



eRAD RIS

# COMBINED CUSTOMER RELEASE NOTES

for eRAD RIS Build 1.00 through 1.41.7

UPDATED MARCH 9, 2022

# SUMMARY

This document re-publishes the previously released Customer Release Notes for eRAD RIS Build 1.00 through 1.41.7 as a single document.

The following documents have been merged:

1. eRAD RIS Customer Release Notes 1.00.pdf
2. eRAD RIS Customer Release Notes 1.26.pdf
3. eRAD RIS Customer Release Notes 1.27.pdf
4. eRAD RIS Customer Release Notes 1.28.pdf
5. eRAD RIS Customer Release Notes 1.29.pdf
6. eRAD RIS Customer Release Notes 1.30.pdf
7. eRAD RIS Customer Release Notes 1.31.pdf
8. eRAD RIS Customer Release Notes 1.32.pdf
9. eRAD RIS Customer Release Notes 1.33.pdf
10. eRAD RIS Customer Release Notes 1.34.pdf
11. eRAD RIS Customer Release Notes 1.35.0.pdf
12. eRAD RIS Customer Release Notes 1.35.1.pdf
13. eRAD RIS Customer Release Notes 1.35.2.pdf
14. eRAD RIS Customer Release Notes 1.35.3.pdf
15. eRAD RIS Customer Release Notes 1.35.4.pdf
16. eRAD RIS Customer Release Notes 1.35.5.pdf
17. eRAD RIS Customer Release Notes 1.35.6.pdf
18. eRAD RIS Customer Release Notes 1.35.7.pdf
19. eRAD RIS Customer Release Notes 1.35.9.pdf
20. eRAD RIS Customer Release Notes 1.36.0.pdf
21. eRAD RIS Customer Release Notes 1.36.1.pdf
22. eRAD RIS Customer Release Notes 1.36.2.pdf
23. eRAD RIS Customer Release Notes 1.36.3.pdf
24. eRAD RIS Customer Release Notes 1.36.5.pdf
25. eRAD RIS Customer Release Notes 1.37.0.pdf
26. eRAD RIS Customer Release Notes 1.37.01.pdf
27. eRAD RIS Customer Release Notes 1.37.02.pdf
28. eRAD RIS Customer Release Notes 1.37.03.pdf
29. eRAD RIS Customer Release Notes 1.37.04.pdf
30. eRAD RIS Customer Release Notes 1.37.05.pdf
31. eRAD RIS Customer Release Notes 1.37.06.pdf
32. eRAD RIS Customer Release Notes 1.37.07.pdf
33. eRAD RIS Customer Release Notes 1.37.08.pdf
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40. eRAD RIS Customer Release Notes 1.38.1.pdf
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52. eRAD RIS Customer Release Notes 1.40.03.pdf
53. eRAD RIS Customer Release Notes 1.40.04.pdf



- 54. eRAD RIS Customer Release Notes 1.40.05.pdf
- 55. eRAD RIS Customer Release Notes 1.40.06.pdf
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# Release Notes for

## rRIS 1.0



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## **1. Purpose**

This document developed as an overview of the work lists, data windows, features and user preferences available in rRIS.

## **2. Intended Audience**

This document has unrestricted internal use and is intended for all users.

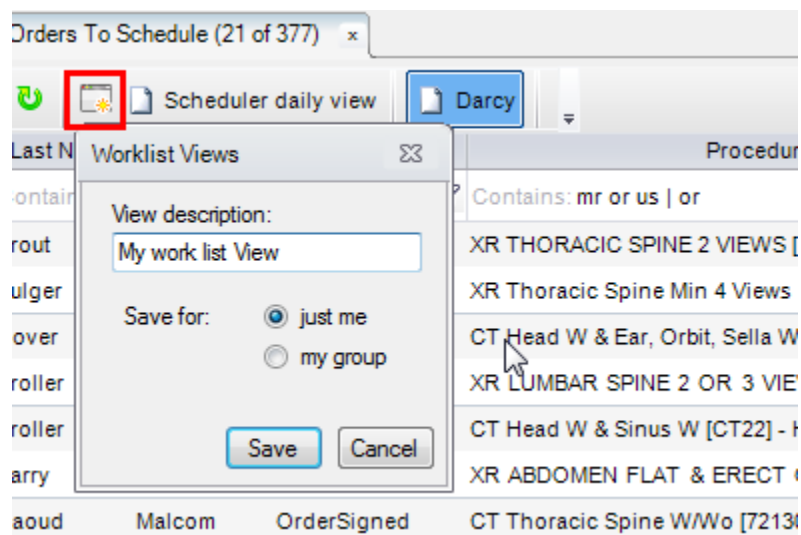
## **3. Work lists**

The rRIS application has many work lists available for the multiple rolls within a Diagnostic Medical Imaging center. Below is a brief description of the work lists under the Administration menu. The columns available in work lists may be difficult to display. Because of this, some of the data in the screenshots may not be visible as I try to capture all columns for display in this document.

### **3.1 Application Work Lists**

The application has work lists that can be of a daily view, patient view, or a view that contains all records that need to processed for a particular role. The columns may be sorted, filtered and arranged to the user's preference. Columns can be sorted by selecting the column header. Columns may be filtered by entering text in the columns filter header. Also the filtering criteria may be specified by selecting the Icon located at the top of each column in the filter row.

In Figure 3.1.1 below, selecting the Icon outlined in Red will open the Work list Views window. The user can sort, filter, arrange and / or hide the columns as they choose, then select this Icon, create a unique name and save the view. The view can be saved for the user only, or for the user group they belong to. The next time this work list is accessed, simply select the view to the right of the Work list Views Icon. The current selected view will be highlighted in blue.



**Figure 3.1.1 – Creating Custom views**

**Tab name and row count**: Orders To Schedule (386)

**Icon to create a custom view**: Scheduler daily view

**Saved custom view**: Scheduler daily view

**Select column header to sort**: Order Date

**Enter filter criteria here. Icon to open filter options**: Filter Order Number

Last Name	First Name	Status	Procedures	Order Date	Referring	MRN	Filter Order Number	Primary Phone Number	City	Carrier	PreCert Requ...	Patient Type
Yeesh	Yolanda	OrderSigned	XR Bone Length Study [77073]	10-29-2011 9:10 PM	Troy Muttery	10006	1009893	(555) 555-5555	Mycity			O
Yeesh	Yolanda	OrderSigned	XR RIBS 3 VIEWS, BILAT [71110] - Ch...	10-29-2011 8:10 PM	Darcy Noye	10006	1009892	(555) 555-5555	Mycity			O
Fish	Frankie	OrderSigned	US Chest [76604] - Chest	10-29-2011 10:23 AM	Darcy Noye	10429	1009890					O
Fish	Frankie	OrderSigned	XR ABDOMEN FLAT & ERECT OR DE...	10-28-2011 5:59 PM	Darcy Noye	10429	1009882					O
Cone	Clare	OrderSigned	XR ANKLE MIN 3 VIEWS [73610] - An...	10-28-2011 5:57 PM	Darcy Noye	10000	1009881	(902) 587-2665	Okeechee			O
Porter	Sally	OrderSigned	CT 3 Phase [CT13]	10-28-2011 5:37 PM	WILLIAM BIHA...	10303	1009879		Indiana...			O
Norton	Sally	OrderSigned	CT Ankle Arthrogram [CT31] - AnkleJoi...	10-28-2011 2:53 PM	Grace Harding	296	1009866					O
Norton	Sally	OrderSigned	CT Abdomen W/Wo & Pelvis W/Wo [C...	10-28-2011 2:37 PM	Grace Harding	296	1009863					O
Norton	Sally	OrderSigned	CT Abdomen W & CTA Chest W/Wo [C...	10-28-2011 2:19 PM	Kathy Simpson	296	1009860					O
Norton	Sally	OrderSigned	CT Abdomen Wo & Pelvis Wo [CT8] - ...	10-28-2011 1:48 PM	Janet Hobbs	296	1009853					O
Pudd	Elmer	OrderSigned	XR HEEL MIN 2 VIEWS [73650] - Ankl...	10-28-2011 12:46 PM	Ian Power	10383	1009852	(554) 654-6545	Buntime			O
Dolittle	David	OrderSigned	XR RIBS 3 VIEWS, BILAT [71110] - Ch...	10-28-2011 11:22 AM	Darcy Noye	10378	1009883	(980) 265-6465 4	Mycity	ROSOFSK...		O
Ballard	Harold	OrderSigned	XR LUMBAR SPINE MIN 4 VIEWS [72...	10-26-2011 4:55 PM	Darcy Noye	10366	1009827		Meachoo	ATKINS, R...		O
Trout	Brooke	OrderSigned	XR THORACIC SPINE 2 VIEWS [7207...	10-26-2011 2:22 PM	Darcy Noye	10103	1009826					O
Houphmeyer	Artie	OrderSigned	XR HEEL MIN 2 VIEWS [73650] - Ankl...	10-26-2011 11:55 AM	Darcy Noye	10240	1009820					O
Wonder	Willia	OrderSigned	XR FEMUR 2 VIEWS [73550] - Leg	10-26-2011 11:52 AM	Darcy Noye	10008	1009818					O
Brie	Bella	OrderSigned	XR FEMUR 2 VIEWS [73550] - Leg	10-26-2011 11:50 AM	Darcy Noye	9999	1009817	(555) 555-5555	Newark			O
Acorn	Adele	OrderSigned	XR FEMUR 2 VIEWS [73550] - Leg	10-26-2011 11:49 AM	Darcy Noye	9998	1009816	(902) 548-8765	Terminia			O
Edward	Edna	OrderSigned	XR RIBS 3 VIEWS, BILAT [71110] - Ch...	10-26-2011 11:41 AM	Troy Muttery	10099	1009814					O
Dolittle	Donna	OrderSigned	XR RIBS 3 VIEWS, BILAT [71110] - Ch...	10-26-2011 11:39 AM	Darcy Noye	10004	1009813					O
Xroller	Xena	OrderSigned	CT Abdomen W & Pelvis W & CTA Ch...	10-26-2011 11:31 AM	Darcy Noye	10007	1009811			JOHN W. C...	Approved	O
Gallante	Verna	OrderSigned	XR LUMBAR SP COMP W BEND VIE...	10-26-2011 11:29 AM	Troy Muttery	10361	1009810					O
Bulger	Eunice	OrderSigned	XR Thoracic Spine Min 4 Views [72074...	10-26-2011 11:26 AM	Darcy Noye	10360	1009825			ADKINS, F...		O
Yeesh	Yolanda	OrderSigned	CT Abdomen W & Pelvis W & CTA Ch...	10-26-2011 11:04 AM	Troy Muttery	10006	1009808	(555) 555-5555	Mycity	CHASE CH...	Required	O
Yeesh	Yolanda	OrderSigned	CT Abdomen W & Pelvis W & CTA Ch...	10-26-2011 10:45 AM	Troy Muttery	10006	1009807	(555) 555-5555	Mycity			O
Build 24	This is	OrderSigned	XR CHEST PA ONLY [71010] - Chest	10-25-2011 2:13 PM	Troy Muttery	10357	1009805					O
Dover	Ben	OrderSigned	CT Head W & Ear, Orbit, Sella W [CT3...	10-20-2011 1:22 PM	Troy Muttery	10349	1009824	(902) 458-7455	Fifteen	KADISH &...	Required	O
Walsh	Brenda	OrderSigned	XR CERVICAL SPINE MIN 4 VIEWS [7...	10-19-2011 3:16 PM	Darcy Noye	10346	1009779					O
Timeless	Tina	OrderSigned	XR NECK SOFT TISSUE [70360] - Neck	10-19-2011 12:55 PM	Testy Testerson	10011	1009772	(902) 548-8484	Getcha	CHIDI / TQI...	Required	O
Timeless	Tina	OrderSigned	CT Soft Tissue Neck W [70491] - Neck	10-19-2011 12:55 PM	Testy Testerson	10011	1009773	(902) 548-8484	Getcha	CHIDI / TQI...	Required	O
Xroller	Xena	OrderSigned	XR LUMBAR SPINE 2 OR 3 VIEWS [7...	10-19-2011 12:48 PM	Darcy Noye	10007	1009770			JOHN W. C...	N	O
Wonder	Willia	OrderSigned	CT Cervical Spine W [72126] - Cervical...	10-19-2011 9:50 AM	Jerry Piled	10008	1009767			CHIDI / TQI...	Required	O
Houphmeyer	Artie	OrderSigned	XR Hand 2 Views & Wrist 2 Views, Unil...	10-19-2011 8:27 AM	Darcy Noye	10240	1009765					O

Auto Refresh Schedule Edit Order

Saved: Edit Order (Yolanda Yeesh) 386 Rows

**Figure 3.1.1 – Work list features.**

Additional filtering options are to filter a column within a work list by entering multiple search criteria. The separator “or” (case insensitive) or “[ ]” (pipe) will separate multiple search criteria and apply a “contains”. Note the search string “ ” (single quotes) will match empty entries or null. This can also be applied to the “does not contain” filter if specified in the filtering list of options. This is achieved by selecting the filter ICON on the column header and selecting the “does not contain” option.



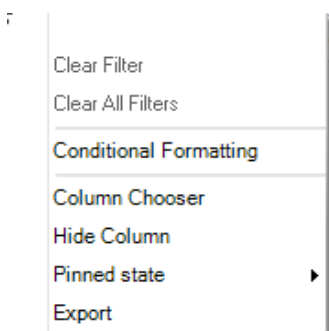
Orders To Schedule (21 of 377) x

Scheduler daily view Darcy

Last Name	First Name	Status	Procedures	Order Date	Referring	MRN	Filter Order Number	Primary Phone Number	City	Carrier
Trout	Brooke	OrderSigned	XR THORACIC SPINE 2 VIEWS [72070] - Lumbar spine	10-26-2011 2:22 PM	Darcy Noye	10103	1009826			
Bulger	Eunice	OrderSigned	XR Thoracic Spine Min 4 Views [72074] - Lumbar spine	10-26-2011 11:26 AM	Darcy Noye	10360	1009825			ADKINS, FREDERICK W
Dover	Ben	OrderSigned	CT Head W & Ear, Orbit, Sella W [CT33] - Head	10-20-2011 1:22 PM	Troy Muttery	10349	1009824	(902) 458-7455	Fifteen	KADISH & KADISH
Xroller	Xena	OrderSigned	XR LUMBAR SPINE 2 OR 3 VIEWS [72100] - Lumbar s...	10-19-2011 12:48 PM	Darcy Noye	10007	1009770			JOHN W. CONRAD
Xroller	Xena	OrderSigned	CT Head W & Sinus W [CT22] - Head	08-02-2011 2:34 PM	Darcy Noye	10007	1009604			
Barry	Mary7	OrderSigned	XR ABDOMEN FLAT & ERECT OR DECUB [74020] - A...	05-25-2011 10:09 AM	WILLIAM...	4378	1009359		Montgomery	
Daoud	Malcom	OrderSigned	CT Thoracic Spine W/Wo [72130]	05-06-2011 1:04 PM	YELENA L...	9568	1009138			RIVERVIEW CARE CENT
Dorrance	Jenae	OrderSigned	MAx/Digi Mam Scr Bil, Diag Bil & US Brst [MA10]	05-06-2011 12:05 AM	YAO-YAO...	9549	1009130			PA - STATE WORKERS' I
Stoeckert	Wanda	OrderSigned	PT/CT Sodium Fluoride PET Bone Scan [PT4]	05-06-2011 12:03 AM	WILLIAM...	9511	1009092			ALLRAD DIRECT COMP
Kerrick	Tennille	OrderSigned	PT/CT Sodium Fluoride PET Bone Scan [PT4]	05-06-2011 12:03 AM	WILLIAM...	9483	1009064			NATIONWIDE HEALTH
Mackimmie	Karry	OrderSigned	PT/CT Sodium Fluoride PET Bone Scan [PT4]	05-05-2011 9:22 PM	WILLIAM...	9173	1008754			YORK RISK SERVILA GR
Wolfgang	Florencia	OrderSigned	PT/CT Sodium Fluoride PET Bone Scan [PT4]	05-05-2011 9:20 PM	WILLIAM...	9094	1008675			CIGNAMEDSOLUTIONS
Callejo	Margit	OrderSigned	PT/CT Sodium Fluoride PET Bone Scan [PT4]	05-05-2011 8:14 PM	WILLIAM...	8824	1008405			ADVANTRA GOLD PPO
Kopke	Francesca	OrderSigned	PT/CT Sodium Fluoride PET Bone Scan [PT4]	05-05-2011 8:13 PM	WILLIAM...	8804	1008385			USAA AUTO
Kochevar	Penny	OrderSigned	PT/CT Sodium Fluoride PET Bone Scan [PT4]	05-05-2011 8:11 PM	WILLIAM...	8734	1008315			USAA AUTO
Kreiman	Nichol	OrderSigned	PT/CT Sodium Fluoride PET Bone Scan [PT4]	05-05-2011 7:22 PM	WILLIAM...	8440	1008021			NATIONWIDE AUTO
Gholston	Ezekiel	OrderSigned	PT/CT Sodium Fluoride PET Bone Scan [PT4]	05-05-2011 6:18 PM	WILLIAM...	7778	1007359			SLOANE FISH
Swantek	Merlin	OrderSigned	PT/CT Sodium Fluoride PET Bone Scan [PT4]	05-05-2011 5:05 PM	WILLIAM...	6759	1006342			JEWISH CONVALESCEN
Morel	Meryl	OrderSigned	PT/CT Sodium Fluoride PET Bone Scan [PT4]	05-05-2011 5:03 PM	WILLIAM...	6695	1006278			CCMSI MIDLAND, LLC
Witaker	Merle	OrderSigned	PT/CT Sodium Fluoride PET Bone Scan [PT4]	05-05-2011 4:32 PM	WILLIAM...	6128	1005712			BANNER MASONRY COF
Marini	Edna	OrderSigned	PT/CT Sodium Fluoride PET Bone Scan [PT4]	05-05-2011 4:31 PM	WILLIAM...	6094	1005678			CIGNAMEDSOLUTIONS

**Figure 3.1.2 – Column filtering on multiple criteria**

A right mouse click on a column header gives the user a context menu. The options include to Clear the filter of the column selected, clearing all filters applied to work list, conditional formatting, column chooser which allows the user to select from a defined list which columns they would to view on the work list. Hiding a column will add the column to the list window that is opened when selecting Column chooser. Pinned state allows the user to have the column displayed to the left, right or removing the pinned options. Lastly an option to export the work lists contents to an .xml file.



**Figure 3.1.3 – Context menu from column header**

### 3.2 Billing Exception work list

The billing exception work list contains all studies requiring action due to incorrect billing details. Only a single action can be completed from this work list which is Edit Billing. Selecting the Edit Billing button opens the data window. The user is able to correct any inaccuracies in the billing details as required.

Flags	Status	Procedures	Scheduled Date	First Name	Last Name	MRN	Birth Date	Billing Status Code	Age At Study	Room
Contains: [icon]	Signed1	XR CERVICAL SP 2 OR 3 VIEWS [72040] - Ankle joint	05-12-2011 3:05 PM	Tammi	Hartwigsen	7594	07-22-1953	Failed	58 years	XR1LU
Contains: [icon]	Signed1	CT Abdomen W & CTA Chest W/Wo [CT66] - Abdomen	07-19-2011 1:45 PM	Heavy	Load	9990	06-15-1954	Failed	57 years	CT1LU
Contains: [icon]	Dictated	CT Abdomen W & Pelvis W [CT9] - Abdomen	08-11-2011 8:15 AM	Xena	Xroller	10007	07-22-1956	Failed	55 years	CT1FH
Contains: [icon]	Signed1	NM Testicular W Flow [78761] - Pelvis	08-29-2011 12:00 AM	Sally	Norton	296	07-28-1985	Failed	26 years	OutsideRead_NM
Contains: [icon]	Signed1	CT Abdomen W & Pelvis W & CTA Chest W/Wo [CT54] - Abdomen	09-15-2011 7:45 AM	DGI	Test	10247	08-31-1988	Failed	23 years	CT1LU
Contains: [icon]	Signed1	XR HEEL MIN 2 VIEWS [73650] - Ankle joint/Right	10-19-2011 7:00 PM	Garret	Bundigger	10347	06-16-1964	Failed	47 years	XR1EL
Contains: [icon]	Signed1	CT Ear Orbit Sella W [70481] - Head/Left	10-28-2011 12:00 AM	orbit	orbit	10413	10-03-2011	Failed	0 months	OutsideRead_CT
Contains: [icon]	Signed1	XR RIBS 3 VIEWS, BILAT [71110] - Chest/Bilateral	10-28-2011 11:35 AM	Elmer	Pudd	10383	12-28-1940	Failed	71 years	XR1FH
Contains: [icon]	Signed1	XR Hand 2 Views & Wrist 2 Views, Bilat [RD36] - Hand/Bilateral	10-28-2011 2:20 PM	Elmer	Pudd	10383	12-28-1940	Failed	71 years	XR1LU
Contains: [icon]	Signed1	XR Sinus Fistula Tract [76080] - Head	10-29-2011 7:54 PM	Brody	Buddy	10431	10-26-2011	Failed	0 months	XR1EL
Contains: [icon]	Signed1	CT Chest W [71260] - Abdomen	02-08-2012 8:45 AM	Sally	Norton	296	07-28-1985	Failed	26 years	CT1FH

Figure 3.2.1 – Billing Exception work list

### 3.3 Patient Merge work list

Some application users may only have the option to suggest a merge and not have the ability to complete the merge process. Suggestions are placed in the Patient Merge work list for a user who has the ability “Merge” and take action on the request. The patient merge suggestion can be completed or rejected. Each of these actions will remove the record from this work list.

Source	Target	Source MRN	Target MRN	Requested By	Requested Date	Comment
Contains: ▼	Contains: ▼	Contains: ▼	Contains: ▼	Contains: ▼	Equals: ▼	Contains: ▼
Bree, Buella	Brie, Bella	10443	9999	Noye, Darcy	10-30-2011 10:20 PM	Adding to demonstrate the Pending Merge...

☒ Auto Refresh Patient Merge

Suggested Merge (MRN 10443 to MRN 9999) 1 Rows

**Figure 3.3.1 – Patient Merge work list**

#### 3.3.1 Patient Merge

The patient merge feature in rRIS allows users who have access to complete a “Merge” the ability to search for the Source Patient (to be merged) as well as search for the Target Patient (merging to). Once the patient search has been completed the Clinical Data section will display

the patient's history. Selecting the Folder Icon will open the patient's folder so the user may complete a more thorough investigation before the merge is completed.

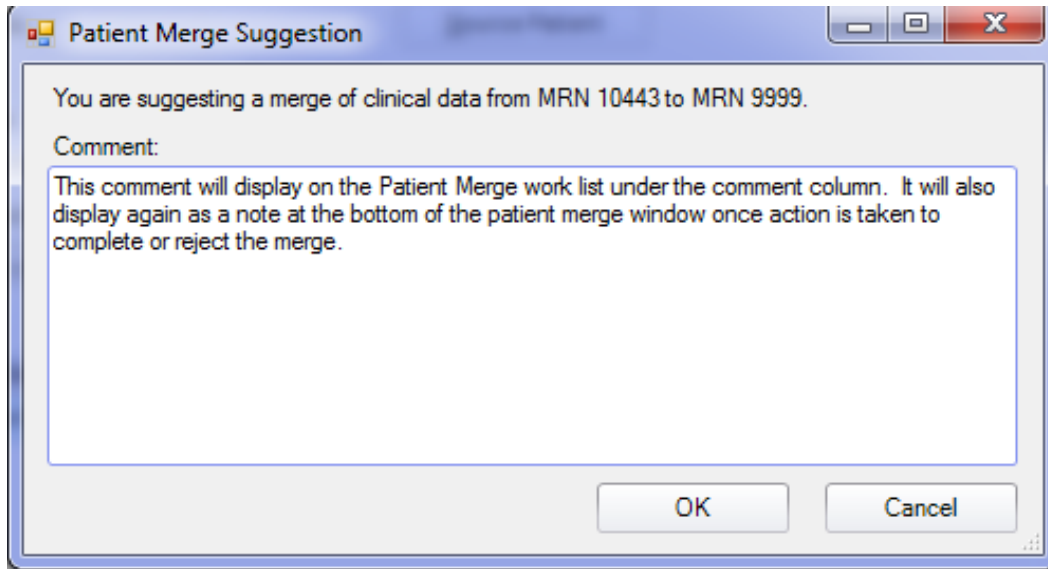
Users who don't have access to complete a patient merge should be given the rights to "Suggest" a merge. Suggested merges are added to the Patient Merge work list for an admin type user to action the suggestion. The suggested merge can either be completed or rejected.

The screenshot displays the 'Patient Merge (MRN 10443 to MRN 9999)' window. It is divided into two main sections: 'Source (This patient will be removed)' and 'Target (This patient will receive all clinical data)'. Each section contains fields for patient information (First Name, Middle Name, Last Name, Birth Date, MRN, Gender) and a 'Clinical Data' table. The 'Source' patient is Buella Bree, born 07-21-1999, MRN 10443, Female. The 'Target' patient is Bella Brie, born 07-21-1999, MRN 9999, Female. The 'Clinical Data' table for the target patient lists various procedures with their accessions, statuses, and scheduled dates. At the bottom of the window are buttons for 'Suggest', 'Merge', and 'Close'. A status bar at the very bottom indicates 'Saved: Edit (Andrew Maund)'.

Accession	Status	Procedures	Scheduled
D	OrderSigned	XR Chest Min 4 Views [71030] - Chest	
1009642	Cancelled	CT Cervical Spine W [72126] - Cervical spine	31/10/2011 9:15:00 AM
1009663	Arrived	XR RIBS 3 VIEWS, BILAT [71110] - ChestBilateral	31/10/2011 8:15:00 AM
1009643	Cancelled		31/10/2011 7:45:00 AM
1009645	Scheduled		28/10/2011 7:30:00 PM
1009643	Scheduled	US Chest [76604] - Chest	21/10/2011 3:00:00 PM
1009544	Scheduled	US Abdominal Ltd Or Fu [76705] - Abdomen	21/10/2011 11:15:00 AM
1009480	Scheduled	XR HEEL MIN 2 VIEWS [73650] - Ankle joint/Right	03/10/2011 8:40:00 AM
1009472	ExamDone	XR Wrist 2 Views [73100] - Wrist/Left	28/09/2011 12:00:00 PM
1009444	Scheduled	XR NECK SOFT TISSUE [70360] - Neck	26/09/2011 9:00:00 AM
1009434	Discontinued	CT Cervical Spine WWo [72127] - Cervical spine	19/09/2011 5:30:00 PM
1009369	ExamDone	XR ABDOMEN AP, KUB [74000]	02/09/2011 12:00:00 AM
1009336	Transcribed	XR Chest PA Lat, Obliques [71022] - Chest	31/08/2011 1:00:00 PM
1009332	Scheduled	CT Chest W [71260] - Chest	30/08/2011 1:00:00 PM
1009328	Cancelled		26/08/2011 11:20:00 AM
1009326	Cancelled		26/08/2011 11:00:00 AM
1009284	Scheduled	XR NECK SOFT TISSUE [70360] - Neck	23/08/2011 8:20:00 PM
1009285	Scheduled	XR Chest PA Lat, Obliques [71022] - Chest	23/08/2011 7:45:00 PM
1009247	Scheduled	US Soft Tissue - Chest Wall [USST4] - Chest	15/08/2011 11:10:00 AM
1009259	Scheduled	XR CHEST PA LAT [71020] - Chest	15/08/2011 11:05:00 AM
1009260	Scheduled	XR CHEST PA ONLY [71010] - Chest	15/08/2011 11:00:00 AM
1009244	Scheduled	CT Head W & Sinus W [CT22] - Head	15/08/2011 8:25:00 AM
1009238	Scheduled	CT 3 Phase [CT13]	12/08/2011 11:20:00 AM
1009200	Scheduled	CT .RECALL NO DICTATION INVOLVED [CT60]	12/08/2011 9:15:00 AM

**Figure 3.3.1.1 – Patient Merge data window**

If the user suggests a patient merge a dialogue box will be displayed for the user to enter notes for the suggestion. The notes are captured in the comment column of the Patient Merge work list and will also display as a note at the bottom of the Patient Merge window once action is taken to complete or reject the merge.



**Figure 3.3.1.2 – Patient Merge Suggestion**

Once the suggestion has been submitted it now appears on the Patient Merge work list. The admin type user who administers this task will open the suggestion in the Patient Merge window again. They will action the suggestion by completing the merge if they determine the suggestion to be accurate, or they will reject it. Both actions remove it from the Patient Merge work list.

## RADNET, Inc. – rRIS Release Notes

Patient Merge Requests (1) | Patient Merge (MRN 10443 to MRN 9999)

Source (This patient will be removed)

First Name: Buella  
Middle Name:  
Last Name: Bree  
Birth Date: 07-21-1999  
MRN: 10443  
Gender: Female

Contact Info:

Clinical Data:

Accession	Status	Procedures	Scheduled	Dictated	Transcribed	Signed
D	OrderSigned	XR Chest Min 4 Views [71030] - Chest				

Target (This patient will receive all clinical data)

First Name: Bella  
Middle Name:  
Last Name: Brie  
Birth Date: 07-21-1999  
MRN: 9999  
Gender: Female

Contact Info: 897 Scultebute Lane

Clinical Data:

Accession	Status	Procedures	Scheduled
D 1009642	Cancelled	CT Cervical Spine W [72126] - Cervical spine	31/10/2011 9:15:00 AM
1009663	Arrived	XR RIBS 3 VIEWS, BILAT [71110] - Chest/Bilateral	31/10/2011 8:15:00 AM
1009643	Cancelled		31/10/2011 7:45:00 AM
1009645	Scheduled		28/10/2011 7:30:00 PM
1009543	Scheduled	US Chest [76604] - Chest	21/10/2011 3:00:00 PM
1009544	Scheduled	US Abdominal Ltd Or Fu [76705] - Abdomen	21/10/2011 11:15:00 AM
1009480	Scheduled	XR HEEL MIN 2 VIEWS [73650] - Ankle joint/Right	03/10/2011 8:40:00 AM
1009472	ExamDone	XR Wrist 2 Views [73100] - Wrist/Left	28/09/2011 12:00:00 PM
1009444	Scheduled	XR NECK SOFT TISSUE [70360] - Neck	26/09/2011 9:00:00 AM
1009434	Discontinued	CT Cervical Spine W/Wo [72127] - Cervical spine	19/09/2011 5:30:00 PM
1009369	ExamDone	XR ABDOMEN AP, KUB [74000]	02/09/2011 12:00:00 AM
1009336	Transcribed	XR Chest PA Lat, Obliques [71022] - Chest	31/08/2011 1:00:00 PM
1009332	Scheduled	CT Chest W [71260] - Chest	30/08/2011 1:00:00 PM
1009328	Cancelled		26/08/2011 11:20:00 AM
1009326	Cancelled		26/08/2011 11:00:00 AM
1009284	Scheduled	XR NECK SOFT TISSUE [70360] - Neck	23/08/2011 8:20:00 PM
1009285	Scheduled	XR Chest PA Lat, Obliques [71022] - Chest	23/08/2011 7:45:00 PM
1009247	Scheduled	US Soft Tissue - Chest Wall [USST4] - Chest	15/08/2011 11:10:00 AM
1009259	Scheduled	XR CHEST PA LAT [71020] - Chest	15/08/2011 11:05:00 AM

Merge Requested By: Noye, Darcy

This comment will display on the Patient Merge work list under the comment column. It will also display again as a note at the bottom of the patient merge window once action is taken to complete or reject the merge.

Reject Merge Close

**Figure 3.3.1.3 – Admin user to complete action on Patient Merge suggestion.**

Selecting Reject, the user is returned to the Patient Merge Requests work list. Selecting Merge will display a confirmatory message.

rRIS

You are about to merge clinical data from MRN 10443 to MRN 9999.

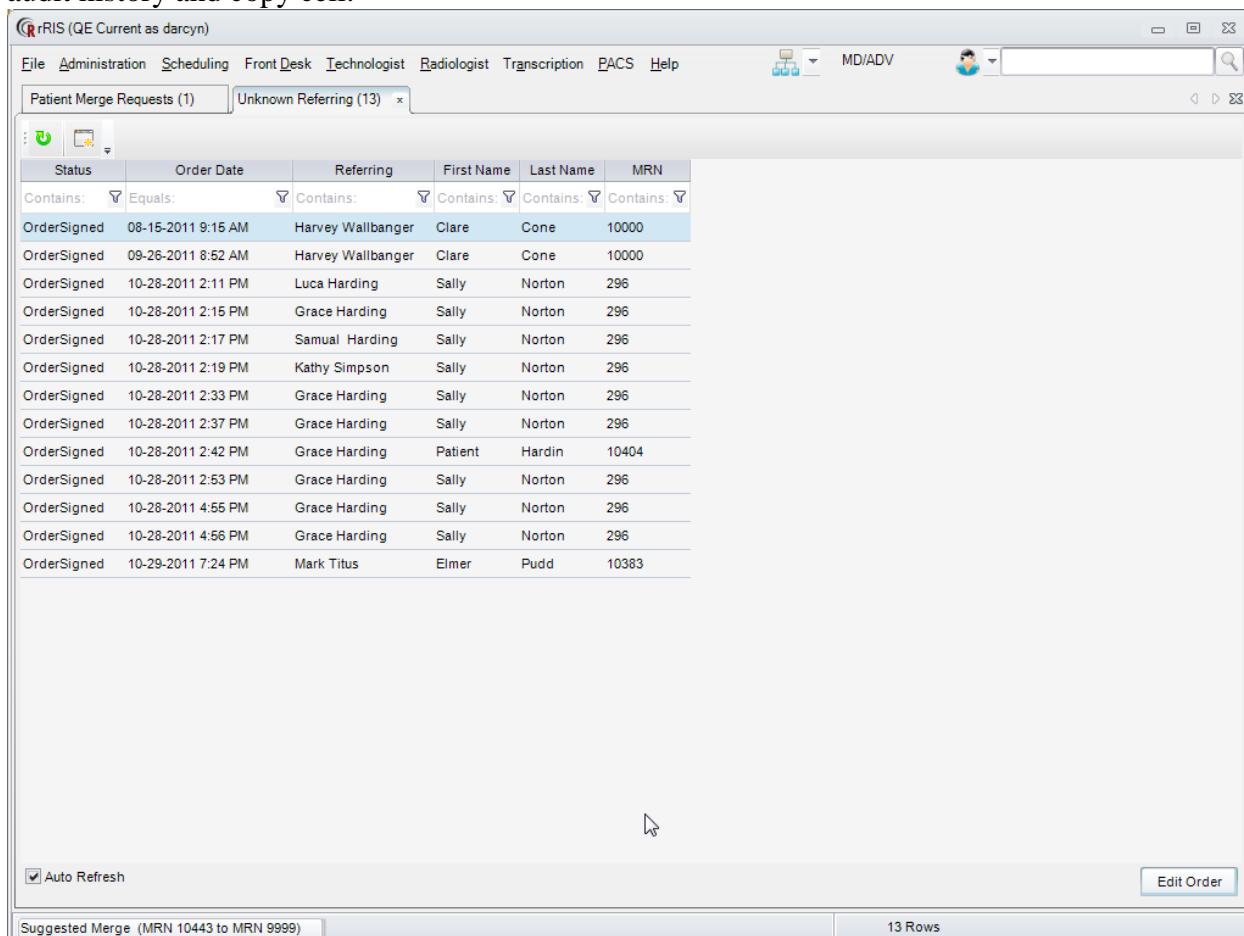
This will delete 'Buella Bree (MRN 10443)'

Continue Cancel

**Figure 3.3.1.4 – Merge action confirmatory message**

### 3.4 Unknown Referring work list

Orders created or scheduled with an Unknown Referring Physician will be placed in the work list. The order itself is not impeded from workflow. A user with proper rights can action the orders in this work list. Button action is edit order only. Context menu options are edit order, audit history and copy cell.



Status	Order Date	Referring	First Name	Last Name	MRN
OrderSigned	08-15-2011 9:15 AM	Harvey Wallbanger	Clare	Cone	10000
OrderSigned	09-26-2011 8:52 AM	Harvey Wallbanger	Clare	Cone	10000
OrderSigned	10-28-2011 2:11 PM	Luca Harding	Sally	Norton	296
OrderSigned	10-28-2011 2:15 PM	Grace Harding	Sally	Norton	296
OrderSigned	10-28-2011 2:17 PM	Samual Harding	Sally	Norton	296
OrderSigned	10-28-2011 2:19 PM	Kathy Simpson	Sally	Norton	296
OrderSigned	10-28-2011 2:33 PM	Grace Harding	Sally	Norton	296
OrderSigned	10-28-2011 2:37 PM	Grace Harding	Sally	Norton	296
OrderSigned	10-28-2011 2:42 PM	Grace Harding	Patient	Hardin	10404
OrderSigned	10-28-2011 2:53 PM	Grace Harding	Sally	Norton	296
OrderSigned	10-28-2011 4:55 PM	Grace Harding	Sally	Norton	296
OrderSigned	10-28-2011 4:56 PM	Grace Harding	Sally	Norton	296
OrderSigned	10-29-2011 7:24 PM	Mark Titus	Elmer	Pudd	10383

Figure 3.4.1 – Unknown Referring work list

### 3.5 IVT work list

Orders that require insurance verification are added to this work list. Button actions are insurance verification (IVT) and Schedule. The context menu also contains IVT and Schedule as well as Audit History and Copy Cell.

Status	Procedures	Order Date	Scheduled Date	First Name	Last Name	PreCert Required	Insurance Verification Status	Carrier	Modality Type	MRN	Site Code	Practice Code
Scheduled	PT/CT Myocardial Multi Study [78492]	05-05-2011 3:4...	10-31-2011 7:46 AM	Meri	Dzuro	Required	Required	LIBERTY MU...	PT	10424	FH	ADV
Scheduled	PT/CT Myo Imag Perf Study [78459]	05-05-2011 4:1...	10-29-2011 8:00 AM	Caridad	Rougeau	Required	Required	MARRIOTT C...	PT	10430	EL	ADV
Dictated	CT Cervical Spine Wo & Lumbar Spin...	09-20-2011 11:...	09-28-2011 5:00 PM	Xena	Xrolter		Required		CT	10007	EL	ADV
ExamDone	DX Appendicular Skeleton [77081]	10-05-2011 2:4...	10-05-2011 2:45 PM	Clare	Cone		Required	MEDICAL CL...	BD	10000	EL	ADV
ExamDone	DX Appendicular Skeleton [77081]	10-13-2011 7:5...	10-13-2011 9:15 AM	Zelda	Zoom	N	Required	JOHN AXAL	BD	10005	EL	ADV
OrderSigned	CT Head W & Ear, Orbit, Sella W [CT...	10-20-2011 1:2...		Ben	Dover	Required	Approved	KADISH & KA...		10349		ADV
Arrived	US Chest [76604] - Chest	10-21-2011 10:...	10-21-2011 1:00 PM	William	Bonnie		Required	PENN NATIO...	US	10351	EL	ADV
Scheduled	US Chest [76604] - Chest	10-21-2011 10:...	10-28-2011 1:45 PM	Edna	Edward		Required		US	10099	EL	ADV
OrderSigned	CT Abdomen W & Pelvis W & CTA C...	10-26-2011 11:...		Yolanda	Yeesh	Required	Approved	CHASE CHA...		10006		ADV
Dictated	CT Abdomen W & Pelvis W [CT9] - A...	10-26-2011 11:...	10-26-2011 1:00 PM	Yolanda	Yeesh		Required	CHASE CHA...	CT	10006	EL	ADV
Arrived	CT Abdomen W & Pelvis W [CT9] - A...	10-26-2011 8:5...	10-27-2011 7:46 AM	Claude	Pepper	Required	Required	GOLDSTEIN...	CT	10368	FH	ADV
Scheduled	CT Abdomen W & CTA Chest W/Wo [...]	10-26-2011 9:0...	10-28-2011 2:30 PM	Brooke	Trout	Required	Required	SHARON DU...	CT	10103	FH	ADV
Scheduled	CT Soft Tissue Neck W & Chest W [C...	10-26-2011 9:0...	10-27-2011 7:50 AM	Barney	Hubble		Required		CT	10369	EL	ADV
Scheduled	FL Arthrogram Ankle Fluoro [73815] - ...	10-27-2011 9:5...	10-27-2011 2:00 PM	Yolanda	Yeesh		Required		XR	10006	EL	ADV
Scheduled	FL Arthrogram Ankle Fluoro [73815] - ...	10-27-2011 9:5...	10-27-2011 3:30 PM	Yolanda	Yeesh		Required		MR	10006	EL	ADV
Scheduled	CT Chest W & Abdomen W [CT4] - C...	10-28-2011 10:...	10-29-2011 8:15 AM	Adella	Doverspike		Required		CT	8479	EL	ADV
Scheduled	US Chest [76604] - Chest	10-28-2011 10:...	10-29-2011 8:45 AM	Adella	Doverspike		Required		US	8479	EL	ADV
Signed1	CT Chest W [71260] - Abdomen	10-28-2011 11:...	02-08-2012 8:45 AM	Sally	Norton		Required		CT	296	FH	ADV
Dictated	CT Abdomen W & Pelvis W & CTA C...	10-28-2011 11:...	10-28-2011 1:00 PM	Elmer	Pudd		Required	ROSOFSKY...	CT	10383	FH	ADV
Scheduled	CT 3 Phase [CT13]	10-28-2011 11:...	11-01-2011 1:30 PM	Bobbi958	Poole		Required		CT	2434	LU	ADV
OrderSigned	CT Abdomen Wo & Pelvis Wo [CT8] - ...	10-28-2011 1:4...		Sally	Norton		Required			296		ADV
OrderSigned	CT Abdomen W & CTA Chest W/Wo [...]	10-28-2011 2:1...		Sally	Norton		Required			296		ADV
Scheduled	CT 3 Phase [CT13]	10-28-2011 2:3...	10-29-2011 8:30 AM	Terry	Mills		Required		CT	10403	FH	ADV
OrderSigned	CT Abdomen W/Wo & Pelvis W/Wo [...]	10-28-2011 2:3...		Sally	Norton		Required			296		ADV
ExamDone	CT Abdomen W & Pelvis W & CTA C...	10-28-2011 2:4...	10-28-2011 3:30 PM	Patient	Hardin		Required		CT	10404	LU	ADV
OrderSigned	CT Ankle Arthrogram [CT31] - Ankle J...	10-28-2011 2:5...		Sally	Norton		Required			296		ADV
Scheduled	CT 3 Phase [CT13]   CT 3 Phase [CT13]	10-28-2011 3:0...	10-05-2011 3:15 PM	Sally63	Shea		Required		CT	10409	EL	ADV
Scheduled	CT 3 Phase [CT13]   CT 3 Phase [CT13]	10-28-2011 3:0...	10-19-2011 3:16 PM	Sally63	Shea		Required		CT	10409	EL	ADV
Scheduled	CT 3 Phase [CT13]	10-28-2011 3:2...	10-29-2011 8:00 AM	sticktest	sticktest		Required		CT	10415	FH	ADV
Scheduled	MR x Lower Ext Joint W [73722]	10-28-2011 3:2...	10-29-2011 10:20 AM	Brooke	Trout		Required		MR	10103	EL	ADV
Scheduled	CT 3 Phase [CT13]   CT Abdomen W...	10-28-2011 3:4...	10-31-2011 8:15 AM	Patient	b25		Required		CT	10419	EL	ADV
Scheduled	CT 3 Phase [CT13]   CT Abdomen W...	10-28-2011 3:4...	10-31-2011 8:45 AM	Patient	b25		Required		CT	10419	EL	ADV
Scheduled	CT Head W [70460] - Head	10-28-2011 4:1...	10-29-2011 8:45 AM	Zelda	Zoom		Required		CT	10005	EL	ADV

Figure 3.5.1 – IVT work list



### 3.6 IVT data windows

Below are examples of the IVT data window. Included are the patient and Insurance Verification Precert tabs. The attachments tab is a standard window used in other data windows and is covered in detail later in this document.

#### 3.6.1 Patient tab

The user has the ability to add or edit data on the Patient tab. This tab provides the user with general information about the patient.

The screenshot displays the 'Patient' tab within the IVT data window. The form is organized into three main sections: General Information, Address Information, and Patient Origin. The General Information section includes fields for First Name (Volanda), Middle (Y), Last Name (Yeesh), Gender (Female), Birth Date (07-21-1956), and MRN (10006). The Address Information section includes fields for Address 1 (132 My St.), Zip, Address 2, Home Phone ((555) 555-5555), City (MyCity), Mobile Phone ((555) 555-5553), State (Mystate), and E-mail (yy@why.com). The Patient Origin section includes fields for Place of Birth, Primary Language (English), Education Level (College), Religion (Christian), and Ethnic Origin (Unknown). The form has a 'Save' button and a 'Close' button at the bottom right.

General Information	
First Name:	Volanda
Middle:	Y
Last Name:	Yeesh
Gender:	Female
Birth Date:	07-21-1956
MRN:	10006
<input type="checkbox"/> Verified ID	

Address Information	
Address 1:	132 My St.
Zip:	
Address 2:	
Home Phone:	(555) 555-5555
City:	MyCity
Mobile Phone:	(555) 555-5553
State:	Mystate
E-mail:	yy@why.com

Patient Origin	
Place of Birth:	
Primary Language:	English
Education Level:	College
Religion:	Christian
Ethnic Origin:	Unknown

**Figure 3.6.1.1 – IVT Patient Tab**

#### 3.6.2 Insurance Verification PreCert

On the Insurance Verification PreCert, the users have the ability update the insurance information and add / edit billing code information

## RADNET, Inc. – rRIS Release Notes

IVT WL (49) | IVT (Yolanda Yeesh) x

Patient Insurance Verification PreCert Attachments

Insurance Policies

Note	Carrier Code	Carrier Name	Policy Number	Group Name	Group Number	Phone	Priority
------	--------------	--------------	---------------	------------	--------------	-------	----------

Manage Policies

Verification REQUIRED ☐ Insurance verified Amount to collect:

Verification and PreCert Notes

11-01-11 dtn -

Billing Code Information

PreCert #	Expiry Date	Billing Code	Pre Cert Status
▶		(73815) RADIOLOGIC EXAMINATION, ANKLE, ARTHROGRAPHY, RADIOLOGICAL SUPERVISION AND INTERPRETATION	Not Required

☐ Show inactive CPT codes

Save Close

**Figure 3.6.2.1 – IVT Insurance Verification PreCert Tab**

### 3.7 No Show work list

The No Show work list contains the exams that have been flagged as no show at the time of cancelling the order or scheduled exam. Button actions that can be completed is Reschedule only. Context menu options are Audit History, Copy Cell, Reschedule, and Change Status which contains its own sub menu.

No Show WL (51)

Flags	Status	Procedures	Scheduled Date	First Name	Last Name	Primary Phone Number	MRN	Room	Due Time
Contains: ▾	Contains: ▾	Contains: ▾	Equals: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾
	Scheduled	XR NECK SOFT TISSUE [70360] - Neck	10-19-2011 2:35 PM	Adele	Acorn	(902) 548-8765	9998	XR1EL	Overdue 11 d 8 h 4 m
	Scheduled	XR ABDOMEN AP, KUB [74000] - Abdomen	10-19-2011 2:45 PM	Edna	Edward		10099	XR1EL	Overdue 11 d 7 h 54 m
	Scheduled	CT Abdomen W/Wo & Pelvis W [CT23] - Abdomen	10-19-2011 2:50 PM	Edna	Edward		10099	CT1EL	Overdue 11 d 7 h 49 m
	Scheduled	CT 3 Phase [CT13]	10-19-2011 3:15 PM	Sally63	Shea		10409	CT1EL	Overdue 11 d 7 h 23 m
	Scheduled	CT Soft Tissue Neck W & Chest W [CT35] - Neck	10-19-2011 3:20 PM	Adele	Acorn	(902) 548-8765	9998	CT1EL	Overdue 11 d 7 h 19 m
	Scheduled	CT Soft Tissue Neck W & Chest W [CT35] - Neck	10-19-2011 5:00 PM	Adele	Acorn	(902) 548-8765	9998	CT1EL	Overdue 11 d 5 h 39 m
	Scheduled	CT Chest W [71260] - Chest	10-20-2011 8:15 AM	Spencer	Test		2170	CT1FH	Overdue 10 d 14 h 24 m
	Scheduled	PT/CT Myo Imag Perf Study [78459]	10-20-2011 9:45 AM	test	patient2		4626	PT1FH	Overdue 10 d 12 h 54 m
	Scheduled	CT Ear Orbit Sella W [70481] - Head/Bilateral	10-20-2011 3:02 PM	Walk	In		10350	CT1EL	Overdue 10 d 7 h 37 m
	Scheduled	CT Elbow Arthrogram [CT27] - Elbow/Left	10-21-2011 8:40 AM	William	McCarty	(902) 566-5695	10352	CT1EL	Overdue 9 d 13 h 59 m
	Scheduled	US Chest [76604] - Chest	10-21-2011 9:25 AM	Troy	Beatle		10353	US1EL	Overdue 9 d 13 h 14 m
	Scheduled	US Chest [76604] - Chest	10-21-2011 10:15 AM	Yolanda	Yeesh	(555) 555-5555	10006	US1EL	Overdue 9 d 12 h 24 m
	Scheduled	US Abdominal Ltd Or Fu [76705] - Abdomen	10-21-2011 10:15 AM	Zelda	Zoom	(902) 156-5466	10005	US2EL	Overdue 9 d 12 h 24 m
	Scheduled	US Abdominal Complete [76700] - Abdomen	10-21-2011 10:45 AM	Willa	Wonder		10008	US1EL	Overdue 9 d 11 h 54 m
	Scheduled	US Scrotum Contents [76870] - Pelvis	10-21-2011 10:45 AM	Xena	Xroller		10007	US2EL	Overdue 9 d 11 h 54 m
	Scheduled	US Soft Tissue - Chest Wall [USST4] - Chest	10-21-2011 11:15 AM	William	McCarty	(902) 566-5695	10352	US1EL	Overdue 9 d 11 h 24 m
	Scheduled	US Abdominal Ltd Or Fu [76705] - Abdomen	10-21-2011 11:15 AM	Bella	Brie	(555) 555-5555	9999	US2EL	Overdue 9 d 11 h 24 m
	Scheduled	US Soft Tissue - Abdominal Wall [USST1] - Abdomen	10-21-2011 1:00 PM	Clare	Cone	(902) 587-2665	10000	US2EL	Overdue 9 d 9 h 39 m
	Scheduled	US Abdominal Complete [76700] - Abdomen	10-21-2011 1:30 PM	Danny	Briere		786	US2EL	Overdue 9 d 9 h 9 m
	Scheduled	US Soft Tissue - Chest Wall [USST4] - Chest	10-21-2011 1:40 PM	Tina	Timeless	(902) 548-8484	10011	US1EL	Overdue 9 d 8 h 59 m
	Scheduled	US Soft Tissue - Chest Wall [USST4] - Chest	10-21-2011 2:00 PM	Donna	Dolittle		10004	US2EL	Overdue 9 d 8 h 39 m
	Scheduled	US Abdominal Complete [76700] - Abdomen	10-21-2011 2:20 PM	Adele	Acorn	(902) 548-8765	9998	US1EL	Overdue 9 d 8 h 19 m
	Scheduled	US Chest [76604] - Chest	10-21-2011 3:00 PM	Bella	Brie	(555) 555-5555	9999	US1EL	Overdue 9 d 7 h 39 m
	Scheduled	US Duplex Abd Pel Retro Lmt [93976] - Abdomen	10-21-2011 3:00 PM	Artie	Houphmeyer		10240	US2EL	Overdue 9 d 7 h 39 m
	Scheduled	US Chest [76604] - Chest	10-21-2011 3:30 PM	Brenda	Walsh		10346	US2EL	Overdue 9 d 7 h 9 m
	Scheduled	XR RIBS BILAT W PA CHEST [71111] - Chest/Bilateral	10-25-2011 2:25 PM	Yolanda	Yeesh	(555) 555-5555	10006	XR1EL	Overdue 5 d 8 h 14 m
	Scheduled	CT Soft Tissue Neck W & Chest W [CT35] - Neck	10-27-2011 7:50 AM	Barney	Hubble		10369	CT1EL	Overdue 3 d 14 h 49 m
	Scheduled	XR NECK SOFT TISSUE [70360] - Neck	10-27-2011 10:00 AM	Barney	Hubble		10369	XR1EL	Overdue 3 d 12 h 39 m
	Scheduled	XR ABDOMEN AP, KUB [74000] - Abdomen	10-27-2011 1:40 PM	Yolanda	Yeesh	(555) 555-5555	10006	XR1FH	Overdue 3 d 8 h 59 m
	Scheduled	FL Arthrogram Ankle Fluoro [73615] - Ankle/joint	10-27-2011 2:00 PM	Yolanda	Yeesh	(555) 555-5555	10006	XR1EL	Overdue 3 d 8 h 39 m
	Scheduled	US Chest [76604] - Chest	10-28-2011 1:45 PM	Edna	Edward		10099	US2EL	Overdue 2 d 8 h 54 m
	Scheduled	XR Long Leg Study [76499LL] - Leg	10-28-2011 2:05 PM	Chris	Anderson		10371	XR1FH	Overdue 2 d 8 h 34 m
	Scheduled	CT Abdomen W & CTA Chest W/Wo [CT66] - Abdomen	10-28-2011 2:30 PM	Brooke	Trout		10103	CT1FH	Overdue 2 d 8 h 9 m

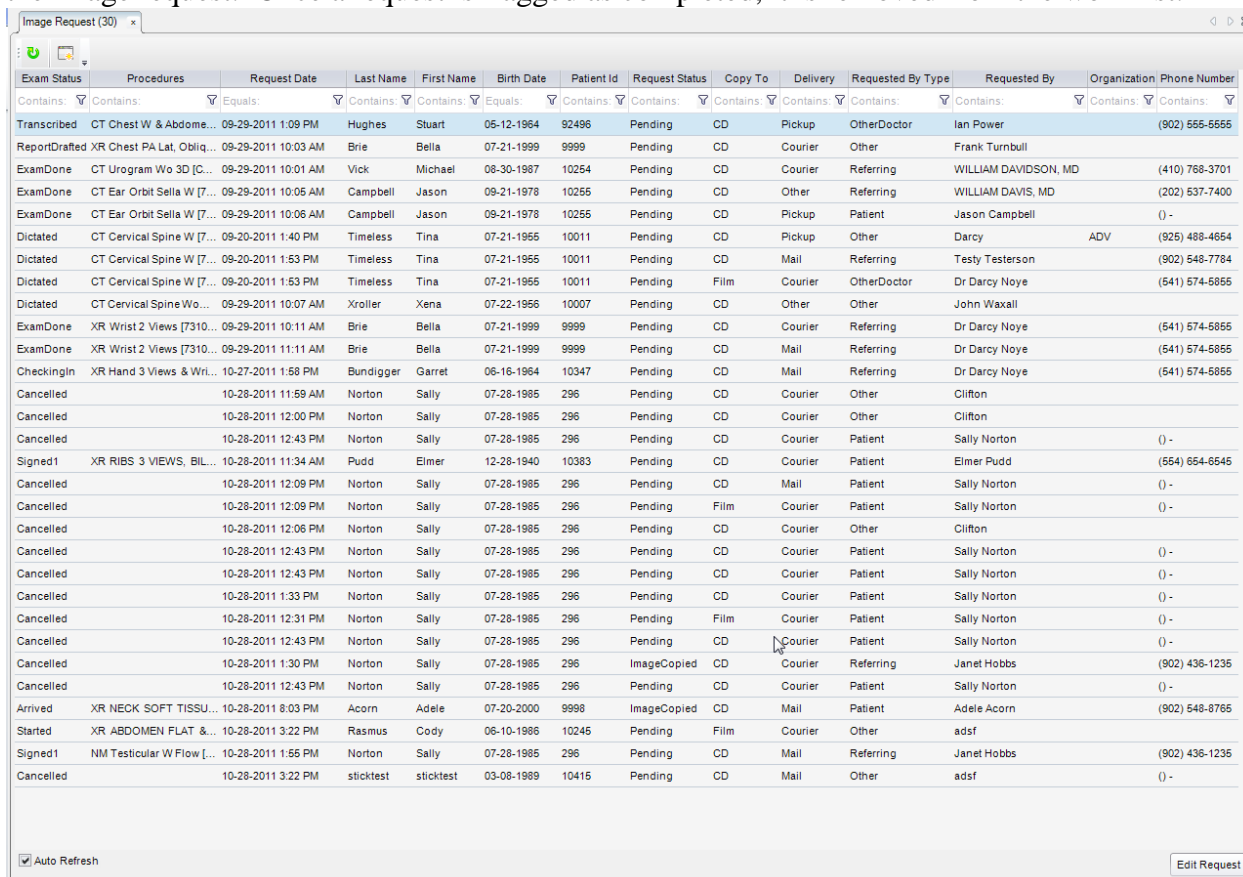
☒ Auto Refresh Reschedule

Suggested Merge (MRN 10443 to MRN 9999) 51 Rows

Figure 3.7.1 – No Show work list

### 3.8 Image Request work list

From other work lists user have the ability to enter request for images. Each request is added to the Image Request work list. The button and context menu actions from this work list are to edit the image request. Once a request is flagged as completed, it is removed from the work list.



Exam Status	Procedures	Request Date	Last Name	First Name	Birth Date	Patient Id	Request Status	Copy To	Delivery	Requested By Type	Requested By	Organization	Phone Number
Transcribed	CT Chest W & Abdom...	09-29-2011 1:09 PM	Hughes	Stuart	05-12-1964	92496	Pending	CD	Pickup	OtherDoctor	Ian Power		(902) 555-5555
ReportDrafted	XR Chest PA Lat, Obl...	09-29-2011 10:03 AM	Brie	Bella	07-21-1999	9999	Pending	CD	Courier	Other	Frank Turnbull		
ExamDone	CT Urogram Wo 3D [C...	09-29-2011 10:01 AM	Vick	Michael	08-30-1987	10254	Pending	CD	Courier	Referring	WILLIAM DAVIDSON, MD		(410) 768-3701
ExamDone	CT Ear Orbit Sella W [7...	09-29-2011 10:05 AM	Campbell	Jason	09-21-1978	10255	Pending	CD	Other	Referring	WILLIAM DAVIS, MD		(202) 537-7400
ExamDone	CT Ear Orbit Sella W [7...	09-29-2011 10:06 AM	Campbell	Jason	09-21-1978	10255	Pending	CD	Pickup	Patient	Jason Campbell		( ) -
Dictated	CT Cervical Spine W [7...	09-20-2011 1:40 PM	Timeless	Tina	07-21-1955	10011	Pending	CD	Pickup	Other	Darcy	ADV	(925) 488-4654
Dictated	CT Cervical Spine W [7...	09-20-2011 1:53 PM	Timeless	Tina	07-21-1955	10011	Pending	CD	Mail	Referring	Testy Testerson		(902) 548-7784
Dictated	CT Cervical Spine W [7...	09-20-2011 1:53 PM	Timeless	Tina	07-21-1955	10011	Pending	Film	Courier	OtherDoctor	Dr Darcy Noye		(541) 574-5855
Dictated	CT Cervical Spine Wo...	09-29-2011 10:07 AM	Xroller	Xena	07-22-1956	10007	Pending	CD	Other	Other	John Waxall		
ExamDone	XR Wrist 2 Views [7310...	09-29-2011 10:11 AM	Brie	Bella	07-21-1999	9999	Pending	CD	Courier	Referring	Dr Darcy Noye		(541) 574-5855
ExamDone	XR Wrist 2 Views [7310...	09-29-2011 11:11 AM	Brie	Bella	07-21-1999	9999	Pending	CD	Mail	Referring	Dr Darcy Noye		(541) 574-5855
CheckingIn	XR Hand 3 Views & Wri...	10-27-2011 1:58 PM	Bundigger	Garret	06-16-1964	10347	Pending	CD	Mail	Referring	Dr Darcy Noye		(541) 574-5855
Cancelled		10-28-2011 11:59 AM	Norton	Sally	07-28-1985	296	Pending	CD	Courier	Other	Clifton		
Cancelled		10-28-2011 12:00 PM	Norton	Sally	07-28-1985	296	Pending	CD	Courier	Other	Clifton		
Cancelled		10-28-2011 12:43 PM	Norton	Sally	07-28-1985	296	Pending	CD	Courier	Patient	Sally Norton		( ) -
Signed1	XR RIBS 3 VIEWS, BIL...	10-28-2011 11:34 AM	Pudd	Elmer	12-28-1940	10383	Pending	CD	Courier	Patient	Elmer Pudd		(554) 654-6545
Cancelled		10-28-2011 12:09 PM	Norton	Sally	07-28-1985	296	Pending	CD	Mail	Patient	Sally Norton		( ) -
Cancelled		10-28-2011 12:09 PM	Norton	Sally	07-28-1985	296	Pending	Film	Courier	Patient	Sally Norton		( ) -
Cancelled		10-28-2011 12:06 PM	Norton	Sally	07-28-1985	296	Pending	CD	Courier	Other	Clifton		
Cancelled		10-28-2011 12:43 PM	Norton	Sally	07-28-1985	296	Pending	CD	Courier	Patient	Sally Norton		( ) -
Cancelled		10-28-2011 12:43 PM	Norton	Sally	07-28-1985	296	Pending	CD	Courier	Patient	Sally Norton		( ) -
Cancelled		10-28-2011 1:33 PM	Norton	Sally	07-28-1985	296	Pending	CD	Courier	Patient	Sally Norton		( ) -
Cancelled		10-28-2011 12:31 PM	Norton	Sally	07-28-1985	296	Pending	Film	Courier	Patient	Sally Norton		( ) -
Cancelled		10-28-2011 12:43 PM	Norton	Sally	07-28-1985	296	Pending	CD	Courier	Patient	Sally Norton		( ) -
Cancelled		10-28-2011 1:30 PM	Norton	Sally	07-28-1985	296	ImageCopied	CD	Courier	Referring	Janet Hobbs		(902) 436-1235
Cancelled		10-28-2011 12:43 PM	Norton	Sally	07-28-1985	296	Pending	CD	Courier	Patient	Sally Norton		( ) -
Arrived	XR NECK SOFT TISSU...	10-28-2011 8:03 PM	Acorn	Adele	07-20-2000	9998	ImageCopied	CD	Mail	Patient	Adele Acorn		(902) 548-8785
Started	XR ABDOMEN FLAT &...	10-28-2011 3:22 PM	Rasmus	Cody	06-10-1986	10245	Pending	Film	Courier	Other	adsf		
Signed1	NM Testicular W Flow [...]	10-28-2011 1:55 PM	Norton	Sally	07-28-1985	296	Pending	CD	Mail	Referring	Janet Hobbs		(902) 436-1235
Cancelled		10-28-2011 3:22 PM	sticktest	sticktest	03-08-1989	10415	Pending	CD	Mail	Other	adsf		( ) -

Figure 3.8.1 – Image Request work list

#### 3.8.1 Image Request Data Window

If the image request needs to be updated after it has been requested, the user can complete the request from the exam itself on the Image Request data tab, or they can access the request from the Image Request work list, select the row and select the Edit Request button. The user has the ability to edit other data on the patient, but this main purpose of Edit Request from the Image Request work list is to update the status of the image request.

The user may also access and print the release form from with the data window.

From the radio buttons displayed the user can specify who requested the images and where the images are to be delivered. Selecting patient will populate the name and address. The referring completes the same field. If there is more than one address on file for the referrer the user will need to select it from the list provided. Other required fields are the Format and Method of delivery. If the status Picked Up is selected, the Identification Verified check box becomes required.

The screenshot displays the 'Image Request' window in the rRIS system. At the top, there are tabs for 'Patient', 'Order', 'Documentation', 'Notes / Exam Times', 'Attachments', and 'Image Request'. The 'Image Request' tab is selected. Below the tabs, there is a table titled 'Previous Requests (1)' with the following data:

Date	Req. By	Source	Format	Delivery	Status
29/09/2011 10:03:10 AM -03:00	Frank Turnbull	Other	CD	Courier	Pending

Below the table, there are two main sections: 'Requested By' and 'Deliver To / Pickup By'. Each section has radio buttons for 'Patient', 'Referring', 'Other Doctor', and 'Other'. The 'Referring' option is selected in both sections. In the 'Requested By' section, the 'Doctor' field is empty, 'Location' is empty, 'Name' is 'Frank Turnbull', 'Organization' is empty, and 'Phone Number' is '() -'. In the 'Deliver To / Pickup By' section, the 'Doctor' field is 'Noye, Darcy T', 'Location' is '14 Workdown Dr., 1, Worktown, MD, 45742', 'Prefix' is 'Dr', 'First Name' is 'Darcy', 'Last Name' is 'Noye', 'Suffix' is empty, 'Address' is '154 Hangdown Dr.', 'City' is 'Hangtown', 'State' is 'MD', 'Country' is 'United States', 'ZipCode' is '45742', and 'Phone Number' is '(541) 574-5855'. There are also fields for 'Format' (set to 'CD') and 'Notes' (empty). Below these are 'Delivery Instructions' with 'Method' set to 'Courier' and 'Instructions' (empty). At the bottom, there is an 'Image Request Status' section with radio buttons for 'Pending', 'Cancelled', 'Copied', 'Sent', 'Picked Up', and a checkbox for 'Identification Verified'. The 'Pending' option is selected. A 'Release Form' button is located to the right of the status section. At the bottom right of the window are 'Save' and 'Close' buttons.

Figure 3.8.1.1 – Image Request data window

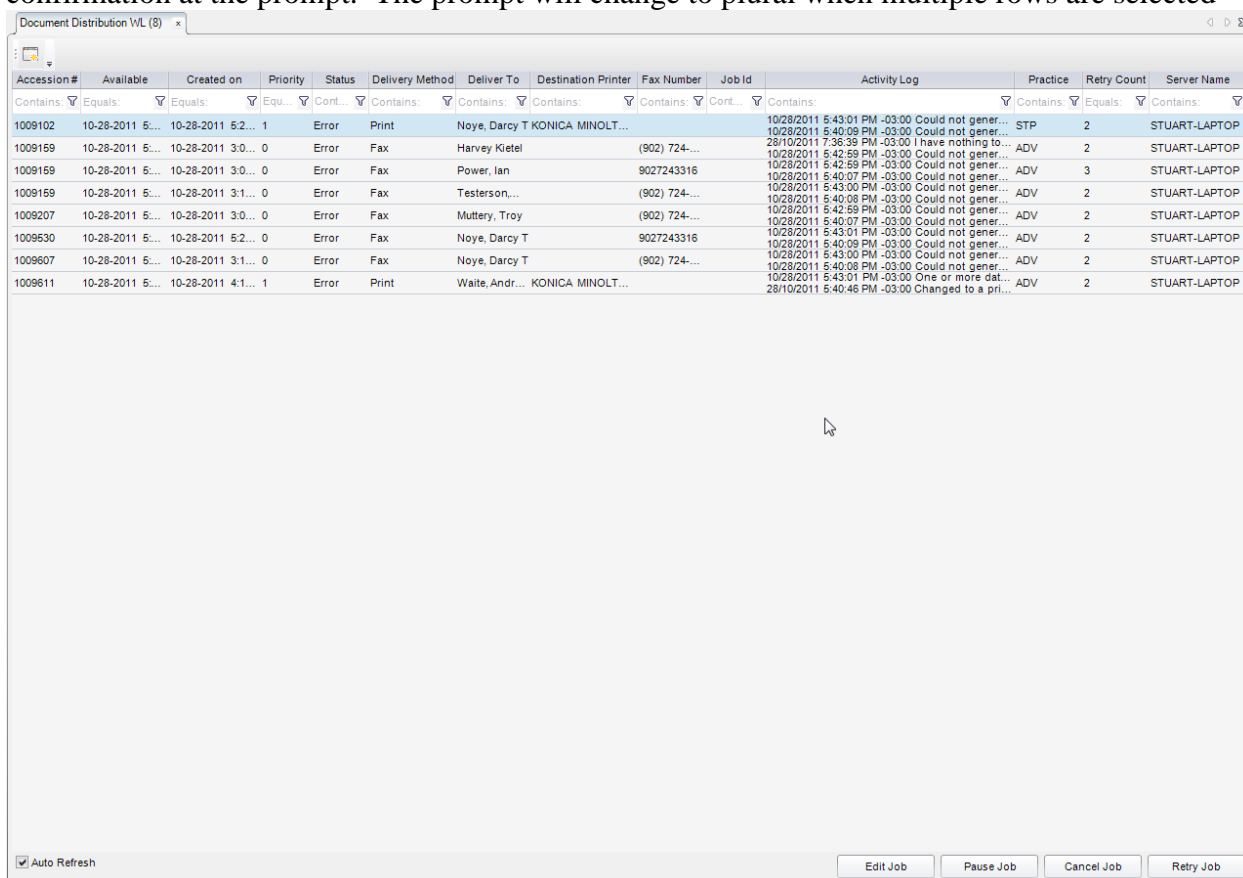
### 3.9 Document Distribution work list

Reports documents that have been marked for distribution are added to the Document Distribution work list. Button actions from this work list are to Edit, Pause, Cancel, and Retry jobs. There is no context menu from this work list.

The Retry button is only available if the status is not Pending. All other buttons are always available. Cancelling a job will set the status to Cancelled and the item will drop off the work list.

Pause, Cancel, and Retry all prompt for confirmation.

All buttons allow multi-select. If a combination of Pending and non-pending jobs are selected, the Retry button will be unavailable. The action will apply to all selected rows after confirmation at the prompt. The prompt will change to plural when multiple rows are selected



Accession #	Available	Created on	Priority	Status	Delivery Method	Deliver To	Destination Printer	Fax Number	Job Id	Activity Log	Practice	Retry Count	Server Name
1009102	10-28-2011 5...	10-28-2011 5:2...	1	Error	Print	Noye, Darcy T	KONICA MINOLT...			10/28/2011 5:43:01 PM -03:00 Could not gener...	STP	2	STUART-LAPTOP
1009159	10-28-2011 5...	10-28-2011 3:0...	0	Error	Fax	Harvey Kietel		(902) 724-...		10/28/2011 5:40:09 PM -03:00 Could not gener...	ADV	2	STUART-LAPTOP
1009159	10-28-2011 5...	10-28-2011 3:0...	0	Error	Fax	Power, Ian		9027243316		28/10/2011 7:36:38 PM -03:00 I have nothing to...	ADV	3	STUART-LAPTOP
1009159	10-28-2011 5...	10-28-2011 3:1...	0	Error	Fax	Testerson,...		(902) 724-...		10/28/2011 5:42:59 PM -03:00 Could not gener...	ADV	2	STUART-LAPTOP
1009207	10-28-2011 5...	10-28-2011 3:0...	0	Error	Fax	Muttry, Troy		(902) 724-...		10/28/2011 5:40:07 PM -03:00 Could not gener...	ADV	2	STUART-LAPTOP
1009530	10-28-2011 5...	10-28-2011 5:2...	0	Error	Fax	Noye, Darcy T		9027243316		10/28/2011 5:43:00 PM -03:00 Could not gener...	ADV	2	STUART-LAPTOP
1009607	10-28-2011 5...	10-28-2011 3:1...	0	Error	Fax	Noye, Darcy T		(902) 724-...		10/28/2011 5:40:08 PM -03:00 Could not gener...	ADV	2	STUART-LAPTOP
1009611	10-28-2011 5...	10-28-2011 4:1...	1	Error	Print	Waite, Andr...	KONICA MINOLT...			10/28/2011 5:40:08 PM -03:00 Could not gener...	ADV	2	STUART-LAPTOP
										10/28/2011 5:43:01 PM -03:00 One or more dat...			
										28/10/2011 5:40:46 PM -03:00 Changed to a pri...			

☒ Auto Refresh

Edit Job Pause Job Cancel Job Retry Job

Figure 3.9.1 – Document Distribution work list

### 3.10 Patient Folder

The user has complete system functions on patient records (if they have permissions) from the patient folder.

Depending on the status of the exam will depend on what buttons become enabled at the bottom of the work list.

The button actions available from within this window are from left to right in figure below Sign Reports, Create/Edit Reports, Dictate, Perform Exam, Registration, Schedule, Reschedule, Edit Order, Mark Order.

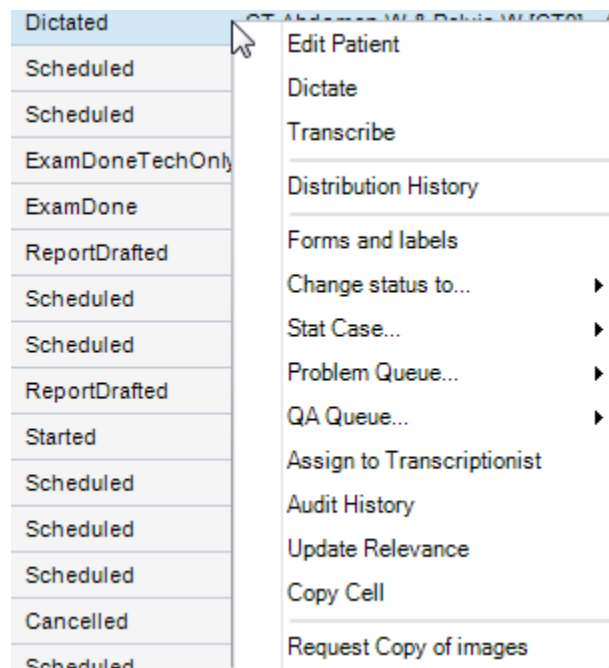
Patient Search | Patient: Yolanda Yeesh (47) x

Flags	Nuggets	Status	Procedures	Scheduled Date	Accession #	Dictated Date	Transcribed Date	Signed
Contains:	Contains:	Contains:	Contains:	Equals:	Contains:	Equals:	Equals:	Equals:
		Scheduled	XR KNEE 1-2 VIEWS, UNILAT [73560] - Knee/Right	10-31-2011 3:45 PM	1009680			
		Scheduled	XR Hand 2 Views & Finger 2 Views, Unilat [RD20] - Hand/Left	10-31-2011 3:40 PM	1009679			
		Scheduled	XR RIBS 3 VIEWS, BILAT [71110] - Chest/Bilateral	10-30-2011 9:13 PM	1009664			
		Cancelled		10-27-2011 3:30 PM	1009570			
		Cancelled		10-27-2011 2:30 PM	1009568			
		Scheduled	FL Arthrogram Ankle Fluoro [73615] - Ankle joint	10-27-2011 2:00 PM	1009571			
		Scheduled	XR ABDOMEN AP, KUB [74000] - Abdomen	10-27-2011 1:40 PM	1009572			
		Cancelled		10-27-2011 1:00 PM	1009569			
		Dictated	CT Abdomen W & Pelvis W [CT9] - Abdomen	10-26-2011 1:00 PM	1009556	10-27-2011 11:01 AM		
		Scheduled	XR RIBS BILAT W PA CHEST [71111] - Chest/Bilateral	10-25-2011 2:25 PM	1009553			
		Scheduled	US Chest [76604] - Chest	10-21-2011 10:15 AM	1009535			
		ExamDoneTechOnly	DX Appendicular Skeleton [77081]	10-13-2011 8:15 AM	1009510			
		ExamDone	CT Ear Orbit Sella W/Wo [70482] - Head/Left	10-04-2011 11:15 AM	1009488			
		ReportDrafted	XR ORBITS 4 VIEWS [70200] - Head	09-30-2011 1:50 PM	1009479	10-04-2011 10:47 AM	10-04-2011 11:03 AM	
		Scheduled	CTA Abd Aorta Runoff W/Wo [75635] - Abdomen	09-26-2011 10:50 AM	1009452			
		Scheduled	CT Lumbar Spine Wo [72131] - Lumbar spine	09-20-2011 2:00 PM	1009438			
		ReportDrafted	XR Long Leg Study [76499LL] - Leg	09-19-2011 11:40 AM	1009432	09-27-2011 2:05 PM	09-27-2011 2:16 PM	
		Started	XR UPPER EXTREMITY INFANT 2 VIEWS [73092]	09-16-2011 10:05 AM	1009430			
		Scheduled	US Breast Uni Or Bii [76645] - Breast/Left	09-09-2011 3:05 PM	1009394			
		Scheduled	MA DIGITAL MAMMO DIAG UNI & US BREAST [G0206/US] - Breast	09-09-2011 2:35 PM	1009395			
		Scheduled	XR Abdomen AP, Obi W Cone [74010] - Abdomen	09-08-2011 1:55 PM	1009376			
		Cancelled		09-08-2011 1:45 PM	1009375			
		Scheduled	XR Chest PA Lat, Obliques [71022] - Chest	08-31-2011 7:15 PM	1009349			
		Scheduled	CT Chest W & Abdomen W/Wo [CT42] - Chest	08-31-2011 6:25 PM	1009348			
		Scheduled	CT Chest W & Abdomen W [CT4] - Chest	08-22-2011 1:00 PM	1009277			
		Scheduled	US OB 1ST TRI TA 1 FETUS -LESS 14 WKS [76801]	08-15-2011 1:40 PM	1009252			
		Scheduled	US Soft Tissue - Chest Wall [USST4] - Chest	08-12-2011 2:30 PM	1009243			
		Arrived	XR CHEST PA LAT [71020] - Chest	08-12-2011 2:25 PM	1009241			
		Arrived	CT Chest W & Abdomen W [CT4] - Chest	08-12-2011 2:25 PM	1009242			
		Cancelled		08-11-2011 1:00 PM	1009228			
		ReportDrafted	XR ABDOMEN AP, KUB [74000] - Abdomen	08-10-2011 9:00 AM	1009207	09-27-2011 2:16 PM	09-27-2011 2:16 PM	
		Dictated	CT Chest W & Abdomen W/Wo [CT42] - Chest	08-10-2011 8:15 AM	1009206	10-27-2011 10:45 AM		

Auto Refresh | Sign Reports | Create/Edit Reports | Dictate | Perform Exam | **Registration** | Schedule | Reschedule | Edit Order | Mark Order

**Figure 3.10.1 – Patient Folder work list**

The context menu also has many options available. Below is an example screenshot of the context menu. Again depending on the status of the exam and allowable permissions to the user, will depend on what is available from the context menu.



**3.10.2 – Patient Folder context menu. In this example the exam status is dictated.**

### 3.10.1 Data Nuggets

Data nuggets are available only from the patient folder. If the patient record has a specific nugget available it will be in an enabled state, otherwise it will be disabled (grayed out). Each nugget has an assigned shortcut key, which is displayed when hovering the mouse pointer over the nugget in a tooltip. The nugget can be closed by selecting the same Icon from the Nuggets column again for that record, selecting the shortcut key for that nugget (provided focus is on that patient record row), or by pressing the X in the upper right corner of the nugget window. All of the Nuggets will have the patient name age and gender in the upper left, and procedure, procedure code and body part in the lower right corner of the nugget.

Summary – Selecting the Summary Data nugget will open the Summary view of the patient



Summary

Yeesh, Yolanda 55y3m(F) CURRENT

Phone #: (555) 555-5555 English

Mobile #: (555) 555-5553

Work #: (555) 555-5554

Email: yy@why.com

Mailing Address: 132 My St.  
Mycity, Mystate

XR ORBITS 4 VIEWS [70200] - Head

**Figure 3.10.1.1 – Summary Data Nugget**

Notes – displays the patient and study (order) notes

Notes

Yeesh, Yolanda 55y3m(F) CURRENT

Patient Notes

10-29-11 dtn - Patient notes are captured in this text box.

Study Notes

11-01-11 dtn - Order notes for Yolanda

CT Abdomen W Pelvis W CTA Chest W/Wo [...]

**Figure 3.10.1.2 – Notes Data Nugget**

Documents – Attached (scanned) documents. All documents scanned for the patient are in list box at top and can be viewed by selecting it from the list. Document notes can be viewed. Document type can be changed. Document can be printed.

Documents 88

Yeesh, Yolanda 55y3m(F) Type: \*Unknown 08-02-2011 CURRENT

**Unknown**

Name: DOLITTLE, DONNA  
MRN: 10004  
Darcy Noye

Sex: M  
DOS: 7/21/2011  
DOB: 7/22/1999

Name: DOLITTLE, DONNA  
MRN: 10004  
Encounter ID: 27062

**Patient Demographics**

Scheduler: darcyn Date/ Time Scheduled: 7/21/2011

SSN

Home Phone

Work Phone


Other Phone

Referral Source

Patient Notes

Patient Alerts

**Exam Information**

Barcode Accession #	Procedure ID/ Description	Exam Time	Body Part / Laterality	Modifier	Pre-Cert#
 1009114	US71*US xLwr Ext Art Duplex Uni W SP	5:40 AM			

Chief Complaint

Patient History (Duration, Trauma, Surgery)

Tech Notes

Primary Tech

not entering any notes

Secondary Tech

**Referring Information:**

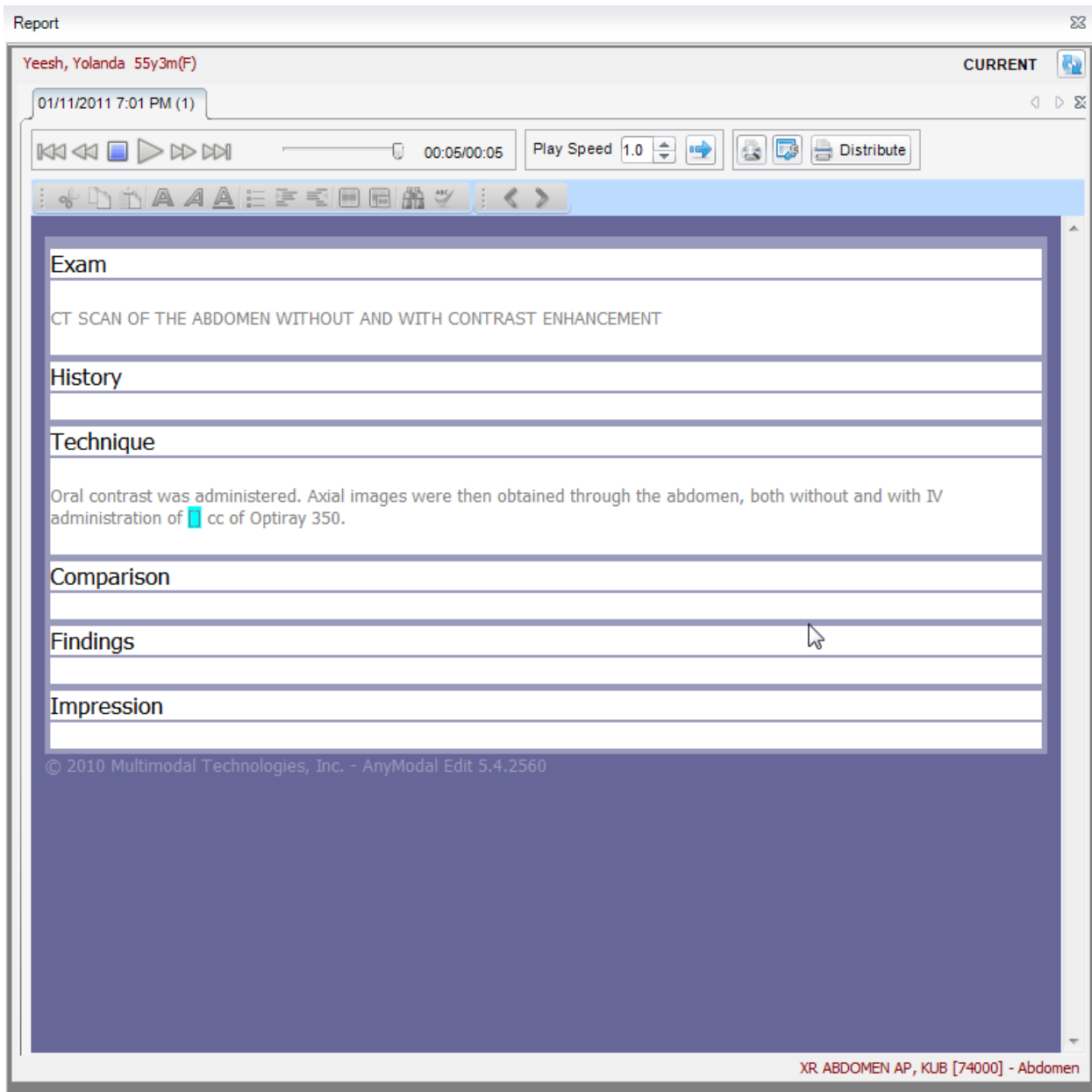
Referring Physician:	Phone:	Fax:	Address:
Darcy Noye	(541) 574-5855	(555) 555-6316	

Procedure Performed:	DOS	Location
RD10*XR Femur, Bilat 2 Views	7/21/2011	

XR RIBS BILAT W PA CHEST [71111] - Chest/Bilateral

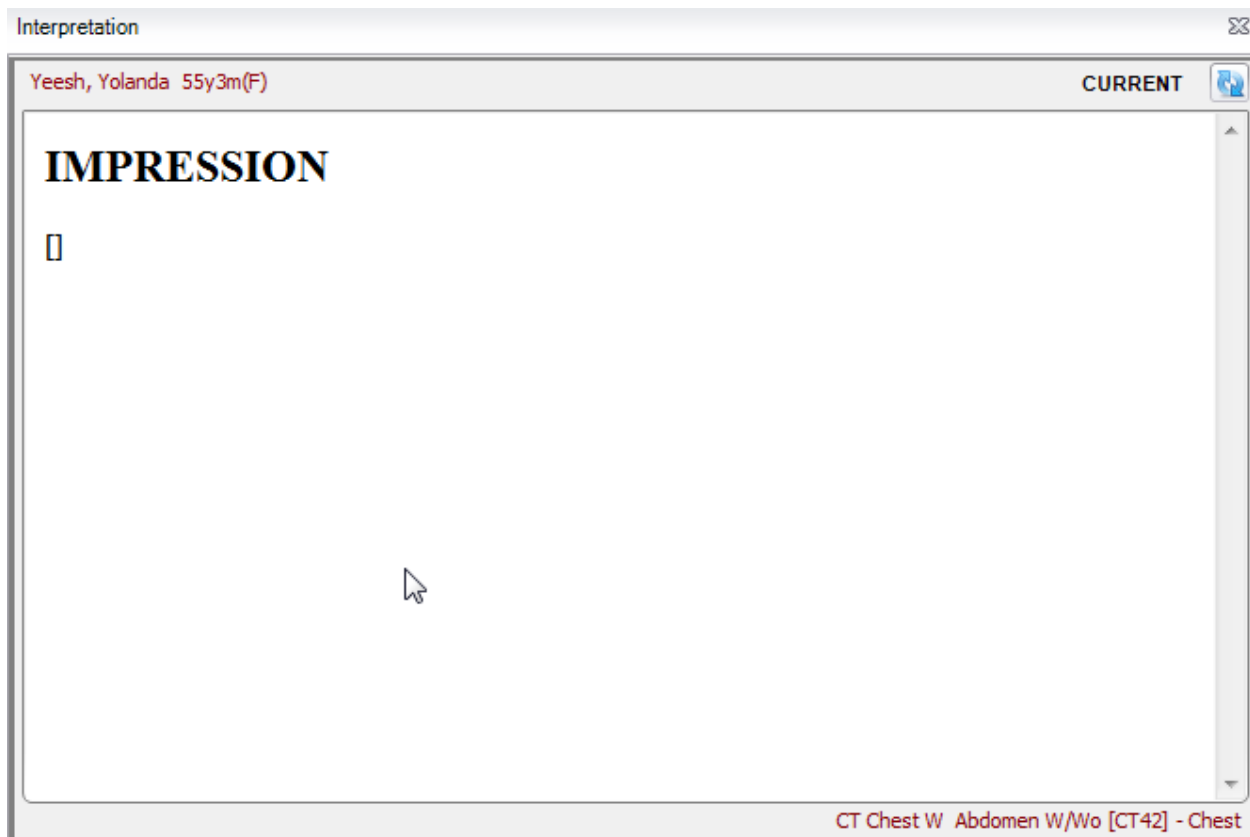
**Figure 3.10.1.3 – Document nugget (sample only)**

Report Nugget –Patients diagnostic report. User can load and play back audio, distribute the report, view report history and preview report



**Figure 3.10.1.4 – Report Nugget**

Interpretation – Open data nugget of the interpretation



**Figure 3.10.1.5 – Interpretation Nugget**

### **3.10.2 Audit History**

The audit history is available from the context menu of the patient folder. It is also available from the context menus of the following work lists. Unknown Referring, IVT, No Show, Orders to Schedule, Cancelled Orders, Confirmation, Closed Rooms Reschedule, Reception, Technologist, Pending Dictating, Dictated by Date, Suspended, Pending Signature, Reports Drafted, and Pending Review.

The audit history gives the user important information of the history of the patients procedure. Filters on Patients Order, and Study can be applied. The user can also include system retrievals.

Selecting a row will present the details in the form below.

The audit history list can be sorted and filtered. The standard system wide context menu from the column header is available.

## RADNET, Inc. – rRIS Release Notes

Patient Search | Patient: Yolanda Yeesh (47) | Audit (Yolanda Yeesh) x

Filters  
☐ Patient ☐ Order ☒ Study ☐ Include Retrievals

date	description	notes	user id	accession number	order number	status
Equals: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾
01/11/2011 10:44:09 PM	Order Updated	Visit updated	darcyn			
31/10/2011 3:50:18 PM	Study Scheduled	Visit updated	darcyn			
31/10/2011 3:50:18 PM	Study Scheduled	Visit updated	darcyn			
29/10/2011 9:14:56 PM	Order Submitted	Visit updated	darcyn			
29/10/2011 9:14:56 PM	Order Submitted	Visit updated	darcyn			
29/10/2011 9:14:56 PM	Order Submitted	Patient updated	darcyn			
28/10/2011 2:30:36 PM	Study Updated	Visit updated	Terry			
28/10/2011 2:30:09 PM	Order Updated	Visit updated	Terry			
27/10/2011 3:09:26 PM	Order Updated	Visit updated	Ian			
27/10/2011 3:09:26 PM	Order Updated	Patient updated	Ian			
27/10/2011 1:37:17 PM	Study Scheduled	Visit updated	darcyn			
27/10/2011 1:37:17 PM	Study Scheduled	Patient updated	darcyn			
27/10/2011 1:00:49 PM	Study Updated	Study updated	darcyn	1009488	1009750	ExamDone
27/10/2011 1:00:49 PM	Study Updated	Visit updated	darcyn			
27/10/2011 1:00:49 PM	Study Updated	Patient updated	darcyn			
27/10/2011 1:00:47 PM	Study Completed	Set Study Status to ExamDone	darcyn	1009488	1009750	ExamDone
27/10/2011 1:00:46 PM	Study Updated	Study updated	darcyn	1009488	1009750	Started
27/10/2011 1:00:46 PM	Study Updated	Patient updated	darcyn			
27/10/2011 1:00:41 PM	UI_StudyStarted	Set Study Status to Started	darcyn	1009488	1009750	Started
27/10/2011 1:00:41 PM	Study Updated	Study updated	darcyn	1009488	1009750	Started

Save Close

**Figure 3.10.2.1 – Audit History**

## 4. Attachments

Attachments can be added to an order from different areas of the application. From New

Appointment, Schedule Order and Registration data windows there is a paperclip icon

Located on the procedure picker row.



The screenshot shows a table with columns: Studies, Duration, Room, and Scheduled Date. The first row contains: 'XR Chest Min 4 Views(Chest, ) x', '5', 'XR1EL', and '11-01-2011 9:50 AM'. To the right of the 'Scheduled Date' column is a paperclip icon, which is highlighted with a red box. Below the table is a button that says 'Click here to add another study'.

**Figure 4.1 – Displaying the location to access the attachment viewer work list**

The screenshot shows the 'Attachment Viewer' window. It has a toolbar with buttons for 'Scan', 'Import', 'Verbal', and a folder icon. There is a checkbox labeled 'Show all documents for patient'. Below the toolbar is a table with the following columns: Attached, Type, Pages, Level, Scheduled, Acc #, Procedures, Status, Attached By, and Notes. The table contains six rows of data, all dated '08-30-2011'. The 'Attached By' column for all rows shows 'darcyn'. At the bottom right of the window is a 'Close' button.

Attached	Type	Pages	Level	Scheduled	Acc #	Procedures	Status	Attached By	Notes
Equals: ∨	Contains: ∨	Equals: ∨	Contains: ∨	Equals: ∨	Contains: ∨	Contains: ∨	Contains: ∨	Contains: ∨	No... ∨
08-30-2011	Insurance C...	2 Patient						darcyn	
08-30-2011	Other	3 Patient						darcyn	
08-30-2011	New Type	3 Patient						darcyn	
08-30-2011	Insurance C...	2 Patient						darcyn	
08-30-2011	Other	1 Patient						darcyn	
08-30-2011	New Type	1 Patient						darcyn	

**Figure 4.2 – Attachment Viewer window**

The user can select the Scan button to scan and attach a new document or script. The Import button allows the user attach a pre-existing file saved on the local system or shard drive. The

Verbal button allows the user to create verbal or amended order document. The last Icon is to access the advanced properties for scanning.

When the scan or attachment is complete, the Attached Document window will automatically open. Also double clicking on a row in the attachment viewer will also open this window.

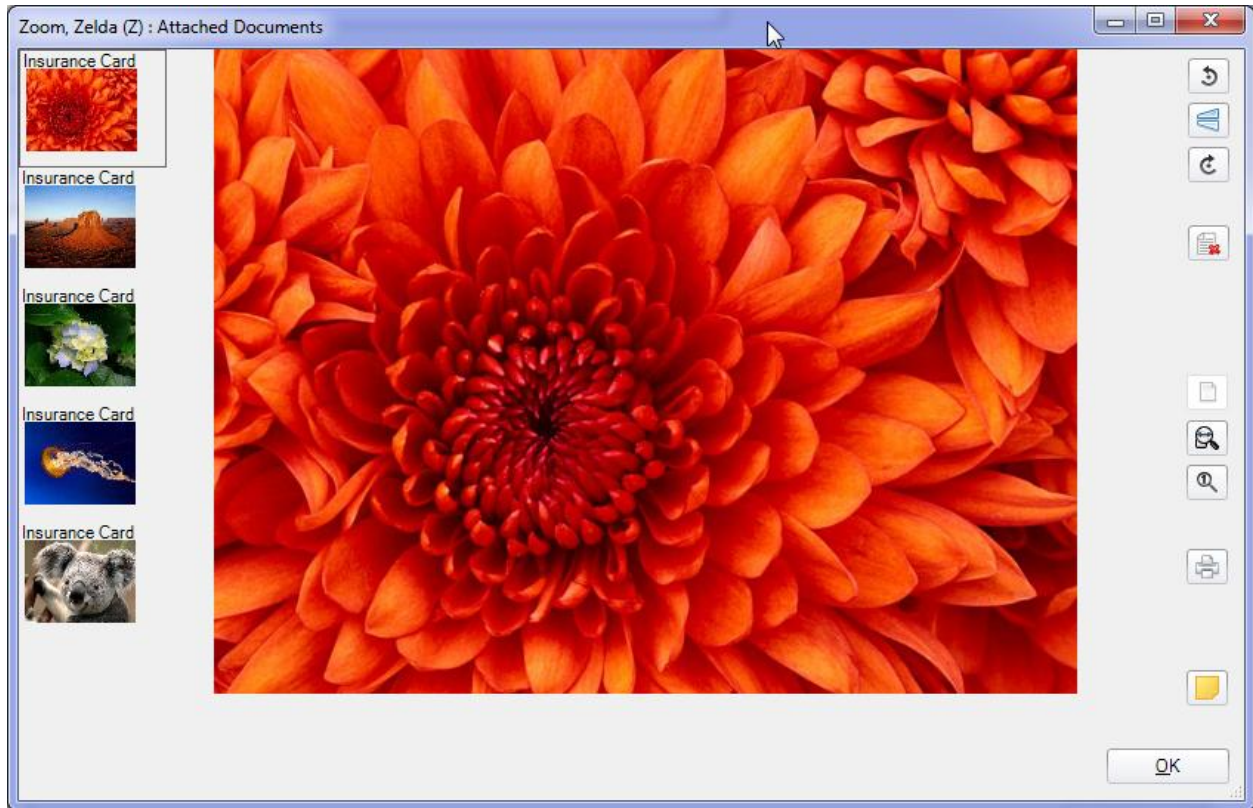


Figure 4.3 – Attachment Documents window

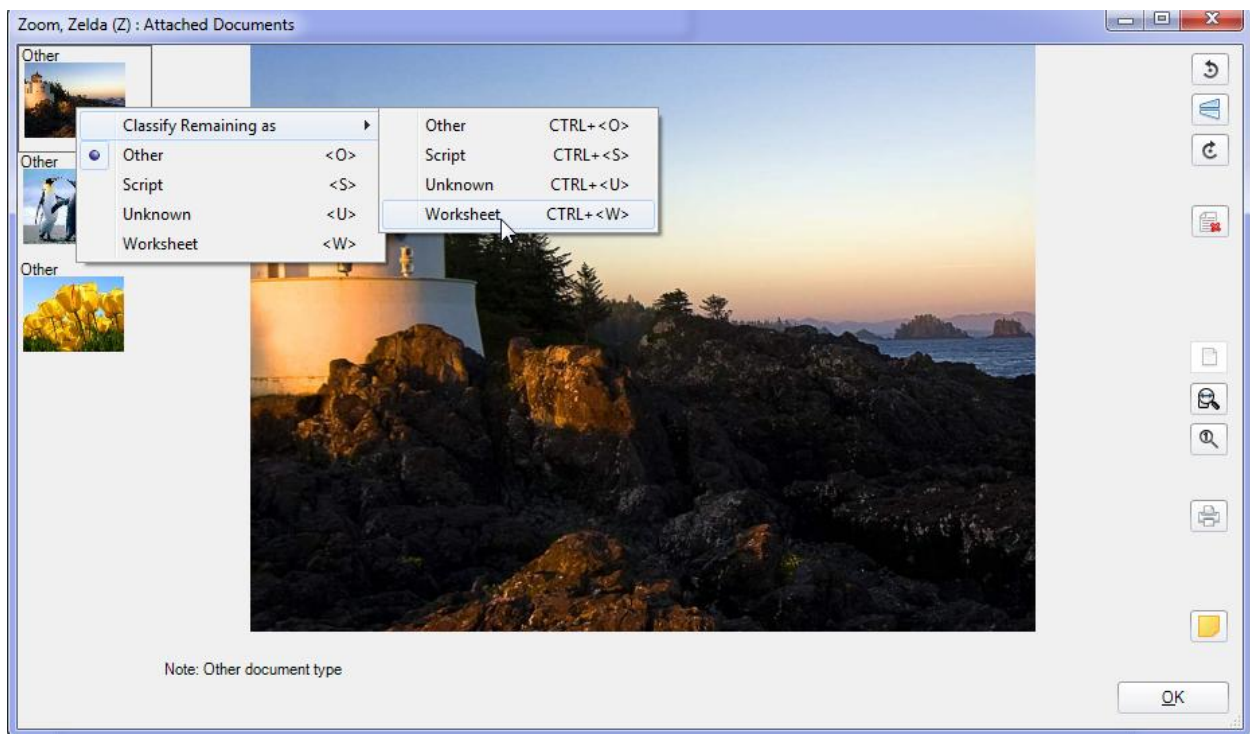
## **4.1 Change Document Type**

In the example above the document type is insurance card. The user has the ability to assign or change the document type after the document has been scanned. Additionally the user has the option to change the type of the document selected and also the documents that follow the currently selected document.

In the view attachment window, thumbnails are displayed on the left side. A right click on a thumbnail will open the list displayed in Figure 4.4. The first menu item “Classify Remaining as” expands the menu to show the available document types. The user can change the currently selected document as well as the all of the documents that follow the document in thumbnail view below it.

The document types available from this context menu are only those of the same document type of the scanned or imported image. For example, if the document scanned has a document type that is at the Patient Level, the context menu will only show active document types at Patient Level.

The order of the thumbnails can be changed by dragging and dropping.



**Figure 4.4 – Attached Documents window showing context menu.**



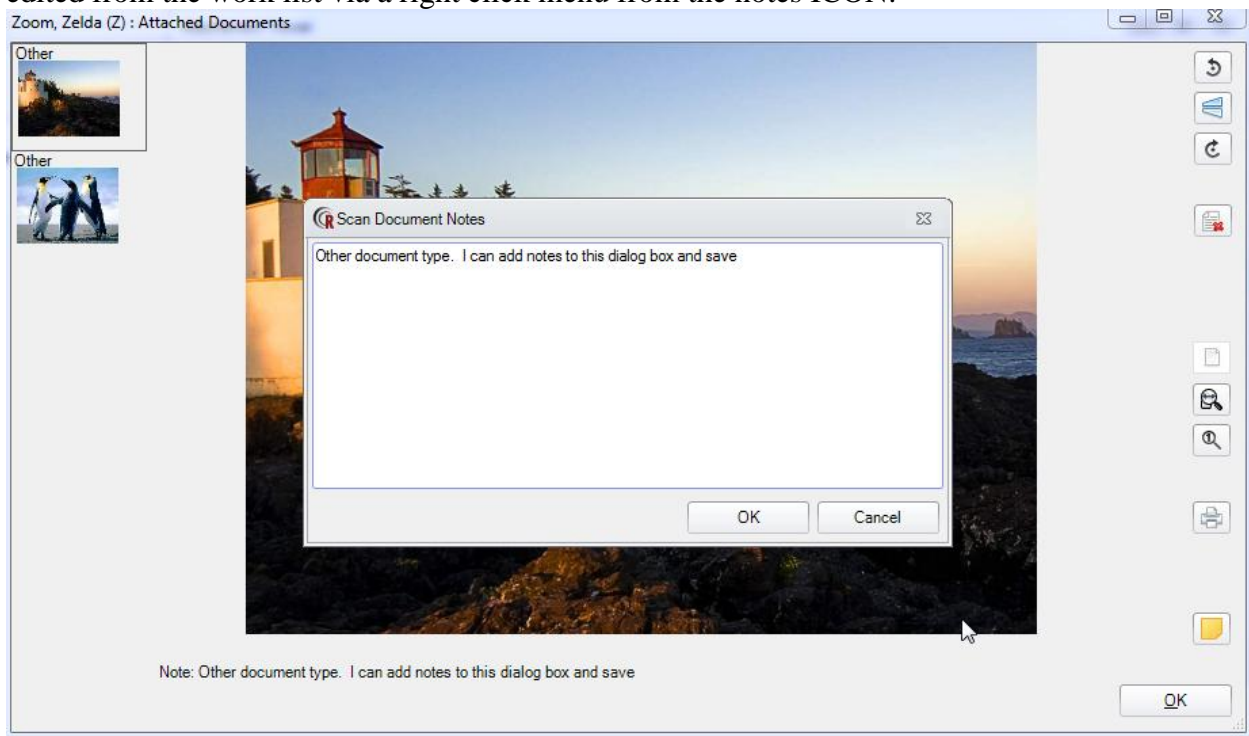
Changing the document type as shown in Figure 4.4 a new record is created and a new row will display in the Attachment Viewer. The original attachment “other” has 3 pages. One of those pages is changed to Type “worksheet”, creating a new row for “worksheet” document with 1 page and “other” has the remaining.

Re-classifying an attachment back to its original classification, it will join the attachment document entry for any other of that type that were scanned or attached at the same time.

Also from Figure 4.4 you will notice that the document types may have shortcut keys assigned. To change the document type for a single document, you only need to select the shortcut key itself. For example, to change the document type to Unclassified, highlight the thumbnail and select **U** on the keyboard. To change the document type for the currently selected thumbnail and the documents below it, you must also select <Ctrl> in addition to the shortcut key.

## 4.2 Attach Document Notes

Looking at figure 4.2.1, you will notice a yellow “notebook” Icon in the lower right above the OK button. Selecting this Icon will open the Scan Document Notes window. Entering notes in the above window, selecting OK will save the note to the attachment and is displayed in the lower left when viewing the attachment. The note ICON will display in a new column titled “notes” on the Attachment Viewer work list (see figure 4.2). The scan document notes can be edited from the work list via a right click menu from the notes ICON.



**Figure 4.2.1 – Adding document notes.**

### 4.3 Straighten Tool

When viewing the scanned image or attachment the user can right click on an image and choose **Straighten**, next they are asked to underline a word in the image. The user has option to apply or cancel changes. When they choose Apply, the image will be rotated making the line they drew strait. An undo option is also available from context menu or keyboard shortcut <Ctrl>+ Z.

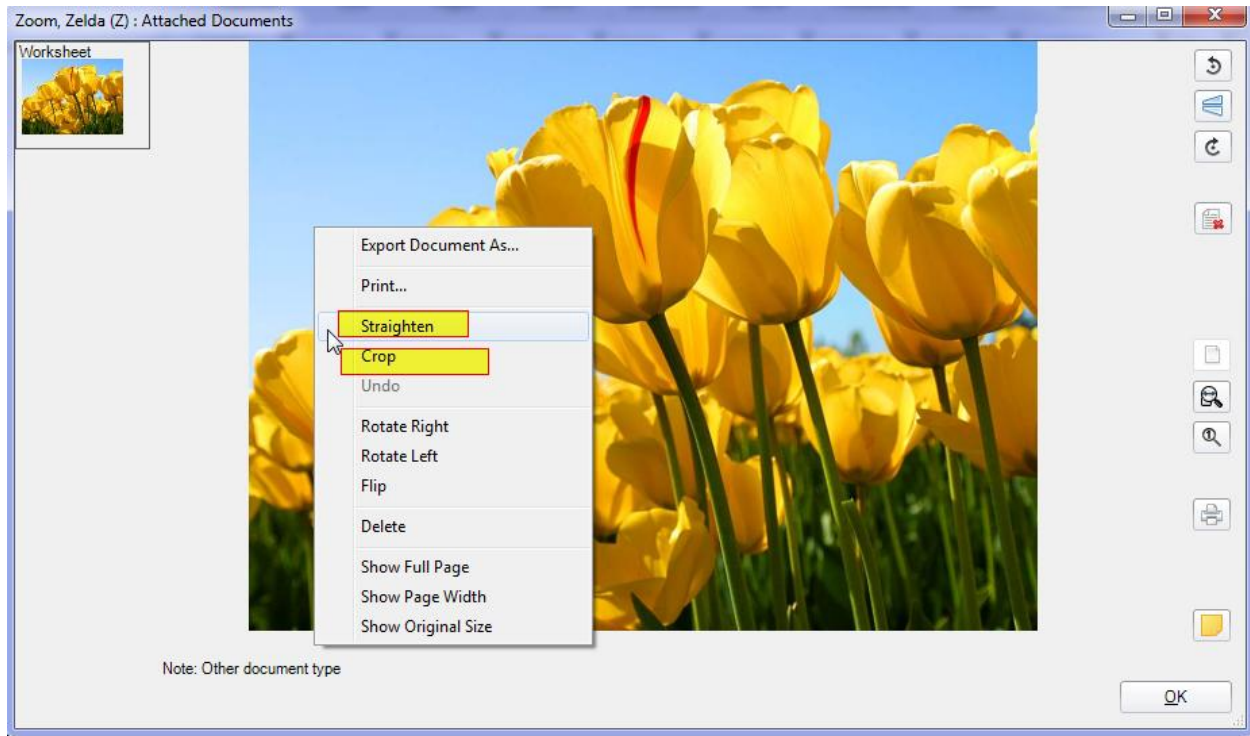


Figure 4.3.1 – Context menu showing Straighten and Crop

## 4.4 Cropping Tool

Also from the context menu an image cropping feature has been added. The user selects the context menu option, click and drags the desired area, and select Apply or Cancel. The cropping can be reverted back by using the same Undo options for Straighten.

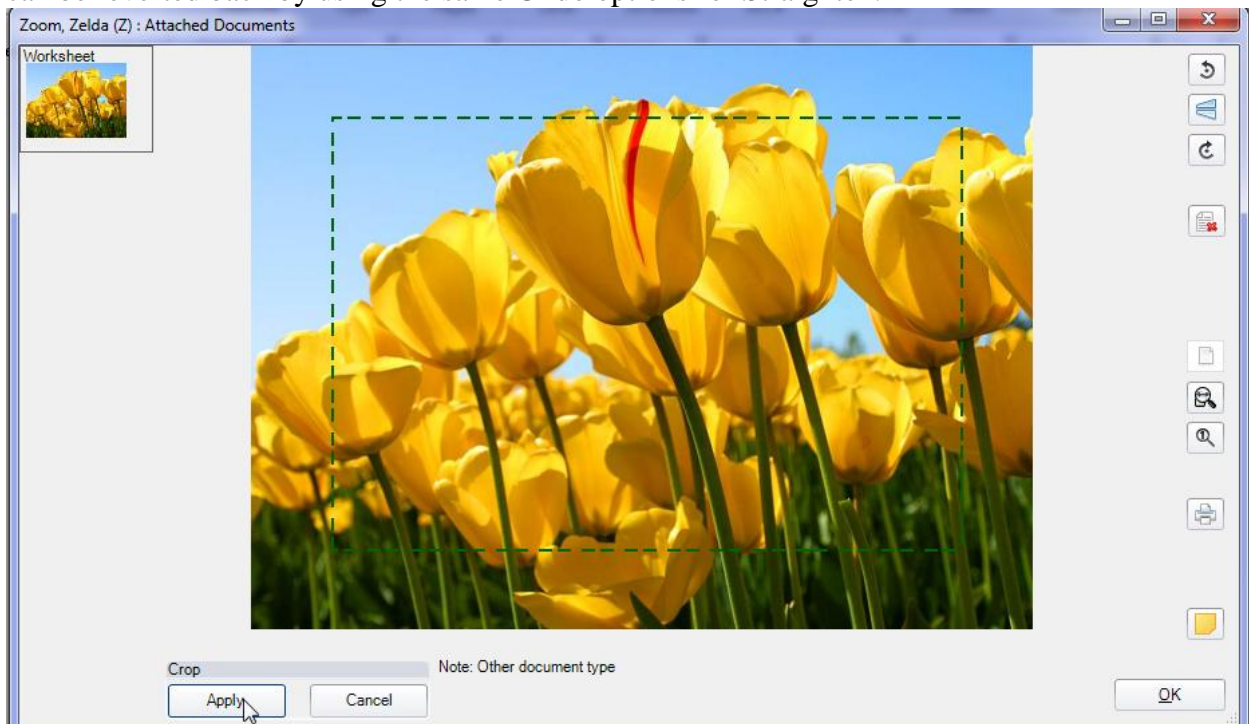
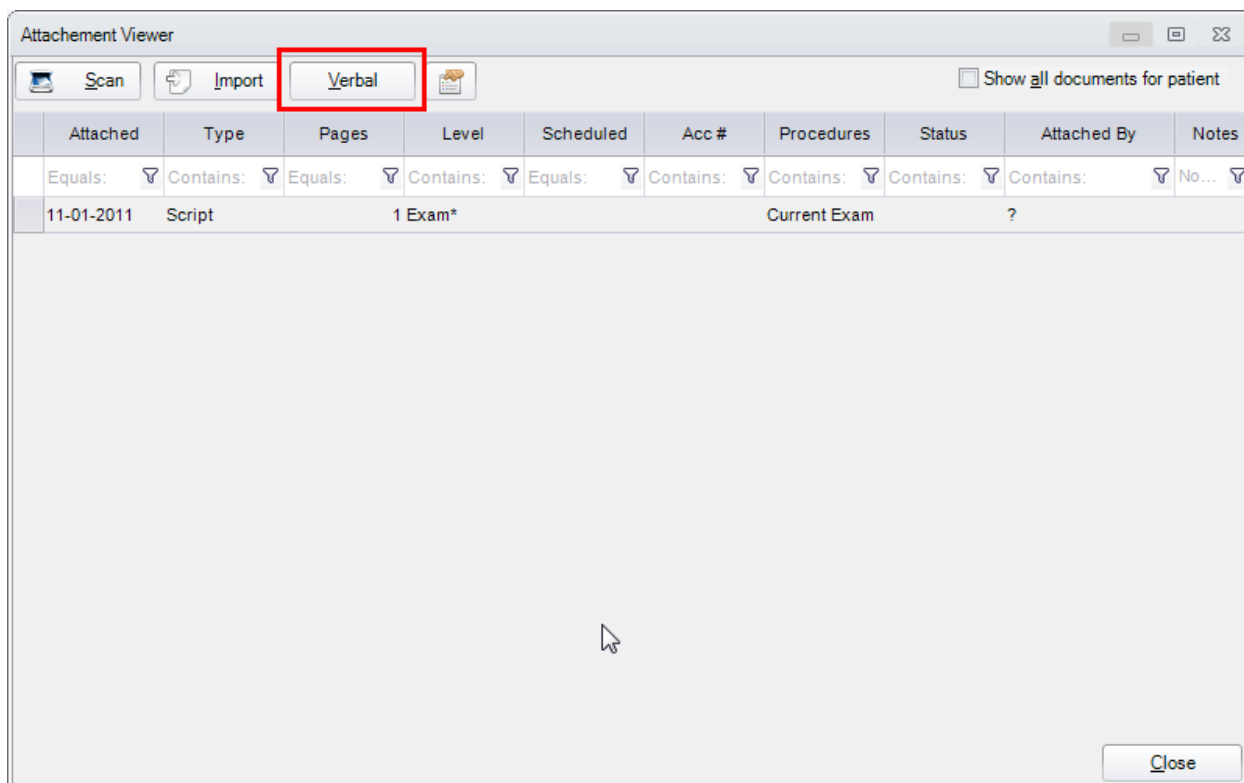


Figure 4.4.1 – Cropping attachment

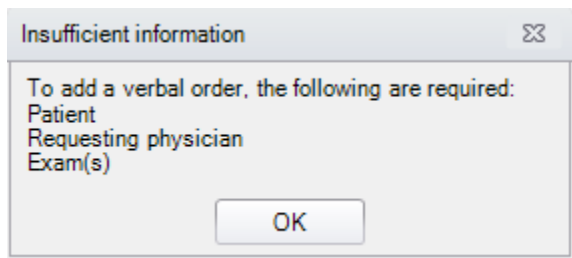
## 4.5 Verbal Order

Patients may arrive at registration / walk-in without a written order from a referring physician, or perhaps the tech needs to change it. Since all downstream users may want or need to see the verbal order, it has been created as an attached document.

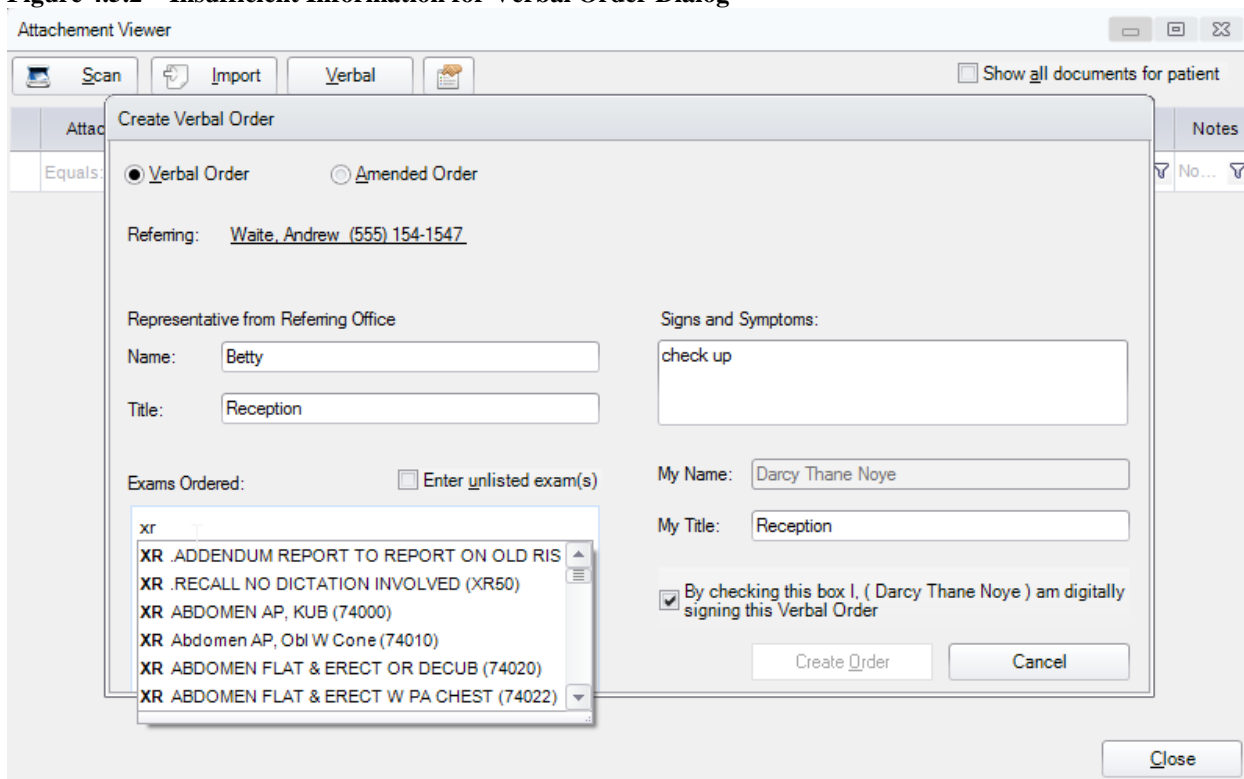


**Figure 4.5.1 – Access to Verbal Order window**

A Verbal Order is created by selecting the Verbal Order button from the attachment viewer. Selecting the Verbal Order button will open the Verbal Order window. Before the Verbal Order window opens, it checks for the patients data. If there is insufficient information a pop up window informs the user of the missing information.



**Figure 4.5.2 – Insufficient Information for Verbal Order Dialog**



**Figure 4.5.3 Creating Verbal Order**

Selecting the Create Order button will render the data and save it as an attachment. The document is attached to the current order with a scan type of script. The regular attachment viewer will allow the order to be viewed.

stick, stick : Attached Documents

Script

### Verbal Order Form

Created on 11-01-2011

Patient Name stick stick Phone #

Patient MRN 10461

Date of Birth 07-31-2011

---

Ordering Physician Andrew Waite Physician Phone # (555) 154-1547

Representative from Referring Physician Office:

Name Betty

Title Reception

---

Exams Ordered

XR ABDOMEN AP, KUB (74000)

---

Reasons for Exam (Signs and Symptoms)

check up

---

Team Member taking Verbal Order

Name Darcy Thane Noye

Title Reception

OK

**Figure 4.5.2 – Verbal Order saved as attachment**

## 4.6 Amended Order

Utilizing the Verbal Order feature, Amended Order will also have a fill-in form type of feature that is stored as a scanned document. A radio button has been added to the verbal order screen to allow it to be switched to an amended order. Upon selecting the Amended Order radio button the label for “Signs and Symptoms” (see figure 4.5.3 above) changes to “Comments” (See figure 4.6.1 below). The rest of the workflow is the same as Verbal Order. Of course the rendered document is altered to say “Amended order” at the top, and it also has the comments field, and does not have a signs and symptoms page.

The screenshot shows the 'Attachement Viewer' application window. A 'Create Verbal Order' dialog box is open, featuring a 'Verbal' tab. The dialog includes the following elements:

- Referring:** Muttery, Troy (902) 548-7464
- Representative from Referring Office:**
  - Name:** Betty
  - Title:** Reception
- Comments:** check up
- Exams Changed to:** ☒ Enter unlisted exam(s). Below this is a text box with the instruction: 'Selecting check box changes this text box to free form'.
- My Name:** Darcy Thane Noye
- My Title:** Reception
- ☒ By checking this box I, ( Darcy Thane Noye ) am digitally signing this Verbal Order
- Buttons:** 'Create Order', 'Cancel', and 'Close'.

Figure 4.6.1 – Creating Amended Order



Script

---

**Amended Order Form** Created on 11-01-2011

---

Patient Name Buella Bree Phone  
Patient MRN 10443  
Date of Birth 07-21-1999

---

Ordering Physician Troy Muttery Physician Phone # (902) 548-7464

Representative from Referring Physician Office:  
Name Betty  
Title Reception

---

Exam(s) changed to:  
Selecting check box changes this text box to free form

---

Comments  
check up

---

Team Member taking Amended Order  
Name Darcy Thane Noye  
Title Reception

OK

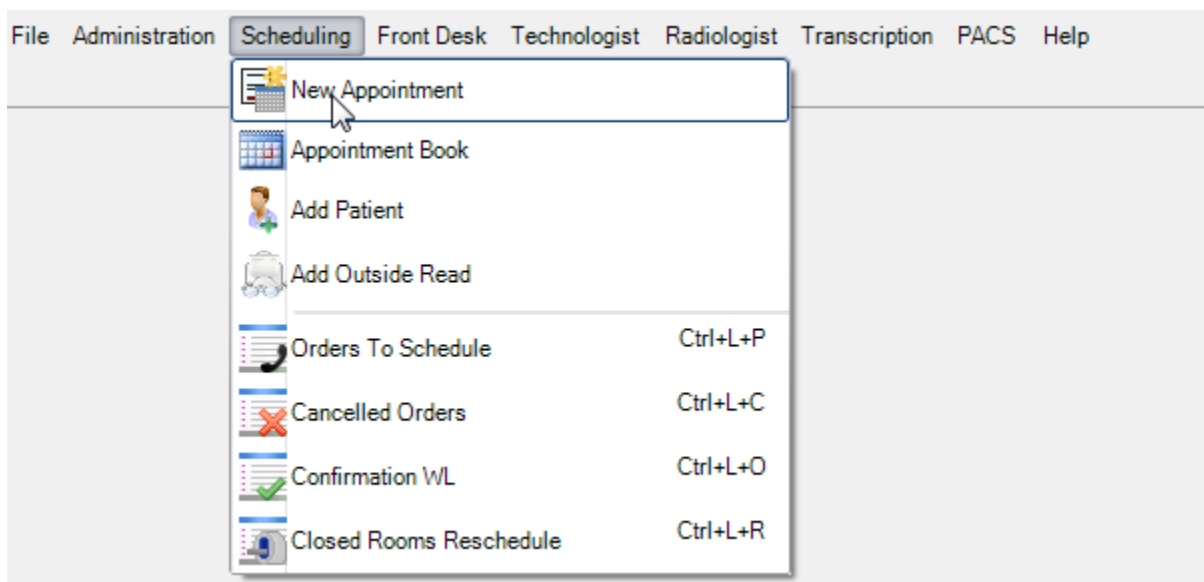
**Figure 4.6.2 – Amended Order saved as attachment**

## **5. Scheduling**

The scheduling role consists of numerous work lists and data windows. The following is a summary of each.

### **5.1 New Appointment**

The New Appointment data window is accessed under the Scheduling menu.



**Figure 5.1 – Accessing New Appointment**

The New Appointment data window is used to create new orders or scheduled appointments. Within the data window numerous pieces of information is captured about the patient, patient demographics, order details, procedure to be order/scheduled, scanned docs or attachments, image requests and also an overall review of the procedure details.


#### **5.1.1 Patient Tab**

New or pre-existing patients can be added. A search function can be used via the search Icon, or by entering patient details (first / last name or birth date) and with the focus in the last name field, hitting the enter key. Required fields on the tab are the patients first and last name, gender, and birth date. The patient MRN is a unique system generated ID.

Schedule Order (Yeesh Yolanda) x

Patient | Contacts / Demographics | Order | Schedule | Image Request (0) | Review

**General Information**

Prefix:   MRN:  ☐ Claustrophobic

First Name:  Gender:

Last Name:  Birth Date:

Middle:  Suffix:  Place of Birth:

**Contact Information**

Address 1:  Zip:   Primary Phone:

Address 2:  Country:  ☐ No Alternate Phone

City:  Work Phone:

State:  Email:  Other Phone:

Preferred Contact Method:  Preferred Delivery Method:

**Patient Origin**

Primary Language:

Education Level:

Religion:

Race:

Ethnicity:

**Patient Notes**

10-29-11 dtn - Patient notes are captured in this text box.

**Figure 5.1.1 – New Appointment – Patient tab**

## Patient Search

Selecting the patient search Icon spawns a new window. If data entered is the first name, last name or birth date fields, this data is passed to the patient search window and a list of patients matching the criteria entered will be displayed. The patient search window can be opened by selecting the Icon or entering a value and hitting the enter key while the focus is in the last name field. Select the check box “Search Other Variations” will complete a more extensive search. Patients name “starts with” Search first, then a “sounds like” search as well as search for birthdate variations (‘12/01/1970’, ‘01/12/1970’)

**General Information**

Prefix:  MRN:

First Name:

Last Name:

Middle:

**Contact Information**

Address 1:

Address 2:

City:

State:

Preferred Contact Method:

**Patient Origin**

Primary Language:

Education Level:

Religion:

Race:

Ethnicity:

**Search Criteria**

First Name:  Birth Date:

Last Name:  Phone #:

☐ Search Other Variations

MRN:

First Name	Last Name	Middle Name	Birth Date	MRN	Issuer	Gender	Address	City
Yolanda	Yeesh		07-21-1966	10006	system	F		
Elmer	Yeesh		06-13-1944	10184	system	M		

**Figure 5.1.2 – Patient Search**

## 5.1.2 Contacts/Demographics

This tab captures emergency contact information, patient demographics and people who are granted access for obtaining medical records on behalf of the patient. Starting with Responsible Party and Emergency Contact, the list box for relation contains a preconfigured list of possible relations for the responsible party. Selecting Self, will auto populate all the fields, provided the corresponding field on Patient Tab has the data completed. Spouse and child will complete all fields with the exception of First Name. The responsible part data is not required at this point, but will be required at the time of registration.

The next section on this tab called Demographics at Encounter captures patient's specifics such as height and weight. BMI is auto calculated based on the values entered for height and weight. The pregnant flag is active for female and unknown patients. Blood pressure, smoking status and if educational resources were requested / provided may also be captured.

Schedule Order \* x

Patient | **Contacts / Demographics** | Order | Schedule | Image Request (0) | Review

**Responsible Party**

Relation: Self State: Zip: Home Phone: () -

First Name: Last Name: Parent Address 1: Address 2: City:

**Emergency Contact**

Relation: State: Zip: Home Phone: () -

First Name: Last Name: Address 1: Address 2: City:

**Demographics at Encounter**

Height: ft in Is Pregnant Weight: lbs BMI: Blood Pressure: / Smoking Status: Requested Educational Resources Provided Educational Resources

**Approved Medical Record Access**

Relation	Name	Expiry	Details
----------	------	--------	---------

Previous Edit Add Remove

**Figure 5.1.2 - Contacts / Demographics tab**

Approved medical access is a visual confirmation for staff informing who has access to the patient's medical records. Those approved for a patient's medical access may be added, edited and removed from this list. The previous button will show those with expired access.

The relation to patient, first and last name, addresses / phone number, expiry date for access, and details are captured in this window. Again in the relation list box, selecting spouse or child will populate the last name and address / phone number fields. If the expiry date field is left blank, this person will remain on this approved list indefinitely.

**Responsible Party**

Relation: Self State: Mystate  
 First Name: Yolanda Zip:   
 Last Name: Yeesh Home Phone: (555) 555-5555  
 Address 1: 132 My St.  
 Address 2:   
 City: Mycity

**Emergency Contact**

Relation: Spouse State: Mystate  
 First Name: Yuri Zip:   
 Last Name: Yeesh Home Phone: (555) 555-5555  
 Address 1: 132 My St.  
 Address 2:   
 City: Mycity

**Demographics at Encounter**

Height: 5ft 5in ☐ Is Pregnant  
 Weight: 150 lbs  
 BMI: 24.96  
 Blood Pressure: 125 / 78  
 Smoking Status: Never Smoked  
☒ Requested Educational Resources  
☒ Provided Educational Resources

**Approved Medical Record Access**

Relation	Name	Expiry	Details
Spouse	Yeesh, Yuri	12-31-2011	The patient's husband is granted medical reco...
Child	Yeesh, Yana	11-30-2011	The patient's daughter has access until end of...

**Add Medical Record Access**

Relation: Child Expires on: 11-30-2011  
 First Name: Yana Phone Number: (555) 555-5555  
 Last Name: Yeesh Fax Number: () -  
 Address 1: 132 My St.  
 Address 2:   
 City: Mycity  
 State: Mystate  
 Zip:   
 Details: The patient's daughter has access until end of November  
 OK Cancel

**Figure 5.1.3 – Add Medical Record Access**

## 5.1.3 Order Tab

The order tab captures Referring Details, Chief Complaint, Preferred Location, Order Flags, Insurance Policy Details, and Order Notes. The referring field keeps a history of all referrers captured in previous orders for this patient and will be available for selection from the down arrow on the referrer's field. If the referrer has one address associated, it will auto populate in the Visited At: field. If multiple addresses exist for the referrer selected, the user must select one of the possible values for that referrer. If the referrer of the Order has not been associated with this patient before, the user may search for the referrer.

Patient | Contacts / Demographics | **Order** | Schedule | Image Request (0) | Review

**Referring Details**

Referring: Noye, Darcy T Visited at: 154 Workdown Dr., 1, Worktown, MD, 45742  
☒ Direct Referral (Pre-Auth Program)

CC Physicians:

**Chief Complaint**

**Preferred Location**

Practice: Advanced Radiology STAT Exam STAT Read STAT Precert Class: Outpatient Sedation:

Site: Transportation Required: Special Accommodations:

**Insurance Policies**

Note	Carrier Code	Carrier Name	Policy Number	Group Name	Group Number	Phone	Priority
------	--------------	--------------	---------------	------------	--------------	-------	----------

Manage Policies Verification REQUIRED ☐ Insurance verified Amount to collect:

**OrderNotes**

11-01-11 dtn -

Save as Order Schedule Close

**Figure 5.1.3.1 – Order Tab**

The referring search window can be opened via the search Icon located to the right of the Referring field, or the name may be entered in the Referring text field and tabbing out will also open the Referring search window. If no match is found for the referrer a new “Unknown Referring Physician” can be created. Unknown referrers created are added to the Unknown Referring Work List, which is discussed later in this document. The CC Physicians and visit details work the same as the Referring Details and Visit.

You will notice below the Referring list box a check box for Direct Referral as well as (Pre-Auth Program). When a Referring Physician has this flag, the box is added to the New Appointment / Schedule Order data windows when this referrer is selected.

Similar to the Direct Referral Program flag, the Pre-Auth Program is a new flag added to Personnel that becomes active when the resource type Referring Physician flag is checked. If the ordering referring physician selected has the Pre-Auth Program flag, it will display directly under the Referring box on the order tab. The Referrer may or may not have the Direct Referral flag.

The screenshot shows a window titled "Referring Search". It contains a "Search Criteria" section with input fields for "First Name", "Last Name" (containing "noye"), "City", "Phone #", and "NPI". There are "Search", "Reset", and "Create New" buttons. Below the search criteria is a table with columns "Last Name", "First Name", and "Summary". The table contains one row for "Noye, Darcy" with a summary of a "Direct Referral Program" including user, gender, email, and cell phone information. At the bottom, it says "1 Rows" and has "Select" and "Close" buttons.

Last Name	First Name	Summary
Noye	Darcy	Direct Referral Program User: darcyn Gender: M darcy.noye@radnet.com Cell: (902) 439-6517

**Figure 5.1.3.2 – Referring Search accessed from Order tab of New Appointment window**

Next to the Referring Details is Chief Complaint. This is a free form text box.

Preferred location captures the Practice and Site requested.

Patient order flags that may be captured are STAT Exam, STAT Read, STAT Precert, Class of patient, Sedation type, Transportation Required and Special Accommodations. STAT Exam, Read and Precert are flags that will appear as an Icon in the flag columns of work lists.

Depending on the work list being viewed, there may also be a column. For example, the Reception work list has columns for Exam Stat and Read Stat. Patient Class code will appear in the Patient Type column of work lists. Sedation code will appear in the Sedation column of the Technologist work list. When the Transportation Required check box is selected the associated text box will become enabled. This is free form text box. If this flag is selected the patients address and primary phone number will become required fields. Selecting the Special Accommodations check box enables the associated list box and free form text box. A flag will appear in the Flags column.



Insurance policies section will display the insurance policies selected for use with this order. Selecting the Manage Policies button will open the window in Figure below

**Patient Insurance Policies**

Policies:

Use	carrier	policy number	group number	group name	Expired
<input type="checkbox"/>	(01406201) MOBLEY & BROWN	21544851	2517		<input type="checkbox"/>
<input type="checkbox"/>	(01400046) CHASE CHASE & HAMMERSCHLAG	45741251	8574		<input type="checkbox"/>

[Click here to add a new row](#)

☐ Show Inactive Policies

**Policy Holder Information**

Relation to patient:  Address 1:

First Name:  Address 2:

Last Name:  City:

Birth Date:  State:

Gender:  Zip:

**Injury Details**

Claim Number:  ☒ Unknown Claim Number

Injury Date:  Source:

City:  Employer:

State:

Adjustor First Name:  Adjustor Phone Number:

Adjustor Last Name:

OK Cancel

**Figure 5.1.3.3 – Patient Insurance Policies window**

Carriers can be entered manually or by using the search function. To enable the search Icon the user must first select a row under the Carrier column or entering a partial name and hitting the enter key will also open the search window. If the user knows the Carrier code or phone number, this also can be entered and upon hitting the Enter key, the Carrier name will populate the Carrier column. For each carrier selected for the patient a policy number must also be entered. The policy number mask may have a mandatory mask. In the event that the policy mask is wrong and the patient insurance policy does not fit the mask, the user can prefix the policy with a “+” character to bypass the policy mask. Any study with an insurance policy that begins with a “+” will be flagged as a billing exception and held until the “+” is removed.

For each carrier added the Policy Holder Information details are to be completed. The only required fields are the patients first and last name. As like other areas of the application the list box Relation to patient has values such as Self that will auto populate the remaining fields based on the data existing for the patient. Select spouse or child will complete all field with the exception of first name.

Some carriers will require that the Injury details are captured. If this is standard for the carrier, the Claim number is a must. If at the time the order is being placed the claim number is not known, the user may temporarily bypass it by selecting the Unknown Claim check box.

The adjustors first and last name as well as phone number can also be captured in this section.

## 5.1.4 Schedule Tab

The schedule tab captures the order the procedure belongs to, the procedure to be completed, a daily calendar view which can be used to pick the time for the exam and Icon to open the attachment viewer. The information added can be saved as an order or as a scheduled exam. Depending on the procedure selected, the Laterality may be required. If the time(s) selected are available the scheduled date will have a green outline. If the time slot(s) are locked by another user on the system, the outline of the scheduled date will be red. Once the exam is scheduled the time will no longer display in the search.

**Figure 5.1.4.1 – Schedule tab**

The user has the option to select the calendar view (calendar Icon next the scheduled date on procedure picker row) and select the date and time the exam is to be completed or they can use the advanced search criteria on the right of the data window. Selecting the search button will populate the rooms and time available on the advanced tab. The summary tab will give an overview of the times available based on morning, afternoon and evening.

Summary

Advanced

EL		FH		LU	
Mon, 10-31-2011		Mon, 10-31-2011		Mon, 10-31-2011	
Afternoon	3:00 PM	Afternoon	3:00 PM	Afternoon	3:00 PM
Mid Afternoon	3:30 PM	Mid Afternoon	3:30 PM	Mid Afternoon	3:30 PM
Evening	6:00 PM				
Tue, 11-01-2011		Tue, 11-01-2011		Tue, 11-01-2011	
Morning	7:45 AM	Morning	7:45 AM	Morning	7:45 AM
Mid Morning	10:30 AM	Mid Morning	10:30 AM	Mid Morning	10:30 AM
Afternoon	1:00 PM	Afternoon	1:00 PM	Afternoon	1:00 PM
Mid Afternoon	3:30 PM	Mid Afternoon	3:30 PM	Mid Afternoon	3:30 PM
Wed, 11-02-2011		Wed, 11-02-2011		Wed, 11-02-2011	
Morning	7:45 AM	Morning	7:45 AM	Morning	7:45 AM
Mid Morning	10:30 AM	Mid Morning	10:30 AM	Mid Morning	10:30 AM
Afternoon	1:00 PM	Afternoon	1:00 PM	Afternoon	1:00 PM
Mid Afternoon	3:30 PM	Mid Afternoon	3:30 PM	Mid Afternoon	3:30 PM
Thu, 11-03-2011		Thu, 11-03-2011		Thu, 11-03-2011	
Morning	7:45 AM	Morning	7:45 AM	Morning	7:45 AM
Mid Morning	10:30 AM	Mid Morning	10:30 AM	Mid Morning	10:30 AM
Afternoon	1:00 PM	Afternoon	1:00 PM	Afternoon	1:00 PM
Mid Afternoon	3:30 PM	Mid Afternoon	3:30 PM	Mid Afternoon	3:30 PM

**Figure 5.1.4.2 – Summary tab of advanced search**

The paper clip Icon located on the procedure picker row will open the attachment view window. Attachments are covered in Section 4 of this document.

## 5.1.5 Image Request Tab

The Image Request tab is a work list view displaying the request for images for the current scheduled procedure. When creating a new appointment, the image requests will only be saved if the procedure is scheduled. If the procedure is saved as an order a message prompt will inform the user that if saved as order all image requests will be removed. From this tab the user may add, edit or remove edit requests. The user may also print the release form. Creating Image requests will be covered later in this document.

Study	Date	Req. By	Source	Format	Delivery	Status
RD19*XR Hand 2 Views & Wris...	31/10/2011 3:34:14 PM -03:00	Bella Brie	Patient	CD	Courier	New

**Figure 5.1.5.1 – Image Request tab**

### 5.1.6 Review Tab

The review tab is a convenience tab that allows the user to get an overall view of the order that is to be placed. The patient name, procedures, procedure codes, the site address where the procedure is to take place, and the prep instructions.

## RADNET, Inc. – rRIS Release Notes

The screenshot shows the 'Review' tab of the RADNET rRIS interface. At the top, there is a navigation bar with tabs: Patient, Contacts / Demographics, Order[A], Order[B], Schedule, Image Request (0), and Review (selected). Below the navigation bar, the main content area is divided into two sections. The top section contains patient information and exam details. The bottom section contains a 'Prep Instructions' area with a checkbox for 'Prep Instructions Reviewed'.

Patient: Yolanda Yeesh is scheduled for a  
XR Hand 2 Views & Finger 2 Views, UNILAT on: Monday October 31, 2011 at 3:30 PM for: 5 minutes at: Eldersburg  
- (73120) RADIOLOGIC EXAMINATION, HAND; 2 VIEWS  
XR KNEE 1-2 VIEWS, UNILAT on: Monday October 31, 2011 at 3:35 PM for: 5 minutes at: Eldersburg  
- (73560) RADIOLOGIC EXAMINATION, KNEE; 1 OR 2 VIEWS

Address:  
Eldersburg  
1430 Progress Way  
Suite 108  
Eldersburg MD 21784

Prep Instructions: ☐ Prep Instructions Reviewed

- General XR  
- General CT

1 of 2: General XR  
All children must be accompanied by an adult other than the patient

2 of 2: General CT  
Weight limit 450 lbs at most sites. No solids 2 hrs prior

Have you ever had an iodine injection before?  
- If so have you had any problems with the injection?  
-- (If so consult technologist)

Asthma?  
- (If so, tell patient to bring their inhaler)?

Ask if Diabetic? If so, what meds do they take?  
If pt takes oral meds for diabetes refer to memo date 7-10-08 and follow necessary instructions.

For Oral Prep please see memo dated 10-14-2008 and follow protocol

Ask pt about pregnancy?

If patient is scheduling both a CT and MR WITH  
contrast and answers NO to all screening questions then the procedures may be scheduled on the same day. If the patient answers YES to any of the questions then the procedures  
MUST be scheduled on separate days and the MR must be scheduled first.

All children must be accompanied by an adult other than the patient

Save as Order Schedule Close

Figure 5.1.6.1 – Review tab

## 5.2 Orders to Schedule work list

Figure 5.2.1 shows the Orders to schedule work list. This work list contains a complete list of orders in the rRIS system to be processed to scheduled studies. Actions that may be completed from the buttons in lower right of this work list are to schedule the order, Registration to “check in” or “arrive” the patient, Edit Order and Mark Order. The context menu provides a few more options to the user. Schedule, Mark Order, Edit orders are also options as well as the ability to cancel the order, access patient folder, an audit history of the order, and copy the contents of a particular cell.

Last Name	First Name	Status	Procedures	Order Date	Referring	MRN	Filler Order Number	Primary Phone Number	City	Carrier	PreCert Requir...	Patient Type
Cont...	Yolanda	OrderSigned	XR Bone Length Study [77073]	10-29-2011 9:10 PM	Troy Muttery	10006	1009893	(555) 555-5555	Mycity			O
Yeesh	Yolanda	OrderSigned	XR RIBS 3 VIEWS, BILAT [71110] - Chest	10-29-2011 8:10 PM	Darcy Noye	10006	1009892	(555) 555-5555	Mycity			O
Fish	Frankie	OrderSigned	US Chest [76604] - Chest	10-29-2011 10:23 AM	Darcy Noye	10429	1009890					O
Fish	Frankie	OrderSigned	XR ABDOMEN FLAT & ERECT OR DECUB...	10-28-2011 5:59 PM	Darcy Noye	10429	1009882					O
Cone	Clare	OrderSigned	XR ANKLE MIN 3 VIEWS [73610] - Ankle joi...	10-28-2011 5:57 PM	Darcy Noye	10000	1009881	(902) 587-2665	Okeechee			O
Porter	Sally8	OrderSigned	CT 3 Phase [CT13]	10-28-2011 5:37 PM	WILLIAM BIH...	10303	1009879		Indiana...			O
Norton	Sally	OrderSigned	CT Ankle Arthrogram [CT31] - Ankle joint/R...	10-28-2011 2:53 PM	Grace Harding	296	1009866					O
Norton	Sally	OrderSigned	CT Abdomen W/Wo & Pelvis W/Wo [CT10] - ...	10-28-2011 2:37 PM	Grace Harding	296	1009863					O
Norton	Sally	OrderSigned	CT Abdomen W & C...	10-28-2011 2:19 PM	Kathy Simpson	296	1009860					O
Norton	Sally	OrderSigned	CT Abdomen Wo & P...	10-28-2011 1:48 PM	Janet Hobbs	296	1009853					O
Pudd	Elmer	OrderSigned	XR HEEL MIN 2 VIEW	10-28-2011 12:46 PM	Ian Power	10383	1009852	(554) 654-6545	Buntime			O
Dolittle	David	OrderSigned	XR RIBS 3 VIEWS, E	10-28-2011 11:22 AM	Darcy Noye	10378	1009883	(980) 265-6465 4	Mycity	ROSOFSK...		O
Ballard	Harold	OrderSigned	XR LUMBAR SPINE I	10-26-2011 4:55 PM	Darcy Noye	10366	1009827		Meachoo	ATKINS, R...		O
Trout	Brooke	OrderSigned	XR THORACIC SPIN	10-26-2011 2:22 PM	Darcy Noye	10103	1009826					O
Houphm...	Artie	OrderSigned	XR HEEL MIN 2 VIEW	10-26-2011 11:55 AM	Darcy Noye	10240	1009820					O
Wonder	Willia	OrderSigned	XR FEMUR 2 VIEWS [73550] - Leg	10-26-2011 11:52 AM	Darcy Noye	10008	1009818					O
Brie	Bella	OrderSigned	XR FEMUR 2 VIEWS [73550] - Leg	10-26-2011 11:50 AM	Darcy Noye	9999	1009817	(555) 555-5555	Newark			O
Acorn	Adele	OrderSigned	XR FEMUR 2 VIEWS [73550] - Leg	10-26-2011 11:49 AM	Darcy Noye	9998	1009816	(902) 548-8765	Terminia			O
Edward	Edna	OrderSigned	XR RIBS 3 VIEWS, BILAT [71110] - Chest	10-26-2011 11:41 AM	Troy Muttery	10099	1009814					O
Dolittle	Donna	OrderSigned	XR RIBS 3 VIEWS, BILAT [71110] - Chest	10-26-2011 11:39 AM	Darcy Noye	10004	1009813					O
Xroller	Xena	OrderSigned	CT Abdomen W & Pelvis W & CTA Chest W...	10-26-2011 11:31 AM	Darcy Noye	10007	1009811			JOHN W. C...	Approved	O
Gallante	Verna	OrderSigned	XR LUMBAR SP COMP W BEND VIEWS [7...	10-26-2011 11:29 AM	Troy Muttery	10361	1009810					O
Bulger	Eunice	OrderSigned	XR Thoracic Spine Min 4 Views [72074] - Lu...	10-26-2011 11:26 AM	Darcy Noye	10360	1009825			ADKINS, F...		O
Yeesh	Yolanda	OrderSigned	CT Abdomen W & Pelvis W & CTA Chest W...	10-26-2011 11:04 AM	Troy Muttery	10006	1009808	(555) 555-5555	Mycity	CHASE CH...	Required	O
Yeesh	Yolanda	OrderSigned	CT Abdomen W & Pelvis W & CTA Chest W...	10-26-2011 10:46 AM	Troy Muttery	10006	1009807	(555) 555-5555	Mycity			O
Build 24	This is	OrderSigned	XR CHEST PA ONLY [71010] - Chest	10-25-2011 2:13 PM	Troy Muttery	10357	1009806					O
Dover	Ben	OrderSigned	CT Head W & Ear, Orbit, Sella W [CT33] - H...	10-20-2011 1:22 PM	Troy Muttery	10349	1009824	(902) 458-7455	Fifteen	KADISH &...	Required	O
Walsh	Brenda	OrderSigned	XR CERVICAL SPINE MIN 4 VIEWS [72050]...	10-19-2011 3:16 PM	Darcy Noye	10346	1009779					O
Timeless	Tina	OrderSigned	XR NECK SOFT TISSUE [70360] - Neck	10-19-2011 12:55 PM	Testy Testers...	10011	1009772	(902) 548-8484	Getcha	CHIDI / TQI...	Required	O
Timeless	Tina	OrderSigned	CT Soft Tissue Neck W [70491] - Neck	10-19-2011 12:55 PM	Testy Testers...	10011	1009773	(902) 548-8484	Getcha	CHIDI / TQI...	Required	O
Xroller	Xena	OrderSigned	XR LUMBAR SPINE 2 OR 3 VIEWS [72100]...	10-19-2011 12:48 PM	Darcy Noye	10007	1009770			JOHN W. C...	N	O
Wonder	Willia	OrderSigned	CT Cervical Spine W [72126] - Cervical spine	10-19-2011 9:50 AM	Jerry Piled	10008	1009767			CHIDI / TQI...	Required	O
Houphm...	Artie	OrderSigned	XR Hand 2 Views & Wrist 2 Views, Unilat [R...	10-19-2011 8:27 AM	Darcy Noye	10240	1009765					O

Figure 5.2.1 – Orders to Schedule work list.

### 5.2.1 Schedule from Orders to Schedule

Selecting the schedule button from the Orders to Schedule work list will open the Schedule Order data window. The tabs and fields are the same as New Appointment with a few differences.

The first difference you will notice is the data window tab is appended with the patient's name. In figure 5.2.1.1 you will see the Schedule Order window open on a patient record from the Orders to Schedule work list. To compare I have opened New Appointment data window next to it. Notice the tab name is Schedule Order.

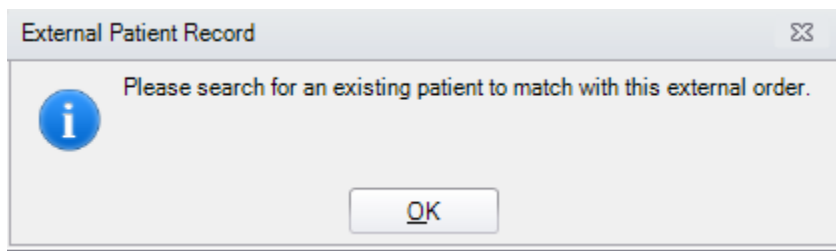
Another difference is button actions at the bottom of the data window. The Schedule Order (patient name) data window has the option to “Save” or “Cancel”, where New Appointment they are “Save as Order”, “Scheduled” and “Close”

The final difference you will notice is that the Schedule Order (patient name) already contains the data for patient, order, and the procedure selected.

**Figure 5.2.1.1- Schedule Order data window from Orders to Schedule**

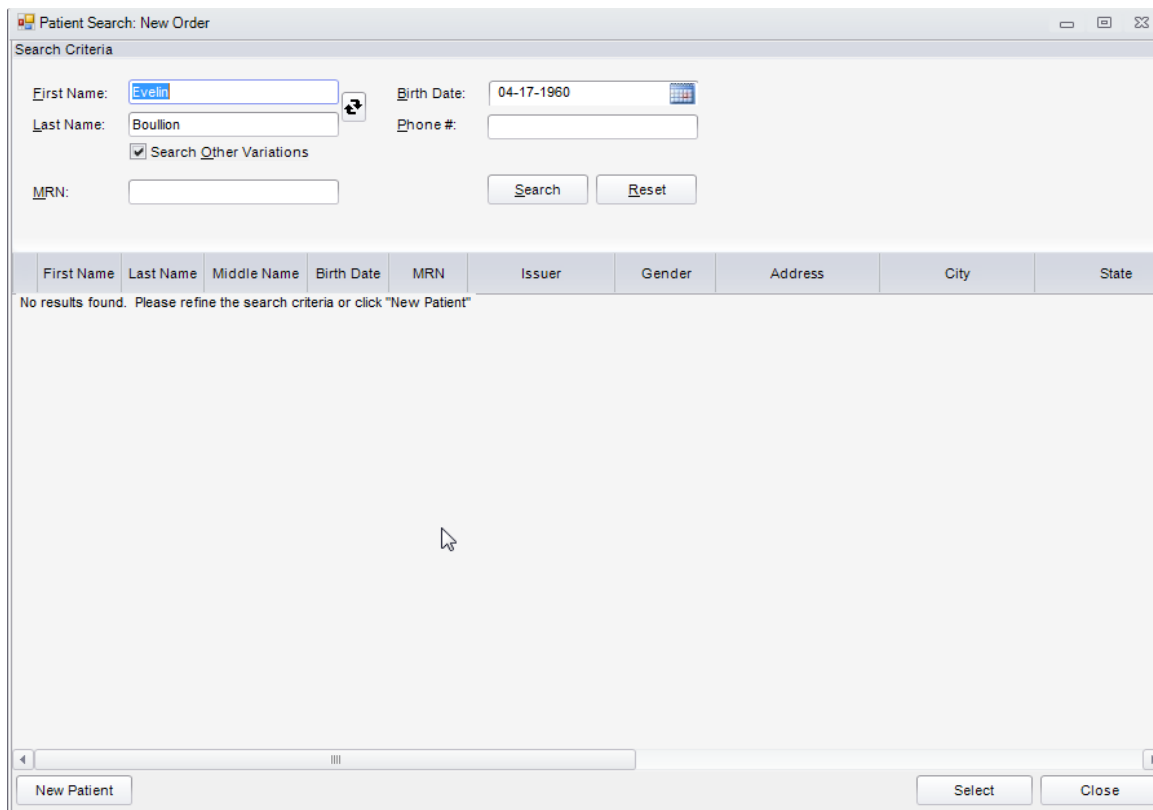
If the Order being scheduled is from an outside ordering system the application will determine if the order to be scheduled was received from an external system. It will compare the “Issuer of

ID” with our internal, configurable value. If the “issuer of ID” does not match, the user is prompted with a message



**Figure 5.2.1.2 – External Patient Record – User is informed the order is from an external system**

Selecting OK will automatically open the patient search window displaying any matches and will also search for “Other Variations” of the name. As with the previous build, the user can try alternate search criteria (e.g. reversing the first and last name), if no patient matches are found the user may create a new patient from the “Patient Search New Order” window.

A window titled "Patient Search: New Order" with a close button in the top right corner. The window contains a "Search Criteria" section with the following fields: "First Name" (containing "Evelin"), "Last Name" (containing "Boullion"), "Birth Date" (containing "04-17-1960"), "Phone #", and "MRN". There is a checkbox labeled "Search Other Variations" which is checked. Below these fields are "Search" and "Reset" buttons. Below the search criteria is a table with the following columns: First Name, Last Name, Middle Name, Birth Date, MRN, Issuer, Gender, Address, City, and State. The table is currently empty, and a message below it says "No results found. Please refine the search criteria or click 'New Patient'". At the bottom of the window, there is a "New Patient" button on the left and "Select" and "Close" buttons on the right.

**Figure 5.2.1.3 – Patient Search New Order**



If the “New Patient” button is selected, the Schedule Order (patient name) will open. The user may proceed as if they were creating a new patient. This will issue an rRIS MRN for future orders. The patient record provided from the EMR is retained, and future messages coming in from the EMR will automatically reference the newly created internal patient. **Note:** if the user closes the search screen without selecting or creating a patient, the Schedule Order screen will close and the user will be returned to the “Orders to Schedule” work list.

If the Patient Search New Order does find a match to an existing patient record, the user must determine if they are indeed the same person. If an internal match is found, it will appear in the search window. The user can press select to associate the current order with our internal patient and establish a link between them. If the user selects an existing patient record, they will be presented with be prompted to confirm.

### **5.2.2 Edit Order**

The Edit Order action button opens the data window. Within this data window the user has the ability to view or edit the Patient tab information, Attachments (or scan docs), and the Order information.

#### **5.2.2.1 Patient Tab**

The Patient tab is exactly the same as Schedule Order

#### **5.2.2.2 Attachments Tab**

The Attachments tab is a work list view of the imported or scanned documents. The user can view the attachments for this order, or view all attachments for this patient by adding a check to the “Show all documents for patient”. Actions from this tab are Scan, Import or access advance properties for attachments.

The work list view of the attachments informs the user of the date, type, number of pages, the level of the attachment (such as Patient level, Exam level), who attached the document, and notes associated with the attachment. This is indicated by a notepad Icon. A double mouse click on the Attachment row will open the attachment. The complete function and how to use Attachments is covered in Section 4 of this document.

Orders To Schedule (382) | Edit Order (Artie Houphmeyer) x

Patient | Attachments | Order

Scan Import Verbal ☒ Show all documents for patient

Attached	Type	Pages	Level	Attached By	Notes
Equals: ▾	Contains: ▾	Equals: ▾	Contains: ▾	Contains: ▾	No... ▾
10-19-2011	Insurance Card		1 Patient	darcyn	
10-19-2011	Insurance Card		8 Patient	darcyn	
10-19-2011	Insurance Card		1 Patient	darcyn	

Save Close

Connected: QE Current 1.1.25.6949

**Figure 5.2.2.2.1 – Edit Order - Attachments tab**

### 5.2.2.3 Order tab

The Order tab from Edit Order has the same fields as Schedule Order with the addition of the Exam Requested where studies may be added and removed, and Body Part and Laterality specified.

The screenshot shows the 'Edit Order' window with the 'Order' tab selected. The window is divided into several sections:

- Referring Details:** Includes fields for 'Referring:' (with a dropdown menu), 'Visited at:' (with a dropdown menu), 'Direct Referral (Pre-Auth Program)' checkbox, 'CC Physicians:' (with a dropdown menu), and 'Visit Location for CC' (with a dropdown menu).
- Preferred Location:** Includes a 'Practice:' dropdown menu, 'Site:' dropdown menu, and checkboxes for 'STAT Exam', 'STAT Read', 'STAT Precert', 'Transportation Required', and 'Special Accommodations'.
- Flags:** Includes checkboxes for 'STAT Exam', 'STAT Read', 'STAT Precert', 'Class:' dropdown menu, 'Sedation:' dropdown menu, and 'Insurance verified' checkbox.
- Insurance Policies:** Includes a table with columns: Note, Carrier Code, Carrier Name, Policy Number, Group Name, Group Number, Phone, and Priority. Below the table is a 'Manage Policies' button and a field for 'Amount to collect:'.
- Exam Requested:** Includes a 'Study(s):' text area, 'Body Part:' dropdown menu, and 'Laterality:' dropdown menu.
- OrderNotes:** Includes a text area for notes.

At the bottom right of the window are 'Save' and 'Close' buttons.

Figure 5.2.2.3.1 – Order Tab from Edit Order

### 5.2.3 Registration

The Registration data windows from Orders to Schedule are the same as Registration from the Reception work list. This is covered in section 5.3 of this document.

### 5.2.4 Mark Order

The Mark Order data window is a limited use data window designed for a few select sites that utilize this work flow. Most users will not have access to this work flow as it will be disabled. The actions from this data window are limited as what can be added / edited. Selecting the save button will schedule the Order with the current time and date.

Orders To Schedule (381) | Mark Order (Artie Houphmeyer)

Order

**General Information**

First Name: Artie  
Middle Name:  
Last Name: Houphmeyer  
Birth Date: 01-05-1969  
MRN: 10240  
Gender: Male

Patient Notes:

**Contact Information**

Address 1:  
Address 2:  
City:  
State:  
Zip Code:  
Home Phone #: () -  
Mobile Phone #: () -  
Email:

**Order Details**

Order Number:  
Patient Location:  
Requested By: Noye, Darcy T  
Procedure: XR HEEL MIN 2 VIEWS(Ankle joint, Left)  
XR HEEL MIN 2 VIEWS  
Body Part: Ankle joint  
Laterality: Left  
Indication:

**Demographics**

Height: ft in  
Weight:  
Marital Status:  
Student Status:  
Employment Status:  
Is Pregnant

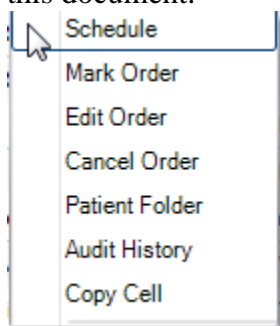
Save Close

aved: Mark Order (Adele Acorn)

**Figure 5.2.4.1 – Mark Order**

### 5.2.5 Context Menu

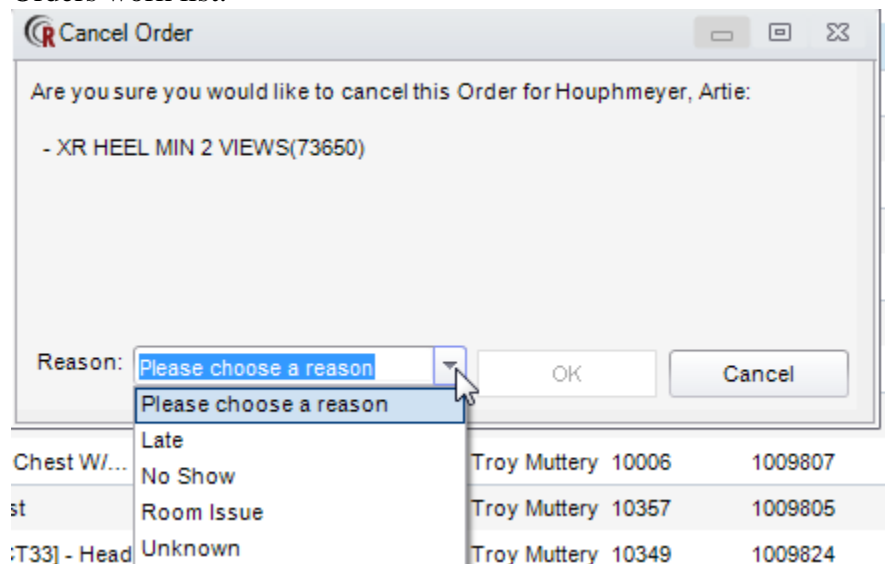
The context menu offers the actions of the buttons discussed above, as well as the ability to Cancel Order, Patient Folder, Audit History, and Copy Cell. Schedule, Mark Order and Edit Order have already been discussed. Patient Folder and Audit History will be discussed later in this document.



**Figure 5.2.5.1 – Orders to Schedule Context Menu**

### 5.2.5.1 Cancel Order

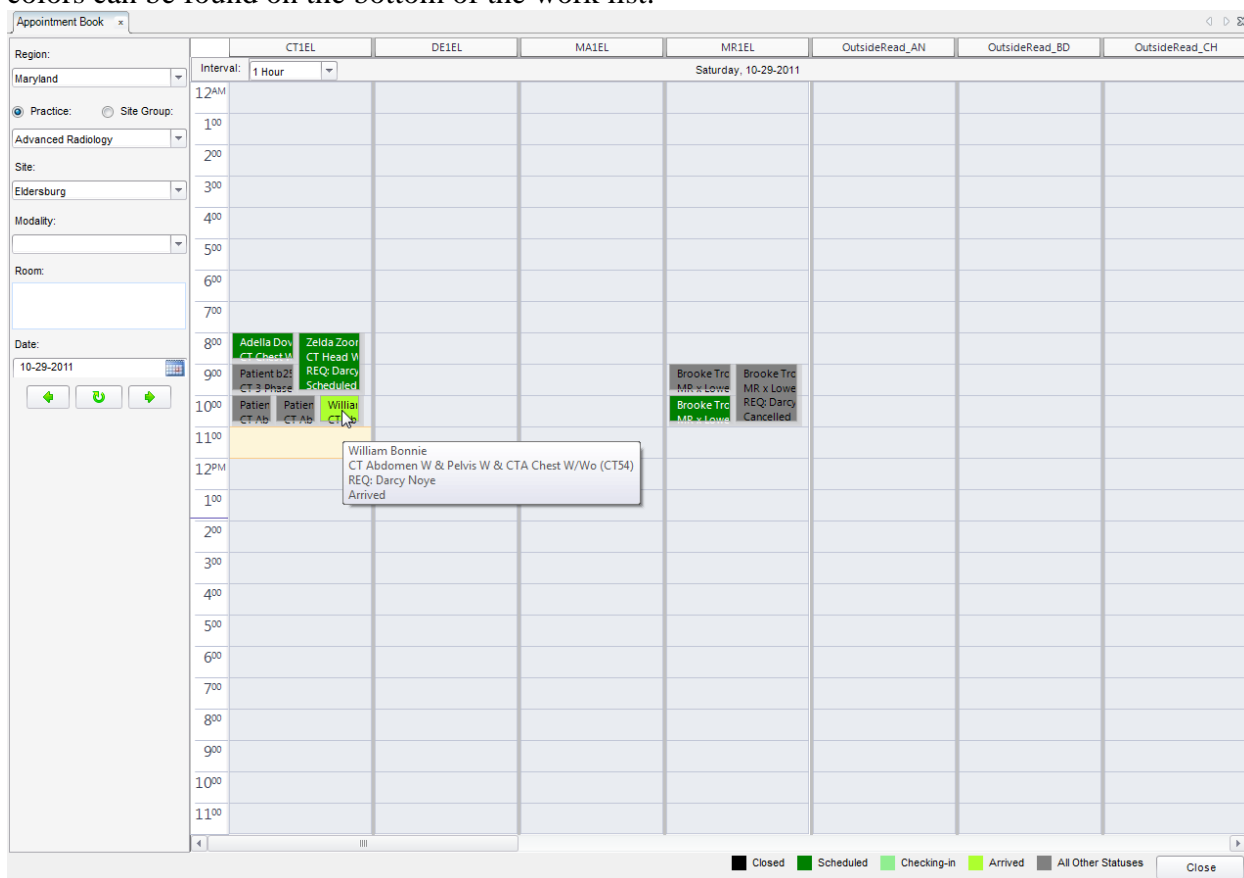
Selecting Cancel Order from context menu will open the Cancel Order data window as shown in Figure 5.2.5.1.1. The message in the window displayed informs you of the patient and exam for the patient selected. A reason for cancelled the order must be chosen from the list provided to enable the OK button. Upon selecting OK this order will be removed and added to the Cancelled Orders work list.



**Figure 5.2.5.1.1 – Cancel Order**

### 5.3 Appointment Book

The Appointment Book gives a view of the scheduled exams by day. The calendar view data window may be filtered by Region, Practice or Site Group, Site, Modality, Room and of course Date. The view of the calendar can be compressed using the Interval option. The exams in the view are color coded giving the user an easy reference of the status for each. A legend of the colors can be found on the bottom of the work list.



**Figure 5.3.1 – Appointment Book view**

If the time interval is increased it becomes difficult to read the entirety of the exam. Hovering the mouse over the exam will display a tool tip so the information may be read.

A user may schedule a new exam or reschedule an existing exam from this work list. A double mouse click on a blank time slot will open the Edit Schedule window and a new exam can be scheduled. Double mouse click on an already existing exam will also open the edit exam window. Changes can be made to the exam and saved as a new scheduled exam, save it as an order, or cancel.

## 5.4 Add Patient

Add patient is a simple data window that accepts user input, with no search functionality. The user will have to perform a patient search before taking the action to create a new patient. The MRN is a unique system generated ID.

The patient tab has 4 different sections capturing patient data.

The General Information section captures the patients name, gender and date of birth.

Contact Information section captures address, phone numbers, email address, and preferred methods of contact and delivery method.

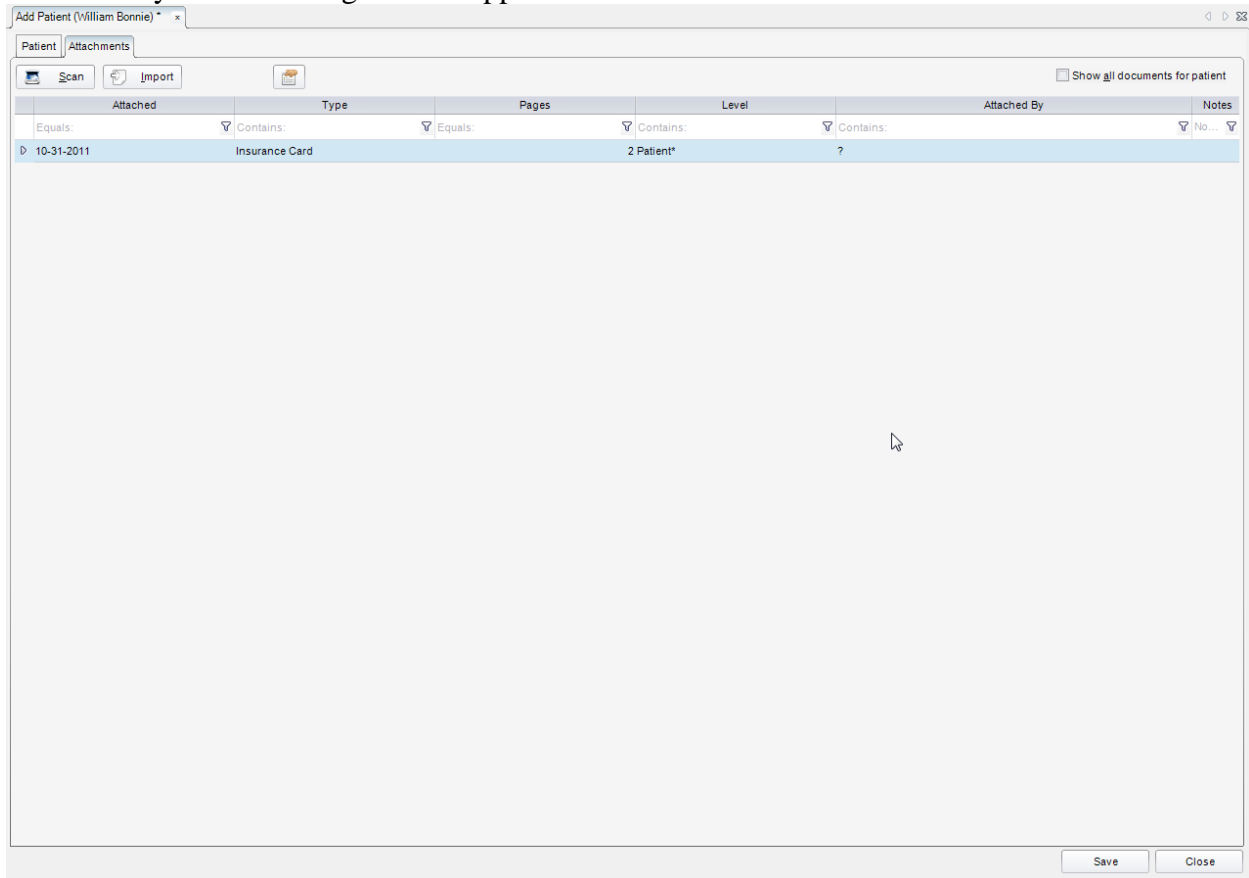
Patient Origin section captures the patient's primary language, education, religion, race and ethnicity.

Lastly Patient Notes are captured in a free form text box.

The screenshot displays the 'Add Patient' window with the 'Patient' tab selected. The window is titled 'Add Patient (William Bonnie)' and contains four main sections: General Information, Contact Information, Patient Origin, and Patient Notes. The General Information section includes fields for Prefix, First Name (William), Last Name (Bonnie), Middle, Suffix, MRN (10454), Gender (Male), Birth Date (05-14-1973), and Place of Birth. The Contact Information section includes Address 1, Address 2, City, State, Zip, Country, Email, Preferred Contact Method, Preferred Delivery Method, Primary Phone, Work Phone, and Other Phone. The Patient Origin section includes Primary Language, Education Level, Religion, Race, and Ethnicity. The Patient Notes section is a large text area with the text '10-31-11 dtn'. The window has a 'Save' button and a 'Close' button at the bottom right.

Figure 5.4.1 – Add Patient data window displaying Patient tab

The attachments tab allows the user to scan or import any relevant documents. Each document attached to the patient will display in a work list fashion on this tab. The patient and Attachment tabs are very similar throughout the application.



**Figure 5.4.2 Add Patient data window displaying Attachments tab**

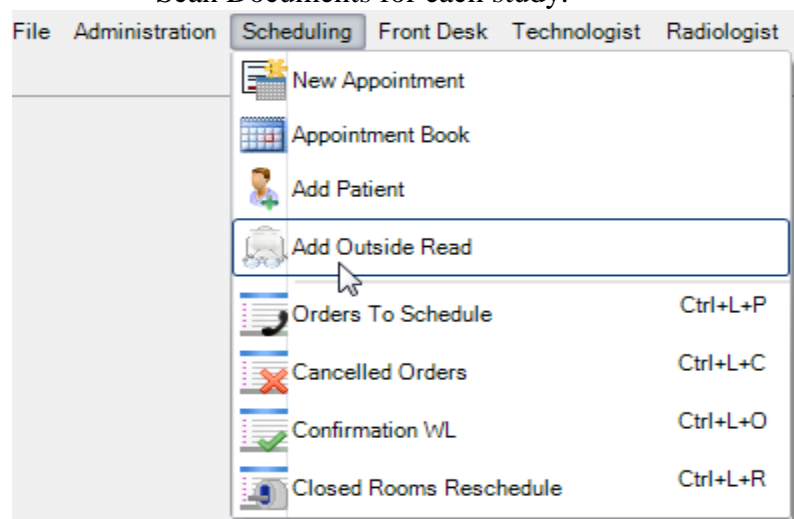


## **5.5 Add Outside Read**

Professional Only workflow outside reads – a new data window was added under the Scheduling menu.

“Add Outside Read” will open a new window that will allow the user to:

- Search or add a new patient.
- Data entry for exam date, order notes, stats, indications, referring, practice, etc.
- Entry for the exam location using the site field (required).
- Enter a list of studies for the order.
- Scan Documents for each study.



**Figure 5.5.1 – Add Outside Read menu option**

**Add Outside Read** \* x

**Patient** | **Order**

**General Information**

Prefix:  MRN:  ☐ Claustrophobic

First Name:  Gender:  ☐ Verified ID

Last Name:  Birth Date:  52y10m

Middle:  Suffix:  Place of Birth:

**Contact Information**

Address 1:  Zip:   Primary Phone:  ☐ No Alternate Phone

Address 2:  Country:

City:  Work Phone:

State:  Email:  Other Phone:

Preferred Contact Method:  Preferred Delivery Method:

**Patient Origin**

Primary Language:  Education Level:  Religion:  Race:  Ethnicity:

**Patient Notes**

10-31-11 dtn -

**Figure 5.5.2 – Patient tab of Add Outside Read data window**

The screenshot shows the 'Add Outside Read' window with the 'Order' tab selected. The 'Study(s)' field contains 'XR, RECALL NO DICTATION INVOLVED'. The 'Body Part' field is empty. The 'Laterality' field is empty. The 'Exam Date' field is '10-31-2011'. The 'Referring Details' section shows 'Referring: Noye, Darcy T' and 'Visited at: 154 Workdown Dr., 1, Worktown, MD, 45742'. The 'Chief Complaint' field is 'Hypochondriac'. The 'Performed Location' section shows 'Practice: Advanced Radiology' and 'Site: OutsideMed'. The 'Flags' section shows 'STAT Read', 'STAT Precert', and 'Outside Read' (checked). The 'OrderNotes' section contains the text '10-31-11 dtn - This section is for entering the Order Notes.'.

**Figure 5.5.3 – Order tab of Add Outside Read data window**

Once the information for the Outside Read has been added to the data window, the study will be moved directly to Exam Done status and are ready for dictation, transcription and signing.

Administrators will need to create one modality for each modality type. These modalities created do not have to be assigned to scheduling groups (sites) also the Outside Read Modalities can marked as inactive. If the modality does not exist a message will inform the user with a list of modalities the administrator will need to create.

In the organization screen for site, the field “outside\_read\_location\_flag” has been added. When this flag is set those sites will not show up in the other Scheduling screen’s schedule/reschedule inputs for site. And on the “New Outside Read” only the sites for outside reads will be displayed.

**Edit Site**

**Site**

Site Code:  ☒ Active

Description:

Phone #:

Fax #:

Printer:

PACS Server:

Template:

☒ Outside Read Location

Site Notes:

**Contact**

Contact Name:

Phone #:

Mobile #:

Fax #:

Email:

Contact Notes:

**&Address**

Address 1:

Address 2:

City:

State:

Zip Code:

**Figure 5.5.4 – Outside Read Site needs to be created.**

## 5.6 Confirmation work list

The Confirmation work list is a daily view work list that displays the contents of the days scheduled procedures. As a patients is confirmed the record will be removed from the work list, but remains on the days Reception work list. The options from this work list are Confirmation and Reschedule using the buttons in the lower right of the work list. A context menu also gives the user options to edit patient, access forms and labels, access patient folder, audit history, and to copy the contents of a cell.

Flags	Status	Procedures	Scheduled Date	First Name	Last Name	MRN	Room	Accession #	Carrier	Due Time	Calculated Time Severity	Read STAT	Confirmed Flag	Exam STAT
	Scheduled	CT Head W & STN W [CT17] - Head	10-31-2011 11:30 AM	Frankie	Fish	10429	CT1EL	1009659		Due in 13 h...	None	N	N	N
	Scheduled	CT Abdomen W & CTA Chest W...	10-31-2011 8:46 AM	Patient	b25	10419	CT1EL	1009626		Due in 11 h...	None	N	N	N
	Scheduled	CT Ear Orbit Sella Wo [70480] - H...	10-31-2011 8:46 AM	Elmer	Pudd	10383	CT1LU	1009662		Due in 11 h...	None	N	N	N
	Scheduled	CT 3 Phase [CT13]	10-31-2011 8:15 AM	Patient	b25	10419	CT1EL	1009627		Due in 10 h...	None	N	N	N

Figure – 5.6.1 – Confirmation work list

### 5.6.1 Confirmation data window

Selecting the Confirmation button from the work list will open the Confirmation (patient name) data window. If patient has multiple exams scheduled for that day the user will be prompted with message asking if they would like open the other order along with the one you are currently opening.

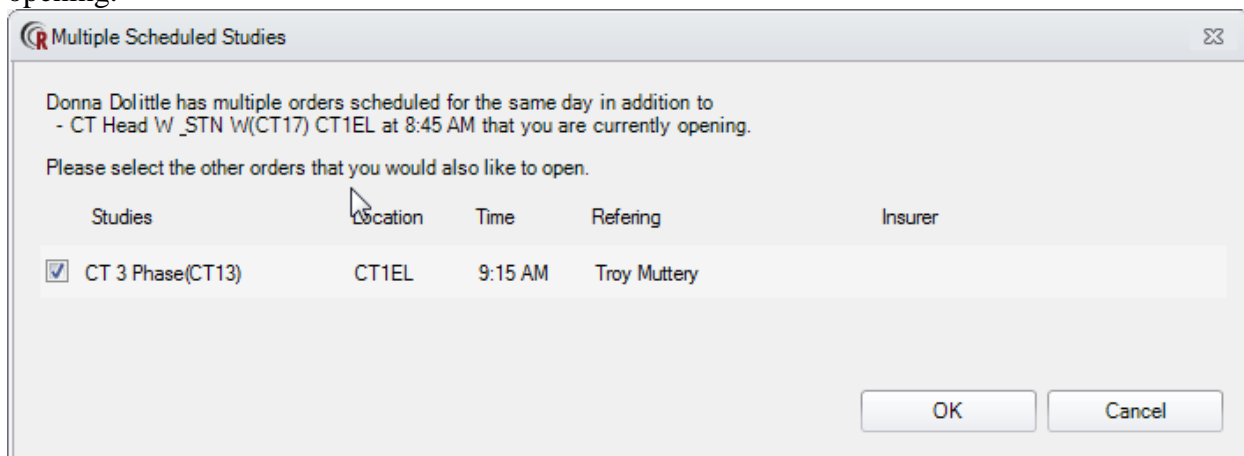


Figure 5.6.1.1 – Confirmation – Multiple Scheduled Studies

If the user chooses so they can open the other study(s) for confirmation. The data windows have the same fields as scheduled order, with the exception of the Exam tab which doesn't have the advance search options. Selecting the Confirmation button will remove this patient's study(s) from the Confirmation work list. The exams will remain on the Reception work list.

Orders To Schedule (380) | Confirmation W/L (5) | Confirmation (Donna Dolittle) x

Patient | Order[A] | Order[B] | Exam | Attachments | Review

Order	Studies	Duration	Room	Scheduled Date
A	CT Head W STN W(Head, ) x	30	CT1EL	11-01-2011 8:45 AM
B	CT 3 Phase x	30	CT1EL	11-01-2011 9:15 AM

Click here to add another study

Body Part:  Laterality:

Reschedule Confirm Close

Saved: Mark Order (Adele Acorn)

**Figure 5.6.1.2 – Confirmation Data Window**

The user also has the option to Reschedule, or to simply close the data window without saving any changes and the patient's study(s) will remain on the work list.

## 5.7 Closed Rooms Reschedule work list

The cancelled orders work list will contains all scheduled orders that are scheduled in a room that has been closed. The button options from this work list are to reschedule the order. The context menu also has the reschedule option as well as the option to change the status of the exam. The exams will drop off the work list as they are rescheduled or when the time of the original exam has passed.

Flags	Status	Procedures	Scheduled Date	First Name	Last Name	MRN	Room	Accession#	Due Time	Calculated...	Read...	Exam STAT
Contains: ▾	Contains: ▾	Contains: ▾	Equals: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Equals: ▾	Co... ▾	Contains: ▾
	Scheduled	CT Head W & STN W [CT17] ~...	10-31-2011 11:30 AM	Frankie	Fish	10429	CT1EL	1009659	Due in 13 h 51 m	None	N	N
	Scheduled	CT Abdomen W & CTA Chest W...	10-31-2011 8:45 AM	Patient	b25	10419	CT1EL	1009626	Due in 11 h 6 m	None	N	N
	Scheduled	CT 3 Phase [CT13]	10-31-2011 8:15 AM	Patient	b25	10419	CT1EL	1009627	Due in 10 h 36 m	None	N	N

☒ Auto Refresh Reschedule

Saved: Confirmation (Meri Dzuro) 3 Rows

Figure 5.7.1 – Closed Rooms work list



## 5.8 Cancelled Orders work list

The Cancelled orders work list contains all of the orders that have been cancelled. As of right now, this work list is only a visual confirmation of what has been cancelled. At this time you cannot re-order or create a new order from this work list. The user can check the Audit History to see who and when the order was cancelled.

Flags	Status	Procedures	Order Date	Referring	First Name	Last Name	MRN	Patient Key	Placer Order Number	Requested By Address Key	Requested By
Contains: [S]	OrderCancelled	Contains: [X]	09-27-2011 1:40 PM	Jerry Piled	Barry	Melnose	10155	161302	23752	20180	
Contains: [X]	OrderCancelled	Contains: [X]	09-28-2011 8:33 AM	Ian Power	Harry	Knotter	10095	161282	23748	20123	
Contains: [X]	OrderCancelled	Contains: [X]	10-28-2011 2:25 PM	Grace Harding	Sally	Norton	296	296	23779	20219	
Contains: [X]	OrderCancelled	Contains: [X]	10-28-2011 11:22 AM	Darcy Noye	David	Dolittle	10378	161373	23750	20178	

Figure 5.8.1 – Closed Rooms work list

## 5.9 Reschedule

Reschedule can take place from the Reception work list, Confirmation work list, Appointment Book, and the No Show work list. Upon select to Reschedule, the user will be prompted with the window displayed in figure below.

The Reschedule dialog box contains the following information:

Study	Referring Physician	Date/Time	Modality	Status
<input checked="" type="checkbox"/> Troy Mutterly	JOHN AXAL			
<input checked="" type="checkbox"/> CT 3 Phase(CT13)		11-02-2011 9:15 AM	CT1EL	Arrived
<input type="checkbox"/> Darcy Noye	JOHN AXAL			
<input type="checkbox"/> CT Head W ,STN W(CT17)		11-02-2011 8:45 AM	CT1EL	Arrived

Reason: Please choose a reason

- Late
- No Show
- Room Issue
- Unknown

Buttons: OK, Cancel

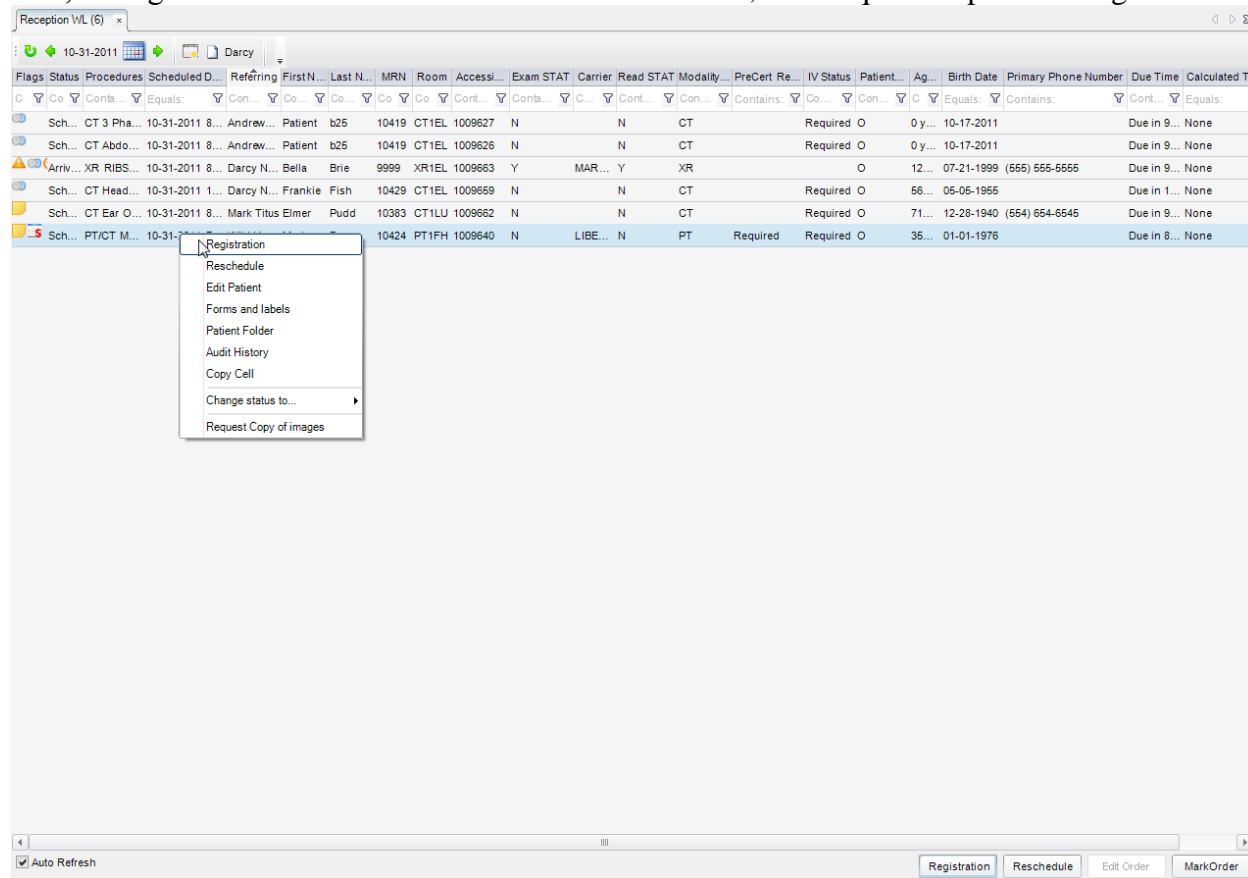
**Figure 5.9.1 – Reschedule**

If the patient has multiple scheduled exams for that day the user can choose to reschedule one or all. The exam selected from the work list is checked by default. The user must select a reason code for the reschedule to enable the OK button.

## 6. 6. Front Desk

### 6.1 Reception work list

The Reception work list is a daily view of the exams scheduled. The calendar Icon allows the user chooses a different day, month, or year. The user can also navigate to other days using the left and right green arrows on either side of date and calendar control. Possible buttons actions are Registration, Reschedule, Edit Order and Mark Order. Context menu options are Registration, Reschedule, Edit Patient, Forms and Labels, Patient Folder, Audit History, Copy Cell, Change Status to... which contains its own sub-menu, and Request Copies of Images.



**Figure 6.1.1 – Reception work list with context menu displayed**

Registration is to be completed to get the patient status to checked in or arrived status. Much of the registration data fields will already have been complete. Required fields at the time of Registration are the Verified ID flag, Responsible party, and the user will be prompted for policy information, which can be bypassed.

## **6.2 Registration**

Registration is accessed from different places in the application. A user can complete Registration from Orders to Schedule work list, bypassing the schedule order stage. The Reception work list also has the ability to complete Registration. The actions from Registration are to Check In the patient Arrive the patient, save changes to the data window and leaving it in a state of scheduled if accessed from Reception work list, or advancing the order to scheduled status if registration was accessed from Orders to Schedule work list. The use can also close the Registration data window. If changes were made in the data window the user will be prompted to save changes.

### **6.2.1 Patient Tab**

The patient tab is the same as new order with the exception of a Labels and Forms button giving the user the ability to print any label or form that may be associated with the procedure. Also there are two additional check boxes for Arbitration Signed and Verified ID, which is mentioned above as being a required field.

## RADNET, Inc. – rRIS Release Notes

Reception WL (11) Registration (Yeesh Yolanda) ×

Patient | Contacts / Demographics | Order[A] | Order[B] | Exam | Visit History | Image Request (0)

**General Information**

Prefix:  MRN:   
First Name:  Gender:   
Last Name:  Birth Date:  55y3m  
Middle:  Suffix:  Place of Birth:   
☐ Claustrophobic  
☐ Arbitration Signed  
☐ Verified ID

**Contact Information**

Address 1:  Zip:   Primary Phone:   
Address 2:  Country:  ☐ No Alternate Phone  
City:  Work Phone:   
State:  Email:  Other Phone:   
Preferred Contact Method:  Preferred Delivery Method:

**Patient Origin**

Primary Language:   
Education Level:   
Religion:   
Race:   
Ethnicity:

**Patient Notes**

10-31-11 dtn -

10-29-11 dtn - Patient notes are captured in this text box.

Labels and Forms

Checking In | Arrive | Save | Close

Figure 6.2.1.1 – Patient tab at Registration

## 6.2.2 Contacts / Demographics

Again this tab is essentially the same as in new order with the exception of the Demographics at Encounter that is located on the Visit History tab for Registration. The Responsible Party is required.

Patient | **Contacts / Demographics** | Order[A] | Order[B] | Exam | Visit History | Image Request (0)

**Responsible Party**

Relation:  State:   
 First Name:  Zip:   
 Last Name:  Home Phone:   
 Address 1:   
 Address 2:   
 City:

**Emergency Contact**

Relation:  State:   
 First Name:  Zip:   
 Last Name:  Home Phone:   
 Address 1:   
 Address 2:   
 City:

**Approved Medical Record Access**

Relation	Name	Expiry	Details
Spouse	Yeesh, Yuri	12-31-2011	The patient's husband is granted medical record access until the end of year

Previous Edit Add Remove

Checking In Arrive Save Close

**Figure 6.2.2.1- Contacts/Demographics Tab**

## 6.2.3 Order Tab

The order tab of the Registration data window has the same fields as Schedule Order with the addition of Payments.

The screenshot displays the 'Order' tab within the RADNET rRIS Registration data window. The interface includes several sections for data entry and viewing:

- Referring Details:** Includes fields for Referring (Waite, Andrew R), Visited at (no address on file), Direct Referral (checkbox), CC Physicians, and Visit Location for CC.
- Chief Complaint:** A large text area for describing the patient's condition.
- Preferred Location:** Includes Practice (Advanced Radiology) and Site.
- Flags:** Includes checkboxes for STAT Exam, STAT Read, STAT Precert, Transportation Required, and Special Accommodations. It also has a Class dropdown (Outpatient) and a Sedation dropdown.
- Insurance Policies:** A table listing insurance policies with columns: Note, Carrier Code, Carrier Name, Policy Number, Group Name, Group Number, Phone, and Priority. One policy is listed: Note: 0140659, Carrier Code: DERENBERGER EDWARD, Policy Number: 456577, Group Name: Group Number, Phone: 4107663098, Priority: Primary.
- Payments:** A table showing payment history with columns: Posted By, Amount, Payment Method, and Date. One payment is listed: Posted By: darcyn, Amount: \$100.00, Payment Method: Cash, Date: 11-01-2011. Below the table is a 'Total: \$100.00' and an 'Add Payment' button.
- OrderNotes:** A text area containing the note '11-01-11 dtn -'.
- Verification:** A section with 'Verification REQUIRED' and a checked 'Insurance verified' checkbox. The 'Amount to collect' is \$400.00.

At the bottom of the window, there are buttons for 'Checking In', 'Arrive', 'Save', and 'Close'. The status bar at the very bottom indicates 'Saved: Registration (Bree Buella)'.

**Figure 6.2.3.1 – Registration Order tab**

Payments can be made and a history of who accepted the payment, the amount, method of payment, and the date the payment was entered. Payment details may be edited after being posted.

**Front Desk Payment**

**Payment**

Amount to Collect: \$400.00

Amount: \$100.00

Method: Cash

Check Number:

Credit Card Type:

Credit Card Number:

Name on Credit Card:

Credit Card Expiry:

**Notes**

Patient made cash payment at time of procedure

Save Cancel

**6.2.3.2 – Payment window**



### 6.2.3 Exam Tab

The exam tab displays the study(s) orders, duration, room and date of the procedure. Attachments may be accessed or added. You will remember in the Schedule Order window, this area was used to display the advanced scheduling availability. The prep instructions occupy this space in Registration. Also on this tab are the PreCer t#, Expiry Date, and Billable Item.

Patient | Contacts / Demographics | Order | **Exam** | Visit History | Image Request (0)

Studies	Duration	Room	Scheduled Date
CT 3 Phase x	30	CT1EL	11-01-2011 7:45 AM

[Click here to add another study](#)

Body Part:  Laterality:

Prep Instructions: ☐ Prep Instructions Reviewed

General CT

Weight limit 450 lbs at most sites. No solids 2 hrs prior

Have you ever had an iodine injection before?

- If so have you had any problems with the injection?

--(if so consult technologist)

Asthma?

- (if so, tell patient to bring their inhaler?)

Ask if Diabetic? If so, what meds do they take?

If pt takes oral meds for diabetes refer to memo date 7-10-08 and follow necessary instructions.

For Oral Prep please see memo dated 10-14-2008 and follow protocol

Ask pt about pregnancy?

If patient is scheduling both a CT and MR WITH contrast and answers NO to all screening questions then the procedures may be scheduled on the same day. If the patient answers YES to any of the questions then the procedures MUST be scheduled on separate days and the MR must be scheduled first.

All children must be accompanied by an adult other than the patient

Checking In | Arrive | Save | Close

Figure 6.2.3.1 – Registration Exam tab

## 6.2.4 Visit History

The Demographics at Encounter is located on the Visit History tab. Also included on this tab are the patient's drug allergies and Patient Immunizations with the ability to Export to HL7.

Patient | Contacts / Demographics | Order | Exam | **Visit History** | Image Request (0)

**Demographics at Encounter**

Height:  ft in

Weight:  lbs

BMI:

Blood Pressure:  /

Smoking Status:

☐ Is Pregnant

☐ Requested Educational Resources

☐ Provided Educational Resources

**Drug Allergies**

Show drug allergies for the current patient's visit?  None

DrugAllergy	Start Date	End Date	Reaction	Status
▶				

**Patient Immunizations**

Vaccine	Date	Qty	Units	Lot #	Manufacturer
▶					

Export HL7

Checking In | Arrive | Save | Close

Figure 6.2.4.1 – Visit History tab

### 6.2.5 Image Request

The Image Request tab is a work list view displaying the request for images for this scheduled procedure. From this tab the user may add, edit or remove edit requests. The user may also print the release form. Creating Image requests will be covered later in this document. The Image Request data window is present on the Schedule Order, Registration and Perform Exam data windows.

The Image request tab will contain the number of image requests for the study. A study with no requests for images will show “Image Request (0)” in the tab page title.

Only new requests can be removed (i.e. not save to the db). In order to “remove” other requests they have to be cancelled. This can be accomplished via the Image request tab or by editing the request from the Image Request work list.

Study	Date	Req. By	Source	Format	Delivery	Status
D XR FEMUR 2 VIEWS [73550] ~...	01/11/2011 10:24:54 AM -03:00	Darcy Noye	Referring	CD	Courier	Pending

**Figure 6.2.5.1 – Image Request Tab**

From the Image Request tab, a new request can be added, or a previous request edited. The remove button will only work for requests in a status of “New”. In the example above the status is Pending. The request would have to be edited and cancelled.

**Image Request**

**Studies (1)**

	Date	Last Name	First Name	Study
▶	01/11/2011 8:44:00 AM	Acorn	Adele	73550*XR FEMUR 2 VIEWS

**Previous Requests (1)**

	Date	Req. By	Source	Format	Delivery	Status
▶	01/11/2011 10:24:54...	Darcy Noye	Referring	CD	Courier	Pending

**Requested By**

☐ Patient ☒ Referring ☐ Other Doctor ☐ Other

Doctor: [Noye, Darcy T]

Location: [154 Workdown Dr., 1, Worktown, MD, 45742]

Name: [Darcy Noye]

Organization:

Phone Number: [(541) 574-5855]

**Deliver To / Pickup By**

☐ Patient ☒ Referring ☐ Other Doctor ☐ Other

☐ Same as requested by

Doctor: [Noye, Darcy T]

Location: [154 Workdown Dr., 1, Worktown, MD, 45742]

Prefix:

First Name: [Darcy]

Last Name: [Noye]

Suffix:

Address: [154 Hangdown Dr.]

City: [Hangtown]

State: [MD]

Country: [United States]

Zip Code: [45742]

Phone Number: [(541) 574-5855]

**Details**

Format: [CD]

Notes:

**Delivery Instructions**

Method: [Courier]

Instructions:

**Image Request Status**

☒ Pending ☐ Cancelled ☐ Copied ☐ Sent ☐ Picked Up ☐ Identification Verified

OK Cancel

Figure 6.2.5.2 – Image Request window

Within the Image Request window the user will have the ability to change its status when creating a request. This will allow a user create and complete the request in one step. The “complete” status has been split. . Available statuses for the request are Pending, Cancelled, Copied, Sent and Picked Up. The statuses of Sent and Picked Up enable the system to

differentiate how a request was completed. Also, when a request is picked up, the “Identification Verified” check box is enabled and becomes required.

## **6.3 Walk In Data Window**

The Walk In data window is essentially a mirror copy of the Registration data window with no data. This gives the user the ability to skip the New Appointment and / or Schedule Order process. The idea is a patient shows up with order in hand requesting a procedure. Please refer to screenshots in section 6.2

## 7. Technologist

### 7.1 Technologist work list

The Technologist work list is a daily view for the Technologist role. As exams are completed, the record will be removed from the work list. If the exam is completed, it will advance the status to exam done. Alternatively the exam may be aborted, and thus the exam will sent back to the pending orders work list if the user so chooses or can simply be discontinued. Discontinued exams remain on the Technologist work list.

Button actions are Perform Exam and Edit Patient. Context menu options are Perform Exam, Edit Patient, Forms and Labels, Change status to...(which has a sub menu), Patient Folder, Audit History, Copy Cell and Request Copy of Images.

Technologist WL (4)

10-31-2011

Test

Flags	Status	Procedures	Scheduled Date	Referring	First Name	Last Name	MRN	Room	Accession #	Read STAT	Sedation	Exam STAT	Modality Ty...	PreCert Re...	Patient Ty...	Age At...	Tech...	Birth Date
Co...	Con...	Contains:	Equals:	Contai...	Contains:	Contai...	Co...	Co...	Contains:	Contai...	Cont...	Contai...	Contains:	Contains:	Contai...	Cont...	Co	Equals:
	Arrived		10-31-2011 8:15 AM	Andrew W...	Patient	b25	10419	CT1EL	1009627	N	N	CT		O	0 years		10-17-2011	
	Arrived	CT Abdomen...	10-31-2011 8:45 AM	Andrew W...	Patient	b25	10419	CT1FH	1009626	N	N	CT		O	0 years		10-17-2011	
	Arrived	CT Head W/W...	10-31-2011 8:45 AM	Mark Titus	Elmer	Pudd	10383	CT1LU	1009662	N	N	CT	Required	O	71 years	Dale...	12-28-1940	
	Arrived	XR RIBS 3 VIE...	10-31-2011 8:15 AM	Darcy Noye	Bella	Brie	9999	XR1EL	1009663	Y	T1	Y	XR	O	12 years		07-21-1999	

☒ Auto Refresh

Perform Exam

Edit Order

Edit Patient

Figure 7.1.1 – Technologist work list

### 7.2 Technologist Data Window

Accessing the Technologist data window the user selects a procedure from the work list and then selects the Perform Exam button. This covered in 7.2.8 of this document.

#### 7.2.1 Patient Tab

The patient tab has the same look and feel as in Schedule Order and Registration.

#### 7.2.2 Order Tab

The Order tab has the Referring details, Chief Complaint, Preferred Location, Flags, and Order Notes.

The screenshot displays the 'Perform Exam Order tab' interface. At the top, a header bar contains tabs for 'Include', 'Flags', 'Status', 'Procedures', 'Scheduled Date', 'Referring', 'Room', 'Accession #', 'Read STAT', 'Sedation', 'Exam STAT', and 'Modality Type'. Below this, a data row shows: 'Arrived CT 3 Phase [CT13]', '11-01-2011 7:45 AM', 'Andrew Waite', 'CT1FH', '1009669', 'N', 'N', and 'CT'. A secondary tab bar includes 'Patient', 'Order' (which is selected), 'Documentation', 'Billing Codes', 'Attachments', 'Notes / Exam Times', and 'Image Request (1)'. The main content area is divided into several sections: 'Referring Details' with fields for 'Referring:' (set to 'Waite, Andrew R') and 'Visited at:' (set to '(no address on file)'); 'CC Physicians:' with a search icon and a 'Visit Location for CC' dropdown; 'Preferred Location' with 'Practice:' (set to 'Advanced Radiology') and 'Site:' (empty); 'Flags' with checkboxes for 'Stat Exam', 'Stat Precert', 'Stat Read', and 'Special Accommodations'; 'Class:' (set to 'Outpatient') and 'Sedation:' (empty). An 'OrderNotes' section at the bottom left shows a text area with the entry '11-01-11 dtn -'. At the bottom right, a row of buttons includes 'Start', 'Suspend', 'Complete', 'Abort', 'Save', and 'Close'.

**Figure 7.2.2.1 – Perform Exam Order tab**



### 7.2.3 Documentation Tab

The Documentation tab captures the Techs notes, the techs that performed and assisted on the exam, patient details, the equipment used and procedure to be performed and any reasons for change and associated radiologists.

To start the exam, the Primary Tech field needs to be populated. If the patient the exam is being performed on is a female between the ages of 12 and 55, the LMP and Pregnant / Not Pregnant fields become required fields.

To complete the exam the Technologist Notes field must be completed.

The referring physician may have a Preferred assigned to the Personnel profile. If they do, the Assigned Radiologist field will be pre-populated this Radiologist. In a case where there is more than one preferred reader, the Assigned Radiologist field will not have a default value. Upon starting the exam a dialog box will inform the user that preferred radiologists are assigned to this referrer. Ok to the message will mark the field with ! indicating that a preferred radiologist is configured and may be selected. The preferred radiologists will be prefixed with Preferred:

**Figure 7.2.3.1 – Perform Exam Documentation tab**

If the exam being performed is flagged with No Report (Tech Only) and / or Report External to rRIS, additional check boxes will appear on the Documentation tab. If both of these check boxes are present when Performing Exam, only one will be permitted to be checked as they contradict one another. A warning message will be presented to the user when one of the checkboxes is selected.

The screenshot shows the 'Perform Exam' window in the RADNET rRIS system. The 'Documentation' tab is selected, displaying the 'Tech Notes' section with a text area and a 'Copy / Paste' button. Below this is the 'Procedure' section, which includes dropdown menus for 'Scanner', 'Performed Procedure', 'Body Part', and 'Laterality'. There is also a 'Change Reason Code' dropdown and a 'Change Reason Note' text area. At the bottom of the 'Procedure' section, there are two checkboxes: 'No Report (Tech Only)' and 'Report External to rRIS'. To the right of the 'Procedure' section is the 'Associated Radiologists' section, which includes dropdown menus for 'Assigned Radiologist', 'Performing Radiologist', and 'Assistant Radiologist'. At the bottom of the window, there are buttons for 'Start', 'Suspend', 'Complete', 'Abort', 'Save', and 'Close'.

**Figure 7.2.3.2 – Perform Exam showing No Report and Report External check boxes**

Completing an exam with either “No report (Tech Only)” or “Report External to rRIS” will send the exam to a status of “ExamDoneTechOnly” and will not be added to the Radiologists work list of Exam Done.

After the exam is started, the rest of the buttons will become enabled. If the exam is aborted, the Abort Exam window opens. The user must select a reason why the exam has been aborted. The list of reasons can be sorted and / or filtered. A right click on the column header gives the user more sorting options.

When a reason code is selected and you hit the OK button a dialog box will open asking if you would like to send this order back to the Orders to Scheduled work list. Select Yes will do so. Select No will cancel the exam and set the status to Discontinued.

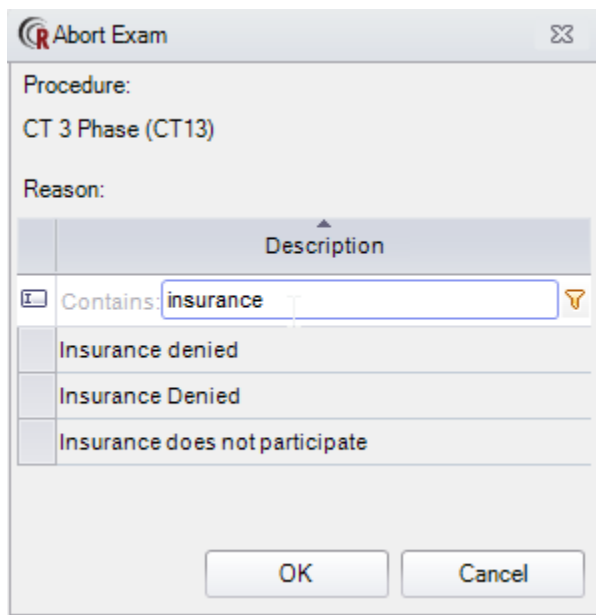


Figure 7.2.3.3 – Abort Exams reason codes

## 7.2.4 Billing Codes

The Billing codes tab allows the tech to edit the details of the billing codes, add cpt modifiers, units used, change reason, and precert status.

PreCert#	Expiry Date	Billing Code	Cpt Modifier1	Cpt Modifier2	Units	Change Reason	Pre Cert Status
		(73550) RADIOLOGIC EXAMINATION, FEMUR, 2 VIEWS					Not Required

**Figure 7.2.4.1 – Perform Exam Billing Codes**

## 7.2.5 Attachments Tab

The Attachments Tab is the same as in previous data window.

## 7.2.6 Notes / Exams Times

The Notes / Exam times tab captures the Scheduled / Arrival time and who scheduled and arrived the patient.

The time that exam was started and completed and by whom is also captured.

Appointment notes and a duplicate view of the patient notes is present. Both of these text boxes can be edited. The patient notes entered here will also display in the patient notes field on the Patient tab.

The screenshot displays the 'Notes / Exam Times' tab in the rRIS application. At the top, a table lists exam details: 'Started', 'XR FEMUR 2 VIEWS [73550] - Leg', '11-01-2011 8:44 AM', 'Darcy Noye XR1EL', '1009682', 'N', 'N', and 'XR'. Below this, a navigation bar includes tabs for 'Patient', 'Order', 'Documentation', 'Billing Codes', 'Attachments', 'Notes / Exam Times' (which is active), and 'Image Request (1)'. The main content area is divided into three sections: 'Scheduling / Arrival', 'Exam Time', and 'Appointment Notes' / 'Patient Notes'. The 'Scheduling / Arrival' section shows 'Scheduled Time' as 11-01-2011 8:44 AM, 'Arrival Time' as 11-01-2011 10:36 AM, and 'Arrival Early/Late' as 1 hour 52 minutes late. The 'Exam Time' section shows 'Start Time' as 11-01-2011 11:25 AM, 'Completed Time' as mm-dd-yyyy h:mm am/pm, 'Start Early/Late' as 2 hours 41 minutes late, and 'Exam Duration' as 23 min. late. The 'Appointment Notes' and 'Patient Notes' sections are empty. At the bottom, there are buttons for 'Start', 'Suspend', 'Complete', 'Abort', 'Save', and 'Close'.

Include	Flags	Status	Procedures	Scheduled Date	Referring	Room	Accession#	Read STAT	Sedation	Exam STAT	Modality Type
<input checked="" type="checkbox"/>		Started	XR FEMUR 2 VIEWS [73550] - Leg	11-01-2011 8:44 AM	Darcy Noye	XR1EL	1009682	N	N	N	XR

**Notes / Exam Times**

**Scheduling / Arrival**

Scheduled Time: 11-01-2011 8:44 AM  
Arrival Time: 11-01-2011 10:36 AM  
Arrival Early/Late: 1 hours 52 minutes late

Scheduled By: Noye, Darcy (902) 439-6517  
Arrived By: Noye, Darcy (902) 439-6517

**Exam Time**

Start Time: 11-01-2011 11:25 AM  
Completed Time: mm-dd-yyyy h:mm am/pm  
Start Early/Late: 2 hours 41 minutes late  
Exam Duration: 23 min. late

Completed By: Dolron, Denis (902) 439-3656

**Appointment Notes**

11-01-11 dtn -

**Patient Notes**

11-01-11 dtn -  
07-25-11 dn - yep, this section for patient notes

Start Suspend Complete Abort Save Close

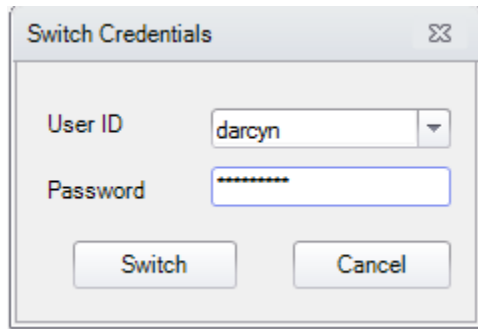
Figure 7.2.6.1 – Perform Exam Notes / Exam Times tab

### 7.2.7 Image Request

There are no changes to the Image Request tab. Please see section 6.2.5 of this document.

### 7.2.8 Credential Switch

To assist in auditing in shared workstation environments where a common login may be used, Credential Switch has been developed. This flag is added at the user's personnel level. If the users account has this flag checked, they will receive prompt. If valid credentials are entered the user will be permitted to continue workflow.



**Figure 7.2.8.1 Switch Credential dialog box**

The user will be prompted every time either of these Data Windows is accessed, even when the user may currently have a data window open where credentials have been passed. If a second user clicks on the first user's tab, rRIS will allow them to see the tab, without being prompted for credentials again. In this manner, it is possible for the second user to save the data of the first user, and it will be saved under the credentials of the first user. This was preferred to having the system prompt yet again for credentials. When the user leaves the Perform Exam or the Edit Patient, the credentials will be set back to the user logged into the application. The dialogue box will keep a history of User ID's enter as long as the current rRIS session is active.

## **8. Radiologist**

### **8.1 Pending Dictation**

The Pending Dictation work list has two different default views. For most users who access this work list they will see the Pending Dictation option from the Radiologist menu. There is also a menu option of Pending Dictation (all) that displays all pending dictations for all users. The work list that opens for the user will not display exams that are assigned to another Radiologist, or exams that have been dictated on or suspended by another Radiologist. Beside tab contains the name of the work list as well as the count of records in the work list. The number is updated jobs are completed. When a filter is applied it will display the number of records currently on work list followed by the overall count. (Example 9 of 25)

Button actions from this work list are only to Dictate. Context menu options are Dictate, Patient Folder Audit History, Copy Cell, Forms and Labels, Stat Case (which has a sub menu), Assign to Radiologist and Request Copy of Images

The Pending Dictation work list has a large selection of columns available to be viewed. I have included 2 screenshots to capture all columns.

## RADNET, Inc. – rRIS Release Notes

First Name		Last Name		MRN	Accession #	Flags	Status	Procedures	Scheduled Date	Birth Date	Age At Study	Room	Modality Type	Exam STAT	Read STAT	Problem	QA	Performed End Date	Performed Start D...	Transcriptionist
Cont...	Cont...	Cont...	Cont...	C	Contal...	Con	Cont...	Contains	Equals	Equals	Contal...	Co	Contains	Contains	Contal...	Co...	Co	Equals	Equals	Contains
Clare	Cone	100...	1009491					ExamDo...	DX Append...	10-05-2011	2...	07-20-1999	12 years	DE1EL	BD	N	N		10-27-2011 12:58...	10-27-2011 12:58...
Zelda	Zoom	100...	1009511					ExamDo...	DX Append...	10-13-2011	9...	07-20-1966	55 years	DE1EL	BD	N	N		10-27-2011 12:57...	10-27-2011 12:57...
Yolanda	Yeesh	100...	1009488					ExamDo...	CT Ear Orb...	10-04-2011	11...	07-21-1956	55 years	CT1EL	CT	N	N		10-27-2011 1:00 PM	10-27-2011 1:00 PM
Zelda	Zoom	100...	1009489					ExamDo...	CT Cervical...	10-04-2011	2...	07-20-1966	55 years	CT1EL	CT	Y	Y		10-27-2011 12:59...	10-27-2011 12:59...
two	studies	103...	1009500					ExamDo...	CT 3 Phase...	10-07-2011	7...	06-19-2011	4 months	CT1EL	CT	N	N	N	10-06-2011 3:46 PM	10-06-2011 3:46 PM
Xena	Xrollier	100...	1009517					ExamDo...	CT Cervical...	10-19-2011	2...	07-22-1966	55 years	CT1EL	CT	N	N		10-27-2011 12:56...	10-27-2011 12:56...
DGI	Test	102...	1009412					ExamDo...	CT 3 Phase...	09-14-2011	7...	08-31-1988	23 years	CT1LU	CT	N	Y		09-13-2011 3:13 PM	09-13-2011 3:12 PM
Jason	Campbell	102...	1009417					ExamDo...	CT Ear Orb...	09-14-2011	9...	08-21-1978	33 years	CT1LU	CT	N	Y		09-14-2011 8:35 AM	09-14-2011 8:35 AM
Michael	Vick	102...	1009419					ExamDo...	CT Abdom...	09-14-2011	10...	08-30-1987	24 years	CT1LU	CT	N	N	N	09-14-2011 8:53 AM	09-14-2011 8:52 AM
Sally	Norton	296	1009638					ExamDo...	CT Ear Orb...	09-21-2011	12...	07-28-1985	26 years	Outs...	CT	N	Y		09-21-2011 12:00...	09-21-2011 12:00...
two	studies	103...	1009499					ExamDo...	MA DIGITA...	10-07-2011	8...	06-19-2011	4 months	MA1...	MA	N	Y		10-06-2011 3:47 PM	10-06-2011 3:47 PM
Tina	Timeless	100...	1009551					ExamDo...	MA DIGITA...	10-21-2011	11...	07-21-1965	56 years	MA1...	MA	N	Y	N	10-27-2011 12:54...	10-21-2011 11:48...
Marc	Schweikert	103...	1009496					ExamDo...	PT/CT Myo...	10-07-2011	8...	12-12-1981	30 years	PT1FH	PT	N	N		10-27-2011 12:58...	10-27-2011 12:57...
Lisa	Bonnet	101...	1009566					ExamDo...	US Chest [...]	10-27-2011	9...	02-07-1984	27 years	US1EL	US	N	Y		10-27-2011 9:03 AM	10-27-2011 9:03 AM
Bella	Brie	9999	1009472					ExamDo...	XR Wrist 2...	09-28-2011	12...	07-21-1999	12 years	DX1...	XR	N	N		10-27-2011 1:02 PM	10-27-2011 1:02 PM
Zelda	Zoom	100...	1009353					ExamDo...	XR CHEST...	09-01-2011	12...	07-20-1966	55 years	Outs...	XR	N	N	N	09-01-2011 12:00...	09-01-2011 12:00...
Zelda	Zoom	100...	1009354					ExamDo...	XR CHEST...	09-01-2011	12...	07-20-1966	55 years	Outs...	XR	N	Y		09-01-2011 12:00...	09-01-2011 12:00...
Xena	Xrollier	100...	1009357					ExamDo...	XR Chest P...	09-02-2011	12...	07-22-1966	55 years	Outs...	XR	N	Y	N	09-02-2011 12:00...	09-02-2011 12:00...
Adele	Acorn	9998	1009358					ExamDo...	XR Chest...	09-02-2011	12...	07-20-2000	11 years	Outs...	XR	N	N	N	09-02-2011 12:00...	09-02-2011 12:00...
Bella	Brie	9999	1009359					ExamDo...	XR ABDO...	09-02-2011	12...	07-21-1999	12 years	Outs...	XR	N	Y		09-02-2011 12:00...	09-02-2011 12:00...
Bernice	Barry	102...	1009468					ExamDo...	XR Should...	09-27-2011	12...	06-17-1964	47 years	Outs...	XR	N	Y		09-27-2011 12:00...	09-27-2011 12:00...
Bernice	Barry	102...	1009476					ExamDo...	XR FINGE...	09-29-2011	2...	06-17-1964	47 years	XR1EL	XR	N	N		10-27-2011 1:01 PM	10-27-2011 1:01 PM
Elmer	Yeesh	101...	1009516					ExamDo...	XR Spine 1...	10-19-2011	1...	06-13-1944	67 years	XR1EL	XR	N	N		10-27-2011 12:56...	10-27-2011 12:56...
William	Bonnie	103...	1009532					ExamDo...	XR Foot 2...	10-21-2011	8...	11-23-1859	152 years	XR1...	XR	N	N		10-27-2011 12:55...	10-21-2011 8:43 AM
Brooke	Trout	101...	1009457					ExamDo...	XR Femur...	09-26-2011	9...	06-12-1984	27 years	XR1...	XR	N	N		10-27-2011 1:04 PM	10-27-2011 1:04 PM

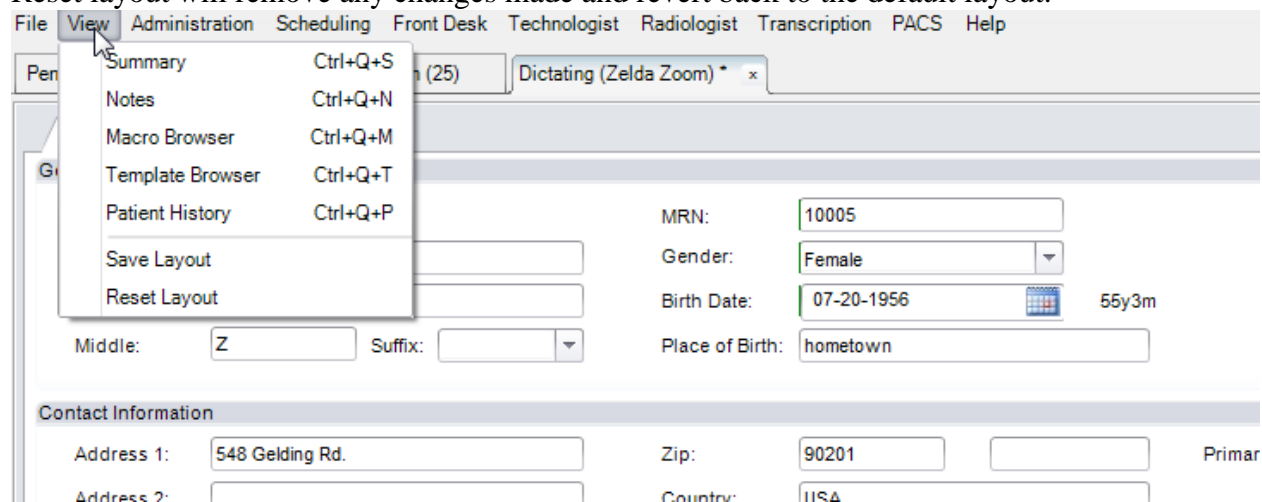
Figure 8.1.1 – Pending Dictation work list #1





## 8.2 Dictating Data Window

When the Dictating data window is opened a new menu option “View” becomes present. This menu has options for the dictating data window. This menu is present in the dictate and reporting windows. Expanding the menu allows the user to select which data panes they wish to view. If one of the data panes is accidentally closed, it can be re-opened from this menu. You will also notice that you can “Save Layout” changes and “Reset Layout” changes. Adjusting the layout during the session doesn’t automatically save the layout on exit of the window. If the user adjusts the layout to their liking, select Save Layout will retain the layout for all future sessions. Reset layout will remove any changes made and revert back to the default layout.



**Figure 8.2.1 – View Menu**

The dictating data window has 3 tabs, the Patient Tab with the patient’s name, address origin, and notes. The Exam tab that shows the technologists work flow. Lastly, the report tab which has the dictation control, and report editor. The data tabs can be moved and docked within the main document frame area. A user can list the tabs in the order they like or dock them individually. On the outer frames of the data windows are data panes. These data panes include the patient summary, a section to enter notes, Macro Browser, Template Browser, and a Patient History list box.

These controls are much more flexible, they can be docked anywhere in the bounds of the reporting screen, they can be displayed as a tabbed document window next to the document window as if it was one. It can be floating above the rRIS, or on another screen. They can be pinned so that they stay visible or they can be unpinned so that they auto hide to a small tab. I have provided examples in an attempt to show the versatility of the data pane.

## RADNET, Inc. – rRIS Release Notes

**General Information**

Prefix: [ ] MRN: 10005 ☐ Claustrophobic  
First Name: Zelda Gender: Female ☐ Arbitration Signed  
Last Name: Zoom Birth Date: 07-20-1956 55y3m ☐ Verified ID  
Middle: Z Suffix: [ ] Place of Birth: hometown

**Contact Information**

Address 1: 548 Gelding Rd. Zip: 90201 Primary Phone: (902) 156-5466  
Address 2: [ ] Country: USA ☐ No Alternate Phone  
City: Bell Work Phone: (902) 548-7854  
State: California Email: [ ] Other Phone: 0 -  
Preferred Contact Method: [ ] Preferred Delivery Method: [ ]

**Patient Origin**

Primary Language: English  
Education Level: High School  
Religion: Christian  
Race: Asian  
Ethnicity: Asian

**Patient Notes**

11-01-11 dtn -  
10-04-11 dtn - This is the patient notes field

**Summary**

**Initial Report** **STAT**  
Accession ID: 1009354  
Procedure: 71020:XR CHEST PA LAT  
MRN: 10005  
Patient: Zelda Zoom(55y3m / F)  
Date: 09-01-2011 12:00 AM  
Referring: Noye, Darcy (541) 574-5855  
Dictated by:  
Trans By:  
Tech notes: Noye, Darcy (902) 439-6517

**Notes**

Assign to: [ ]  
Assign to WL: ☒ General ☐ Problem ☐ QA

**Macro Browser**

Show All [ ]  
Macros  
booger  
booger  
StickTest

**Template Browser**

Show All [ ]

**Patient History**

Flags	Nuggets	Status	Procedures	Scheduled Date	Accession #	Dictated Date	Transcribed Date	Signed Date	Locked By
N	Contains: Contains:	Contains: Contains:	Equals:	Contains: Equals:	Contains: Equals:	Contains: Equals:	Contains: Equals:	Contains: Equals:	Contains: Equals:
	Arrived	US Chest [76604] - Chest	08-03-2011 1:00 PM	1009175					

Emergency Access **STAT** Images Submit Sign Suspend Skip

Figure 8.2.2 – Dictating data window sample view 1 tabbed

**Report**

00:00:00 Play Speed 1.0 Distribute

© 2010 Multimodal Technologies, Inc. - AnyModal Edit 5.4.2560

**Patient**

**General Information**

Prefix: [ ] MRN: 10005 [ ] Gender: Female [ ] ☐ Claustrophobic

First Name: Zelda [ ] Birth Date: 07-20-1956 [ ] 55y3m ☐ Arbitration Signed

Last Name: Zoom [ ] Place of Birth: hometown [ ] ☐ Verified ID

Middle: Z [ ] Suffix: [ ]

**Contact Information**

Address 1: 548 Gelding Rd. [ ] Zip: 90201 [ ] Primary Phone: (902) 156-5466 [ ]

**Exam**

**Technologists Notes**

Primary Tech: Noye, Darcy [ ] Copy / Paste

Assisting Tech 1: [ ]

Assisting Tech 2: [ ]

Last Menstrual Period: [ ] ☒ Pregnant ☐ Not Pregnant

☐ Shielded Patient ☐ Pregnancy Test ☐ Blood Test

**Patient History**

Flags	Nuggets	Status	Procedures	Scheduled Date	Accession #	Dictated Date	Transcribed Date	Signed Date	Locked By
N	Contains: [ ]	Contains: [ ]	Contains: [ ]	Equals: [ ]	Contains: [ ]	Equals: [ ]	Equals: [ ]	Equals: [ ]	Contains: [ ]
	Arrived		US Chest [76604] - Chest	08-03-2011 1:00 PM	1009175				

**Summary**

**Initial Report** **STAT**

Accession ID: 1009354

Procedure: 71020:XR CHEST PA LAT

MRN: 10005

Patient: Zelda Zoom(55y3m / F)

Date: 09-01-2011 12:00 AM

Referring: Noye, Darcy (541) 574-5855

Dictated by:

Trans By:

Tech notes: Noye, Darcy (902) 439-6517

**Notes**

Assign to: [ ]

Assign to WL: ☒ General ☐ Problem ☐ QA

**Macro Browser**

☐ Show All [ ]

Macros

booger

booger

StickTest

**Template Browser**

☐ Show All [ ]

Emergency Access **STAT** Images [ ] Submit [ ] Sign [ ] Suspend [ ] Skip [ ]

Figure 8.2.3 – Dictating data window sample view 2 horizontal

**Exam**

Tech: Noye, Darcy

isting Tech 1:

isting Tech 2:

Menstrual Period: mm-dd-yyyy

Shielded Patient

Pregnancy

**Report**

Play Speed 1.0

© 2010 Multimodal Technologies, Inc. - AnyModal Edit 5.4.2560

**Patient**

**General Information**

Prefix:

First Name: Zelda

Last Name: Zoom

Middle: Z Suffix:

**Contact Information**

Address 1: 548 Gelding Rd.

Address 2:

City: Bell

State: California

Preferred Contact Method:

**Patient Origin**

Primary Language: English

Education Level: High School

Religion: Christian

Race: Asian

Ethnicity: Asian

**Summary**

**Initial Report** **STAT**

Accession ID: 1009354

Procedure: 71020:XR CHEST PA LAT

MRN: 10005

Patient: Zelda Zoom(55y3m / F)

Date: 09-01-2011 12:00 AM

Referring: Noye, Darcy (541) 574-5855

Dictated by:

Trans By:

Tech notes: Noye, Darcy (902) 439-6517

**Notes**

Assign to:

Assign to WL: ☒ General ☐ Problem ☐ QA

**Macro Browser**

Show All

Macros

booger

booger

StickTest

**Template Browser**

Show All

**Patient History**

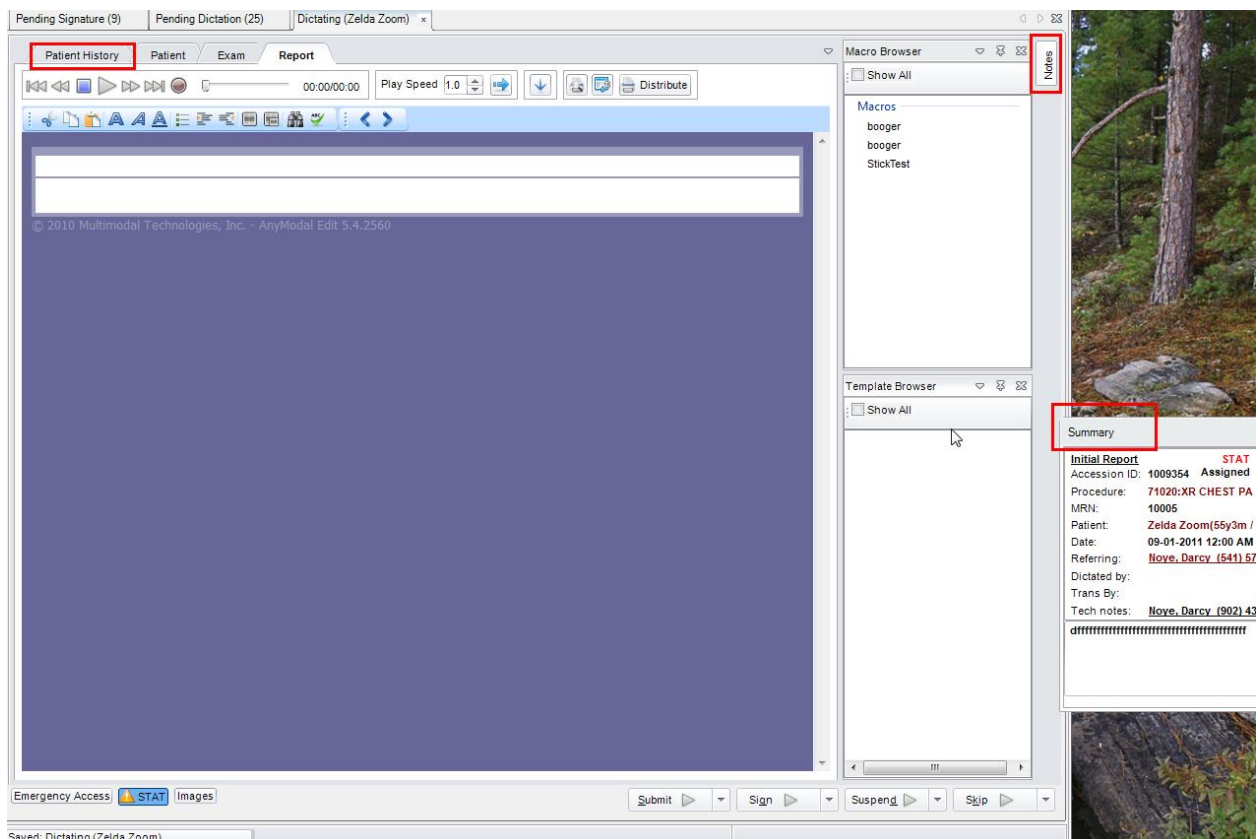
Flags	Nuggets	Status	Procedures	Scheduled Date	Accession #	Dictated Date	Transcribed Date	Signed Date	Locked By
N	Contains:	Contains:	Contains:	Contains:	Equals:	Contains:	Equals:	Equals:	Contains:
	Arrived		US Chest [76604] - Chest	08-03-2011 1:00 PM	1009175				

Emergency Access **STAT** Images

Submit Sign Suspend Skip

**Figure 8.2.4 – Dictating data window sample view 3 vertical**

The user can have one or two tabs horizontal / vertical and the other(s) tabbed. The layout can be saved in the users desired configuration. If the layout is changed, but not desired, the user can select reset layout to revert back to the original.



In Figure 8.25 we have the summary screen that is floating on the desktop on the right of the rRIS. Patient history is a tab next to the patient tab (sequence of tabs can be re-arranged), and the notes are unpinned to make them auto hide on the left side of the window. Hover the mouse over the unpinned data panes will expand that data pane into view.

### 8.2.1 Patient Tab

Figure 8.2.2 shows the patient tab. The information available are the patients general Information such has name, gender date of birth, contact information, patient Origin, and patient notes.

### 8.2.2 Exam Tab

The exam tab is a view of the technologist's notes, the tech that performed the exam, procedure details, and assigned radiologists.

### 8.2.3 Report Tab

On the report tab the user will find the report template, the dictation control, the ability to adjust play back speed, distribute report, report history, and preview report.

#### Dictation Control

The dictation control buttons in use will be lit to easily identify the current state. The buttons will light up in a blue color, with the exception of the record button which will be red. When no buttons are selected from either the Speechmike, or the dictation control, the stop button will be lit blue.



Figure 8.2.3.1 – Dictation control in a stopped state



Figure 8.2.3.2 – Dictation control in record state

A right click within the report template will open context menu. From this menu the option of text expander is available. The text expander has a preconfigured list, but the user may also add to this list.

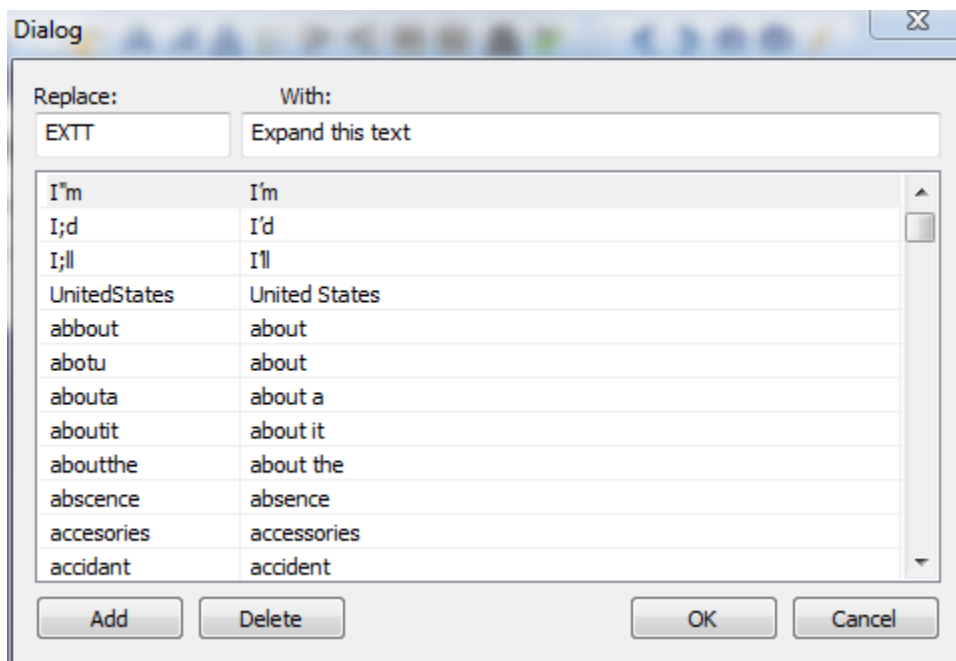
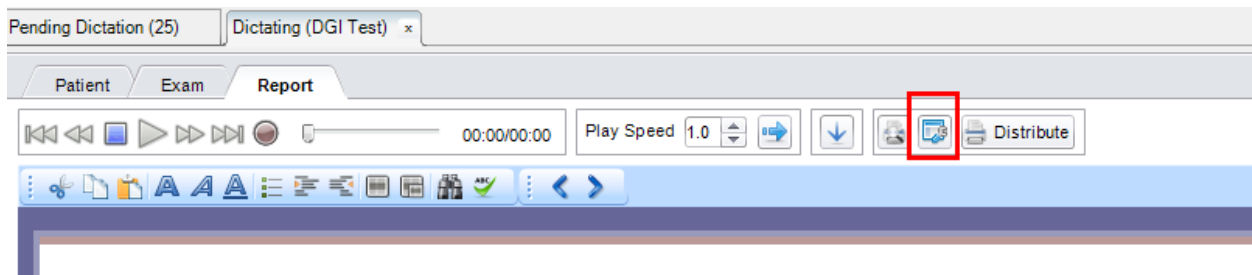


Figure 8.2.3.3 – Text expander dialog window



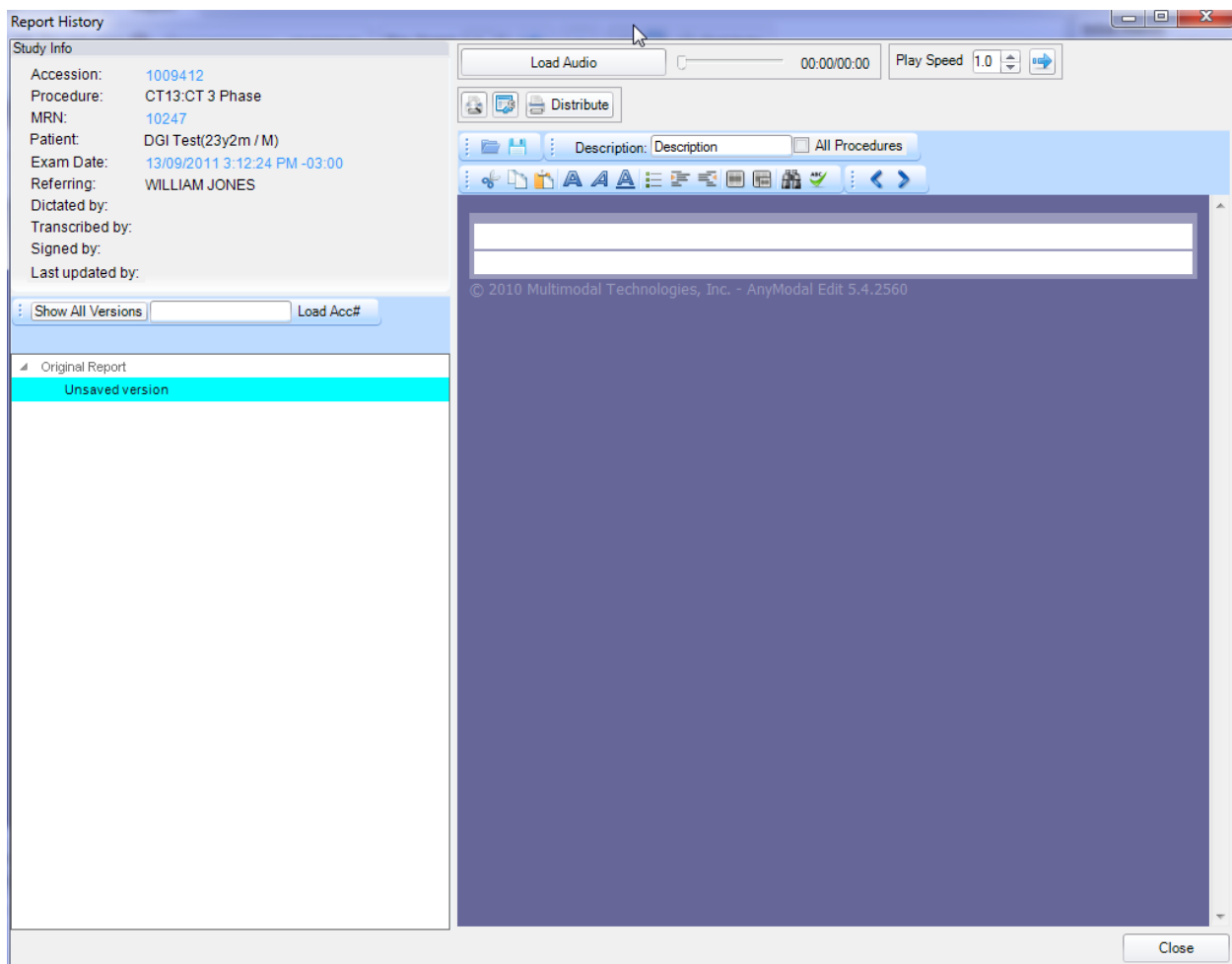
### Report History

Report history is accessed from the Icon outlined in red below. Selecting this button will open the Report History window.



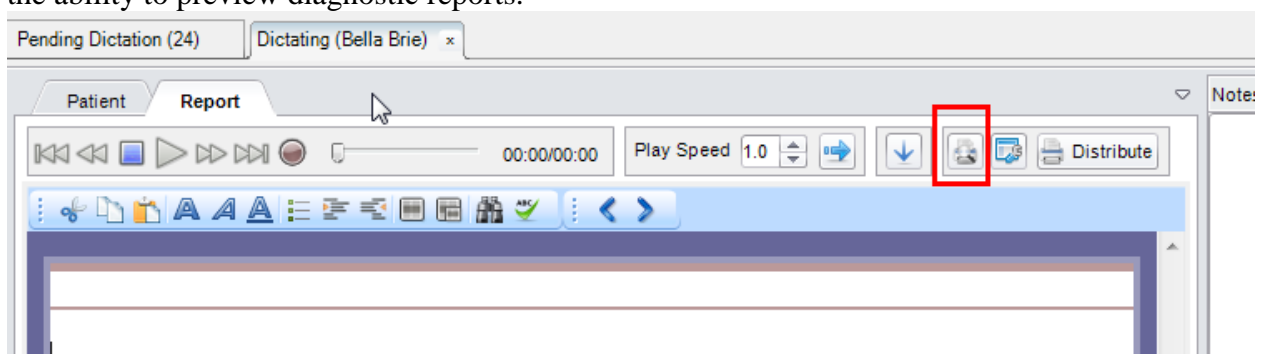
**Figure 8.2.3.4 – Report History Icon**

The user can select which version they would like to view as well as play back the dictation for that interpretation. The user may also enter another accession number to view the report and play back the dictation. The study info panel displays information about the patient and specific history of the study.



**Figure 8.2.3.5 – Report History Window**

The Report Preview button outlined in red below provides the radiologist and the technologist the ability to preview diagnostic reports.



**Figure 8.2.3.6 – Report Preview**

From within the diagnose window or create reports windows will display a print layout view of the report even when the interpretation is not saved to the DB.

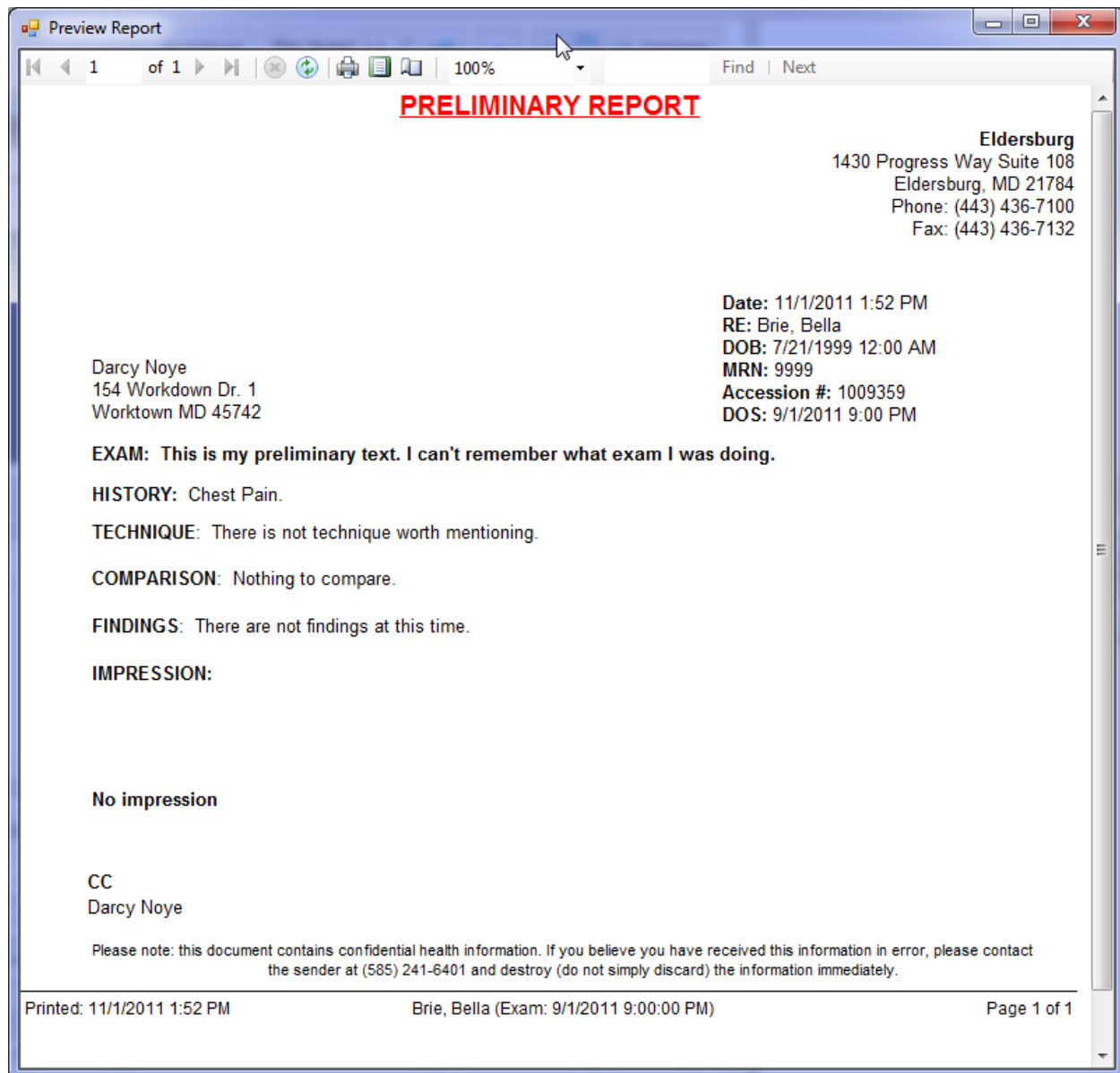


Figure 8.2.3.7 – Report Preview

### Dictating and Create Report Configurable Default Buttons

The button controls on the Dictating, and Reporting windows for Radiologists and Transcriptionists have a downward arrow next to the button indicating that there is more than one potential action that can be completed on a particular button control. Figure 8.2.3.8 displays these buttons, with the Submit button menu expanded showing alternate actions. Hover the mouse pointer over the button will show its default value. Clicking directly on the button will perform the assigned default action.

You can see in Figure 8.2.3.8 that two option from this buttons drop down list have bypass VR. Selecting one of this menu options will submit the dictation skipping voice recognition.

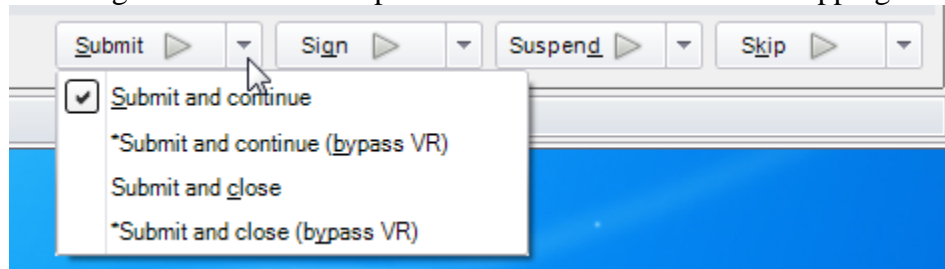


Figure 8.2.3.8 – Radiologist drop down buttons

To change the default action of the button, hold down the CTRL key on the keyboard and select the action from the drop down list. The option selected from the list will be performed as well as change the default setting for the button. When the default action is changed for a button, the text on the button will also change.

Some actions are preceded by an ‘\*’ (as displayed in figure 8.2.3.8), these are the actions that cannot be defaulted. If the user attempts to default that action a message box would be displayed.

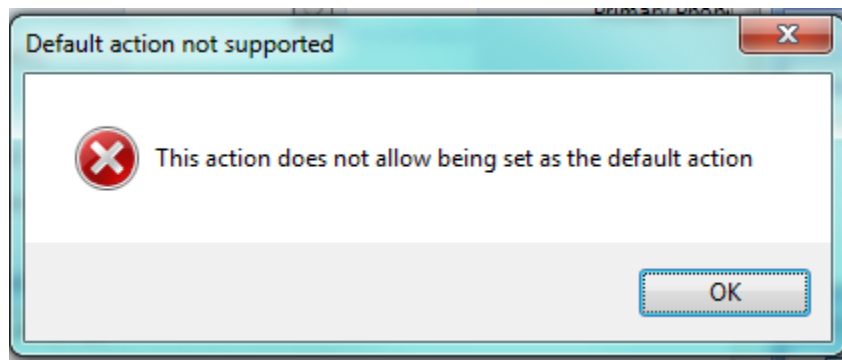
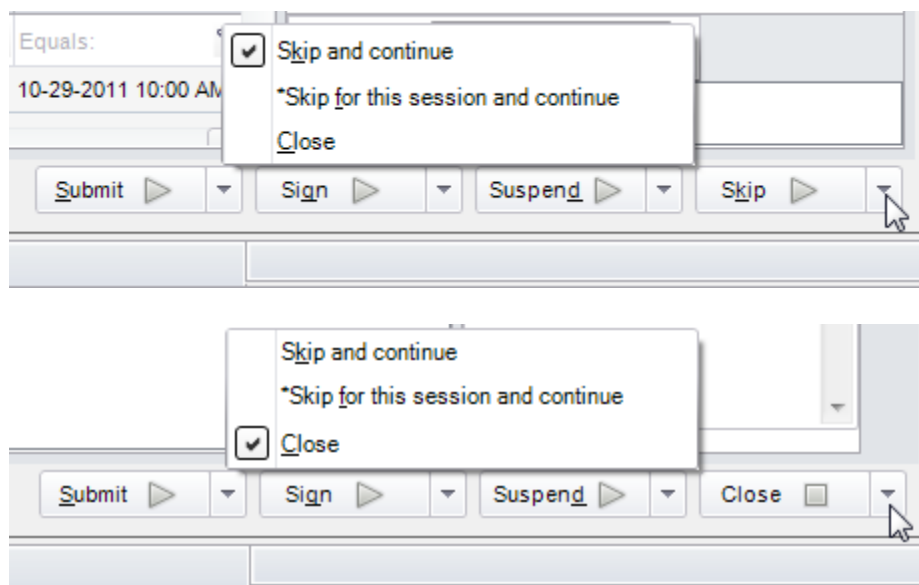


Figure 8.2.3.8 – Message informing user the action cannot be defaulted to the button

Actions are defined as “button action” and continue or “button action” and close. Referring to Figure 8.2.3.9, you will notice ICONS on the buttons as play ► or stop ◼. Assigning actions that are to continue to the next record on the work list display the play ICON, and actions that are to complete action and close data window to return to the work list will have the stop ICON.



**Figure 8.2.3.9 – Default button changed. Default action checked in drop menu with text on button also changed.**

In figure 8.2.3.9 the menu options are to skip the current exam and a specified following action. In this example Skip and Close is defaulted with the action being to simply close the Dictate window.

Skip and continue will skip the item for the current workflow instance. To access this exam in the Dictate window again, it can be opened directly from the work list as normal, or if the user completes the entire work list, then the skipped rows are accessed next.

The final menu option of “\*Skip for this session and continue” will mark this exam as such.

Unlike “Skip and Continue” once the user completes the work list, exams flagged “\*Skip for this session and continue” will not be accessed during the normal “next available exam” work flow. If the user so chooses, they can access the exam via the work list, or if the exam(s) are to be added back into the “next exam” work flow, the user does have the ability to manually add these skipped exams back into the workflow by resetting skipped rows via the Radiologist menu option displayed in Figure 8.2.3.10. Also in Figure 8.2.3.10 is the window that opens. The user can reset individual rows or all of the skipped rows in this list.

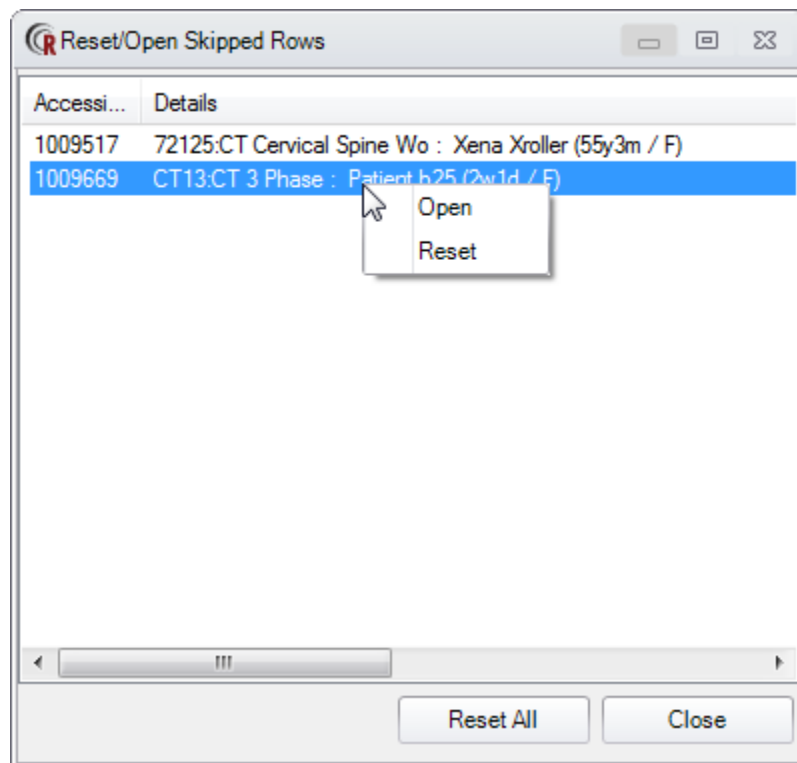
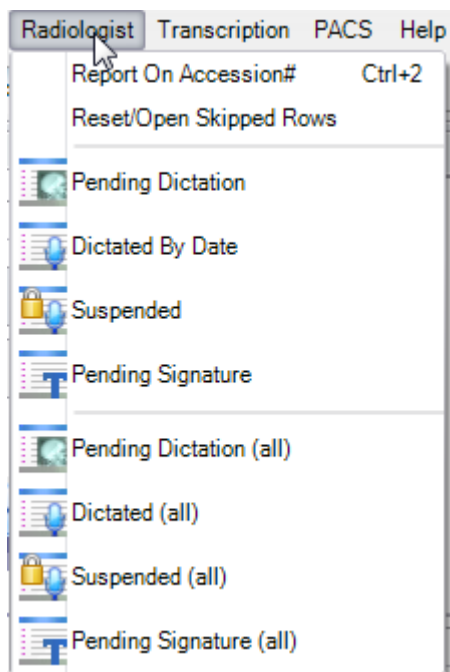


Figure 8.2.3.10 – Reset/Open Skipped Rows menu option and Window

## Emergency Access

If the user has the Emergency Access flag, they will be permitted to override a lock to an exam and continue workflow. Figure 8.2.3.11 shows the Dictate window open by a user that has the Emergency Access flag. This exam is not owned by this particular user. Selecting the Emergency Access button will enable the “Submit, Sign, and Suspend” buttons, permitting the user to continue workflow for this exam. The emergency access flag is set for the user in the personnel editor.

The screenshot displays the RADNET rRIS Dictate window. The interface is divided into several sections:

- Patient Tab:** Contains fields for General Information (Prefix, First Name: Lisa, Last Name: Bonnet, Middle, Suffix, MRN: 10168, Gender: Female, Birth Date: 02-07-1984, Place of Birth), Contact Information (Address 1, Address 2, City, State, Zip, Country, Email, Preferred Contact Method, Preferred Delivery Method), Patient Origin (Primary Language, Education Level, Religion, Race), and Patient Notes (11-01-11 dtn -).
- Exam Tab:** Shows exam details including Accession ID: 1009566, Procedure: 76604:US Chest, MRN: 10168, Patient: Lisa Bonnet(27y8m / F), Date: 10-27-2011 9:03 AM, Referring: Nove, Darcy (541) 574-5855, Dictated by: Nove, Darcy (902) 439-6517, Trans By: Yeo, Dale (902) 555-5555, and Tech notes: lkjdsf.
- Summary Tab:** Displays a list of patient history with columns for Flags, Nuggets, Status, Procedures, Scheduled Date, and Accession#. The first entry is "Dictated US Chest [76604] - Chest" with a scheduled date of "10-27-2011 9:35 AM" and accession number "1009566".
- Bottom Toolbar:** Contains buttons for "Emergency Access" (highlighted with a red box), "STAT", "Images", "Submit", "Sign", "Suspend", and "Skip".

**Figure 8.2.3.11 – Emergency access**

## RADNET, Inc. – rRIS Release Notes

**Patient** Exam Report

**General Information**

Prefix:  MRN:   
First Name:  Gender:   
Last Name:  Birth Date:  27y8m  
Middle:  Suffix:  Place of Birth:

**Contact Information**

Address 1:  Zip:   
Address 2:  Country:   
City:   
State:  Email:   
Preferred Contact Method:  Preferred Delivery Method:

**Patient Origin**

Primary Language:   
Education Level:   
Religion:   
Race:

**Patient Notes**

11-01-11 dtn -

**Summary**

**Initial Report** **STAT**

Accession ID: 1009566  
Procedure: 76604:US Chest  
MRN: 10168  
Patient: Lisa Bonnet(27y8m / F)  
Date: 10-27-2011 9:03 AM  
Referring: Novye, Darcy (541) 574-5855  
Dictated by: Novye, Darcy (902) 439-6517  
Trans By:  
Tech notes: Yeo, Dale (902) 555-5555  
lkjdsf

**Notes**

Assign to:   
Assign to WL: ☒ General ☐ Problem ☐ QA

**Macro Browser**

☐ Show All

**Template Browser**

☐ Show All

**Patient History**

Flags	Nuggets	Status	Procedures	Scheduled Date	Accession #
N	Contains: <input type="text"/>	Contains: <input type="text"/>	Contains: <input type="text"/>	Equals: <input type="text"/>	Contains: <input type="text"/>
		Dictated	US Chest [76604] - Chest	10-27-2011 9:35 AM	1009566

Emergency Access: **STAT** Images

Submit Sign Suspend Skip

Connected: QE Current 1.1.25.6949





## RADNET, Inc. – rRIS Release Notes

Pending Signature (8) Dictated By Date (9) x

10-20-2011

Dictated Date	Dictated By	Dictated Date	Suspended By	Suspended Date	Study Key	Transcriptionist	Read STAT	Problem	QA	Audio Size (bytes)	Audio Length	MModal Job Id	MModal-Learning Submitted	MModal-Learning Complete	Exam STAT
Contains: ▾	Contains: ▾	Equals: ▾	Contains: ▾	Equals: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾
011 12:...	darcyn	10-20-2011...			22504		N	N	N	0	00:00:00		N	N	N
011 8:2:...	darcyn	10-20-2011...			22525		N	N	N	25208	00:00:06		N	N	N
011 12:...	darcyn	10-20-2011...			22550		N	N	N	0	00:00:00		N	N	N
011 9:2:...	darcyn	10-20-2011...			22569		N	N	N	0	00:00:00		N	N	N
011 11:...	darcyn	10-20-2011...			22623		N	N	N	0	00:00:00		N	N	N
011 11:...	darcyn	10-20-2011...			22628		N	N	N	0	00:00:00		N	N	N
011 8:1:...	darcyn	10-20-2011...			22687		N	N	N	59866	00:00:15		N	N	N
011 9:4:...	darcyn	10-20-2011...			22688		N	N	N	23926	00:00:06	2.16.840.1.1...	N	N	N
011 7:2:...	darcyn	10-20-2011...			22740		N	N	N	44050	00:00:11		N	N	N

Auto Refresh Dictate

Figure 8.3.2 - Dictated by Date

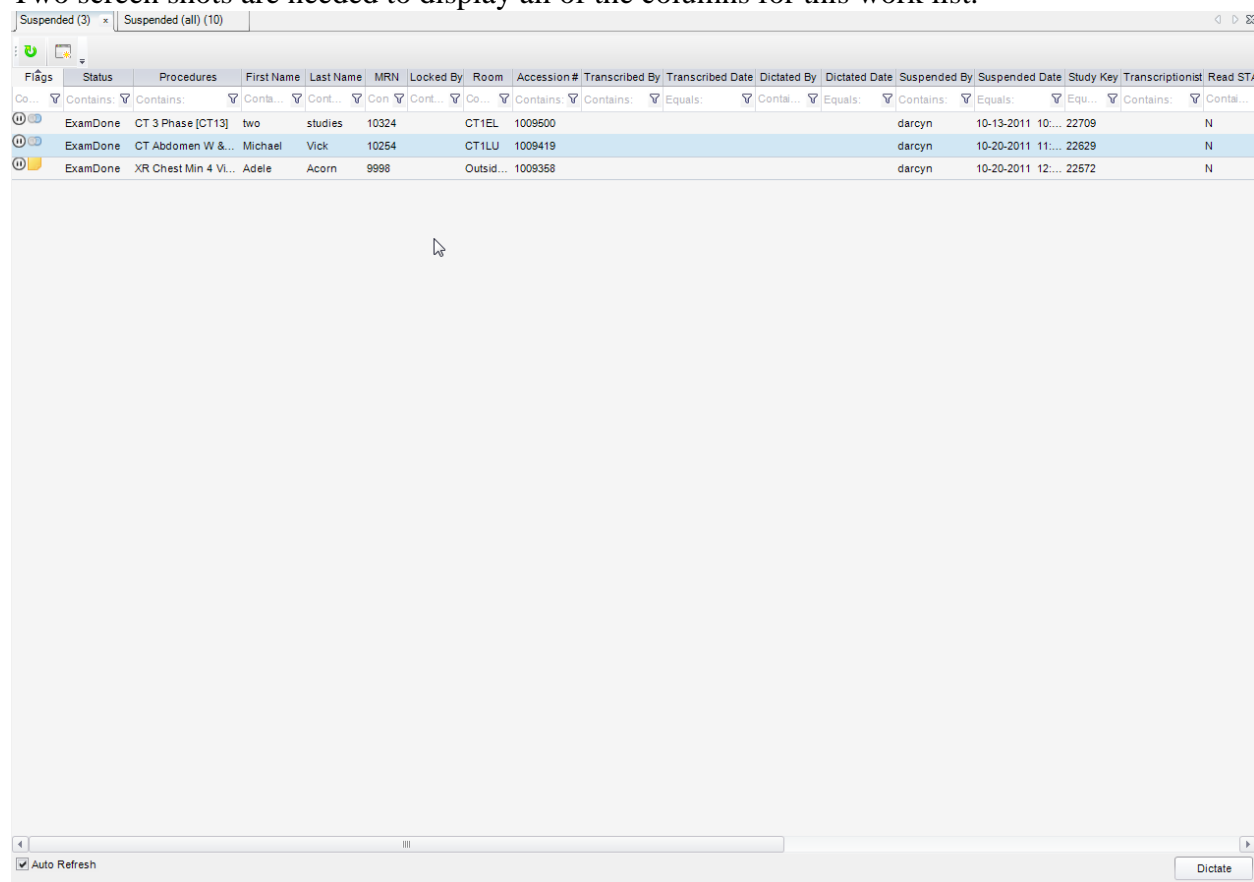
## 8.4 Suspended work list

There are two views of the Suspended work list. Most users will only see the one that displays the current exams in Suspended state by the current logged in user. Admin types can also view the Suspended (all) which shows all jobs in suspended state for all users.

There is only one button action of Dictate from this work list.

The context menu options are Assign to Radiologist, Stat Case (sub menu to assign/unassign), Patient Folder, Audit History, Copy Cell and Request Copy of Images.

Two screen shots are needed to display all of the columns for this work list.



The screenshot shows a web application window titled 'Suspended (3)' and 'Suspended (all) (10)'. It displays a table of exams with columns: Flags, Status, Procedures, First Name, Last Name, MRN, Locked By, Room, Accession #, Transcribed By, Transcribed Date, Dictated By, Dictated Date, Suspended By, Suspended Date, Study Key, Transcriptionist, and Read STA. The table contains three rows of data. Below the table is a 'Dictate' button.

Flags	Status	Procedures	First Name	Last Name	MRN	Locked By	Room	Accession #	Transcribed By	Transcribed Date	Dictated By	Dictated Date	Suspended By	Suspended Date	Study Key	Transcriptionist	Read STA
Co...	ExamDone	CT 3 Phase [CT13]	two	studies	10324		CT1EL	1009600					darcyn	10-13-2011 10:...	22709		N
Co...	ExamDone	CT Abdomen W &...	Michael	Vick	10254		CT1LU	1009419					darcyn	10-20-2011 11:...	22629		N
Co...	ExamDone	XR Chest Min 4 Vi...	Adele	Acorn	9998		Outsid...	1009358					darcyn	10-20-2011 12:...	22572		N

Figure 8.4.1 – Suspended work list

## RADNET, Inc. – rRIS Release Notes

Suspended (3) | Suspended (all) (10)

Dictated By	Dictated Date	Suspended By	Suspended Date	Study Key	Transcriptionist	Read STAT	Problem	QA	Audio Size (bytes)	Audio Length	MModel Job Id	MModel-Learning Submitted	MModel-Learning Complete	Exam STAT
Contai...	Equals:	Contains:	Equals:	Equi...	Contains:	Contai...	Contains:	Cont...	Equals:	Contains:	Contains:	Contains:	Contains:	Contains:
darcyn	10-13-2011 10:...	22709			N	N	N	13056	00:00:03		N	N	N	N
darcyn	10-20-2011 11:...	22629			N	N	N	0	00:00:00		N	N	N	N
darcyn	10-20-2011 12:...	22572			N	N	N	0	00:00:00		N	N	N	N

☒ Auto Refresh Dictate

**Figure 8.4.2 – Suspended work list additional columns**

## 8.5 Pending Signature work list

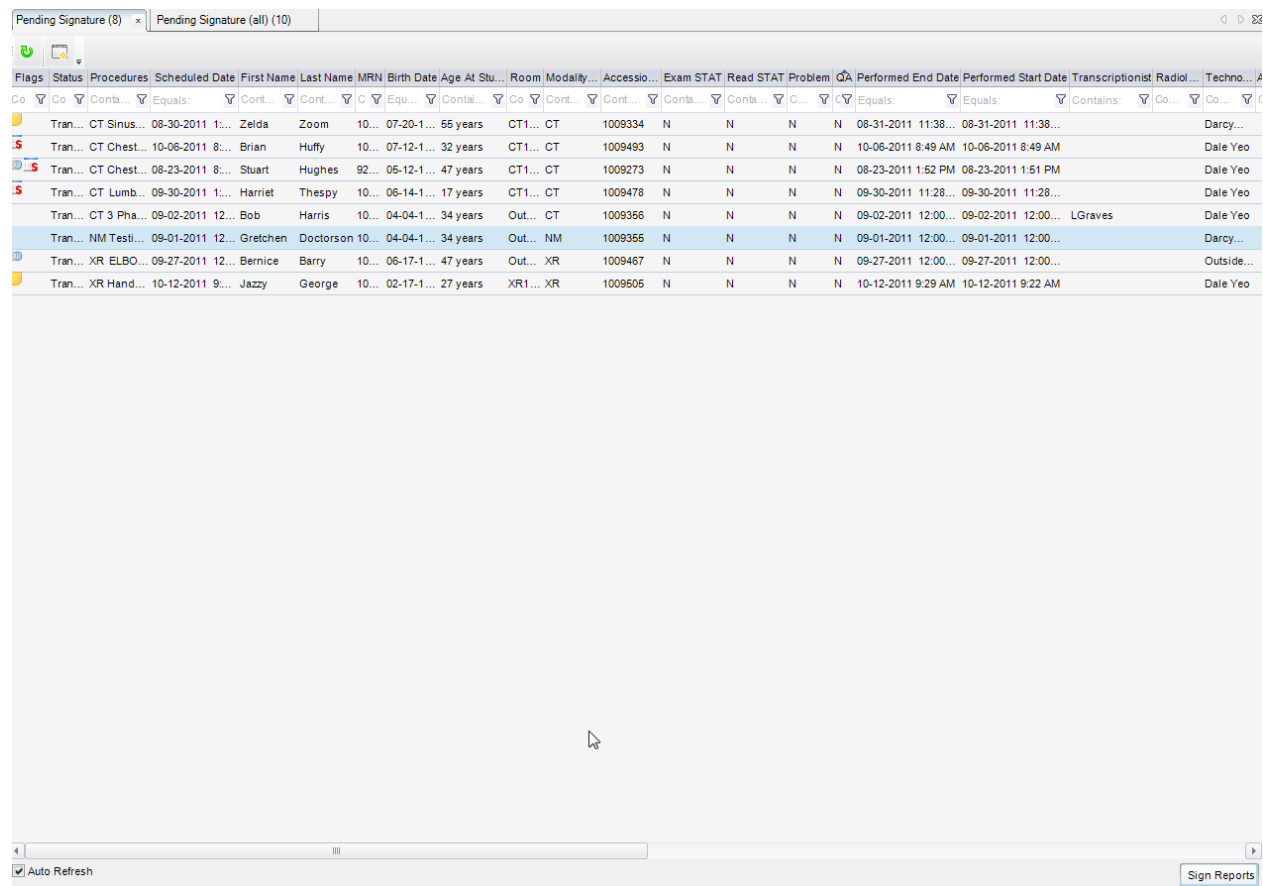
The Pending Signature work list contains the exams that require sign off by the logged in user. Users of resource type Radiologist will have their Pending Signature work list launch when they log into the application.

Again admin types will also have an additional Radiologist menu option of Pending Signature (all) display a view of reports from all users that needing final signature.

The only button action available is Sign Reports.

Context menu options are Dictate, Patient History, Audit History, Copy Cell, Change Status To Report Drafted, Delete the dictation/report and reset the status, Forms and Labels, Stat Case...(sub menu to assign/unassign) and Request Copy of Images.

The following two figures were required to display all columns available in the Pending Signature work list.



The screenshot displays a web application window titled "Pending Signature (8)" and "Pending Signature (all) (10)". It shows a table of pending signature exams. The table has columns for Flags, Status, Procedures, Scheduled Date, First Name, Last Name, MRN, Birth Date, Age At Stu..., Room, Modality, Accessio..., Exam STAT, Read STAT, Problem, QA, Performed End Date, Performed Start Date, Transcriptionist, Radiol..., and Techno... The table contains several rows of data, including exams for patients like Zelda Zoom, Brian Huff, Stuart Hughes, Harriet Thespy, Bob Harris, Gretchen Doctorson, Bernice Barry, and Jazzy George. The bottom of the window features an "Auto Refresh" checkbox and a "Sign Reports" button.

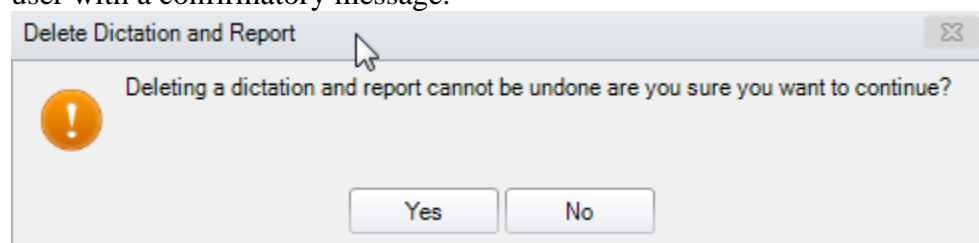
Flags	Status	Procedures	Scheduled Date	First Name	Last Name	MRN	Birth Date	Age At Stu...	Room	Modality	Accessio...	Exam STAT	Read STAT	Problem	QA	Performed End Date	Performed Start Date	Transcriptionist	Radiol...	Techno...
		Tran... CT Sinus...	08-30-2011 1:...	Zelda	Zoom	10...	07-20-1...	55 years	CT1...	CT	1009334	N	N	N	N	08-31-2011 11:38...	08-31-2011 11:38...			Darcy...
		Tran... CT Chest...	10-06-2011 8:...	Brian	Huff	10...	07-12-1...	32 years	CT1...	CT	1009493	N	N	N	N	10-06-2011 8:49 AM	10-06-2011 8:49 AM			Dale Yeo
		Tran... CT Chest...	08-23-2011 8:...	Stuart	Hughes	92...	06-12-1...	47 years	CT1...	CT	1009273	N	N	N	N	08-23-2011 1:52 PM	08-23-2011 1:51 PM			Dale Yeo
		Tran... CT Lumb...	09-30-2011 1:...	Harriet	Thespy	10...	06-14-1...	17 years	CT1...	CT	1009478	N	N	N	N	09-30-2011 11:28...	09-30-2011 11:28...			Dale Yeo
		Tran... CT 3 Pha...	09-02-2011 12:...	Bob	Harris	10...	04-04-1...	34 years	Out...	CT	1009356	N	N	N	N	09-02-2011 12:00...	09-02-2011 12:00...	LGraves		Dale Yeo
		Tran... NM Testi...	09-01-2011 12:...	Gretchen	Doctorson	10...	04-04-1...	34 years	Out...	NM	1009355	N	N	N	N	09-01-2011 12:00...	09-01-2011 12:00...			Darcy...
		Tran... XR ELBO...	09-27-2011 12:...	Bernice	Barry	10...	06-17-1...	47 years	Out...	XR	1009467	N	N	N	N	09-27-2011 12:00...	09-27-2011 12:00...			Outside...
		Tran... XR Hand...	10-12-2011 9:...	Jazzy	George	10...	02-17-1...	27 years	XR1...	XR	1009505	N	N	N	N	10-12-2011 9:29 AM	10-12-2011 9:22 AM			Dale Yeo

Figure 8.5.1 – Pending Signature work list

Pending Signature (8)		Pending Signature (all) (10)															
Audio Size...	Time Pending Sign...	MModal Job Id	MModal-Learning Submit...	MModal-Learning Complete	Transcribed...	Transcribed Date	Dictated...	Dictated Date	Suspended By	Suspended Date	Locked By	Chair Id	Chair Qc Flag	Site Code			
Contai...	Contains:	Contains:	Contains:	Contains:	Contains:	Equals:	Cont...	Equals:	Contains:	Equals:	Cont...	C...	Contains:	Cont...			
31d 0h 25m	2.16.840.1.1...	Y	Y	Y	Y	09-30-2011 10...	09-27-2011...	09-27-2011...						EL			
2d 1h 28m		N	N	N	N	10-29-2011 9.4...	10-13-2011...	10-13-2011...						EL			
31d 22h 7m		N	N	N	N	09-29-2011 1.0...	09-27-2011...	09-27-2011...						LU			
2d 1h 29m	2.16.840.1.1...	N	N	N	N	10-29-2011 9.4...	10-20-2011...	10-20-2011...						LU			
2d 1h 43m	2.16.840.1.1...	N	N	N	N	10-29-2011 9.2...	10-04-2011...	10-04-2011...						EL			
2d 1h 45m		N	N	N	N	10-29-2011 9.2...	10-20-2011...	10-20-2011...						EL			
2d 1h 43m	2.16.840.1.1...	N	N	N	N	10-29-2011 9.2...	10-04-2011...	10-04-2011...						EL			
2d 1h 47m		N	N	N	N	10-29-2011 9.2...	10-12-2011...	10-12-2011...				N		EL			

**Figure 8.5.2 – Pending Signature work list**

Selecting the context menu item Delete the dictation/ report and reset the status will prompt the user with a confirmatory message.



**Figure 8.5.3 Delete the dictation / report confirmation dialog**

When the delete dictation/report happens the system will remove the current dictation and set the status back to exam done with the exception of an addendum. If the dictation is for an addendum then the application will reset the status back to Signed where it can be dictated on once again if needed.

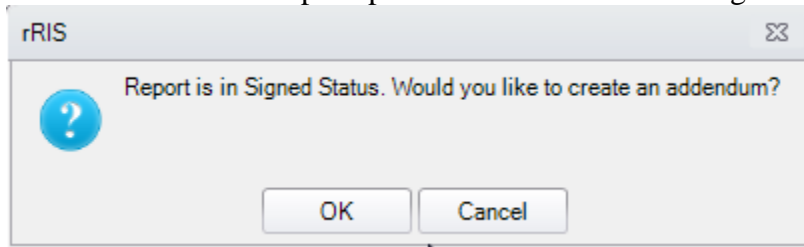
A dictation deletion can only be performed when the study is in Dictated, ReportDrafted or Transcribed status.

### 8.5.1 Sign Reports Data window

The data window tabs, panes and features are the same as the dictating data window pictured in section 8.2 of this document. Once the report is signed the exam the accessed from the patient folder.

### 8.5.2 Amending Reports

From the patient folder select the Exam in the list. This will enable the Dictate button. Selecting the Dictate button will prompt the user with the following message.

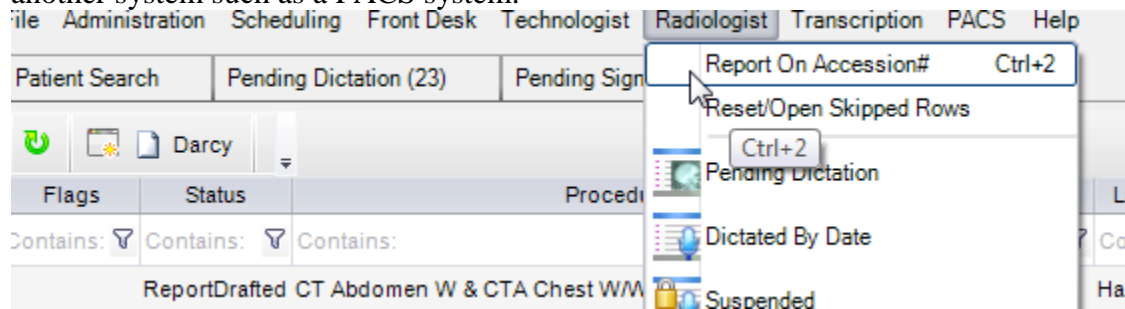


**Figure 8.5.2.1 – Create addendum message**

After selecting the OK button to the message above will open the Dictating (patient name) window, and the user can complete the dictation or add template normal text, or cancel out and the status of the exam stays in in signed status.

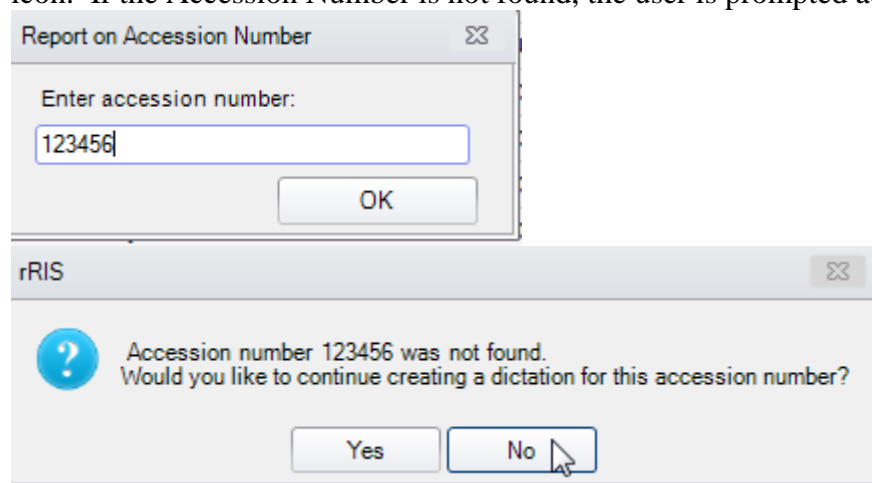
## 8.6 Report on Accession Number

This feature will allow the user to open the Diagnose screen on a study based on a specified accession number. This provides the user with the ability to bypass the worklist type workflow and run rRis in a “slave” type mode. The input of this accession number can come in different forms as tcp listener, file watcher, etc. These are all used as methods to drive workflow from another system such as a PACS system.



**Figure 8.6.1 – Report on Accession Number**

The user also has the ability to manually enter an Accession Number and let rRIS search for it. This can be done by using the menu option or the right-click context menu on the system tray icon. If the Accession Number is not found, the user is prompted accordingly.



**Figure 8.6.2 – Enter Accession Number Dialog and Confirmation Message**



## 9. Transcription

### 9.1 Report Drafted

The Reported Drafted is a work list for the Transcription role and is a complete list of all jobs that require action to move to Transcribed status (transcribed exams are displayed in the Pending signature work list).

The only button action is Create/Edit Reports.

Context menu options are Assign to Transcriptionist, Stat Case (sub menu to assign/unassign), Problem Queue (sub menu to assign/unassign), QA Queue (sub menu to assign/unassign), Change Status To Report Drafted, Delete the dictation/ report and reset the status, Patient Folder, Audit History, Copy Cell and Request Copy of Images.

The following 2 figures display the columns available from the Reports Drafted work list.

Flags	Status	Procedures	First Name	Last Name	MRN	Locked By	Room	Accession #	Transcribed By	Transcribed Date	Dictated By	Dictated Date	Suspended By	Suspended Date	Study Key	Transcriptionist	Read STAT
		CT Abdom...	MC	Hammer	9743		CT1EL	1008813	Terry	05-12-2011 2:17...	Terry	05-12-2011 1...					
		XR Chest...	Tricia	Grothen	8611		XR1FH	1007721	Service: rRISS...	05-12-2011 2:34...	Terry	05-12-2011 2...			20932	N	
		XR RECA...	Marty	Callinan	7839		XR2FH	1007084	Terry	05-12-2011 2:36...	Terry	05-12-2011 2...			20295	N	
		MaxDigi...	Hye	Cregor	5716		MA1EL	1005172	Service: rRISS...	05-12-2011 2:47...	Terry	05-12-2011 2...			18383	N	
		XR FOOT...	Sudie	Liebross	8518		XR2FH	1007797	Service: rRISS...	05-12-2011 2:52...	Terry	05-12-2011 2...			21008	N	
		MR MRCP...	Merrill	Dienhart	4952		MR1EL	1004262	Service: rRISS...	05-12-2011 2:57...	Terry	05-12-2011 2...			17473	N	
		MR x Brea...	Janita	Santacruz	5073		MR1EL	1004299	Service: rRISS...	05-12-2011 3:15...	Terry	05-12-2011 3...			17510	N	
		XR FEMU...	Julietta	Vanderli...	8334		XR2FH	1007890	Terry	05-12-2011 3:26...	Terry	05-12-2011 2...			21101	N	
		NM Miralu...	Modesta	Clowes	4084		NM1FH	1003604	Service: rRISS...	05-12-2011 3:31...	Terry	05-12-2011 3...			16815	N	
		XR Femur...	Kala	Nuffer	8569		XR1FH	1007885	Service: rRISS...	05-12-2011 3:32...	Terry	05-12-2011 3...			21096	N	
		XR ELBO...	Johnetta	Lindinha	7950		XR1LU	1007130	Service: rRISS...	05-12-2011 3:32...	Terry	05-12-2011 3...			20341	N	
		XR CHES...	Penelope	Fludd	7818		XR1FH	1007140	Service: rRISS...	05-12-2011 3:34...	Terry	05-12-2011 3...			20351	N	
		XR Cystog...	Veronique	Majocka	8336		XR1FH	1007816	Service: rRISS...	05-12-2011 3:35...	Terry	05-12-2011 3...			21027	N	
		XR Bone...	Shoshana	Marsili	8415		XR1EL	1007536	Service: rRISS...	05-12-2011 3:35...	Terry	05-12-2011 3...			20747	N	
		CTA Neck...	Mahalia	Fouree	4252		CT1EL	1004220	Service: rRISS...	05-12-2011 3:36...	Terry	05-12-2011 3...			17431	N	
		MR x Che...	Rosella	Bachas	4841		MR1FH	1004198	Service: rRISS...	05-12-2011 3:37...	Terry	05-12-2011 3...			17409	N	
		MaxDigi...	Sherita	Sieving	5225		MA1EL	1005160	Service: rRISS...	05-12-2011 3:38...	Terry	05-12-2011 3...			18371	ian	N
		MR Lumb...	Daniel	Ayhens	4973		MR1LU	1004385	Service: rRISS...	05-12-2011 3:42...	Terry	05-12-2011 3...			17596	N	
		US OB FO...	Lloyd	Hankinson	4525		US1FH	1004072	Service: rRISS...	05-12-2011 3:45...	Terry	05-12-2011 3...			17283	N	
		DX Appen...	Pa	Luxon	4431		DE1FH	1004346	Service: rRISS...	05-12-2011 3:50...	Terry	05-12-2011 3...			17557	N	
		US Chest...	Jamey	Poling	4011		US2EL	1003901	Terry	05-12-2011 3:51...	Terry	05-12-2011 3...			17112	N	
		PT/CT A...	Omar	Ravitz	9124		PT1FH	1008347	Service: rRISS...	05-12-2011 3:51...	Terry	05-12-2011 3...			21558	N	
		US OB Fol...	Antoinette	Hurrington	4751		US1EL	1003929	Service: rRISS...	05-12-2011 3:52...	Terry	05-12-2011 3...			17140	N	
		XR ELBO...	Ruben	Gaunt	8545		XR1LU	1007880	Service: rRISS...	05-12-2011 3:53...	Terry	05-12-2011 3...			21091	N	
		MR Lumb...	Pauletta	Mellom	4852		MR1EL	1004292	Service: rRISS...	05-12-2011 3:53...	Terry	05-12-2011 3...			17503	N	
		MaxDigi...	Gerald	Weniger	5555		MA1LU	1005003	Service: rRISS...	05-12-2011 4:21...	Terry	05-12-2011 3...			18214	N	
		US Hyster...	Katlin	Litz	4964		US2FH	1004096	Service: rRISS...	05-12-2011 4:21...	Terry	05-12-2011 3...			17307	N	
		MaxDigi...	Lida	Sowl	5092		MA1LU	1004533	Service: rRISS...	05-12-2011 4:21...	Terry	05-12-2011 3...			17744	N	
		XR CHES...	Elena	Downy	7927		XR2FH	1007087	Service: rRISS...	05-12-2011 4:21...	Terry	05-12-2011 3...			20298	N	
		US Neona...	Kristie	Nina	4847		US1EL	1004086	Service: rRISS...	05-12-2011 4:21...	Terry	05-12-2011 3...			17297	N	
		MR Pelvis...	Earlie	Hettinger	4759		MR1FH	1004366	Service: rRISS...	05-12-2011 4:21...	Terry	05-12-2011 3...			17577	N	
		XR FORE...	Catarina	Odonell	7710		XR1LU	1007149	Service: rRISS...	05-12-2011 4:21...	Terry	05-12-2011 3...			20360	N	

Figure 9.1.1 Report Drafted work list

**Figure 9.1.2 Report Drafted work list**

Delete Dictation and Report ✕

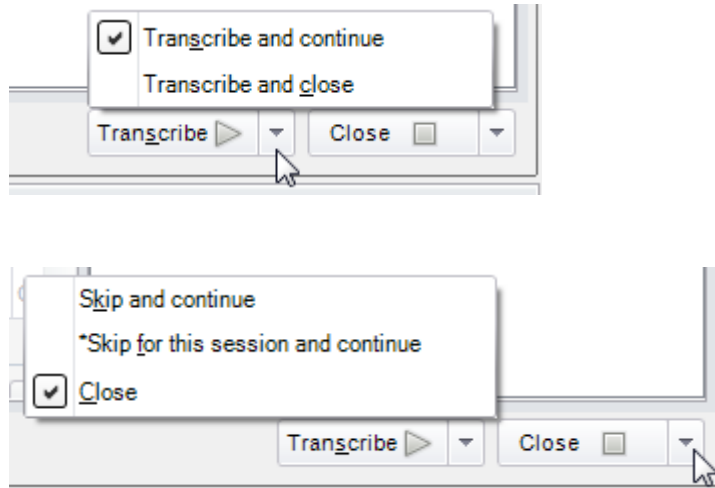


When the delete dictation/report happens the system will remove the current dictation and set the status back to exam done with the exception of an addendum. If the dictation is for an addendum then the application will reset the status back to Signed where it can be dictated on once again if needed.

A dictation deletion can only be performed when the study is in Dictated, ReportDrafted or Transcribed status.

### **9.1.1 Reported Drafted Data Window**

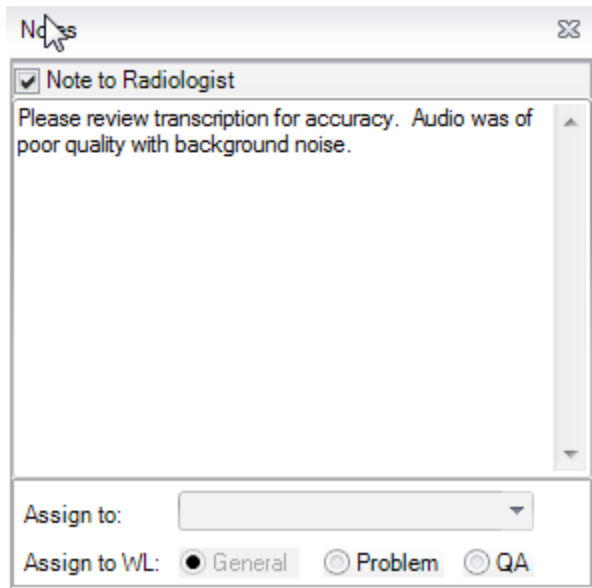
The Transcription Editor is a mirror image of the Dictating data windows with the exception of the button available to skip and close.



**Figure 9.1.1.1 Transcription Editor buttons for transcribing and closing**

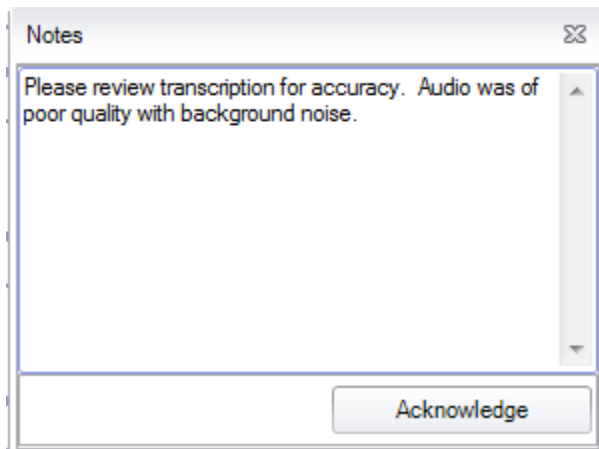
### **9.1.2 Diagnostic – Note to Radiologist**

Note to Radiologist has been added in this build. Utilizing the pre-existing “Transcription Notes” data pane in the reporting data window, a checkbox was added. When checked it marks the notes are meant for the radiologist to review. Also when this checkbox is selected the “Assign to:” and Assign to WL:” are disabled.



**Figure 9.1.2.1 – Note to Radiologist selecting, disabling Assign to and Assign to WL**

When the transcriptionist submits this study with “Note to Radiologist” checked, the Radiologist must acknowledge the note before the study can be signed off.



**Figure 9.1.2.2 – Note to Radiologist – Note to be acknowledged.**

The Radiologist can choose to re-dictate, edit report, or edit data window fields without having to acknowledge the “Note to Radiologist”. If the exam is moved to a status of Dictated or Report Drafted, the flag for “Note to Radiologist” is retained. The radiologist still has to acknowledge the note before it can be signed. If the exam status was changed to Report Drafted by a radiologist, the transcriptionist can remove the “Note to Radiologist” flag and the exam will no longer have to be acknowledged by the Radiologist.

If the Radiologist attempts to sign off a report that has not been acknowledged, they will be presented with a confirmatory message that provides the option to acknowledge and sign off, or select No and return to the data window.

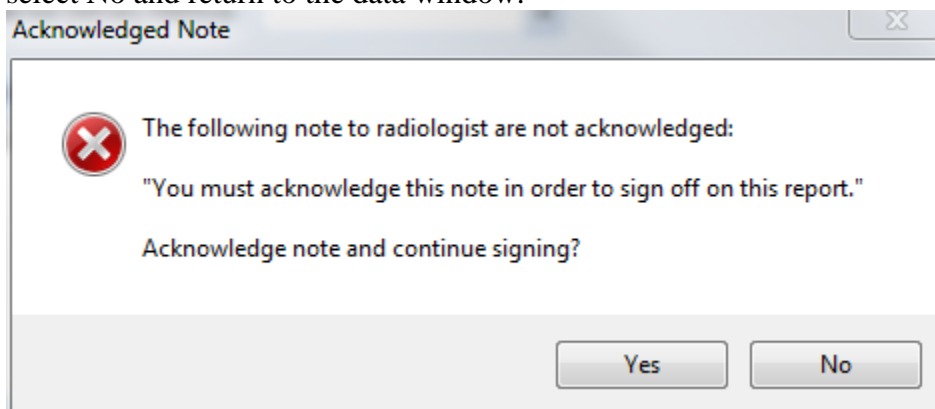



Figure 9.1.2.3 – Confirmation of signing before acknowledging Note To Radiologist

### 9.1.3 Optimizing Dictation Playback

On the reporting control there is an Optimize Playback toggle buttons . When this button is enabled, rRIS will skip any dead space in the report/dictation. The button state is stored at the user level so the application will remember the setting when the next report is loaded.

### 9.1.4 Playback Speed per Radiologist

Transcription can adjust the playback per radiologist. If Radiologist A has a slower talking rate when dictating, and Radiologist B has a faster, the transcriptionist can adjust the playback speed. The speed selected will be auto saved and the next dictation the transcriptionist completes on Radiologist A or B, etc... is maintained.

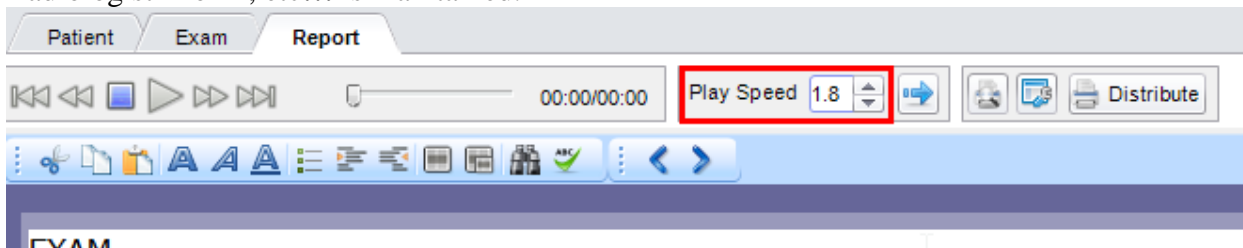


Figure 9.1.2.4 – Playback speed

### 9.2 Pending Review

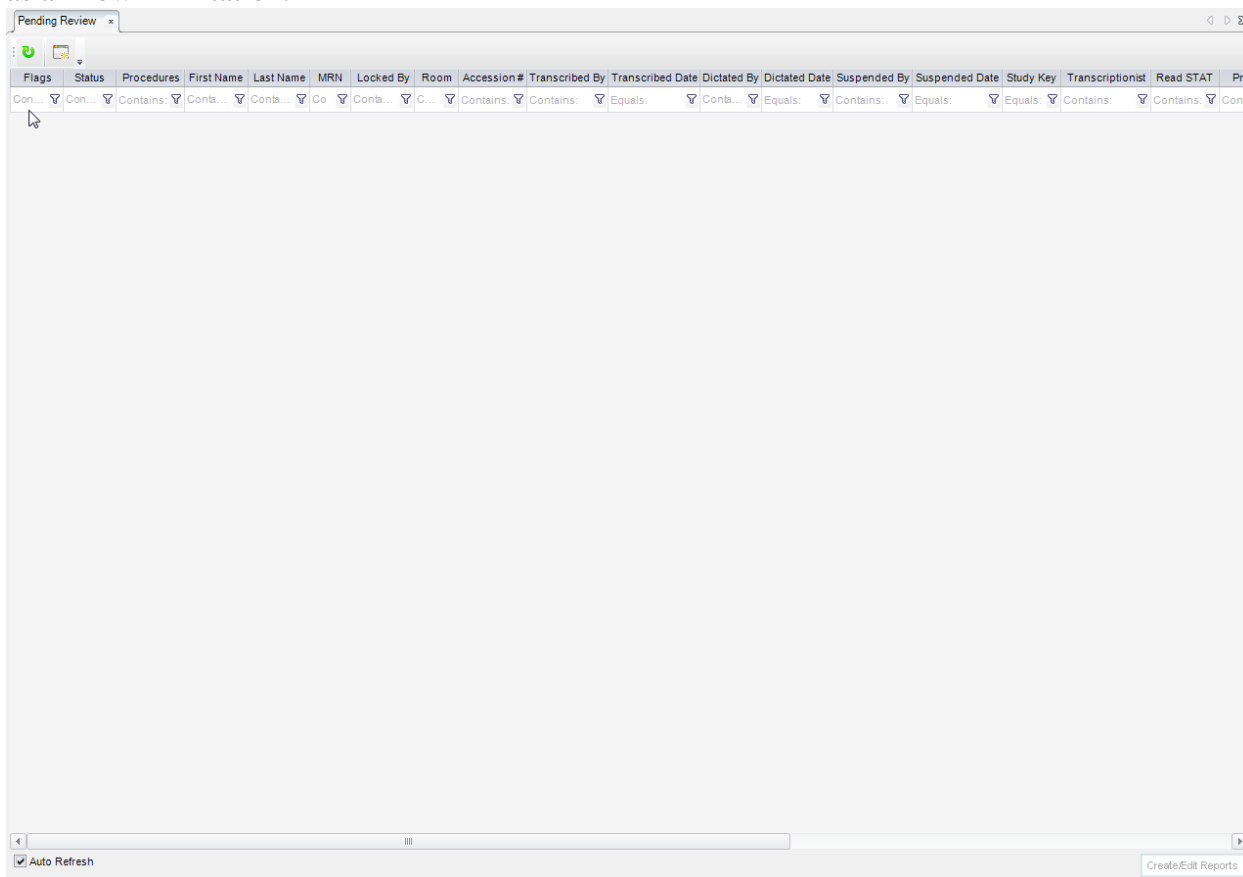
The Pending Review work list contains jobs that may have been dictated on but the accession number was not recognized by the system, the job will be added to this work list.

Only the Create/Edit Reports button action is available from this work list.

The context menu options are

Again 2 figures were needed to show the columns available.

Please Note that in rRIS first release, although the menu item and work list is accessible, the feature is not complete, therefore there will be no records assigned to the work list. This is listed as a known limitation.



**Figure 9.2.1 – Pending Review work list**

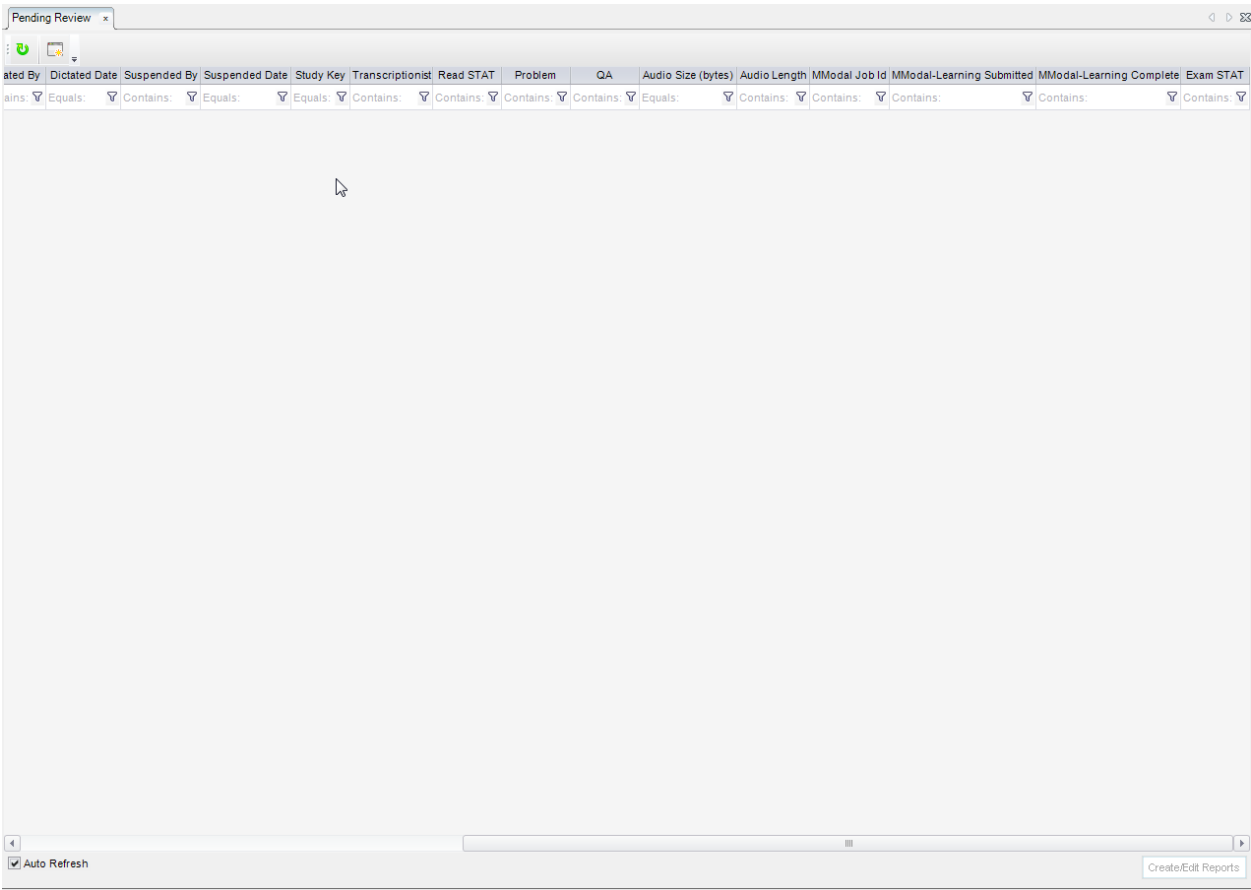
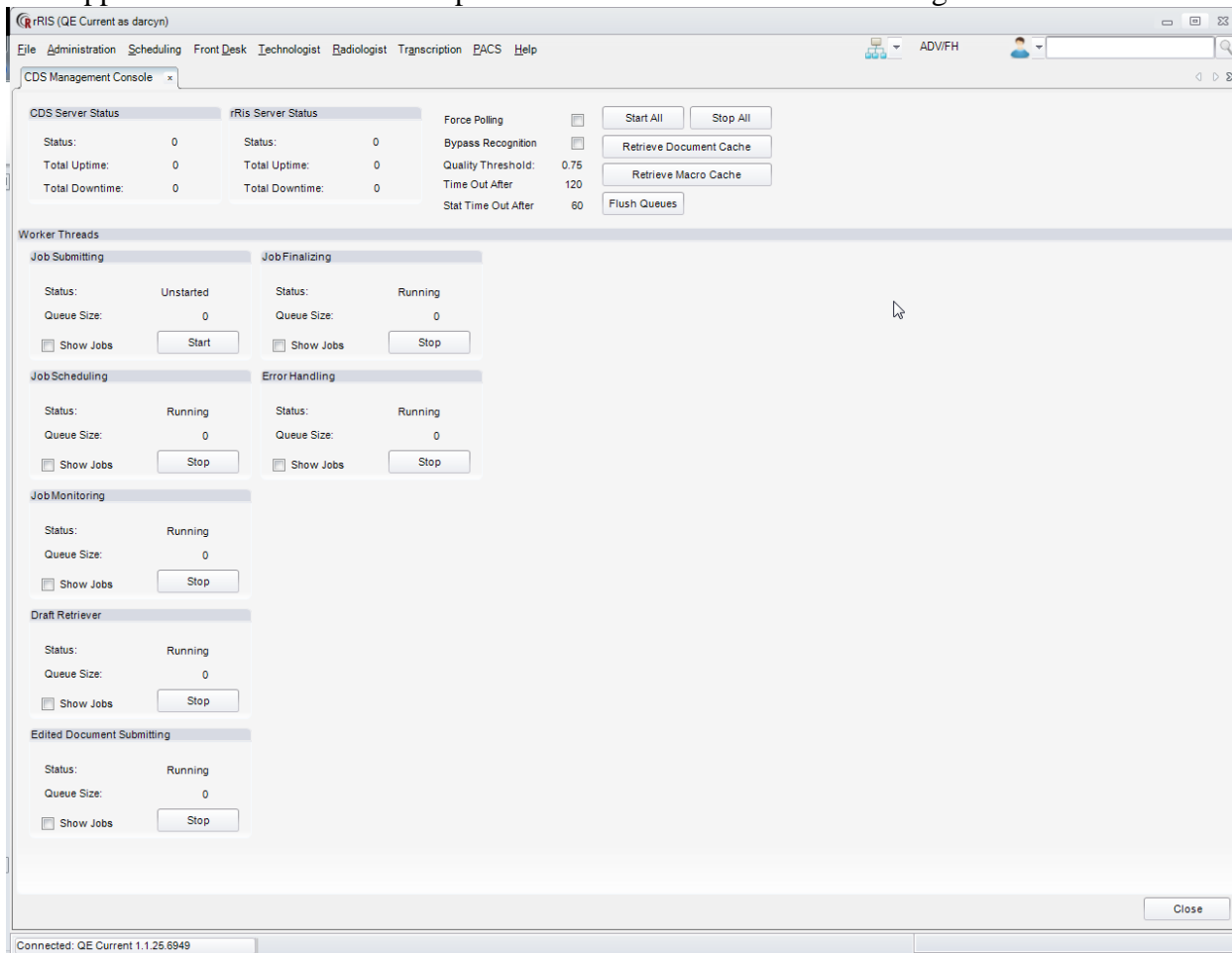


Figure 9.2.2 – Pending Review work list



## 10. CDS Job Manager

The CDS Job Manager is an application that handles communication with our MModal partner for voice recognition. You can access the CDS Job Manager console from within the rRIS main GUI application. Under the menu option Administration>CDS Job Manager.



**Figure 10.1 CDS Job Manager Console**

**CDS Server Status:** shows the amount of uptime and downtime since the last service restart that the CDS service has been communicating with MModal servers.

**rRIS Server Status:** shows the amount of uptime and downtime since the last service restart that the CDS service has been communicating with rRIS servers

**Force Polling:** normally we poll MModal for completed jobs every 10 minutes for normal cases and 5 minutes for stat cases. If this option is checked we will poll every minute. This should only be turned on in cases where you are trying to catch jobs or when trouble shooting.

**Bypass Recognition:** if this option is checked we will always return typing documents to the MT's and bypass the recognition process completely. This is added in the event a site wants digital dictation only if the MModal servers go down for an extended period of time.

**Quality Threshold (70):** reflects the system configuration value stored in the lookup table. When a dictation is submitted for recognition we get a quality score. If the quality score is higher than this value we will wait for the recognized draft to be returned from MModal. If the quality score is below the value we will bypass recognition and return a typing document.

**Time out after:** reflects the CDSTimeOutInMinutes.

**Stat Time out after:** reflects the CDSStatTimeOutInMinutes.

**Start All :** this will start all of the worker threads (processes)

**Stop All:** this will stop all of the worker threads (processes)

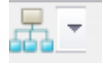
**Retrieve Document Cache:** this will download all of the templates from MModal into the rRIS database

**Retrieve Macro Cache:** this will download all of the macros (normal) from MModal in the rRIS database

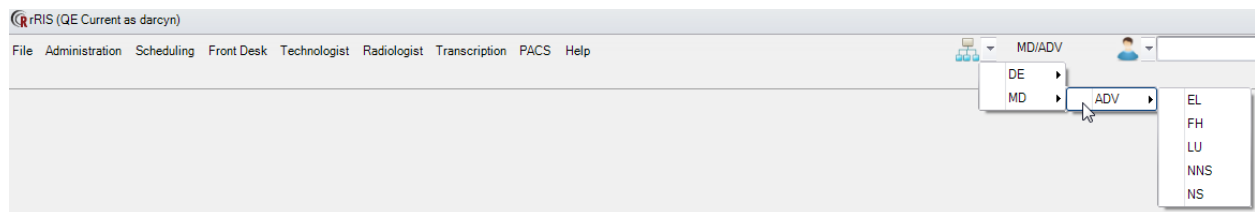
**Flush Queues:** this will clear all of the worker threads of any data (jobs) that may be in each process

## **11. Organization Picker**

The ability to change between organizations has been built into the application. A new ICON



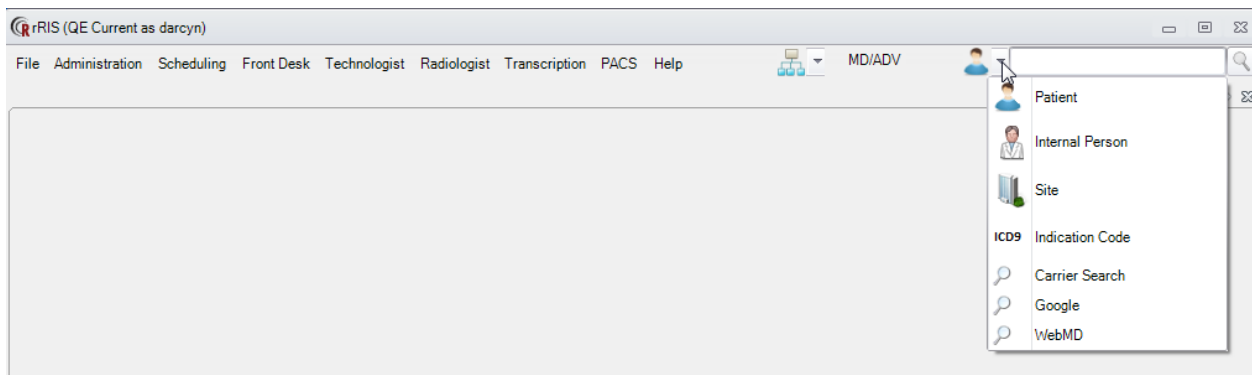
was added to the menu bar. Selecting the arrow next to the ICON will expand to a drop down list enabling the user to change from current site. Expanding the list will display all the Orgs and Sites the current logged in user is configured for. When the selected Org or site changes, work lists will refresh as will the label next to the ICON. The org and site codes of your currently selected Organization and site are displayed to the right of the ICON.



**Figure 11.1 – Expanded Organization Picker**

## **12. Search Functionality**

Within rRIS there are multiple search options. Users with the proper permissions have the ability to not only search for patients, but also for staff, sites, and insurance carriers. The search functionality also supports the ability to add multiple search providers such as Google and / or WebMD.



**Figure 12.1 – Accessing search options available**

The internal person search is a great utility to quickly find the resources such as referring doctors, techs, radiologists, etc. within the application.

The site search allows users to lookup contact information for other sites within the organization.

Multiple search providers can also be added to the search functionality selection.

## 12.1 Enhanced Patient Search

Patients can be searched on by last name, first name, birthdate, or MRN. In the event that the patient's name changed, a search can be performed on the patient's previous name(s) or MRN.

The screenshot shows a 'Patient Search' window with a 'Search Criteria' section. It includes input fields for 'First Name' (bella), 'Last Name' (brie), 'Birth Date' (mm-dd-yyyy), and 'Phone #'. A checkbox for 'Search Other Variations' is checked. There is also an 'MRN' field and 'Search' and 'Reset' buttons. Below the search criteria is a table with patient information.

First Name	Last Name	Middle Name	Birth Date	MRN	Issuer	Gender	Address	City	State	Home Phone	Mobile Phone	Matching Alternate MRN	Matching Alternate First Name	Matching Alternate Last Name
Bella	Brie		07-21-1999	9999	system	F	897 Sculltebute Lane	Newark	Delaware	(555) 555-5555			Bella, buella	Brie, Bree

**Figure 12.1.1 – Previous name**

You will also notice in the above figure the check box “Search Other Variations” is selected. When this checkbox is selected rRIS will complete a more extensive search. Patients name “starts with” Search first, then a “sounds like” search as well as search for birthdate variations (‘12/01/1970’, ‘01/12/1970’). If the name field only has one character, the sounds like search will do a starts with instead.

Example - firstname sounds like s, lastname sounds like smith will be converted to firstname starts with s, lastname sounds like smith.

## 13. User Preferences

### 13.1 Font Size

User can adjust the font size within the application. Three font sizes are offered, small, medium and large. Adjusting font size is accessed from the File > Font Size menu.

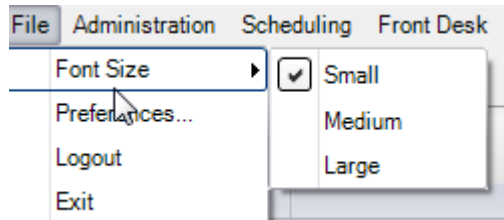


Figure 13.1.1 – Adjusting Font Size

## 13.2 User Preferences

User preferences are also accessed from the file menu. Most the preferences are for Radiologist and Technologist workflow.

### 13.2.1 General Tab

**MT Polling** – Used for transcription. When user logs in they don't see a work list, the create / edit report window opens automatically.

**Screen Lock** – There is a system config setting “MaxUILockTimeoutMin” which is the maximum inactivity time the user can set their user preferences to. So for example if the system max is set to 10, everyone will be locked out after 10 minutes of inactivity and users can only set their local preference to 10 minutes or less.

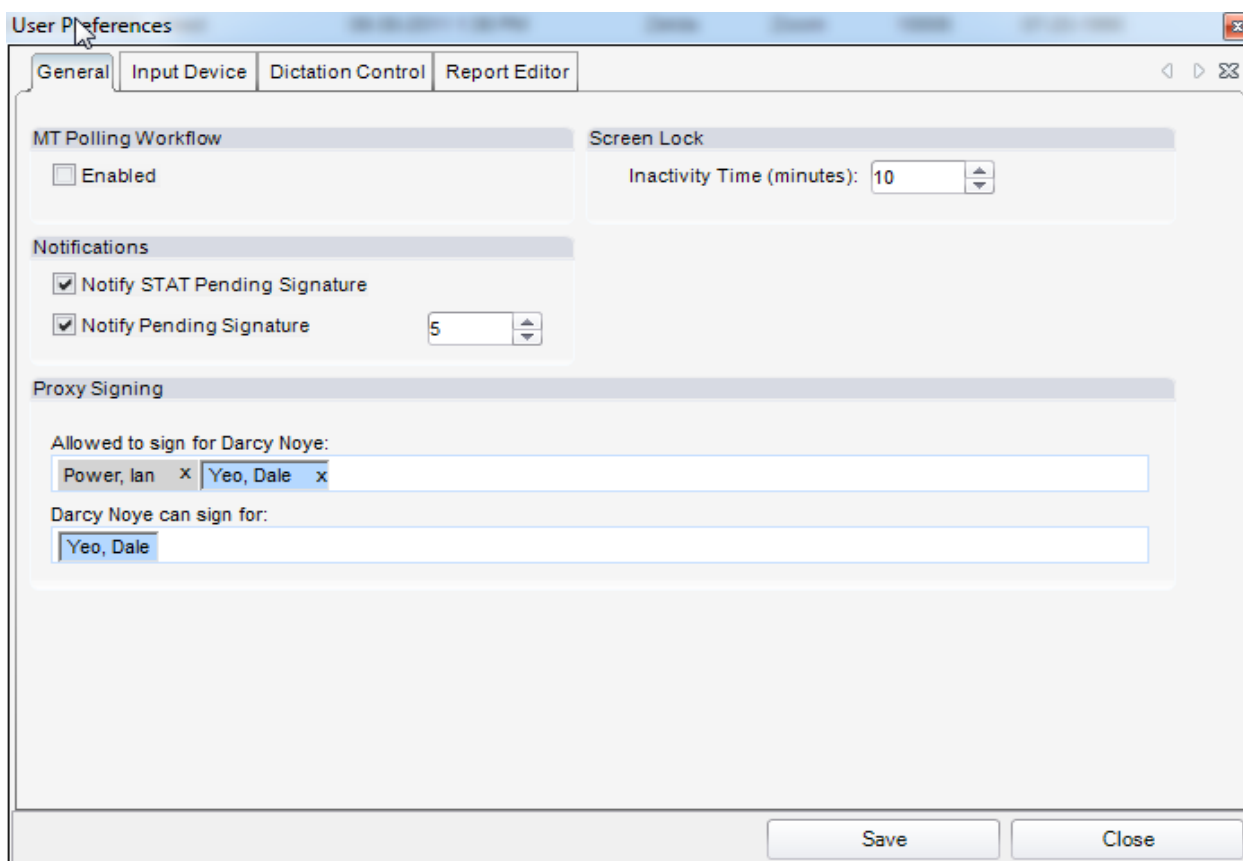


Figure 13.2.1.1 – General tab of User Preferences

### Notifications -

**Proxy Signing** - Users can specify who will be able to proxy sign on their behalf. Also as a display only, it will inform who you (the user preferences of the user logged in) that you may sign for.

### 13.2.2 Input Device Tab

**SpeechMike Buttons** – Used to configure the user preferences of the Philips SpeechMike Function 1-4 keys, the EOL button and Instr (INS / OVR on speechmike) on the face of the SpeechMike and also the trigger button located on the underside of the SpeechMike.

**Foot Pedals** – Used to configure foot pedals the users desired preference

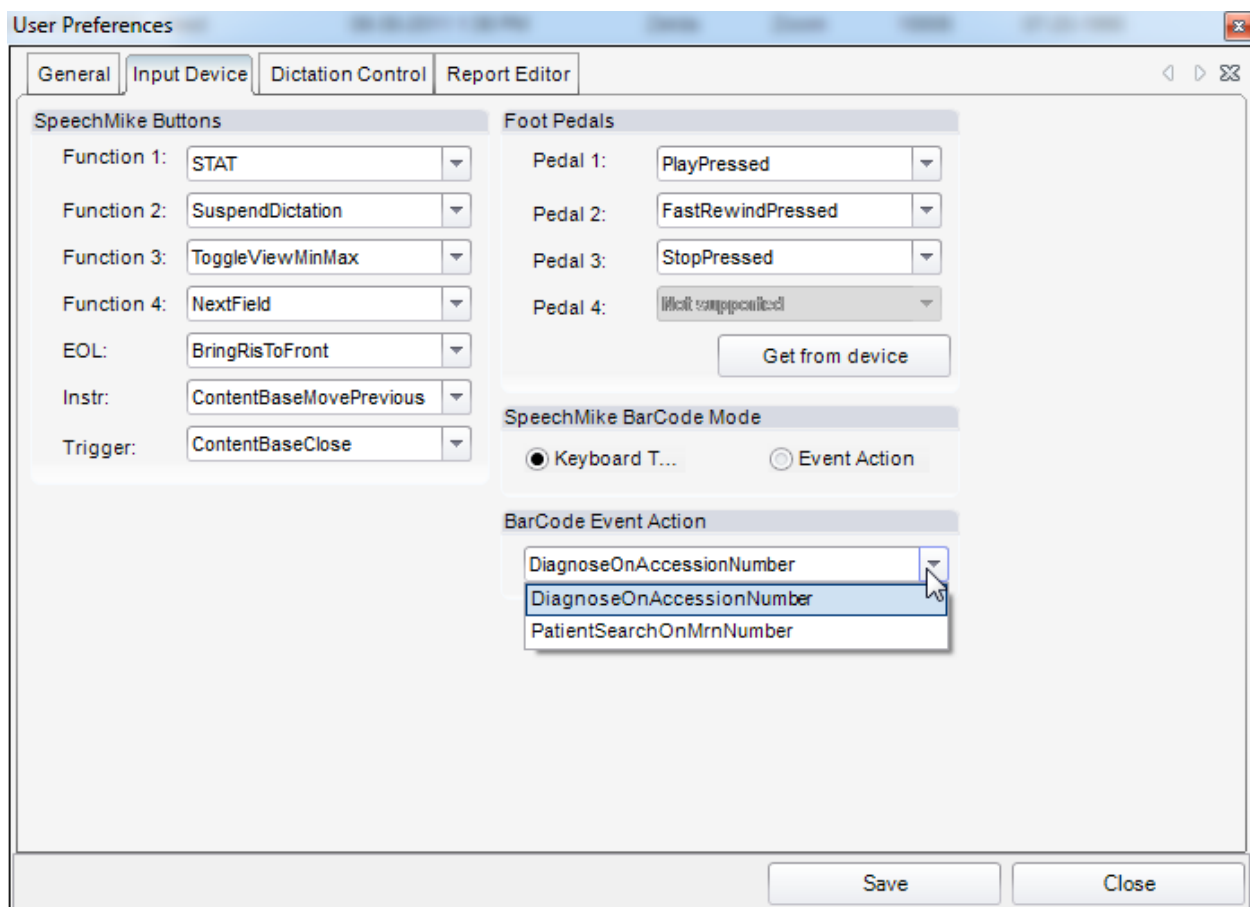


Figure 13.2.2.1 – User Preferences Input Device tab



### SpeechMike BarCode Mode –

- Keyboard Text - Takes the scanned barcode and essentially keyboards it into whatever field is active. This is the standard barcode implementation
- Event Action - This will cause the Barcode to trigger a configurable event to be fired in rRis and a corresponding action will be taken.

**Barcode Event Action** – Scanning barcode event action. Scanning the patients folder barcode will either Diagnose on the Accession Number or Search for the patient using their MRN

### 13.2.3 Dictation Control tab

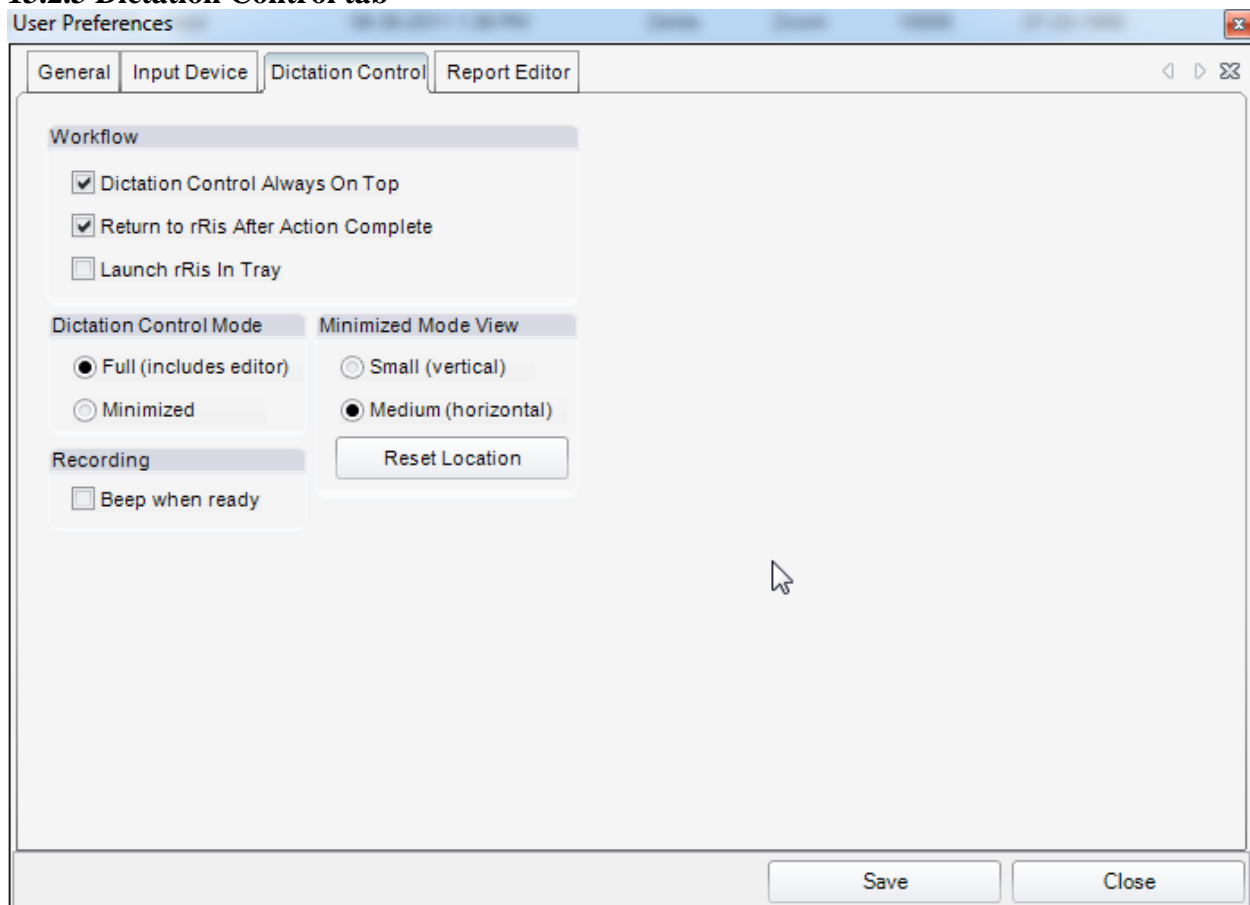


Figure 13.2.3.1 – User Preference Dictation Control tab

### Workflow-

- **Dictation Control Always On Top** - when turned on will force the control to remain on top of other windows even if the other window has focus.
- **Return to rRIS After Action Complete** – If this is selected, and Dictation Control Mode is set to Minimized, once the Radiologist has completed dictation and exits the Dictation window they will be returned to rRIS in Full view
- **Launch rRIS in Tray** - If rRIS is configured to launch in tray, immediately after logging in the application will not show on the screen as usual but appear in the system tray as a small “R” icon. When rRis is shown and this mode is configured, minimizing or closing rRis using the icons at the top right of the application window will simply return rRis to the tray icon. To actually exit rRis the user needs to select File -> Exit from the file menu when rRis is onscreen, or using the tray icons context menu -> Exit.
  - **User id** - identifies currently logged in user
  - **Show rRis** - Will bring rRis on the screen, same as double clicking
  - **Report on accession #** - Prompt user for the accession number
  - **Info** - Will display information about rRis such as version
  - **Exit** - Will exit rRis completely

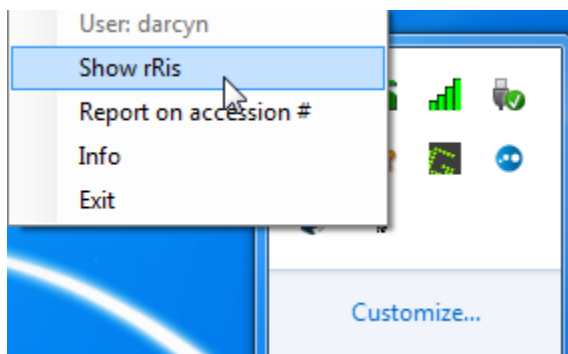


Figure 13.2.3.2 – rRIS launched to system tray

**Dictation Control Mode** – Full (includes editor) is the standard mode. Minimized will open as one of the two options in figure 13.2.3.3.

**Minimized Mode View** – Two different dictation control layouts have been implemented; a vertical (small) and a horizontal (medium). These controls exist outside of the rRis GUI. They have the ability to float on the screen and can be placed where they will least interfere with the radiologist’s existing RIS/PACS workstation.



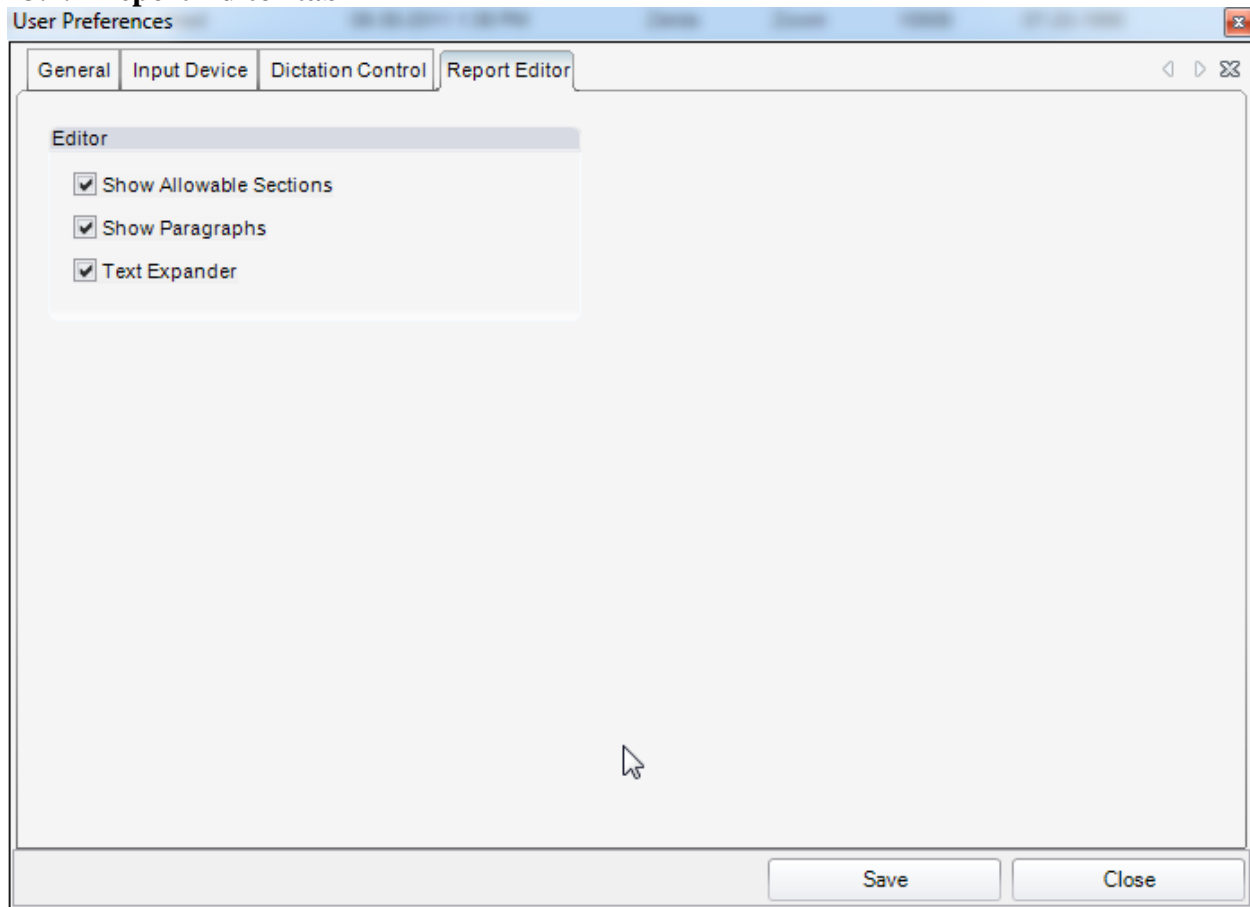
**Figure 13.2.3.3 – Horizontal (medium) control and Vertical (small) control**

The minimized views can be placed anywhere on the screen and their location will be remembered forever. In the unlikely event that the location was saved to make them appear in an area which is not visible, in the user preferences the user can select “Reset Location” which will reset the control’s location to position 0,0 (top left of screen 1).

### **Recording -**

A user preference called Beep when ready was added to the Dictation Control tab. This feature will play an audible sound to alert the user as to when the control is ready for recording.

### **13.2.4 Report Editor tab**



#### **13.2.4.1 – User Preference Report Editor tab**

### Editor

**Show allowable Sections** – In the report editor, selecting a section name within the editor will display the allowable sections available. With focus within the section header and typing will open a window displaying the allowable sections.

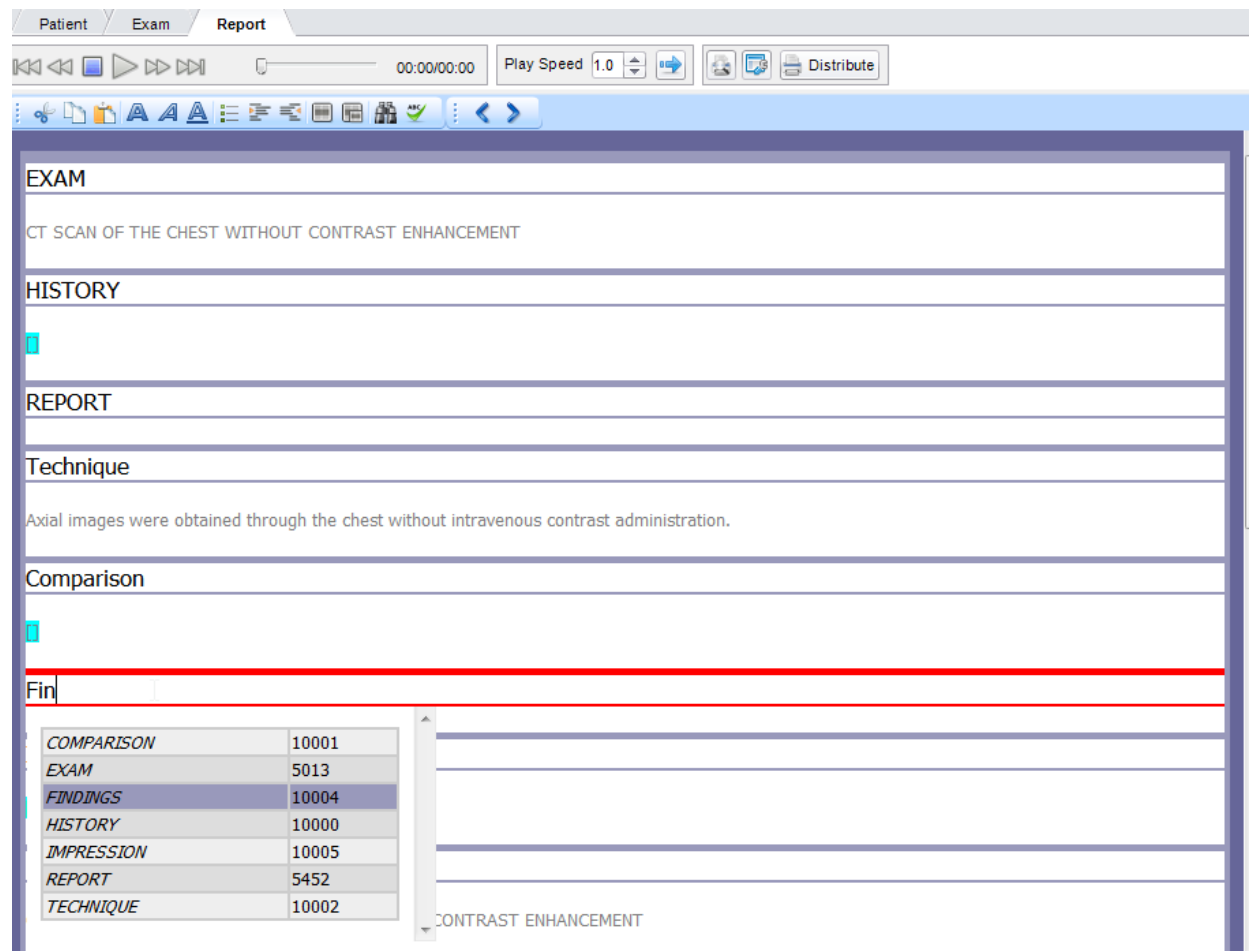


Figure 13.2.4.2 – Show allowable sections

**Show Paragraphs** – Separates the text into paragraphs in report editor.

The breast tissue is heterogeneously dense limiting in both breasts particularly for the upper outer quadrant medial right breast adult posterior third. This however well.

No abnormal microcalcifications or other primary secondary breast ultrasound is to be performed.

Bilateral breast ultrasound standard technique findings: The breast was performed and demonstrates a irregular in hyperechoic position measuring approximately 2.4 x 1.9 x 1.2 cm.

**13.2.4.2 Show Paragraph Enabled**

in both breasts particularly for the upper outer quadrants medial right breast adult posterior third. This however well.

No abnormal microcalcifications or other primary secondary breast ultrasound is to be performed.

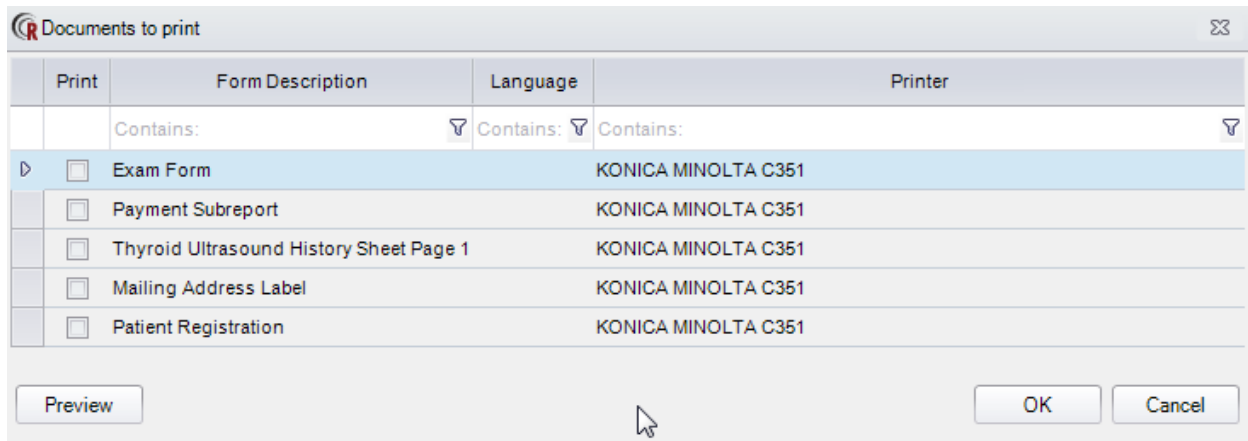
Bilateral breast ultrasound standard technique findings: The breast was performed and demonstrates a irregular in hyperechoic position measuring approximately 2.4 x 1.9 x 1.2 cm.

**13.2.4.3 Show Paragraphs Disabled**

**Text Expander** – Enables the Text Expander utility. See section 8.2.3 of this document for more information on Text Expander.

## 14. Forms and Labels

Forms and Labels can be configured to print when the order reaches a specific status or the user can manually print from the context menu accessed from Patient Folder, Reception work list, Confirmation work list, Technologist work list, and Radiology work lists. Also from the Registration data window, and Technologist work list.



The screenshot shows a dialog box titled "Documents to print" with a close button in the top right corner. The dialog contains a table with four columns: "Print", "Form Description", "Language", and "Printer". Below the table header, there are three "Contains:" labels with dropdown arrows. The table lists five items, each with a checkbox in the "Print" column and "KONICA MINOLTA C351" in the "Printer" column.

Print	Form Description	Language	Printer
	Contains: ▼	Contains: ▼	Contains: ▼
<input type="checkbox"/>	Exam Form		KONICA MINOLTA C351
<input type="checkbox"/>	Payment Subreport		KONICA MINOLTA C351
<input type="checkbox"/>	Thyroid Ultrasound History Sheet Page 1		KONICA MINOLTA C351
<input type="checkbox"/>	Mailing Address Label		KONICA MINOLTA C351
<input type="checkbox"/>	Patient Registration		KONICA MINOLTA C351

At the bottom of the dialog, there is a "Preview" button on the left, and "OK" and "Cancel" buttons on the right.

Figure 14.1 – Forms and Labels.

Forms and Labels can be configured to print for a specific modality type, procedure type, specific carrier, gender, and practice.

## 15. Help menu

The help provides important information of the versions, where the application was installed from, current connection, logged on user, etc.

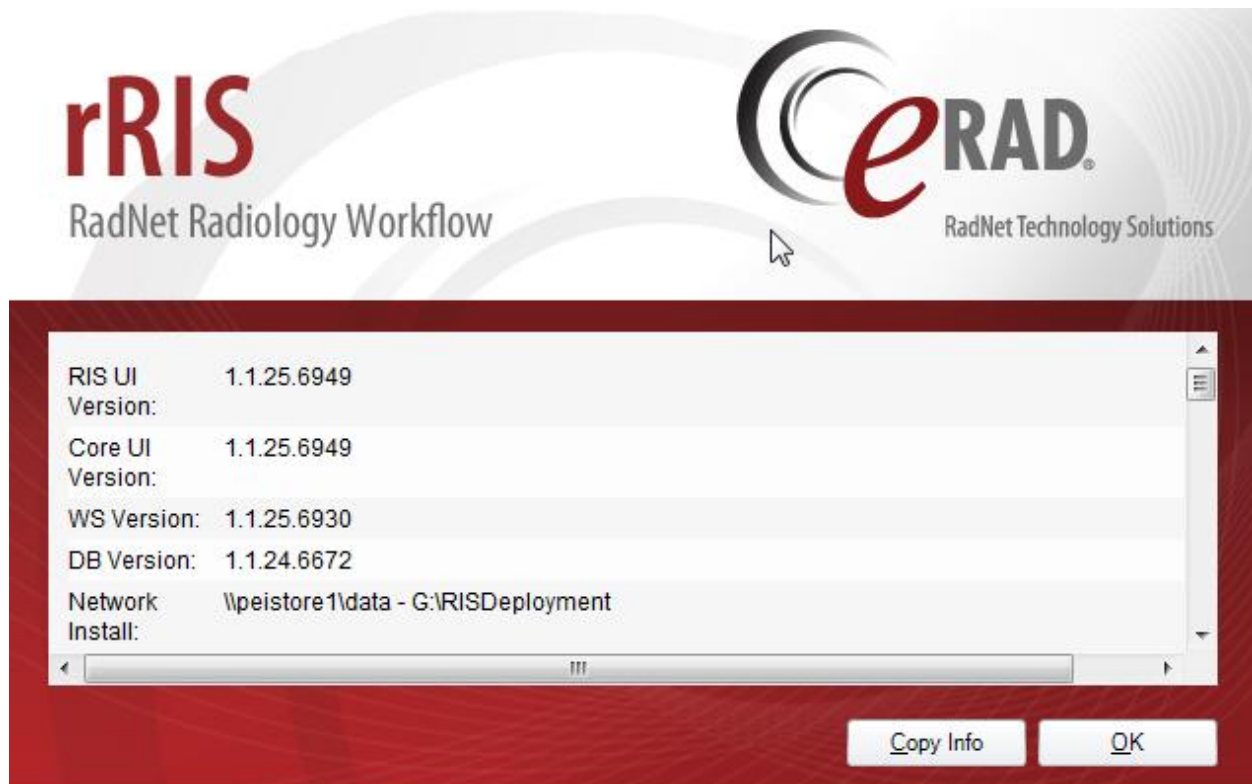


Figure 15.1 – Help About Window

Selecting the Copy Info button will capture the data window the Help About window, and then the user can easily paste the contents into an editor.



## **16. Shortcuts**

rRIS application shortcuts will be covered in a separate document.

## 17. Known Limitations

#	Status	Project	Subject	Category	Target version
660	New	Radnet RIS	Outside reads will eventually end in billing exceptions.	Thick Client GUI	1.25
560	New	Radnet RIS	Column filter range of same day - no results returned	Thick Client GUI	1.21
644	New	Radnet RIS	Cannot close application if there is a data window open.	Thick Client GUI	1.25
659	New	Radnet RIS	Manage policies > Injury Details keeps history of last selected	Thick Client GUI	1.25
665	New	Radnet RIS	fk error when adding new order	Thick Client GUI	1.25
438	New	Radnet RIS	User Preferences - Should enable or disable speech preferences based on resource type	Admin Tools	1.16
447	New	Radnet RIS	Dictation - User is able to start dictating with SpeechMike when it is not the recording device	Thick Client GUI	1.17
667	New	Radnet RIS	Dictating > Adding tech notes and submit throws error	Thick Client GUI	1.25
671	New	Radnet RIS	Launch rRIS to system tray Icon needs to be updated.	Thick Client GUI	1.25
360	New	M Modal Interim Reporting	Audio not played to the end message		
639	New	Radnet RIS	Work list column not expanded when opening work list.	Thick Client GUI	1.25
657	New	Radnet RIS	Opening dictate window on signed exam or suspended message conflicts with pacs message	Thick Client GUI	1.25

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668	New	Radnet RIS	User Preference > Stat Notification not working	Thick Client GUI	1.25
670	New	Radnet RIS	Diagnose > Report preview can be opened multiple times	Thick Client GUI	1.25
639	New	Radnet RIS	Work list column not expanded when opening work list.	Thick Client GUI	1.25
675	New	Radnet RIS	Edit Order > Verbal Order returns error	Thick Client GUI	1.25
677	New	Radnet RIS	Edit order tab missing patient name	Thick Client GUI	1.25
678	New	Radnet RIS	Transcription > Save playback speed for dictating rads	Thick Client GUI	1.25
674	New	Radnet RIS	Cancelled Orders work list buttons not enabled	Thick Client GUI	1.25
358	New	M Modal Interim Reporting	Accession Number for Memo recordings		
74	New	Radnet RIS	Patients with deleted_flag = 'Y' are still showing up on worklists	Thick Client GUI	1.07
252	New	Radnet RIS	ScheduleGroup - Slowness when saving lookup	Web Services/DB	1.11
406	New	Radnet RIS	New Appointment - Unhandled WCF exception	Web Services/DB	1.15
463	New	Radnet RIS	Concurrency error on scheduling	Web Services/DB	1.17
469	New	Radnet RIS	After deleting 1 User cannot save for other users	Web Services/DB	1.17
633	New	Radnet RIS	Walk in image request	Thick Client GUI	1.24
640	New	Radnet RIS	Installer error > Windows xp cannot register spellchecker - wspell.ocx	Thick Client GUI	1.23
652	New	Radnet RIS	The recently used patient list sometimes return an empty patient folder		
663	New	Radnet RIS	Add outside read does not have new attachment Icon	Thick Client GUI	1.25

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669	New	Radnet RIS	Data nugget for notes has study notes where data windows have order notes	Thick Client GUI	1.25
649	New	Radnet RIS	System menu location error	Thick Client GUI	
650	New	Radnet RIS	Deleting study from exam tab with multiple exams	Thick Client GUI	1.25
635	New	Radnet RIS	Build 1.25 - new color scheme		
647	New	Radnet RIS	Labels can be partial hidden when using large text size	Thick Client GUI	1.25
648	New	Radnet RIS	Fullscreen covers taskbar	Thick Client GUI	
658	New	Radnet RIS	Order tab > OrderNotes spelled as one word	Thick Client GUI	1.25
522	New	Radnet RIS	Search for available times incomplete based on criteria	Thick Client GUI	1.2
529	New	Radnet RIS	Reschedule study search returning incorrect times	Thick Client GUI	1.21
624	New	Radnet RIS	Schedule exam, selecting time from Advance tab can make available times "jump"	Thick Client GUI	1.23
321	New	Radnet RIS	DataSet Visualizer - Does not show for Studys and CC Physician	Thick Client GUI	1.12
448	New	Radnet RIS	Receipt - Registration screen should stay in foreground when prompted for receipt	Thick Client GUI	1.17
666	New	Radnet RIS	Abort exams window resize issue	Thick Client GUI	1.25
655	New	Radnet RIS	Document Distribution History > formatting of fax number	Thick Client GUI	1.25
106	In Progress	Radnet RIS	Worklist - Issue with refreshing when web services are down	Thick Client GUI	1.12
224	In Progress	Radnet RIS	Order - Exception when scheduling a modified order	Thick Client GUI	1.11
357	In Progress	Radnet RIS	Lookup table filters with dropdown datatype don't work		1.13
643	QE Rejected	Radnet RIS	Dictate window > Blank error is displayed and rRIS stops	Thick Client GUI	1.25

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			responding.		
418	QE Rejected	Radnet RIS	IVT workflow -Object reference not set to an instance of an object	Thick Client GUI	1.15
579	QE Rejected	Radnet RIS	IVT PreCert column does not update	Thick Client GUI	1.22
310	QE Rejected	Radnet RIS	Appointment Book - Needs to default to a configurable start of day	Thick Client GUI	1.12
613	QE Rejected	Radnet RIS	If patient mode is already open, and you try to go to patient mode for a different study...	Thick Client GUI	1.24

# **User Release Notes**

for RADNET rRIS  
Version 1.0  
Build 26

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## **1. Purpose**

This document describes some of the new features and changes implemented in rRIS as of the end of Sprint 26. This version of rRIS is referred to as Build 1.26.

Only features which can be visually demonstrated to the user will be outlined in this document.

## **2. Intended Audience**

This document is created by the rRIS Development team for the RadNet RIS management team.

## **3. Installing/Accessing the Application**

The installation instructions for the rRIS client have been posted to the RadNet Wiki page at <http://mdbal01rdtweb/Wiki/>

Under the RIS menu, click on the rRIS page. The credentials to access the page are:

Username: rRIS

Password: Summerside

*Please note that Build 1.26 is considered a new core release of the application and will require a reinstallation of rRIS. This is accomplished by navigating to the rRIS shared installation drive and running the CoreInstall.bat file (ex: I:\RISDeployment\CoreInstall.bat)*

If you experience difficulties accessing the application, please do not hesitate to contact Darcy Noye with the PEI RIS Development Team.



## 4. New Features and Enhancements

### Problem List – Requirement MU 170.302.c

A new data pane was added to the Visit History tab of the Registration data window. The Problem List data pane is a grid view that will display an historical list of “problems” recorded in previous visits.

The screenshot displays the RADNET rRIS Pre-Release interface with the 'Visit History' tab selected. The interface is divided into several panes:

- Demographics at Encounter:** Includes fields for Height (ft in), Weight (lbs), BMI, Blood Pressure, and Smoking Status. There are also checkboxes for 'Is Pregnant', 'Requested Educational Resources', and 'Provided Educational Resources'.
- Drug Allergies:** Features a dropdown menu to 'Show drug allergies for the current patient's visit?' and a table with columns: Drug Allergy, Start Date, End Date, Reaction, and Status.
- Patient Immunizations:** Includes a table with columns: Vaccine, Date, Qty, Units, and Lot. There is an 'Export HL7' button at the bottom.
- Problem List:** Features a dropdown menu to 'Show problem list for the current patient's visit?' with options 'None' and 'Add/Edit Problem'. Below the dropdown is a table with columns: Problem, Date, and Status. The table contains one entry: '(450) TENDONITIS'. A link 'Click here to add a new row' is also present.

**Figure 4.1 – Problem List Grid**

The list box has 2 hard coded values of “None” and “Add/Edit Problem”. Selecting the Visit History tab, the Problem list grid will be disabled. Selecting “None” will capture the current visit as not having a problem associated with it. Selecting “Add/Edit Problem” will enable the grid. If there is a problem from a previous visit, the user can edit the entry or can add a new problem.

Patient | Contacts / Demographics | Order | Exam | Visit History | Image Request (0)

### Demographics at Encounter

Height:  ☐ Is Pregnant

Weight:  lbs

BMI:

Blood Pressure:  /

Smoking Status:

☐ Requested Educational Resources

☐ Provided Educational Resources

### Drug Allergies

Show drug allergies for the current patient's visit?

Drug Allergy	Start Date	End Date	Reaction	Status
▶				

### Patient Immunizations

Vaccine	Date	Qty	Units	Lot
▶				

Export HL7

### Problem List

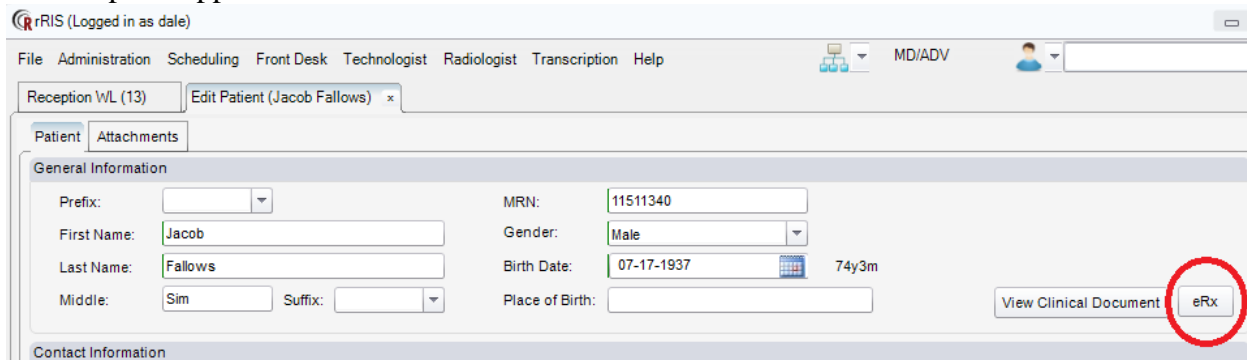
Show problem list for the current patient's visit?  Add/Edit Problem

Problem	Start Date	End Date	Status
(450) TENDONITIS			
(450) TENDONITIS			
(477) COSMETIC ENHANCEMENTS TO TH...			
(478) HYPERTROPHY OF NASAL TURBINA...			
(479) NASAL DUCT CLEANING			

Figure 4.2 – Problem List enabled showing available problems (ICD-9)

### Electronic Prescribing (ePrescribing) – Requirement MU 170.304.b

A new button available on the Patient window titled eRx. This button does some data validation to compile an xml message into a format that New Crop requires to get access to their ePrescription application.



The screenshot shows the rRIS (Logged in as dale) interface. The top menu bar includes File, Administration, Scheduling, Front Desk, Technologist, Radiologist, Transcription, and Help. The user is logged in as MD/ADV. The main window displays the 'Edit Patient (Jacob Fallows)' tab. The 'Patient' tab is selected, showing 'General Information'. The form contains fields for Prefix, First Name (Jacob), Last Name (Fallows), Middle (Sim), Suffix, MRN (11511340), Gender (Male), Birth Date (07-17-1937), and Place of Birth. A 'View Clinical Document' button is visible, and the 'eRx' button is circled in red.

**Figure 4.3 – eRx button on patient tab**

If the user is not presented with any validation errors a web browser object will launch and they will be logged into the New Crop System and taken directly to their Compose Rx screen. This object will close with the application.

The screenshot shows the 'New Crop ePrescribe' window within the rRIS application. The window is titled 'New Crop ePrescribe' and has a menu bar with options: File, Administration, Scheduling, Front Desk, Technologist, Radiologist, Transcription, Help. The main area is divided into tabs: Select Dr./Staff, Compose Rx, Med Entry, Pt. Details, Diagnoses, Admin. The 'Compose Rx' tab is active. The patient information section shows: Patient: Jacob Sim Fallows, DOB: 7/17/1937, Gender: Male. A warning message states: 'PRE-PRODUCTION: THIS IS NOT A SECURE OR LIVE ENVIRONMENT. TEST PATIENTS ONLY. The use of REAL PATIENTS is a violation punishable under SECTION 7.2 of the HIPAA Privacy Rule. If you believe you are seeing this in error, please contact your EMR or software provider.' Below this, there are sections for 'Drug Search' (with a 'Drug Search' button and a checkbox for 'Include obsolete drugs'), 'Allergy / Intolerance Search' (with a search button and a text area for 'memo'), and 'Current Medications for Jacob Sim Fallows' (with a 'Takes No Meds' checkbox). At the bottom, there are checkboxes for 'Instant Renewal', 'Discontinued / Previous', 'Cancelled Mid-Process', and 'Pharmacy Communication'. A note at the bottom states: 'Tinted Rx are external: entered via MedEntry or imported, source shown.' The window has 'Save' and 'Close' buttons at the bottom right.

**Figure 4.4 – New Crop ePrescribe window**

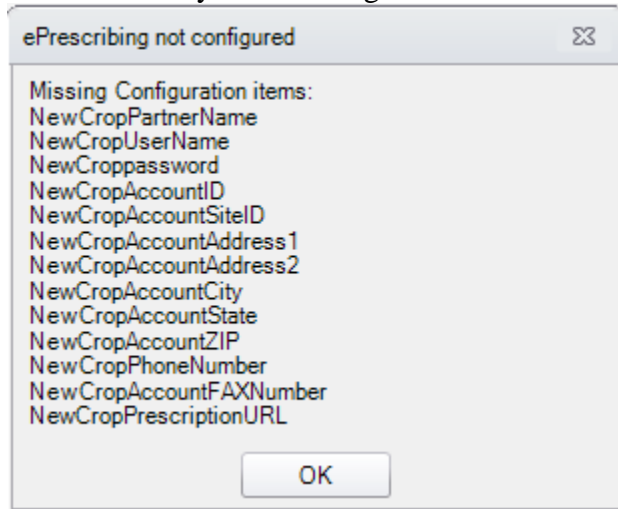
A new field has been added to the personnel editor to capture the DEA# that will need to be completed for the Radiologist to access the New Crop ePrescribe website.

The screenshot shows the 'Personnel' editor window in the rRIS application. The window has a sidebar with a tree view containing: User, Affiliation, Personnel (selected), Specialty, UserCDSProfile, UserGroup, and UserGroupPermission. The main area has tabs: General, Resource, Account, Attachments, Preferences. The 'Resource' tab is active. The 'Resource Type' section has checkboxes for 'Referring Physician', 'Radiologist' (checked), 'Unknown Referring', 'Transcriptionist', and 'Technologist'. The 'Referring Flags' section has checkboxes for 'Direct Referral Program' and 'Pre-Auth Program'. The 'Resource Information' section has fields for 'NPI' (with a dropdown menu), 'UPIN', and 'DEA' (with a red box around the value '1234'). There are also checkboxes for 'Emergency Access' and 'Unknown NPI'. The 'Practices' section has a list of practices: 'Advanced Radiology', 'Papastavros Medical Imaging', and 'Occupational Therapy'. The 'Specialties' section has a list of specialties: 'Radiology', 'Diagnostic X-Ray', and 'Occupational Therapy'.

**Figure 4.5 – DEA number field in personnel editor**

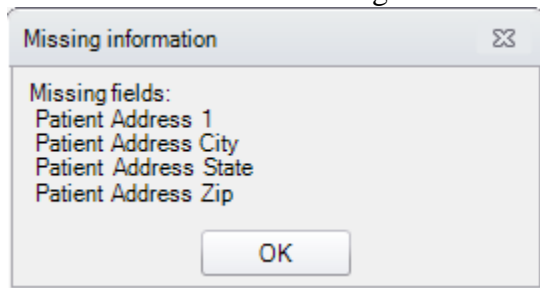
There are 3 types of validation checks

First is to verify ePrescribing the account fields are configured



**Figure 4.6 – Validation on ePrescribe fields**

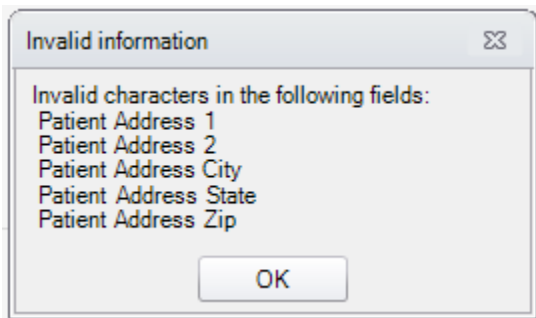
Second would be for missing information on both patient and practice



**Figure 4.7 – Checks on missing information on patient / practice data**

Third check validates information on both patient and practice

1. ?, & and “ are not accepted by New Crop
2. State must be a valid 2 digit state
3. Zip must be 5 digits (and 4 if there is a zip extension)
4. Country must be US



**Figure 4.8 – Validation on Invalid characters for patient / practice**

A new access string was created, and should be granted to the Radiologist user group

Access String Code	Description	Display Order	Default Access Level Code	Active
Contains: clinical.epre	Contains:	Equals:	Contains:	Contains:
Clinical.ePrescribe	Access ePrescription (eRx)	1	None	Y
Click here to add a new row				

**Figure 4.9 – Access String**

New system config Code values for New Crop

System Config Code	Value
Contains: newc	Contains:
NewCropAccountAddress1	77 Evergreen Terrace
NewCropAccountAddress2	Suite 501
NewCropAccountCity	Baltimore
NewCropAccountCountry	US
NewCropAccountFAXNumber	9027243318
NewCropAccountID	
NewCropAccountName	
NewCropAccountPhoneNumber	9027243317
NewCropAccountSiteID	
NewCropAccountState	MD
NewCropAccountZIP	90210
NewCropAccountZIPExt	
NewCropPartnerName	
NewCropPassword	
NewCropPrescriptionURL	http://preproduction.newcropaccounts.com/Int...
NewCropUsername	
Click here to add a new row	

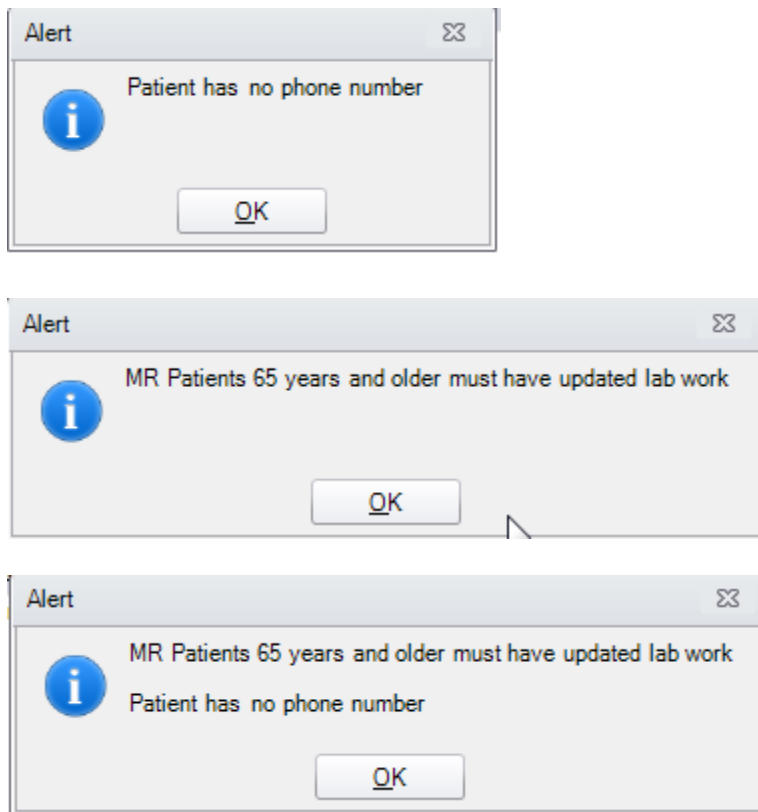
**Figure 4.10 – New System config values**

## Clinical Decision Support – MU Requirement 170.304.e

Alert framework has been added so that an alert message will fire when we meet a certain criteria. We created two alert rules in the application:

- 1) No Phone number which fires a message if there is no cell, home or work phone entered for a patient.
- 2) Rule if the modality is a MR and the patient is over 65 to fire the alert.

If both are met for a patient, the alerts will be applied in one message.



**Figure 4.11 – Possible Alert Messages**

A new lookup table has also been added to contain the alert codes and messages.

	Alert Configuration Code		Alert Generator	Display Order	Active
	Contains:	Description			
General					
AbortedStudyReason					
AccessString					
AddressDescription					
AlertConfiguration					
	GetLabWork	MR Patients 65 years and older must have updated lab w...	MRIPatients65PlusMustHaveLabW...	1	Y
	NoPhone	Patient has no phone number	PatientMissingPhoneInfo	2	N

**Figure 4.11 – Alert Configuration lookup table**



## **Exchange Clinical Information and Patient Summary Record – MU Requirement 170.304.i**

We added a button on the Patient General tab which will allow the user the ability to import a validate CCR or CCD document and display in human readable format.

To successfully show the imported xml file we loaded two xls stylesheets into the resources part of the application for each type CCR.xml and CDA.xml. The stylesheet transforms the xml to a html document which we store on the local users workstation where the user is running the application from. After closing the web browser we remove the results file from the users workstation. Finally we do some low level validation when importing the file,

- 1) We do a quick check to make sure the file location exists on both types and throws an exception error message if one or both don't exists in the location specified.
- 2) TODO: remove the results.html file when closing the webbrowsers

We display the SHA-1 value of the imported document (used to verify that the document is not modified by an outside force).

The screenshot shows the 'Patient' tab selected in the top navigation bar. Below it, the 'General Information' section contains fields for Prefix, First Name (Mary), Last Name (MacDonald), Middle, Suffix, MRN (10529), Gender (Female), Birth Date (12-29-1968), and Place of Birth. There are also checkboxes for 'Claustrophobic' and 'Arbitration Signed'. A red rectangle highlights the 'View Clinical Document' button, which is next to an 'eRx' button. Below the 'General Information' section is the 'Contact Information' section, which includes fields for Address 1 (89 Evergreen Terrace), Address 2, Zip (98575), Country, Home Phone ((555) 555-5555), and a checkbox for 'No Alternate Phone'.

**Figure 4.12 – View Clinical Document button**

The example below is a sample displaying an imported CCR document opened in rRIS internal web browser.

Continuity of Care Record
Sha-1 Hash: 2DD44E1444A20EABB233B8ED20A19C2F2EFE468A

### Continuity of Care Record

**Date Created:** Thu Mar 25, 2010 at 01:15 PM UTC-05:00  
**From:** John Q Doe Jr. MD (Primary Physician)  
**To:** Long Term Care Facility of America (Long Term Care Facility)  
**Purpose:** consult/ referral

#### Patient Demographics

Name	Date of Birth	Gender	Identification Numbers	Address / Phone
John D. Smith	Jul 04, 1960	Male	999999999	355 Maple Street Williamsport, PA17701  +1-570-837-8364

#### Alerts

Type	Date	Code	Description	Reaction	Source
Allergy	Adverse Event Date: Jun 27, 1996	416098002 (SNOMED-CT)	<b>Drug Allergy (disorder)</b>	Drug-induced hypotension (disorder)	<a href="#">John D. Smith</a>

#### Problems

Type	Date	Code	Description	Status	Source
Diagnosis	Date Diagnosed: Sep 16, 2009	44054006 (SNOMED-CT)	<b>Diabetes mellitus type 2 (disorder)</b>	Active	
Diagnosis	Date Diagnosed: May 05, 2002	55822004 (SNOMED-CT)	<b>Hyperlipidemia (disorder)</b>	Resolved	<a href="#">John D. Smith</a>
Diagnosis	Date Diagnosed: Sep 16, 2009	53741008 (SNOMED-CT)	<b>Coronary arteriosclerosis (disorder)</b>	Active	<a href="#">John D. Smith</a>
Diagnosis	Date Diagnosed: Sep 16, 2009	59621000 (SNOMED-CT)	<b>Essential hypertension (disorder)</b>	Active	<a href="#">John D. Smith</a>

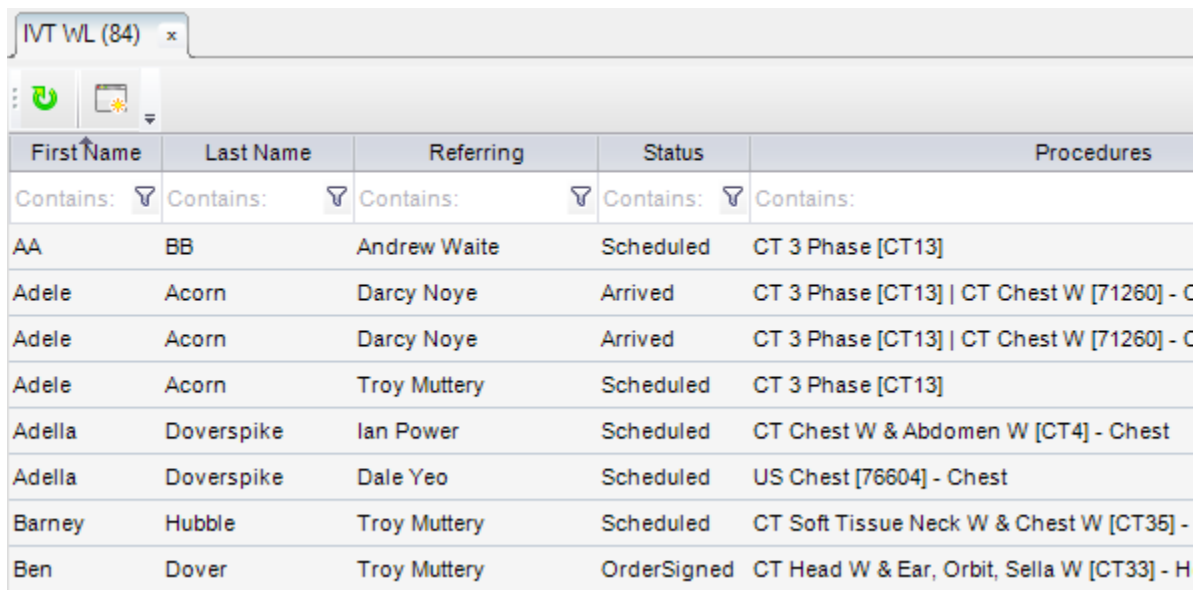
#### Medications

Medication	RxNorm Code	Date	Status	Form	Strength	Quantity	SIG	Indications	Instruction	Refills	Source
<b>glyburide (Diabeta)</b>	205875	Date Started: Sep 16, 2009	Active		2.5 MG		1 tablet PO				<a href="#">John D. Smith</a>
<b>Atorvastatin Calcium</b>	617314	Date Started: May 05,	Active		10 MG		1 tablet				<a href="#">John D. Smith</a>

Figure 4.13 – Imported Sample CCR document.

## Referring Column Added to IVT Work List


In build 1.26 the referring column has been added to the IVT work list. If the patient record is edited and the referrer is changes, the column will reflect this change on the IVT work list. As like other columns, the referring column can be pinned to the left or right or hidden from view.

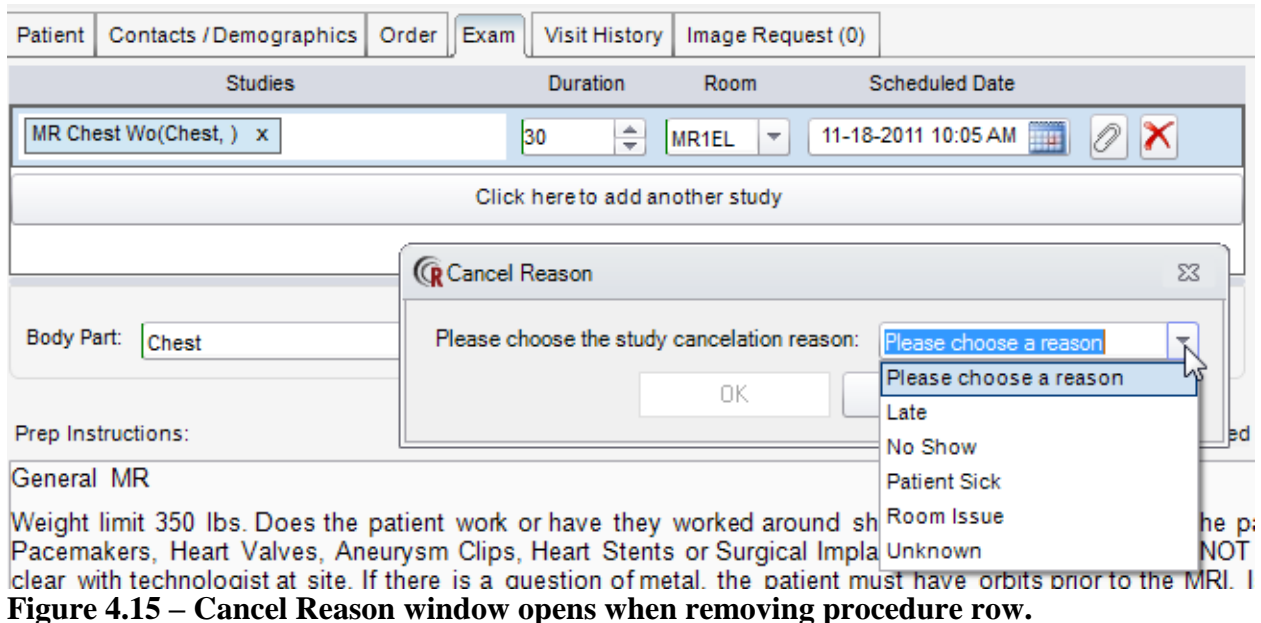


IVT WL (84) x				
First Name	Last Name	Referring	Status	Procedures
Contains:	Contains:	Contains:	Contains:	Contains:
AA	BB	Andrew Waite	Scheduled	CT 3 Phase [CT13]
Adele	Acorn	Darcy Noye	Arrived	CT 3 Phase [CT13]   CT Chest W [71260] - C
Adele	Acorn	Darcy Noye	Arrived	CT 3 Phase [CT13]   CT Chest W [71260] - C
Adele	Acorn	Troy Muttery	Scheduled	CT 3 Phase [CT13]
Adella	Doverspike	Ian Power	Scheduled	CT Chest W & Abdomen W [CT4] - Chest
Adella	Doverspike	Dale Yeo	Scheduled	US Chest [76604] - Chest
Barney	Hubble	Troy Muttery	Scheduled	CT Soft Tissue Neck W & Chest W [CT35] -
Ben	Dover	Troy Muttery	OrderSigned	CT Head W & Ear, Orbit, Sella W [CT33] - H

**Figure 4.14 – Displaying Referring Column on IVT Work List**

## **Removing Study from Procedure Picker Row Must Add Cancel Reason**

At the time of Registration on scheduled studies, if the user removes the procedure picker row via the large red  located on the right edge of the picker row, the user will now have to enter a reason for cancelling.



**Figure 4.15 – Cancel Reason window opens when removing procedure row.**

## 5. Resolved Defects

Bugs, Suggested Features and Support Issues resolved in build 1.26. The extract is taken from Redmine bug tracking system and only displays defects resolved in 1.26.

#	Status	Tracker	Priority	Subject	Category	Target version	Resolved Version
666	Resolved	Bug	Low	Abort exams window resize issue	Thick Client GUI	1.25	1.26
664	Resolved	Bug	Normal	error searching for appointment time when modality template key is null	Thick Client GUI	1.25	1.26
662	Resolved	Bug	High	schedule start date and performed start date null after billing edit save	Thick Client GUI	1.25	1.26
661	Resolved	Bug	High	Need to be able to edit insurance information on billing exceptions screen	Thick Client GUI	1.25	1.26
635	Resolved	Bug	Normal	Build 1.25 - new color scheme			1.26

## 6. Known Limitations

The following are Bugs, Suggested Features, and Support Issues found in build 1.26.

#	Status	Subject	Category	Target version
714	New	Permission - Issue with Edit Patient permission	Thick Client GUI	1.26
713	New	Management Reports - Parameter selection is not available when defaults are specified	Thick Client GUI	1.26
712	New	Report History > Show all versions throws error	Thick Client GUI	1.26
711	New	Dictation - Send To throws error	Thick Client GUI	1.26
710	New	Session History Clean up item	Thick Client GUI	1.26
709	New	Dictation / Create Edit reports - Patient Alert pop up not centered	Thick Client GUI	1.26
708	New	Action on Order that has alert criteria throws error	Thick Client GUI	1.26
707	New	Error thrown when cancel selected on reschedule and alert rule configured	Thick Client GUI	1.26
706	New	Patient injury not associated with visit	Thick Client GUI	1.26
694	New	Perform Exam data window mystery list box	Thick Client GUI	1.26
682	New	CPT Modifiers Display	Thick Client GUI	1.26
681	New	Default "Units"	Thick Client GUI	1.26

# **User Release Notes**

for RADNET rRIS  
Version 1.0  
Build 27

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## **1. Purpose**

This document describes some of the new features and changes implemented in rRIS as of the end of Sprint 27. This version of rRIS is referred to as Build 1.27.

Only features which can be visually demonstrated to the user will be outlined in this document.

## **2. Intended Audience**

This document is created by the rRIS Development team for the RadNet RIS management team.

## **3. Installing/Accessing the Application**

The installation guide for the rRIS client have been posted to the RadNet Wiki page at <http://mdbal01rdtweb/Wiki/>

Under the RIS menu, click on the rRIS page. The credentials to access the page are:

Username: rRIS

Password: Summerside

*Please note that Build 1.27 is considered a new core release of the application and will require a reinstallation of rRIS. This is accomplished by navigating to the rRIS shared installation drive and running the CoreInstall.bat file (ex: I:\RISDeployment\CoreInstall.bat)*

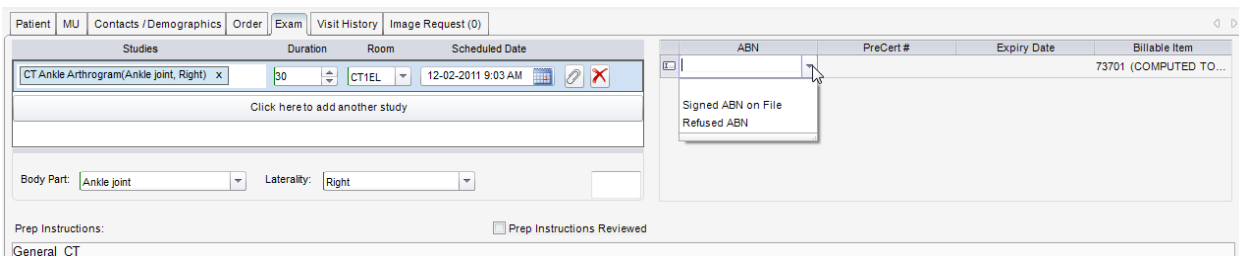
If you experience difficulties accessing the application, please do not hesitate to contact Darcy Noye with the PEI RIS Development Team.

## 4. New Features and Enhancements

### Advanced Beneficiary Notice (ABN) Flag

In build 27 the ability to mark patient studies with ABN flag has been added. A drop down list box was added to the billing code information data pane. During Registration, the ABN list box is adjacent to the procedure picker row.

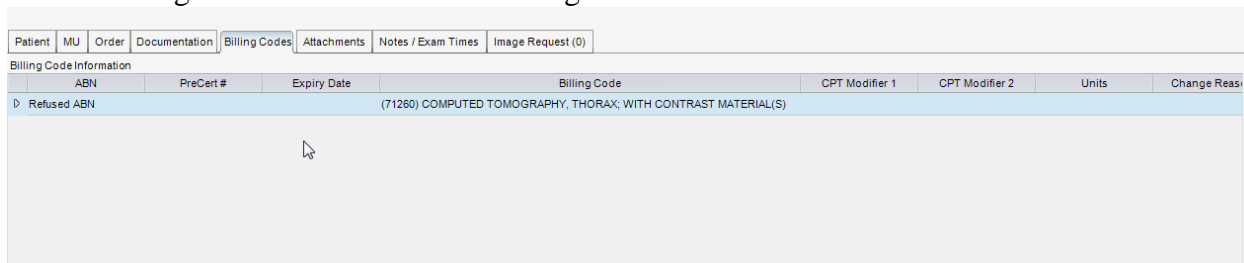
Available options



The screenshot shows the 'Registration' window with the 'Exam' tab selected. The 'Studies' section displays a study for 'CT Ankle Arthrogram(Ankle joint, Right)' with a duration of 30 minutes and a scheduled date of 12-02-2011 9:03 AM. Below the study details, there are dropdown menus for 'Body Part' (Ankle joint) and 'Laterality' (Right). To the right, a table lists billing items, including '73701 (COMPUTED TO...'. A dropdown menu is open next to the 'ABN' column, showing options: 'Signed ABN on File' and 'Refused ABN'.

**Figure 4.1 – ABN list box displayed from the Registration window.**

The ABN flag is also available to Technologists from Perform Exam window.



The screenshot shows the 'Perform Exam' window with the 'Billing Codes' tab selected. The 'Billing Code Information' section displays a table with columns: ABN, PreCert#, Expiry Date, Billing Code, CPT Modifier 1, CPT Modifier 2, Units, and Change Reason. The table contains one row: 'Refused ABN' with a billing code of '(71260) COMPUTED TOMOGRAPHY, THORAX; WITH CONTRAST MATERIAL(S)'. A dropdown menu is open next to the 'ABN' column, showing options: 'Signed ABN on File' and 'Refused ABN'.

**Figure 4.2 – ABN list box from Perform Exam window.**

Lastly the ABN flag is available in the IVT data window.

## RADNET, Inc. – rRIS Pre-Release Notes

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Patient | Insurance Verification PreCert | Attachments

Insurance Policies

Note	Carrier Code	Carrier Name	Policy Number	Group Name	Group Number	Phone	Priority
------	--------------	--------------	---------------	------------	--------------	-------	----------


Manage Policies

Verification REQUIRED ☐ Insurance verified Amount to collect:

Verification and PreCert Notes

12-02-11 dtn -

Billing Code Information

ABN	PreCert #	Expiry Date	Billing Code	PreCert Status
<input type="text" value="f"/> 			(73701) COMPUTED TOMOGRAPHY, LOWER EXTREMITY; WITH CONTRAST MATERIAL(S)	Not Required

Signed ABN on File

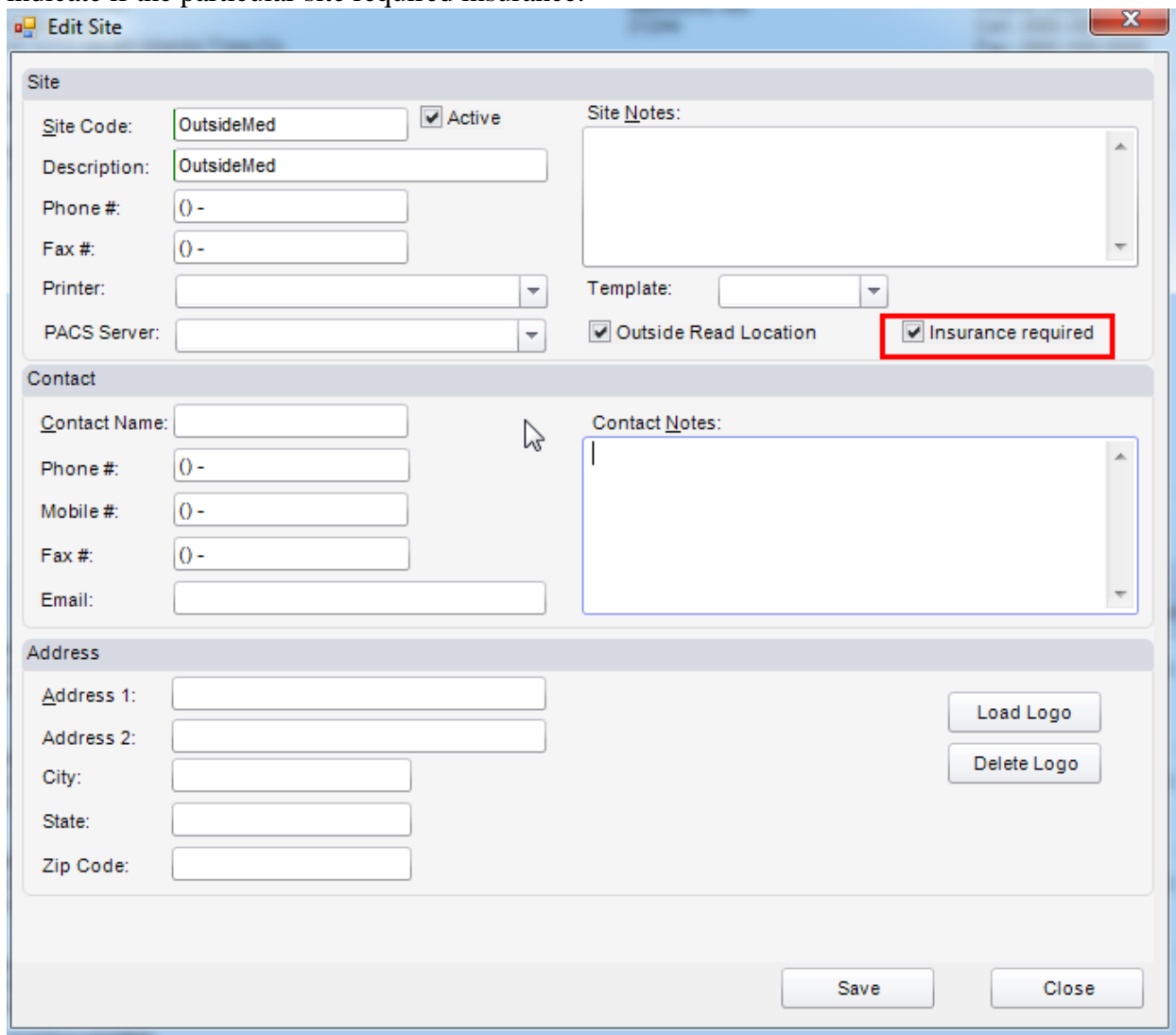
Refused ABN

☐ Show inactive CPT codes

**Figure 4.3 – ABN list box from IVT data window**

## Outside Read Sites Insurance Required

Insurance policies can now be specified for outside reads. At the site level, a flag was added to indicate if the particular site required insurance.

The image is a screenshot of a software window titled "Edit Site". The window is divided into three main sections: "Site", "Contact", and "Address". In the "Site" section, there are fields for "Site Code" (containing "OutsideMed"), "Description" (containing "OutsideMed"), "Phone #", "Fax #", "Printer", and "PACS Server". There are also checkboxes for "Active" (checked), "Outside Read Location" (checked), and "Insurance required" (checked and highlighted with a red rectangle). A "Site Notes" text area is also present. The "Contact" section has fields for "Contact Name", "Phone #", "Mobile #", "Fax #", and "Email", along with a "Contact Notes" text area. The "Address" section has fields for "Address 1", "Address 2", "City", "State", and "Zip Code". At the bottom right of the "Address" section are "Load Logo" and "Delete Logo" buttons. At the bottom of the window are "Save" and "Close" buttons.

**Figure 4.3 – Insurance Required flag at site level**

When creating an Outside Read, once the site is selected for the order, the Insurance Policies data pane appears allowing the user to add a new or select a previous Insurance Policy.

The screenshot displays the 'Add Outside Read' form in the rRIS system. The form is divided into several sections: 'Patient' and 'Order' tabs at the top; 'Study(s):' with a dropdown menu showing 'CT Chest W Abdomen W'; 'Body Part:' with a dropdown menu showing 'Chest'; 'Laterality:' with a dropdown menu; 'Exam Date:' with a date picker showing '12-20-2011'; 'Tech Notes:' with a text area; 'Referring Details' with 'Referring:' dropdown showing 'Piled, Jerry T' and 'Visited at:' dropdown showing '123 MileHigh Dr., Mountain View, CO, 12345'; 'CC Physicians:' with a dropdown menu; 'Visit Location for CC' with a dropdown menu; 'Chief Complaint' with a text area; 'Performed Location' with 'Practice:' dropdown showing 'Advanced Radiology' and 'Site:' dropdown showing 'Outsidemed'; 'Flags' with checkboxes for 'STAT Read', 'STAT Precert', and 'Outside Read' (checked); 'Order Notes' with a text area showing '12-02-11 dtn -'; and 'Insurance Policies' at the bottom. The 'Insurance Policies' section includes a table with columns: Note, Carrier Code, Carrier Name, Policy Number, Group Name, Group Number, Phone, and Priority. Below the table is a 'Manage Policies' button. At the bottom right, there are fields for 'Verification REQUIRED' (checked), 'Insurance verified' (unchecked), and 'Amount to collect:' with a text input field.

**Figure 4.4 – Add Outside Read displaying Insurance Policies data pane**

Outside reads that require insurance can also be added to the Billing Exception work list. If the outside read site does not have the “Insurance Required” flag, it will not be added to the Billing Exception work list.

## **Clinical Decision Support – MU Requirement 170.304.e**

On the MU tab where medications are located a grid for lab results has been added under the grid there are buttons for adding and editing lab results. There is also a right click context menu for add/edit and delete. The delete warns the user asking them to confirm the delete.

The grid only shows the fields that are critical to the technician for example the lab's name and address information isn't critical to their decision making and is only available on the right click edit menu.

In the edit screen most fields are free text data entry. The main exception being the test name, which is combo box entry based on the LabTest lookup table. Only the active tests in the LabTest lookup are returned with the patient recorded for display in the UI. This is to limit bandwidth usage, to speed performance and make it easier for techs and rads to see the critical items they are concerned with. Note if we were to receive the values via an HL7 feed, the system would enter all test items but only the active tests would display and download to the clients. Later if a test is activated the history of all past retrievals for that test will be displayed. For the entry of a lab result the only required fields are the observation date which is the date the test was collected on in all cases where there is a specimen (such as blood work – according to the HL7 spec). The other required fields include observation\_value and the name of the test aka lab\_test\_code.

The screenshot displays the RADNET rRIS interface. At the top, a navigation bar includes tabs for Patient, MU, Contacts / Demographics, Order, Exam, Visit History, and Image Request (0). The 'Medications' section shows a message: 'Failed to update patient medications.' with a 'Sync/Refresh' button. Below this is the 'Lab Results' section, which contains a table with columns: Date, Test, Result, Abnormal, Range, and Units. The table has one row: 12-02-2011, Test 1, test, H. An 'Add' button is visible. Overlaid on the bottom is the 'Add Lab Results' dialog box, which contains the following fields: Observation Date (12-02-2011), Test Name (Test 1), Value (test), Abnormality (H^Above high normal), Reference Range, Units, Specimen Source, Specimen Quality, Specimen Condition, and Lab Name/Address (home). The dialog has 'OK' and 'Cancel' buttons. An 'Export HL7' button is also visible on the right side of the interface.

Date	Test	Result	Abnormal	Range	Units
12-02-2011	Test 1	test	H		

**Add Lab Results**

Observation Date: 12-02-2011

Test Name: Test 1

Value: test

Abnormality: H^Above high normal

Reference Range:

Units:

Specimen Source:

Specimen Quality:

Specimen Condition:

Lab Name/Address: home

OK Cancel

Export HL7

**Figure 4.5 – Possible Alert Messages**

Please note that this feature is incomplete. The sync refresh button does nothing at this time because NewCrop has not yet released WS methods for receiving lab results. HL7 portion of the solution still needs work if we are to receive lab results via HL7.

## Lab Results – MU Requirement 170.306.g

The medications grid is located on the MU tab, next to the patient tab in most content screens. In addition to the auto sync feature the user can click on the “Refresh/Sync” button just below the grid. This refresh will query NewCrop on a separate thread as not to slow down or lockup the main workflow in the case where the intranet connection is unavailable, failing or slow.

The screenshot displays the eRAD RIS application interface. At the top, the title bar reads "eRAD RIS (Logged in as kevin)". Below this is a menu bar with options: File, Administration, Scheduling, Front Desk, Technologist, Radiologist, and a dropdown menu showing "MD/ADV". A user profile icon and the name "kevin m" are visible on the right. The main content area has tabs for "Patient Search", "Edit Patient (bevin Molyneaux)", and "Attachments". The "MU" tab is selected, showing three sub-tabs: "Patient", "MU", and "Attachments". The "Medications" section contains a table with columns: Date, Status, Medication, Physician, and SIG Text. A single entry is visible: 11-17-2011, Pending, Viagra 100mg tablet, Kevin cee Molyneaux, 10 tablet BEDTIME. Below the table is a "Sync/Refresh" button. The "Lab Results" section has a table with columns: Date, Test, Result, Abnormal, Range, and Units. It includes "Add" and "Edit" buttons and a "Sync/Refresh" button. The "Immunizations" section has a table with columns: Vaccine, Date, Qty, Units, Lot #, and Manufacturer. It includes an "Encrypt File" checkbox and an "Export HL7" button. At the bottom right are "Save" and "Close" buttons. A status bar at the bottom left shows "Connected: Debug".

Date	Status	Medication	Physician	SIG Text
11-17-2011	Pending	Viagra 100mg tablet	Kevin cee Molyneaux	10 tablet BEDTIME

Date	Test	Result	Abnormal	Range	Units
------	------	--------	----------	-------	-------

Vaccine	Date	Qty	Units	Lot #	Manufacturer
---------	------	-----	-------	-------	--------------

Figure 4.6 – Medication data pane on MU tab



A new system configuration setting “MUMedicationSyncFrequency” has also been created. After the sync is performed the patient.last\_medication\_sync is updated to reflect the change. The new medications (if any) and patient.last\_medication\_sync are stored when the user saves the screen. Saving the screen is guaranteed at key points in the workflow such as IVT verification, arrival, starting and completing studies.

Auto sync’s can be disabled by setting the “MUMedicationsSyncFrequency” to -1. A zero value would force an autosync every time they open a patient record. For example, a value such as 600 would force a check every 10 hours.

## **Drug to Drug Allergy and Drug Formulary – MU Requirements 170.302(a)(b)**

A new button has been added on the Visit History tab in the Drug Allergies data pane. This button passes along the allergies entered in our grid to the New Crop application where the user will be responsible to add them to the patient within New Crop.

The screenshot displays the rRIS interface with the 'Visit History' tab selected. The interface is divided into four main panes:

- Demographics at Encounter:** Contains input fields for Height (ft in), Weight (lbs), BMI, Blood Pressure, and Smoking Status. It also includes checkboxes for 'Is Pregnant', 'Requested Educational Resources', and 'Provided Educational Resources'.
- Drug Allergies:** Features a dropdown menu to 'Show drug allergies for the current patient's visit?' with an 'Add/Edit Allergy' button and an 'Upd NewCrop' button. Below is a table with columns: Drug Allergy, Start Date, End Date, Reaction, Severity, and Status.
- Problem List:** Includes a dropdown menu to 'Show problem list for the current patient's visit?' and a table with columns: Problem, Start Date, End Date, and Status.
- Clinical Summary:** Contains buttons for 'View/Print' and 'Export' under the heading 'Continuity of Care Document (CCD)', and a 'View/Print' button under 'View External Clinical Document'.

**Figure 4.7 – Drug Allergies and Update NewCrop**

## 5. Resolved Defects

Bugs, Suggested Features and Support Issues resolved in build 1.27. The extract is taken from Redmine bug tracking system and only displays defects resolved in 1.27.

#	Status	Tracker	Priority	Subject	Category	Target version	Resolved Version
701	Resolved	Bug	High	No way to turn off ChairService	Web Services/DB	1.27	1.27
706	Resolved	Bug	Normal	Patient injury not associated with visit	Thick Client GUI	1.26	1.27
699	Resolved	Bug	Normal	CarrierType - Issue with display order	Admin Tools	1.25	1.27
698	Resolved	Bug	Normal	Organization - Couple of issues when adding sites	Admin Tools	1.25	1.27
697	Resolved	Bug	Normal	Organization - Edit Region Popup	Admin Tools	1.25	1.27
695	Resolved	Bug	Normal	Management Report > Daily Schedule copay format issue	Mgt Reports	1.27	1.27
694	Resolved	Bug	Normal	Perform Exam data window mystery list box	Thick Client GUI	1.26	1.27
689	Resolved	Bug	Normal	Lookup table Unit of Measure > Measure type is case sesitive	Admin Tools	1.25	1.27
624	Resolved	Bug	Normal	Schedule exam, selecting time from Advance tab can make available times "jump"	Thick Client GUI	1.23	1.27

## 6. Known Limitations

The following are Bugs, Suggested Features, and Support Issues found in build 1.27. This build is the current QE build and testing is ongoing. The list may increase in size. This document will not be updated or re-released.

#	Status	Subject	Category	Target version
741	New	Add Outside Read - can save outside read without visit selected.	Thick Client GUI	1.27
738	Resolved	Create outside read without insurance policy will throw error from Billing Exception	Thick Client GUI	1.27
701	Resolved	No way to turn off ChairService	Web Services/DB	1.27
746	New	Logging off application will show message "rRIS is already running."	Thick Client GUI	1.27
744	Resolved	Errors in Edit Billing	Thick Client GUI	1.27
743	Resolved	Date selected from Date / Time Picker not accepted after removing composite code.	Thick Client GUI	1.27
740	Resolved	Outside Read - Edit billing does not show all the billing exceptions	Thick Client GUI	1.27
739	Resolved	Outside Read - Edit Billing from Billing Exception and Responsible Party is required	Thick Client GUI	1.27
736	Resolved	DB Version in help about is not updated	Web Services/DB	1.27
702	Closed	Document distribution is not configurable for queue name or poll time	Web Services/DB	1.27
695	Resolved	Management Report > Daily Schedule copay format issue	Mgt Reports	1.27

# **User Release Notes**

for RADNET rRIS  
Version 1.0  
Build 28

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## **1. Purpose**

This document describes some of the new features and changes implemented in rRIS as of the end of Sprint 28. This version of rRIS is referred to as Build 1.28.

Only features which can be visually demonstrated to the user will be outlined in this document.

## **2. Intended Audience**

This document is created by the rRIS Development team for the RadNet RIS management team.

## **3. Installing/Accessing the Application**

The installation guide for the rRIS client have been posted to the RadNet Wiki page at <http://mdbal01rdtweb/Wiki/>

Under the RIS menu, click on the rRIS page. The credentials to access the page are:

Username: rRIS

Password: Summerside

*Please note that Build 1.28 is considered a new core release of the application and will require a reinstallation of rRIS. This is accomplished by navigating to the rRIS shared installation drive and running the CoreInstall.bat file (ex: I:\RISDeployment\CoreInstall.bat)*

If you experience difficulties accessing the application, please do not hesitate to contact Darcy Noye with the PEI RIS Development Team.

## 4. New Features and Enhancements

### Adding RVU to Billing Codes

In build 28 the Billing Code table has 2 new columns added to specify RVU values. The columns Technical RVU and Professional RVU are displayed in Figure 4.1 below.

Billing Code	Description	Version	Display Order	Technical Rvu	Profession Rvu	Active
71275	COMPUTED TOMOGRAPHIC ANGIOGRAPHY, CHEST (NONCORONARY), WITH CONTRAST MA...	1	1	1.2	0.75	Y
71551	MAGNETIC RESONANCE (EG, PROTON) IMAGING, CHEST (EG, FOR EVALUATION OF HILAR A...	1	1			Y
71550	MAGNETIC RESONANCE (EG, PROTON) IMAGING, CHEST (EG, FOR EVALUATION OF HILAR A...	1	1			Y
71555	MAGNETIC RESONANCE ANGIOGRAPHY, CHEST (EXCLUDING MYOCARDIUM), WITH OR WIT...	1	1			Y

Figure 4.1 – Billing Code table showing Technical and Professional RVU columns.

### Real Time Alerts

The Alert configuration was introduced in Build 26. In Build 28 the alert will also be real time. Added to the Alert Configuration table patients first or last name has changed and birth date. This is for existing patients if a new patient is being added and one of these fields are changed no alert will display.

For existing patients, if the value for one of these fields are changed and do not match with the value stored in database, the user will automatically receive an alert when the field that was edited is exited. Example: User edits birth date by changing day of birth and tabs out of that field, or selects another area of the form, an alert will pop up.

Also in build 26 the alert for a Patient over the age of 65 and the modality is MR an alert was opened. This alert has been enhanced. The additional conditions must also be met for this alert to fire. In addition to the patient's age and modality type, the patient must have been prescribed Lipitor, lab result has LDL Cholesterol over 100 and have and have heart disease captured in the Problem List.

Alert Configuration Code	Description	Alert Generator	Display Order	Active
DOBChange	Patient's Birth Date has changed. Please ensure the data is correct.	PatientBirthChanged	5	Y
FirstNameChange	Patient's First Name has changed. Please ensure the data is correct.	PatientFirstNameChanged	4	Y
GetLabWork	MR Patients age 65+ with Heart Disease on Lipitor and LDL > 100. Make sure you have up-to-date lab results	MRIG65PlusHeartDiseaseLipitorAndLDL100Plus	1	Y
LastNameChange	Patient's Last Name has changed. Please ensure the data is correct.	PatientLastNameChanged	3	Y
NoPhone	Patient has no phone number	PatientMissingPhoneInfo	2	Y

Figure 4.2 – Alert Configuration lookup table



The Alert Configuration Code and Description can be entered as the user wishes. The Alert Configuration Code must be a unique value.

The alert generators are hard coded values in the application. The cell under the Alert Generator column is a list box and currently has the following values:

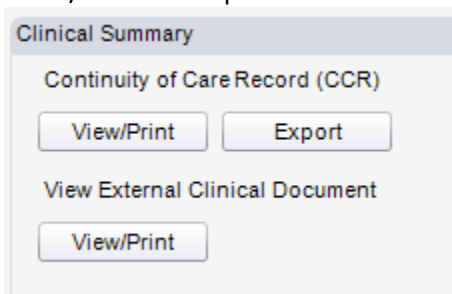
- PatientBirthChanged
- PatientFirstNameChanged
- PatientLastNameChanged
- PatientMissingPhoneInfo
- MRI65PlusHeartDiseaseLipitorAndLDL100Plus

### Clinical Summary – MU Requirement 170.304.i

The generation of the Clinical Summary structured xml file actually satisfies pieces of requirements.

- 170.304(f) Copy of Electronic Health Record
- 170.304(h) Clinical Summaries
- 170.304(i) Exchange Clinical Information / Patient Summary

On the Clinical Summaries section within the Patient Visit 2 buttons were added View /Print and Export.



**Figure 4.3 – Clinical Summary – CCR buttons for View/Print and Export**

Basically you have the option to View the Patient CCR in a browser window. Printing is covered off by using the right click print on the open record.

Exporting the file allows the user to specify where they want the generated XML file saved. From there it can be handled like any file in the Windows environment for printing, copying, emailing and deleting. The preview mode for the CCR looks something like this...

## RADNET, Inc. – rRIS Pre-Release Notes

Continuity of Care Record Sha-1 Hash: 08B9238EF2D85164F9F53DA28690A12070D3F1C5

**Continuity of Care Record**

**Date Created:** 2011-12-12T17:11:42Z  
**From:** Ian G Power  
**To:**  
**Purpose:** Personal Health Record rRIS

**Patient Demographics**

Name	Date of Birth	Gender	Identification Numbers	Address / Phone
Ian G Power	04-04-1978	Undifferentiated	2169	Ians address 1 Ians address 2 Ians City, CA 21244 ian.power@radnet.com  Home: (902) 222-6666 Work: (902) 222-6666

**Alerts**

Type	Date	Code	Description	Reaction	Source
Allergy	--	305 (FDB)	Sulfa (Sulfonamides)	-	Ian G Power
Allergy	--	245 (FDB)	Penicillins	-	Ian G Power

**Problems**

Type	Date	Code	Description	Status	Source
Problem	11-22-2011	10.01 (ICD9CM)	PRIMARY TUBERCULOUS COMPLEX BACTERIOLOGI	Active	Ian G Power
Problem	11-14-2011	952.9 (ICD9CM)	UNSPECIFIED SITE OF SPINAL CORD INJURY W	Resolved	Ian G Power
Problem	12-05-2011	401.9 (ICD9CM)	UNSPECIFIED ESSENTIAL HYPERTENSION	Active	Ian G Power

**Procedures**

Type	Date	Code	Description	Location	Substance	Method	Position	Site	Status	Source
Radiology	12-05-2011		CT 3 Phase [CT13]						Signed1	RadNet rRIS 1.1.28.7842
Radiology	12-05-2011		CT Head W [70460] - Head						Signed1	RadNet rRIS 1.1.28.7842
Radiology	09-03-2011		CT 3 Phase [CT13]						Scheduled	RadNet rRIS 1.1.28.7842
Radiology	10-27-2011		CT Head W & Ear, Orbit, Sella W [CT33] - Head						Cancelled	RadNet rRIS 1.1.28.7842
Radiology	11-24-2011		CT 3 Phase [CT13]						Scheduled	RadNet rRIS 1.1.28.7842
Radiology	12-09-2011		CT 3 Phase [CT13]						Scheduled	RadNet rRIS 1.1.28.7842

Figure 4.4 – Viewing CCR

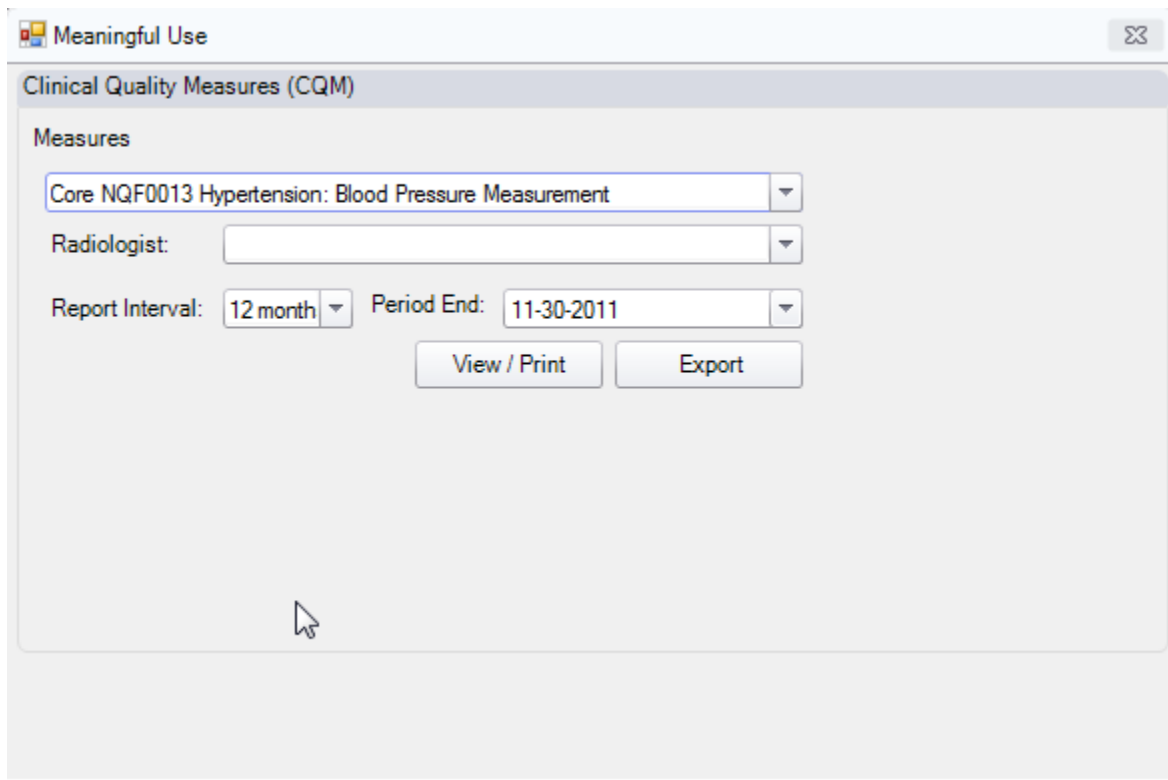
Currently we generate the following sections, but could add others as required.

1. Document Header
2. Patient Demographics
3. Alerts (Allergies)
4. Problems (ICD codes)
5. Procedures (RIS procedures\_
6. Medications
7. Immunizations
8. Results (Lab Results)
9. People (Patient information)

Information Systems (RadNet rRIS)

## Clinical Quality Measures – MU Requirement 170.304j

Under the Administration menu a new menu item Meaningful Use has been added. This opens the Meaningful Use window (we will change the name of this menu item and window to CQM or Clinical Quality Measures in a later build). The window has a series of list boxes. The first has a list of the CQM options. A radiologist list box, report interval, and the Period Ending for the report.



The screenshot shows a software window titled "Meaningful Use". Inside, there is a section titled "Clinical Quality Measures (CQM)". Below this title, there is a "Measures" label followed by a dropdown menu currently showing "Core NQF0013 Hypertension: Blood Pressure Measurement". Below that is a "Radiologist:" label followed by an empty dropdown menu. Then, there is a "Report Interval:" label with a dropdown menu showing "12 month", and a "Period End:" label with a dropdown menu showing "11-30-2011". At the bottom of this section are two buttons: "View / Print" and "Export".

Figure 4.5 – Medication data pane on MU tab

The following describes each of the CQM requirements to generate the report.

Core

c\_mu\_cqm\_0013\_hypertension –

- a) The patient must be at least **18 years of age or older** at the start of the reporting period and have at least **two encounters** with the Rad during the reporting period.
- b) An active diagnosis of **Hypertension(used icd-9 codes)**.
- c) At least one **blood pressure reading (systolic and diastolic)** should be performed and documented during the reporting period in the Vital Signs chart section.

c\_mu\_cqm\_0028a\_tobacco\_use –

- a) The patient must be at least **18 years of age or older** at the start of the reporting period and have at least **two encounters** with the Rad during the reporting period.
- b) The patient was queried about tobacco use one or more times within 24 months.

c\_mu\_cqm\_0028b\_tobacco\_intervention –

- a) The patient must be at least **18 years of age or older** at the start of the reporting period and have at least **two encounters** with the Rad during the reporting period.
- b) Documentation that the patient is a tobacco user within the last 24 months.
- c) An active diagnosis of Nondependent tobacco use disorder (**used icd-9 codes**).

c\_mu\_cqm\_0421a\_weight\_screening -

- a) The patient must be at least **65 years of age or older** at the start of the reporting period and have at least **one encounter** with the Rad during the reporting period.
- b) The number of patients in the denominator that have a normal BMI (BMI  $\geq 22$  or  $<30$ ) OR an abnormal BMI (BMI  $\geq 30$  or  $<22$ ) recorded in the Vital Signs chart section (BMI must be recorded in the six months prior to the encounter date or during the reporting period);

c\_mu\_cqm\_0421b\_weight\_screening –

- a) The patient must be aged 18 - 64 at the start of the reporting period and have had one encounter with the Rad during the reporting period.
- b) The number of patients in the denominator that have a normal BMI (BMI  $\geq 18.5$  or  $<25$ ) OR an abnormal BMI (BMI  $\geq 25$  or  $<18.5$ ) recorded in the Vital Signs chart section (BMI must be recorded in the six months prior to the encounter date or during the reporting period);

Alternative Core

c\_mu\_cqm\_0024\_child\_weight\_assessment -

- a) The patient must be aged 2 - 17 at the start of the reporting period and have had one encounter with the Rad during the reporting period.
- b) And had BMI percentile documentation (**V85.5, V85.51, V85.52, V85.53, V85.54**), counseling for nutrition (V65.3) and counseling for physical activity (V65.41) during the reporting period. (**used icd-9 codes**).

c\_mu\_cqm\_0038\_childhood\_immunization - missing

c\_mu\_cqm\_0041\_influenza\_immunization -

- a) The patient must be at least **50 years of age or older** at the start of the reporting period and have at least **two encounters** with the Rad during the reporting period.
- b) And had an influenza shot during the flu season(Jan-Feb and Sept –Dec).
- c) And have received influenza vaccine CVX code 111 or 140.

Optional

c\_mu\_cqm\_0031\_breast\_screening -

- a) The patient must be female aged 40 - 69 at the start of the reporting period and have had one encounter with the Rad during the reporting period.
- b) At least one procedure should be a mammo type(Screening).

c\_mu\_cqm\_0043\_pneumonia\_vaccination -

- a) The patient must be aged 65 at the start of the reporting period and have had one encounter with the Rad during the reporting period.
- b) And have ever received a pneumococcal vaccine CVX code 100 or 133.

c\_mu\_cqm\_0061\_diabetes\_blood\_pressure –

- a) The patient must be aged 18 - 74 at the start of the reporting period and have had one encounter with the Rad during the reporting period.
- b) And had a diagnosis of Diabetes recorded(used icd-9 codes): 250, 250.0, 250.00, 250.01, 250.02, 250.03, 250.10, 250.11, 250.12, 250.13, 250.20, 250.21, 250.22, 250.23, 250.30, 250.31, 250.32, 250.33, 250.4, 250.40, 250.41, 250.42, 250.43, 250.50, 250.51, 250.52, 250.53, 250.60, 250.61, 250.62, 250.63, 250.7, 250.70, 250.71, 250.72, 250.73, 250.8, 250.80, 250.81, 250.82, 250.83, 250.9, 250.90, 250.91, 250.92, 250.93, 357.2, 362.0, 362.01, 362.02, 362.03, 362.04, 362.05, 362.06, 362.07, 366.41, 648.0, 648.00, 648.01, 648.02, 648.03, 648.04

Patient in the reporting period last blood pressure reading must be <140/90 during the reporting period.

## 5. Resolved Defects

Bugs, Suggested Features and Support Issues resolved in build 1.28. The extract is taken from Redmine bug tracking system and only displays defects resolved in 1.28.

#	Status	Tracker	Priority	Subject	Category	Target version	Resolved Version
752	Closed	Bug	High	Created a Business Hours Availability Template and error returned	Admin Tools	1.27	1.28
749	Closed	Bug	High	Perform Exam > Abort > Study is not sent to Orders to Schedule	Thick Client GUI	1.27	1.28
738	Closed	Bug	High	Create outside read without insurance policy will throw error from Billing Exception	Thick Client GUI	1.27	1.28
747	Closed	Bug	Normal	Walk-In - If the room is selected when the system time is greater than the Scheduled date field, buttons are disabled	Thick Client GUI	1.27	1.28
744	Closed	Bug	Normal	Errors in Edit Billing	Thick Client GUI	1.27	1.28

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737	Closed	Bug	Normal	Add outside read patient search from enter key not initiated	Thick Client GUI	1.26	1.28
736	Closed	Bug	Normal	DB Version in help about is not updated	Web Services/DB	1.27	1.28
720	Closed	Bug	Normal	Carrier Search needs a unique ICON	Thick Client GUI	1.26	1.28
698	Closed	Bug	Normal	Organization - Couple of issues when adding sites	Admin Tools	1.25	1.28
649	Resolved	Bug	Normal	System menu location error	Thick Client GUI		1.28

## 6. Known Limitations

The following are Bugs, Suggested Features, and Support Issues found in build 1.28. This build is the current QE build and testing is ongoing. The list may increase in size. This document will not be updated or re-released.

#	Status	Subject	Category	Target version
760	New	Edit Send To report is not defaulted correctly	Thick Client GUI	1.28
761	New	Closing the Report History will through series of messages	Thick Client GUI	1.28
762	New	Seen this error when closing Report Drafted	Thick Client GUI	1.28
763	New	Report History data nugget throws error on Send To button	Thick Client GUI	1.28
764	Resolved	Walk-In Error thrown after completing required fields.	Thick Client GUI	1.28
765	Resolved	Cannot open 2 instances of Edit Patient	Thick Client GUI	1.28
766	New	Exiting application with data window open keeps record locked	Thick Client GUI	1.28
767	New	Logging off application with data window open can cause error	Thick Client GUI	1.28
768	New	CQM window > Report Interval fields need to be longer	Thick Client GUI	1.28
769	New	Drug Allergies Row Error	Thick Client GUI	1.28
771	New	CQM 00043 Pneumonia Vaccination Status for Older Adults returns error	Thick Client GUI	1.28
772	Resolved	Clinical Summary > Continuity of Care Record needs "Scheduled Study Date"	Thick Client GUI	1.28
773	Resolved	Clinical Summary > Continuity of Care Record Throws error if patient folder is missing procedures	Thick Client GUI	1.28
774	New	Patient search column for "DataNug" gone after search	Thick Client GUI	1.28
775	New	Spelling error for RVU column	Admin Tools	1.28



# **User Release Notes**

for eRAD RIS  
Version 1.0  
Build 29

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## **1. Purpose**

This document describes some of the new features and changes implemented in eRAD RIS as of the end of Sprint 29. This version of eRAD RIS is referred to as Build 1.29.

Only features which can be visually demonstrated to the user will be outlined in this document.

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS management team.

## **3. Installing/Accessing the Application**

The installation guide for the eRAD RIS client have been posted to the RadNet Wiki page at <http://mdbal01rdtweb/Wiki/>

Under the RIS menu, click on the rRIS page. The credentials to access the page are:

Username: rRIS

Password: Summerside

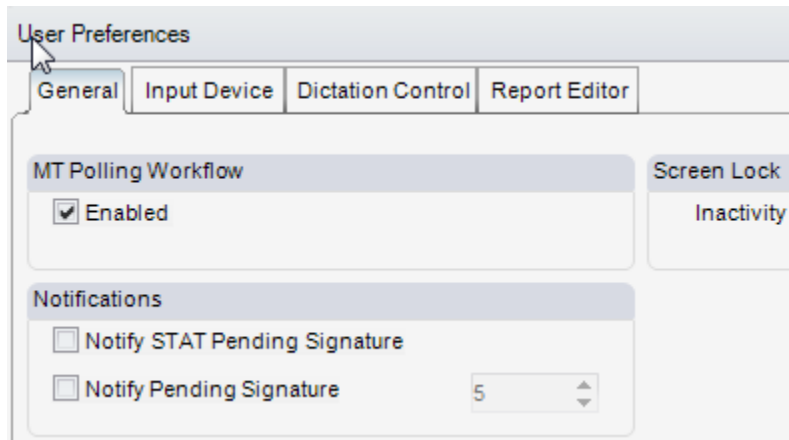
*Please note that Build 1.29 is considered a new core release of the application and will require a reinstallation of eRAD RIS. This is accomplished by navigating to the eRAD RIS shared installation drive and running the CoreInstall.bat file (ex: I:\RISDeployment\CoreInstall.bat)*

If you experience difficulties accessing the application, please do not hesitate to contact Darcy Noye with the PEI RIS Development Team.

## 4. New Features and Enhancements

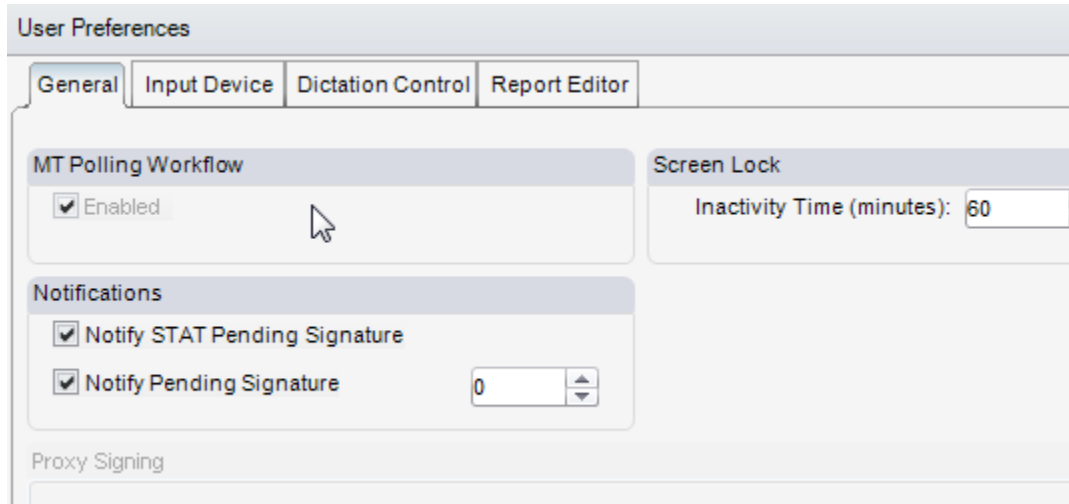
### MT Polling Permission

MTPolling will now be disabled in the User Preference screen if the permission “Clinical.UserPreferences.TranscriptionPolling” is not granted to the user. It is suggested that the base permission be set to “None”.



The screenshot shows the 'User Preferences' window with the 'General' tab selected. The 'MT Polling Workflow' section has a checkbox labeled 'Enabled' which is checked. The 'Notifications' section has two checkboxes: 'Notify STAT Pending Signature' and 'Notify Pending Signature', both of which are unchecked. The 'Notify Pending Signature' checkbox has a numeric spinner set to 5. The 'Screen Lock' section is partially visible on the right.

Figure 4.1 – User who has permission to change preference



The screenshot shows the 'User Preferences' window with the 'General' tab selected. The 'MT Polling Workflow' section has a checkbox labeled 'Enabled' which is checked, but it is disabled (grayed out) and a mouse cursor is hovering over it. The 'Notifications' section has two checkboxes: 'Notify STAT Pending Signature' and 'Notify Pending Signature', both of which are checked. The 'Notify Pending Signature' checkbox has a numeric spinner set to 0. The 'Screen Lock' section is visible on the right, showing 'Inactivity Time (minutes): 60'. The 'Proxy Signing' section is visible at the bottom.

Figure 4.2 – User who does not have permission to change preference

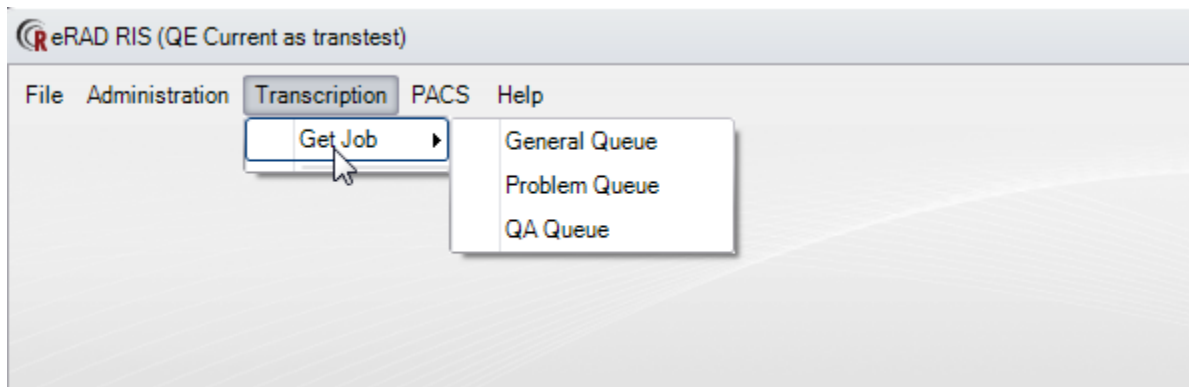
## Ability for Medical Transcription to Change Polling Queues

In previous builds, transcription had the ability to assign / un-assign to the Problem and QA work lists. The user would have access to the work list to view the contents and select which record they would like to open from the work list. With the introduction of work list polling, and the possibility of transcription not having access to these work lists, we needed to provide access to these queues.

Four new access strings have been added to control the access to the menu items.

Access String	Description
WL.GetJob	Access to MT polling workflow for general queue/all queues
WL.GeneralQueue	Access to MT polling workflow for general queue
WL.ProblemQueue	Access to MT polling workflow for problem queue
WL.QaQueue	WL access to MT polling workflow for qa queue

The transcription menu will display the Get Job menu item with a submenu listing the individual queues.



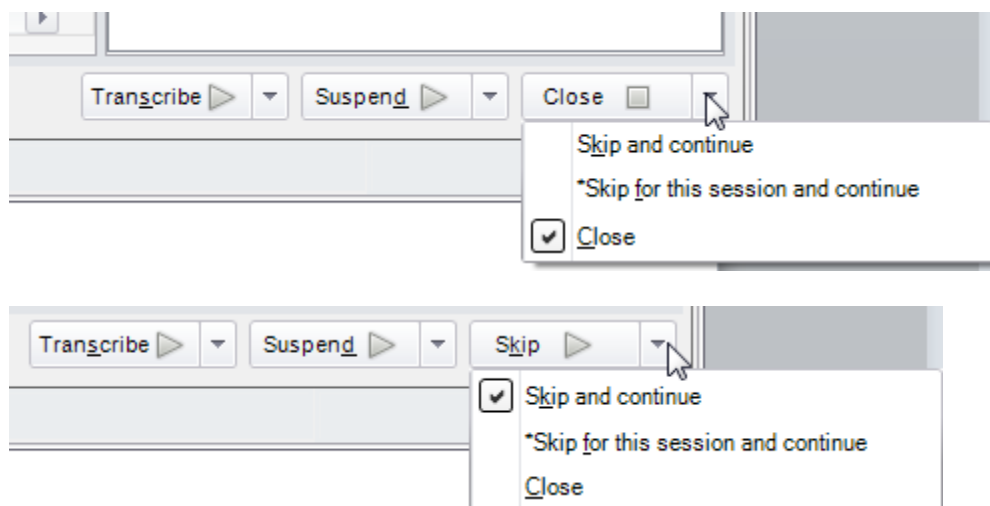
**Figure 4.3 – Transcription role with only access to polling queue's**

Selecting one of these menu items will start polling the respective queue and get a job as soon as one is available. If an Edit report screen is already open on, it will tell them to close it before they can start polling a new queue.

## **Reset Skipped Rows for Transcription**

This feature was introduced for Radiologists in Build 23 and is now included in work flow for Transcription.

Figure 4.4 below shows the options available to be assigned the far right button on the Transcription Editing tab. The default button action can be changed. To change the default action of the button, hold down the CTRL key on the keyboard and select the action from the drop down list. The option selected from the list will be performed as well as change the default setting for the button. When the default action is changed for a button, the text on the button will also change.



**Figure 4.4 – Displaying the ability to Skip work list rows and changing the default action of the “Close” Button**

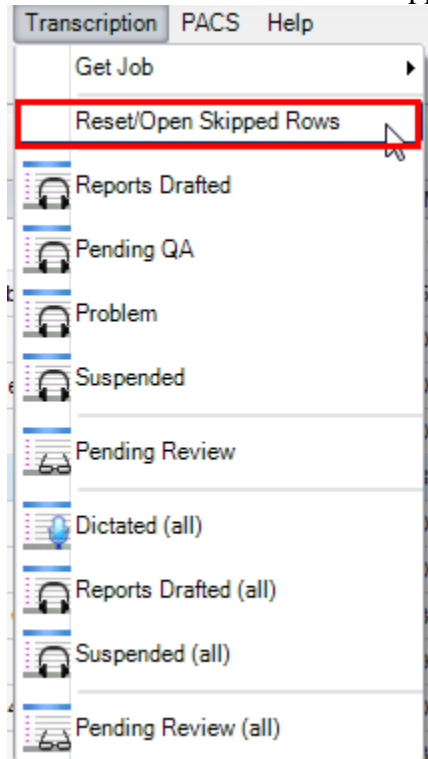
Actions are defined as “button action” and continue or “button action” and close. Referring to Figure 4.4, you will notice ICONS on the buttons as play ► or stop ◻. Assigning actions that are to continue to the next record on the work list display the play ICON, and actions that are to complete action and close data window to return to the work list will have the stop ICON.

Also in figure 4.4 the menu options are to skip the current exam and a specified following action. In the first example, Close is defaulted with the action being to simply close the Transcription Editing window.

Skip and continue will skip the item for the current workflow instance. To access this exam in the Editing window again, it can be opened directly from the work list as normal, or if the user completes the entire work list, then the skipped rows are accessed next.

The final menu option of “\*Skip for this session and continue” will mark this exam as such. Unlike “Skip and Continue” once the user completes the work list, exams flagged “\*Skip for this session and continue” will not be accessed during the normal “next available exam” work flow.

If the user has access to the work list they can access the exam via the work list, or if the exam(s) are to be added back into the “next exam” work flow, the user does have the ability to manually add these skipped exams back into the workflow by resetting skipped rows via the Transcription menu option displayed in Figure 4.5. Figure 4.6 is the window that opens. The user can reset individual rows or all of the skipped rows in this list.



**Figure 4.5 – Reset/Open Skipped Rows menu option**

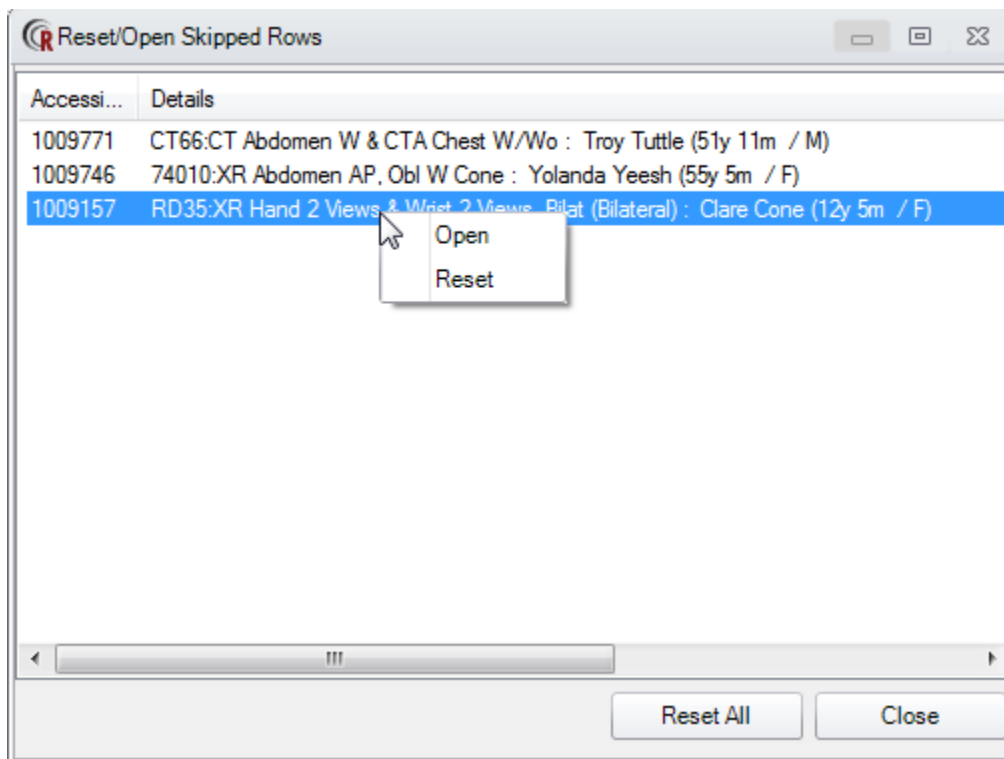


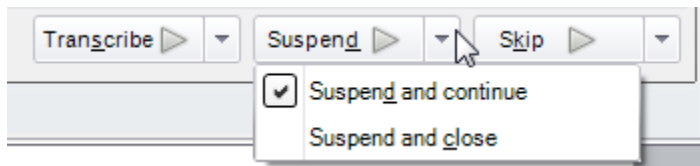
Figure 4.6 – Reset/Open Skipped Rows window

### Suspended Workflow Added for Transcription

The ability to suspend a job has been available to the Radiologists for some time now. In build 29 this work flow has been introduced to the Transcription work flow as well. In the Report Editing window a new drop list button has been added with the options to Suspend and continue or to Suspend and close.

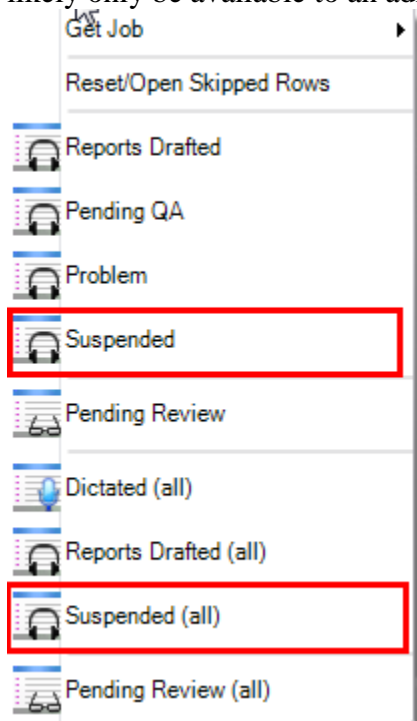
Suspend and continue will suspend the current exam open in report editor window. Suspend and close will suspend the current exam and return the user to the work list they accessed the record from. If the user is configured polling work flow only (does not have access to work list views) they are returned to the main screen.





**Figure 4.7 – Suspended Button with drop list options**

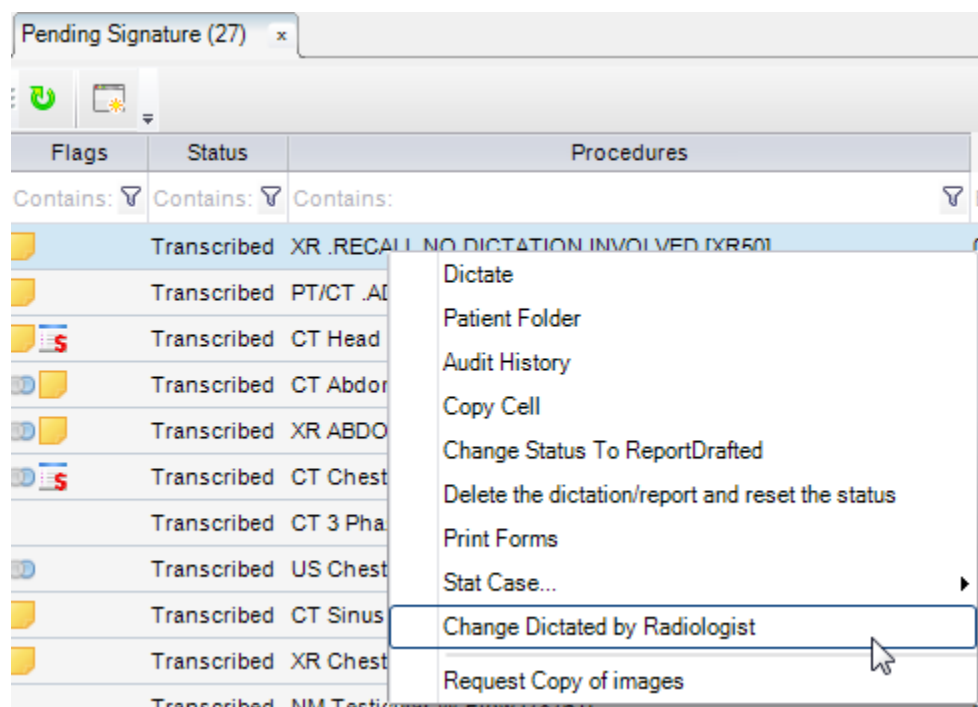
For those that do have access to work lists, under the Transcription menu you will find two new menu options. Suspended and Suspend (all) have been added. The Suspended work list will have all suspended records belonging to the current logged in user. The Suspend (all) work list will display records from all users suspended from transcription. This menu option will most likely only be available to an admin.



**Figure 4.8 – Suspended menu options to access work list**

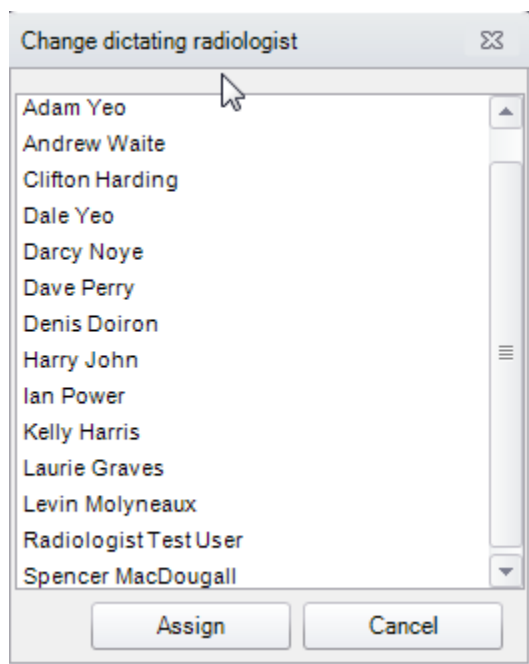
## Change Dictating Radiologist from Work List

In build 29, exams that are in a status of Dictated, Report Drafted, Transcribed, and Signed can have the dictating radiologist changed. From the Patient folder, Dictated by Date, and Pending Signature work lists select the row to be changed and from the context menu (right click) select the menu option Change Dictated by Radiologist.



**Figure 4.9 – Change Dictated by Radiologist on context menu**

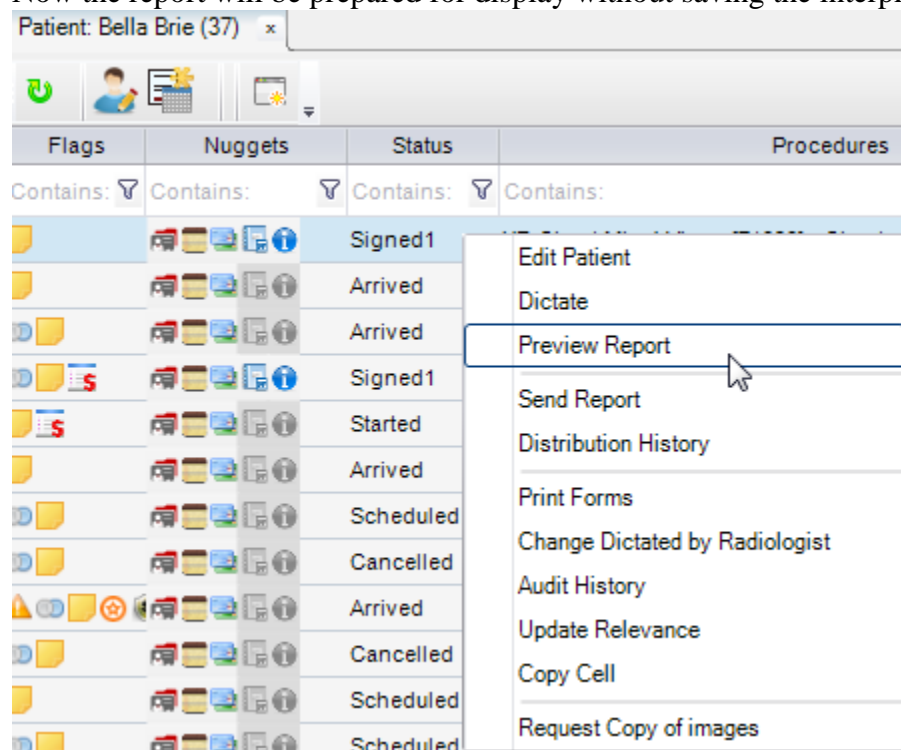
This will open a new window with the Radiologists that can be assigned to the study(s) selected based on what practice they are assigned to and where the modality resides for the studies affected. Only the latest interpretation will be affected.



**Figure 4.10 – Change dictating Radiologist window**

## Preview Report Enhancements

If the record selected has an interpretation row, Preview Report will show on the context menu. Before build 29, if the report was not ready, it would throw an error stating that it was not ready. Now the report will be prepared for display without saving the interpretation body.



**Figure 4.11 – Preview Report from context menu**

### **Billing Exception**

We created a method that will run when a study is being signed off.

The new functionality was designed to ensure that the following segments of data were populated;

- Referring Physician was selected, and was not still flagged as an unknown referring Physician
- Insurance was specified
  - o Insurance Policy number was specified
  - o Checks to see if the policy number doesn't override the policy mask
  - o Insurance is active
- There was a responsible party selected.
- Pre Certification number is defined.

All these cases apply to outside read studies excluding responsible party, when the outside site required Insurance.

We also created a WL called "Billing Exception WL", under the administration menu, studies will appear on this worklist when the study is either on hold for billing, or when the study failed a billing exception on signing.

### **User Preferences for Inbound Reporting (File Listener and TCP Listener)**

Two new user preferences have been added in this build. Start TCP Listener and Start File Listener each are checkboxes. When logging in we determine if we should start the listeners based on the system setting first and the user preference second. If both are true then we turn the corresponding listener on.

The default setting is checked or true. This was determined to be the norm if the system setting is on.

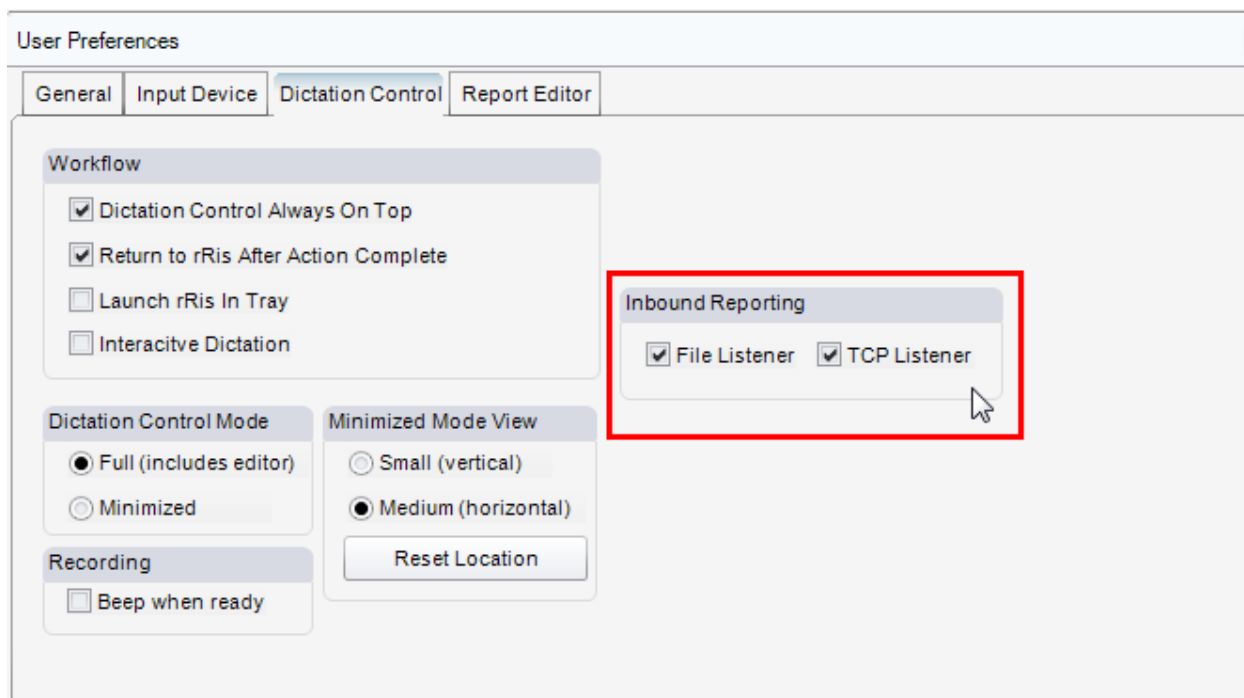


Figure 4.11 – Inbound Reporting User Preferences

## Modality Scheduling Interval

To allow for time blocks to be more configurable for each modality a new column called “Scheduling Interval” has been added to the Modality Lookup table. The time interval is defaulted to 5, but will allow each modality to have individual time blocks.

Lookup Tables - Modality

Modality Code	Description	AE title	Digital	Site Code	Modality Type Code	Weight	Confined Space Flag	Scheduling Interval	Pacs
CT1EL	CT1EL	CT1EL	N	EL (Eldersburg)	CT	300		20	N
CT1FH	CT1FH	CT1FH	N	FH (Fisher)	CT			5	N
CT1LU	CT1LU	CT1LU	N	LU (Lutherville)	CT			5	N
CT1GL	CT1GL	CT1GL	N	GLA (Glasgow)	CT		N	5	N
DE1EL	DE1EL	DE1EL	N	EL (Eldersburg)	BD (Bone Density)			5	N
DE1FH	DE1FH	DE1FH	N	FH (Fisher)	BD (Bone Density)			5	N
DX1LU	DX1LU	DX1LU	N	LU (Lutherville)	XR (Plain Film/Xra...)			5	N

Figure 4.12 – Modality lookup displaying new column Scheduling Interval

If the procedure selected has a default time that is less than the Scheduling Interval for the modality, the time blocks will reflect the modality scheduling interval.

## Automated Measure Calculation – MU Requirement 170.302.n

Meaningful User requirement # 170.302 n\_AutomatedMeasure\_Gen\_PS\_RevE.doc

**“170.302 n Automate measure calculation.** For each meaningful use objective with a percentage-based measure, electronically record the numerator and denominator and generate a report including the numerator, denominator, and resulting percentage associated with each applicable meaningful use measure.

Created a management to call stored procedure to display automated measures.(report is called MU Scorecard added it to the report server([Home](#) > [Dev](#) > [Meaningful Use](#) ).

Added a number of new fields to our hidden MU tab used to capture measures

1) **Hidden MU tab(ctrl + M + U)**

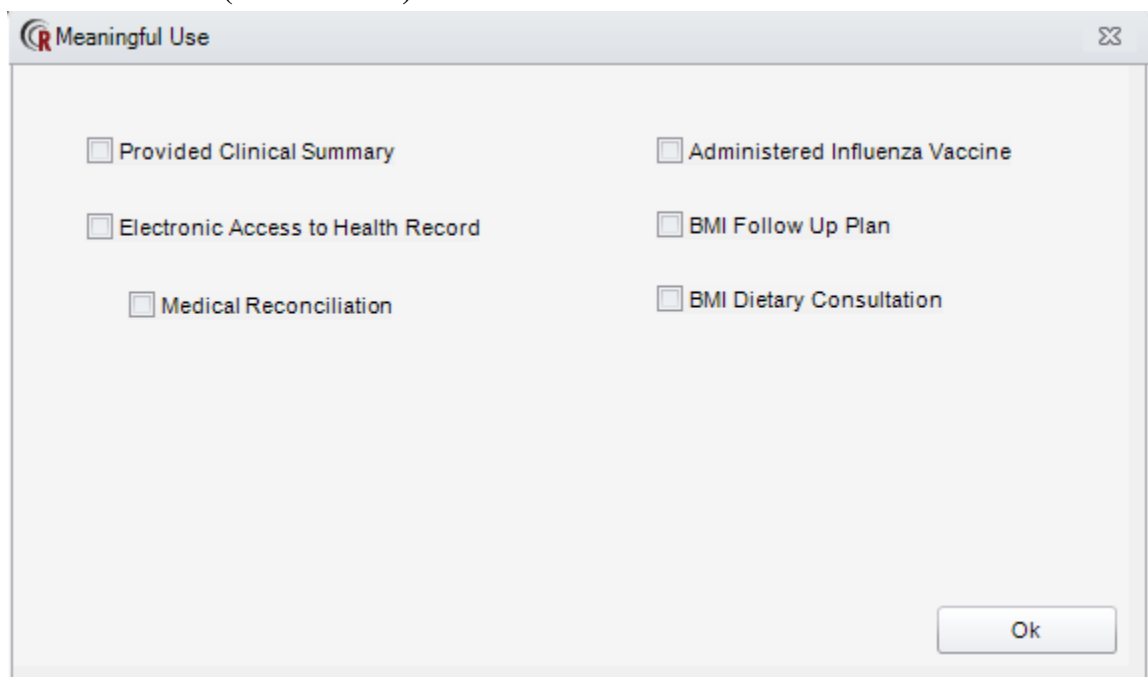
A screenshot of a software window titled "Meaningful Use" with a close button in the top right corner. The window contains six checkboxes arranged in two columns. The left column has three checkboxes: "Provided Clinical Summary", "Electronic Access to Health Record", and "Medical Reconciliation". The right column has three checkboxes: "Administered Influenza Vaccine", "BMI Follow Up Plan", and "BMI Dietary Consultation". An "Ok" button is located at the bottom right of the window.

Figure 4.13 – Meaning Use (hidden tab)

- a) **Provided Clinical Summary** – captures if a clinical summary was provided to the patient at any during the visit. Behind the scene the date is stamped when this checkbox was checked.
- b) **Electronic Access to Health Record** – is used to capture timely access. Behind the scene the date is stamped when this checkbox was checked.
- c) **Medical Reconciliation** – is used to capture if the Rad did any medical reconciliation on the patient during the visit.

- d) **Administered influenza vaccine** – Is used by CMQ to capture if influenza vaccine was administered during the visit.
  - e) **BMI Follow Up plan** – Is used by CMQ to capture if a follow up plan was suggested to the patient. Should never be used other than certification day.
  - f) **BMI Dietary Consultation** - Is used by CMQ to capture if a follow up plan was suggested to the patient. Should never be used other than certification day.
- 2) **Other Automated Measures** –
- a) **Transition of care** - must be checked if the patient is referred to the rad by a referring physician. In our case all exams should have this checked. Talking to Susan only mammo screening should not check this off.
  - b) **Provided Educational Resources** – if the patient was provided educational resources during visit this should be checked.

The screenshot displays the eRAD RIS interface with several sections:

- Demographics at Encounter:** Includes fields for Height (ft in), Weight (lbs), BMI, Blood Pressure, and Smoking Status. There are checkboxes for "Is Pregnant", "Transition of Care", and "Provided Educational Resources".
- Clinical Summary:** Includes a "Continuity of Care Record (CCR)" section with "View/Print" and "Export" buttons, and a "View External Clinical Document" section with a "View/Print" button.
- Active Medications:** Includes a table with columns: Date, Medication, Physician, and SIG Text. A sample entry shows "12-23-2..." for the date, "Penicillamine 250mg cap..." for the medication, "Ian Power" for the physician, and "1 capsule DAILY" for the SIG Text. There are "None" and "Use Grid" radio buttons and a "Sync/Refresh" button.
- Medication Allergies:** Includes a table with columns: Drug Allergy, Reaction, Severity, and Status. There are "None" and "Use Grid" radio buttons.
- Problem List:** Includes a table with columns: Problem, Start Date, End Date, and Status. There are "None" and "Use Grid" radio buttons.
- Lab Results:** Includes a table with columns: Date, Test, and Re.

**Figure 4.14 – Meaning Use “Hidden Tab” is accessed from Visit History**



## **Generate Patient Lists – MU Requirement 170.302.i**

### Requirement

*“Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research, or outreach.”*

The Test Procedure requires the following...

*Enable a user to electronically select, sort, retrieve, and generate lists of patients according to, at a minimum, the data elements included in:*

- (1) Problem list;*
- (2) Medication list;*
- (3) Demographics; and*
- (4) Laboratory test results.*

Following this we created a management report named “Patient Lists” which provides the user with parameters to filter a list based on patient age (range), ICD9 (Problem), Medication (string search) as well as 4 sets of labs and lab value. The age parameters include the values selected. So in the screen shot I’ve selected ages 25-65 this would include ages of 25, 65 and everything in between.

Home > Dev > Meaningful Use > Patient Lists

From Age  To Age

ICD9  Medication

Lab Test 1  Lab Value 1 (ie: >100):

Lab Test 2  Lab Value 2 (ie: >100):

Lab Test 3  Lab Value 3 (ie: >100):

Lab Test 4  Lab Value 4 (ie: >100):

1 of 1 100% Find | Next

## Patient Lists

Age: 25 through 65  
Lab 1: HDL cholesterol with lab value: >30

MRN	First Name	Last Name	Age	Gender
405979410	Frank	Lewis	61	M
	Lab Results	2010-09-20 Test:Total cholesterol Result:162mg/dl 2010-09-20 Test:HDL cholesterol Result:43mg/dl 2010-09-20 Test:LDL cholesterol Result:84mg/dl 2010-09-20 Test:Triglycerides Result:127mg/dl		
				Count: 1

Report Description: Designed for Meaningful Use requirement 170.302(i) this returns list of patients based on the conditions(conditions) specified.

Patient Lists RadNet - Confidential and Proprietary Date Run: 12/22/2011 3:22 PM  
http://peidev1/ReportServer/Dev/Meaningful Use Page 1 of 1 RMIS\dale

**Figure 4.15 – Patient List report**

## Session Individual Production Counters

Introduced in build 29 are status counters for Radiologists and Transcription work flows. Located at the bottom of the application, they are visible from all windows. The stats displayed are based the users production for that day. We are capturing the data based on a 24 hour calendar day (midnight to midnight). For example if a dictation was completed yesterday and signed today, the Signed count at the bottom would increase by one, but the dictation count would remain the same because it was captured the day before.

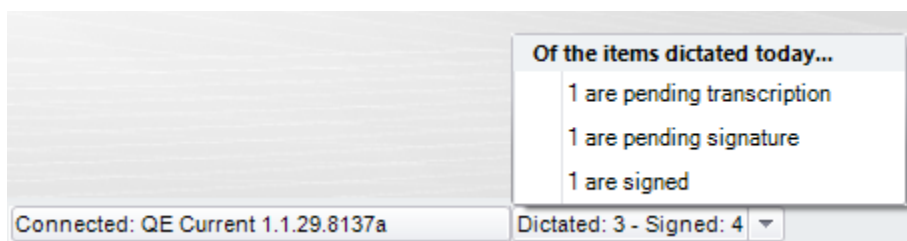


Figure 4.16 – Production Counters for Radiologists

The expanded menu shows the status of exams that were dictated today. In the example above the Radiologist dictated on 3 exams and has signed 4. Of the 3 that were dictated today, 1 is pending transcription 1 is pending signature and 1 has been signed.

Transcription will see a similar counter tracking their individual progress for that day.

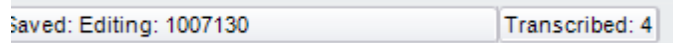


Figure 4.17 – Production counter for transcription

## Failed PACS Correction Work List

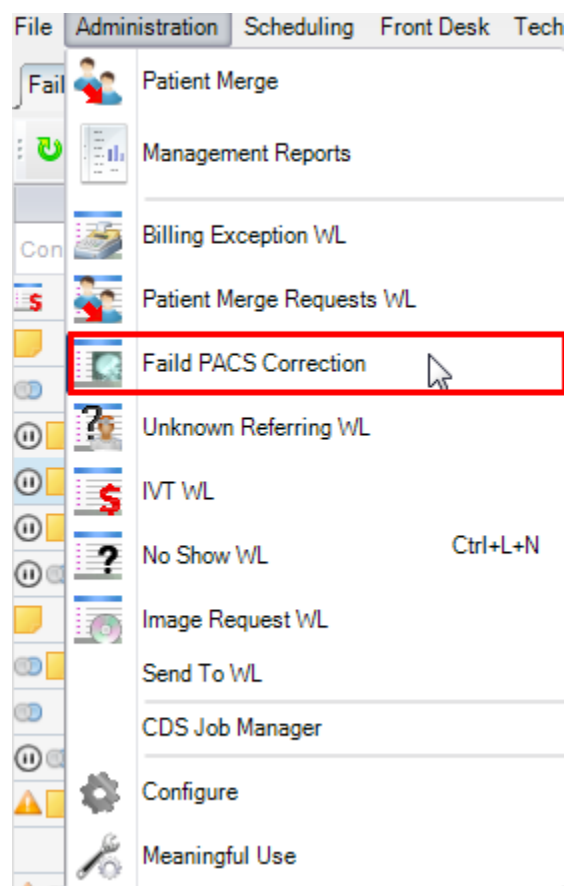
The modality lookup table contains a new column “Pacs Correction Required Flag”.

Modalities:										
Modality Code	Description	AE title	Digital	Site Code	Modality Type Code	Weight	Confined Space Flag	Scheduling Interval	Pacs Correction Required Flag	
Contai... el	Contains: ▼	Contains: ▼	Contains: ▼	Contains: ▼	Contains: ▼	Equals: ▼	Contains: ▼	Equals: ▼	Contains: ▼	
CT1EL	CT1EL	CT1EL	N	EL (Eldersburg)	CT	300		20	Y	C
DE1EL	DE1EL	DE1EL	N	EL (Eldersburg)	BD (Bone Density)			5	N	
INTERNALEL	Used for cr...		Y	EL (Eldersburg)	(na) ?? (Unknown)	N		5	N	
MA1EL	MA1EL	MA1EL	N	EL (Eldersburg)	MA (Mammography)			5	N	

Figure 4.18 – Modality lookup table displaying new column Pacs Correction Required Flag

If the value is Y or on for a modality the exam will be sent to the Failed PACS Correction work list when the technologist completes the exam. If the value on the modality is N or off, when the technologist completes the exam it will go to the Pending Dictation work list.

A new work list has been added under the Administration menu titled “Failed PACS Correction” has been added. As mentioned previously the modalities marked for PACS correction will have the completed exams populate this work list.



**Figure 4.19 – Administration menu showing Failed PACS Correction menu option**

Flags	Status	Procedures	Scheduled Date	First Name	Last Name	MRN	Birth Date
Contains: S	ExamDone	CT Chest W/ Abdomen W/CTA - Chest	11-12-2008 8:50 AM	Doug	Downs	10719	05-15-1995 1
	ExamDone	CT Chest W	05-04-2011 10:30 AM	Danny	Briere	786	10-10-1970 4
	ExamDone	CT Head W	05-05-2011 11:05 AM	dale	testman	734	09-09-1969 4
	ExamDone	MA xDigi Main Screen, Diag and US Dist (MA)	05-11-2011 11:00 AM	Lonnie	Bulat	4159	06-29-1943 6
	ExamDone	US Hips Infant Wo Manipulation [76886]	05-11-2011 11:30 AM	Ula	Pagnello	4380	01-01-1979 3
	ExamDone	PT/CT .RECALL NO DICTATION INVOLVED [PT1]	05-16-2011 7:45 AM	Etsuko km	Bellaire	3694	07-22-1938 7
	ExamDone	CT Chest W/Wo [71270] - Chest	06-08-2011 7:45 AM	Mike	Richards	4444	10-29-2010 1
	ExamDone	XR Chest Special Views [71035] - Chest	07-25-2011 2:28 PM	Clare	Cone	10000	07-20-1999 1
	ExamDone	CT Chest W Abdomen W & Pelvis W [CT5] - Chest	08-15-2011 11:30 AM	Clare	Cone	10000	07-20-1999 1
	ExamDone	CT Urogram Wo 3D [CT61]	09-14-2011 8:30 AM	Michael	Vick	10254	08-30-1987 2
	ExamDone	CT Abdomen W & Pelvis W & CTA Chest W/Wo [CT54] - Abdomen	09-14-2011 10:00 AM	Michael	Vick	10254	08-30-1987 2
	ExamDone	CT Ear Orbit Sella W [70481] - Head - Left	09-21-2011 12:00 AM	Sally	Norton	296	07-28-1985 2

Auto Refresh Open PACS Correction

Saved: Lookup Tables - Modality Dictated: 3 - Signed: 4 50 Rows

**Figure 4.20 – Failed PACS Correction Work List**

Selecting the Open PACS Correction button will open the corresponding PACS viewer window designed for this function. If a user so chooses, they can select Force PACS Correction from the context menu the exam(s) will be moved to the Pending Dictation work list.

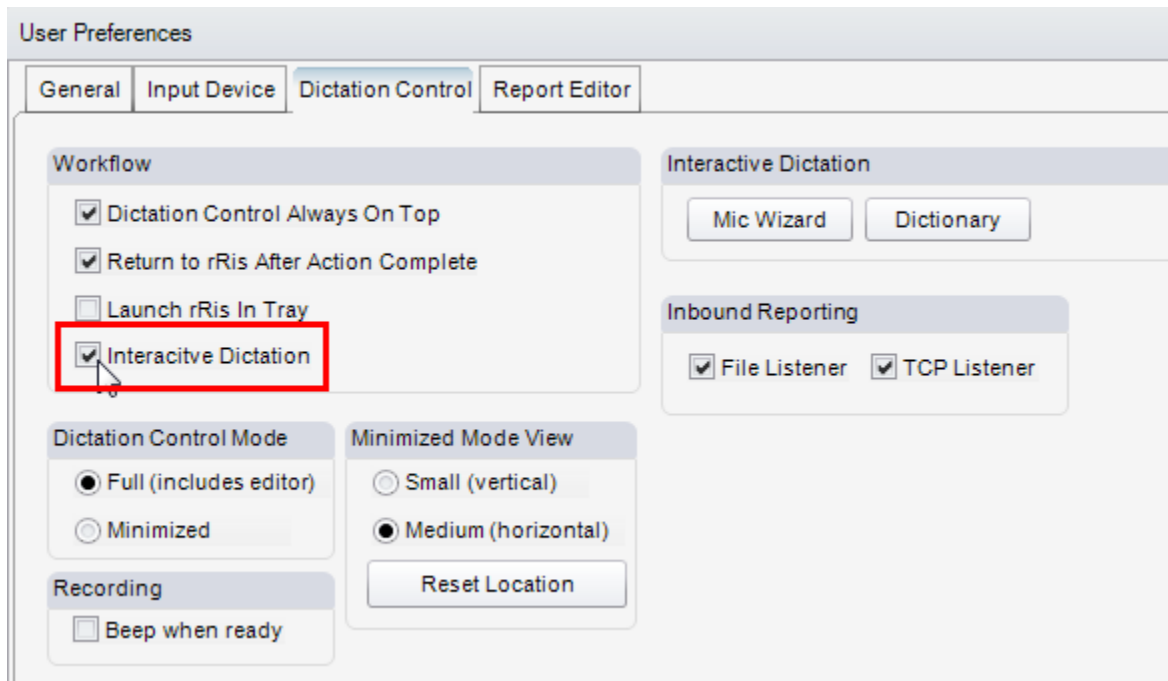
The patient folder also has a new column PACS Corrected Flag.

Flags	Nuggets	Status	Procedures	Scheduled Date	Accession #	Dictated Date	Transcribed Date	Signed Date	MRN	Room	Site	PACS Corrected Flag
Co...	Contains: S	ExamDone	XR Chest Min 4 Views [71030] - Chest	01-06-2012 5:00 PM	1010002				10743	XR1EL	EL	
	ExamDone	XR RIBS 2 OR MORE VIEWS, UNILAT [71100] - Chest	01-05-2012 5:10 PM	1009989					10743	XR1EL	EL	✓
	Signed1	XR Bone Age [77072]	01-05-2012 5:00 PM	1009992	01-06-2012 1:07 PM	01-06-2012 3:15...	01-06-2012 3:...		10743	XR1EL	EL	✓
	Arrived	XR RIBS 3 VIEWS, BILAT [71110] - Chest - Bilateral	01-05-2012 3:43 PM	1009988					10743	XR1EL	EL	
	Arrived	XR RIBS 3 VIEWS, BILAT [71110] - Chest - Bilateral	01-05-2012 3:43 PM	1009990					10743	XR1EL	EL	
	Arrived	XR RIBS 3 VIEWS, BILAT [71110] - Chest - Bilateral	01-05-2012 3:43 PM	1009991					10743	XR1EL	EL	
	Signed1	XR Hand 2 Views & Wrist 2 Views, Bilat [RD35] - Hand...	01-05-2012 3:00 PM	1009986	01-05-2012 2:55 PM	01-05-2012 2:55...	01-05-2012 2:...		10743	XR1EL	EL	✓
	Signed1	XR RIBS 3 VIEWS, BILAT [71110] - Chest - Bilateral	01-05-2012 2:40 PM	1009985	01-05-2012 2:19 PM	01-05-2012 2:19...	01-05-2012 2:...		10743	XR1EL	EL	✓
	Signed1	CT Chest W & Abdomen W [CT4] - Chest	01-05-2012 2:20 PM	1009984	01-05-2012 2:17 PM	01-05-2012 2:17...	01-05-2012 2:...		10743	CT1EL	EL	✓

**Figure 4.20 – Patient folder displaying column for PACS Corrected Flag**

## **Interactive Dictation**

Build 29 introduces Interactive Dictation. This is enabled by a user preference flag under the Dictation Control tab.



**Figure 4.21 – Interactive Dictation user preference flag**

The dictation window opens as it normally would without Interactive Dictation. As the Radiologist records the dictation, the text is captured real time. The user can release the dictation button control and start / stop as required.

More documentation will be available in Build 30 regarding Interactive Dictation.

## **View / Edit Data Window**

A new data window has been added in Build 29. This window is accessed from the patient folder and is enabled for all active statuses except for status of Cancelled. Selecting a row from the patient folder and select the View / Edit button will open the View/Edit (patient name) data window. In this release the data tabs are the same for all statuses. This will be enhanced in the next build. Also OrderSigned will return error.

## RADNET, Inc. – eRAD RIS Pre-Release Notes

The screenshot displays the eRAD RIS (QE Current as darcyn) application window. The top menu bar includes File, Administration, Scheduling, Front Desk, Technologist, Radiologist, Transcription, PACS, and Help. The patient name 'Layton Drive (9)' is shown in the top left, and the user 'drive' is logged in. The main window contains a table of procedures with columns for Flags, Nuggets, Status, Procedures, Scheduled Date, Accession #, Dictated Date, Transcribed Date, and Signed Date. The 'View/Edit' button in the bottom right corner is highlighted with a red rectangle.

Flags	Nuggets	Status	Procedures	Scheduled Date	Accession #	Dictated Date	Transcribed Date	Signed Date
Contains: V	Contains: V	Contains: V	Contains: V	Equals: V	Contains: V	Equals: V	Equals: V	Equals: V
		ExamDone	XR Chest Min 4 Views [71030] - Chest	01-06-2012 5:00 PM	1010002			
		Dictated	XR RIBS 2 OR MORE VIEWS, UNILAT [71100] - Chest	01-05-2012 5:10 PM	1009989	01-06-2012 4:30 PM		
		Signed1	XR Bone Age [77072]	01-05-2012 5:00 PM	1009992	01-06-2012 1:07 PM	01-06-2012 3:15 PM	01-06-
		Arrived	XR RIBS 3 VIEWS, BILAT [71110] - Chest - Bilateral	01-05-2012 3:43 PM	1009988			
		Arrived	XR RIBS 3 VIEWS, BILAT [71110] - Chest - Bilateral	01-05-2012 3:43 PM	1009990			
		Arrived	XR RIBS 3 VIEWS, BILAT [71110] - Chest - Bilateral	01-05-2012 3:43 PM	1009991			
		Signed1	XR Hand 2 Views & Wrist 2 Views, Bilat [RD35] - Hand - Bilateral	01-05-2012 3:00 PM	1009986	01-05-2012 2:55 PM	01-05-2012 2:55 PM	01-05-
		Signed1	XR RIBS 3 VIEWS, BILAT [71110] - Chest - Bilateral	01-05-2012 2:40 PM	1009985	01-05-2012 2:19 PM	01-05-2012 2:19 PM	01-05-
		Signed1	CT Chest W & Abdomen W [CT4] - Chest	01-05-2012 2:20 PM	1009984	01-05-2012 2:17 PM	01-05-2012 2:17 PM	01-05-

Auto Refresh Sign Reports Create/Edit Reports Dictate Perform Exam Registration Schedule Reschedule Edit Order MarkOrder View/Edit

Saved: Dictating (Layton Drive) Dictated: 4 - Signed: 4 9 Rows

Figure 4.22 – View / Edit button to access View/Edit data window

Patient: Layton Drive (9) View/Edit (Layton Drive) x

Patient Contacts / Demographics Order Documentation Billing Codes Attachments Notes / Exam Times

☐ Place Billing On Hold

**Billing Notes**  
01-06-12 dtn -

**Scheduling / Arrival**  
Scheduled Time: 01-05-2012 3:43 PM  
Arrival Time: 01-05-2012 3:55 PM  
Arrival Early/Late: 12 minutes late  
Scheduled By:  
Arrived By: Nove, Darcy (902) 439-6517

**Exam Time**  
Start Time: mm-dd-yyyy h:mm am/pm  
Completed Time: mm-dd-yyyy h:mm am/pm  
Start Early/Late: n/a  
Exam Duration: 15 min, early  
Primary Tech: n/a

**Appointment Notes**  
01-06-12 dtn -

**Patient Notes**  
01-06-12 dtn -

Save Close

**Figure 4.23 – View/Edit data window.**



## 5. Resolved Defects

Bugs, Suggested Features and Support Issues resolved in build 1.29. The extract is taken from Redmine bug tracking system and only displays defects resolved in 1.29.

#	Status	Tracker	Priority	Subject	Category	Target version	Resolved Version
785	Closed	Bug	High	Add patient. Cannot create new order	Thick Client GUI	1.28	1.29
782	Closed	Bug	Normal	Unselecting Referring resource type, the NPI is still required to save.	Admin Tools	1.28	1.29
780	Closed	Bug	Normal	Schedule study for past date and select Room can throw error	Thick Client GUI	1.28	1.29
773	Closed	Bug	Normal	Clinical Summary > Continuity of Care Record Throws error if patient folder is missing procedures	Thick Client GUI	1.28	1.29
772	Closed	Bug	Normal	Clinical Summary > Continuity of Care Record needs "Scheduled Study Date"	Thick Client GUI	1.28	1.29
765	Closed	Bug	Normal	Cannot open 2 instances of Edit Patient	Thick Client GUI	1.28	1.29
763	Closed	Bug	Normal	Report History data nugget throws error on Send To button	Thick Client GUI	1.28	1.29
754	Closed	Bug	Normal	Labels and Forms - Issue with Action Picker	Admin Tools	1.25	1.29
743	Closed	Bug	Normal	Date selected from Date / Time Picker not accepted after removing composite code.	Thick Client GUI	1.27	1.29

## **RADNET, Inc. – eRAD RIS Pre-Release Notes**

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741	Closed	Bug	High	Add Outside Read - can save outside read without visit selected.	Thick Client GUI	1.27	1.29
740	Closed	Bug	Normal	Outside Read - Edit billing does not show all the billing exceptions	Thick Client GUI	1.27	1.29
739	Closed	Bug	Normal	Outside Read - Edit Billing from Billing Exception and Responsible Party is required	Thick Client GUI	1.27	1.29
733	Closed	Bug	High	Cannot Scan documents	Thick Client GUI	1.26	1.29
709	Resolved	Bug	Low	Dictation / Create Edit reports - Patient Alert pop up not centered	Thick Client GUI	1.26	1.29
675	Closed	Bug	Normal	Edit Order > Verbal Order returns error	Thick Client GUI	1.25	1.29

## 6. Known Limitations

The following are Bugs, Suggested Features, and Support Issues found in build 1.29. This build is the current QE build and testing is ongoing. The list may increase in size. This document will not be updated or re-released.

#	Status	Subject	Category	Target version
807	New	Timezone issue - Cannot update personnel	Admin Tools	1.29
806	Resolved	Walk-In error when checking in	Thick Client GUI	1.29
805	Resolved	Failed PACS Correction > Flag on modality does not work	Thick Client GUI	1.29
804	New	Perform Exam > Labels don't activate after changing Performed Procedure.	Thick Client GUI	1.29
803	New	User Preferences options access	Thick Client GUI	1.29
802	New	Column Age At Study not calculating age correctly.	Thick Client GUI	1.29
801	New	Possible issue with date / time formats and Perform Exam data window	Thick Client GUI	1.29
800	New	Forms and labels action on <-- arrow continues when filtered list is done	Admin Tools	1.29
799	Resolved	Configurable Modality Scheduling	Thick Client GUI	1.29
797	Resolved	Failed PACS Correction work list only moves one exam at time when forcing PACS Correction	Thick Client GUI	1.29
796	Resolved	Creating duplicate user throws error	Admin Tools	1.29
795	Resolved	MT polling work flow. Once list is complete cannot close the editor window	Thick Client GUI	1.29
794	Resolved	Patient Search window > Search by Phone number will throw error	Thick Client GUI	1.29
791	New	View / Edit data window error on View OrderSigned	Thick Client GUI	1.29

## **RADNET, Inc. – eRAD RIS Pre-Release Notes**

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790	Resolved	View / Edit data window prompts for required fields	Thick Client GUI	1.29
783	New	the gui has hard coded values for Patient relation	Thick Client GUI	1.29
777	New	missing a billing message when tech only workflow	Web Services/DB	1.29

# **User Release Notes**

for eRAD RIS  
Version 1.0  
Build 30

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## **1. Purpose**

This document describes some of the new features and changes implemented in eRAD RIS as of the end of Sprint 30. This version of eRAD RIS is referred to as Build 1.30.

Only features which can be visually demonstrated to the user will be outlined in this document.

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS management team.

## **3. Installing/Accessing the Application**

The installation guide for the eRAD RIS client have been posted to the RadNet Wiki page at <http://mdbal01rdtweb/Wiki/>

Under the RIS menu, click on the rRIS page. The credentials to access the page are:

Username: rRIS

Password: Summerside

*Please note that Build 1.30 is considered a new core release of the application and will require a reinstallation of eRAD RIS. This is accomplished by navigating to the eRAD RIS shared installation drive and running the CoreInstall.bat file (ex: I:\RISDeployment\CoreInstall.bat)*

If you experience difficulties accessing the application, please do not hesitate to contact Darcy Noye with the PEI RIS Development Team.

## 4. New Features and Enhancements

### Reporting – Permission to Edit Macros

In build 30 a new permission has been added to remove the ability to edit Macros from the report editor. The new permission access string is “Clinical.MacroEditing”. If the user group does not have this permission, a user belonging to this group will not be able to add / remove or edit macros. It should be noted that a user can only edit a Macro from the report editor when they are the owner of that Macro.

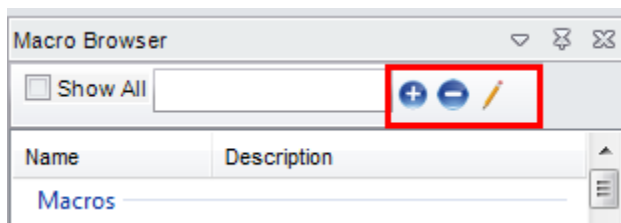


Figure 4.1 – User who has permission Edit Macros (permission Clinical.MacroEditing = Full)

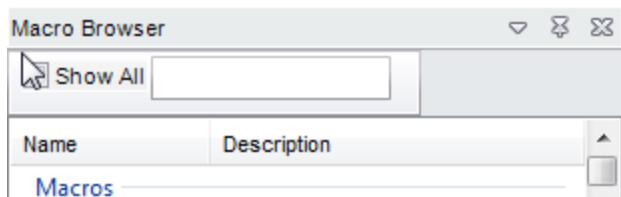


Figure 4.2 – User who does not have permission Edit Macros (permission Clinical.MacroEditing = None)



## Advanced Macro Editing Options

In build 30 a new tab has been added within the Macro Editor. The Advanced tab allows a user with access to the Macro Editor to assign a Macro to other Practice's and / or other User's.

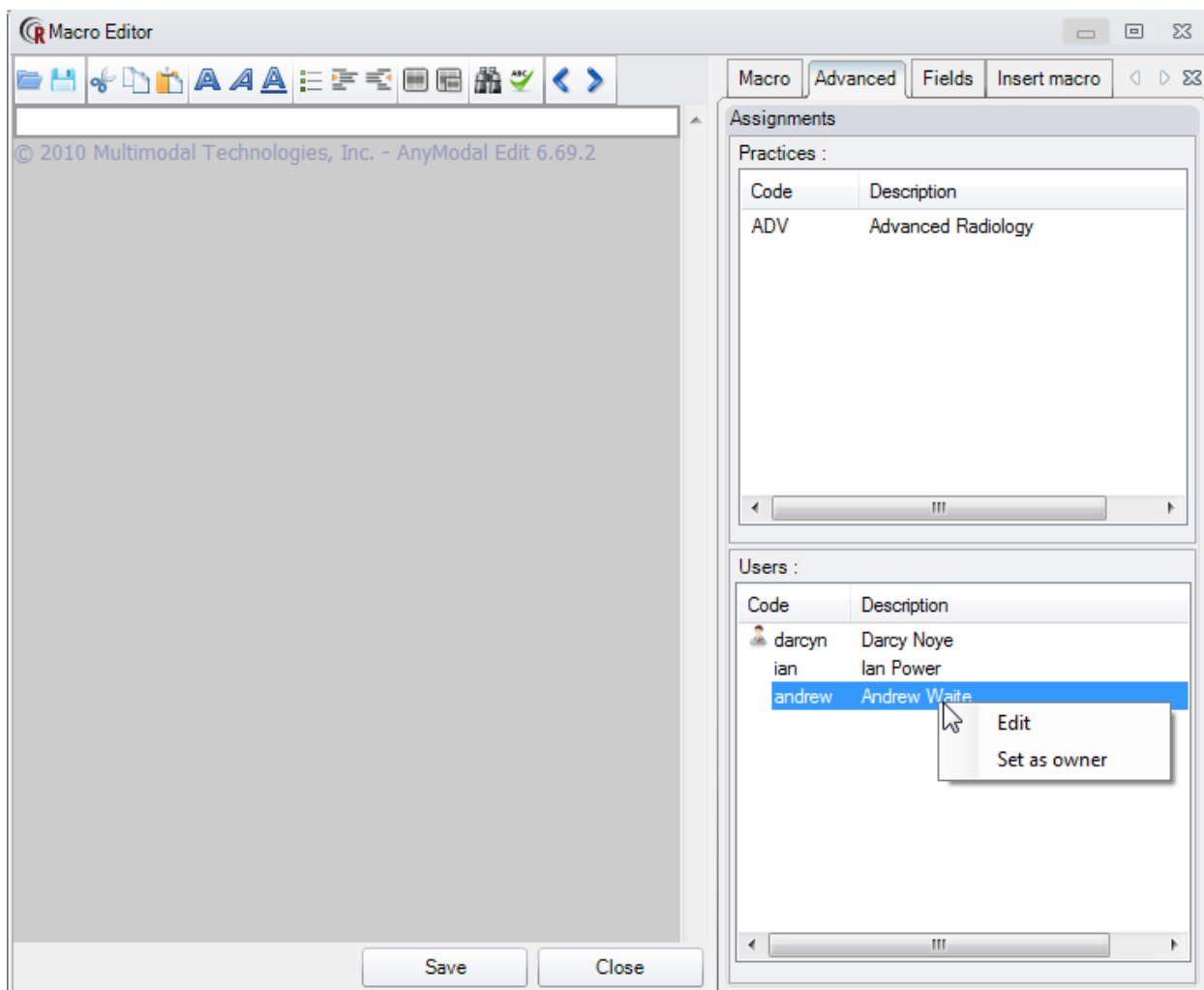
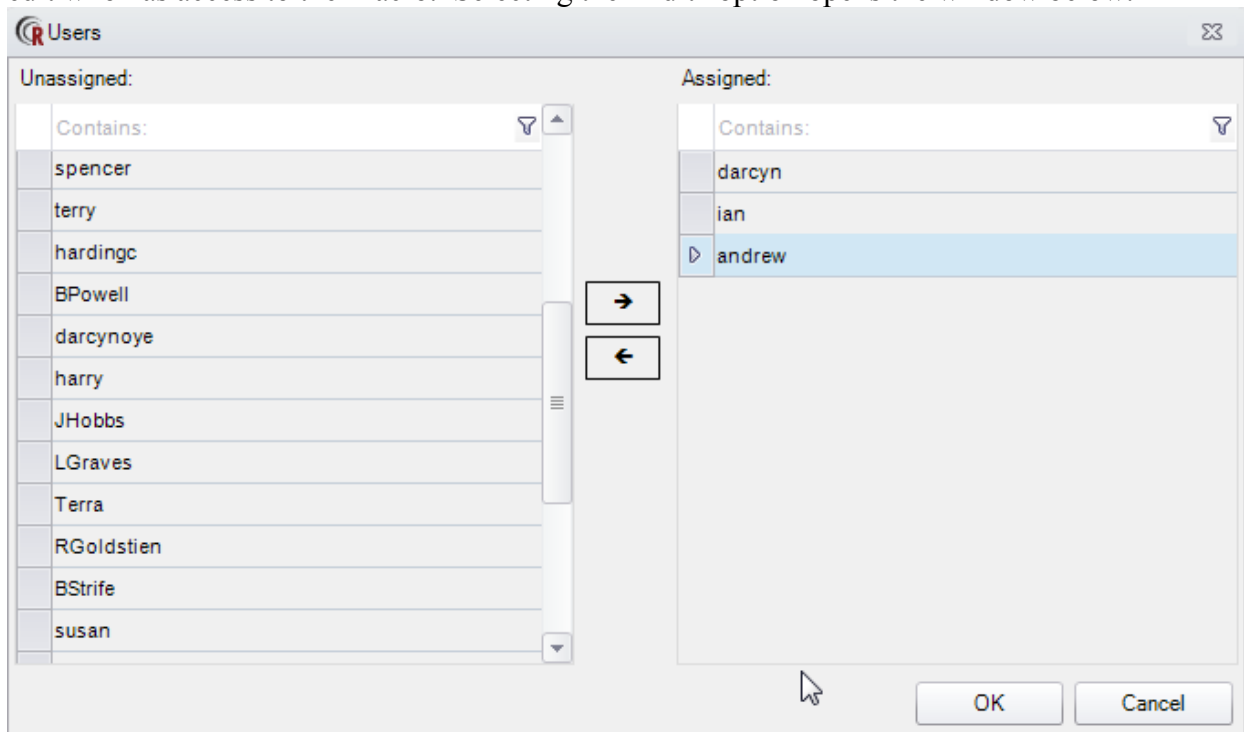


Figure 4.3 – Macro Editor displaying Advanced tab

In the figure above the Advance tab is selected. Under the Assignments pane you can see that this particular macro is assigned to Advanced Radiology. The practice the user belongs to will be the default value when creating a Macro.

Under the Users pane you can see that this Macro is assigned to 3 users. Currently the Macro is “owned” by user darcyn as indicated by the Icon next to the user name under the code column.

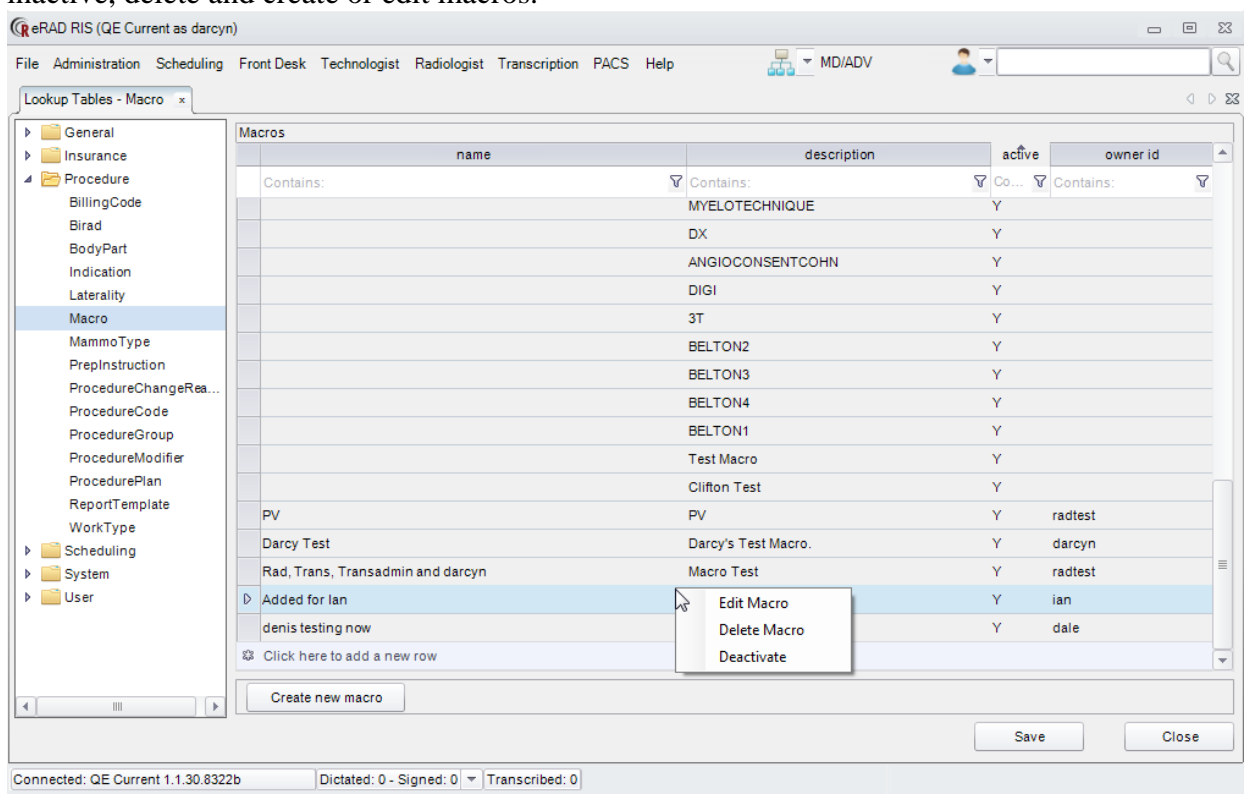
From the context menu the current owner can change who the owner of the Macro is and also edit who has access to the Macro. Selecting the “Edit” option opens the window below.



**Figure 4.4 – Users window allows for the addition or removal of users that will have access to the Macro**

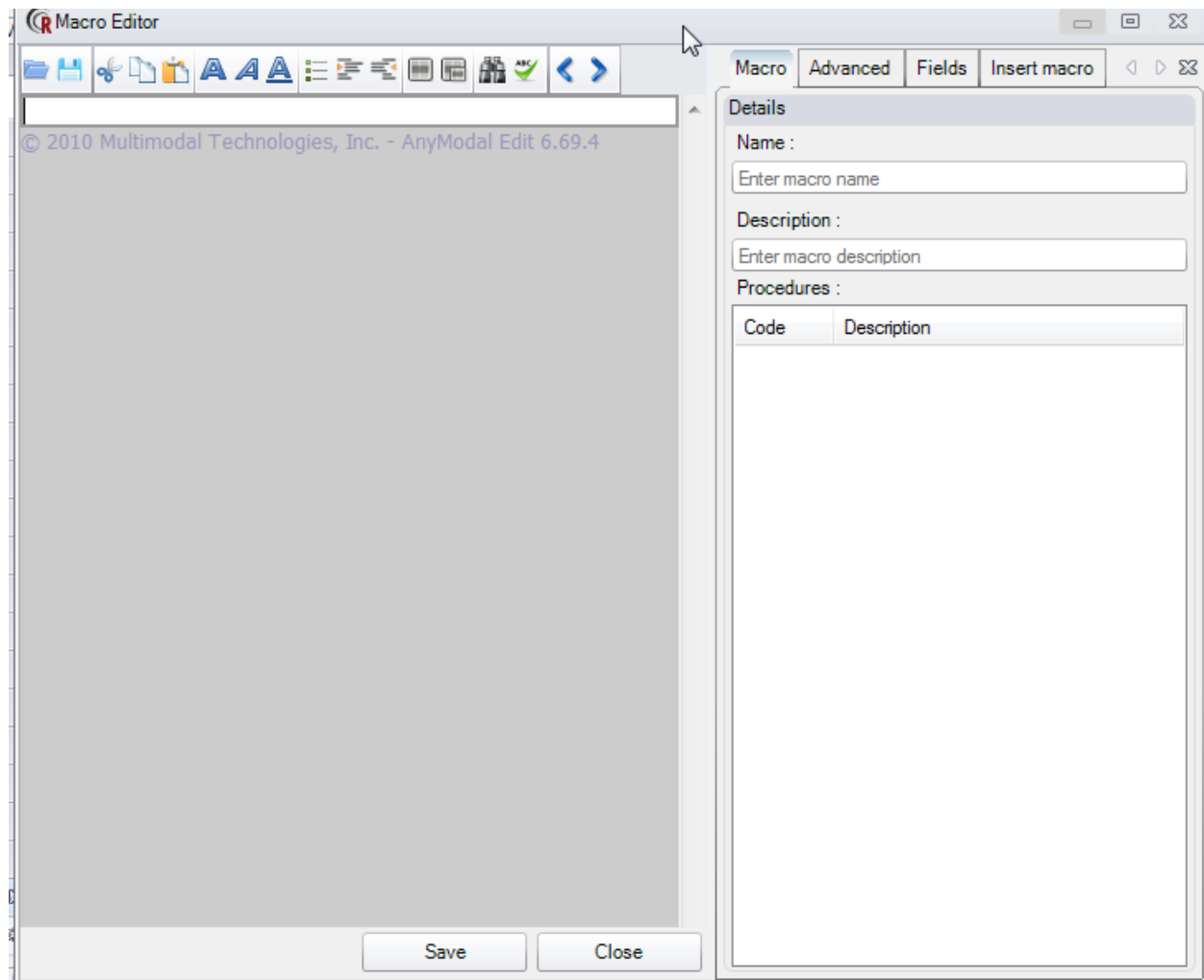
## Administration Macro Editing

With the new advanced tab added to the Macro Editor, practically all functions can be performed within the Macro Editor. Because of this added functionality to the Macro Editor, the lookup editor for the Macro table has been simplified. There is now only one grid and the rule sets are no longer configurable on this screen. From the macro lookup editor, users can set it to active / inactive, delete and create or edit macros.



**Figure 4.5 – Macro lookup table**

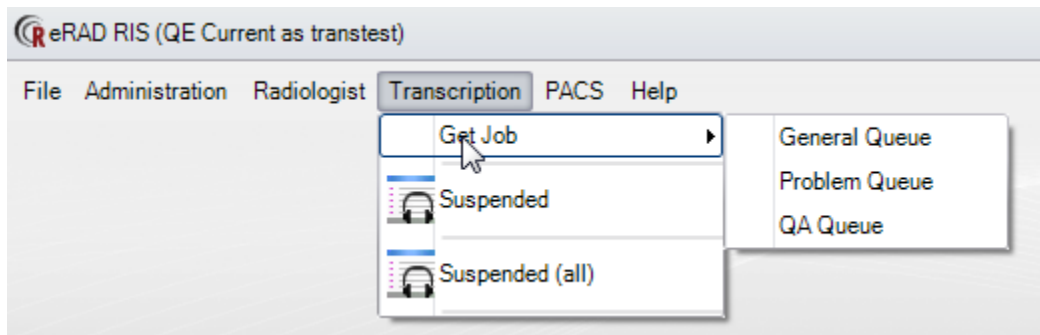
When creating or editing macros the same macro editor will show, user must have access to the advanced tab in order to perform advanced assignments.



**Figure 4.6 – Macro Editor (same is accessed from report editor)**

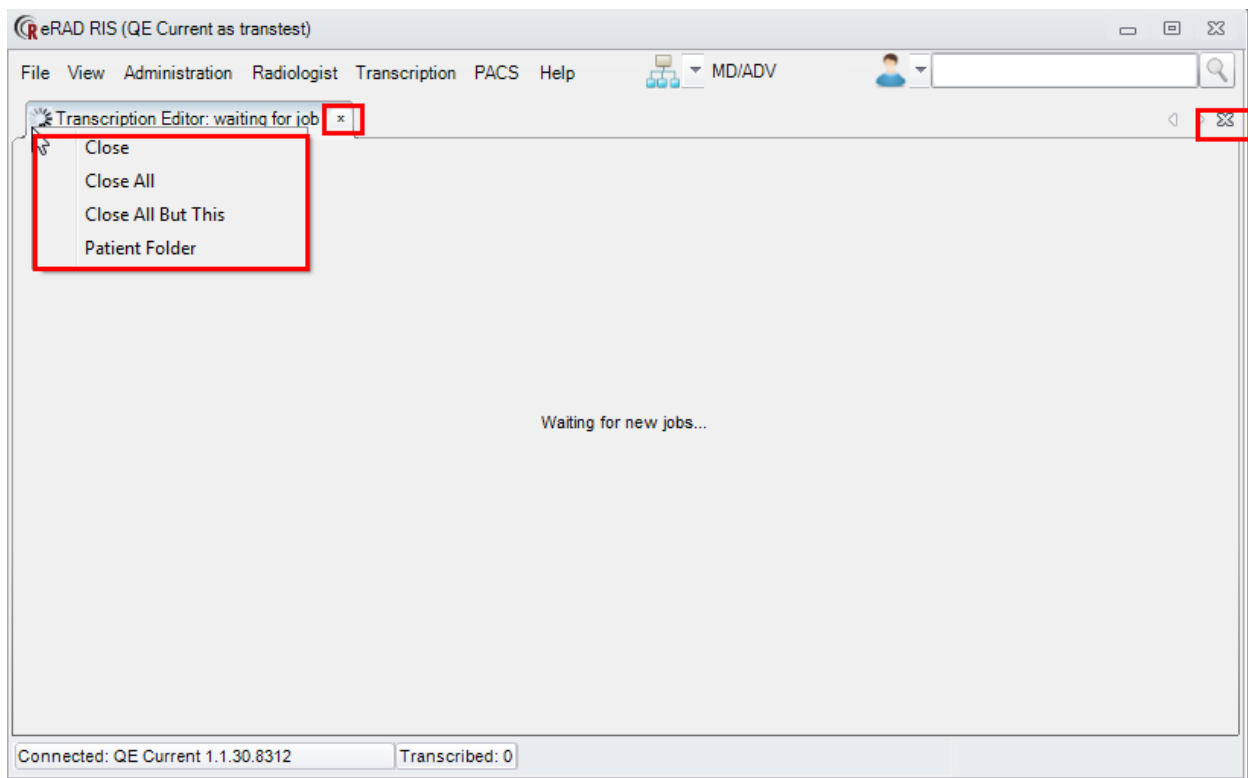
## **Transcription Polling – Ability to Close Tab on Empty Queue**

In the previous build Transcription polling was added to eRAD RIS, but when the polling queue list was completed, or an empty queue was opened the user had no way to close the data window queue. In build 30 the user will now be able to close an empty queue and open a different one to continue transcription work flow.



**Figure 4.7 – Displaying Transcription Polling Queues**

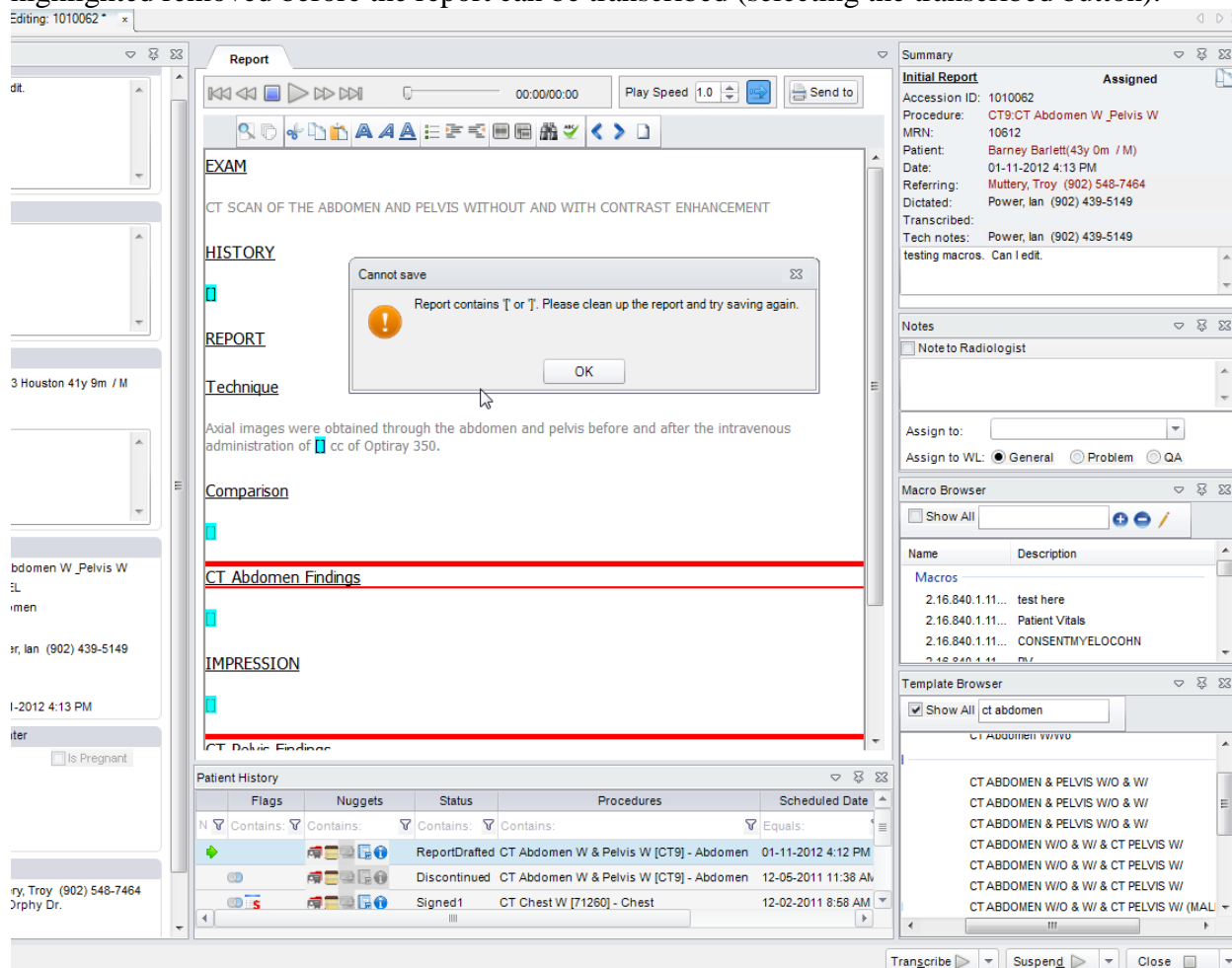
The polling window can be closed the same as other data windows in the application. Viewing the figure below the user can select one of the “X”s or choose an option from the tabs context menu.



**Figure 4.8 – Closing Polling window**

## Ability to Assign Reports without Clearing Fields '[' from the Report

In the Report Editor window the report must have all of the pre-marked fields [ ] that are highlighted removed before the report can be transcribed (selecting the transcribed button).



**Figure 4.9 – Display message that appears if the pre-marked fields are not removed from the report**

If the report is assigned to another Transcriptionist or to another WL the user will be permitted to select the Transcribe button with the pre-marked fields still in the report. The exam status does not change, but it moved to the selected work list, or remains in its current work list assigned to the designated user.

The screenshot shows a software window titled "Notes" with standard window controls (minimize, maximize, close). Inside the window, there is a checkbox labeled "Note to Radiologist" which is currently unchecked. Below this checkbox is a large, empty text area with a vertical scrollbar on the right. Underneath the text area is a label "Assign to:" followed by a dropdown menu that currently displays "Laurie Graves". Below the dropdown menu is a label "Assign to WL:" followed by three radio button options: "General", "Problem", and "QA". The "QA" radio button is selected. At the bottom of the window is a tab labeled "Macro Browser" with its own set of window controls.

**Figure 4.10 – Notes data pane of report editor window showing the Assign to: list box and the Assign to WL.**

## Relevance Flag

Added a configuration table “Relevance”:

Modality Type Code	Current Study Criteria	Matching Study Criteria	Acceptable Modalities
MA (Mammography)			MA
	abd	chest, pelvis, gast, bowel, abdomen	
	abdomen	chest, pelvis, gast, bowel, abd	
	ALZ	brain, head	
	ankle	lower extremity, calcaneus, feet, femur, fib, heel, tib, knee, toe,...	

For the first entry in the above, Mammo studies of any body part will only be relevant if the modality for the other study is also a Mammo. Note: adb and abdomen are considered as possible body part strings and if they appear studies with “chest, pelvis, gast...” will be considered as relevant on any modality.

Each row represents a Relevance Rule. If any one of applicable relevance rules applies evaluate to True, then the matching study is marked as “Relevance\_flag = ‘Y’”.

**ModalityTypeCode:** When a rule exists with a modality type cod, such as MA, then source studies of type MA will only be applicable to relevance rules that have “Modality Type Code” MA. If this is left blank then it’s considered a generic rule and will apply to any source studies where there isn’t already a modality type code based relevance rule.

**CurrentStudyCriteria:** If the word in this column exists in the source study description, then this rule is used.

**MatchingStudyCriteria:** Comma separate list of words that must exist in the matching study. If other study matches one of the words in this field’s comma separated list then it is considered Relevant. It is default behavior that we also include the word in the CurrentStudyCriteria. For example, where CurrentStudyCriteria contains **adb**, then it is a relevant if the other study contains **abd**, chest, pelvis, gast, bowel or abdomen.

**AcceptableModalities:** If specified, then matching studies must also be of one of the specified modality types. This acceptableModalities string can be a single modality type or a comma separated list of acceptable modality types.

For the first entry in the above screenshot, the source study of type Mammo will only be relevant if the modality for the other study is also a Mammo by leaving the “CurrentStudyCriteria” and “MatchingStudyCriteria” empty its equivalent to say any current study description and any MatchingStudyCriteria.

Also, added the work list Relevance Flag as shown in the following:



Lookup Tables - Relevance		Patient Search		Patient: Sidney Crosby (29) x			
				123 alt		Default2	
Procedures		Scheduled Date	Signed Date	Site	Relevance	Relevance Flag	
Contains:		Equals:	Equals:	Co	Equals:	Contains:	
ECT Foot & Ankle [CT55] - Ankle joint - Left		05-06-2011 1:00 PM	05-04-201...	EL	100	Y	
ECT Ankle Arthrogram [CT31] - Ankle joint - Left		05-06-2011 9:00 AM	05-04-201...	EL	63	Y	
ECT Ankle Arthrogram [CT31] - Ankle joint - Left		05-05-2011 2:00 PM	05-04-201...	EL	63	Y	
ECT Chest W [71260] - Chest		11-16-2011 8:15 AM		FH	51	N	
ECT 3 Phase [CT13]		11-16-2011 8:05 AM		FH	51	N	
ECT Chest W/Wo [71270] - Chest		11-15-2011 5:53 PM		FH	51	N	
ECT Abdomen W & Pelvis W [CT9] - Abdomen		11-02-2011 9:25 AM	12-20-201...	EL	50	N	
ECT 3 Phase [CT13]		11-02-2011 9:15 AM	12-20-201...	EL	50	N	

In the above, the CT31 is most relevant to the other CT31 because they are the same study. Next is the CT Foot because it has the relevant flag and is of the Left ankle, the right angle even though it was performed on the same day as the previous study gets a lower relevance score of “79” instead of “81” because it has a different laterality.

We use much the same % relevance calculation (idea is for sorting) as before; however, the weight of date and procedure description match is given 50% to each. Also, the configuration from the l\_relevance table also adds weight to the scores.

For the procedure description portion of the calculation, each matching word is given a score of .5; however, if the word is a modality type it's given a score of 1, if it's a body part a score of 2, a laterality gets a score of 3 and if it's a string in the Relevance rule it's given a score between 6 and 2. If it's a string in the relevance rule, 6 is given if it's the first word (in the comma separated list for the MatchingStudyCriteria column), while 2 would be given to the last item in the comma separated list. Finally the total score is divided the best possible score for that patient and scaled to 50%.

**Figure 4.11 – Preview Report from context menu**

## Access Strings Added

Added the following access strings to the lookup table AccessStrings

```
*** 'Config.LookupEditor.CountryState'
*** 'Config.LookupEditor.LabTest'
*** 'Config.LookupEditor.Relevance'
```

\*\*\* 'Clinical.UserPreferences.TranscriptionPolling'  
\*\*\* 'Clinical.DeleteDictationReportResetStatus'  
\*\*\* 'Clinical.AssignRadiologist'  
\*\*\* 'Clinical.ChangeDictateByRadiologist'  
\*\*\* 'Clinical.RequestImageCopy'  
\*\*\* 'Clinical.EditSchedule'  
\*\*\* 'Clinical.ChangeStatusExamDone'  
\*\*\* 'Clinical.ChangeStatusCanceledStudy'  
\*\*\* 'Clinical.EditDiagnosticReport'

### State Field Selection – List Box

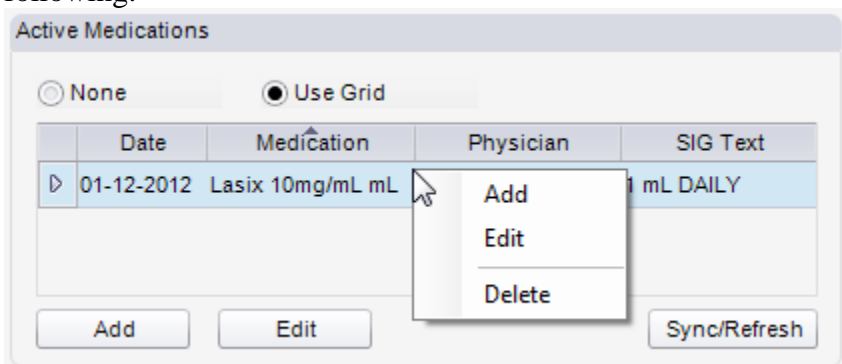
In build 30 the State Field has been enhanced to change to a list box if the value for the Country field entered is US. The State field will change to a list box with each state listed as an available selection.

The screenshot displays the 'Schedule Order (adele acorn)' window with tabs for Patient, Contacts / Demographics, Order, Schedule, Image Request (0), Visit, and Review. The 'General Information' section includes fields for Prefix, First Name (adele), Last Name (acorn), Middle, Suffix, MRN (10879), Gender, Birth Date, and Place of Birth. The 'Contact Information' section includes Address 1, Address 2, City, State, Zip, Country (US), Home Phone, Work Phone, Cell Phone, Email, and Preferred Delivery Method. The 'State' field is open, showing a list box with the following states: Alaska, Alabama, Arkansas, Arizona, and California. The 'Patient Origin' section includes Preferred Language, Education Level, Religion, and Race. The 'Patient Notes' section shows a note dated 01-13-12 dtn -.

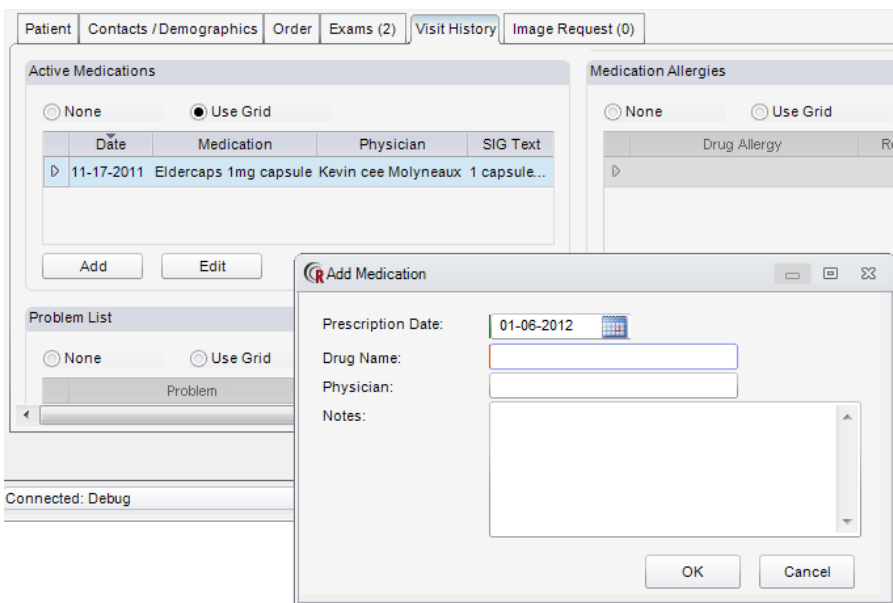
Figure 4.12 – Displaying State field list box when country is US

## Manual Entry of Medication

On the Active Medications data pane the ability to Add / Edit / Delete medications has been added. Buttons to “Add or Edit” have been added to the data pane. Also a context menu on the medications data panel has the options to Add or Edit as well as Delete, as shown in the following:



**Figure 4.13 – Active Medications data pane New context menu and Add / Edit buttons**



**Figure 4.14 – Add Medication window**

Also added a flag to the c\_patient\_medication table called “ris\_entered\_flag”, which will keep ris entered medications when we sync with new crop and will allow us to edit only the ris\_entered items.

## Automated Measures – MU Requirement 170.302n

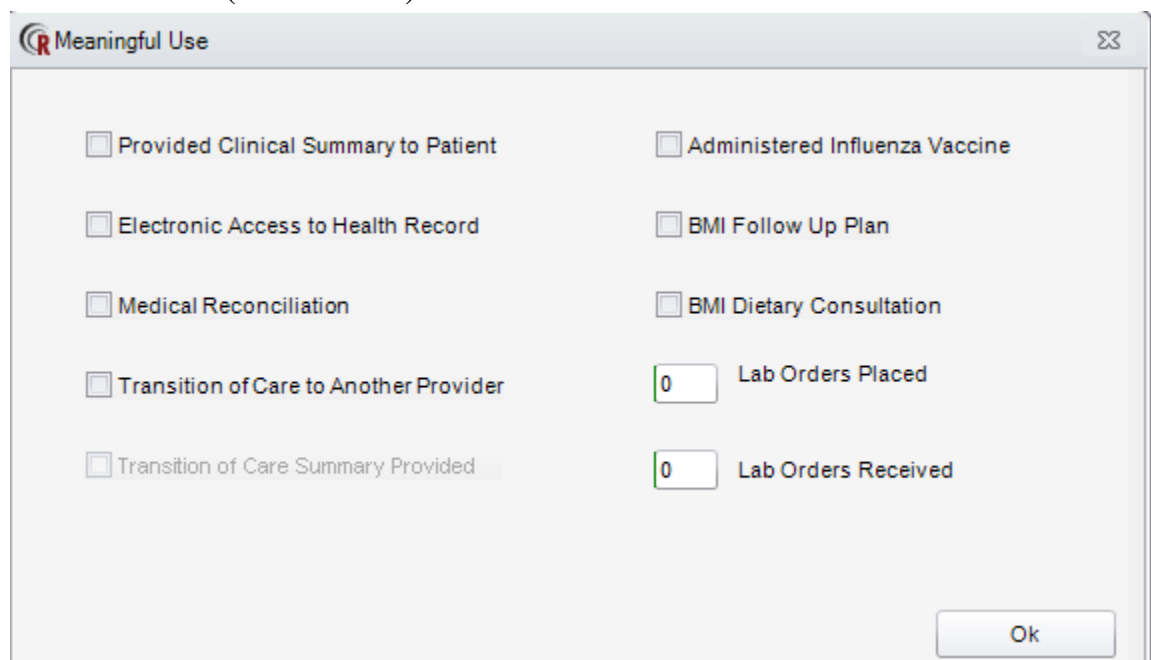
Meaningful User requirement # 170.302 n\_AutomatedMeasure\_Gen\_PS\_RevE.doc

**“170.302 n Automate measure calculation.** For each meaningful use objective with a percentage-based measure, electronically record the numerator and denominator and generate a report including the numerator, denominator, and resulting percentage associated with each applicable meaningful use measure.

Created a management to call stored procedure to display automated measures.(report is called MU Scorecard added it to the report server([Home](#) > [Dev](#) > [Meaningful Use](#) ).

Added a number of new fields to our hidden MU tab used to capture measures

1) **Hidden MU tab(ctrl + M + U)**



The screenshot shows a window titled "Meaningful Use" with a close button in the top right corner. Inside the window, there are two columns of checkboxes and two input fields. The checkboxes are: "Provided Clinical Summary to Patient", "Electronic Access to Health Record", "Medical Reconciliation", "Transition of Care to Another Provider", "Transition of Care Summary Provided", "Administered Influenza Vaccine", "BMI Follow Up Plan", and "BMI Dietary Consultation". The input fields are labeled "Lab Orders Placed" and "Lab Orders Received", both with a value of "0". An "Ok" button is located at the bottom right of the window.

Figure 4.15 – Hidden MU Tab

- a) **Provided Clinical Summary** – captures if a clinical summary was provided to the patient at any during the visit. Behind the scene the date is stamped when this checkbox was checked.
- b) **Electronic Access to Health Record** – is used to capture timely access. Behind the scene the date is stamped when this checkbox was checked.
- c) **Medical Reconciliation** – is used to capture if the Rad did any medical reconciliation on the patient during the visit.

- d) **Administered influenza vaccine** – Is used by CMQ to capture if influenza vaccine was administered during the visit.
  - e) **BMI Follow Up plan** – Is used by CMQ to capture if a follow up plan was suggested to the patient. Should never be used other than certification day.
  - f) **BMI Dietary Consultation** - Is used by CMQ to capture if a follow up plan was suggested to the patient. Should never be used other than certification day.
  - g) **Transition of Care to Another Provider** – if the patient is referred to another setting of care or provider.
  - h) **Transition of Care Summary Provided** – if the patient the is referred to another setting of care or provider and a patient summary record is provided.
  - i) **Lab Orders Placed** – used to capture if a lab order was requested.
  - j) **Lab Orders Received** – used to capture if a lab order results were retrieved.
- 2) **Other Automated Measures** –
- a) **Transition of care** - must be checked if the patient is referred to the rad by a referring physician. In our case all exams should have this checked. Talking to Susan only mammo screening should not check this off.

The screenshot shows a 'Referring Details' form. At the top, there's a 'Referring:' dropdown menu with 'Wilson, Micah9 1' selected. To its right is a 'Visited at:' dropdown menu with 'venue, 226 Fabien Boulevard, Kansas, Florida, 73148' selected. Below these, there's a 'CC Physicians:' dropdown menu and a 'Visit Location for CC' dropdown menu. A checkbox labeled 'Transition of Care' is checked.

**Figure 4.17 – Referring Details**

- b) **Provided Educational Resources** – if the patient was provided educational resources during visit this should be checked.

The screenshot shows a 'Demographics at Encounter' form. It has fields for 'Height:' (with a unit dropdown set to 'ft in'), 'Weight:' (with a unit dropdown set to 'lbs'), 'BMI:', 'Blood Pressure:' (with two input fields separated by a slash), and 'Smoking Status:' (with a dropdown menu). There is a checkbox for 'Is Pregnant' which is unchecked. At the bottom, there is a checkbox for 'Provided Educational Resources' which is also unchecked.

**Figure 4.17 – Demographics**

## **Clinical Quality Measures – MU Requirement 170.304j**

Meaningful User requirement #

170.304j\_CalculateClinicalQualityMeasures\_Amb\_PS\_RevE.doc

“170.304 (j) Clinical Quality Measures This test procedure is organized into two sections:

Calculate clinical quality measures – evaluates the capability to electronically calculate

1. all six of the core clinical measures specified by CMS for eligible professionals and
2. at a minimum, three clinical quality measures specified by CMS for eligible professionals, excluding the

Submit calculated clinical quality measures – evaluates the capability to electronically submit calculated quality measures in accordance with the standard and implementation specifications.

Resolution

Core

c\_mu\_cqm\_0013\_hypertension –

- a) The patient must be at least **18 years of age or older** at the start of the reporting period and have at least **two encounters** with the Rad during the reporting period.
- b) An active diagnosis of **Hypertension(used icd-9 codes)**.  
(401.0, 401.1, 401.9, 402.00, 402.01, 402.10, 402.11, 402.90, 402.91, 403.00, 403.01, 403.10, 403.11, 403.90, 403.91, 404.00, 404.01, 404.02, 404.03, 404.10, 404.11, 404.12, 404.13, 404.90, 404.91, 404.92, 404.93)
- c) At least one **blood pressure reading (systolic and diastolic)** should be performed and documented during the reporting period in the Vital Signs chart section.

c\_mu\_cqm\_0028a\_tobacco\_use –

- a) The patient must be at least **18 years of age or older** at the start of the reporting period and have at least **two encounters** with the Rad during the reporting period.
- b) The patient was queried about tobacco use one or more times within 24 months.

c\_mu\_cqm\_0028b\_tobacco\_intervention –

- a) The patient must be at least **18 years of age or older** at the start of the reporting period and have at least **two encounters** with the Rad during the reporting period.
- b) Documentation that the patient is a tobacco user within the last 24 months.
- c) An active diagnosis of Nondependent tobacco use disorder (**used icd-9 codes**).

c\_mu\_cqm\_0421a\_weight\_screening -

- a) The patient must be at least **65 years of age or older** at the start of the reporting period and have at least **one encounter** with the Rad during the reporting period.
- b) The number of patients in the denominator that have a normal BMI (BMI  $\geq 22$  or  $<30$ ) OR an abnormal BMI (BMI  $\geq 30$  or  $<22$ ) recorded in the Vital Signs chart section (BMI must be recorded in the six months prior to the encounter date or during the reporting period);

c\_mu\_cqm\_0421b\_weight\_screening -

- a) The patient must be aged 18 - 64 at the start of the reporting period and have had one encounter with the Rad during the reporting period.
- b) The number of patients in the denominator that have a normal BMI (BMI  $\geq 18.5$  or  $<25$ ) OR an abnormal BMI (BMI  $\geq 25$  or  $<18.5$ ) recorded in the Vital Signs chart section (BMI must be recorded in the six months prior to the encounter date or during the reporting period);

Alternative Core

c\_mu\_cqm\_0024\_child\_weight\_assessment -

- a) The patient must be aged 2 - 17 at the start of the reporting period and have had one encounter with the Rad during the reporting period.
- b) And had BMI percentile documentation (V85.5, V85.51, V85.52, V85.53, V85.54), counseling for nutrition (V65.3) and counseling for physical activity (V65.41) during the reporting period. **(used icd-9 codes).**

c\_mu\_cqm\_0038\_childhood\_immunization – missing

c\_mu\_cqm\_0041\_influenza\_immunization -

- a) The patient must be at least **50 years of age or older** at the start of the reporting period and have at least **two encounters** with the Rad during the reporting period.
- b) And had an influenza shot during the flu season(Jan-Feb and Sept –Dec).
- c) And have received influenza vaccine CVX code 111 or 140.

Optional

c\_mu\_cqm\_0031\_breast\_screening -

- a) The patient must be female aged 40 - 69 at the start of the reporting period and have had one encounter with the Rad during the reporting period.
- b) At least one procedure should be a mammo type(Screening).

c\_mu\_cqm\_0043\_pneumonia\_vaccination -

- a) The patient must be aged 65 at the start of the reporting period and have had one encounter with the Rad during the reporting period.
- b) And have ever received a pneumococcal vaccine CVX code 100 or 133.

c\_mu\_cqm\_0061\_diabetes\_blood\_pressure –

- a) The patient must be aged 18 - 74 at the start of the reporting period and have had one encounter with the Rad during the reporting period.
- b) And had a diagnosis of Diabetes recorded(used icd-9 codes): 250, 250.0, 250.00, 250.01, 250.02, 250.03, 250.10, 250.11, 250.12, 250.13, 250.20, 250.21, 250.22, 250.23, 250.30, 250.31, 250.32, 250.33, 250.4, 250.40, 250.41, 250.42, 250.43, 250.50, 250.51, 250.52, 250.53, 250.60, 250.61, 250.62, 250.63, 250.7, 250.70, 250.71, 250.72, 250.73, 250.8, 250.80, 250.81, 250.82, 250.83, 250.9, 250.90, 250.91, 250.92, 250.93, 357.2, 362.0, 362.01, 362.02, 362.03, 362.04, 362.05, 362.06, 362.07, 366.41, 648.0, 648.00, 648.01, 648.02, 648.03, 648.04
- c) Patient in the reporting period last blood pressure reading must be <140/90 during the reporting period.



## 5. Resolved Defects

Bugs, Suggested Features and Support Issues resolved in build 1.30. The extract is taken from Redmine bug tracking system and only displays defects resolved in 1.30.

#	Status	Tracker	Priority	Subject	Category	Target version	Resolved Version
796	Closed	Bug	High	Creating duplicate user throws error	Admin Tools	1.29	1.30.8182
795	Closed	Bug	High	MT polling work flow. Once list is complete cannot close the editor window	Thick Client GUI	1.29	1.30
790	Closed	Bug	High	View / Edit data window prompts for required fields	Thick Client GUI	1.29	1.30
778	Closed	Bug	High	ePrescribing > Birth date being passed incorrectly to New Crop	Thick Client GUI	1.28	1.30
771	Closed	Bug	High	CQM 00043 Pneumonia Vaccination Status for Older Adults returns error	Thick Client GUI	1.28	1.30
752	Closed	Bug	High	Created a Business Hours Availability Template and error returned	Admin Tools	1.27	1.30
732	Closed	Bug	High	** Exceptions Thrown when changing patient		1.25	1.30
731	QE Rejected	Bug	High	** Exception thrown (invalid cast) when attempting to add image requests before a patient is selected.		1.25	1.30.8227
715	Closed	Bug	High	Application crash on Perform exam	Thick Client GUI	1.26	1.30.8178
809	Resolved	Bug	Normal	Error on New Appointment	Web Services/DB	1.30	1.30

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808	QE Rejected	Bug	Normal	After logging in get error on Dictation control	Thick Client GUI	1.30	1.30
806	Closed	Bug	Normal	Walk-In error when checking in	Thick Client GUI	1.29	1.30
797	Closed	Bug	Normal	Failed PACS Correction work list only moves one exam at time when forcing PACS Correction	Thick Client GUI	1.29	1.30
794	Closed	Bug	Normal	Patient Search window > Search by Phone number will throw error	Thick Client GUI	1.29	1.30.8178
786	Resolved	Bug	Normal	Resuming rRIS application.	Thick Client GUI	1.28	1.30.8188
764	Closed	Bug	Normal	Walk-In Error thrown after completing required fields.	Thick Client GUI	1.28	1.30
755	Closed	Bug	Normal	Logout with Newcrop window open throws error	Thick Client GUI	1.27	1.30
730	Closed	Bug	Normal	Permissions - Missing Lookup Access Strings	Admin Tools	1.25	1.30.8232
441	Closed	Bug	Normal	Add Patient - Age calculation	Thick Client GUI	1.16	1.30
310	QE Rejected	Bug	Normal	Appointment Book - Needs to default to a configurable start of day	Thick Client GUI	1.12	1.30
252	Closed	Bug	Normal	ScheduleGroup - Slowness when saving lookup	Web Services/DB	1.11	1.30
833	Resolved	Bug	High	Build 30 cannot run on Windows XP	Thick Client GUI	1.30	1.30

## 6. Known Limitations

The following are Bugs, Suggested Features, and Support Issues found in build 1.30. This build is the current QE build and testing is ongoing. The list may increase in size. This document will not be updated or re-released.

#	Status	Subject	Category	Target version
830	New	View / Edit on a signed report will throw error on Report tab	Thick Client GUI	1.30
824	New	Removing Procedure can close RIS	Thick Client GUI	1.30
819	Resolved	"Inactive" lateral codes are showing up in scheduling screen. Any values "inactive" values in lookup should not be "selectable" in combo boxes.	Thick Client GUI	1.30
816	Resolved	State selection does not save	Thick Client GUI	1.30
814	New	Cannot preview reports	Thick Client GUI	1.30
813	New	Cannot access CDS Job Manager	Admin Tools	1.30
832	New	Demographics at encounter is duplicated	Thick Client GUI	1.30
831	New	Active meditations - Right click brings up 2 context menus on column headers	Thick Client GUI	1.30
829	Resolved	Meaningful Use - Automated Measure report return duplicate user	Mgt Reports	1.30
828	New	Macro lookup - Cannot deactivate or delete a macro	Admin Tools	1.30
827	New	Assigning macros to other users includes all resource types	Thick Client GUI	1.30
826	New	Duplicate NPI throws exception	Thick Client GUI	1.30

825	Resolved	Inactive rooms appear in advanced scheduling	Thick Client GUI	1.30
823	New	Macros ignoring "assign to user"	Thick Client GUI	1.30
822	New	Remove access string Macro Editing Advanced tab and cannot edit macros	Thick Client GUI	1.30
821	New	Newly added access strings are not easily found in UserGroup Lookup editor	Thick Client GUI	1.30
820	New	View Images not available from login	Thick Client GUI	1.30
818	New	After bypass PACS correction no order to the next exam selected in work list when WL sorted by scheduled date	Thick Client GUI	1.30
817	New	Order of tabs for Order Signed	Thick Client GUI	1.30
815	New	External patient can be scheduled without creating an internal patient.	Thick Client GUI	1.30
812	New	Open dictate data window to add addendum will throw error	Thick Client GUI	1.30
811	New	GUI will not open to full size	Thick Client GUI	1.30
810	Resolved	advanced search times are not correct in relation to current system time	Thick Client GUI	1.30
809	Resolved	Error on New Appointment	Web Services/DB	1.30
808	QE Rejected	After logging in get error on Dictation control	Thick Client GUI	1.30

# **User Release Notes**

for eRAD RIS  
Version 1.0  
Build 31

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## **1. Purpose**

This document describes some of the new features and changes implemented in eRAD RIS as of the end of Sprint 31. This version of eRAD RIS is referred to as Build 1.31.

Only features which can be visually demonstrated to the user will be outlined in this document.

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS management team.

## **3. Installing/Accessing the Application**

The installation guide for the eRAD RIS client have been posted to the RadNet Wiki page at <http://mdbal01rdtweb/Wiki/>

Under the RIS menu, click on the rRIS page. The credentials to access the page are:

Username: rRIS

Password: Summerside

*Please note that Build 1.31 is considered a new core release of the application and will require a reinstallation of eRAD RIS. This is accomplished by navigating to the eRAD RIS shared installation drive and running the CoreInstall.bat file (ex: I:\RISDeployment\CoreInstall.bat)*

If you experience difficulties accessing the application, please do not hesitate to contact Darcy Noye with the PEI RIS Development Team.

## 4. New Features and Enhancements

### Mammo Callbacks, Recalls, Repeats

Birad and Recommendation both existed in previous builds. A new directory titled Mammography has been added to the Administration> Configure list of. Under this new directory are lookup tables for Breast Density, Pathology, MammoBiopsyTechnique, MammoBiopsyStage, MammoLetterConfig, and FollowUpType. The BIRAD and Recommendation lookups will be moved to this directory in the next build.

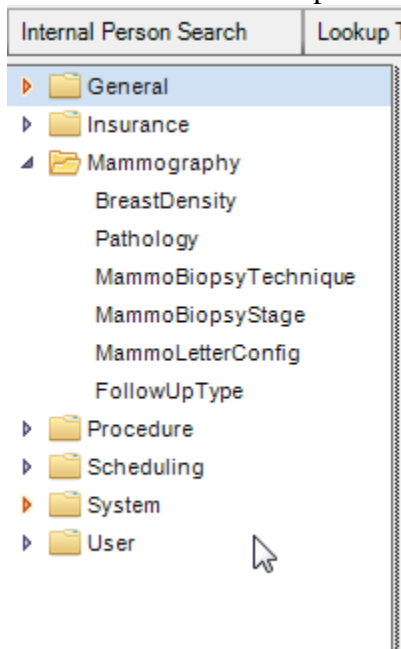


Figure 4.1 – New Configure directory titled “Mammography”

On a new install, an administrator can create BIRADS in the Birad editor and then create the Recommendations in the Recommendation editor.

By configuring the set of Recommendations for each BI-RADS level, the administrator can determine which short list of recommendations the Radiologist will see after indicating the BI-RADS code.





Lookup Tables - Recommendation

Recommendation Code	Display Order	Description	Follow Up Days	Procedure Code	Active
Contains: ▾	Equals: ▾	Contains: ▾	Equals: ▾	Contains: ▾	Contains: ▾
▸ 10M	23	10 months	300		Y
▸ 11M	24	11 months	330		Y
▸ 3M	16	3 months	60		Y
▸ 4M	17	4 months	120		Y
▸ 5M	18	5 months	150		Y
▸ 6M	19	6 months	180		Y
▸ 7M	20	7 months	210		Y
▸ 8M	21	8 months	240		Y
▸ 9M	22	9 months	270		Y
▸ A	25	Appropriate action should be taken.			Y
▸ B	11	Biopsy should be considered			Y
▸ D	10	Any decision to biopsy should be based on clinical ass...			Y
▸ G	7	Ductography			Y
▸ H	13	Histology using core biopsy			Y
▸ L	12	Needle localization and biopsy			Y
▸ M	2	Magnification views			Y
▸ N	9	Normal interval followup			Y
▸ O	6	Old film comparison			Y
▸ P	1	Additional projections			Y
▸ R	26	Technical Repeat			Y
▸ S	3	Spot Compression			Y
▸ T	14	Suggestive of malignancy - take appropriate action			Y
▸ U	5	Ultrasound	6	US Breast Uni Or Bil (76645)	Y
▸ V	4	Spot magnification view(s)			Y
▸ W	15	Spot magnification view(s)			Y

Save Close

**Figure 4.3 – Recommendation lookup**

Follow-up Orders are created as required when the Radiologist signs a report. The backend services will determine if a follow-up order is required by looking at the Radiologist's recommendation.

A new order will not be created unless the Radiologist selects a recommendation that has an associated "Follow Up Days" or "Procedure Code".

The following table shows how the status of the new order is determined:

Follow-Up Order Status	Condition
Callback	If the recommendation includes a procedure code, the callback status will be used. The order will have the procedure code that is indicated by the recommendation, instead of what was initially performed.
Short Term Follow Up	If the recommendation includes a follow-up days that is less than 365, the follow-up order will have a Short Term Follow Up status and a target schedule date of Date Of Service +

	follow-up days. Procedure code will be the same as the original study.
Invitation	If the recommendation includes a follow-up days that is 365 or greater, the follow-up order will have a status of Invitation and a target schedule date of Date Of Service + follow-up days. Procedure code will be the same as the original study.

BI-RADS play an indirect role in determining the behavior of the follow-up order creation process. The BI-RADS code will determine which recommendations are presented to the Radiologist, and the selected recommendation will determine the workflow from that point. BI-RADS 0, 4, and 5 are given special treatment however, even though follow-up orders are not automatically generated.

There is a BI-RADS 0 Follow-up Work list and a BI-RADS 4/5 Follow-up Work list from which the user can manually schedule additional procedures, log contact and follow-up attempts, enter biopsy and pathology information, etc. The 0 and 4/5 follow-up worklist and the biopsy, pathology, and contact logging will be discussed in separate documents.

Note: Invitations will not be generated for male patients as males are excluded from reminder letter workflow. The behavior that skips male patients for invitations will be enhanced to look at other criteria such as a patient or study level flag that indicates that an invitation/reminder letter should not be sent.

### **Follow-up Order attributes**

The follow-up order will have a status that is determined based on the logic in the section above. It will also have a key reference to the study that caused the creation of the order. The reference to the original study is required in case the Radiologist adds the report and changes the recommendation. In this case, the backend services will modify the existing follow-up order as appropriate (i.e. update the target schedule date and the status), in order to ensure we are not generating multiple follow-up orders for the same study.

In addition, a target date for scheduling will be set if applicable, based on the follow up days of the recommendation.

Mammo Follow Up Orders (5)									
Status	Procedures	Order Date	Target Date	Referring	Last Name	First Name	MRN		
Contains: ▼	Contains: ▼	Equals: ▼	Equals: ▼	Contains: ▼	Contains: ▼	Contains: ▼	Contains: ▼		
CallBack	MA Digital Mammo Screen Uni [G0202UNI] - Breast	01-19-2012 9:16 AM		WILLIAM SAWAY	Hoye	Garcia	10915	1	
CallBack	US Breast Uni Or Bil [76645] - Breast	01-19-2012 9:35 AM		WILLIAM SAWAY	Hoye	Garcia	10915	1	
CallBack	US Breast Uni Or Bil [76645] - Breast/Left	01-19-2012 9:06 AM	01-25-2012 6:20 PM	Darcy Noye	Zoom	Zelda	10005	1	
ShortTermFollowUp	MA DIGITAL MAMMO SCREEN BIL [G0202] - Breast	01-20-2012 11:14 AM	04-19-2012 12:18 PM	Darcy Noye	Jones	Jenna	10924	1	
ShortTermFollowUp	MA DIGITAL MAMMO SCREEN BIL [G0202] - Breast	01-20-2012 11:21 AM	03-20-2012 12:23 PM	Jerry Piled	Hughes	Heather	10925	1	

**Figure 4.4 – Target date from Mammo Follow Up Orders**

When a user attempts to schedule an order with a target schedule date, the scheduling screen should set the start date search criteria automatically. E.g. if a scheduler opens up a study 2 weeks before the target schedule date, the start date should be 2 weeks in the future, instead of set to the current date. The scheduler will have the ability to massage the start date range if required.

Search Criteria:

Region: Maryland ▼

☒ Practice: ☐ Site Group: Advanced Radiology ▼

Site: (all) ▼

Start Date: 04-19-2012 ▼

End Date: 04-24-2012 ▼

☒ Monday ☒ Tuesday ☒ Wednesday ☒ Thursday ☒ Friday ☒ Saturday ☒ Sunday

Monday  
Start Time: 7:00 AM  
End Time: 10:00 PM

Search

**Figure 4.5 – Search Criteria start date determined by the target date of the Mammo Follow Up.**

The target schedule date is currently calculated based on the date of service + the follow up days associated with the recommendation. We may need to add a “Back on schedule” checkbox for cases where the current study is a follow-up of a previous mammography exam and the patient was late. E.g. if a patient is supposed to come in every 6 months and they are two months late, “back on schedule” would massage the target date such that the patient is due back in 4 months.

Currently all follow-up orders will be visible in the Patient Folder. Call Backs and Invitations will be placed on a work list tentatively titled “Mammo Follow-Up Orders” which will be described in a separate document. Invitations will be used to help drive the reminder letter workflow, which will be described in a separate document.

### **Follow-up Order procedure code**

The procedure code for the Follow-up order will be the same as the original procedure, unless there is an override attached to the recommendation (e.g. mammo diag ultrasound breast). The system cannot currently replace a single procedure with 2 follow-up procedures.

In the event that there is no procedure code override attached to the recommendation, the follow-up order will use the same body part and laterality as the original study.

**Technical Repeats** (currently a known limitation is preventing this feature to be used. This will be corrected in the next build)

The Radiologist can sign a report with BI-RADS 0 and a recommendation of Technical Repeat. This will send the exam to a BI-RADS 0 Follow-Up worklist (discussed later). A user can then choose “Create Technical Repeat” once they have the patient on the phone and they are ready to schedule a new time.

The Technical Repeat will be a study that starts off in Scheduled status and has the same accession number as the original study.

Repeats are walked through the workflow and performed by the technologist as if they were a regular exam.

When the Radiologist picks up the Exam from the Exam Done Worklist, they will be prompted to create an addendum, and they should see both the original and the new images in PACS. The addendum will be associated with the original exam, not with the Technical Repeat. The tech notes from the technical repeat will be merged into the technotes from the original study.

After the Rad dictates or signs off on the addendum, the technical repeat will move to a final status of RepeatDone. It will be visible from Patient History but not from any of the other status driven worklists.

A Technical Repeat should bypass billing, the original exam itself is the study that will be billed.

Technical Repeats will not function as designed (with respect to opening the new images on the pacs) unless/until our PACS integration framework passes over the accession number (+MRN?) instead of simply sending over study instance UID.

Note: the reporting screen does not look for the recommendation description of “Technical Repeat”, it looks for the recommendation code that is specified by the system config setting: TechnicalRepeatRecommendationCode (in the futures branch this is set to “R” which maps to the recommendation code/description “R”/”Technical Repeat”).

## Mammo Follow Up – Breast Density

A new lookup table has been added under the Mammography directory.

Lookup Tables - BreastDensity x

Breast Density Code	Description	Display Order	Active
Contains:	Contains:	Equals:	Contains:
ExtDensity	Extremely Dense	4	Y
Fatty	Almost entirely fat	1	Y
HetDensity	Heterogeneously dense	3	Y
ScatteredFibro	Scattered Fibroglandular densities	2	Y

Figure 4.6 – Breast Density lookup table

Breast Density table contains the values that will be available to the Radiologist user. The Tissue Density dropdown list mimics the behavior of the BI-RADS and Recommendation dropdown lists. These controls only become visible when the radiologist opens an exam that has a procedure code that has “BIRAD ENABLED FLAG” set to “Y”

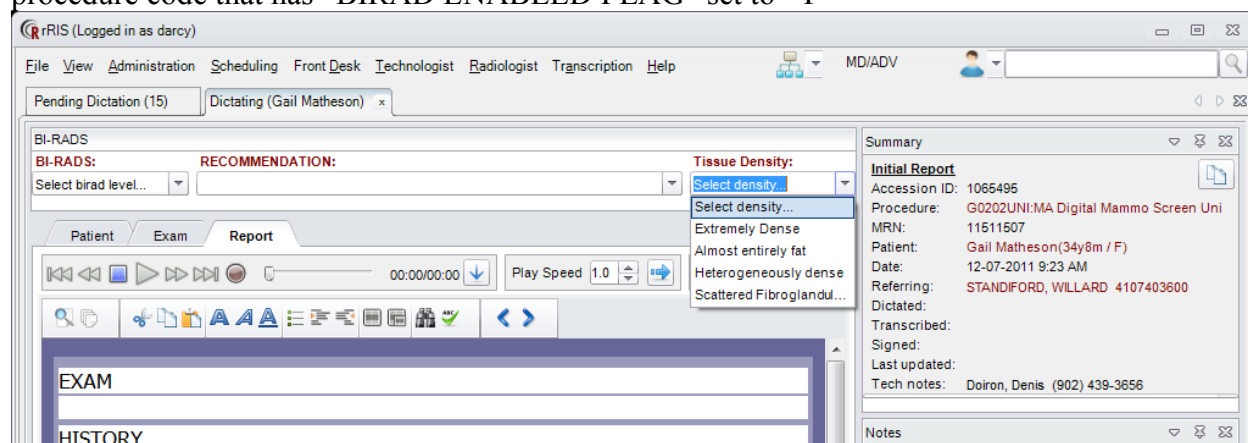
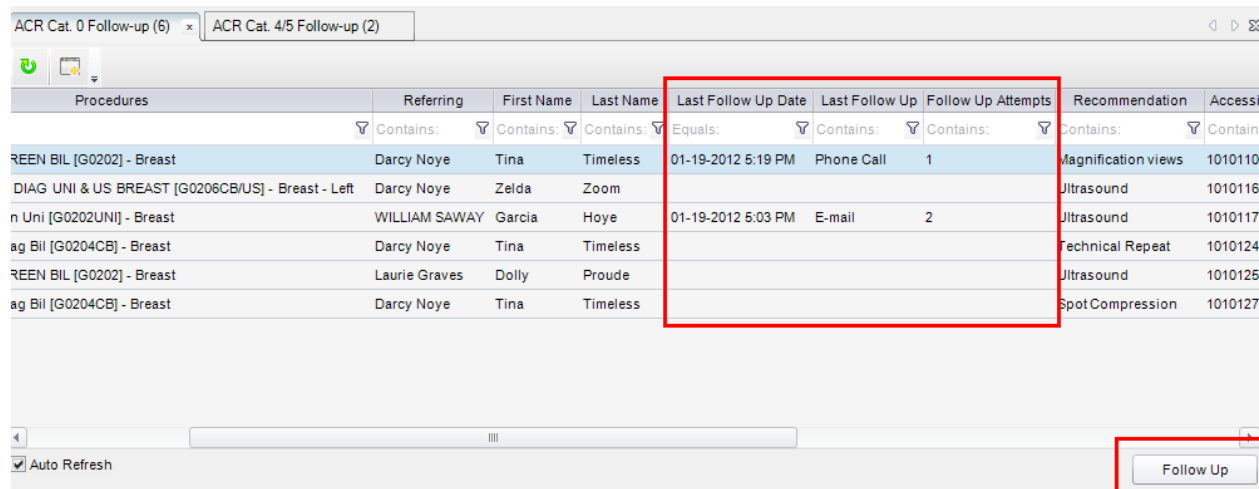


Figure 4.7 – Tissue Density drop down list.

## Mammo Follow Up – Contact Logging

Contact logging was added to the Mammo Follow Up work lists of ACR Cat. 0 Follow-Up and ACR Cat. 4/5 Follow-Up. Columns on the work list track the “Last Follow Up date, Method of Last Follow-Up and Follow Up Attempts”.



Procedures	Referring	First Name	Last Name	Last Follow Up Date	Last Follow Up	Follow Up Attempts	Recommendation	Accession
REEN BIL [G0202] - Breast	Darcy Noye	Tina	Timeless	01-19-2012 5:19 PM	Phone Call	1	Magnification views	1010110
DIAG UNI & US BREAST [G0206CB/US] - Breast - Left	Darcy Noye	Zelda	Zoom				Ultrasound	1010116
n Uni [G0202UNI] - Breast	WILLIAM SAWAY	Garcia	Hoye	01-19-2012 5:03 PM	E-mail	2	Ultrasound	1010117
ag Bil [G0204CB] - Breast	Darcy Noye	Tina	Timeless				Technical Repeat	1010124
REEN BIL [G0202] - Breast	Laurie Graves	Dolly	Proude				Ultrasound	1010125
ag Bil [G0204CB] - Breast	Darcy Noye	Tina	Timeless				Spot Compression	1010127

Auto Refresh ☒ Follow Up

**Figure 4.8 – Follow Up work list displaying Follow Up columns**

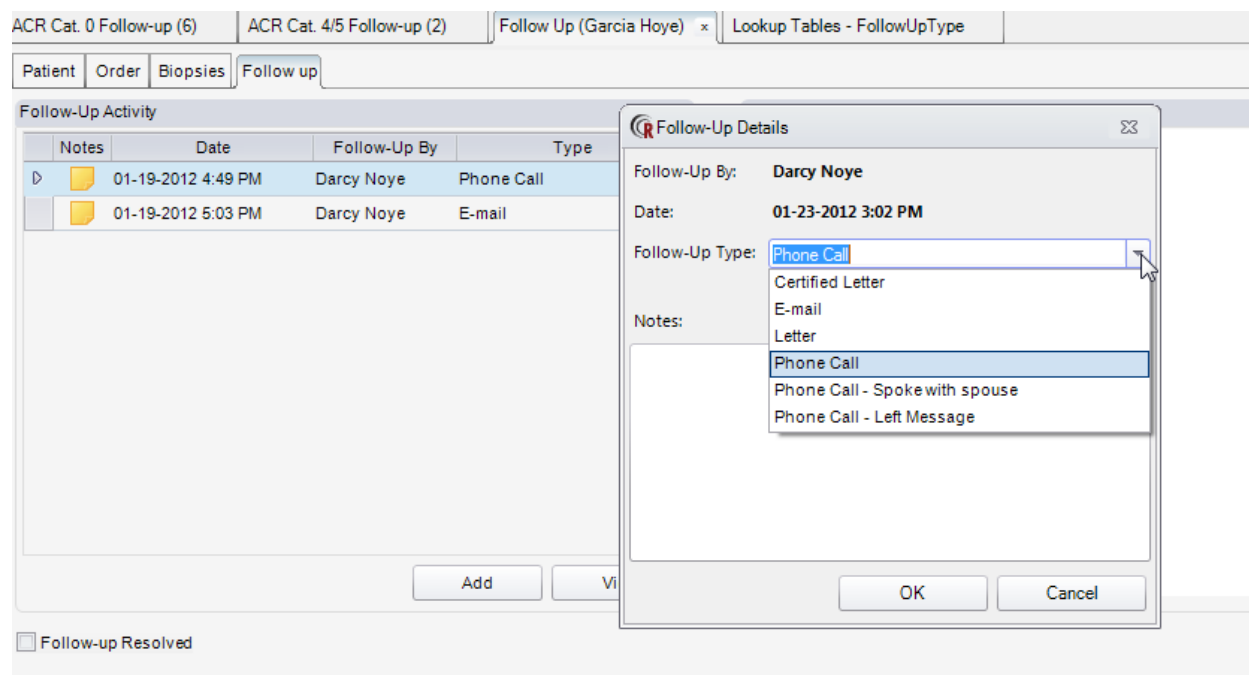
The “Follow-Up’s” are created from the Follow-Up data window.

The main grid sits on the Follow Up tab and shows a summary of the follow-up activity on the current exam. The yellow sticker icon means there are notes/comments attached to the follow-up entry.

The user can double-click or highlight a follow-up and click view to see the full details on a pop-up dialog.

The Figure below shows the Follow Up tab displaying the contact attempts. The Add button has been selected displaying the Follow Up Details window.





**Figure 4.9 – Entering Follow Up.**

A list box within the window has various Follow Up values from a lookup table was created in the Administration -> Configuration screen to allow the administrator to define a set of Follow-Up codes for the user to choose from on the Follow-Up Details pop-up dialog. An administrator can configure new follow-up types as required to increase the value of the information on the work list.

## Mammo Layletter Printing

Lay Letter printing has been added to build 31. The SystemConfig table has new values to specify default letters for each BIRAD category.

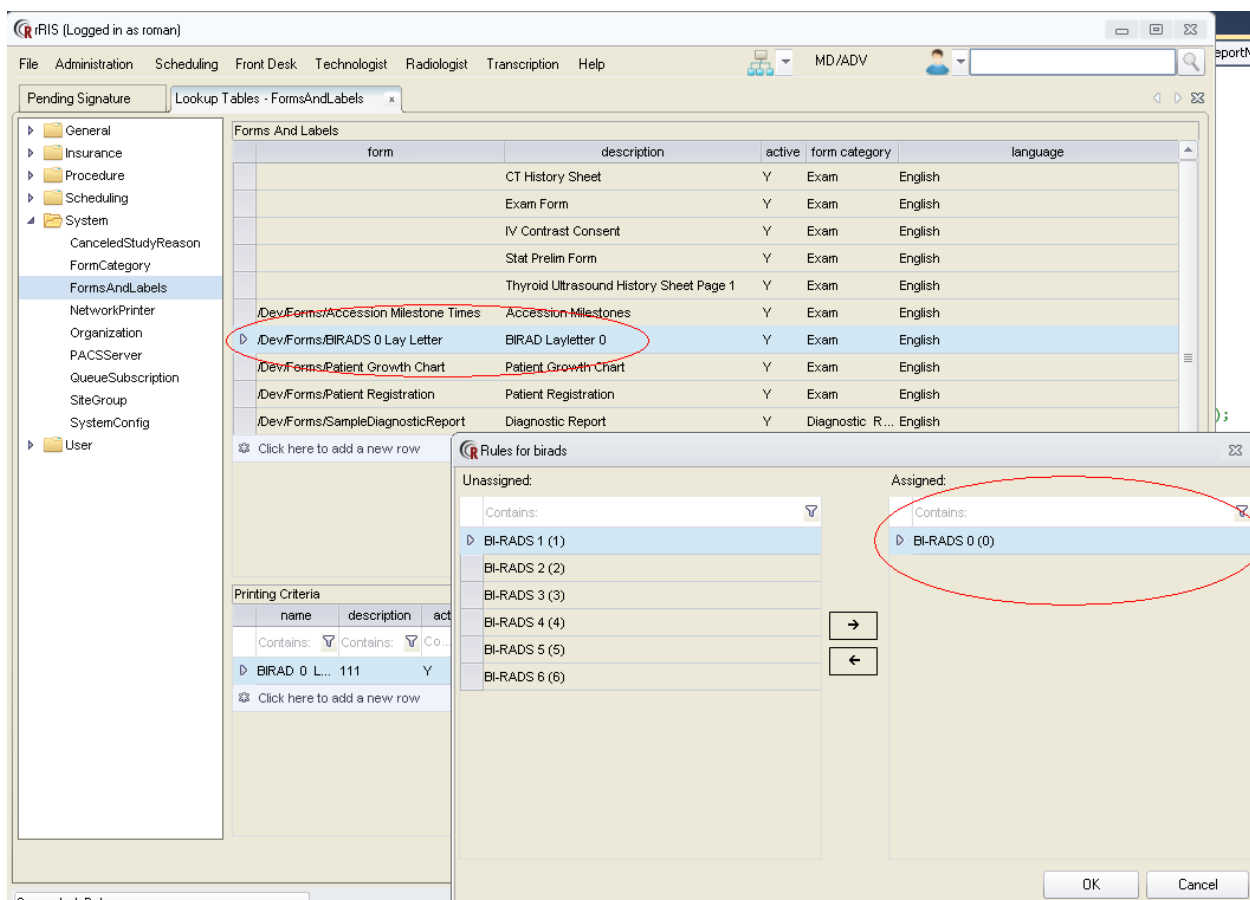
System Config Code	Value	Default	Description
Contains: 	Contains: 	Contains: 	Contains: 
LayletterBIRAD0Default	/QE Current/Forms/Generic Mammo Lay Let...		(value = path and name) The path and name...
LayletterBIRAD1Default	/QE Current/Forms/Generic Mammo Lay Let...		(value = path and name) The path and name...
LayletterBIRAD2Default	/QE Current/Forms/Generic Mammo Lay Let...		(value = path and name) The path and name...
LayletterBIRAD3Default	/QE Current/Forms/Generic Mammo Lay Let...		(value = path and name) The path and name...
LayletterBIRAD4Default	/QE Current/Forms/Generic Mammo Lay Let...		(value = path and name) The path and name...
LayletterBIRAD5Default	/QE Current/Forms/Generic Mammo Lay Let...		(value = path and name) The path and name...
LayletterBIRAD6Default	/QE Current/Forms/Generic Mammo Lay Let...		(value = path and name) The path and name...

**Figure 4.10 – SystemConfig table displaying new Config Codes for LayLetters**

The default values for system config layletter paths can be overridden by values in the Forms and Labels lookup editor.

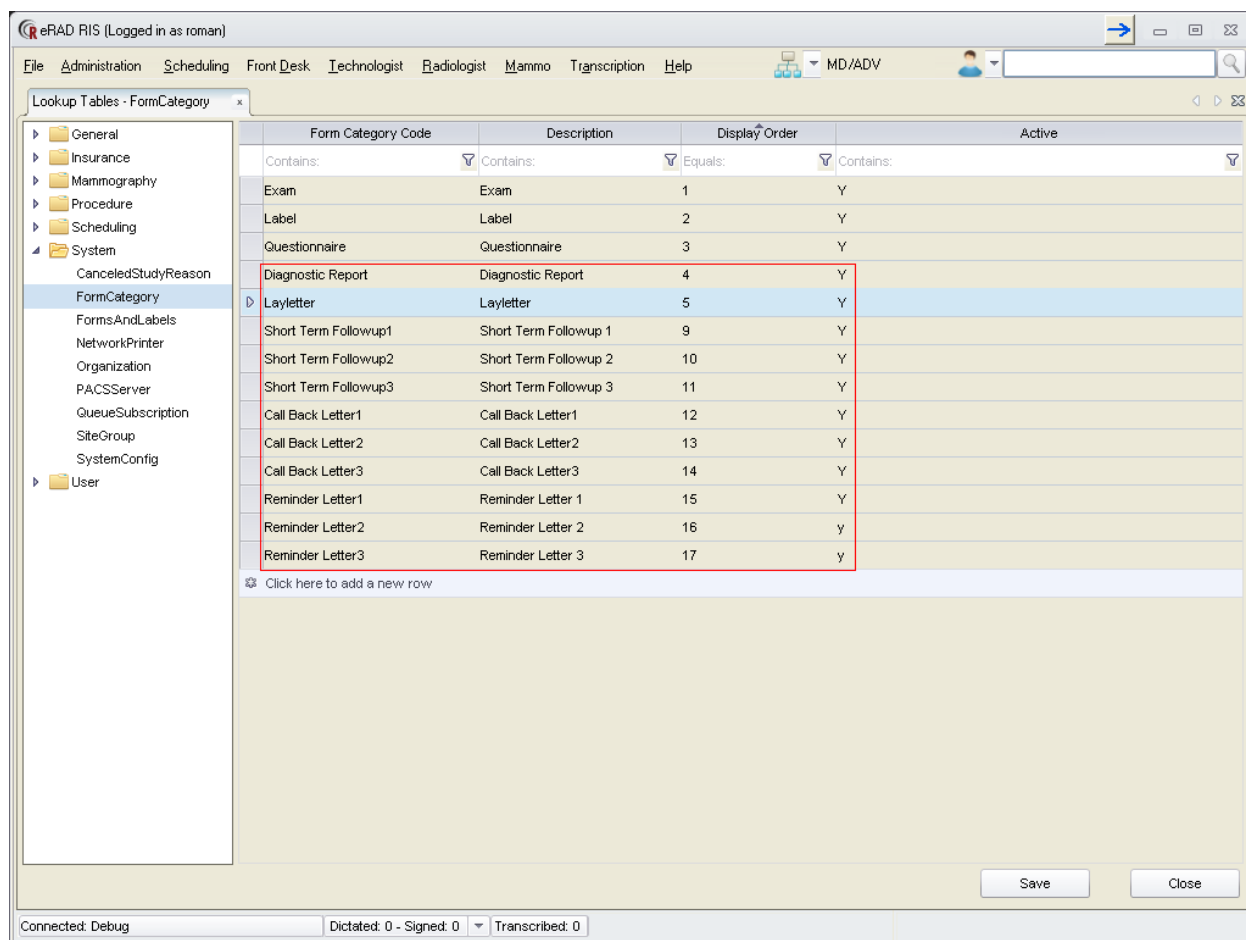
FORMS AND LABELS – Custom LayLetter for each appropriate BIRAD can be configured for each PRACTICE in the Forms and Labels configuration screen. If not defined, no letter will be available of on demand printing via right click print forms. On demand printing can still be accomplished via right click, distribution → distribution history and re-sending the layletter for back end printing.

If no custom template is defined for practice. Document distribution engine will use the system default Layletter template.



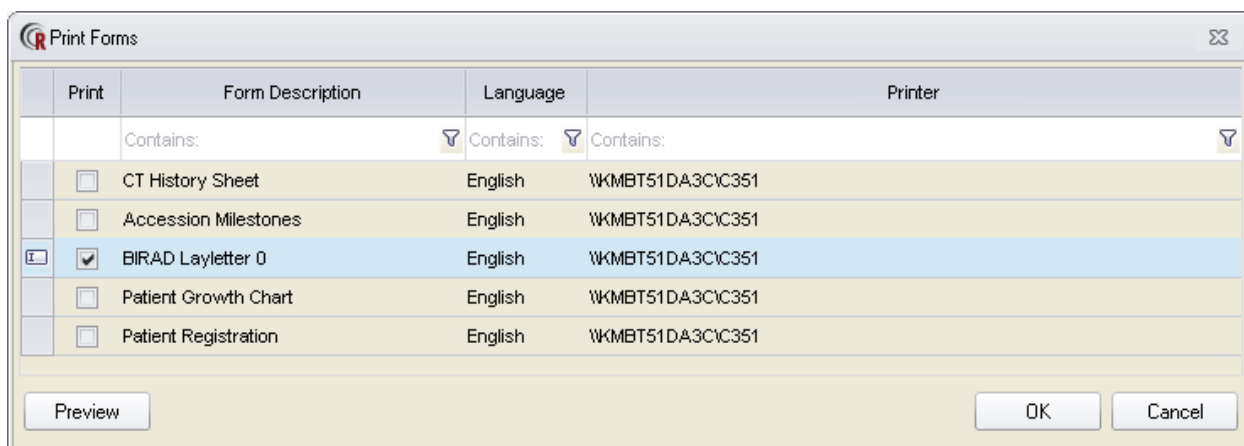
**Figure 4.11 – Forms and Labels displaying a configured BIRAD Layletter**

**FORM CATEGORIES** - Form categories for mammography letter forms have been made static ( system locked – for mammography and other purposes. Categories “Diagnostic Report”, “Layletter”, “Recall Letter”, “Call Back Letter” , “Short Term Followup” → system will not allow a user to delete or change the name of these 3 categories.



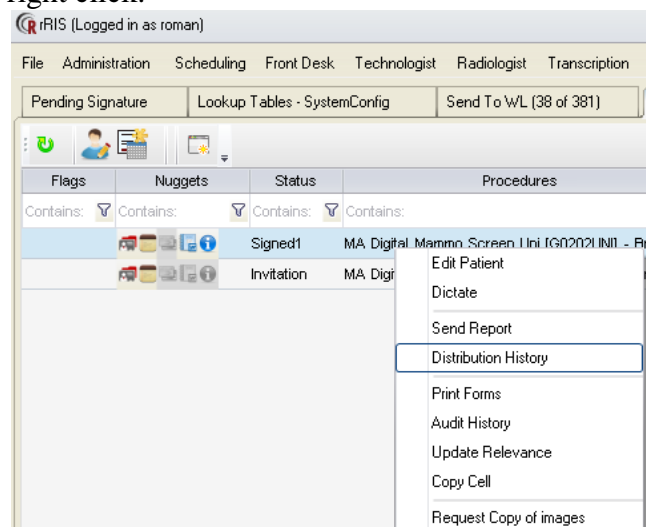
**Figure 4.12 – Form Category for Layletters, Callback, Short Term Follow Up and Reminder Letters**

If patients diagnosis BIRAD code / PRACTICE matches the layletter code assigned and the study is in “Signed1” status, the letter will be available for printing from the patient history work list, by right clicking the study and selecting “Print Forms”. (To print to the local printer)



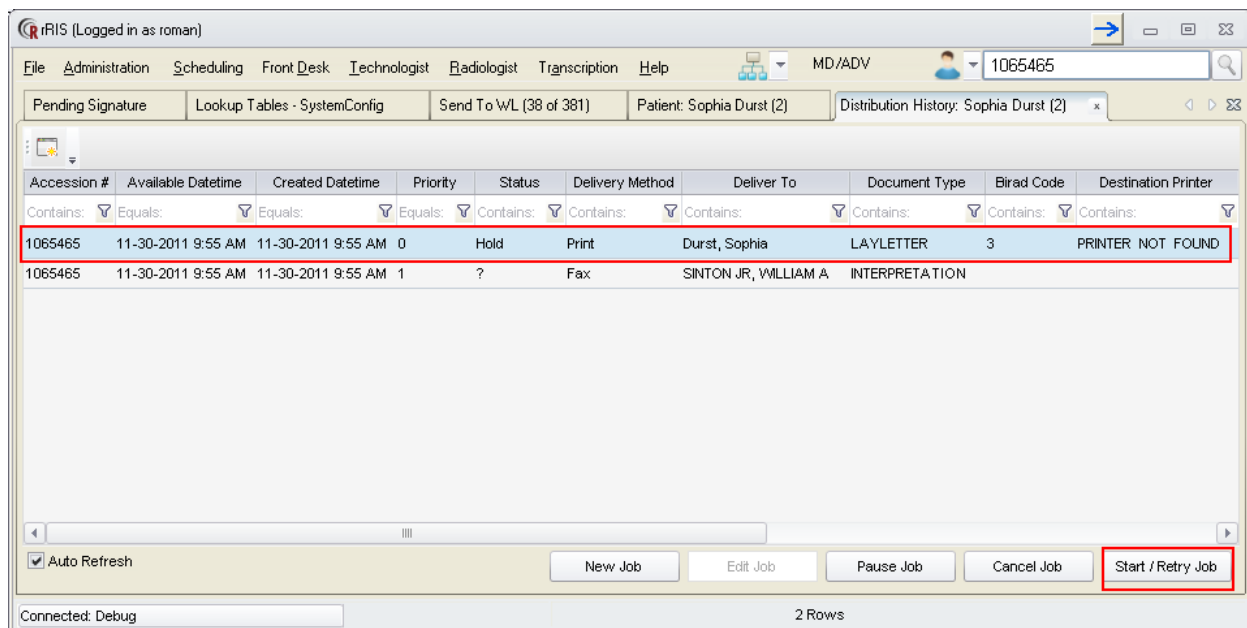
**Figure 4.13 – Print Forms displaying Layletter specified in Forms and Labels lookup editor**

Alternative method of on demand printing is by accessing the document distribution history via right click.



**Figure 4.14 – Accessing Distriubtion History from patient folder.**

Selecting the layletter for the exam and hitting the “Start / Restart Job” to print a copy of the letter to the back end printer.



**Figure 4.15 – Distribution History Work List**

NOTE: Document Distribution History work list will not allow a user to resume a Layletter job that was cancelled by the DDE engine (as in this case a newer version / newer diagnosis layletter was created). Only user cancelled layletters can be retried.

When the letter is created, automatically printed or (replaced with a newer version by the system) an entry will be logged in the Audit History:

Date	Description	Notes	User Id	Accession Number	Order Number	Status
11-15-2011 2:50 PM	Print Letter	Letter BIRADS 0 Lay Letter was printed using Background Printing.	roman	1065390	1064142	
11-08-2011 4:35 PM	UI_ReportSigned	Study updated	roman	1065390	1064142	Signed1
11-08-2011 4:35 PM	Study Retrieved		roman	1065390	1064142	ExamDone
11-08-2011 4:34 PM	Study Retrieved		roman	1065390	1064142	ExamDone
11-08-2011 4:12 PM	Study Retrieved		roman	1065390	1064142	ExamDone
11-08-2011 4:12 PM	Study Retrieved		roman	1065390	1064142	ExamDone
11-08-2011 4:12 PM	Order Retrieved		roman		1064142	OrderSigned
11-08-2011 4:12 PM	Study Completed	Set Study Status to ExamDone	roman	1065390	1064142	Started
11-08-2011 4:12 PM	Study Updated	Study updated	roman	1065390	1064142	Started
11-08-2011 4:12 PM	Study Retrieved		roman	1065390	1064142	Started
11-08-2011 4:12 PM	UI_StudyStarted	Study updated	roman	1065390	1064142	Started
11-08-2011 4:12 PM	Study Retrieved		roman	1065390	1064142	Scheduled
11-08-2011 4:10 PM	Study Scheduled	Study updated	roman	1065390	1064142	Scheduled

**Figure 4.16 – Audit History**

Also, all user actions for putting the job on Hold, Cancelling, Starting / Retrying the job will be audited to the system audit log.

### BULK Layletter Printing Workflow:

Layletters will be automatically submitted to the Document Distribution Engine when an exam is Signed. The printer selection will be made in the same way the DDE engine currently selects the printer for diagnostic reports. (BASED on network printer configured to the Site). DDE back end printing Layletter jobs when queued will be automatically placed in HOLD status (not to tie up the printer). Administrative staff will need to open the DDE work list at the end of the day, multi select the layletters to be printed and select to START the jobs. (Recommend creating a LAYLETTER filtered view on the Document Distribution Work list for this purpose).

While the Job is in any status other than Completed, if diagnosis is changed on the exam ( ex. Addendum with different BIRAD reading), the lay letter in the DDE worklist will be cancelled and a new job with a newer letter will be generated.

Accession #	Available	Created on	Priority	Status	Delivery Method	Deliver To	Document Type	Birad Code	Destination Printer
1061012	11-18-2011 4:08 PM	11-18-2011 4:08 PM	0	Hold	Print	Hardin, Max 41815	LAYLETTER	0	Microsoft XPS Document Writer
1065293	11-18-2011 4:08 PM	11-18-2011 4:08 PM	0	Hold	Print	Stuart, Misty462	LAYLETTER	0	Microsoft XPS Document Writer
1000800	11-18-2011 4:09 PM	11-18-2011 4:09 PM	0	Hold	Print	Briere, Danny Billy	LAYLETTER	0	Microsoft XPS Document Writer
1049077	11-18-2011 4:09 PM	11-18-2011 4:09 PM	0	Hold	Print	Zachter, Nicole Sim	LAYLETTER	0	Microsoft XPS Document Writer
1065401	11-24-2011 3:11 PM	11-24-2011 3:11 PM	0	Hold	Print	Hardin, Max 41815	LAYLETTER	0	Microsoft XPS Document Writer
1065452	11-29-2011 10:41 AM	11-24-2011 3:29 PM	0	Hold	Print	Stuart, Samantha	LAYLETTER	3	KONICA MINOLTA C351 VPS
1065456	11-24-2011 3:29 PM	11-24-2011 3:29 PM	0	Hold	Print	Loots, Gretchen	LAYLETTER	3	PRINTER NOT FOUND
1065458	11-24-2011 3:29 PM	11-24-2011 3:29 PM	0	Hold	Print	Smythie, Jenn	LAYLETTER	4	PRINTER NOT FOUND
1065459	11-24-2011 3:29 PM	11-24-2011 3:29 PM	0	Hold	Print	Graceson, Shawna	LAYLETTER	3	PRINTER NOT FOUND
1065461	11-24-2011 3:29 PM	11-24-2011 3:29 PM	0	Hold	Print	Gorbachov, Lana	LAYLETTER	3	PRINTER NOT FOUND
1065461	11-24-2011 3:29 PM	11-24-2011 3:29 PM	0	Hold	Print	Gorbachov, Lana	LAYLETTER	3	PRINTER NOT FOUND
1065461	11-24-2011 3:29 PM	11-24-2011 3:29 PM	0	Hold	Print	Gorbachov, Lana	LAYLETTER	3	PRINTER NOT FOUND
1065461	11-24-2011 3:29 PM	11-24-2011 3:29 PM	0	Hold	Print	Gorbachov, Lana	LAYLETTER	3	PRINTER NOT FOUND
1065461	11-24-2011 3:29 PM	11-24-2011 3:29 PM	0	Hold	Print	Gorbachov, Lana	LAYLETTER	3	PRINTER NOT FOUND
1065461	11-24-2011 3:29 PM	11-24-2011 3:29 PM	0	Hold	Print	Gorbachov, Lana	LAYLETTER	3	PRINTER NOT FOUND
1065461	11-24-2011 3:29 PM	11-24-2011 3:29 PM	0	Hold	Print	Gorbachov, Lana	LAYLETTER	3	PRINTER NOT FOUND
1065461	11-24-2011 3:29 PM	11-24-2011 3:29 PM	0	Hold	Print	Gorbachov, Lana	LAYLETTER	3	PRINTER NOT FOUND
1065464	11-30-2011 9:55 AM	11-30-2011 9:55 AM	0	Hold	Print	Sands, Hanna	LAYLETTER	3	KONICA MINOLTA C351 VPS
1065465	11-30-2011 9:55 AM	11-30-2011 9:55 AM	0	Hold	Print	Durst, Sophia	LAYLETTER	3	PRINTER NOT FOUND
1065467	11-30-2011 9:56 AM	11-30-2011 9:56 AM	0	Hold	Print	Waite, Ollie	LAYLETTER	0	PRINTER NOT FOUND
1065468	11-30-2011 9:56 AM	11-30-2011 9:56 AM	0	Hold	Print	Peters, Mila	LAYLETTER	0	PRINTER NOT FOUND
1065469	11-30-2011 9:56 AM	11-30-2011 9:56 AM	0	Hold	Print	Peters, Kelly	LAYLETTER	0	PRINTER NOT FOUND

**Figure 4.17 – Send To work list, printing bulk layletters**

Document Distribution Engine will attempt to dynamically pick a template for each Layletter as per configuration in the FORMS and LABELS screen. (Considering only criteria of BIRAD + PRACTICE).

If there is no template specified for (BIRAD + PRACTICE), DDE engine will use a System template for BIRAD from the SystemConfiguration table. If for some reason multiple templates are configured for (BIRAD + PRACTICE) → mis-configuration. DDE engine will pick the first available template.

Edit Job → Edit Job button is disabled on the DDE work list when working with a lay letter. Edit Job button is specific to sending diagnostic reports (to change fax number or recipient) so not applicable to layletters.



## Mammo Reminder, Short Term Followup, Call Back Printing

A method to print Reminder, Short Term Followup and Call Back letter printing was needed. These letters

Configuration:

**FORM CATEGORIES** - Form categories for mammography letter forms have been made static (system locked – for mammography and other purposes. Categories “Diagnostic Report”, “Layletter”, “Recall Letter”, “Call Back Letter”, “Short Term Followup” → system will not allow a user to delete or change the name of these 3 categories.

Lookup Tables - FormCategory

Form Category Code	Description	Display Order	Active
Exam	Exam	1	Y
Label	Label	2	Y
Questionnaire	Questionnaire	3	Y
Diagnostic Report	Diagnostic Report	4	Y
Layletter	Layletter	5	Y
Short Term Followup1	Short Term Followup 1	9	Y
Short Term Followup2	Short Term Followup 2	10	Y
Short Term Followup3	Short Term Followup 3	11	Y
Call Back Letter1	Call Back Letter1	12	Y
Call Back Letter2	Call Back Letter2	13	Y
Call Back Letter3	Call Back Letter3	14	Y
Reminder Letter1	Reminder Letter 1	15	Y
Reminder Letter2	Reminder Letter 2	16	y
Reminder Letter3	Reminder Letter 3	17	y

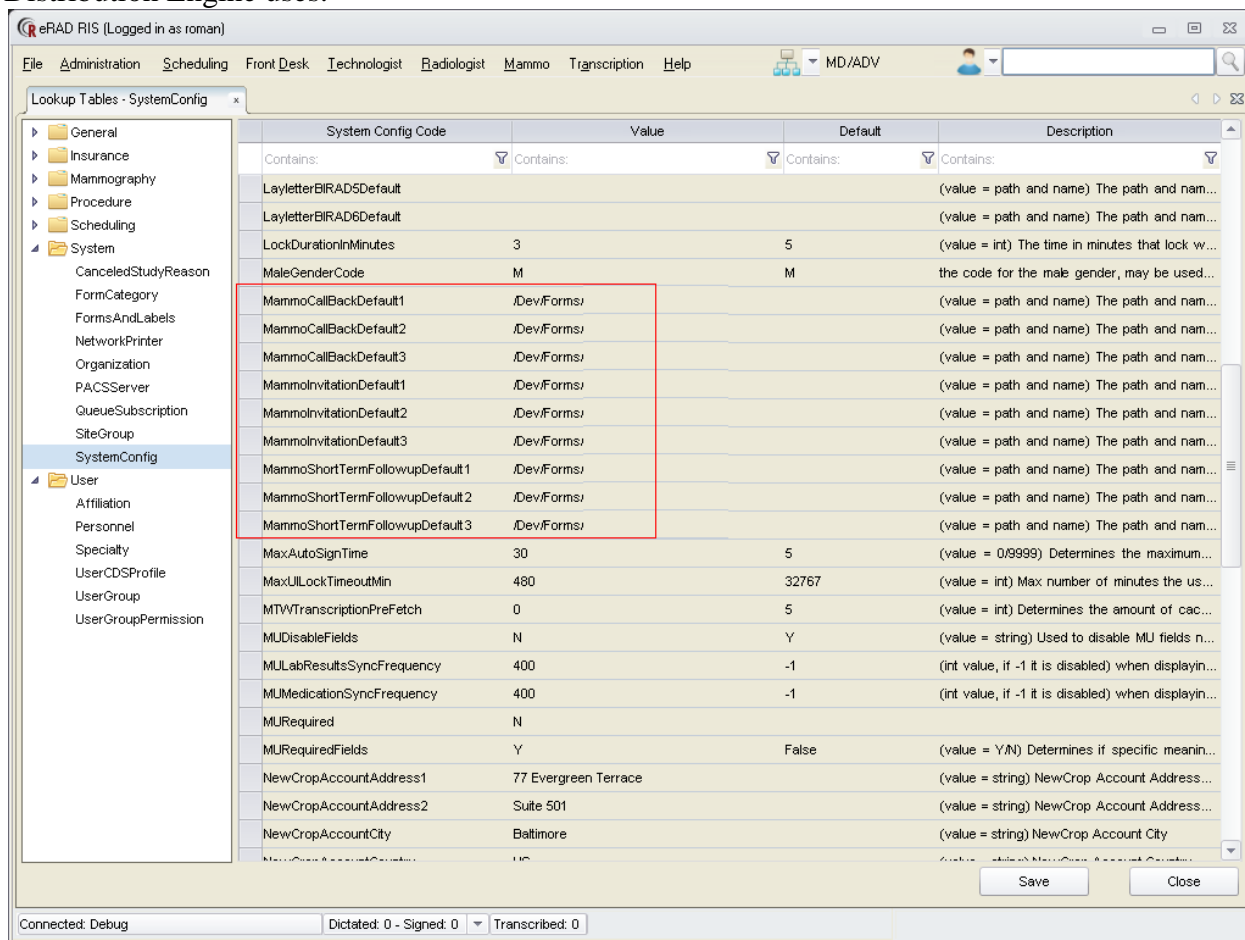
Click here to add a new row

Save Close

Figure 4.18 – Form categories for Short Term, Callback and Reminder letters created

FORMS AND LABELS – 3 Custom letters can be created for each letter category for each PRACTICE in the Forms and Labels configuration screen. If not defined, a system default letter will be used.

Mapping a mammography letter to PRACTICE is the only mapping configuration Document Distribution Engine uses.



**Figure 4.19 – SystemConfig values for default letter templates**

## MAMMOGRAPHY LETTER CONFIGURATION ( # letters, and timeframes)

There are 3 SYSTEM DEFAULT form categories (categories that have NO association to any PRACTICE or SITE) defined to be used as system wide defaults. These should not be deleted! Using the Mammography Letter Configuration screen each practice or site can populate 1,2 or 3 letters for each category. The number of letters a site or practice had defined will control how many letters they will be configured to print.

So if system defaults are used → all 3 letters are available.

If Site Mapped 2 Reminder letters → they will only have access to print 2 reminder letters.

If Site Mapped 3 Call Back letters → site will have access to 3 Call back letters.

Practice Code	Site Code	Form Category Code	Timeframe To Target	Display Order	Description	Active
Contains: ▼	Contains: ▼	Contains: ▼	Contains: ▼	Equals: ▼	Contains: ▼	Contains: ▼
		Reminder Letter1	-60	1	60 days Prior to Target	Y
		Reminder Letter2	-30	2	30 days Prior to Target	Y
		Reminder Letter3	+30	3	30 days After Target	Y
		Short Term Followup1	-60	12		Y
		Short Term Followup2	-30	13		Y
		Short Term Followup3	+30	14		Y
		Call Back Letter1	-14	15		Y
		Call Back Letter2	-7	16		Y
		Call Back Letter3	+14	17		Y
Advanced Radiology	NS (New site just bought)	Call Back Letter1	-90		90 to target - Custom for Advanced	Y
Advanced Radiology	NS (New site just bought)	Call Back Letter2	-45		45 to target - Custom for Advanced	Y

**Figure 4.20 – MammoLetterConfig lookup table**

Time Frames for letters. Time frames for letters can be customized on system wide or if Site defined their own category letters (time frame can be set just for practice or just for site category).

Reminder Letters → are used for orders of type “Invitation”

Short Term Followup Letters → are used for orders of type “ShortTermFolloup”

Call Back Letters → are used for orders of type “CallBack”

Each order has a defined “Target Date” for the patient to be scheduled. For orders of type “Inviation” and “ShortTermFolloup” the Target date is determined based on the “Recommendation” that the radiologist specified.

For orders of type “CallBack” the intent is for the patient to come back as soon as possible, so the **Target Date is set to the current date** (when the **layletter is printed** for the corresponding exam).

**TIME FRAME CALCULATION:** The Mammography Letters work list has a calculated column field that will calculate (which letter should be sent to the patient) for every “Invitation”, “ShortTermFolloup”, “CallBack” order. The calculation is performed based on order “Target Date” and the configuration that is entered in the MammoLetterConfig screen.

For example: Letter 1 Configuration of **-60 days to Target Date**, on the work list will calculate to send the patient Letter 1 until letter 1 is printed or calculation fall into next criteria example Letter 2 – **30 days to Target Date**.

So the system will recommend Letter 1 to be printed for the patient until the letter is printed or the calculation falls into the next timeframe (ex. Letter 2 timeframe).

**Deceased Handling:** If a patient has a deceased flag specified on the patient record. System will not calculate a Mammography Letter for the patient. (Preventing printing).

**Ignored Reminder:** Calculated letter category will fall into **Ignored Reminder** calculation 2 weeks (14 days) after last letter has been sent to the patient. (Last letter could be letter 2, or 3 depending on configuration)

### BULK Mammography Letter Printing Workflow:

In order to bulk print letters, the designated staff member will need to load the Mammography Letter work list via Mammo menu → Letters.

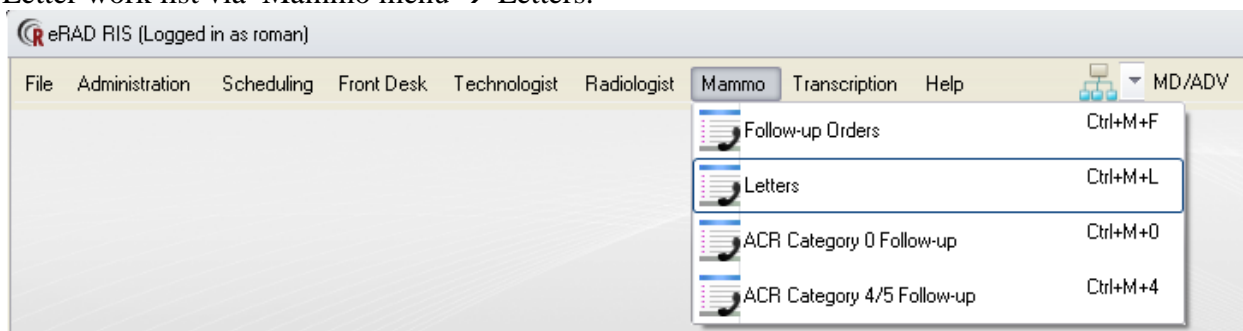


Figure 4.21 – Mammo → Letters menu option

The user will then see all calculated letters due to be printed. Work list can be filtered down to see only specific letter categories. Once the work list is filtered to desired letters for printing, the user may use (CTRL –A) keyboard shortcut to select all items on the work list, and click the “Print Selected” button. This action will send all selected letters for printing to the Document Distribution Work list. The system does allow the user to submit letters of various types at the same time.

Custom Filters can be defined to print specific letter categories.

Status	Procedures	Order Date	Referring	Target Date	Calculatedmammorereminder	Last Name	First Name	MRN	F
Invitation	MA Digital Mammo Diag Uni [G0206] - Breast	11-22-2011 10:18 AM	Kerry846 Smith	04-20-2012 12:00 AM	Ignored Reminder	Loots	Gretchen	11511448	1C
Invitation	MA Digital Mammo CB Diag Bil [G0204CB] - Breast	11-29-2011 8:47 AM	WILLARD STANDIFORD	05-27-2012 9:49 AM	Reminder Letter1	Sands	Hanna	11511459	1C
Invitation	MA Digital Mammo Screen Uni [G0202UNI] - Breast	11-29-2011 9:21 AM	WILLIAM SINTON JR	05-27-2012 10:23 AM	Reminder Letter1	Durst	Sophia	11511460	1C
Invitation	MA Digital Mammo Screen Bil w Implants [G0202IMP] - Breast	11-29-2011 11:44 AM	WILLIAM SCHWARTZ	05-27-2012 12:46 PM	Reminder Letter1	Milton	Holly	11511469	1C
Invitation	MA Digital Mammo Screen Bil w Exam [G0202WVC] - Breast	12-02-2011 2:28 PM	WILLARD STANDIFORD	05-30-2012 3:47 PM	Reminder Letter1	Gupta	Dianna	11511487	1C
CallBack	MA Digital Mammo Screen Uni [G0202UNI] - Breast	12-05-2011 3:22 PM	WILLIAM SINTON JR	06-02-2012 4:25 PM	Call Back Letter1	Beginis	Anna	11511497	1C
CallBack	MA Digital Mammo Screen Uni [G0202UNI] - Breast	12-05-2011 3:26 PM	stephen stuart	05-03-2012 4:28 PM	Call Back Letter1	Ends	Anna	11511498	1C
ShortTermFollowUp	MA Digital Mammo Screen Uni [G0202UNI] - Breast	12-06-2011 11:10 AM	WILLARD STANDIFORD	05-04-2012 12:18 PM	Short Term Followup1	Byte	Bonnie	11511502	1C
ShortTermFollowUp	MA Digital Mammo Screen Uni [G0202UNI] - Breast	12-07-2011 7:34 AM	WILLIAM SINTON JR	07-04-2012 8:36 AM	Short Term Followup1	Mistry	Ginger	11511505	1C
ShortTermFollowUp	MA DIGITAL MAMMO DIAG BIL & US BREAST [G0204US] - Breast	12-15-2011 10:45 AM	WILLARD STANDIFORD	06-12-2012 10:49 AM	Short Term Followup1	Workflow	Betty	11511519	1C
ShortTermFollowUp	MA DIGITAL MAMMO DIAG BIL & US BREAST [G0204US] - Breast	01-04-2012 9:54 AM	WILLIAM SINTON JR	06-02-2012 9:55 AM	Short Term Followup1	Perry	Kyla	11511536	1C

Calculated letter category column.

Print Selected Letters

**Figure 4.22– Mammo letter work list**

## Mammo Follow Up Worklists

For the Mammography work flow there was a need to capture Mammo exams of BIRAD 0 and BIRAD 4/5 follow up's was required. Two new work lists have been added in build 31. Each is described below.

### BI-RADS 0 Worklist

Flags	Status	Procedures	Referring	First Name	Last Name	Last Follow Up Date	Last Follow Up	Follow Up Attempts	Recommendation	Access
Contains: ▼	Contains: ▼	Contains: ▼	Contains: ▼	Contains: ▼	Contains: ▼	Equals: ▼	Contains: ▼	Contains: ▼	Contains: ▼	Contains: ▼
	Signed1	MA DIGITAL MAMMO SCREEN BIL [G0202] - Breast		Tina	Timeless	01-19-2012 5:19 PM	Phone Call	1	Magnification views	10101
	Signed1	MA DIGITAL MAMMO CB DIAG UNI & US BREAST [G0206CB/US] - Breast - Left	Darcy Noye	Zelda	Zoom				Ultrasound	10101
	Signed1	MA Digital Mammo Screen Uni [G0202UNI] - Breast	WILLIAM SAWAY	Garcia	Hoye	01-19-2012 5:03 PM	E-mail	2	Ultrasound	10101
	Signed1	MA Digital Mammo CB Diag Bil [G0204CB] - Breast	Darcy Noye	Tina	Timeless				Technical Repeat	10101
	Signed1	MA DIGITAL MAMMO SCREEN BIL [G0202] - Breast	Laurie Graves	Dolly	Proude				Ultrasound	10101
	Signed1	MA Digital Mammo CB Diag Bil [G0204CB] - Breast	Darcy Noye	Tina	Timeless				Spot Compression	10101

Auto Refresh ☒ Follow Up

**Figure 4.23 – ACR Cat. 0 Follow-up work list**

Tentative Work list Tab Title: “ACR Cat. 0 Follow-up Work list”

Work list filter: show all signed studies with a BI-RADS code of 0, in the ReportSigned1 status, with mammo\_fup\_required\_flag = ‘Y’. When a BI-RADS 0 study is signed, it will automatically go to this work list. The study remains on the work list until a user opens the Post Exam screen and checks the “Follow-up Resolved” checkbox and saves the change to the database.

**Double click action:** Open Post Exam follow-up.

**Context menu items available from right click:**

- Patient folder,
- Audit History,
- Print Forms,
- Post Exam,
- Rescheduled Flag ... Set Follow up Rescheduled
- Rescheduled Flag ... Clear Follow up Rescheduled

**Columns:**

- Flags
- Status

- Procedures
- Referring
- First Name
- Last Name
- Accession #
- BI-RADS
- Technologist
- Signed By Radiologist
- MRN
- Performed End Date
- Recommendation
- Last Follow Up Date
- Last Follow Up (Type)
- Follow Up Attempts
- Signed Date
- Rescheduled (Flag) – set automatically when the user schedules an exam from Post Exam  
-> Schedule, or manually (as a fail-safe) if the study gets scheduled in some other way
- Locked By – indicates the user, if any, who is currently working on the study.

### **Expected Workflow:**

Users will use this list to follow-up on BIRADS 0 studies. They can open Post Exam and schedule a follow-up study, and add follow-up activity (e.g. sent certified letter).

The study will not leave the work list at the point of scheduling. It will remain on the list until the exam is flagged as “Resolve Follow-Up”.

## BI-RADS 4/5 Work list

ACR Cat. 4/5 Follow-up (2) x

Flags	Status	Procedures	Referring	First Name	Last Name	Accession #	BI-RADS	Assigned Tech	Signed By Radiologist	MRN	Performed E
Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Equals: ▾
Signed1	MA DIGITAL MAMMO DIAG BIL & US BREAST [G0204/US] - Breast - Bilateral	Troy Muttrey	Yolanda	Yeesh	1010115	4	Ian Power	Darcy Noye	10006	01-19-2012 5	
Signed1	MA Digital Mammo Screen Uni [G0202/UN] Breast	WILLIAM SAWAY	Stephanie	Powell	1010118	4	Denis Doiron	Darcy Aiken	10916	01-19-2012 9	
MA DIGITAL MAMMO DIAG BIL & US BREAST [G0204/US] - Breast - Bilateral											

</

Figure 4.24 – ACR Cat. 4/5 Follow-up

**Tentative Worklist Tab Title:** “ACR Cat. 4/5 Follow-up” (suggestions?)

**Worklist filter:** same as BI-RADS 0, except we filter for BI-RADS 4/5

**Double click action:** same as BI-RADS 0

**Context menu items available from right click:** same as BI-RADS 0

**Columns:** same as BI-RADS 0

**Expected Workflow:** same as BI-RADS 0 except the user may also enter biopsy and pathology information on the Post Exam follow-up screen.

Again, to be clear, the studies on this list will not fall off until the user “resolves follow-up” on the Post Exam screen.

## CallBack and Short Term Follow-up Worklist

**Tentative Worklist Tab Title:** “Mammo Follow Up Orders” (suggestions?)

**Worklist filter:** order status is “Callback” or “ShortTermFollowUp” and target date (for scheduling) is specified. (suggestions? Callbacks may not need to have a target date, perhaps we should only look at those 2 statuses).

**Double click action:** Schedule Order

**Context menu items:** to be determined



**Columns:**

- Status
- Procedures
- Order Date
- Referring
- Last Name
- First Name
- MRN
- Filler Order Number
- City
- Insurance Carrier
- PreCert Required
- Patient Type
- Target Date (for scheduling)
- Primary Phone Number

These columns are preliminary and most were borrowed from the Orders To Schedule WL.

**Expected Workflow:**

Callbacks and Short Term Follow Up orders will be created automatically when the Rad signs off on a study with a special recommendation (documented elsewhere). Other users will work this list, and as the exam is scheduled it will automatically fall off the Follow Up Orders list.

### Password Change

In build 31 the ability to change your password from within the RIS has been added.

A new check box called “Domain Authentication” on the Account tab of the Personnel editor has been added.

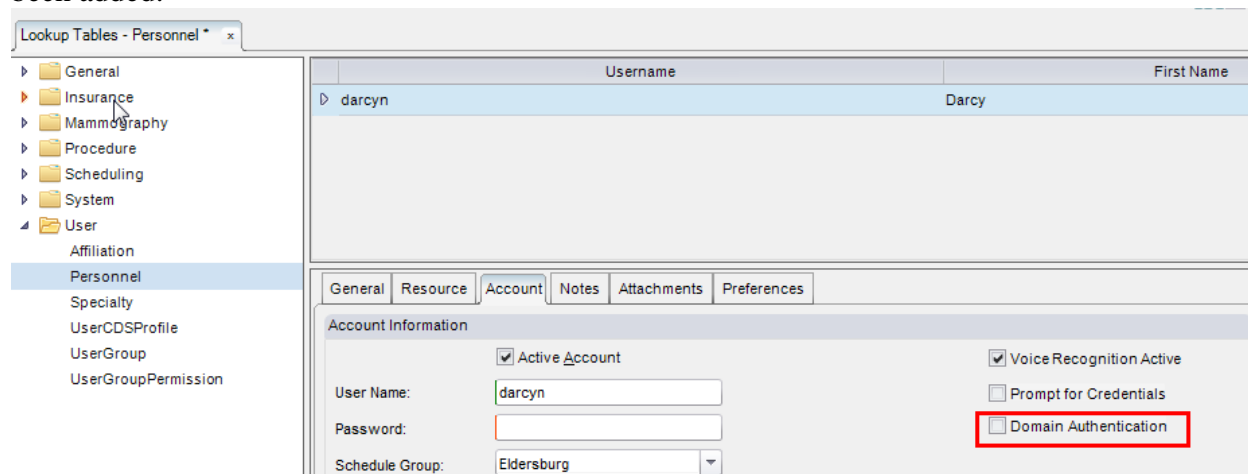


Figure 4.25 – Domain Authentication flag

When this flag is **not** set (unchecked) a new menu option under the File menu called “Change Password...” will appear.

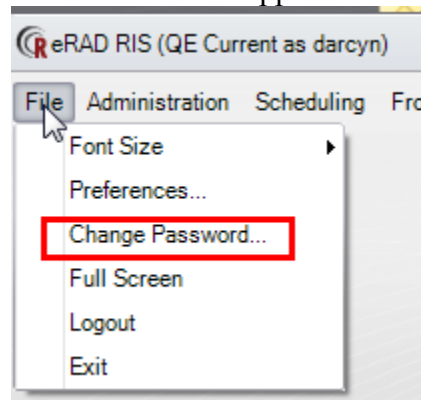
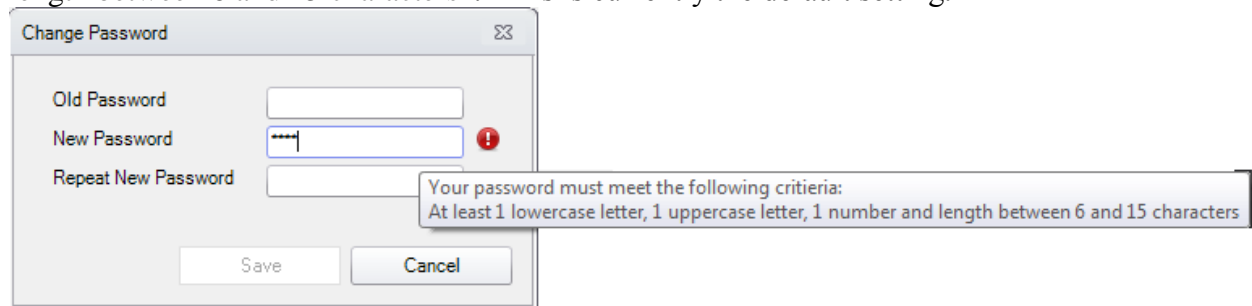


Figure 4.26 – Change Password Menu item activated when the Flag for Domain Authentication is unchecked in the personnel editor.

Selecting this menu option will open the Change Password dialogue window. You must enter in the correct current password. If you enter the current password incorrectly it will prompt on save that it has been entered incorrectly.

The New Password and the Repeat New Password must match.

The New Password must have “At least 1 lowercase letter, 1 uppercase letter, 1 number and length between 6 and 15 characters”. This is currently the default setting.



**Figure 4.27 – Change Password dialogue box**

To change the RIS password the user must enter their old password, and re-enter their new password twice.

#### Validations:

The new password must meet the Strong Password validation. This validation is configured by setting a regex value in the Config Table item: StrongPasswordRegex.

For example, (and the default value is)

`(?=^.{6,15}$)(?=.*\d)(?=.*[a-z])(?=.*[A-Z])(?=.*[!@#$%^&*()_+}{&quot;;'/?&gt;.&lt;.,])(?!.*\s).*`  
This translates to at least 1 lowercase letter, 1 uppercase letter, 1 number and length between 6 and 15 characters.

If this regex is passed, a checkmark appears beside the new password field. Otherwise, an exclamation mark will appear. The tooltip on the exclamation mark will explain the regex validation in human readable terms. This human readable version comes from another Config Table Entry called StrongPasswordRegexHing, which is defaulted to “At least 1 lowercase letter, 1 uppercase letter, 1 number and length between 6 and 15 characters”

## Removal of Philips Device Control and Default Device

In previous builds it was noted that the playback of dictations was not being played back on the Philips SpeechMike, and were being played back on the systems default device. To avoid conflicting hardware it is being suggested that the Philips SpeechMike should not be the default recording /playback device.

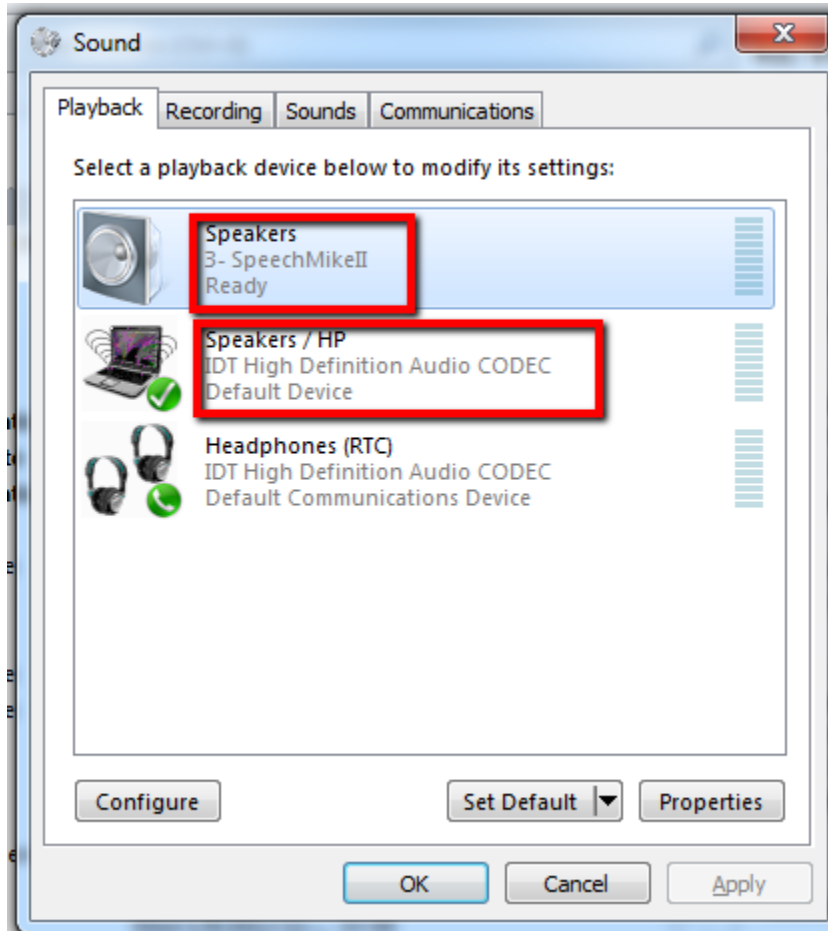


Figure 4.28 – SpeechMike is not default playback device

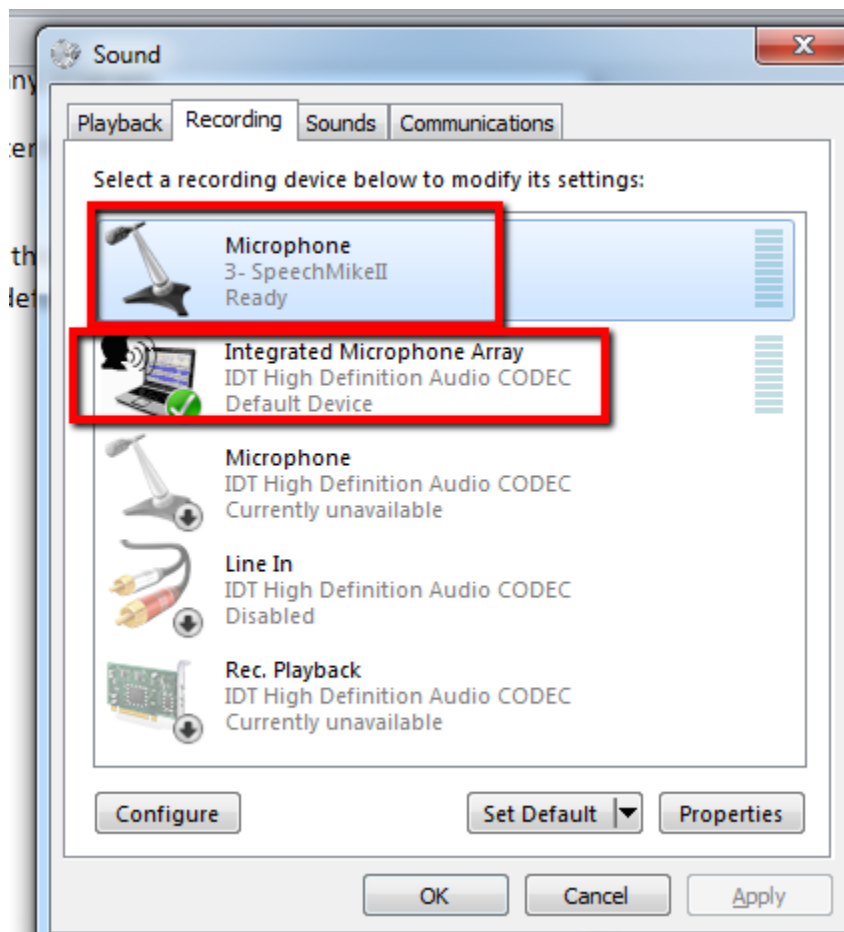


Figure 4.29 – Philips SpeechMike is not the default recording device

Selecting the User Preference Interactive Dictation flag will activate the Interactive Dictation data pane. Selecting the Mic Wizard button will open the MicConfig window. On the second step of the MicConfig wizard the user can select the ERAD RIS recording and playback devices. If the Philips SpeechMike is the default recording / playback device, the user will also be informed on this page.

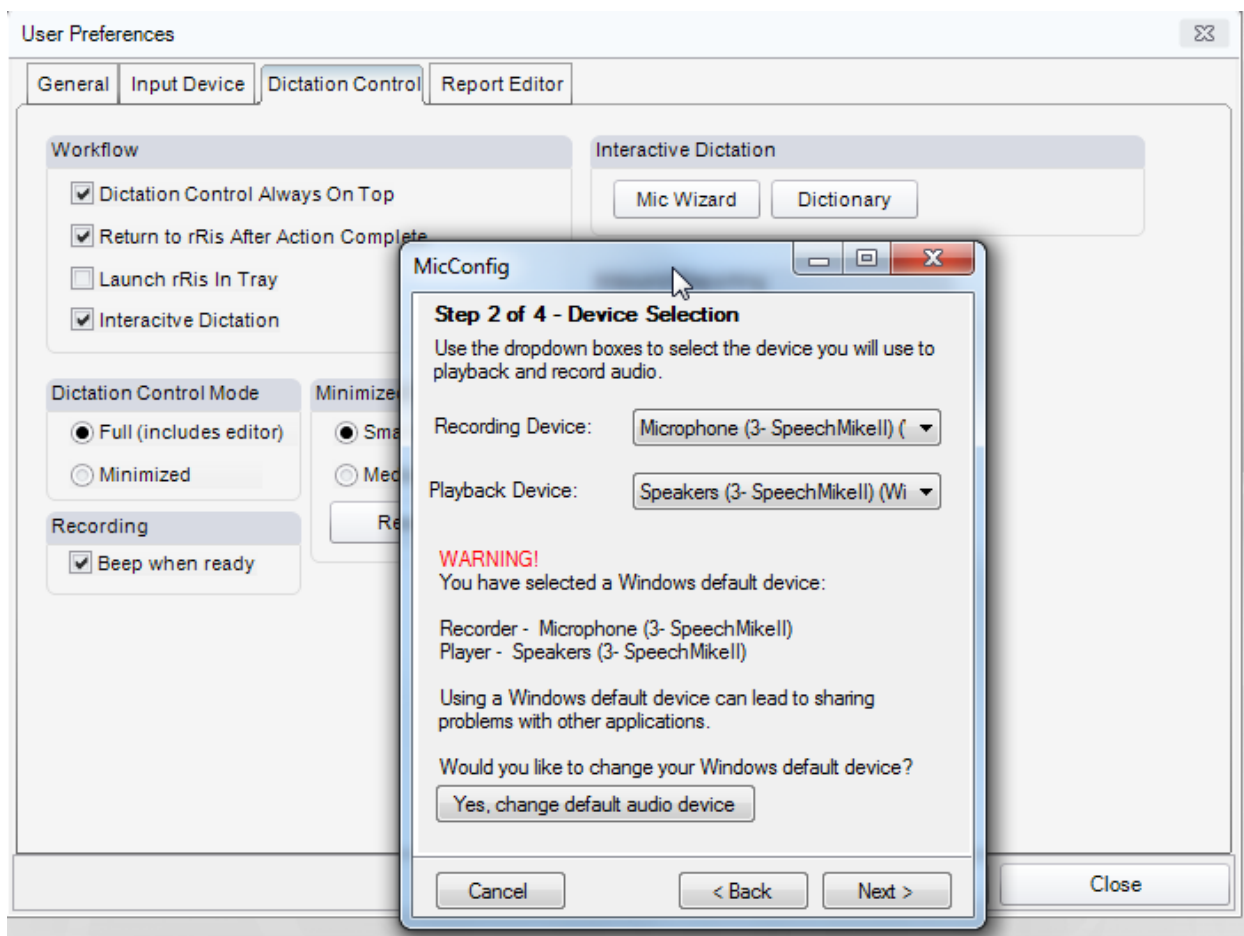


Figure 4.30 – MicConfig wizard. Step 2 of 4 Device Selection

## **Reporting – RegFreeCom**

We have provided the manifest files along with our application files in the installation directory. Now with these new files they will register themselves on demand.

The two files we use with regfree com are AnyModalCaptureCtrl.dll and AnyModalEditCtrl2.dll. We added four files to the root of the MainApp project. They are:

AnyModalCaptureCtrl.dll,

AnyModalCaptureCtrl.sxs.manifest,

AnyModalEditCtrl2.dll and

AnyModalEditCtrl2.sxs.manifest

These files are set to copy into the build directory and will need to be updated as new releases are provided from MModal. Note that the manifest files typically don't change unless the interface to either dll changes.

## Rewind Desktop Interactive Dictation

In previous builds that included Interactive Dictation we didn't have the ability to rewind the dictation when working in Interactive Mode. MModal will need to supply a "true" fix for this deficiency. Until then this temporary fix for rewind has been added into the application. There is no visual representation of the rewinding action (bouncing ball affect) in the document.

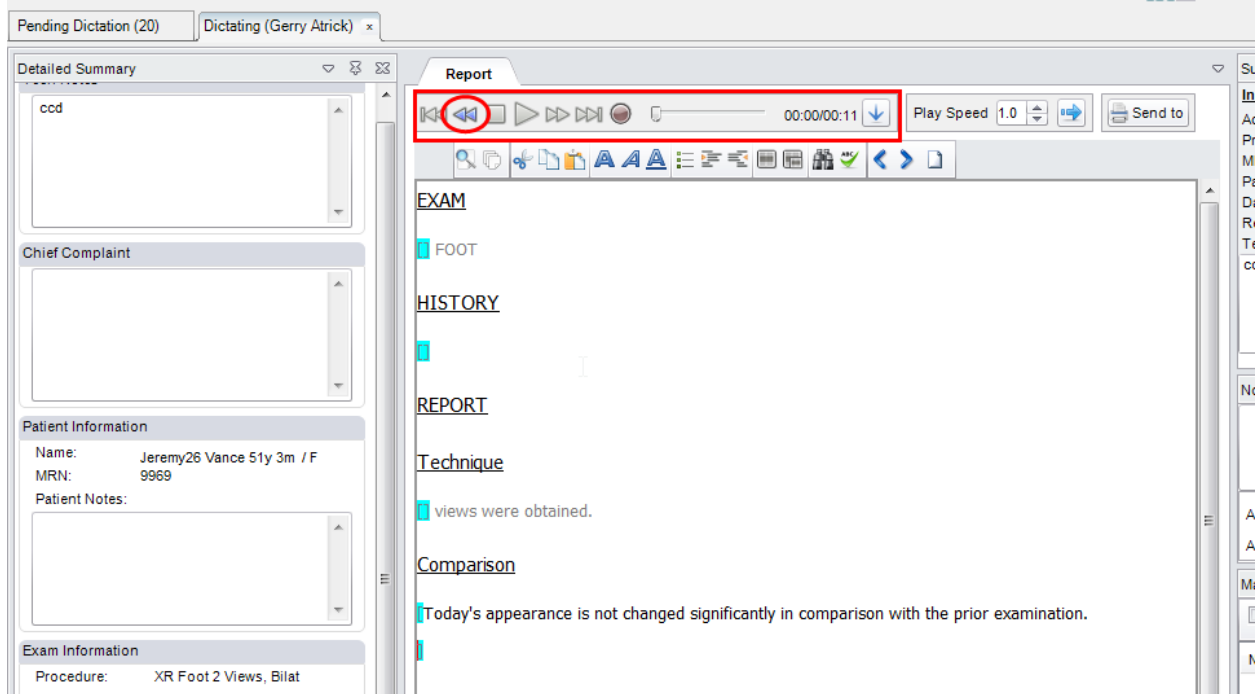


Figure 4.31 – Interactive Dictation rewind feature. Rewinding from Philips Speechmike



## Tentatively Sign (AKA Sign Opps)

A new status of ***TentativelySigned1*** was created which will hold a signed report for a configurable amount of time.

Flags	Status	Procedures	Scheduled Date	First Name	Last
Contains: [filter]	Contains: [filter]	Contains: [filter]	Equals: [filter]	Contains: [filter]	Contains: [filter]
	TentativelySigned1	CT Abdomen W & P...	12-28-2011 11...	Greta	Gable

Figure 4.32 - Tentatively Signed Work List displaying 1 record in TentativelySigned1 status

Once the time has elapsed we have a service that will pick the job up and send it through for report distribution and billing.

A new System Config entry called **MaxAutoSignTime** has been created to (1.) assign a default value for time allotted to hold an exam in TentativelySigned1 status and (2.) allows the user to set a different system time greater or less than the default time.

System Config Code	Value	Default	Description
MaxAutoSignTime	10	5	(value = 0/9999) Determines the maximum allowed ti...

Figure 4.33 – System Config table displaying MaxAutoSignTime

Four new access strings have been added for this feature:

**Clinical.UserPreferences.TentativeSigning** that will control if the user has access to turn the feature on or off in the User Preference screen. This would typically be added to an admin group who generally configures user preferences for each user via the Configuration screens. This access string may also be given to radiologist groups if they require the ability to change and manage this at that level.

**WL.TentativelySigned** was added to control access to the work list for radiologist or individual users.

**WL.TentativelySignedAll** – A work list that will display all Tentatively Signed records for all users. Usually only accessed by an Admin type user.

**Clinical.ReleaseTentativelySignedReport** was added to control access to the right click context menu to push the exam through.

The user preference Tentative Signing is accessible if the **Clinical.UserPreferences.TentativeSigning** access string is enabled. Checking it will enable the **hold time** spinner box. This hold time value is the amount of time before the report will be automatically moved to Signed status. The default value will be the default for the system configuration value **MaxAutoSignTime** or the value assigned to it. The user preference cannot be more than the value (default or user entered) of the System Config Code.

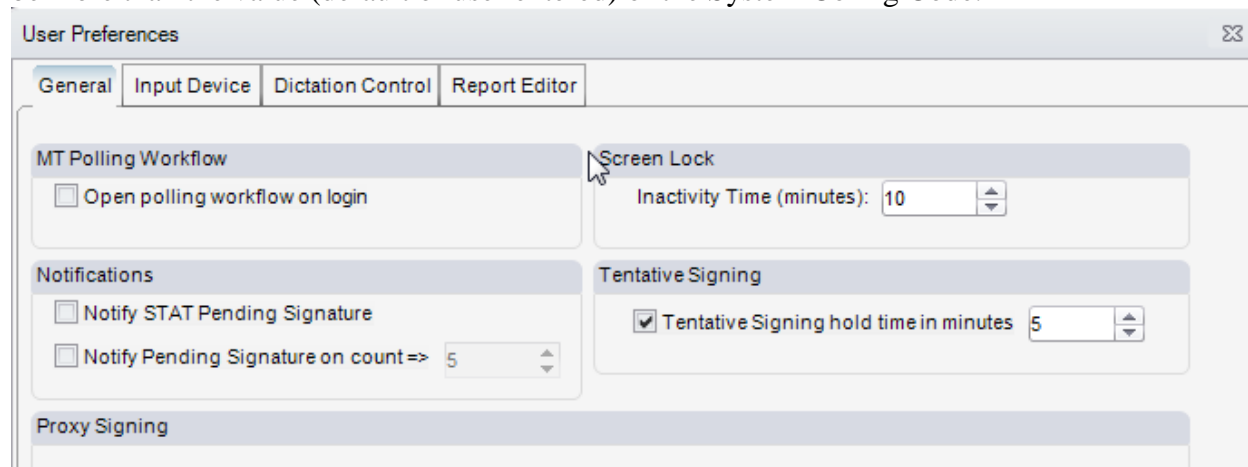


Figure 4.34– Tentatively Signing User Preference

If the User Preference was already set and the Value of system config entry for MaxAutoSignTime is changed to be less than the user preference, the next time the user opens User Preferences a message prompt will be displayed informing that your value has been adjusted.

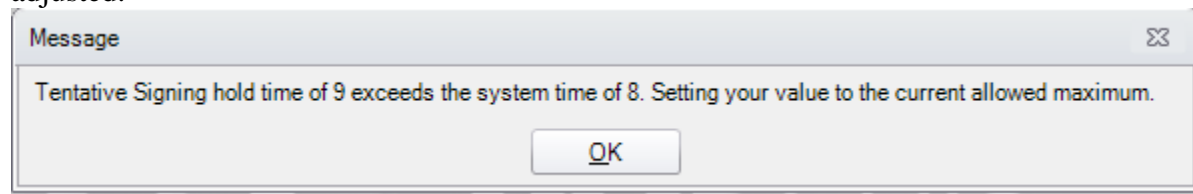


Figure 4.35 – Message pop up displayed if the user preference is more than the current system config value

## **Updated Meaningful Use Permissions**

Changed permission codes for the following access strings.

1. Clinical.ConfigureMeaningfulUse
2. Clinical.eLabOrdering
3. Clinical.ePrescribeAdministrator
4. Clinical.ePrescribeRadiologist
5. Clinical.ePrescribeStaff

Updated permissions to be this.

1. MU.ConfigureMeaningfulUse
2. MU.eLabOrdering
3. MU.ePrescribeAdministrator
4. MU.ePrescribeRadiologist
5. MU.ePrescribeStaff
6. MU.TransitionOfCare \*\*New permission for the transition of care checkbox on the order tab

## **Miscellaneous High Priority Items**

1. Race, Smoking, preferred language, ethnicity need a config setting that will make them required at registration.
2. Scheduling – Summary tab should be the default tab.
3. Personnel – Need a Notes section where notes can be added and displayed about a person
4. Image request – if you add more than one study, the patient is no longer an option for the deliver-to functionality
5. When patient folder is open, the New Appointment menu item assumes it should take patient context. This is no longer desired, so now it will not take patient context, unless the smaller New Appointment button is used within the patient folder itself.
6. Registration – Must be able to enter a PreCert number and expiry date in the registration grid.
7. Registration – Change checkbox on billing codes to say “Show previous PreCert and CPT codes”
8. Technologist – Patient tab should be read-only, except patient notes.
9. Scheduling – Default tab should be patient.
10. Verbal Order – Change the Free Text option to be the default for studies, not the multi-type ahead.
11. Technologist - LMP, pregnancy check, and Tech name should be required on Complete, not on start.
12. Tech Worklist – Want to also see Checking in status
13. Tech Worklist – Do not want to see discontinued exams in this WL.
14. Technologist - Billing code grid columns should be in the order of Abn, units, change reason code, billing code
15. Various billing codes grids: PreCert expiry date column showed a time portion, when it should only have been date.

## 5. Resolved Defects

Bugs, Suggested Features and Support Issues resolved in build 1.31. The extract is taken from Redmine bug tracking system and only displays defects resolved in 1.31.

#	Status	Tracker	Priority	Subject	Category	Target version
711	Closed	Bug	High	Dictation - Send To throws error	Thick Client GUI	1.26
725	Resolved	Bug	Normal	Pending Dictation > Open Suspended exam can cancel will return error.	Thick Client GUI	1.26
745	Closed	Bug	Normal	Should not be allowing State as free text	Thick Client GUI	1.25
761	Closed	Bug	Normal	Closing the Report History will through series of messages	Thick Client GUI	1.28
762	Resolved	Bug	Normal	Seen this error when closing Report Drafted	Thick Client GUI	1.28
784	Closed	Bug	Normal	Delete drug allergy and try to access eRx (newcrop) will through error	Thick Client GUI	1.28
789	Closed	Bug	Normal	Clinical Summary CCR to view/print or export throws error	Thick Client GUI	1.28
799	Resolved	Bug	High	Configurable Modality Scheduling	Thick Client GUI	1.29
805	Closed	Bug	High	Failed PACS Correction > Flag on modality does not work	Thick Client GUI	1.29
808	Closed	Bug	Normal	After logging in get error on Dictation control	Thick Client GUI	1.30

810	Resolved	Bug	Normal	advanced search times are not correct in relation to current system time	Thick Client GUI	1.30
812	Resolved	Bug	High	Open dictate data window to add addendum will throw error	Thick Client GUI	1.30
814	New	Bug	High	Cannot preview reports	Thick Client GUI	1.30
816	Closed	Bug	High	State selection does not save	Thick Client GUI	1.30
819	Closed	Bug	High	“Inactive” lateral codes are showing up in scheduling screen. Any values “inactive” values in lookup should not be “selectable” in combo boxes.	Thick Client GUI	1.30
825	Closed	Bug	Normal	Inactive rooms appear in advanced scheduling	Thick Client GUI	1.30
829	Closed	Bug	Normal	Meaningful Use - Automated Measure report return duplicate user	Mgt Reports	1.30
830	Closed	Bug	High	View / Edit on a signed report will throw error on Report tab	Thick Client GUI	1.30
835	Closed	Bug	High	Perform exam - laterality codes are not retained once you start the exam.	Thick Client GUI	1.31
836	Closed	Bug	Normal	Country field defaults to USA if zip code is entered first.	Thick Client GUI	1.31
837	Closed	Bug	Normal	Removing country code changes state format	Thick Client GUI	1.31

## 6. Known Limitations

The following are Bugs, Suggested Features, and Support Issues found in build 1.31. This build is the current QE build and testing is ongoing. The list may increase in size. This document will not be updated or re-released.

#	Status	Subject	Category	Target version
839	Resolved	Interactive dictations will stay in Dictated status if use submit button	Thick Client GUI	1.31
840	New	Order tab name on reschedule	Thick Client GUI	1.31
842	Resolved	Interactive dictation can freeze after dictating on Suspended exam with no audio	Thick Client GUI	1.31
843	New	Playback device selected in Mic Wizard is not being used.	Thick Client GUI	1.31
845	New	Non Interactive User cannot playback interactive dictations	Mgt Reports	1.31
846	New	Tentative signing hold time message	Admin Tools	1.31
847	Resolved	Pending Dictation / Dictated / Report Drafted / Pending Review / Dictated need to be appended with (All)	Thick Client GUI	1.31
848	Resolved	Mammography directory for lookups	Admin Tools	1.31
853	New	Follow up orders - Need to add the ability to cancel follow up orders	Thick Client GUI	1.31
854	New	Mammo Layletters are not being sent for distribution	Thick Client GUI	1.31
855	New	Follow up work lists still have Post Exam in context menu	Thick Client GUI	1.31
856	New	Mammo exams > Recommendation and Tissue Density are not saving	Thick Client GUI	1.31
857	New	Mammo Follow Up Orders - Target date not searched on schedule	Thick Client GUI	1.31

858	New	Interactive dictation suspended throws Anymodel error when opened by non interactive user.	Thick Client GUI	1.31
859	New	Procedures scheduled with default laterality are not saved when flag for Laterality required is N	Thick Client GUI	1.31
860	Resolved	Attempting to create Technical Repeat throws error	Thick Client GUI	1.31
674	Resolved	Cancelled Orders work list buttons not enabled	Thick Client GUI	1.31



# **User Release Notes**

for eRAD RIS  
Version 1.0  
Build 32

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## **1. Purpose**

This document describes some of the new features and changes implemented in eRAD RIS as of the end of Sprint 32. This version of eRAD RIS is referred to as Build 1.32.

Only features which can be visually demonstrated to the user will be outlined in this document.

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS management team.

## **3. Installing/Accessing the Application**

The installation guide for the eRAD RIS client have been posted to the RadNet Wiki page at <http://mdbal01rdtweb/Wiki/>

Under the RIS menu, click on the rRIS page. The credentials to access the page are:

Username: rRIS

Password: Summerside

*Please note that Build 1.32 is considered a new core release of the application and will require a reinstallation of eRAD RIS. This is accomplished by navigating to the eRAD RIS shared installation drive and running the CoreInstall.bat file (ex: I:\RISDeployment\CoreInstall.bat)*

If you experience difficulties accessing the application, please do not hesitate to contact Darcy Noye with the PEI RIS Development Team.

## 4. New Features and Enhancements

### Interactive – Submit Button Changes

When opening a dictate screen as an interactive user the submit button will be modified to not show the bypass VR option as they really don't apply to this workflow. The normal submit option get rewired to send the interactive dictation directly to the transcriptionists for review.

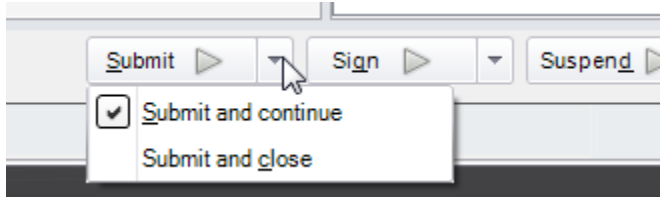


Figure 4.1 – Submit Button Options for Interactive Dictation User

## **Macro Editor Changes \ Updates**

1. In the previous build the Advanced tab on the macro editor was added. If the permission for the Advanced tab was removed an error would be thrown. This has been corrected.
2. Also now when assigning a macro to users, the list that is presented is filtered to only be Radiologists. In build 1.31 the list presented displayed all resource types
3. Before build 1.32 a macro created would automatically be assigned to the user that was creating it, even when the user did not have the resource flag for Radiologist. In Build 1.32 if the user is a rad, we will automatically assign the macro to them, if the user is not a rad we check to see who dictated the study. In the case of an MT creating a macro, there would be a dictating rad, and therefore we would assign it to the dictating rad. If there was no dictating rad and the user isn't a rad then it would not get assigned to anyone. In this case the user creating the macro (which should in theory here be an admin) will have to create the assignments manually.
4. Macros are automatically assigned to the Radiologist who created it. The creator (owner) can assign additional users to have access to the macro. In previous builds, if the macro was only assigned to the owner, other users could still see the macro in the available list. This has been corrected in build 1.32.

## **Dictation Data Window Changes \ Updates**

1. In previous builds data panes that were pinned but then closed so not in view and the layout was saved in the Dictate, Sign Reports, or Create \ Edit Reports data window, the next time the screen was loaded you could not open that data pane from the View menu. This has been corrected in build 32.
2. The ability to change the dictating Radiologist in the Summary pane of the Sign Reports window was not working. This has been fixed in build 32
3. In previous builds if the user had the user preference for Dictation Control Mode set to Minimized and the exam opened from the work list had a dictation, the dictation would not load in the minimized control. This has been fixed in build 32

## **Dictation Commands**

Below is the list of defined commands available for reporting dictation.

### **DICTATION COMMANDS**

#### **SELECTING AND CORRECTING**

**select <word sequence>** Select a word or group of words; 5 word limit, including punctuation  
CDS Live will find exact matches, as well as any related match. It will select the first available instance after the cursor.

**correct <word sequence>** Correct a word or group of words

**select <word> through <word>**

Select the text beginning with the first word spoken through to the last word spoken.

**correct <word> through <word>**

Correct the text beginning with the first word spoken through to the last word spoken.

**select all** Select all text in the entire document.

#### **FOLLOW-UP SELECTION**

**select next**

**select next one**

**next one**

Select the next instance of the currently selected text.

Can be used with:

Sentence, Section, Subsection, List Item, Paragraph, or Line.

This command requires the use of "Select Current <x>" first.

**select previous**

**select previous one**

**select previous**

Select the previous instance of the currently selected text.

Can be used with:

Sentence, Section, Subsection, List Item, Paragraph, or Line

This command requires the use of "Select Current <x>" first.

**select next <n> words**

Select the number of words (between 2 and 10, including punctuation) to the right of the cursor.

Cannot use the Next One commands in conjunction with this command.

The cursor must be at the beginning or end of a word to use this command properly.

**select previous <n> words**

Select the number of words (between 2 and 10, including punctuation) to the left of the cursor.

Cannot use the Previous One commands in conjunction with this command.

The cursor must be at the beginning or end of a word to use this command properly.

2

### CLEAR SELECTION

**clear selection** Clear the selected text. Cursor will be positioned at the end of the selection, once cleared.

**unselect text** Deselect the selected text.

**unselect that** Deselect the selected text.

### SECTION AND SUBSECTION

**toggle section/subsection**

Toggle the current selection between regular text and a section/subsection.

**new section/subsection**

Turn regular selected text into a new section/subsection at the current cursor position.

**new section <section title>: [word sequence x]**

Create a new section/subsection beginning with the section/subsection title, colon, and section content.

**insert section/subsection** Insert a new section/subsection at the current cursor position.

**new section <section title>: [word sequence x]**

Insert a new section/subsection beginning with the section/subsection title, colon, and section content.

**select current section/subsection**

Select the entire section/subsection in which the cursor is currently positioned.

**delete current section/subsection**

Delete the entire section/subsection



in which the cursor is currently positioned.

**delete next section/subsection**

Delete the next section/subsection to the right of the cursor position, excluding the current section/subsection.

**delete previous section/subsection**

Delete the previous section/subsection to the left of the cursor position, excluding the current section/subsection.

3

## LIST

**item <n> <word sequence>** Begin a list at the current cursor position with the first list item. Continue with Item <n> until complete.

**item number <n> <word sequence>** Begin a list at the current cursor position with the first list item. Continue with Item Number <n> until complete.

**next item <word sequence>** Begin a list at the current cursor position with the first list item. Next Item command continues the list.

**delete next list** Delete the next list item, excluding the current list item.

**delete previous list** Delete the previous list item, excluding the current list item.

## LINE AND PARAGRAPH

**new line/paragraph**

Start selected text on a new line/paragraph or create a new line/paragraph at the current cursor position

**next line/paragraph** Move to the next line/paragraph following the current line/paragraph.

**insert line/paragraph** Insert a new line/paragraph from the cursor position.

**select current line/paragraph**

Select the current line/paragraph in which the cursor is currently positioned.

## UNDOING AND DELETING

**delete selection**

**delete current selection** Delete the currently selected text.

All delete commands ensure proper spacing and case at the location of the deletion.

**delete current sentence** Deletes the entire sentence in which the cursor is currently positioned.

**delete next <n> words**

Delete a specified number (between 2 and 10 words, including punctuation) of words to the right of the cursor position.

If the cursor is positioned within a word, it will use that word as the first word.

**delete previous <n> words**

Delete a specified number (between 2 and 10 words, including punctuation) of words to the left of the cursor position.

If the cursor is positioned within a word, it will use that word as the first word.

**undo that**

**undo last**

**undo last command**

Undo last command spoken.

4

## CAPITALIZING

**lowercase/no caps selection** Turns current selection into lowercased text

**lowercase/no caps next <n> words**

Lowercases the sequence of <n> tokens to the left of the current cursor position

Can select between 2 and 10 words, including punctuation

**lowercase/no caps previous <n> words**

Lowercases the sequence of <n> tokens to the right of the current cursor position

Can select between 2 and 10 words, including punctuation

**uppercase/all caps selection** Turns current selection into uppercased text

**uppercase/all caps next <n> words**

Uppercases the sequence of <n> tokens to the left of the current cursor position

Can select between 2 and 10 words, including punctuation

**uppercase/all caps previous <n> words**

Uppercases the sequence of <n> tokens to the right of the current cursor position

Can select between 2 and 10

words, including punctuation

### EDITING AND FORMATTING TEXT

**boldface selection** Turns current selection into boldfaced text

**boldface next <n> words**

Boldfaces the sequence of <n> tokens to the left of the current cursor position

Can select between 2 and 10 words, including punctuation

**boldface previous <n> words**

Boldfaces the sequence of <n> tokens to the right of the current cursor position

Can select between 2 and 10 words, including punctuation

**italicize selection** Turns current selection into italicized text

**italicize next <n> words**

Italicizes the sequence of <n> tokens to the right of the current cursor position

Can select between 2 and 10 words, including punctuation

**italicize previous <n> words**

Italicizes the sequence of <n> tokens to the left of the current cursor position

Can select between 2 and 10 words, including punctuation

**underline selection** Turns current selection into underlined text

**underline next <n> words**

Underlines the sequence of <n> tokens to the left of the current cursor position

Can select between 2 and 10 words, including punctuation

**underline previous <n> words**

Underlines the sequence of <n> tokens to the right of the current cursor position

Can select between 2 and 10 words, including punctuation

5

### NAVIGATING THE DOCUMENT

**scroll up** Scrolls up

**scroll down** Scrolls down

**insert after <word>** Places cursor after the given word in insert mode

**insert after <word sequence>** Places cursor after the given word

sequence in insert mode

**insert before <word>** Places cursor before the given word

in insert mode

**insert before <word sequence>** Places cursor before the given word

in insert mode

**go to <start/begin/beginning> of**

**<sentence/paragraph>**

Places cursor at the beginning of the current sentence, paragraph, or list

**move to <start/begin/beginning> of**

**<sentence/line/paragraph>**

Places cursor at the beginning of the current sentence, line, paragraph, or

list

**go to <end/ending> of**

**<sentence/line/paragraph>**

Places cursor at the end of the current sentence, line, paragraph, or

list

**move to <end/ending> of**

**<sentence/line/paragraph>**

Places cursor at the end of the current sentence, line, paragraph, or

list

6

## FIELD COMMANDS

**next field**

**go to next field**

Positions cursor in next field (relative to current cursor position)

A Field is identified by surrounding square brackets, e.g. [This is a field]. The selection will include the brackets.

**previous field**

**go to previous field**

Positions cursor in previous field (relative to current cursor position)

**first field**

**go to first field**

Positions cursor in first field in document

**last field**

**go to last field**

Positions cursor in last field in document

## RADIOLOGY SPECIFIC COMMANDS

**go to start/begin/beginning of**

**<section name>** Places cursor at the beginning of the given section

**move to the <start/begin/beginning>**

**of the <section name>**

Places cursor at the beginning of the given section

**go to the <start/begin/beginning> of the <section name> section**

Places cursor at the beginning of the given section

**move to the <start/begin/beginning> of the <section name> section**

Places cursor at the beginning of the given section

**go to <end/ending> of <section name>**

Places cursor at the end of the given section

**move to <end/ending> of <section name>**

Places cursor at the end of the given section

**go to the <end/ending> of the <section name> section**

Places cursor at the end of the given section

**move to the <end/ending> of the <section name> section**

Places cursor at the end of the given section

**move that to beginning of <section name> section**

Moves currently selected content to the beginning of the indicated section

**move current selection to start of <section name>**

Moves currently selected content to the beginning of the indicated section

**move selection to begin of <section name>**

Moves currently selected content to the beginning of the indicated section

**move that to end of <section name>** Moves currently selected content to the end of the indicated section

**move current selection to ending of <section name> section**

Moves currently selected content to the end of the indicated section

**move current selection to <section name>**

Moves currently selected content to the end of the indicated section

## New Management Reports

### 1. Daily FAX Log

The Daily Fax log can be filtered on a specified date criteria and also on the Distribution Statuses.

#### Daily FAX Log

Date: 01/19/12

Status(s): ?, Cancelled, Completed, Error, Hold, InProgress, Pending

Date	Status	Acc # ↕	Patient Name ↕	MRN ↕	Recipient ↕	Fax # ↕	Retries	Job Id ↕	Del. Method ↕
Total Count									0

Figure 4.2 – Daily Fax Log Report

### 2. Unread Exams *\*displays all exams in status “exam done”*

The Unread Exams list cannot be filtered. It returns a list of all unread exams.

#### Unread Exams

Performed ↕	Patient ↕	MRN ↕	Acc # ↕	Procedures ↕	Performed By ↕
01/19/2012 02:22 PM	testman, dale	734	1000853	CT Head W & Sinus W [CT22] - Head	
01/06/2012 02:26 PM	Worster, Elane	2008109	1052996	PT/CT Myo Imag Perf Study [78459]	Denis Doiron
12/28/2011 12:17 PM	Bevacqua, Elva	11499448	1052999	PT/CT Myo Imag Perf Study [78459]	Ian Power
01/06/2012 01:48 PM	Oaxaca, Misha	17135	1053658	PT/CT Myocardial Multi Study [78492]	Denis Doiron
01/12/2012 07:12 PM	Zempel, Akilah	7795	1054083	PT/CT Myo Imag Perf Study [78459]	Denis Doiron
01/13/2012 04:13 PM	Delarge, Tamara	10022	1054113	PT/CT Myo Imag Perf Study [78459]	Ian Power
11/28/2011 09:17 AM	Powell, Stephen	T.34323	1058500	CT 3 Phase [CT13]	Denis Doiron
12/20/2011 11:07 AM	Lovenbury, Donnetta	11502287	1058804	CT Thoracic Spine W [72129]	Ian Power
09/01/2011 12:00 AM	Bonkers, Betty	11506331	1061341	NM Testicular W Flow [78761]	Darcy Aiken

Figure 4.3 – Unread Exams Report

## **MQSA Reporting**

### **Proposed DEFINITIONS:**

The following definitions should be used in the creation of the Mammography MQSA Audit reports. Reference the ACR BI-RADS® Breast Imaging Atlas, BI-RADS®. Mammography pages 229-260 for more information.

**Positive Exam:** An exam is considered to be positive if the BI-RADS® assessment category is 0, 4, 5 for a screening exam; or 4, 5 for a diagnostic exam.

**Negative Exam:** An exam is considered to be negative with a benign or probably benign finding if the BI-RADS® assessment category is 1, 2, or 3 for either a screening or a diagnostic exam.

MQSA does not limit the use of category 3 to diagnostic exams. Therefore, a BI-RADS® category 3 is considered negative for both screening and diagnostic exams.

**True-Positive (TP):** Cancer was diagnosed within 1 year after biopsy recommendation based on an abnormal mammogram.

(BI-RADS® Category 0, 4 or 5 for screening; BI-RADS® Category 4 or 5 for diagnostic).

**True-Negative (TN):** No known tissue diagnosis of cancer within 1 year of a negative examination

(BI-RADS® Category 1 or 2 for screening, BI-RADS® Category 1, 2 or 3 for diagnostic).

**False-Negative (FN):** Tissue diagnosis of cancer within 1 year of a negative examination

(BI-RADS® Category 1 or 2 for screening, BI-RADS® Category 1, 2 or 3 for diagnostic).

**False-Positive (FP):** Three separate definitions:

a. (FP1): No known tissue diagnosis of cancer within 1 year of a positive screening examination

(BI-RADS® Category 0, 4, or 5).

b. (FP2): No known tissue diagnosis of cancer within 1 year after recommendation for which

further imaging evaluation, biopsy, or surgical consultation on the basis of a positive

examination (BI-RADS® Category or 5 ).

c. (FP3): Benign tissue diagnosis within 1 year after recommendation for biopsy on the basis of

a positive examination (BI-RADS® Category 4 or 5).

Note:  $TP + TN + FP + FN = \text{Total number of examinations.}$

This note refers to definitions 9, 10, 11, and 12.

Positive Predictive Value (PPV): Three separate definitions:

a. (PPV1) (abnormal findings at screening): The percentage of all positive screening examinations (BI-RADS® Categories 0, 4 and 5) that result in a tissue diagnosis of cancer within 1 year. An

initial screening assessment of Category 4 or 5 is unusual, but is possible.

$PPV1 = TP / (\text{number of positive screening examinations})$

OR

$PPV1 = TP / (TP + FP1)$  [FP1 = see 12a in glossary of statistical terms]

b. (PPV2) (biopsy recommended): The percentage of all screening or diagnostic examinations

recommended for biopsy or surgical consultation (BI-RADS® Categories 4 and 5) that resulted

in a tissue diagnosis of cancer within one year.

$PPV2 = TP / (\text{number of screening or diagnostic examinations recommended for biopsy})$

OR

$PPV2 = TP / (TP + FP2)$  [FP2 = see 12b in glossary of statistical terms]

c. (PPV3) (biopsy performed): The percentage of all known biopsies done as a result of positive

screening or diagnostic examinations or additional imaging evaluations of positive screening

examinations (BI-RADS® Categories 4 and 5) that resulted in a tissue diagnosis of cancer

within 1 year. PPV3 is also known as the Biopsy Yield of Malignancy or the Positive Biopsy

Rate (PBR).

$PPV3 = TP / (\text{number of biopsies})$



OR

$PPV3 = TP / (TP + FP3)$  [FP3= see 12c in glossary of statistical terms]

Negative Predictive Value: indicates the percentage of patients who truly do not have breast cancer when the mammogram was called normal.

Sensitivity: The probability of detecting a cancer when a cancer exists or the number of cancers diagnosed after being identified at mammography in a population within 1 year of the imaging examination, divided by all cancers present in that population in the same time period.

$Sensitivity = TP / (TP + FN)$  [Remember that FN is actually a cancer case]

Specificity: The probability of interpreting an examination as negative when cancer does not exist; or the number of true-negative mammograms in a population divided by all actual negative cases (those for which there is no tissue diagnosis of cancer within 1 year of the mammogram) in the population.

$Specificity = TN / (TN + FP)$

Cancer Detection Rate: The number of cancers correctly detected at mammography per 1,000 patients examined at mammography.

- a. This is of greatest value when calculated for screening examinations only or when calculated separately for screening and diagnostic examinations.
- b. May also be calculated separately for PREVALENT cancers (those found at first-time mammographic examination) and for INCIDENT cancers (those found at subsequent screening examinations performed at or close to the recommended screening interval).
- c. May also be calculated by AGE GROUP (40–49 years, 50–59 years, etc.).

Recall Rate (Abnormal Interpretation Rate: The percentage of examinations interpreted as positive. For screening mammography, positive examinations include BI-RADS® Categories 0, 4 and 5

assessments. For diagnostic mammography positive examinations include BI-RADS® Category 4 and 5 assessments.

Recall Rate (Abnormal Interpretation Rate) = (positive examinations) / (all examinations)

Note that in many scientific publications concerning screening mammography, a Recall Rate is reported as being equivalent to the Abnormal Interpretation Rate, even though some screening

examinations occasionally are given BI-RADS® Category 4 or 5 assessments. This is done because prompt further imaging evaluation with mammography and/or ultrasound (to assess for extent of disease and to plan for imaging-guided biopsy) is also recommended in addition to tissue diagnosis for almost all (if not all) screening examinations that are given BI-RADS® Category 4 or 5 assessments.

Note from Randy Rogers:

-----

According to MQSA:

Recall Rate: # of positive examinations on screening (BI-RADS Categories 0,4 and 5) divided by the total number of examinations (screenings)

Would like this as one calculation and then a breakout of just the 0 and a breakout of 4/5. So:

Recall Rate Total

Recall Rate 0

Recall Rate 4/5

Unknown Exams: Positive exams that do not have a biopsy result (ex. BIRAD 0) and therefore cannot be classified as either true or false positives. For screening exams, BI-RADS® 0 is considered positive per ACR guidelines.

Proposed List of Reports for MQSA audit:

General Exam list: (drill down report would be ideal)

PARAMETERS to query by:	Exam Data to Display:	Statistical Data to Display:
Date Range	Patient Name	Date time report was ran
Location ( Practice, Site, etc)	Patient ID	List of parameters used.

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BIRAD codes to include. (ex. Looking for positive, negative exams). Do we want to create automatic groupings of BIRAD codes to report by??	Accession Number	
Radiologist(s) – All or specific	Exam Date	Totals per location
Filter exams by Biopsy results, Include / Exclude exams without biopsies.	Exam Status	Totals per Radiologist
Procedure Codes to query on: Ex. Looking for only Mammo Screening, or only Mammo Diagnostic exams, only Ultrasounds etc.	Dictating Radiologist	Totals per BIRADS category
	Signing Radiologist	
	Biopsy Result	
	Biopsy Date	
	BIRAD assigned	

Report should not list any exams that have not been performed. All in Signed1 status.

Summary Reporting by Location and or By Radiologist: (could be 2 different reports but data queried should be identical)

PARAMETERS to query by:	Statistical Data to Display:	Statistical Data to Display:
Date Range	Break down exams by Screening vs Diagnostic	Date time report was ran
Location ( Practice, Site, etc)	Break down Sreening and Diagnostic by procedure.	List of parameters used.
	Breakdown each procedure by BIRAD. ( so total for each birad per site/radiologist)	Total exams by Screening vs Diagnostic
	Summary per Screening ,	Total Sreening and

	per Diagnostic: True Positive Total True Negative Total False Positive Total False Negative Total Sensitivity Specificity PPV Unknown exams	Diagnostic by procedure.
	Combined total of Screening and Diagnostic exams.	Total each procedure by BIRAD. ( so total for each birad per site/radiologist)

**List of False Negative Exams - by Location and or By Radiologist:**

<b>PARAMETERS to query by:</b>	<b>Exam Data to Display:</b>	<b>Statistical Data to Display:</b>
Date Range	Patient Name	Date time report was ran
Location ( Practice, Site, etc)	Patient ID	List of parameters used.
Radiologist ( All or specific	Accession Number	Total exams by Location
	Exam Date	Total exams by Radiologist
	Exam Status	
	Dictating Radiologist	
	Signing Radiologist	
	Biopsy Result	
	BIRAD assigned	

**List of False Positive Exams - by Location and or By Radiologist:**

<b>PARAMETERS to query by:</b>	<b>Exam Data to Display:</b>	<b>Statistical Data to Display:</b>
Date Range	Patient Name	Date time report was ran
Location ( Practice, Site, etc)	Patient ID	List of parameters used.
Radiologist ( All or specific	Accession Number	Total exams by Location
	Exam Date	Total exams by Radiologist
	Exam Status	

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	Dictating Radiologist	
	Signing Radiologist	
	Biopsy Result	
	BIRAD assigned	

### List Mammography exams performed by Technologist:

PARAMETERS to query by:	Exam Data to Display:	Statistical Data to Display:
Date Range	Patient Name	Date time report was ran
Location ( Practice, Site, etc)	Patient ID	List of parameters used.
Technologist	Accession Number	Total exams by Location
Select procedures to include ( ex Mammo Screening, Mammo Diagnostc, Mammo Ultrasounds)	Exam Date	Total exams by Technologist
	Exam Status	
	Dictating Radiologist	
	Signing Radiologist	
	Biopsy Result	
	BIRAD assigned	

By technologist - list of exams where a technologist has performed a mammogram or interventional procedure within the date range and location specified in the report.

### List of Positive exams with outstanding Pathology Follow-ups:

PARAMETERS to query by:	Exam Data to Display:	Statistical Data to Display:
Date Range	Patient Name	Date time report was ran
Location ( Practice, Site, etc)	Patient ID	List of parameters used.
	Accession Number	Exam Total
	Exam Date	
	Exam Status	
	Dictating Radiologist	
	Signing Radiologist	
	Biopsy Result	
	BIRAD assigned	

All positive mammography exams performed during the specified period that do not have pathology results recorded nor does a later exam exist with pathology results.

### List of Positive exams Follow-ups by BIRAD:

PARAMETERS to query by:	Exam Data to Display:	Statistical Data to Display:
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Date Range	GROUP EXAMS by Recommendation ( ex. BIRAD 0, followup exam scheduled is Ultrasound, etc)	Date time report was ran
Location ( Practice, Site, etc)	Patient Name	
BIRAD code(s) to include	Patient ID	List of parameters used.
Procedure Codes to query on: Ex. Looking for only Mammo Screening, or only Mammo Diagnostic exams, only Ultrasounds etc.	Accession Number	Exam Total
	Exam Date	
	Exam Status	
	Dictating Radiologist	
	Signing Radiologist	
	Biopsy Result	
	BIRAD assigned	
	NEXT Exam Referring MD#	
	NEXT Exam Accesion #	
	NEXT Exam Date	
	NEXT EXAM Status	

New requirement provide a report (for Referring Physician) listing patients that have ignored all reminder letters sent (so have not returned). Also listing any patients that RadNet has not received biopsy results from.

## 5. Resolved Defects

Bugs, Suggested Features and Support Issues resolved in build 1.32. The extract is taken from Redmine bug tracking system and only displays defects resolved in 1.32.

#	Status	Tracker	Priority	Subject	Category	Target version
860	Closed	Bug	High	Attempting to create Technical Repeat throws error	Thick Client GUI	1.31
850	Closed	Bug	High	Beaumont - Management Reports window should not be modal	Thick Client GUI	1.27
839	Closed	Bug	High	Interactive dictations will stay in Dictated status if use submit button	Thick Client GUI	1.31
790	Closed	Bug	High	View / Edit data window prompts for required fields	Thick Client GUI	1.29
848	Closed	Bug	Normal	Mammography directory for lookups	Admin Tools	1.31
847	Closed	Bug	Normal	Pending Dictation / Dictated / Report Drafted / Pending Review / Dictated need to be appended with (All)	Thick Client GUI	1.31
828	Closed	Bug	Normal	Macro lookup - Cannot deactivate or delete a macro	Admin Tools	1.30
827	Closed	Bug	Normal	Assigning macros to other users includes all resource types	Thick Client GUI	1.30
823	Closed	Bug	Normal	Macros ignoring "assign to user"	Thick Client GUI	1.30
822	Closed	Bug	Normal	Remove access string Macro Editing Advanced tab and cannot edit macros	Thick Client GUI	1.30
817	Closed	Bug	Normal	Order of tabs for Order Signed	Thick Client GUI	1.30
674	Closed	Feature	Normal	Cancelled Orders work list buttons not enabled	Thick Client GUI	1.31

## 6. Known Limitations

The following are Bugs, Suggested Features, and Support Issues found in build 1.32. This build is the current QE build and testing is ongoing. The list may increase in size. This document will not be updated or re-released.

#	Status	Subject	Assigned to	Category	Target version	Resolved Version
879	New	If RIS in minimized with Dictate window open the application will not open to desktop	Clifton Harding	Thick Client GUI	1.32	
878	New	All hyperlinks in dictate / reporting summary data pane open as "Referring Details"	Stephen Powell	Thick Client GUI	1.32	
877	New	Interactive user cannot dictate if Dictation Control Mode is minimized	Clifton Harding	Thick Client GUI	1.32	
876	New	Error accessing transcribed records	Clifton Harding	Thick Client GUI	1.32	
875	New	Error trying to preview report	Clifton Harding	Thick Client GUI	1.32	
873	Resolved	User can create another new macro from the create new macro editor	Denis Doiron	Admin Tools	1.32	1.33
872	Resolved	Concurrency error on saving macro lookup.	Denis Doiron	Admin Tools	1.32	1.33
871	Resolved	Create a new macro from Macro Editor returns a Unique key violation	Denis Doiron	Admin Tools	1.32	1.33
866	New	Error thrown when changing Performed Procedure Code during perform exam	Kevin Molyneaux	Thick Client GUI	1.32	
865	New	Forms and Labels set to auto print can have multiple instances open	Darcy Aiken	Thick Client GUI	1.32	



# **User Release Notes**

for eRAD RIS  
Version 1.0  
Build 33

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## **1. Purpose**

This document describes some of the new features and changes implemented in eRAD RIS as of the end of Sprint 33. This version of eRAD RIS is referred to as Build 1.33.

Only features which can be visually demonstrated to the user will be outlined in this document.

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS management team.

## **3. Installing/Accessing the Application**

The installation guide for the eRAD RIS client have been posted to the RadNet Wiki page at <http://mdbal01rdtweb/Wiki/>

Under the RIS menu, click on the rRIS page. The credentials to access the page are:

Username: rRIS

Password: Summerside

*Please note that Build 1.33 is considered a new core release of the application and will require a reinstallation of eRAD RIS. This is accomplished by navigating to the eRAD RIS shared installation drive and running the CoreInstall.bat file (ex: I:\RISDeployment\CoreInstall.bat)*

If you experience difficulties accessing the application, please do not hesitate to contact Darcy Noye with the PEI RIS Development Team.

## 4. New Features and Enhancements

### Interactive – Submit Button Changes

When opening a dictate screen as an interactive user the submit button will be modified to not show the bypass VR option as they really don't apply to this workflow. The normal submit option get rewired to send the interactive dictation directly to the transcriptionists for review.

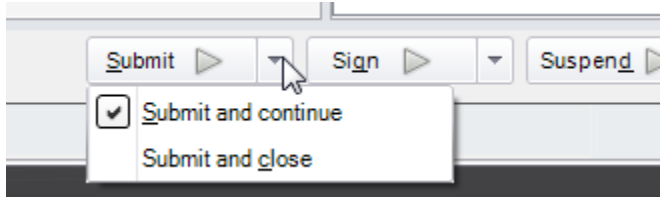


Figure 4.1 – Submit Button Options for Interactive Dictation User

### **Unknown Referring Fixes**

When a referring is unknown, the normal search button now launches the reconciliation screen. This prevents them from orphaning an unknown referring by the user selecting a different referring from the search without using the reconciliation screen.

On the user manager resource tab, the unknown referring checkbox is data bound ( as it was before) but is now visually disabled. This prevents someone from manually creating an unknown referring directly in this screen, without associating them to an order (which would make them an orphan). It also has the benefit of preventing someone from resolving an exception by unchecking the unknown checkbox, and selecting either no other resource type, or selecting them as a rad, tech, or transcriptioninists. This would create an order that is not truly linked to a referring.

When initially creating the unknown referring, the button has been renamed to Add Unknown (from Create New) to make it more intuitive.

When an order is Book-X 'ed (multiple orders are created) it is possible to re-use the same “unknown referring” on more than one order. However, the process for resolving unknown referring expects a relationship of 1 to 1 between order and unknown referring. Therefore, a message was generated after resolving each order saying:

“The unknown referring is referenced elsewhere and cannot be removed.”

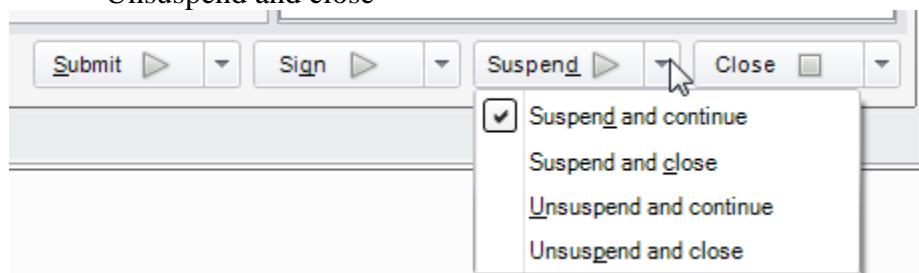
To avoid confusion this message was changed to:

"Your changes were saved, however the original unknown referring is still linked to another order."

## **Enhancements for Suspending / Un-suspending Studies**

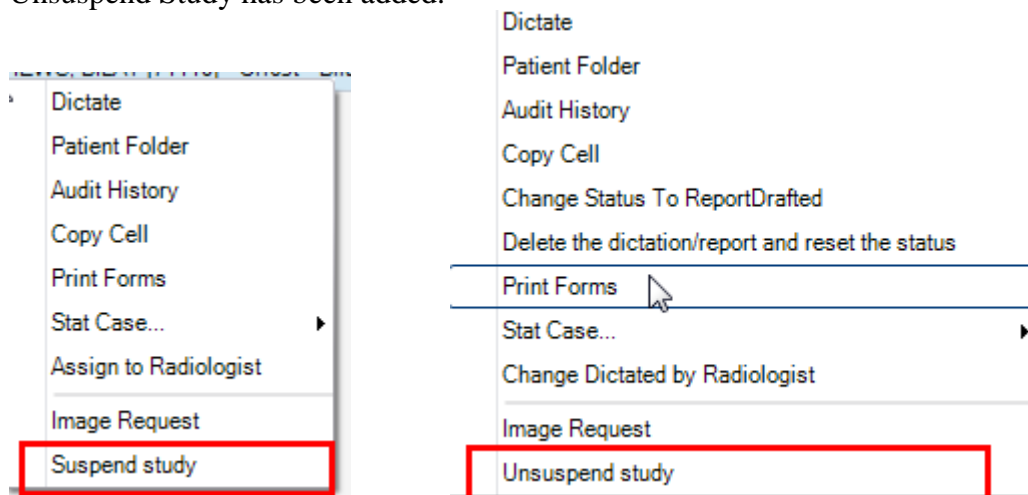
Additional ways to suspend and un-suspend studies has been added in build 33. In figure 4.1 is displaying the dictate window open on a study that is in suspended status. Two new options have been added to the Suspend button:

- Unsuspend and continue
- Unsuspend and close



**Figure 4.1 – Un-suspending options added to Suspend button drop list**

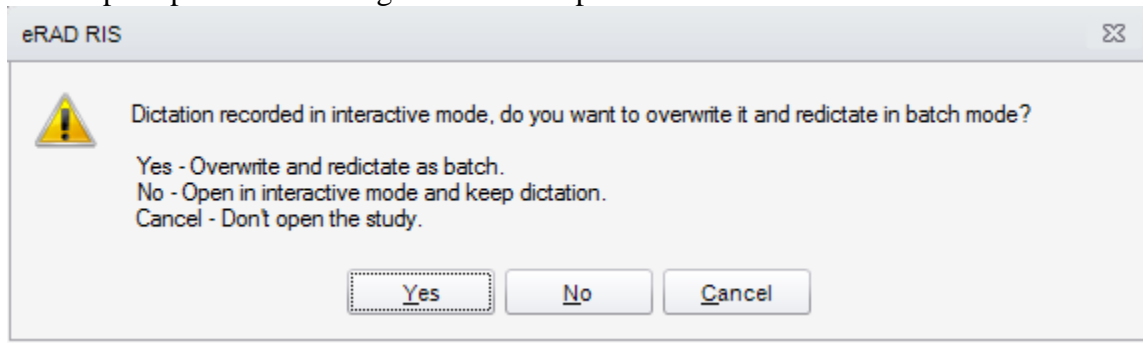
Also from the main work lists, context menu items have been added. When the study is in the Pending Dictation or Pending Signature work lists the context menu item option for Suspend Study has been added. For studies on the Suspended work list, the context menu item Unsuspend Study has been added.



**Figure 4.2 – Context menus displaying options to Suspend / Un-suspend studies from the work list**

## **Interpretation Type Handling**

In previous builds a non-Interactive (or desktop dictation) would encounter an error when opening a dictated study that was completed using Interactive dictation, and vice versa. In build 33 when a user opens a study that was dictated in a mode different than their current mode, they will be prompted with message box with 3 options.



**Figure 4.3 – New message box for non-interactive user opening interactive dictation.**

The message describes the action of each option.

**Yes** – Will open the dictate window with no dictation, and no text in report. If the dictate window is closed you will be prompted if you would like to save your changes. Selecting no will retain the original

**No** – Will open the dictate window in Interactive mode (even if the user's current preference is non-interactive) and keep the current dictation

**Cancel** – Will return the user to the work list.

## New Management Reports

### 1. Audit Log

#### Audit Log

Date: 1/24/2012  
User: IAN

Date\Time ↕	Patient ↕	User ↕	Description ↕	Changes ↕
1/24/2012 7:55 AM	(998877799): Eckerd, Sally	(lan).Power, Ian	Study Retrieved	
1/24/2012 8:04 AM	(998877799): Eckerd, Sally	(lan).Power, Ian	Study Updated	<Changes><ModifiedRows><c_patient><last_medication_sync Before="18/01/2012 4:51:24 PM - 04:00" After="24/01/2012 8:01:29 AM - 04:00" /></c_patient></ModifiedRows><DeletedRows><c_patient_medication /></DeletedRows><AddedRows><c_patient_medication /></AddedRows></Changes>
1/24/2012 8:04 AM	(998877799): Eckerd, Sally	(lan).Power, Ian	Study Updated	<Changes><AddedRows><c_patient_contact /></AddedRows></Changes>
1/24/2012 8:04 AM	(998877799): Eckerd, Sally	(lan).Power, Ian	Study Retrieved	
1/24/2012 8:07 AM	(998877799): Eckerd, Sally	(lan).Power, Ian	Study Updated	<Changes><ModifiedRows><c_patient><last_medication_sync Before="24/01/2012 8:01:29 AM - 04:00" After="24/01/2012 8:04:43 AM - 04:00" /></c_patient><c_patient_medication><dea_class_code Before="" After="0" /></c_patient_medication><c_patient_lab_result><observation_date Before="05/02/2010 12:00:00 AM - 04:00" After="15/07/2009 12:00:00 AM - 03:00" /><requested_date Before="17/01/2012 12:00:00 AM - 04:00" After="15/07/2009 12:00:00 AM - 03:00" /></c_patient_lab_result></ModifiedRows><DeletedRows><c_patient_medication /></DeletedRows><AddedRows><c_patient_medication /></AddedRows></Changes>

Figure 4.4 – Audit Log Report

### 1. Audit Log by Patient



## Audit Log by Patient

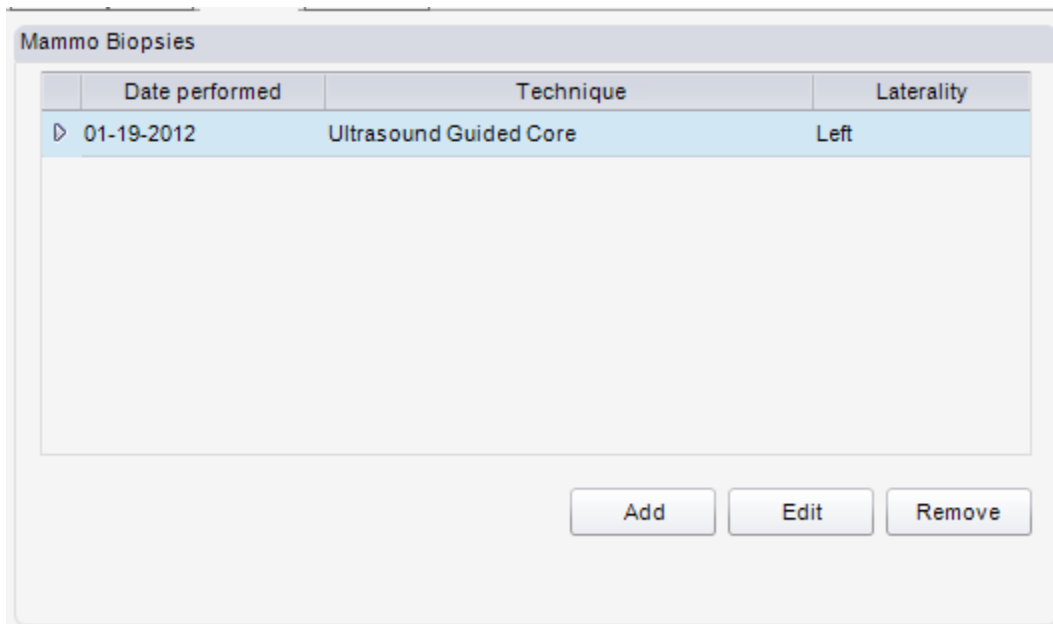
Patient: (11040) Senior, Bob

Log Date ↕	Log Time ↕	User ID ↕	Username ↕	description ↕	modification meta data ↕
01-25-2012	01:14 PM	lan	Ian Power	Study Scheduled	<Changes><AddedRows><c_patient /><c_patient_drug_allergy /><c_patient_problem_list /><c_patient_medication /><c_patient_lab_result /></AddedRows></Changes>
	01:14 PM	lan	Ian Power	Study Scheduled	<Changes><AddedRows><c_visit /></AddedRows></Changes>
	01:14 PM	lan	Ian Power	Study Scheduled	<Changes><AddedRows><c_order /></AddedRows></Changes>
	01:14 PM	lan	Ian Power	Study Scheduled	<Changes><AddedRows><c_study /><c_study_item /><c_study_item_certification /><c_billing_detail /></AddedRows></Changes>
	01:15 PM	lan	Ian Power	Patient Retrieved	
	01:15 PM	lan	Ian Power	Study Retrieved	
	01:15 PM	lan	Ian Power	Study Confirmed	<Changes><ModifiedRows><c_study><confirmed_flag Before="N" After="Y" /></c_study></ModifiedRows></Changes>
	01:15 PM	lan	Ian Power	Study Retrieved	
	01:16 PM	lan	Ian Power	Study Updated	<Changes><ModifiedRows><c_patient><last_medication_sync Before="25/01/2012 1:13:59 PM -04:00" After="25/01/2012 1:15:59 PM -04:00" /></c_patient><c_patient_medication><dea_class_code Before="" After="0" /></c_patient_medication></ModifiedRows></Changes>
	01:16 PM	lan	Ian Power	Study Updated	<Changes><ModifiedRows><c_visit><provided_clinical_summary_date Before="25/01/2012 12:00:00 AM" After="25/01/2012 1:16:02 PM" /><timely_access_date Before="25/01/2012 12:00:00 AM" After="25/01/2012 1:16:02 PM" /><transition_of_care_summary_flag Before="N" After="Y" /><transition_of_care_to_provider_flag Before="N" After="Y" /></c_visit></ModifiedRows><AddedRows><c_patient_contact /></AddedRows></Changes>

Figure 4.5 – Audit Log by Patient

## **Mammography Biopsy and Pathology**

A tab was added to the Post Exam screen that displays current biopsies, allows for adding new biopsies, and provides edit/remove functionality.



**Figure 4.6 – Mammo Biopsy data pane from the Follow-up data window**

- Clicking the Add or Edit button will present the Add/Edit Dialog, where biopsy information can be collected. On the next screen capture:
  - 1: Correlate biopsies with other studies
    - Clicking a checkbox will correlate the biopsy with the study corresponding to the checkbox row. After checking, the biopsy would appear if the checked row study was opened.
  - 2: Required fields
    - All fields on this side of the screen are required as of Sprint 29.
  - 3: Technical data
    - No fields on this side are required as of Sprint 29.
  - 4: Multi-type look ahead

- Pathology codes will automatically display if the first character of any word in the code is entered. For instance if the desired code is “The First Code”, it will appear if the character (T, F, or C) is entered.

The screenshot shows the 'Add Mammo Biopsy' form. At the top, there is a table with columns: Include, Flags, Status, Procedures, Referring, Accession #, Birad Code, Signed By Radiologist, MRN, and Patient. Two rows are visible, both for 'Signed1 MA Digital Mammo Screen Bil w Implants [G0202IMP] - Breast' by Heather813 Franco. Below the table, the form is divided into two main sections: 'General' and 'Technical'. The 'General' section includes fields for 'Performing Surgeon' (highlighted with a red box and '1.'), 'Biopsy Location', 'Biopsy Technique', 'Date Performed', 'Lesion Classification' (Benign/Malignant), 'Breast Side' (Left/Both/Right), 'Performed' (Internal/External), 'Additional Surgery' (Not Required/Required), 'Follow-up' (Not required/Required), and 'Follow-up Interval'. The 'Technical' section includes fields for 'Nipple Involved' (Yes/No), 'Tumor Size' (mm), 'Nodes Removed', 'Nodes Positive', 'Estrogen Receptor' (+/-), 'Progesterone Receptor' (+/-), 'Stage', 'S Phase', 'Margin Status' (Involved/Uninvolved), 'Pathology Codes' (highlighted with a red box and '4.'), and 'Differentiation' (Well/moderately/poorly differentiated). The 'Pathology Codes' dropdown shows 'Edema' and 'Benign Cyst' as options. At the bottom right are 'Save' and 'Cancel' buttons.

**Figure 4.7 – Add Mammo Biopsy**

- The performing surgeon can be selected /added from the referring physician popup.

**Add Mammography Biopsy**

**Referring Search**

Search Criteria

First Name:  City:

Last Name:  Phone #:

NPI:

Last Name	First Name	Summary	Work Address	Home Address
Doiron	Denis	User: denis Gender: M denis.doiron@radnet.com Cell: (902) 439-3656 ID: 1050	Report Delivery: Fax Print Testing Kensington, PE C)Blm0	
Yeo	Dale	User: dale Gender: M dale.yeo@radnet.com Cell: (902) 555-5555 ID: 1051	Report Delivery: Fax 123 Pine Dr LA, CA 90210 Fax: (999) 555-3121 Phone: (999) 555-1213	Report Delivery: Fax 222 Evergreen Terrace LA, CA 90211 Fax: (999) 867-2121 Phone: (999) 868-5151
Aiken	Darcy	User: darcy Gender: M Cell: ID: 1076 NPI: 768343	Report Delivery: Fax 26 Rocky Oak Blvd. 84 South Green Milton Boulevard Lubbock, Ohio 72489 Fax: dfasdf	
Hampton	Dylan	Gender: U Cell: ID: 281	Report Delivery: Fax	

Results exceed the 100 row limit

Differentiation:

☐ Well differentiated

☐ Moderately differentiated

☐ Poorly differentiated

Figure 4.8 – Performing Surgeon Search

- Follow-up orders can be created after “Create Followup” is clicked

The screenshot shows the 'Add Mammo Biopsy' window. At the top is a table with columns: Include, Flags, Status, Procedures, Referring, Accession #, Birad Code, Signed By Radiologist, MRN, and Pe. The table contains two rows of data. Below the table are two main sections: 'General' and 'Technical'. The 'General' section includes fields for Performing Surgeon, Biopsy Location, Biopsy Technique, Date Performed, Lesion Classification (Benign/Malignant), Breast Side (Left/Both), Performed (Internal/External), Additional Surgery (Not Required/Required), and Follow-up (Not required/Required). The 'Technical' section includes fields for Nipple Involved (Yes/No), Margin Status (Involved/Uninvolved), Pathology Codes (Edema, Benign Cyst), and Differentiation (Well, Moderately, Poorly differentiated). A 'Create Followup' dialog box is open in the center, showing Site: Fisher, Interval: 4 months, and buttons for Schedule and Cancel.

Include	Flags	Status	Procedures	Referring	Accession #	Birad Code	Signed By Radiologist	MRN	Pe
<input type="checkbox"/>		Signed1	MA Digital Mammo Diag Uni [G0206] - Breast	Heather813 Franco	1067082	4	Jeremy Noonan	T.267 01-	
<input checked="" type="checkbox"/>		Signed1	MA Digital Mammo Screen Bil w Implants [G0202IMP] - Breast	Heather813 Franco	1067155	4	Jeremy Noonan	T.267 01-	

**General**

Performing Surgeon:

Biopsy Location:

Biopsy Technique:

Date Performed:

Lesion Classification: ☒ Benign ☐ Malignant

Breast Side: ☒ Left ☐ Both

Performed: ☒ Internal ☐ External

Additional Surgery: ☒ Not Required ☐ Required

Follow-up: ☐ Not required ☒ Required

Follow-up Interval:

**Technical**

Nipple Involved: ☐ Yes ☐ No

☐ (+) ☐ (-)

☐ (+) ☐ (-)

Margin Status: ☐ Involved ☐ Uninvolved

Pathology Codes:

Differentiation: ☐ Well differentiated ☐ Moderately differentiated ☐ Poorly differentiated

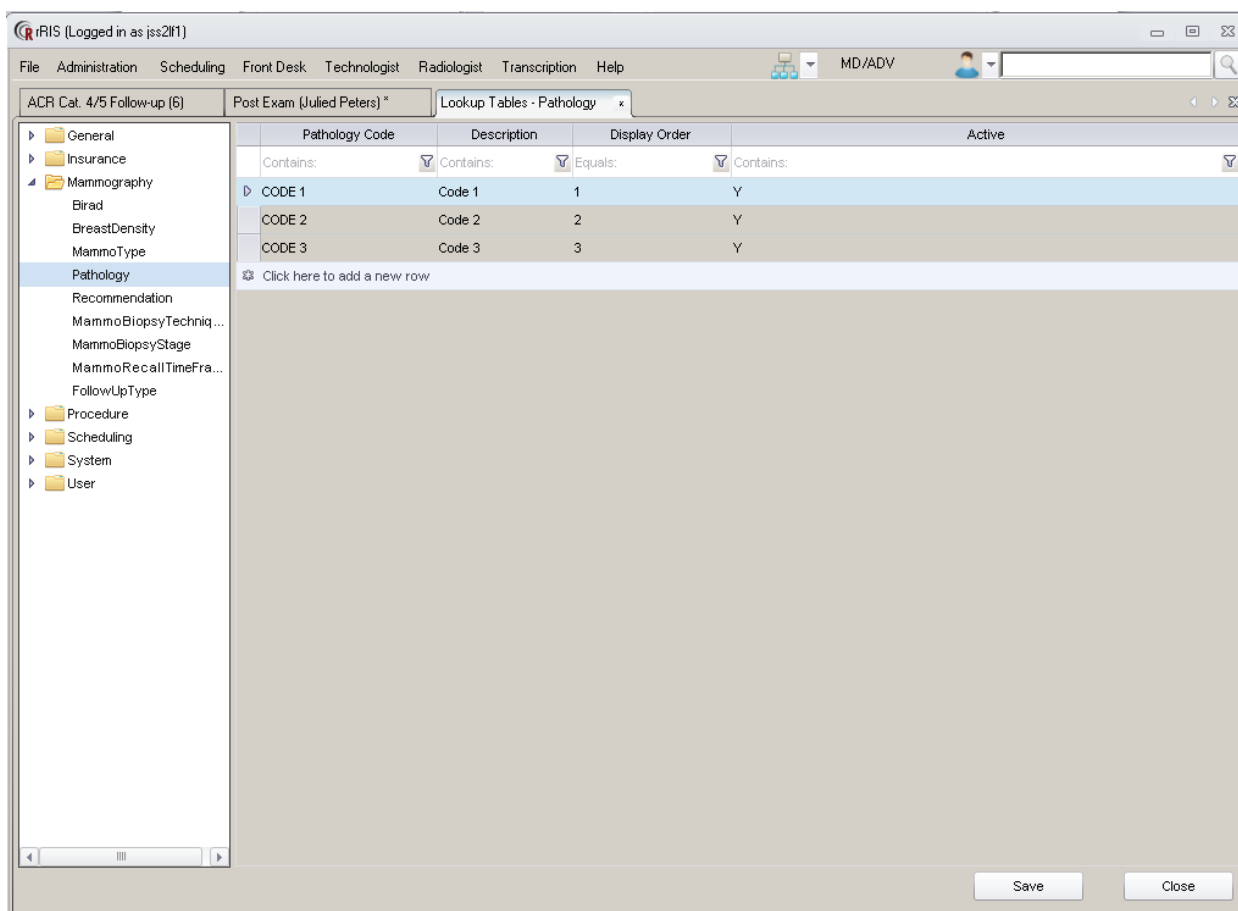
**Create Followup**

Site:

Interval:

**Figure 4.9 – Dialogue from Create Followup**

- Pathology, Biopsy techniques, and Biopsy stages can be added/edited from the lookup table editor:



**Figure 4.10 – Pathology lookup table**

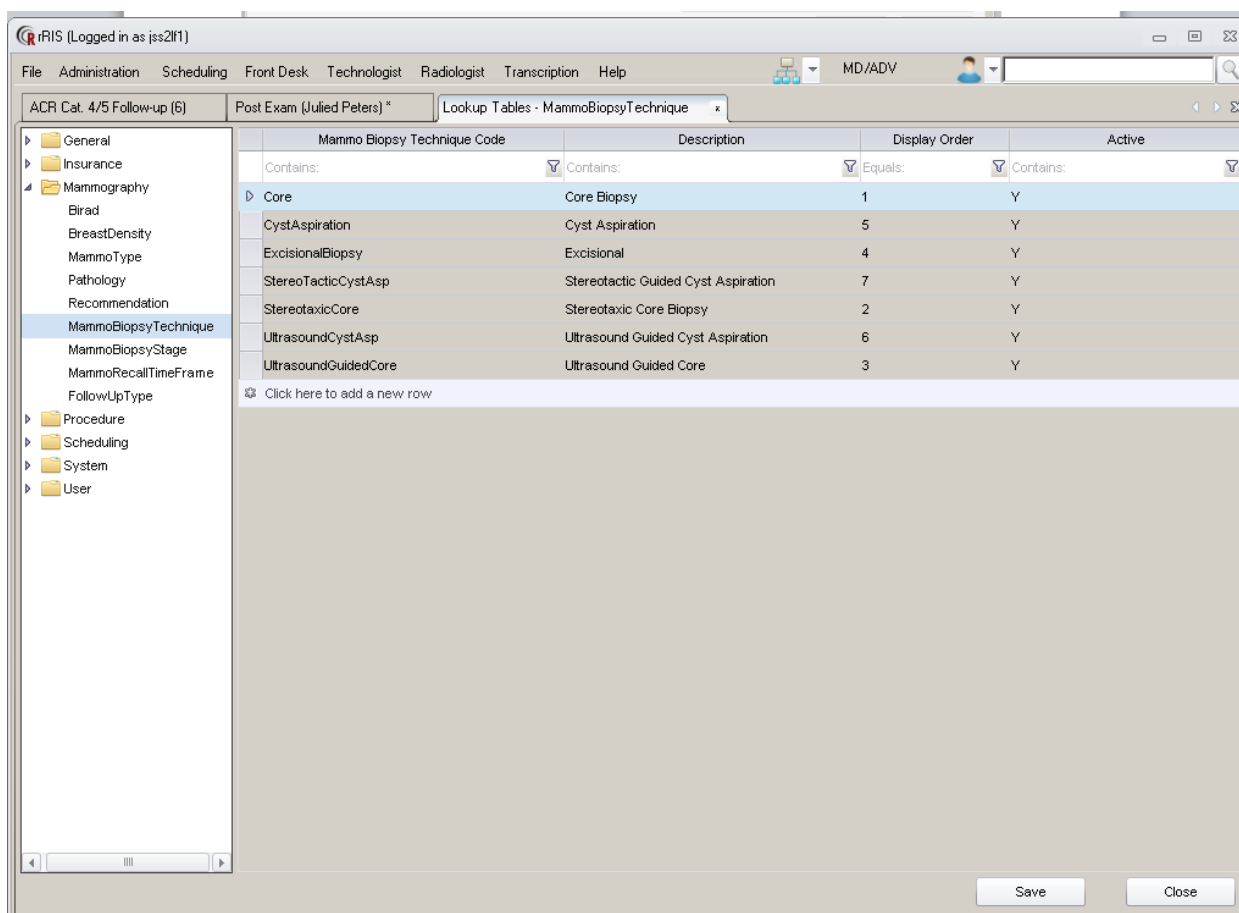
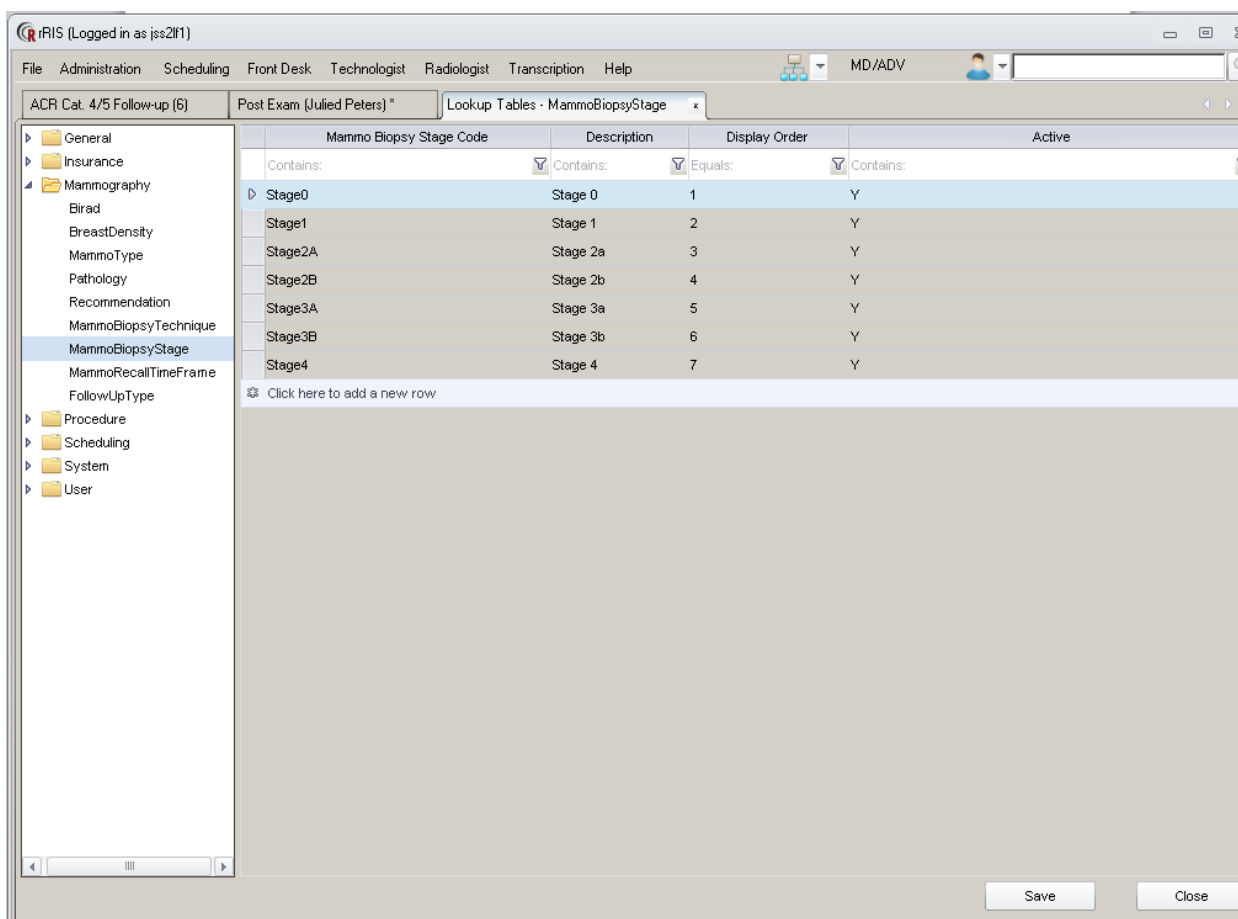


Figure 4.11 shows the Mammo Biopsy Technique Lookup Table in the eRAD RIS software. The interface includes a menu bar, a sidebar with a tree view, and a main table area. The table lists several biopsy techniques with their codes, descriptions, display orders, and active status.

Mammo Biopsy Technique Code	Description	Display Order	Active
Core	Core Biopsy	1	Y
CystAspiration	Cyst Aspiration	5	Y
ExcisionalBiopsy	Excisional	4	Y
StereoTacticCystAsp	Stereotactic Guided Cyst Aspiration	7	Y
StereotaxicCore	Stereotaxic Core Biopsy	2	Y
UltrasoundCystAsp	Ultrasound Guided Cyst Aspiration	6	Y
UltrasoundGuidedCore	Ultrasound Guided Core	3	Y

**Figure 4.11 – Mammo Biopsy Technique Lookup Table**



**Figure 4.12 – Mammo Biopsy Stage Lookup table**



### **Scan Doc Events**

The transfer of scanned documents to the PACS was needed. The action queue mechanism already supported sending events to Mirth. New db\_action types were added for StudyCorrected, ScanDocAssociated, ScanDocDisassociated, ScanDocCreated, ScanDocUpdated, ScanDocDeleted. Actions of these types are sent to Mirth which writes out an xml file describing the action and containing the relevant keys.

From the PACS side a script was written to pull data from the RIS database and push it to the PACS. As described above we now notify the script that images / documents should be transferred.

### **Front end integration with PACS - MRN + Accession**

Previously we used the study instance UIDS to match with the PACS image. In build 33 we will now match on MRN as well as the Accession number as well as the 2 most relevant Priors.

## 5. Resolved Defects

Bugs, Suggested Features and Support Issues resolved in build 1.33. The extract is taken from Redmine bug tracking system and only displays defects resolved in 1.33.

#	Tracker	Priority	Subject	Category	Target version
888	Bug	Urgent	Perform Exam - If you select include check box on second exam change reason code is required	Thick Client GUI	1.33
881	Bug	High	Constraint exception on visit table when saving a multiple study containers	Web Services/DB	1.32
872	Bug	High	Concurrency error on saving macro lookup.	Admin Tools	1.32
866	Bug	High	Error thrown when changing Performed Procedure Code during perform exam	Thick Client GUI	1.32
856	Bug	High	Mammo exams > Recommendation and Tissue Density are not saving	Thick Client GUI	1.31
742	Bug	High	Beaumont - Issue with WSBinding	Web Services/DB	1.25
898	Bug	Normal	Suspending a transcribed study from work list context menu will not prompt with Suspended message	Thick Client GUI	1.33
878	Bug	Normal	All hyperlinks in dictate / reporting summary data pane open as "Referring Details"	Thick Client GUI	1.32
873	Bug	Normal	User can create another new macro from the create new macro editor	Admin Tools	1.32
871	Bug	Normal	Create a new macro from Macro Editor returns a Unique key violation	Admin Tools	1.32
863	Bug	Normal	Error on AssignedRad when attempting to edit image request from perform exam.	Thick Client GUI	1.31
862	Bug	Normal	Attempting to Add image request can throw an error	Thick Client GUI	1.31
855	Bug	Normal	Follow up work lists still have Post Exam in context menu	Thick Client GUI	1.31
832	Bug	Normal	Demographics at encounter is duplicated	Thick Client GUI	1.32

## **RADNET, Inc. – eRAD RIS Pre-Release Notes**

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768	Bug	Normal	CQM window > Report Interval fields need to be longer	Thick Client GUI	1.33
724	Bug	Normal	Patient Tab > View Clinical Document wrong tab stop	Thick Client GUI	1.33
679	Bug	Normal	Drug Allergy data panel	Thick Client GUI	1.33

## 6. Known Limitations

The following are Bugs, Suggested Features, and Support Issues found in build 1.33. This build is the current QE build and testing is ongoing. The list may increase in size. This document will not be updated or re-released.

#	Status	Subject	Category	Target version	Resolved Version
895	New	Signing Interactive job as non interactive user can delete report	Thick Client GUI	1.33	
886	Resolved	Removing Pathology codes throws error	Thick Client GUI	1.33	1.34
883	Resolved	Saving Biopsy result can throw error	Thick Client GUI	1.33	1.34
900	New	Add multiple to UserGroupPermission throws exception	Admin Tools	1.33	
899	Resolved	Study suspended without interpretation throws error after suspended message	Thick Client GUI	1.33	1.34
896	Resolved	Issues with Changing "Internal RIS" passwords.	Admin Tools	1.33	1.34
894	Resolved	Multi order scheduling search results not picking correct times	Thick Client GUI	1.33	1.34
893	New	Macro editing - same user can be added twice	Admin Tools	1.33	
892	New	Dictate > if duplicate MRN's exist but from different issuer of ID the Summary and Exam Information can display different patient names	Web Services/DB	1.33	
891	New	multiple study scheduling search results not correct for first site on list	Web Services/DB	1.33	1.34
890	Resolved	On a new order removing procedure with laterality code throws error	Thick Client GUI	1.33	1.34

## **RADNET, Inc. – eRAD RIS Pre-Release Notes**

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887	New	Cannot submit dictation db constraint	Web Services/DB	1.33	
885	New	Mammo Follow-up > Add \ Edit biopsy tabbing order	Thick Client GUI	1.33	
884	Resolved	When region and language format is not English (United States) then "Meaningful Use" on administration screen does not work	Thick Client GUI	1.33	1.34
882	New	Adding Performing Surgeon from search throws error	Thick Client GUI	1.33	
897	Resolved	Placement of tabs on Book X	Thick Client GUI	1.33	1.34

# **User Release Notes**

for eRAD RIS  
Version 1.0  
Build 34

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## **1. Purpose**

This document describes some of the new features and changes implemented in eRAD RIS as of the end of Sprint 34. This version of eRAD RIS is referred to as Build 1.34.

Only features which can be visually demonstrated to the user will be outlined in this document.

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS management team.

## **3. Installing/Accessing the Application**

The installation guide for the eRAD RIS client have been posted to the RadNet Wiki page at <http://mdbal01rdtweb/Wiki/>

Under the RIS menu, click on the rRIS page. The credentials to access the page are:

Username: rRIS

Password: Summerside

*Please note that Build 1.34 is considered a new core release of the application and will require a reinstallation of eRAD RIS. This is accomplished by navigating to the eRAD RIS shared installation drive and running the CoreInstall.bat file (ex: I:\RISDeployment\CoreInstall.bat)*

If you experience difficulties accessing the application, please do not hesitate to contact Darcy Noye with the PEI RIS Development Team.



## 4. New Features and Enhancements

### TWAIN Scanning

Originally the eRAD RIS was going to support WIA (Windows Image Acquisition: [http://msdn.microsoft.com/en-us/library/windows/desktop/ms630368\(v=vs.85\).aspx](http://msdn.microsoft.com/en-us/library/windows/desktop/ms630368(v=vs.85).aspx)) scanning only. Most modern scanners support WIA technology with updated drivers from the manufacturer. There are some that have not provided support and do not intend to provide support for pre-existing hardware.

Build 34 will now support TWAIN as well as the existing support we had for WIA. In the figure below you will see a new menu option under the File Menu titled Scanning. The sub menu provides the user with the option to select the type of scanning they require.

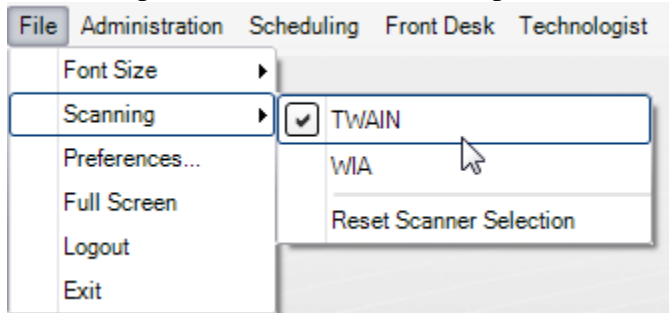
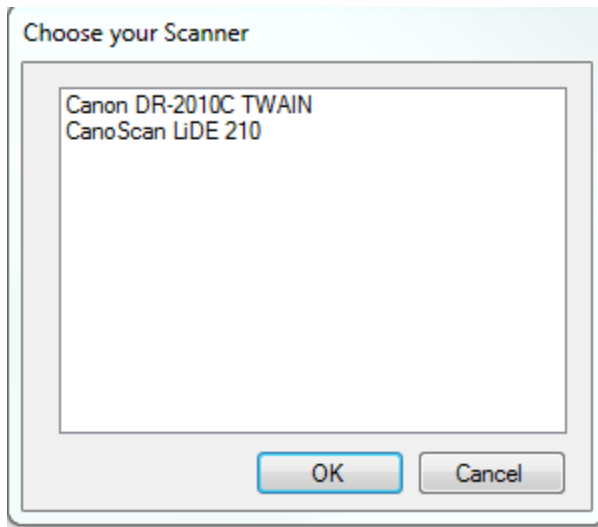


Figure 4.1 – File > Scanning menu

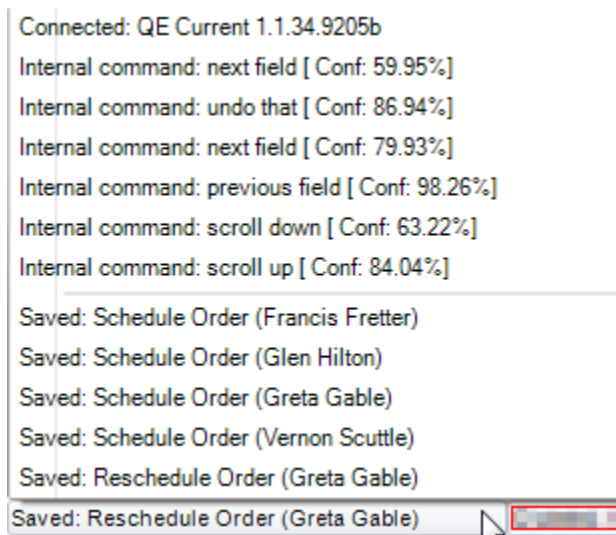
Also, in the above menu, is the option “Reset Scanner Selection”, which is used to reset the default scanner for cases where the user has more than one scanner to choose from and wants to switch scanners or the previously used scanner has been disconnected. After choosing “Reset Scanner Selection”, the next time the user performs a scan they will receive a prompt to select a scanner.



**Figure 4.2 – Choose your Scanner selection box**

## **Enhancements to Status Area**

To make the status message area more usable, we've split the context based menu items and non-context based status messages as displayed below



**Figure 4.3 – Enhanced Status Area**

The non-context items show at the top above the status area separator in order that they occurred (up to 12 items). As you can see in the figure above it is displaying messages for internal commands and are displaying the type of command (Internal or Custom) the command issued (next field, Scroll down, etc.) and the confidence that the recognizer determined the speech ([Conf: 86.94%]).

The context based status messages are displayed at the bottom of the list. The text showing on the actual status bar in this case “Saved: Reschedule Order (Greta Gable)” is the last thing that was written regardless of context.

## MU Screen Changes

Changes were identified as needed in order to improve usability of certain MU features.

- 1) The eLab button was removed completely.
- 2) The eRx button is security driven.
- 3) Moved the blood pressure, the patient education and the immunization grid to the hidden MU window.

The screenshot shows a software window titled "Meaningful Use" with a close button in the top right corner. The window contains two main sections. The top section is a list of checkboxes for various patient care tasks, arranged in two columns. The bottom section is titled "Immunizations" and contains a table with columns for Vaccine, Date, Qty, Units, and Lot #. Below the table is a scroll bar and a button labeled "Click here to add a new row". At the bottom right of the window are two buttons: "Encrypt File" and "Export HL7".

☐ Provided Clinical Summary to Patient

☐ Administered Influenza Vaccine

☐ Provided Educational Resources

☐ BMI Follow Up Plan

☐ Medical Reconciliation

☐ BMI Dietary Consultation

☐ Electronic Access to Health Record

☐ Cessation Counseling

☐ Transition of Care to Another Provider

Blood Pressure:  /

Lab Orders Placed

Lab Orders Received

☐ Transition of Care Summary Provided

**Immunizations**

Vaccine	Date	Qty	Units	Lot #
Adenovirus, type 4 and type 7, live, oral	02-08-2012	1 L	3	O

Click here to add a new row

Encrypt File ☐ Export HL7

**Figure 4.4 – Hidden MU window changes**

- 4) Visit Tab has been added to the Perform Exam workflow.

Technologist WL (1) **Perform Exam** (Vernon Scuttle) x

Include	Flags	Status	Procedures	Scheduled Date	Referring	Room	Accession #	Read STAT	Sedation	Exam STAT	Modality Type
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Arrived	XR RIBS 2 OR MORE VIEWS, UNILAT [71100] - Chest	02-17-2012 3:50 PM	Darcy Noye	XR1LU	1010233				XR

Patient Order Documentation Billing Codes Attachments Notes / Exam Times **Visit** Image Request (0)

**Demographics at Encounter**

Height:  Weight:  lbs BMI:

Smoking Status:  ☐ Is Pregnant

**Clinical Summary**

Continuity of Care Record (CCR) View External Clinical Document

**Medications**

☐ None ☐ Use Grid ☐ Show Inactive

Date	Medication	Physician	SIG Text
12-14-2011	Lipitor 20mg tablet	Darcy Thane...	1 tablet as di...

**Allergies**

☐ None ☐ Use Grid

Allergy	Reaction	Severity	Status	Start
▶				

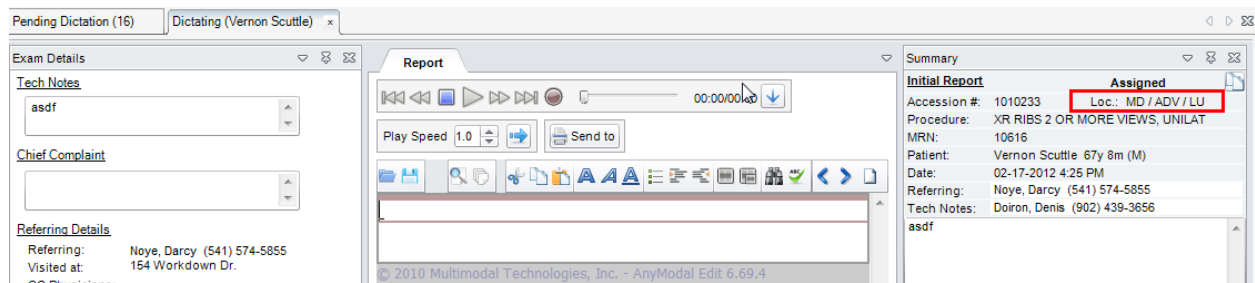
**Figure 4.5 – Visit tab for Technologists**

## Organization Added to Exam Information of Summary / Exam Details

It was requested to have the Organization path added to the reporting window. In build 34, the Exam Details and the Summary pane now display this information. If the exam was from an outside read, the side will be indicated as “OUT” as displayed in figure below.

The screenshot shows a software interface with two main panes: 'Exam Details' on the left and 'Report' on the right. The 'Exam Details' pane contains several sections: 'Tech Notes' (with a text area and a mouse cursor), 'Chief Complaint' (with a text area), 'Referring Details' (with fields for Referring: Noye, Darcy (541) 574-5855, Visited at: 154 Workdown Dr., and CC Physicians:), 'Exam Information' (with fields for Location: MD / ADV / OUT, Accession #: 1009808, Procedure: FL Arthrogram Elbow MR [FL 3], Scanner: OutsideRead\_XR, Body Part: Elbow, Laterality:, Primary Tech: Tech, Outside, and Assisting Tech(s)), and 'Patient Information' (with Name: Yena Xroller, 55y, 6m (F)). The 'Report' pane shows a 'Report' tab, navigation buttons, and a copyright notice '© 2010 Multimodal'. The 'Location: MD / ADV / OUT' field in the 'Exam Information' section is highlighted with a red rectangular box.

Figure 4.6 – Exam Details of dictating / reporting window



**Figure 4.7 – Summary pane of dictating / reporting window**

## Medical Transcriptionist Reminder On Save

When transcribing reports the transcriptionist has the ability to assign the report to another user or to the problem or QA work lists.

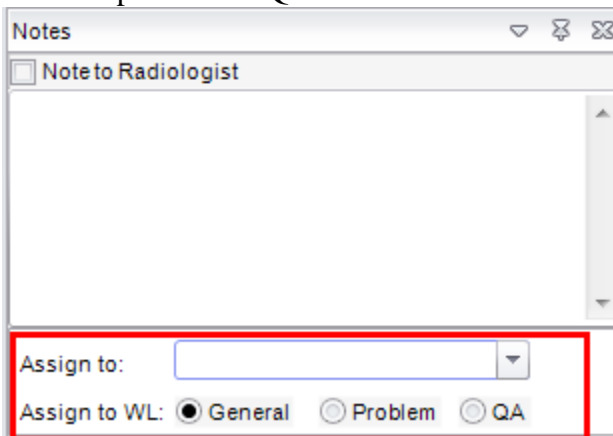


Figure 4.8 – Reporting window, Notes data pane showing the ability to assign to a user or work list

A reminder in the form of pop-up messages has been added when the Transcribe button is selected.

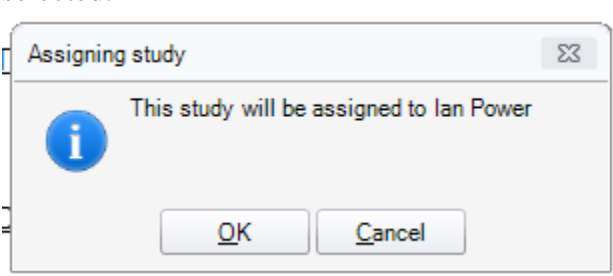


Figure 4.9 – Assigning to a user

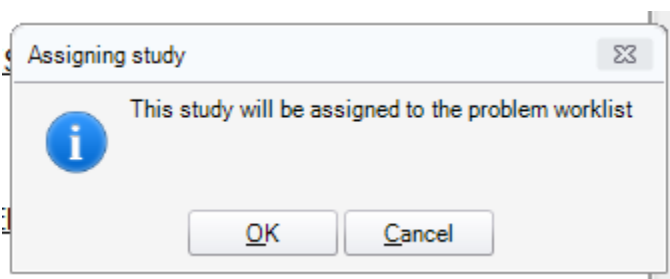


Figure 4.10 – Assigning to a work list



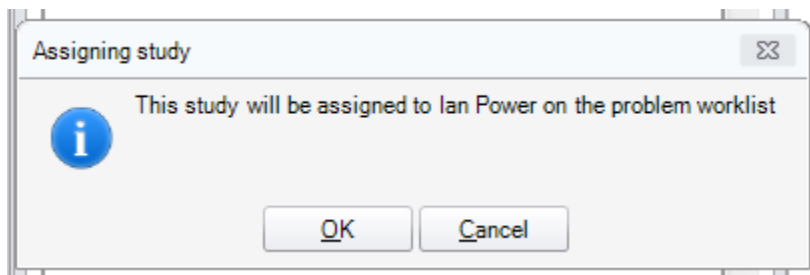


Figure 4.11 – Assigning to a user and a work list

### Suspending from Work List Permissions

Two new access strings have been added to control who and when the suspend from work list options are available.

1. Clinical.SuspendStudyFromOtherUser
2. Clinical.UnsuspendStudyFromOtherUser

These access strings gives the user the permission to Suspend and Unsuspend pretty much anything regardless who owns it at the time.

If a user doesn't have these permission(s) then he can only

- Unsuspend – when the job is suspended by the current user.
- Suspend
  - Exam done
    - If it's not dictated yet, the user can suspend it if he is the assigned radiologist, or if it's not assigned to any radiologists
    - If it's dictated, the user can suspend it if he is the dictating radiologist.
  - Dictated or Report Drafted
    - The user can suspend if he is the dictating radiologist or if he is the assigned MT
  - Transcribed
    - The user can suspend if he is the dictating radiologist or if he is the MT that transcribed.

## Interactive Panel Event Logging

The Interactive Panel is accessed from the Radiologist menu. The menu option is controlled by the access string **Clinical.Rad.InteractivePanel**. By default this access string is set to none in the access string lookup table and must be added to the UserGroupPermission lookup table. As the access string would suggest, it would be available to Radiologist group.

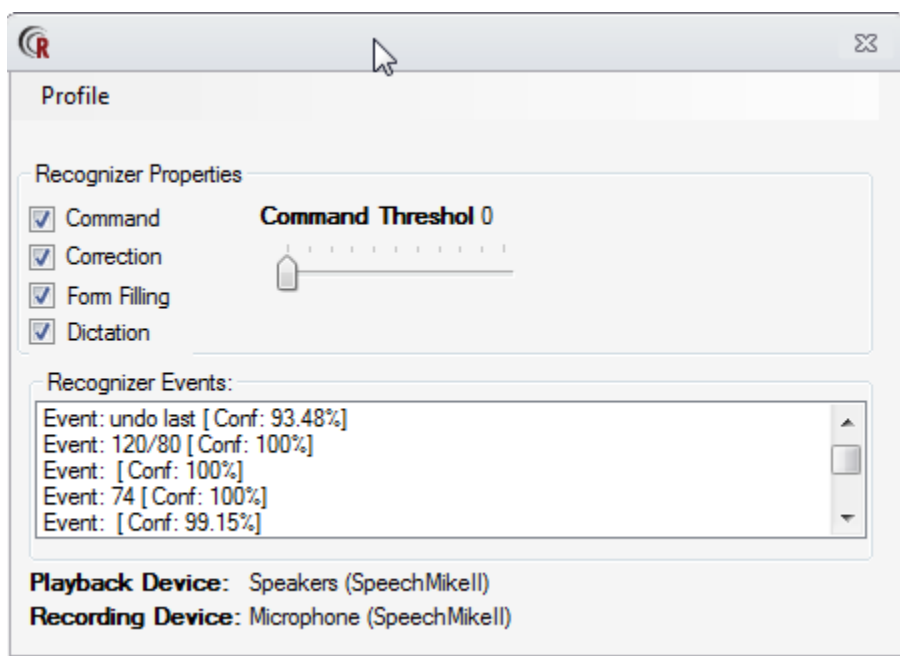


Figure 4.12 – Interactive Panel

The Interactive control panel listens to the recognizer events and writes the recognized utterance and the confidence level at which it recognized it.

This can be opened and remain visible, drag it out of the way, while the user is dictating.

**Note:** events will not be written to the log while the Interactive Panel is closed to save resources.

The Recognizer Properties control what interactive commands / dictation events that can be used in the document. For example if the flag for “Command” is removed, voice commands such as “go to the end of the Findings section” will no longer be accepted in the document.

There are no save, ok or cancel buttons in this window. If a flag is selected / unselected, it will be saved when the window is closed.

## Spell Check Prompts

From the reporting window, if there is spelling errors detected in the report, once the user selects the Sign or Transcribed buttons the user will be prompted asking if they would like to correct the errors.

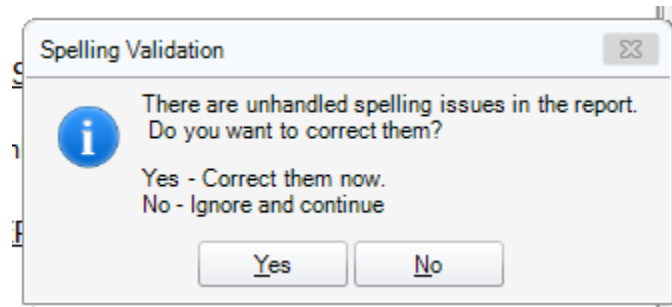


Figure 4.13 – Spelling Error Message Prompt

Selecting “Yes” will open the spell check window giving the user the options to Ignore, Change, Add, etc...

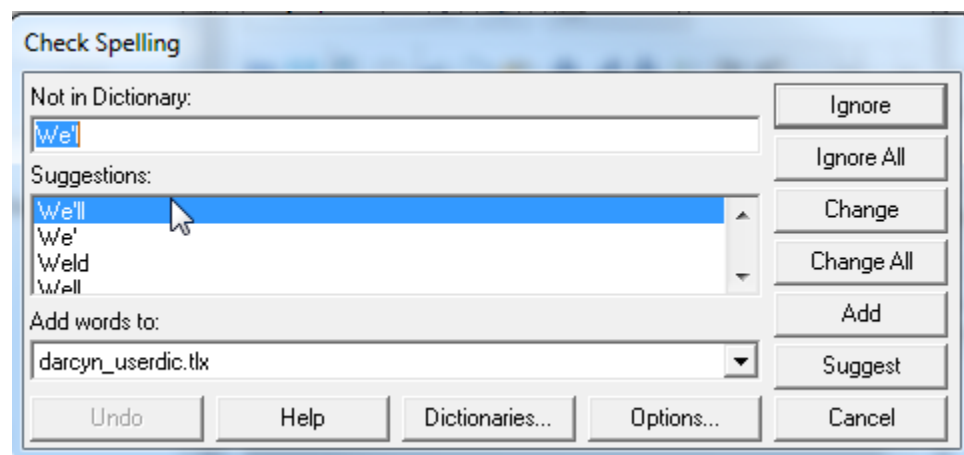


Figure 4.13 – Check spelling dialogue window

## **Extended Field Functionality**

We added the “cue” attribute which can be defined when editing/creating a field in a document. This cue field will set the rules which define what needs to be dictated to move the cursor position to the field or to place dictation content in the field. There are several rules which are set forth by the JSGF standard.

Here is an example cue: “ **[fetal] biophysical [profile] score | biophysical profile**”. There are several important characteristics in this definition. Anything in “[ ]” indicates that it may or may not be spoken. The “|” character is an “or” conditions. So in the example the same result would happen if we said the following commands.

- Fetal biophysical profile score
- Biophysical score
- Fetal biophysical score
- Biophysical profile score

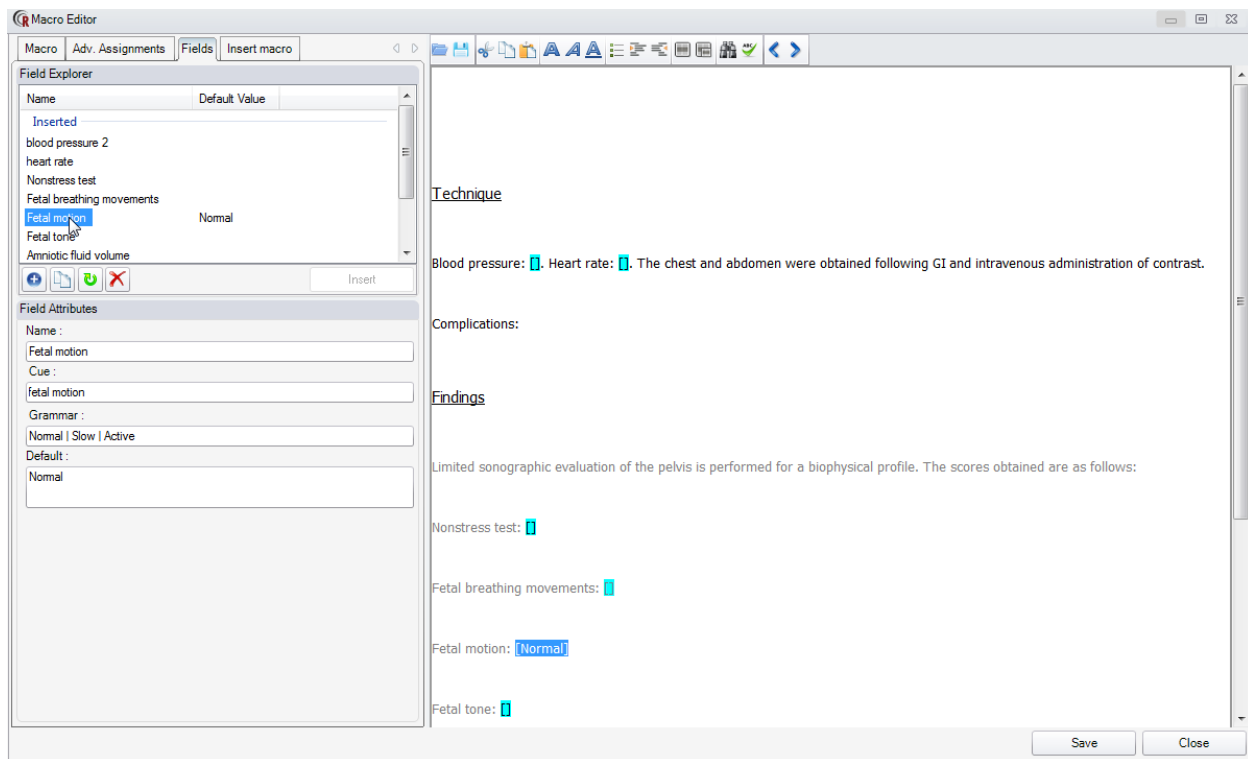
Or

- Biophysical profile

As you can see these combinations can go from simple to very complex.

### **GRAMMAR:**

We created the grammar field which is also editable when editing/creating fields in the macro editor. The grammar field will allow users to specify what data should be recognized when dictating into the field. It will not limit literally but will try to recognize the values in the said grammar field first. For example if our grammar was set to be “yes|no|maybe” it would, at a degree recognize those three words before any others.



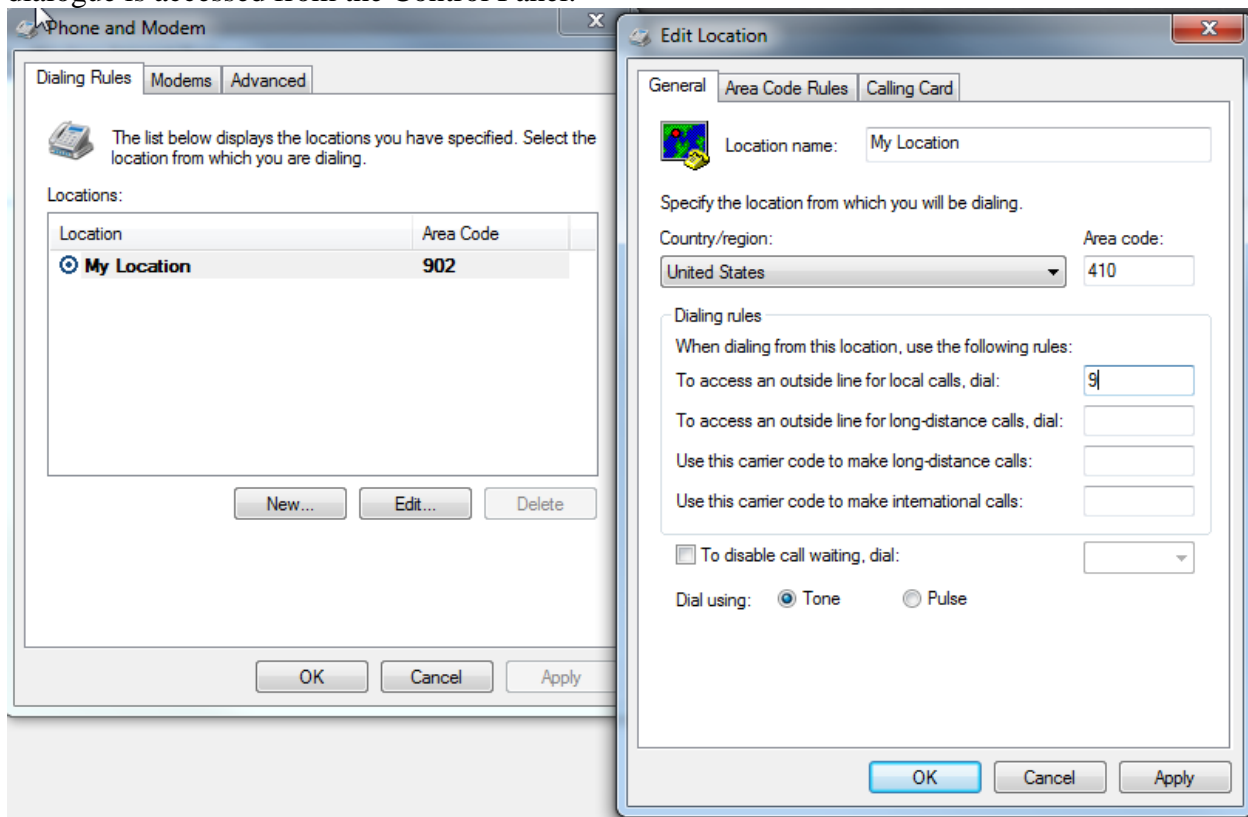
**Figure 4.14 – Macro Editor displaying the Extending Field Functionality**

Looking at the figure above, in the Field Explorer section the Field Motion is selected. You can see this opens the Field Motion Field Attributes:

- Name = The display name in the Field Explorer
- Cue = Dictation command to select this field in the report. As the example above states this can be a range of words. For example to select the Fetal motion field the cue could be configured as **Fetal motion | Fetal movement**. In this case the field will be selected with either of the voice commands.
- Grammar = The most likely voice dictation that will be given. It can be a range of values separated with the pipe “|”. Does not have to be one of these commands, but improves the recognition rates.
- Default = The field will be defaulted with this value, but can be changed

## Canonical Fax Numbers

Windows has a built in utility to specify dialing rules that will provide a way to specify a pre-dial a number for either (or both) long-distance and local calling. You can also specify dialing of a 1 and/or area code prior to the main 7 digit phone number. These dialing rules only take effect if the fax number is specified in canonical form, ie. +1 (999) 999-9999. The Phone and Modem dialogue is accessed from the Control Panel.



**Figure 4.15 – Displaying Microsoft Windows Phone and Modem dialing rules**

Another issue was formatting of numbers. In eRAD RIS we have all of the phone / fax number fields masked as (xxx)xxx-xxxx. If a number was obtained from an external system that didn't have this formatting, it would cause errors.

Now prior to submitting the fax job, the formatting and any non-numeric characters are removed. If the remaining characters are numbers with either 10 or 11 digits, it will be forced into canonical form and submitted.

NOTE: if the remaining numbers are 11 characters in length and the first digit is a one it is also removed so that we have a 10 character phone number remaining.

## **MQSA Reporting**

### Proposed DEFINITIONS:

The following definitions should be used in the creation of the Mammography MQSA Audit reports. Reference the ACR BI-RADS® Breast Imaging Atlas, BI-RADS®. Mammography pages 229-260 for more information.

**Positive Exam:** An exam is considered to be positive if the BI-RADS® assessment category is 0, 4, 5 for a screening exam; or 4, 5 for a diagnostic exam.

**Negative Exam:** An exam is considered to be negative with a benign or probably benign finding if the BI-RADS® assessment category is 1, 2, or 3 for either a screening or a diagnostic exam.

MQSA does not limit the use of category 3 to diagnostic exams. Therefore, a BI-RADS® category 3 is considered negative for both screening and diagnostic exams.

**True-Positive (TP):** Cancer was diagnosed within 1 year after biopsy recommendation based on an abnormal mammogram.

(BI-RADS® Category 0, 4 or 5 for screening; BI-RADS® Category 4 or 5 for diagnostic).

**True-Negative (TN):** No known tissue diagnosis of cancer within 1 year of a negative examination

(BI-RADS® Category 1 or 2 for screening, BI-RADS® Category 1, 2 or 3 for diagnostic).

**False-Negative (FN):** Tissue diagnosis of cancer within 1 year of a negative examination

(BI-RADS® Category 1 or 2 for screening, BI-RADS® Category 1, 2 or 3 for diagnostic).

**False-Positive (FP):** Three separate definitions:

a. (FP1): No known tissue diagnosis of cancer within 1 year of a positive screening examination (BI-RADS® Category 0, 4, or 5).

b. (FP2): No known tissue diagnosis of cancer within 1 year after recommendation for which further imaging evaluation, biopsy, or surgical consultation on the basis of a positive examination (BI-RADS® Category 0 or 5 ).

c. (FP3): Benign tissue diagnosis within 1 year after recommendation for biopsy on the basis of a positive examination (BI-RADS® Category 4 or 5).

Note:  $TP + TN + FP + FN = \text{Total number of examinations}$ .

This note refers to definitions 9, 10, 11, and 12.

Positive Predictive Value (PPV): Three separate definitions:

a. (PPV1) (abnormal findings at screening): The percentage of all positive screening examinations

(BI-RADS® Categories 0, 4 and 5) that result in a tissue diagnosis of cancer within 1 year. An initial screening assessment of Category 4 or 5 is unusual, but is possible.

$PPV1 = TP / (\text{number of positive screening examinations})$

OR

$PPV1 = TP / (TP + FP1)$  [FP1 = see 12a in glossary of statistical terms]

b. (PPV2) (biopsy recommended): The percentage of all screening or diagnostic examinations recommended for biopsy or surgical consultation (BI-RADS® Categories 4 and 5) that resulted in a tissue diagnosis of cancer within one year.

$PPV2 = TP / (\text{number of screening or diagnostic examinations recommended for biopsy})$

OR

$PPV2 = TP / (TP + FP2)$  [FP2 = see 12b in glossary of statistical terms]

c. (PPV3) (biopsy performed): The percentage of all known biopsies done as a result of positive screening or diagnostic examinations or additional imaging evaluations of positive screening examinations (BI-RADS® Categories 4 and 5) that resulted in a tissue diagnosis of cancer within 1 year. PPV3 is also known as the Biopsy Yield of Malignancy or the Positive Biopsy Rate (PBR).

$PPV3 = TP / (\text{number of biopsies})$

OR

$PPV3 = TP / (TP + FP3)$  [FP3 = see 12c in glossary of statistical terms]

Negative Predictive Value: indicates the percentage of patients who truly do not have breast cancer when the mammogram was called normal.

Sensitivity: The probability of detecting a cancer when a cancer exists or the number of cancers diagnosed after being identified at mammography in a population within 1 year of the imaging examination, divided by all cancers present in that population in the same time period.

$\text{Sensitivity} = TP / (TP + FN)$  [Remember that FN is actually a cancer case]

Specificity: The probability of interpreting an examination as negative when cancer does not



exist; or the number of true-negative mammograms in a population divided by all actual negative cases (those for which there is no tissue diagnosis of cancer within 1 year of the mammogram) in the population.

Specificity =  $TN / (TN + FP)$

**Cancer Detection Rate:** The number of cancers correctly detected at mammography per 1,000 patients examined at mammography.

a. This is of greatest value when calculated for screening examinations only or when calculated separately for screening and diagnostic examinations.

b. May also be calculated separately for PREVALENT cancers (those found at first-time mammographic examination) and for INCIDENT cancers (those found at subsequent screening examinations performed at or close to the recommended screening interval).

c. May also be calculated by AGE GROUP (40–49 years, 50–59 years, etc.).

**Recall Rate (Abnormal Interpretation Rate):** The percentage of examinations interpreted as positive. For screening mammography, positive examinations include BI-RADS® Categories 0, 4 and 5

assessments. For diagnostic mammography positive examinations include BI-RADS® Category 4 and 5 assessments.

**Recall Rate (Abnormal Interpretation Rate) =** (positive examinations) / (all examinations)

Note that in many scientific publications concerning screening mammography, a Recall Rate is reported as being equivalent to the Abnormal Interpretation Rate, even though some screening examinations occasionally are given BI-RADS® Category 4 or 5 assessments. This is done because

prompt further imaging evaluation with mammography and/or ultrasound (to assess for extent of disease and to plan for imaging-guided biopsy) is also recommended in addition to tissue diagnosis

for almost all (if not all) screening examinations that are given BI-RADS® Category 4 or 5 assessments.

Note from Randy Rogers:

-----

According to MQSA:

Recall Rate: # of positive examinations on screening (BI-RADS Categories 0, 4 and 5) divided by the total number of examinations (screenings)

Would like this as one calculation and then a breakout of just the 0 and a breakout of 4/5. So:

Recall Rate Total

Recall Rate 0

Recall Rate 4/5

Unknown Exams: Positive exams that do not have a biopsy result (ex. BIRAD 0) and therefore cannot be classified as either true or false positives. For screening exams, BI-RADS® 0 is considered positive per ACR guidelines.

### Proposed List of Reports for MQSA audit:

General Exam list: (drill down report would be ideal)

PARAMETERS to query by:	Exam Data to Display:	Statistical Data to Display:
Date Range	Patient Name	Date time report was ran
Location ( Practice, Site, etc)	Patient ID	List of parameters used.
BIRAD codes to include. (ex. Looking for positive, negative exams). <b>Do we want to create automatic groupings of BIRAD codes to report by??</b>	Accession Number	
Radiologist(s) – All or specific	Exam Date	Totals per location
Filter exams by Biopsy results, Include / Exclude exams without biopsies.	Signing Radiologist	Totals per Radiologist
Procedure Codes to query on: Ex. Looking for only Mammo Screening, or only Mammo Diagnostic exams, only Ultrasounds etc.	Biopsy Result	Totals per BIRADS category
	Biopsy Date	
	BIRAD assigned	

Report should not list any exams that have not been performed. All in Signed1 status.

Summary Reporting by Location and or By Radiologist: (could be 2 different reports but data queried should be identical)

PARAMETERS to query by:	Statistical Data to Display:	Statistical Data to Display:
Date Range	Break down exams by Screening vs Diagnostic	Date time report was ran
Location ( Practice, Site, etc)	Break down Sreening and Diagnostic by procedure.	List of parameters used.
	Breakdown each procedure by BIRAD. ( so total for each birad per site/radiologist)	Total exams by Screening vs Diagnostic

	Summary per Screening , per Diagnostic: True Positive Total True Negative Total False Positive Total False Negative Total Sensitivity Specificity PPV Unknown exams	Total Sreening and Diagnostic by procedure.
	Combined total of Screening and Diagnostic exams.	Total each procedure by BIRAD. ( so total for each birad per site/radiologist)

**List of False Negative Exams - by Location and or By Radiologist:**

<b>PARAMETERS to query by:</b>	<b>Exam Data to Display:</b>	<b>Statistical Data to Display:</b>
Date Range	Patient Name	Date time report was ran
Location ( Practice, Site, etc)	Patient ID	List of parameters used.
Radiologist ( All or specific	Accession Number	Total exams by Location
	Exam Date	Total exams by Radiologist
	Exam Status	
	Dictating Radiologist	
	Signing Radiologist	
	Biopsy Result	
	BIRAD assigned	

**List of False Positive Exams - by Location and or By Radiologist:**

<b>PARAMETERS to query by:</b>	<b>Exam Data to Display:</b>	<b>Statistical Data to Display:</b>
Date Range	Patient Name	Date time report was ran
Location ( Practice, Site, etc)	Patient ID	List of parameters used.
Radiologist ( All or specific	Accession Number	Total exams by Location
	Exam Date	Total exams by Radiologist
	Exam Status	
	Dictating Radiologist	
	Signing Radiologist	
	Biopsy Result	
	BIRAD assigned	

**List Mammography exams performed by Technologist:**

<b>PARAMETERS to query by:</b>	<b>Exam Data to Display:</b>	<b>Statistical Data to Display:</b>
Date Range	Patient Name	Date time report was ran
Location ( Practice, Site, etc)	Patient ID	List of parameters used.
Technologist	Accession Number	Total exams by Location
Select procedures to include ( ex Mammo Screening, Mammo Diagnositc, Mammo Ultrasounds)	Performed Date	Total exams by Technologist
	Exam Status	

By technologist - list of exams where a technologist has performed a mammogram or interventional procedure within the date range and location specified in the report.

**List of Positive exams with outstanding Pathology Follow-ups:**

<b>PARAMETERS to query by:</b>	<b>Exam Data to Display:</b>	<b>Statistical Data to Display:</b>
Date Range	Patient Name	Date time report was ran
Location ( Practice, Site, etc)	Patient ID	List of parameters used.
	Accession Number	Exam Total
	Exam Date	
	Exam Status	
	Dictating Radiologist	
	Signing Radiologist	

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	Biopsy Result	
	BIRAD assigned	

All positive mammography exams performed during the specified period that do not have pathology results recorded nor does a later exam exist with pathology results.

### List of Positive exams Follow-ups by BIRAD:

PARAMETERS to query by:	Exam Data to Display:	Statistical Data to Display:
Date Range	GROUP EXAMS by Recommendation ( ex. BIRAD 0, followup exam scheduled is Ultrasound, etc)	Date time report was ran
Location ( Practice, Site, etc)	Patient Name	
BIRAD code(s) to include	Patient ID	List of parameters used.
Procedure Codes to query on: Ex. Looking for only Mammo Screening, or only Mammo Diagnostic exams, only Ultrasounds etc.	Accession Number	Exam Total
	Exam Date	
	Exam Status	
	Dictating Radiologist	
	Signing Radiologist	
	Biopsy Result	
	BIRAD assigned	
	NEXT Exam Referring MD#	
	NEXT Exam Accession #	
	NEXT Exam Date	
	NEXT EXAM Status	

- New requirement provide a report (for Referring Physician) listing patients that have ignored all reminder letters sent (so have not returned). Also listing any patients that RadNet has not received biopsy results from.

## SAMPLE REPORTS

MQSA General Exam List:

Standard Filtering Criteria: (Practice, Site, Date Range)

Additional Filtering Criteria: ( Radiologist, Include / Exclude Biopsies, Procedures to Include / Exclude)

Practice:	Advanced Radiology	Site(s):	Eldersburg, Fisher, Luthervill
From:	11/09/2011	To:	09/02/2012
Signing Radiologist:	Denis Doiron, Dale Yeo Jr, Ian	Procedure Codes:	MA Stereotactic Biopsy, MA I
Biopsy Inclusion:	Exams With Biopsies, No Bio		

## MQSA Geneal Exam List

**Practice:** Advanced Radiology

**Site(s):** Eldersburg, Fisher, Lutherville, New site just bought, OutsideMed

**Date Range:** 9/11/2011 - 2/9/2012

**Signing Radiologist:** Denis Doiron , Dale Yeo Jr, Ian Power , Andrew WaiteW , Radiologist Test User , Darcy Aiken , Kevin Molyneaux , Clifton Harding , Jenko Stuart , Jenko Stuart , Clifton Harding , Roman Embleton

**Procedure Codes:** 77031, 77032S, 77053, 77054, G0202, G0202IMP, G0202UIMP, G0202UNI, G0202WC, G0204, G0204/US, 30204BX, G0204CB, G0204CB/US, G0206, G0206/US, G0206BX, G0206CB, G0206CB/US, MA10, MA11, MA12, MA13, MA14, MA15, MA16, MA17, MA18, MA50, MA999, MAPH

BIRAD / Recommendation	Accession	Patient Name	Signed Date	Signing Radiologist	Procedure	Biopsy	Biopsy Date	Biopsy Result
<input type="checkbox"/> BIRAD 0	8							
<input type="checkbox"/> Additional projections	4							
<input type="checkbox"/> Magnification views	2							
<input type="checkbox"/> Technical Repeat	2							
	1067162	Milton Polly,	01-19-2012	Darcy Aiken	MA Digital Mammo Screen Uni [G0202UNI] - Breast	N		
	1067177	Power Yvonne,	01-19-2012	Darcy Aiken	MA Digital Mammo Screen Uni [G0202UNI] - Breast	N		
<input type="checkbox"/> BIRAD 1	6							
<input type="checkbox"/> BIRAD 2	3							
<input type="checkbox"/> BIRAD 3	14							
<input type="checkbox"/> BIRAD 4	3							
<input type="checkbox"/> BIRAD 6	1							
Report Total:	35							

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Report Description: This report displays the general mammography exam list for selected sites/practice. All Exams are Signed exams.

4ef24a25-6723-4116-bac5-9311f9e48e9e

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Current report server <http://peidev1/ReportServer>

**MQSA False Negative List & MQSA False Positive List** - both reports display exactly as the “General Exam List” report above, but the content is only filtered to False Negative False Positive Exams.

Standard Filtering Criteria: (Practice, Site, Date Range)

Additional Filtering Criteria: ( Radiologist, Include / Exclude Biopsies, Procedures to Include / Exclude)

Example:

Practice:	Advanced Radiology	Site(s):	Eldersburg, Fisher, Lutherville
From:	14/02/2011	To:	09/02/2012
Signing Radiologist:	Denis Doiron, Dale Yeo Jr, Ian	Procedure Codes:	MA Stereotactic Biopsy, MA I
Biopsy Inclusion:	Exams With Biopsies, No Bio		

### MQSA List of False Positive Exams

Practice: Advanced Radiology

Site(s): Eldersburg, Fisher, Lutherville, New site just bought, OutsideMed

Date Range: 2/14/2011 - 2/9/2012

Signing Radiologist: Denis Doiron , Dale Yeo Jr, Ian Power , Andrew WaiteW , Radiologist Test User , Darcy Aiken , Kevin Molyneaux , Clifton Harding , Jenko Stuart , Jenko Stuart , Clifton Harding , Roman Embleton

Procedure Codes: 77031, 77032S, 77053, 77054, G0202, G0202IMP, G0202UIMP, G0202UNI, G0202WC, G0204, G0204/US, G0204BX, G0204CB, G0204CB/US, G0206, G0206/US, G0206BX, G0206CB, G0206CB/US, MA10, MA11, MA12, MA13, MA14, MA15, MA16, MA17, MA18, MA50, MA999, MAPH

BIRAD / Recommendation	Accession	Patient Name	Signed Date	Signing Radiologist	Procedure	Biopsy	Biopsy Date	Biopsy Result
<input type="checkbox"/> BIRAD 4	2							
<input type="checkbox"/> Biopsy should be considered	1							
	1067377	Brinks Betty,	02-07-2012	Darcy Aiken	MA Digital Mammo Screen Uni [G0202UNI] - Breast	Y	02-05-2012	Benign
<input type="checkbox"/> Needle localization and biopsy	1							
	1066991	TEST0031 CQM,	01-19-2012	Roman Embleton	MA xDigi Mam Scr Bil & Diag Uni [MA13] - Breast	Y	02-15-2012	Malignant
Report Total:	2							

## MQSA List of Exams performed by Technologist

Practice:	Advanced Radiology	Site(s):	Eldersburg, Fisher, Lutherville
From:	12/06/2011	To:	09/02/2012
Performed by Technologist:	stuart: stuart, stephen, denis:	Procedure Codes:	MA Stereotactic Biopsy, MA I

## MQSA List of Exams performed by Technologist

**Practice:** Advanced Radiology

**Site(s):** Eldersburg, Fisher, Lutherville, New site just bought, OutsideMed

**Date Range:** 6/12/2011 - 2/9/2012

**Performed by Technologist:** stuart: stuart, stephen, denis: Doiron, Denis, dale: Yeo, Dale, ian: Power, Ian, andrew: WaiteW, Andrew, schedtest: Test, Scheduler, regtest: Test User, Registration, radtest: Test User, Radiologist, transtest: Test User, Transcriptionist, transadmin: Test User, Transcriptionist Admin, stick: Powell, Stick, darcy: Aiken, Darcy, kevin: Molyneaux, <Kevin, terry: Mills, Terry, schedtest1: Test, Scheduler, hardingc: Harding, Clifton, BPowell: Powell, Brittany, asdff: asdff, asdff, delme1: test123, testasdf, kevin: MolyneauxClone, KevinClone, upsala: Stuart, Jenko, jenko2: Stuart, Jenko, clifton: Harding, Clifton, GenTech: Tech, Generic, jeremy: Noonan, Jeremy, roman: Embleton, Roman, SwiftRadius: SwiftRadius, SwiftRadius, <KevinB27: KevinB27, KevinB27, transpoll: Polling, Transcription, jbetts: Betts, Johnny

**Procedure Codes:** 77031, 77032S, 77053, 77054, G0202, G0202IMP, G0202UIMP, G0202UNI, G0202WC, G0204, G0204/US, G0204BX, G0204CB, G0204CB/US, G0206, G0206/US, G0206BX, G0206CB, G0206CB/US, MA10, MA11, MA12, MA13, MA14, MA15, MA16, MA17, MA18, MA50, MA999, MAPH

Technologist:	Procedure	Accession	Patient Name	Exam Status	BIRAD	Performed Date
<input checked="" type="checkbox"/> darcy: Aiken, Darcy		1				
<input checked="" type="checkbox"/> denis: Doiron, Denis		26				
<input checked="" type="checkbox"/> ian: Power, Ian		14				
	<input checked="" type="checkbox"/> MA Digital Mammo Screen Uni [G0202UNI] - Breast	8				
	<input checked="" type="checkbox"/> MA Digital Mammo CB Diag Bil [G0204CB] - Breast	1				
	<input checked="" type="checkbox"/> MA xDigi Mam Scr Bil, Diag Bil & US Brst [MA10] - Breast	1				
	<input checked="" type="checkbox"/> MA xDigi Mam Scr Bil & Diag Uni [MA13] - Arm	1				
	<input type="checkbox"/> MA xDigi Mam Scr Bil & Diag Uni [MA13] - Breast	2				
		1066991	TEST0031 CQM,	Signed1	4	01-06-2012
		1067209	Doyle Krista,	Signed1	3	01-20-2012
	<input checked="" type="checkbox"/> MA xDigi Mam Scr Bil & US Brst [MA14] - Breast	1				
<input checked="" type="checkbox"/> roman: Embleton, Roman		1				
<input checked="" type="checkbox"/> terry: Mills, Terry		2				
Report Total:		44				



*Report Description: This report displays the list of mammography exams performed by Technologist.*

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Date Run: 2/9/2012 2:52 PM

**MQSA List of Positive Exams with Outstanding Biopsies** - This report displays the list of Positive Mammography Exams ( for selected time period, location, radiologist) that do not have pathology result recorded, nor does a later exam exist with pathology results. All Exams are Signed exams.

Practice:	Advanced Radiology	Site(s):	Eldersburg, Fisher, Lutherville
From:	15/05/2011	To:	09/02/2012
Signing Radiologist:	Denis Doiron, Dale Yeo Jr, Ian		

## MQSA List of Positive Exams with Outstanding Biopsies

**Practice:** Advanced Radiology

**Site(s):** Eldersburg, Fisher, Lutherville, New site just bought, OutsideMed

**Date Range:** 5/15/2011 - 2/9/2012

**Signing Radiologist:** Denis Doiron , Dale Yeo Jr, Ian Power , Andrew WaiteW , Radiologist Test User , Darcy Aiken , Kevin Molyneaux , Clifton Harding , Jenko Stuart , Jenko Stuart , Clifton Harding , Roman Embleton

BIRAD	Accession	Patient Name	Procedure	Signed Date	Signing Rad	Biopsy Performed
<input type="checkbox"/> BIRAD 0	7					
	1067162	Milton Polly,	MA Digital Mammo Screen Uni [G0202UNI] - Breast	01-19-2012	Darcy Aiken	N
	1067177	Power Yvonne,	MA Digital Mammo Screen Uni [G0202UNI] - Breast	01-19-2012	Darcy Aiken	N
	1067192	Molyneaux Kendra,	MA Digital Mammo Screen Uni [G0202UNI] - Breast	01-20-2012	Darcy Aiken	N
	1067305	Pitts Georgia,	MA Digital Mammo Screen Uni [G0202UNI] - Breast	02-02-2012	Darcy Aiken	N
	1067354	Hoast Ivan,	MA DIGITAL MAMMO SCREEN BIL [G0202] - Breast	02-07-2012	Clifton Harding	N
	1061947	Thornquist Mel, Sim	MA xDigi Mam Scr Bil & Diag Uni [MA13] - Arm	11-08-2011	Roman Embleton	N
	1065390	Phramany Alda, Sim	MA xDigi Mam Scr Bil & US Brst [MA14] - Breast	11-08-2011	Roman Embleton	N
<input type="checkbox"/> BIRAD 4	1					
	1067078	OOQQ OOQQ,	MA xDigi Mam Scr Bil & Diag Bil [MA11] - Breast	01-12-2012	Darcy Aiken	N
Report Total:	8					

*Report Description: This report displays the list of Positive Mammography Exams ( for selected time period, location, radiologist) that do not have pathology result recorded, nor does a later exam exist with pathology results. All Exams are Signed exams.*

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Date Run: 2/9/2012 2:59 PM

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Current report server <http://peidev1/ReportServer>

## MQSA List of Positive Exam Follow-ups - *Report Description: This report displays the list of Follow-up (Orders / Exams) for Positive Exams, by date, location. All Exams are Signed exams.*

Practice:	Advanced Radiology	Site(s):	Eldersburg, Fisher, Lutherville
From:	17/07/2011	To:	09/02/2012

### MQSA List of Positive Exam Follow-ups

**Practice:** Advanced Radiology

**Site(s):** Eldersburg, Fisher, Lutherville, New site just bought, OutsideMed

**Date Range:** 7/17/2011 - 2/9/2012

Original ACC# - Patient Name		Requested Date	Next Order Status	Requested by:	Next Accession	Next Accession Status	Next Procedure performed
<input type="checkbox"/> BIRAD 0	8						
<input type="checkbox"/> 1067192 - Molyneaux Kendra,							
<input type="checkbox"/> 1067354 - Hoast Ivan,							
<input type="checkbox"/> 1065390 - Phramany Alda, Sim							
<input type="checkbox"/> 1061947 - Thornquist Mel, Sim			No Followup				
<input type="checkbox"/> 1067162 - Milton Polly,			No Followup				
<input type="checkbox"/> 1067177 - Power Yvonne,		01-19-2012	OrderSigned	WILLIAM SCHWARTZ	1067162	Signed1	G0202UNI
<input type="checkbox"/> 1067305 - Pitts Georgia,		01-19-2012	OrderSigned	WILLIAM SINTON JR	1067177	Signed1	G0202UNI
<input type="checkbox"/> BIRAD 4	5	01-19-2012	ShortTermFollowUp	WILLIAM SINTON JR			
Report Total:	13						

**MQSA Radiologist Reporting Summary**

There was a request to group this report by site (see below).

Practice:	Advanced Radiology	Site(s):	Eldersburg, Fisher, Lutherville
From:	17/07/2011	To:	09/02/2012
Signing Radiologist:	Denis Doiron, Dale Yeo Jr, Iai	Procedure Codes:	MA Stereotactic Biopsy, MA I

## MQSA Radiologist Reporting Summary

**Practice:** Advanced Radiology

**Site(s):** Eldersburg, Fisher, Lutherville, New site just bought, OutsideMed

**Date Range:** 7/17/2011 - 2/9/2012

**Signing Radiologist:** Denis Doiron , Dale Yeo Jr, Ian Power , Andrew WaiteW , Radiologist Test User , Darcy Aiken , Kevin Molyneaux , Clifton Harding , Jenko Stuart , Jenko Stuart , Clifton Harding , Roman Embleton

**Procedure Codes:** 77031, 77032S, 77053, 77054, G0202, G0202IMP, G0202UIMP, G0202UNI, G0202WC, G0204, G0204/US, G0204BX, G0204CB, G0204CB/US, G0206, G0206/US, G0206BX, G0206CB, G0206CB/US, MA10, MA11, MA12, MA13, MA14, MA15, MA16, MA17, MA18, MA50, MA999, MAPH

Site	Signing Radiologist	Accession	Patient Name	TP	TN	FP1	FN
Eldersburg	<input type="checkbox"/> Darcy Aiken	1					
	<input checked="" type="checkbox"/> Diagnostic	1		0	0	0	0
	<input checked="" type="checkbox"/> Clifton Harding	2					
	<input checked="" type="checkbox"/> Roman Embleton	1					
Fisher	<input checked="" type="checkbox"/> Andrew WaiteW	1					
	<input type="checkbox"/> Darcy Aiken	25					
	<input type="checkbox"/> Screening	25		0	0	1	0
	<input type="checkbox"/> Procedure: MA Digital Mammo Screen Uni [G0202UNI] - Breast	21					
	<input checked="" type="checkbox"/> BIRAD 0	4					
	<input checked="" type="checkbox"/> BIRAD 1	3					
	<input checked="" type="checkbox"/> BIRAD 2	2					
	<input checked="" type="checkbox"/> BIRAD 3	11					
	<input type="checkbox"/> BIRAD 4	1					
		1067377	Brinks Betty,	N	N	Y	N
	<input checked="" type="checkbox"/> Procedure: MA xDigi Mam Scr Bil & Diag Bil [MA11] - Breast	2					
	<input checked="" type="checkbox"/> Procedure: MA xDigi Mam Scr Bil & Diag Uni [MA13] - Breast	2					
	<input checked="" type="checkbox"/> Roman Embleton	2					
Lutherville	<input checked="" type="checkbox"/> Clifton Harding	1					
	<input checked="" type="checkbox"/> Ian Power	1					
	<input checked="" type="checkbox"/> Roman Embleton	1					
Report Total:		35					

## MQSA Location Reporting Summary (Example 1 – Grouped by BIRAD → Procedure)

Practice:	Advanced Radiology	Site(s):	Eldersburg, Fisher, Lutherville
From:	13/03/2011	To:	09/02/2012
Procedure Codes:	MA Stereotactic Biopsy, MA I		

## MQSA Location Reporting Summary

Practice: Advanced Radiology

Site(s): Eldersburg, Fisher, Lutherville, New site just bought, OutsideMed

Date Range: 3/13/2011 - 2/9/2012

Procedure Codes: 77031, 77032S, 77053, 77054, G0202, G0202IMP, G0202UIMP, G0202UNI, G0202WC, G0204, G0204/US, G0204BX, G0204CB, G0204CB/US, G0206, G0206/US, G0206BX, G0206CB, G0206CB/US, MA10, MA11, MA12, MA13, MA14, MA15, MA16, MA17, MA18, MA50, MA999, MAPH

Site / Location:	Accession	Positive	TP	TN	FP1	FN	Sensitivity	Specificity	PPV3	Recall Rate
<input checked="" type="checkbox"/> Eldersburg	5									
<input type="checkbox"/> Fisher	31									
<input checked="" type="checkbox"/> Diagnostic	3	1	0	0	0	0	NaN	0	0	0.03
<input type="checkbox"/> Screening	28	8	0	0	0	0	NaN	0	0	0.21
<input checked="" type="checkbox"/> BIRAD 0	5									
<input checked="" type="checkbox"/> BIRAD 1	4									
<input checked="" type="checkbox"/> BIRAD 2	2									
<input checked="" type="checkbox"/> BIRAD 3	13									
<input type="checkbox"/> BIRAD 4	3									
<input checked="" type="checkbox"/> MA Digital Mammo Screen Bil w Implants [G0202IMP] - Breast	1									
<input checked="" type="checkbox"/> MA Digital Mammo Screen Uni [G0202UNI] - Breast	1									
<input type="checkbox"/> MA xDigi Mam Scr Bil & Diag Bil [MA11] - Breast	1									
	1067078	Y	N	N	N	N				
<input checked="" type="checkbox"/> BIRAD 6	1									
<input checked="" type="checkbox"/> Lutherville	3									
Report Total:	39	13	0	0	0	0	NaN	0	0	0.33

Report Description: This report displays the Mammography Site Reporting Summary for selected sites/practice. All Exams are Signed exams.

Sensitivity Definition: Site/Practice TP Total for selected period / ( System Wide TP + System Wide FN) within the same time period.

Specificity Definition: Site/Practice TN Total for selected period / ( System Wide TN + System Wide FP) within the same time period.

PPV3 Definition: Total (Screening or Diagnostic) TP exams for selected period / ( System Wide Total of Biopsies) within the same time period.

Recall Rate: Total (Screening or Diagnostic) Positive exams for selected period / ( System Wide Total Mammo Exams) within the same time period.

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## MQSA Location Reporting Summary (Example 2 – Grouped by Procedure → BIRAD)

Practice:	Advanced Radiology	Site(s):	Eldersburg, Fisher, Lutherville
From:	12/06/2011	To:	09/02/2012
Procedure Codes:	MA Stereotactic Biopsy, MA I		

## MQSA Location Reporting Summary

**Practice:** Advanced Radiology

**Site(s):** Eldersburg, Fisher, Lutherville, New site just bought, OutsideMed

**Date Range:** 6/12/2011 - 2/9/2012

**Procedure Codes:** 77031, 77032S, 77053, 77054, G0202, G0202IMP, G0202UIMP, G0202UNI, G0202WC, G0204, G0204/US, G0204BX, G0204CB, G0204CB/US, G0206, G0206/US, G0206BX, G0206CB, G0206CB/US, MA10, MA11, MA12, MA13, MA14, MA15, MA16, MA17, MA18, MA50, MA999, MAPH

Site / Location:	Accession	Positive	TP	TN	FP1	FN	Sensitivity	Specificity	PPV3	Recall Rate
<input checked="" type="checkbox"/> Eldersburg	4									
<input type="checkbox"/> Fisher	31									
<input checked="" type="checkbox"/> Diagnostic	3	1	0	0	0	0	NaN	0	0	0.03
<input type="checkbox"/> Screening	28	8	0	0	0	0	NaN	0	0	0.21
<input checked="" type="checkbox"/> MA Digital Mammo Screen Bil w Implants [G0202IMP] - Breast	1									
<input type="checkbox"/> MA Digital Mammo Screen Uni [G0202UNI] - Breast	21									
<input type="checkbox"/> BIRAD 0	4									
	1067162	Y	N	N	N	N				
	1067177	Y	N	N	N	N				
	1067192	Y	N	N	N	N				
	1067305	Y	N	N	N	N				
<input checked="" type="checkbox"/> BIRAD 1	3									
<input checked="" type="checkbox"/> BIRAD 2	2									
<input checked="" type="checkbox"/> BIRAD 3	11									
<input checked="" type="checkbox"/> BIRAD 4	1									
<input checked="" type="checkbox"/> MA xDigi Mam Scr Bil, Diag Bil & US Brst [MA10] - Breast	1									
<input checked="" type="checkbox"/> MA xDigi Mam Scr Bil & Diag Bil [MA11] - Breast	2									
<input checked="" type="checkbox"/> MA xDigi Mam Scr Bil & Diag Uni [MA13] - Breast	2									
<input checked="" type="checkbox"/> MA xDigi Mam Scr Bil & US Brst [MA14] - Breast	1									
<input checked="" type="checkbox"/> Lutherville	3									
Report Total:	38	12	0	0	0	0	NaN	0	0	0.32

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*Report Description: This report displays the Mammography Site Reporting Summary for selected sites/practice. All Exams are Signed exams.*

*Sensitivity Definition: Site/Practice TP Total for selected period / ( System Wide TP + System Wide FN) within the same time period.*

*Specificity Definition: Site/Practice TN Total for selected period / ( System Wide TN + System Wide FP) within the same time period.*

*PPV3 Definition: Total (Screening or Diagnostic) TP exams for selected period / ( System Wide Total of Biopsies) within the same time period.*

*Recall Rate: Total (Screening or Diagnostic) Positive exams for selected period / ( System Wide Total Mammo Exams) within the same time period.*

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### Mammography Document Distribution Status - *Report Description: This report displays mammography documents queue'd in the Document Distribution Worklist. Items older than 2 days will be red.*

Practice:  Site(s):

### Mammography Document Distribution Status

Practice: Advanced Radiology

Site(s): Eldersburg, Fisher, Lutherville, New site just bought, OutsideMed

Document Type / Status	ACC#	Recipient:	BIRAD	Date Created	Time in DDE Queue
<input type="checkbox"/> LAYLETTER	30				
<input type="checkbox"/> Hold	30				
<input type="checkbox"/> Short Term Followup1	2				
<input type="checkbox"/> Hold	1				
	1066965	waite, andrew		01-17-2012	23
<input type="checkbox"/> Pending	1				
	1067167	BlueEyes, Betty		02-07-2012	2
Report Total:	32				

### Mammography Ignored Reminders List - *Report Description: This report displays the list of patients( per Radiologist) that have Ignored Mammography Reminder letters*

Practice:  Site(s):   
Referring Physician:

#### Mammography Ignored Reminders List

**Practice:** Advanced Radiology

**Site(s):** Eldersburg, Fisher, Lutherville, New site just bought, OutsideMed

**Referring Physician:** WILLIAM SCHWARTZ, YOLANDA AJALA

Referring Name / Reminder Ignored	Target Date	Patient ID	Patient Name	Procedures	Last Letter Sent	Last Letter Date
<input type="checkbox"/> WILLIAM SCHWARTZ	1					
<input type="checkbox"/> ShortTermFollowUp						
	06-17-2012	1000000812	BlueEyes Betty	MA Digital Mammo Screen Uni [G0202UNI] - Breast	Short Term Followup3	01-23-2012
<input type="checkbox"/> YOLANDA AJALA	1					
<input type="checkbox"/> ShortTermFollowUp						
	06-04-2012	4542	waite andrew	MA xDigi Mam Scr Bil & Diag Uni [MA13] - Breast	Short Term Followup3	01-23-2012
Report Total:	2					



## Mammography Annual Radiologist Reporting Summary:

Practice:	Advanced Radiology	Site(s):	Eldersburg, Fisher, Lutherville
Signing Radiologist:	Denis Doiron, Dale Yeo Jr, Ian	Procedure Codes:	MA Stereotactic Biopsy, MA I
Reporting Year:	2012		

## Mammography Annual Radiologist Reporting Summary

**Practice:** Advanced Radiology

**Site(s):** Eldersburg, Fisher, Lutherville, New site just bought, OutsideMed

**Reporting Year:** 2012

**Signing Radiologist:** Denis Doiron , Dale Yeo Jr, Ian Power , Andrew WaiteW , Radiologist Test User , Darcy Aiken , Kevin Molyneaux , Clifton Harding , Jenko Stuart , Jenko Stuart , Clifton Harding , Roman Embleton , kevinb34smoke kevinb34smoke

**Procedure Codes:** 77031, 77032S, 77053, 77054, G0202, G0202IMP, G0202UIMP, G0202UNI, G0202WC, G0204, G0204/US, G0204BX, G0204CB, G0204CB/US, G0206, G0206/US, G0206BX, G0206CB, G0206CB/US, MA10, MA11, MA12, MA13, MA14, MA15, MA16, MA17, MA18, MA50, MA999, MAPH

Radiologist Reporting Totals for 2012	Accession	Patient Name	Signed Date	BIRAD
<input checked="" type="checkbox"/> Andrew WaiteW	1			
<input checked="" type="checkbox"/> Clifton Harding	3			
<input type="checkbox"/> Darcy Aiken	25			
<input checked="" type="checkbox"/> February	3			
<input type="checkbox"/> January	22			
<input checked="" type="checkbox"/> MA Digital Mammo Screen Uni [G0202UNI] - Breast	18			
<input checked="" type="checkbox"/> MA xDigi Mam Scr Bil & Diag Bil [MA11] - Breast	2			
<input type="checkbox"/> MA xDigi Mam Scr Bil & Diag Uni [MA13] - Breast	2			
	1066965	waite andrew,	01-13-2012	3
	1067209	Doyle Krista,	01-20-2012	3
<input checked="" type="checkbox"/> Denis Doiron	1			
<input checked="" type="checkbox"/> Roman Embleton	1			
Report Total:	31			

**Mammography Annual Technologist Exams Performed Summary:**

Practice:	Advanced Radiology	Site(s):	Eldersburg, Fisher, Lutherville
Performed by Technologist:	stuart: stuart, stephen, denis	Procedure Codes:	MA Stereotactic Biopsy, MA I
Performed Year:	2012		

**Mammography Annual Technologist Exams Performed Summary**

**Practice:** Advanced Radiology

**Site(s):** Eldersburg, Fisher, Lutherville, New site just bought, OutsideMed

**Performed Year:** 2012

**Performed by Technologist:** stuart: stuart, stephen, denis: Doiron, Denis, dale: Yeo, Dale, ian: Power, Ian, andrew: WaiteW, Andrew, schedtest: Test, Scheduler, regtest: Test User, Registration, techtest: Test User, Technologist, radtest: Test User, Radiologist, transtest: Test User, Transcriptionist, transadmin: Test User, Transcriptionist Admin, stick: Powell, Stick, darcy: Aiken, Darcy, kevin: Molyneaux, Kevin, terry: Mills, Terry, schedtest1: Test, Scheduler, hardingc: Harding, Clifton, BPowell: Powell, Brittany, asdff: asdff, asdff, delme1: test123, testasdf, kevinc: MolyneauxClone, KevinClone, upsala: Stuart, Jenko, jenko2: Stuart, Jenko, clifton: Harding, Clifton, GenTech: Tech, Generic, jeremy: Noonan, Jeremy, roman: Embleton, Roman, SwiftRadius: SwiftRadius, SwiftRadius, KevinB27: KevinB27, KevinB27, transpoll: Polling, Transcription, jbetts: Betts, Johnny, b34unitest: kevinb34smoke, kevinb34smoke

**Procedure Codes:** 77031, 77032S, 77053, 77054, G0202, G0202IMP, G0202UIMP, G0202UNI, G0202WC, G0204, G0204/US, G0204BX, G0204CB, G0204CB/US, G0206, G0206/US, G0206BX, G0206CB, G0206CB/US, MA10, MA11, MA12, MA13, MA14, MA15, MA16, MA17, MA18, MA50, MA999, MAPH

Technologist Performed Totals for 2012	Accession	Patient Name	Exam Status	BIRAD	Performed Date
<input checked="" type="checkbox"/> darcy: Aiken, Darcy	1				
<input type="checkbox"/> denis: Doiron, Denis	22				
<input checked="" type="checkbox"/> February	2				
<input type="checkbox"/> January	20				
<input checked="" type="checkbox"/> MA Digital Mammo Screen Bil w Implants [G0202IMP] - Breast	1				
<input checked="" type="checkbox"/> MA Digital Mammo Screen Uni [G0202UNI] - Breast	16				
<input checked="" type="checkbox"/> MA xDigi Mam Scr Bil & Diag Bil [MA11] - Breast	2				
<input type="checkbox"/> MA xDigi Mam Scr Bil & Diag Uni [MA13] - Breast	1				
	1066965	waite andrew,	Signed1	3	01-06-2012
<input checked="" type="checkbox"/> ian: Power, Ian	10				
<input checked="" type="checkbox"/> techtest: Test User, Technologist	3				
Report Total:	36				

## 5. Resolved Defects

Bugs, Suggested Features and Support Issues resolved in build 1.34. The extract is taken from Redmine bug tracking system and only displays defects resolved in 1.34.

#	Tracker	Priority	Subject	Category	Target version
886	Bug	High	Removing Pathology codes throws error	Thick Client GUI	1.33
883	Bug	High	Saving Biopsy result can throw error	Thick Client GUI	1.33
880	Bug	High	When scheduling an appointment that spans 2 orders then 2 visits are created	Thick Client GUI	1.32
919	Bug	Normal	preview report does not always show report correctly	Thick Client GUI	1.34
906	Bug	Normal	Error printing receipts	Thick Client GUI	1.34
901	Bug	Normal	Scanner not detected	Thick Client GUI	1.34
899	Bug	Normal	Study suspended without interpretation throws error after suspended message	Thick Client GUI	1.33
896	Bug	Normal	Issues with Changing "Internal RIS" passwords.	Admin Tools	1.33
894	Bug	Normal	Multi order scheduling search results not picking correct times	Thick Client GUI	1.33
891	Bug	Normal	multiple study scheduling search results not correct for first site on list	Web Services/DB	1.33
890	Bug	Normal	On a new order removing procedure with laterality code throws error	Thick Client GUI	1.33
884	Bug	Normal	When region and language format is not English (United States) then "Meaningful Use" on administration screen does not work	Thick Client GUI	1.33
859	Bug	Normal	Procedures scheduled with default laterality are not saved when flag for Laterality required is N	Thick Client GUI	1.31
897	Bug	Low	Placement of tabs on Book X	Thick Client GUI	1.33

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846	Bug	Low	Tentative signing hold time message	Admin Tools	1.31
840	Bug	Low	Order tab name on reschedule	Thick Client GUI	1.31
505	Bug	Low	Exception thrown scanning document	Thick Client GUI	1.20

## 6. Known Limitations

The following are Bugs, Suggested Features, and Support Issues found in build 1.34. This build is the current QE build and testing is ongoing. The list may increase in size. This document will not be updated or re-released.

#	Status	Subject	Category	Target version	Resolved Version
936	New	Usergroups require Config.LookupEditor.Personnel to add unknown referring	Thick Client GUI	1.34	
913	New	Patient folder will display target and previously viewed images	Thick Client GUI	1.34	
912	New	Cannot view priors in dictate window	Thick Client GUI	1.34	
910	New	Patient Folder will keep opening image viewer	Thick Client GUI	1.34	
908	New	Object reference from dictate window will close RIS	Thick Client GUI	1.34	
933	New	MQSA_Reporting - General Exam List - Procedure Codes	Mgt Reports	1.34	
932	New	MQSA_Mammo - General Exam List - Date range does not included selected "To:" date	Mgt Reports	1.34	
931	New	Mammo reporting - General Exam List - not displaying Patient ID	Mgt Reports	1.34	
930	Resolved	Alternate phone flag does not disable alternate phone number fields	Thick Client GUI	1.34	1.35
929	New	User Group permissions difficult to add	Admin Tools	1.34	
928	Resolved	View / Edit OrderCancelled gives GetData error	Thick Client GUI	1.34	1.35
927	Resolved	Issue with procedure picker type ahead when procedure is removed.	Thick Client GUI	1.34	1.35
926	Resolved	Memory leak causing error.	Thick Client GUI	1.34	1.35
925	Resolved	Error scanning specific document type from Perform Exam	Thick Client GUI	1.34	1.35

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924	Resolved	Add outside read on site that requires insurance, but insurance is not chosen, is not added to billing exception	Thick Client GUI	1.34	1.35
923	Resolved	Image Request on Multi procedure order belonging to different orders throws error	Thick Client GUI	1.34	1.35
922	Resolved	Error thrown attempting to create multi procedure schedule	Thick Client GUI	1.34	1.35
921	Resolved	Home phone is not copied to Responsible Party	Thick Client GUI	1.34	1.35
917	New	Minimizing application by moving another application over top of RIS throws error	Thick Client GUI	1.34	
916	New	Adding UserGroupPermission with empty access string throws exception	Admin Tools	1.34	
915	New	Error returned on suspended study when selecting Cancel on overwrite message	Thick Client GUI	1.34	
914	New	Documents can be distributed without specifying deliver to: causing error	Thick Client GUI	1.34	
911	New	Adding a third study through registration behaves differently.	Thick Client GUI	1.34	
909	New	First time launch of a study does not find the image	Thick Client GUI	1.34	
907	Resolved	Datetimeoffset columns not correctly updating to the correct time zone	Web Services/DB	1.34	1.35
905	New	Rescheduling an exam without selecting time returns un-informative error.	Thick Client GUI	1.34	
904	New	Rescheduling exam and choose Schedule later and the procedure is not retained	Thick Client GUI	1.34	
903	New	Tool tips on flags don't always worked	Thick Client GUI	1.34	
902	New	worklist filler connection leak on exception	Web Services/DB	1.34	

918	Resolved	Clean up tab order of Visit tab	Thick Client GUI	1.34	1.35
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# **User Release Notes**

for eRAD RIS  
Version 1.0  
Build 35



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## **1. Purpose**

This document describes some of the new features and changes implemented in eRAD RIS as of the end of Sprint 35. This version of eRAD RIS is referred to as Build 1.35.

Only features which can be visually demonstrated to the user will be outlined in this document.

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS management team.

## **3. Installing/Accessing the Application**

The installation guide for the eRAD RIS client have been posted to the RadNet Wiki page at <http://mdbal01rdtweb/Wiki/>

Under the RIS menu, click on the rRIS page. The credentials to access the page are:

Username: rRIS

Password: Summerside

*Please note that Build 1.35 is considered a new core release of the application and will require a reinstallation of eRAD RIS. This is accomplished by navigating to the eRAD RIS shared installation drive and running the CoreInstall.bat file (ex: I:\RISDeployment\CoreInstall.bat)*

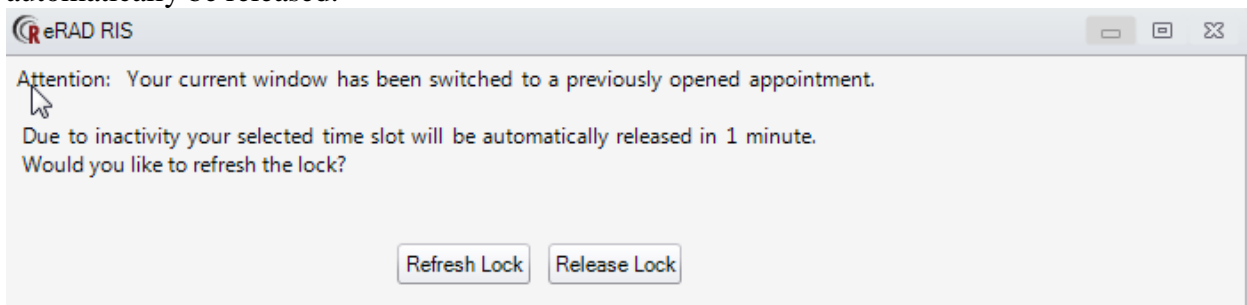
If you experience difficulties accessing the application, please do not hesitate to contact Darcy Noye with the PEI RIS Development Team.

## **4. New Features and Enhancements**

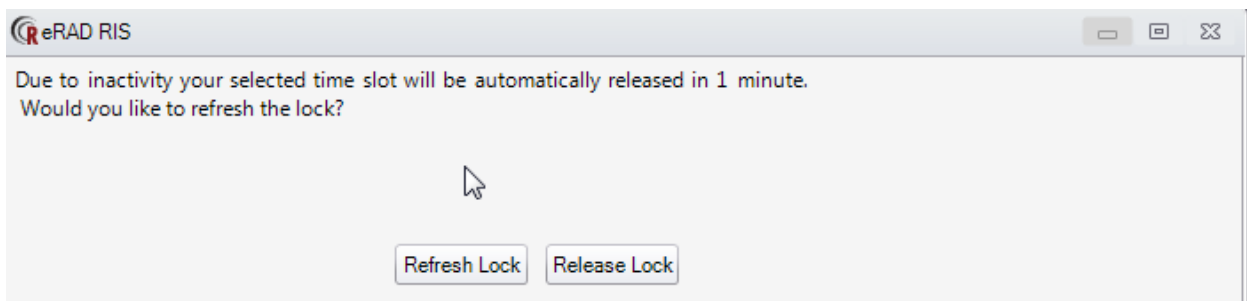
### **Scheduling Timeslot Lock Release**

In the past if the user has searched for and selected available time slots for scheduling, this user would have those times locked. In the event the user was distracted from completing the schedule, the selected times would remain locked.

In build 35 we have introduced a lock release. We check every 10 seconds to see if there was any activity. As long as the scheduling tab is the active tab then any mouse or keyboard event will refresh the lock. If the user opens a new tab then any mouse or keyboard event will not refresh the lock. When the timer runs through the configurable amount of time, the focus will jump back to the scheduling tab with a pop-up prompting the user if the lock timer should refresh or release the lock, if the pop-up is left open for 1 minute then it will close and the lock will automatically be released.



**Figure 4.1 – Lock release prompt if not in data window**



**Figure 4.2 – Lock release prompt if you are in data window but not on Schedule tab**

### Schedule Review on Selecting Schedule Button

When a user had completed entering in data, searching for available schedule dates and time, etc they would select the schedule button to commit the data. It was desired that the user be presented with a review of the schedule.

In build 35 upon selecting the Schedule button the user will now be presented with the Review window. The review window will display a Schedule Summary of the patients name, procedures scheduled, date time and duration of the study. The address of the site in which the exams will occur and any prep instructions for the procedures selected.

The screenshot shows a software window titled "Review". It contains the following sections:

- Schedule Summary:**
  - Patient: **Vernon Scuttle** is scheduled for a **XR Foot 2 Views, Bilat** on: **Monday March 19, 2012** at **7:30 AM** for: **10 minutes** at: **Eldersburg**
  - (73620) RADIOLOGIC EXAMINATION, FOOT; 2 VIEWS
- CT Head W & Ear, Orbit, Sella W** on: **Monday March 19, 2012** at **8:00 AM** for: **30 minutes** at: **Eldersburg**
- (70481) COMPUTED TOMOGRAPHY, ORBIT, SELLA, OR POSTERIOR FOSSA OR OUTER, MIDDLE, OR INNER EAR; WITH CONTRAST MATERIAL(S)

**Address:**

**Eldersburg**  
1430 Progress Way  
Suite 108  
Eldersburg MD 21784

**Prep Instructions:** ☐ Prep Instructions Reviewed

- General XR
- General CT

1 of 2: General XR  
**All children must be accompanied by an adult other than the patient**

2 of 2: General CT  
Weight limit **450 lbs** at most sites. **No solids 2 hrs prior**

Have you ever had an iodine injection before?  
- If so have you had any problems with the injection?  
--(if so consult technologist)

Asthma?  
- (if so, tell patient to bring their inhaler)?

Ask if Diabetic? If so, what meds do they take?  
If pt takes oral meds for diabetes refer to memo date 7-10-08 and follow necessary instructions.

For Oral Prep please see memo dated 10-14-2008 and follow protocol

Ask pt about pregnancy?

If patient is scheduling both a CT and MR WITH contrast and answers NO to all screening questions then the procedures may be scheduled on the same day. If the patient answers YES to any of the questions then

**All children must be accompanied by an adult other than the patient**

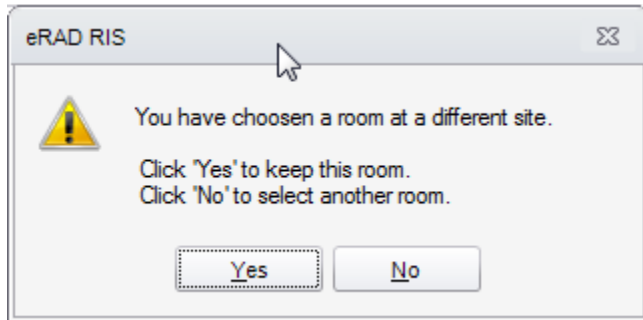
At the bottom right of the window are two buttons: "Schedule" and "Modify".

**Figure 4.3 – Schedule Review window**

The user can select the Schedule button to confirm, or select the Modify button to return to the Schedule Order data window to make any corrections required.

## **Scheduling Across Sites Warning**

If the user is scheduling a multi procedure order and the rooms selected are (modality code) from different sites, the user will be prompted with an informative message with a Yes / No option to continue with the selection.



**Figure 4.4 – Scheduling across sites warning**

## Cancelling / Rescheduling Studies

The patient folder has a new column on the work list. The procedures to schedule column will now show the procedures that are to be scheduled from an order in the event that one of the procedures from an original order remains scheduled, arrived, completed, etc...

In the example displayed below, the patient had an order with 2 procedures scheduled. One of the procedures was cancelled and sent to the Orders to Schedule work list. The result in the patient folder is the Order Signed showing the original procedures for that order and the Procedures to Schedule from that order, the study that was cancelled, and the study that remained in schedule status.

Flags	Nuggets	Status	Procedures	Scheduled Date	Procedures To Schedule	Accession Number
Contains: ▾	Contains: ▾	Cancelled	XR Foot 2 Views, Bilat [RD30] - Foot - Bilateral	03-16-2012 5:50 PM		1010908
Contains: ▾	Contains: ▾	Scheduled	XR Chest Min 4 Views [71030] - Chest	03-16-2012 5:40 PM		1010909
		OrderSigned	XR Chest Min 4 Views [71030] - Chest   XR Foot 2 Views, Bilat [RD30] - Foot/Bilateral		XR Foot 2 Views, Bilat [RD30] - Foot/Bilateral	

**Figure 4.5 – Patient folder displaying results of scheduled order with one cancelled study**

The list below is some possible scenarios and the results from cancelled and aborted exams.

### Scenario #1-1:

A patient is scheduled for a US Bladder on Friday at 11:00 AM. The patient calls and cannot make the appointment but request a new time. The PSR cancels the Friday appointment and then searches for new appointment times. The PSR and patient together find an appointment for Monday.

The patient folder now contains:

- Friday's cancelled US Bladder.
- Monday's scheduled US Bladder

### Scenario #1-2:

The patient from Scenario #1 arrives for his Monday appointment. The PSR registers the patient and marks the study as "Patient Arrived". The technologist invites the patient to the imaging room and starts the procedure. The technologist discovers the patient bladder is not full enough and cannot complete the procedure at this time. The patient has other commitments and must reschedule this procedure for a future date. The Monday's procedure is "Aborted" and a new study is put on the pending orders worklist to be scheduled (re-scheduled flag can be used to show that this is a re-scheduling event).

The patient folder now contains:

- Friday's cancelled US Bladder.
- Monday's aborted US Bladder.
- Pending order for US Bladder

### **Scenario #1-3:**

A PSR calls the patient from scenario #1 to re-schedule the US Bladder. The patient decides not to follow up with the procedure and wishes to not have it completed. The PSR cancels the pending order (pending study).

The patient folder now contains:

- Friday's cancelled US Bladder.
- Monday's aborted US Bladder.
- Cancelled US Bladder pending order.

### **Scenario #2:**

A patient is scheduled for a CT Head on Tuesday at 11:00 AM and XR Foot on Tuesday at 11:45 AM. The patient arrives and is registered. The tech performs the CT Head on the patient. After the CT Head, the patient has to leave and cannot have the XR foot done at this time. The tech completes the CT Head and cancels the XR Foot and request that it be put back on the pending order work list.

The patient folder now contains:

- Tuesday's completed CT Head
- Tuesday's cancelled XR Foot
- Pending order by XR Foot

### **Scenario #3-1**

A patient is scheduled for a MR Knee on Friday at 9:00 AM, and XR Elbow on Friday at 10:00 AM. The patient calls a day before the exam and request that they be rescheduled. The PSR and the patient together reschedule then for Monday at the same times.

The patient folder now contains:

- Friday's cancelled MR Knee
- Friday's cancelled XR Elbow
- Mondays scheduled MR Knee
- Mondays scheduled XR Elbow

### **Scenario #3-2**

The patient from scenario #3 arrives on. The PSR notices that the script is for a MR Knee and XR Ankle. The PSR updates the XR Elbow to XR Ankle. The tech performs and completes the MR Knee. However, the patient unfortunately has to leave prior to starting the XR Ankle. The tech cancels the XR Ankle and returns it to the pending order worklist.

The patient folder now contains:

- Friday's cancelled MR Knee
- Friday's cancelled XR Elbow
- Monday's completed MR Knee



- Monday's cancelled XR Ankle
- Pending order for XR Ankle

### **Scenario #4-1**

Sorry for the bad example of procedures here.

A patient is scheduled for US Bladder and US Pelvis On Tuesday at 2:30 and 3:00 PM respectively. The patient arrives and is registered. The technologist starts both studies in the RIS. The tech cannot complete the studies as the patient bladder is not full. The technologist aborts both exams and sends them to the pending order worklist.

The patient folder now contains:

- Tuesday's aborted US Bladder
- Tuesday's aborted US Pelvis
- Pending order for US Bladder (under the skin, this technically belongs the same order as the US Pelvis).
- Pending order for US Pelvis (under the skin, this technically belongs the same order as the US Bladder).

### **Scenario #4-2**

A PSR calls the patient to reschedule procedures aborted in scenario #4. Together they schedule 2 studies for Thursday at 3:30 PM and 4:00 PM. The patient arrives and is registered. The tech starts both procedures. The tech completes the US Bladder. But a clinical decision is made that the US Pelvis is not needed so the procedure is aborted.

The patient folder now contains:

- Tuesday's aborted US Bladder
- Tuesday's aborted US Pelvis
- Thursday's completed US Bladder.
- Thursday's aborted US Pelvis.

### **Scenario #5-1**

A patient is scheduled for a mammo screening on Friday at 11:30 AM. The patient arrives, registered and the procedure is performed. The radiologist diagnoses a Birad-0, and recommends a follow-up US Breast.

The patient folder now contains:

- Friday's completed mammo screening exam.
- Pending order for US Breast. The study is also visible in the mammo follow-up worklist, but not visible in the generic pending ordered worklist.

### **Scenario #5-2**

A PSR calls the patients to schedule US-Breast follow-up. Together they schedule an appointment for Wednesday at 10:45 AM. The patient does not show for Wednesday morning appointment. The appointment is cancelled and is marked to be rescheduled.

The patient folder now contains:

- Friday's completed mammo screening exam.
- Wednesday morning cancel US Breast
- Pending order for US Breast. The study is also visible in the mammo follow-up worklist, but not visible in the generic pending ordered worklist.

### **Scenario #5-3**

A PSR calls the patients to re-schedule US-Breast follow-up. Together they schedule an appointment for Thursday at 10:45 AM. The patient arrives and the procedure is performed.

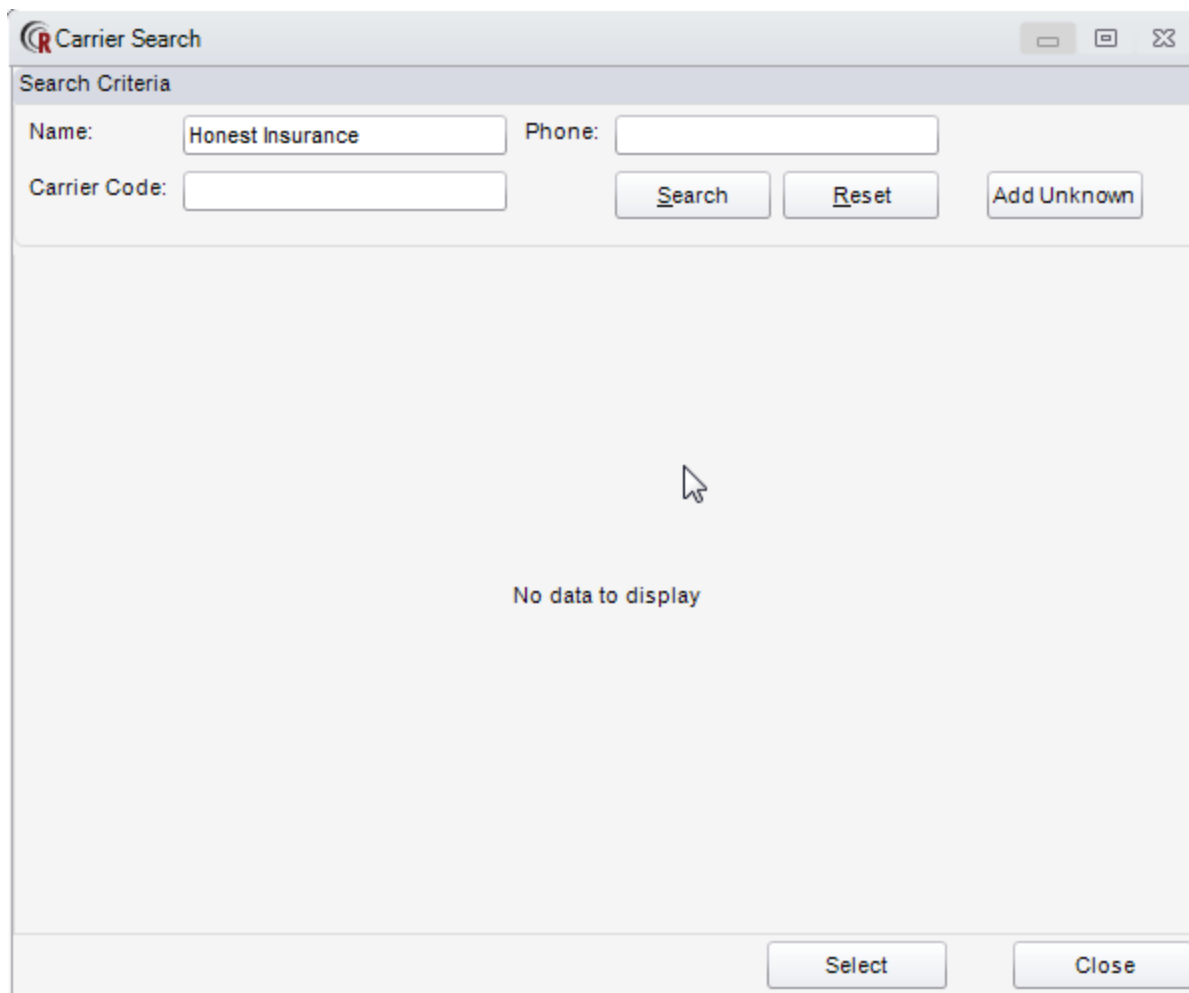
The patient folder now contains:

- Friday's completed mammo screening exam.
- Wednesday morning cancel (no-show) US Breast
- Thursday morning completed US Breast.

## **Unknown Carrier Work Flow**

Needed with the eRAD RIS was a method to add Insurance Carriers that did not already exist within the application at the time of scheduling.

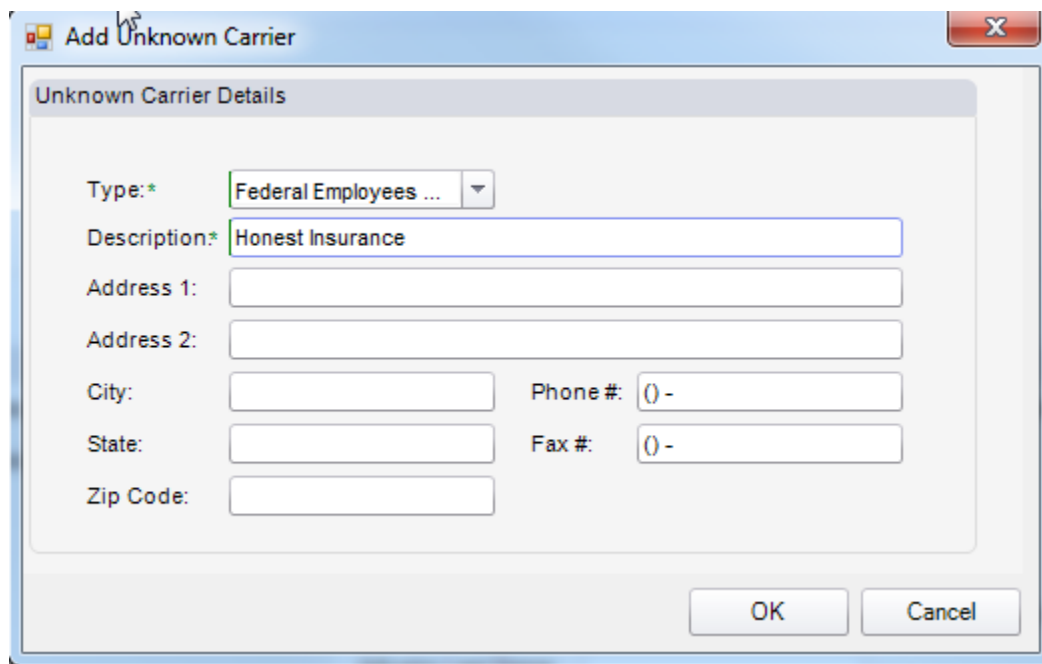
In build 35 users will have the ability to add unknown carriers. Within the existing Manage Policies window, if a Carrier name entered does not match an existing carrier, the user can add the unknown carrier from the Carrier Search window.



The screenshot shows a window titled "Carrier Search" with a standard Windows-style title bar. Below the title bar is a section labeled "Search Criteria". This section contains three input fields: "Name:" with the text "Honest Insurance", "Phone:" which is empty, and "Carrier Code:" which is also empty. To the right of these fields are three buttons: "Search", "Reset", and "Add Unknown". Below the search criteria section is a large, empty rectangular area. In the center of this area, the text "No data to display" is shown. At the bottom of the window, there are two buttons: "Select" and "Close".

**Figure 4.6 – Carrier Search window didn't find a match**

Selecting the Unknown Carrier button in the above figure will open the Add Unknown Carrier window



The 'Add Unknown Carrier' window contains the following fields:

- Type\*: Federal Employees ... (dropdown)
- Description\*: Honest Insurance (text box)
- Address 1: (text box)
- Address 2: (text box)
- City: (text box)
- State: (text box)
- Zip Code: (text box)
- Phone #: () - (text box)
- Fax #: () - (text box)

Buttons: OK, Cancel

**Figure 4.7 – Add Unknown Carrier window**

After scheduling the above example, the entries with unknown carriers will be added to the “Unknown Reconciliation WL” (formally known as the “Unknown Referring WL”) and will contain Unknown Carriers and Unknown Referrers as indicated under the columns for each in the work list

eRAD RIS (Logged in as kevin)

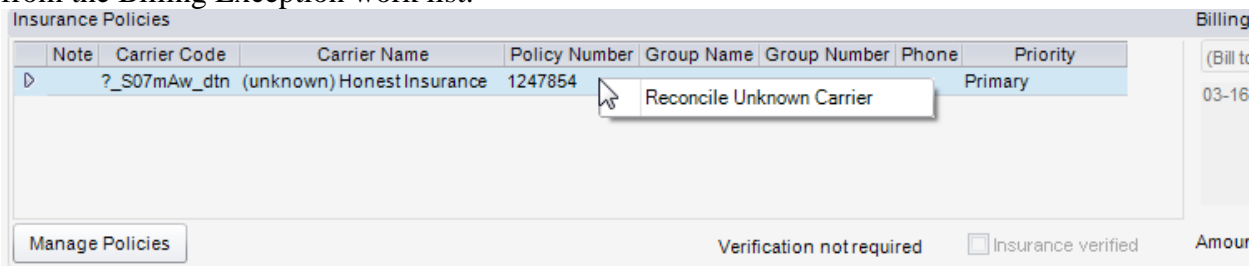
File Administration Scheduling Front Desk Technologist Radiologist Mammo Transcription Help MD/ADV

Unknown Reconciliation (5)

Status	Order Date	Referring	First Name	Last Name	MRN	Unknown Referring Flag	Unknown Carrier Flag
OrderSigned	08-18-2011 12:00 PM	aefe aefa	Hilton	Mcmillon	11507493	✓	
OrderSigned	10-12-2011 11:01 AM	cc cc	test123	asdf	11507514	✓	
OrderSigned	12-21-2011 2:14 PM	Bob Bob	andrew	waite	4542	✓	
OrderSigned	02-06-2012 11:50 AM	bbbab ababab	Angel446	Dunn	T.451	✓	
OrderSigned	02-23-2012 7:10 PM	aaa aaa	kevin	molyneaux	11511282		✓

**Figure 4.8 – Unknown Reconciliation work list**

Double clicking on the row with the “Unknown Carry Flag” checked will open edit order and you can go to the insurance grid, right clicking on the row to reconcile the unknown entry. The Reconcile Unknown menu item is only available to users who have admin access to edit the carrier lookup table. Orders listed in the Unknown Reconciliation WL can only be accessed when the status of the order is OrderSigned. Once the study is scheduled and statuses past scheduled in the work flow, the Unknown Carrier can be reconciled from any data window that has the Manage Policies data pane, included View / Edit from the patient folder and Edit Billing from the Billing Exception work list.



**Figure 4.9 – Reconcile Unknown Carrier**

In the “Reconcile Unknown Carrier” screen you can enter a code for the carrier and chose “Make Known” or you can search for an existing carrier, which may have been added but was not found earlier when scheduling the patient.

**Unknown Carrier Details**

Code: \*

Type: \*

Description: \*

Address 1:

Address 2:

City:  Phone #:

State:  Fax #:

Zip Code:

**Search Criteria**

Name:  Phone:

Carrier Code:

code	description	phone	fax	address1	address2	city	zip	state
0501107	ALLSTATE INSURANCE	(877) 224-2...	(800) 572-4...	PO BOX 650048		DALLAS	75265	
0501117	CALIFORNIA CASULTY INSUR...	(800) 841-4...	(800) 803-1...	PO BOX 42630		PHOENIX	85080	
0501116	NORTHLAND INSURANCE	(800) 237-9...	(651) 310-4...	385 WASHINGTO...		ST. PAUL	55102	
0501118	DONEGAL INSURANCE GROUP	(800) 877-0...	(717) 426-7...	1195 RIVER ROAD	PO BOX 300	MARIETTA	17547	
0501185	STATE FARM INSURANCE	(410) 721-1...	(410) 721-5...	2431 CROFTON L...	SUITE 13	CROFTON	21114	
0501188	WESTFIELD INSURANCE	(717) 569-5...	(717) 539-6...	P O BOX 3010	201 EAST...	LANCASTER	17604	
0501119	KEYSTONE AUTO INSURANCE	(800) 945-0...	(888) 227-3...	PO BOX 6032		NEWARK	19714	

**Figure 4.10 – Reconcile Unknown Carrier window**

Validation was also added so that users can not add carrier codes that start with '?', which is reserved for the system generated unknown carrier codes.

## Self-Pay Feature

The new Billing Method controls are located to the right of the Insurance Policies grid.

A new drop down box exists for Billing Method. It will be defaulted to “Bill to Insurance”  
The PSR can select the dropdown, and populate 1 of 4 other values, which are driven from a new lookup table (l\_bill\_to\_types), consisting initially of: 1. Self pay no discount 2. Self pay prompt pay discount 3. Self pay medical hardship 4. Self pay manager override)

There is a small notes section which becomes enabled when any self pay option is selected from the drop down list box. This is in fact the Billing Notes column.

The existing amount to collect textbox would be where we put in the quoted amount for the self-pay.

If the PSR later selects an insurance carrier, the billing method box is reset to “bill to insurance”, and the box and notes are then disabled. To re-enable them, the PSR may un-select the insurance carrier.

The new controls are controlled by a permission “Clinical.BillingMethod”

Also the alert when no insurance is added has been removed if a self-pay option is selected.

The screenshot shows the 'Insurance Policies' data pane. It features a table with columns: Note, Carrier Code, Carrier Name, Policy Number, Group Name, Group Number, Phone, and Priority. To the right of the table is the 'Billing Method' section, which includes a dropdown menu currently set to '(Bill to insurance)'. Below the dropdown is a text box containing '03-16-12 NoyeD - This is a text box'. At the bottom of the pane are three controls: a 'Manage Policies' button, a 'Verification not required' checkbox, and an 'Amount to collect' text box.

**Figure 4.11 – Billing Method data pane, list box and notes billing notes text box**

This close-up shows the 'Billing Method' dropdown menu expanded. The options listed are: '(Bill to insurance)' (highlighted), '(Bill to insurance)', 'Self pay medical hardship', 'Self pay manager override', 'Self pay no discount', and 'Self pay prompt pay discount'. Below the list is an 'Amount to collect' text box.

**Figure 4.12 –Billing Method list box values**

## Meaningful Use Wizard

A new ICON has been added to the Patient Visit tab. This ICON will open a new Meaningful Use Wizard dialog where the users can check an item and that item will be added to the grid on the patient visit tab.

The screenshot displays the eRAD RIS interface. At the top, there are tabs for 'ics', 'Order', 'Exam', 'Visit', and 'Image Request (0)'. The 'Visit' tab is highlighted with a red box. Below the tabs, there are input fields for 'Weight: [ ] lbs', 'BMI: [ ]', and a checkbox for 'Is Pregnant'. To the right, the 'Clinical Summary' section includes 'Continuity of Care Record (CCR)' and 'View External Clinical Document' buttons. Below this, the 'Allergies' section is highlighted with a red box. It contains a radio button for 'None' and a radio button for 'Use Grid'. Below these is a table with columns: Allergy, Reaction, Severity, Status, and Start Date. The table is currently empty. To the left of the allergies grid, there is a 'Medications' section with a table that has columns: Medication, Physician, and SIG Text. At the bottom of the medications section, there is a 'Sync/Refresh' button.

**Figure 4.13 – Meaningful Use Wizard button**

The Meaningful User Wizard button is controlled by the access string MU.WizardDialog. User groups must have this value set to full in order to see the button.

**Medical History** – The medical history grid allows the user the ability to have the same icd-9 code show multiple times however, we don't allow the dates of an icd-9 code to overlap. If the user selects the same icd-9 code only one can be active at a time (we throw an error saying overlapping dates not allowed). We added code that forces the user to select a start date for active icd-9 codes and we added code to force an end date for inactive or resolved icd-9 codes. This is needed so we can use the mu wizard to activate or inactive the correct code in the list.

**Allergies** – The allergy shows in the grid only once. Therefore you have an allergy or the user does not have the allergy.

**Medications** – Because we are using NewCrop medications can show in the list multiple times. We don't have the concept of start and end dates with medications so the way we use the meaningful use wizard is as follows. If the user clicks the wizard button we show all active drugs by checking the appropriate mediation (no matter if entered in ris or NewCrop). If the user



unchecks the checkbox we make all medications entered in rRIS (ris\_entered\_flag = Y) inactive. We don't inactive the medications entered in NewCrop because the sync button will control the status of the medication. If the user checks a medication in the wizard we add a new row to the grid.

The screenshot shows the 'MU Wizard Dialog' window. It contains three main sections: Medications, Medical History, and Allergies. The Medications section has a list of 12 items with checkboxes. The Medical History section has a list of 12 items with checkboxes. The Allergies section has a table with 12 substances and three columns for severity: Mild, Mod, and Severe, each with a checkbox.

Medications	
<input type="checkbox"/> ActoPlus Med	<input type="checkbox"/> Glumentza
<input type="checkbox"/> Avandamet	<input type="checkbox"/> Glyburid Met
<input type="checkbox"/> Diabex	<input type="checkbox"/> Janumet
<input type="checkbox"/> Diafomin	<input type="checkbox"/> Melformin
<input type="checkbox"/> Flortamet	<input type="checkbox"/> Metaglip
<input type="checkbox"/> Gluccophage	<input type="checkbox"/> PrandiMet
<input type="checkbox"/> Glucovance	<input type="checkbox"/> Riomet(liquid form Metformin)

Medical History	
<input type="checkbox"/> Aneurysm Clip or Coil	<input type="checkbox"/> Metal in the body
<input type="checkbox"/> Aneurysm Had Surgery	<input type="checkbox"/> Morphine Pump
<input type="checkbox"/> Aneurysm No Surgery	<input type="checkbox"/> Pacemaker
<input type="checkbox"/> Asthma	<input type="checkbox"/> Paraplegic
<input type="checkbox"/> Breast Implants	<input type="checkbox"/> Previous CT Contrast Reaction
<input type="checkbox"/> Cancer	<input type="checkbox"/> Previous MR Contrast Reaction
<input type="checkbox"/> Diabetes	<input type="checkbox"/> Universal Precautions
<input type="checkbox"/> Insulin Pump	

Allergies	Mild	Mod	Severe
Adhesive Tape	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bee Sting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Betadine (Topical Iodine)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contrast (Medical Imaging)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dog, Cat or Animal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dust	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fruit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grass / Pollen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Latex	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lidocaine / Novacaine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mold	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Peanut or other nut	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Penicillin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rubbing Alcohol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shellfish	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sulfa Drug	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

OK Cancel

Figure 4.14 – Meaningful Use Wizard window

## **Hide New Crop Access**

Added an access string “Clinical.NewCrop”, which if set to something other than Level.Full will prevent any of the newcrop features from being accessible, which means the button on the PatientInformation and the update button on PatientDrugs will be hidden.

The permission controls the visibility of the buttons and the syncing with New Crop.

## **Control Access to Proxy Signing Feature**

Add the access string: Clinical.UserPreferences.ProxySigning

When set to None, the proxy group box in the user prefer screen will be hidden. If its set to any other level other than full the proxy group box will be disabled.

### Notes Fields - User Identifier

In previous builds the Notes field would capture the user's initials. In build 35 it will now display the last name and first initial of first name. The notes history will also display the same.

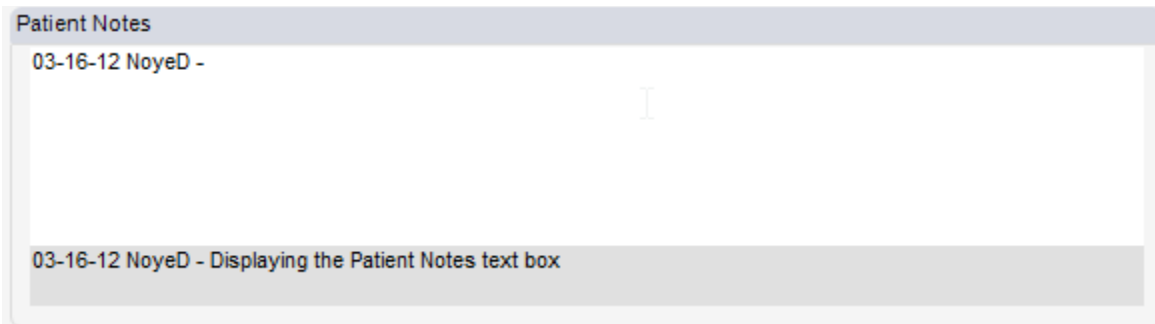


Figure 4.15 – Notes field displaying new User Identifier

### Billing Exception Additions

New exceptions added:

#### **Patient**

- Full name
- Address
- A contact phone number

#### **Insurance**

- Policy holder relationship
- Name
- Date of Birth
- Address

#### **Responsible party**

- Relationship
- Date of birth
- Gender
- Address

### MWL Enhancements

DCM4CHEE supports coercion of inbound messages via xsl stylesheets, meaning that we can make modifications to the passed in messages before they are acted upon.

For MWL queries, there is a base stylesheet that is shared across all queries in addition to optional stylesheets that are specific to a particular calling AE Title.

The common stylesheet now coerces the dicom tag for study status (00400020) to be ARRIVED\STARTED\DISCONTINUED. This will filter the worklist to studies of only these statuses. In addition, we only send HL7 to dcm4chee when the status is arrived, started, discontinued, exam done, or cancelled. Note that scheduled studies are NOT sent to dcm4chee. The stylesheet also uses the current date if no date, accession number, or patient id is provided, otherwise it will use the date provided which could possibly be none.

In order to support the modality\_x\_modality requirement, a separate xml file has been created in order to contain the groupings. For each calling AE Title, it is required that all AE titles to be returned in the worklist are listed, including the calling AE Title itself.

The following example specifies that a Calling AE Title of CT1EL will return all studies scheduled under either CT1EL or MR1FH. Note that this example is somewhat nonsensical.

```
<modality_x_modality>
  <modality calling_ae_title="CT1EL">
    <x_modality ae_title="CT1EL" />
    <x_modality ae_title="MR1FH" />
  </modality>
</modality_x_modality>
```

If no modality node exists with the calling AE Title sent in the query then the query will be limited to only the calling AE Title.

## **Document Distribution Enhancements**

For busy jobs, I put a delay in of 10 minutes, hardcoded.

A catch-all else block to handle all failures that were not previously being checking for was added. These errors included “Fax Transmission Error” and “Disconnected”. This will send these jobs to error status.

For busy jobs, a delay in of 10 minutes was added (hardcoded for this release, may look at configurable value in the future)

On a manual retry, we’ll now clear the fax no answer log.

## Management Reports – Sales

The Sales Team had requested management report. Below is a list of 6 new management reports designed specifically for the Sales Team.

For a list of all current designed management reports, please see the rRIS Core Management Reports.pdf file that can be accessed on the RADNET Wiki

### 1. 6 Month Variance Report

#### 6 Month Variance Report

Practice: Advanced Radiology

Site(s): Fisher, Lutherville

Date Range: Aug 2011 - Feb 2012

Referring Phys	Specialty	Site	Modality	Aug 2011	Sep 2011	Oct 2011	Nov 2011	Dec 2011	Jan 2012	Total	Mnthly Avg	Feb 2012	Variance
aaa aaa	Breast Surgery	FH	CT	0	0	0	0	1	2	3	0.5	0	(0.5)
			XR	0	0	0	0	0	1	1	0.2	0	(0.2)
		LU	CT	0	0	0	0	1	0	1	0.2	1	0.8
			XR	0	0	0	0	0	1	1	0.2	0	(0.2)
				0	0	0	0	2	4	6	1.0	1	0.0
Administrator Test User		FH	BD	3	0	0	0	0	0	3	0.5	0	(0.5)
			CT	0	0	1	0	0	1	2	0.3	0	(0.3)
			PT	6	5	2	0	2	1	16	2.7	8	5.3
			XR	102	0	23	0	0	3	128	21.3	0	(21.3)
		LU	XR	41	0	13	0	0	0	54	9.0	0	(9.0)
				152	5	39	0	2	5	203	33.8	8	(25.8)
aefe aeef	Head & Neck Surgery	FH	MA	0	0	1	0	0	0	1	0.2	0	(0.2)
				0	0	1	0	0	0	1	0.2	0	(0.2)
Aimee86 McClain		LU	XR	0	0	0	0	0	1	1	0.2	0	(0.2)
				0	0	0	0	0	1	1	0.2	0	(0.2)
Alfred Tapia		FH	CT	0	0	0	0	0	1	1	0.2	0	(0.2)
			CT	0	0	1	0	0	0	1	0.2	0	(0.2)
				0	0	1	0	0	1	2	0.3	0	(0.3)

## 2. 13 Month Variance Report

### 13 Month Variance Report

Practice: Advanced Radiology

Site(s): Fisher, Lutherville

Date Range: Aug 2011 - Feb 2012

Physician	Affiliation	Specialty	Site	Modality	Feb 2011	May 2011	Jun 2011	Jul 2011	Aug 2011	Sep 2011	Oct 2011	Nov 2011	Dec 2011	Jan 2012	Monthly Avg	Feb 2012	Var	Difference
aaa aaa		Breast Surgery	FH	CT	0	0	0	0	0	0	0	0	1	2	0.3	0	(0.3)	-100%
				XR	0	0	0	0	0	0	0	0	0	1	0.1	0	(0.1)	-100%
			LU	CT	0	0	0	0	0	0	0	0	1	0	0.1	1	0.9	1100%
				XR	0	0	0	0	0	0	0	0	0	1	0.1	0	(0.1)	-100%
			Total		0	0	0	0	0	0	0	0	2	4	0.5	1	0.5	100%
Administrator Test User			FH	BD	0	0	0	1	3	0	0	0	0	0	0.3	0	(0.3)	-100%
				CT	0	0	0	0	0	0	1	0	0	1	0.2	0	(0.2)	-100%
			LU	PT	0	0	0	2	6	5	2	0	2	1	1.5	8	6.5	433%
				XR	0	0	0	39	102	0	23	0	0	3	13.9	0	(13.9)	-100%
			Total		0	0	0	60	152	5	39	0	2	5	21.9	8	(13.9)	-63%
aefe aeia		Head & Neck Surgery	FH	MA	0	0	0	0	0	0	1	0	0	0	0.1	0	(0.1)	-100%
				Total	0	0	0	0	0	0	1	0	0	0	0.1	0	(0.1)	-100%
Almee86 Moolain			LU	XR	0	0	0	0	0	0	0	0	0	1	0.1	0	(0.1)	-100%
				Total	0	0	0	0	0	0	0	0	0	1	0.1	0	(0.1)	-100%
Alexander06 Avila			LU	MA	0	0	1	0	0	0	0	0	0	0	0.1	0	(0.1)	-100%
				Total	0	0	1	0	0	0	0	0	0	0	0.1	0	(0.1)	-100%

### 3. 13 Month Variance Report by Physician Location

#### 13 Month Variance Report by Physician/Location with Percentage

Practice: Advanced Radiology

Site(s): Fisher, Lutherville

Date Range: Feb 2011 - Feb 2012

Physician	Site	Modality	Feb 2011	May 2011	Jun 2011	Jul 2011	Aug 2011	Sep 2011	Oct 2011	Nov 2011	Dec 2011	Jan 2012	Monthly Avg	Feb 2012	Var	Difference
ssa aaa	FH	CT	0	0	0	0	0	0	0	0	1	2	0.3	0	(0.3)	-100%
		XR	0	0	0	0	0	0	0	0	0	1	0.1	0	(0.1)	-100%
	LU	CT	0	0	0	0	0	0	0	0	1	0	0.1	1	0.9	1100%
		XR	0	0	0	0	0	0	0	0	0	1	0.1	0	(0.1)	-100%
	Total		0	0	0	0	0	0	0	0	2	4	0.5	1	0.6	100%
Administrator Test User	FH	BD	0	0	0	1	3	0	0	0	0	0	0.3	0	(0.3)	-100%
		CT	0	0	0	0	0	0	1	0	0	1	0.2	0	(0.2)	-100%
		PT	0	0	0	2	6	5	2	0	2	1	1.5	8	6.5	433%
		XR	0	0	0	39	102	0	23	0	0	3	13.9	0	(13.9)	-100%
	LU	XR	0	0	0	18	41	0	13	0	0	0	6.0	0	(6.0)	-100%
	Total		0	0	0	60	152	5	39	0	2	5	21.9	8	(13.9)	-63%
sefe aeef	FH MA		0	0	0	0	0	0	1	0	0	0	0.1	0	(0.1)	-100%
	Total		0	0	0	0	0	0	1	0	0	0	0.1	0	(0.1)	-100%
Aimee86 McClain	LU XR		0	0	0	0	0	0	0	0	0	1	0.1	0	(0.1)	-100%
	Total		0	0	0	0	0	0	0	0	0	1	0.1	0	(0.1)	-100%
Alexander06 Avila	LU MA		0	0	1	0	0	0	0	0	0	0	0.1	0	(0.1)	-100%
	Total		0	0	1	0	0	0	0	0	0	0	0.1	0	(0.1)	-100%
Alfred Tapia	FH	CT	0	0	0	0	0	0	0	0	0	1	0.1	0	(0.1)	-100%
		LU CT	1	0	0	0	0	0	1	0	0	0	0.1	0	0.9	1100%
	Total		1	0	0	0	0	0	1	0	0	1	0.2	0	0.8	500%



#### 4. 13 Month Variance Report by Group

##### 13 Month Variance Report by Group with Percentage

Affiliations	Physician	Site	Modality	Feb 2011	May 2011	Jun 2011	Jul 2011	Aug 2011	Sep 2011	Oct 2011	Nov 2011	Dec 2011	Jan 2012	Monthly Avg	Feb 2012	Var
BLAKER CHIROPRACTIC	WILLIAM BLAKER	Total		0	94	4	14	0	0	0	0	0	0	9.3	0	(9.3)
CALVERT WOMENS HEALTH	WILLIAM SPENCER-STRONG II	FH	BD	0	1	0	0	0	0	0	0	0	0	0.1	0	(0.1)
			MR	0	12	4	2	0	0	0	0	0	0	1.5	0	(1.5)
			PT	0	0	1	0	0	0	0	0	0	0	0.1	0	(0.1)
		LU	MR	0	17	2	3	0	0	0	0	0	0	1.8	0	(1.8)
			XR	0	4	0	0	0	0	0	0	0	0	0.3	0	(0.3)
		Total		0	34	7	5	0	0	0	0	0	0	3.8	0	(3.8)
CARDIOVASCULAR SPECIALISTS OF CENTRAL MD	WILLIAM HERZOG	FH	CT	0	0	0	1	0	0	0	0	0	0	0.1	0	(0.1)
			PT	0	18	11	8	0	0	1	0	0	0	3.2	0	(3.2)
			XR	0	0	0	1	0	0	0	0	0	0	0.1	0	(0.1)
		LU	CT	0	1	1	0	0	0	0	0	0	0	0.2	0	(0.2)
			US	0	2	0	0	0	0	0	0	0	0	0.2	0	(0.2)
		Total		0	21	12	10	0	0	1	0	0	0	3.7	0	(3.7)
	WILLIAM PARNES	FH	CT	0	2	1	2	0	0	0	0	0	0	0.4	0	(0.4)
			MA	0	0	0	1	0	0	0	0	0	0	0.1	0	(0.1)
			PT	0	8	22	10	0	0	1	0	0	0	3.4	0	(3.4)
			US	0	1	0	0	0	0	0	0	0	0	0.1	0	(0.1)
			XR	0	0	1	0	0	0	0	0	0	0	0.1	0	(0.1)
		LU	CT	0	1	0	0	0	0	0	0	0	0	0.1	0	(0.1)
			US	0	1	0	0	0	0	0	0	0	0	0.1	0	(0.1)
		Total		0	13	24	13	0	0	1	0	0	0	4.3	0	(4.3)

## 5. 13 Month Specific Group Report

### Specific Group 13 Month Variance Report

Practice: Advanced Radiology

Site(s): Fisher, Lutherville

Date Range: Aug 2011 - Feb 2012

Affiliation	Physician	Site	Modality	Feb 2011	May 2011	Jun 2011	Jul 2011	Aug 2011	Sep 2011	Oct 2011	Nov 2011	Dec 2011	Jan 2012	Monthly Avg	Feb 2012	Var
	888 888	FH	CT	0	0	0	0	0	0	0	0	1	2	0.3	0	(0.3)
			XR	0	0	0	0	0	0	0	0	0	1	0.1	0	(0.1)
		LU	CT	0	0	0	0	0	0	0	0	1	0	0.1	1	0.9
			XR	0	0	0	0	0	0	0	0	0	1	0.1	0	(0.1)
		Total		0	0	0	0	0	0	0	0	2	4	0.5	1	0.5
	Administrator Test User	FH	BD	0	0	0	1	3	0	0	0	0	0	0.3	0	(0.3)
			CT	0	0	0	0	0	0	1	0	0	1	0.2	0	(0.2)
			PT	0	0	0	2	6	5	2	0	2	1	1.5	8	6.5
			XR	0	0	0	39	102	0	23	0	0	3	13.9	0	(13.9)
		LU	XR	0	0	0	18	41	0	13	0	0	0	6.0	0	(6.0)
Total		0	0	0	60	162	5	39	0	2	6	21.9	8	(13.9)		
888 888	FH	MA	0	0	0	0	0	0	1	0	0	0	0.1	0	(0.1)	
		Total		0	0	0	0	0	0	1	0	0	0	0.1	0	(0.1)
Aimee86 Moolain	LU	XR	0	0	0	0	0	0	0	0	0	0	1	0.1	0	(0.1)
		Total		0	0	0	0	0	0	0	0	0	1	0.1	0	(0.1)
Alexander06 Avila	LU	MA	0	0	1	0	0	0	0	0	0	0	0	0.1	0	(0.1)
		Total		0	0	1	0	0	0	0	0	0	0	0.1	0	(0.1)
Alfred Tapia	FH	CT	0	0	0	0	0	0	0	0	0	0	1	0.1	0	(0.1)
		LU	CT	1	0	0	0	0	0	1	0	0	0	0.1	0	0.9
	Total		1	0	0	0	0	0	1	0	0	1	0.2	0	0.9	

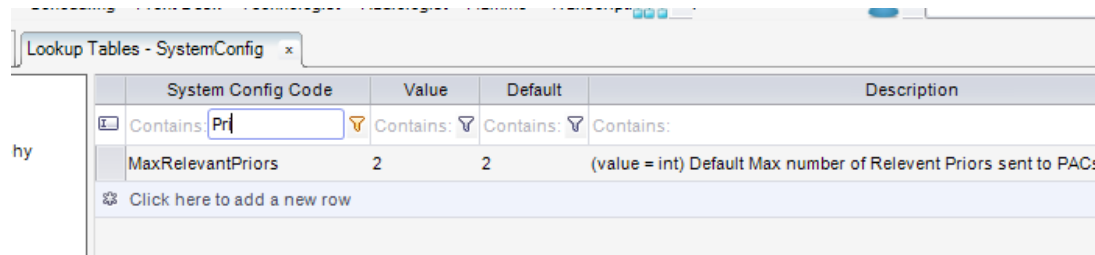
## 6. 9 Month Quarterly Variance Report

### Quarterly Variance Report

Physician	Specialty	Site	Modality	Qtr 3 2011	Qtr 4 2011	Mnthly Avg	Qtr 1 2012	Var
aaa aaa	Breast Surgery	FH	CT	0	1	0.2	2	1.8
			XR	0	0	0.0	1	1.0
		LU	CT	0	1	0.2	1	0.8
			XR	0	0	0.0	1	1.0
	Total			0	2	0.3	5	4.7
Administrator Test User		FH	BD	4	0	0.7	0	(0.7)
			CT	0	1	0.2	1	0.8
			PT	13	4	2.8	9	6.2
			XR	141	23	27.3	3	(24.3)
		LU	XR	59	13	12.0	0	(12.0)
			Total			217	41	43.0
aeefe aeefa	Head & Neck Surgery	FH	MA	0	1	0.2	0	(0.2)
	Total			0	1	0.2	0	(0.2)
Aimee86 McClain		LU	XR	0	0	0.0	1	1.0
				Total			0	0
Alfred Tapia		FH	CT	0	0	0.0	1	1.0
		LU	CT	0	1	0.2	0	(0.2)
	Total			0	1	0.2	1	0.8

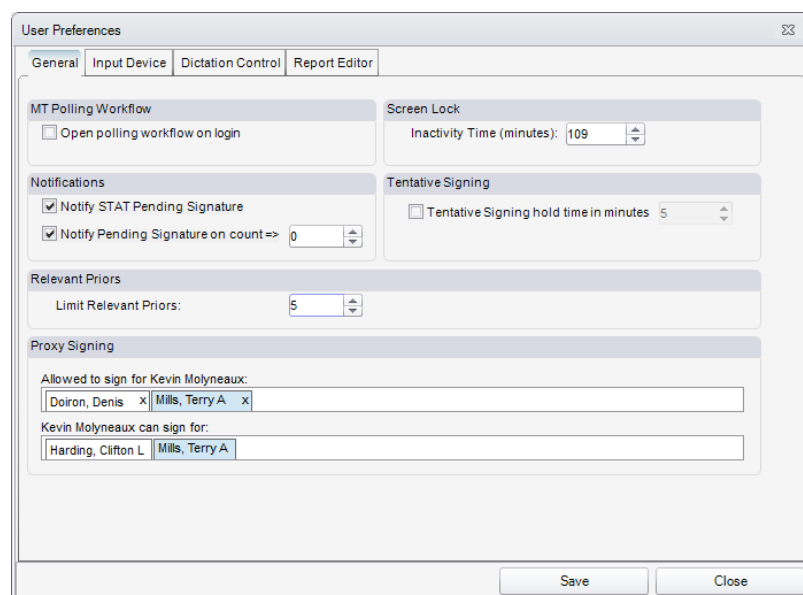
## Limit Number of Relevant Priors

Added a system configuration setting called “MaxRelevantPriors”, which limits the number of relevant priors shown in the PACs “sorted by ranking”.



**Figure 4.16 – MaxRelevantPriors system config entry**

A user can modify their personal MaxRelevantPriors via user preferences.



**Figure 4.17 – MaxRelevantPriors User Preference**

## **Radiologist Written Signature on Reports**

To implement, you will need to add a new scan document type that is associated to the person level. This scan document type must be referenced in the DoctorsSignatureScanType system configuration setting.

**The default DoctorsSignatureScanType value is “DoctorsSignature”.**

Also, you will need to update your version of the Diagnostic Report Body and Diagnostic Report Addendum reports in SQL Server Report Server. If you are using the “SampleDiagnosticReportBody” and the “SampleDiagnosticReportAddendum”, then the signature feature is automatically included. Please feel free to reference the sample diagnostic report template for more implementation details.

### Implementation instructions for the original report:

Open the diagnostic report template that the system uses for report body.  
Add a new dataset called “SelectDoctorsSignature”. Use the following properties.

The screenshot shows the 'Dataset Properties' dialog box with the 'Query' tab selected. The 'Name' field is set to 'SelectDoctorsSignature'. The 'Use a dataset embedded in my report' radio button is selected. The 'Data source' is set to 'DataSource2'. The 'Query type' is set to 'Text'. The 'Query' text area contains the following SQL query:

```
select dbo.c_GetDoctorsSignature(signed_by_user_id) as DoctorSignature
from c_interpretation
where study_key = @study_key
and addendum_key = 0
and signed_by_user_id is not null
```

The 'Time out (in seconds)' field is set to 0. The 'Query Designer...', 'Import...', and 'Refresh Fields' buttons are visible. The 'OK' and 'Cancel' buttons are at the bottom right.

Add a new image control to the area you want the signature to appear. We added the image control just above the doctor’s name in the sample template.

[title]: [First(text)]	Exam Section
[title]: [First(text)]	Title Bolded Ln1
[text]	Title Bolded
[title]: [First(text)]	Normal Section Ln1
[text]	Normal Section
[title]: [First(text)]	Impression Section Ln1
[text]	Impression Section
[text]	No Title Section

Thank you for the opportunity to participate in the care of this patient.

[SigningDoctorsName]  
Electronically Signed: «Expr»

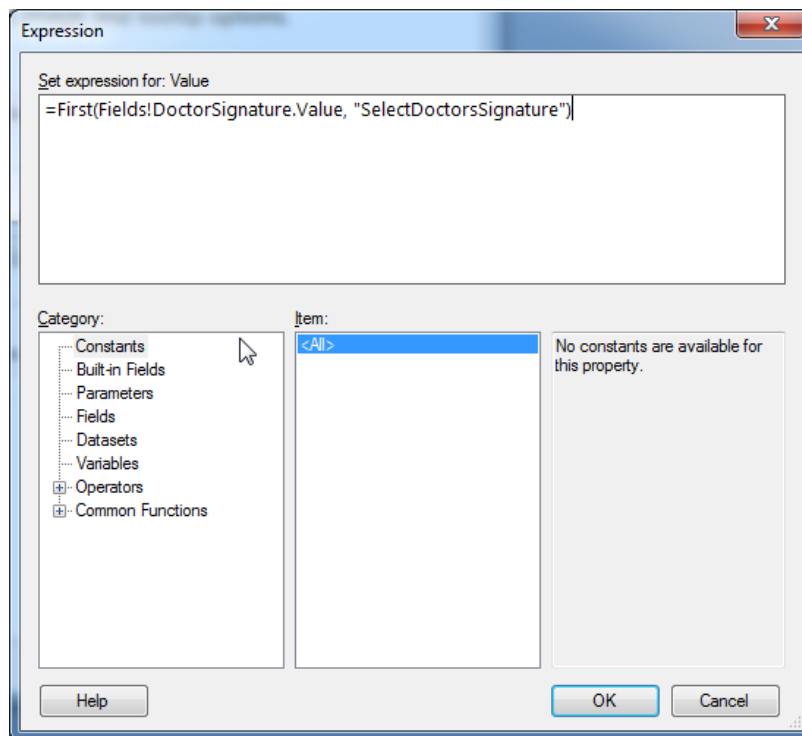
Here are the properties for the image control.

The Image Properties dialog box has a sidebar with tabs: General, Size, Visibility, Action, and Border. The General tab is selected. The main area contains the following fields:

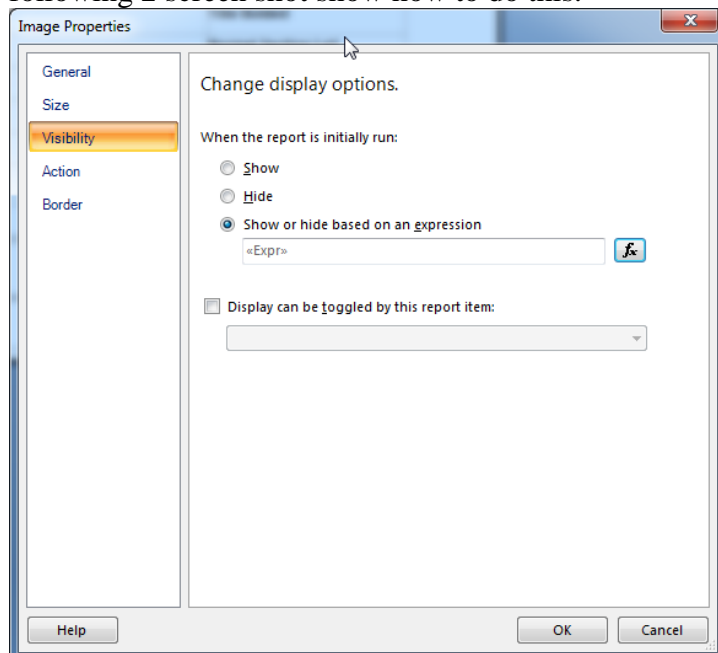
- Name:** RadiologistSignature
- ToolTip:** (empty text box)
- Select the image source:** Database (dropdown menu)
- Use this field:** «Expr» (dropdown menu)
- Use this MIME type:** image/jpeg (dropdown menu)

Buttons at the bottom: Help, OK, Cancel.

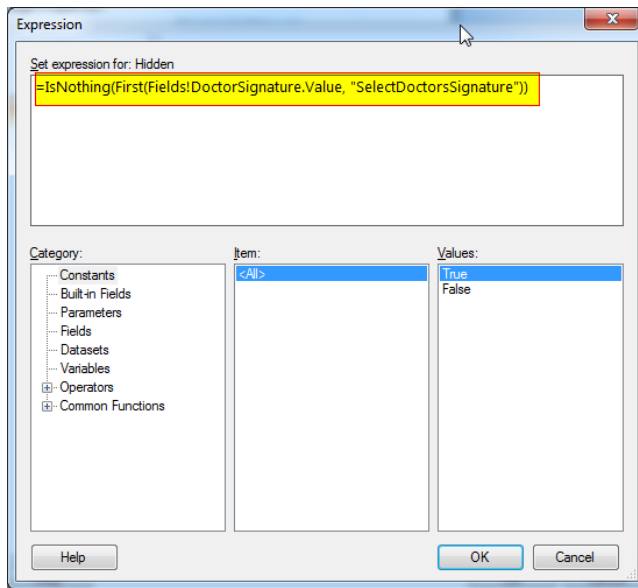
In the “Use this field” we used the following:



For visibility, we will hide the image control if there is no signature on file for the doctor. The following 2 screen shot show how to do this.

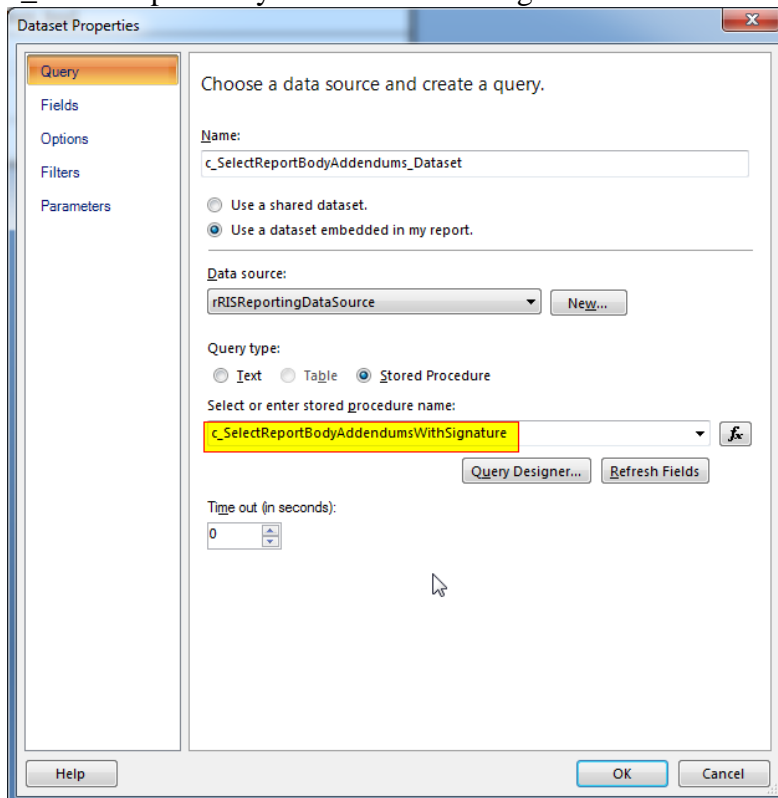




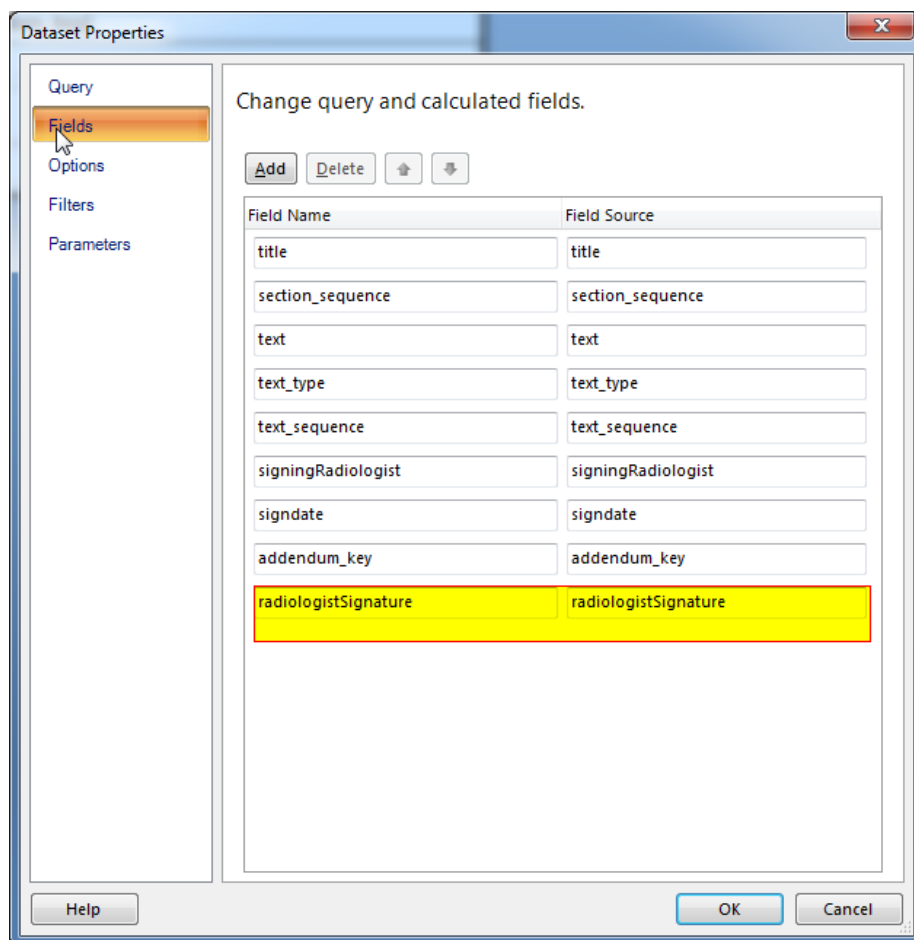


### Implementation instructions for Addendums:

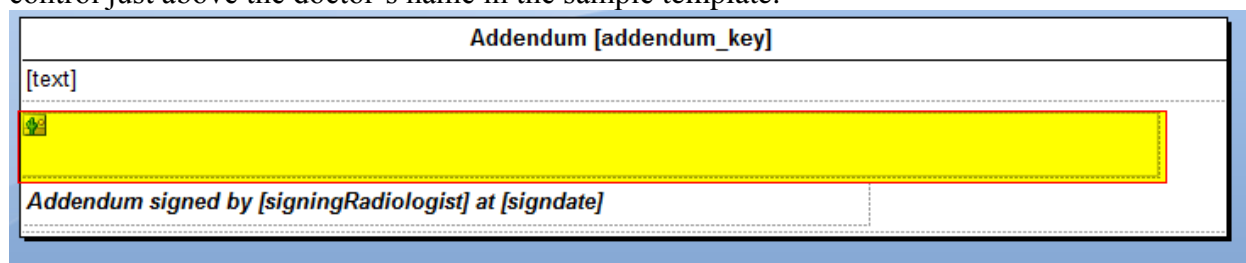
Open the diagnostic report template that the system uses for report addendums.  
Change the c\_SelectReportBodyAddendum dataset to point to a new stored procedure call  
c\_SelectReportBodyAddendumsWithSignature



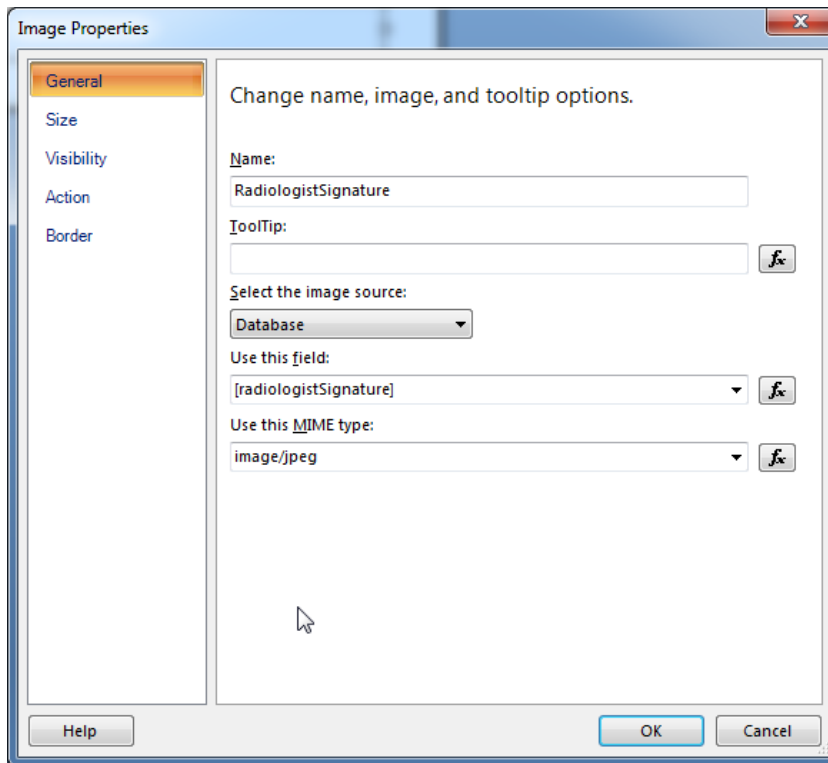
Click refresh fields and verify that the radiologistSignature field is not populated in the Fields list.



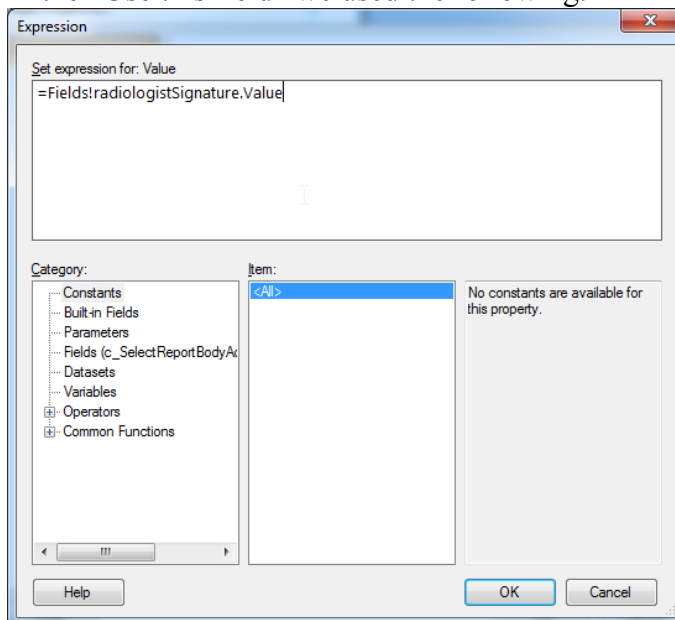
Add a new image control to the area you want the signature to appear. We added the image control just above the doctor's name in the sample template.



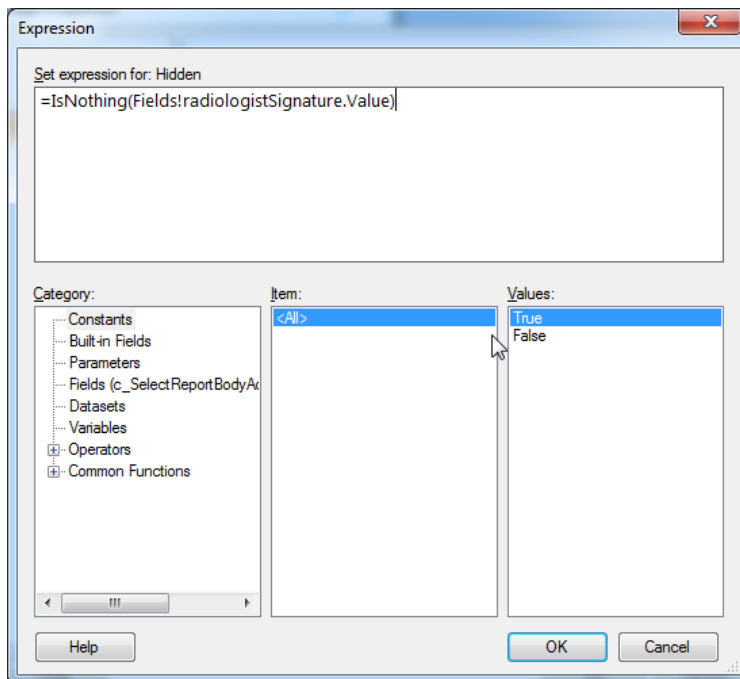
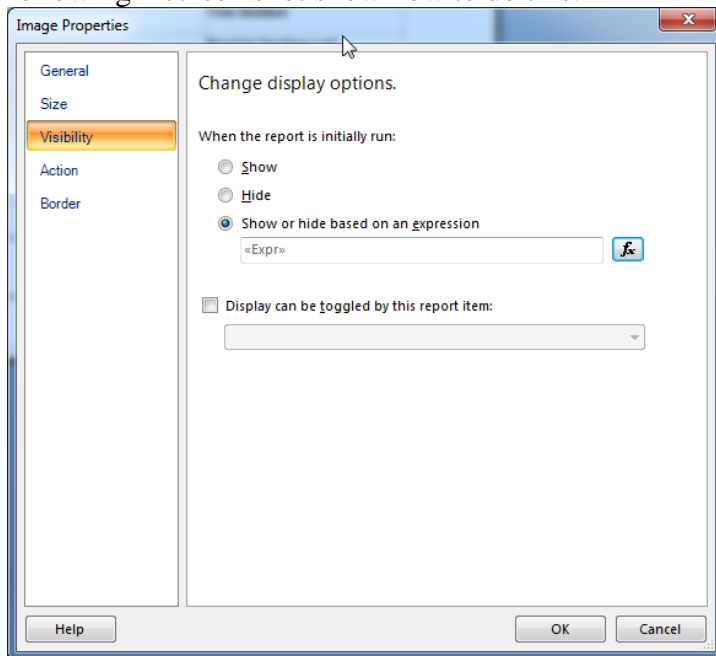
Here are the properties for the image control.



In the “Use this field” we used the following:



For visibility, we will hide the image control if there is no signature on file for the doctor. The following 2 screen shot show how to do this.



## Pending Edit Work List

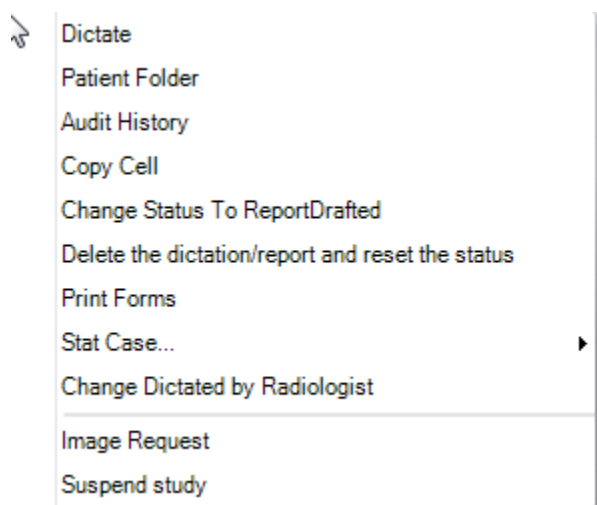
A new work list called Pending Edit has been added for the Radiologist role. This new work list will contain exams in Report Drafted items dictated by the current logged in Radiologist. The columns in the work list are the same as the Pending Signature work list.

Flags	Status	Procedures	Scheduled Date	First Name	Last Name	MRN	Birth Date	Age At St.	Room	Modality T.	Accessi...	Exam S...	Read...	Problem	QA	Performed End Date	Performed Start Date	Assigned Trans	Assigned
Contains: Contains: Contains:	Contains: Contains: Contains:	Contains: Contains: Contains:	Contains: Contains: Contains:	Contains: Contains: Contains:	Contains: Contains: Contains:	Contains: Contains: Contains:	Contains: Contains: Contains:	Contains: Contains: Contains:	Contains: Contains: Contains:	Contains: Contains: Contains:	Contains: Contains: Contains:	Contains: Contains: Contains:	Contains: Contains: Contains:	Contains: Contains: Contains:	Contains: Contains: Contains:	Contains: Contains: Contains:	Contains: Contains: Contains:	Contains: Contains: Contains:	Contains: Contains: Contains:
ReportDrafted	XR HEEL MIN 2 VIEWS [73650] - Ankle...	08-11-2011 7:45 AM	Barry	Blue	10076	03-03-1960	51 years	XR1FH	XR	1009213	✓	✓				08-10-2011 2:12 PM	08-10-2011 2:11 PM	andrew	
ReportDrafted	MA Digital Mammo Screen Bil w Exam [...	02-14-2012 2:45 PM	Gretchen	Goldie	11008	02-05-1974	38 years	MA1EL	MA	1010213			✓			02-14-2012 2:45 PM	02-14-2012 2:43 PM	Adam	
ReportDrafted	MA DIGITAL MAMMO SCREEN BIL [G...	02-16-2012 7:45 AM	Mary	Grace	11018	11-26-1969	62 years	MA1EL	MA	1010225				✓		02-15-2012 4:33 PM	02-15-2012 4:32 PM	dale	
ReportDrafted	XR Chest Min 4 Views [71030] - Chest	02-13-2012 6:00 PM	Garcia	Hoye	10915	04-04-1977	34 years	XR1EL	XR	1010198						02-13-2012 4:33 PM	02-13-2012 4:32 PM	denis	darcyn
ReportDrafted	US Abdominal Ltd Or Fu [76705] - Abdo...	01-17-2012 1:00 PM	Chester	Malarky	10622	07-14-1965	56 years	US2EL	US	1010093						01-17-2012 11:46 AM	01-17-2012 11:45 AM	darcyn	
ReportDrafted	MA DIGITAL MAMMO SCREEN BIL [G...	03-12-2012 2:45 PM	Sally	Moore	11328	07-15-1965	46 years	MA1EL	MA	1010506						03-12-2012 2:42 PM	03-12-2012 2:41 PM	darcyn	
ReportDrafted	MA Digital Mammo Screen Bil w Implan...	01-19-2012 10:15...	Xena	Xoller	10007	07-22-1966	55 years	MA1EL	MA	1010114						01-19-2012 5:51 PM	01-19-2012 5:51 PM	darcyn	

Auto Refresh Sign Report 7 Rows

**Figure 4.18 – Pending Edit work list**

The Radiologist can open the sign reports data window from the button in the lower right, double clicking on the selected work list row, or choosing from the options from the context menu displayed in the figure below.



**Figure 4.19 – Pending Edit context menu options**

## Reporting - Message Prompt for Missing or Empty Required Sections

When the “Sign” or “Transcribe” button is pressed we will run validation against the report and compare it to the Document Model to make sure all required sections are accounted for. If they are not, the user will be prompted with a message box. The user will have to correct the issues before they are able to sign/transcribe the report. If the user needs to save without correcting the issue(s), he will have to save using another button, like suspend for example would be the perfect example. Or perhaps a Radiologist might want to send it to a transcriptionist to make the corrections, which he could do by using the appropriate button under the submit button drop down.

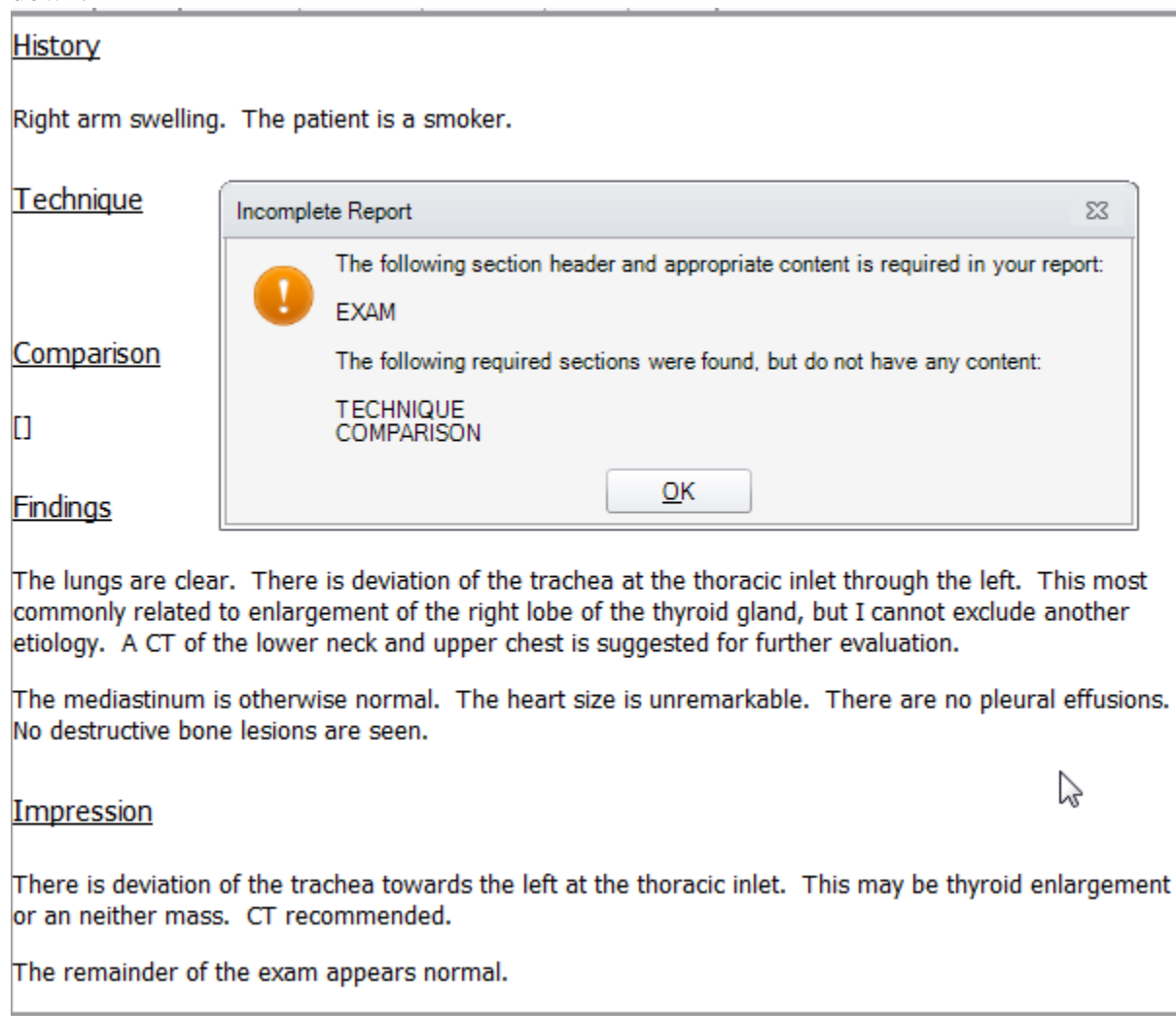
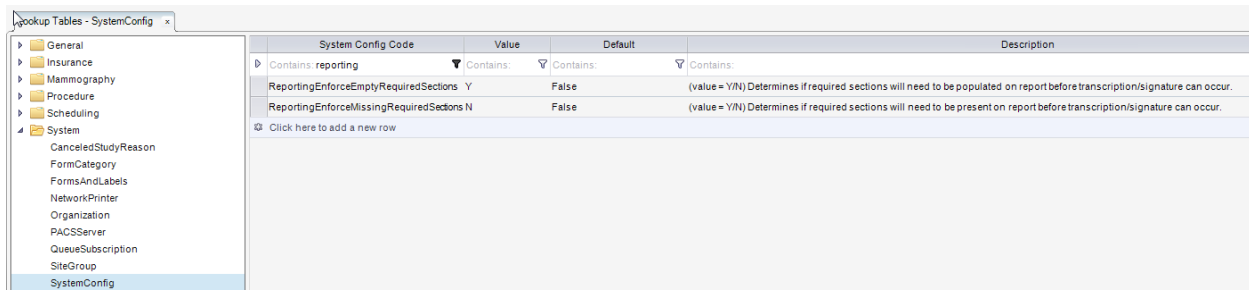


Figure 4.20 – Incomplete Report Message Prompt

This new feature is controlled by two new config values that can turn on or off parts of this feature.

- ReportingEnforceEmptyRequiredSections
- ReportingEnforceMissingRequiredSections



System Config Code	Value	Default	Description
Contains: reporting	Contains:	Contains:	Contains:
ReportingEnforceEmptyRequiredSections Y	False	(value = Y/N) Determines if required sections will need to be populated on report before transcription/signature can occur.	
ReportingEnforceMissingRequiredSections N	False	(value = Y/N) Determines if required sections will need to be present on report before transcription/signature can occur.	
Click here to add a new row			

**Figure 4.21 – Incomplete Report new config settings**



## Reporting – Sign Oops (Delayed Release of Report after Signing)

**NOTE:** The screen shots and explanation of the feature below reference “*Tentatively Signed*”. This terminology will be replaced in the next build and captured in the release notes of the next build.

Another new feature in build 35 is the Sign Oops feature. This feature is a configurable value controlled first on the client side system config settings.

- The feature can be turned on/off from the system config – TentativeSigningEnabled with possible options of Y or N
- The “MaxAutoSign” config setting determines the max allowed time for a study to sit in “TentativelySigned1”.
- The user preference pane allow the user to set if they want to use this feature or not, and also what they want their time period to be, which can be set up to the “MaxAutoSign” value. And as low as 1 minute.

System Config Code	Value	Default	Description
Contains: sign	Contains:	Contains:	Contains:
DoctorsSignatureScanType	DoctorsSignature	DoctorsSignature	(value = string) Identifies the value of scan document type used for doctors signature.
MaxAutoSignTime	5	5	(value = 0/9999) Determines the maximum allowed time for tentative signing
TentativeSigningEnabled	N	False	(value = Y/N) Determines if Tentative Signing will be available

Figure 4.21 – System config options for Sign Oops feature

Access to the work lists, user preference and the option to release the report before the configured time has elapsed are controlled by the following access strings

Access String Code	Description	Display Order	Default Access Level Code	Active
Contains: ten	Contains:	Equals:	Contains:	Contains:
Clinical.UserPreferences.TentativeSigning	allows the user to be able to use TentativeSigning	1	Disabled	Y
Clinical.ReleaseTentativelySignedReport	Controls access to the right click context menu item to release or push the exam to signed.	1	None	Y
WL.TentativelySigned	WL access for Tentatively Signed Reports	1	None	Y
WL.Rad.TentativelySignedAll	WL access for Tentatively Signed Reports All	1	None	Y

Figure 4.22 – Access strings for Tentatively signed features

- WL.TentativelySigned – Controls the access to the Tentatively Signed work list. This would be for the logged in user

- WL.Rad.TentativelySignedAll – Controls access to the All Tentatively Signed work list. This would be for an Admin to see all users exams in Tentatively Signed status
- Clinical.UserPreferences.TentativelySigning – Enables the User Preference
- Clinical.ReleaseTentativelySignedReport – Controls if the user will have the option to release the exam early from Tentatively Signed work list/status before the designated time specified in the user preference

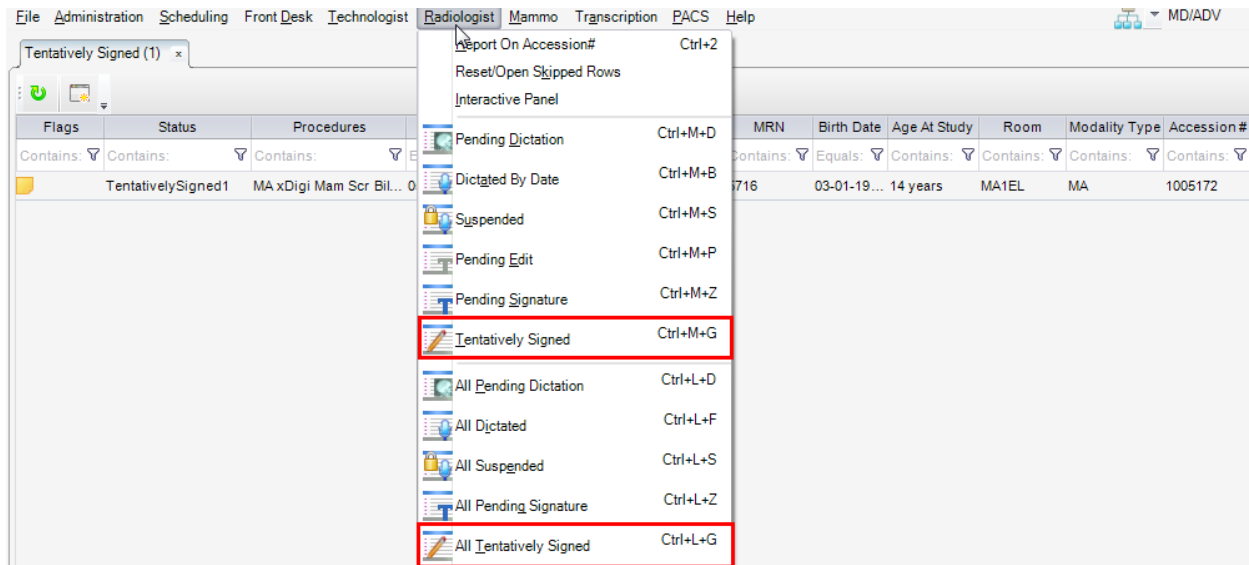


Figure 4.23 – Tentatively Signed work list and Work list access from the Radiologist menu

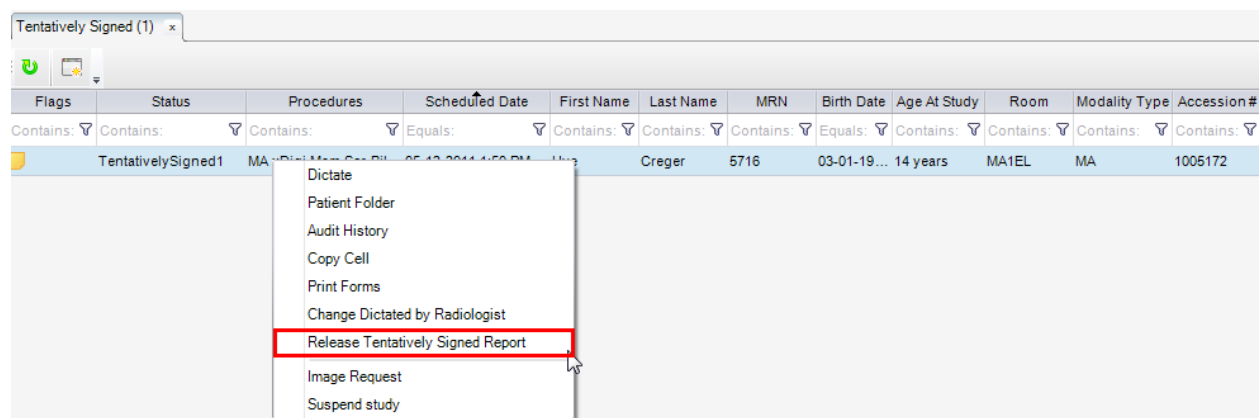


Figure 4.24 – Context menu option to Release Tentatively Signed Report

The screenshot shows the 'User Preferences' dialog box with the 'General' tab selected. The 'Tentative Signing' section is highlighted with a red rectangle. It contains a checked checkbox for 'Tentative Signing hold time in minutes' with a value of 5. Other sections include 'MT Polling Workflow' (with 'Open polling workflow on login' unchecked), 'Notifications' (with 'Notify STAT Pending Signature' and 'Notify Pending Signature on count =>' unchecked), 'Screen Lock' (with 'Inactivity Time (minutes)' set to 13), 'Relevant Priors' (with 'Limit Relevant Priors' set to 1), and 'Proxy Signing' (with 'Allowed to sign for Darcy Noye' and 'Darcy Noye can sign for' lists).

**Figure 4.25 – Tentatively Signing User Preference**

**NOTE:** The user preference value for “Tentatively Signing hold time in minutes” cannot exceed the system config setting value specified for “MaxAutoSignTime”.

Exams that are in the Tentatively Signed work list can be opened in the dictate window. The user will have access to the same options / controls within the dictate window. The exam can be submitted to MT again, putting it in a status of Report Signed. The exam can be signed again, which would put the exam back in Tentatively Signed status, starting the time to be held in this status over again. The exam can be suspended, and the exam would then be in the Suspended work list. Closing the data window would return the exam to the Tentatively Signed work list.

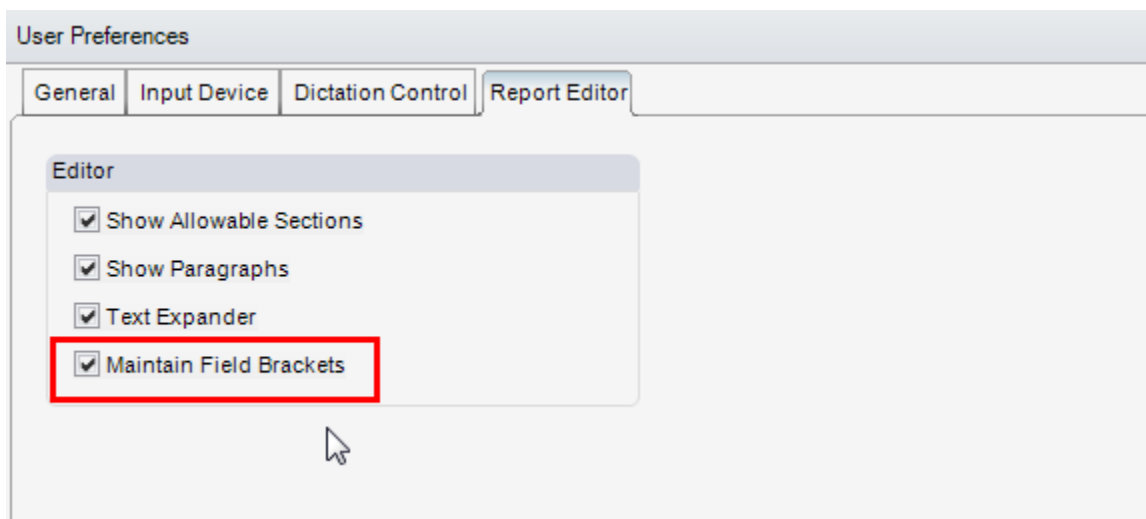
## **Reporting – Remove Field Markers for Document Distribution**

In previous builds the Radiologist or Transcriptionist could not submit or sign a report if the report had field markers “[“ or “]” still in the report, requiring the user to remove all instances before the job could be submitted.

In build 35 the use can now submit jobs with the field markers still existing in the report. Going forward the “[“ and “]” will be removed before the report is previewed or sent for distribution. When viewing the report via the Data Nugget, the field markers will still be present.

## Reporting – Maintain Field Markers User Preference

A new user preference has been added for maintaining field markers within the report. If the User Preference is not selected, when the user is completing a report that has the predefined field markers, once that field is selected and it is dictated interactively or a value is manually entered in that field, the field marker will be removed.



**Figure 4.26 – User preference “Maintain Field Brackets”**

The alternative is having the user preference Maintain Field Brackets enabled. In this case when the user enters a value in a predefined field, the field brackets are retained.

The access string `Clinical.UserPreferences.MaintainFieldBrackets` controls access to the user preference.

Access String Code	Description	Display Order	Default Access Level Code	Active
Contains: clinical.userpreferences.ma	Contains:	Equals:	Contains:	Contains:
Clinical.UserPreferences.MaintainFieldBrackets	Clinical.UserPreferences.MaintainFieldBrackets	1	None	Y

Click here to add a new row

**Figure 4.27 – Access string `Clinical.UserPreferences.MaintainFieldBrackets`**

## **Reporting – Insert Normal and Default Templates**

When opening an exam for dictation, the templates that are available to the user are based on the naming convention of Worktype Code = Procedure Code. We do an exact match on these fields to load the default, shortlisting the templates of any items that precede the work type code.

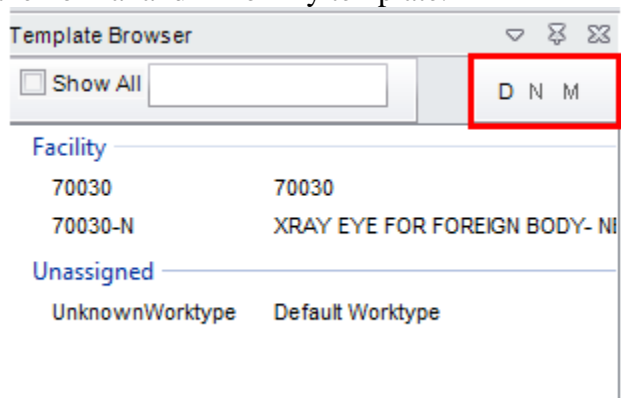
For example for procedure code: 34560

- Worktype code 34560 will load as a default and will be available in the template picker.
- Worktype code 34560-N will load in the template picker shortlist (this is mentioned purposely)
- Worktype code 34560-N@@@@ will load in the template picker shortlist. Where @@@@ can be anything but usually is the doctors name.

To assist the users in selecting templates and the ability to insert the default and the main normal, the use can use voice commands:

- a) Insert Template Default - will insert the exact match template as it did when loading the study. Mainly for undoing or returning to original state.
- b) Insert Template Normal – will insert the procedure code match plus the additional –N which specifies normal. For example this will insert template 34560-N
- c) Insert Template My – will insert the procedure code match plus the N plus the user id if supplied. For example this will insert template 34560-NHARDINGC

New buttons have also been added to the Template Browser data pane D for the default, N for the normal and M for My template.



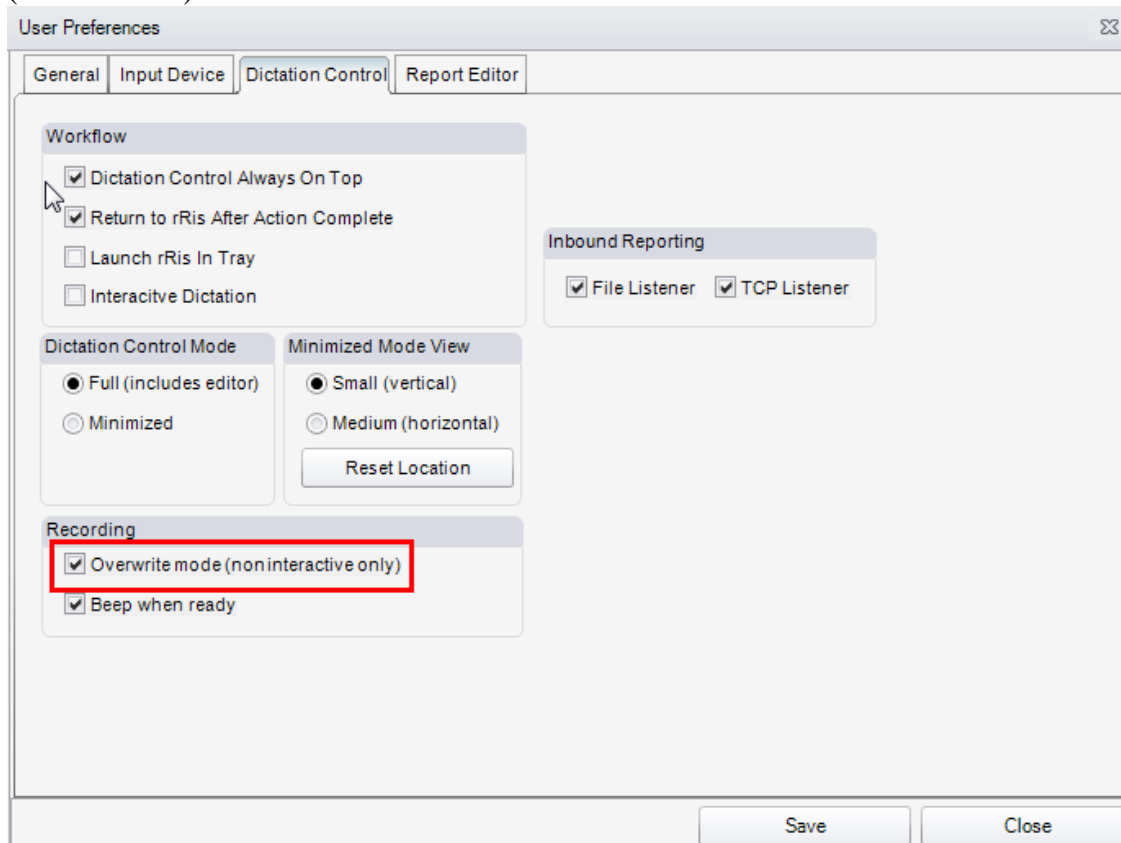
**Figure 4.28 – Template Browser buttons for selecting templates**

## **Reporting - Set User ID and Role for Reporting**

When a report is opened in the editor we set the user id and role. We use the currently logged on user identifier and if opening ReportingRadiologist we set the role to RAD. Alternatively if they are opening the ReportingTranscription we set the role to MT.

## **Reporting / Dictation – Insert / Overwrite Recording Preference**

Users requested to have the option to choose default recording preference when adding dictation. A new user preference called “Overwrite mode (non-interactive only)” has been added in build 35. From the file menu > preferences > Dictation Control tab under the Recording section, the user can make the preference to be Overwrite if selected, or insert when unselected. Overwrite is not supported with Interactive Dictation, thus this user preference does not apply to Interactive (aka: self-edit) users.

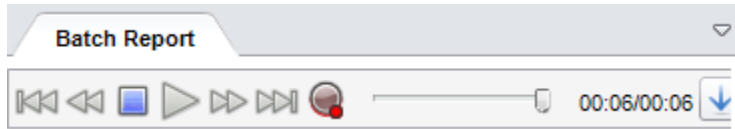


**Figure 4.29 – Overwrite dictation user preference.**

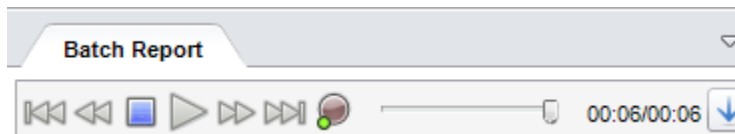
The insert/overwrite is used within the dictation window – dictation control. If the user places the dictation marker at a point within the recording the previous default would be to insert into the recording if the Radiologist decided to add to the dictation. This new user preference will change the default to overwrite the dictation from the point where the dictation pointer is positioned to the point where it is stopped. The recording before and after this point would remain untouched.



To indicate what the current state is, the recording ICON on the dictation control has been enhanced. You will notice in the figures below the extra colored red or green dots on either side of the dictation button. The dots appear on opposite sides of the record button to help color blind users determine the current state of insert / overwrite.



**Figure 4.30 – Dictation control indicating Overwrite**



**Figure 4.31 – Dictation control indicating Insert**

The option can be toggles on the Speechmike as well. The Ins\Ovr button will toggle between Insert and Overwrite. A light on the Speechmike directly above the Ins\Ovr button will also change colors depending on which option is currently selected. Insert - the light will be green. Overwrite – the light will be red.

## **SQL Server Reporting Services with Secure Socket Layer**

Forms and labels, management reports, and diagnostic reports all leverage SQL Server Reporting Services (SSRS). SSRS exposes webservices that are called behind the scenes in the RIS client. The url for the webservices is currently set in the system config table in Administration->Configure.

Under no circumstances should RIS client use plain http for the URL in an internet scenario. If the client is being run in a protected, intranet or internal LAN, then http is acceptable. Either a VPN or https must be used for the internet to keep patient data from being transmitted over the internet in clear text.

For a resolution, we create a server certificate with a name that matches the server's computer name, Run Visual Studio Command Prompt 2010 as administrator:

Example: `makecert -sr LocalMachine -ss My -a sha1 -n CN=ip-0A0223EF6 -sky exchange -pe` where ip-0A0223EF6 is the computername.

This will create a certificate with a private key and put it in the Local Machine, Personal certificate store.

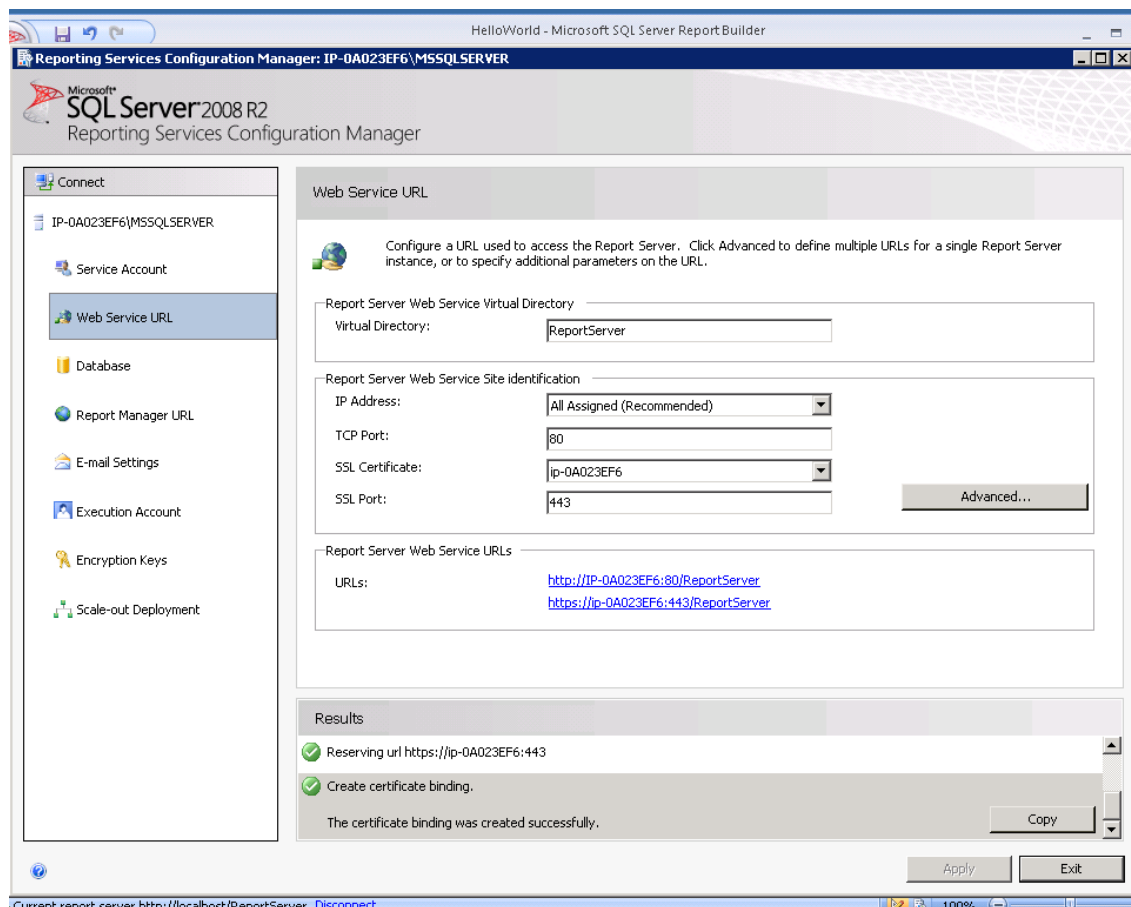
Open up certificates for the local machine personal store using Start->Run->mmc->File->Add/Remove Snapin->Certificates

Browse to the newly create certificate, right click the cert, All Tasks -> Export... Choose Yes, export the private key, choose next, choose Export all extended properties, choose next, enter a password, click next, specify a file name that includes servercert in the name (for clarity).

Repeat the steps above except the second time, do not export the private key, and then pick a file name that includes clientcert in the name (for clarity).

Remote into the server and launch mmc, import the server certificate into both "My Computer/Personal" and "My Computer/Trusted People".

On the server, run Reporting Services Configuration Manager, go to the Web Service URL tab and choose the newly created certificate from the list, verify that after the selection is made the results section does not report any failures.



**Figure 4.32 – Reporting Services Configuration Manager**

On the client, import the client certificate created above into Local Machine/Trusted People using mmc.

Launch RIS. In the Administration->Configure menu option in RIS, browse to System\SystemConfig and find the ReportServerUrl config setting. Set the Value to: <https://ip-0a023ef6/ReportServer> where ip-0a023ef6 is the server's computer name.

Note: the above requires that port 443 incoming is open on the windows server's firewall. Edit the hosts file on the client and add an entry for the servers computer name with the appropriate IP address. Note that this step may not be required in cases where ping <servername> resolves the IP correctly.

## View Images of Studies Started but not Completed

The current implementation will allow a user to view image from the search field, by typing **v:** followed by the **accession number** (Example – v:1010245) will open the Patient Folder, automatically select the associated study from the patient folder work list, and open the PACS to view the images.

Similar to the accession number search, if the accession number could not be found then the same message prompt will appear.

The screenshot shows the eRAD RIS interface with the patient search for Sidney Crosby (34). The table below represents the data displayed in the interface:

Flags	Nuggets	Status	Procedures	Scheduled Date	Accession#	Dictated Date	Transcribed Date
Contains:	Contains:	Contains:	Contains:	Equals:	Contains:	Equals:	Equals:
		Arrived	CT Abdomen W & Pelvis W [CT9] - Abdomen	10-27-2011 10:15 AM	1065065		
		Cancelled	CT 3 Phase [CT13]	10-27-2011 10:05 AM	1065066		
		Signed1	CT Abdomen W & Pelvis W [CT9] - Abdomen	10-27-2011 9:15 AM	1065062	02-06-2012 8:40 AM	02-06-2012 8:40 AM
		Signed1	CT 3 Phase [CT13]	10-27-2011 9:05 AM	1065063	02-06-2012 6:46 AM	02-06-2012 6:46 AM
		Arrived	CT Abdomen W & Pelvis W [CT9] - Abdomen	10-27-2011 8:15 AM	1065071		
		Arrived	CT 3 Phase [CT13]	10-27-2011 8:05 AM	1065072		
		Scheduled	CT Abdomen W & Pelvis W & CTA Chest W/Wo [CT54] - Abdomen	10-26-2011 4:13 PM	1065067		
		Scheduled	CT 3 Phase [CT13]	10-26-2011 2:00 PM	1065037		
		Scheduled	CT 3 Phase [CT13]	10-26-2011 1:40 PM	1065036		
		Signed1	CT Chest W & Abdomen W [CT4] - Chest	05-30-2011 2:00 PM	1009017		
		Signed1	CT 3 Phase [CT13]	05-07-2011 10:30 AM	1008770	05-06-2011 2:43 PM	05-06-2011 3:59 PM
		Signed1	CT Chest W [71260] - Chest	05-06-2011 1:30 PM	1000731	05-03-2011 2:07 PM	05-04-2011 2:58 PM
		Signed1	CT Foot & Ankle [CT55] - Ankle joint - Left	05-06-2011 1:00 PM	1000720	05-03-2011 2:13 PM	05-04-2011 2:58 PM
		Signed1	CT Ankle Arthrogram [CT31] - Ankle joint - Left	05-06-2011 9:00 AM	1000716	05-04-2011 9:42 AM	05-04-2011 2:58 PM
		Signed1	CT Ankle Arthrogram [CT31] - Ankle joint - Left	05-05-2011 2:00 PM	1009414	05-03-2011 4:00 PM	05-04-2011 2:57 PM
		Started	CT Chest W & Abdomen W [CT4] - Chest	05-04-2011 3:30 PM	1000736		
		Signed1	CT Chest W/Wo [71270] - Chest	05-03-2011 7:45 AM	1009218	05-03-2011 2:12 PM	05-04-2011 3:01 PM
		Cancelled	CT Chest W [71260] - Chest	05-03-2011 7:45 AM	1000714		
		Signed1	XR SI JT INJ Fluoro Guid [RD16]	07-20-2009 3:15 PM	1046404		
		OrderSigned	CT Cervical Wo, Thoracic Wo, & Lumbar Wo [CT47] - Cervical sp...				
		OrderSigned	CT Abdomen W & Pelvis W & CTA Chest W/Wo [CT54] - Abdomen				

At the bottom of the interface, there are buttons for 'Auto Refresh', 'Dictate', 'Perform Exam', 'Register', 'Schedule', 'Reschedule', 'Edit Order', 'View/Edit', 'Sign Report', and 'Create/Edit Report'.

Figure 4.33 – Image search

## **KBI Extract**

KBI is an external system that is used for measuring productivity at each site. The RIS will provide a method so that KBI can extract the transactional count on a daily bases.

A stored procedure call c\_KBIExtract for rRIS was created that does the following:

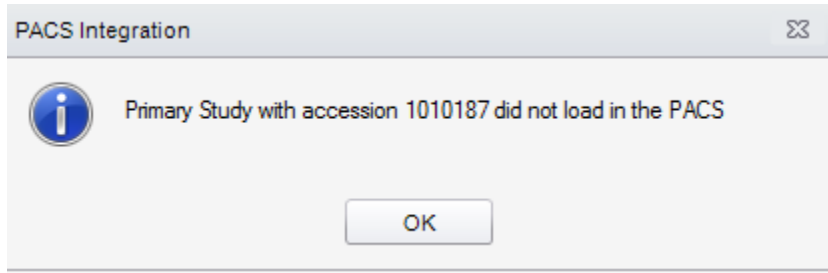
- Provide a count of billable items by transaction date (perfomed date), practice and modality.
- The performed date is based on an argument that is passed to the stored procedure. This way the stored procedure could be run for any day, versus a day based on the current day.

It only includes exam status when there are images associated to the study, basically after the technologist role.

## **PACS Integration Message for Studies with no Images**

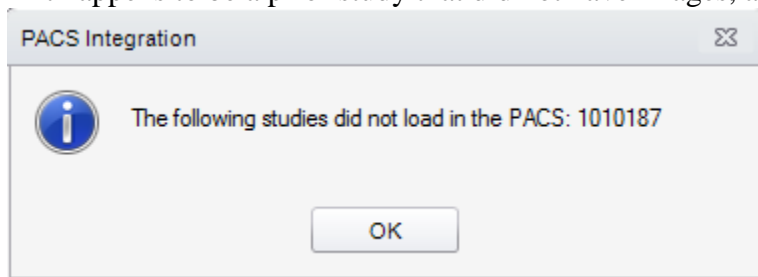
A change was made on the PACS side to return a list of the opened accession numbers. The RIS then checks this opened list against the list that was requested. If there is a discrepancy then the user is notified.

If the primary study failed to load the message indicates explicitly that it was the primary that failed to load.



**Figure 4.34 – Primary study does not have images**

If it happens to be a prior study that did not have images, a message will also inform the user.



**Figure 4.34 – Relevant prior study does not have images**

## Miscellaneous Additions and Enhancements

### Increase System Config Value

System Configuration field value was increased from 100 to 500

System Config Code	Value	Default	Description
Contains: passwordr	Contains:	Contains:	Contains:
StrongPasswordRegex	(?=^(6,10)\$)^S*(?=[a-z])S*(?=[A-Z])(?[0-9])(?![s*])S*\$	^(?=^(6,10)\$)^S*(?=[a-z])S*(?=[A-Z])(?[0-9])(?![s*])S*\$	(value = string) Used to configure the regex fo...
StrongPasswordRegexHint	6-10 characters including 1 uppercase letter, 1 lowercase letter and one number	6-10 characters including 1 uppercas...	6-10 characters including 1 uppercase letter,...

Click here to add a new row

**Figure 4.35 – System Config table displaying the value column with increased field length**

### Reporting - Addendum Work Type

When the reporting screens are in Addendum mode, if a work type exists with work type code of “ADDENDUM” it will be used for the report, if not, “unknown work type” will be used.

### Reporting – Note to Radiologist

In previous builds the radio buttons where not disabling after selecting the check box for Note To Rad. Now the Qa and Problem radio button will be disabled when Note to Rad is checked, enabled on uncheck.

### Reporting – Inconsistency with Next Field Functionality

When using the keyboard manual “Next Field” it would sometimes select part of the section header and get confused of its location. Result would be more text selected than was desired. This has been resolved by modifying the code for next field.

### Reporting – Create Macro from Command Bar

The user used to receive a COM error when attempting to create a macro from selected text, but the user had not selected any text.

We have added an appropriate message if nothing is selected when trying to create macro from selected text.

We still allow for empty text if a paragraph is selected or new lines.

A tooltip description has also been added to the command button.

### Other

1. Site column was added to the Orders To Schedule work list
2. PACS corrected column was added to the Tech work list
3. When submitting a New Appointment to the Orders to Schedule work list the site field must be completed on the Order tab.

## 5. Resolved Defects

Bugs, Suggested Features and Support Issues resolved in build 1.35. The extract is taken from Redmine bug tracking system and only displays defects resolved in 1.35.

#	Tracker	Priority	Subject	Category	Found Version
1101	Bug	Urgent	Scheduled exam is in Overbooked timeslot, cannot complete tech workflow	Thick Client GUI	1.35
999	Bug	Urgent	Cannot transcribe Mammo exams	Thick Client GUI	1.35
854	Bug	Urgent	Mammo Layletters are not being sent for distribution	Thick Client GUI	1.31
1090	Bug	High	Personnel address information not expanded for Mirth	Web Services/DB	1.35
1089	Bug	High	Order CC Person Key not expanded for Mirth	Web Services/DB	1.35
1037	Bug	High	LastContacts functionality not working properly	Thick Client GUI	1.35
1034	Bug	High	RAD - Mammo Scheduling from Followup 0 worklist	Thick Client GUI	1.35



1029	Bug	High	Diagnose as ReadOnly, using speech command you are able to sign the report	Thick Client GUI	1.35
1006	Bug	High	Management report for CPT Quantity	Mgt Reports	1.35
997	Bug	High	emergency contact not saved if relation to patient not specified	Thick Client GUI	1.35
936	Bug	High	Usergroups require Config.LookupEditor.Personnel to add unknown referring	Thick Client GUI	1.34
934	Bug	High	Key Not Found when printing forms after network error communicating with SSRS	Mgt Reports	1.35
913	Bug	High	Patient folder will display target and previously viewed images	Thick Client GUI	1.34
910	Bug	High	Patient Folder will keep opening image viewer	Thick Client GUI	1.34
875	Bug	High	Error trying to preview report	Thick Client GUI	1.32
820	Bug	High	View Images not available from login	Thick Client GUI	1.3

712	Bug	High	Report History > Show all versions throws error	Thick Client GUI	1.26
1094	Bug	Normal	Type column in Mirth dashboard not populated correctly	Web Services/DB	1.35
1076	Bug	Normal	Cannot add payment for Walk - In	Thick Client GUI	1.35
1073	Bug	Normal	document distribution rows created in duplicate	Thick Client GUI	1.35
1002	Bug	Normal	problem deleting injury information	Thick Client GUI	1.35
983	Bug	Normal	null reference error in radgridhelper dispose when closing insurance dialog	Thick Client GUI	1.35
982	Bug	Normal	two users shceduling at same time have change of double booking	Thick Client GUI	1.35
968	Bug	Normal	View / Edit error on Mammo statuses	Thick Client GUI	1.35
957	Bug	Normal	Scanning > After selecting scanner the first scan is not saved.	Thick Client GUI	1.35

946	Bug	Normal	Patient Insurance Policies search is blank page on search	Thick Client GUI	1.35
939	Bug	Normal	Change status to Cancel - No row at index 0	Thick Client GUI	1.34
933	Bug	Normal	MQSA_Reporting - General Exam List - Procedure Codes	Mgt Reports	1.34
932	Bug	Normal	MQSA_Mammo - General Exam List - Date range does not included selected "To:" date	Mgt Reports	1.34
930	Bug	Normal	Alternate phone flag does not disable alternate phone number fields	Thick Client GUI	1.34
928	Bug	Normal	View / Edit OrderCancelled gives GetData error	Thick Client GUI	1.34
925	Bug	Normal	Error scanning specific document type from Perform Exam	Thick Client GUI	1.34
921	Bug	Normal	Home phone is not copied to Responsible Party	Thick Client GUI	1.34
914	Bug	Normal	Documents can be distributed without specifying deliver to: causing error	Thick Client GUI	1.34

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895	Bug	Normal	Signing Interactive job as non interactive user can delete report	Thick Client GUI	1.35
870	Bug	Normal	When "zipcode" table not populated / not in DB, user cannot create patients, orders, etc.	Admin Tools	1.31
857	Bug	Normal	Mammo Follow Up Orders - Target date not searched on schedule	Thick Client GUI	1.31
834	Bug	Normal	Expand system config value to 255 characters from 100	Web Services/DB	1.31
770	Bug	Normal	Organization - Modifying Practice or Site removes Logo	Admin Tools	1.27
579	Bug	Normal	IVT PreCert column does not update	Thick Client GUI	1.35
1040	Bug	Low	Unable to post billing exception with Claim # required when both a claim number are entered and the "Unknown Claim Number" are checked	Thick Client GUI	1.35
800	Bug	Low	Forms and labels action on <-- arrow continues when filtered list is done	Admin Tools	1.29

## 6. Known Limitations

The following are Bugs, Suggested Features, and Support Issues found in build 1.35. This build is the current QE build and testing is ongoing. The list may increase in size. This document will not be updated or re-released.

#	Status	Subject	Category	Found Version	Resolved Version
1105	Resolved	ConfirmValidMRNNumber failing	Web Services/ DB	1.35	
1102	New	CDS Threads pinning CPU in Balitmore Sandbox environment	Web Services/ DB	1.35	1.36
1097	New	Reporting > Problems continuing dictation when using interactive and field markers	Thick Client GUI	1.35 SVN 10005	
1063	Resolved	New patient button on patient demographics screen.	Thick Client GUI	1.35	1.36.10196
1117	New	Report editor text can span off of the editor	Thick Client GUI	1.35	
1116	New	Procedure can be scheduled when laterality is required but not selected	Thin Client GUI	1.35	
1114	New	Room is not updated on work lists if changed during Perform Exam	Thick Client GUI	1.35	

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1112	New	New Appointment > Patient tab > Contact Information tab order	Thick Client GUI	1.35	
1111	New	Billing exception for unknown carrier.	Thick Client GUI	1.35	
1110	New	Tooltip to create macro from selected text is misspelled	Thick Client GUI	1.35	
1109	New	User preference > Interactive Dictation misspelling	Thick Client GUI	1.35	
1108	Resolved	When pasting an address into the Report Delivery address field only the first line is filled in	Thick Client GUI	1.35	1.36.10179
1107	Resolved	Address paste on personnel screen doesn't work	Thick Client GUI	1.35	1.36.10179
1106	New	Logging into locked workstation when GUI ZIP file has changed	Thick Client GUI	1.35	
1098	New	PACS Correction and PACS view image functionality conflict re: Session Id	Thick Client GUI	1.35	
1096	New	Reporting > viewing report history throws COM error	Thick Client GUI	1.35 SVN 10005	

1095	New	Session Id for PACS is not being handled appropriately	Thick Client GUI	1.35	
1093	New	When allergy is inactive in the lookup the value is not displayed for the patient that has that allergy		1.35	
1087	Resolved	Unknown Reconciliation - Cannot edit order from this work list if the study is past ordersigned status	Thick Client GUI	1.35	1.36.10210
1085	New	Scheduling an aborted exam, removing a completed exam from the order and adding a new procedure	Thick Client GUI	1.35	
1084	New	External patients can be scheduled without having "System" MRN	Thick Client GUI	1.35	
1083	New	Completed Time	Thick Client GUI	1.35	
1082	Resolved	Appointment Book "Interval" dropdown does not reflect displayed interval	Thick Client GUI	1.35	1.36
1080	New	Mammo -- Followup -- Schedule ( runtime issue) - Able to schedule without selecting a room	Thick Client GUI	1.35	
1079	New	Mammo -- Followup 0 --> Schedule ( Save as Order) Null study dataset	Thick Client GUI	1.35	

1075	Resolved	patient notes and order notes not synchronizing in View/Edit	Thick Client GUI	1.35	1.36.9940
1074	Resolved	Location label not populated/recommendation codes not populating.	Thick Client GUI	1.35	1.36.9941
1072	Resolved	Graceful exception if new scheduled study deleted before saving	Thick Client GUI	1.35	1.36
1071	New	Mammo -- Followup 0 Worklist --> schedule ( runtime- object reference error)	Thick Client GUI	1.35	
1070	New	Rescheduling an order that has a study cancelled will still show the cancelled study	Thick Client GUI	1.35	
1067	Resolved	If you click Schedule button on the follow up screen after you have already schehduled the follow up you get an exception	Thick Client GUI	1.35	1.36
1066	Resolved	Scheduling - able to schedule procedure to wrong room	Thick Client GUI	1.35	1.36
1062	New	Edit order with multiple procedures change one procedure and save	Thick Client GUI	1.35	
1061	Resolved	Scheduling -- no study -- able to do room search ( runtime error)	Thick Client GUI	1.35	1.36



1059	New	Broken Lock on Re-Schedule Should Disable "Schedule Later" and "Cancel Study" Buttons	Thick Client GUI	1.35	
1057	New	Scheduling - Confirmation WL --> runtime crash	Thick Client GUI	1.35	
1055	New	Tentatively signed feature cannot be turned off with System Config value	Thick Client GUI	1.35	
1053	Resolved	Mammo Callback can create order with duplicate procedure	Thick Client GUI	1.35	1.36
1050	New	An outgoing call cannot be made since the application is dispatching an input-synchronous call. (Exception from HRESULT: 0x8001010D (RPC_E_CANTCALLOUT_ININPUTSYNCCALL))	Thick Client GUI	1.35	
1045	Resolved	Foreign Key Constraint error from New Appointment	Thick Client GUI	1.35	1.36
1044	New	New Patient with Canadian address throws 'Invalid Selection' validation	Thick Client GUI	1.35	
1041	Resolved	Index was outside the bounds of the array.	Thick Client GUI	1.35	1.36

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1039	New	Unable to post billing exception. Claim number is required when carrier doesn't have injury flag set if any data at all is entered in injury details	Thick Client GUI	1.35	
1035	Resolved	Cannot insert duplicate key row in object 'dbo.c_order_item' with unique index 'IX_c_order_item'. The duplicate key value is (23978, 1)	Thick Client GUI	1.35	1.36
1024	Resolved	Exception thrown when changing room in Confirmation window.	Thick Client GUI	1.35	1.36
1023	New	When user creates a worklist view, there is no way to return to the worklist's default system view	Thick Client GUI	1.35	
1020	New	As SchedAdmin, add study to existing list of studies generates duplicate key	Thick Client GUI	1.35	
1017	Resolved	Invalid Scheduled Date Error when trying to complete a Tech where the room was closed after scheduling	Thick Client GUI	1.35	1.36
1014	New	Patient Audit throws exception when clicking filter radio box value	Thick Client GUI	1.35	
1011	New	Rad - Macro Editor -- Object Reference Runtime error	Thick Client GUI	1.35	
1007	New	Mammo Follow-up order	Web Services/ DB	1.35	

994	Resolved	When creating a patient, and user adds an attachment, there is no option to delete a row if entered incorrectly.	Thick Client GUI	1.35	1.36
991	New	Patient Merge -- Selecting source and destination give weird birthdates		1.35	
989	New	Cannot update 'State' field in Patient	Thick Client GUI	1.35	
984	Resolved	When doing an "outside read" upon choosing performed location site, the insurance grid appears and some text is cut off.	Thick Client GUI	1.35	1.36
981	New	Data nugget and camel notation	Thick Client GUI	1.35	
980	New	Streaming execption when playing dictation	Thick Client GUI	1.35	
976	Resolved	Object reference saving multiple procedure order	Thick Client GUI	1.35	1.36
970	Resolved	Schedule Order Patient search does not automatically highlight best available	Thick Client GUI	1.35	1.36.10289
969	Resolved	Add Outside Read Billing Method needs more real estate	Thick Client GUI	1.35	1.36

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965	New	Dictate Screen does not lock after period of inactivity	Thick Client GUI	1.35	
956	New	When in "pending signature" WL, there is no context menu option for "Sign Report"	Thin Client GUI	1.35	
954	Resolved	Outside read - order_item_key not found	Thick Client GUI	1.35	1.36
953	Resolved	Study field on procedure picker row (including outside read) is not marked as required	Thick Client GUI	1.35	1.36.10217
938	New	ReportingExceptions logged on report server logs	Mgt Reports	1.35	
935	Resolved	Erron on launch "Value SendBringRisToFrontEvent is no longer a valid entry"	Thick Client GUI	1.35	1.36
1113	New	Lang item for rRIS to system try need to be updated.	Thick Client GUI	1.35	
1077	Resolved	Scheduling - Calendar is too small = windows XP	Thick Client GUI	1.35	1.36
1069	Resolved	Personnel editor inconsistency	Thick Client GUI	1.35	1.36.10270

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1065	Resolved	Error saving user in personnel editor.	Thick Client GUI	1.35	1.36.10299
1064	Resolved	Clicking Schedule Later on a procedure loses the laterality for the procedure	Thick Client GUI	1.35	1.36
1060	New	Tab order in Patient Demographics Content Pane	Thick Client GUI	1.35	
1058	New	Scheduling a child patient	Thick Client GUI	1.35	
1051	New	Recorder::resume couldn't open recording device (AnyModalCaptureCtrl.AsyncRecognizer.1 )	Thick Client GUI	1.35	
1038	New	Confirmation Dialog popups do not pop up on the same monitor as RIS ( always primary monitor)	Thick Client GUI	1.35	
1033	New	Weight limit warning displays twice	Thick Client GUI	1.35	
1032	New	Mammo Followup -> Cat 0 Followup worklist - Adding Biopsies	Thick Client GUI	1.35	
1015	Resolved	Personnel	Thick Client GUI	1.35	1.36.10172

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1010	New	Continuity of Care Record (CCR) - user is able to click view / print, but when the preview appears there is no "print" button.	Thick Client GUI	1.35	
1008	Resolved	Pasting Address on Patient Screen does not populate state if US is already entered in Country field	Thick Client GUI	1.35	1.36.10179
995	Resolved	Invisible tab	Thick Client GUI	1.35	1.36
973	Resolved	Issues adding multiple CC physicians	Thin Client GUI	1.35	1.36.10232
967	New	When placing a new order, w/ schedule, upon focus of "Schedule" tab, cursor is not visible but focus appears to be in the "Studies" field.	Thick Client GUI	1.35	
959	Resolved	Edit Medical Access window title is incorrect	Thick Client GUI	1.35	1.36
685	Resolved	Error When Exporting Table Data	Thick Client GUI	1.35	1.36.10143

**HOTFIX**

for eRAD RIS  
Version 1.0  
Build 35  
Hotfix 35.001

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## **1. Purpose**

An issue was discovered where after a study is scheduled all outbound messaging from RIS is in a faulted state. This is no fault of the user and no workflow changes are required to prevent it.

There are drop-down controls on the RIS client that are pre-populated with Referring Physicians that have been previously associated with the current patient. When saving the study, the internal keys related to these physicians are being persisted in the RIS database with the details surrounding the action undertaken by the user. In the case of an Unknown Referring in this list, the key stored is -1.

The Wedge service takes these details and tries to resolve this -1 to an existing physician. It throws an error because that -1 does not refer to anything. Since the Wedge preserves the order of messages in a first-in-first-out manner, its message queue is now blocked, preventing any other messages from going out.

**The result of this error was the halting of all outbound messaging from the RIS.**

This hot fix applied to Build 35 for this issue causes the Wedge service to no longer resolve person keys of -1. This fix will automatically carry forward in future builds.

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

## **3. Who is affected**

Installations of eRAD RIS 1.1.35.10140 (RIS application Help About → labeled as 1.1.34.10140)

## **4. Installing**

*To install this hot fix:*

- 1) Shut down the Wedge service*
- 2) Replace the existing Wedge.exe with the one distributed with this readme file.*
- 3) If Wedge.pdb exists, replace it also*
- 4) Start the Wedge service*
- 5) The Wedge.exe (and pdb) files should also be replaced in the directories containing the other rRIS services (Core, DocumentDistribution, CDS, etc.) in a similar manner.*

If you have any questions regarding this Hotfix, contact Darcy Noye with the PEI RIS Development Team.

**HOTFIX**

for eRAD RIS  
Version 1.0  
Build 35  
Hotfix 35.002

## **Table of Contents**

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2.	Intended Audience .....	3
3.	Who is affected .....	4
4.	Installing .....	4

## **1. Purpose**

The text in Red indicates changes from Hotfix 35.001, which this fix also includes.

An issue was discovered where after a study is scheduled all outbound messaging from RIS could be potentially be in a faulted state. This is no fault of the user and no workflow changes are required to prevent it.

There are drop-down controls on the RIS client that are pre-populated with Referring Physicians that have been previously associated with the current patient. When saving the study, the internal keys related to these physicians are being persisted in the RIS database with the details surrounding the action undertaken by the user. In the case of an Unknown Referring in this list, the key stored is -1. 0 is also a possible value.

The Wedge service takes these details and tries to resolve this -1(or 0) to an existing physician. It throws an error because that -1(or 0) does not refer to anything. Since the Wedge preserves the order of messages in a first-in-first-out manner, its message queue is now blocked, preventing any other messages from going out.

**The result of this error was the halting of all outbound messaging from the RIS.**

This hot fix applied to Build 35 for this issue causes the Wedge service to no longer resolve person keys of -1 less than 0 or any person keys from the c\_previous\_referring table. This fix will automatically carry forward in future builds.

A separate issue with the Mirth mapping files was causing the Proposed Study Instance UID sent to the PACS to be truncated. This has been fixed in the OBX.js file included in this directory.

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **3. Who is affected**

Installations of eRAD RIS 1.1.35.10140 (RIS application Help About → labeled as 1.1.34.10140)

### **4. Installing**

*To install this hot fix:*

- 1) Shut down the Wedge service*
- 2) Replace the existing Wedge.exe with the one distributed with this readme file.*
- 3) If Wedge.pdb exists, replace it also*
- 4) Start the Wedge service*
- 5) The Wedge.exe (and pdb) files should also be replaced in the directories containing the other rRIS services (Core, DocumentDistribution, CDS, etc.) in a similar manner.*

*Copy the OBX.js file to the MirthMappings\Outbound\eRadPACS directory.*

If you have any questions regarding this Hotfix, contact Darcy Noye with the PEI RIS Development Team.

**HOTFIX**

for eRAD RIS  
Version 1.0  
Build 35  
Hotfix 35.003

## **Table of Contents**

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2.	Intended Audience .....	3
3.	Who is affected .....	4
4.	Installing .....	4



## **1. Purpose**

1. A Microsoft update was released on April 10, 2012 to fix several security vulnerabilities. This update inadvertently made a change to the way the Document Distribution Engine is submitting fax jobs to the MS Fax console. A code fix was required to make a small adjustment to this job submission.

The hotfix 35.003 includes 3 files to correct this issue.

- i) Tourreau.Gilles.FaxDotNet.dll
  - ii) Tourreau.Gilles.FaxDotNet.pdb
  - iii) Tourreau.Gilles.FaxDotNet.XML
2. For Highway go live, accreditation logos on the diagnostic reports were required. This hotfix will add the logos to the reports by adding the SQL objects without updating the RIS binaries. This means that for build 35 system administrators will not be able to add logos or associate logos to a modality and/or procedure and the issue is temporarily corrected via Patch-b35-2.sql file in the 35.003.
  3. The KBI extract stored procedure had changes made to it on the NY City production system. As a precaution and to keep in sync we have included these changes to the Patch-b35-2.sql file so the changes are not inadvertently overwritten in a potential future patch of build 35.
  4. SQL update required to correct an issue with the Daily Schedule management report. The Insurance Carrier was not being populated. This SQL update is also included in the Patch-b35-2.sql

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **3. Who is affected**

Installations of eRAD RIS 1.1.35.10140 (RIS application Help About → labeled as 1.1.34.10140)

### **4. Installing**

*To install this hot fix:*

- 1) Shut down the Document Distribution Engine service*
- 2) Replace the existing Torreau.Gilles.FaxDotNet.\* files with the ones distributed with this readme file.*
- 3) Start the Document Distribution Engine service*
- 4) These files should also be replaced in the directories containing the other rRIS services (Core, DocumentDistribution, CDS, etc.) in a similar manner.*
- 5) From the SQL Server Management Studio execute the Patch-b35-2.sql on your database.*

If you have any questions regarding this Hotfix, contact Darcy Noye with the PEI RIS Development Team.

**HOTFIX**

for eRAD RIS  
Version 1.0  
Build 35  
Hotfix 35.004

## **Table of Contents**

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## **1. Purpose**

- 1) Redmine Bug 1141: Backend printing jobs report an error even though they successfully print.

The error message in the log indicates that the patient\_key column in the c\_document\_distribution table is db\_null. This is because after the job prints there is an attempt to create an audit message indicating success, but the patient key in the row is null.

The c\_document\_distribution\_patient\_key\_patch.sql file in this directory provides a trigger that looks up the patient\_key based on the study key if the patient key is not already provided. With this change the jobs will continue to print successfully and will eliminate the error message.

- 2) Redmine Bug 1143: Fax jobs are failing with an error: "Could not load file or assembly 'Microsoft.ReportViewer.WinForms, ...". This is because there are two missing .dll files that are not packaged with the Distribution Service. These .dll's are Microsoft.ReportViewer.WinForms.dll and Microsoft.ReportViewer.Common.dll. The Microsoft.ReportViewer.WinForms.xml file has also been packaged with the .dll's.

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

## **3. Who is affected**

Installations of eRAD RIS 1.1.35.10140 (RIS application Help About → labeled as 1.1.34.10140)

## **4. Installing**

*To install this hot fix:*

- 1) Open a new query window in SQL Server Management studio.*
- 2) Paste the contents of the c\_document\_distribution\_patient\_key\_patch.sql file into it.*
- 3) Ensuring that the correct DB instance is selected, execute the sql. (DB may have more than one DB instance installed. (Example – Test and Production environments)*
- 4) Copy the Microsoft.ReportViwer.WinForms.dll, Microsoft.ReportViewer.Common.dll, and Microsoft.ReportViewer.Common.xml files into the directory containing the DocumentDistribution Service.*
- 5) Restart the service.*

If you have any questions regarding this Hotfix, contact Darcy Noye with the PEI RIS Development Team.

**HOTFIX**

for eRAD RIS  
Version 1.0  
Build 35  
Hotfix 35.005

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## **1. Purpose**

- 1) Redmine Bug 1152: Mammo exam --> Recommendation codes not saving.  
Transcription opens the exam to transcribe but the recommendation field is empty

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

## **3. Who is affected**

Installations of eRAD RIS 1.1.35.10140 (RIS application Help About → labeled as 1.1.34.10140)

This is a cumulative HOTFIX. It includes all previous HOTFIXES (35.001 – 35.004)

## **4. Installing**

Please remember to take a backup of all files before replacing with current HOTFIX

*To install this hot fix:*

- 1) *Replace the contents of the RISDeployment folder with the contents in the ThickClient folder included with this patch. This includes:*
  - a) *Build\YourSystemName\rRIS\_1.1.35.10752.zip*
  - b) *Build\rupdate.exe*
  - c) *Core\\_setup\rRisSetup.msi and setup.exe*
- 2) *Replace the binaries in the rRISService folder with the binaries included with this HOTFIX in the rRISService folder. The will require you to stop the rRISSERVICE*
- 3) *Run the Patch-b35-2.sql file and the rRISCoreData.sql file against your database.*

*NOTE other files that are included folders such as MirthConfig were updated in previous HOTFIXES and are also included here. Please refer to previous HOTFIX documentation.*

If you have any questions regarding this Hotfix, contact Darcy Noye with the PEI RIS Development Team.

**HOTFIX**

for eRAD RIS  
Version 1.0  
Build 35  
Hotfix 35.006

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## **1. Purpose**

This HOTFIX has been produced to fix bugs required for production setting, or to complete an enhancement requested for production.

This HOTFIX includes the following:

- 1) Redmine Bug 1157: Image Center Manager (ICM) Dashboard was not completed in Build 35. This has 2 new report files and a .sql file
  - a) Accession Milestone Time.rdl
  - b) Imaging Center Manager (ICM).rdl
  - c) Patch-b35-3.sql. This script creates:
    - i) 2 new views – c\_mamt\_wait\_times and c\_mgmt\_PWT.
    - ii) 1 new function – c\_GetPatientNameFromPatientKey
    - iii) 1 Updated view – c\_mgmt\_unread\_exams
    - iv) 1 updated stored procedure – c\_GetDailyModalityUtilization
- 2) Append MRN with letter – This is a request for production so the MRN's generated from RIS do not collide with MRN's from legacy systems. The MRN will be appended with an r for all new generated MRN's.

This has 4 new files for the rRISServices directory and a .sql file

  - a) CommonLib.dll
  - b) CommonLib.pdb
  - c) WCFSservice.dll
  - d) WCFSservice.pdb
  - e) defaultMRNSuffix.sql – Creates new system config entry and adds value of r for the config value.
- 3) Redmine Bug 1262: When a user tries to manually send out a legacy report at Highway, it fails in the distribution queue with a "Could not generate report: The system cannot find the file specified" error.

This issue was caused by the use of the PDFToImages.exe utility to manipulate the legacy report. This executable and a dll it depends on could not be found for two reasons. First, they were not being included with the service binaries and second, the path on which the service was looking for it was incorrect. The build process has been updated to include these files and the path issue has been corrected to ensure that it is looking for PDFToImages.exe in the same directory as the rest of the assemblies.

This includes 4 new files to be added or replaced in the Document Distribution Service directory

- a) PDFToImages.exe
  - b) O2S.Components.PDFRender4NET.dll
  - c) DDEngine.dll
  - d) DDEngine.pdb
- 4) Redmine Bug 1183 – Fix will exclude study items and bill codes that are not active. Removes trailing suffix from the MRN (problem with Radnet Nobel blender). Corrects mappings when multiple interpretation nodes are included in the message. The fix includes the Billing folder to be replaced on the Mirth server. The billing folder contains 17 files:
- a) 01\_DecodeContainer.js, ACC.js, EVN.js, FT1.js, GT1.js, IN1.js, MSH\_ADT.js, MSH\_DFT.js, msh\_ORU.js, OBX.js, ORC\_OBR.js, PID.js, PV1.js, VariableSetup.js, ZCS.js, ZFT.js, ZIN.js
- 5) Redmine Bugs 1264 and 1265 –
- Bug 1264 - Turnaround times not all being reported correctly. Incorrect user being looked for to get the drafted date from mModal in VR1 it was “Service: rRISServices” now in RIS is now called “System”
- Bug 1265 - Numbers for component Unread Exams being incorrectly counted. Needed to add a PACS corrected flag and a coalesce to performed\_end\_date, performed\_start\_date to correct handle null performed\_end\_dates.
- The 3rd part is an enhancement to the Result Template used at New City (Highway). The fix is to provide a function called by the view which returns a formatted name in LastName Suffix, FirstName of the patient. This issue came to light when a patient was also a Dr and he expected to see MD after his name.
- a) Files included are NewCityDiagnosticReport.rdl and Patch-b35-4.sql
- 6) Redmin Bugs 1275 and 1282 (partial fix) –
- Bug 1275 – This fixes an issue using the F8 key on keyboard. If dictating as non-interactive and the F8 key is used to initiate dictation, some interactive commands were firing.
- Bug 1282 – MT polling studies from same order is not skipped when locked. Studies belonging to the same order, such as a stat read, work list will apply a lock on both studies if either is opened. The issue is when using the MT polling workflow the “other study” can still be accessed.
- a) Files included are ris.exe and WCFService.dll.

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

## **3. Who is affected**

Previous versions of build 35. Current build is 1.1.35.10752.

## **4. Installing**

Please remember to take a backup of all files before replacing with current HOTFIX

*To install this hot fix:*

Redmine Bug 1157:

- 1) Manually add and/or replace the 2 report files on the report server.*
  - a) Accession Milestone Time.rdl*
  - b) Imaging Center Manager (ICM).rdl*
- 2) Run the Patch-b35-3.sql file against your database.*

Append MRN with letter:

- 1) Copy the 4 files to the rRISService directory.*
- 2) Run the defaultMRNSuffix.sql file against your database*

Redmine Bug 1262:

- 1) Manually add/replace the included files into the directory containing the Document Distribution Service.*

Redmine Bug 1183:

- 1) To install, connect to your Mirth server, copy mapping files to the appropriate billing channels and re-deployment the channels.*

Redmine Bugs 12364 and 1265:

- 1) Manually add or replace the report file on the report server*
  - a) NewCityDiagnosticReport.rdl*
- 2) Run the Patch-b35-4.sql file against your database*

RedMine Bugs 1282 and 1275:

- 1) *From the RISDeployment directory, unzip the rRIS\_1.1.35.10752. Replace the ris.exe file.  
Re-zip the contents and rename the zip folder to rRIS\_1.1.35.10752a*
- 2) *In the rRISServices directory replace the WCFService.dll*

If you have any questions regarding this Hotfix, contact Darcy Noye with the PEI RIS Development Team.



# **Server Update**

for eRAD RIS

Version 1.0

Build 35

Update 35.007

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### **1. Purpose**

This update has been produced to fix bugs required for production setting, or to complete an enhancement requested for production.

This update includes the following:

- 1) HL7 Mammo Report Message with Recommendation Code– This fix will allow messages with Mammo reports with recommendation codes to come into RIS. There was a bug that caused a null reference error.
  - a) WCFSservice.dll
  - b) WCFSservice.pdb
- 2) Outbound HL7 message queue was blocked due to person key resolution problem.  
Two files to be replaced:
  - a) Wedge.exe
  - b) Wedge.pdb
- 3) IVT Order Row Specific – This fix will convert the IVT work list from showing all the studies related to an order to only show the single order and show the more appropriate information.
  - a) Files included - Patch-b35-5-UpdateIVTtoOrderRowSpecific.sql

### **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **3. Who is affected**

All previous versions of build 35. Current build is 1.1.35.10752.

## **4. Installing**

- 1) HL7 Mammo Report Message with Recommendation Code:  
*Copy the 2 files to the directory for each rRISService. rRISService directories include:*
  - a) *rRISService*
  - b) *CDS rRISService*
  - c) *Wedge rRISService*
  - d) *DDE rRISService (DDE – Document Distribution Engine).*
  
- 2) Outbound HL7 message queue:  
*Copy the 2 files to the directory for each rRISService. rRISService directories include:*
  - a) *rRISService*
  - b) *CDS rRISService*
  - c) *Wedge rRISService*
  - d) *DDE rRISService (DDE – Document Distribution Engine).*
  
- 3) IVT Order Row Specific:  
*Run the Patch-b35-5-UpdateIVTtoOrderRowSpecific.sql file against your database*

**HOTFIX**

for eRAD RIS  
Version 1.0  
Build 35  
Hotfix 35.009

## **Table of Contents**

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## **1. Purpose**

This HOTFIX has been produced to fix bugs required for production setting, or to complete an enhancement requested for production.

This HOTFIX includes the following:

- 1) Outbound HL7 message queue was blocked due to person key resolution problem.
  - a) Wedge.exe, Wedge.pdb

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

## **3. Who is affected**

All previous version of build 35. Current build is 1.1.35.10752.

## **4. Installing**

- 1) *Copy the 2 files to the directory for each rRISService. The changes to these files are only relevant to the Wedge, but it is recommended to also copy them to the other rRISService directories.*

# **User Release Notes**

for eRAD RIS  
Version 1.0  
Build 36



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## **1. Purpose**

This document describes some of the new features and changes implemented in eRAD RIS as of the end of Sprint 36. This version of eRAD RIS is referred to as Build 1.36.

Only features which can be visually demonstrated to the user will be outlined in this document.

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS management team.

## **3. Installing/Accessing the Application**

The installation guide for the eRAD RIS client have been posted to the RadNet Wiki page at <http://mdbal01rdtweb/Wiki/>

Under the RIS menu click on the rRIS page. The credentials to access the page are:

Username: rRIS

Password: Summerside

*Please note that Build 1.36 is considered a new core release of the application and will require a reinstallation of eRAD RIS. This is accomplished by navigating to the eRAD RIS shared installation drive and running the CoreInstall.bat file (ex: I:\RISDeployment\CoreInstall.bat)*

If you experience difficulties accessing the application please do not hesitate to contact Darcy Noye with the PEI RIS Development Team.

## 4. New Features and Enhancements

### Sending Tech Only Studies to Billing at Exam Done Status

Studies that were flagged as No Report Required Tech Only will never be set to Signed status. Previously only studies in Signed status were sent to billing. Now if a study is flagged No Report (Tech Only) when the study reaches exam done status it will be sent to billing.

The screenshot displays the eRAD RIS interface. At the top, there are two tabs: 'Technologist WL (2)' and 'Perform Exam (Kevin Klondike) \*'. Below the tabs is a table with columns: 'Include', 'Status', 'Flags', 'Procedures', 'Scheduled Date', 'Referring', and 'Rc'. The table contains three rows. The first two rows are 'Cancelled' with a green checkmark in the 'Flags' column. The third row is 'Arrived' with a green checkmark in the 'Flags' column and a green arrow in the 'Include' column. Below the table is a row of tabs: 'Patient', 'Order', 'Documentation', 'Billing Codes', 'Attachments', 'Notes / Exam Times', 'Visit', and 'Image Request (0)'. The 'Documentation' tab is selected, showing 'Tech Notes'. Under 'Technologists Notes', there is a text area with 'Testing No Report'. To the right of the text area are fields for 'Primary Tech: \*', 'Assisting Tech 1:', 'Assisting Tech 2:', and 'Last Menstrual Period:'. Below the 'Tech Notes' section is the 'Procedure' section. It contains fields for 'Scanner: \*' (CT1LU), 'Performed Procedure: \*' (DX Appendicular Skeleton (77081)), 'Body Part:', 'Laterality:', 'Change Reason Code: \*', and 'Change Reason Note:'. At the bottom of the 'Procedure' section are two checkboxes: 'No Report (Tech Only)' (checked) and 'Report External to eRAD RIS' (unchecked). To the right of the 'Procedure' section is the 'Associated Radiologists' section, which contains fields for 'Assigned Radiologist', 'Performing Radiologist', and 'Assistant Radiologist'.

Include	Status	Flags	Procedures	Scheduled Date	Referring	Rc
<input type="checkbox"/>	Cancelled	✓	XR Foot 2 Views, Bilat [RD30] - Foot - Bilateral	05-02-2012 11:55 AM	Darcy Noye XR	
<input type="checkbox"/>	Cancelled	✓	XR Foot 2 Views, Bilat [RD30] - Foot - Bilateral	05-02-2012 11:15 AM	Darcy Noye XR	
<input checked="" type="checkbox"/>	Arrived	✓	DX Appendicular Skeleton [77081]	05-02-2012 7:45 AM	Darcy Noye CT	

**Tech Notes**

Technologists Notes:

Testing No Report

Primary Tech: \*

Assisting Tech 1:

Assisting Tech 2:

Last Menstrual Period:

**Procedure**

Scanner: \* CT1LU

Performed Procedure: \* DX Appendicular Skeleton (77081)

Body Part: Laterality:

Change Reason Code: \*

Change Reason Note:

☒ No Report (Tech Only) ☐ Report External to eRAD RIS

**Associated Radiologists**

Assigned Radiologist



Performing Radiologist



Assistant Radiologist

Figure 4.1 – Perform Exam: No Report required flag

As you can see from the figure above this study has been flagged that no report is required.

Billing Exception (80) x

Flags	Status	Procedures	Scheduled Date	First Name	Last Name	MRN	Birth Date	Billing St
Contains: ▾	Contains: ▾	Contains: ▾	Equals: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Equals: ▾	Contains
 	Exam Done(Tech Only)	DX Appendicular Skeleton [77081]	05-02-2012 7:45 AM	Kevin	Klondike	11979	12-29-1968	Failed
	Signed	MA DIGITAL MAMMO SCREEN BIL [G0202] - Breast - Bilateral	04-27-2012 11:15 AM	Betty	Brown	11594	04-04-1977	Failed

**Figure 4.2 – Status of Exam Done (Tech Only) added to billing.**

This particular study did not meet the billing requirements and has been added to the Billing Exception work list. Notice the status is Exam Done(Tech Only).

## Study Statuses Display Changes

In previous builds study statuses were displayed as one complete word regardless of how many actually words were in the status. In build 36 the DB study status will be converted to be more easily read. Below is a list of status and the converted text that will be displayed on the work list.

<b>DB Status</b>	<b>Work list Displayed Status</b>
OrderDraftedOrder	Drafted
OrderSigned	Ordered
OrderCancelled	Order Cancelled
Invitation	Invitation
ShortTermFollowUp	Short Term Follow Up
CallBack	Call Back
Scheduled	Scheduled
Cancelled	Cancelled
CheckingIn	Checking In
Arrived	Arrived
Started	Started
Discontinued	Discontinued
ExamDone	Exam Done
ExamDoneTechOnly	Exam Done(Tech Only)
Dictated	Dictated
ReportDrafted	Report Drafted
Transcribed	Transcribed
RepeatDone	Repeat Done
TentativelySigned1	Signed*
Signed1	Signed
ActionPending	Action Pending
ActionComplete	Action Complete

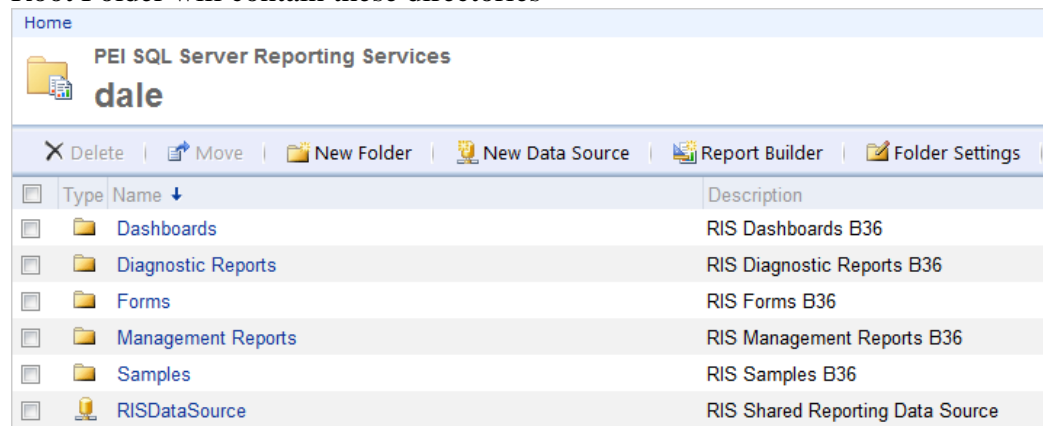
**Table 4.1 – Statuses converted to readable text.**

### Deploying RIS Reporting Services

Utilizing the Report Server utility (RS.EXE which is part of SSRS) a DOS batch file and some VB .NET scripts have been created.

The structure of the report server is deployed as follows:

Root Folder will contain these directories



The screenshot shows a web interface for the 'PEI SQL Server Reporting Services' root folder. The breadcrumb is 'Home'. The folder name is 'dale'. The toolbar includes 'Delete', 'Move', 'New Folder', 'New Data Source', 'Report Builder', and 'Folder Settings'. The table below lists the contents of the folder.

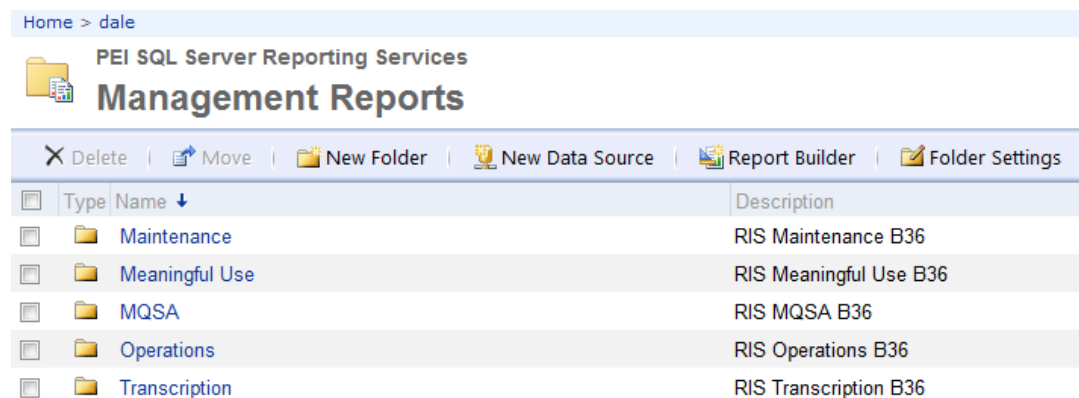
Type	Name	Description
Folder	Dashboards	RIS Dashboards B36
Folder	Diagnostic Reports	RIS Diagnostic Reports B36
Folder	Forms	RIS Forms B36
Folder	Management Reports	RIS Management Reports B36
Folder	Samples	RIS Samples B36
Data Source	RISDataSource	RIS Shared Reporting Data Source

**Figure 4.3 – Root Folder for deploying reports to reporting server**

Dashboards, Diagnostic Reports and Forms folders are designated as site folders. This means they will get an initial deployment, but will not be overwritten during upgrades.

Management Reports folder

This folder will not be deleted, but the following subfolders will be:



The screenshot shows the 'Management Reports' subfolder within the 'dale' folder. The breadcrumb is 'Home > dale'. The folder name is 'Management Reports'. The toolbar is the same as in Figure 4.3. The table below lists the contents of this subfolder.

Type	Name	Description
Folder	Maintenance	RIS Maintenance B36
Folder	Meaningful Use	RIS Meaningful Use B36
Folder	MQSA	RIS MQSA B36
Folder	Operations	RIS Operations B36
Folder	Transcription	RIS Transcription B36

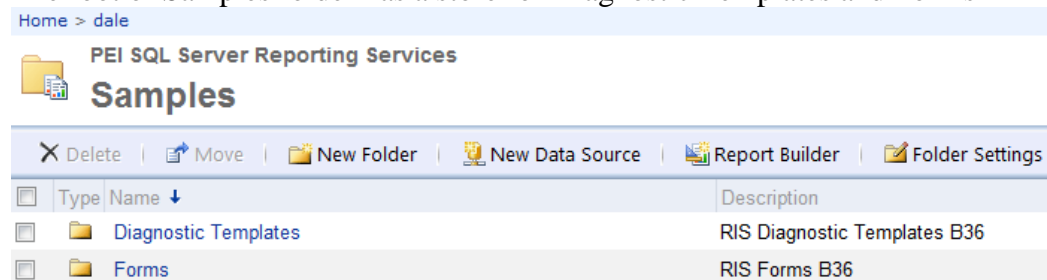
**Figure 4.4 – Management Reports Subfolders**

*\*The intention below Management Reports is to add a folder (yet to be named) where site specific (custom) reports would live. That folder would not be deleted and rebuilt in the deployment process.*

### Samples Folder

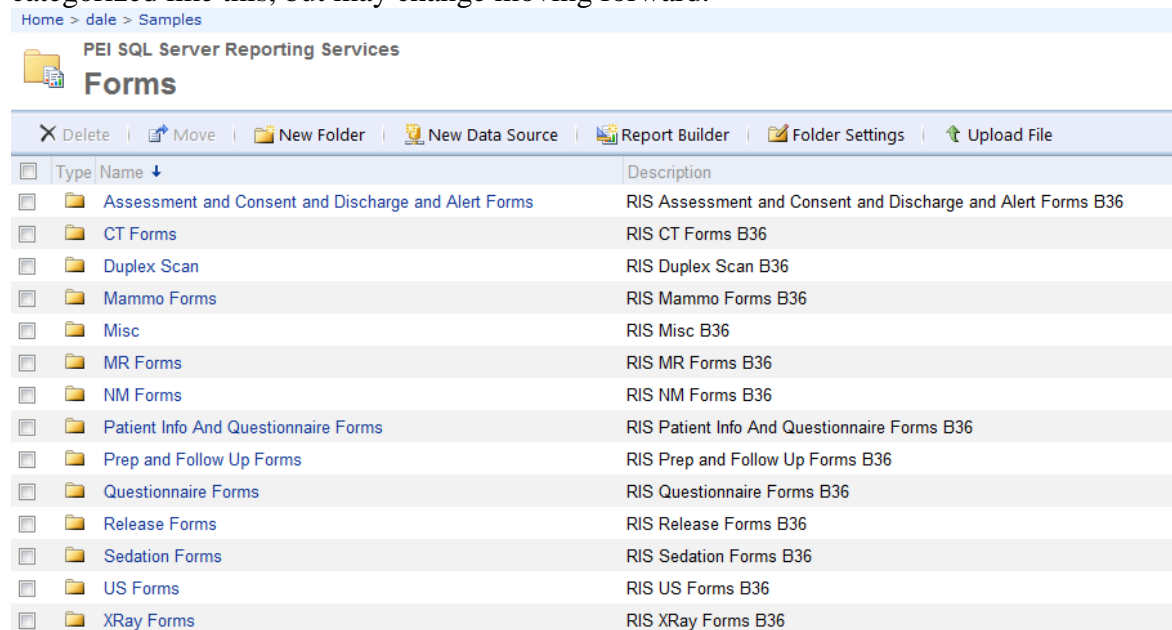
The samples folder will be deleted and rebuilt with the upgrades.

The root of Samples folder has a store for Diagnostic Templates and Forms



**Figure 4.5 – Sample folder deployed**

The forms folder underneath Samples contains a large set of examples which have currently been categorized like this, but may change moving forward.



**Figure 4.6 – Forms folder**

Deploying using the deployment script is pretty basic.

1. Launch the DeployReports.bat file.
2. **Enter report server name:**
  - a. A script will run against the server and return a list of all the root folders on that report server
3. A subscript will execute to display a list of the root folders currently sitting on the report server entered above.
4. **Enter root folder to deploy reports:**
  - a. This will create a new root if the name you give doesn't exist, or it will simply publish below the root of the folder if it does already exist.
5. **Enter the Build Number (ie: B35):**
  - a. This number will get tagged into the description of the folders as they get built (or rebuilt). It will not update folders if they exist and are not being replaced.
6. **Do you wish to deploy core management reports?**
  - a. If you enter "y", it will redeploy the core management reports
7. **Do you wish to deploy sample files?**
  - a. If you enter "y", it will delete, rebuild and deploy the core samples
8. **Do you wish to create a datasource?**
  - a. If you select "y" you will get prompted for more information about the datasource you wish to create

If you selected to create a datasource, the following steps will be requested to complete the connection string.

1. **Enter database server name:**
  - a. This is the name of the physical database server
2. **Enter database name:**
  - a. This is the name of the database on the database server
3. **Enter report schema user name:**
4. **Enter report schema password:**

The results of deployment will be written to log.txt in the same folder as the DeployReports.bat file.



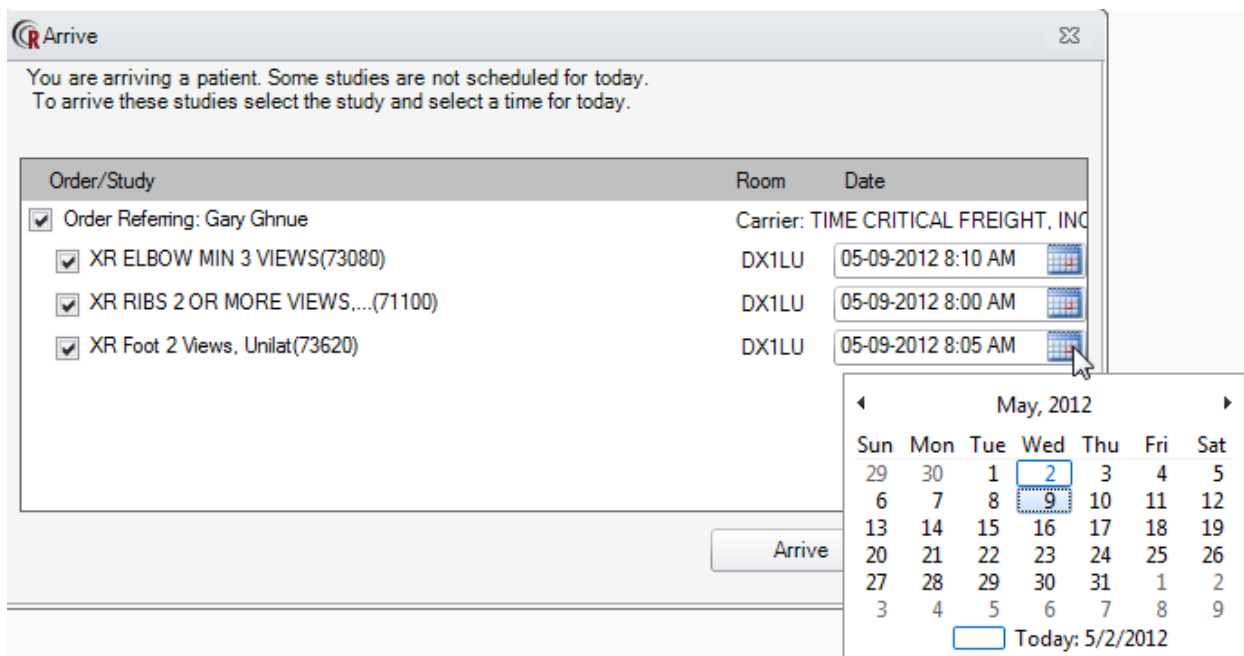
## Check In / Arrive Before Scheduled Date

If a patient arrives for their scheduled appointment before the scheduled date, registration needs to accommodate the patient. A new window will open

Studies scheduled for a future date can be checked in / arrived early. A new window has been added to the process. If the patients study being checked in / arrived is for a future date the new window will open prompting the user to select the desired patient's studies in which they would like to check in / arrive.

Order/Study	Room	Date
<input type="checkbox"/> Order Referring: Darcy Noye	Carrier: FUTURECARE CANTON HARI	
<input type="checkbox"/> XR Wrist 2 Views(73100)	DX1LU	04-27-2012 1:00 PM
<input checked="" type="checkbox"/> XR Bone Length Study(77073)	DX1LU	04-27-2012 1:05 PM
<input checked="" type="checkbox"/> CT Chest W Abdomen W/Wo(CT42)	CT1LU	04-27-2012 1:10 PM

**Figure 4.7 – Arrive window displayed on early arrivals**

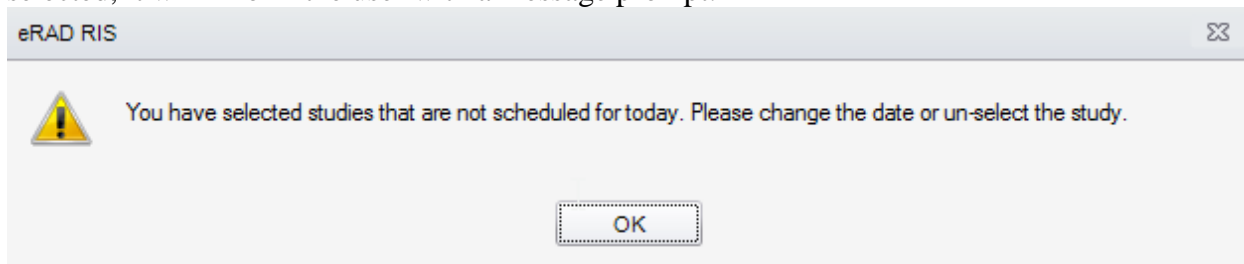


**Figure 4.8 – Order selected auto selects all. Must be current date to arrive**

Looking at the figure above, selecting the Order Referring check box will select all the studies. If you then try to unselect one of the studies it will deselect all including the Order Referring check box.

Selecting the check box for the study will activate the Date control. Selecting the calendar ICON opens the calendar control to select the current date. The date can also be input manually.

If the Check In / Arrive button is selected and a study(s) selected does not have the current date selected, it will inform the user with a message prompt.



**Figure 4.9 – Message of study with a future date.**

## **Site and Practice filtered according to schedule group**

The user group the user belongs to will control what sites the user will now be able to have access to. Also based on those sites the practices will also be filtered to the practices that the user has sites for scheduling.

This will be seen in the dropdown lists in which the practice or site is selectable. For instance, when creating a new appointment on the order tab, the list boxes for Practice and Site will be filtered to what is configured for the user in the schedule group the user belongs to.

Also, included in the dropdown's list of values is any practice/site that is already saved in the dataset. For example if another user (with a different schedule group) opens a study in the New Order, Registration, or View/Edit windows and does not have access to the site that the order was saved with, the user may edit the order/study and save.

### **Logging client side errors to the server**

To aid support in troubleshooting errors that may have occurred, the ability to log the error in a database table has been added in build 36.

The logging is configurable, controlled by a new system configuration value called `EnableLoggingClientErrorsToServer`, which defaults to true. . If this is false then the GUI will not try to upload errors as they occur. If this is true, the GUI will upload errors as soon as they occur, as long as a) the error is not related to authentication, and b) the error is not the exact same as the last error that was logged by that user.

If an error occurs while logging to the server, we silently suppress the error so it is not displayed to the client, and we disable future logging for the rest of the session (i.e. until RIS is restarted). This functionality was put in place to ensure that we didn't fall into an infinite loop of logging an error, logging the error that occurred while logging the error, etc.

Errors are stored in the `c_client_error_log` table. The log contains the date of the error, the `user_id` of the current user, the computer name, the details of the error itself, and a `hash_code` for that error.

The `hash_code` is calculated using the description of the error to help with grouping and filtering.

## Management Report Authorization

eRAD RIS supports both Windows and custom authentication, but our Reporting Services integration has always relied upon the Report Manager web interface to configure permissions. Starting in build 36, we will support managing authorization for Management Reports from within our Configuration module. Authorization should allow members of specified user groups to access the contents of particular folders on the Management Report Server.

When the user opens eRAD RIS, we query the report server to obtain a list of reports and forms that the guest user is authorized to access. We have built new logic into the application to ensure that the Administration -> Management Report screen will only display the reports for which the current user is authorized to access. Note that if a user belongs to Groups A and B, they will have access to folder C if EITHER group A or group B is authorized.

### Initial Configuration

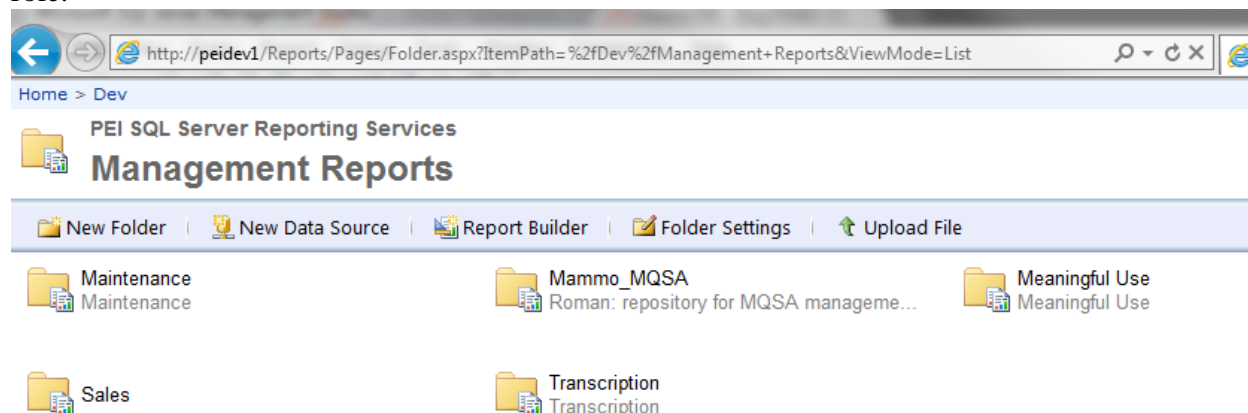
From Administration->Configure->System->SystemConfig, the administrator/installer can set the values for the following key configuration values:

ReportServerUrl	Identifies the URL of the SSRS Report Server web services endpoint.
ReportServerUserName	Identifies the name of a windows account on the report server. If this value is blank, the RIS will try to use the active user's credentials instead. Before populating this value, the user will need to create a windows account on the report server. Consider using the password never expires option when creating the account.
ReportServerPassword	The password that will be used to authenticate to the report server when using the guest account specified above
ReportServerMgmtReportFolderFilter	The folder that will be used as the top level folder for management reports. No folders or reports should be accessible that are not children of this folder

**Figure 4.2 – Report server System Config codes**

### Configuring the guest account's report server permissions

Step 1: visit the report manager in Internet Explorer, by default this is <http://peidev1/Reports> in our environment, substitute the machine name for the report server in place of peidev1 if applicable. From the “Home” folder, click “Site Settings” in the top Right Corner and then click “Security” on the left side of the screen. Ensure that the guest account has the “System User” role.



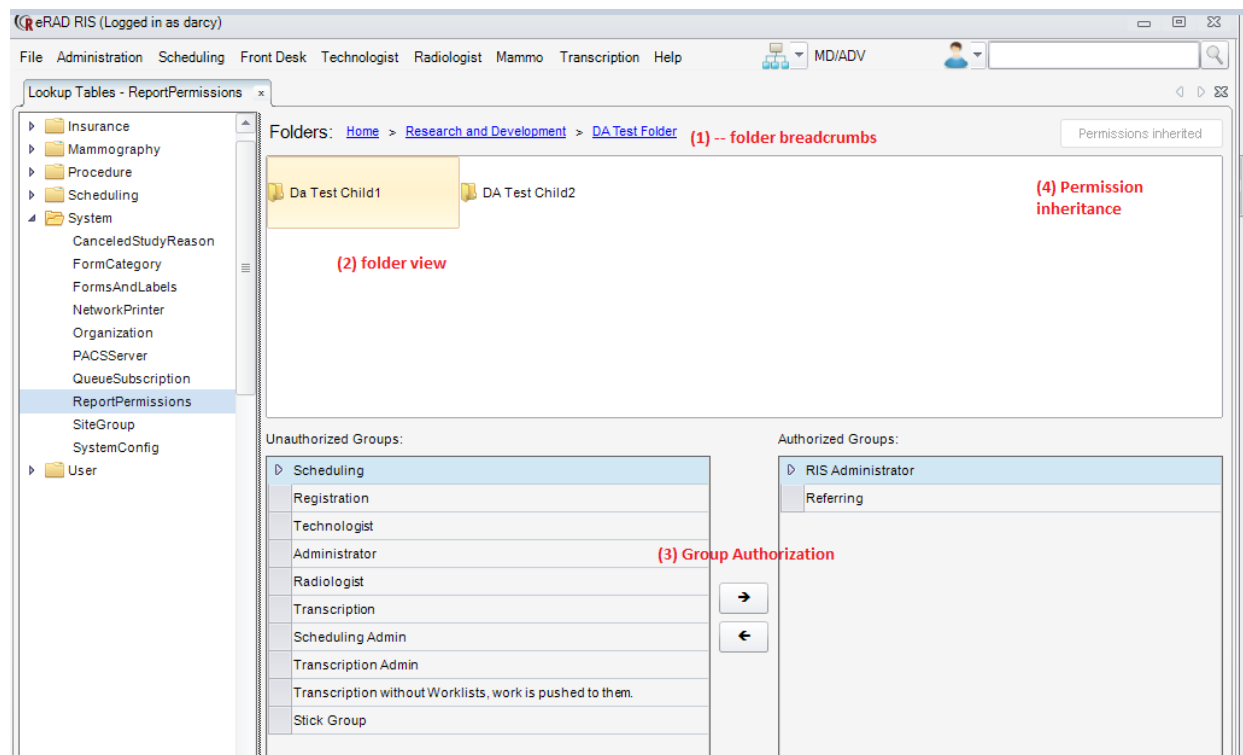
**Figure 4.10 – Report Manager page that is provided by SQL Server reporting Services**

Step 2: again using the report manager, browse to the top level folder that will be specified in the config setting “ReportServerMgmtReportFolderFilter”, click “Folder Settings” and assign the Browser role assignment to this folder. Note that the guest user also needs browser permissions at the root folder for the report server.

### New Report Permissions Editor

1. A list of folder hyperlinks shows which folder is currently being edited. The user is editing the folder “DA Test Folder” in the screenshot above. The user can navigate back up the tree by pressing the backspace button, or by clicking on the link for another folder (e.g. “Research and Development”. The Home folder is the top level folder for this RIS install, it is configured to point to a physical folder on the report server (see ReportServerUrl and ReportServerMgmtReportFolderFilter in the SystemConfig editor).
2. Folder View – displays the folders within the folder that is currently being edited. If the user double-clicks or presses the enter key on a folder, the editor will update all areas to reflect the selected folder. In the screenshot above, the folder “DA Test Folder” contains two other folders. If the user presses enter or double-clicks “DA Test Child1”, the area

in section 1 would update to show “Home > Research and Development > DA Test Folder > DA Test Child1”, the folder list would show “DA Test Child1”’s folder contents and the list of groups in section 3 would update to reflect the permissions for the “DA Test Child1” folder.



**Figure 4.11 – Report permission editor**

3. Group Authorizations – the bottom portion of the editor shows a list of groups. All existing groups should fall into the “Unauthorized Groups” or “Authorized Groups”. The user can move a group from one category to the other by double-clicking, pressing enter, or using the arrow buttons between the two grids.
4. Permission Inheritance – our permission framework is built so that a folder will either have its own list of authorized groups, or it will inherit from its closest ancestor (e.g. parent, grand-parent, great-grand parent, etc). While editing the top level (“Home”) folder, this button will be invisible. If the current folder inherits its permissions from an ancestor, the button will be disabled and show the text “Permissions inherited”. If the current folder has its own defined permissions, it will be enabled and show the text “Revert to parent security”. Reverting to parent security will result in the current set of authorizations being deleted, and the screen will refresh to show the inherited permissions.

Note: when the user changes the assigned groups from a folder so that it is different from its parent, the user will be prompted with:

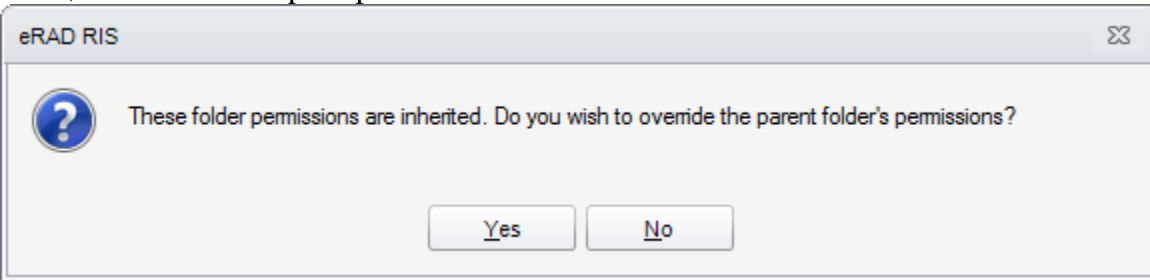


Figure 4.12 – Prompt to override the permissions of a parent folder



## Modality closure “times”

In previous builds of eRAD RIS modalities could be closed in a date range, but the time could not be specified. In build 36 2 new columns have been added to the modality closure grid. This now allows the modality to be closed for an hour, 2, 3, etc... instead of a full day.

The screenshot shows the 'Lookup Tables - Modality' window. On the left, a tree view lists various categories, with 'Modality' selected. The main pane displays a table of modalities. The row for 'CT1FH' is highlighted with a red box. Below the table, a 'Duration Override' section shows the 'CT1FH modality closure' details. This section includes a table with columns for 'Start Date', 'Start Time', 'End Date', and 'End Time'. The first row shows a closure from '05-07-2012' at '8:00 AM' to '05-07-2012' at '11:00 AM', with the entire row highlighted by a red box. To the right of this table is a 'CT1FH modality restriction' section with columns for 'Start Date' and 'Start Time'.

Modality Code	Description	AE title	Digital	Site Code	Modality Type Code	Weight	Confined Space Flag	Scheduling Interval	Pacs Correction Required Flag	Device Template	Active
CT1EL	CT1EL	CT1EL	N	EL (Eldersburg)	CT	300		30	N	CTELSCANNER	Y
CT1FH	CT1FH	CT1FH	N	FH (Fisher)	CT			5	N		Y
CT1LU	CT1LU	CT1LU	N	LU (Lutherville)	CT			5	N		Y
CT1GL	CT1GL	CT1GL	N	GLA (Glasgow)	CT		N	5	N		Y
DE1EL	DE1EL	DE1EL	N	EL (Eldersburg)	BD (Bone Density)			5	N		Y
DE1FH	DE1FH	DE1FH	N	FH (Fisher)	BD (Bone Density)			5	N		Y
DX1LU	DX1LU	DX1LU	N	LU (Lutherville)	XR (Plain Film/Xra...)			5	N		Y
INTERNAL	Used for cr...		Y	INTERNAL (... (na)	INTERNAL (... (na)			5	N		N
INTERNALLEL	Used for cr...		Y	EL (Eldersburg)	(na) ?? (Unknown)			5	N		N
INTERNALLLU	Used for cr...		Y	LU (Lutherville)	(na) ?? (Unknown)			5	Y		N
MA1EL	MA1EL	MA1EL	N	EL (Eldersburg)	MA (Mammography)			5	N		Y

CT1FH modality closure:			
Description	Start Date	Start Time	End Date
test	05-07-2012	8:00 AM	05-07-2012 11:00 AM

CT1FH modality restriction:	
Start Date	Start Time

**Figure 4.13 – Modality closure times**

In the figure above the Modality lookup is opened. The Specific modality to be closed is selected in the top pane. This will show all modality closures. The user can specify the start date, start time, end date and time.

This has also been extended to the modality restrictions.

## Meaningful Use (MU) wizard dialog

The patient visit tab has been enhanced with a MU wizard. The wizard will allow the user to quickly add or remove allergies, medical history and medications via a list of check boxes. When an item is checked, that item will be added to the grid on the patient visit tab. The wizard is accessed from the Meaningful Use Wizard button shown in figure 4.15.

Medications	
<input type="checkbox"/> ActoPlus Med	<input type="checkbox"/> Glumentza
<input type="checkbox"/> Avandamet	<input type="checkbox"/> Glyburid Met
<input checked="" type="checkbox"/> Diabex	<input type="checkbox"/> Janumet
<input type="checkbox"/> Diafomin	<input type="checkbox"/> Melformin
<input type="checkbox"/> Flortamet	<input type="checkbox"/> Metaglip
<input type="checkbox"/> Gluccophage	<input type="checkbox"/> PrandiMet
<input type="checkbox"/> Glucovance	<input type="checkbox"/> Riomet(liquid form Metformin)

Medical History	
<input type="checkbox"/> Aneurysm Clip or Coil	<input type="checkbox"/> Metal in the body
<input type="checkbox"/> Aneurysm Had Surgery	<input type="checkbox"/> Morphine Pump
<input type="checkbox"/> Aneurysm No Surgery	<input type="checkbox"/> Pacemaker
<input type="checkbox"/> Asthma	<input type="checkbox"/> Paraplegic
<input type="checkbox"/> Breast Implants	<input type="checkbox"/> Previous CT Contrast Reaction
<input type="checkbox"/> Cancer	<input type="checkbox"/> Previous MR Contrast Reaction
<input checked="" type="checkbox"/> Diabetes	<input type="checkbox"/> Universal Precautions
<input type="checkbox"/> Insulin Pump	

Allergies	Mild	Mod	Severe
Adhesive Tape	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bee Sting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Betadine (Topical Iodine)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contrast (Medical Imaging)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dog, Cat or Animal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dust	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fruit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grass / Pollen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Latex	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lidocaine / Novacaine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mold	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Peanut or other nut	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Penicillin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rubbing Alcohol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shellfish	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sulfa Drug	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Figure 4.14 – MU wizard

**Medical History** – The medical history grid allows the user the ability to have the same icd-9 code show multiple times, however we don't allow the dates of an icd-9 code to overlap. If the user selects the same icd-9 code only one can be active at a time (we throw an error saying overlapping dates not allowed). We added code that forces the user to select a start date for active icd-9 codes and we added code to force an end date for inactive or resolved icd-9 codes. This is needed so we can use the mu wizard to activate or inactivate the correct code in the list.

**Allergies** – The allergy shows in the grid only once. If an inactive allergy is flagged again, it will simply activate it.

Medications – Because we are using NewCrop medications can show in the list multiple times. We don't have the concept of start and end dates with medications so the way we use the meaningful use wizard is as follows.

If the user clicks the wizard button we show all active drugs by checking the appropriate medication (no matter if entered in ris or newcrop). If the user unchecks the checkbox we make all medications entered in eRAD RIS (ris\_entered\_flag = Y) inactive. We don't inactive the medications entered in NewCrop because the sync button will control the status of the medication. If the user checks a medication in the wizard we add a new row to the grid.

The screenshot displays the 'Schedule Order' form in the eRAD RIS system. The form is organized into several sections:

- Demographics at Encounter:** Includes fields for Height (ft in), Weight (lbs), BMI, and Smoking Status. There is a checkbox for 'Is Pregnant'.
- Clinical Summary:** Includes a 'Continuity of Care Record (CCR)' section with 'View/Print' and 'Export' buttons, and a 'View External Clinical Document' button.
- Medications:** Features a table with columns: Date, Medication, Physician, and SIG Text. A row is shown for '05-02-2012 Diabex'. Below the table are 'Add', 'Edit', and 'Sync/Refresh' buttons.
- Allergies:** Features a table with columns: Allergy, Reaction, Severity, Status, and Start Date. A row is shown for 'Adhesive Tape' with 'Mild' severity and 'Active' status. Below the table is a link to 'Click here to add a new row'.
- Medical History:** Features a table with columns: Problem, Start Date, End Date, and Status. A row is shown for '(250) DIABETES MELLITUS WITHO...' with a start date of '05-02-2012' and 'Active' status. Below the table is a link to 'Click here to add a new row'.
- Lab Results:** Features a table with columns: Date, Test, and Result.

A tooltip for the 'Meaningful Use Wizard' button is visible on the right side of the form.

**Figure 4.15 – Displaying access to the MU wizard and the Medications, Allergies and Medical History grids**

## MU Scorecard Management Report

The automated measure report has a details section which allows the user the ability to drill down into each MU status to check each user's numerator/denominator and percentages for each measure MU Status. To help the user easily track down users that are not meeting the MU standard we fill the last textbox red indicating below the MU standard for the MU Status. Ideally, if the users are using the system in a meaningful way we will never see red in the last textbox

### MU Scorecard

Practice: Advanced Radiology

Date Range: 1/1/2012 - 12/31/2012

#### Automated Measure

Description	Radiologist	MU Measure	Numerator	Denominator	Counts
⊕ Allergy list	7.41				14/189
⊕ Clinical summaries	2.16				5/232
⊕ CPOE	77.27				17/22
⊕ Demographics	11.64				22/189
⊕ Electronic copy health information	35.71				5/14
⊕ Lab results	100				2/2
⊕ Medication list	7.94				15/189
⊕ Medication reconciliation	1.16				2/173
⊕ Patient education	1.59				3/189
⊖ Patient reminders	9.76				4/41
	Andrew Waite	10.0 %	0	1	0.0 %
	Darcy Aiken	10.0 %	0	1	0.0 %
	Darcy Noye	10.0 %	0	10	0.0 %
	Gordon Craig	10.0 %	0	1	0.0 %
	Ian Power	10.0 %	2	8	25.0 %
	Kevin Molyneaux	10.0 %	1	12	8.3 %
	Radiologist Test User	10.0 %	1	8	12.5 %
⊕ Patient summary	66.67				2/3
⊕ Problem list	4.76				9/189
⊕ Smoking status	8.07				13/161
⊕ Timely access	2.12				4/189
⊕ Transmit eRx	100				2/2
⊕ Vitals and BMI	2.86				5/175

## CQM Measure

Description	Radiologist	Population	Num Count	Numerator	Exclusion	Denominator	Percentage
☒ NQF 0013	Total			4	0	4	100.0%
☒ NQF 0024	Total			0	0	0	0.0%
☒ NQF 0028a	Total			4	0	8	50.0%
☒ NQF 0028b	Total			0	0	3	0.0%
☒ NQF 0031	Total			6	0	28	21.4%
☒ NQF 0038	Total			9	0	12	75.0%
☒ NQF 0041	Total			1	0	5	20.0%
☒ NQF 0043	Total			1	0	11	9.1%
☒ NQF 0061	Total			0	0	0	0.0%
☒ NQF 0421a	Total			7	0	11	63.6%
☒ NQF 0421b	Total			0	0	117	0.0%

**Figure 4.16 – MU Scorecard management report**

## Outside Read Changes

In build 36, the Add Outside Read data window has seen some change.

The following has been added to Add Outside Read:

### 1. **Digital Flag;**

Added a ‘digital’ flag to the add outside read screen, if one or more of the images are expected to be in eRad PACS then this check box should be checked, which will put it into the PACS correction workflow and when the rad reads the study the images will get loaded; otherwise, the study is considered analog or that the images will be searched for manually on an external system.

Pending Dictation (2 of 22) | Add Outside Read \* x

Patient | Order

Study(s): CT Chest W Abdomen W x

Body Part: Chest

Laterality:

Exam Date: mm-dd-yyyy

Ext. Accession: Test123

History:

Referring Details

Referring: \* [Red Exclamation Mark] Visited at: \*

CC Physicians:

Visit Location for CC\*:

Performed Location

Practice: \* Advanced Radiology External MRN: Ext123456

Site:

Flags

☐ STAT Read ☐ STAT Precert

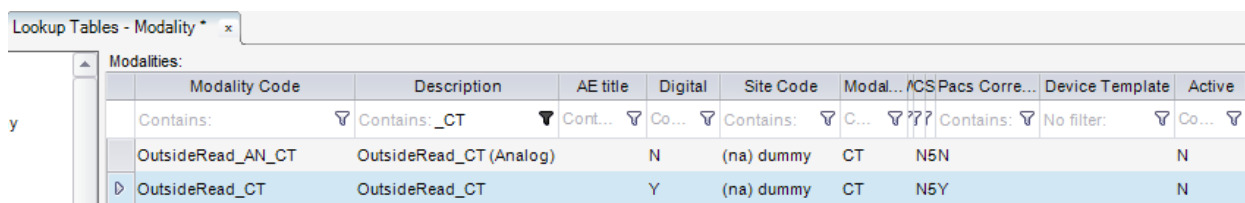
☒ Digital

Order Notes

05-03-12 NoyeD -

**Figure 4.17 – Digital flag on Add Outside Read window**

Under the hood there is a modality named “OutsideRead\_<mod\_type\_code>” such as “OutsideRead\_CT” for each modality type. This is still how things work; however, there is now an additional modality for each type named “OutsideRead\_AN\_<mod\_type\_code>” for each modality type. The <AN> standing for analog. An administrator setting up the system access the outside read screen they will be prompted to create outside modalities for each of the active modality types that is still missing from the l\_modalities table. They will not get prompted to create the \_AN\_ modalities since those can be auto generated from the digital modalities they need to manual create.



Modality Code	Description	AE title	Digital	Site Code	Modal...	ACS Pacs Corre...	Device Template	Active
OutsideRead_AN_CT	OutsideRead_CT (Analog)		N	(na) dummy	CT	N5N		N
OutsideRead_CT	OutsideRead_CT		Y	(na) dummy	CT	N5Y		N



**Figure 4.18 – Modality lookup showing outside read rooms as digital and analog**

The figure below shows a digital outside read study (OutsideRead\_XR) and an outside read study that is analog (OutsideRead\_AN\_XR)

Study that is analog (OutsideRead\_AN\_XR)

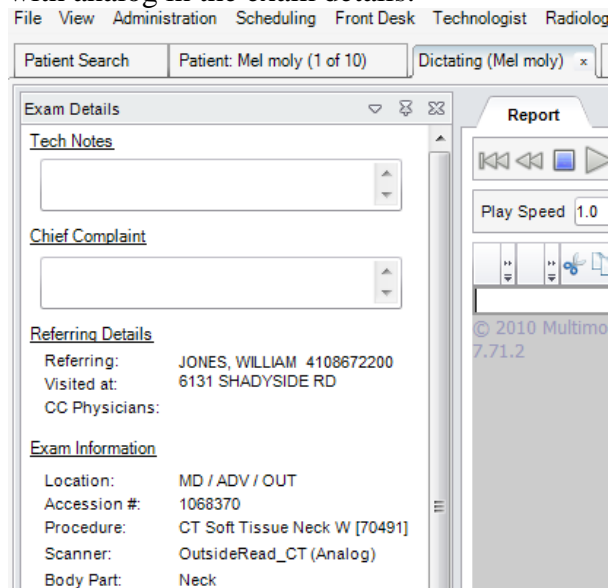
Pending Dictation (2 of 22)

Testing 643

Flags	Status	Scheduled Date	Procedures	Last Name	First Name	MRN	Birth Date	Age At Study	Room	Modality Type	Accession #
Contains: ▾	Contains: ▾	Equals: ▾	Contains: xr ▾	Contains: ▾	Contains: ▾	Contains: ▾	Equals: ▾	Contains: ▾	Contains: out ▾	Contains: ▾	Contains: ▾
	Exam Done	04-24-2012 12:00 AM	XR Facial Bones 1-2 Views [70140] - Head	Tullestry	Tony	10633	11-09-2011	5 months	OutsideRead_XR	XR	1011149
	Exam Done	04-25-2012 12:00 AM	XR Knee 3 Views, Bilat [RD2] - Knee - Bilateral	Viddler	Vernon	11933	09-26-1977	34 years	OutsideRead_AN_XR	XR	1011148

**Figure 4.19 – Work list view of digital and analog outside reads**

The Dictate, Sign Reports, and Create Reports windows also shows analog studies appended with analog in the exam details.



File View Administration Scheduling Front Desk Technologist Radiologist

Patient Search Patient: Mel moly (1 of 10) Dictating (Mel moly) x

**Exam Details**

Tech Notes

Chief Complaint

Referring Details

Referring: JONES, WILLIAM 4108672200  
 Visited at: 6131 SHADYSIDE RD  
 CC Physicians:

Exam Information

Location: MD / ADV / OUT  
 Accession #: 1068370  
 Procedure: CT Soft Tissue Neck W [70491]  
 Scanner: OutsideRead\_CT (Analog)  
 Body Part: Neck

**Report**

Play Speed 1.0

© 2010 Multimedix 7.71.2

**Figure 4.20 – Dictate window displaying scanner information**

## 2. External Accession Number for Outside Reads:

Users need to add the external accession number for cases where the images aren't imported into our PACS and the user needs to locate them on an external system where the images were acquired.

For each study we the user can provide an external accession number, which is displayed on the Radiologist and ‘View Edit’ screens. Screens show the external accession number so RADs can search the external system (when applicable). The report will show both the RIS and External accession numbers. The RIS accession number must maintain their uniqueness since our search current must resolve studies uniquely and our interfaces require accession number to be unique. We can’t use the external accession number as the RIS accession number because we must prevent duplicates.

**Figure 4.21 – Add Outside Read window displaying external accession number field**

The external accession number is displayed in the Exam Details and Summary panes of the radiologists and transcription windows.

**Figure 4.22 Exam details and Summary Panes of Dictate window**



The View/Edit data window also has the External Accession number in display on the Note/Exam Times tab. It can also be edited on the Documentation tab.

Patient: Bonnie Blue (1) View/Edit (Bonnie Blue) x


Patient Contacts / Demographics Order Documentation Billing Codes Attachments **Notes / Exam Times** Visit


☐ Place Billing On Hold

**Billing Notes**

05-03-12 NoyeD -


**Scheduling / Arrival**


Scheduled Time:\* 05-02-2012 12:00 AM  Scheduled By:

Arrival Time: mm-dd-yyyy h:mm am/pm  Arrived By:

Arrival Early/Late: 33 hours 20 minutes late

**Exam Time**

Start Time: 05-02-2012 12:00 AM  Primary Tech: Tech, Outside

Completed Time: 05-02-2012 12:00 AM 

Start Early/Late: On time

Exam Duration: 30 min. early

Accession #: 1011179 [Ext: test123Acc]

**Order Notes** **Patient Notes**

05-03-12 NoyeD - 05-03-12 NoyeD -

**Figure 4.23 – External Accession number on the View/Edit window**

The screenshot shows the 'View/Edit (Bonnie Blue)' window. The 'Tech Notes' section has a large text area for 'Technologists Notes'. To the right, there are fields for 'Primary Tech' (set to 'Tech, Outside'), 'Assisting Tech 1', 'Assisting Tech 2', 'Last Menstrual Period' (with a calendar icon), and checkboxes for 'Pregnant', 'Not Pregnant', 'Shielded Patient', 'Pregnancy Test', and 'Blood Test'. The 'Procedure' section includes 'Scanner' (set to 'OutsideRead\_CT'), 'Performed Procedure' (set to 'CT Chest W & Abdomen W (CT4)'), 'Body Part' (set to 'Chest'), 'Laterality', 'Change Reason Code', and 'Change Reason Note'. The 'External Accession' field is highlighted with a red box and contains the value 'test123Acc'. Below it is a checkbox for 'No Report (Tech Only)'. The 'Associated Radiologists' section on the right has fields for 'Assigned Radiologist', 'Performing Radiologist', and 'Assistant Radiologist'.

Figure 4.24 – Ability to edit the External Accession number

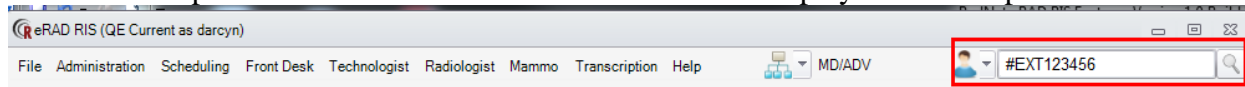
### 3. External MRN:

An External MRN can also be added in the Add Outside Read data window. Located on the Order tab, the External MRN field is a free form text field that will allow users to input and save an external MRN for this patient.

The screenshot shows the 'Add Outside Read' window. The 'Study(s)' section has a list box with 'CT Chest W Abdomen W'. The 'Body Part' is set to 'Chest', 'Laterality' is empty, 'Exam Date' has a calendar icon, and 'Ext. Accession' is 'test123Acc'. The 'Referring Details' section includes 'Referring' (set to 'Graves, Laurie'), 'Visited at' (set to '78 MileHigh Dr., Mountain View, CO, 12345'), 'CC Physicians', and 'Visit Location for CC'. The 'Performed Location' section has 'Practice' (set to 'Advanced Radiology') and 'Site'. The 'External MRN' field is highlighted with a red box and contains the value 'Ext123456'. The 'Flags' section has checkboxes for 'STAT Read', 'STAT Precert', and 'Digital' (checked). The 'Order Notes' section on the right contains the text '05-03-12 NoyeD -'.

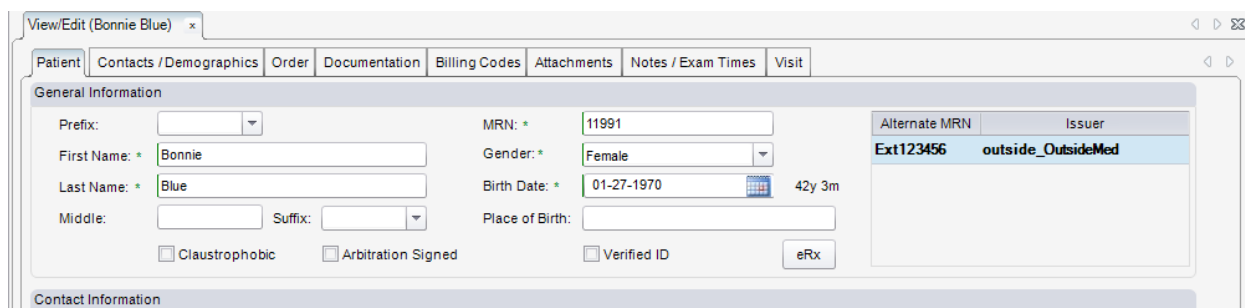
Figure 4.25 – External MRN field on Add Outside Read window

Submitting an outside read with an external MRN also creates a second patient record with that patient\_id/MRN with the issuer\_of\_patient\_id of 'outside\_<site\_code>'. This is so we can locate the patient via the alternate MRN which will be displayed on the report.



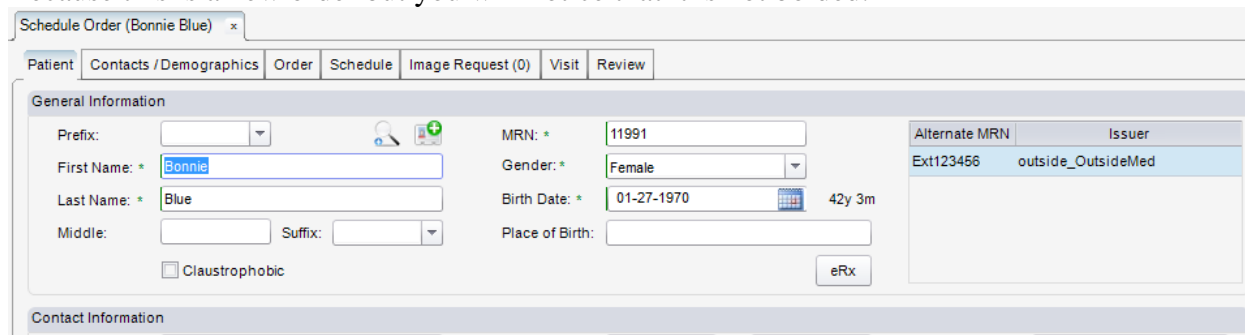
**Figure 4.26 – Searching for external MRN**

A new section has been added on the main patient tab to display the alternate MRN(s) for a patient. If the study that is open was an outside read with an alternate MRN for reporting than that MRN will show in bold if that is the MRN that for the report.



**Figure 4.27 – View/Edit showing Alternate MRN**

When scheduling a new appointment for this patient, the alternate MRN will display. Because this is a new order but you will notice that it is not bolded.



**Figure 4.28 – New appointment showing alternate MRN**

The alternate MRN may be edited in the View/Edit window on the order tab.

The screenshot shows the 'View/Edit (Bonnie Blue)' window. At the top, there are tabs for Patient, Contacts / Demographics, Order, Documentation, Billing Codes, Attachments, Notes / Exam Times, and Visit. Below these are sections for Referring Details, Chief Complaint, Performed Location, Flags, and Insurance Policies. The 'Ext MRN' field is highlighted with a red box.

Section	Field	Value
Patient Search	Patient	Bonnie Blue (1)
Referring Details	Referring: *	Graves, Laurie
Referring Details	Visited at: *	78 MileHigh Dr., Mountain View, CO, 12345
Referring Details	CC Physicians:	
Referring Details	Visit Location for CC*	
Performed Location	Practice: *	Advanced Radiology
Performed Location	Site:	OutsideMed
Performed Location	Ext MRN:	Ext123456
Flags	STAT Exam	<input type="checkbox"/>
Flags	STAT Read	<input type="checkbox"/>
Flags	STAT Precert	<input type="checkbox"/>
Flags	Transportation Required:	
Flags	Special Accommodations:	
Insurance Policies	Billing Method	

**Figure 4.30 – Ext MRN field in View/Edit window**

#### 4. **History Box:**

On the Order tab, the History box replaces the Tech Notes box. In fact the text box itself is the same, but the label of the box has changed.

The screenshot shows the 'Add Outside Read' window. It has tabs for Patient and Order. The 'Study(s):' field contains 'CT Chest W'. The 'Body Part' is 'Chest', 'Laterality' is empty, 'Exam Date' is 'mm-dd-yyyy', and 'Ext. Accession' is empty. The 'History' text box is highlighted with a red box and contains the text 'I will see you later in the tech notes field.' Below the 'History' box is the 'Referring Details' section, and to the right is the 'Order Notes' section.

Section	Field	Value
Study(s):	Study(s):	CT Chest W x
Body Part	Body Part:	Chest
Laterality	Laterality:	
Exam Date	Exam Date:	mm-dd-yyyy
Ext. Accession	Ext. Accession:	
History	History:	I will see you later in the tech notes field.
Referring Details	Referring: *	
Referring Details	Visited at: *	
Referring Details	CC Physicians:	
Referring Details	Visit Location for CC*	
Order Notes	Order Notes	05-07-12 TestS -

**Figure 4.31 – History text box in Add Outside Read window**

Text entered in the History box will be displayed in the Tech Notes box in View/Edit window and Billing Exception window.

The screenshot displays the eRAD RIS interface with the 'Patient' tab selected. The 'Tech Notes' section is visible, showing a text area with the text 'I will see you later in the tech notes field.' This text is a copy from the 'History' box. To the right of the text area are several fields: 'Primary Tech: \*' (set to 'Tech, Outside'), 'Assisting Tech 1:', 'Assisting Tech 2:', 'Last Menstrual Period:' (with a date picker and radio buttons for 'Pregnant' and 'Not Pregnant'), and checkboxes for 'Shielded Patient', 'Pregnancy Test', and 'Blood Test'. Below the 'Tech Notes' section is the 'Procedure' section, which includes 'Scanner: \*' (set to 'OutsideRead\_CT') and 'Performed Procedure: \*' (set to 'CT Chest W & Abdomen W (CT4)'). To the right of the 'Procedure' section is the 'Associated Radiologists' section, which includes 'Assigned Radiologist' and 'Performing Radiologist' fields.

**Figure 4.32 – Text captured in History box appears in the Tech Notes field**

### 5. Chief Complaint:

The chief complaint field has been removed from the Add Outside Read window. To fill in the space where the chief complaint was shown, the order notes was resized and moved into the empty space. This had a nice effect on the screen and freed up much needed space for outside reads that require insurance information.

### 6. Patient Tab Changes:

The Field Place of Birth has been removed, as has the Claustrophobic and Verified ID check boxes. The eRx button for ePrescribe does not appear. All of these fields / buttons were located in the upper right of the Add Outside Read window. This space is now for the display of the Alternate MRN

The screenshot shows the 'Add Outside Read' window with the 'Patient' tab selected. The 'General Information' section contains fields for Prefix, First Name, Last Name, Middle, Suffix, MRN (12015), Gender, Birth Date (mm-dd-yyyy), and Alternate MRN/Issuer. The 'Contact Information' section includes Address 1, Address 2, City, State, Zip, Country (US), Email, Preferred Contact Method, Preferred Delivery Method, Home Phone, Work Phone, and Cell Phone. The 'Patient Notes' section shows a note dated 05-07-12 by NoyeD.

**Figure 4.33 – Add Outside Read data window**

The Patient Origin data pane has also been removed. The patient note pane was expanded to occupy the page real estate.

### 7. **Site Filtering:**

Finally, we are now filtering practices based on the practices assigned to a user. In addition, a practice will only be displayed in the practice selection if that practice has an outside read site.

## Self-Pay Carrier

In previous builds a study could be flagged as self-pay if the patient did not have an insurance carrier. This created an issue with the billing work flow as insurance was a required step.

In build 36 we have added the ability to assign self-pay methods carrier codes which will be used as the insurance required.

The Carrier lookup table has a new column called “Self Pay Flag” added to specify if the carrier is for self-pay.

Carrier Code	Description	Phone	Fax	Address1	Address2	City	Zipcode	State	Notes	Requires Injury Flag	Carrier Type Code	Policy Number	Self Pay Flag	Active
500509	MARYLAND ASSOCIATION BOAR...	8009449092	4108412669	621 RIDGELY AVE	SUITE 301	ANNAPOLIS	21401		**ENTER ONE CALL IN AP...		Z (Other)		N	Y
111110	FUTURECARE CANTON HARBOR	4103426644	4103273949	1300 S. ELLWOOD AVEN...		BALTIMORE	21224		**ENTER ONE CALL IN AP...		Z (Other)		N	Y
100	SELF-PAY NO DISCOUNT										A (Self Pay)		Y	Y

**Figure 4.34 – Carrier lookup displaying new column “Self Pay Flag”**

The Bill to Type lookup table also has a new column “Carrier Code” which allows for the self-pay carrier code to be specified for the Bill to Type Code.

Bill To Type Code	Display Order	Description	Carrier Code	Active
Self Hardship	4	Self pay medical hardship	(100) SELF-PAY NO DISCOUNT,	Y
Self Mgr Override	5	Self pay manager override	(100) SELF-PAY NO DISCOUNT,	Y
Self No Discount	2	Self pay no discount	(100) SELF-PAY NO DISCOUNT,	Y
Self Prompt	3	Self pay prompt pay discount	(300) Test Self Pay	Y

**Figure 4.35 – Bill to Type lookup displaying new column “Carrier Code”**

## Mammo Diagnostic Reporting Window Features

It was desired to have data panels with new properties specifically for the Mammography reporting radiologist. We felt these panels were optimal for other users as well. Although we have them initially associated with Mammography reporting, some of these features will be available for all reporting users.

By default, the windows still load in their themed (grey) look. This was done to prevent shock to any existing radiologists before the mammo features are fully in place.

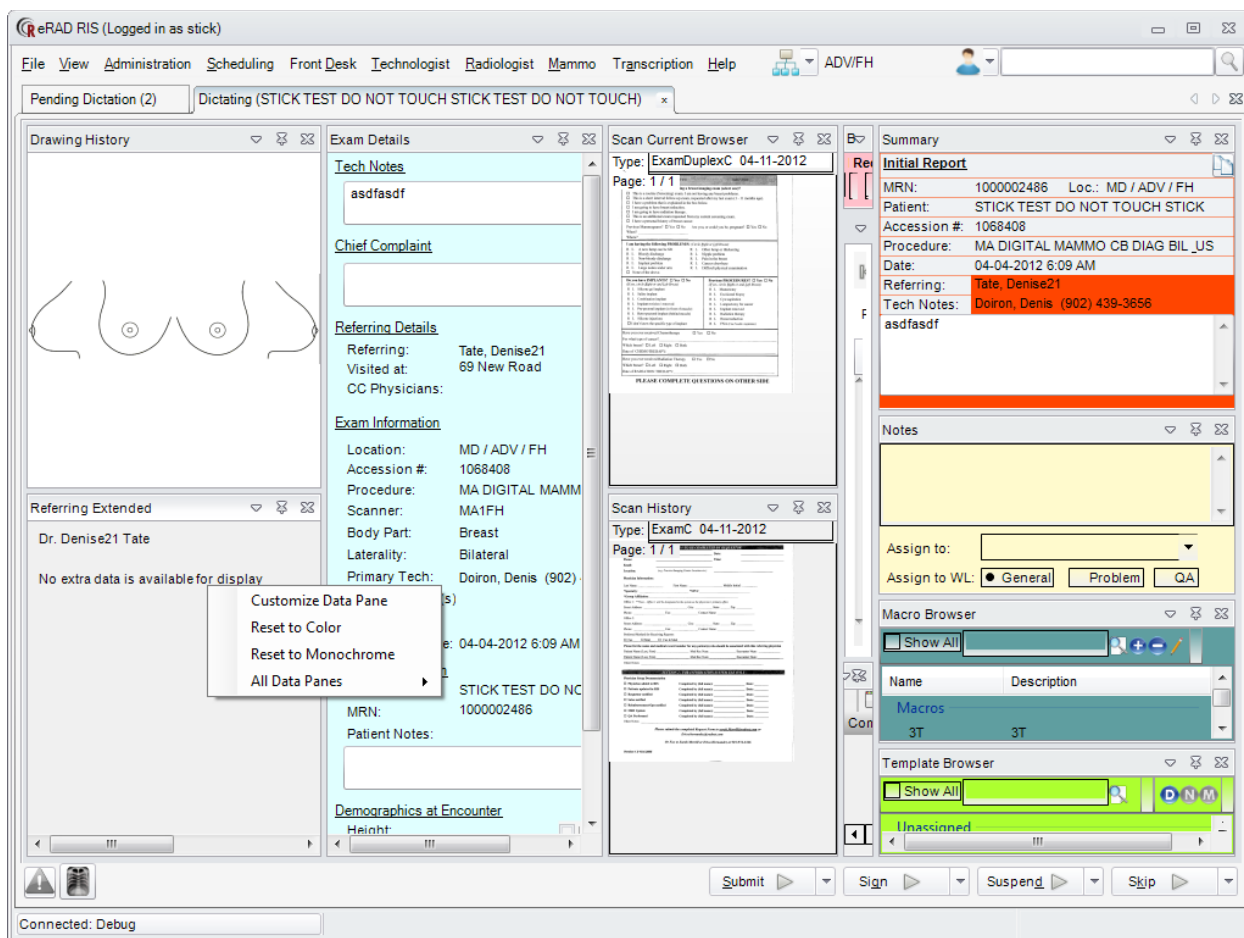


Figure 4.36 – Reporting window showing background and text colors and context menu

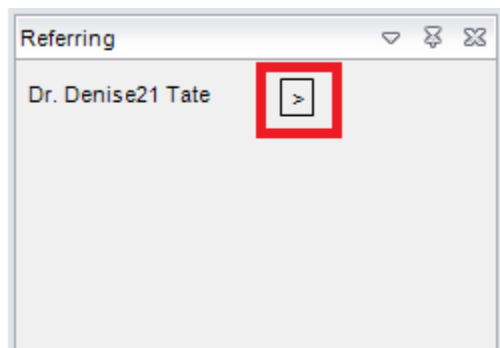
A new Class RToolWindow was created that maintains a set of defaults colours, for both the themed (ie, mostly grey), and pastel representation of mammo window. Each RToolWindow



now has a right-click context menu controlled with an access string (menu.CustomizeDataPanes) with options for:

- Customize window – allows the user to set foreground and background colors on each data pane.
- Reset to Color - initializes the window with the default pastel colour assigned to it.
- Reset to Monochrome - set the color to the default monochrome scheme
- All Data Panes – Contains a sub menu
  - Show/Hide Titlebars – will show or hide the title bars on each tool window
  - Reset to Color - initializes all the panes with the default pastel colour assigned to it
  - Reset to Monochrome - set the color of all panes to the default monochrome scheme

Also added was the extended data glyph. This new feature has another tool window that can be associated with an existing tool window. The example that has been coded is the referring physician window, where only a minimal amount of data is visible by default, but the extended data window features supplemental information

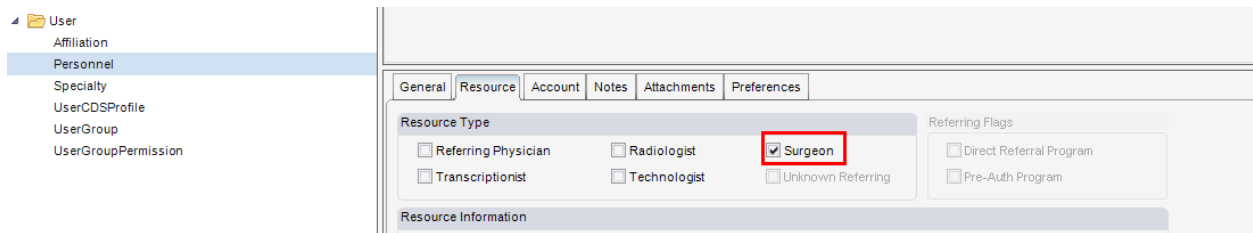


**Figure 4.37 – Extended data glyph button**

When the extended data glyph is hovered over, an additional window is opened as a floating window at the mouse location. This new window is just like any other tool window, so it can be docked into the layout as well.

### Surgeon as Person Type

When adding/editing a person through the Personnel lookup editor there is now a Surgeon checkbox available.



The screenshot displays the 'Personnel' editor interface. On the left, a sidebar lists navigation options: User, Affiliation, Personnel (highlighted), Specialty, UserCDSPProfile, UserGroup, and UserGroupPermission. The main panel has tabs for General, Resource, Account, Notes, Attachments, and Preferences. The 'Resource' tab is active, showing a 'Resource Type' section with checkboxes for Referring Physician, Radiologist, Surgeon (checked and highlighted with a red box), Transcriptionist, and Technologist. There is also an 'Unknown Referring' checkbox. To the right, a 'Referring Flags' section contains checkboxes for Direct Referral Program and Pre-Auth Program. A 'Resource Information' section is partially visible at the bottom.

**Figure 4.38 – Surgeon flag in Personnel editor**

The Surgeon can only be searched for and used in the “Send To” Report feature. A user flagged as a surgeon will not return in the results for referring search. This includes the “Performing Surgeon” field on the Mammo Biopsy window (referring search only).

## Reporting – Bring RIS to Front

Bring RIS to Front is a new available option that can be mapped to a function key, The EOL button, Instr button or the trigger on the underside of the Philips Speechmike.

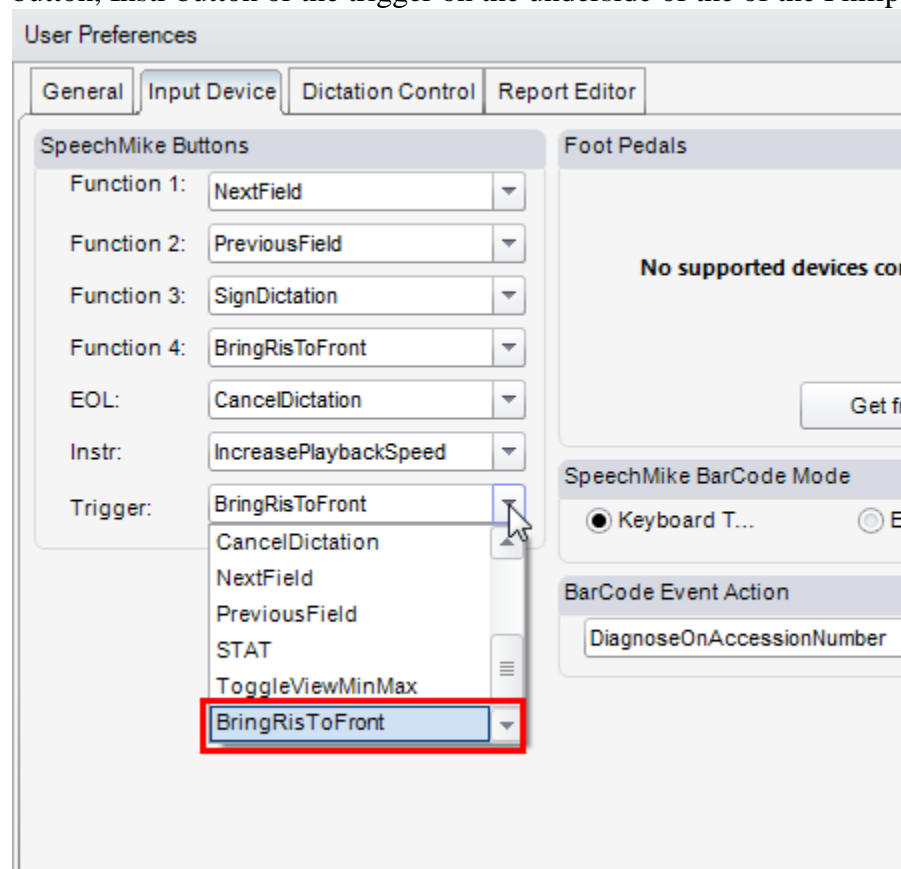
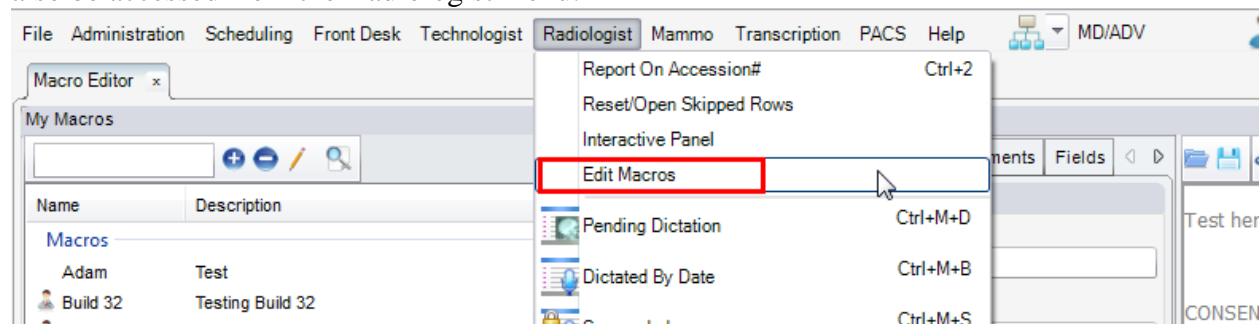


Figure 4.39 – User Preference SpeechMike button action for BringRisToFront

If the RIS is hidden behind another application, such as PACS, the user can select the button programmed for BringRisToFront and the RIS will appear in the foreground.

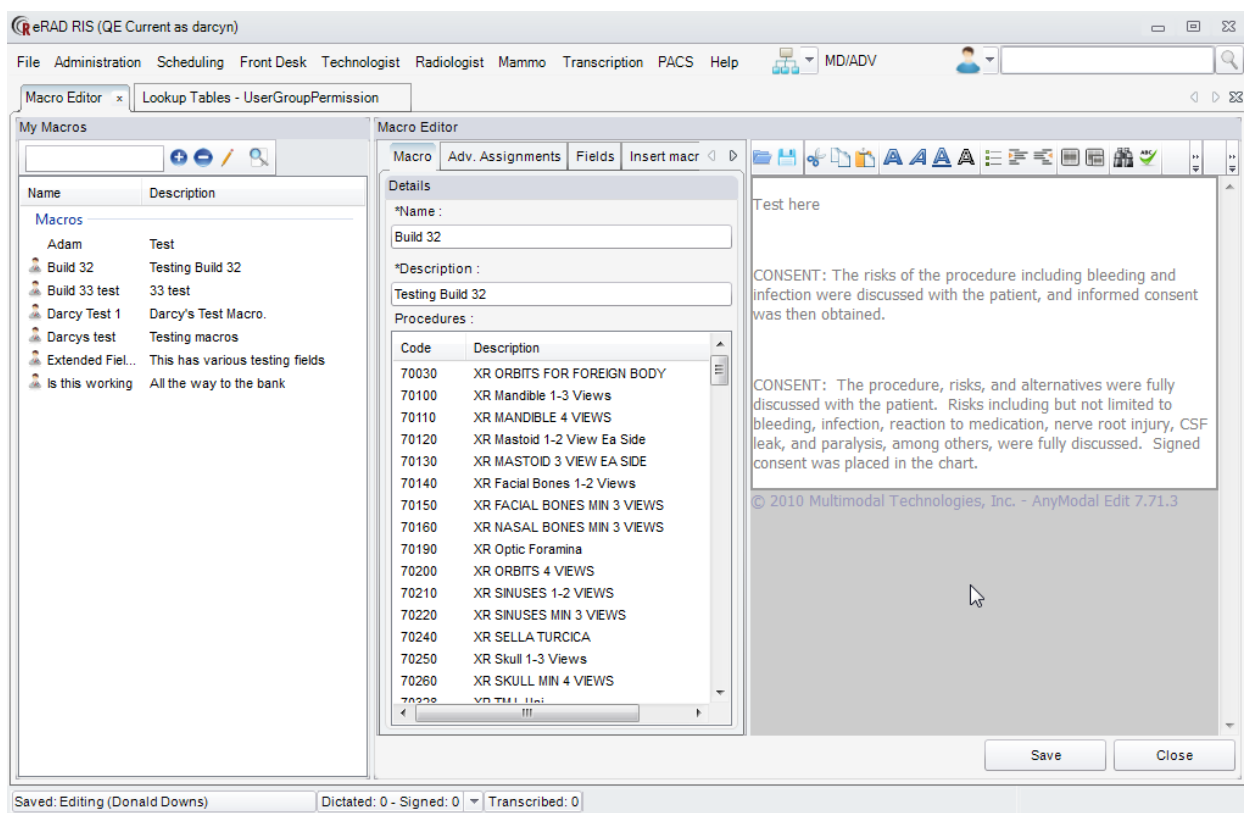
## Reporting - Easy Access to Macro Editor

In previous builds the macro editor had to be accessed via Administration menu > Configure > Macro lookup table or from within the diagnose window. In build 36 the macro editor can now also be accessed from the Radiologist menu.



**Figure 4.40 – Macro Editor accessed from the Radiologist menu**

The same access string permissions are required as with previous macro editor access. The Editor will open as a new data window tab. The Macro's displayed on the left are those assigned to the logged in user. This is biggest difference as how the editor is loaded. When accessed from the Radiologist menu, the editor loads those macros assigned to the user. When the editor is accessed from within the dictate window is loads based on the procedure code.



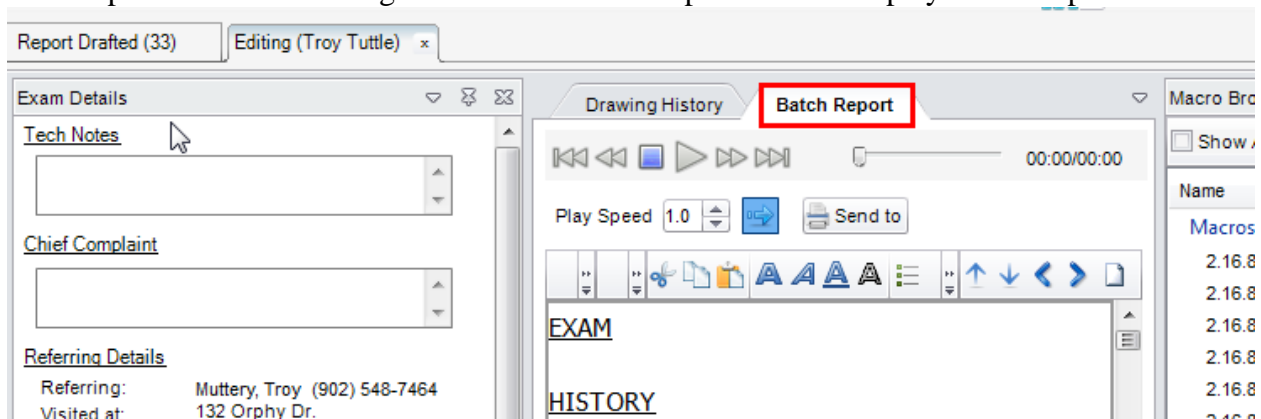
**Figure 4.41 – Macro Editor from Radiologist menu**

### Reporting – Indicate Reporting Mode

Users need to know what mode the report was created with (Interactive or Batch). This is very important to the medical transcriptionists as it changes their editing functions.

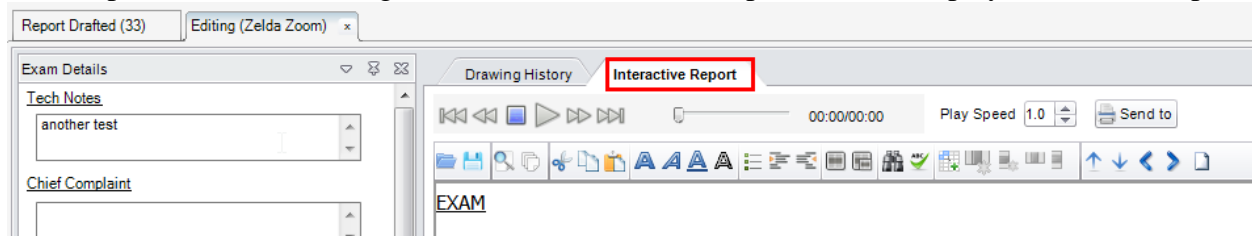
In build 36, the reporting tab within the report editor (dictate, create/edit report, sign report windows).

If the report was created using Batch Dictation the report tab will display Batch Report



**Figure 4.42 – Editor showing report created with Batch dictation**

If the report was created using Interactive Dictation the report tab will display Interactive Report



**Figure 4.43 – Editor showing report created with Interactive dictation**

If for some reason the report was not dictated using batch or interactive dictations, the tab will read “Report” as it did in the past.

## Reporting – Patient History Apply Filtered Views

Work lists such as Pending Dictation, Reception, Reports Drafted, etc... have the ability to create custom views to the work list. The list can be sorted, filtered, columns moved or hidden as saved as a view or default view for the user or for the group. The filtering of a list has been added to the Patient History data pane within the Reporting window.

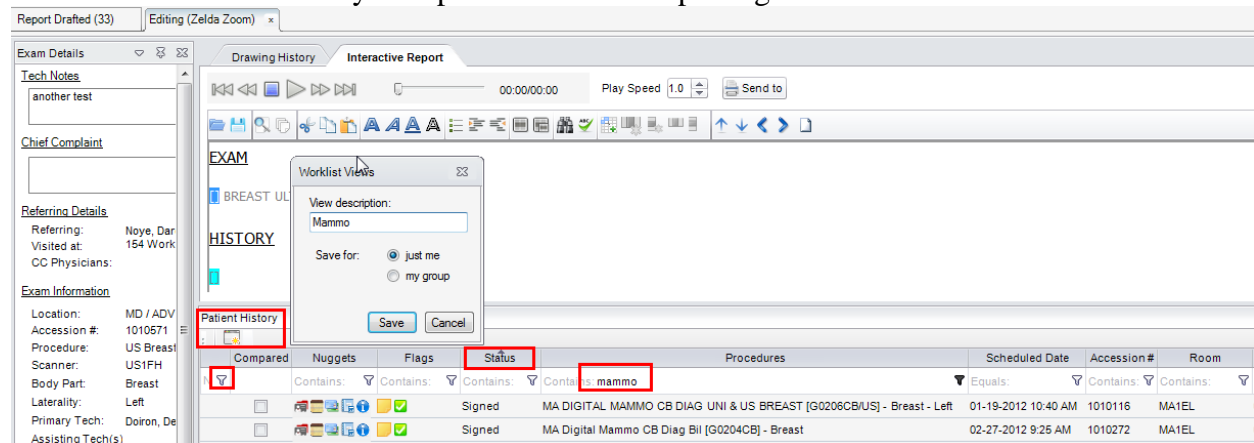
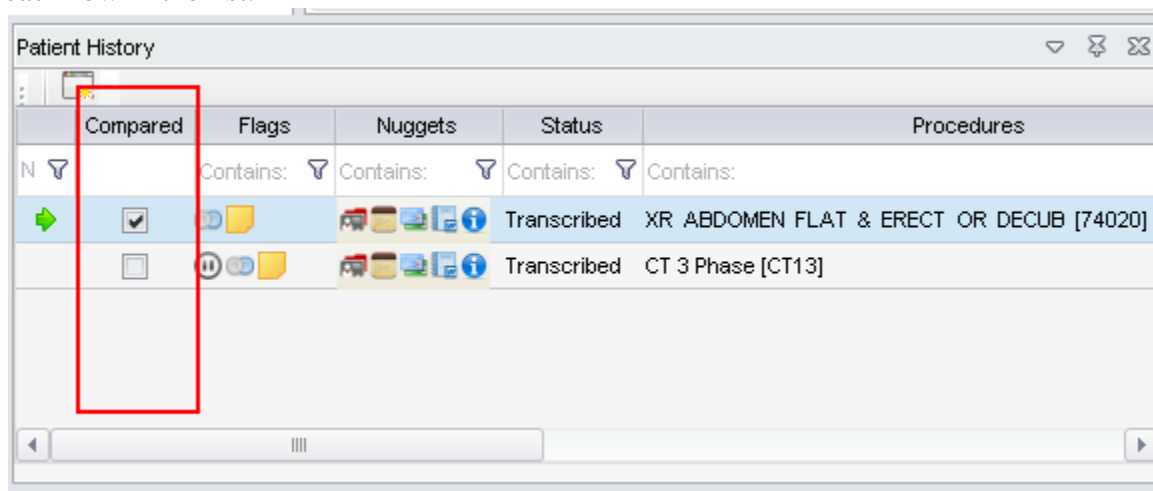


Figure 4.44 – Creating custom view on patient history data pane in reporting window

In the figure above, a custom view for mammo exams is being created. The procedure column is filtered on “Mammo” and the status column is sorted descending.

## Reporting – Patient History Mark Priors

The patient history control has also seen another enhancement in build 36. A new column titled “Compared” has been added on the left side of the control. The column contains a check box for each row in the list.



**Figure 4.45 – Patient History displaying new “compared” column**

When the diagnostic screen is opened the working radiologist is able to make any applicable changes to relevant priors, by clicking the checkbox on study history row to mark a study as a relevant prior. Marked relevant priors can be unchecked (removed) on the fly as well by unchecking a row. When the radiologist saves his/her work in the Diagnostic screen by clicking save, completing a dictation, signing, etc. The relevant prior’s selection will be automatically saved.

**NOTE: It must be noted that because the row has a check in the compared column, this does not initiate a call to PACS to load the images, this is simply a visual marker to display the prior.**

Another part to this feature and enhancement to the Patient History control is the ability to display the current study in the in control or to omit it. This is controlled by a user preference. Looking at the figure above, the reporting window is opened and the current study is displayed and automatically has a check mark in the Compared column.



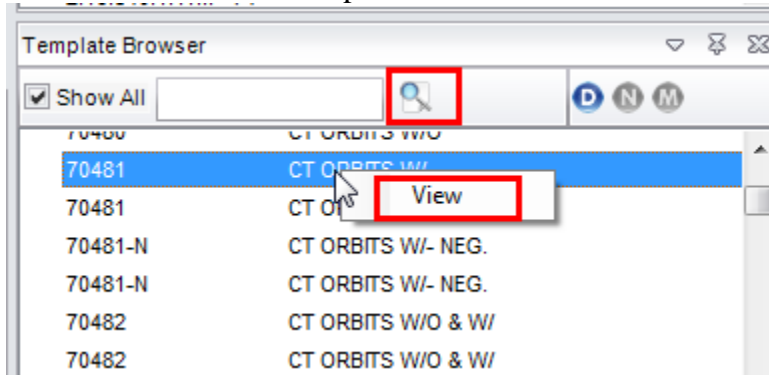
The screenshot shows the 'User Preferences' dialog box with the 'General' tab selected. The dialog is divided into several sections: 'MT Polling Workflow', 'Notifications', and 'Relevant Priors'. In the 'Relevant Priors' section, the 'Limit Relevant Priors' is set to 2, and the checkbox 'Show Current Study in Patient History Tool Window' is checked and highlighted with a red rectangle. Other visible options include 'Open polling workflow on login' (unchecked), 'Notify STAT Pending Signature' (checked), 'Notify Pending Signature on count => 10' (checked), and 'Screen Lock' (Inactivity).

**Figure 4.46 – User preference “Show Current Study in Patient History Tool Window”**

## **Reporting - Preview Report Templates**

Added in build 36 is the ability to view a template or document model. Prior to this version the radiologist would have to load the template into the editor in order to see the layout/contents.

From the report editor window (Dictate window) on the Template Browser data pane a new ICON and context menu options have been added.

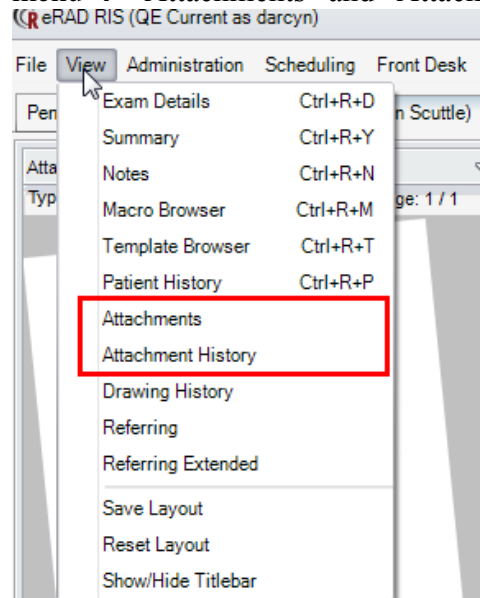


**Figure 4.47 – Access to view report templates and document models**

Highlighting the desired template and selecting the View Icon or the context menu option of View will open a new window displaying the template or document model.

## **Reporting - Viewing Current Study and Prior Study Attachments**

Two new tool windows were created that are accessible to Radiologists through the “View” menu → “Attachments” and “Attachment History”.



**Figure 4.48 – View menu displaying Attachments and Attachment History menu options**

“Attachments” Tool window → will dynamically display attachments (scanned or imported documents) for the current study radiologist is working on, in the diagnostic screen.

“Attachment History” tool window → will dynamically display attachments (scanned or imported documents) for any study that is clicked on (highlighted) in the “Patient History” window.

Both windows, for historic or current study will display relevant attachments according to the user’s preferences for displaying attachments. All usual attachment viewer tools and views are available in both tool windows by right clicking on the attachment.

### **Attachment Navigation Enhancements:**

- Regardless of the view mode: (full page, page width, or original size) → user can click on the attachment, then use the mouse wheel to scroll to the end of the page, continued scrolling will advance user to next page. Individual pages can also be scrolled if needed via scroll bar. This functionality now applies to all attachment controls in other parts of the application ex. (Document Data Nugget)

- Only inside the “Attachments” and “Attachment History” the action of scrolling the mouse wheel through pages → once the last page of a document is reached the viewer will load the next document. This allows the user to scroll through all available documents and pages dynamically.
- Inside the “Attachment History” and “Attachment”, in the top right hand corner of the screen document type is displayed, with a drop down menu. Where a user can select a different document type to jump to a different document in the viewer.
- As user uses the mouse wheel to scroll through different pages of the attachments loaded in the viewer in the top right hand corner page count will be displayed.

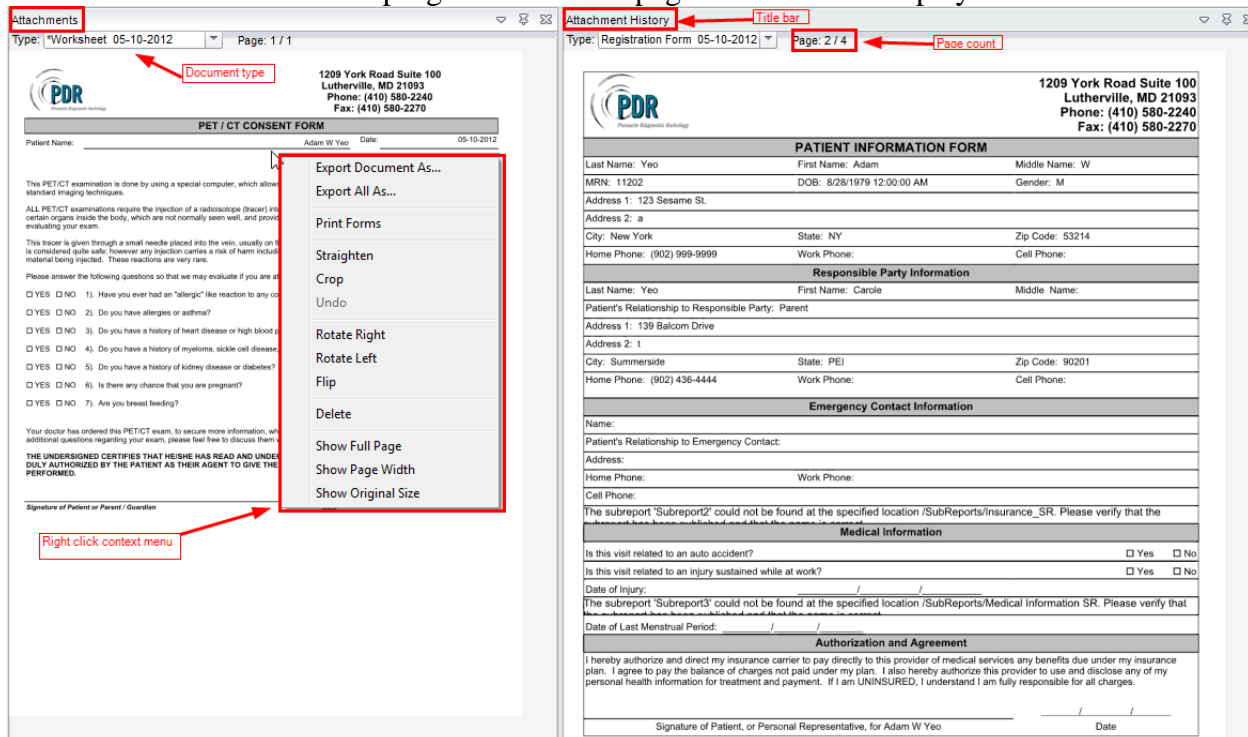


Figure 4.49 – Example of attachments and attachment history tool window

## Reporting – Signed by date Work List for Administrator(s)

A new daily work list “All Signed by Date” has been added under the Radiologist menu. Added for the admin role, this work list contains all signed reports for the date selected.

Signed By Date (5) x

05-04-2012

Flags	Nuggets	Status	Procedures	Scheduled Date	Accession #	Dictated Date	Transcribed Date	Signed Date	MRN	Site	PACS Corre...	BI-RADS	Room	Scheduled Modality C...
Con...	Contains: ▼	Cont...	Contains: ▼	Equals: ▼	Conta...	Equals: ▼	Equals: ▼	Equals: ▼	Co...	C...	Contains: ▼	Cont...	Cont...	Contains: ▼
		Signed	MR MRCP...	05-12-2011 2:...	1004262	05-12-2011...	10-31-2011 3:0...	05-04-2011...	4952	EL			MR1EL	MR1EL
		Signed	CT Abdom...	08-11-2011 8:...	1009212	10-29-2011...	03-12-2012 3:0...	05-04-2011...	10007	FH			CT1FH	CT1FH
		Signed	XR CHES...	09-01-2011 12:...	1009354	11-01-2011...	12-28-2011 4:1...	05-04-2011...	10005	Outsid...			Outside...	OutsideRead_XR
		Signed	CT Cervic...	10-04-2011 2:...	1009489	03-14-2012...	03-15-2012 11:...	05-04-2011...	10005	EL	✓		CT1EL	CT1EL
		Signed	CT Abdom...	11-29-2011 11:...	1009792	11-29-2011...	11-29-2011 2:0...	05-04-2011...	10596	EL			CT1EL	CT1EL

☒ Auto Refresh

Dictate Perform Exam Register Schedule Reschedule Edit Order View/Edit Sign Report Create/Edit Report

**Figure 4.50 – Signed by date work list.**

This work list takes context menus and buttons from patient mode, but in this case will display all studies signed by date. Just like other by date work lists the user will have the ability to navigate to previous day/next day, or pick a day from a calendar.

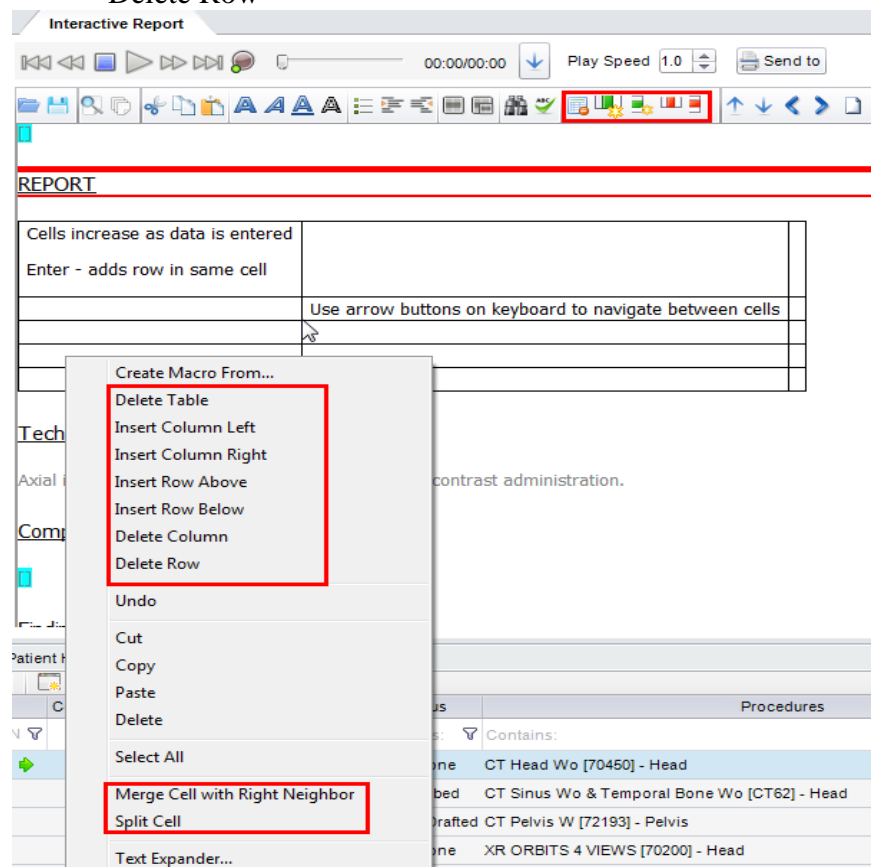
Access to the work list is controlled by Access string = **WL.Rad.SignedFilteredByDate**

### Reporting – Tables in Reports

The ability to add table(s) to reports has been added in build 36. There is a limited set of functionality that is available from the new toolbar buttons and/or context menu options.

In the figure below starting from the left the toolbar buttons are:

- Insert/Delete table
- Insert Column
- Insert Row
- Delete Column
- Delete Row



**Figure 4.51 – Adding table to report and available options**

The context menu in the above figure is displayed from a right click within the table. If focus is in another area of the report the context menu will have the option to Insert Table.

## Reporting – Template Browser Buttons for Default, Normal and My Normal

In the reporting window, buttons have been added to the Template Browser for loading report templates. Looking at the figure below the button **D** is for the Default Template, **N** is Normal Report and **M** is for My Normal.

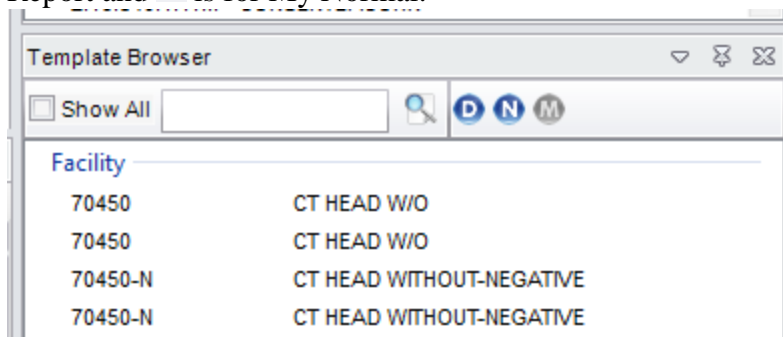


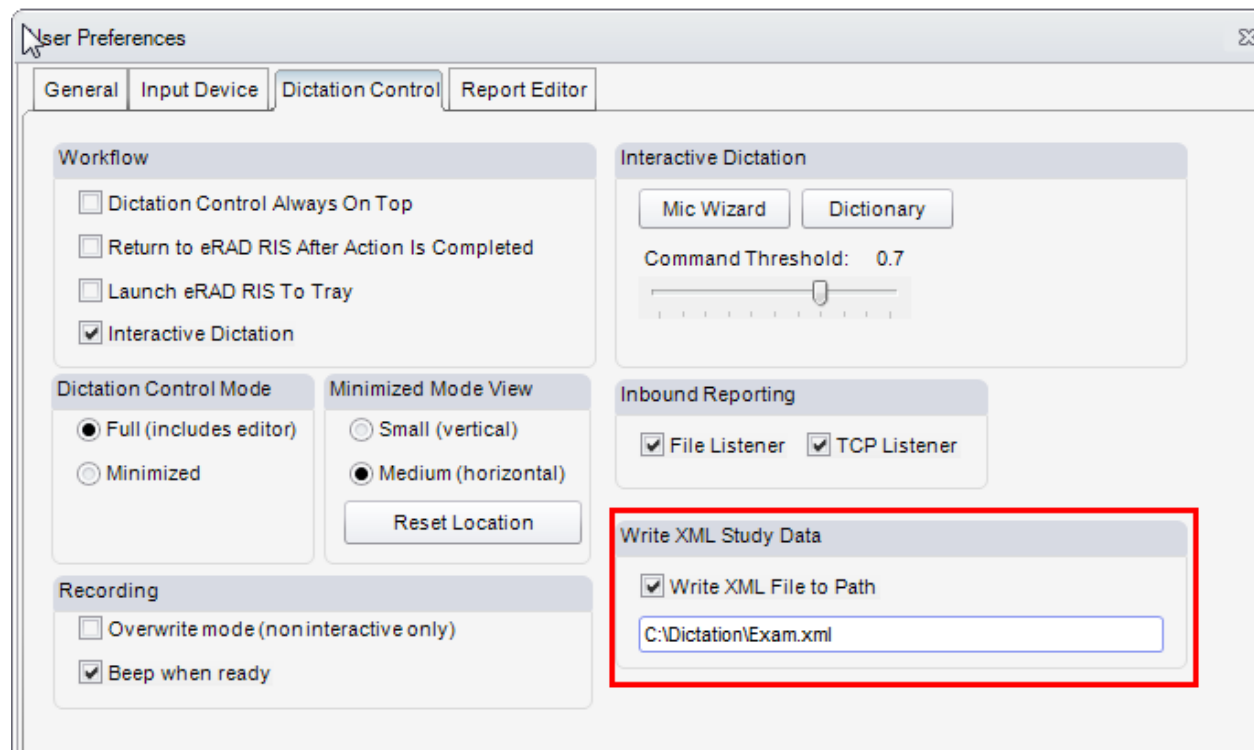
Figure 4.52 – Reporting window Template Browser buttons.

If the buttons is colored blue, this indicates there is a template available for the procedure. If the button is grey (such as the M), this indicates the type of template is not available for the procedure.

## **Reporting – Yellow Sticker Support**

There is an existing application that is used in the field called Yellow Sticker. This application need to know when a radiologist opens an exam to dictate or is dictating a particular case. Yellow Sticker also needs the ability to update a notes field in the system. This notes field can then be viewed by users.

This has been implemented in build 36 and is controlled via a new user preference “Write XML Study Data”. This new option is in the form of a check box and when checked will enable the File Path text box. When not checked the text box will be disabled.



**Figure 4.53 – User preference window displaying new preference “Write XML Study Data”**

The default value for the path is “C:\Dictation\Exam.xml”. This value can be set to any valid path and file combination. Note that if the path doesn’t exist the system will attempt to create it upon the first open of a study for dictation.

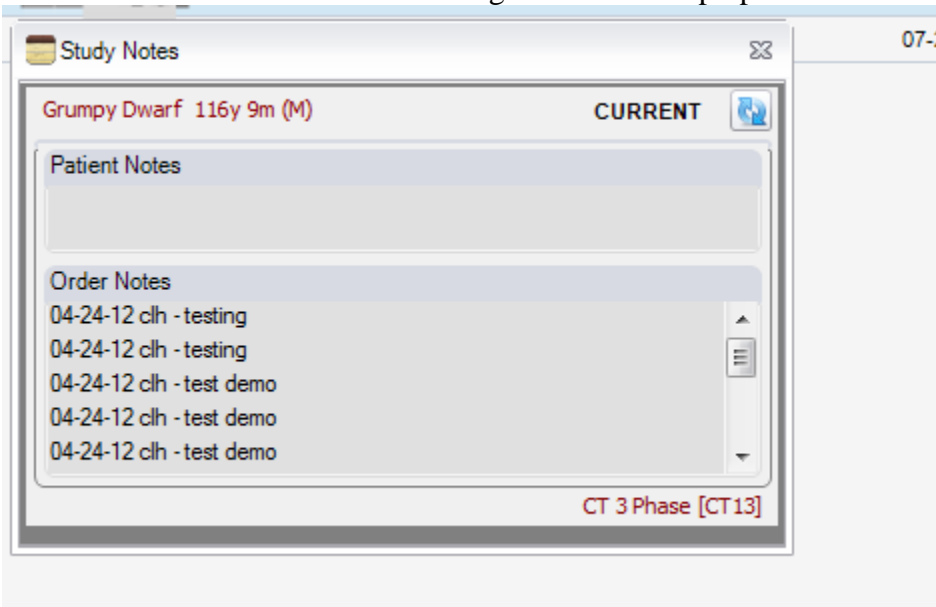
Each time a dictation screen is opened or focused we write an xml file containing the required fields to the specified directory.



Here is the XML that will be created by the RIS when a study is opened or, in the case of multiple studies being open, focused. We do not delete the file but overwrite as a new one is opened or focused.

```
<YellowStickerData xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
<Accession>1067158</Accession>
<PatientName>Cynthia7 Shields</PatientName>
<DOB>2/28/1960</DOB>
<StudyDate>1/19/2012 12:57:54 PM +00:00</StudyDate>
<MRN>T.366</MRN>
</YellowStickerData>
```

Also the ability to update the notes field via the Yellow Sticker application has been added too. These notes are attached to the existing order notes. It prepends to the existing notes.



**Figure 4.54 – Study Notes**

To set the notes the calling application should POST to the [http://\[servername\]:9002/api/notes/](http://[servername]:9002/api/notes/) with values for accession number, initials, and notes. The accession number will determine which order to attach the notes field.

## 5. Resolved Defects

Bugs Suggested Features and Support Issues resolved in build 1.36. The extract is taken from Redmine bug tracking system and only displays defects resolved in 1.36.

#	Tracker	Priority	Subject	Category	Found Version
1141	Bug	Urgent	Backend Printing jobs reporting Error	Web Services/DB	1.35
1143	Bug	High	Fax/Print jobs failing with missing dll error	Web Services/DB	1.35
1102	Bug	High	CDS Threads pinning CPU in Balitmore Sandbox environment	Web Services/DB	1.35
1063	Bug	High	New patient button on patient demographics screen.	Thick Client GUI	1.35
1265	Bug	Normal	Imaging Center Dashboard	Mgt Reports	1.35
1264	Bug	Normal	Transcription Dashboard	Mgt Reports	1.35
1207	Bug	Normal	Transcription Dashboard	Mgt Reports	1.35
1173	Bug	Normal	personKeyNotFound in summary panel	Thick Client GUI	1.35
1167	Bug	Normal	PushSignature service causes an unwanted addendum	Web Services/DB	1.35
1156	Bug	Normal	error on getdata/displaydata in tech	Thick Client GUI	1.35
1148	Bug	Normal	Check - in Arrive early and cancel one procedure still appears in Check In window	Thick Client GUI	1.35
1144	Bug	Normal	Document Distribution - Fax number not auto completed when referring selected that has Fax as delivery	Thick Client GUI	1.35
1137	Bug	Normal	Daily Schedule Report	Mgt Reports	1.35
1136	Bug	Normal	After getting message for not paper in scanner second attempt will though error	Thick Client GUI	1.35

1135	Bug	Normal	Change document type from Attachment viewer includes personal scan type	Thick Client GUI	1.35
1134	Bug	Normal	Scheduling study can require site be selected	Thick Client GUI	1.35
1133	Bug	Normal	Scan cannot be saved because of out of memory error	Thick Client GUI	1.35
1132	Bug	Normal	Clone user clones affiliation at the person level	Admin Tools	1.35
1131	Bug	Normal	Error on Access string WL.MT.GetJob set to none	Thick Client GUI	1.35
1130	Bug	Normal	Unable to use RIS after a cache corruption caused by a hardware failure.	Web Services/DB	1.35
1127	Bug	Normal	Patient Folder not updated to correct patient	Thick Client GUI	1.35
1120	Bug	Normal	Billing Exception occurring when they shouldn't	Thick Client GUI	1.35
1119	Bug	Normal	Post billing exception can return error	Thick Client GUI	1.35
1114	Bug	Normal	Room is not updated on work lists if changed during Perform Exam	Thick Client GUI	1.35
1110	Bug	Normal	Tooltip to create macro from selected text is misspelled	Thick Client GUI	1.35
1109	Bug	Normal	User preference > Interactive Dictation misspelling	Thick Client GUI	1.35
1108	Bug	Normal	When pasting an address into the Report Delivery address field only the first line is filled in	Thick Client GUI	1.35
1107	Bug	Normal	Address paste on personnel screen doesn't work	Thick Client GUI	1.35
1087	Bug	Normal	Unknown Reconciliation - Cannot edit order from this work list if the study is past ordersigned status	Thick Client GUI	1.35

1082	Bug	Normal	Appointment Book "Interval" dropdown does not reflect displayed interval	Thick Client GUI	1.35
1075	Bug	Normal	patient notes and order notes not synchronizing in View/Edit	Thick Client GUI	1.35
1074	Bug	Normal	Location label not populated/recommendation codes not populating.	Thick Client GUI	1.35
1072	Bug	Normal	Graceful exception if new scheduled study deleted before saving	Thick Client GUI	1.35
1067	Bug	Normal	If you click Schedule button on the follow up screen after you have already scehduled the follow up you get an exception	Thick Client GUI	1.35
1066	Bug	Normal	Scheduling - able to schedule procedure to wrong room	Thick Client GUI	1.35
1061	Bug	Normal	Scheduling -- no study -- able to do room search ( runtime error)	Thick Client GUI	1.35
1059	Bug	Normal	Broken Lock on Re-Schedule Should Disable "Schedule Later" and "Cancel Study" Buttons	Thick Client GUI	1.35
1053	Bug	Normal	Mammo Callback can create order with duplicate procedure	Thick Client GUI	1.35
1050	Bug	Normal	An outgoing call cannot be made since the application is dispatching an input-synchronous call. (Exception from HRESULT: 0x8001010D (RPC_E_CANTCALLOUT_ININPUTSYNCCALL))	Thick Client GUI	1.35
1045	Bug	Normal	Foreign Key Contrain error from New Appointment	Thick Client GUI	1.35
1041	Bug	Normal	Index was outside the boudns of the array.	Thick Client GUI	1.35
1039	Bug	Normal	Unable to post billing exception. Claim number is required when carrier doesn't have injury flag set if any data at all is entered in injury details	Thick Client GUI	1.35

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1035	Bug	Normal	Cannot insert duplicate key row in object 'dbo.c_order_item' with unique index 'IX_c_order_item'. The duplicate key value is (23978, 1)	Thick Client GUI	1.35
1019	Bug	Normal	Rad - Macro Editor - Insert Macro ( Cast Error)	Thick Client GUI	1.34 or 1.35
1017	Bug	Normal	Invalid Scheduled Date Error when trying to complete a Tech where the room was closed after scheduling	Thick Client GUI	1.35
1011	Bug	Normal	Rad - Macro Editor -- Object Reference Runtime error	Thick Client GUI	1.35
994	Bug	Normal	When creating a patient, and user adds an attachment, there is no option to delete a row if entered incorrectly.	Thick Client GUI	1.35
989	Bug	Normal	Cannot update 'State' field in Patient	Thick Client GUI	1.35
987	Bug	Normal	Switch user from patient search	Thick Client GUI	1.35
984	Bug	Normal	When doing an "outside read" upon choosing performed location site, the insurance grid appears and some text is cut off.	Thick Client GUI	1.35
981	Bug	Normal	Data nugget and camel notation	Thick Client GUI	1.35
970	Bug	Normal	Schedule Order Patient search does not automatically highlight best available	Thick Client GUI	1.35
969	Bug	Normal	Add Outside Read Billing Method needs more real estate	Thick Client GUI	1.35
962	Bug	Normal	Unknown Referring: Clicking Add with no first name blows up	Admin Tools	1.33
954	Bug	Normal	Outside read - order_item_key not found	Thick Client GUI	1.35
953	Bug	Normal	Study field on procedure picker row (including outside read) is not marked as required	Thick Client GUI	1.35

952	Bug	Normal	Schedulingt: Unable to find modality solution message only lists procedure code	Thick Client GUI	1.34
951	Bug	Normal	PAtient Folder Context Menu for a "Scheduled" study is missing "Reschedule"	Thick Client GUI	1.34
950	Bug	Normal	Weight Restriction Warning has spelling errors	Thick Client GUI	1.34
943	Bug	Normal	Schedule Order Patient tab requests	Thick Client GUI	1.34
942	Bug	Normal	Patient/Order Notes does not follow characters being entered.	Thick Client GUI	1.34
941	Bug	Normal	Schedule Order - Phone number fields lose mask when entering to many extra numbers for extention	Thick Client GUI	1.34
935	Bug	Normal	Erron on launch "Value SendBringRisToFrontEvent is no longer a valid entry"	Thick Client GUI	1.35
929	Bug	Normal	User Group permissions difficult to add	Admin Tools	1.34
924	Bug	Normal	Add outside read on site that requires insurance, but insurance is not chosen, is not added to billing exception	Thick Client GUI	1.34
923	Bug	Normal	Image Request on Multi procedure order belonging to different orders throws error	Thick Client GUI	1.34
922	Bug	Normal	Error thrown attempting to create multi procedure schedule	Thick Client GUI	1.34
916	Bug	Normal	Adding UserGroupPermission with empty access string throws exception	Admin Tools	1.34
911	Bug	Normal	Adding a third study through registration behaves differently.	Thick Client GUI	1.34
905	Bug	Normal	Rescheduling an exam without selecting time returns un-informative error.	Thick Client GUI	1.34

904	Bug	Normal	Rescheduling exam and choose Schedule later and the procedure is not retained	Thick Client GUI	1.34
900	Bug	Normal	Add multiple to UserGroupPermission throws exception	Admin Tools	1.33
879	Bug	Normal	If RIS in minimized with Dictate window open the application will not open to desktop	Thick Client GUI	1.32
877	Bug	Normal	Interactive user cannot dictate if Dictation Control Mode is minimized	Thick Client GUI	1.32
811	Bug	Normal	GUI will not open to full size	Thick Client GUI	1.30
801	Bug	Normal	Possible issue with date / time formats and Perform Exam data window	Thick Client GUI	1.29
781	Bug	Normal	Read Only permission still allows some actions	Admin Tools	1.20
758	Bug	Normal	Drug Allergy Type requires Display order to save	Admin Tools	1.27
691	Bug	Normal	Configure > Lookup Tables scroll bar not always present.	Admin Tools	1.20
644	Bug	Normal	Cannot close application if there is a data window open.	Thick Client GUI	1.25
643	Bug	Normal	Dictate window > Blank error is displayed and rRIS stops responding.	Thick Client GUI	1.25
529	Bug	Normal	Reschedule study search returning incorrect times	Thick Client GUI	1.21
522	Bug	Normal	Search for available times incomplete based on criteria	Thick Client GUI	1.20
447	Bug	Normal	Dictation - User is able to start dictating with SpeechMike when it is not the recording device	Thick Client GUI	1.17
313	Bug	Normal	Appointment Book - Out of memory exception	Thick Client GUI	1.12

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105	Bug	Normal	Worklist - Issue with large worklist and title bar	Thick Client GUI	1.07
1124	Bug	Low	Cannot read contents of list box	Thick Client GUI	1.35
1121	Bug	Low	Book Summary Error	Thick Client GUI	1.35
1077	Bug	Low	Scheduling - Calendar is too small = windows XP	Thick Client GUI	1.35
1069	Bug	Low	Personnel editor inconsistency	Thick Client GUI	1.35
1065	Bug	Low	Error saving user in personnel editor.	Thick Client GUI	1.35
1064	Bug	Low	Clicking Schedule Later on a procedure loses the laterality for the procedure	Thick Client GUI	1.35
1044	Bug	Low	New Patient with Canadian address throws 'Invalid Selection' validation	Thick Client GUI	1.35
1038	Bug	Low	Confirmation Dialog popups do not pop up on the same monitor as RIS ( always primary monitor)	Thick Client GUI	1.35
1015	Bug	Low	Personnel	Thick Client GUI	1.35
1008	Bug	Low	Pasting Address on Patient Screen does not populate state if US is already entered in Country field	Thick Client GUI	1.35
995	Bug	Low	Invisible tab	Thick Client GUI	1.35
973	Bug	Low	Issues adding multiple CC physicians	Thin Client GUI	1.35
959	Bug	Low	Edit Medical Access window title is incorrect	Thick Client GUI	1.35
821	Bug	Low	Newly added access strings are not easily found in UserGroup Lookup editor	Thick Client GUI	1.30
685	Bug	Low	Error When Exporting Table Data	Thick Client GUI	1.35
321	Bug	Low	DataSet Visualizer - Does not show for Studys and CC Physician	Thick Client GUI	1.12



## 6. Known Limitations

The following are Bugs Suggested Features and Support Issues found in build 1.36. This build is the current QE build and testing is ongoing. The list may increase in size. This document will not be updated or re-released.

#	Status	Subject	Found Version	Resolved Version
1272	New	Error trying to import image	1.36	
1270	New	View/Edit data window does not show billing codes	1.36	
1269	Resolved	Relevant priors do not open correctly when user preference to show current study in patient history is off	1.36	1.37.11062
1257	New	Signed by date WL access string not included in build	1.36	
1249	Resolved	Creating custom view on status column can crash RIS	1.36	
1180	New	Mammo follow up work lists > Scheduling from follow up does not always flag study as resolved	1.36	
1290	New	Data nugget - Notes or Study Notes?	1.36	
1289	Resolved	Transcription - Perform Exam ( worklist does not show current study)	1.36	1.37
1288	Resolved	Template viewer title bar has incorrect title.	1.36	
1287	New	Carriers flagged as inactive cannot be found in search.	1.36	
1286	New	Status filtering on worklist - you have to filter by old status value, not the displayed value	1.36	
1283	Resolved	Nuggets shouldn't respond to right click	1.36	1.37.11175
1282	New	MT Polling > Studies from same order are not skipped when locked	1.36	
1281	New	Surgeon can be searched for to send report, but cannot be used to send report	1.36	
1278	New	Error accessing data windows resuming locked RIS application	1.36	

1273	Resolved	Assign to Radiologist window closes if clicking to fast on scroll bar action down	1.36	1.37.11070
1268	Resolved	Personnel > Cannot search for existing after deleting create new	1.36	fixed in 1.37.11062
1259	New	Yellow Sticker - XML file is not updated when using skip function	1.36	
1258	New	Arriving multiple studies for one day, the Relation to Patient is not captured to the other studies	1.36	
1253	New	Questionnaire exception on "Context Menu" / "Close All"	1.36	
1245	New	Unable to cast System.DBNull to System.String	1.36	
1242	New	Null Reference on Payment control	1.36	
1241	New	Selecting BIRAD or Tissue density will show "..." in the associated box and the the value selected.	1.36	
1240	New	Buttons disappear from bottom of Patient folder on Maximize	1.36	
1238	New	Editing patient and repeatedly getting "Status can not be empty" message on save	1.36	
1235	New	Select Search multiple times in Carrier search window will throw error.	1.36	
1229	QE Rejected	Modality closure issues	1.36	1.36
1227	New	Patient Folder Window --> Scheduled Date filter = object reference error	1.36	
1221	New	Drawing History color schemes cannot be reset	1.36	
1220	New	Insurance - Returns Object Reference Error	1.36	
1219	New	Unable to delete billing codes	1.36	
1218	New	Logging client side errors to the server logs the same consecutive error from the same work station	1.36	
1217	New	Drawing History will not open again after Reset Layout	1.36	

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1215	New	Rad - Dictate - Template Browser - runtime	1.36	
1214	New	From diagnose screen choosing Referring Extended from View Menu does not show pane	1.36	
1213	New	Rad - All Pending Signature Worklist --> Dictate --> Click Print Icon "Send to" = runtime	1.36	
1202	New	Registering studies early should pick current time	1.36	
1198	New	Scheduling - Edit Image request --> runtime NULL handling	1.36	
1195	QE Rejected	Rad - Dictate or Transcription window.. Attachments and Attachment History views are missing	1.36	
1192	New	birthday bug -- cannot change birthdate forward 1 day	1.36	
1190	New	Error message appears twice	1.36	
1186	New	Filtered patient folder on Signed and Ordered rows are in the list.	1.36	
1179	New	Walk-in	1.36	1.36
1178	New	Macro Editor --> Insert Macro --> Click Previous Field = COM Error	1.36	
1177	New	Completing fields in report editor and using Back button < will return COM error.	1.36	
1175	New	Transcription editor does not support keyboard shortcut to select text up and down	1.36	
1174	New	Mammo - Followup worklist. Right Click --> Followup "New patient button is available on signed study"	1.36	
1172	New	Rad - Macro Editor - Exception inserting normal	1.36	
1170	New	Warning for scheduling across sites message displayed twice when selecting Yes	1.36	

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1168	New	User is able to add multiple procedures in one row.	1.36	
1162	New	Error from entering alpha numeric number in allergy field	1.36	
1161	New	error on second save within macro editor	1.36	
1160	QE Rejected	Procedure Group function returns Inactive study items	1.36	1.36
1154	New	Removing procedure from study cell can throw exception if Scheduled Date field is selected.	1.36	
1153	New	Save layout not saving selected tabs	1.36	
1145	New	Edit macro twice throws object reference error	1.36	
1088	New	Log RIS Logon Failures to c_Audit log	1.36	
964	New	Payments - Making a credit card payment	1.36	
1291	New	Interactive dictation > non responsive recording using shortcut key	1.36	
1277	New	Self-pay insurance carriers show up in Patient Insurance Policies carrier search	1.36	
1261	Resolved	Double context menu in personnel editor > Contact information	1.36	1.37.11062
1243	New	Able to choose same physician multiple times on CC physicians control	1.36	
1236	New	Patient Folder Preview window issue on patient search	1.36	
1225	New	Scheduling - Image Request WL --> Edit Image request ( new patient icon)	1.36	
1224	New	Image Request list sometimes shows "No Data to Display" in DataGrid when there are items in the list	1.36	
1223	New	Image Request tab shows (0) when there are image requests in the list	1.36	
1211	Resolved	Administration - User - Personnel ( Add, Edit Address validation)	1.36	1.37.11062
1208	New	Study box size on Walk-In Exam tab is too small to see all of the study description	1.36	

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1200	New	Patient Merge - Search - Invalid Search Criteria - click Details = error	1.36	
1185	New	Alert may cause button to grey out, even if action did not take place	1.36	
1184	New	Batch to Interactive Mode changes can result in tab being mislabeled	1.36	

# **Server Update**

for eRAD RIS

Version 1.0

Build 36

Update 36.001

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### **1. Purpose**

This server update has been produced to fix bugs required for production setting, or to complete an enhancement requested for production.

This server update includes the following:

1. HL7 Mammo Report Message with Recommendation Code– This fix will allow messages with Mammo reports with recommendation codes to come into RIS. There was a bug that caused a null reference error.  
Two files to be replaced:
  - a. WCFSservice.dll
  - b. WCFSservice.pdb
2. Outbound HL7 message queue was blocked due to person key resolution problem.  
Two files to be replaced:
  - a. Wedge.exe
  - b. Wedge.pdb
3. SQL scripts. Three separate scripts to be run. Please run scripts in of Patch 1-2-3.
  - a. Patch-36b-1- Correct stored procedure c\_selectreporttable.sql (Redmine bug #1342 - sql to correct stored procedure c\_SelectReportTable)
  - b. Patch-b36-2-UpdateIVTtoOrderRowSpecific.sql (This fix will convert the IVT worklist from showing all studies related to an order to only show the single order, and show the more appropriate information. This sql script was already released as hotfix 35.007 for build 35)
  - c. Patch-b36-3-from B35 patches.sql (these are sql patches that have been applied to build 35 but were not added to build 36)

### **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **3. Who is affected**

All previous version of build 36. Current build is 1.1.36.11197.



## **4. Installing**

- 1) HL7 Mammo Report Message with Recommendation Code:  
*Copy the 2 files to the directory for each rRISService. rRISService directories include:*
  - a) *rRISService*
  - b) *CDS rRISService*
  - c) *Wedge rRISService*
  - d) *DDE rRISService (DDE – Document Distribution Engine.*
  
- 2) Outbound HL7 message queue:  
*Copy the 2 files to the directory for each rRISService. rRISService directories include:*
  - a) *rRISService*
  - b) *CDS rRISService*
  - c) *Wedge rRISService*
  - d) *DDE rRISService (DDE – Document Distribution Engine.*
  
- 3) SQL scripts:  
*ON the database RIS instance run the 3 sql files in order of patch number. In this order*  
  
*Patch-36b-1- Correct stored procedure c\_selectreporttable.sql*  
*Patch-b36-2-UpdateIVTtobeOrderRowSpecific.sql*  
*Patch-b36-3-from B35 patches.sql*

# **Server Update**

for eRAD RIS

Version 1.0

Build 36

Update 36.002

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## **1. Purpose**

This server update has been produced to fix bugs required for production setting, or to complete an enhancement requested for production.

This server update includes the following:

1. Logged as Redmine bug 1328 - Management Report Access fix.

If during RIS session, the personnel editor was accessed and changes made and saved to a subset of users because of resource type, the logged in user would no longer have access to Management reports. Whenever the cache was updated, the new copy from web services did not include “l\_user\_x\_user\_group”.

Files included are:

- a) rRISServices.exe
- b) rRISServices.pdb
- c) SignatureApprovalService.exe
- d) Wedge.exe
- e) Wedge.pdb
- f) CDSJobManager.dll
- g) CDSJobManager.pdb
- h) ScheduledTaskManager.dll
- i) ScheduledTaskManager.pdb
- j) SignatureApprovalService.pdb
- k) DDEngine.dll
- l) DDEngine.pdb
- m) ChairApi.dll
- n) ChairApi.pdb
- o) WCFSservice.dll
- p) WCFSservice.pdb
- q) CommonLib.dll
- r) CommonLib.pdb
- s) rRISServices.vshost.exe
- t) Interop.FAXCOMEXLib.dll
- u) Tourreau.Gilles.FaxDotNet.dll
- v) Tourreau.Gilles.FaxDotNet.pdb
- w) Tourreau.Gilles.FaxDotNet.xml

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2. Logged as Redmine bug 1427 - Appointment book not displaying device availability. The appointment book was not utilizing the device template configuration. Files are contained in the rRIS\_1.1.36.12558
3. Logged as Redmine bug 1426 – Associating Scanned documents (attachments) to additional accession numbers would create an error. Files are contained in the rRIS\_1.1.36.12558
4. SQL scripts. Three separate scripts to be run. Please run scripts in of Patch 4-5-6.
  - a. Patch-36b-4- BUG1289 Show Current Study.sql – this script will add the user preference “Show Current Study in Patient History Tool Window” for all users.
  - b. Patch-b36-5-BUG1442 MQSA Reporting Fix.sql – Changes how the biopsy result is captured. Now the “Lesion Classification” selection is used, not the “Nodes Positive” selection .
  - c. Patch-b36-6 Blank Sections in Reports.sql – Corrects report rendering to exclude blank sections

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

## **3. Who is affected**

All previous versions of build 36. Current build is 1.1.36.11197.

## **4. Installing**

- 1) HL7 Mammo Report Message with Recommendation Code:  
*Copy the files from the BUG1328- Management report access to the directory for each rRISService.*  
*rRISService directories include:*
  - a) *rRISService*
  - b) *CDS rRISService*
  - c) *Wedge rRISService*
  - d) *DDE rRISService (DDE – Document Distribution Engine).*
  
- 2) Bugs 1426- Associating Scanned documents and 1427 - Appointment book not displaying device availability.  
*Replace the current RIS UI file (Example rRIS\_1.1.36.1197) in the RISDeployment directory with the.zip file included in the folder “Bug 1426 and 1427- Appointment book and scan doc association fixes”.*  
*File included:*
  - a) *rRIS\_1.1.36.12558.zip*
  
- 3) SQL scripts:  
*ON the database RIS instance run the 3 sql files.*  
*Execute in this order:*
  1. *Patch-36b-4- BUG1289 Show Current Study.sql*
  2. *Patch-b36-5-BUG1442 MQSA Reporting Fix.sql*
  3. *Patch-b36-6 Blank Sections in Reports.sql*

# **Server Update**

for eRAD RIS

Version 1.0

Build 36

Update 36.003

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### **1. Purpose**

This server update has been produced to fix bugs required for production setting, or to complete an enhancement requested for production.

This server update fixes 2 issues.

- 1.) Redmine Bug 1458 – On Windows XP workstations, the DOB may change for dates that fall between the second Sunday of March to the first Sunday of April and the last Sunday of October to the first Sunday of November. This was due to the change to the start and end of Daylight Savings Time (DST) in 2007. Although there was an XP service pack that allowed XP to properly start and end DST, XP inherently could only support a single algorithm for determining the start and end of DST.
- 2.) Redmine Bug 1505 – Interactive commands not working when using next study workflow.

Files for each reported fix listing about are contained in the 2 folders supplied with this update.

- 1.) Folder GUI ZIP Updates contains the following
  - a. AudioLib.dll
  - b. ris.exe
  - c. WCFClient.exe
- 2.) Folder RIS Service Updates contains the following
  - a. rRISServices.exe
  - b. rRISServices.pdb
  - c. WCFSservice.dll
  - d. WCFSservice.pdb

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

## **3. Who is affected**

All previous versions of build 36.

**NOTE:** Build 36 Server Update 36.002 must be applied before this update.

## **4. Installing**

- 1.) Copy and replace the files **from** the GUI ZIP Updates folder **to** the rRIS\_1.1.36.12558.zip file. Rename the .zip to rRIS\_1.1.36.12653.zip
- 2.) Copy and replace the files from the RIS Service Updates folder to rRISService directory. Stop each service, replace the files and restart each service.  
These directories may include:
  - a. rRISService
  - b. CDS rRISService
  - c. Wedge rRISService
  - d. DDE rRISService

# **Server Update**

for eRAD RIS

Version 1.0

Build 36

Update 36.005

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## **1. Purpose**

This server update has been produced to fix bugs required for production setting, or to complete an enhancement requested for production.

This server update fixes 2 issues.

- 1.) Redmine Bug 1673 – setBuillingStatus NA action causing billing post to fail.  
When completing a TechOnly exam that goes to billing, an error was occurring because it was being set at not applicable. It has been changed back to be set as UI\_StudyCompleted

Files for this fix are included in the following folders.

- 1.) Folder GUI ZIP Updates contains the following
  - a. ris.exe
- 2.) Folder RIS Service Updates contains the following
  - a. WCFService.dll
  - b. WCFService.pdb

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

## **3. Who is affected**

All previous versions of build 36.

**NOTE:** Previous server updates and hotfixes must be applied before this update.

## **4. Installing**

- 1.) Copy and replace the files **from** the GUI ZIP Updates folder **to** the rRIS\_1.1.36.12653.zip file. Rename the .zip to rRIS\_1.1.36.12953.zip  
(NOTE: the .zip file name must be different for the changes to take effect on the client. Changing it to .12953 will keep it in sync with the RIS UI Version)
- 2.) Stop the following services as needed: copy the files from the RIS Service Updates folder to rRISService folder and restart the service(s).  
These directories may include:
  - a. rRISService (core service)
  - b. CDS rRISService
  - c. Wedge rRISService
  - d. DDE rRISService

(NOTE: your installation may not have all services listed)



# **User Release Notes**

for eRAD RIS  
Version 1.0  
Build 37



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## **1. Purpose**

This document describes some of the new features and changes implemented in eRAD RIS as of the end of Sprint 37. This version of eRAD RIS is referred to as Build 1.37.

Only features which can be visually demonstrated to the user will be outlined in this document.

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS management team.

## **3. Installing/Accessing the Application**

The installation guide for the eRAD RIS client have been posted to the RadNet Wiki page at <http://mdbal01rdtweb/Wiki/>

Under the RIS menu click on the rRIS page. The credentials to access the page are:

Username: rRIS

Password: Summerside

*Please note that Build 1.37 is considered a new core release of the application and will require a reinstallation of eRAD RIS. This is accomplished by navigating to the eRAD RIS shared installation drive and running the CoreInstall.bat file (ex: I:\RISDeployment\CoreInstall.bat)*

If you experience difficulties accessing the application please do not hesitate to contact Darcy Noye with the PEI RIS Development Team.

## 4. New Features and Enhancements

### Activity Work List

The Activity work list is new in Build 37. The Activity work list is accessed under the Administration menu and access is controlled by a new access string called WL.ActivityWL.contains all outstanding active studies.

The Activity work list contains all outstanding active studies. An outstanding study is one that has progressed beyond scheduled status but is not finished. This will include statuses of Checking In, Arrived, Started, Exam Done, Dictated, Report Drafted, Transcribed, Signed\* (indicating report is being held). It may also include studies with a status of Signed or Exam Done (tech only) if billing has failed on these studies. It will not include studies in statuses of Scheduled, Cancelled, Discontinued, Void or studies with status of Signed and Exam Done (tech only) that were successfully sent to the billing system.

Exam Status	Procedures	Scheduled Start Date	Requested By	Billing Status	Last Name	First Name	Patient ID	Accession N...	Modality Type	Site	Carrier	Performed By	Transcribed By	Dictated By	Signed By Radiologist	Unknown WL	Merge Request	Addendum
Started	CT 3 Phase [CT13]	05-02-2011 1:50 PM	YOLANDA AJALA	Pending			714	1000707	CT	LU	CSEK	System						
Started	CT 3 Phase [CT13]	05-04-2011 1:00 PM	WILLIAM BIHAND	Pending			760	1000737	CT	LU	SAFECO AUTO	System			Terry Mills			✓
Arrived	MR x Lower Ext Joint W [73722]	05-30-2011 11:35 AM	WHITNEY BURROWS	Pending			734	1000723	MR	FH	MOBLEY & B...	Dale Yeo Jr	Terry Mills	Terry Mills	Terry Mills			✓
Arrived	CT Chest W [71260] - Chest	05-30-2011 1:55 PM	WHITNEY BURROWS	Pending			734	1000734	CT	EL	MOBLEY & B...	Terry Mills	Terry Mills	Terry Mills	Terry Mills			✓
Arrived	CT Feet & Ankle [CT56] - Ankle/Join...	05-30-2011 2:25 PM	YOUNG CHANG	Pending	testman	dale	734	1000735	CT	EL	MOBLEY & B...	Terry Mills						✓
Exam Done	CT Head W & Sinus W [CT22] - Head	05-06-2011 11:05 AM	WILLIAM CASSIDY	Pending	testman	dale	734	1000863	CT	EL	MOBLEY & B...	System	Darcy Aiken	Clifton Harding	Clifton Harding			✓
Transcribed	CT Thoracic Spine W [7129] - Abd...	05-24-2011 9:30 AM	YASIN MANSOOR	Pending	Gigler	Maddie	7499	1006821	CT	EL	FOREMOST I...	Denis Dairon	Denis Dairon	Terry Mills				✓
Arrived	XR ADDENDUM REPORT TO RE...	05-30-2011 1:55 PM	WENDY DUBIN	Pending	Kofron	Waneta	8401	1007814	XR	EL	ASSOCIATED ...	Terry Mills			Terry Mills			✓
Arrived	CT 3 Phase [CT13]	04-10-2012 1:00 PM	WILLIAM ARMIGER	Pending	aa	aa	9808	1008627	CT	FH	MOBLEY & B...							
Transcribed	XR SHOULDER MIN 2 VIEWS [730...	08-10-2011 2:40 PM	WOMENS HEALTH...	Pending	TEST_Sav...	Lonnie	6402e67f-0621...	1065822	XR	FH		Terry Mills	Terry Mills	Darcy Aiken				
Started	MA xDigi Main Scr Bli & US Brst [M...	05-26-2010 11:25 AM	YAO-YAO ZHU	Pending	Matye	Francis	10922	1009822	MA	LU	CLINICAL AS...	stephen stuart						

Figure 4.1 – Activity work list.

From this work list, users will be able to access the Patient Folder, View/Edit window, and also Audit History.

## Labwork work list

A work list titled “Labwork Required WL” has been added in build 37. This work list will contain patient studies have been flagged as blood work required. An example is if a patient is diabetic and/or on certain medication we may want that patient to show on the Labwork WL.

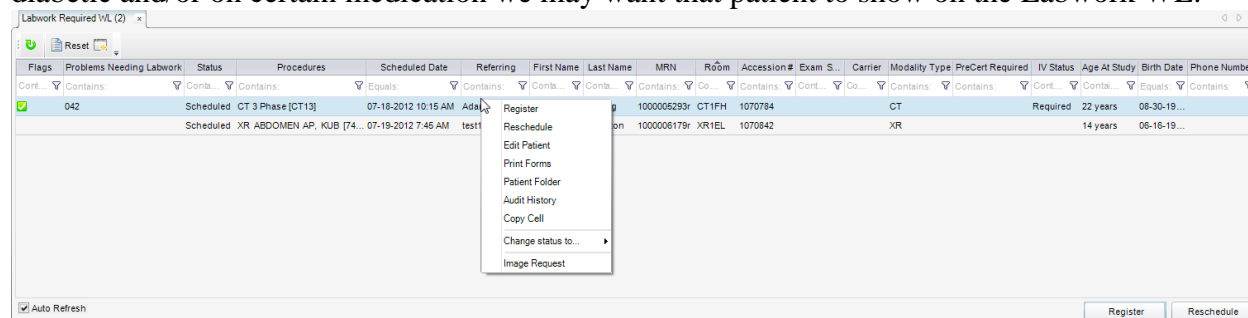


Figure 4.2 – Labwork Required WL

A new system config value (LabWLWindowInDays) controls the timeframe in which the studies would appear on the work list. If the study(s) were to appear 2 prior of the scheduled date the system config value would be set as *LabWLWindowInDays=14*.

A study that is scheduled one month in advance wouldn't show in the work list until two weeks before the appointment and will be removed if a recent labwork request or result exists (recent being => the time of the order). Also, the study will be removed from the work list when the patient is arrived.

Changes to lookup tables were also required to accommodate capturing if the patient was to be added to the Labwork WL.

The Indication lookup table (indication codes used in Medical History list on MU Tab) entries have a new column “Bloodwork Required Flag”

Lookup Tables - Indication					
	Indication Code	Description	Display Order	Bloodwork Required Flag	Active
Contains:	Contains:		Equals:	Contains:	Contains:
042	HUMAN IMMUNODEFICIENCY VIRUS (HIV) DISEASE	1	Y	Y	
052.0	POSTVARICELLA ENCEPHALITIS	1	N	Y	
052.1	VARICELLA (HEMORRHAGIC) PNEUMONITIS	1	N	Y	
052.2	POSTVARICELLA MYELITIS	1	N	Y	
052.7	CHICKENPOX WITH OTHER SPECIFIED COMPLICATIONS	1	N	Y	
052.8	CHICKENPOX WITH UNSPECIFIED COMPLICATION	1	N	Y	
052.9	VARICELLA WITHOUT COMPLICATION	1	N	Y	
053.0	HERPES ZOSTER WITH MENINGITIS	1	N	Y	
053.1	HERPES ZOSTER WITH OTHER NERVOUS SYSTEM COMPLICATIONS	1	N	Y	
053.2	HERPES ZOSTER WITH OPHTHALMIC COMPLICATIONS	1	N	Y	

Figure 4.3 – Indication lookup table

The Medication lookup table (medication used in the Medication list on MU tab) entries have a new column “Bloodwork Required Flag”

Lookup Tables - Medication					
<ul style="list-style-type: none"> <li>General</li> <li>AbortedStudyReason</li> <li>AccessString</li> <li>AddressDescription</li> <li>AlertConfiguration</li> <li>Allergy</li> <li>ContactMethod</li> <li>CountryState</li> <li>CreditCardType</li> <li>DeliveryMethod</li> <li>EducationLevel</li> <li>Gender</li> <li>ImageMedium</li> <li>Issuer</li> <li>LabTest</li> <li>Language</li> <li>Medication</li> </ul>					
Medication Code	Description	Display Order	Bloodwork Required Flag	Active	
Contains: ▼	Contains: ▼	Equals: ▼	Contains: ▼	Contains: ▼	
ActoPlus Med	ActoPlus Med	1	Y	Y	
Avandamet	Avandamet	2	Y	Y	
Diabex	Diabex	3	Y	Y	
Diafomin	Diafomin	4	Y	Y	
Fortamet	Fortamet	5	Y	Y	
Glucophage	Glucophage	6	Y	Y	
Glucovance	Glucovance	7	Y	Y	
Glumentza	Glumentza	8	Y	Y	
Glyburid Met	Glyburid Met	9	Y	Y	
Ians Moonshine	Ians Moonshine	10	Y	Y	
Janumet	Janumet	11	Y	Y	
Klor-con	Klor-con	12	Y	Y	
Mefenamic	Mefenamic	13	Y	Y	

Figure 4.4 – Medication lookup table

The Modality Type lookup has a new column “Bloodwork Applicable Flag”.

Lookup Tables - ModalityType					
<ul style="list-style-type: none"> <li>General</li> <li>Insurance</li> <li>Mammography</li> <li>Procedure</li> <li>Scheduling <ul style="list-style-type: none"> <li>AvailabilityTemplate</li> <li>ConfirmationStatus</li> <li>ExpiringReservation</li> <li>Holiday</li> <li>Modality</li> <li>ModalityType</li> <li>ScheduleGroup</li> </ul> </li> <li>System</li> <li>User</li> </ul>					
Modality Type Code	Description	Display Order	Bloodwork Applicable Flag	Active	
Contains: ▼	Contains: ▼	Equals: ▼	Contains: ▼	Contains: ▼	
??	Unknown	1	N	N	
AN	Angiography	1	N	Y	
BD	Bone Density	1	N	Y	
CH	Special Charges	1	N	Y	
CT	CT	1	Y	Y	
EN	Endoscopy	1	N	Y	
FL	Fluoroscopy	1	N	Y	
INTERNAL	Used for creating blank patients for internal commands.	1	N	N	
MA	Mammography	1	N	Y	
MR	MRI	1	Y	Y	

Figure 4.5 – ModalityType lookup table

The PracticeSiteXProcedureOverride lookup has a new column “Bloodwork Required Age”.

Lookup Tables - PracticeSiteXProcedureOverride

General

Insurance

Mammography

Procedure

BillingCode

BodyPart

Indication

Laterality

MModelDocumentModel

PracticeSiteXProcedureOverride

PreInstruction

Practice Code	Site Code	Procedure Code	Bloodwork Required Age	External Report Workflow Flag	Active
Contains: ▾	Contains: ▾	Contains: ▾	Equals: ▾	Contains: ▾	Contains: ▾
Advanced Radiology		Test XYZ DEXA (77032)	Y	Y	Y
Borg/IDE		Test XYZ DEXA (77032)	Y	Y	Y
Advanced Radiology	(na) dummy	CT 3 Phase (CT13)	10	N	Y
Click here to add a new row					

Figure 4.6 – PracticeSiteXProcedureOverride lookup table

Looking at the above lookups new columns, if the patient is diabetic (and diabetic is configured to bloodwork\_required\_flag ‘Y’) or the medication they are on is configured to bloodwork\_required\_flag ‘Y’ and the modality type has a bloodwork\_applicable\_flag of ‘Y’, then the study would fall to the LabWL once the exam is within LabWLWindowInDays. Note: a “bloodwork required age” set to 0 says that every exam for that procedure will require bloodwork, while a value of 60 would say any exam with a patient 60 or older will require bloodwork. Bloodwork required age is configurable at the procedure level and can be overridden at the practice or site.

To remove it from the Lab WL, the user needs to do one of the following:

- Enter lab result(s) in the MU Lab Results Grid
- Open the screen and see if lab results get updated from NewCrop
- Make and record a lab work request
- Check the “Skip Lab WL” checkbox.

The screenshot displays the 'View/Edit: Adam Testing # 1000005293r' window with the 'MU' tab selected. The interface is divided into several sections:

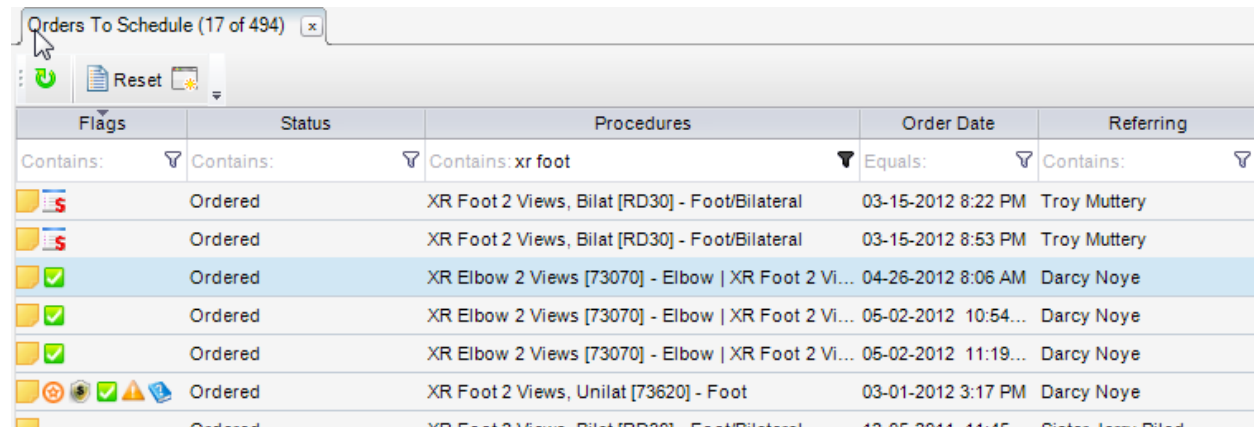
- Demographics at Encounter:** Includes fields for Height (ft in), Weight (lbs), BMI, and Smoking Status (current every day smoker). There is also a checkbox for 'Is Pregnant'.
- Clinical Summary:** Contains a 'Continuity of Care Record (CCR)' section with 'View' and 'Export' buttons, and a 'View External Clinical Document' button.
- Medications:** Features a table with columns: Date, Medication, Physician, and SIG Text. A single entry is visible: 07-09-2012, Diabex, test, test. Below the table are 'Add', 'Edit', and 'Sync/Refresh' buttons.
- Allergies:** Includes a table with columns: Allergy, Reaction, Severity, Status, and Start Date. It is currently empty.
- Medical History:** Features a table with columns: Problem, Start Date, End Date, and Status. A single entry is visible: (042) HUMAN IMMUNODEFICIENC..., 05-01-2012, Active. Below the table is a link: 'Click here to add a new row'.
- Lab Results:** Includes a table with columns: Date, Test, and Result. It is currently empty. At the bottom right of this section is a checkbox labeled 'Skip Lab Worklist', which is highlighted with a red box.

**Figure 4.7 MU tab**



## Orders to Schedule WL Flags Column

It was requested to have the Flags column added to the Order to Schedule WL. In build 37, this column has been added.



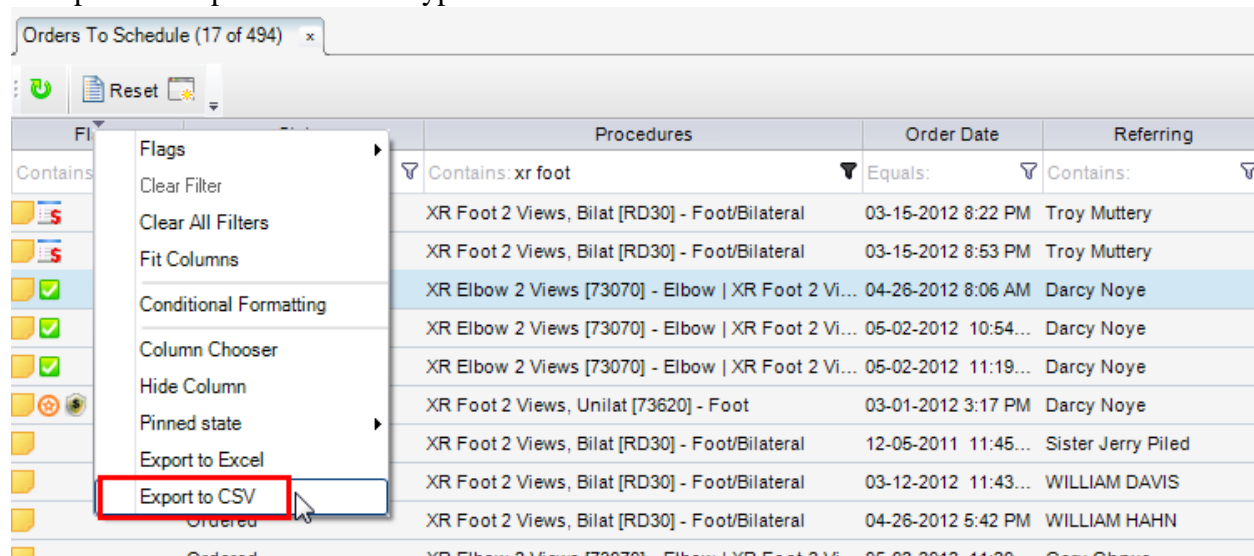
The screenshot shows a window titled "Orders To Schedule (17 of 494)". It contains a table with the following columns: Flags, Status, Procedures, Order Date, and Referring. The "Flags" column contains various icons representing different order statuses or types. The "Status" column shows "Ordered" for all entries. The "Procedures" column lists various X-ray views and foot types. The "Order Date" and "Referring" columns show the date and time of the order and the name of the referring person.

Flags	Status	Procedures	Order Date	Referring
Contains: [icon]	Contains: [icon]	Contains: xr foot	Equals: [icon]	Contains: [icon]
[icon]	Ordered	XR Foot 2 Views, Bilat [RD30] - Foot/Bilateral	03-15-2012 8:22 PM	Troy Muttery
[icon]	Ordered	XR Foot 2 Views, Bilat [RD30] - Foot/Bilateral	03-15-2012 8:53 PM	Troy Muttery
[icon]	Ordered	XR Elbow 2 Views [73070] - Elbow   XR Foot 2 Vi...	04-26-2012 8:06 AM	Darcy Noye
[icon]	Ordered	XR Elbow 2 Views [73070] - Elbow   XR Foot 2 Vi...	05-02-2012 10:54...	Darcy Noye
[icon]	Ordered	XR Elbow 2 Views [73070] - Elbow   XR Foot 2 Vi...	05-02-2012 11:19...	Darcy Noye
[icon]	Ordered	XR Foot 2 Views, Unilat [73620] - Foot	03-01-2012 3:17 PM	Darcy Noye

Figure 4.8 – Orders to Schedule WL

## Export WL to CSV file type

In previous versions of eRAD RIS, work lists could be exported to Excel in .xml format. This did not work for older versions of Excel. Added to the context menu from work lists columns is the option to export to .csv file type.



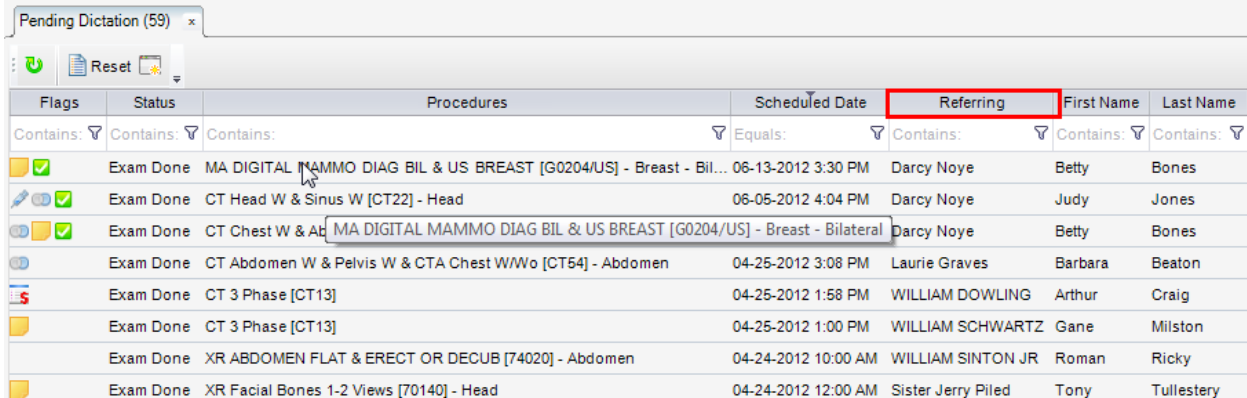
The screenshot shows the same "Orders To Schedule" window as Figure 4.8, but with a context menu open over the "Flags" column. The menu options include: Flags, Clear Filter, Clear All Filters, Fit Columns, Conditional Formatting, Column Chooser, Hide Column, Pinned state, Export to Excel, and Export to CSV. The "Export to CSV" option is highlighted with a red rectangle.

Flags	Status	Procedures	Order Date	Referring
Contains: [icon]	Contains: [icon]	Contains: xr foot	Equals: [icon]	Contains: [icon]
[icon]	Ordered	XR Foot 2 Views, Bilat [RD30] - Foot/Bilateral	03-15-2012 8:22 PM	Troy Muttery
[icon]	Ordered	XR Foot 2 Views, Bilat [RD30] - Foot/Bilateral	03-15-2012 8:53 PM	Troy Muttery
[icon]	Ordered	XR Elbow 2 Views [73070] - Elbow   XR Foot 2 Vi...	04-26-2012 8:06 AM	Darcy Noye
[icon]	Ordered	XR Elbow 2 Views [73070] - Elbow   XR Foot 2 Vi...	05-02-2012 10:54...	Darcy Noye
[icon]	Ordered	XR Elbow 2 Views [73070] - Elbow   XR Foot 2 Vi...	05-02-2012 11:19...	Darcy Noye
[icon]	Ordered	XR Foot 2 Views, Unilat [73620] - Foot	03-01-2012 3:17 PM	Darcy Noye
[icon]	Ordered	XR Foot 2 Views, Bilat [RD30] - Foot/Bilateral	12-05-2011 11:45...	Sister Jerry Piled
[icon]	Ordered	XR Foot 2 Views, Bilat [RD30] - Foot/Bilateral	03-12-2012 11:43...	WILLIAM DAVIS
[icon]	Ordered	XR Foot 2 Views, Bilat [RD30] - Foot/Bilateral	04-26-2012 5:42 PM	WILLIAM HAHN

Figure 4.9 – Export work lists to .csv

## Referring Column Added to Radiologist WL's

The column “Referring” has been added to the Pending Dictation, Suspended, Pending Edit, Pending Signature, Signed Pending Release, All Pending Dictation, All Suspended, All Pending Signature, All Signed Pending Release, All Signed by Date, All Pending QA and All Problem work lists. The above work lists are under the Radiologist menu.



Pending Dictation (59) x

Reset

Flags	Status	Procedures	Scheduled Date	Referring	First Name	Last Name
Contains: ▼	Contains: ▼	Contains: ▼	Equals: ▼	Contains: ▼	Contains: ▼	Contains: ▼
	Exam Done	MA DIGITAL MAMMO DIAG BIL & US BREAST [G0204/US] - Breast - Bil...	06-13-2012 3:30 PM	Darcy Noye	Betty	Bones
	Exam Done	CT Head W & Sinus W [CT22] - Head	06-05-2012 4:04 PM	Darcy Noye	Judy	Jones
	Exam Done	CT Chest W & Ab MA DIGITAL MAMMO DIAG BIL & US BREAST [G0204/US] - Breast - Bilateral		Darcy Noye	Betty	Bones
	Exam Done	CT Abdomen W & Pelvis W & CTA Chest W/Wo [CT54] - Abdomen	04-25-2012 3:08 PM	Laurie Graves	Barbara	Beaton
	Exam Done	CT 3 Phase [CT13]	04-25-2012 1:58 PM	WILLIAM DOWLING	Arthur	Craig
	Exam Done	CT 3 Phase [CT13]	04-25-2012 1:00 PM	WILLIAM SCHWARTZ	Gane	Milston
	Exam Done	XR ABDOMEN FLAT & ERECT OR DECUB [74020] - Abdomen	04-24-2012 10:00 AM	WILLIAM SINTON JR	Roman	Ricky
	Exam Done	XR Facial Bones 1-2 Views [70140] - Head	04-24-2012 12:00 AM	Sister Jerry Piled	Tony	Tullestery

**Figure 4.10 – Displaying the Referring column added to Pending Dictation**

## Patient First and Last Name Columns Added to Document Distribution WL

As the title states, the 2 columns were added to the Document Distribution WL for the patients first and last name. The Distribution History By Date WL has also had these columns added.

Distribution WL (632) x

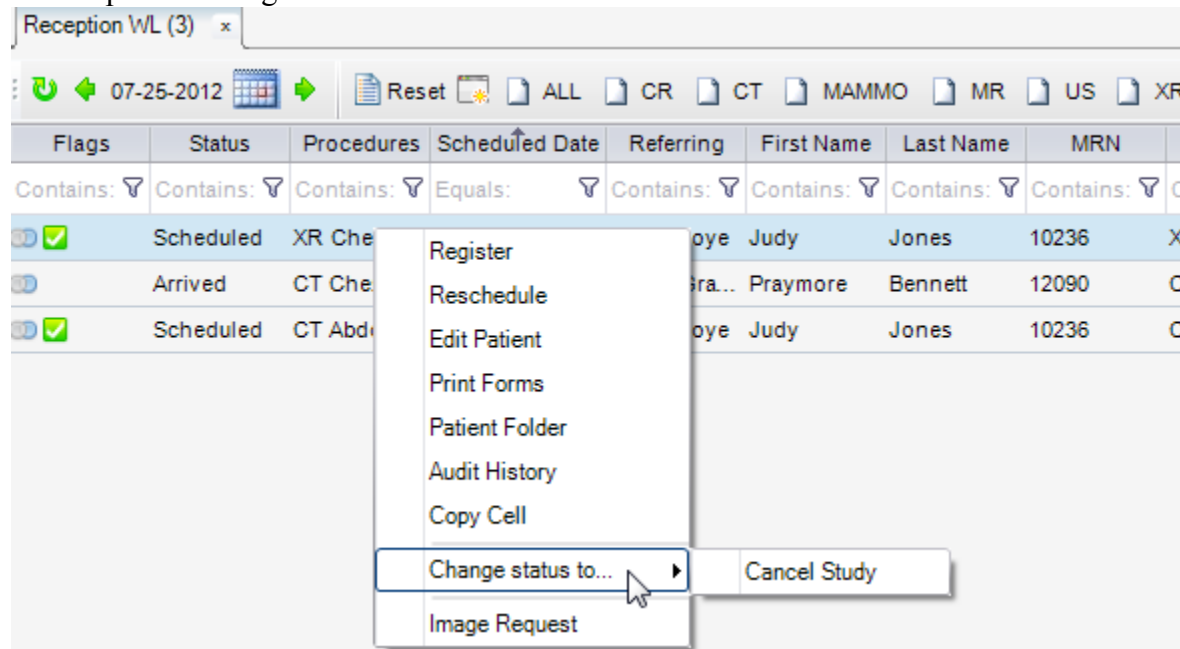
Reset

Accession #	Available	Created on	Priority	Patient First Name	Patient Last Name	Status	Document Type
Contains: ▼	Equals: ▼	Equals: ▼	Equals: ▼	Contains: ▼	Contains: ▼	Contains: ▼	Contains: ▼
1010096	03-02-2012 3:18 PM	02-15-2012 12:02...	0	George	Tucker	Hold	INTERPRETATION
1010099	02-15-2012 12:02 PM	02-15-2012 12:02...	0	Dolly	Proude	Error	INTERPRETATION
1010097	02-15-2012 12:02 PM	02-15-2012 12:02...	1	Dolly	Proude	Hold	INTERPRETATION
1010088	03-02-2012 10:33 AM	02-15-2012 12:02...	1	Clare	Cone	Hold	INTERPRETATION
1009885	03-09-2012 9:19 AM	02-15-2012 12:02...	0	Brooke	Trout	Error	INTERPRETATION
1010121	02-15-2012 12:02 PM	02-15-2012 12:02...	0	Adam	Yeo	Error	INTERPRETATION
1010121	02-15-2012 12:02 PM	02-15-2012 12:02...	1	Adam	Yeo	Hold	INTERPRETATION
1010113	02-15-2012 12:02 PM	02-15-2012 12:02...	1	Willa	Wonder	Hold	INTERPRETATION
1010113	02-15-2012 12:02 PM	02-15-2012 12:02...	1	Willa	Wonder	Hold	INTERPRETATION
1009989	03-02-2012 10:3	02-15-2012 12:02 PM	0	Layton	Drive	Error	INTERPRETATION

Figure 4.11 – Document Distribution WL with patient first and last name columns

## **Remove Change to...Arrived Status from Reception WL**

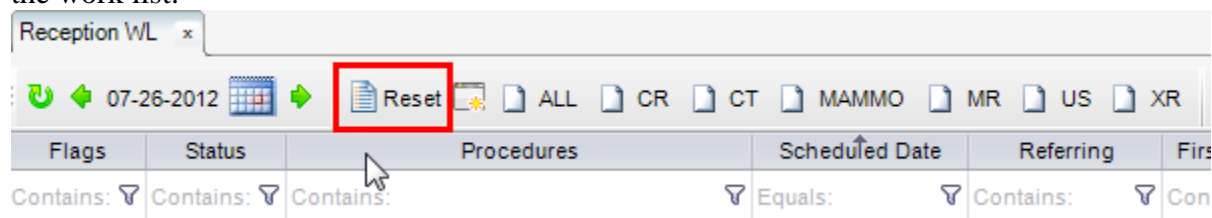
The Reception WL has had the option to change to “arrived” status removed from the context menu option “Change status to...”



**Figure 4.12 – Arrived status removed from context menu**

## Default WL view

In previous versions the user didn't have the ability to remove a "My View", once the view was selected, they could not revert back to the default work list view. In build 37 a "Reset" has been added to all work lists. If a "My View" is selected, the sorting, filtering, columns displayed, etc... have changed, selecting the "Reset" button will revert the work list back to the default of the work list.



**Figure 4.13 – Reset button to remove my views**

Once the "Reset" button is selected the work list will be sorted by the scheduled start date. The Document Distribution work lists will be sorted by available date.

### **Statuses and Outside Reads Removed from IVT Work List**

In previous versions of eRAD RIS, the IVT work list was displaying rows with statuses in Invitation and Short Term Follow up, these statuses have been removed. It was also displaying Outside Read studies, which will no longer be present on the IVT work list.

### **Work List Filtering Changes**

We needed the ability to filter work lists using “and” “or” conditions and to exclude other strings that don’t contain a particular expression.

To accomplish this we have changed work list filtered to support this. The following is an explanation:

We support ‘and’ using the ‘&’ character, ‘or’ using ‘|’, ‘not’ using ‘!’ and groupings using ‘(’ and ‘)’. Some example filters are:

(CT & XR) | MR – will display procedures with CT and XR procedures as wells as MR procedures  
(CT & XR) | !MR – will display procedures with CT and XR procedures but not MR procedures

The ! operation also works on Parentheses groups such as the following, which displays all CT procedures that are not also XRay:

!(ct & xr) & CT

If the parentheses do not match such as (CT & MR, then the groupings are not evaluated. Also if an operator is missing such as (CT & XR)!MR then the & is used where the missing operator should be.

Note: as before you can match to “, which matches to a blank column so the following expression  
(CT & XR) || “

The above example, matches any procedure that has both CT and an XR in the description or has a blank description.

## Context Menus Added to Patient Search Results

The Patient Search window has had some additions in build 37. A context menu has been added allowing the user to select “New Appointment” and “New Walk-in”. New buttons have also been added. The top of the search screen has “New Patient”, for the case where you can’t find the patient you want and only want to add a note to their patient file and first need to create the patient.

The screenshot shows the 'Patient Search' window. At the top, there's a 'Search Criteria' section with fields for 'First Name', 'Last Name' (containing 'power'), 'Birth Date' (mm-dd-yyyy), 'Phone #', and 'MRN'. There are 'Search', 'Reset', and 'New Patient' buttons. Below this is a table of search results. A context menu is open over the first row, showing options: 'Patient Folder in New Tab', 'New Appointment', 'New Walk-in', 'Edit Patient', 'Copy Cell', and 'Patient Folder (Preview Mode)'. At the bottom of the window, there are buttons for 'Patient Folder', 'New Appointment', 'New Walk-in', 'Edit Patient', and 'Close'.

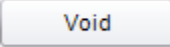
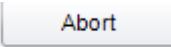
First Name	Last Name	Middle Name	Birth Date	MRN	Issuer	Gender	Address	City	State	Home Phone	Mobile Phone	Match
Ian	Power	G	04-04-1978	2169	system	M	sdfg					
Ian	Power		04-04-1978	2169	system	M						
Frank	Power				system	M	622 Chestnut	Springfield				
Max	Power				system	M	25 Stanford Ave	Belle Plaine	MN			
Max	Power				system	M	Test Street	Baltimore	MD	(342) 232-4243		

**Figure 4.14 - Patient Search**

When in the patient search popup the bottom buttons and context menu items are hidden and if the patient search is on a popup which is launched from a content base that Search/New Patient icon buttons then the “new Patient” button on the search popup will close the popup and click the “New Patient” icon on the content screen and will populate the default values for the new patient based on what was typed in the search screen.

### Void Signed and Abort Exam Done Studies

The ability to void a signed study and Abort a study in statuses of Exam Done, Exam Done (tech only), Dictated, Report Drafted and Transcribed has been added in build 37. Buttons of Void

 and Abort  can be accessed from the View Edit window. The View Edit window is accessible from the patient folder.

When the user selects the Void button in the View Edit window, they will be prompted with a message, displayed in the figure below

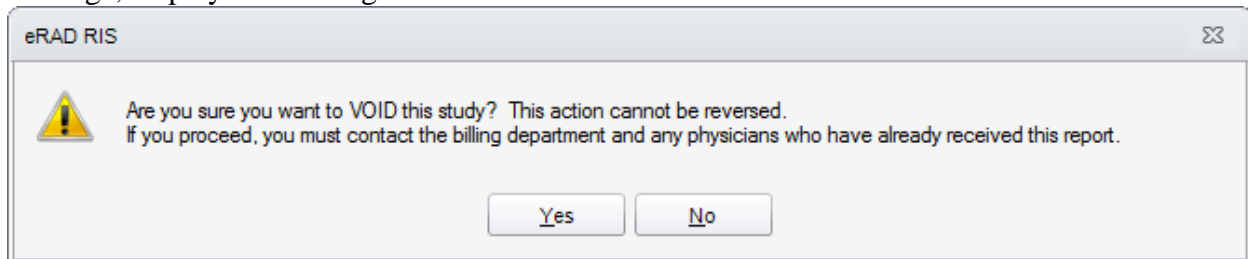


Figure 4.15 – Confirm Void message

Clicking 'No' will just return to the view edit screen, 'Yes' will save the study with the status of Void.

When a study is aborted in the View Edit window a confirmatory message prompt will also display

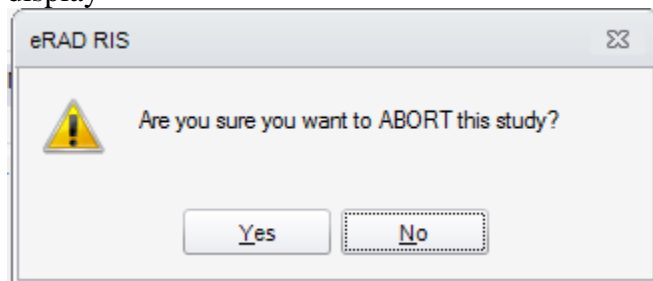
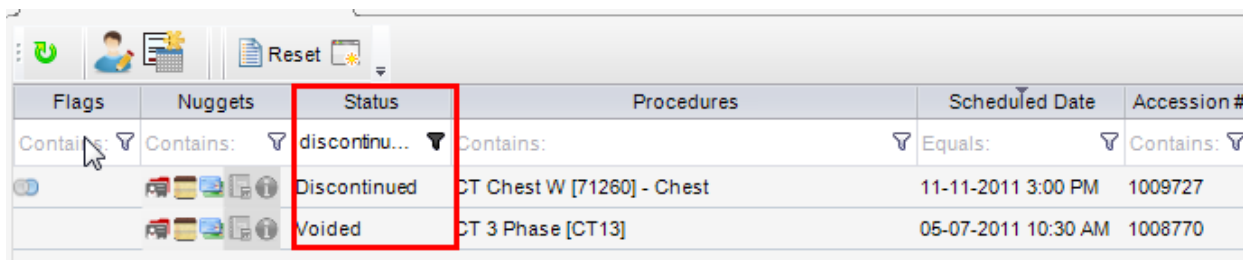


Figure 4.16 – Confirm Abort

Studies that are voided will appear in the Patient Folder work list as "Voided", while studies that are aborted will appear on the Patient Folder work list as "Discontinued".





Flags	Nuggets	Status	Procedures	Scheduled Date	Accession #
Contains: [icon]	Contains: [icon]	discontin...	Contains: [icon]	Equals: [icon]	Contains: [icon]
[icon]	[icon]	Discontinued	CT Chest W [71260] - Chest	11-11-2011 3:00 PM	1009727
[icon]	[icon]	Voided	CT 3 Phase [CT13]	05-07-2011 10:30 AM	1008770

**Figure 4.17 – Patient Folder displaying voided and aborted statuses**

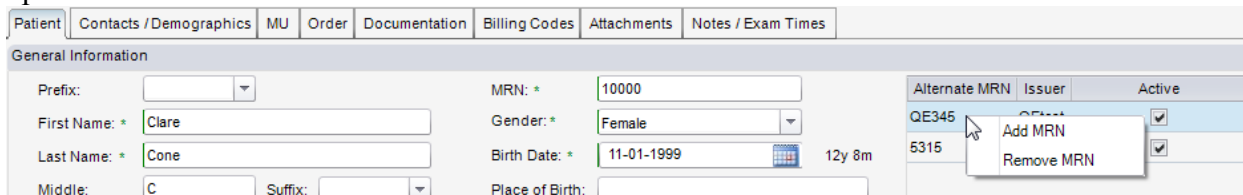
Permissions for these buttons are controlled by the access strings of:

Access to Void – Clinical.VoidStudy

Access to Abort – Clinical.AbortStudy

## Add and Remove Patient Alternate MRN's

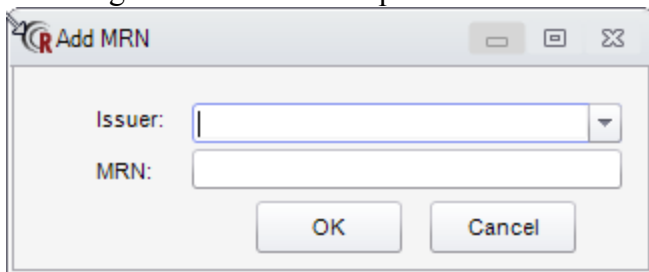
On the patient tab, a new data pane has been added that allows users with permissions to add and remove alternate MRN's. If the alternate MRN data pane is empty open the context menu from the column header and the option to “Add MRN” will be available. If there are already alternate MRN's in the data pane, simply open the context menu from the list and the user will have to option to “Add MRN” or Remove MRN”



Prefix:	MRN: *	Alternate MRN	Issuer	Active
First Name: * Clare	Gender: * Female	QE345		<input checked="" type="checkbox"/>
Last Name: * Cone	Birth Date: * 11-01-1999	5315		<input checked="" type="checkbox"/>
Middle: C	Place of Birth:			

**Figure 4.18 – Add and Remove MRN**

Selecting “Add MRN” will open the Add MRN window.



**Figure 4.19 – Add MRN window**

The Issuer: list box is populated with the values from the Issuer Lookup table.

Issuer Code	Description	Display Order	Active
Contains: ▼	Contains: ▼	Equals: ▼	Contains: ▼
QEtest	QE Test	1	Y
QEtest2	Qe Test 2	2	Y
Up	Up	3	Y
Click here to add a new row			

**Figure 4.20 Issuer Lookup**

If an alternate MRN is attempted to be added to another patient, the user will get a prompt informing that the MRN is already assigned to another patient.

**Figure 4.21 – MRN already assigned**

The alternate MRN can be used for patient search.

First Name	Last Name	Middle Name	Birth Date	MRN	Issuer	Gender	Address	City	State	Home Phone	Mobile Phone	Matching Alternate MRN	Matching First
Clare	Cone	C	11-01-1999	10000	system	F	54 Heritage Dr.	Okeechee	SD	(902) 587-2665	(902) 452-3246	QE345	

**Figure 4.22 – Patient search on alternate MRN**

Permissions to access the Add and Remove options as well as the lookup table are as follows

Add MRN – Clinical.AddMRN

Remove MRN – Clinical.RemoveMRN

Access to Issuer lookup table – Config.LookupEditor.Issuer

Note: users can never remove the system MRN or MRN added in the “AddOutsideRead / Alternate MRN ForReport”. To remove an “Alternate MRN for Report”, use the View Edit screen and edit/remove the “Alternate MRN for Report” from the applicable field.

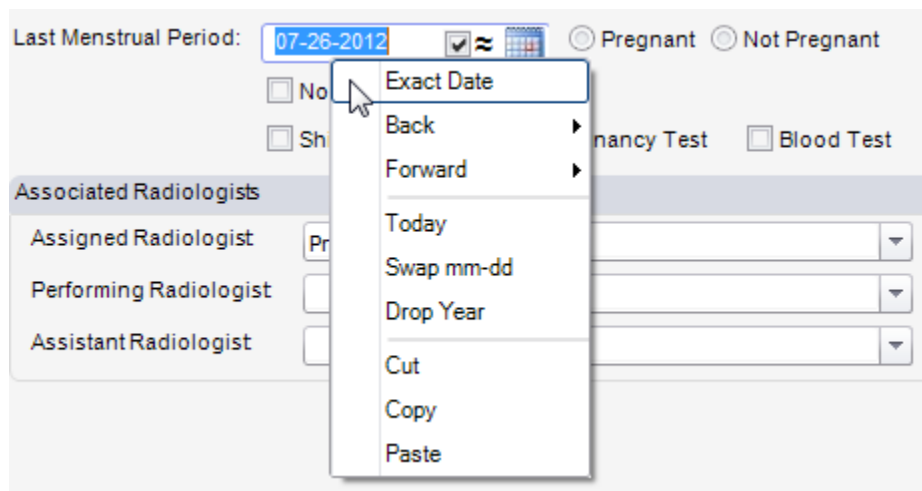
### Last Menstrual Period Approximate Date

In the Perform Exam window there is a date field for Last Menstrual Period. Requested was the ability to show this date as an approximate date. Within the date field a check box will appear when a date is entered or selected from the calendar control.

The screenshot shows the 'Perform Exam' window for Judy Jones. The 'Last Menstrual Period' field is highlighted with a red box. It contains the date '07-26-2012' and a checkbox labeled 'Approximate Date' which is currently checked. Below the date field, there are radio buttons for 'Pregnant' and 'No Pregnant', and a checkbox for 'No Longer Menstruating'. At the bottom of the form, there are checkboxes for 'Shielded Patient', 'Pregnancy Test', and 'Blood Test'.

**Figure 4.23 – Approximate date**

The check box can be toggled and the date can be changed backwards and forwards, today's date selected and the day / month swapped when the day does not exceed 12.



**Figure 4.24 – LMP date field context menu**

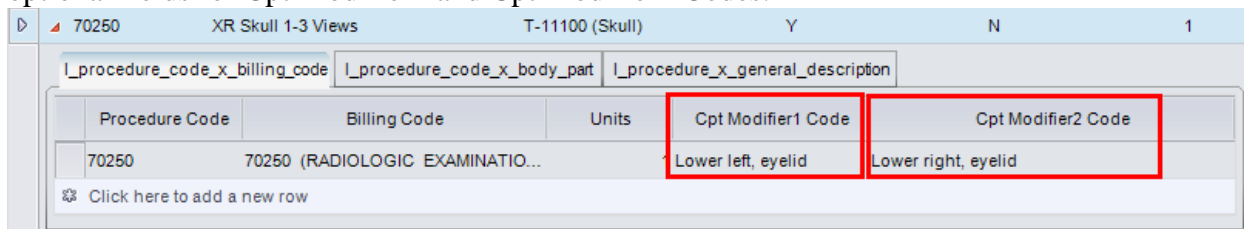
### Save As Order from Schedule Order Window

In previous versions the scheduled window allowed the user to either Schedule or Close the Schedule Order window. A new button “Save as Order” has been added. Orders opened in the Schedule window from the Orders to Schedule work list will have this option.

This option was always available from the New Appointment window. This gives the user an extra option in case the patient can’t agree on a time with the scheduler at the time; any added information can then be saved to the order.

## Default CPT

Procedure codes can now have default CPT1 and CPT2 modifiers assigned. From the procedure code lookup table expand the procedure code row. Looking at the figure below you can see the optional fields for Cpt Modifier1 and Cpt Modifier2 Codes.



The screenshot shows a table with columns: Procedure Code, Billing Code, Units, Cpt Modifier1 Code, and Cpt Modifier2 Code. The row for procedure code 70250 is expanded, showing the billing code 70250 (RADIOLOGIC EXAMINATIO...), units 1, Cpt Modifier1 Code Lower left, eyelid, and Cpt Modifier2 Code Lower right, eyelid. The Cpt Modifier1 and Cpt Modifier2 columns are highlighted with red boxes.

Procedure Code	Billing Code	Units	Cpt Modifier1 Code	Cpt Modifier2 Code
70250	70250 (RADIOLOGIC EXAMINATIO...	1	Lower left, eyelid	Lower right, eyelid

**Figure 4.25 – Default CPT1 and CPT2 modifier**

## Changes to Patient Merge window

We have retained the same Source and Destination concepts, but we now categorize the patient information into separate categories of items that can be merged over from the Source. Name, DOB, Address, Home Phone, Cell Phone, and Work Phone are the categories of information that can be used to merge over. By default each of these options is set to use the Destination patient's attributes, but by toggling a radiobutton for each category, the admin can selectively use the attributes from the Source patient.

Patient Merge suggest was also updated to use this ability, so a front desk user without sufficient authorization for a Patient Merge can still suggest a merge and indicate which version of the data is most appropriate to retain.

In addition, we now show the patient history including access to the nuggets so the admin has easy access to the scan documents if they feel the need to compare the patient's photo ID or signature, and they can view the list of exams on both the source and the destination.

As before, there is a "< -- >" button to switch the source and the destination patient.

A "Show ID" button (a camera icon) that will only be visible if the patient has at least one scan document classified as a license (a config setting is used to specify which "scan document type" represent the driver's license/photo ID).

On the back-end, the logic for patient merge is very similar as it was before, we are now doing a patient merge and then updating the patient attributes where applicable afterwards.



## Show Report for Prior Exam for Mammo Follow-ups

The schedule order window for Mammo follow-ups will allow the user to view reports for the prior exam. The button will be located in the lower left of the window.

Mammo Follow Up Orders (3) | Schedule Order : Judy Jumper # 12032

Patient | Contacts / Demographics | MU | Order | Schedule | Image Request (0) | Review

**General Information**

Prefix:  MRN: \* 12032

First Name: \* Judy Gender: \* Female

Last Name: \* Jumper Birth Date: \* 11-27-1969 42y 7m

Middle:  Suffix:  Place of Birth:

☐ Claustrophobic ☐ Arbitration Signed ☐ Deceased eRx

**Contact Information**

Address 1: 58 Eighty fifth St Zip: 25002 Home Phone: (902) 555-4874

Address 2:  Country: US ☐ No Alternate Phone

City: Alloy Work Phone: () -

State: West Virginia Email:  Cell Phone: () -

Preferred Contact Method:  Preferred Delivery Method:

**Patient Origin**

Preferred Language: English

Education Level:

Religion:

Race: White

Ethnicity: Not Hispanic or Latino

**Patient Notes**

07-26-12 NoyeD -

05-23-12 NoyeD - Testing mammo features

Show Report | Save as Order | Schedule | Close

**Figure 4.27 – Mammo follow-up schedule order window**

## Patient Address Updates – Relation to Patient

Changes have been made to the PatientRelation lookup so we can configure what is copied over to other patient fields from the Patient Tab information. This applies to the Responsible Party and Emergency Contact sections on the Contacts/Demographics, Medical Record Access window and the Manage Policies window relation to patient.

Patient Relation Code	Description	Display Order	Address Same As Patient Flag	Firstname Same As Patient Flag	Lastname Same As Patient Flag	Active
Contains: ▼	Contains: ▼	Equals: ▼	Contains: ▼	Contains: ▼	Contains: ▼	Contains: ▼
Self	Self	1	N	Y	Y	Y
Spouse	Spouse	2	N	N	Y	Y
PA	Parent	3	N	N	N	Y
Mother	Mother	4	N	N	N	Y
Father	Father	5	N	N	N	Y
Child	Child	6	N	N	Y	Y

Click here to add a new row

**Figure 4.28 – Additional columns added to PatientRelation lookup table**

Similar to before when we hard coded these conditions to things like “Self” the last name and first name will be copied over if the flag for that piece of data is set and if the field is blank. The Address Same As Patient Flag will copy over all contact information if the destination field hasn’t yet been set after doing that if all the fields match the Patient, the “Same as patient field will be checked”.

Schedule Order : bevin Molyneaux # T1276 \* x

Patient | Contacts / Demographics | MU | Order | Schedule | Image Request (0) | Review

**Responsible Party**

Relation: Self ▼

First Name: bevin Last Name: Molyneaux

☒ Same as Patient

Address 1: 84 Green Old Freewayfasd State: CA

Address 2: 296 Green Milton Freeway Zip: 90210

City: Dallas Phone:

**Emergency Contact**

Relation: Spouse ▼

First Name: test Last Name: Molyneaux

☒ Same as Patient

Address 1: 84 Green Old Freewayfasd State: CA

Address 2: 296 Green Milton Freeway Zip: 90210

City: Dallas Phone:

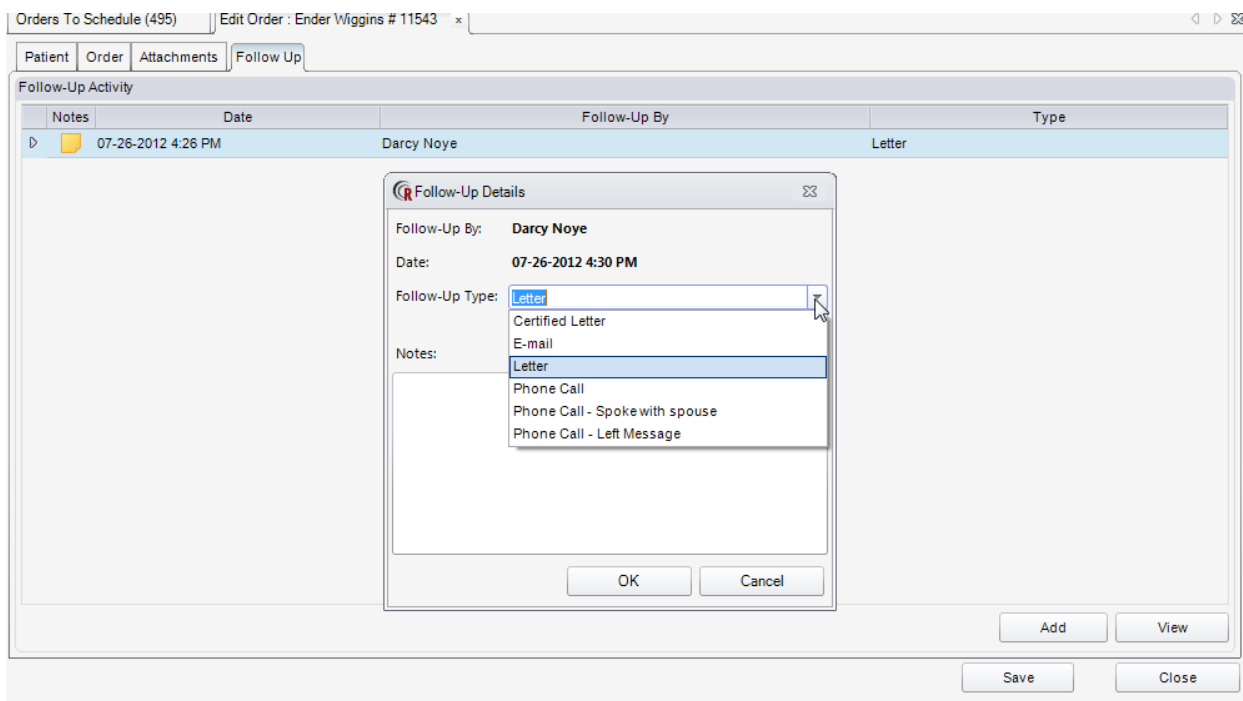
**Figure 4.29 – Relation to patient fields**

If “Same as Patient” is checked then any changes to the patient’s address information will be updated in the contacts tab.



## Order Follow Up Tracking

In build 37 tracking follow ups on orders will be available. Edit the order and a follow up tab has been added. On this tab the follow ups can be added or previously added follow ups can be viewed.



**Figure 4.30 – Order follow up tracking**

This works similar to the pre-existing follow up tracking from Mammo, with the exception of the columns on the work list. ACR Cat. 0 and ACR Cat. 4/5 Follow-up work lists will display the Last Follow Up Date, the follow up attempts, and the method of the Last Follow Up. These columns were not added to the Orders To Schedule or Patient Folder work lists. If the user wishes to see the follow-up, they must open the Edit Order window and select the follow up tab.

### Zip Code Field Enhancements

If the zip code field is populated with 5 numeric characters, the search option will be enabled. If the character count does not match five, the search will not be conducted.

To initiate the search and auto populate the City and State fields, the user can tab from or select enter from the zip code field.

### Copy Contents from Grids

To assist in capturing / copying information from a grid the context menu item option of “Copy Cell” has been added. Examples are the Insurance Policies grid and Billing Code Information Grid.

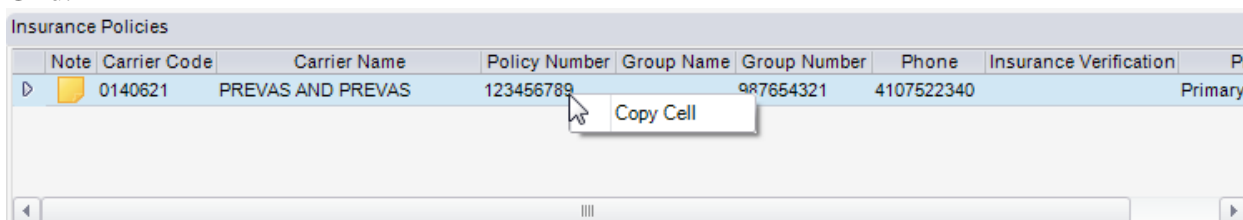


Figure 4.32 – Copy cell context item added to grids

## New Required Fields

In build 37 the Chief Complaint field and Special Accommodations field are now required. The standard pop up message information of incomplete required fields will display if these fields are not populated.

The screenshot displays the 'Schedule Order' form for patient Barney Hubble (ID 10369). The form is divided into several sections: 'Referring Details' (including Referring Physician, Visited at, and Image Notes), 'Preferred Location' (Practice and Site), 'Flags' (Transportation Required, Special Accommodations, Class, Sedation, Transition of Care), 'Billing Method', and 'Order Notes'. A red box highlights the 'Chief Complaint' field in the 'Referring Details' section. Another red box highlights the 'Special Accommodations' dropdown menu in the 'Flags' section. A third red box highlights the 'OK' button in the error message dialog. The error message dialog states: 'The following errors must be corrected: "Chief Complaint" is required, "Special Accommodations" is required.' A fourth red box highlights the 'There are 2 Errors' message at the bottom right of the form.

**Figure 4.31 – New required fields**

## Editing Data of Exam for Outside Reads

From the view edit window users can change the Arrival time and the Exam start and end times. Neither of these data panes applied to Outside Reads. Now when opening an Outside Read in the view edit window, the Notes/Exam Times tab will have a new data pane of “Outside Read” in place of the Arrival and Exam times data panes.

The screenshot displays the 'Notes / Exam Times' tab in the RADNET eRAD RIS interface. The tab bar at the top includes 'Patient', 'Contacts / Demographics', 'MU', 'Order', 'Documentation', 'Billing Codes', 'Attachments', 'Notes / Exam Times' (which is active), and 'Report'. Below the tab bar, there is a checkbox labeled 'Place Billing On Hold'. The main content area is divided into three sections: 'Billing Notes' at the top, 'Outside Read' in the middle, and two side-by-side sections at the bottom labeled 'Order Notes' and 'Patient Notes'. The 'Billing Notes' section contains a text area with the entry '07-26-12 NoyeD -'. The 'Outside Read' section contains three fields: 'Exam Date:' with the value '02-22-2012 12:00 AM' and a calendar icon, 'Created Date:' with the value '02-22-2012 2:43 PM' and a calendar icon, and 'Ext. Accession #:' which is currently empty. The 'Order Notes' and 'Patient Notes' sections each contain a text area with the entry '07-26-12 NoyeD -'.

**Figure 4.33 – Outside Read time**

Editing of this field is permission based and the user must have the **Clinical.ModifyTimestamp** permission to edit these fields.

## Meaningful Use (MU) Enable Controls

Added a new Access string **MUEnabledControls** that when the user has full access to this new permission has the ability to add Problems, Allergies or Medications either by the quick add edit button or the MU grids. If they do not have full access to **MUEnabledControls** the user will be only able to enter Problems, Allergies and Medications by clicking on the Meaningful Use Quick Add Edit button.

Access String Code	Description	Display Order	Default Access Level Code	Active
Contains: muen	Contains:	Equals:	Contains:	Contains:
Clinical.MUEnabledControls	Access MU controls on a form (radio buttons and grids)	1	None	Y

Figure 4.34 – New access string for Clinical.MUEnabledControls

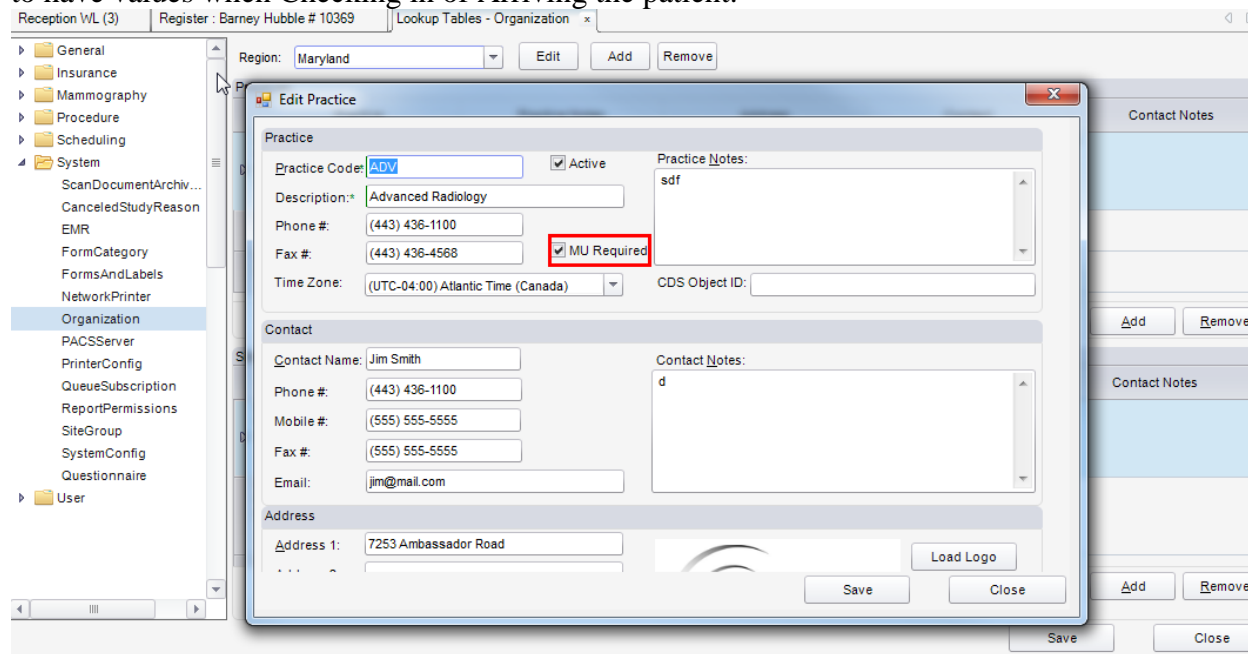
## Meaningful Use Changes

In build 37 there has been many minor changes to Meaningful Use. First off the data tab that contains the MU grids has been renamed from “Visit” to “MU”. The location of the tab has been moved so that it is in front of the “Order” tab in all data windows that MU is present. The MU Wizard Dialog has been renamed to Meaningful Use Quick Add Edit and the location of this button has been moved from the right side of the MU tab to the right side. The Meaningful Use Information button has also been move from the right side to the left.

**Figure 4.35 – MU tabs new location and displaying Meaningful Use Quick Add Edit and Meaningful Use Information buttons new locations.**

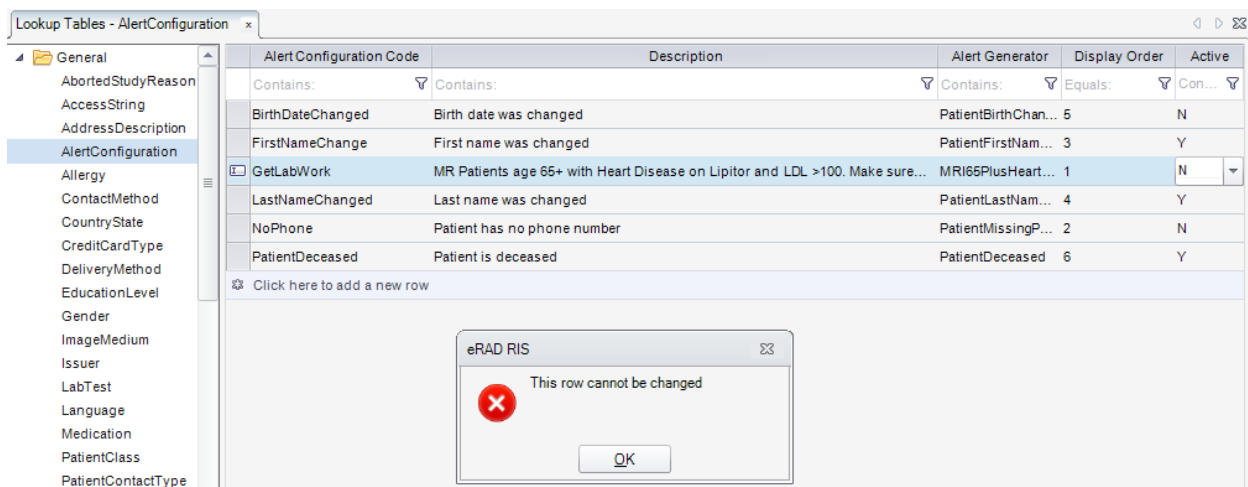
The access string for the Meaningful Use Quick Add Edit button was also as MU.QuickAddEditDialog, while the old access string MU.WizardDialog has been removed.

To turn on Meaningful Use as required is now set at the practice level. From the Organization lookup table > Edit Practice and there is a new check box “MU Required”. Checking this box will require the Preferred Language, Race, and the Ethnicity fields on the patient tab and the Smoking Status, and radio button for Medications, Allergies and Medical History on the MU tab to have values when Checking in of Arriving the patient.



**Figure 4.36 – MU Required at the practice level**

Users are prevented from change the Clinical Summary Rule by not allowing them to de-activate the Alert Configuration code for GetLabWork.



**Figure 4.37 – Alert Configuration cannot be disabled**

A new Clinical Summary management report has been added which is setup in the Forms and Labels lookup table. In order to capture is the report was printed we added a new system config code of MUclinicalSummary item. The value is changeable based on the name of the management report file. If the name of the report is change, the value of MUclinicalSummary code will have to change to match it.

When the user prints this new report the application will look for the Config item to determine if we need to capture if the report was printed. We record the date the report was printed and set the provided\_clinical\_summary\_flag = Y in the db when this report is printed.

Lastly a change was made to the MU Scorecard so it does not calculate multiple patient population and multiple numerator counts. There are two entries "0024" and "0038" that contain multiple entries. The report will display empty for those two mu entries. The user will to drill down to see the values as displayed in the figure below

<input type="checkbox"/> NQF 0038	Childhood Immunization ***					
	<input checked="" type="checkbox"/> Administrator Test User					
	<input checked="" type="checkbox"/> Andrew WaiteW					
	<input checked="" type="checkbox"/> Clifton Harding					
	<input checked="" type="checkbox"/> Dale Yeo					
	<input checked="" type="checkbox"/> Darcy Aiken					
	<input checked="" type="checkbox"/> Darcy Noye					
	<input checked="" type="checkbox"/> Denis Doiron					
	<input type="checkbox"/> Ian Power					
DTaP vaccine	1	1	1	0	1	100.0%
IVP Polio vaccine	1	2	1	0	1	100.0%
MMR meals mumps and rubela vaccine	1	3	1	0	1	100.0%
HIB vaccine	1	4	0	0	1	0.0%
Hepatitis B vaccine	1	5	1	0	1	100.0%
Chicken pox (VZV) vaccine	1	6	1	0	1	100.0%
Pneumococcal vaccine	1	7	1	0	1	100.0%
Hepatitis A vaccine	1	8	0	0	1	0.0%
Rotavirus vaccine	1	9	0	0	1	0.0%
Influenza vaccine	1	10	1	0	1	100.0%
DTaP, IPV, MMR, VZV, Hepatitis B vaccine	1	11	1	0	1	100.0%
DTaP, IPV, MMR, VZV, Hepatitis B, Pneumococcal vaccine	1	12	1	0	1	100.0%

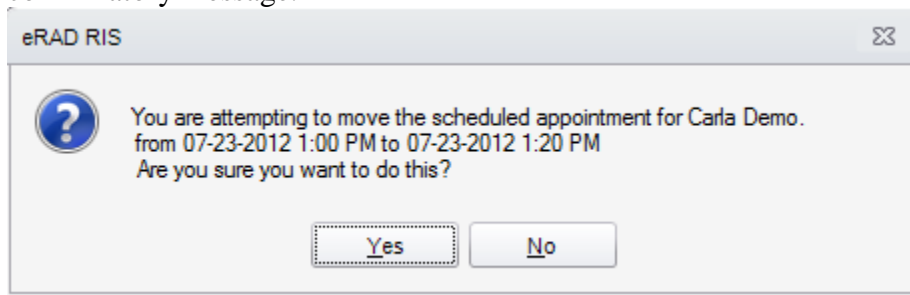
**Figure 4.38 – MU Scorecard changes**

## Appointment Book Change Schedule Time by Dragging

A limited piece of functionality was added to the Appointment book window. Users with the permission “Clinical.AppointmentsBooked.AppointmentDragging” will be permitted to move studies in the status of “Scheduled” only to different time slots. This will only work for studies that have 1 procedure in the order. The dragging of appointments that have multiple studies with one order will still have to be completed via rescheduled window.

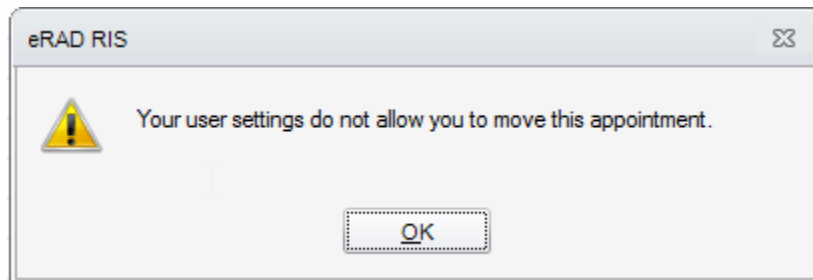


After the user has moved to the appointment to the desired time, the user will be prompted with a confirmatory message.



**Figure 4.39 – Dragging appointment confirmatory message**

If the user tries to move the study to a modality that is not valid based the users schedule group configuration, then they will get the warning.



**Figure 4.40 – Message prompt if study is dragged to incorrect modality**

## External Reporting Workflow / No Report Workflow

Previous to build 37 no report workflow was configured at the procedure. If the procedure column No Report Flag was flagged as Y a check box would appear in the Perform Exam window. This column has been renamed to External Report Workflow Flag and if the procedure has this flag, the check box External Report Workflow is automatically checked in the Perform Exam window.

If the study is then opened with the “View Edit” or “Verify External” screens there will be a button “Verify External Report”, which will move the study to the final state of “ExtReportVerified”.

To find all exam done with external reports, which require verification, use the Exam Search as shown in the following:

Flags	Status	Scheduled Date	Procedures	Referring	First Name	Last Name	MRN	Birth Date	Modality Type	Site	Room	Accession#	Sig
Exam Done		07-05-2012 1:00 PM	CT 3 Phase [CT13]	NewUn NewUn	Kerry846	Smith	T.1052	11-26-1978	CT	EL	CT1EL	1070125	
Exam Done		07-05-2012 8:30 AM	CT 3 Phase [CT13]	Shane908 Adams	Adam	Testing	1000005293r	08-30-1989	CT	FH	CT1FH	1070167	
Exam Done		07-09-2012 3:00 PM	CT 3 Phase [CT13]	Bobbie Pace	Blah	Craig	1000005439r	02-25-2003	CT	FH	CT1FH	1070314	
Exam Done		07-09-2012 8:00 AM	CT 3 Phase [CT13]	Shane908 Adams	Adam	Testing	1000005293r	08-30-1989	CT	PO	CT1PO	1070380	
Exam Done		07-10-2012 8:00 AM	MRI CHEST [PID0752]	Adam Yeo	Iva	Helgo	1000005602r	07-12-1979	MR	FH	MR3T	1070389	

**Figure 4.41 – Exam search window (explained later in this document)**

In the Verify External screen, users can “View Images” and “Verify the report”. The Verify External window is accessed from patient folder.

The screenshot shows the 'Verify External' window in the eRAD RIS application. The window is titled 'eRAD RIS (Logged in as kevin)'. It features a menu bar with options like File, Administration, Scheduling, Front Desk, Technologist, Radiologist, Mammo, Transcription, PACS, and Help. Below the menu bar, there are tabs for 'Exam Search (5)', 'Verify External: Kerry846 Smith # T.1052', and 'Verify External: Adam Testing # 1000005293r'. A sub-menu bar includes 'Patient', 'Contacts / Demographics', 'MU', 'Order', 'Documentation' (which is selected), 'Billing Codes', 'Attachments', and 'Notes / Exam Times'. The main content area is divided into several sections: 'Tech Notes' with a text area containing 'ASDFASDF' and a 'Copy / Paste' button; 'Primary Tech' with a dropdown menu showing 'stuart, stephen'; 'Assisting Tech 1' and 'Assisting Tech 2' with empty dropdowns; 'Last Menstrual Period' with a date picker and radio buttons for 'Pregnant' and 'Not Pregnant'; checkboxes for 'Shielded Patient', 'Pregnancy Test', 'Blood Test', and 'No Longer Menstruating'; 'Procedure' section with 'Scanner' (CTPH), 'Performed Procedure' (CT 3 Phase (CT13)), 'Body Part', 'Laterality', 'Change Reason Code', and 'Change Reason Note'; and 'Associated Radiologists' with dropdowns for 'Assigned Radiologist', 'Performing Radiologist', and 'Assistant Radiologist'. At the bottom are buttons for 'View Images', 'Verify External Report', 'Save', and 'Close'. The status bar at the very bottom shows 'Connected: Debug' and 'Dictated: 0 - Signed: 0'.

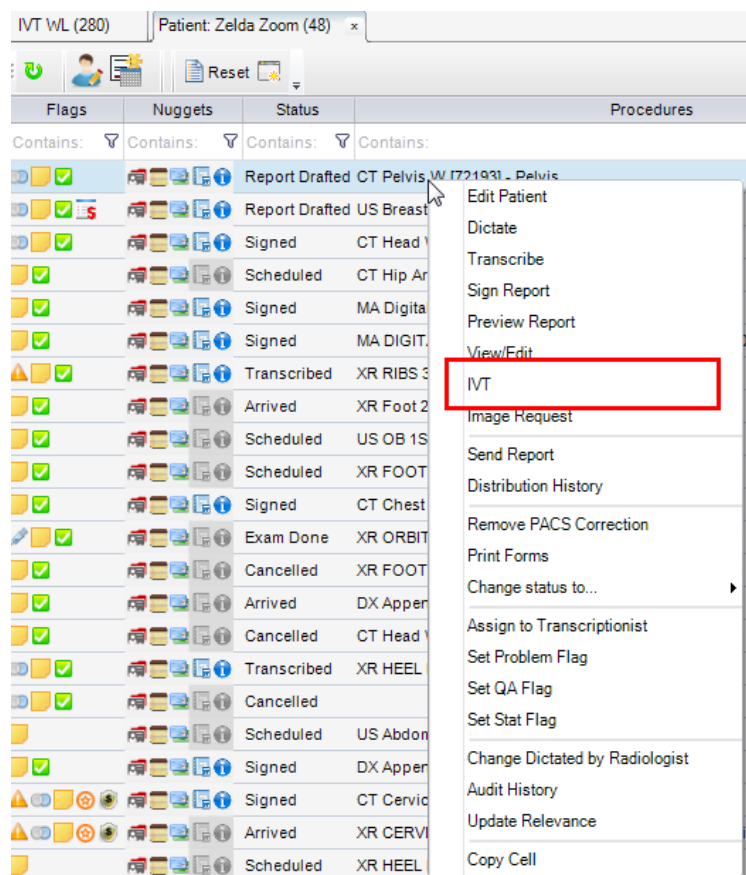
**Figure 4.42 – Verify External window accessed from patient folder**

ExamDoneReportVerified, will get added to the billing rules and will go to billing.

## IVT Additions and Data Window changes

In build 37 some additions have been made accessing the IVT data window as well as changes within the IVT data window.

The Patient Folder now has IVT in the context menu that will open the IVT data window



**Figure 4.43 – IVT added to context menu of patient folder**

Changes within the data window are a new tab called Order / Exam located between the Insurance Verification PreCert tab and the Attachments tab. The tab is initialized as read only as there is no need for editing in this window. The exam information data pane contains the Exam date and time, accession number(s) exam status and procedure.

**Figure 4.44 – IVT Order/Exam tab**

Also added to the Insurance Verification PreCert tab was access to the Order Notes text box to simplify work flow.

**Figure 4.45 – Order notes field added to IVT window**

## Mammo Diagnostic Reporting BI-RADS picker changes

In build 37 there have been some minor changes in the Mammography workflow, specifically the BI-RADS picker, which now has a configurable default recommendation for each BI-RADS level. If BIRAD is expanded, you will see all configured recommendation codes that are mapped (per SITE) to the BIRAD. There is now an optional field “Is Default Recommendation Flag”. If set to “Y” this recommendation for the BIRAD, for the Site will be pre-populated automatically once the Radiologist selects a BIRAD. Majority of the time the Radiologist will keep the default recommendation, however they can always choose to manually change it.

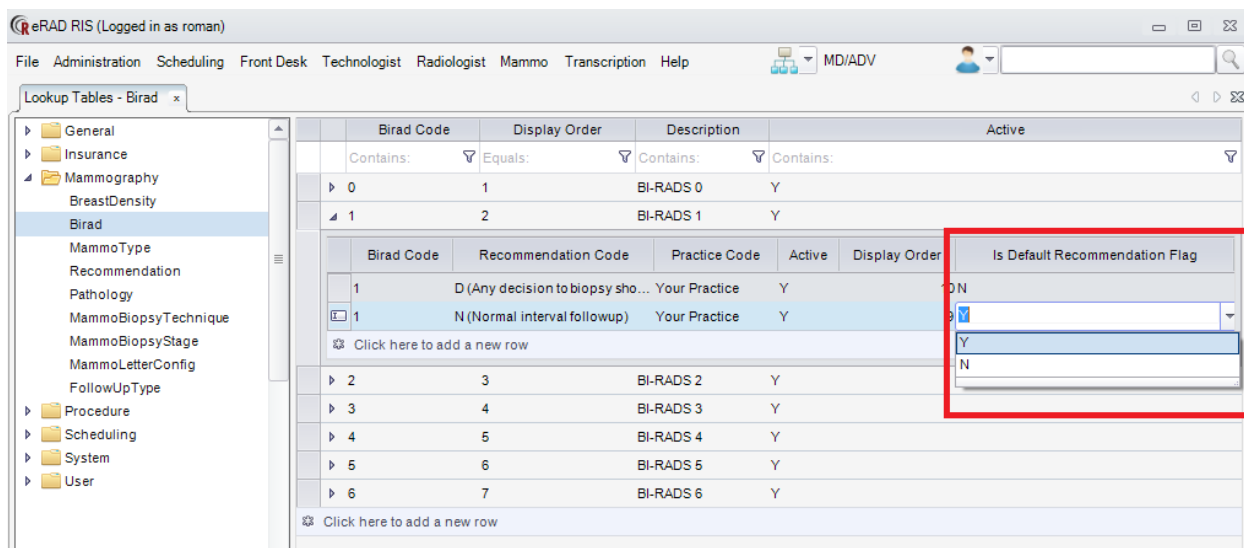


Figure 4.46 – Configuration example for BI-RADS picker

In RIS, once configured, if user selects a BI-RADS level, the corresponding ‘default’ recommendation will automatically populate the ‘Recommendation’ dropdown.

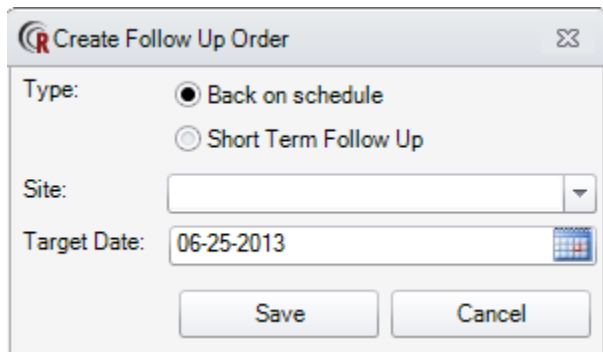


Figure 4.47 – BI-RADS selector in RIS

## **Follow-up Screen Enhancements**

Follow-up workflow needs to allow the user to generate a follow-up order after new information becomes available (Eg. Biopsy results).

After the user chooses “Not Required” for additional surgery, they are able to enter a “Follow-up Required” or “Follow-up not required”. If the user chooses “Required” for additional surgery, a “Create Follow-up” button appears, and when clicked, a dialog box appears:



**Figure 4.48 – Create follow-up Order dialog**

This follow-up order dialog allows the user to specify “Back on Schedule” (i.e. invitation status) or Short Term Follow Up.

A site drop down list provides a Site drop down, that is populated with a short list of all sites for the practice that performed the mammography exam.

The target date controls the Target Schedule Date, which will be used to help determine when the order should be scheduled, and when the patient should receive reminder letters.

### **Auto-Resolving Follow-Ups**

If the user specifies that no additional surgery is required and no additional follow-up is required, the signed exam should drop off the Follow-up worklist.

### **Lost to Follow-up**

The follow-up tab of the Follow up screen has a checkbox that says Lost to follow-up. If this is checked, the exam should drop off the follow-up worklist. This functionality existed previously, but the text has been changed.

### **Follow-up Outstanding Issue**

Input on the biopsy window is currently a required field for all practices using mammo tracking. In the future, those practices that don’t do additional surgery shouldn’t have to click “Not

required” (i.e. we should have a configuration setting that controls which practices require this field), for the time being all practices will be required to answer this question.

Additional Surgery: ☐ Not Required ☐ Required

Figure 4.49 – Additional Surgery Inputs

### Xkeys Integration framework

Xkeys device mapping is normally done via “MacroWorks Software” that is installed on each user workstation. After exploring various integration options, we decided to leverage the MacroWorks mapping software to allow users to map their own XKeys device actions. We will be adding RIS action templates to the existing MacroWorks software, to make RIS actions available for key mappings.

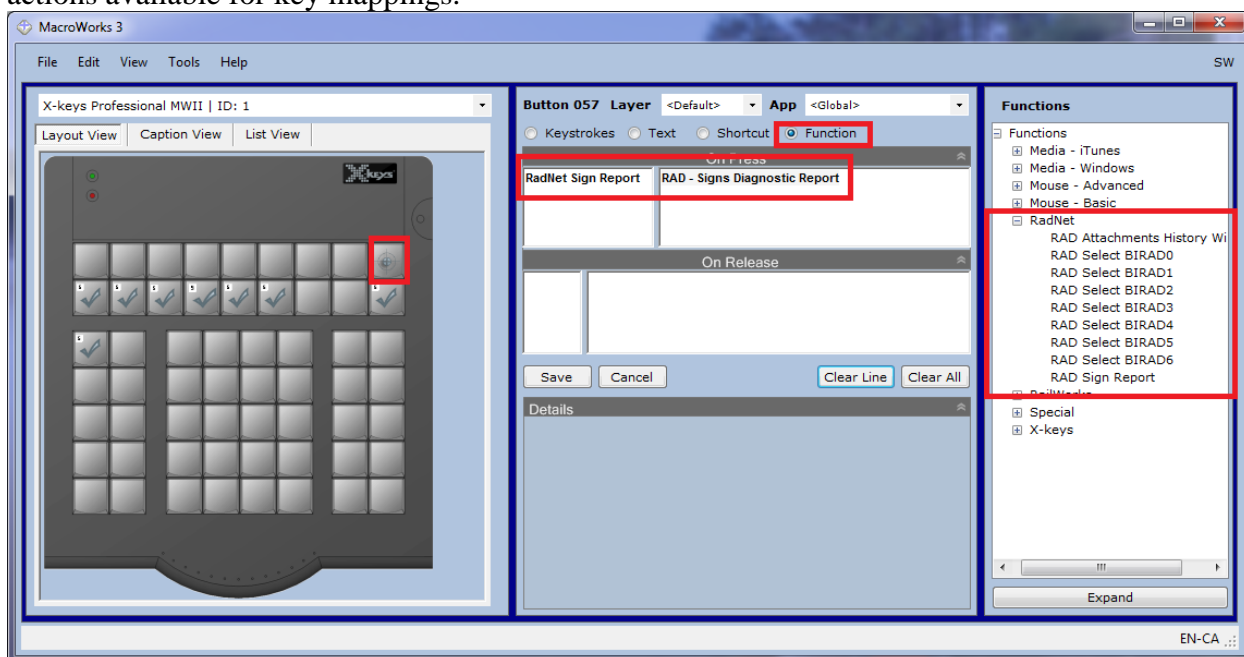
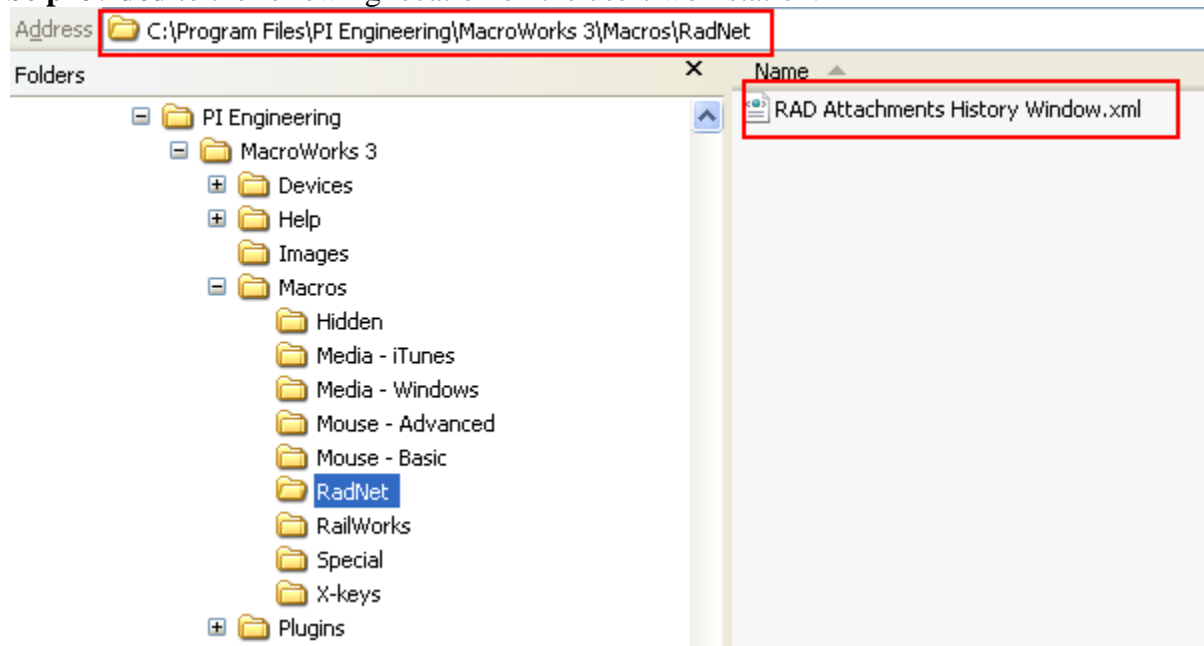


Figure 4.50 – XKey Configuration Utility



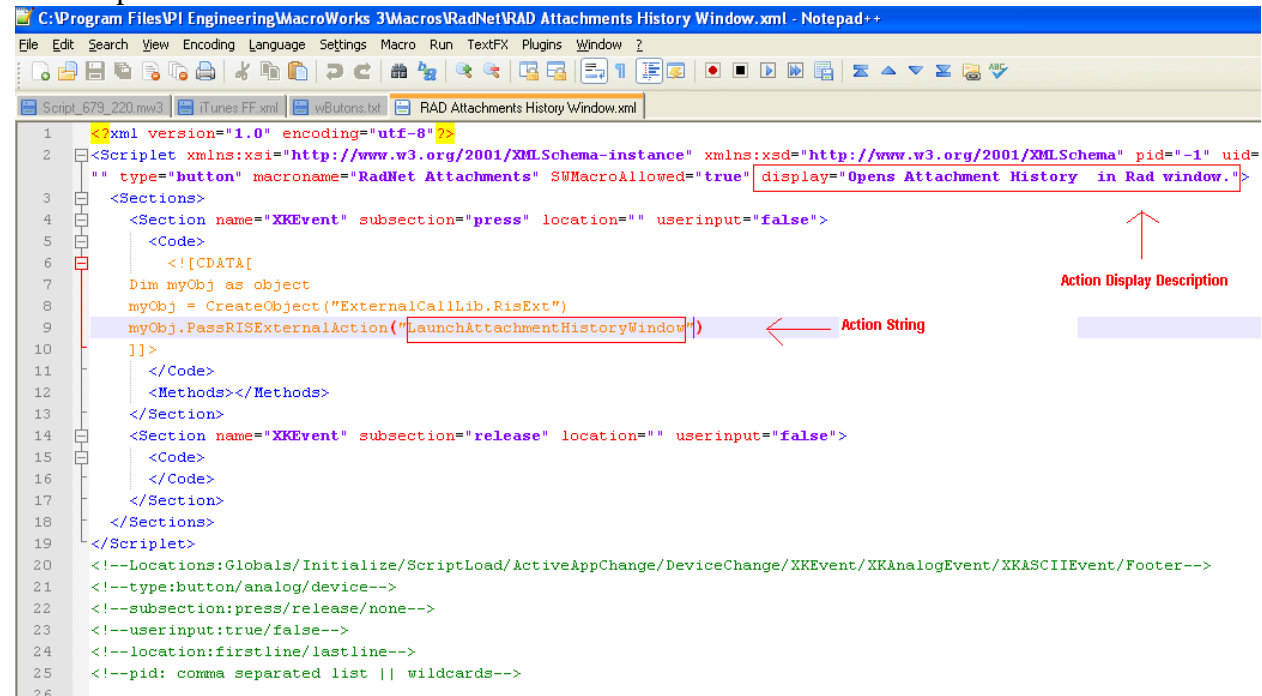
**For every “Function” listed on the right hand of the screen under RadNet, an XML file will be provided** to the following location on the users workstation:



**Figure 4.51 – XKey XML file location**

The XML file itself will contain a command to execute a new DLL that is compiled with RIS. The DLL will execute a call passing an “**Action String**” to RIS. The XML structure file for different actions will always be the same. Only the action description, and the actual action string that is being passed to RIS will need to be changed when creating new actions

See sample below:



**Figure 4.52 – Sample XML file for XKeys**

Once this action is mapped to a key on the Xkeys device. When a user presses the key, the new DLL will pass an “Action String” to the main RIS window. RIS window will constantly be listening for actions being passed from the external DLL.

The following function will be listening.

**MainApp.MainShell → WinProc (function)**

If a call is determined to be coming in from the new External Call DLL the “Action String” being passed will be passed to a new XkeysLibrary class →

**MainApp.XkeysIntegration.xKeysCallLibrary → AcceptExternalCall (function)**

Based on the Action string that is passed in → new actions can be coded into the library. All existing RIS actions can be referenced and re-used. ( ex. Speech Mike actions)

Supported Events for XKey Configuration:

- Ability to select any BIRAD via Xkeys mapping
- Ability to select any breast density code via Xkeys mapping
- Ability to Sign Diagnostic Report via Xkeys mapping
- Ability to Suspend Dictation via Xkeys mapping
- Ability to load any Text Macro into the body of a Diagnostic report ( limitation – in RIS currently can not define default location for the macro to be inserted.) Insert will occur to the location where the user is currently focused in the report.

NOTE: X keys can be programmed to fire multiple events on press of a key. For example one key stroke could set the BIRAD, insert a Macro into the report and fire an event to another application such as PACS.

### Maximum Open Tabs by User Group

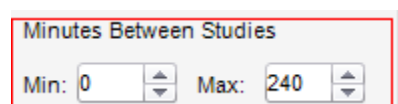
It was determined that a need for a maximum number of open tabs, defined by user group. Code was added to all places that create tabs within RIS. If the maximum number has been exceeded, a message will appear asking the user to close some open tabs.

This does not apply to pop-up style windows, only tabs. Therefore (as an example) Reset Skipped rows dialog will still launch even if the maximum number of open tabs has been met. A new column was added to the l\_user\_group table for maximum\_open\_tabs. The default value is 20. The value for each group can be edited in the lookup editor for user group

### Min Max Wait Time

There was a desire at the sites to allow for a configurable amount of time to occur between studies, part of this desire for this was that existence of the hardcoded limit of 4 hours that could occur between studies.

To resolve this possible issue that could occur of too much time between studies, we created a new config variable called “ScheduleDefaultMaxTimeBetweenStudies” this will work in conjunction with the addition of new controls added to the search panel that will allow for the manual selection of the allowed time between studies. This selection will only affect individual studies, it will not get used for procedure plans, where there is already a configured wait time.



**Figure 4.53 – Min Max Controls**

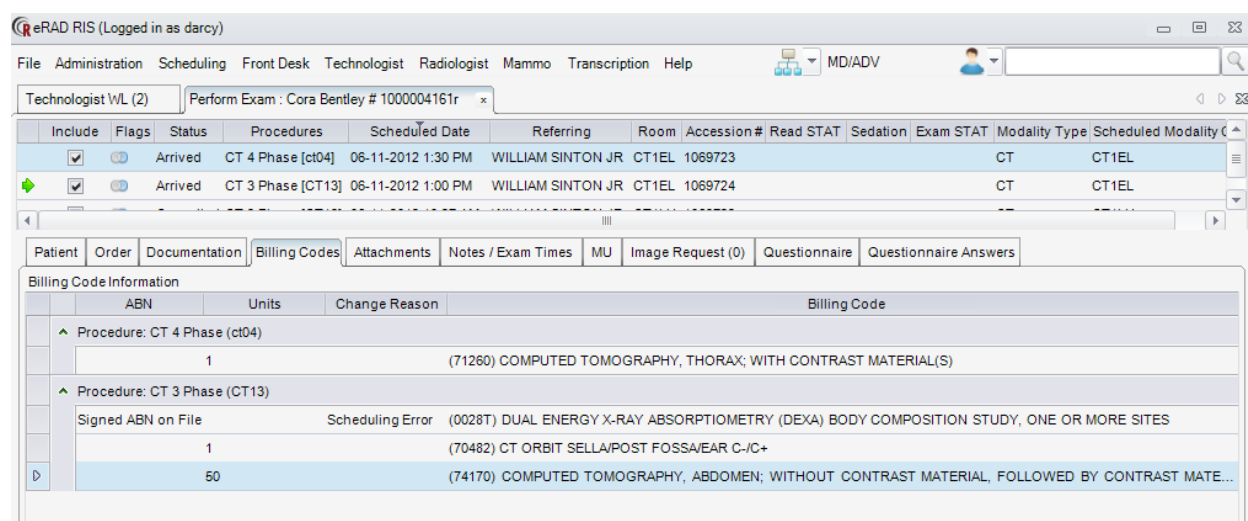
As described above this selection process applies to all non-procedure plan studies, but there is no visible distinction to the user which one will be affected by the selection, there is a desired addition to have an advanced selection that will allow for the selection of min/max for each procedure and no selection of procedure plan studies.

## PreCert Notes in View Edit and Billing

It was discovered that we need the ability to view pre-cert notes after the pre-cert is done. Viewing ability to view/edit and billing exception screens was added to remedy this issue.

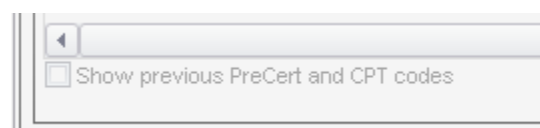
## Billing Code Grid Changes

It was discovered that users were having difficulty distinguishing which billing codes were matched up to each procedure. To remedy this, the procedure code has been added to the grid for billing codes, see below:



**Figure 4.54 – Billing code grid including associated procedures**

The bill codes above are now shown as rows which are grouped under the procedure.



**Figure 4.55 – Disabled dynamically when rows are not being filtered**

The filter for showing prior PreCert and Bill codes has been updated so that it will be disabled unless there are actually rows that are being filtered out. The author was advised that there were complaints that the users had to toggle the checkbox just to see if there were any old rows that

were not being shown. This checkbox now behaves like it's cousin on the insurance dialog box (the enabled/disabled state provides information as to whether there is anything extra to show). I modified the change reason so that it is bound to the procedure change reason lookup instead of a hard coded list.

Finally, the logic for the add button on the bottom of the grid was updated so that it assigns the bill code to the currently selected procedure on the bill code grid. Previously it was using the first active study item for study row [0].

### **Outstanding issues**

When the tech changes the procedure, RIS creates a new study\_item\_certification row and filters out the old. If the user checks the checkbox to show the old precert rows, it shows them nested under the new procedure code (e.g. modify a CT3 phase to a CT4 phase. The CT3 phase precert rows will be nested under CT4 for the procedure code, because the study item was modified instead of creating a new study item and marking the old row as deleted).

## **Technologist Notes Locking After Completion**

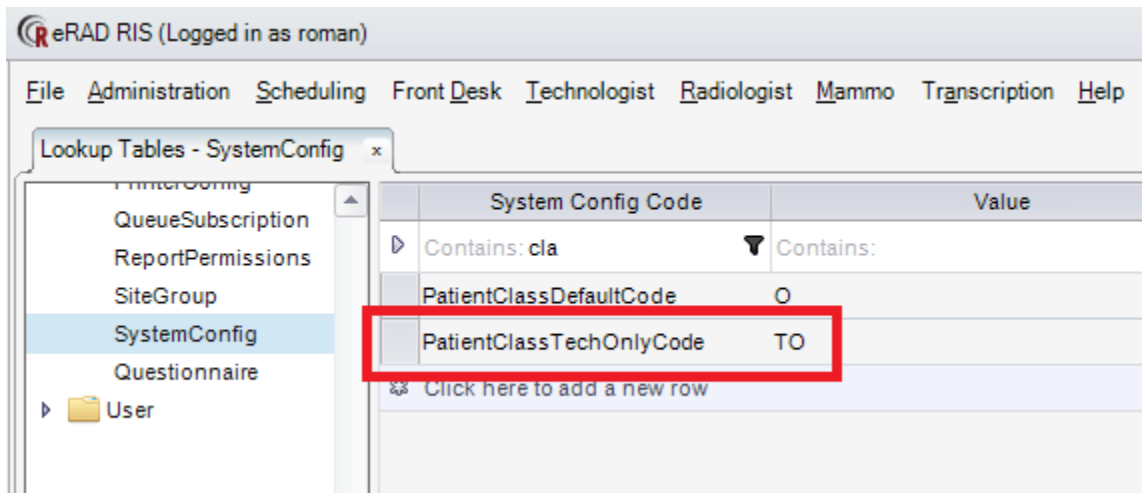
A new permission was added, "**Clinical.Tech.ModifyTechNotesAfterCompletion**" to allow the locking of Technologist Notes to be permission based.

This permission is checked when the Tech or View/Edit screen opens and the user will prevent an unauthorized user from changing the technotes after the exam has been completed. A RIS Administrator will be able to update technotes at any time. Note that the Tech that completes the exam will be able to change the tech notes after they complete the exam while the screen is still open, but after they close out of the screen, they will need authorization to make a change.

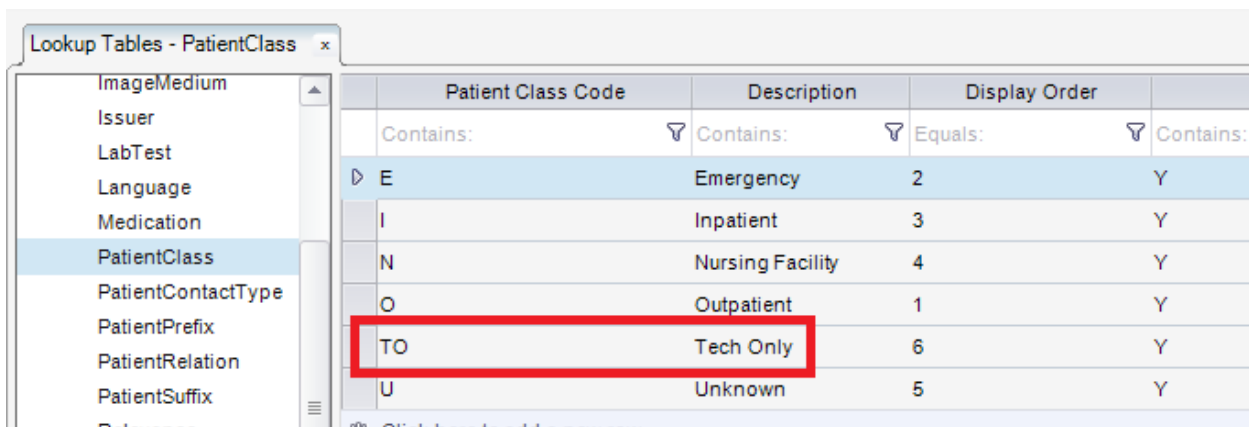
## **Tech Only – Patient Class Workflow**

There is a TECH ONLY patient class. If it is set, then it should override any other settings and make this a tech only study.

Because customer sites can dynamically add Patient Class codes, I introduced a new configuration setting that will indicate the patient class code to be used for Tech Only workflow.

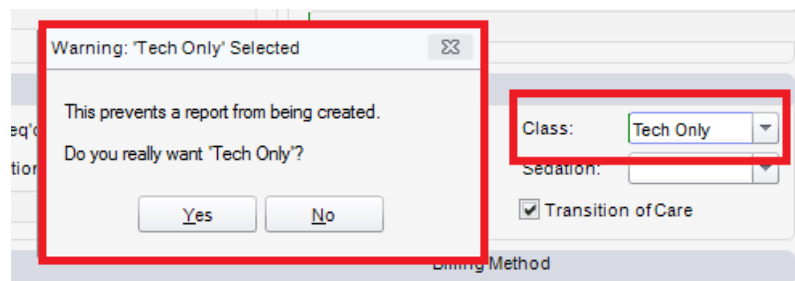


**Figure 4.56 – Configuration to define Patient Class Tech Only**



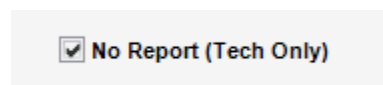
**Figure 4.57 – Patient Class code for Tech Only**

At the time the order is created or a study is booked, if the user selects the “Tech Only” patient class they will receive a confirmation dialog box, similar to the confirmation the Technologist receives if they select the workflow manually. This is to confirm that the user wants to proceed with the workflow.



**Figure 4.58 – Patient Class Tech Only Warning**

If the user decides to proceed with “Tech Only” patient class the study will automatically be flagged for Tech Only workflow. The Technologist will NOT need to set the flag manually. ( it will be pre-selected)



**Figure 4.59 – Pre-selected No Report (Tech Only) checkbox when Tech Only patient class is chosen**

On the technologist work list a new column is available for display, to visually indicate to the Technologist if the study has been selected for Tech Only workflow.

ed	Patient Type	Age At Study	Assigned Tech	Birth Date	PACS Corrected	Scheduled Modality Code	Tech Only Flag
Contains: ▼	Contains: ▼	Contains: ▼	Contains: ▼	Equals: ▼	Contains: ▼	Contains: ▼	Contains: ▼
O	29 years	Ian Power	10-14-19...		XR1EL		
O	19 years		06-13-19...		DX1LU		
O	29 years		10-14-19...		CT1EL		
TO	58 years	Ian Power	08-14-19...		MR1LU		✓
TO	1 years	stephen stuart	04-19-20...		CT1FH		✓
O	0 months		06-11-20...		CT1FH		

**Figure 4.60 – Worklist flag “Tech Only Flag” is checked for all tech only studies**

## Technologist No longer Menstruating

LMP – Add a “no longer menstruating” checkbox beside LMP that skips the required field check. This should be stored at the patient level so that once it is set, it will never prompt again. A checkbox was added for the option for “No Longer Menstruating” to the technologist screen. See screenshot below:

The screenshot displays the eRAD RIS interface. At the top, a menu bar includes 'File', 'Administration', 'Scheduling', 'Front Desk', 'Technologist', 'Radiologist', 'Mammo', 'Transcription', and 'Help'. Below the menu, a toolbar shows 'MD/ADV' and a search icon. The main window is titled 'Technologist WL (2)' and 'Perform Exam : Cora Bentley # 1000004161r'. A table lists exam details with columns: Include, Flags, Status, Procedures, Scheduled Date, Referring, Room, Accession#, Read STAT, Sedation, Exam STAT, Modality Type, and Scheduled Modality. Two rows are visible, both for 'CT 4 Phase [ct04]' and 'CT 3 Phase [CT13]' performed on 06-11-2012 by WILLIAM SINTON JR. Below the table, a tabbed interface shows 'Patient', 'Order', 'Documentation', 'Billing Codes', 'Attachments', 'Notes / Exam Times', 'MU', 'Image Request (0)', 'Questionnaire', and 'Questionnaire Answers'. The 'Documentation' tab is active, showing 'Tech Notes' and 'Technologists Notes'. On the right, a form for 'Primary Tech' is filled with 'Power, Ian'. Below this, 'Last Menstrual Period' is set to '06-04-2012' with a calendar icon. A red box highlights the 'No Longer Menstruating' checkbox, which is currently unchecked. Other checkboxes include 'Shielded Patient', 'Pregnancy Test', and 'Blood Test'. The 'Associated Radiologists' section on the right has fields for 'Assigned Radiologist', 'Performing Radiologist', and 'Assistant Radiologist'. The 'Procedure' section on the left shows 'Scanner: \* CT1EL' and 'Performed Procedure: \* CT 4 Phase (ct04)'.

**Figure 4.61 – No longer Menstruating Flag**

## View Images from Technologist Screen

A new button titled “View Images” was added to the technologist Perform Exam Screen, on the bottom left. This button is only visible when you have both PACS and RIS installed.

**Figure 4.62 – View Images Button on RIS / PACS machine**

## Backend Interface with RADAR



A need was discovered to have all mammo exams confirmed via automation. RADAR will be used to confirm mammo appointments. Therefore we needed to build an interface with RADAR. Development is underway to interface the Merge RIS with RADAR. The high level solution is as follows:

1. Merge RIS dumps to a flat file a list of mammo appointments that are to be confirmed 4 or 5 days out.
2. RADAR picks up this file and begins confirming the appointments.
3. RADAR will send a flat file to the RIS with a confirmation status of the appointments.
4. This flat file is “processed” and the statuses are updated in the Merge RIS.

rRIS needs to simulate at least this integration with the following additions:

1. The procedures that are to be included in the flat file should be configurable, therefore allowing us to expand this feature functionality beyond mammo exams.
2. If the patient has multiple exams scheduled for that day, regardless of the procedure, we must provide the earliest appointment time to the flat file for RADAR.
3. We need a management report that lists all studies that have a confirmation status of “rescheduled” or “cancel”. This report would be used by a PSR to reschedule or cancel the study via the gui.

Note: In the future, we want to automatically move the study to the “orders to schedule WL” or automatically cancel an appointment based on these confirmation statuses from RADAR. **This is not needed for B37.**

### Outbound file for RADAR

In S19 and S21, Stuart built a very similar for MedVoice. I used this interface as the base and made the following enhancements.

1. Added a configuration setting called “**RADARProceduresToConfirm**” that contains a comma separated list of procedure codes that are to be confirmed by RADAR.
2. Only return 1 study per day for a patient that meets the “procedures to confirm” criteria
3. Return the scheduled start date and time for the patient’s first appointment for that day, regardless of what study it is (includes studies that do not match the “procedure to confirm” criteria.
4. Added a configuration setting called “**RADARConfirmDaysOut**” that contains the number of days out from today (or the date the query is ran) to search for studies that are to be confirmed by RADAR.

There is a view in the RIS DB called **c\_vw\_RADAR\_confirmation**. This view is used to produce a list of studies that are to be confirmed by RADAR. The **RADARProceduresToConfirm** and **RADARConfirmDaysOut** are built into this view.

The view is limited to only retrieve one days' worth of exams to be confirmed. So if the current day is Friday, and the **RADARConfirmDaysOut** is set to 3, the list retrieved from this view will include all studies scheduled on Monday. Running the view on Saturday with the same parameters will produce a list for Tuesday, and so on. Therefore this view needs to be run daily, regardless if it is a weekend or a holiday, in order to produce a list of exams to be confirmed on for a future date.

A-1 Mirth channel called "RADARConfirmation" has been created to trigger the compiling of the list of studies to be confirmed. This channel connects to the RIS db, queries the **c\_vw\_RADAR\_confirmation** and creates a file that contains the list of studies to be confirmed.

The output file is a comma separated file with the following columns:

- LastName
- FirstName
- HomePhone
- MRN
- EncounterID
- Accession
- Modality
- ProcedureCode
- Location
- ArrivalTime

The channel configuration is found in `\MirthConfig\RADARConfirmation.xml`

There are no channel mappings for this channel.

### **Response File from RADAR**

For the inbound implementation from RADAR I largely copied Stuart's implementation for MedVoice. See sprint documents "s19\Medvoice Confirmation Integration Continued\_(Stu).docx" for details.

The RADAR side of this portion is not yet completed. We are speculating it will be the same at the MedVoice implementation. If there are differences then we will need to adjust accordingly. The flat file from RADAR is a comma separated file (with no spaces between the fields) that contains:

- Status
- Mrn
- Encountered
- Accession\_number

The channel configuration is found in \MirthConfig\RADARInbound.xml

The channel mappings are found in \MirthMapping\Inbound\RADAR.

Mirth mappings were created to accept the inbound file and appropriately update the studies. If the patient id provided does not exist, an error will be thrown indicating that column 'last\_name' does not allow nulls. This is because the confirmation file does not have all the patient demographics necessary to create the new patient.

#### **DB Schema Changes**

New db view called c\_vw\_RADAR\_confirmation

New stored function call c\_GetFirstAppointment

### **Change Default User for New Install**

The default user for a new RIS install is "administrator". The authentication method is "Domain" (aka Active Directory). We should not default a user RIS to the Windows administrator user on the server where the RIS services are running.

The default RIS user for a new DB install is now set to be "RISAdmin". This account now uses RIS authentication (not active directory). The default password is "RISAdmin" (case sensitive). The RIS installation documentation has also been updated to reflect these changes.

### **Core Version Check**

A check is needed when we apply a patch build, that verifies that the core version of DLLs installed on the workstation matches the core version required for the patch build.

When coping the patch build dependencies a core version check is now performed. If the builds version does not match the installed core's version #, then a prompt is displayed and the application exits:

The RIS software is incompatible with the installed core version. \nContact an administrator to obtain the correct version.\n\nPatch Version is {0}\nCore Version is {1}

Note: when versioning the application such as 1.1.37.svn# where 37 in this example is the sprint number, the second digit will now be the core version so as of build 37 release we are incrementing that to 1.2.37.svn#. Each time we change a core DLL dependency we need to increment the core version in the release.

### **New Management Reports Added**

Front Desk Dashboard Management report - The Report shows a snap shot for the practice based off the selected dated and we break the dashboard into Daily Schedule, Frontdesk Activity, Modality availability and No Shows. The Daily schedule section shows the user all exams scheduled for the selected date for all sites within the selected practice. Within this report we show the user the all exams confirmed, if IVT or Pre-cert is required and the total of Complete vs Schedule exams. The Front Desk Activity section shows the number of exams the user scheduled, checked, walkins and the number of exams verified. The Modality section shows room availability. The report pulls the room availability from the modality template to show the minutes the room is open.

Sales Management reports – The sales team requested 9 new sales management reports:

- 6 Month Variance Report
- 13 Month Variance Report
- 13 Month Variance by Group Report
- 13 Month Variance by Physician location Report
- 13 Month Variance by Spec Group Report
- Month-over-Month Variance Report
- Quarterly Variance Report
- Year-over-Year Variance Report
- Year-to-Date Report

**6 Month Variance Report** – This report selects all exams for the entire selected month and all exams from the previous 6 months to display a variance between the selected month and the average of the previous 6 months. Note we exclude exams in status (Cancelled or Discontinued).

### 6 Mth Variance Report

Practice: Your Practice

Site(s): Your Site A, Your Site B, Your Site C, OutsideMed, PowerVille

Date Range: 11-01-2011 to 05-31-2012

\*Date chosen will assume the end of the selected month was intended.

Physician	Specialty	Site	Modality	Nov 2011	Dec 2011	Jan 2012	Feb 2012	Mar 2012	Apr 2012	Total	Mthly Avg	May 2012	Var
(123) 123-1231 23333			Total	0	0	0	0	1	52	53	8.8	0	(8.8)
(123) 123-1231 23333													
123 (123) 123-1231 23333			Total	0	0	0	0	0	2	2	0.3	0	(0.3)
a a			Total	0	0	0	0	0	1	1	0.2	0	(0.2)
aa aa			Total	0	0	0	0	5	355	360	60.0	3	(57.0)

Figure 4.62 – 6 Month Variance Report

**13 Month Variance Report** - This report selects all exams for the entire selected month and all exams from the previous 12 months to display a variance between the selected month and the average of the previous 12 months. Note we exclude exams in status (Cancelled or Discontinued).

### 13 Mth Variance Report

Practice: Advanced Radiology

Site(s): Eldersburg, Fisher, Lutherville, OutsideMed, PowerVille

Date Range: 06-01-2011 to 06-30-2012

\*Date chosen will assume the end of the selected month was intended.

Physician	Affiliations	Specialties	Site	Mod type	Jun 2011	Jul 2011	Aug 2011	Sep 2011	Oct 2011	Nov 2011	Dec 2011	Jan 2012	Feb 2012	Mar 2012	Apr 2012	May 2012	Mnthly Avg	Jun 2012	Var	Diff
Spencer MacDougall			Total		0	15	87	53	167	85	97	60	33	7	1	0	50.4	0	(50.4)	-100%
Terry Mills			Total		0	18	73	89	52	61	51	64	5	4	1	0	34.8	0	(34.8)	-100%

Figure 4.63 – 13 Month Variance Report

**13 Month Variance by Group Report** - This report selects all exams for the entire selected month and all exams from the previous 12 months to display a variance between the selected month and the average of the previous 12 months. Note we exclude exams in status (Cancelled or Discontinued).

### 13 Mth Variance by Group Report

Practice: Your Practice

Site(s): Your Site A, Your Site B, Your Site C, OutsideMed, PowerVille

Date Range: 05-01-2011 to 05-31-2012

\*Date chosen will assume the end of the selected month was intended.

Affiliations	Physician	Site	Mod type	Mod type	May 2011	Jun 2011	Jul 2011	Aug 2011	Sep 2011	Oct 2011	Nov 2011	Dec 2011	Jan 2012	Feb 2012	Mar 2012	Apr 2012	Mnthly Avg	May 2012	Var
			Total		7440	1227	2638	3744	352	1544	312	311	427	268	464	756	1623.6	128	-1495.6
1ST MEDICAL INC			Total		0	0	0	0	0	4	3	5	14	2	0	1	2.4	1	-1.4
A WOMENS CHOICE OB/GYN#   AAMC BREAST CENTER   ABC PEDIATRIC			Total		0	0	35	183	3	61	3	0	1	0	2	0	24.0	0	-24.0
AAMC BREAST CENTER			Total		0	0	0	0	0	0	0	0	0	0	0	0	0.0	1	1.0

Figure 4.64 – 13 Month Variance by Group Report

**13 Month Variance by Physician location Report** – This report selects all exams for the entire selected month and all exams from the previous 12 months to display a variance between the selected month and the average of the previous 12 months. Note we exclude exams in status (Cancelled or Discontinued).

### 13 Mth Variance by Phy\_Location Report

Practice: Your Practice

Site(s): Your Site A, Your Site B, Your Site C, OutsideMed, PowerVille

Date Range: 05-01-2011 to 05-31-2012

\*Date chosen will assume the end of the selected month was intended.

Physician	Practice	Site	Mod type	May 2011	Jun 2011	Jul 2011	Aug 2011	Sep 2011	Oct 2011	Nov 2011	Dec 2011	Jan 2012	Feb 2012	Mar 2012	Apr 2012	Total	Mthly Avg	May 2012	Var	Diff
(123) 123-1231 23333			Total	0	0	0	0	0	0	0	0	0	0	1	52	53	4.4	0	(4.4)	-100%
(123) 123-1231 23333			Total	0	0	0	0	0	0	0	0	0	0	0	2	2	0.2	0	(0.2)	-100%
(123) 123-1231 23333			Total	0	0	0	0	0	0	0	0	0	0	0	1	1	0.1	0	(0.1)	-100%

Figure 4.65 – 13 Month Variance by Physician Location Report

**13 Month Variance by Spec Group Report** – This report selects all exams for the entire selected month and all exams from the previous 12 months to display a variance between the selected month and the average of the previous 12 months. Note we exclude exams in status (Cancelled or Discontinued).

### 13 Mth Variance by Spec Group Report

Practice: Your Practice

Site(s): Your Site A, Your Site B, Your Site C, OutsideMed, PowerVille

Date Range: 05-01-2011 to 05-31-2012

\*Date chosen will assume the end of the selected month was intended.

Affiliations	Physician	Site	Mod type	Mod type	May 2011	Jun 2011	Jul 2011	Aug 2011	Sep 2011	Oct 2011	Nov 2011	Dec 2011	Jan 2012	Feb 2012	Mar 2012	Apr 2012	Mthly Avg	May 2012	Var	Diff
			Total		7440	1227	2638	3744	352	1544	312	311	427	268	464	756	1623.6	128	(1495.6)	
1ST MEDICAL INC			Total		0	0	0	0	0	4	3	5	14	2	0	1	2.4	1	(1.4)	

Figure 4.66 – 13 Month Variance by Spec Group Report

**Month-over-Month Variance Report** – This report selects all exams for the selected month up to the selected date and all exams from the previous month to display a variance between the selected month and the previous month. Note we exclude exams in status (Cancelled or Discontinued).

### Month-over-Month Variance Report

Practice: Advanced Radiology

Site(s): Eldersburg, Fisher, Lutherville, OutsideMed, PowerVille

Date Range: 06-01-2012 to 07-04-2012

Top N: 30

<i>*business day Mon-Fri and not a holiday</i>			Business Days		21	3	
Physician ↕	Specialties	Affiliations	Site	Mod type	Jun 2012	Jul 2012	Var ↕
⊞ Ian Power				Total	3	6	3.0
⊞ WILLIAM ARNOLD	General Practice			Total	1	3	2.0
⊞ Bobbie Pace				Total	0	1	1.0
⊞ Brittany Powell				Total	0	1	1.0
⊞ KevinClone MolyneauxClone	Allergist			Total	0	1	1.0

Figure 4.67 – Month-over-Month Variance Report

**Quarterly Variance Report** – This report selects all exams for the entire selected quarter and all exams from the previous 2 quarters to display a variance between the selected month's quarter and the average of the previous 2 quarters. Note we exclude exams in status (Cancelled or Discontinued).

### Quarterly Variance Report

Practice: Your Practice

Site(s): Your Site A, Your Site B, Your Site C, OutsideMed, PowerVille

Physician	Specialties	Site	Modality type	Qtr 4 2011	Qtr 1 2012	Total	Mnthly Avg	Qtr 2 2012	Var
⊞ (123) 123-1231 23333 (123) 123-1231 23333	Total			0	1	1	0.2	53	52.8
⊞ 123 (123) 123-1231 23333	Total			0	0	0	0.0	2	2.0
⊞ a a	Total			0	0	0	0.0	3	3.0
⊞ aa aa	Total			0	5	5	0.8	359	358.2

Figure 4.68 – Quarterly Variance Report

**Year-over-Year Variance Report**- This report selects all exams for the selected year and all exams from the previous 2 years to display a variance between the selected year and the average of the previous 2 years. Note we exclude exams in status (Cancelled or Discontinued).

## Year-over-Year Variance Report

Practice: Your Practice

Site(s): Your Site A, Your Site B, Your Site C, OutsideMed, PowerVille

Top N: 30

Physician	Site	Modality type	2010	2011	2 YearAvg	2012	Variance
aa aa	Total		0	0	0	364	364.0
WILLIAM SINTON JR	Total		42	134	88	198	110.0
Andrew WaiteW	Total		0	101	50.5	158	107.5
WILLIAM SCHWARTZ	Total		34	122	78	163	85.0
weewe wwewew	Total		0	0	0	56	56.0

Figure 4.69 – Year-over-Year Variance Report

**Year-to-Date Report** - This report selects all exams for the year up to selected date and compares exams from the previous year up to one year from the selected date. Note we exclude exams in status (Cancelled or Discontinued).

## Year-to-Date Report

Practice: Your Practice

Site(s): Your Site A, Your Site B, Your Site C, OutsideMed, PowerVille

Date Range(s): (01-01-2011 - 06-28-2011) to (01-01-2012 - 06-28-2012)

Top N: 30

Physician	Site	2011	2012	Variance
aa aa	Total	0	364	364.0
Andrew WaiteW	Total	1	158	157.0
Spencer MacDougall	Total	0	101	101.0

Figure 4.70 – Year-to-date Report

### Sales Metrics- Referring Physician Volumes:

**New Referrers Overview (new entries):** View of all new referring physicians with an entry date over the last 10 days. Ideally, a *Detailed View* (“drill-down”) would include City/Town, Specialty, type of study and an identifier for the patient (MRN, etc.).



New Referrers added last 10 days	
Practice	Total
☐ Your Practice	2
☐ Justin Wells	Hand Surgery
☐ Baltimore	2
☐ MR	1
☐ XR	1
☐ Wil Lewis	Anesthesiology
☐ Baltimore	1
<b>Total</b>	<b>2</b>

Figure 4.71 – New Referrers

**Minimalist Referrer View:** View would include all referring physicians that have referred any study for the first time in over 90 days. In order to prevent overlap with “New Referrers View,” this data would exclude new physician entries into the system. Ideally, a *Detailed View* would include City/Town, Specialty, type of study and an identifier for the patient (MRN, etc.).

**Top 10 Negative Referring Physician Monthly Variances:** Referring physician data from 2<sup>nd</sup> month would be compared to 1<sup>st</sup> month and dashboard would highlight top negative variances to this comparison (actual study count vs. percentages). After 3<sup>rd</sup> month, dashboard would compare Month 3 data to the monthly average of Months 1 & 2. Eventual goal would be to compare the most recently closed out month to the prior 12 month averages. ALL studies view, as well as separate views per each modality. \*w/specialty & group affiliation

Referrers ordering for first time in over 90+ days	
Practice	Total
☐ Advanced Radiology	1
☐ Jody Wilkins	
☐ N/A	1
☐ CT	1
LastReq: 176 T.34841 <a href="#">1069619</a>	
<b>Total</b>	<b>1</b>

Figure 4.72 – Minimalist Referrer View

**Top 10 Positive Referring Physician Monthly Variances:** Same comparison as above, but with positive variances. \*w/specialty & group affiliation

Top 10 Negative Variance				
Practice	Specialties	Business Days		Variance
		22 May 2012	13 Jun 2012	
☐ DATest		0.09	0.00	(0.09)
☐ Alice Gregory		0.05	0.00	(0.05)
☐ CT		0.05	0.00	(0.05)
	1000003610r 1069485			
☐ WILLIAM DAVIS	General Practice	0.05	0.00	(0.05)
☐ Your Practice		8.32	8.77	0.45
☐ Your Practice 2		0.05	0.00	(0.05)
<b>Total</b>		<b>8.45</b>	<b>8.77</b>	<b>0.32</b>

Figure 4.73 – Top 10 Positive / Negative Variance

**Referring Physician Volumes to Date “Search”:** The ability to pull a real-time data set for any referring physician that includes volumes to date for the month that we’re currently in, as well as historical monthly volume patterns. *Default View* would be ALL studies, but *Detailed Views* would provide data per each modality.

### Physician Search

Physician	Jan	Feb	Apr	May	Jun	Sep	Oct	Nov	Dec	Mnthly Avg	Total	Jun 2012	Variance
☐ Alyssa Jones	15	2	3	1	1	1	3	3	5		34		
☐ 2012	15	2	1	1	1	0	0	0	0	3.3	20	1	(2.3)
☐ 2011	0	0	2	0	0	1	3	3	5	1.2	14	0	(1.2)
<b>Total</b>	<b>15</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>5</b>		<b>34</b>	<b>1</b>	

Figure 4.74 – Referring Physician Volumes to date “Search”

**Top Referrers by Modality:** View would be month to date. Drill down will descend as far as needed. Detailed view that may also be helpful would be same view, but by affiliation (i.e., “Rockland Orthopedics”).

### Center Volume Metrics

Note: Initial challenge may be that volume data might only be available by Accession # vs CPT codes, but worth exploring.

Top Referrers			
Practice			Total
☐ Your Practice			134
☐ Your Site A			41
☐ Your Site B			43
☐ CT			5
	WILLIAM SINTON JR	General Practice	2
	aa aa		1
	Andrew WaiteW	Optometrist (for aphakia)	1
	WILLIAM SCHWARTZ	General Practice	1
☐ MA			4
☐ MR			2
☐ NM			1
☐ PT			31
☐ Your Site C			27
☐ OutsideMed			18
☐ PowerVille			3
☐ test1			2
<b>Total for: Jun 2012</b>			<b>134</b>

**Figure 4.75 – Top Referrers**

**Monthly Volume Reporting:** Similar view to the “Elaine” report, but in real-time rather than per week. Report would provide per day averages (5 day week) per modality for the particular month that we’re in.

Monthly Report				
Practice	Business Days	22	7	Total
		May 2012	Jun 2012	
☐ Advanced Radiology		2.3	1.7	4.0
☐ Eldersburg		0.4	0.7	1.1
☐ CT		0.3	0.7	1.0
71260		0.0	0.1	0.1
70482		0.1	0.3	0.4
74170		0.1	0.3	0.4
☐ XR		0.1	0.0	0.1
☐ Fisher		0.5	0.7	1.3
☐ Lutherville		1.4	0.3	1.6
☐ Borg/IDE		0.0	0.0	0.0
☐ DATest		0.1	0.0	0.1
<b>Total</b>		<b>2.4</b>	<b>1.7</b>	<b>4.1</b>

Figure 4.76 – Monthly Report

**Quarterly Volume Reporting:** Same comparison as above, but would provide a quarterly per day volume averages.

Quarterly Report				
Practice	Business Days	65	56	Variance
		Qtr 1 2012	Qtr 2 2012	
⊞ DATest		0.15	0.04	(0.11)
⊞ Your Practice		21.51	21.14	(0.37)
⊞ Your Site A		6.00	6.12	0.12
⊞ ??		0.02	0.09	0.07
⊞ BD		0.08	0.09	0.01
⊞ CT		4.20	3.61	(0.59)
⊞ MA		0.43	0.55	0.12
⊞ MR		0.18	0.05	(0.13)
⊞ US		0.31	0.34	0.03
⊞ XR		0.78	1.39	0.61
⊞ Your Site B		10.94	10.55	(0.39)
⊞ Your Site C		4.09	3.64	(0.45)
⊞ OutsideMed		0.48	0.57	0.09
⊞ PowerVille		0.00	0.21	0.21
⊞ test1		0.00	0.04	0.04
⊞ Your Practice 2		0.02	0.27	0.25
<b>Total</b>		<b>21.68</b>	<b>21.45</b>	<b>(0.23)</b>

Figure 4.77 – Quarterly Report

**Modality Usage Reports (per Day):** Exact same view as already built in the current ICM dashboard. View provides a daily view of % availability for each modality outside of scheduled exams.

Practice	% Room Usage	Minutes Free	% Free
☐ Advanced Radiology			
☐ Eldersburg	0.13		
☐ Fisher			
☐ Lutherville	0.94		
☐ PowerVille			

Figure 4.78 – Modality Usage Report

**% of Daily Exams Volume:** Scheduled & completed per modality w/canceled exam explanation e.g. aborted, no auth, etc.

Practice	% of Daily Exams Volume	Complete vs Scheduled
☐ Advanced Radiology		0/2
☐ Eldersburg		0/1
☐ Lutherville		0/1
<b>Total</b>		<b>0/2</b>

Figure 4.79 – % of Daily Exams Report

**Metrics:** RTAT (all except mammo & mammo only)

Mammo Exams (Procedure Category is BRE)		
☐ Week Ending	ADV	# Signed Exams
☐ 06/08/2012	40.00 %	5
☐ 06/15/2012	100.00 %	1
☐ 06/22/2012	100.00 %	1
<b>Total</b>	<b>57.14 %</b>	<b>7</b>

Figure 4.80 – RTAT Report

## Reporting – Rewind and Fast Forward Speed Setting

A user preference was added that will allow users to set the rewind and fast forward speed in a range of 2 – 50, with 1 being the normal playback speed.

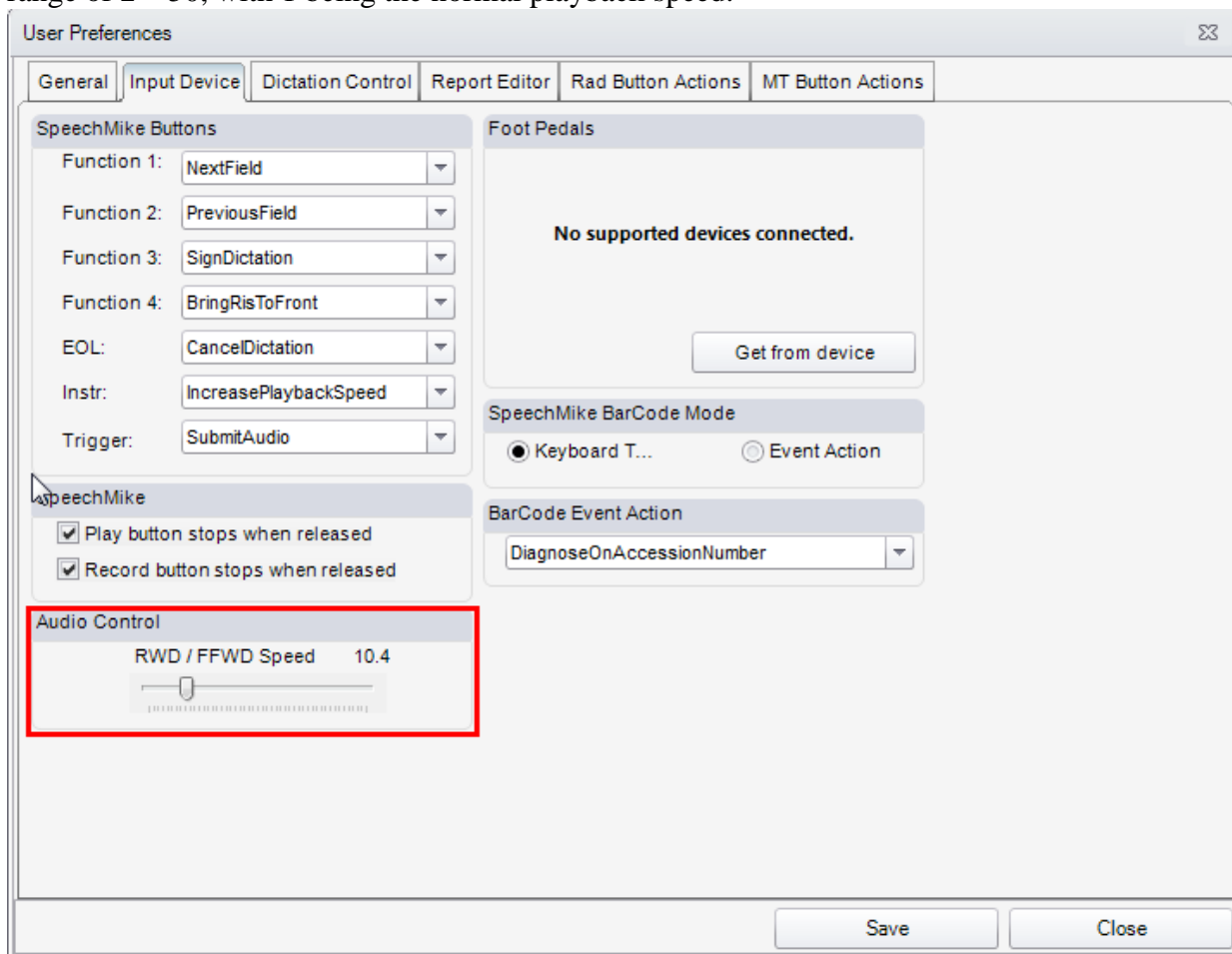
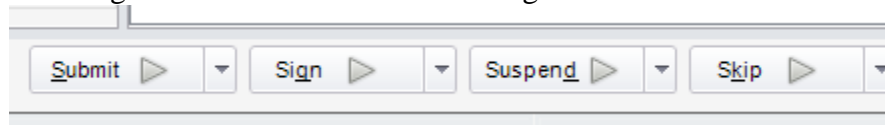


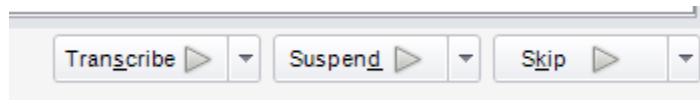
Figure 4.81 – User preference Audio Control rewind/fast forward speed

## **User Preferences for Radiologist and Technologist window buttons**

User preferences have been added so default action of the buttons located in the lower left of the Radiologists windows and the Technologist windows can be defined in one location.



**Figure 4.82 – Buttons available for Radiologists**



**Figure 4.83 – Buttons available for Technologists**

Two new tabs were added to user preferences to accommodate assigning the action of each of the above displayed buttons in each of the windows associated with the Radiologist and Technologist roles.

In the figures below you can see that each work list is listed and the default action of the button that can be assigned.



User Preferences

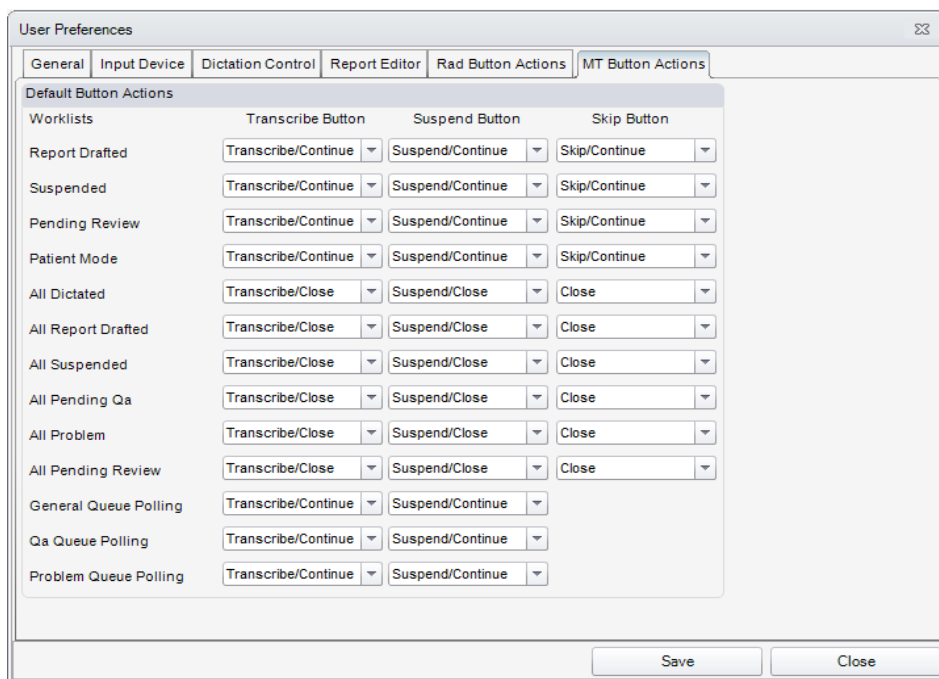
General Input Device Dictation Control Report Editor **Rad Button Actions** MT Button Actions

Default Button Actions

Worklists	Submit Button	Sign Button	Suspend Button	Skip Button
Pending Dictation	Submit/Continue	Sign/Continue	Suspend/Continue	Skip/Continue
Dictated by Date	Submit/Close	Sign/Close	Suspend/Close	Skip/Continue
Suspended	Submit/Close	Sign/Close	Unsuspend/Close	Skip/Continue
Pending Edit	Submit/Continue	Sign/Continue	Suspend/Continue	Skip/Continue
Pending Signature	Submit/Continue	Sign/Continue	Suspend/Continue	Skip/Continue
Signed, Pending	Submit/Close	Sign/Close	Suspend/Close	Skip/Continue
Patient Mode	Submit/Close	Sign/Close	Suspend/Close	Skip/Continue
All Pending Dictation	Submit/Close	Sign/Close	Suspend/Close	Close
All Dictated	Submit/Close	Sign/Close	Suspend/Close	Close
All Suspended	Submit/Close	Sign/Close	Suspend/Close	Close
All Pending Signature	Submit/Close	Sign/Close	Suspend/Close	Close
All Signed, Pending	Submit/Close	Sign/Close	Suspend/Close	Close
All Signed by Date	Submit/Close	Sign/Close	Suspend/Close	Close

Save Close

**Figure 4.84 – Radiologist work list button actions**



**Figure 4.85 – Transcription work list button actions**

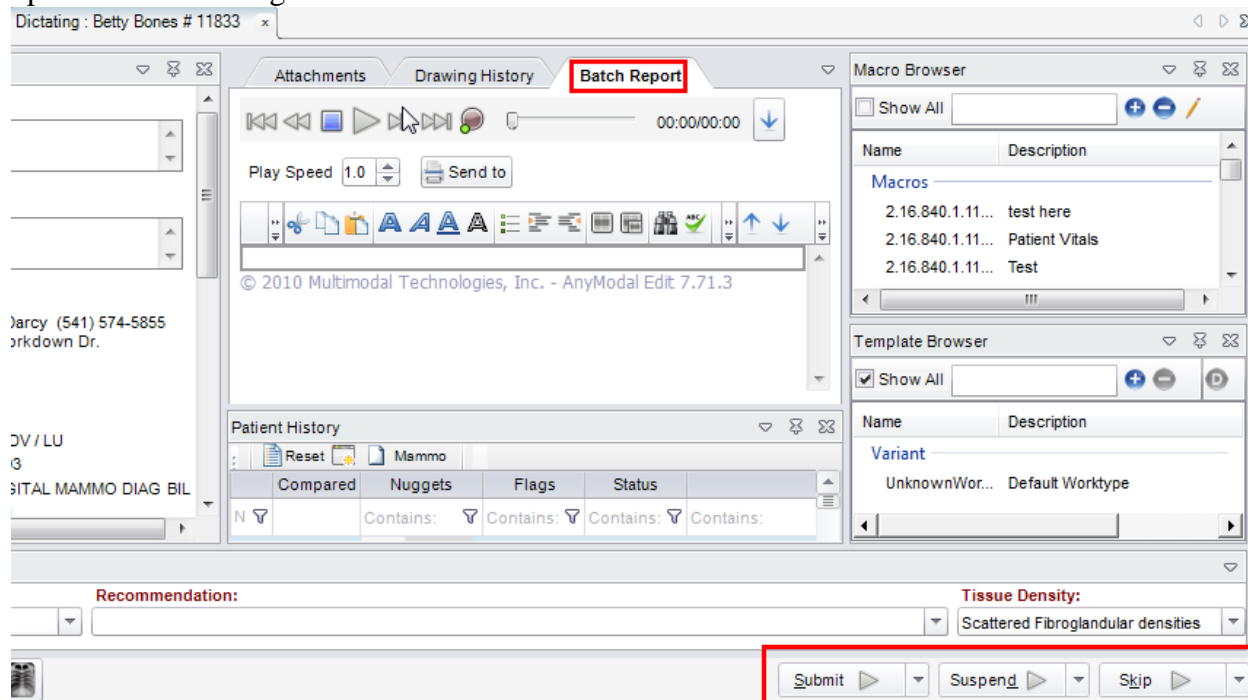
The values available in the dropdowns should relate to the workflow. In some cases when workflow starts in certain work lists the available actions will vary. For instance, since work lists intended for user exclude suspended items from their view, these work lists wouldn't need an unsuspend option, but the same work list intended for an admin (All keyword) included suspended items and will have an unsuspend option.

MT workflow where they poll jobs from the webserver is intended to force work to MTs, skipping the jobs is not allowed. So for these three worklists there are no options at all on the skip button as it is forced to close.

Holding the CTRL button when clicking on a sub-item in the action buttons will set that item up as the default for that workflow, it will not fire the action as it used to.

## **Reporting – Sign Button Removed for Batch Dictation**

If the user is dictating in Batch mode (non-interactive) the sign button will no longer be an option in the Pending Dictation window.

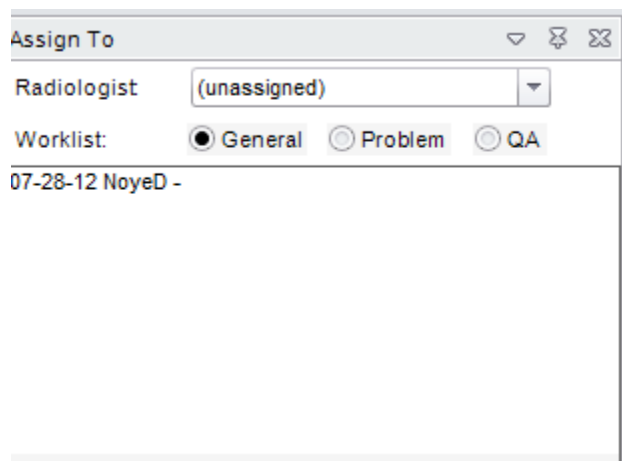


**Figure 4.86 – Sign button removed from Pending Dictation when recording in Batch**

## **Reporting – Problem and QA Work Lists for Radiologists**

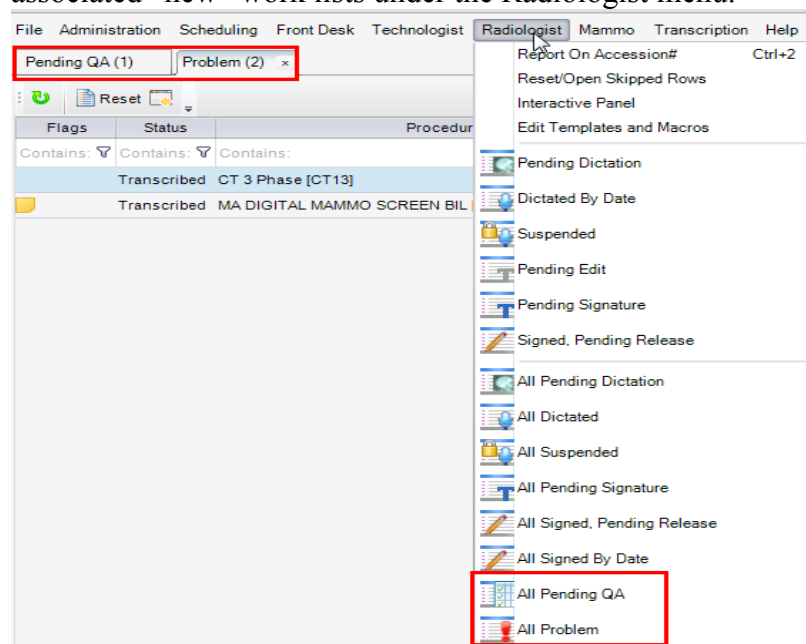
Similar to the pre-existing Problem and QA work lists for transcription, we have added Problem and QA work lists for radiologists. When in one of the radiologist's data windows the assign to data pane will allow for the study to be assigned to one of these work lists.

Access to these work lists are controlled by two new user permission access strings  
WL.Rad.QA – grants access to the Radiologist All Pending QA work list  
WL.Rad.Problem – grants access to the Radiologist All Problem work list



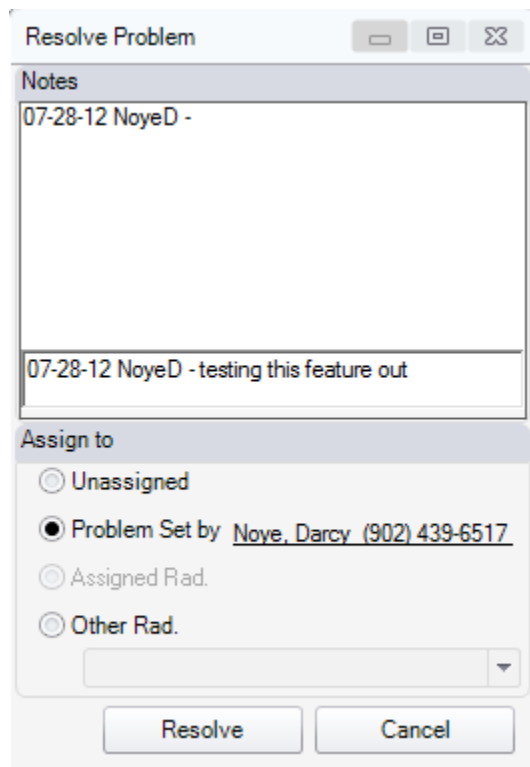
**Figure 4.87 – Assign To in radiologist window**

Once assigned to either the Problem or QA work lists these studies can be accessed from the associated “new” work lists under the Radiologist menu.



**Figure 4.88 – New Problem and QA work lists.**

From the All Problem work list a new pop up menu that is accessed from the context menu of has been added to resolve problems. The Resolve Problem window that opens will allow user to attach notes to the study assign to a particular Radiologist, mark it unassigned, or leave set to the user who set the problem (this is the default action).



**Figure 4.89 – Resolve Problem window**

## **Reporting – Dictation Control Stop When Play or Record Released**

In build 37 two more user preferences of “Play button stops when released” and “Record button stops when released” have been added. These user preferences only work with Speechmikes that buttons for play and record and will not work with “slider” style Speechmikes.

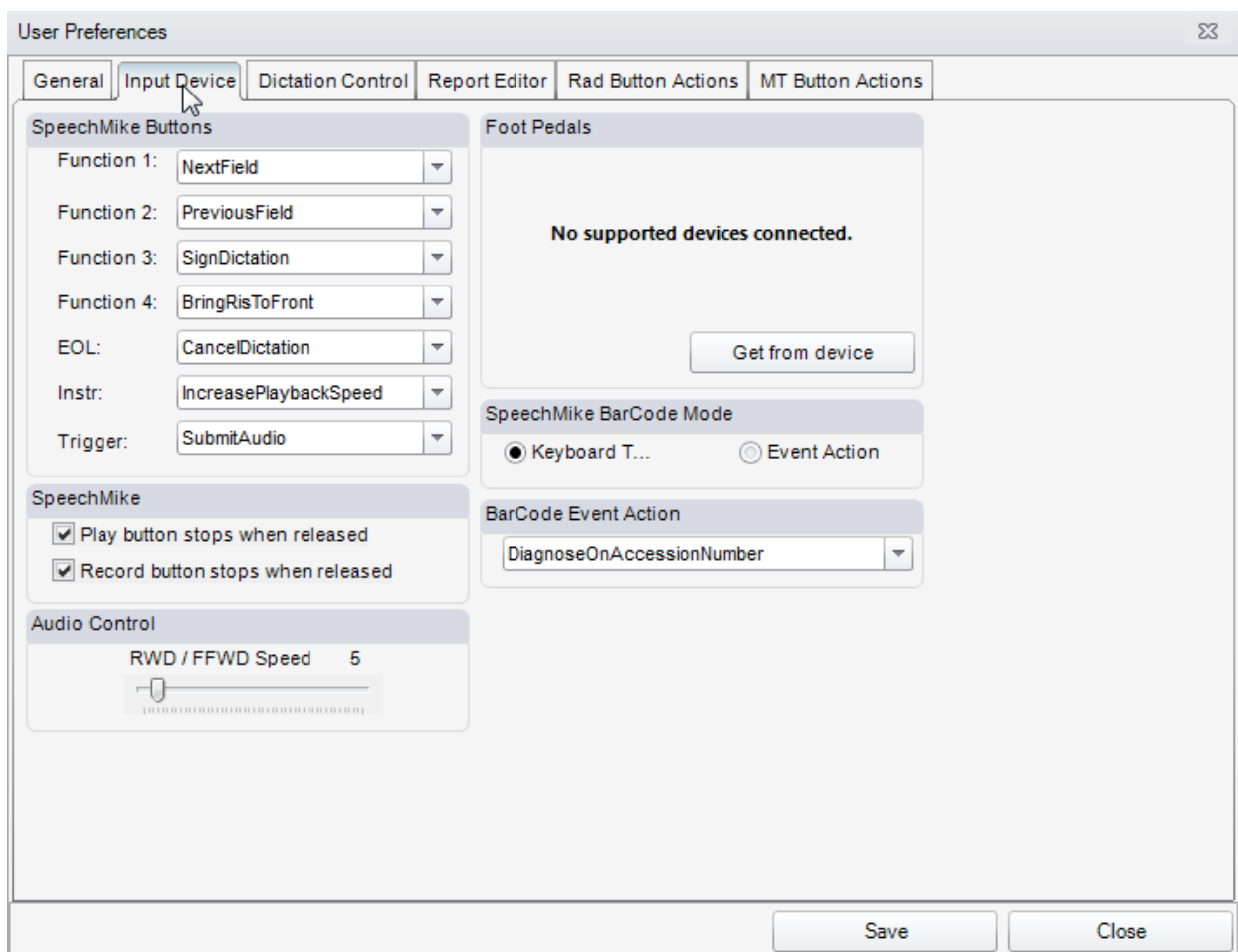


Figure 4.90 – SpeechMike user preferences

## Reporting – Bolding Current Value in “Assign To” Lists

From work lists we can assign the study to a particular radiologist or transcriptionist. When the list is opened, the currently assigned user will be bolded. If the study is not assigned, the (unassigned) option in the list will be bolded.

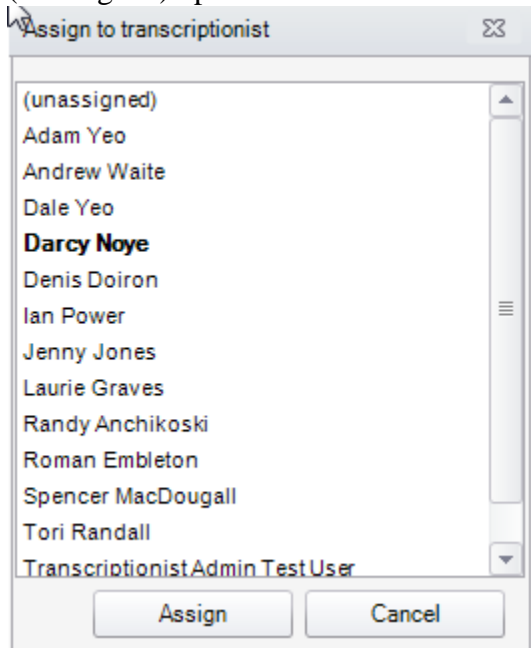


Figure 4.91 – Assign to Transcriptionist with current assigned user bolded

## Reporting – Audit History Change for CDSManager

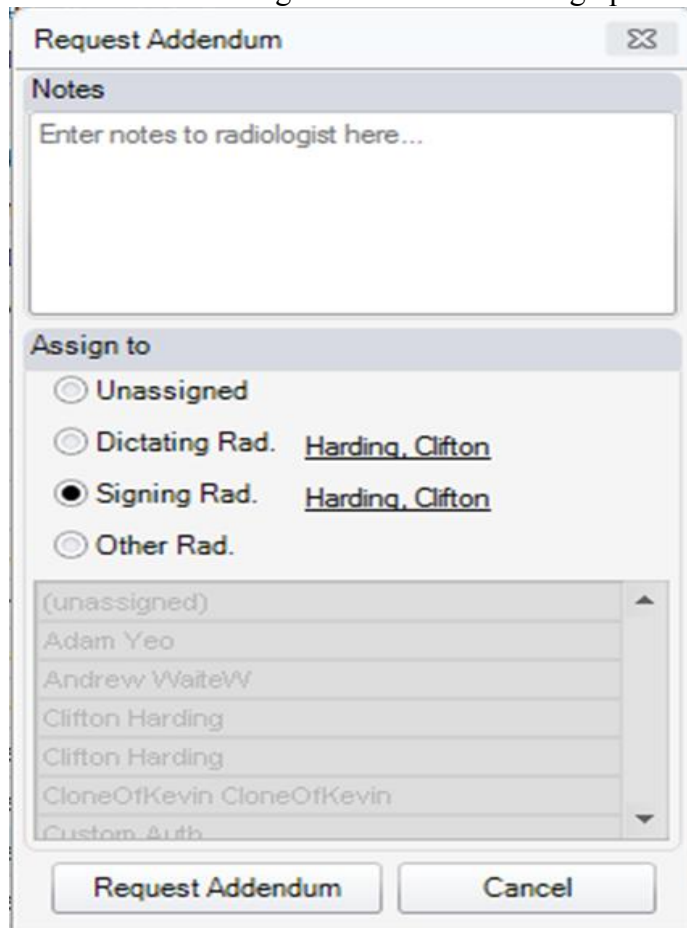
Audit log used to show “Study drafted” message for all studies was processed by the job manager, whether it retrieved a draft or only a typing document. Now when a Typing document is the result it will show in the audit log with a “Study not drafted, typing document retrieved” message instead.





## Reporting - Request Addendum

When right clicking on a signed study, user will now see a context menu item called “Request Addendum”. Clicking on that item will bring up the following popup dialog.



**Figure 4.94 – Request Addendum window**

From this screen user is able to write notes for the radiologist and choose who should be assigned to addend the report. This will default to the signing radiologist. Here is the data it changes:

```
assigned_radiologist = assigned rad selection  
transcription_notes = notes in textbox  
note_to_radiologist_flag = "Y";  
addendum_requested_flag = "Y";
```

When right clicking on a study that is already marked for addendum. The context menu will show “Cancel Addendum Request” which will cancel the request. Here is the data it changes

```
Setassigned_radiologistNull();  
Settranscription_notesNull();  
note_to_radiologist_flag = "N";  
addendum_requested_flag = "N";
```

When a study is marked for addendum it will show up the pending dictation work lists. The rad will dictate it as he does his other studies. He will get a prompt indicating that an addendum was requested for this study. When he dictates the study he will see the notes and need to acknowledge them before moving it forward

### Reporting - Resend Interpretation for VR

Added a context menu item to the standard transcriptionist context menu for worklists called “Resend for recognition”. When this is used, it will be logged in the audit log, the study will return to dictated status, and the CDSManager will pick it up from there for recognition. We also added the interpretation type code to most worklists for rads/trans.

### Reporting – Report Editor Preferences for Color, Fonts and Font Size

In build 37 the report editor can be customized to the users liking. From within the report editor from a right click will open the context menu. Selecting Editor Appearance will open the Editor Preferences window with options for the report text and for the Sections.

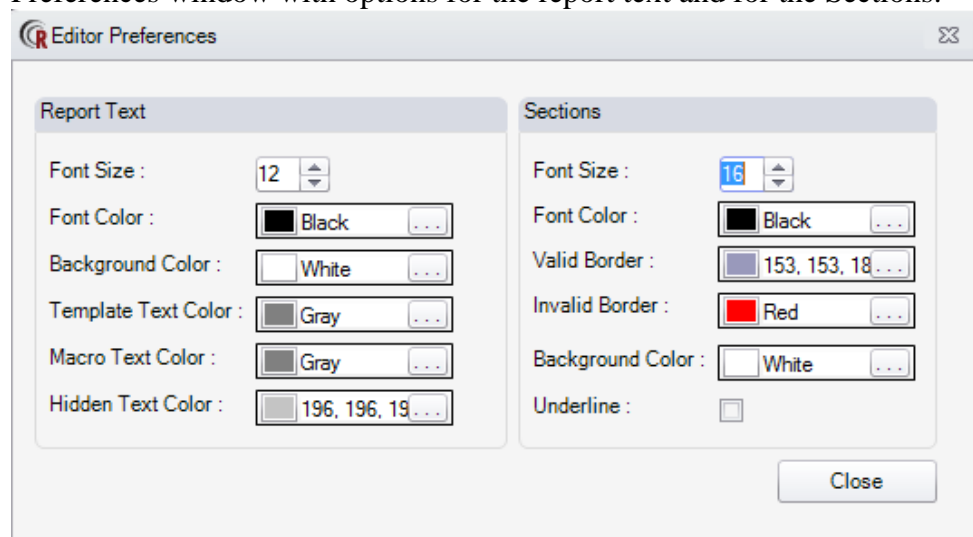


Figure 4.95 – Editor Preferences

Description of settings:

## **Report Text**

- 1) Font Size will control the font size of report text excluding section titles. Min 8 – Max 40
- 2) Font color controls the font color of the text in the report. This will be the color of the text that is typed or recognized as speech to text. This will not include normal text or canned text in the report
- 3) Background Color will control the color of the report excluding the background and outline of sections
- 4) Template Text Color controls the canned text that exists in a template when its used
- 5) Macro Text Color controls the color of the text inserted into the editor
- 6) Hidden Text Color will control the color of hidden text returned in batch mode if there any. Typically this text is placed at the top of the report.

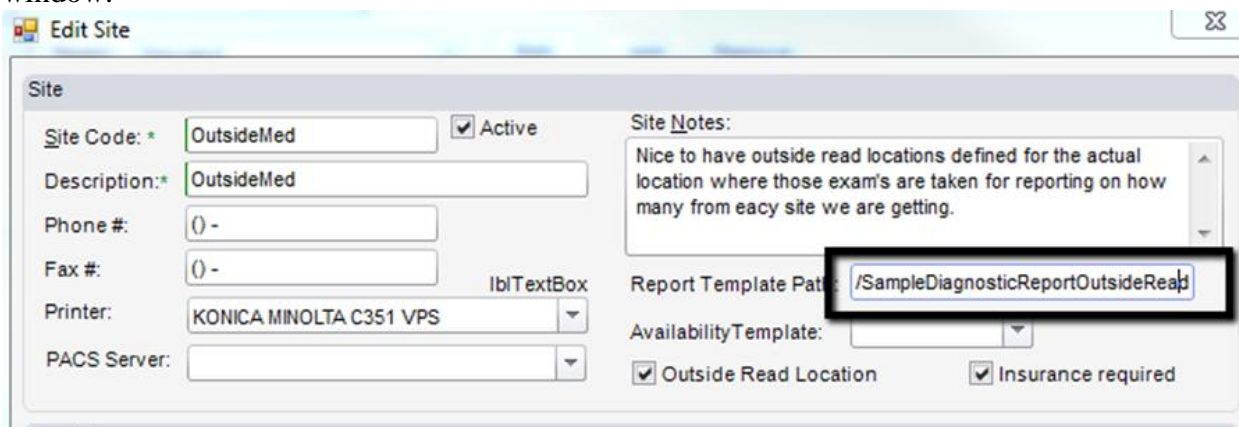
## **Sections**

- 1) Font Size will control the font size of the section title text only
- 2) Font Color will control the color of the section title text only
- 3) Valid Border Color will control the border color around sections if they are valid. To hide the border make this color the same as the report background color or section background color.
- 4) Invalid Border Color will control the border color around sections that are invalid as defined by the document model rules and setup.
- 5) Background Color will control the only the color of the background of the section title area.

Underline will place an underline under section titles

## Site Level Report Templates

Templates can be assigned at the Site Level. From the Organization lookup table and editing the particular site in question, the report template path can be specified in a new field added to this window.

The screenshot shows a software window titled "Edit Site". It contains several input fields and checkboxes. The "Report Template Path" field is highlighted with a red rectangular box. The text entered in this field is "/SampleDiagnosticReportOutsideRead". Other visible fields include "Site Code" (OutsideMed), "Description" (OutsideMed), "Phone #", "Fax #", "Printer" (KONICA MINOLTA C351 VPS), and "PACS Server". There are also checkboxes for "Active", "Outside Read Location", and "Insurance required". A "Site Notes" text area is also present.

**Figure 4.96 – Site template path**

This new field called Report Template Path will be a pointer to a template created on the SSRS server. It expects a path that will be appended to the Report Server URL configuration value. It will use these two parameters to create the full uri to the report.

For example the system configuration values used are:

ReportServerUrl: <http://10.120.19.10/ReportServer>

DiagnosticReportDefaultBody: /Forms/ADVDiagnosticReport

The above values will be concatenated to create the complete path of

<http://10.120.19.10/ReportServer/> Forms/ADVDiagnosticReport

If the setting in the Site>Report Template Path field is blank or null then it will always default to the System Configuration value as a default.

## Calculating Default and Normal Templates

When creating template we have the option to mark them as default or normal. In a perfect world perhaps we would only ever have one default and one normal per study. But in reality, based on the assignments made to the template as far as practices/procedures/users that it applies to, there can be overlap.

What happens if for a particular study there is overlap? Perhaps it has five qualifying default templates. In that case we score the rule set of the templates, and use the highest scoring one. The same would apply to normal, but they are scored and processed separately. The idea of rule set scoring is to mathematically represent how specific the rule set is. The more specific it is the higher the score.

The most specific rule set score would be a rule set assigned 1 practice, one procedure, and 1 user. It cannot get more specific than this, therefore it will score 100%. The more items are assigned to a rule set, the lower the score will be.

I've inserted a table that may be used as reference, or even altered to identify the scores on your specific scenario.

So far we've been talking only about template marked as default/normal in the template editor.

The user also has the ability to mark items in the template browser as default/normal by way of a context menu. These assignments will always take precedence over template level default/macros talked about above. But conflict may still occur and if multiple templates are marked as default/normal by the user in the browser, the rule set score will come to the rescue again and break the ties.

#Practice	#Procedure	#User	Corrected #Practice	Corrected #Procedure	Corrected #User	Score
1	1	1	1	1	1	100.000%
0	1	1	9	1	1	11.111%
0	2	1	9	2	1	5.556%
1	20	1	1	20	1	5.000%
2	10	1	2	10	1	5.000%
1	10	2	1	10	2	5.000%
0	1	0	9	1	74	0.150%
1	0	1	1	690	1	0.145%
0	0	1	9	690	1	0.016%

**Table 4.1 - The above table is interactive. Edit numbers in any of the columns to see the overall score change.**

## **Reporting – Macro and Template Browser Navigation Enhancements**

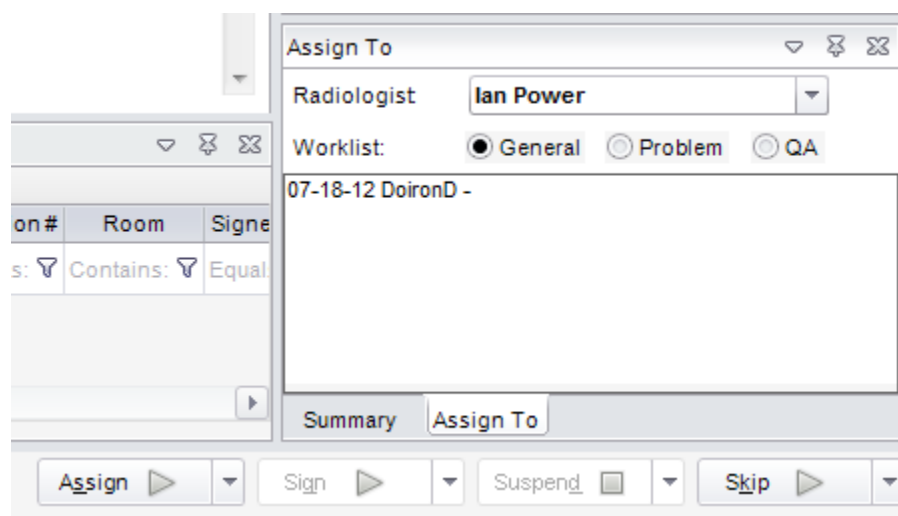
Fixed were several bugs and focus problems with the browsers but more notably we added the CTRL+UP and CTRL+DOWN shortcuts. The CTRL+UP places the cursor into the search box within the currently selected browser. CTRL + DOWN move the cursor out of the search box and selects the first item in the browser for further navigation or insertion.

We also now select an item in the list when the browser is selected which will allow the users to quickly navigate using the UP and DOWN keys.

## **Reporting – Assign To Panel**

The control was changed around a bit to make it more intuitive and more useful. We...

Moved the notes control bellow the “Assign to” controls.



**Figure 4.97 – Assign To data pane**

The assigned transcriptionist control will be pre populated with whoever it is assigned to at the time. This field however does not have to be blanked out in order to transcribe, because only when the value is different will is assign it to that value. If the value didn't change then it will remain assigned to that particular person and will move on to transcribed status

Whenever a value is changed in the assign to panel the main action button on the screen, either Submit, or Transcribe, will change to Assign to. All other button other than skip will be disabled. This should make it clear to the user that values were changed and what action will take place.

To remove the Assign to button and return to the normal workflow, the assign to panel values will have to be reset to their initial values. Made easier by them being bolded.

When the assigned to user value is changed it will show as bolded text. This lets the user know that this was modified and also the “Assign” button will become enabled.

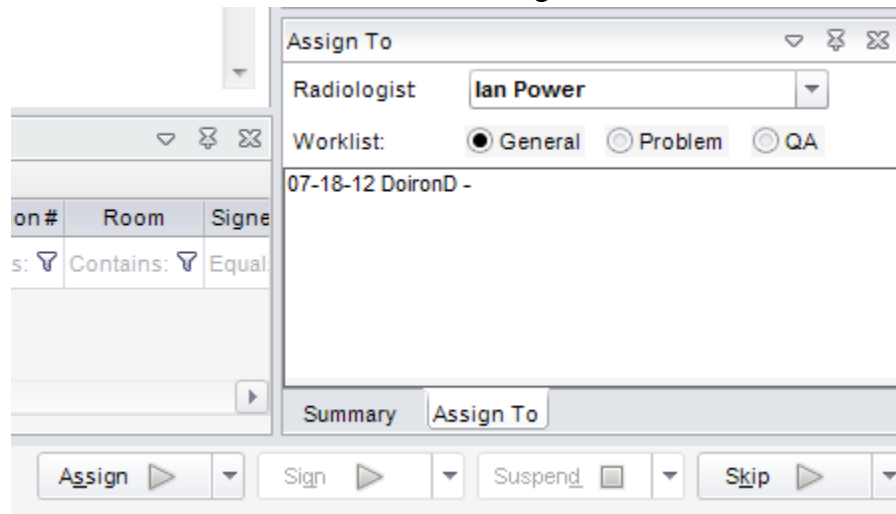


Figure 4.98 – Assign To data pane user in bolded text

When looking at a drop down list, the previously assigned to value will show as bolded text. This provided the user the ability to return to the previous value, or simply see what the value was before they changed it.

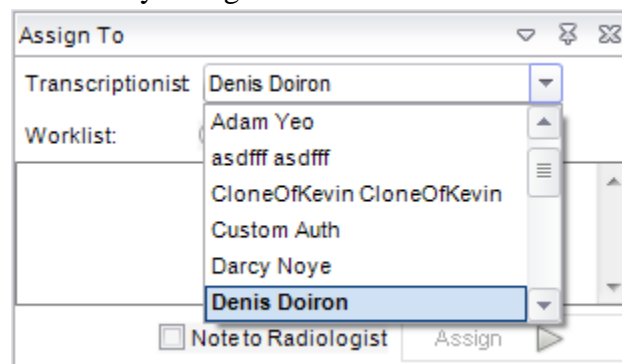
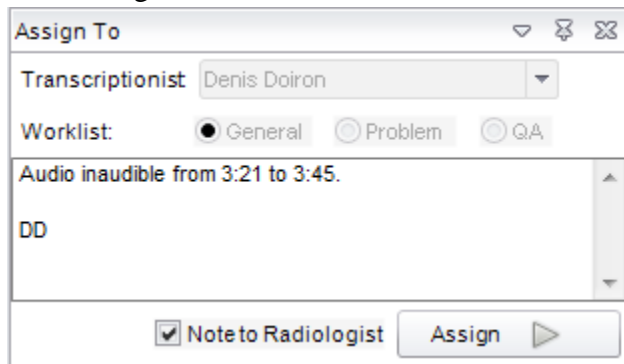


Figure 4.99 – Assign To list box showing user in bold

When writing radiologist notes, both the notes must be entered and the checkmark must be checked in order for the “Assign” button to enable. All other controls will disable when the

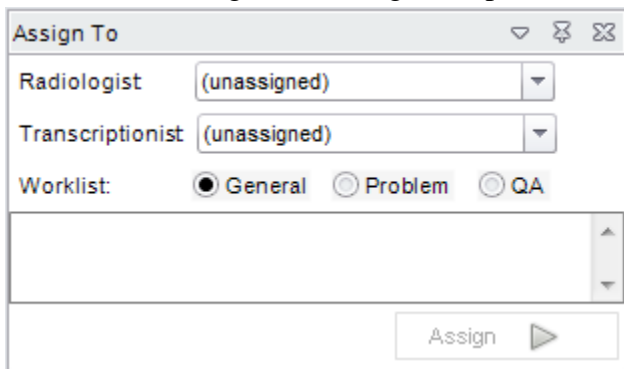
“Notes to Radiologist” check box is checked. Also any changed to these controls will be reverted to their original values.



The screenshot shows a window titled "Assign To" with a close button and a help icon. It contains a "Transcriptionist" dropdown menu with "Denis Doiron" selected. Below it is a "Worklist" section with three radio buttons: "General" (selected), "Problem", and "QA". A text area contains the text "Audio inaudible from 3:21 to 3:45." followed by "DD". At the bottom, there is a checkbox labeled "Note to Radiologist" which is checked, and an "Assign" button with a right-pointing arrow.

**Figure 4.100 – Assign To “Note to Radiologist checked**

We added an assigned radiologist drop down, which will only be visible in Radiologist screens



The screenshot shows a window titled "Assign To" with a close button and a help icon. It contains a "Radiologist" dropdown menu with "(unassigned)" selected. Below it is a "Transcriptionist" dropdown menu also with "(unassigned)" selected. Below these is a "Worklist" section with three radio buttons: "General" (selected), "Problem", and "QA". A text area is empty. At the bottom, there is an "Assign" button with a right-pointing arrow.

**Figure 4.101 – Assign To Radiologist field**



## **Reporting – Miscellaneous Enhancements and Fixes**

### **Send To button access string**

Added Reporting.SendTo as an access string, when set to none it will remove the button.

### **Transcription Summary Fixes**

Location wasn't copying to the clipboard, and Laterality was missing.

Added Location to the copy to clipboard code, added laterality at the end of the procedure code line.

Also cleaned up the copy to clipboard functionality so that's it's ordered better, spaced better and only copying what is on the screen and not hidden unpopulated values.

Example:

Priority: Normal

Location: MD / ADV / LU

MRN: 11504776

Patient: Gemma Wojtowich 80y 2m (M)

Accession: 1059842

Procedure: CTA Abd Aorta Runoff W/Wo [75635]

Performed Date: 03-27-2012 7:28 AM

Referring: MolyneauxClone, KevinClone (902) 439-4503

Dictated: Doiron, Denis (902) 439-3656

Performed By: Test User, Technologist (999) 999-9999

Tech Notes: sgferwte

### **Prompt to Run SpeechMike Wizard**

When a user unplugs their speechmike, or starts using a different one. The Mic Wizard setting will point to a non-existent device. This causes an error. In this error we now inform the user to run the mic wizard.

### **Editor Ctrl + Shift + Up or Down Arrows**

CTRL + Shift + Up or Down should select paragraphs up or down as it does in most editors. But in our case that shortcut was being used to navigate grids on the screen, in this case patient history. It has been changed so that this will now work in the editor.

### **Transcribing Assigned Studies**

Currently when an MT is assigned a job, and she opens it it will show her in the assign to control.

Now when she transcribe it will try to assign it to her again, so she needs to go clear out the value then transcribe again.

We will no longer pre populate that field, it will always load up empty.

### **Transcription Polling Lock Issue**

MT polling is broken for multiple studies on the same order, a timing issue exists where the MT will lose work because her lock will be lost.

A GuiLockManager refactor will be required but for now all we did is change the GetAvailableCDSJob to not return any locked items, not even the ones owned by the current user.

## New Fields for Physician Details

Added three new fields to the personnel notes section (Image Preference, Specialty Read and Referring Protocol)

Lookup Tables - Personnel

Username	First Name	Last Name
darcyn	Darcy	Noye

General Resource Account **Notes** Attachments Preferences Create New Search

**Image Preference Notes:**  
Testing this feature.

**Specialty Read Notes:**  
All of the Neuro MRI to be read by a Neuro Radiologist

**Referring Protocol Notes:**  
Always send their patients in for a 4 view knee but wants very specific view.

Internal Notes:

Figure 4.102 – Notes fields in personnel editor

When a search is performed for this referring physician, the three new notes sections will also appear in the search.

Referring Search

Search Criteria

First Name: City: Last Name: noye Phone #: NPI: Search Reset Add Unknown

Last Name	First Name	Summary	Image Preference	Specialty Read	Referring Protocol
Noye	Darcy	Direct Referral Program Pre-Auth Program User ID: darcyn Male darcy.noye@radnet.com Cell: (902) 439-6517 Internal ID: 1125 NPI: 9876541231 Radiology Diagnostic X-Ray Occupational Therapy	Testing this feature.	All of the Neuro MRI to be read by a Neuro Radiologist	Always send their patients in for a 4 view knee but wants very specific view.

Figure 4.103 – Referring search shows notes fields

If the referrer selected has specific notes in these three fields, they can also be viewed on the data window in the Referring Details section on the Order tab.

The image notes appears in its own section.

Order | Schedule | Image Request (0) | Review

Referring Details

Referring: \* Noye, Darcy T ☐ Direct Referral

Visited at: \* 154 Workdown Dr., 1, Worktown, MD, 45742

Img Notes: Testing this feature.

Figure 4.104 – Image notes on Order tab

Specialty Read notes appear in a tooltip window when the ICON is hovered over.

Referring Details

Referring: \* Noye, Darcy T ☐ Direct Referral

Visited at: \* 154 Workdown Dr., 1, Worktown, MD, 45742

Img Notes: Testing this feature.

Specialty Read:  
All of the Neuro MRI to be read by a Neuro Radiologist

Figure 4.105 – Specialty Read notes

The Referring Protocol notes also appear in a tooltip window when the ICON is hovered over.

Referring Details

Referring: \* Noye, Darcy T ☐ Direct Referral

Visited at: \* 154 Workdown Dr., 1, Worktown, MD, 45742

Img Notes: Testing this feature.

Referring Protocol:  
Always send their patients in for a 4 view knee but wants very specific view.

Figure 4.106 – Referring protocol notes

## Button and Context Menu Options Added to Patient Search

Added the button “New Patient” to the top of the search screen for the case where you can’t find the patient you want and only want to add a note to their patient file and first need to create the patient.

Also, added the following context menu’s and bottom buttons.

The screenshot shows the 'Patient Search' window. At the top, there are input fields for 'First Name', 'Last Name' (containing 'test'), 'Birth Date' (mm-dd-yyyy), 'Phone #', and 'MRN'. There are 'Search', 'Reset', and 'New Patient' buttons. Below the search criteria is a table of search results. A context menu is open over the first row, showing options: 'Patient Folder in New Tab', 'New Appointment', 'New Walk-in', 'Edit Patient', 'Copy Cell', and 'Patient Folder (Preview Mode)'. At the bottom of the window are buttons for 'Patient Folder', 'New Appointment', 'New Walk-in', 'Edit Patient', and 'Close'.

First Name	Last Name	Middle Name	Birth Date	MRN	Issuer	Gender	Address	City	State	Home Phone	Mobile Phone	Matching Alter MRN
mike	Testyyy	13747	04-14-1972	4874	RIS	U	13 Second Boulevard	Little Rock				
Kevin	testabcaa		08-09-1981	56								
test	tester		09-14-2010	10								
Jess387	TEST_SaveCompleteStudy		09-20-2007	12								
Jess387	TEST_SaveCompleteStudy		09-20-2007	12								
Jess387	TEST_SaveCompleteStudy		09-20-2007	12								
Jess387	TEST_SaveCompleteStudy		09-20-2007	128711	RIS	U						
Angelique	TEST_SaveCompleteStudy		12-19-1970	128733	RIS	U						
Angelique	TEST_SaveCompleteStudy		12-19-1970	128834	RIS	U						

**Figure 4.107 – New buttons and context menu options for patient search**

When in the patient search popup the bottom buttons and context menu items are hidden and if the patient search is on a popup which is launched from a content base that Search/New Patient icon buttons then the “new Patient” button on the search popup will close the popup and click the “New Patient” icon on the content screen and will populate the default values for the new patient based on what was typed in the search screen.

## Modality Type Selection for Outside Reads

A new combo box has been added to the Outside Read order tab. The combo box is populated with key/values from **l\_modality\_type**. In the background we will still try to determine the modality type, but if the site does not have a suitable configuration, the user will have the ability to enter the modality type in this new combo box. The Modality type field will be required.

The screenshot displays the 'New Outside Read' form in the eRAD RIS system. The form is divided into two main tabs: 'Patient' and 'Order'. The 'Order' tab is currently selected. The form includes several sections and fields:

- Study(ies):** A text area containing 'CT Abdomen W Pelvis W CTA Chest W/Wo'.
- Body Part:** A dropdown menu set to 'Abdomen'.
- Laterality:** A dropdown menu.
- Exam Date:** A date field set to 'mm-dd-yyyy'.
- Ext. Accession:** A text field.
- Modality Type:** A dropdown menu with a list of options: 'Angiography', 'Bone Density', 'CT', 'Endoscopy', and 'Fluoroscopy'. The 'CT' option is currently selected.
- Referring Details:** A section with 'Referring:' and 'Visited at:' fields.
- CC Physicians:** A text field.
- Visit Location for CC:** A dropdown menu.
- Performed Location:** A section with 'Practice:' (set to 'Advanced Radiology') and 'External MRN:' fields.
- Site:** A dropdown menu.
- Flags:** A section with checkboxes for 'STAT Read', 'STAT Precert', and 'Digital' (checked).
- History:** A text area for recording history.
- Order Notes:** A text area containing '07-28-12 NoyeD -'.

At the bottom of the form, there are 'Save' and 'Close' buttons.

**Figure 4.108 – Modality Type Field**

## Dynamic Printer to Document Type Configuration

Added in build 37 is the ability to map printers based on document type, per site / practice. This will give facilities ability to direct print traffic to various destinations.

A new lookup table titled PrinterConfig has been added which allows administrators to configure the practice / site printer where a particular form category should be directed to be printed.

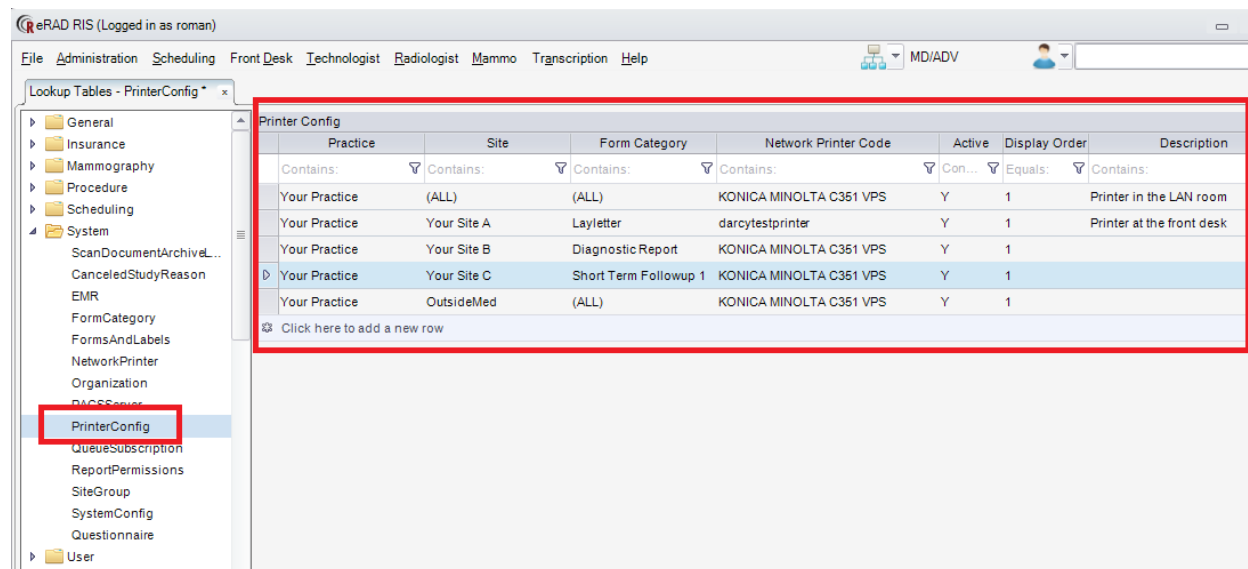


Figure 4.109 – PrinterConfig lookup table

For the build 37 upgrade an upgrade script was written. to copy network printers from current site configuration to the new lookup table. By default in the new lookup table the existing printer(s) for site will be mapped to (ALL) document types → to maintain previous configuration. Going forward users can use a new lookup table in the Administration under → System → Printer Config to define a more granular mapping or printers to document types.

This configuration primarily affects ALL back end document print distribution, and ALL mammography letters.

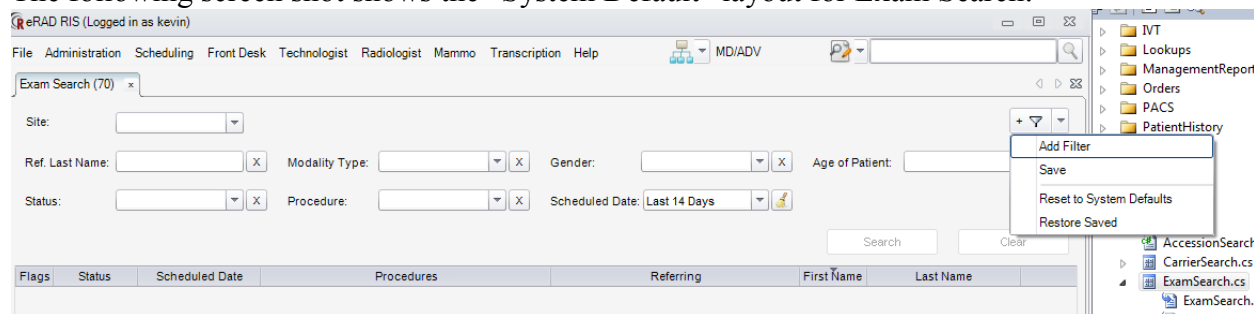
**NOTE:** Printer selection dropdown has been removed from the Add/Edit Site window. All future printer configurations to Practice / Site / Document Types will now be done via this new lookup table.

### Exam Search

We've added a new search provider called "Exam Search", which has a dynamic set of search criteria. The only search parameter that is always present is Site, picking a site automatically gets remembered, any other changes to search filters can only be saved if they explicitly choose the +Filter, Save option.

To prevent extremely poor system performance we recommend users choose a site and require the user to choose a date range, which is less than equal to 14 days.

The following screen shot shows the "System Default" layout for Exam Search:



**Figure 4.110 – Exam Search window**

Users can remove filters by clicking the "X" buttons or use drag and drop on the labels to reorder the filters. The first three user defined filters are used in the toolbar's "Quick Search" text box.

All text box inputs such as "Ref. Last Name" matching on values starting with that text. Contains type of matching has not been provided at this time so we can better evaluate performance of this feature before opening it up to a contains type of searching.

Age of patient allows for exact ages such as 20 or age ranges such as 20-25.

Saving your filter set also saves the order and which columns are displayed in the results grid. Sorting by a column, will request that the results be sorted on the server, for cases where the number of search results exceeds what can be displayed.

In addition to dragging and dropping search filters, you can also right click on a search filter entry and use the Move Previous, Move Next buttons to change the order of your custom search criteria.

There are validation checks to insure, invalid dates and invalid combo box selections are not allowed.



Each filter you populate much match for a result to be displayed; however, if you add two filters for the same field such as Modality Type, an ‘or’ operations will be performed on the two values for that field.

For example:

Exam Search (10)

Site:

Ref. Last Name:  X Modality Type: CT X Gender:  X Age of Patient:  X

Status:  X Modality Type: MRI X Procedure:  X Scheduled Date: Today X

Search Clear

Flags	Status	Scheduled Date	Modality Type	Procedures	Referring	First Name	Last Name	MRN
Arrived	06-20-2012 3:20 PM	CT	CT 3 Phase [CT13]	aa aa	aa	bb	11507034	
Scheduled	06-19-2012 10:25 AM	MR	MR Cardiac Morph W/Wo [MR45] - Heart	Blanca95 Willis	Joan	Molina	T.5071	
Cancelled	06-19-2012 8:21 AM	MR	MR x Brain W [70552] - Head	Joseph7 Sloan	Harry	Ballard	T.44428	
Dictated	06-19-2012 10:10 AM	CT	CT Thoracic Spine W [72129] - Abdomen	YASIN MANSOOR	Maddie	TEST_SaveCompleteStudy	9c89770a-c8de-450e-a31e-222191fc	
Dictated	06-19-2012 10:45 AM	CT	CT Thoracic Spine W [72129] - Abdomen	YASIN MANSOOR	Maddie	TEST_SaveCompleteStudy	bd097a11-bee5-4af4-bfc2-5210f6b2c	

**Figure 4.111 – Exam Search**

The Broom Icon can be used to reset/clear its filters value.

Pressing the enter key on any of the search filters will execute the search. If there are any results in the grid keyboard focus will go to the first row in the grid. If there are no results, your keyboard focus will return to the last search field you were editing so you can quickly make a change and press enter again.

Exam Search

Site:

Ref. Last Name: asdfasf X Modality Type:  X Gender:  X Age of Patient:

Status:  X Procedure:  X Scheduled Date: Last 7 Days X

Search

Flags	Status	Scheduled Date	Procedures	Referring	First Name	Last Name	MRN	Birth Date	Modality Type	Site	Room	Accession#	Signed By	User Id	Signed Date
No results to display.															

**Figure 4.112 – Exam Search**

Also if there are too many results the tab will say “Exam Search (100+)”, and the text “Too many matches. Results are limited..” will be displayed just above the results grid

Flags	Status	Scheduled Date	Procedures	Referring	First Name	Last Name
Exam Done	06-18-2012 8:00 AM	MR Elbow Arthrogram [MR62] - Elbow	Francis7 Steele	Karen	Phelps	
Scheduled	06-11-2012 10:00 AM	MR x Chest W [71551] - Chest	Stacy60 Fox	Henry7	Morrow	
Scheduled	06-18-2012 10:30 AM	MR Lumbar Spine W/Wo [72158] - Lumbar spine	James McLean	Nancy	Douglas	

Figure 4.113 – Exam Search

The exam search max results is configurable via the System Config setting:  
ExamSearchMaxResults:

System Config Code	Value	Default	Description
Contains: exam	Contains:	Contains:	Contains:
ExamSearchMaxResults	100	100	(value = int) The maximum number of rows

Figure 4.114 – Exam Search

## Generalized Procedure Name

A new lookup table was added (ProcedureGeneralDescription). This lookup allows you to configure a friendly description.

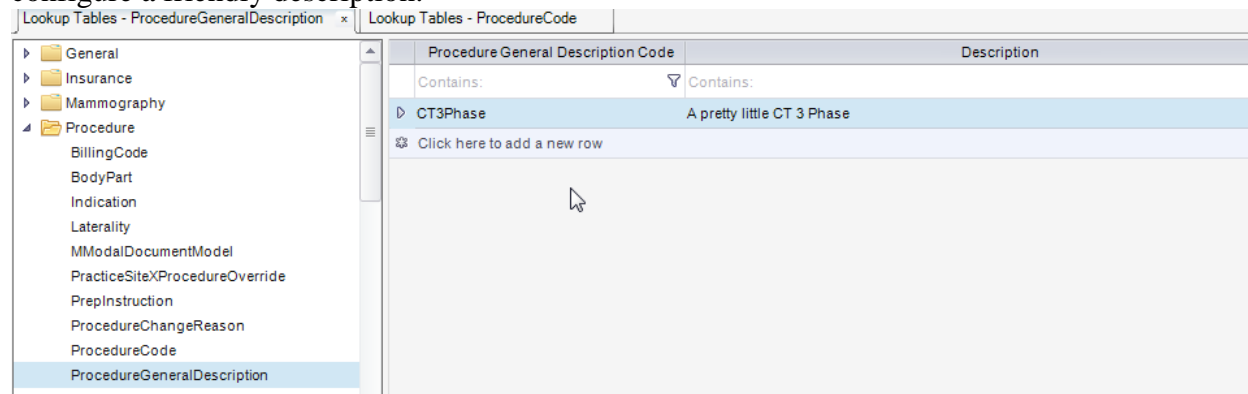


Figure 4.115 – Procedure General Description lookup

A new cross table (ProcedureXGeneralDescription) was created and included in the study data set. This cross table also includes a relation to practice.

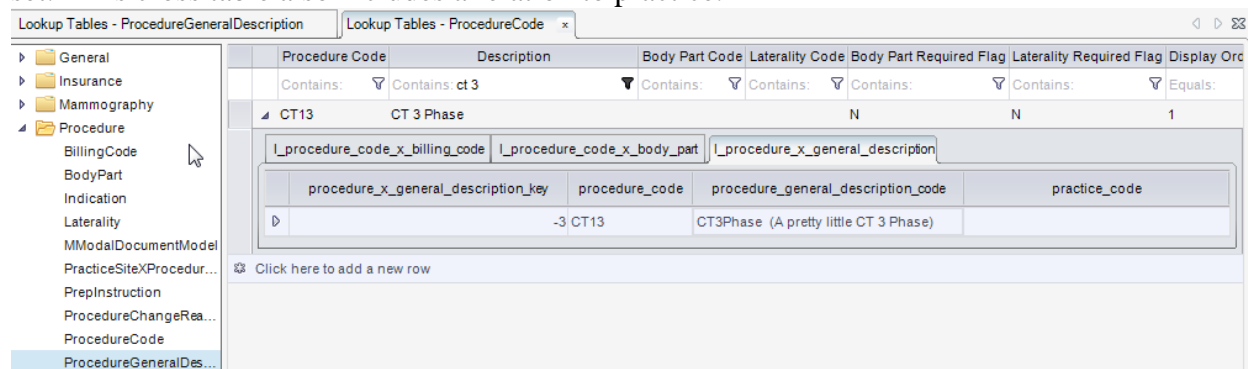


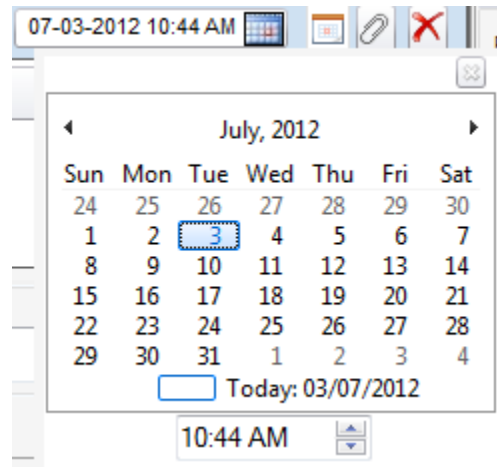
Figure 4.116 – Procedure code lookup display cross table ProcedureXGeneralDescription

A null value in practice means for all practices, unless there is another reference to that specific practice. If no entry is found in the procedure\_x\_general\_description table, then the original procedure description is used instead.

## **Scheduling Date Time Control Enhancement**

The previous control that was being used has the limitation of only being able to select the date and not the time.

The new control will allow for the time to be selected by typing in the box, setting focus to the individual time portions and using the up/down controls, or by using the mouse wheel.



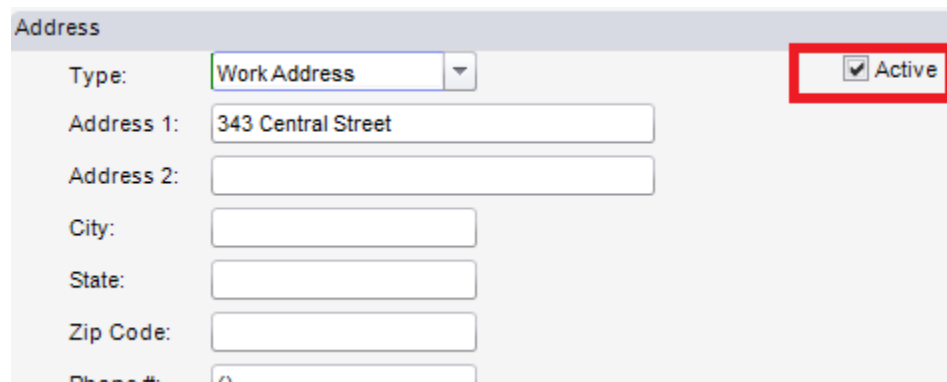
**Figure 4.117 – New date/time control**

The changes to the date picker control will use the provided format to determine which format the pop-up should be displayed in. If the format is a custom format and contains the time then it will be displayed as the figure above. This layout will allow for the closing of the screen by loss of focus outside of the pop-up or by clicking the “X” in the top corner. We have also corrected the issue that when a custom format is specified that the user will be able to change the time using the keyboard up/down keys.

If the format only has the date and not the time, the user will see the calendar only without the time option and will not have the “X” option to close the window.

## Referring Physician Addresses

It has been requested that referring physician addresses can be flagged as active or inactive. This has been added in build 37.

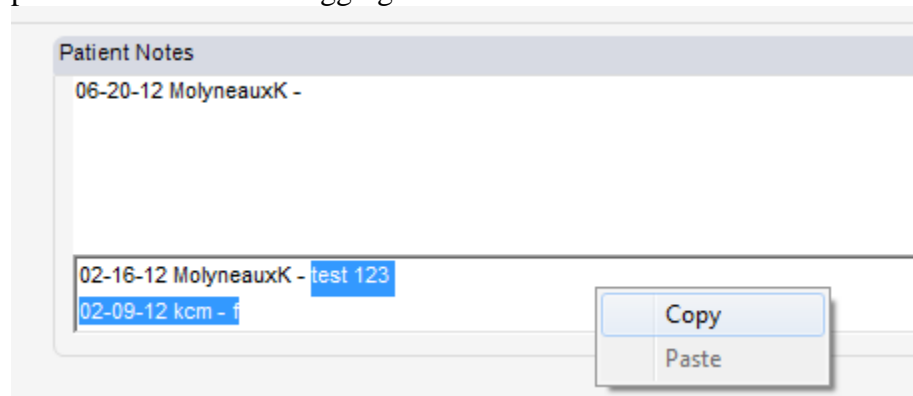


The screenshot shows a form titled "Address" with the following fields: "Type:" with a dropdown menu set to "WorkAddress", "Address 1:" with the text "343 Central Street", "Address 2:" (empty), "City:" (empty), "State:" (empty), "Zip Code:" (empty), and "Phone #:" (empty). In the top right corner, there is a checkbox labeled "Active" which is checked, and this entire checkbox area is highlighted with a red rectangular border.

Figure 4.118 – Referring physician addresses can active or inactive

## Notes Text Boxes Copy / Paste Option

Added Copy/Paste options to the input box and the Copy context menu to the logged area as shown in the following. Note: paste in the logging area is disabled if the user doesn't have permission to edit the logging area.



The screenshot shows a "Patient Notes" window with a list of notes. The first note is "06-20-12 MolyneauxK -". Below it, two other notes are visible: "02-16-12 MolyneauxK - test 123" and "02-09-12 kcm - f". A context menu is open over the second note, showing two options: "Copy" and "Paste".

Figure 4.119 – Copy/Paste notes fields

## Multiple Schedule Groups Per User

In previous versions users could only be assigned to one schedule group. It was desired to allow users to have multiple schedule groups. This was to prevent the need from having to create a new schedule group for each possible configuration, and remove the requirement to build a master schedule group that can be used across all sites/practices.

The previous method of selecting a scheduling group was by a list box in the personnel editor. The list box has been replaced with a multi type ahead box that allows for multiple enteries.

The screenshot displays the 'Lookup Tables - ScheduleGroup' window. At the top, a table lists user information:

Username	First Name	Last Name
darcyn	Darcy	Noye

Below the table are tabs for 'General', 'Resource', 'Account', 'Notes', 'Attachments', and 'Preferences'. The 'Account' tab is selected, showing 'Account Information'. This section includes:

- ☒ Active Account
- ☐ Prompt for Credentials
- User ID: \* darcyn
- ☐ Domain Authentication
- Password: \* \*\*\*\*\*
- Schedule Group: A multi-type ahead box containing 'Eldersburg x' and 'Fisher x'. A dropdown menu is open below it, showing 'Lutherville'.
- User Groups: A multi-type ahead box containing 'RIS Administrator x', 'Radiologist x', and 'technologist x'.

A red rectangle highlights the 'Schedule Group' multi-type ahead box and its dropdown menu.

**Figure 4.120 – Multiple schedule groups per user**

With the ability of having multiple schedule groups assigned to the same user there is potential that there could be conflicting configurations. To deal with this issue if the time is available in one configuration then the time slot is available, this also applies to the reservation configuration. But in the case where there is a conflicting duration provided then the template duration will be ignored and the duration will be used from the previous level, which would from the modality duration override, if one exists, otherwise the duration from the procedure will be used.

### Organization Picker Enhancements

The Org Picker allows the user to choose their current location in order to help filter worklists. In prior builds we were only showing the region/practice/site code. In Build 37 we will now show the code and the description.

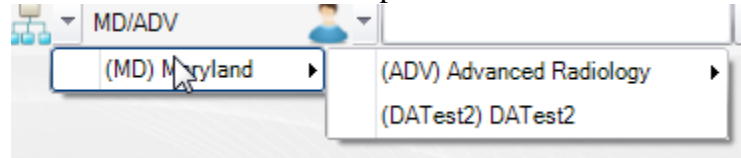


Figure 4.121 – Org picker enhancements

The region/practice/site code are displayed first, and their respective descriptions are displayed afterwards. The text of the description is truncated if it exceeds 50 characters.

### Unknown Referring Required Address Removed

The unknown referring required an address, as all referring's needed a visited at address in the past.

In build 37 the address is no longer a requirement for the Unknown referring physician.

### Verify Credentials Enhancements

The swap credentials feature (now renamed Verify Credentials) would prompt each and every time a Perform Exam window was opened. For techs that might open 2 or 3 patients in a row, this was very time consuming and frustrating.

The swap credentials class was enhanced to be able to store the last UID and PW and Auth type of the last successfully swapped user.

A new timer - activity based – was introduced.

If the timer has not expired, a new button appears on the next opening of the verify credentials screen, with the previous logon id. The text of the button is "I am (userid)"

If the user clicks on this button, it opens the new screen under the credentials of that user, without them needing to key in a password.

A system config value controls the duration of the inactivity timer. A timer setting of 0 disables the feature.

(SwapCredentialsKeepPreviousUserTimeout)

When the inactivity timer expires, the button will disappear.

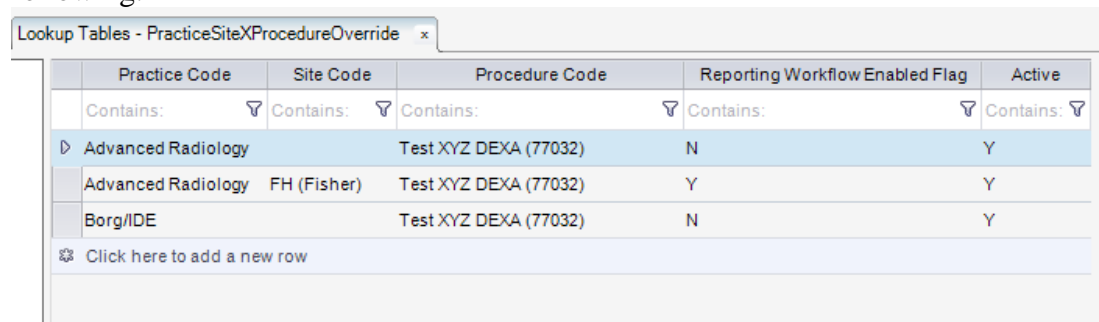
An old bug was found if the user closed the tech worklist, reopening the worklist would now adopt the credentials of the switched user. I had not accounted for this, so now the credentials used to open the original worklist are preserved, so they can always be reverted to.

Edit patient was removed as an option from the tech screen, and Edit Patient (if activated by other means) no longer attempts to verify credentials.

### No Report Required Work Flow Enhancements

Previous to build 37, users in the Perform Exam window could flag an exam to not have a report. A flag on the documentation tab of the Perform Exam window, when checked, the exam would not be routed to the radiologist work list(s) and would go directly to billing, provided all the billing criteria has been met. This work flow still exists, but now we also provide the practice / site the option to mark procedures to have “No Report Required”

For configuring this feature see the “PracticeSiteXProcedureOverride” lookup as shown in the following:



Practice Code	Site Code	Procedure Code	Reporting Workflow Enabled Flag	Active
Contains: ▼	Contains: ▼	Contains: ▼	Contains: ▼	Contains: ▼
▶ Advanced Radiology		Test XYZ DEXA (77032)	N	Y
Advanced Radiology	FH (Fisher)	Test XYZ DEXA (77032)	Y	Y
Borg/IDE		Test XYZ DEXA (77032)	N	Y
✱ Click here to add a new row				

**Figure 4.122 – PracticeSiteXProcedureOverride lookup table**

In the above, the “Test XYZ DEXA” procedure will skip reporting for all of “Borg/IDE” and all of “Advanced Radiology” except for the “Fisher” site. Note: Site code is optional, if it is empty the override is for the entire practice and if a Site code is provided, that overrides the practice setting.



The tech screen for “ReportingWorkflowEnabled = ‘N’” the check box for No Report (Tech Only) is checked and disabled so the user in the tech screen cannot accidentally remove it.

The screenshot displays the eRAD RIS interface. At the top, there are two tabs: "Perform Exam : Max Hardin # T.6003" and "Lookup Tables - PracticeSiteXProcedureOverride". Below the tabs is a table with columns: Include, Status, Flags, Procedures, and Scheduled Date. The table contains two rows. The first row is "US Breast Uni Or Bil [76645] - Breast - Left" with a scheduled date of "04-30-2012 4:25 PM". The second row is "Test XYZ DEXA [77032] - Breast" with a scheduled date of "04-30-2012 4:05 PM". Below the table is a navigation bar with tabs: Patient, Order, Documentation, Billing Codes, Attachments, Notes / Exam Times, MU, and Im. The "Documentation" tab is selected. Below the navigation bar is a "Tech Notes" section with a "Technologists Notes" text area. To the right of the text area are buttons: Primary, Assist, Assist, and Last M. Below the "Tech Notes" section is a "Procedure" section. It contains several fields: "Scanner:" with a dropdown menu showing "MA2FH", "Performed Procedure:" with a dropdown menu showing "Test XYZ DEXA (77032)", "Body Part:" with a dropdown menu showing "Breast", and "Laterality:" with a dropdown menu. Below these fields are "Change Reason Code:" and "Change Reason Note:" fields. At the bottom of the "Procedure" section is a checkbox labeled "No Report (Tech Only)" which is checked and disabled.

Include	Status	Flags	Procedures	Scheduled Date
<input type="checkbox"/>	Arrived	00	US Breast Uni Or Bil [76645] - Breast - Left	04-30-2012 4:25 PM
<input checked="" type="checkbox"/>	Arrived	00	Test XYZ DEXA [77032] - Breast	04-30-2012 4:05 PM

Patient Order Documentation Billing Codes Attachments Notes / Exam Times MU Im

Tech Notes

Technologists Notes:

Primary Assist Assist Last M

Procedure

Scanner: MA2FH

Performed Procedure: Test XYZ DEXA (77032)

Body Part: Breast Laterality:

Change Reason Code:

Change Reason Note:

☒ No Report (Tech Only)

**Figure 4.123 – No Report auto checked and disabled**

## 5. Resolved Defects

Bugs Suggested Features and Support Issues resolved in build 1.37. The extract is taken from Redmine bug tracking system and only displays defects resolved in 1.37.

Bug #	Tracker	Priority	Subject	Category	Found Version
1300	Bug	Urgent	DD when using an undefined recipient fails generating SSRS report	Thick Client GUI	1.36
1563	Bug	High	Reporting - Update to the latest Radiology Recognizer	Thick Client GUI	1.36
1545	Bug	High	Scanning issue (Not Responding)		1.35
1499	Bug	High	getting over booked error on outside reads when schedule outside reads exceed 15		1.36
1496	Bug	High	Remove Orphans	Thick Client GUI	1.36
1494	Bug	High	Beverly and Highway Users getting communication exception	Web Services/DB	1.36
1466	Bug	High	Reporting Interactive - minimize mode doesn't load macros	Thick Client GUI	1.36
1451	Bug	High	HIA report preview - blank sections should not appear in rendered report	Mgt Reports	1.36
1440	Bug	High	Move To <section> not being recognized consistently.	Thick Client GUI	1.36
1372	Bug	High	Minimize Dictation - Sign Report as EOL throws exception	Thick Client GUI	1.36
1359	Bug	High	Report on Accession number	Thick Client GUI	1.36
1355	Bug	High	Scheduled by userID is not populating in the study table	Mgt Reports	1.1.36.1119 7
1342	Bug	High	Report tables not consistently returning in same sequence	Mgt Reports	1.36
1330	Bug	High	Perform exam	Thick Client GUI	1.36
1294	Bug	High	Pacs correction not Y on statuses beyond examdone	Thick Client GUI	1.36
1292	Bug	High	Suspending in WPR workflow doesn't work	Thick Client GUI	1.36

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1284	Bug	High	Dated Worklists not reflecting proper dates	Thick Client GUI	1.35
1272	Bug	High	Error trying to import image	Thick Client GUI	1.36
1270	Bug	High	View/Edit data window does not show billing codes	Thick Client GUI	1.36
1269	Bug	High	Relevant priors do not open correctly when user preference to show current study in patient history is off	Thick Client GUI	1.36
1257	Bug	High	Signed by date WL access string not included in build	Thick Client GUI	1.36
1097	Bug	High	Reporting > Problems continuing dictation when using interactive and field markers	Thick Client GUI	1.35 SVN 10005
851	Bug	High	Beaumont - PSPLOG.dll error on app launch	Thick Client GUI	1.27
777	Bug	High	missing a billing message when tech only workflow	Web Services/DB	1.29
1510	Bug	Normal	eRAD RIS Error - Scanned Documents (saving after viewing an attached scanned document)	Thick Client GUI	1.36
1480	Bug	Normal	Sort issue on Appointments Schedule	Mgt Reports	1.36
1445	Bug	Normal	Fax jobs: Busy retry count goes forever	Web Services/DB	1.35
1429	Bug	Normal	Cannot update patient prefix table via the GUI lookup table editor		1.36
1425	Bug	Normal	The image request worklist has a button called "Edit" but when you open the form it says "Request Copies"		1.35
1397	Bug	Normal	patient search - phone number	Web Services/DB	1.36
1395	Bug	Normal	Image request form shows offset.	Thick Client GUI	1.35
1365	Bug	Normal	Summary tab on scheduling tab is blank when value is not entered on system config, does not recognize defaults	Admin Tools	1.36
1364	Bug	Normal	Some study updated messages are post to the message queues with an empty study container	Web Services/DB	1.36
1363	Bug	Normal	inactive holidays still being applied to the calendars	Thick Client GUI	1.35

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1360	Bug	Normal	Mgmt Reports - Scheduled vs Completed - report is showing exams in 'Cancelled' status.	Mgt Reports	1.1.36.1119 7
1358	Bug	Normal	Mgmt Reports - Scheduled Count by Site - exams are all appearing regardless of status.	Mgt Reports	1.1.36.1119 7
1357	Bug	Normal	Management Report - Room Utilization - documentation for this report is not correct, appears to be for a different report altogether.	Mgt Reports	1.1.36.1119 7
1353	Bug	Normal	Billing file can include addendums	Web Services/DB	1.35
1351	Bug	Normal	Mgmt Report 'Referrals by Physician' - when scheduled_start_date is greater than today's date, report and view are still showing it as a valid exam.	Mgt Reports	1.1.36.1119 7
1350	Bug	Normal	MGMT Report - Radiologist Signing Activity - 'Radiologist(s)' dropdown menu needs to be ordered alphabetically	Mgt Reports	1.1.36.1119 7
1346	Bug	Normal	Mgmt Report - Pre-Auth Referring Physician - description is not accurate	Mgt Reports	1.1.36.1119 7
1345	Bug	Normal	Mgmt Report - Pre-Auth Daily Count - description is not accurate of what the report is showing.	Mgt Reports	1.1.36.1119 7
1344	Bug	Normal	In visit tab, in 'Medications' window, message stating 'Failed to Update Medications' is cut off from view.	Thick Client GUI	1.1.36.1119 7
1343	Bug	Normal	Dictated by date worklist and counts are using 24 hours instead of date	Thick Client GUI	1.36
1341	Bug	Normal	Mgmt Report - Patient Wait Times - problem with view using two different time zones	Mgt Reports	1.1.36.1119 7
1340	Bug	Normal	Daily Fax log management report is not filtering out other distribution methods	Mgt Reports	1.1.36.1119 7
1338	Bug	Normal	core services install.. missing libraries	Web Services/DB	1.36
1337	Bug	Normal	MU required fields prompted for on Outside Reads	Thick Client GUI	1.36
1333	Bug	Normal	Removing rows from MU Grids so it is empty does not change from "Use Grid" to "None"	Thick Client GUI	1.36
1332	Bug	Normal	Meaningful Use - New Appointment on existing patient with MU history, Medical history does not keep "Use Grid"	Thick Client GUI	1.36

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1328	Bug	Normal	When in RIS, after creating a new user / person, user attempts to launch Mgt. Reports but when the report selection window opens there is no reports	Mgt Reports	1.1.36.1119 7
1326	Bug	Normal	Management Report - Referring Physician Notification - when physicians name has suffix, it is appearing twice with their name in the report	Mgt Reports	1.1.36.1119 7
1325	Bug	Normal	Management Reports - Procedures without Procedure Group has no information at all in document.	Documentat ion	1.1.36.1119 7
1324	Bug	Normal	ODC - Login failed attempt will keep password on login screen	Thick Client GUI	1.35
1323	Bug	Normal	ODC - saved my view continuously shows hour glass	Thick Client GUI	1.35
1320	Bug	Normal	ODC - Edit patient from patient search hangs app	Thick Client GUI	1.35
1318	Bug	Normal	Management Reports - Audit Log - drop down for 'user' is not in a easy to find order. It displays user name first, but appears to be sorted by user's last name.	Mgt Reports	1.1.36.1119 7
1317	Bug	Normal	Fax Sender in DDE requires a default printer	Web Services/DB	1.35
1316	Bug	Normal	'No Shows' management report does not recognize cancelled exams for 'No show' reason		1.1.36.1119 7
1315	Bug	Normal	Cell borders are inconsistent on Mgmt Report titled 'No Shows'		1.1.36.1119 7
1314	Bug	Normal	Need Plan Management report returns no data whatsoever		1.1.36.1119 7
1313	Bug	Normal	Management Report - Modality Utilization - not working, showing no data at all		1.1.36.1119 7
1312	Bug	Normal	IVT 7 day trend displays more data than it should.		1.1.36.1119 7
1311	Bug	Normal	Management Report - Front Desk Activity - will not populate 'Verified'	Mgt Reports	1.1.36.1119 7
1310	Bug	Normal	Confirmed Appts. Mgmt Report is showing all confirmed appointments, regardless of status.	Mgt Reports	1.1.36.1119 7
1309	Bug	Normal	Core reports document does not contain requirements for report titled 'Appointment Schedule'	Documentat ion	1.1.36.1119 7

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1308	Bug	Normal	Mgt Reports - Aborted Exams report - expanding reason shows numbers but does not indicate what they are for	Mgt Reports	1.36.11197
1306	Bug	Normal	Medical History > remove and add new problem will give error	Thick Client GUI	1.36
1305	Bug	Normal	Delete Allergy row, then add through Quick Add/Edit results in status column error	Thick Client GUI	1.36
1304	Bug	Normal	Report Preview unsigned addendum from worklist	Thick Client GUI	1.35
1303	Bug	Normal	Each Failed Login Results in Multiple Login Attempts	Thick Client GUI	1.35
1302	Bug	Normal	Recommendation lookup > Remove drill down control	Thick Client GUI	1.36
1301	Bug	Normal	Error from patient search.	Thick Client GUI	1.36
1299	Bug	Normal	DD Editing an existing job in the worklist doesn't load with all values	Thick Client GUI	1.36
1296	Bug	Normal	Unknown Referring/Carrier... should we be using Edit Order?? Seems bad idea		1.36
1295	Bug	Normal	Unknown Reconciliation WL - can edit order on studies that are scheduled or further in workflow	Thick Client GUI	1.36
1293	Bug	Normal	Error closing New Appointment / Patient Search	Thick Client GUI	1.36
1290	Bug	Normal	Data nugget - Notes or Study Notes?	Thick Client GUI	1.36
1289	Bug	Normal	Transcription - Perform Exam ( worklist does not show current study)	Thick Client GUI	1.36
1288	Bug	Normal	Template viewer title bar has incorrect title.	Thick Client GUI	1.36
1283	Bug	Normal	Nuggets shouldn't respond to right click	Thick Client GUI	1.36
1282	Bug	Normal	MT Polling > Studies from same order are not skipped when locked	Thick Client GUI	1.36
1281	Bug	Normal	Surgeon can be searched for to send report, but cannot be used to send report	Thick Client GUI	1.36
1279	Bug	Normal	When using CTRL + Shift + '+' or '-' buttons or up and down arrow keys, RIS throws an error and	Thick Client GUI	36.11042

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			crashes.		
1278	Bug	Normal	Error accessing data windows resuming locked RIS application	Thick Client GUI	1.36
1274	Bug	Normal	Open Capacity	Mgt Reports	1.35
1273	Bug	Normal	Assign to Radiologist window closes if clicking to fast on scroll bar action down	Thick Client GUI	1.36
1271	Bug	Normal	Patient Folder > Ordered status studies data nuggets do not load	Thick Client GUI	1.35
1268	Bug	Normal	Personnel > Cannot search for existing after deleting create new	Admin Tools	1.36
1256	Bug	Normal	Macro editor - the delete function will not delete the macro	Thick Client GUI	1.36.10931
1245	Bug	Normal	Unable to cast System.DBNull to System.String	Thick Client GUI	1.36
1238	Bug	Normal	Editing patient and repeatedly getting "Status can not be empty" message on save	Thick Client GUI	1.36
1235	Bug	Normal	Select Search multiple times in Carrier search window will throw error.	Thick Client GUI	1.36
1227	Bug	Normal	Patient Folder Window --> Scheduled Date filter = object reference error	Thick Client GUI	1.36
1220	Bug	Normal	Insurance - Returns Object Reference Error		1.36
1215	Bug	Normal	Rad - Dictate - Template Browser - runtime	Thick Client GUI	1.36
1213	Bug	Normal	Rad - All Pending Signature Worklist --> Dictate --> Click Print Icon "Send to" = runtime	Thick Client GUI	1.36
1198	Bug	Normal	Scheduling - Edit Image request --> runtime NULL handling	Thick Client GUI	1.36
1195	Bug	Normal	Rad - Dictate or Transcription window.. Attachments and Attachment History views are missing	Thick Client GUI	1.36
1186	Bug	Normal	Filtered patient folder on Signed and Ordered rows are in the list.	Thick Client GUI	1.36
1178	Bug	Normal	Macro Editor --> Insert Macro --> Click Previous Field = COM Error	Thick Client GUI	1.36
1175	Bug	Normal	Transcription editor does not support keyboard shortcut to select text up and down	Thick Client GUI	1.36

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1174	Bug	Normal	Mammo - Followup worklist. Right Click --> Followup "New patient button is available on signed study"	Thick Client GUI	1.36
1172	Bug	Normal	Rad - Macro Editor - Exception inserting normal	Thick Client GUI	1.36
1170	Bug	Normal	Warning for scheduling across sites message displayed twice when selecting Yes	Thick Client GUI	1.36
1161	Bug	Normal	error on second save within macro editor	Thick Client GUI	1.36
1153	Bug	Normal	Save layout not saving selected tabs	Thick Client GUI	1.36
1106	Bug	Normal	Logging into locked workstation when GUI ZIP file has changed	Thick Client GUI	1.35
1093	Bug	Normal	When allergy is inactive in the lookup the value is not displayed for the patient that has that allergy		1.35
1057	Bug	Normal	Scheduling - Confirmation WL --> runtime crash	Thick Client GUI	1.35
991	Bug	Normal	Patient Merge -- Selecting source and destination give weird birthdates		1.35
980	Bug	Normal	Streaming exeception when playing dictation	Thick Client GUI	1.35
976	Bug	Normal	Object reference saving multiple procedure order	Thick Client GUI	1.35
945	Bug	Normal	Responsible party is not updated when patient information has changed.	Thick Client GUI	1.34
807	Bug	Normal	Timezone issue - Cannot update personnel	Admin Tools	1.29
783	Bug	Normal	the gui has hard coded values for Patient relation	Thick Client GUI	1.29
781	Bug	Normal	Read Only permission still allows some actions		1.2
758	Bug	Normal	Drug Allergy Type requires Display order to save	Admin Tools	1.27
756	Bug	Normal	Beaumont - Issue with time zones	Web Services/DB	1.25
750	Bug	Normal	Patient Search > Reset search criteria throws error.	Thick Client GUI	1.27
691	Bug	Normal	Configure > Lookup Tables scroll bar not always present.		1.2
463	Bug	Normal	Concurrency error on scheduling	Web Services/DB	1.17



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224	Bug	Normal	Order - Exception when scheduling a modified order	Thick Client GUI	1.11
1261	Bug	Low	Double context menu in personnel editor > Contact information	Admin Tools	1.36
1211	Bug	Low	Administration - User - Personnel ( Add, Edit Address validation)	Thick Client GUI	1.36
1208	Bug	Low	Study box size on Walk-In Exam tab is too small to see all of the study description	Thick Client GUI	1.36
1200	Bug	Low	Patient Merge - Search - Invalid Search Criteria - click Details = error	Thick Client GUI	1.36
1184	Bug	Low	Batch to Interactive Mode changes can result in tab being mislabeled		1.36
1060	Bug	Low	Tab order in Patient Demographics Content Pane	Thick Client GUI	1.35
1058	Bug	Low	Scheduling a child patient	Thick Client GUI	1.35
1051	Bug	Low	Recorder::resume couldn't open recording device (AnyModalCaptureCtrl.AsyncRecognizer.1)	Thick Client GUI	1.35
1010	Bug	Low	Continuity of Care Record (CCR) - user is able to click view / print, but when the preview appears there is no "print" button.	Thick Client GUI	1.35

## 6. Known Limitations

The following are Bugs Suggested Features and Support Issues found in build 1.37. This build is the current QE build and testing is ongoing. The list may increase in size. This document will not be updated or re-released.

#	Status	Priority	Subject	Resolved Version
1613	New	High	Reporting - Assign to Data pane will not open from view menu	
1611	New	Normal	View Template - Base Dropdowns visible and enabled	1.38
1610	New	Normal	If Patient Class for Tech Only is missing, scheduling from Orders to Schedule gives strange error.	
1609	New	Normal	Voided studies cannot accessed in View Edit window	
1608	New	Normal	Referring column not added to the Dictated by Date and All Dictated work lists	
1607	New	Normal	Perform Exam - Check \ Uncheck include box issue	
1606	In Progress	Normal	Dictate window getting Error on GetData/DisplayData	
1598	New	Normal	WPR workflow, multiple same accession numbers.	
1595	New	Normal	Message boxes not focusing default button.	
1594	New	Normal	View/Edit screen does not show EMR order information	
1593	New	Normal	Dictation / Create Edit Report screens do not show EMR ordered procedure	
1592	New	Normal	Opening exam done study prompting for an addendum...	
1590	New	Normal	View Edit report tab does not include section headers or formatted text	
1579	New	Normal	Exception on patient folder, right-click, Send Report	
1577	New	Normal	RIS throws an inappropriate error when you try to complete 2 studies at once that are in different modalities.	
1576	New	Normal	Saving a new order can cause an empty "Patient Mode" list...	
1575	New	Normal	Assigning one user trice in macro / template throws an error on save	
1572	New	Normal	Practice Filler code vs Modality - site - practice.	

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1571	New	Normal	CDS Retrieve Document Cache -- if service is not running = infinite loop and hang of UI	
1570	New	Normal	Data consistency error with composite study	
1569	New	Normal	schedule later does not save procedures that haven't been committed yet	
1568	New	Normal	Installation Directory Name	
1564	New	Normal	Tech WL --> Deleting a billing code does not actually delete	
1552	New	Normal	PACS: Show images button on Dictation window non-functional if first Open call fails	
1536	New	Normal	Tech WL --> right click cancel a Checked In study = Object reference error	
1534	New	Normal	Add\deleting of billing codes	
1530	New	Normal	Macro editor	
1529	New	Normal	Macro editor	
1526	New	Normal	Suspend button and Close does not update recent activity list in status bar	
1524	New	Normal	MU - Grids.. When saving auto select -Use Grid option if validation fails	
1518	New	Normal	Error on close of Perform Exam window.	
1517	New	Normal	Exam search - index out of range when returning no results.	1.2.37.12715
1503	New	Normal	Unknown referring match allows you to match an unknown referring to another unknown referring	
1487	New	Normal	Worklist column does not refresh when exception thrown in Bulk Field Assignment	
1450	New	Normal	Scheduled from IVT can return error	
1446	New	Normal	View Macro with description of Test Here - Error inserting selected normal with exception: The value for column 'name' in table 'I_macro' is DBNull	
1442	New	Normal	Save IVT with large Precert note generates String or binary data would be truncated error	
1430	New	Normal	Error from view/edit window on close	
1394	New	Normal	Confirmation workflow should bypass overbook timeslot check	

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1385	New	Normal	Scheduling Walk In - Overbook reason required should have the red required icon	
1383	New	Normal	Tab order\behaviour: Patient Insurance Policies screen	
1375	New	Normal	hit eRx button on Patient tab get exception	
1370	New	Normal	Can modify/schedule order with patient that has been flagged as deleted by patient merge in another tab	
1366	New	Normal	Play back volume is different (louder) for transcription then for rads	
1348	New	Normal	Special Accommodations required fields	
1336	New	Normal	on dated WL, adding or deleting a rView will change the display text for the "date"	
1331	New	Normal	Flags pane of perform exam window	
1298	New	Normal	DD when send thread has an exception it never starts again	
1297	New	Normal	Walkin - Randomly Raises "Get Data" error and won't load	
1612	New	Low	Locking - message box modifictaions perhaps	
1603	New	Low	Action pending (Internal Patient) doesn't have suspended flag on work list remvoed	
1560	New	Low	Spell Checker appears by default on primary monitor	
1540	New	Low	GUI hung	
1539	New	Low	Busy cursor over worklist only	
1522	New	Low	Quickly alternating between Suspend & Complete buttons on Perform Exam causes data error	
1516	New	Low	Exam Search --> Allows 2 different type of Site filters.	
1509	New	Low	Image Request Window --> Same as requested by checkbox does not work	
1508	New	Low	Date formatter not applied on new image request Studies grid	
1490	New	Low	hitting enter twice on the patient tab for scheduling will open clear patient pop-up	
1485	New	Low	On the Input tab of the Preferences screen there is a Label that can't be read	
1482	New	Low	Personnel editor - create new validates fields on search	

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1461	New	Low	Importing Insurance from EMR Policies doesn't populate Gender or Relation	
1453	New	Low	Changing or removing insurance does not automatically reset the Insurance Verified Checkbox	
1433	New	Low	Need to reduce flickering on save	
1379	New	Low	Address 1 box on Patient Insurance Policies screen partially obscured by another control	
1352	New	Low	Holiday	

# **Server Update**

for eRAD RIS

Version 1.0

Build 37

Update 37.001

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## 1. Purpose

This server update has been produced to fix bugs required for production setting, or to complete an enhancement requested for production.

This server update fixes the following issues.

Redmine Bug #	Issue	Description	Priority	Status
1643	External Report	Ideally we need this to be part of the Radiologist Pending Dictation workflow. Add a column that views can be created on. When the radiologist opens the study the view the images and have the Verify External Report button. Goes to billing with the radiologist the clicked the Verify External Report button as the dictating physician. Ultimately we would like a way to scan in the document and save it as the report for approval and deliver that way.	HIGH	COMPLETE
1632	Voided	Not Able to View/Edit the exam.	HIGH	COMPLETE
1633	Temporary Template	Still have to enter end time 11:50 to keep the 12 from showing, these are not showing on the Manual Appt (seems to only look at the default template) When using the Appt book through scheduling these slots are still available and are able to be picked without issue.	HIGH	COMPLETE
1641	Addendum	Need to add addendum_requested_flag to Activity WL - Need to add addendum flag and addendum_requested_flag to patient folder WL - Need to show signed studies in Activity WL where addendum_requested_flag is Y	HIGH	COMPLETE



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1630	Addendum	Unsigned Addendum states "Addendum" in the report. Need to fix so if a report is printed/faxed prior to the Addendum then it shouldn't show "Addendum"	HIGH	COMPLETE
1634	Follow up Tab	Needs to be accessible from any point, example need to see it in Schedule Order or View/Edit	MED/HIGH	COMPLETE
	Template documentation	Supply documentation on the Template mgt, for transcription mgt team.	HIGH	COMPLETE
1635	Pending Dictation - Assigned to Rad details	When assigning a dictation to a specific radiologist, put the rads 'lastname, firstname' in the "Assigned Rad" column on the worklist	HIGH	COMPLETE
1645	Tech Only	The tech only checkbox is not really necessary any longer. Just need an indication that the tech cannot change. They will use the Patient Class if it needs to be changed. Needs PACS Correction workflow but then just goes directly to billing.	HIGH	COMPLETE
1644 / 1618	Hold Code	Need flag at procedure level called "Hold Code". At tech completion this goes directly to status of Hold Code Complete.	HIGH	COMPLETE
1638	Insurance	Insurance: Once you add insurance to an order and try to remove or expire, it still shows in the order as active. No way to remove it once added.	HIGH	COMPLETE
1652	Verbal Order	You must be NT authenticated to create a Verbal Amended Order, we thought there was a fix for non NT authenticated users to access the reports.	HIGH	COMPLETE
BAD CONFIG	Outside Reads	Outside Reads: Unable to save an outside read.	HIGH	COMPLETE
1636	Billing	Units not being reset to the default value when switching procedures	HIGH	COMPLETE
1614	Reporting	Set account specs not working if system config values not set to true	HIGH	COMPLETE

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1653	Tech	Maintaining correction selection on perform exam screen patient history grid	HIGH	COMPLETE
1616	External Report workflow	Assigning the "assign by" radiologist	HIGH	COMPLETE
1625	Alisa - Reporting	Addendums should be blocked on historical (imported) studies	HIGH	COMPLETE
1646	Reporting	DLL Issues in B37. Cannot successfully run interactive features	CRITICAL	COMPLETE
1637	Mammo	Mammo follow up target date needs to be editable - We will display and allow the target date to be edited.	HIGH	COMPLETE
1631	Mammo	MU fields are required, but in mammo workflow, we do not know what the values should be - We will add code to the patch to bypass the MU fields, when the user is using the FollowUp mammo feature.	HIGH	COMPLETE
1627	Mammo	When entering a new follow-up date for a biopsy, if an order already exists it will not update the target date and simply gives a message "order already exists". - Add new feature to allow the update of the existing follow up order using the manual follow up from the biopsy screen.	HIGH	COMPLETE
1640	Image Request BUG	Can't open image request editing form from Image request WL.	HIGH	COMPLETE
1639	Scheduling - Joe	Duration issue with template duration overrides	HIGH	COMPLETE
1545	Scheduling	Scanning issue (Not Responding)	High	COMPLETE
1642	Outside Reads	Time of the outside read dates needs to be noon instead of the beginning of the day	Med	COMPLETE
1605	Reporting	Template Editor > need an easier way to find base templates	Med	COMPLETE
1604	Reporting	Base templates not saving for new templates created	Med	COMPLETE
1596	Installer	Error on Installtion ieframe.dll	MED/HIGH	COMPLETE
1375	Scheduling / MU	hit eRx button on Patient tab get exception	MED/HIGH	COMPLETE
1145	Reporting	Edit macro twice throws object	Med	COMPLETE

## RADNET, Inc. – eRAD RIS Server Update

		reference error		
1096	Reporting	Reporting > viewing report history throws COM error	Med	COMPLETE
1651	HL7	error when processing HL7_StudyScheduled Message	Med	COMPLETE
1622	Payments	Payment made on rescheduled exam was displaying incorrect location and receipt prefix	Med / High	COMPLETE

## 2. Known Limitations

#	Priority	Subject	Comments
1647	High	Error adding follow up on voided exam	<u>BUG</u> - Most fields are disabled in the view/edit window on voided studies. The few remaining are attachments, payments and follow-up. These will be disabled in future build
1646	High	Interactive Dictation Problems in Build 37	<u>BUG</u> - This is currently resolved by reverted back to the previous recognizer file.
1667	Normal	Historic Tech Only exams do not have "Post" button enabled in billing exception	<u>Known Limitation</u> - Changes have been made in this build to remove the Tech Only check box in the Perform Exam window and have this work flow driven by a new patient class of Tech Only.  We have seen that with historical exams on the Billing Exception work list that were flagged as Tech Only, the Post button will not enable. The <b>work around</b> for this issue is to change the patient class to Tech Only, save the record and reopen the Billing Exception work list. The post button will now be enabled.
1665	Normal	Blank help about message	<u>BUG</u> - This has only occurred once. A restart of the application fixed the issue.

## **RADNET, Inc. – eRAD RIS Server Update**

1662	Normal	Availability Templates / appt book colors shown on legend do not contain legend for 2 colours that appear in the grid.	<u>Known Limitation</u> - The colors referenced in this bug are for the background on the calendar, not the statuses of the studies
1661	Normal	Cloning availability templates ( problem)	<u>BUG</u> - When cloning, it always adds the template as a "Procedure Availability"
1660	Normal	Reschedule on same day will enable flag for multiple studies	<u>BUG</u> - Occurs when study is rescheduled for same day
1659	Normal	Reporting - No space added when dictating measurements.	<u>BUG</u> - reporting MMODAL bug.
1658	Normal	Pre Auth Program does not appear for referring physician	<u>BUG</u> - If the Referring Physician selected on the order tab has flags in personnel editor for Direct Referral and Pre-Auth Program, only the Direct Referral will display due to space availability
1657	Normal	Setting playbackspeed on control is slow.	
1654	Normal	Perform exam patient history grid issues	<u>BUG</u> - Occurs when the Include option on the patient history grid is unselected.
1650	Normal	Exam Done(tech only) status has Register available in patient folder	<u>BUG</u> - Register button will need to be disabled in future builds.
1649	Normal	Calendar view on multi procedure order	<u>BUG</u> - This may end up a known limitation on the Telrik controls we use in this window. If there are multiple procedures and multiple rooms to select from, the room on the right side can off by 5 minutes

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

## **3. Who is affected**

All previous versions of build 37.

## **4. Package Contents**

The following files are included for this upgrade:

- 1.) Core Installer updates\\_setup\rRISSetup.msi and setup.exe
- 2.) GUI ZIP Updates\rRIS\_1.2.37.13040.zip
- 3.) RIS Service Updates\rRISServices.exe, rRISServices.pdb, WCFSservice.dll, WCFSservice.pdb, Wedge.exe, Wedge.pdb
- 4.) SQL\B37.001\_updates.sql

## **5. Installing**

- 1.) Copy the file rRIS\_1.2.37.13040.zip file **from** the “GUI ZIP Updates” folder and replace the .zip file in the RISDeployment\Build\<RIS\_your environment> folder. Make sure to create a backup of the previous .zip file. The ris.exe.config made be needed.
- 2.) Copy and replace the files from the “core Installer updates” folder and replace the \_setup folder in the RISDeployment\Core folder.
- 3.) Stop the following services as needed: (NOTE: your installation may not have all services listed) replace the files and restart each service.  
These directories may include:
  - a. rRISService (core service)
  - b. CDS rRISService
  - c. Wedge rRISService
  - d. DDE rRISService

## **RADNET, Inc. – eRAD RIS Server Update**

Copy the files from the “RIS Service Updates” folder to rRISService directory and replace the files in each folder associated with the services listed above.  
Restart each service.

4.) Run the B37.001\_updates.sql file against the RIS DB instance.

# **Server Update**

for eRAD RIS

Version 1.0

Build 37

Update 37.002

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## **1. Purpose**

This server update has been produced to fix bugs required for production setting, or to complete an enhancement requested for production.

This server update includes the following:

1. Logged as Redmine bug 1669 - Reporting - Custom Field Exam Title not populating laterality.

Files included are:

- a) WCFSservice.dll
- b) WCFSservice.pdb

2. Logged as Redmine bug 1640 - Can't open image request editing form from Image request WL.

Files included are:

- 1) UILib.dll

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

## **3. Who is affected**

All previous versions of build 37. Current build is 1.2.37.13040.

## **4. Installing**

- 1) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService.

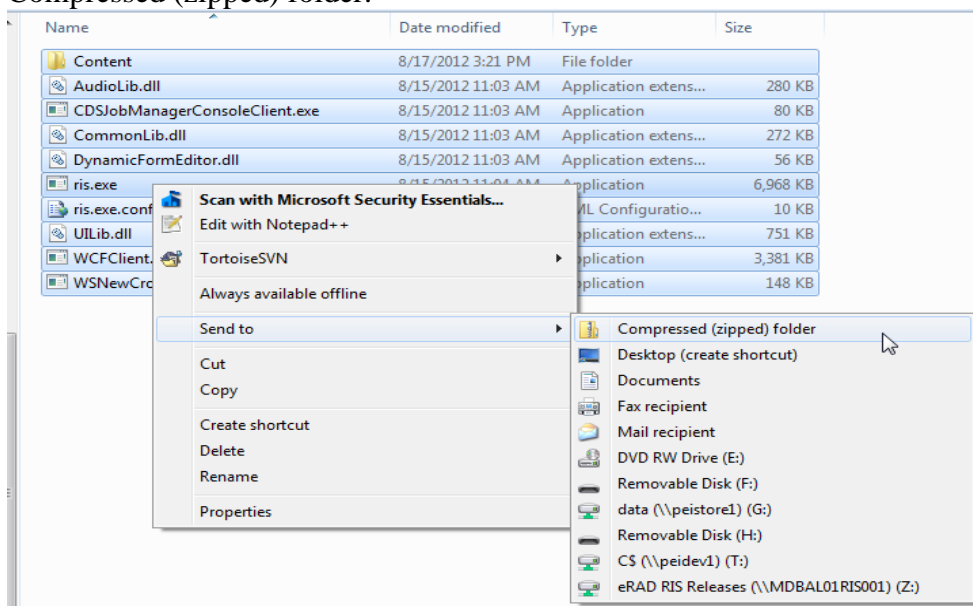
*rRISService directories include:*

- a) *rRISService*
- b) *CDS rRISService*
- c) *Wedge rRISService*
- d) *DDE rRISService*

Restart each service

- 2) Copy the UILib.dll file from the GUI ZIP Updates folder and replace the file of the same name in the rRIS\_1.2.37.13040.zip file.

This may require you to unzip the file, copy and replace the UILib.exe file. Zip the contents again by select all of the files in the rRIS\_1.2.37.13040 folder, right click, select Send to > Compressed (zipped) folder.



Rename the .zip file that was created to rRIS\_1.2.37.13040a.zip. Move this .zip file up one directory. Remove the old rRIS\_1.2.37.13040.zip file and the uncompressed rRIS\_1.2.37.13040 folder.

The next time the users log in, updates will automatically be detected because the .zip file has been renamed.

# **Server Update**

for eRAD RIS

Version 1.0

Build 37

Update 37.003

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## **1. Purpose**

This server update has been produced to fix bugs required for production setting, or to complete an enhancement requested for production.

This server update includes the following:

1. Logged as Redmine bug 1676 - Users who are domain users cannot login when they do not have a resource type.

Files included are:

- a) WebApi.dll
- b) WebApi.pdb

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

## **3. Who is affected**

All previous versions of build 37.

## **4. Installing**

- 1) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService.

*rRISService directories include:*

- a) rRISService*
- b) CDS rRISService*
- c) Wedge rRISService*
- d) DDE rRISService*

Restart each service

# **Server Update**

for eRAD RIS

Version 1.0

Build 37

Update 37.004

## **Table of Contents**

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3. Who is affected .....	4
4. Installing .....	5



### **1. Purpose**

This server update has been produced to fix bugs required for production setting, or to complete an enhancement requested for production.

This server update includes the following:

1. Logged as Redmine bug 1681 – Patient Merge is not creating a data clob in the action data table. This causes all messaging to stop when the action is processed by the wedge due to error.
2. Logged as Redmine bug 1691 – Perform Exam – Error on click of complete button: “error determining study keys for status update”. This error was occurring when the scanner was changed in the perform exam window and tried to complete exam.
3. Logged as Redmine bug 1688 - View Edit on Scheduled study prompts for MU required fields
4. Logged as Redmine bug 1687 – Forms not available from print forms option after upgrade. This is an option in the work lists. From context menu > Print Forms > forms that have a practice specified are not available.
5. Logged as Redmine bug 1686 – Min Max wait time system config code value not used in new appointment
6. Logged as Redmine bug 1685 – Merge Request WL error when attempted to view the WL
7. Logged as Redmine bug 1682 – Bypass MU required on “Checking In”. Currently when registering a patient, the MU fields will be required when “checking in” the patient. Desired to have it only when arriving.
8. Logged as Redmine bug 1690 – CDS Job Manager not running
9. Logged as Redmine bug 1692 - Export CCR button on MU tab should have the patients name in file name
10. Logged as Redmine bug 1693 - Searching for appointment time excludes the last day in the search range
11. Logged as Redmine bug 1694 - device template assigned to device and procedure with date override has issues using full range

## **RADNET, Inc. – eRAD RIS Server Update**

12. Logged as Redmine bug 1674 - Access String  
Reporting.ReleaseOthersTentativeSignedReports missing
13. Logged as Redmine bug 1695 - Concurrency exception when editing templates

Files included for this server update:

1. GUI ZIP Updates folder contains
  - a. Ris.exe
  - b. WCFClient.exe
2. RIS Service Update folder contains:
  - a. CDSJobManager.dll
  - b. CDSJobManager.pdb
  - c. rRISServices.exe
  - d. rRISServices.pdb
  - e. SignatureApprovalService.exe
  - f. SignatureApprovalService.pdb
  - g. WCFService.dll
  - h. WCFService.pdb
  - i. WebApi.dll
  - j. WebApi.pdb
3. SQL folder contains:
  - a. rRISCoreData.sql

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

## **3. Who is affected**

All previous versions of build 37.

## **4. Installing**

- 1) Copy the files in the GUI ZIP Updates folder and replace those in the rRIS\_1.2.37.13040 folder. Rename the zip file to be rRIS\_1.2.37.13171
- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService.  
*rRISService directories include:*
  - a) *rRISService*
  - b) *CDS rRISService*
  - c) *Wedge rRISService*
  - d) *DDE rRISService*

Restart each service

- 3) Run the rRISCoreData.sql file on you eRAD RIS DB instance

# **Server Update**

for eRAD RIS

Version 1.0

Build 37

Update 37.005

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5. Installing .....	6

## **1. Purpose**

This server update has been produced to fix bugs required for production setting, or to complete an enhancement requested for production.

This server update includes the following:

1. Logged as Redmine bug 1689 – Work list views (my views) are no longer available after upgrade
2. Logged as Redmine bug 1702 – Clinical Summary did display the modality type description and now it will display all modality type descriptions for that day
3. Logged as Redmine bug 1679 – Receipt issue resulting in incorrect total payments for patient.
4. Logged as Redmine bug 1696 – Suspended transcriptions are not viewable by the rad in the suspended work list.
5. Logged as Redmine bug 1699 – Unable to sync with NewCrop
6. Logged as Redmine bug 1703 – Memory leak when questionnaire tab is not shown in perform exam window.
7. Logged as Redmine bug 1704 – Error in IVT window “Failed to enable constraints” when closing Manage Policies window
8. Logged as Redmine bug 1705 – Application hang when using minimized dictation control
9. Logged as Redmine bug 1701 – Unable to create an outside read
10. Logged as Redmine bug 1700 – Error on reschedule from “Closed Rooms Reschedule” work list.
11. Logged as Redmine bug 1707 – CDSJobManager is not processing jobs missing “performed by user id”
12. Logged as Redmine bug 1680 – Document Distribution engine queue poller error when referring address unknown

## **RADNET, Inc. – eRAD RIS Server Update**

13. Logged as Redmine bug 1698 – Application hang after transcription queue is completed in batch editing mode.
14. Logged as Redmine bug 1710 – rRIS Version Number needs to display an extra .1 to display as 1.1.xxxxx
15. Logged as Redmine bug 1731 – Right click Change status to exam done creates bad data
16. Logged as Redmine bug 1722 – Reporting – Wrong default template displaying
17. Logged as Redmine bug 1723 – Studies transcribed from QA WL do not appear in Pending Dictation WL.
18. Logged as Redmine bug 1711 - Unique constraint in Tech window when Check box in patient history grid is selected and scan doc attached then try to start the exam

## **2. Package Contents**

Files included for this server update:

1. GUI ZIP Updates folder contains
  - a. ris.exe
  - b. WCFClient.exe
  - c. AudioLib.dll
  - d. CommonLib.dll
  - e. UILib.dll
2. RIS Service Update folder contains:
  - a. Wedge.exe
  - b. Wedge.pdb
  - c. DDEngine.dll
  - d. DDEngine.pdb
  - e. WCFService.dll
  - f. WCFService.pdb
  - g. WebApi.dll
  - h. WebApi.pdb
  - i. CDSJobManager.dll
  - j. CDSJobManager.pdb
  - k. SignatureApprovalService.exe
  - l. SignatureApprovalService.pdb
3. SQL folder contains:
  - a. B37.005\_updates.sql
  - b. rRISCoreData.sql



### **3. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **4. Who is affected**

All previous versions of build 37.

### **5. Installing**

- 1) Copy the files in the GUI ZIP Updates folder and replace those in the rRIS\_1.2.37.13040 folder. Rename the zip file to be rRIS\_1.2.37.13347
- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService.  
*rRISService directories include:*
  - a) *rRISService*
  - b) *CDS rRISService*
  - c) *Wedge rRISService*
  - d) *DDE rRISService*

Restart each service

- 3) Run the B37.005\_updates.sql and the rRISCoreData.sql file on you eRAD RIS DB instance.

# **Server Update**

for eRAD RIS

Version 1.0

Build 37

Update 37.006

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## **RADNET, Inc. – eRAD RIS Server Update**

### **1. Purpose**

This server update has been produced to fix bugs required for production setting, or to complete an enhancement requested for production.

This server update includes the following:

#### **Billing exception for missing billing codes**

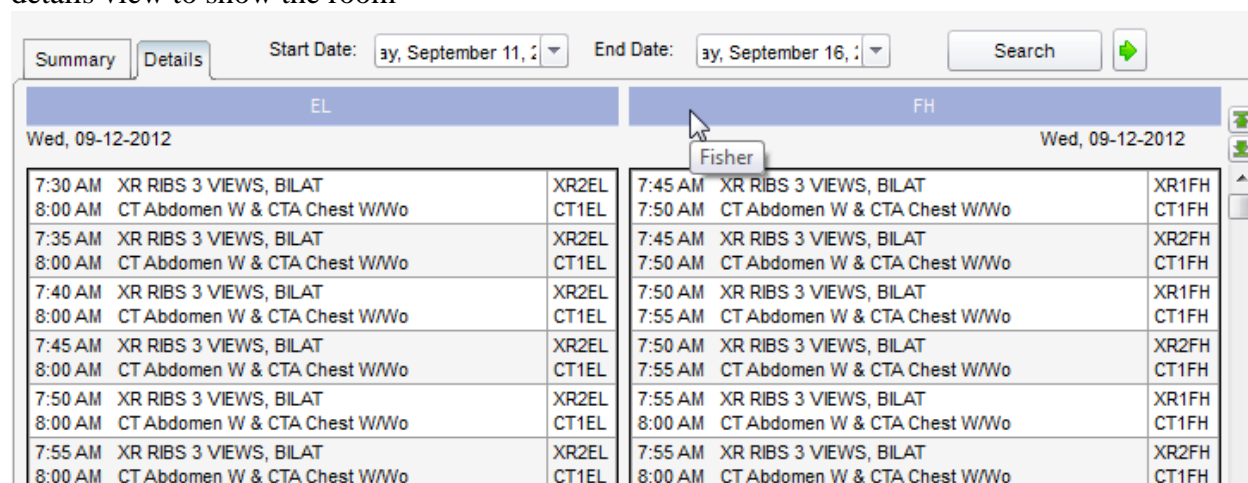
If the exam being performed has an inactive billing code or the code is set to inactive during the technologist workflow, the exam will now go to the billing exception work list and a note will be posted in the Billing Notes section.



**Figure 1.1 – Billing exception posted for studies with inactive billing codes**

#### **Rooms displayed next to time on details tab of schedule window**

When scheduling a multi procedure order in the past the advanced search > details tab did not indicate room with the available time. The user would need to select the time and see the rooms populate in the room list box on the procedure picker row. A new column was added to the details view to show the room



**Figure 1.2 – Details view on schedule tab**

## RADNET, Inc. – eRAD RIS Server Update

### Defects resolved

Redmine #	Subject	Priority
1735	Studies were being signed off on that no active billing codes were assigned	Med
1736	Outside reads were not being assigned billing codes	Med
1710	MU version number	Med
1699	NewCrop GetCredential Passing NewCropAccountSiteId instead of NewCropUsername	High
1751	COM component throwing access denied error	Med
1749	MT polling general queue is getting QA / Problem Jobs	High
1748	Assigned transcriptionist with non lowercase userid	High
1762	Remove a CC doctor from the registration screen, and save - it comes back	High
1760	CC docs get added multiple time on the perform exam screen	High
1761	Scheduled procedure can be blank after an abort	High
1763	Provided Clinical Summary	High
1728	Base template dropdown not filtering out inactive items	High
1708	Suspended jobs on polling queue will hang the application	High
1515	error loading worklist views in highway (logged 13 times in 1.5 days)	Med
1755	Duplicate section templates - When a template included duplicate sections ie multiple EXAM sections. We run into some issues. NOTE: this is a temporary solution. With problematic templates we won't insert the template, we will use the batch draft as is, and let them make the required corrections manually if anything is missing in the report.	High

## **2. Package Contents**

Files included for this server update:

1. GUI ZIP Updates folder contains
  - a. ris.exe
  - b. WCFClient.exe
  - c. CommonLib.dll
  - d. UILib.dll
  - e. WSNewCropClient.exe
2. RIS Service Update folder contains:
  - a. Wedge.exe
  - b. Wedge.pdb
  - c. CommonLib.dll
  - d. CommonLib.pdb
  - e. WCFService.dll
  - f. WCFService.pdb
  - g. WebApi.dll
  - h. WebApi.pdb
  - i. CDSJobManager.dll
  - j. CDSJobManager.pdb
  - k. SignatureApprovalService.exe
  - l. SignatureApprovalService.pdb
  - m. rRISServices.exe
  - n. rRISServices.pdb

### **3. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **4. Who is affected**

Previous versions of build 37.

### **5. Installing**

- 1) Copy the files in the GUI ZIP Updates folder and replace those in the rRIS\_1.2.37.13347 folder. Rename the zip file to be **rRIS\_1.2.37.13665**
- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService.  
*rRISService directories include:*
  - a) *rRISService*
  - b) *CDS rRISService*
  - c) *Wedge rRISService*
  - d) *DDE rRISService*

Restart each service

# **Server Update**

for eRAD RIS

Version 1.0

Build 37

Update 37.007



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## **RADNET, Inc. – eRAD RIS Server Update**

### **1. Purpose**

This server update has been produced to fix bugs required for production setting, or to complete an enhancement requested for production.

This server update includes the following:

#### **Defects resolved**

<b>Redmine #</b>	<b>Subject</b>	<b>Priority</b>
1822	Reporting - Speech Mike 3 barcoding will not work	High
1807	Historical (imported) reports - Preview tool, and historical report distribution word-wrapping at a random spot.	High
1826	Mirth Mapping - After a patient merge, we are sending the original MRN in future messages	High
1724	Template editing - concurrency violations still intermittently are happening. Edit default template may return Concurrency violation.	High
1823	Work list - multi sort using dictated date and read stat flag. Worklist performance unacceptable	High
1832	Work list performance unacceptable at ARS	High
1834	MU - NewCrop updated EXE needs to be deployed	Med
1774	Perform Exam - When referrer has preferred Rad the Rad selected will not save on included study	Med

## **2. Package Contents**

Files included for this server update:

1. GUI ZIP Updates folder contains
  - a. AudioLib.dll
  - b. CommonLib.dll
  - c. ris.exe
  - d. WCFClient.exe
  
2. RIS Service Update folder contains:
  - a. CDSJobManager.dll
  - b. CDSJobManager.pdb
  - c. CommonLib.dll
  - d. CommonLib.pdb
  - e. DDEngine.dll
  - f. DDEngine.pdb
  - g. rRISServices.exe
  - h. rRISServices.pdb
  - i. WCFService.dll
  - j. WCFService.pdb
  - k. WebApi.dll
  - l. WebApi.pdb
  - m. Wedge.exe
  - n. Wedge.pdb
  
3. Mirth Mappings\Outbound\eRadPACS folder contains:
  - a. 04\_PID.js
  
4. SQL Folder contains:
  - a. B37.007\_updates.sql

### **3. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **4. Who is affected**

Previous versions of build 37.

### **5. Installing**

- 1) Copy the files in the GUI ZIP Updates folder and replace those in the rRIS\_1.2.37.13665 folder. Rename the zip file to be **rRIS\_1.2.37.13807**
- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService.  
*rRISService directories include:*
  - a) *rRISService*
  - b) *CDS rRISService*
  - c) *Wedge rRISService*
  - d) *DDE rRISService*

Restart each service

- 3) Copy the PID.js file into the MirthMappings/Outbound/eRadPACS directory. If any custom changes at the site have been made (which shouldn't be), they will need to be merged manually.
- 4) Run the B37.007\_updates.sql file against the eRAD RIS database instance.

# **Server Update**

for eRAD RIS

Version 1.0

Build 37

Update 37.008

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## **RADNET, Inc. – eRAD RIS Server Update**

### **1. Purpose**

This server update has been produced to fix bugs required for production setting, or to complete an enhancement requested for production.

This server update includes the following:

#### **Defects resolved**

Redmine #	Subject	Priority
1857	New Appointment – Search for time slot takes 20 seconds at ARS	High

## **2. Package Contents**

Files included for this server update:

1. RIS Service Update folder contains:
  - a. WCFSservice.dll
  - b. WCFSservice.pdb

## **3. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

## **4. Who is affected**

Previous versions of build 37.

## **5. Installing**

- 1) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService.  
*rRISService directories include:*
  - a) *rRISService*
  - b) *CDS rRISService*
  - c) *Wedge rRISService*
  - d) *DDE rRISService*

Restart each service



# **Server Update**

for eRAD RIS

Version 1.0

Build 37

Update 37.009

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## **RADNET, Inc. – eRAD RIS Server Update**

### **1. Purpose**

This server update has been produced to fix bugs required for production setting, or to complete an enhancement requested for production.

This server update includes the following:

#### **Defects resolved**

Redmine #	Subject	Priority
1863	Signed exams fail billing – “No active billing codes for this study”	High
1866	Action data does not have all studies in the study container XML	Med-High

## **2. Package Contents**

Files included for this server update:

1. RIS Service Update folder contains:
  - a. WCFService.dll
  - b. WCFService.pdb

## **3. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

## **4. Who is affected**

Previous versions of build 37.

Server updates may not be cumulative; therefore this server update must be applied directly to the previous server update.

## **5. Installing**

- 1) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService.

*rRISService directories include:*

- a) *rRISService*
- b) *CDS rRISService*
- c) *Wedge rRISService*
- d) *DDE rRISService*

Restart each service

# **Server Update**

**For eRAD RIS  
Version 1.0  
Build 37  
Update 37.010**

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## **RADNET, Inc. – eRAD RIS Server Update**

### **1. Purpose**

This server update has been produced to fix bugs required for production setting, or to complete an enhancement requested for production.

This server update includes the following:

#### **Defects resolved**

Redmine #	Subject	Priority
1860	Activity WL - View/Edit - View Images throws error looking for room	Med
1874	Reporting - CDSJobManager Open to Sign>Submit will get stuck in dictated	Med
1867	Removing study from procedure plan will remove same sequence number from all procedure plans	High
1883	Some patients cannot be checked in / arrived because of error on saving attachments	Med
1832	Worklist performance unacceptable at ARS – this includes IVT WL, PACS Correction WL, Billing Exception WL ...	High
1865	Cannot open "New Walk In" from patient search when another Walk In window is already open	Med
1880	Unique constraint violation on registration screen (ix_c_order_item)	Med
1884	Error opening new walk in from patient search when patient has a previous referring that is inactive	Med
1885	Frequent concurrency violation errors when closing the RIS.	Med
1888	Receipt error posting payment at a site that has a site_code that is a substring of another site	Med
1901	View Images button from Perform Exam "flaky" at ARS	High
1898	Referring's without affiliations missing address details on the search results for referring search	High
1780	Error opening registration or tech when worklist row is modified by another user	Med
1907	primary key violation on PK_C_BILLING_DETAIL – on save of registration screen an error may be thrown on the billing detail violation	High
1904	Scheduler duration > 100 saves as 0	High
1905	Procedure code picker is not wide enough to show rooms with > 5 or 6 characters	High
1913	Radar procedure to confirm will not fit in configuration setting.	High
1908	Fix Performance Issues with MU Reports	Med

## **2. Package Contents**

Files included for this server update:

1. GUI ZIP Updates folder contains
  - a. AudioLib.dll
  - b. CDSJobManagerConsoleClient.exe
  - c. CommonLib.dll
  - d. DynamicFormEditor.dll
  - e. Ris.exe
  - f. UILib.dll
  - g. WCFClient.pdb
  - h. WSNewCropClient.exe
2. RIS Service Update folder contains:
  - a. CDSJobManager.dll
  - b. CDSJobManager.pdb
  - c. CommonLib.dll
  - d. CommonLib.pdb
  - e. DDEngine.dll
  - f. DDEngine.pdb
  - g. rRISServices.exe
  - h. rRISServices.pdb
  - i. rRISServices.vshost.exe
  - j. ScheduledTaskManager.dll
  - k. ScheduledTaskManager.pdb
  - l. SignatureApprovalService.exe
  - m. SignatureApprovalService.pdb
  - n. WCFService.dll
  - o. WCFService.pdb
  - p. WebApi.dll
  - q. WebApi.pdb
  - r. Wedge.exe
  - s. Wedge.pdb
3. SQL folder contains:
  - a. 37.010\_updates.sql



## **4. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

## **5. Who is affected**

Previous versions of build 37.

Server updates may not be cumulative; therefore this server update must be applied directly to the previous server update.

## **6. Installing**

- 1) Copy the files in the GUI ZIP Updates folder and replace those in the rRIS\_1.2.37.13807.zip folder. Rename the zip file to be **rRIS\_1.2.37.13895.zip**
  
- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService.  
*rRISService directories include:*
  - a) *rRISService*
  - b) *CDS rRISService*
  - c) *Wedge rRISService*
  - d) *DDE rRISService*

Restart each service

- 3) Run the B37.010\_updates.sql file against the eRAD RIS database instance.

# Server Update

For eRAD RIS  
Version 1.0  
Build 37  
Update 37.011

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## **RADNET, Inc. – eRAD RIS Server Update**

### **1. Purpose**

This server update has been produced to fix bugs required for production setting, or to complete an enhancement requested for production.

This server update includes the following:

#### **Defects resolved**

Redmine #	Subject	Priority
1920 / 1986	The MU Quick Add Edit has a data error. It should be Metformin and not MelFormin.	Med
1918	Management Reports - Daily Schedule requires chief complaint to be added to the report.	Med
1926	Error when you right-click to add an MRN to the alternate MRN grid	Med
1939 / 1940	Webservices including all studies from the same appointment in the action data	High
1931	Cannot open Labwork WL	High
1912	Management Report - Unread Exams, request to filter report	Med
1922	Management Report - Imaging Center Manager (ICM) Dashboard inconsistency	Med
1941 / 1932	Reporting - Users can dictate on cancelled exams with Report on Accession number	High
1942	Add Unknown referring - removing access does not hide the button	Med
1925	Appointment Book - Edit schedule does not remove the old one until the window is re-opened	Med
1788	Billing Exception - Editing billing codes will clear billing notes field	Med
1938	Error on reschedule of a single study to scheduling a series	Med
1929	PACS Integration - Relevance not working when adding Modality Type criteria	High
1886	Relevance Lookup Editor - cant delete row	High
1934	Relevance Calculation - is evaluating inactive rows	High
1947	Register x was not updating the additional visit contact information	Med
1948	RTAT Summary report slow	Med
1989	Problem resolved studies that are unassigned not appearing on Pending Dictation WL	High
1999	Requesting Addendum on study to unassigned rad will not appear on Pending Dictation WL	High
1998	Duration not correctly being assigned correctly on search results	Med
1993	Studies appeared to move from on order to another when HL7 confirmation messages were processed	High

## **RADNET, Inc. – eRAD RIS Server Update**

1990	Perform Exam - Study can be completed without tech notes	Med
1598	WPR workflow, multiple same accession numbers	Med
1933	Daily Clean scripts for a large database take very long to run and will inflate transaction log	Immediate
2006	Appointment booking check lock	Med
2005	Scheduling a procedure plan was causing issues with duration of 0 not finding results	Med
2007	Radiologist middle name needed on report signature	High
1985	Confirmation Screen - Save button bumps the items off	Med
2011	WPR 000 not creating a new accession number	High
2014	Durations for search results not always returning as expected	Med
2010	Resolve problem to assigned rad saves as user who resolved	High
2012	Appointment Book refresh issue	Med
1983	PDF Import causes major problem with FAX PDF Files	Med
1949	Management Reports - Radiologist Dashboard	Med
1859	Removing procedures picker rows and adding again will return error on Save As Order	Med
2023	Study comes back to IVT is someone opens the study in View Edit, and Billing	High
2004	Error scheduling book x on new patient	High

## **2. Package Contents**

Files included for this server update:

1. GUI ZIP Updates folder contains
  - a. AudioLib.dll
  - b. AudioLib.pdb
  - c. CDSJobManagerConsoleClient.exe
  - d. CDSJobManagerConsoleClient.pdb
  - e. CommonLib.dll
  - f. CommonLib.pdb
  - g. DynamicFormEditor.dll
  - h. DynamicFormEditor.pdb
  - i. O2S.Components.PDFRender4NET.dll
  - j. PDToImages.exe
  - k. Ris.exe
  - l. Ris.pdb
  - m. UILib.dll
  - n. UILib.pdb
  - o. WCFClient.exe
  - p. WCFClient.pdb
  - q. WSNewCropClient.exe
  - r. WSNewCropClient.pdb
2. RIS Service Update folder contains:
  - a. CDSJobManager.dll
  - b. CDSJobManager.pdb
  - c. CommonLib.dll
  - d. CommonLib.pdb
  - e. DDEngine.dll
  - f. DDEngine.pdb
  - g. O2S.Components.PDFRender4NET.dll
  - h. PDFTToImages.exe
  - i. rRISServices.exe
  - j. rRISServices.pdb
  - k. rRISServices.vshost.exe
  - l. ScheduledTaskManager.dll
  - m. ScheduledTaskManager.pdb
  - n. SignatureApprovalService.exe
  - o. SignatureApprovalService.pdb
  - p. WCFService.dll
  - q. WCFService.pdb
  - r. WebApi.dll
  - s. WebApi.pdb

## **RADNET, Inc. – eRAD RIS Server Update**

- t. Wedge.exe
  - u. Wedge.pdb
- 3. SQL folder contains:
  - a. 37.011\_updates.sql
- 4. Reporting.zip folder contains all of the current management reports:
  - a. ParentFolder that contains
    - i. dashboards (9 files)
    - ii. management reports (95 files contained in various sub folders)
    - iii. marketing (9 files)
    - iv. samples (numerous files in various sub folders)
    - v. sub-reports (8 files)
  - b. scripts folder that contains the files required to run DeployReports.bat
    - i. CreateParent.fldr.rss
    - ii. DeleteAndCreateCoreFolders.rss
    - iii. DeleteAndCreateSampleFolders.rss
    - iv. DeleteCoreFolders.rss
    - v. DeleteSamples.rss
    - vi. ListFolders.rss
    - vii. RISDataSource.rds.rss
  - c. DeployReports.bat

**NOTE:** This folder has been compressed and added to a .zip file to reduce size for file transfer. The folder must be “unzipped” before the reports can be deployed.

## **5. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

## **6. Who is affected**

Previous versions of build 37.

Server updates may not be cumulative; therefore this server update must be applied directly to the previous server update.

## 7. eRAD RIS Release Version Numbers

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	Just WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we really did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	

## 8. Installing

- 1) Copy the files in the GUI ZIP Updates folder and replace those in the rRIS\_1.2.37.13895.zip folder. Rename the zip file to be **rRIS\_1.2.37.14161.zip**
- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService.  
*rRISService directories include:*
  - a) *rRISService*
  - b) *CDS rRISService*
  - c) *Wedge rRISService*
  - d) *DDE rRISService*

Restart each service



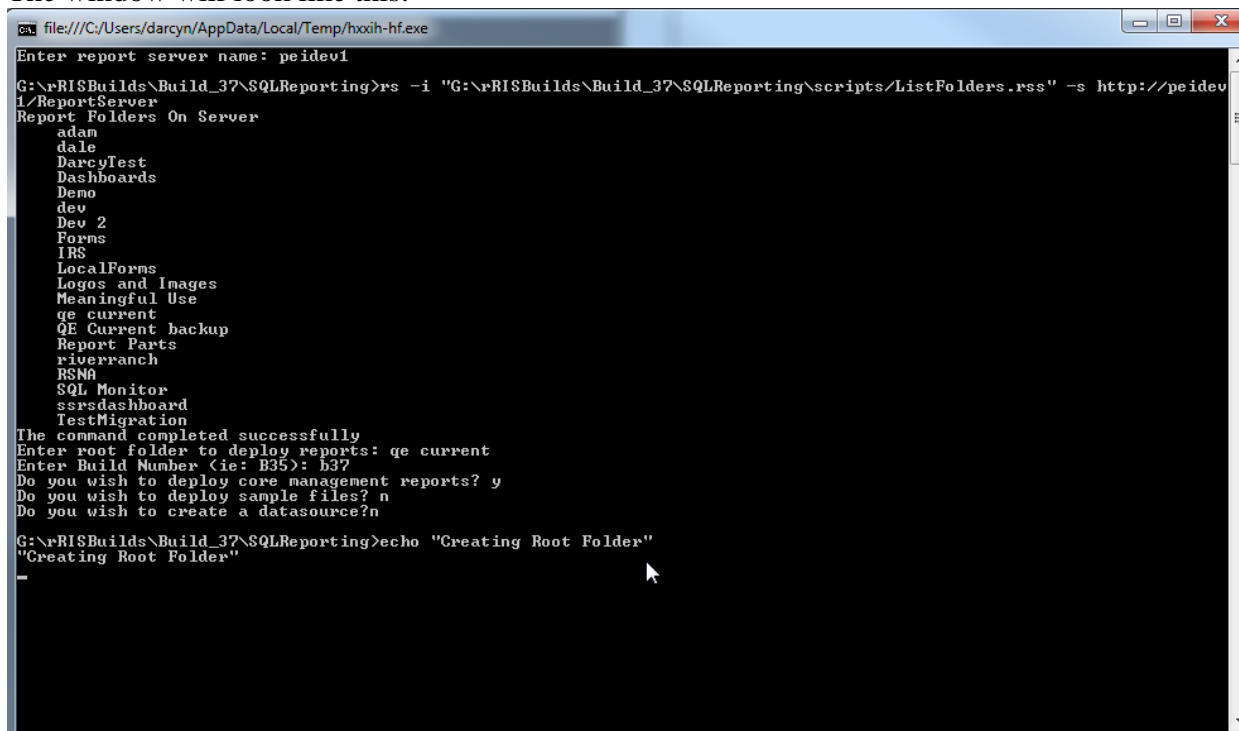
## RADNET, Inc. – eRAD RIS Server Update

- 3) Run the B37.011\_updates.sql file against the eRAD RIS database instance.
- 4) Copy the Reporting.zip file to the local server. Unzip the contents before running the DeployReports.bat file. Completing the DeployReports.bat file will replace all core management reports and all samples if you choose yes to the associated prompt. It will not affect any custom folders that have been created on the report server.

To get the latest Management Reports:

- a) Run the DeployReports.bat file by double clicking on the file
- b) Enter the report server name: Example – MDBAL01RIS001. The report folders on the server will be displayed
- c) Enter the root folder to deploy the reports : Example - Baltimore Sandbox
- d) Enter the build number – Example b37
- e) Next question will ask if you want to deploy core management reports – input y
- f) Next question will ask if you want to deploy sample files – input n
- g) Next question will ask if you wish to create a datasource – input n. (Note: creating a datasource would be used for a new installation and creating SQL Server Reporting Services for the first time)

The window will look like this:



```
file:///C:/Users/darcyn/AppData/Local/Temp/hxxih-hf.exe
Enter report server name: peidev1
G:\rRISBuilds\Build_37\SQLReporting>rs -i "G:\rRISBuilds\Build_37\SQLReporting\scripts/ListFolders.rss" -s http://peidev1/ReportServer
Report Folders On Server
  adam
  dale
  DarcyTest
  Dashboards
  Demo
  dev
  Dev 2
  Forms
  IRS
  LocalForms
  Logos and Images
  Meaningful Use
  qe current
  QE Current backup
  Report Parts
  riverranch
  RSNA
  SQL Monitor
  srsdashboard
  TestNigation
The command completed successfully
Enter root folder to deploy reports: qe current
Enter Build Number (ie: B35): b37
Do you wish to deploy core management reports? y
Do you wish to deploy sample files? n
Do you wish to create a datasource?n
G:\rRISBuilds\Build_37\SQLReporting>echo "Creating Root Folder"
"Creating Root Folder"
```

# Server Update

For eRAD RIS  
Version 1.0  
Build 37  
Update 37.012

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## **RADNET, Inc. – eRAD RIS Server Update**

### **1. Purpose**

This server update has been produced to fix bugs required for production setting, or to complete an enhancement requested for production.

This server update includes the following:

#### **Defects resolved**

Redmine #	Subject	Priority
1831	View images button and retrieving images from archive not working	High
2049	Object Reference not set to an instance of an object error when editing an order	Med
2059	Scheduling from appointment book = Teleric error	High
2076	Issue with logos displaying in reports	Med
2081	VR2 - Messages from Merge with alternate patient ids no longer Merging	Urgent
2090	ris appointment search not returning expected results	High

## **2. Package Contents**

Files included for this server update:

1. GUI ZIP Updates folder contains
  - a. CommonLib.dll
  - b. CommonLib.pdb
  - c. Ris.exe
  - d. Ris.pdb
  - e. UILib.dll
  - f. UILib.pdb
  - g. WCFClient.exe
  - h. WCFClient.pdb
2. RIS Service Updates folder contains
  - a. CDSJobManager.dll
  - b. CDSJobManager.pdb
  - c. rRISServices.exe
  - d. rRISServices.pdb
  - e. SignatureApprovalService.exe
  - f. SignatureApprovalService.pdb
  - g. WCFService.dll
  - h. WCFService.pdb
  - i. Wedge.exe
  - j. Wedge.pdb
3. SQL folder contains:
  - a. 37.012\_updates.sql

### **4. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **5. Who is affected**

Previous versions of build 37.

Server updates may not be cumulative; therefore this server update must be applied directly to the previous server update.

### **6. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	Just WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	
						Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we really did not.
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	
37	12	1.2.37.14285	1.2.37.13040	1.2.37.14300	1.2.37.14285	

## **7. Installing**

- 1) Copy the files in the GUI ZIP Updates folder and replace those in the rRIS\_1.2.37.14161.zip folder. Rename the zip file to be **rRIS\_1.2.37.14285.zip**
- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService.  
*rRISService directories include:*
  - a) *rRISService*
  - b) *CDS rRISService*
  - c) *Wedge rRISService*
  - d) *DDE rRISService*

Restart each service.
- 3) Run the B37.012\_updates.sql file against the eRAD RIS database instance.

# **Server Update**

**For eRAD RIS  
Version 1.0  
Build 37  
Update 37.013**



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### **1. Purpose**

This server update has been produced to fix bugs required for production setting, or to complete an enhancement requested for production.

This server update includes the following:

#### **Defects resolved**

Redmine #	Subject	Priority
1442	Save IVT with large Precert note generates String or binary data would be truncated error	Normal
2107	error on opening registration when patient has multiple orders for today	Normal
2122	selecting search result times/typing date/times in manually could cause the wrong duration override to be used	Normal
2098	Registration - When registering an exam for a patient with multiple exams for the same day	High
2081	VR2 - Messages from Merge with alternate patient ids no longer Merging	Urgent

## **2. Package Contents**

Files included for this server update:

1. GUI ZIP Updates folder contains
  - a. CommonLib.dll
  - b. CommonLib.pdb
  - c. Ris.exe
  - d. Ris.pdb
  - e. UILib.dll
  - f. UILib.pdb
  - g. WCFClient.exe
  - h. WCFClient.pdb
  
2. RIS Service Updates folder contains
  - a. CDSJobManager.dll
  - b. CDSJobManager.pdb
  - c. CommonLib.dll
  - d. bommonLib.pdb
  - e. rRISServices.exe
  - f. rRISServices.pdb
  - g. ScheduledTaskManager.dll
  - h. ScheduledTaskManager.pdb
  - i. SignatureApprovalService.exe
  - j. SignatureApprovalService.pdb
  - k. WCFSservice.dll
  - l. WCFSservice.pdb
  - m. Wedge.exe
  - n. Wedge.pdb
  
3. SQL folder contains:
  - a. B37.013\_updates.sql

### **4. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **5. Who is affected**

Previous versions of build 37.

Server updates may not be cumulative; therefore this server update must be applied directly to the previous server update.

### **6. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	Just WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	
						Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we really did not.
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	
37	12	1.2.37.14285	1.2.37.13040	1.2.37.14300	1.2.37.14285	
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	

## **7. Installing**

- 1) Copy the files in the GUI ZIP Updates folder and replace those in the rRIS\_1.2.37.14285.zip folder. Rename the zip file to be **rRIS\_1.2.37.14326.zip**
- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService.  
*rRISService directories include:*
  - a) *rRISService*
  - b) *CDS rRISService*
  - c) *Wedge rRISService*
  - d) *DDE rRISService*

Restart each service.
- 3) Run the B37.013\_updates.sql file against the eRAD RIS database instance.

# User Release Notes

for eRAD RIS

Version 1

Build 38

Server Patches 38.001 and 38.002 included

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## **1. Purpose**

This document describes some of the new features and changes implemented in eRAD RIS as of the end of Sprint 38. This version of eRAD RIS is referred to as Build 1.2.38.

Only features which can be visually demonstrated to the user will be outlined in this document.

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS management team.

## **3. Installing/Accessing the Application**

The installation instruction for the eRAD RIS client are included with this software release and can be found in the \_Documentation > Installation folder. They have also been posted to the RadNet Wiki page at <http://mdbal01rdtweb/Wiki/>

Under the RIS menu click on the rRIS page. The credentials to access the page are:

Username: rRIS

Password: Summerside

*Please note that Build 1.38 is considered a new core release of the application and will require a reinstallation of eRAD RIS. This is accomplished by navigating to the eRAD RIS shared installation drive and running the CoreInstall.bat file (ex: I:\RISDeployment\CoreInstall.bat)*

If you experience difficulties accessing the application please do not hesitate to contact Darcy Noye with the PEI RIS Development Team.

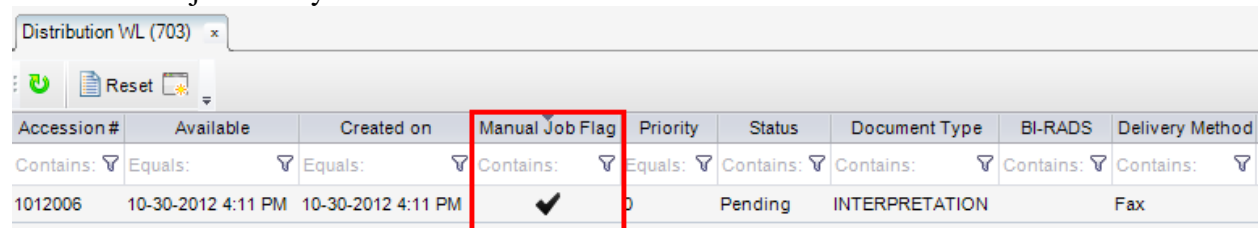
**3a. eRAD RIS Release Version Numbers**

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	Just WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we really did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	
37	12	1.2.37.14285	1.2.37.13040	1.2.37.14300	1.2.37.14285	
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	

## 4. New Features and Enhancements

### Document Distribution – Manual Job Column

A new column titled Manual Job has been added to the Distribution WL and Distribution History by Date WL. A check mark in this column indicates that the job was created manually, otherwise the job was system created.



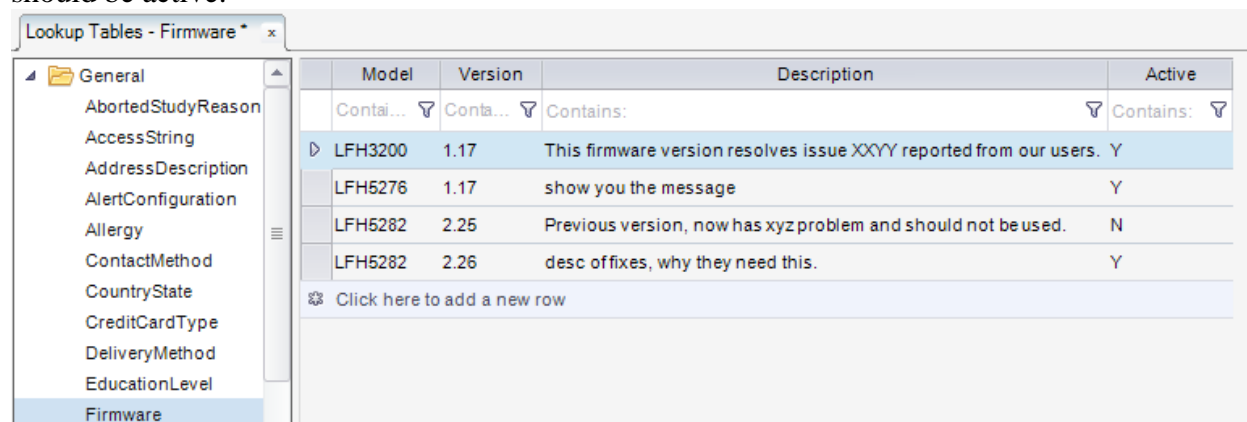
Accession #	Available	Created on	Manual Job Flag	Priority	Status	Document Type	BI-RADS	Delivery Method
Contains: ▼	Equals: ▼	Equals: ▼	Contains: ▼	Equals: ▼	Contains: ▼	Contains: ▼	Contains: ▼	Contains: ▼
1012006	10-30-2012 4:11 PM	10-30-2012 4:11 PM	✓	0	Pending	INTERPRETATION		Fax

Figure 4.1 – Document Distribution WL displaying new Manual Job column

## Firmware Version Check

Users have experienced issues in the past when the firmware version was old and out of date. To circumvent these issues a firmware version check of the SpeechMike can now be performed at the time of logging into the application.

A new lookup table called Firmware that allows the eRAD RIS administrator to add different models numbers of SpeechMikes, the firmware at which it should be at, a description for the admins as to why this firmware upgrade is being requested, and if the models and version prompt should be active.



Model	Version	Description	Active
Contai...	Contai...	Contains:	Contains:
LFH3200	1.17	This firmware version resolves issue XXXY reported from our users.	Y
LFH5276	1.17	show you the message	Y
LFH5282	2.25	Previous version, now has xyz problem and should not be used.	N
LFH5282	2.26	desc of fixes, why they need this.	Y
Click here to add a new row			

Figure 4.2 – Firmware lookup table

If the firmware version of the SpeechMike is not met, the user will be prompted with the following message upon login of eRAD RIS.



Figure 4.3 – Message prompt displayed when Model XX firmware does not match with lookup

## Meaningful Use Clinical Summary Reports

The Clinical Summary Report is a summary of the patients visit. Details in the report include patient name, date of exam, modality description (shows all studies for the day based off of procedure group description), reason for the exam (chief complaint), allergies and severity, patient medications, relevant history (medical history) and any pending appointments the patient may have.

Clinical Summary

1 of 1 100% Find | Next

**ADVANCED RADIOLOGY**

Printed: 10-10-2012 10:15 AM Page 1 of 1

Advanced Radiology  
Lutherville  
1209 York Road Suite 100  
Lutherville, MD 21093

Phone:  
(410) 580-2240

Fax:  
(410) 580-2270

*Thank you for visiting Advanced Radiology today!*

**Visit Overview**

Patient Name:	Darcy Noye
Visit Date:	10-10-2012
Exam Type:	Plain Film/Xray/CR - Chest
Reason for Visit:	Chest pain

**Allergies**

Bee Sting	Mild
Contrast	Mild

**Medications**

No known medications.

**Relevant History**

Metal In The Body
Previous Ct Contrast Reaction

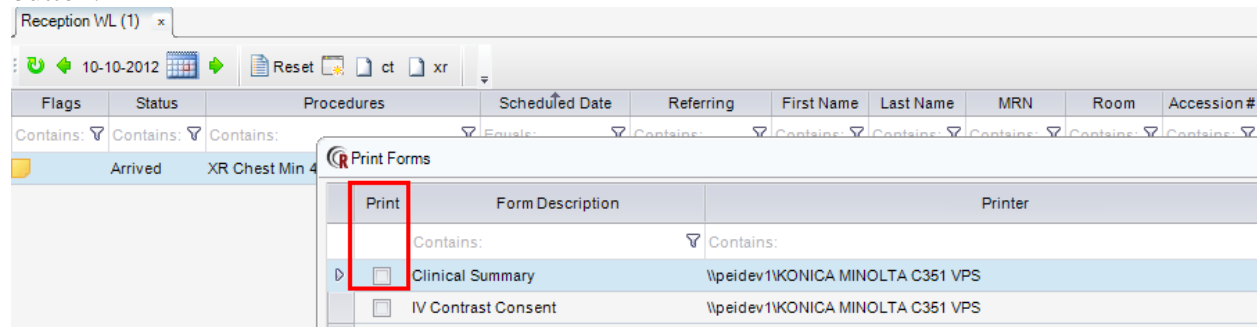
**Pending Appointments**

No pending appointments.

*End of visit summary.*

**Figure 4.4 – Print preview of Clinical Summary Report**

The report is configured in the Forms and Labels lookup editor with form category of Exam. Printing criteria can be configured to print upon a specific action (such as checking in). The form can also be accessed from work lists context menu > print forms option. This opens the Print Forms window. From this window the report can be previewed as displayed in the figure above and also printed from the preview window. It can also be sent directly to the printer without preview by selecting the Print check box for Clinical Summary and selecting the OK button.



**Figure 4.5 – Print Forms window from Reception WL**

## Meaningful Use Quick Add Edit Dialog Changes

Within the Quick Add Edit Dialog window, two new options have been added under Medical History. Hypertension is linked to Indication (ICD-9) code 401.9 and Renal Disease is linked to 593.9.

The screenshot shows the 'MU Quick Add Edit Dialog' window. It contains three main sections: Medications, Medical History, and Allergies. The 'Medical History' section has two columns of checkboxes. The 'Hypertension' checkbox in the left column and the 'Renal Disease' checkbox in the right column are highlighted with red boxes. The 'Allergies' section is a table with columns for Substance, Mild, Mod, and Severe.

Medications	
<input type="checkbox"/> ACTOplus Met	<input type="checkbox"/> Glumetza
<input type="checkbox"/> Avandamet	<input type="checkbox"/> Glyburide-metformin
<input type="checkbox"/> Diabex	<input type="checkbox"/> Janumet
<input type="checkbox"/> Diaformin	<input type="checkbox"/> Metaglip
<input type="checkbox"/> Flortamet	<input type="checkbox"/> Metformin
<input type="checkbox"/> Glucophage	<input type="checkbox"/> PrandiMet
<input type="checkbox"/> Glucovance	<input type="checkbox"/> Riomet (liquid form Metformin)

Medical History	
<input type="checkbox"/> Aneurysm Clip or Coil	<input type="checkbox"/> Metal in the body
<input type="checkbox"/> Aneurysm Had Surgery	<input type="checkbox"/> Morphine Pump
<input type="checkbox"/> Aneurysm No Surgery	<input type="checkbox"/> Pacemaker
<input type="checkbox"/> Asthma	<input type="checkbox"/> Paraplegic
<input type="checkbox"/> Breast Implants	<input type="checkbox"/> Previous CT Contrast Reaction
<input type="checkbox"/> Cancer	<input type="checkbox"/> Previous MR Contrast Reaction
<input type="checkbox"/> Diabetes	<input type="checkbox"/> Renal Disease
<input type="checkbox"/> Hypertension	<input type="checkbox"/> Universal Precautions
<input type="checkbox"/> Insulin Pump	

Allergies			
Substance	Mild	Mod	Severe
Adhesive Tape	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bee Sting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Betadine (Topical Iodine)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contrast (Medical Imaging)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dog, Cat or Animal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dust	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fruit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grass / Pollen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Latex	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lidocaine / Novacaine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mold	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Peanut or other nut	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Penicillin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rubbing Alcohol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shellfish	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sulfa Drug	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

OK Cancel

Figure 4.6 – MU Quick Add Edit Dialog additions

## Management Report - Meaningful Use Automated Measures Details

The MU Automated Measures Details report was created to assist in determining which patient is missing meaningful use criteria. The report is sorted by patient id (MRN). The user has the ability to search by all practices or individual practice. A Radiologist must be selected along with a specific reporting period. The user also has the ability to search for a patient accession number if they only want to view details on a single record.

Practice:  Radiologist:   
 Start Date:  End Date:   
 accession number:  ☒ NULL

1 of 1 100% Find | Next

### MU Automated Measures Details

Radiologist: Noye, Darcy Thane  
 Practice: All Practices  
 Date Range: 10/1/2012 - 12/31/2012  
 Last Updated: 11/8/2012 3:55:24 PM

Description: This report displays the details of the selected practice, selected radiologist and the resulting Meaningful Use measures. Indicators as to whether or not the individual has met, failed or not applicable results within the selected date range.

MRN	Accession#	Problem	Medication	Allergy	Demo	Education	CPOE	Vitals	Smoking	Lab	eHealth	Reconcile	Summary	Timely	eRx	Clinical	Reminder	Total									
11510		✓	✓	✓	✓	✗	✓	✗	✗	0/0	✓	✗	○	✗	0/0	0/2	○	2									
11833		✓	✓	✓	✓	✗	○	✗	✗	0/0	○	✗	○	✗	0/0	0/1	○	1									
11934		✗	✗	✗	✗	✗	○	✗	✗	0/0	○	✗	○	✗	0/0	0/2	○	2									
12400		✓	✓	✓	✓	✗	○	✗	✓	0/0	○	✗	○	✗	0/0	1/1	○	1									
12405		✓	✓	✓	✓	✗	○	✗	✓	0/0	○	✗	○	✗	0/0	0/1	○	1									
1011684		N	N	N	Y	Y	Y	N	N	0	1	Y	57	0	0	N	Z	Y	N	N	N	100	0	0	N	N	57
12407		✓	✓	✓	✓	✗	○	✗	✓	0/0	○	✗	○	✗	0/0	0/1	○	1									
12416		✓	✓	✓	✓	✗	○	✗	✓	0/0	○	✗	○	✗	0/0	0/2	○	2									
12420		✓	✓	✓	✓	✗	○	✗	✓	0/0	○	✗	○	✗	0/0	0/3	○	3									
12424		✓	✓	✓	✓	✗	○	✗	✓	0/0	○	✗	○	✗	0/0	0/1	✗	1									
12557		✓	✓	✓	✓	✗	○	✗	✓	0/0	✗	✓	✓	✓	0/0	0/1	○	1									
12566		✓	✓	✓	✓	✗	○	✗	✓	0/0	○	✗	○	✗	0/0	0/1	○	1									
12592		✗	✗	✗	✓	✗	○	✗	✗	0/0	○	✗	○	✗	0/0	0/1	✗	1									
12618		✓	✓	✓	✓	✗	○	✗	✓	0/0	○	✗	○	✗	0/0	0/1	○	1									
12711		✓	✓	✓	✗	✗	○	✗	✓	0/0	○	✗	○	✗	0/0	0/1	○	1									
12763		✗	✗	✗	✗	✗	○	✗	✗	0/0	○	✗	○	✗	0/0	0/1	○	1									
12781		✗	✗	✗	✗	✗	○	✗	✗	0/0	○	✗	○	✗	0/0	0/2	○	2									
<b>Total</b>		12/16	12/16	12/16	12/16	0/16	1/1	0/16	11/16	0/0	1/2	1/16	1/1	1/16	0/0	1/22	0/2	16									

MU Automated Measures Details Confidential and Proprietary Date Run: 11/8/2012 3:55 PM

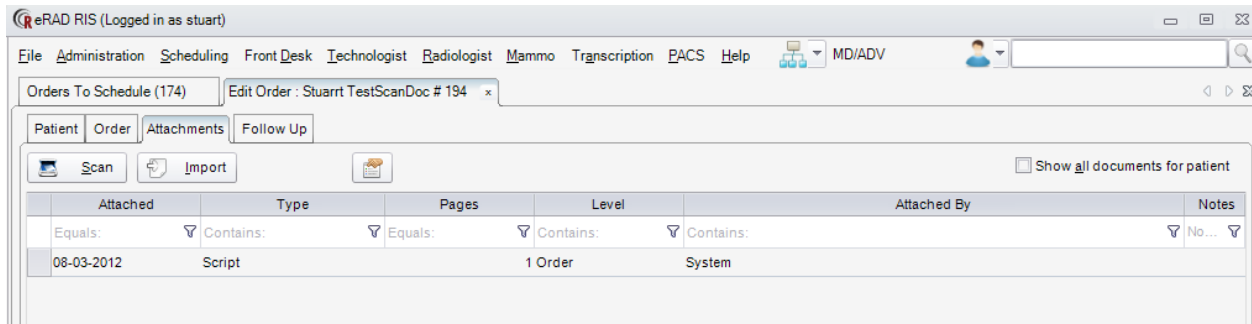
Figure 4.7 – MU Automated Measures Details



### Order Level Attachments (Scan Docs)

We use the SSRS to create a graphical representation of the order much the same as the diagnostic reports are produced for faxing. The image produced by SSRS is then attached as a scan doc to the newly created order.

These shows up as Order Level scan docs in the UI. The following screenshot shows the editing of an order for a patient that has several orders each with its own scan doc. The Show All checkbox is checked.



**Figure 4.8 – Patient order displaying attachment at order level**

In this build the documents can be scanned in or imported at the patient level, then from the Attachments tab changed to order level.

A new order via HL7 will result in a scan doc being automatically created and attached to the order.

## Limit Practices in Template Macro Editor

The Template Macro Editor Practice selection will be auto filtered to the practices the logged in user is associated with in the Personnel Editor.

General Resource Account Notes Attachments Preferences

Resource Type

☐ Referring physician ☒ Radiologist ☐ Surgeon

☐ Transcriptionist ☐ Technologist ☐ Unknown referring

Referring Flags

☐ Direct referral program

☐ Pre-auth program

Resource information

NPI  ☐ Unknown NPI UPIN  DEA

Practices

Specialties

☒ Emergency Access Primary State License  License #

Preferred radiologists

Figure 4.9 – Displaying Practices for logged in user

Looking at the figure above you can see that this user is associated with 2 practices. If this user opens the Template Editor, they can only create a template for these 2 practices.

Template Editor

Template Adv. Assignments Fields Insert me < >

Practice :

Base Template:

Details

\*Name :

\*Description :

© 2010 Multimodal Technologies, Inc. - AnyModal Edit 7.75.2

Figure 4.10 – Template Editor filtered by practice for user

If for some reason a practice is removed from the users personnel account, the template will still be available for edit to the user, but if creating a new one, the practice that is no longer associated will not be available.

## Reporting – QA Workflow

QA Workflow has been introduced in build 38 to allow transcribed reports and signed reports to be reviewed by QA personnel.

To start explaining what is involved in implementing this process we will start with a new lookup table that has been added. The User Id column is list of all users with the resource types of either Radiologist or Transcriptionist. The Quality Review Rate is the frequency in which the users transcribed or signed report is reviewed. Only the users added in this lookup table will be sent to QA.

User Id	Quality Review Rate	Description	Display Order	Active
radtest	5	Dr. Rad will have every 5th reviewed	2	Y
transtest	2	Trans every 2	3	Y
transadmin	4	Transadmin every 4	3	Y
Betty1	1	Every single one	2	Y
spencer	2	every second	1	Y
ian	2	every second	1	Y
dale	2	every second	1	Y

Figure 4.11 – Quality Review Distribution lookup table

Looking at the figure above, the user id radtest will have every 5<sup>th</sup> signed report sent to QA.

The Push Signature Service must be running on the database. The Push Signature Service, up until now has been used for the “Signed, Pending Release” feature (AKA as “Oops” or “Tentatively Signed”). The QA work flow now also utilizes this service. Even if the users don’t use the “Oops” feature, this service must be running.

### Transcription Pending QA work flow

Transcription edits will be sent to the work list Edits Pending QA WL. The work list is accessed from the Transcription menu and granted access from the access string

**WL.MT.ReportDraftedQA.** The work list provides many details such as who transcribed the report, who the report is currently assigned to and transcribed and dictated dates.

The screenshot shows a window titled 'Edits Pending QA WL (7)'. It contains a table with columns: Flags, Status, Procedures, Referring, First Name, Last Name, MRN, Locked By, Room, Accession #, Transcribed By, Assigned Trans, Transcribed Date, Dictated By, and Dictated Date. A context menu is open over the first row, showing options like 'Assign to Transcriptionist', 'Set Problem Flag', 'Remove QA Flag', 'Set Stat Flag', 'Set Suspended Flag', 'Image Request', 'Change Dictated by Radiologist', 'Change Status To ReportDrafted', 'Resubmit dictation for draft', 'Delete the dictation/report and reset the status', 'Patient Folder', 'Audit History', and 'Copy Cell'. A 'Verify Edits' button is visible at the bottom right of the table area.

Flags	Status	Procedures	Referring	First Name	Last Name	MRN	Locked By	Room	Accession #	Transcribed By	Assigned Trans	Transcribed Date	Dictated By	Dictated Date
	Transcribed	XR Foot 2 Views, Bilat [RD30] - Foot...	Laurie Graves	Barbara	Beaton	11895		Outside...	101112	transtest		11-07-2012 2:33 PM	radtest	04-27-2012 2:54 PM
			y Ghnue	David	Cunningh...	12071		CT1EL	1011267	transtest	darcyn	11-07-2012 2:34 PM	darcyn	10-01-2012 2:10 PM
			cy Aiken	Harold	Benson	12285		CT1FH	1011469	transtest		11-07-2012 2:36 PM	stuart	10-03-2012 1:44 PM
			y Darcy Noye	Henry	Hudson	12263		XR1EL	1011478	transtest	transtest	11-07-2012 2:32 PM	darcyn	09-25-2012 5:12 PM
			LIAM SINTO...	Connor	Stately	12491		CT1FH	1011758	transtest	transtest	11-07-2012 2:33 PM	darcyn	10-22-2012 10:59 AM
			LIAM ARNOLD	Bonnie	Brinks	9775		XR1EL	1012037	transtest		11-01-2012 11:00...	darcyn	11-01-2012 10:38 AM
			er Jerry Piled	Hugh	Dough	12807		XR1EL	1012097	transtest		11-06-2012 10:40...	darcyn	11-06-2012 10:34 AM

**Figure 4.12 – Edits Pending QA WL**

From this work list, QA personnel can open the Verify Edits window to begin the process of QA. Various other options can be available from the context menu based on permission for the user.

Within the Verify Edits window the QA user can verify the report or reject. If the report is verified the report is released from the QA process and the Radiologist is then able to sign the report. If the report is rejected, the QA personnel can complete the edits required and transcribe the report. The report will then be available for the Radiologist to complete the work flow.

The report can also be rejected and assigned to a particular user via the Assign To data pane within the Verify Edits window. On the initial load of the window the buttons in the lower right are Verify Edits and Close. If the Reject/Edit button is selected the Verify Edits button will change to Transcribe. If the edit is assigned to a Transcriptionist, Problem or QA, the button will then change to Assign. See figure below

If the report is assigned to a specific transcription user, the report is returned to the Reports Drafted WL for further correction

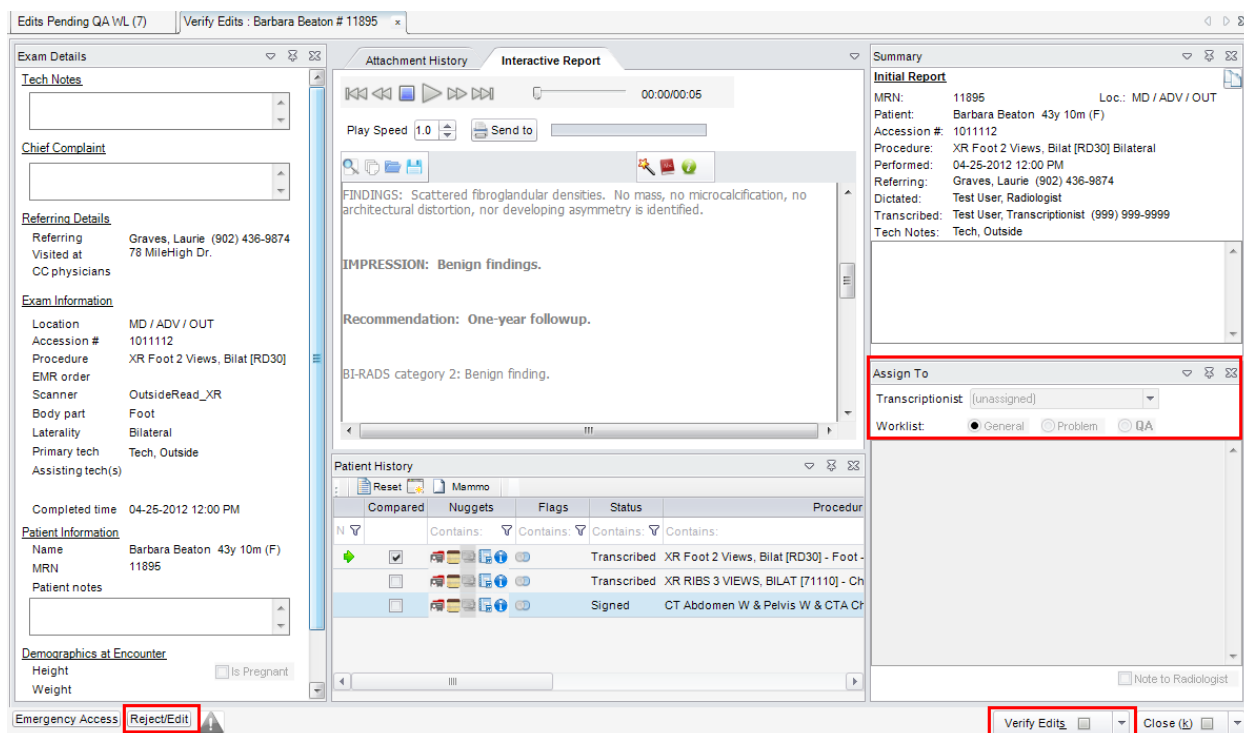


Figure 4.13 - Verify Edits window

## Radiologist Pending QA work flow

Radiologists can also have signed reports sent for QA. Signed reports marked for QA are sent to the All Signed Pending QA WL. Similar to the Signed Pending Release WL, the status of the study will be Signed\*, until the QA personnel action the study from the Verify Report window. The WL is accessed from the Radiologist menu. The access string

The work list itself has numerous columns for display (49 in total) that offer patient information, study information, dictating and signing Radiologists, dates for signing, dictation, etc...

Access to the Signed Pending QA WL is granted from the access string **WL.RAD.QA**

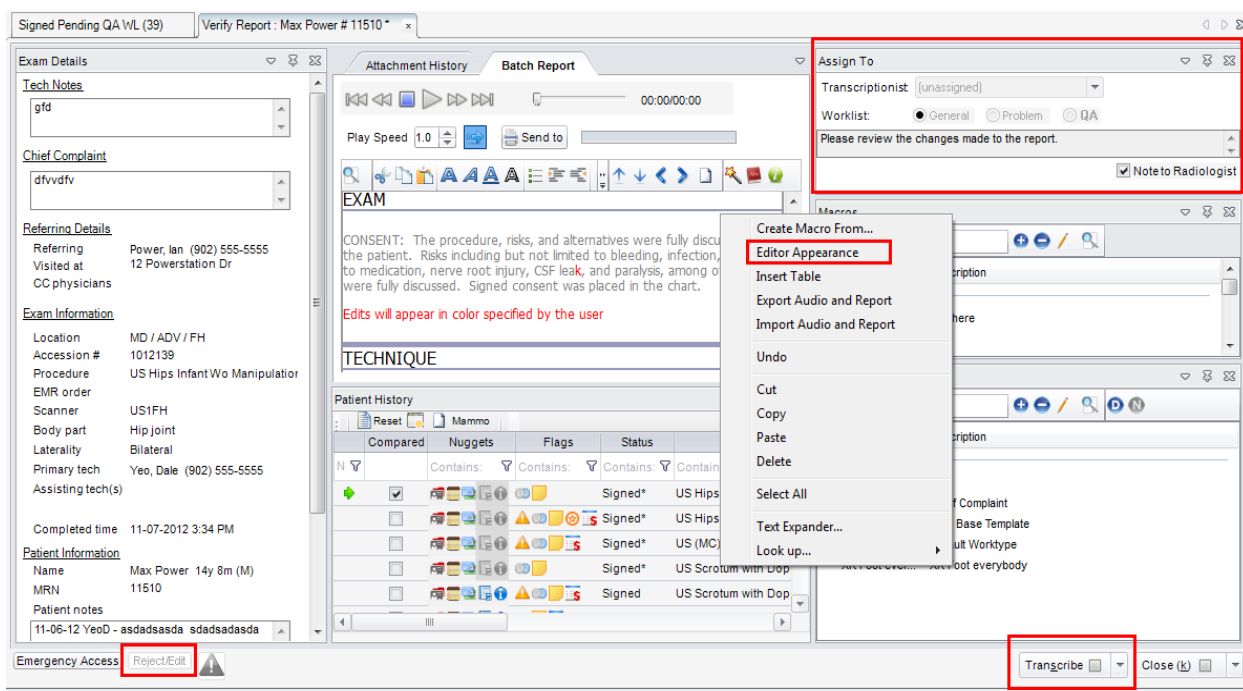
The context menu offers many option based on the user permissions and the action buttons in the lower right are Dictate and Verify Report.

Flags	Status	Procedures	Scheduled Date	Referring	First Name	Last Name	MRN	Birth Date	Age At Study	Room	Modality...	Accession #	Signed By	Signed Date
Signed*		US Scrotum with Doppler [US31]	11-07-2012 3:50 PM	Ian Power	Max	Power	11510	03-04-1998	14 years	US2LU	US	1011783	dale	11-07-2012 3:06
Signed*		XR Spine Survey 2 Views IT20101 - Lum...	11-07-2012 3:35 PM	Dale Yeo Sr	Max	Power	11510	03-04-1998	14 years	DX1LU	XR	1011796	dale	11-07-2012 3:06
		Sign Report	11-07-2012 3:15 PM	Ian Power	Max	Power	11510	03-04-1998	14 years	MR1EL	MR	1012143	dale	11-07-2012 4:03
		Dictate	11-07-2012 3:15 PM	Dale Yeo Sr	Max	Power	11510	03-04-1998	14 years	US2EL	US	1012144	dale	11-07-2012 4:05
		Assign to Chair	11-07-2012 3:15 PM	Ian Power	Max	Power	11510	03-04-1998	14 years	XR1EL	XR	1012146	dale	11-07-2012 4:04
		Assign to Transcriptionist	11-07-2012 3:15 PM	Ian Power	Max	Power	11510	03-04-1998	14 years	XR1FH	XR	1012141	dale	11-07-2012 4:02
		Set Problem Flag	11-07-2012 3:10 PM	Ian Power	Max	Power	11510	03-04-1998	14 years	US1FH	US	1012139	dale	11-07-2012 4:01
		Remove QA Flag	11-07-2012 2:45 PM	Ian Power	Max	Power	11510	03-04-1998	14 years	DX1LU	XR	1011776	dale	11-07-2012 3:05
		Set Suspended Flag	11-07-2012 2:45 PM	Ian Power	Max	Power	11510	03-04-1998	14 years	US1EL	US	1012138	dale	11-07-2012 3:08
		Print Forms	11-07-2012 2:45 PM	Dale Yeo Sr	Max	Power	11510	03-04-1998	14 years	US1LU	US	1011772	dale	11-07-2012 3:05
		Image Request	11-07-2012 2:40 PM	Ian Power	Max	Power	11510	03-04-1998	14 years	XR1EL	XR	1011859	dale	11-07-2012 3:08
		Change Dictated by Radiologist	11-07-2012 2:35 PM	Ian Power	Max	Power	11510	03-04-1998	14 years	XR1EL	XR	1011860	dale	11-07-2012 3:08

**Figure 4.14 – Signed Pending QA WL**

The Verify Report window allows the QA personnel to Verify Report, which will remove the QA flag and the study will be moved to Signed status.

If radiologists are using the “Oops” feature they will still have the same amount of hold time before the report is released. What may happen is that a radiologist’s hold time is 5 minutes but it gets set to QA. If it stays in QA for 20 minutes and then gets “Verified” it will go out immediately because the “Hold Pending Release” time has expired. Alternatively if the report was verified at minute 2 it would stay in the “Pending Release” status until the 5 minutes expired.



**Figure 4.15 – Verify report window displaying rejected example**

If the user determines edits or changes are required then they should click the Reject/Edit button on the bottom left which will enable all of the controls for further editing. At this point the user can edit the existing report in the same way a transcriptionist would. The notable difference in this window is the “Note to Rad” check box will be auto selected with a note entered. If the QA personnel so chooses, they can add additional notes.

When rejecting the user can then edit and transcribe the report, which will give them credit, or re-assign it to the original MT and let them make the changes required.

### QA Edit Text Color

When QA personnel edit the report after rejecting we track the edits typed and these changes can be displayed in a different color. The new editor color is called QA Edit Text and is accessible from the right click Editor Appearance in report editor. This is a user setting so if user “A” changes his/her color it doesn’t mean it will appear that way to the radiologist or user “B”.

## Reporting – Enhancements to Navigation

To assist Radiologists when reporting we have implemented three simple but very helpful features.

### Volume Meter

Similar to the volume meter we already in the MicWizard, the Radiologist reporting window will also have a volume meter for a visual confirmation that what is being dictated is recording.

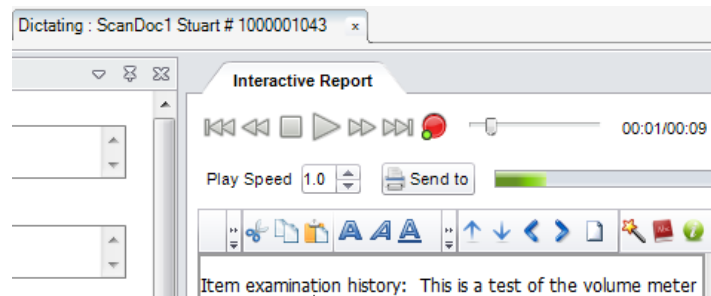


Figure 4.16 – Volume meter in reporting window

### Interactive Cursor

In the reporting window the Interactive Cursor is a larger cursor indication to show the current location. If the user current focus is in another application, the Radiologist may still be recording. The enlarged marker gives a visual representation of where in the report the cursor is.

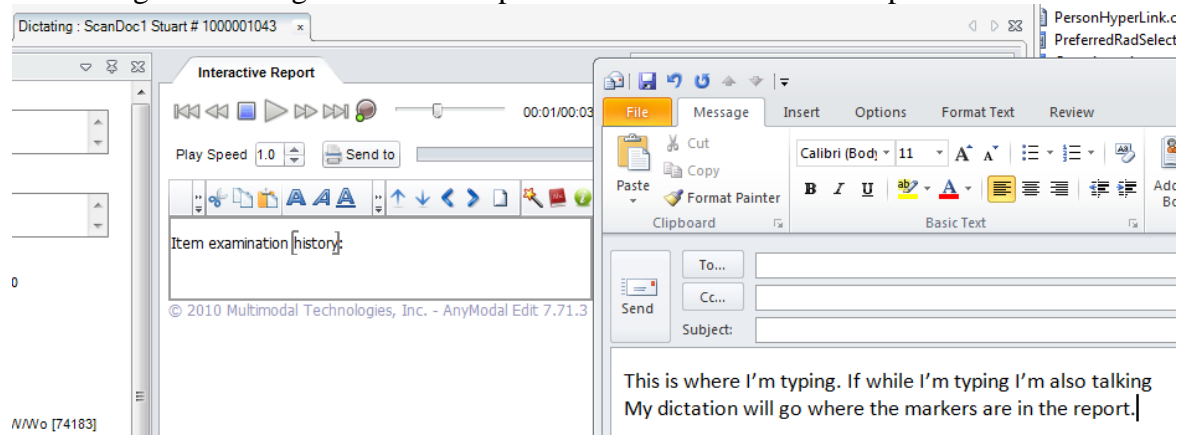


Figure 4.17 – Markers in the report.

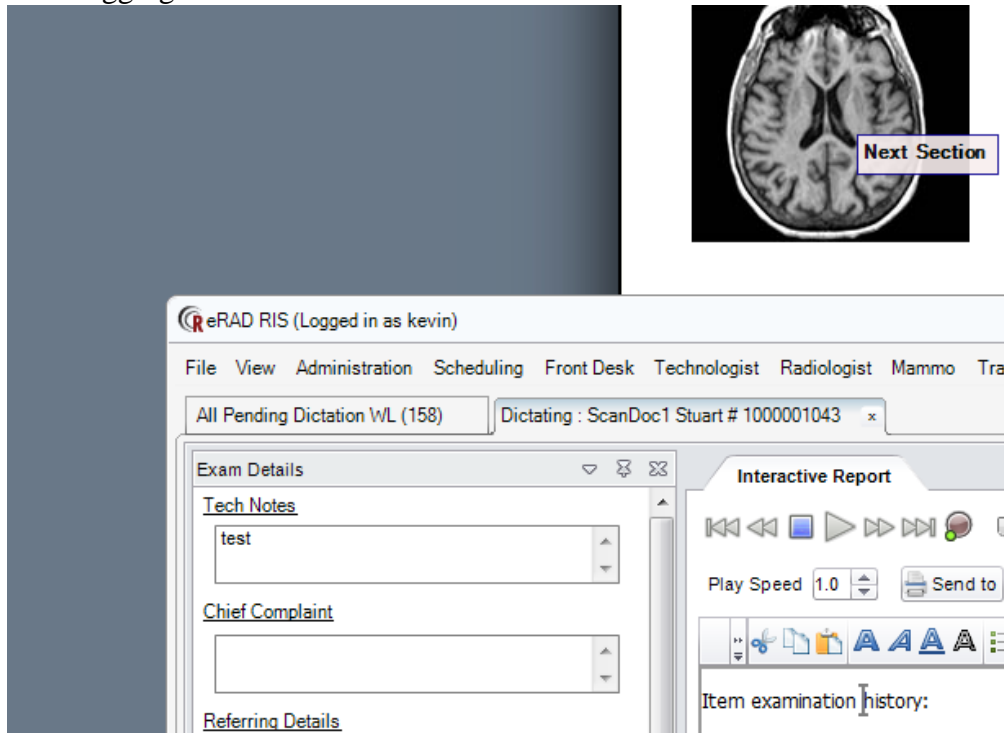
### Interactive Info Prompt of last voice command used

The Interactive Info Prompt is a popup message can be displayed near the users current mouse pointer position, or can be set to display in a fixed location.



So if the Radiologist has the mouse in the PACS and they issue a command, the popup message displays the command near the mouse to let the user know the command was captured and executed.

If the popup is configured to be in a fixed location, the user can position the popup by clicking and dragging to the desired location with the mouse.



**Figure 4.18 – Interactive Info Prompt message displaying Next Section command**

The Interactive Info Prompt and Interactive Cursor options are configurable from the User Preferences window > Report Editor tab.

The screenshot shows the 'User Preferences' window with the 'Report Editor' tab selected. The 'Editor' section contains several checkboxes: 'Show allowable sections' (unchecked), 'Show paragraphs' (checked), 'Text expander' (checked), 'Maintain field brackets' (checked), 'Insert templates with markers' (unchecked), and 'Laterality check' (unchecked). The 'Interactive cursor color' is set to a dark gray color. The 'Interactive Info Prompt' section has two radio buttons: 'Display at a fixed location' (unchecked) and 'Display near the mouse cursor' (checked). The 'Display duration in milliseconds' is set to 400, and the 'Fade out speed (0-100)' is set to 10. The 'Text color' is black, 'Background color' is light pink, and 'Border color' is dark blue. There is a 'None' button next to the border color.

**Figure 4.19 – User Preferences window**

**Interactive Cursor Color** - color to use for the interactive voice cursor location when we are in another application (RIS Application is inactive).

**Fixed/Mouse based Popup Location** - popup opens at the mouse location; otherwise, it opens to the last position it was displayed at. Note user can click on a popup message and move it around the screen or right click on the popup message to change this behavior.

**Duration/Fade out** - duration in ms to display the popup before fading/ Fade out is a value between 0 and 100. 1 fades slower while a larger number fades faster up to 100, which fades instantly.

**Popup Color Text/Background/Border** - Click on the color to change it. The border can also be set to "none".

## Reporting – Auto Populating Macro Fields

When opening the reporting window, users will now have the option to automatically have values pre-populate in the Exam and Technique sections of the report editor specific to the study being read.

To accomplish this, an “Auto Macro” must be created using the Template Macro lookup editor. The following are the steps to create an “auto populating macro field”

- Administration -> Configure
- Expand procedure section and double click TemplateMacro.
- Select Auto Macro in the radio buttons just above the list.
- Click Create new...

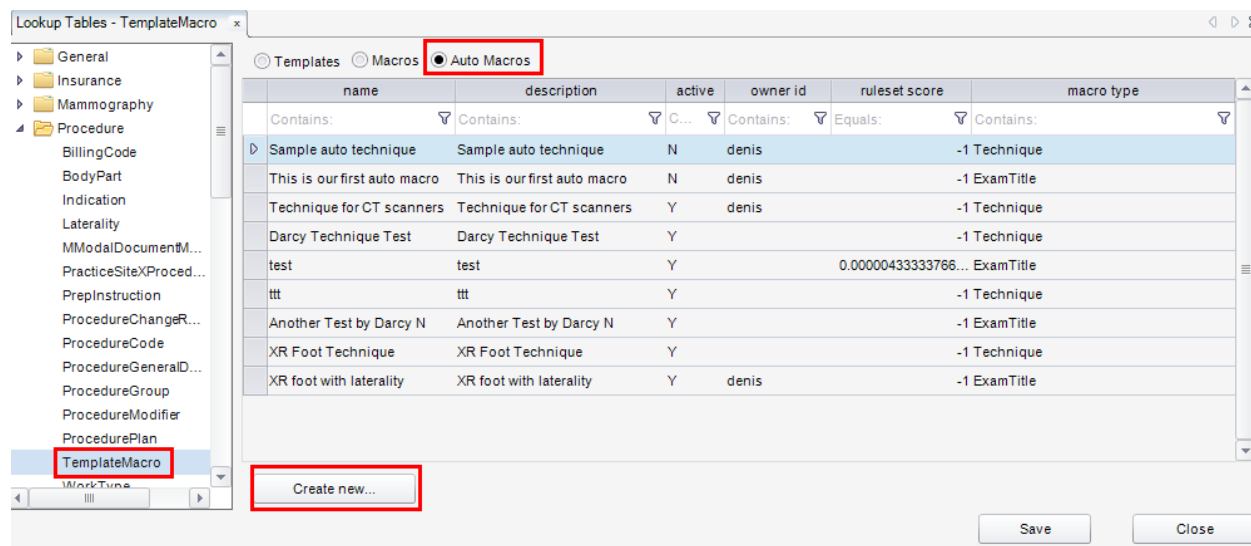
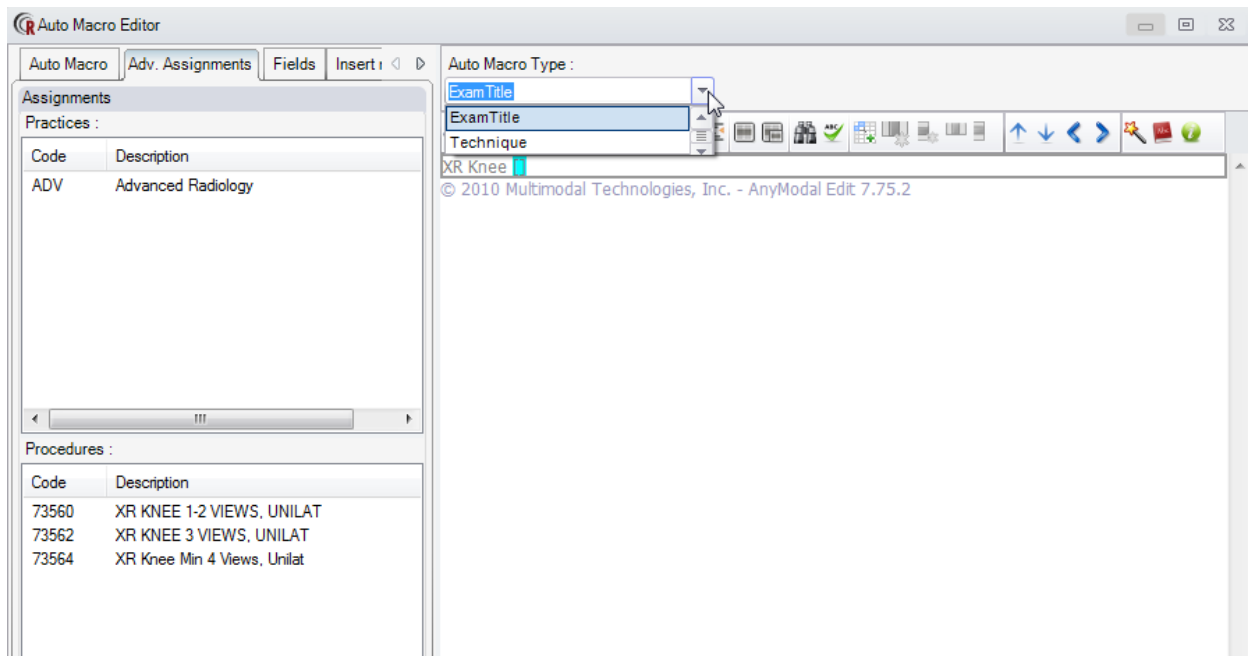


Figure 4.20 – Template Macro lookup

- Select an AutoMacro Type in the top drop down. (Currently there is only Exam Title and Technique)
- Enter Name and Description for the Auto Macro
- Adv. Assignments allows the user to add practices and procedures the Auto Macro is available for. If the practices and procedures are left blank, the Auto Macro will be available to all.
- Enter text in the Macro (ex: XR Knee)



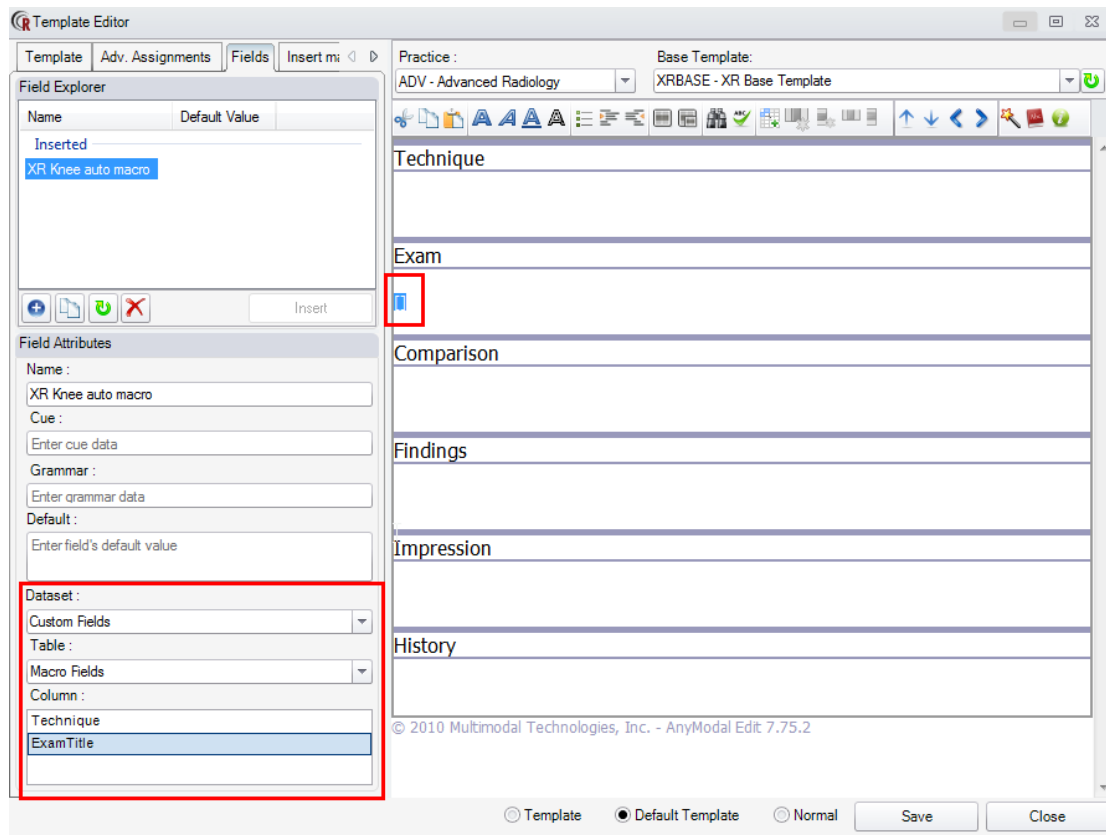
**Figure 4.21 – Auto Macro Editor window**

In the example above I have created an Auto Macro for XR Knee procedures that will populate the Exam Title with “XR Knee [laterality]”. The field for laterality is a custom macro that was created earlier and inserted.


### **Next Create or Edit a Template**

Now that we have the Auto Macro created, we must create or edit a template(s) that will utilize it.

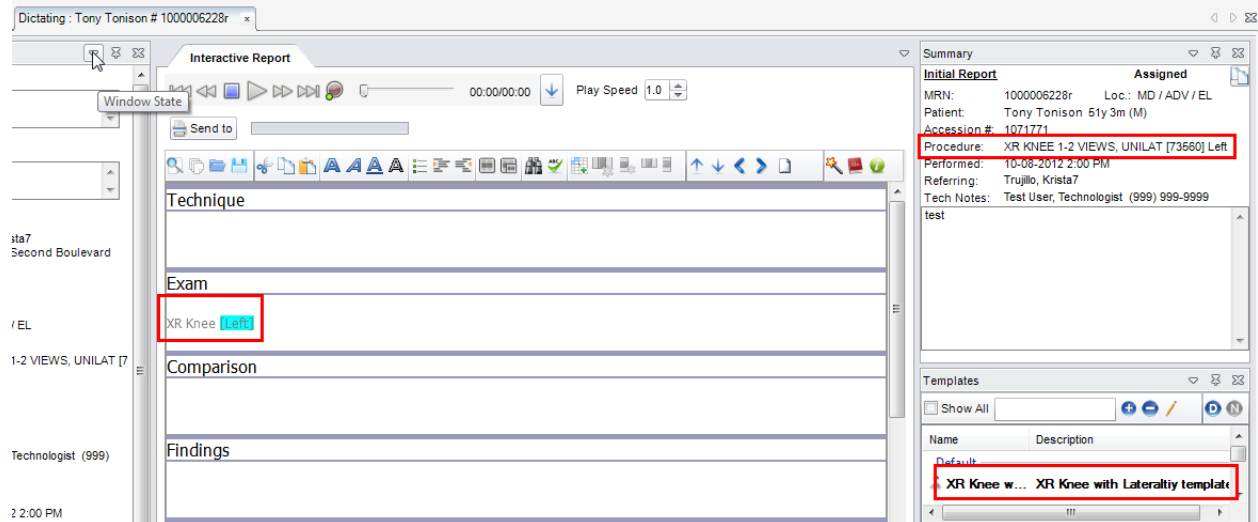
- Administration -> Configure
- Expand procedure section and double click TemplateMacro.
- Select Template in the radio buttons just above the list.
- Click Create new...



**Figure 4.22 – Creating template that auto populate exam title**

- On the fields tab select the Add field button , enter a field name.
- Dataset select **Custom Field**
- Table select **Macro Fields**
- Column selects either **Technique** or **Exam Title**. This should match the Auto Macro Type that was chosen earlier.
- Insert the field in the template
- The template must be assigned to a specific practice, and a base template selected
- Procedure(s) and users can be assigned. A default owner can also be set. In this example the template is available to the same procedures selected in the Auto Macro.
- Save the template.

Now when opening a procedure the template is assigned to the Exam section within the editor will be auto populated with the exam title and laterality.

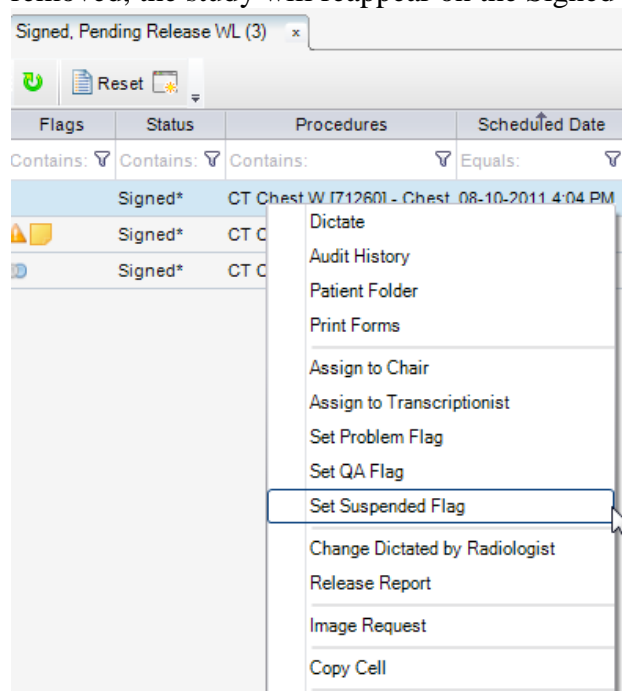


**Figure 4.23 – Dictate window displaying auto populated exam title**

## Reporting – Release Report Workflow Enhancements

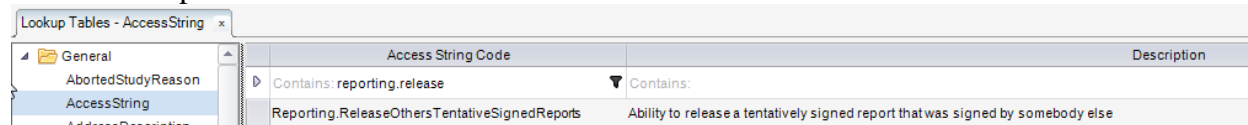
A couple of minor additions have been added for the Release Report Workflow.

First addition is the Signed, Pending Release WL has had the context menu option to “Set Suspended Flag” added. Once the Suspended Flag is set, the study is removed from the Signed, Pending Release WL and will appear on the Suspended WL. Also, when the Suspended flag is removed, the study will reappear on the Signed Pending Release WL



**Figure 4.24 – Signed, Pending Release WL context menu options**

Second addition is a new access string called "Reporting.ReleaseOthersTentativeSignedReports". This access string will allow other users who did not sign the report, have the option to manually release the report from the context menu.



**Figure 4.25 – Access string lookup displaying new string "Reporting.ReleaseOthersTentativeSignedReports"**

As always, it is suggested that the access string permission be set at the User Group level and not from the Access String lookup.

## Reporting – New User Preference for SpeechMike and Speech Commands

Two new Speechmike button actions have been added in Build 38. The DeleteField and DeleteFieldAndMoveNext options can be assigned to buttons on your Speechmike.

The screenshot shows the 'User Preferences' dialog box with the 'Reporting' tab selected. Under the 'SpeechMike™ Button Actions' section, the following assignments are visible:

Button	Action
F1:	NextField
F2:	PreviousField
F3:	DeleteFieldAndMoveNext
F4:	DeleteField
EOL:	SignDictation
Instr:	Nothing
Trigger:	DeleteFieldAndMoveNext

The F3 and F4 rows are highlighted with a red rectangular box.

Figure 4.26 – New Speechmike button action possible assignments

1. Delete Field(Selection)  
This will delete the selected field or selected word(s) only. Cursor will stay at the current location for further dictation.
2. Delete Field and Next Field  
This will delete the current field and proceed to the next available field in the report. This allows for quick deletion of fields in the report. As some doctors like to have all options in fields and delete the selections they want to keep.



## Reporting – Reporting Window Toolbar Additions

The Dictate window toolbar has 3 new icons added in build 38. The Mic Wizard, Dictionary and Document Model are now accessible from these 3 icons.

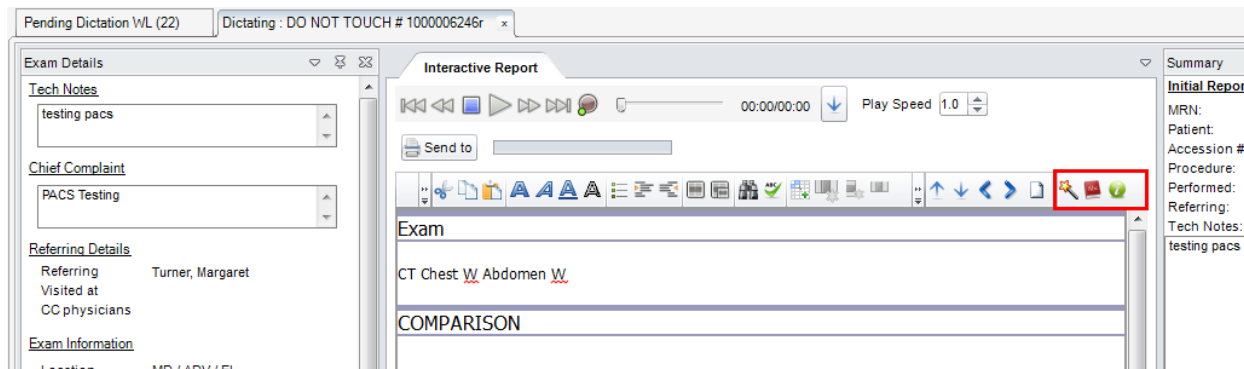


Figure 4.27- Reporting window new icons

### Mic Wizard

The Mic Wizard in previous version could only be accessed from user preferences window. In build 38 the Mic Wizard can be accessed in the “Dictate” window (aka reporting window).



Selecting the Mic Wizard icon  from the toolbar will open the MicConfig window. By following the series of windows in the wizard, the user can configure their microphone for current eRAD RIS session.

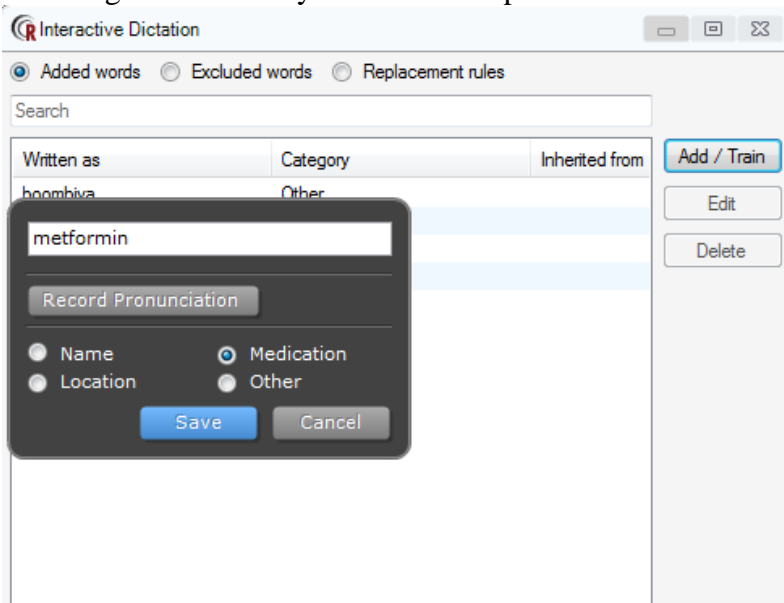


Figure 4.28 – MicConfig window

### **Dictionary**

The Dictionary can now also be accessed from the Dictate window. Similar to the Mic Wizard, the Dictionary was only access via the User Preferences window.


Selecting the Dictionary icon  will open the Interaction Dictation Dictionary window.



**Figure 4.29 – Dictionary window**

The Dictionary allows the user to enter uncommon words or words that are not as easily recognizable when spoken. The user enters the spelling, records the pronunciation, select the appropriate radio button to associate the latest word and save. The next time the word is used it will be recognized and inserted into the report.

### **Document Model**

The 3<sup>rd</sup> new icon added to the toolbar is too access the Document Model information . The window that is presented to the user provides information about the setting and rules for the base template being used for the currently selected template in the editor. This is a read only window and is used for information purposes only.

**Document Model Information** 83

**Rules**

Display Name	Coding System	Coding	Version
XR Base Template	WorktypeContext	XRBASE	1.2.2

**Account Specifications**

Specification	Current Setting
Spacing Format	Double
Cranial Nerve Format	Arabic
Range Format	Symbolic
Month Day Format	Alpha Ordinal
Month Year Format	Alpha Long No Comma
Date Format	Alpha Ordinal
Height Format	Textual
Measurement Format	Space Separated
Number Format	Comma Separated
Ordinal Format	Spelled Out
Patient Name Format	As Dictated
Percent Format	Symbolic
Platelet Count Format	As Dictated
Section Title Format	All Caps
Subsection Title Format	Initial Caps
Section Title Normalization	Normalized
Subsection Title Normalization	As Dictated
Initial Number Format	Spelled Out

**Sections/Subsections**

Section Title	Minimum Required Text	Action	Optional
Technique		append	N
Chest X-Ray		append	N
HISTORY		append	N
Impression		append	N
Exam		append	N
Findings		append	N

**Abbreviation Rules**

Group	Action
slang	As Spoken
lab_measure	As Spoken
dosage	As Spoken
organisms	As Spoken
nonmetricmeasures	As Spoken
metricmeasures	Abbreviate
general	As Spoken

Close

**Figure 4.30 – Document Model information window**

## Reporting – Correction Dialog Box

When dictating in Interactive mode a means to correct words and add them to the dictionary in a more fluid and user friendly manner was needed.

In build 38 a popup correction dialog has been implemented that can be instantiated by using the “correct <utterance>” command. Utterance is a specific word or group of words. Try to limit this utterance to 3 or 4 words. Anything beyond that will be unproductive to use this dialog.

You can also instantiate the correction dialog by issuing “*correct <word> through <word>*”.

Additionally you can instantiate the correction dialog by issuing “*correct selection*” which will open the correction dialog with the selected text in the editor.

When this dialog is opened the users can easily dictate a new word or correct the existing one by typing. In this case I would choose to type the word “cylinders” because it is not in the dictionary.

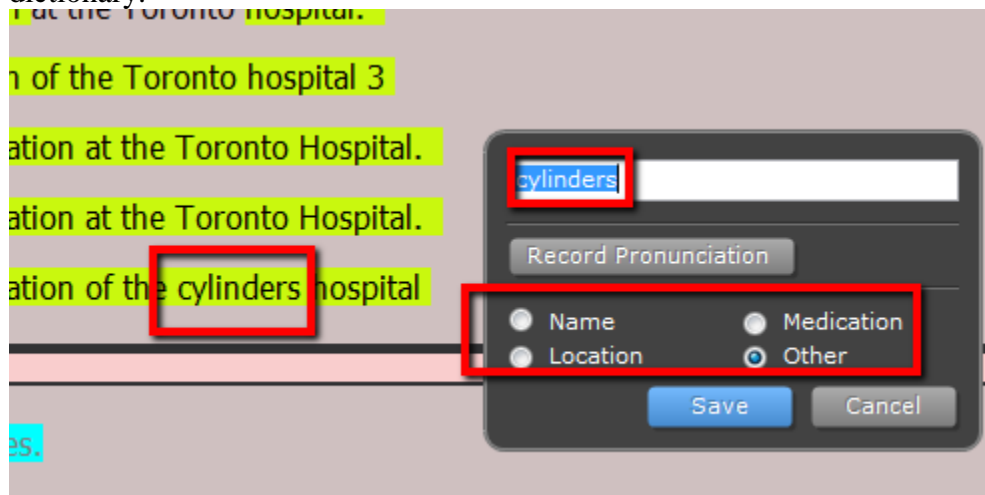
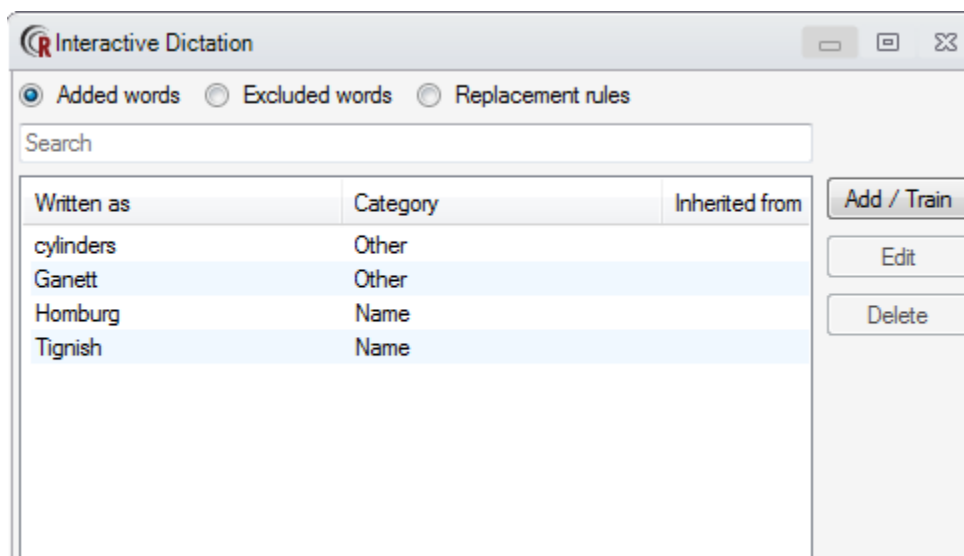


Figure 4.31 – Correct dialog

As you can see after I typed “cylinders” in the correction dialog it added it automatically to the list of added words in my dictionary.



**Figure 4.32 - Corrected word added to dictionary**

After users correct the word by typing or dictating it can be saved or cancelled. Users can train the word by clicking the Record Pronunciation button. It will change color to RED and then automatically turn off. Click “save” to keep changes.

## **Reporting - Upgrade MModal to Latest Version**

We received new set of .dll files from MModal which were integrated into the current code stream.

The files are housed in the rRISSetup.msi file and are installed locally when a full install is completed (running coreinstall.bat file).

The files included are:

AnyModalCaptureControl Version **v7.75.7751.215**

AnyModalEdit control version **7.75.2.97**

AnyModalCaptureUILib version 7.75.25.342

## Reporting – Laterality Discrepancy Check

This new feature can be enabled / disabled with a new user preference added to the Report Editor tab of the User Preference window.

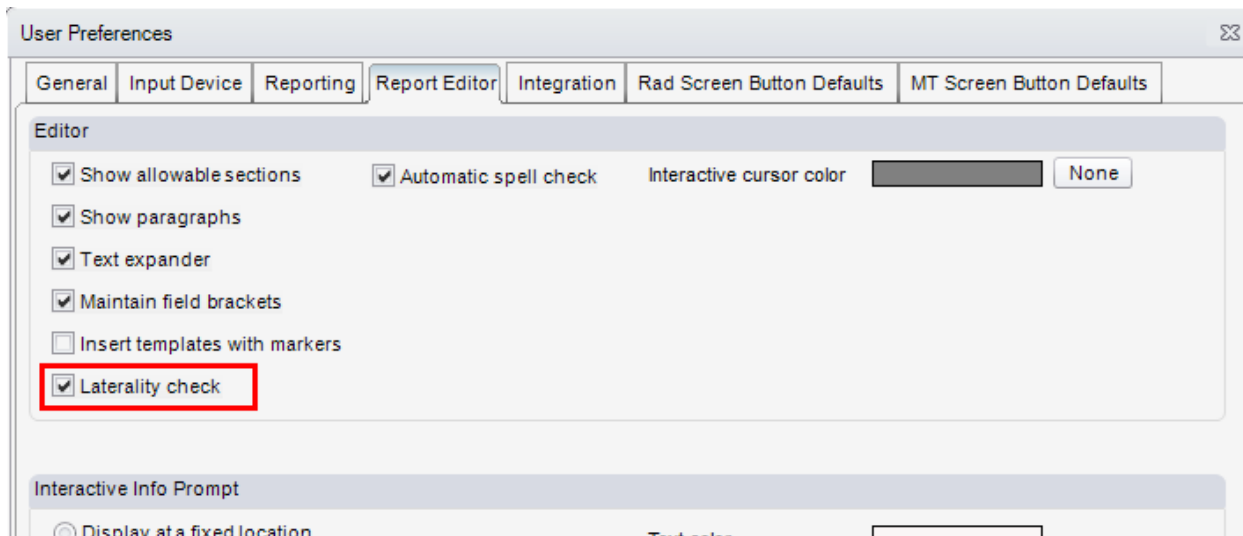


Figure 4.33 – Laterality check user preference

With the laterality check user preference enabled, if the user attempts to sign a report in which the laterality of the procedure conflicts with the laterality within the report the user will be presented with a message box.

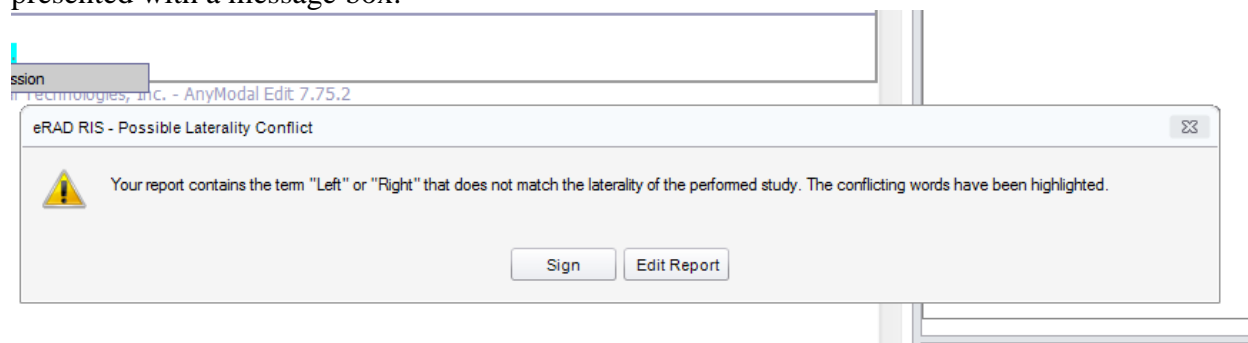
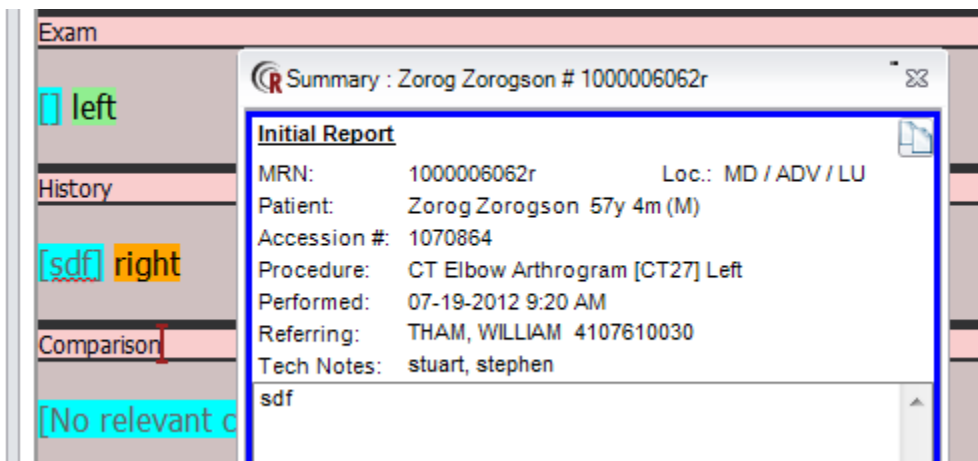


Figure 4.34 – Possible Laterality Conflict message

The conflicting laterality's will be highlighted within the report. The procedure laterality will be highlighted in green, and the conflicting "left or right" text will be highlighted in orange. The screenshot below is displaying the procedure with laterality in the Summary pane. In the report we can see the laterality that matches within the report is green and the one that doesn't is orange.



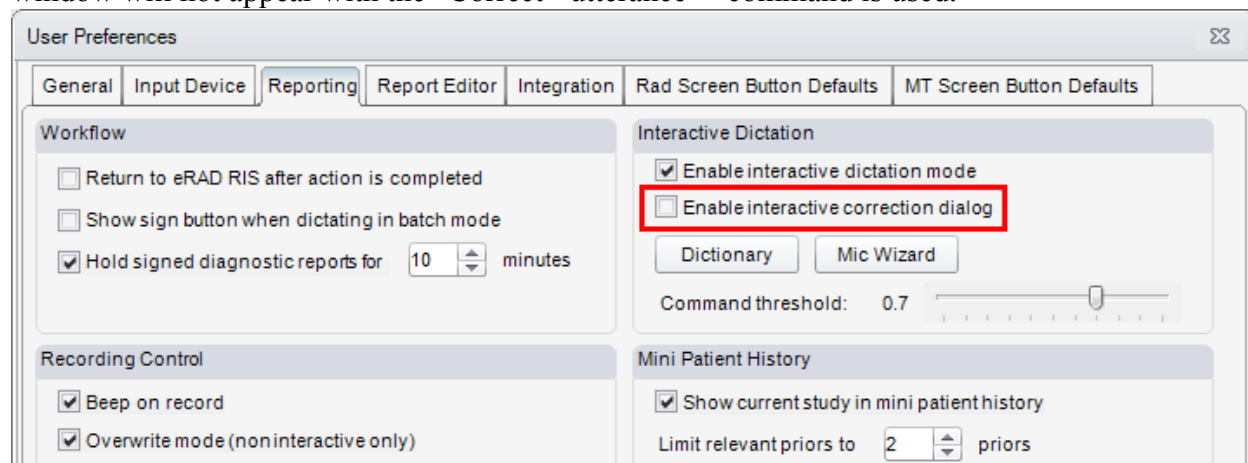
**Figure 4.35 – Conflicting laterality's highlighted in report**



## **Correction Dialog User Preference**

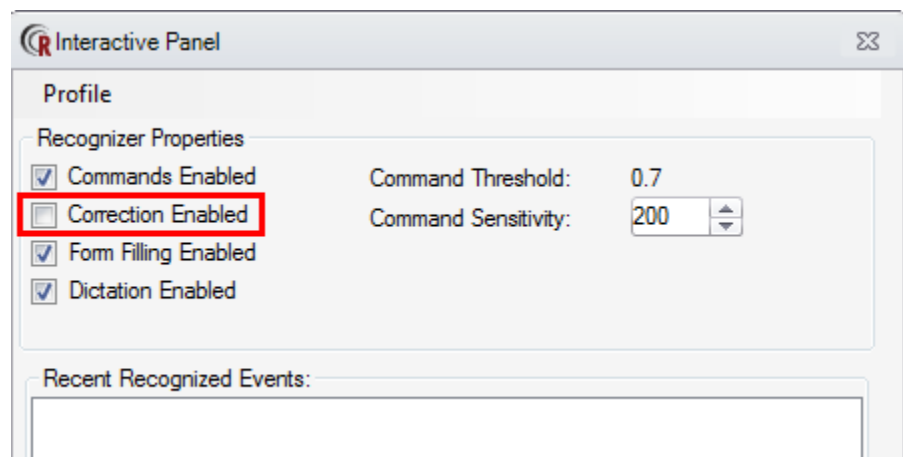
The “Correction Dialog” box is displayed in the reporting window. It allows the user to correct and train with speech word(s) that have not been recognized as originally dictated, and going forward when the user dictates this word(s), it will continually be recognized.

The “Correction Dialog” box is now controlled with a new user preference added to the Reporting tab of the User Preference window. When unselected the “Correction Dialog” window will not appear with the “Correct <utterance>” command is used.



**Figure 4.36 – Enable interactive correction dialog user preference**

Also of note, in previous builds the “Correction Enabled” in the Interactive Panel controlled this feature, but it only applied to the current RIS session. The new user preference will also control the “Correction Enabled” check box in the Interactive Panel.

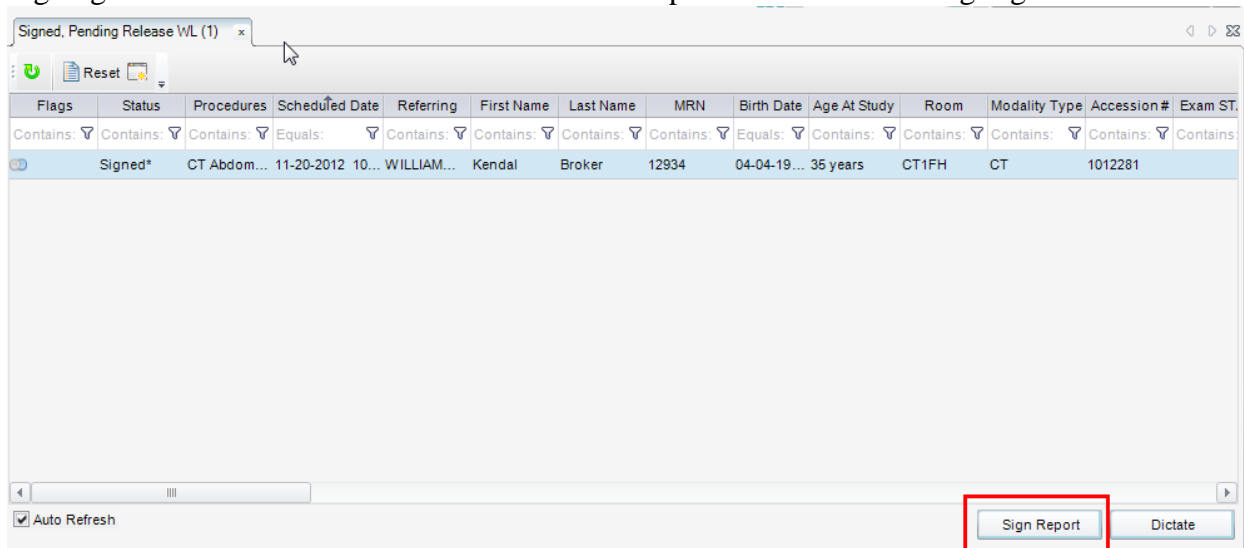


**Figure 4.37 – Correction Enabled in Interactive Panel**

### Signed, Pending Release enhancement

The Signed, Pending Release WL now includes the Sign Reports button.

This new button is located in the lower right of the work list. Selecting this button will open the Signing window. This is the same window that is opened from the Pending Signature window.



**Figure 4.38 – Signed, Pending Release WL with Sign Report button**

## **SpeechMike Mappings to Functional Buttons**

In previous builds there were options for “Sign Report”, “Sign Dictation”, “Submit Audio” and “Cancel Dictation”, but they didn’t work when mapped to any of the functional keys on the SpeechMike. This has been resolved in server patch 38.002.

## **CTRN (Radar) Reminder Request**

This is for Build 38 – 38.002. On the Schedule Review tab in build 38 there is a Reminder Request button that will allow the user to enter in a phone number, email, or mobile phone number to send a reminder request. For build 38 this button is controlled but the access string “Clinical.Schedule.ReminderRequest”.

## **Billing Exception for Missing Billing Codes**

If the exam being performed has an inactive billing code or the code is set to inactive during the technologist workflow, the exam will now go to the billing exception work list and a note will be posted in the Billing Notes section.

The screenshot shows a software interface for 'Billing Notes'. It features a header bar with the text 'Billing Notes'. Below this, there is a list item '09-11-12 NoyeD -'. To the right of this list item is a large rectangular text area. Inside this area, the following text is displayed: '09-11-12 - There are no active billing codes for this study.' followed by a bulleted item '- Patient's contact phone number is required'.

**Figure 4.39 – Billing exception posed for study without an active billing code**

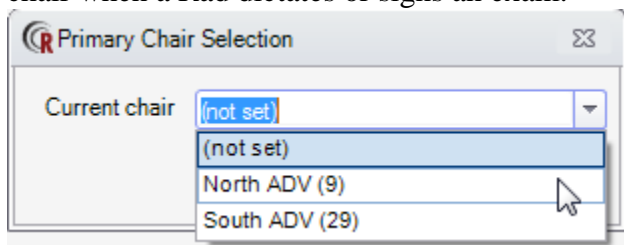
### Chair Service

Chair workflow is used to help divide studies between radiologists. In prior sprints we had developed functionality to show a chair ID and qc flag on the worklist, but we were leaving it up to external systems to maintain these fields.

In Build 38 we have enhanced the RIS client to support setting these fields. In addition, we have also added a Hard copy prior's flag.

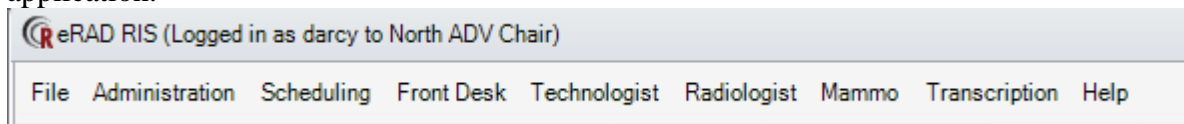
When a radiologist logs in with a practice that supports Chair workflow, they will be prompted to select their “Primary” chair. The list of chairs is determined by the radiologist’s current practice. The number in parenthesis represents the number of exams pending dictation that have been assigned to each chair.

This setting will be persisted for their entire log in session and will be used to assign credit to a chair when a Rad dictates or signs an exam.



**Figure 4.40 – Primary Chair Selection after login**

Once a selection is made, the primary chair selection will be displayed in the title bar of the application.

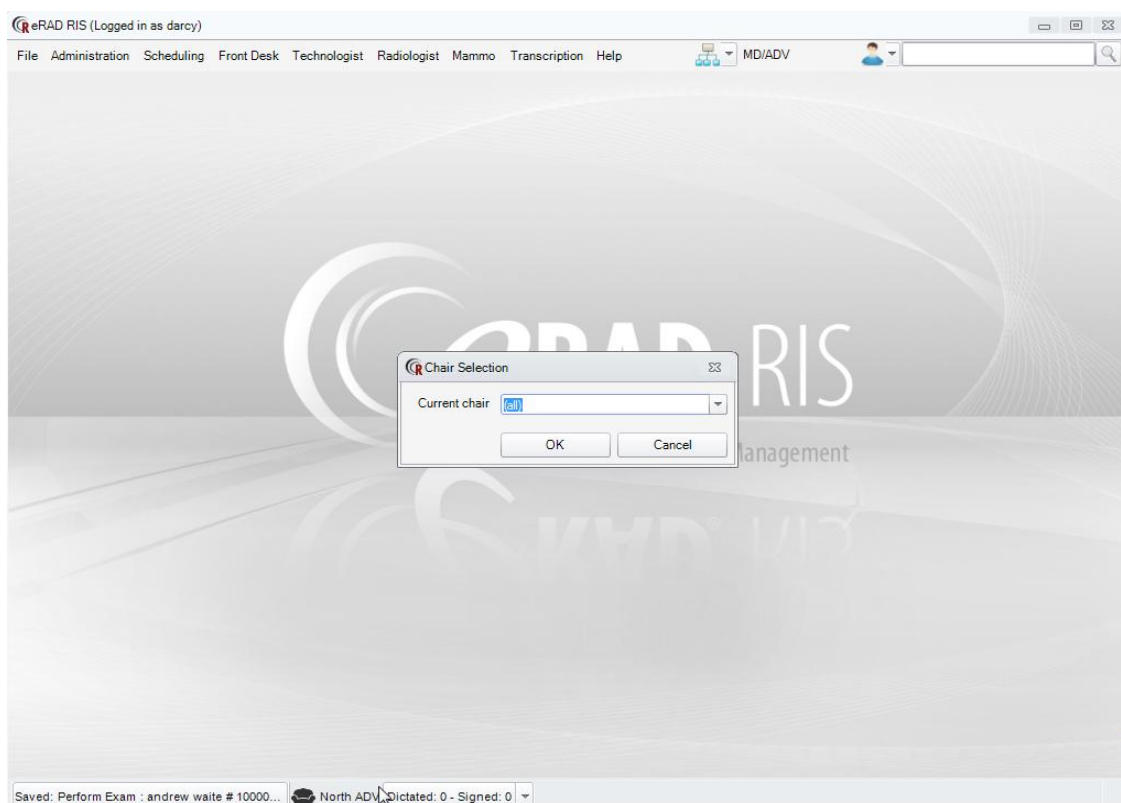


**Figure 4.41 – eRAD RIS title bar displaying primary chair**

If the user dismisses the primary chair selection dialog box or chooses (not set), they will be prompted to make a selection later when/if they open the My Pending Dictation WL or when they try to dictate/sign an exam.

The status bar of the RIS client now includes a Chair control which displays a chair icon (subject to change) and the current chair (if set). This control launches a Chair Selection dialog box which allows the radiologist to set an additional Chair filter for any open work lists that are chair enabled (currently only the Pending Dictation Worklist is chair enabled).

This control will only be visible for a user who is configured as a radiologist, and it will only apply to a practice that is chair enabled.



**Figure 4.42 - Access to chair selection and current selection in status bar**

The Chair Selection dialog box can be triggered in 1 of 3 ways:

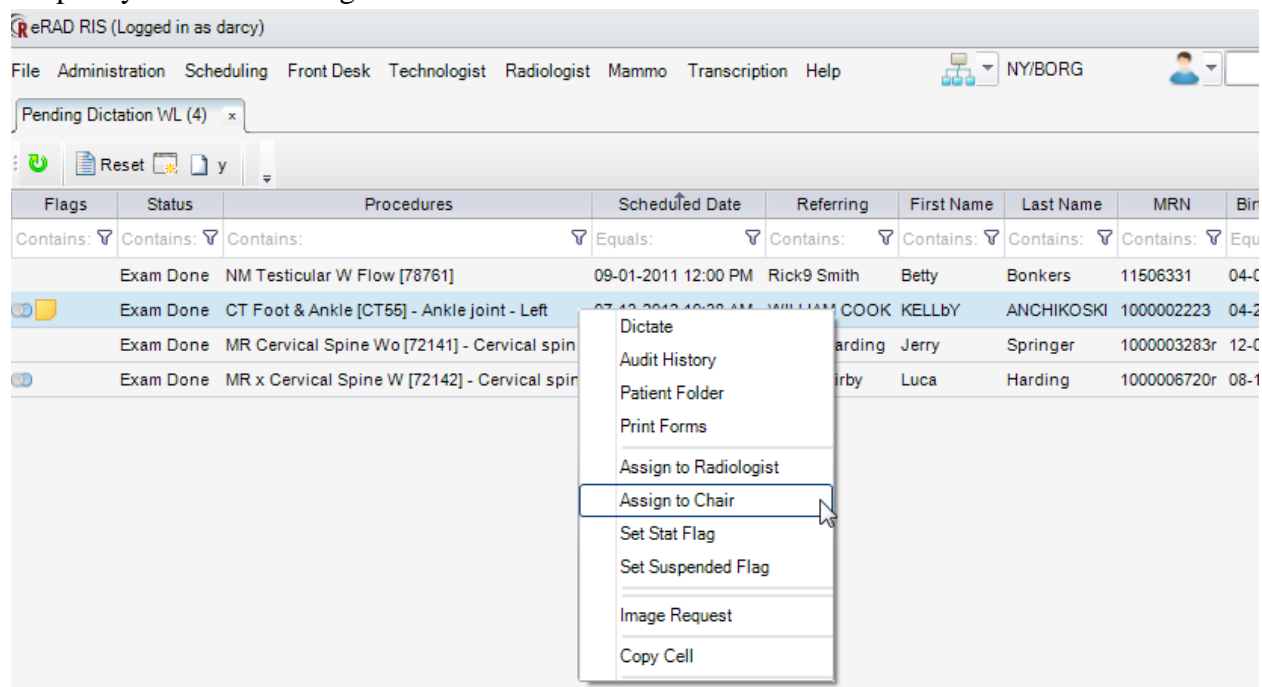
- 1) The radiologist clicks on the chair icon on the status bar
- 2) The radiologist opens a chair enabled worklist when the active chair is not set (or is set to “all”)
- 3) The radiologist has previously specified a chair, but switches the current practice to another chair enabled practice using the “Org Picker”.

Like the “Org Picker”, the chair control automatically applies a filter and adds it to the user’s current filters. Example: if a radiologist has a “My View” configured for CT Exams, they do not need to create one for each practice or chair.

If the primary chair has not been set, the chair icon will set both the primary chair and the chair filter for the dictated work list. After the primary chair has been set, the chair selection will only be used as a work list filter, and will not update the title bar in the RIS client. To be clear, it is the primary chair shown in the title bar that is used to assign credit to a chair, not the work list filter shown on the bottom of the RIS in the status bar area.

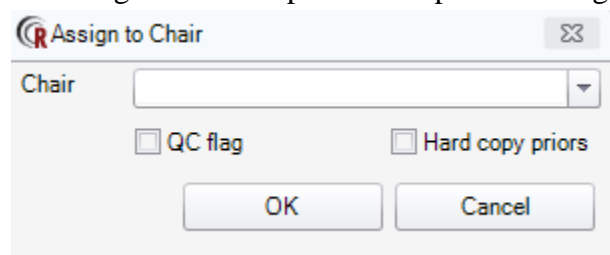
### Changes to work lists

A new item was created for the context menus on the Pending Dictation work list. The user can now select one or more rows and choose Assign to Chair to open a dialog box that allows them to specify the Chair settings.



**Figure 4.43 – Context menu for Pending Dictation**

Selecting this menu option will open the Assign to Chair window.

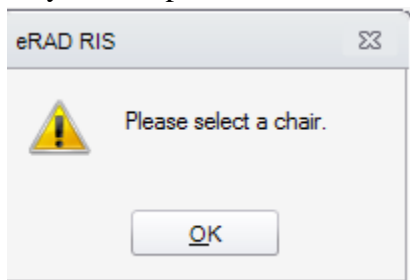


**Figure 4.44 – Assign to Chair window**

Chair assignments from the work list are audited and logged in an action table so they updates are able to be sent out to third party systems using Mirth.

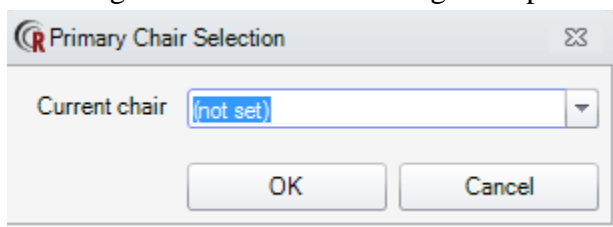
“Hard copy priors” was added to both the radiologist’s work lists and the activity work list.

When a radiologist opens the Dictation or Signing Screen, if they have not yet selected a chair, they will be presented with the following message:



**Figure 4.45 – Message displayed when opening Dictate or Sign Reports window if chair has not been selected**

Selecting OK to the above message will present the user with the chair selection window.



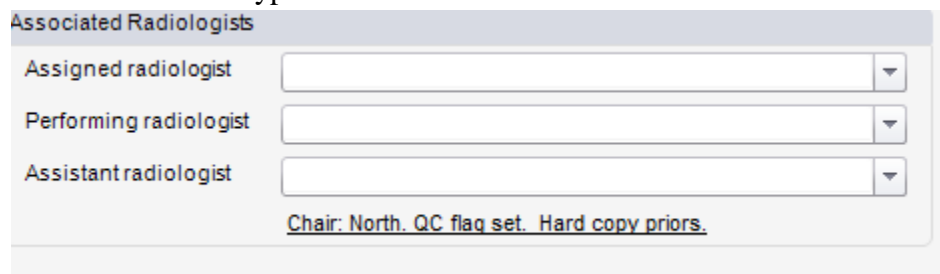
**Figure 4.46 - Primary Chair Selection window**

If Cancel is selected, the user is returned to the work list. To access the dictation or sign reports window, the user must select a chair then OK.

If the Radiologist signs or dictates an exam for which no chair has previously been assigned, the Radiologist's Primary Chair will be assigned to that exam.

### **Technologist window changes**

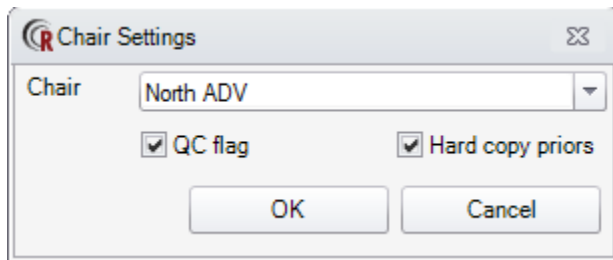
We have added a hyperlink to the tech screen to describe the current chair settings:



**Figure 4.47 - chair hyperlink on tech screen describes the current chair settings**

When the link is clicked, the following dialog box appears:





**Figure 4.48 - Chair Settings dialog box as displayed from tech screen**

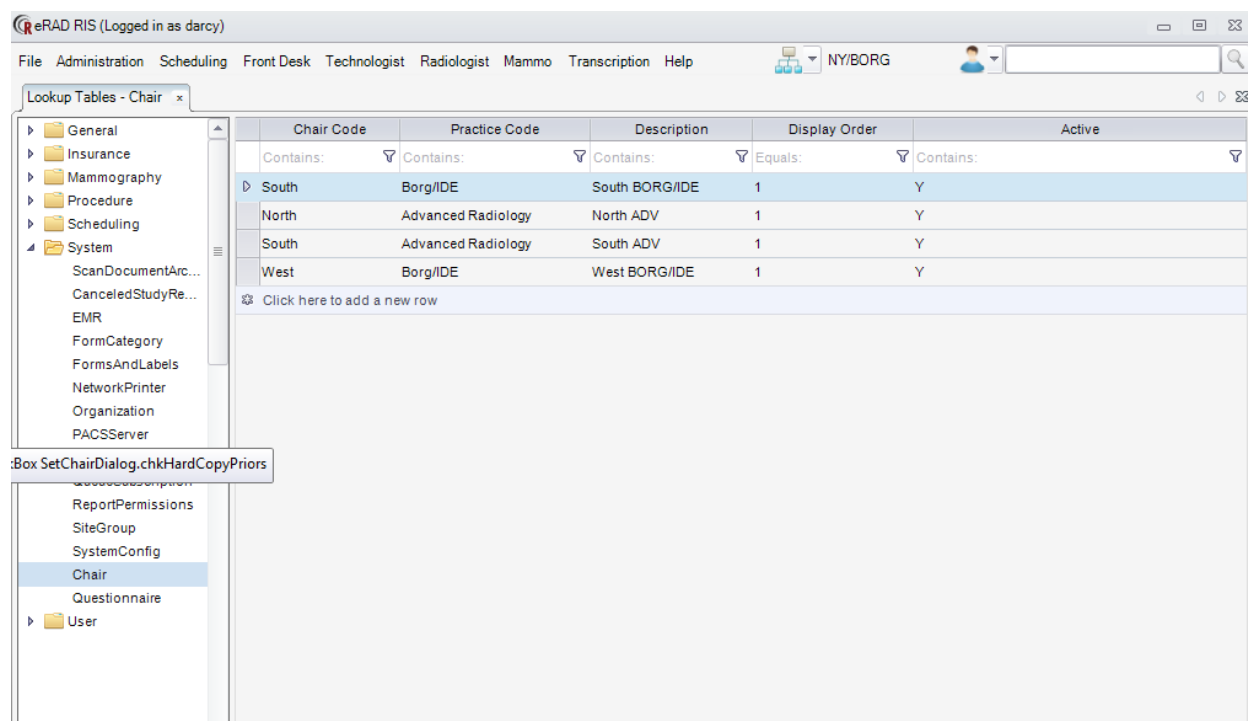
The Chair Settings dialog box will provide a list of chairs for the current practice, a QC Flag checkbox and a Hard copy priors checkbox. If the user presses “OK” the changes will be saved immediately (i.e. it is not dependent upon the user saving and closing the tech screen). Changes triggered from this dialog box are logged to the audit table and they are also stored as an action that can be delivered to external systems via Mirth.

### **Chair Configuration / Setup**

A new lookup table titled “Chair” has been added and is accessed from the Administration > Configure > System > Chair.

Chairs can be defined with a unique chair code, user friendly description, and an associated practice.

A practice can have 0 or more chairs. A single chair can belong to only one practice.

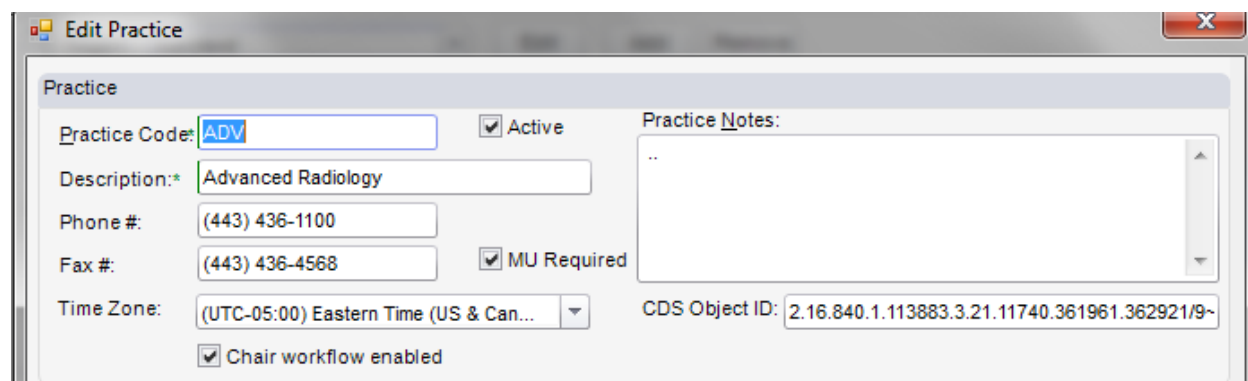


Chair Code	Practice Code	Description	Display Order	Active
Contains: ▼	Contains: ▼	Contains: ▼	Equals: ▼	Contains: ▼
South	Borg/IDE	South BORG/IDE	1	Y
North	Advanced Radiology	North ADV	1	Y
South	Advanced Radiology	South ADV	1	Y
West	Borg/IDE	West BORG/IDE	1	Y

Click here to add a new row

**Figure 4.49 – Chair lookup table**

The Organization lookup has also seen a change. To enable Chair work flow for a practice, edit the desired Practice and check to the Chair enabled work flow check box.



**Edit Practice**

Practice

Practice Code:  ☒ Active

Description:

Phone #:

Fax #:  ☒ MU Required

Time Zone:

☒ Chair workflow enabled

Practice Notes:

CDS Object ID:

**Figure 4.50– Practice enabled for chair work flow**

## Scheduling Across Rooms

A new dynamic column in the scheduled order window has been introduced to give the user a visual representation of the rooms to be selected without reserving the times. In the advanced search > details view the room is displayed in the search results when procedure with different modalities are choosen.

The screenshot shows the 'Schedule Order' window with the following details:

- Order List:**
  - Order A: XR RIBS 3 VIEWS, BILAT (Duration: 5, Room: , Scheduled Date: mm-dd-yyyy h:mm a...)
  - Order A: CT Chest W/Abdomen W/Ches (Duration: 30, Room: , Scheduled Date: mm-dd-yyyy h:mm a...)
  - Order A: XR Chest PA Lat, Obliques(Ches (Duration: 5, Room: , Scheduled Date: mm-dd-yyyy h:mm a...)
- Filters:**
  - Body part: Chest
  - Laterality: (empty)
- Date Range:** Start Date: 11-08-2012, End Date: 11-13-2012
- Study Grid:**

EL			FH			LU		
Fri, 11-09-2012						Fri, 11-09-2012		
7:30 AM	XR RIBS 3 VIEWS, BILAT	XR1EL	7:45 AM	XR RIBS 3 VIEWS, BILAT	XR1FH	7:45 AM	XR RIBS 3 VIEWS, BILAT	DX1LU
9:00 AM	CT Chest W & Abdomen W	CT1EL	7:50 AM	CT Chest W & Abdomen W	CT1FH	7:50 AM	CT Chest W & Abdomen W	CT1LU
10:00 AM	XR Chest PA Lat, Obliques	XR1EL	8:20 AM	XR Chest PA Lat, Obliques	XR1FH	8:20 AM	XR Chest PA Lat, Obliques	DX1LU
7:30 AM	XR RIBS 3 VIEWS, BILAT	XR2EL	7:45 AM	XR RIBS 3 VIEWS, BILAT	XR2FH	7:45 AM	XR RIBS 3 VIEWS, BILAT	XR1LU
9:00 AM	CT Chest W & Abdomen W	CT1EL	7:50 AM	CT Chest W & Abdomen W	CT1FH	7:50 AM	CT Chest W & Abdomen W	CT1LU
10:00 AM	XR Chest PA Lat, Obliques	XR1EL	8:20 AM	XR Chest PA Lat, Obliques	XR1FH	8:20 AM	XR Chest PA Lat, Obliques	DX1LU
7:35 AM	XR RIBS 3 VIEWS, BILAT	XR2EL	7:50 AM	XR RIBS 3 VIEWS, BILAT	XR1FH	7:50 AM	XR RIBS 3 VIEWS, BILAT	DX1LU
9:00 AM	CT Chest W & Abdomen W	CT1EL	7:55 AM	CT Chest W & Abdomen W	CT1FH	7:55 AM	CT Chest W & Abdomen W	CT1LU
10:00 AM	XR Chest PA Lat, Obliques	XR1EL	8:25 AM	XR Chest PA Lat, Obliques	XR1FH	8:25 AM	XR Chest PA Lat, Obliques	DX1LU
7:40 AM	XR RIBS 3 VIEWS, BILAT	XR2EL	7:50 AM	XR RIBS 3 VIEWS, BILAT	XR2FH	7:50 AM	XR RIBS 3 VIEWS, BILAT	XR1LU
9:00 AM	CT Chest W & Abdomen W	CT1EL	7:55 AM	CT Chest W & Abdomen W	CT1FH	7:55 AM	CT Chest W & Abdomen W	CT1LU
10:00 AM	XR Chest PA Lat, Obliques	XR1EL	8:25 AM	XR Chest PA Lat, Obliques	XR1FH	8:25 AM	XR Chest PA Lat, Obliques	DX1LU

Figure 4.51 – Schedule order window displaying new column for rooms when multiple studies of different modalities

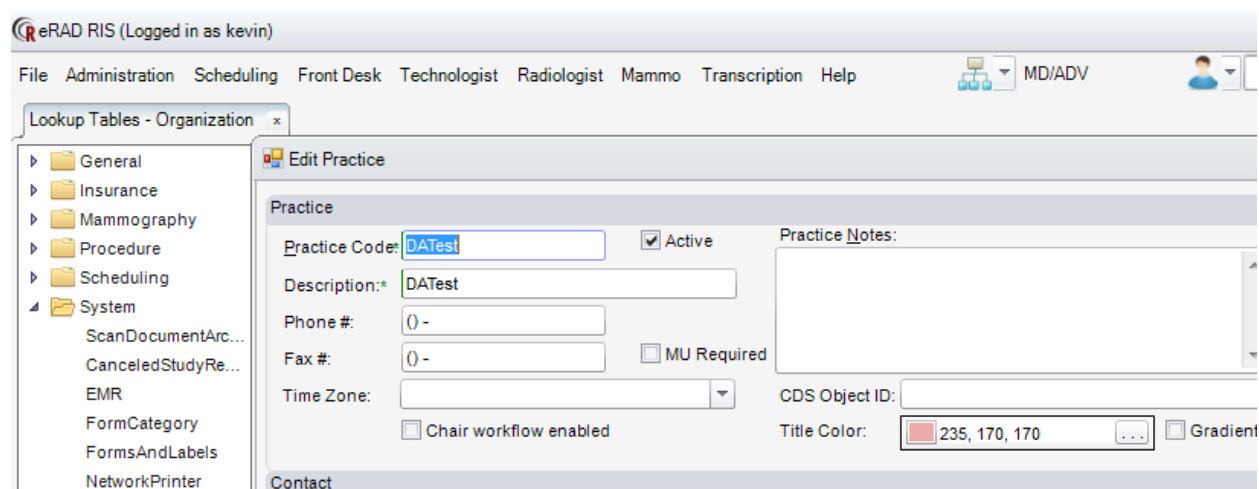
### Modality Editor Lookup Restriction by Site

This new feature will prevent users from adding or modifying modalities for other practices. This is controlled by a new access string “Config.LookupEditor.Modality.ViewAll”

Full access to the above access string will allow the logged in user access to all modalities in the Modality lookup editor. Access as none, will grant access to only those modalities the user is associated with.

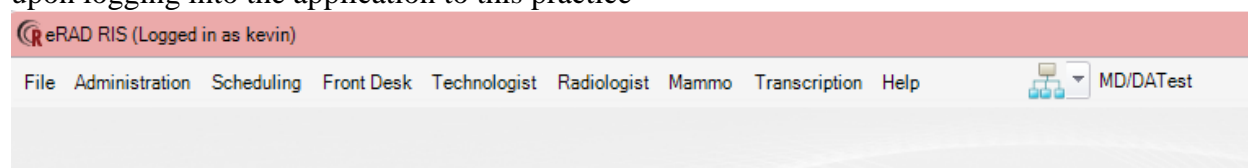
### Organization Picker Title Bar Color

To assist users who may select different practices from the Organization Picker, each practice can be assigned a designated color that will change the color of the title bar. This is accomplished by editing the practice from the Administration menu > Configure > Organization > then select the practice and open for edit.



**Figure 4.52 – Edit Practice displaying how to set title bar color**

With the above practice configured for the color shown above, when the user selects this practice from the Organization Picker, the title bar will be of this color. This color will also be displayed upon logging into the application to this practice



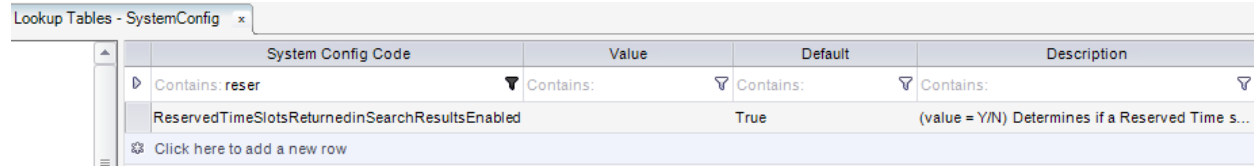
**Figure 4.53 – Colored title bar**

## Schedule Order not displaying locked times

Desired by the users the removal of locked appointment times in the schedule order window. Previously we relied on the red boarder around the Scheduled Date in the procedure picker row to inform the user that a specific time wasn't available.

We have added a system configuration setting:

**ReservedTimeSlotsReturnedinSearchResultsEnabled**



System Config Code	Value	Default	Description
Contains: reser	Contains:	Contains:	Contains:
ReservedTimeSlotsReturnedinSearchResultsEnabled	True		(value = Y/N) Determines if a Reserved Time s...
Click here to add a new row			

**Figure 4.54 – SystemConfig table display new system config code**

When set to true, which is the default setting, search results will return as they always have.

When set to false, if user A has a time selected in the search results, user B completes a search, the time selected by User A does not return in the search results for user B.

If user A has a schedule order window open and selects a time slot to reserve or lock it, then user A opens a second instance of the schedule order window, the locked time in first schedule order window will appear in the search results, but as before, when selected a red boarder will appear around the Scheduled Date column on the procedure picker row indicating it is not available.

## Management Report – Added Mammography Exams

The Added Mammography Exams report displays a list of mammography exams that have been added and dictated within the selected date range. Identification of a mammography exam is based on the procedures mammo type code value being configured.

Parameters:

- From & To Dates (based on dictation date)

Date references:

- Study, interpretation and patient tables

From: 8/6/2012	To: 9/6/2012
1 of 2	100%
Find   Next	

### Added Mammography Exams

Date Range: 8/6/2012 - 9/6/2012

Description: This report displays a list of mammography exams that have been added and dictated within the selected date range. Identification of a mammography exam is based on the procedures' mammo type value being configured.

Accession #	MRN	Patient Name	Status	Dictated by	Signed by
			Signed1	harinn	harinn
		Procedure(s): MA Digital Screening Mammo W CAD [G0202] - Breast - B		08-06-12 11:52 AM	08-06-12 03:10 PM
			Signed1	giulianoc	giulianoc
		Procedure(s): MA Digital Screening Mammo W CAD [G0202] - Breast - B		08-08-12 07:00 PM	08-09-12 05:25 PM
			Signed1	zelenkon	zelenkon
		Procedure(s): MA Digital Diagnostic Mammo Unilat W CAD [G0206] - Breast - R		08-10-12 09:49 AM	08-10-12 11:05 AM

Figure 4.55 – Added Mammography Exams report

## Management Report – Last Login by User ID

The Last Login by User ID report displays the audit information capturing the last login for each user for eRAD RIS. This report will be used for security audits. The report is accessed under the Management Reports \ Maintenance menu.

Parameters:

- None

Data references:

- C\_audit table
- L\_user table

### Last Login by User Id

**Description:** This report displays the audit information capturing the last login for each user with the RIS.

User Id	User Name	Active	Last Logon
stick	Stick Powell	Y	10/4/2012 11:22:30 AM -04:00
denis	Denis Doiron	Y	10/4/2012 10:38:52 AM -04:00
regtest	Registration Test User	Y	10/4/2012 10:28:53 AM -04:00
darcyn	Darcy Noye	Y	10/4/2012 9:34:00 AM -04:00
lan	Ian Power MD	Y	10/4/2012 7:33:27 AM -04:00
gordon	Gordon Craig	Y	10/4/2012 7:09:37 AM -04:00
hardingc	Clifton Harding	Y	10/3/2012 3:10:17 PM -04:00
darcy	Darcy Aiken	Y	10/3/2012 12:12:24 PM -04:00

**Figure 4.56 – Last Login by User Id report**

## Management Report – QA Radiologist Review

The QA Radiologist Review report displays the current status of studies that have been flagged for review. The report can be viewed in the eRAD RIS from the Management Report window \ Statistics \ Radiologists.

From: 9/1/2012 To: 10/4/2012

1 of 1 100% Find | Next

QA Radiologist Review

Date Range: 9/1/2012 - 10/4/2012

Description: This report displays the Rejected QA reports and history associated with those studies for exams reviewed within the dates specified.

Dictated By	Modality Type	Accession	Status	Quality Code	Reviewed by	Reviewed Date
Clifton Harding						13
	CT					5
	MA					5
	MR					3
Darcy Noye						9
	CT					8
		1070823	CT Chest W & Abdomen W [CT4] - Chest			
			Transcribed	REJECTED	darcyn	09-21-12 11:51 AM
		1070873	CT Thoracic Spine W [72129] - Lumbar spine			
			Signed1	REJECTED	darcyn	09-25-12 12:50 PM
			Signed1	REJECTED	darcyn	09-25-12 01:28 PM
			Signed1	REJECTED	darcyn	09-25-12 01:31 PM
			Signed1	REJECTED	darcyn	09-25-12 01:33 PM
			Signed1	REJECTED	darcyn	09-25-12 01:37 PM
			Signed1	REJECTED	darcyn	09-25-12 01:38 PM
		1071081	CT Abdomen W & CTA Chest W/Wo [CT66] - Abdomen			
			Transcribed	REJECTED	darcyn	09-21-12 12:04 PM
	XR					1
Denis Doiron						2
	CT					2
Roman Embleton						1
	CT					1
System						1
	CT					1

Figure 4.57 – QA Radiologist Review report



## Management Report – Referring Physician List

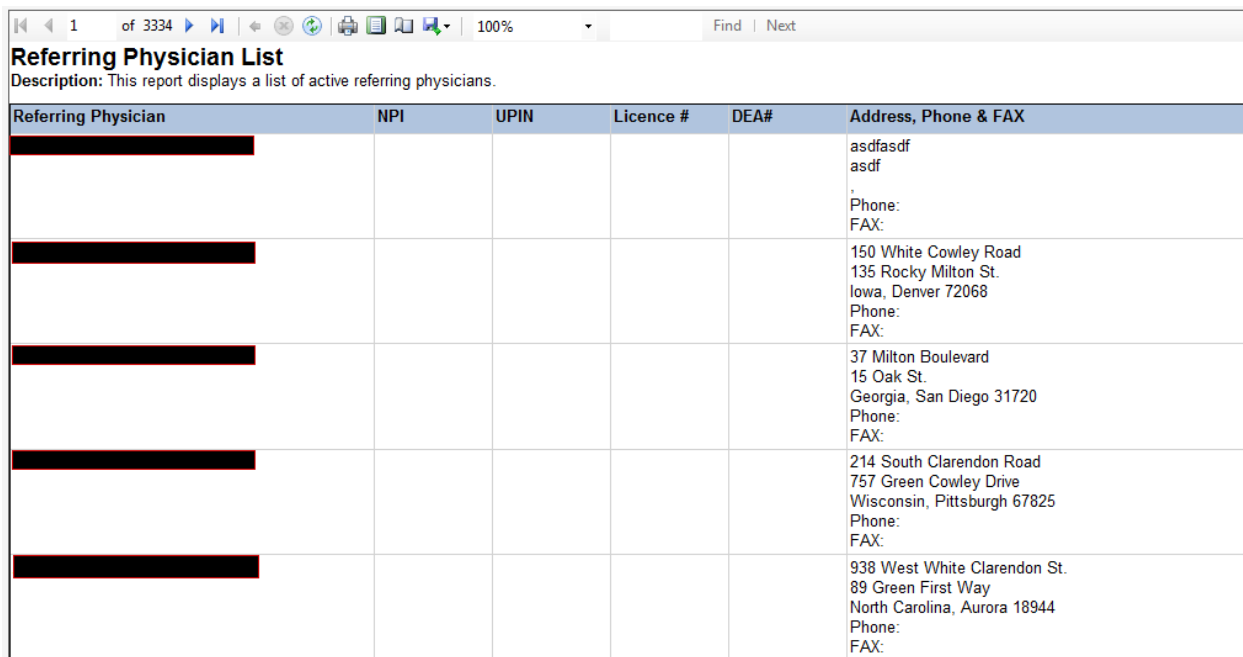
The Referring Physician List report displays the complete list of referring and unknown referring physicians that are active in the eRAD RIS. Also displayed are the NPE, UPIN, License #, DEA#, address, phone, and fax numbers. The report is accessed under Management Reports\Maintenance.

Parameters:

- None

Data reference:

- Person and person address



Referring Physician	NPI	UPIN	Licence #	DEA#	Address, Phone & FAX
					asdfsdf asdf Phone: FAX:
					150 White Cowley Road 135 Rocky Milton St. Iowa, Denver 72068 Phone: FAX:
					37 Milton Boulevard 15 Oak St. Georgia, San Diego 31720 Phone: FAX:
					214 South Clarendon Road 757 Green Cowley Drive Wisconsin, Pittsburgh 67825 Phone: FAX:
					938 West White Clarendon St. 89 Green First Way North Carolina, Aurora 18944 Phone: FAX:

**Figure 4.58 – Referring Physician List report**

## Management Report – Referring Physician Volumes

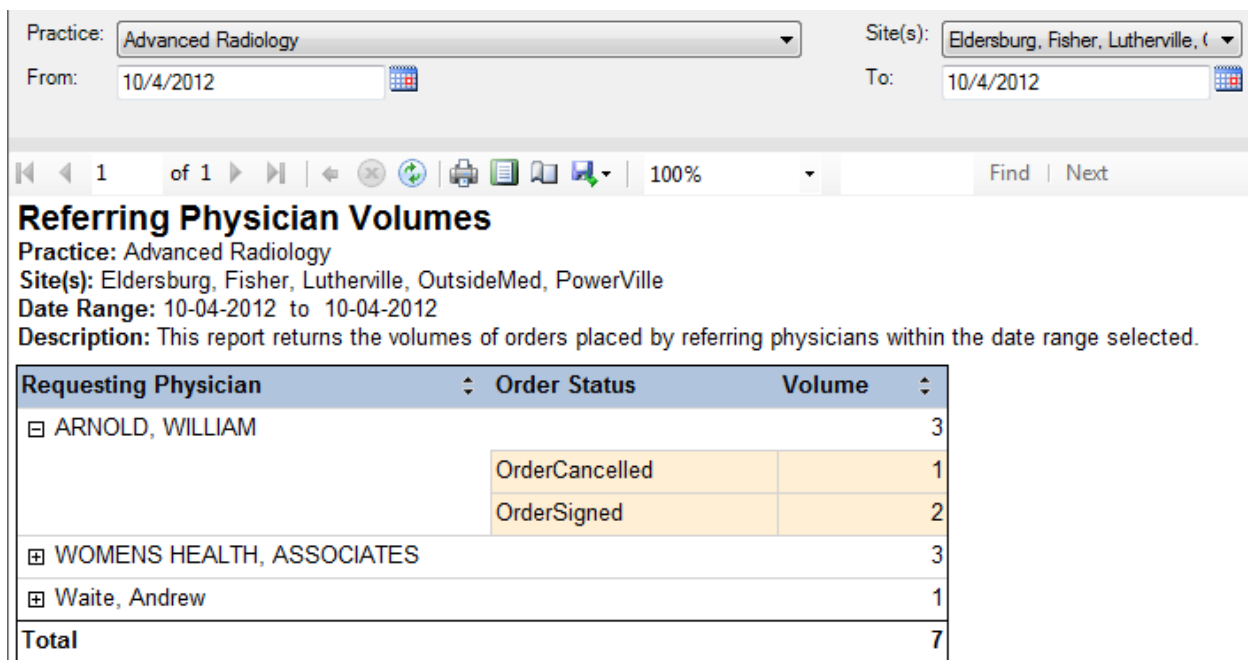
The Referring Physician Volumes report displays the volumes of orders placed by referring physicians within the practice(s), site(s) date range selected. The report is accessed under Management Reports \ Operations.

Parameters:

- Practice
- Site(s)
- From, To Dates

Data references:

- Order table, person table for active referring physicians



**Figure 4.59 – Referring Physician Volumes report**

## Management Report - Chief Complaint Audit

The Chief Complaint Audit report displays a list of chief complaints captured on exams. The report is based on the date range selected for date of service.

Parameters:

- Date Range

Data references:

- Order and study tables (excluding cancelled and aborted status)

### Chief Complaint Audit

Date: 9/7/2012

Description: This report displays a list of the chief complaints identified on exams based on the date of service falling between the dates selected.

DOS	Patient Name	Status	Scheduled By	Arrived By
09-07-12	[REDACTED]			
	Accession #: 1000032714			
	Procedure(s): MA Digital Screening Mammo W CAD [G0202 ] - Breast - B			
	Chief Complaint: PREV 8/25/11			
	NO CHANGES			
	[REDACTED]			
	Accession #: 1000031800			
	Procedure(s): MA Digital Screening Mammo W CAD [G0202 ] - Breast - B			
	Chief Complaint: ROUTINE			
	[REDACTED]			

Figure 4.60 – Chief Complaint Audit report

## **Management Report Deployment Changes**

Separation of samples from the management reports deployment.

Reason for doing this are:

- Smaller deployment of management reports (reduction of 270+MB)
- The sample forms were specific to Radnet, and may not be appropriate to share with external operations\competitors.

Also modified report deployment to enable the implementation team the ability to drop files into the following folders:

- Upload Forms (and a subfolder called SubReports)
- Upload Diagnostic Templates (and a subfolder called SubReports)

These folders should never have files in them from R&D. They are designed solely for the implementation team to upload files they wish to include. The files will be uploaded into the site-specific folder called Forms or Diagnostic Templates depending on the type of file being uploaded.

Ie: if the implementer is setting up a new site and have 40 new forms to copy up to a site, this will enable them drop those files in the folder and it will upload them in bulk vs manually uploading and changing the datasource for each file.

The files will override files that exist in the folder with the same name. At the same time the script does not delete anything out of the destination folders.

Running the deployment now will give the user options to Upload Forms and Upload Diagnostic reports.

As it already does with management reports the datasource for the uploaded forms and templates will be updated to use the destination datasource.

## 5. Access Strings

Access string	Controls Access to
WL.MT.ReportDraftedQA	Transcription Edits Pending QA WL menu option
WL.RAD.QA	Radiologist Signed Pending QA WL menu Option
Reporting.ReleaseOthersTentativeSignedReports	Enables users to release reports signed but other users
Clinical.Schedule.ReminderRequest	Enables Reminder Request button on the Scheduling Review window. This window is presented from New Appointment window after the Schedule button is selected and mandatory fields have been completed
Config.LookupEditor.Modality.ViewAll	This can restrict or enable a user to configure changes for all modalities in the Modality Lookup Editor
Config.LookupEditor.ImageUploader	This feature was not completed for Build 38, but the lookup table exists. If users don't have this access string they will not see the lookup editor option in the Configure window.

## 6. Resolved Defects Build 38

Bugs Suggested Features and Support Issues resolved in build 1.38. The extract is taken from Redmine bug tracking system and only displays defects resolved in 1.38.

#	Status	Tracker	Priority	Subject	Category	Found Version
1911	Closed	Bug	Urgent	EMR distribution jobs not updating to completed status	Web Services/DB	1.37
1770	Closed	Bug	Urgent	Reporting - Editing templates getting "Out of Memory Exception"	Thick Client GUI	1.37
2211	Closed	Bug	High	Modality closure - same day		37.13

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2179	Closed	Bug	High	Omin duration studies where obtain a lock of negative duration length		1.37
2135	Closed	Bug	High	Reporting - No way to turn spell checker off	Thick Client GUI	1.37
2134	Closed	Bug	High	Reporting - Global dictionary being over-written	Thick Client GUI	1.37
2116	Closed	Bug	High	River Ranch - experiencing issues when adding / editing insurance information.	Thick Client GUI	37.12
2111	Closed	Bug	High	Reporting - Sign, Skip etc and continue will kick you back to the worklist prematurely	Thick Client GUI	1.37
2109	Closed	Bug	High	RRanch - User(s) is sporadically receiving error messages with the subject of the error being insurance.	Thin Client GUI	37.11
2092	Closed	Bug	High	Reporting - Float a panel, close it, and save layout makes other panes disappear	Thick Client GUI	1.37
2053	Closed	Bug	High	Scheduling - Deleted row information cannot be accessed through the row.	Thin Client GUI	37.11
2033	Closed	Bug	High	Fax number not populating in Send To popup for MTs	Thick Client GUI	1.37
2013	Closed	Bug	High	Reporting - PSPLOG missing error message when logging into ris.	Thick Client GUI	1.37
1935	Closed	Bug	High	Relevance Calculation - patient history and relevance is only sorted on relevance percentage	Thick Client GUI	1.37

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1927	Closed	Bug	High	Inactive dictations can be lost if attempted to be played back in report history	Thick Client GUI	1.2.37.13895
1906	Closed	Bug	High	Sort order needed on preferred radiologist		1.37
1803	Closed	Bug	High	Transcribed by being overridden by rad user id.	Thick Client GUI	1.37
1791	Closed	Bug	High	Focus not set on report when editing	Thick Client GUI	1.37
1789	Closed	Bug	High	Case issue when assigning templates	Thick Client GUI	1.37
1747	Closed	Bug	High	Synch Macros	Thick Client GUI	1.37
1743	Closed	Bug	High	Study opens in Batch mode when it should be interactive.	Thick Client GUI	1.37.5
1729	Closed	Bug	High	Base template dropdown	Thick Client GUI	1.37
1724	Closed	Bug	High	Edit default template may return Concurrency violation	Admin Tools	1.1.2.37.13312
1648	Closed	Bug	High	Not able to change rooms - re-scheduling.	Thick Client GUI	1.36.12866
1640	Closed	Bug	High	Can't open image request editing form from Image request WL.	Thick Client GUI	1.37
1613	Closed	Bug	High	Reporting - Assign to Data pane will not open from view menu	Thick Client GUI	1.37
1563	Closed	Bug	High	Reporting - Update to the latest Radiology Recognizer	Thick Client GUI	1.36
2228	Resolved	Bug	Normal	the "*" character should not be part of the policy number in the ZIN segment	Web Services/DB	1.37

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2204	Resolved	Bug	Normal	accident code in HL7 ACC billing message needs to be in uppercase	Web Services/DB	1.37
2184	Resolved	Bug	Normal	Management Reports - multiple procedure groups	Web Services/DB	1.37
2183	Resolved	Bug	Normal	Management Reports - Accession Milestone Times	Web Services/DB	1.37
2175	Closed	Bug	Normal	Billing message IN1 segment does not contain the correct value for coordination of benefits priority	Web Services/DB	1.37
2165	Closed	Bug	Normal	Management Report - Daily Summary Report	Mgt Reports	1.37.13
2140	Closed	Bug	Normal	Management Report view for Payments	Web Services/DB	1.37
2138	Closed	Bug	Normal	error when re-ordering insurance priority	Thick Client GUI	1.37.14326
2123	Closed	Bug	Normal	Management Report - Transcription Dashboard	Web Services/DB	1.37
2115	Closed	Bug	Normal	slow view c_mgmt_rad_dict_activity	Web Services/DB	1.37.12
2110	Closed	Bug	Normal	Management Report - Unread Exams	Mgt Reports	1.37
2107	Closed	Bug	Normal	error on opening registration when patient has multiple orders for today	Thick Client GUI	1.37.12
2041	Closed	Bug	Normal	Reproting - Rewind doesn't work with interactive dictations	Thick Client GUI	1.37



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2025	Closed	Bug	Normal	Relevance includes all studies when modality is included in Acceptable Modalities	Thick Client GUI	1.2.37.14161
2015	Closed	Bug	Normal	Reporting - Transcribed by user id getting set to the radiologist		1.37
2008	Closed	Bug	Normal	Worklist Sort on column Time Pending Signature	Thick Client GUI	1.37
1995	Closed	Bug	Normal	Addendum report rendering not showing addendm title	Mgt Reports	1.37
1994	Closed	Bug	Normal	If you work on more than 1 person in personnel, any exception messages will show person[0] details, instead of the person you were working on		1.37
1979	Closed	Bug	Normal	Preferred rad order		1.37
1978	Closed	Bug	Normal	14. Preferred Rad if no modality is assigned it should assume all modalities.		1.37
1976	Closed	Bug	Normal	Enter Key in Referring Field should perform search		1.37
1975	Closed	Bug	Normal	Scheduled By user id		1.37
1972	Closed	Bug	Normal	Home/Business address displayorder.		1.37
1970	Closed	Bug	Normal	Include referring prefix/suffix in search results.		1.37
1969	Closed	Bug	Normal	DEFAULT PATIENT CLASS is being ignored		1.37
1965	Closed	Bug	Normal	schedule groups do not clone in the personnel editor.		1.37

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1961	Closed	Bug	Normal	For personal addresses, copy button for delivery address same as address.		1.37
1959	Closed	Bug	Normal	Quick Keys in Batch Reclassification of scan document types doesn't work.		1.37
1957	Closed	Bug	Normal	Copy from the ICD9 search results grid doesn't work.		1.37
1953	Resolved	Bug	Normal	Schedule Order - Can't see start and end dates		37.9
1952	Closed	Bug	Normal	HTML on Conformation WL is messed up		37.9
1950	Closed	Bug	Normal	Management Report - Transcription Dashboard - Beverly VR2	Mgt Reports	1.37
1948	Closed	Bug	Normal	RTAT slow		1.37
1945	Closed	Bug	Normal	Inability to prove polling workflow is being used.		1.37
1944	Closed	Bug	Normal	MTs losing credit on their work.		1.37
1938	Closed	Bug	Normal	FK_study_key error on reschedule of a single study to scheduling a series		1.37.13895
1936	Closed	Bug	Normal	Injury details are not deleted with the Insurance Policy	Thick Client GUI	1.2.37.13859
1928	Closed	Bug	Normal	Users marked as INACTIVE show HTML tag in internal person search	Documentation	1.2.37.13895
1921	Closed	Bug	Normal	Perceived slowness when dictating in minimized mode.	Thick Client GUI	1.37

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1919	Closed	Bug	Normal	duplicate key error when creating a new user with the same username as an already existing user	Admin Tools	1.37.12812
1917	Closed	Bug	Normal	Delete dictation and report is showing as a "Include Retrievals" type of entry	Web Services/DB	1.37
1916	Closed	Bug	Normal	PACS Integration - System Config Max Relevant Studies not relevant as user pref overrides it	Thick Client GUI	1.37
1914	Closed	Bug	Normal	MU Management Reports need Last Updated added to reports.		1.37
1903	Closed	Bug	Normal	Default access level on for VOID study is FULL		1.37
1902	Closed	Bug	Normal	Object reference error from Report on Accession number	Thick Client GUI	1.2.37.13864
1900	Closed	Bug	Normal	CDSService using UI actions	Web Services/DB	1.37
1893	Closed	Bug	Normal	DBNull error when printing patient summary form	Thick Client GUI	1.37.13858
1892	Closed	Bug	Normal	lab order received cannot be null	Thick Client GUI	1.37.13858
1890	Closed	Bug	Normal	Reporting - Document Model Sync cached lookup is out of date	Thick Client GUI	1.37
1889	Closed	Bug	Normal	Should not be able to record a dictation if dictation screen is opened read only		1.37
1885	Closed	Bug	Normal	frequent concurrency violation errors at ARS	Thick Client GUI	1.37.13858
1879	Closed	Bug	Normal	Management Report - Daily Summary Report	Mgt Reports	1.37

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1878	Closed	Bug	Normal	Management Report - Transcription Dashboard	Mgt Reports	1.37
1872	Closed	Bug	Normal	Management Report - Transcription Dashboard	Mgt Reports	1.37
1866	Closed	Bug	Normal	action data does not have all studies in the study container xml	Web Services/DB	1.37
1850	Closed	Bug	Normal	Image Request WL - Reset filters returns "unknown worklist type" error	Thick Client GUI	1.1.2.37.1366 5
1824	Closed	Bug	Normal	MU Measures Details	Thin Client GUI	1.37
1810	Closed	Bug	Normal	Management Report - Transcription Dashboard	Mgt Reports	1.37
1809	Closed	Bug	Normal	Management Report - Transcription Dashboard	Mgt Reports	1.37
1800	Closed	Bug	Normal	Template/Macro editor now filtering properly on initial load	Thick Client GUI	1.37
1799	Closed	Bug	Normal	Sign button is missing from Dictated by Date WL	Thick Client GUI	1.37
1792	Closed	Bug	Normal	Null Visit.PatientClassCode causes Error opening "Edit Billing"	Thick Client GUI	1.37
1786	Closed	Bug	Normal	Caret not attaching automatically after opening a draft.	Thick Client GUI	1.37
1782	Closed	Bug	Normal	Suspend button shortcut		1.37
1777	Closed	Bug	Normal	Management Report - Charge Audit Report	Mgt Reports	1.37
1773	Closed	Bug	Normal	Reporting - Ability to create macros from the template editor causes errors	Thick Client GUI	1.37

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1764	Closed	Bug	Normal	Management Report - 'Time to Schedule (Seconds)' shows inconsistent number rounding.	Mgt Reports	1.1.2.37.1334 7
1758	Closed	Bug	Normal	Saving template in Template Editor		1.37
1756	Closed	Bug	Normal	Management Report - Unread Exams	Mgt Reports	1.37
1750	Closed	Bug	Normal	Management Report - Transportation	Mgt Reports	1.37
1741	Closed	Bug	Normal	Assigned Radiologist needs to be on Activity List		1.37
1735	Closed	Bug	Normal	Studies were being signed off on that no active billing codes were assigned		1.37
1733	Closed	Bug	Normal	Reporting - Read-only in the reporting screen leaves QA and Problem active	Thin Client GUI	1.37
1726	Closed	Bug	Normal	Can Register ordered studies from patient folder	Thick Client GUI	1.2.37.13347
1725	Closed	Bug	Normal	View 'c_mgmt_sched_activity' is returning incorrect 'Hour' for 12:00 am	Mgt Reports	1.1.2.37.1334 7
1721	Closed	Bug	Normal	Enhancement to Transcription Dashboard	Mgt Reports	1.36
1716	Closed	Bug	Normal	Interactive Panel throws exception for non radiologist	Thick Client GUI	1.1.2.37.1330 4
1715	Closed	Bug	Normal	NewCrop a way to handle docs without a DEA number	Thick Client GUI	1.37
1713	Closed	Bug	Normal	Second Biopsy follow up returns error	Thick Client GUI	1.2.37.13255

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1711	Closed	Bug	Normal	Unique constraint in Tech window when Check box in patient history grid is selected and scan doc attached then try to start the exam	Thick Client GUI	1.2.37.13255
1709	Closed	Bug	Normal	Dictating in minimized mode, the volume meter is not working.	Thick Client GUI	1.2.37.13255
1701	Closed	Bug	Normal	unable to create outside read	Web Services/DB	1.37
1677	Closed	Bug	Normal	Tab text in template editor says macro.	Thick Client GUI	1.37
1664	Closed	Bug	Normal	Reporting - playback highlighter is red	Thick Client GUI	1.37
1659	Closed	Bug	Normal	Reporting - No space added when dictating measurements.	Thick Client GUI	1.37
1657	Closed	Bug	Normal	Setting playbackspeed on control is slow.	Thick Client GUI	1.37
1656	Closed	Bug	Normal	Report Editor - Ctrl+F default button is replace		1.37
1650	Closed	Bug	Normal	Exam Done(tech only) status has Register available in patient folder	Thick Client GUI	1.37
1629	Closed	Bug	Normal	Diagnostic Reports not rendering with double spacing.	Mgt Reports	B37
1628	Closed	Bug	Normal	Signature Approval Service	Web Services/DB	1.36
1617	Closed	Bug	Normal	Changing association of scan docs on Scheduling/Registration form doesn't "stick"	Thick Client GUI	1.37

## RADNET Inc. – eRAD RIS Release Notes

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1611	Closed	Bug	Normal	View Template - Base Dropdowns visible and enabled	Thick Client GUI	1.37
1608	Closed	Bug	Normal	Referring column not added to the Dictated by Date and All Dictated work lists	Thick Client GUI	1.37
1606	Closed	Bug	Normal	Dictate window getting Error on GetData/DisplayData	Thick Client GUI	1.37
1602	Closed	Bug	Normal	RIS - Update installer does not install properly after "Multiple zip files error"	Thick Client GUI	1.36
1601	Closed	Bug	Normal	When set to 'floating' template browser disappears after you create / edit a template	Thick Client GUI	1.2.37.12837
1597	Closed	Bug	Normal	WPR workflow null exception when user opts not to create WPR study	Thick Client GUI	1.37
1576	Closed	Bug	Normal	Saving a new order can cause an empty "Patient Mode" list...		1.37
1570	Closed	Bug	Normal	Data consistency error with composite study	Thick Client GUI	1.37
1568	Closed	Bug	Normal	Installation Directory Name	Thick Client GUI	1.37
1536	Closed	Bug	Normal	Tech WL --> right click cancel a Checked In study = Object reference error	Thin Client GUI	1.2.37.12746
1503	Closed	Bug	Normal	Unknown referring match allows you to match an unknown referring to another unknown referring	Thick Client GUI	1.37

1446	Closed	Bug	Normal	View Macro with description of Test Here - Error inserting selected normal with exception: The value for column 'name' in table 'I_macro' is DBNull	Thick Client GUI	1.37
1354	Closed	Bug	Normal	Management reports - when subreport for 'Report Turnaround' is open in the report viewer in RIS, and you click on a different management report, RIS throws an error.	Mgt Reports	1.1.36.11197
1336	Closed	Bug	Normal	on dated WL, adding or deleting a rView will change the display text for the "date"	Thick Client GUI	1.37
1319	Closed	Bug	Normal	View Edit button is not enabled for cancelled status	Thick Client GUI	1.35
1287	Closed	Bug	Normal	Carriers flagged as inactive cannt be found in search.	Admin Tools	1.36
1219	Closed	Bug	Normal	Unable to delete billing codes	Thick Client GUI	1.36
1214	Closed	Bug	Normal	From diagnose screen choosing Referring Extended from View Menu does not show pane	Thick Client GUI	1.36
1202	Closed	Bug	Normal	Registering studies early should pick current time	Thick Client GUI	1.36
1190	Closed	Bug	Normal	Error message appears twice	Thick Client GUI	1.36
1179	Closed	Bug	Normal	Walk-in	Thick Client GUI	1.36
1111	Closed	Bug	Normal	Billing exception for unknown carrier.	Thick Client GUI	1.35



## RADNET Inc. – eRAD RIS Release Notes

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1084	Closed	Bug	Normal	External patients can be scheduled without having "System" MRN	Thick Client GUI	1.35
1070	Closed	Bug	Normal	Rescheduling an order that has a study cancelled will still show the cancelled study	Thick Client GUI	1.35
1062	Closed	Bug	Normal	Edit order with multiple procedures change one procedure and save	Thick Client GUI	1.35
1020	Closed	Bug	Normal	As SchedAdmin, add study to existing list of studies generates duplicate key	Thick Client GUI	1.35
993	Closed	Bug	Normal	When user opens "Appointment Book" from the Scheduling menu, the Left, right, and Refresh buttons (green) appear enabled but in fact are disabled until one of the dropdown menus are accessed.	Thick Client GUI	1.*
927	Closed	Bug	Normal	Issue with procedure picker type ahead when procedure is removed.	Thick Client GUI	1.34
1822	Closed	Bug	Low	Reporting - Speech Mike 3 barcoding will not work	Thick Client GUI	1.37
1781	Closed	Bug	Low	Submit/Transcribe button shortcuts		1.37
1765	Closed	Bug	Low	Blook worklist: items are not removed when MU entry marked inactive	Thick Client GUI	1.37
1742	Closed	Bug	Low	Activity WL needs "Assign to Rad" context menu	Thick Client GUI	1.37
1666	Closed	Bug	Low	Template Browser > View template prompted to save changes on close	Thick Client GUI	1.2.37.13040

**RADNET Inc. – eRAD RIS Release Notes**

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1665	Closed	Bug	Low	Blank help about message	Thick Client GUI	1.2.37.13040
1610	Closed	Bug	Low	If Patient Class for Tech Only is missing, scheduling from Orders to Schedule gives strange error.	Thick Client GUI	1.37
1603	Closed	Bug	Low	Action pending (Internal Patient) doesn't have suspended flag on work list removed	Thick Client GUI	1.37
1595	Closed	Bug	Low	Message boxes not focusing default button.	Thick Client GUI	1.37
1586	Closed	Bug	Low	Not Contains Worklist filtering does not work	Thick Client GUI	1.37
1553	Closed	Bug	Low	View menu option disabled on attachments in Patient edit	Thick Client GUI	1.37
1540	Closed	Bug	Low	GUI hung	Thick Client GUI	1.2.37.12724
1501	Closed	Bug	Low	Sync Labwork work list name	Thick Client GUI	1.37
1433	Closed	Bug	Low	Need to reduce flickering on save		1.37
1369	Closed	Bug	Low	Field name is needed for message prompt on missing field data	Thick Client GUI	1.36
1162	Closed	Bug	Low	Error from entering alpha numeric number in allergy field	Thick Client GUI	1.36
1128	Closed	Bug	Low	"All Dictated" worklist does not have option to "Transcribe"	Thin Client GUI	1.35.10273
1024	Closed	Bug	Low	Exception thrown when changing room in Confirmation window.	Thick Client GUI	1.35
975	Closed	Bug	Low	Billing exceptions WL Shows non-signed studies		1.*

748	Closed	Bug	Low	Patient Folder > nuggets can overlap with column to the right	Thick Client GUI	1.27
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## 7. Resolved Defects Build 38.001

Redmine #	Subject	Priority
2421	image_request completed date Error	Normal
2416	Reporting - Add user preference for Correction dialogue box	Normal
2415	scheduled_start_date column does not belong to c_client_worklist error when starting/completing an exam	Normal
2335	audit history does not display scrollbar when required	High
2332	When user schedules multiple studies, and cancels any of those studies, the billing codes are still appearing in IVT, and are marked as active	High
2326	Laterality check	High
2323	Resolve 7 vs 8 day retrieval for scheduling query	High
2321	Update priority of insurance	High
2320	Add IVT flag in Pending IVT status	High
2313	Set up Request reminder on Review Tab to be security driven	High
2300	Reporting - Commands button in user preferences remove	Normal
2291	ExamDoneTechOnly studies are not dropping off MWL after completion	Urgent
2290	Reporting - No sign button on Signed Pending Release	High
2289	Can save as order without procedure	Urgent
2246	Reporting - Interactive Dictation SpeechMike buttons not working when set to SubmitAudio	High
2231	MT Polling error in GetNextData	High
2183	Management Reports - Accession Milestone Times	Normal
2094	NPI Clearing out when clicking the grid for first person searched	Urgent
2024	Reporting - Macro Lookup Table taking a long time	High

## 8. Defects Resolved Build 38.002

Redmine #	Subject	Priority
2498	Close application while minimized, after logging in again the application does not appear	Normal
2246	Reporting - Interactive Dictation SpeechMike buttons not working when set to SubmitAudio	High

## 9. Known Limitations – Please see this section for important information

The following are Bugs Suggested Features and Support Issues found in build 1.38. This build is the current QE build and testing is ongoing. The list may increase in size. This document will not be updated or re-released.

I would like to elaborate on a few of the bugs listed known limitations in this list below:

**Bug # 2209** – New work flow introduced that can be found in New Features section of this document. The previous work lists that contained studies marked for QA are no longer in the application. As a work around users may access the All Pending Dictation or the All Reports Drafted work lists and apply a filter on the QA column for results.

**Bug # 2178** – Grids within the application can present a large Red X that will cover the area in which the grid was. This is usually the result of rapid mouse clicks in a grid or a cell within the grid. To avoid this issue do not rapidly click from one cell to the next within grids. Grids are found in most lookup tables, the Mange Policies window, the Insurance Policies data pane on the order tab, etc...

**Bug # 2149** – Image Uploader was to be a new feature in Build 38. Late changes in the application had an adverse effect on this lookup table in which the images would not attach to the row properly. The will not affect the application and Image Uploader lookup table can be hidden from the Administration > Configure menu by not granting any UserGroups the permission for access string Config.LookupEditor.ImageUploader. The access string should be set to “none” by default in the AccessString lookup table.

#	Status	Priority	Subject
2209	New	High	All QA studies WL missing
2178	QE Rejected	High	RED X appearing on Insurance Policies grid

## RADNET Inc. – eRAD RIS Release Notes

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2149	New	High	Lookup Editor - Image Uploader
2074	New	High	Patient distribution history - New button throws exception
1829	QE Rejected	High	Memory leak introduced in B38, needs to be fixed.
2215	New	Normal	Schedule details grid refresh issue
2214	New	Normal	Image request with scheduled study tab show (0) in registration window
2199	New	Normal	INTERNAL PATIENT - Suspend and continue throws exception
2197	New	Normal	User occasionally has to click previous / next multiple times to move to the prev / next date when on a date worklist
2195	New	Normal	When user has 4 or more procedures to schedule, the 'Details' window cuts off the top procedure in the top time slot
2194	New	Normal	Tech Only - External Report Workflow
2193	New	Normal	Image request not saving "Same as requested by"
2192	New	Normal	Image request on discontinued exams
2190	New	Normal	Error On Edit Image Request on Tech screen after status change
2185	New	Normal	eRx - Practice Zip Code Invalid characters
2182	New	Normal	Procedure picker row does not display procedure code
2176	New	Normal	Error on fast clicking schedule button
2171	New	Normal	Large historical patient notes will display double scroll bars
2170	New	Normal	Cache Problem when changing user Permissions

2166	New	Normal	Inactive referring addresses cause issues later in work flow
2163	New	Normal	Studies in Edits Pending QA can be signed off
2162	New	Normal	Cannot create a scantype with a document level or order level
2159	New	Normal	QA Work flow - Reports verified are sent to Signed, Pending Release WL again
2155	New	Normal	Schedule Group drop down clears out when you hit save
2151	New	Normal	Audit log should show user friendly terminology
2150	New	Normal	Audit log displaying user who released report as UI_ReportSigned
2137	New	Normal	Reporting - Skip and continue external reports loop
2117	New	Normal	'Assigned radiologist is required due to referring's preference.
2099	New	Normal	can't clear selection of dataset when creating an auto macro
2097	New	Normal	duplicate field insertion when editing field in auto macro editor
2096	New	Normal	Reschedule on locked exam does not prompt that the booking is locked.
2094	New	Normal	NPI Clearing out when clicking the grid for first person searched
2091	New	Normal	Confirmation Review tab
2089	New	Normal	Referring Search
2087	New	Normal	Macro Editor - Modifying Macro's Default keeps inserting it
2086	New	Normal	Edit Address on user
2070	New	Normal	Internal Person Search - Can search with blank criteria causing exception

## RADNET Inc. – eRAD RIS Release Notes

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2068	New	Normal	Perform exam throws error on complete
2067	New	Normal	Walk-in - New Patient - Issue with Patient Folder displaying patient name
2063	New	Normal	Cancelled appointment requires default fields
2054	New	Normal	New user cannot access WL
2039	New	Normal	Print preview of Dx Report within transcription window when multiple addendums
2018	New	Normal	Reporting - Resolve Problem Assign to other rad will leave previously assigned if not selected
1894	New	Normal	validation of dtpScheduleDate failed
1873	New	Normal	Object error in system config lookup
1842	New	Normal	Reporting - CdsInteractive Text Color not consistent
1830	New	Normal	Interactive dictation - Correct selected text removes space when inserted into the report
1819	New	Normal	Studies can be scheduled on any modality (despite config)
1804	In Progress	Normal	View / Edit a cancelled exam prompts for required fields on Documentation tab
1795	New	Normal	Saving Manage Policies window add new column to Insurance policy grid
1794	New	Normal	Reporting - New setting to run report verification when in QA workflow
2213	New	Low	Image request location list box
2210	New	Low	Payments range message
2201	New	Low	Interactive Panel label for Playback / Recording cut off
2196	New	Low	Check in date - cast error

## RADNET Inc. – eRAD RIS Release Notes

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2187	New	Low	Scheduling - Testing Procedure Plan(Darcy duration 0 test)
2180	New	Low	When we wrap buttons in patient folder due to screen resolution, the wrong button wraps
2173	New	Low	Configure Save button
2169	New	Low	UserGroupPermission - Able to enter non validate access strings
2168	New	Low	Chair Workflow - Able to remove a chair from the lookup that have the chair assigned to a study
2142	New	Low	Reschedule permission does not make 'reschedule' appear in context menu
2106	New	Low	Lookup Editor - TemplateMacro Should have Double click functionality
2105	New	Low	Lookup Editor -TemplateMacro
2088	New	Low	Macro Editor - Tab Order needs to be reveiwed
2079	New	Low	Overbook Reason - No max length, causes exception
2071	New	Low	Window handle error from Dictate window
2069	New	Low	Add image request to Discontinued study
1991	New	Low	Locked RIS may not show in taskbar
1855	New	Low	Reporting - Exam details - Proceudre name my not display completely
1853	New	Low	QualityReviewDistribution is not listed alphabetically in General menu
1797	In Progress	Low	Perferred Language field is not marked as required when on the patient tab
1783	New	Low	Chair Workflow - Select a chair dialog I can type in the dropdown.
1744	New	Low	Preferred Rad Assignment window bottom border missing





# **Server Update**

**For eRAD RIS  
Version 1.0  
Build 38  
Update 38.001**

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## **RADNET, Inc. – eRAD RIS Server Update**

### **1. Purpose**

This server update has been produced to fix bugs required for production setting, or to complete an enhancement requested for production.

This server update includes the following:

#### **Defects resolved**

Redmine #	Subject	Priority
2421	image_request completed date Erro	Normal
2416	Reporting - Add user preference for Correction dialogue box	Normal
2415	scheduled_start_date column does not belong to c_client_worklist error when starting/completing an exam	Normal
2335	audit history does not display scrollbar when required	High
2332	When user schedules multiple studies, and cancels any of those studies, the billing codes are still appearing in IVT, and are marked as active	High
2326	Laterality check	High
2323	Resolve 7 vs 8 day retrieval for scheduling query	High
2321	Update priority of insurance	High
2320	Add IVT flag in Pending IVT status	High
2313	Set up Request reminder on Review Tab to be security driven	High
2300	Reporting - Commands button in user preferences remove	Normal
2291	ExamDoneTechOnly studies are not dropping off MWL after completion	Urgent
2290	Reporting - No sign button on Signed Pending Release	High
2289	Can save as order without procedure	Urgent
2246	Reporting - Interactive Dictation SpeechMike buttons not working when set to SubmitAduio	High
2231	MT Polling error in GetNextData	High
2183	Management Reports - Accession Milestone Times	Normal
2094	NPI Clearing out when clicking the grid for first person searched	Urgent
2024	Reporting - Macro Lookup Table taking a long time	High

## **2. Package Contents**

Files included for this server update:

1. GUI ZIP Updates folder contains
  - a. AudioLib.dll
  - b. AudioLib.pdb
  - c. CDSJobManagerConsoleClient.exe
  - d. CDSJobManagerConsoleClient.pdb
  - e. CommonLib.dll
  - f. CommonLib.pdb
  - g. Diagram Paint.pdb
  - h. DynamicFormEditor.dll
  - i. DynamicFormEditor.pdb
  - j. MessageHelper.pdb
  - k. ris.exe
  - l. ris.pdb
  - m. rupdate.pdb
  - n. UILib.dll
  - o. UILib.pdb
  - p. WCFClient.exe
  - q. WCFClient.pdb
  - r. WSNewCropClient.exe
  - s. WSNewCropClient.pdb
2. RIS Service Updates folder contains
  - a. CDSJobManager.dll
  - b. CDSJobManager.pdb
  - c. CommonLib.dll
  - d. CommonLib.pdb
  - e. DDEngine.dll
  - f. DDEngine.pdb
  - g. rRISServices.exe
  - h. rRISServices.exe.config
  - i. rRISServices.pdb
  - j. rRISServices.vshost.exe
  - k. ScheduledTaskManager.dll
  - l. ScheduledTaskManager.pdb
  - m. SignatureApprovalService.exe
  - n. SignatureApprovalService.pdb
  - o. WCFService.dll
  - p. WCFService.pdb
  - q. WebApi.dll
  - r. WebApi.pdb

## **RADNET, Inc. – eRAD RIS Server Update**

- s. Wedge.exe
- t. Wedge.pdb
- 3. SQL folder contains:
  - a. B38\_001.sql
- 4. CoreInstall folder contains:
  - a. rRisSetup.msi
  - b. setup.exe

### **3. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **4. Who is affected**

Previous versions of build 38.

Server updates may not be cumulative; therefore this server update must be applied directly to the previous server update.

### **5. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	Just WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	
						Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we really did not.
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	
37	12	1.2.37.14285	1.2.37.13040	1.2.37.14300	1.2.37.14285	
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	
38	1	1.2.38.14748	1.2.38.14486	1.2.38.14748	1.2.38.14748	

## **6. Installing**

- 1) Copy the files in the GUI ZIP Updates folder and replace those in the rRIS\_1.2.38.14486.zip folder. Rename the zip file to be **rRIS\_1.2.38.14748.zip**
- 2) Copy and replace the files from the “CoreInstall” folder and replace the \_setup folder in the RISDeployment\Core folder.
- 3) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService.  
*rRISService directories include:*
  - a) *rRISService*
  - b) *CDS rRISService*
  - c) *Wedge rRISService*
  - d) *DDE rRISService*

Restart each service.

- 3) Run the B38\_001.sql file against the eRAD RIS database instance.



# **Server Update**

**For eRAD RIS  
Version 1.0  
Build 38  
Update 38.002**

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## **RADNET, Inc. – eRAD RIS Server Update**

### **1. Purpose**

This server update has been produced to fix bugs required for production setting, or to complete an enhancement requested for production.

This server update includes the following:

#### **Defects resolved**

Redmine #	Subject	Priority
2498	Close application while minimized, after logging in again the application does not appear	Normal
2246	Reporting - Interactive Dictation SpeechMike buttons not working when set to SubmitAduio	High

### **2. Package Contents**

Files included for this server update:

1. GUI ZIP Updates folder contains
  - a. ris.exe
  - b. ris.pdb

### **3. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **4. Who is affected**

Previous versions of build 38.

Server updates may not be cumulative; therefore this server update must be applied directly to the previous server update.

### **5. eRAD RIS Release Version Numbers**

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	Just WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we really did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	
37	12	1.2.37.14285	1.2.37.13040	1.2.37.14300	1.2.37.14285	

## **RADNET, Inc. – eRAD RIS Server Update**

37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	

## **6. Installing**

- 1) Copy the files in the GUI ZIP Updates folder and replace those in the rRIS\_1.2.38.14748.zip folder. Rename the zip file to be **rRIS\_1.2.38. 15182.zip**

**NOTE:** A core install is not required for this update. Simply exit the application and reopen to get the latest changes.

# Server Update

For eRAD RIS  
Version 1.0  
Build 38  
Update 38.003

## **Table of Contents**

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## **RADNET, Inc. – eRAD RIS Server Update**

### **1. Purpose**

This server update has been produced to fix bugs required for production setting, or to complete an enhancement requested for production.

This server update includes the following:

#### **Defects resolved**

Redmine #	Subject	Priority
2649	Reporting - Field's type attribute datatype cast exception. Translation – Inserting old, pre-existing macros will cause error.	High



## **2. Package Contents**

Files included for this server update:

1. GUI ZIP Updates folder contains
  - a. AudioLib.dll
  - b. AudioLib.pdb
  - c. CDSJobManagerConsoleClient.exe
  - d. CDSJobManagerConsoleClient.pdb
  - e. CommonLib.dll
  - f. CommonLib.pdb
  - g. Diagram Paint.pdb
  - h. DynamicFormEditor.dll
  - i. DynamicFormEditor.pdb
  - j. MessageHelper.pdb
  - k. Microsoft.Practices.EnterpriseLibrary.Caching.pdb
  - l. Microsoft.Practices.EnterpriseLibrary.Common.pdb
  - m. Microsoft.Practices.EnterpriseLibrary.Logging.pdb
  - n. Microsoft.Practices.ServiceLocation.pdb
  - o. Microsoft.Practices.Unity.Interception.pdb
  - p. Microsoft.Practices.Unity.pdb
  - q. ris.exe
  - r. ris.pdb
  - s. rupdate.pdb
  - t. UILib.dll
  - u. UILib.pdb
  - v. WCFClient.exe
  - w. WCFClient.pdb
  - x. WSNewCropClient.exe
  - y. WSNewCropClient.pdb

### **3. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **4. Who is affected**

Previous versions of build 38.

Server updates may not be cumulative; therefore this server update must be applied directly to the previous server update.

### **5. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	Just WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	
						Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we really did not.
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	
37	12	1.2.37.14285	1.2.37.13040	1.2.37.14300	1.2.37.14285	
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	

## **6. Installing**

- 1) Copy the files in the GUI ZIP Updates folder and replace those in the rRIS\_1.2.38.15182.zip folder. Rename the zip file to be **rRIS\_1.2.38. 15251.zip**

**NOTE:** A core install is not required for this update. Simply exit the application and reopen to get the latest changes.

# Server Update

For eRAD RIS  
Version 1.0  
Build 38  
Update 38.004

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## **RADNET, Inc. – eRAD RIS Server Update**

### **1. Purpose**

This server update has been produced to fix bugs required for production setting, or to complete an enhancement requested for production.

This server update includes the following:

#### **Defects resolved**

Redmine #	Subject	Priority
2508	MU Bug - provided clinical summary and Timely Access	High
2659	Untimely Message: You already have this order open in another tab	High
2650	CDS Manager crashes due to Quality Review Constraint Violation	Urgent
2634	Reporting - Status counts are causing delays for radiologists and transcriptionists	Immediate
2279	double clicking a button on the worklist launches a screen and then clicks a button on the screen	Normal

## **2. Package Contents**

Files included for this server update:

1. GUI ZIP Updates folder contains
  - a. ris.exe
  - b. ris.pdb
  - c. WCFClient.exe
  - d. WCFClient.pdb
  
2. RIS Service Updates folder contains
  - a. CDSJobManager.dll
  - b. CDSJobManager.pdb
  - c. CommonLib.dll
  - d. CommonLib.pdb
  - e. DDEngine.dll
  - f. DDEngine.pdb
  - g. rRISServices.exe
  - h. rRISServices.pdb
  - i. rRISServices.vshost.exe
  - j. ScheduledTaskManager.dll
  - k. ScheduledTaskManager.pdb
  - l. SignatureApprovalService.exe
  - m. SignatureApprovalService.pdb
  - n. WCFService.dll
  - o. WCFService.pdb
  - p. WebApi.dll
  - q. WebApi.pdb
  - r. Wedge.exe
  - s. Wedge.pdb

### **3. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **4. Who is affected**

Previous versions of build 38.

Server updates may not be cumulative; therefore this server update must be applied directly to the previous server update.

### **5. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	Just WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we really did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	
37	12	1.2.37.14285	1.2.37.13040	1.2.37.14300	1.2.37.14285	
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	
38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	



## **6. Installing**

- 1) Copy the files in the GUI ZIP Updates folder and replace those in the rRIS\_1.2.38.15251.zip folder. Rename the zip file to be **rRIS\_1.2.38.15327.zip**
  
- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService.  
*rRISService directories include:*
  - a) *rRISService*
  - b) *CDS rRISService*
  - c) *Wedge rRISService*
  - d) *DDE rRISService*

Restart each service.

**NOTE:** A core install is not required for this update. Simply exit the application and reopen to get the latest changes.

# **Server Update**

**For eRAD RIS  
Version 1.0  
Build 38  
Update 38.005**

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## **RADNET, Inc. – eRAD RIS Server Update**

### **1. Purpose**

This server update has been produced to fix bugs required for production setting, or to complete an enhancement requested for production.

This server update includes the following:

#### **Defects resolved**

Redmine #	Subject	Priority
2701	constraint error on open of unknown reconciliation work list	High
2731	RIS not responding properly to multiple PACS events on same study	Normal
2781	Reporting - Interactive Dictation set to abbreviate measurements	High
2783	Reporting - Auto download recognizer needs to be turned off	High
2772	Reporting – Interactive Interop.SHDocVw	High
2483	Punctuation added within field when no punctuation was dictated.	Normal
2769	EMR Inbound orders can't be scheduled	Urgent
2726	Pacs integration message box	Urgent

## **2. Package Contents**

Files included for this server update:

1. GUI ZIP Updates folder contains
  - a. rRIS\_1.2.38.15513.zip
  
2. RIS Service Updates folder contains
  - a. CDSJobManager.pdb
  - b. CDSJobManager.dll
  - c. CommonLib.pdb
  - d. CommonLib.dll
  - e. DDEngine.pdb
  - f. DDEngine.dll
  - g. rRISServices.pdb
  - h. rRISServices.exe
  - i. rRISServices.vshost.exe
  - j. ScheduledTaskManager.pdb
  - k. ScheduledTaskManager.dll
  - l. SignatureApprovalService.pdb
  - m. SignatureApprovalService.exe
  - n. WCFService.pdb
  - o. WCFService.dll
  - p. WebApi.pdb
  - q. WebApi.dll
  - r. Wedge.pdb
  - s. Wedge.exe
  
3. SQL folder contains:
  - a. B38\_005.sql

### **3. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **4. Who is affected**

Previous versions of build 38.

Server updates may not be cumulative; therefore this server updated must be applied directly to the previous server update.

## 5. eRAD RIS Release Version Numbers

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	Just WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we really did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	
37	12	1.2.37.14267	1.2.37.13040	1.2.37.14161	1.2.37.14267	
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	
38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	
38	5	1.2.38.15513	1.2.38.14748	1.2.38.15513	1.2.38.15451	

## 6. Installing

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.2.38.15513.zip file provided with this release. The previous GUI.zip should have been renamed to rRIS\_1.2.38.15327. Be sure to make a backup of the ris.exe.config file contained within the .zip folder.
- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService.  
*rRISService directories include:*
  - a) *rRISService*
  - b) *CDS rRISService*
  - c) *Wedge rRISService*
  - d) *DDE rRISService*

Restart each service.
- 3) Run the B38\_005.sql file against the eRAD RIS database instance.



# **Server Update**

**For eRAD RIS  
Version 1.0  
Build 38  
Update 38.006**

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## **RADNET, Inc. – eRAD RIS Server Update**

### **1. Purpose**

This server update has been produced to fix bugs required for production setting, or to complete an enhancement requested for production.

This server update includes the following:

#### **Defects resolved**

Redmine #	Subject	Priority
2869	Reporting - Interactive dictation getting lost and set to 0 bytes	Urgent
2876	Transcription Dashboard not reporting self-editing radiologists properly	Normal

### **2. Package Contents**

Files included for this server update:

1. GUI ZIP Updates folder contains
  - a. AudioLib.dll
  - b. AudioLib.pdb
  - c. Ris.exe
  - d. Ris.pdb
2. SQL folder contains
  - a. B38-006.sql

### **3. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **4. Who is affected**

Previous versions of build 38.

Server updates may not be cumulative; therefore this server updated must be applied directly to the previous server update.

## 5. eRAD RIS Release Version Numbers

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	Just WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we really did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	
37	12	1.2.37.14267	1.2.37.13040	1.2.37.14161	1.2.37.14267	
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	
38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	
38	5	1.2.38.15513	1.2.38.14748	1.2.38.15513	1.2.38.15451	
38	6	1.2.38.15618	1.2.38.14748	1.2.38.15513	1.2.38.15618	

## **6. Installing**

- 1) Copy the files in the GUI ZIP Updates folder and replace those in the rRIS\_1.2.38.15513.zip folder. Rename the zip file to be **rRIS\_1.2.38.15618.zip**
- 2) Run the B38\_006.sql file against the eRAD RIS database instance.

# **Server Update**

**For eRAD RIS  
Version 1.0  
Build 38  
Update 38.007**

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## **RADNET, Inc. – eRAD RIS Server Update**

### **1. Purpose**

This server update has been produced to fix bugs required for production setting, or to complete an enhancement requested for production.

This server update includes the following:

#### **Defects resolved**

Redmine #	Subject	Priority
2884	Hold Code Completed Status	Normal
2898	Verify and continue does not work	High
2904	HL7 messages are changing study status back in the workflow post-ExamDone	Urgent
2905	Reporting - Interactive dictation getting lost in data when refocusing after tab switch	High
2908	Reporting - inbound reporting may not open accession numbers tried once with an error	High

## **2. Package Contents**

Files included for this server update:

1. GUI ZIP Updates folder contains
  - a. rRIS\_1.2.38.15768.zip
2. RIS Service Updates folder contains
  - a. CDSJobManager.pdb
  - b. CDSJobManager.dll
  - c. CommonLib.pdb
  - d. CommonLib.dll
  - e. DDEngine.pdb
  - f. DDEngine.dll
  - g. rRISServices.pdb
  - h. rRISServices.exe
  - i. rRISServices.vshost.exe
  - j. ScheduledTaskManager.pdb
  - k. ScheduledTaskManager.dll
  - l. SignatureApprovalService.pdb
  - m. SignatureApprovalService.exe
  - n. WCFService.pdb
  - o. WCFService.dll
  - p. WebApi.pdb
  - q. WebApi.dll
  - r. Wedge.pdb
  - s. Wedge.exe

## **3. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

## **4. Who is affected**

Previous versions of build 38.

Server updates may not be cumulative; therefore this server update must be applied directly to the previous server update.

## 5. eRAD RIS Release Version Numbers

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	Just WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we really did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	
37	12	1.2.37.14267	1.2.37.13040	1.2.37.14161	1.2.37.14267	
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	
38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	
38	5	1.2.38.15513	1.2.38.14748	1.2.38.15513	1.2.38.15451	
38	6	1.2.38.15618	1.2.38.14748	1.2.38.15513	1.2.38.15618	
38	7	1.2.38.15768	1.2.38.14748	1.2.38.15768	1.2.38.15618	

## **6. Installing**

- 1) Copy the zip file to be **rRIS\_1.2.38.15768.zip** file from the GUI ZIP Updates folder to the RISDeployment\Build folder. Move the rRIS\_1.2.38.15618.zip folder to its backup location. No changes to the ris.exe.config settings file that is contained within the .zip folder.
- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService.  
*rRISService directories include:*
  - a) *rRISService*
  - b) *CDS rRISService*
  - c) *Wedge rRISService*
  - d) *DDE rRISService*

Restart each service.

# **User Release Notes**

for eRAD RIS  
Version 1  
Build 39

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### 1. Purpose

This document describes some of the new features and changes implemented in eRAD RIS as of the end of Sprint 39. This version of eRAD RIS is referred to as Build 1.3.39.

Only features which can be visually demonstrated to the user will be outlined in this document.

### 2. Intended Audience

This document is created by the RIS Development team for the RadNet RIS management team.

### 3. Installing/Accessing the Application

The installation guide for the eRAD RIS client have been posted to the RadNet Wiki page at <http://mdbal01rdtweb/Wiki/>

Under the RIS menu click on the rRIS page. The credentials to access the page are:

Username: rRIS

Password: Summerside

*Please note that Build 1.39 is considered a new core release of the application and will require a reinstallation of eRAD RIS. This is accomplished by navigating to the eRAD RIS shared installation drive and running the CoreInstall.bat file (ex: I:\RISDeployment\CoreInstall.bat)*

If you experience difficulties accessing the application please do not hesitate to contact Darcy Noye with the PEI RIS Development Team.

## 4. New Access Strings and Configuration Settings

Setting Placeholder	Setting	Default	Controls Access to
Access string / User Group Permission tables	Clinical.Schedule.SplittingOrders	none	Controls access to split an order in the registration window
rRISServices.exe.config	<serviceThrottling maxConcurrentCalls="2000" maxConcurrentSessions="4000" maxConcurrentInstances="4000"	Was 100, 50, and 50.  Will now be 2000, 4000 and 4000	This is a pre-existing setting that controls the amount of concurrent users. The previous values were 50, 100, and 100 consecutively.
Access string / User Group Permission tables	Clinical.ImportCD	None	Controls access to Import CD option from patient folder.
SystemConfig table	PACSCacheDelimiter	^	Determines the delimiter to be used to separate user ids in the PACS cache field
SystemConfig table	PACSCacheServer		Determines the PACS work list server used for setting and retrieving the cache field
SystemConfig table	PACSCacheField	UDF7	Determines the field used in the PACS to indicate that the study should be cached
SystemConfig table	PACSCachingEnabled	False	Number of studies allowable to cache per user
SystemConfig table	PACSMaxNumCachedStudies	5	Determines if the PACS image caching functionality is enabled
SystemConfig table	PACSCacheFieldLength	32	Indicates the expected length of the PACS Cache field in the PACS database
Access string / User Group Permission tables	Clinical.CacheStudy	None	Allows the user to manually add a study to



			the cache
Access string / User Group Permission tables	Clinical.RISAdminChangeStatus	None	allows a RIS administrator to make changes to the status of an exam that might not be possible otherwise
Access string / User Group Permission tables	Config.LookupEditor.ScanDocumentArchiveLocation	None	Controls access to the lookup table under the Configure menu item
SystemConfig table	ScanDocumentMaxSizeInDB	2147483647	The maximum size in GB that the system will persist scans documents directly in the db. When this value is exceeded the archive process will begin (at its next run time interval) to move scan documents to the archive.
SystemConfig table	ScanDocumentMinSizeInDB	2147483647	When scan document archiving is initiated, this is the minimum size in GB that the system will reduce the amount of scans documents that are persist directly in the db.
SystemConfig table	ScanDocumentArchiveCurrent Location		The archive location where the archive process will move scan documents to. The value must match a value in the l_scan_document_archive lookup table.
SystemConfig table	ScanDocumentArchiveStartTime	00:00:00	The time of day in hh:mi format (24 hour) that the scan document archive process can wake up.
SystemConfig table	ScanDocumentArchiveStopTime	00:00:00	The time of day in hh:mi format (24 hour) that the scan document archive

			process must stop. <del>Does not have to be greater</del> <u>greater</u> <del>If less</del> than ScanDocumentArchiveStartTime <u>then the process will continue to the next day until the time is reached.</u>
SystemConfig table	ScanDocumentArchiveDaysOfTheWeek	0,1,2,3,4,5,6	<p>A comma separated list of days that the archive process will wake up to see if there is work. The list contains numbers representing the day number within the week, where:</p> <p>0 is Sunday 1 is Monday 2 is Tuesday 3 is Wednesday 4 is Thursday, 5 is Friday 6 is Saturday</p> <p>For example, a value of 0,1,2,3,4,5,6 means that the archive process will run every day of the week.</p>
	ScanDocumentArchiveServerNames		A comma separated list of server names that are allowed to run the archive service.
	ScanDocumentArchiveMaxThreads	6	The maximum number of thread the scan document archive process can use within one process.

## 5. New Features and Enhancements

### Mammo – Ignored Reminder Removal from Mammo Letters Work List

The Mammo Letters WL contains the letters to be sent to patients that have upcoming or missed exam dates for follow up mammo exams. We can generate up to 3 reminder letters that will appear on the Mammo Letters WL from a pre-configured time. When the last letter is generated and a follow up order is not scheduled, we then create an Ignored Reminder on the WL when 60 days has passed since the last letter was generated.

The issue we had with the ignored reminder is that if the follow up was scheduled as a new appointment and not from the follow up order itself, we had no way of removing the ignored reminder from the Mammo Letters WL.

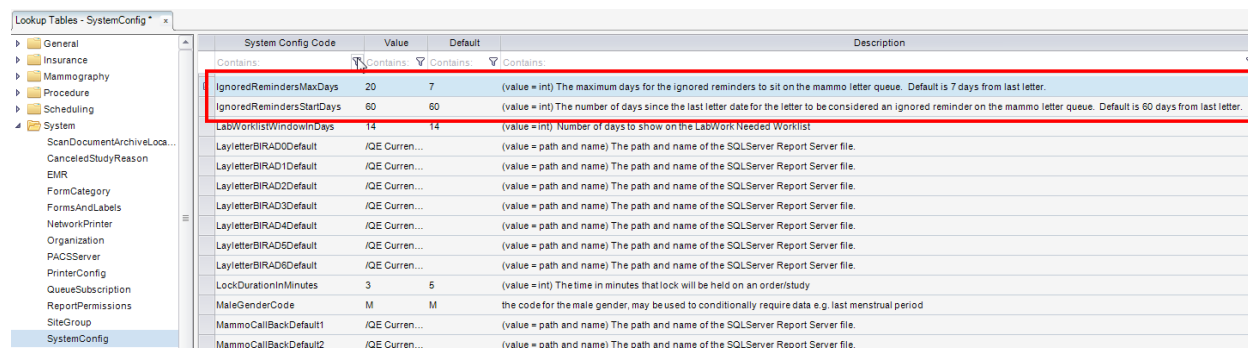
We have added a new System Configuration variable:

**IgnoredRemindersMaxDays** with a default value of 7 days. This value can be changed to the practices desired time in day's length. The **IgnoredRemindersMaxDays** allows the practice to set the amount of days the ignored reminder will remain on the Mammo Letters WL after the reminder was generated.

We have added a second System Configuration variable:

**IgnoredRemindersStartDays** with a default of 60 days. This will allow the practice to configure the time in days that an ignored reminder is generated after the last letter was created.

Example – A the third and final reminder letter was generated 30 days past the target exam date. Using the default value for **IgnoredRemindersStartDays**, the ignored reminder will be created 60 days past the last letter generation date. The ignored reminder will remain on the WL until the **IgnoredRemindersMaxDays** configured value is met, with 7 days being the default. Then the ignored reminder is removed from the WL.



System Config Code	Value	Default	Description
IgnoredRemindersMaxDays	20	7	(value = int) The maximum days for the ignored reminders to sit on the mammo letter queue. Default is 7 days from last letter.
IgnoredRemindersStartDays	60	60	(value = int) The number of days since the last letter date for the letter to be considered an ignored reminder on the mammo letter queue. Default is 60 days from last letter.
LabWorklistWindowInDays	14	14	(value = int) Number of days to show on the LabWork Needed Worklist
LayLetterBIRAD0Default	/QE Curren...		(value = path and name) The path and name of the SQLServer Report Server file.
LayLetterBIRAD1Default	/QE Curren...		(value = path and name) The path and name of the SQLServer Report Server file.
LayLetterBIRAD2Default	/QE Curren...		(value = path and name) The path and name of the SQLServer Report Server file.
LayLetterBIRAD3Default	/QE Curren...		(value = path and name) The path and name of the SQLServer Report Server file.
LayLetterBIRAD4Default	/QE Curren...		(value = path and name) The path and name of the SQLServer Report Server file.
LayLetterBIRAD5Default	/QE Curren...		(value = path and name) The path and name of the SQLServer Report Server file.
LayLetterBIRAD6Default	/QE Curren...		(value = path and name) The path and name of the SQLServer Report Server file.
LockDurationInMinutes	3	5	(value = int) The time in minutes that lock will be held on an order/study
MaleGenderCode	M	M	the code for the male gender, may be used to conditionally require data e.g. last menstrual period
MammoCallBackDefault1	/QE Curren...		(value = path and name) The path and name of the SQLServer Report Server file.
MammoCallBackDefault2	/QE Curren...		(value = path and name) The path and name of the SQLServer Report Server file.

Figure 5.1 – New system configuration settings in SystemConfig table



### Retrieve Locked by User Name

Today in eRAD RIS we don't let locked or taken time slots to appear in the scheduled search grid in the new appointment window. Users do still have the option to select the time from the Appointment Book, from the Scheduled Date control from the procedure picker row on the Schedule tab and also from the Calendar window also access from the procedure picker row.

If the time selected is currently locked by another user, we will try to obtain the user and person information.

'Duration'	This time slot has been taken by Andrew Waite (andrew).
'Room'	This time slot has been taken by Andrew Waite (andrew).
'Scheduled Date'	This time slot has been taken by Andrew Waite (andrew).

**Figure 5.2 – Locked time block user name and person information information**

If the person information is not obtainable, we will display at the very least the user name.

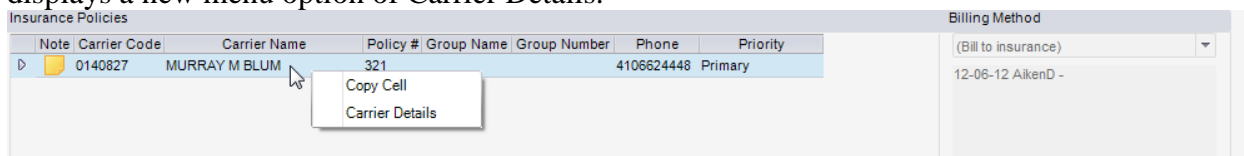
'Duration'	This time slot has been taken by andrew.
'Room'	This time slot has been taken by andrew.
'Scheduled Date'	This time slot has been taken by andrew.

**Figure 5.3 – Locked time block user name only**

## **Carrier Information from Insurance Policy Grid**

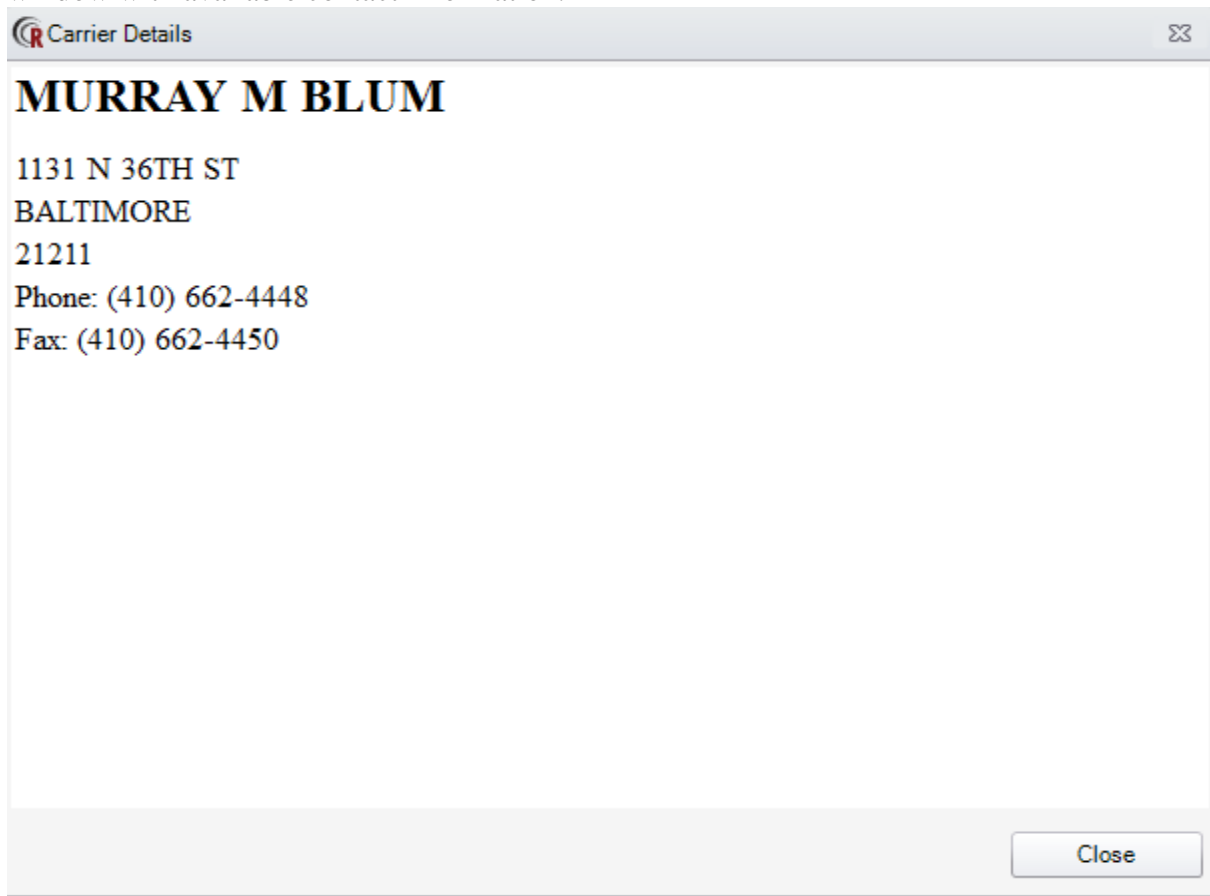
To assist users in easily obtaining the insurance carrier contact information we have added a context menu to the Insurance Policies grid located on the order tab of most data windows.

When the carrier name is present in the Insurance Policies grid, a right click on the carrier row displays a new menu option of Carrier Details.



**Figure 5.4 – Access to Carrier Details from Insurance Policies grid**

Selecting the Carrier Details option from the menu provided will open the Carrier Details window with available contact information.



**Figure 5.5– Carrier Details information.**

## Ability to Split Studies on Existing Order

Previous to this build, the ability to create separate orders within a single booking was possible, but once the studies were scheduled, they could not be divided into separate orders. In build 39, it is now possible to complete this task in the registration window.

The screenshot shows the 'Registration' window for patient 'Hugh Dough # 12807'. The 'Order' tab is active, displaying a table with columns: Order, Studies, Duration, Room, and Scheduled Date. Two studies are listed: 'XR Foot 2 Views, Bil...' and 'XR RIBS 3 VIEWS, BL...'. A dropdown menu is open for the first study, showing 'A' and 'New...' as options. Below the table is a link: 'Click here to add another study'.

Order	Studies	Duration	Room	Scheduled Date
A	XR Foot 2 Views, Bil... x	5	DX1LU	12-21-2012 5:00 PM
A	XR RIBS 3 VIEWS, BL... x	5	DX1LU	12-21-2012 5:05 PM

Click here to add another study

**Figure 5.6 – Splitting studies to separate orders.**

When New... is chosen the behaviour is the same as when scheduling a new appointment. Another order tab appears in which the required details must be completed and the Order tabs become Order[A] and Order[B], etc...

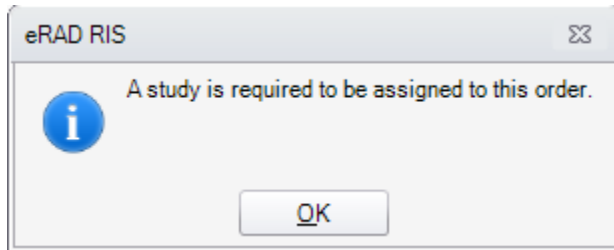
The screenshot shows the 'Registration' window for patient 'Hugh Dough # 12807'. The 'Order[B]' tab is active, displaying fields for 'Chief Complaint', 'Referring Details', and 'CC Physi'. The 'Referring Details' section includes fields for 'Referring \*', 'Visited at \*', and 'Img notes'.

Chief Complaint	Referring Details	CC Physi
	Referring * Visited at * Img notes	Visit Lo

**Figure 5.7 – New order tab**

Access to this feature is available as long as the user has permissions with a new access string `Clinical.Schedule.SplittingOrders`

There is a restriction in place to prevent a study from being removed when there is only one remaining pre-existing study in an order. This is to prevent an order from being orphaned back to the Order to Schedule WL.



**Figure 5.8 – Message prompt from trying to remove all studies**

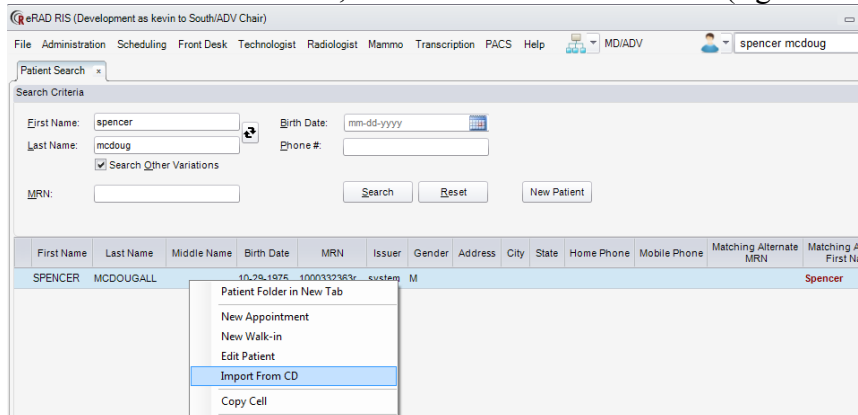
When a study is switched between orders, all the original order item and study item will remain the same and only the required order key will be updated.



## CD Import

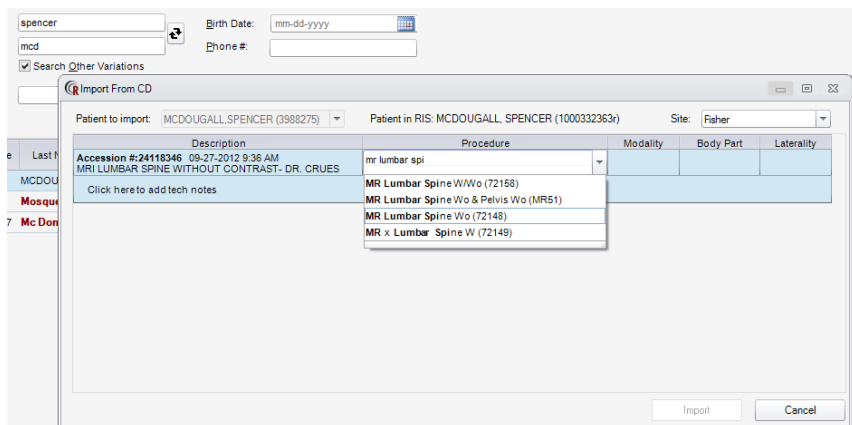
We needed a way to import studies into RIS so that the accession number matches what is in PACS. The real need is so we have the information in RIS for the Patient Folder and that the RADs can see those studies in the relevance logic so that the correct prior exams get loaded.

CD Import has been added in the patient search window. Once you have the correct patient in the search results window, select the new context menu (right click) option “Import from CD”



**Figure 5.9 – Patient Search context menu option Import from CD**

This will open the Import from CD window. If there is only one patient on the CD, this patient will be defaulted and the Patient to import list box will be disabled. Alternatively, if there is more than one, the list box will be enabled. Once the procedure is matched with the details in the description field, the modality will be auto populated, but can be changed if needed. Body part and laterality are optional. The Site field is required, and tech notes can be added.



**Figure 5.10 – Import from CD window**

When the procedure, modality, body part, etc... has been selected, the user can proceed to select the import button.

Description	Procedure	Modality	Body Part	Laterality
Accession #:24118346 09-27-2012 9:36 AM MRI LUMBAR SPINE WITHOUT CONTRAST- DR. CRUES	MR Lumbar Spine Wo (72148)	MR		

Click here to add tech notes

Import (1 of 1) Cancel

**Figure 5.11 – Import from CD window, ready to import!**

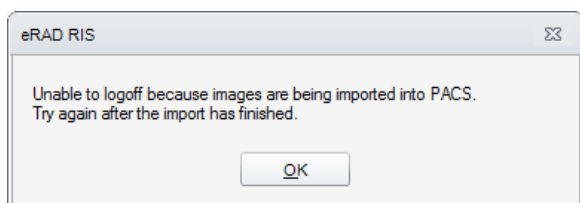
After clicking import, the status area in the bottom left will display “Started Importing into PACS”, and the progress bar will appear giving the user a visual indicator of how much of the import has been completed.

First Name	Last Name	Middle Name	Birth Date	MRN	Issuer	Gender	Address	City	State	Home Phone
SPENCER	MCDUGALL		10-29-1975	1000332363r	system	M				
Spencer	Mosqueda	Lashawnda	09-23-1950	1000073422	system	F	3 KENWOOD ROAD	BROOKLYNN PARK	WV	(555) 409-1212
Spencer147	Mc Donald	07138	03-14-1983	T.47732	system	M	801 Green Second Way	Baton Rouge	Montana	

Started importing into PACS South/ADV Sending data to PACS... 3 Rows

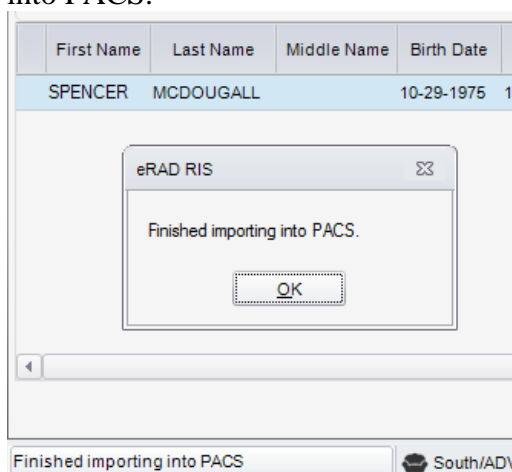
**Figure 5.12 – Import started, showing progress bar and message in status area**

If you try to logoff, exit or if you try to import again you get a message similar to the following.



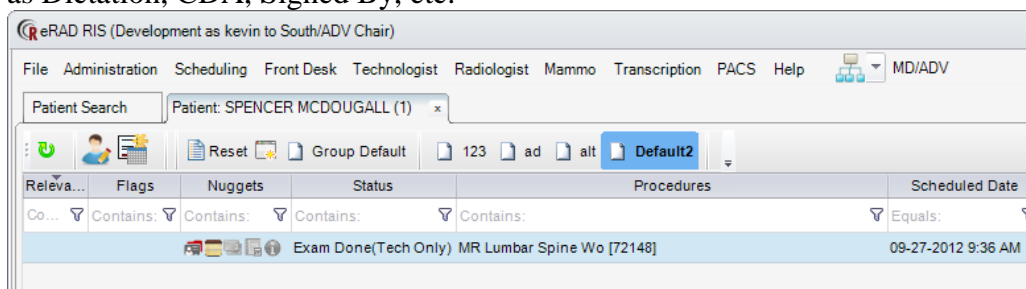
**Figure 5.13 – Message prompt displayed when import hasn't finished**

When the PACS import is complete the user will get a popup and status message as shown in the following. If there was an error the popup would be an exception message box with the e.Message and e.Exception accessible via the show details button along with a failed to import message in the status area. In the example below the status area is displaying Finished importing into PACS.



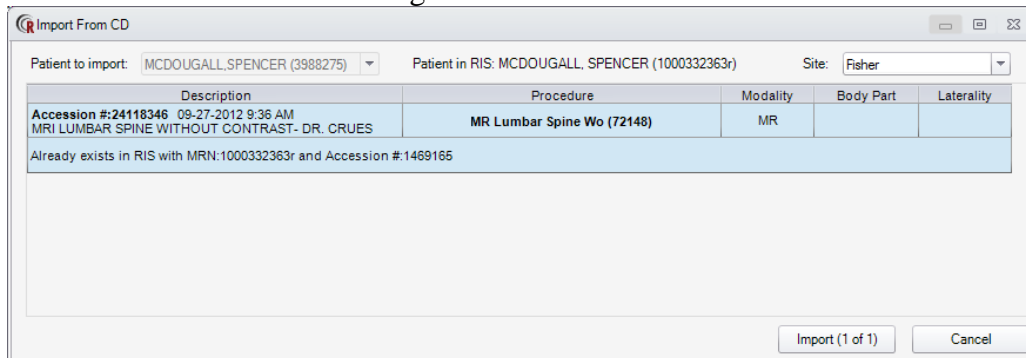
**Figure 5.14 – Import finished**

When the study is imported into RIS you can edit the study via the “View Edit Screen” from the Patient History work list. The exam will have the status of “ExamDoneTechOnly”. ExamDoneTechOnly is a final status, for when we don't have the professional services data such as Dictation, CDA, Signed By, etc.



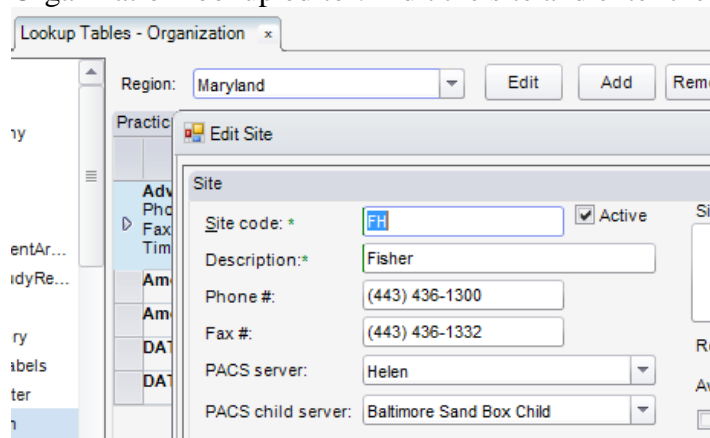
**Figure 5.15 – Patient history WL displaying imported study**

If for some reason the study was loaded in RIS, but the upload of images to PACS was not completed, when they open up the “Import From CD” dialog they would get the following prompt with the procedure already matched. Clicking Import would only import the study on the PACS as there would be nothing to do on the RIS.



**Figure 5.16 – Study has already been imported to RIS but not PACS**

As mentioned earlier, the site to upload the images to must be selected. Each site can be configured to have a child PACS server. Displayed below the Site is accessed from the Organization lookup editor. Edit the site and enter the Child server for this particular site.



**Figure 5.17 – Organization lookup, Site with PACS child server configured**

The PACS child server is configured in the PACSServer lookup table.

Lookup Tables - PACSServer								
Pacs Server Code	Description	Protocol	Url	Port	Display Order	Pacs Ae Title	Active	
Contains: ▼	Contains: ▼	Contains: ▼	Contains: ▼	Equals: ▼	Equals: ▼	Contains: ▼	Contains: ▼	
BaltSandBoxChild	Baltimore Sand Box Child dicom		10.120.0.151	104	1	PBUILDER	Y	
helen	Helen	http	helen.erad.com	80	1		Y	
test151	test151	http	10.120.0.151	80	1		Y	

**Figure 5.18 – PACSServer lookup table with child server configured**

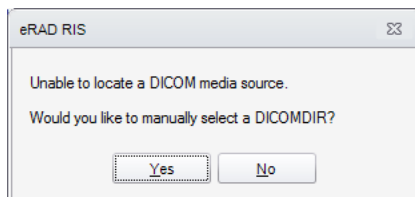
Configuration required importing images to a child PACS server include:

- 1) IP
- 2) Port
- 3) PACS\_AE\_TITLE
- 4) Protocol (dicom)

The Import CD feature uses the dummy outside modality codes, which are required for creating an OutsideRead. If the outside modalities have not been configured the user will get prompted with a message explaining the missing entries. These messages are similar to the messages they would see if the system wasn't configured and they attempted to open the Outside Read screen.

To control access to the Import CD feature the access string "Clinical.ImportCD" has been added with default permission set to "None". In order for users to have access to this feature one of their user groups will need full access rights. If their rights are set to "ReadOnly" they will be able to open the "Import from CD" popup but will not have permission to actually perform the import.

The "Import from CD" action first searches for any CD with a "DICOMDIR" in its root folder. If it finds one that CD is used in the import. If it can't find one it then searches for a removable media such as a USB drive that has a "DICOMDIR" in its root folder and if it finds one of those uses that for the import. If it can't find any DICOM image source then it prompts the user with the option of manually select a DICOMDIR.



**Figure 5.19 – Message prompt for DICOM media source not located**

### PACS Image Caching

In order to speed up the loading of images on the PACS we need to cache the images on the Rad's workstation prior to their opening the study. The PACS currently has a 'prefetch' worklist that is configurable per user or workstation. This works by the PACS viewer running a task every 5 minutes (configurable) to query for the logged in user's prefetch worklist from the prefetch server(configurable). The studies that show up on this worklist are cached to the workstation.

PACS has 10 user defined fields of various lengths in its database. The approach is to use one of these fields to set up the users' prefetch work lists and to have the RIS populate this value appropriately for the user(s) that want to cache a particular study. This is configurable via the *PACSCacheField* system configuration setting.

It was determined that UDF2 is available and meets the necessary length. It is 32 characters long which will allow us to prefetch a study for on average 3 users. The average length of a user id is 7 characters but we also need to put in starting and ending delimiter characters to prevent problems when one user id is encompassed within another. This delimiter character is configurable via the new *PACSCacheDelimiter* system configuration setting.

**Example:** Users *stu* and *stuart* would be inserted into the UDF2 field as ^stu^ and ^stuart^. The RIS will retrieve the value of the UDF for each study it wants to cache prior to setting the value so it can determine if other users have already requested the study to be cached.

**Example:** if we are using UDF2 and its value for accession number 123 is empty the user *stuart* we would set the value of UDF2 to ^stuart^. If user *clifton* then requested that study be cached, the RIS would retrieve the UDF2 value and after seeing that *stuart* already requested it would set the value to ^stuart^^clifton^.

The PACS viewer can only specify one server for querying its prefetch worklist. The RIS now also has one system configuration setting for which server it will use to query/set its cache requests. This is defined in the *PACSCacheServer* system configuration setting.

The RIS client determines what primary studies are to be cached and passes a list of these study keys to the core WCF service. The WCF Service calculates the relevant priors using the same logic the client will use during the open call to the viewer. All primary and relevant studies are then set to be cached in the PACS database.

A *c\_study\_prefetch\_log* table has been added to the RIS database to capture events surrounding this cache framework. Any time a study cache is attempted, an entry is created in this table

indicating the RIS and PACS user ids for the request, the primary study, the study being cached, and a note describing the value of the UDF field in the PACS database or some other information about the event.

### Usage:

Studies can be cached either by a manual selection by the user from a right-click option or automatically based on the next available study on their worklist. Both of these approaches apply **ONLY** to the Pending Dictation worklist.

The automatic caching will take place on every refresh of the worklist after the initial open. This is in order to give the Rad time to sort and filter their worklist appropriately before we start caching studies they have no interest in.

The manual selection involves right-clicking on a study or set of studies using multiple section and selecting *Cache Study*. This is controlled by the access string ***Clinical.CacheStudy***.

### Setup Steps:

- 1) Configure RIS as “trusted” on the PACS worklist server:

All communication to the PACS server runs through the RIS server. In order for that communication to be possible, the RIS server must be registered with the PACS as a trusted server. This is done by ssh’ing into the PACS worklist server and editing */home/medsrv/var/iface/access.cfg* to enter in a line like:

```
10.120.0.152 = “LASBQDEFORTH”
```

Where the first value is the IP of the RIS server and the second is the permissions assigned to it. The above string gives full access.

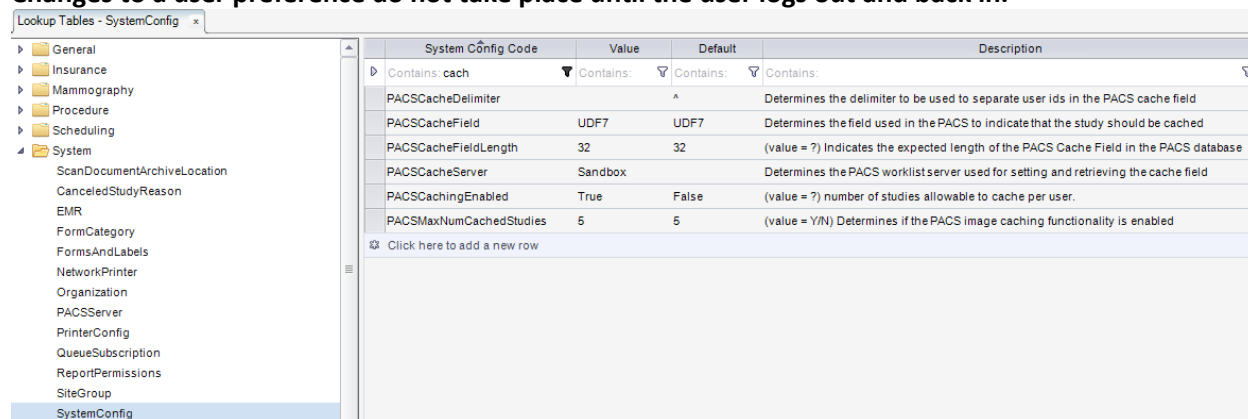
- 2) Configure RIS to use the PACS worklist server for caching:
  - a. If the worklist server does not exist in the *l\_pacs\_server* table, add it.
  - b. Set the ***PACSCacheServer*** system config setting to the *pacs\_server\_code* value of the worklist server in the *l\_pacs\_server* table.
- 3) Set ***PACSCacheField*** to appropriate UDF field for the installation. Example is to use UDF2.
- 4) Set ***PACSCacheDelimiter*** to appropriate value. The default is ^, but that may have to change if it is found to cause problems with HL7.

- 5) Set PACSCachingEnabled to true. This is false by default.
- 6) For users that need to cache, set the User preference for “number of studies to cache” on the Integration tab of the User Preferences dialog to a number between zero and the value of *PACSMaXNumCachedStudies*. I’d suggest 3, maybe.

## Reminder:

Changes to a system configuration setting do not take place until the service is restarted.

Changes to a user preference do not take place until the user logs out and back in.

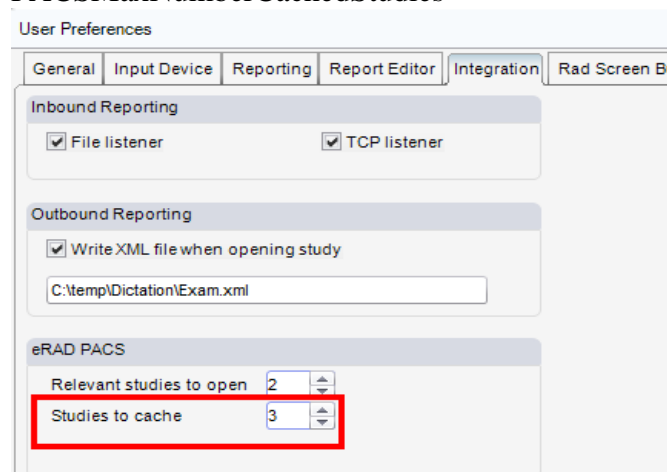


The screenshot shows the 'SystemConfig' dialog box with a tree view on the left and a table on the right. The tree view has 'System' expanded, showing various settings like 'ScanDocumentArchiveLocation', 'CanceledStudyReason', 'EMR', 'FormCategory', 'FormsAndLabels', 'NetworkPrinter', 'Organization', 'PACSServer', 'PrinterConfig', 'QueueSubscription', 'ReportPermissions', 'SiteGroup', and 'SystemConfig'. The table on the right lists system configuration codes, their values, defaults, and descriptions.

System Config Code	Value	Default	Description
Contains: cach	Contains:	Contains:	Contains:
PACSCacheDelimiter	^	^	Determines the delimiter to be used to separate user ids in the PACS cache field
PACSCacheField	UDF7	UDF7	Determines the field used in the PACS to indicate that the study should be cached
PACSCacheFieldLength	32	32	(value = ?) Indicates the expected length of the PACS Cache Field in the PACS database
PACSCacheServer	Sandbox		Determines the PACS worklist server used for setting and retrieving the cache field
PACSCachingEnabled	True	False	(value = ?) number of studies allowable to cache per user.
PACSMaXNumCachedStudies	5	5	(value = Y/N) Determines if the PACS image caching functionality is enabled

Figure 5.20 – New system configuration settings for PACS Image Caching

There is also a new User Preference called “Studies to cache”. The value for Studies to cache cannot be greater than the value for the system configuration setting PACSMaXNumCachedStudies



The screenshot shows the 'User Preferences' dialog box with the 'Integration' tab selected. The 'eRAD PACS' section contains two settings: 'Relevant studies to open' with a value of 2 and 'Studies to cache' with a value of 3. The 'Studies to cache' setting is highlighted with a red rectangle.

Figure 5.21 – User Preference Studies to cache



### Reporting – Enhancements to Navigation

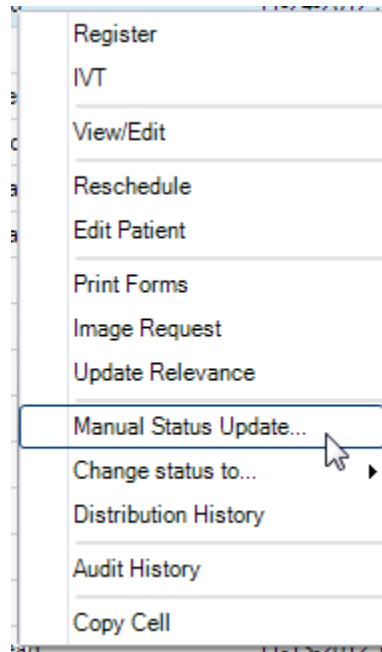
Earlier versions of RIS had a hard coded set of expected status transitions – e.g. an exam could move from Scheduled to Cancelled, but not from Cancelled back to Scheduled. In some cases operations found that they needed to change the status of an exam, but RIS would not allow the exam to move to the desired status. Whenever RIS would not allow a particular transition from one status to another, a RIS Administrator or tech support provider would e-mail R&D and request that the data be updated in the database using SQL.

We added a new database table, s\_status\_transition, which will be maintained by R&D.

We added a new web method that provides a summary of the current exam (to reduce the likelihood of errors) and returns a list of statuses believed to be appropriate for an exam in a given status.

We added a web method to change the status for a specified study to a new status.

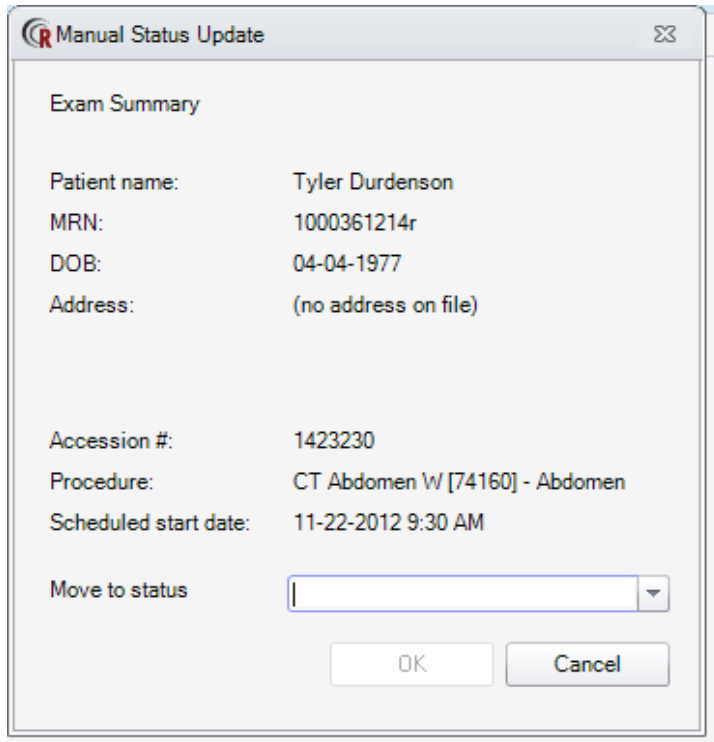
Added a new menu item to the context menu on patient folder, Manual Status Update...



**Figure 5.22 – Manual Status Update context menu option available in Patient History**

The above context menu option is controlled by a new access string “Clinical.RISAdminChangeStatus” permission and is defaulted to None.

The Manual Status Update dialog shows the patient name, MRN, birth date, Address (if known), the current accession #, procedure description and the scheduled start date.



**Manual Status Update**

Exam Summary

Patient name: Tyler Durdenson  
MRN: 1000361214r  
DOB: 04-04-1977  
Address: (no address on file)

Accession #: 1423230  
Procedure: CT Abdomen W [74160] - Abdomen  
Scheduled start date: 11-22-2012 9:30 AM

Move to status:

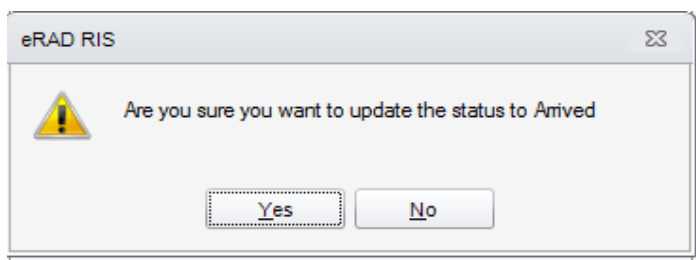
OK Cancel

**Figure 5.23 – Manual Status Update window**

The “Move to status” drop down list is populated based on the list of “destination\_status\_code”s that are present in the s\_status\_transition table for the “source\_status\_code” (i.e. current status) of a given exam.

The OK button will remain disabled until the user makes a choice from the list.

After the user makes a selection and presses OK, the prompt below appears. If the user clicks “Yes”, RIS will attempt to acquire a lock on the current order, and if successful, it will request the status update



**Figure 5.24 – Confirmation prompt**

The audit logs show the date, an appropriate action, the user who took the action and the changes that took place during the manual status update:

Patient: Shawna Givens (2)
Audit (Shawna Givens)

Filters

☐ Patient
☐ Order
☒ Study
☐ Include retrievals

	Date	Action	Description	User	Accession #	Order #	Status
	Equals: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾
▶	11-22-2012 12:52 PM	Study scheduled	Study updated	Darcy Aiken (darcy)	1423234	3697172	Scheduled
	11-22-2012 12:51 PM	Study cancelled	Study updated	Darcy Aiken (darcy)	1423234	3697172	Cancelled
	11-22-2012 12:44 PM	Study scheduled	Study updated	Darcy Aiken (darcy)	1423234	3697172	Scheduled
	11-22-2012 12:44 PM	Study scheduled	Order updated	Darcy Aiken (darcy)		3697172	Ordered
	11-22-2012 12:44 PM	Study scheduled	Visit updated	Darcy Aiken (darcy)			
	11-22-2012 12:44 PM	Study scheduled	Patient updated	Darcy Aiken (darcy)			

Event Time: 11-22-2012 12:52:14.012 PM

Changed c\_study

status\_code:

'Scheduled' (was 'Cancelled')

cancelled\_by\_user\_id:

'nothing' (was 'darcy')

cancelled\_date:

'nothing' (was '11/22/2012 11:51:53 AM -05:00')

allocate\_booking\_time\_flag:

'Y' (was 'N')

cancelled\_reason\_code:

'nothing' (was 'ACNOSHOW')

**Figure 5.25 – Audit log**

The “Action” in the audit logs is determined by the s\_status\_transition table’s “main\_action” column. If there is no main\_action specified, the main\_action will default to “UI\_StudyUpdated”.

**Special Handling of Statuses on the Server**

In addition to the special case exceptions below, we explicitly set the status to the status requested by the RIS Admin, and then we fire all the business rules associated with the UI\_MainAction that is configured for a given status transition. (e.g. if the action is UI\_StudyScheduled, the business logic may dictate that scheduled\_by\_user\_id reflect the current user’s user ID)

<b>Moving From</b>	<b>Moving To</b>	<b>Additional Steps Taken</b>
Cancelled		Clear out cancelled by user id Clear out cancellation date Set Allocate booking flag to Y Set reschedule_flag to N
ExamDoneTechOnly		Set Tech Only Flag to N
Discontinued		Set discontinued by user id null Set discontinued date null Set aborted reason code null
	Cancelled	Set allocate booking flag to N
	ExamDoneTechOnly	Set Tech Only Flag to Y

**Table 5.1 – Status changes “From” and “To” showing additional steps taken**

This has been addressed at individual installs through configuration changes after-the-fact. The issue was identified and checked-in in May, but the config changes were not documented and thus not pushed out in the normal way. Individual installs have been spot checked for the appropriate settings.

```
<serviceThrottling
    maxConcurrentCalls="2000"
    maxConcurrentSessions="4000"
    maxConcurrentInstances="4000"
/>
```

**Figure 5.26 – rRISService.exe.config file update (changes in value**

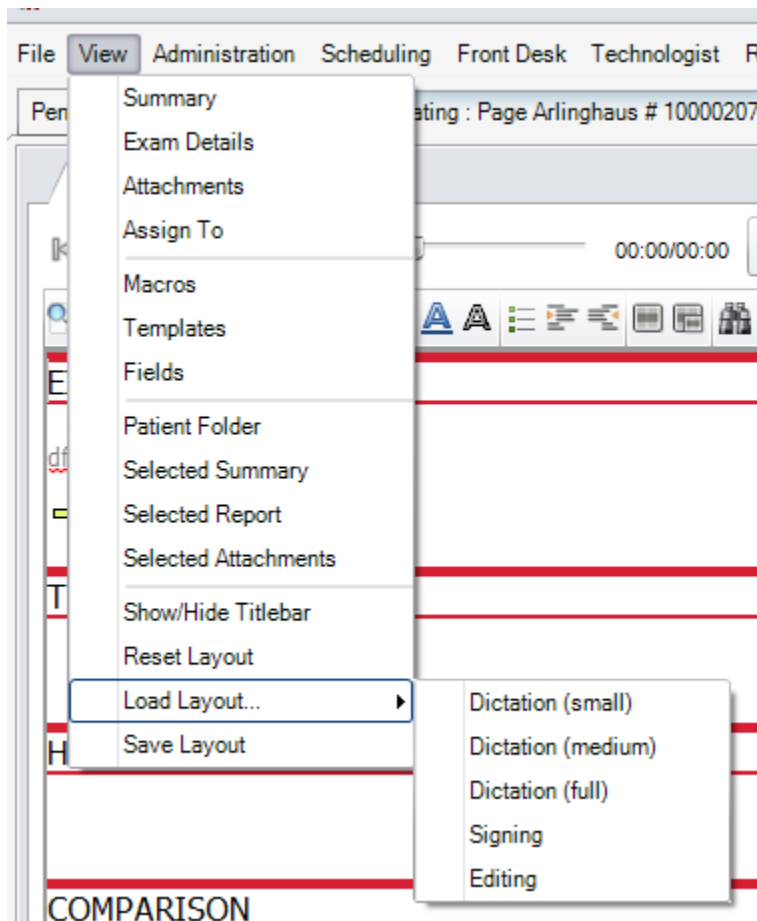
We believe 2000, 4000, 4000 is appropriate for up to 650 concurrent users. These numbers could be set higher if needed.

## **Reporting – Report History availability**

The radiologists have always been able to review a dictation and previous reports via the Report History window that was available from within the reporting window. Access to this window has been added to the context menu of the Patient History work list window, transcription work lists and also to radiologist work lists. Access for this menu option is the from the access string **Clinical.ReportHistory**.

## Reporting – Default Layout Views for Reporting Window

In prior versions of eRAD RIS, the user could have 2 different views saved. There was one for the dictation reporting window and one for the signing reporting window. In build 39 we have added some default “canned” layout views that are always accessible.



**Figure 5.26 – Default canned layout views**

The default “canned” layouts are static; meaning the configuration of the layout cannot be changed and saved as the default. The user may still have their own custom saved layout, can save one of the default views as their layout, but they cannot make changes to default layouts, save and expect it load the next time a default is selected from the Load Layout... submenu.

## Reporting – Playback Highlighter Color

Transcription wanted to be able to change the playback color in the reporting window. When playing back a dictation, the color is the standard blue color. If the playback and the cursor position are disconnected, meaning they are editing a different position of the report, but still listening to the dictation, the color can now be different. A new color option has been added to the Editor Appearance window.

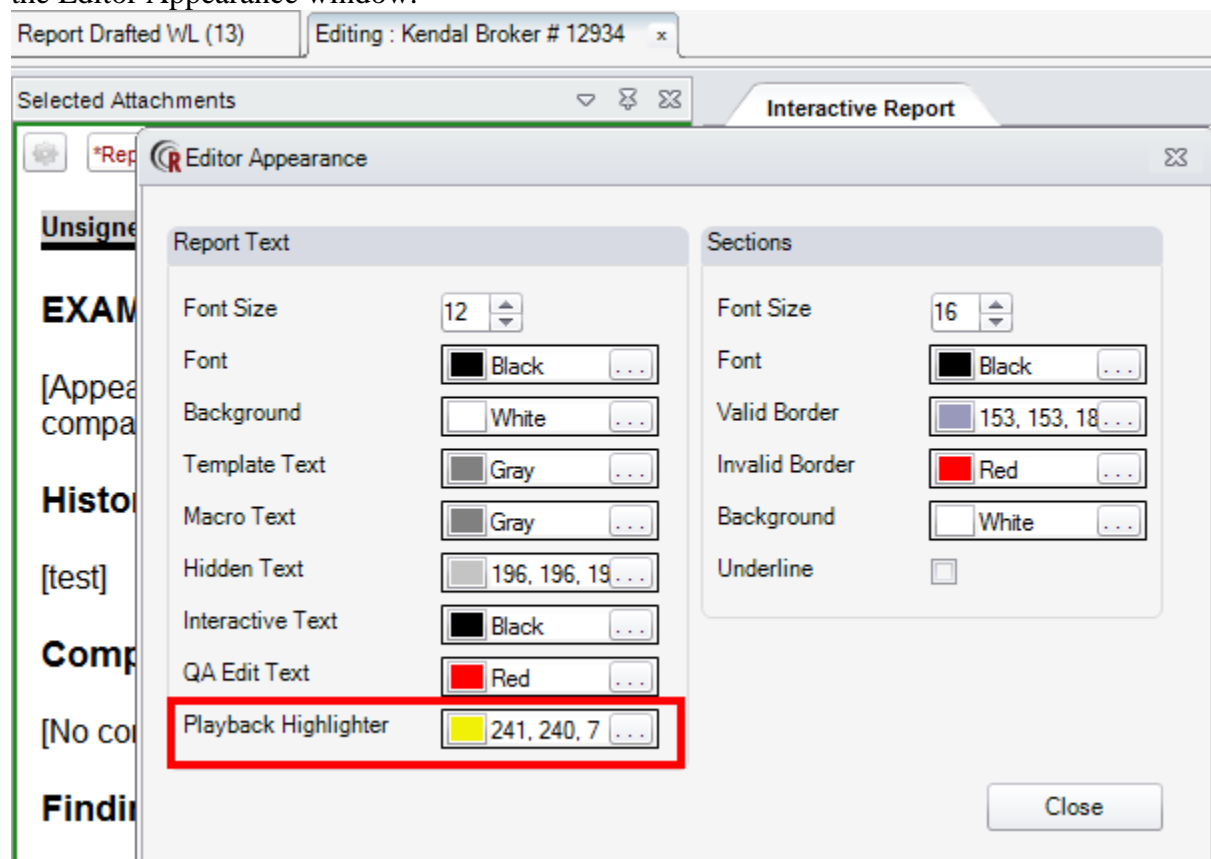


Figure 5.27 – Playback Highlighter color preference option



## **Reporting – Field Tool Window**

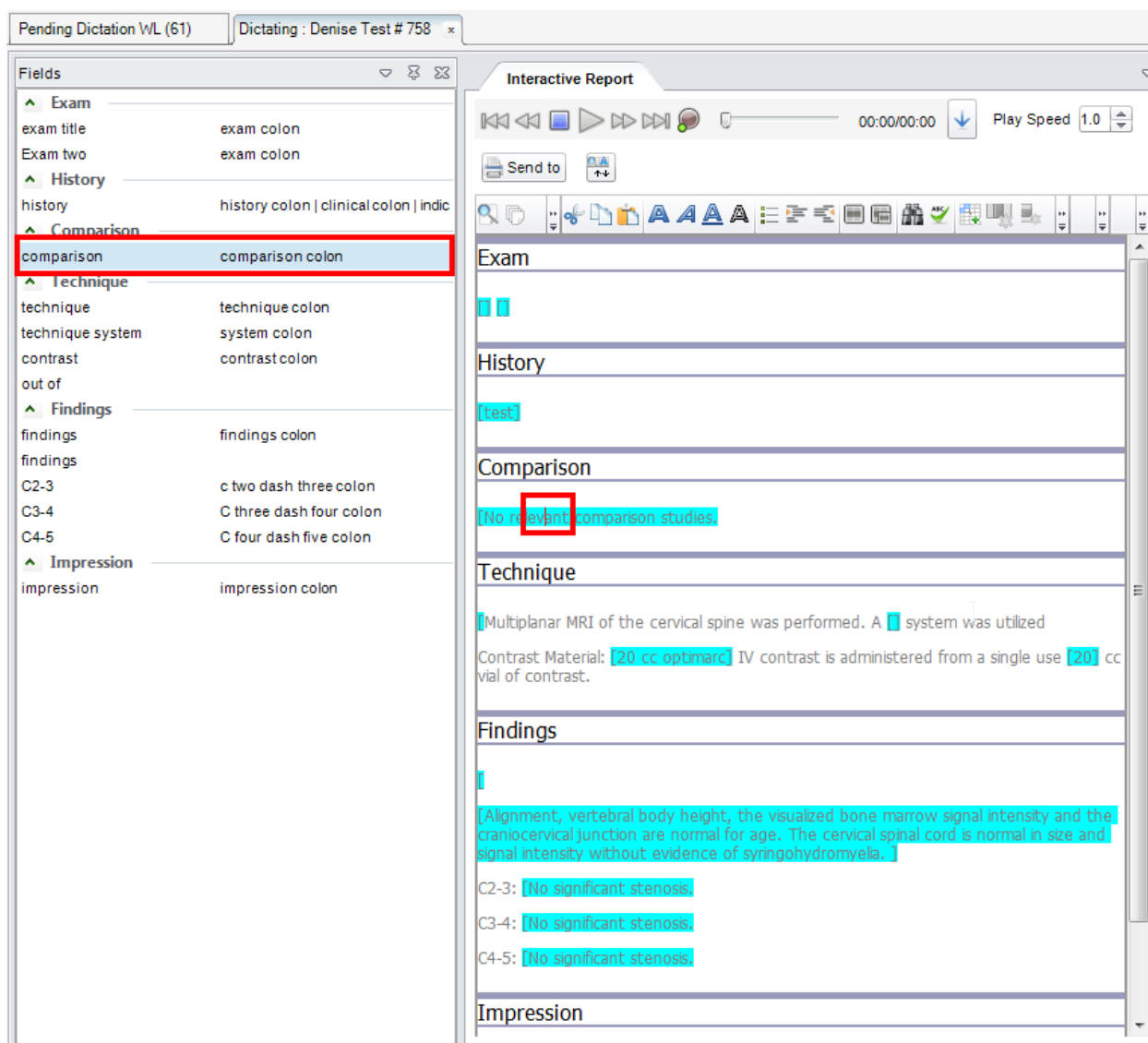
A new tool window (or data pane) has been introduced in Build 39. The Fields tool window will allow the user to see the sections and fields plus and field cues in the current report template loaded in the reporting editor.

The Fields tool window helps the radiologist to easily determine what the next field and field cue may be. The cue is the word or term used to navigate to a particular field. For example: There may be a single field in the History section and the cue for that field may be “History colon”. This will move the cursor position to this field and allow the radiologist to dictate the history for this report.

In the example below you can see the cursor position is in the comparison field, and in the Fields tool window, comparison is highlighted indicating this is the current position in the report. In the second column you see the cues for the individual fields within the report. Lastly, the Fields window can also be used to navigate to a particular field in the report. For example, selecting the impression field in the Fields tool window will put focus on the impression field in the report. If the section title is selected in the Fields tool window it will put the cursor position at the start of that section.

As with the other tool windows, the Fields tool window can be docked, floating, or tabbed. We anticipate that this window will be floated away from the reporting window and used a navigation tool so the report editor is not the main focus.

There is a limitation if a section or field is deleted from the report, the Fields tool window will not dynamically update. If this section or field is selected from the Fields tool window, the user will receive a message that it could not be found, and then it will be removed from the view.



**Figure 5.28 – Field tool window**

## Reporting – Mute Playback on Rewind and Fast Forward

Transcription has requested the ability to mute the playback sound when rewinding or fast forwarding a dictation. We have taken 2 steps for this request.

1. We have made the default to be no sound on playback when rewinding and fast forwarding a dictation
2. We have added a new user preference titled “Enable rewind / fast forward play-back”. Selecting this option will allow for the sound to be enabled when rewinding and fast forwarding.

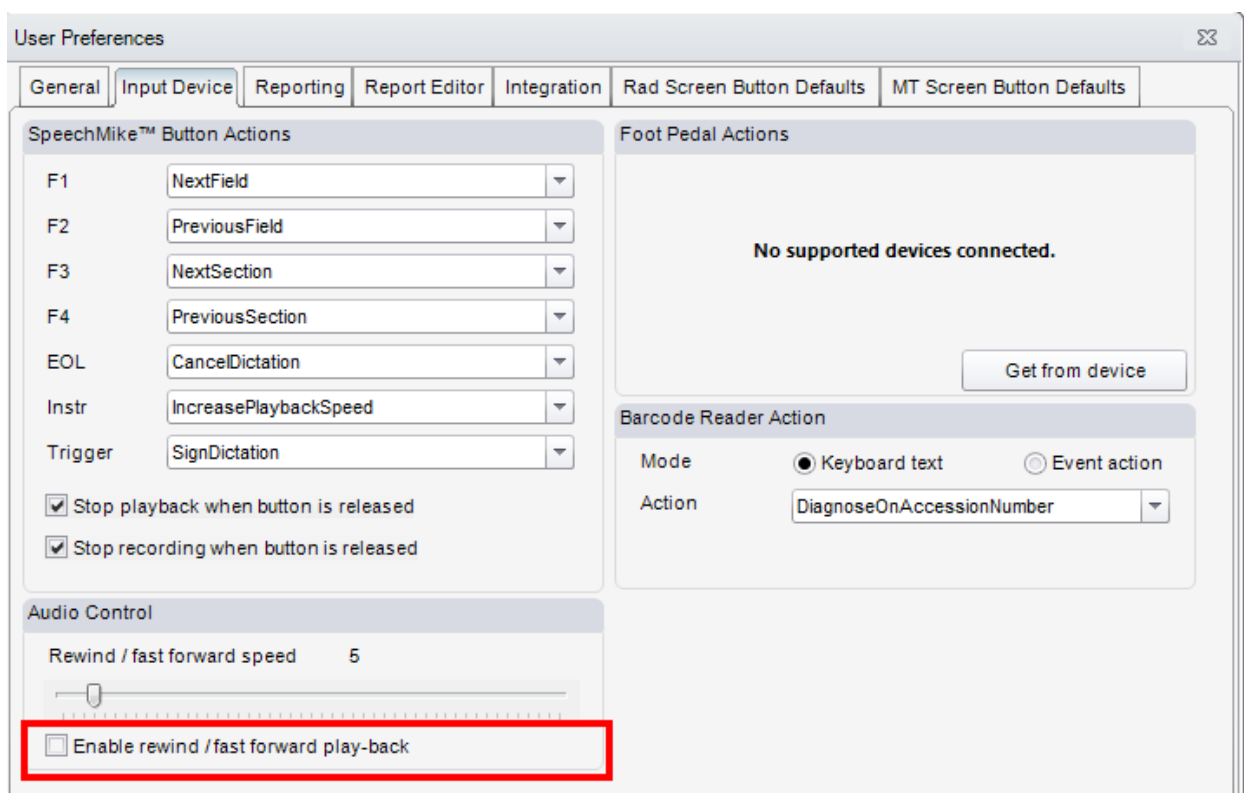


Figure 5.29 – User preference “Enable rewind / fast forward play-back

## **Reporting – Auto reposition of minimized dictation window**

When using the minimized dictation window and the monitor configuration changes (going from 4-3 monitors in use) the dictation control would not automatically realign with active monitors. Although the control was still active, it could not be found. We has a manual reset of the dictation control, but in this build the dictation control will now auto align with the active monitor configuration.

We are now checking to see if the dictation control is completely visible within a screen, if it is not we reset it's position to 0,0 on monitor 1.

### Reporting – Patient History Enhancements

We were tasked with creating a robust full featured patient folder that is launched and managed from within the RIS.

There were several areas that needed to be completed to enhance and complete the patient folder. There are several user preferences, new panes, new controls and views in the patient folder. Below we will describe each and provide some examples on how to set the patient folder up in a real environment.

#### Selected Report Panel

We added a selected report pane that can be opened and docked as the user requires. This selected report pane will show a read only HTML rendered version of the selected row in the patient folder. The pane can be shown by opening from the View>Selected Report option from the main menu. When the user preference “Select current study initially” is checked we will open the current study in the selected report pane. If this preference is not checked it will show the next relevant study in the patient folder and display that report.

Note that the report viewer will now show the entire report with the latest addendum at the top. Also who signed the report or if it is “unsigned”.

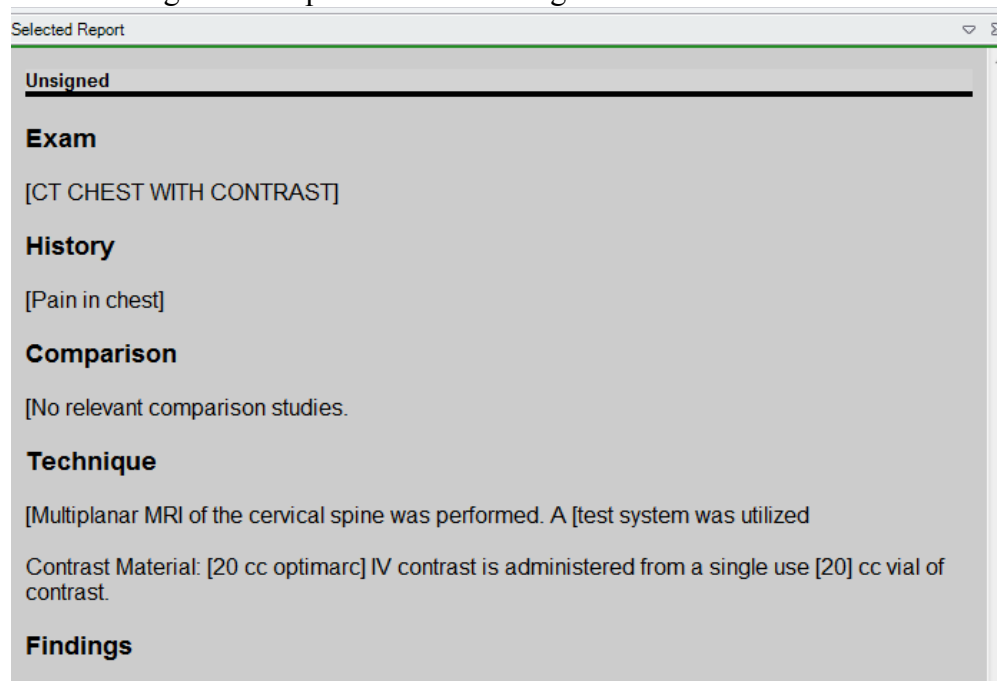


Figure 5.30 – Selected Report tool window

If the report was imported or is deemed a legacy report we provide a button in the report viewer that the user can click to open a PDF.

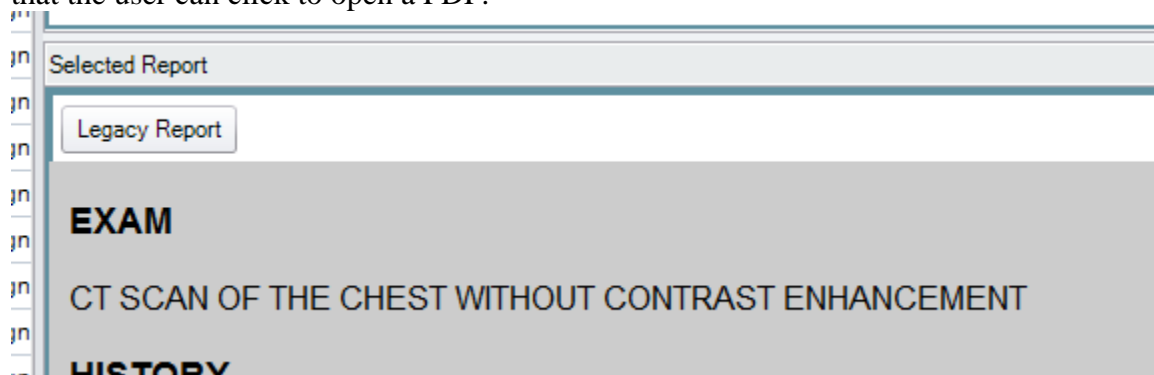


Figure 5.31 – Selected Report tool window for a legacy report

### Selected Summary

We added a “Selected Summary” pane that will provide details about the selected study. This pane is opened and access from the View>Selected Summary option. Just like all panes it can be docked and the layout saved as desired. Note that this summary will change based on the selected study. It is essentially the same control as the summary pane that existed previously but it changes with the selected row.

Referring, tech, dictated by, signed by and transcribed by users will show if the values are populated in the DB. They are hyperlinks and upon clicking will open the details for each person. The details screen could use some work.

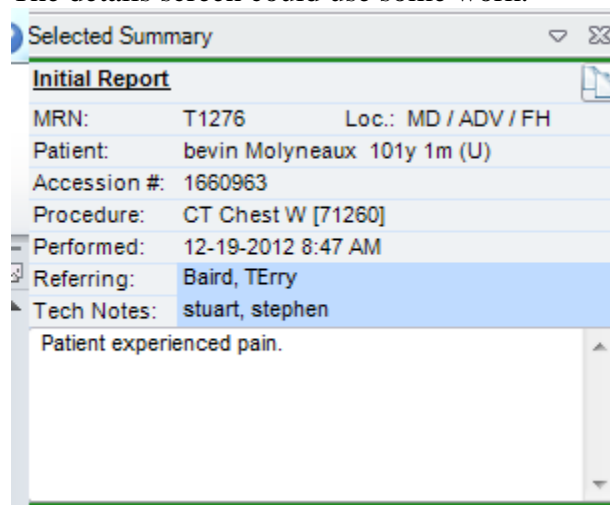


Figure 5.32 – Selected Summary tool window

MRN:	T1276	Loc.: MD / ADV / OUT
Patient:	bevin Molyneaux 101y 1m (U)	
Accession #:	1064975	
Procedure:	CT 3 Phase [CT13]	
Performed:	10-18-2011 12:00 PM	
Referring:	Molyneaux, Kevin (902) 439-4503	
Dictated:	Harding, Clifton	
Transcribed:	Harding, Clifton	
Signed:	Harding, Clifton	
Tech Notes:	Tech, Outside Read	

test

**Figure 5.33 – Selected Summary displaying all hyperlinked fields**

### Document Viewers (Selected Attachments and Attachments)

There is a separate sprint document created to outline the robust features and changes made to the document viewer I won't bother getting too deep on the feature set here. See section Attachment Viewer Enhancement for Patient Folder later in this document.

A document viewer was added as a pane called "Selected Attachments". This can be accessed from the View>Selected Attachments menu option. This particular pane will show scanned documents as per the selected study in the patient folder.

A document viewer was added as a pane called "Attachments". This can be accessed from the View> Attachments menu option. Unlike the "Selected Attachments" this pane will only show the current study.

Both panes support all pane functionality. (saving layout, color, size, state).

Based on the user preference it is possible both viewers can show the same attachments. If you have your "Select current study initially" checked we populate "Selected Attachments" with the current studies attachments. We also populate "Attachments" with the current study attachments. If this is your workflow, and you are lucky enough to have the real estate to show both panes, it will be better to uncheck the user preference which will select the next most relevant study in the patient folder. This would allow viewing of the current attachments and the most relevant at attachments simultaneously.

### User preferences

There were several user preferences added to enable the Patient Folder workflow.

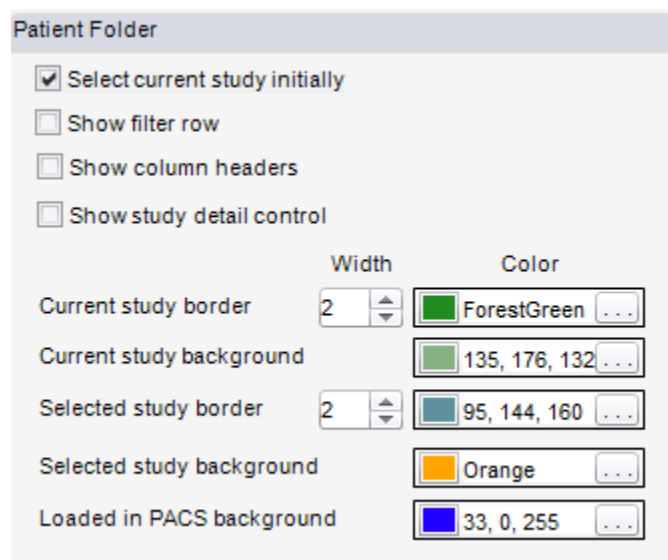


Figure 5.34 – Patient Folder user preferences

### Select current study initially

This setting will select the current study when opening the patient folder. This will make all of the “selected” type panes populate with the current study data.

Unchecking this will automatically figure which study is the next relevant in the folder and select that one. Thus populating the “selected” panes with the most relevant study data.

### Show filter row and Show column headers

These settings will be the defaults when opening the patient folder. They can be toggled in the patient folder by clicking the icons outlined below. Neither the filter row or column headers are showing below.

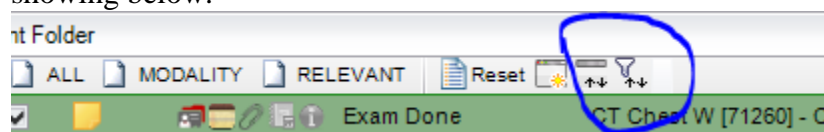
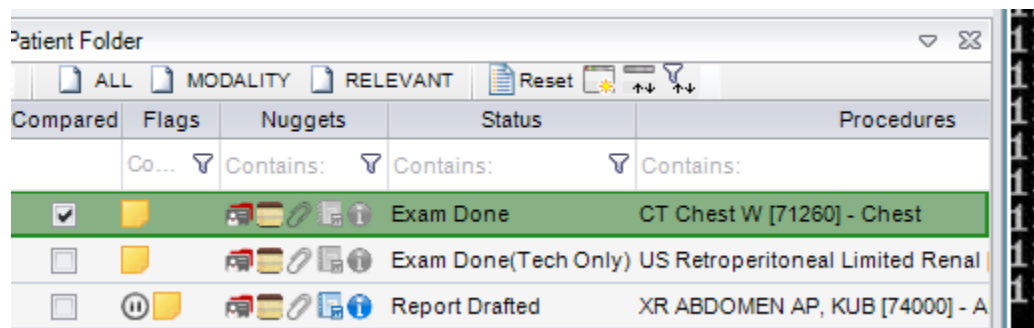


Figure 5.35 – “Show” options for patient folder

Toggle the filter and column headers to turn them both on below. This feature will come in handy when setting up specific radiologist views.

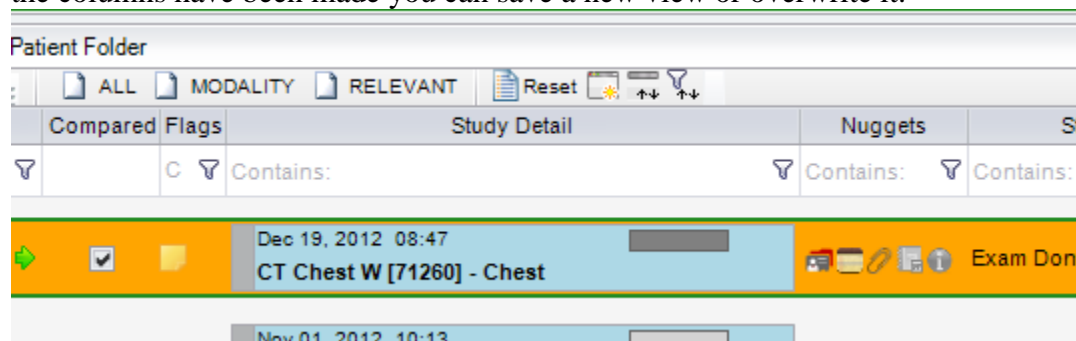




**Figure 5.36 – Patient folder with filter and bar and column headers displayed**

### Show study detail control

When checked the new study detail control will appear in the patient folder list. Notice in the above screen shot that we don't have the control. If you select this option and reopen the same study it will present in the work list. Note that this is just a starting point and now that you have added the control you can remove whatever (likely) all that you desire. Once the modifications to the columns have been made you can save a new view or overwrite it.



**Figure 5.37 – Show study detail**

In the figure below, the columns have been modified to include the “current study indicator” (green arrow on the left) and the study detail control only. Saved the view...

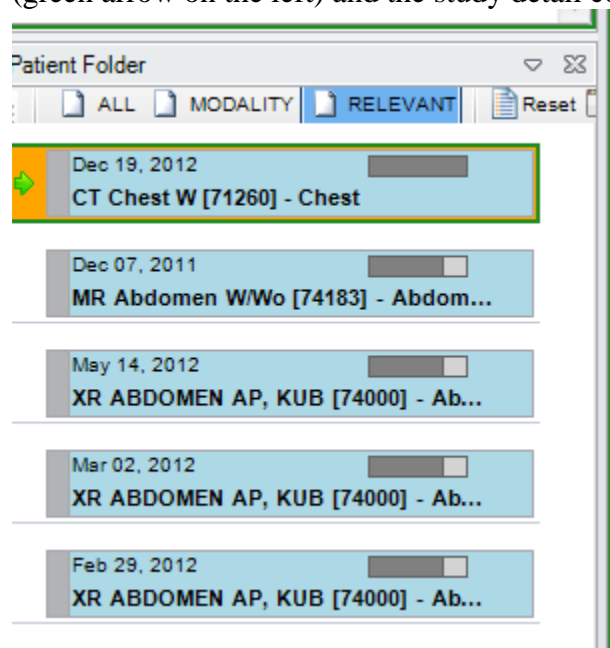


Figure 5.38 – View created to show only current study indicator and study detail control

The study detail has several elements worth discussing. Follow along with the figure below with the number list following.

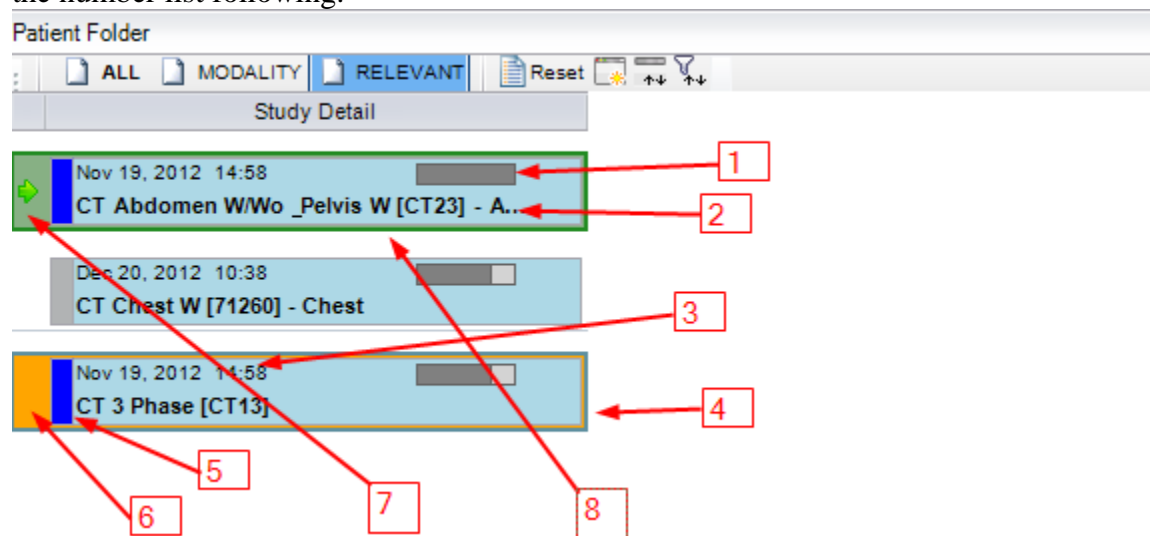
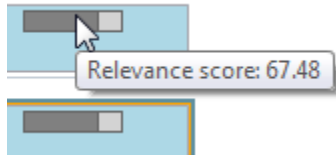


Figure 5.39 – Patient folder explanations to follow

1. Relevance bar. Incrementing in 25% chunks. Hover over the bar will display a tooltip indicating the true relevance score.



2. Procedure description as per worklist display.
3. Date and time of when the exam was performed. If the exam hasn't been performed yet we will put the scheduled date and time instead.
4. Selected border color as per user preference
5. Loaded in PACS color in the detail control. We only change the color for loaded studies.
6. Selected background color as per user preferences
7. Current background color as per user preferences
8. Current border color as per user preferences

The figure below is showing the current study indicator column. When this column is removed we indicate the current study with an earmark in the study detail control.

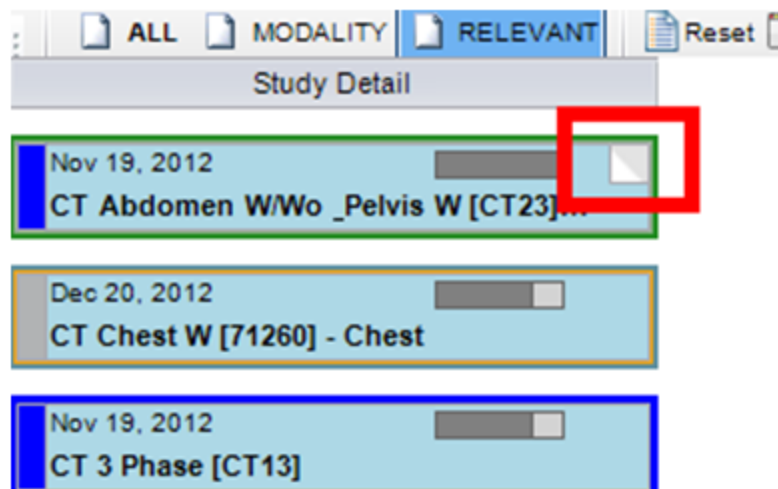


Figure 5.40 – Displaying earmark

### Current study border and Current study background

This will set the colors respectively for the current study. Separate document is created for this functionality.

### Selected study border and background colors

This will set the colors respectively for the selected study. Separate document is created for this functionality.

### Loaded in PACS background

This setting controls the background color when the study is successfully loaded in PACS. We will load the current study always and all of the relevant priors set in the user preferences. If “0” was set in user preferences then only the current study should load in PACS. If “2” priors were set in user preferences we will load the current and two additional relevant priors. Image below shows we only loaded one study in PACS. Double clicking on a study not loaded in PACS will load it and update the patient folder appropriately to indicate the loading has occurred.

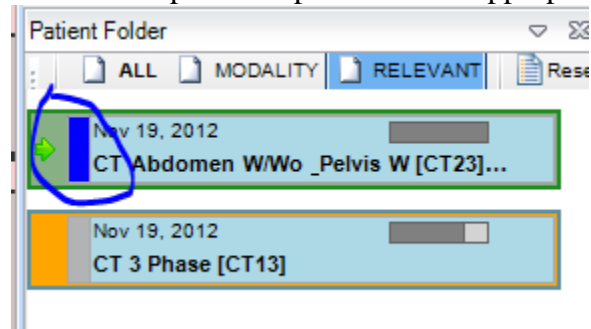


Figure 5.41 – Top study loaded in PACS

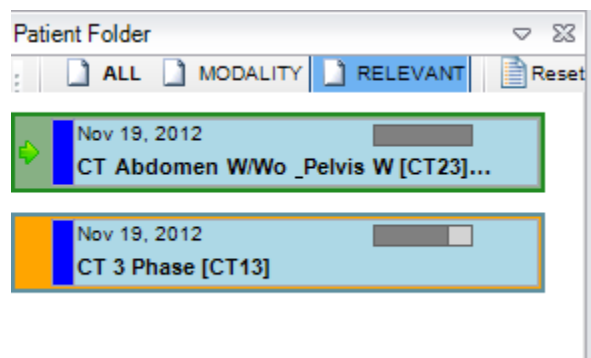


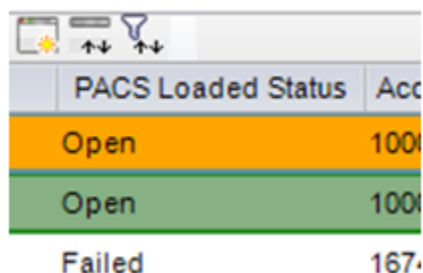
Figure 5.42 – Second study selected

There is a new column added to the patient history control called PACS Loaded Status. This new column can have the following values:

OPEN – simply loaded and open in PACS for viewing

FAILED – could not open or find the study in PACS

ARCHIVE – found the study but it is in archive somewhere



PACS Loaded Status	Acc
Open	100
Open	100
Failed	167

Figure 5.43 – PACS Loaded Status column added to Patient History control

### ALL, MODALITY and RELEVANT views

Although views are completely configurable we anticipate users will setup three group views. ALL – will show all of the patients studies. Nothing special about this view and it can be setup however the users prefer to see the list. Users may prefer this list to be more grid-like similar to our worklists instead of showing the study detail control.

MODALITY – this is a new special view created and will show only studies performed on the same modality type as the current study. This is special as we have to calculate what modality type the current study is and then apply a filter descriptor that limits only this modality type. It is done in code and is triggered by the name of the view. The name must be “MODALITY” case insensitive.

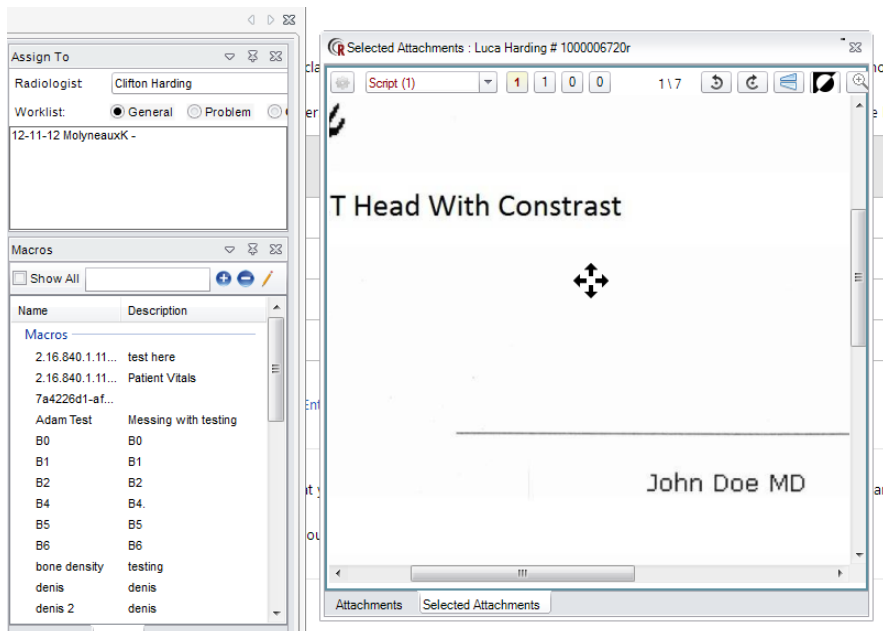
RELEVANT – this view will show all relevant studies. So anything with a “Y” in the relevant flag. Keep in mind that we may have a relevant score but not the relevant flag depending on the rulesets.

## **Reporting – Attachment Viewer Enhancements for Patient Folder**

We need to make the doc viewer simpler to navigate and when shown in a data nugget we need more advanced features such as:

- Panning (click and drag)
- Zooming with scroll wheel
- Click Next/Previous with arrow (hot spots) on the images
- User configurable exclude document types
- In tool bar at the top additional information including total page count
- Buttons at the top for flipping directly to preferred document types (showing count)
- All documents in the same book, such that clicking next, next , next goes through all document pages.
- Rendering of diagnostic report type in attachment viewer
- Enable rotate/flip buttons in attachment viewer (diagnose)
- Add Invert Colors button

Zoom is now possible via the mouse scroll wheel, magnifying buttons, or via the '+'/'-' keyboard keys. When zoomed clicking the mouse on the image and dragging will pan the image.



**Figure 5.44 – Zoomed in image and panning feature**

The user can move to the next image or the previous image by hovering the mouse over the left or right area of the image. A single click anywhere in the left or right area will navigate to the next or pervious image (user doesn't have to click directly on the arrow icon). When the user is in the area which is active for next/previous clicking, the arrow image will paint in darker and the mouse cursor changes to a next or previous arrow.

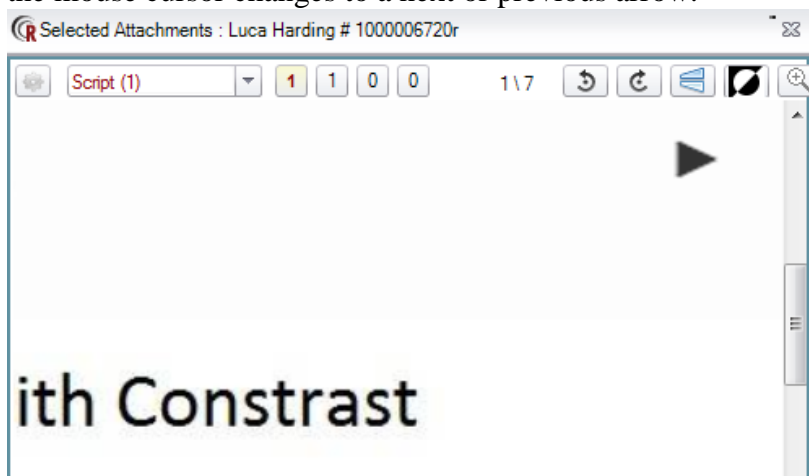
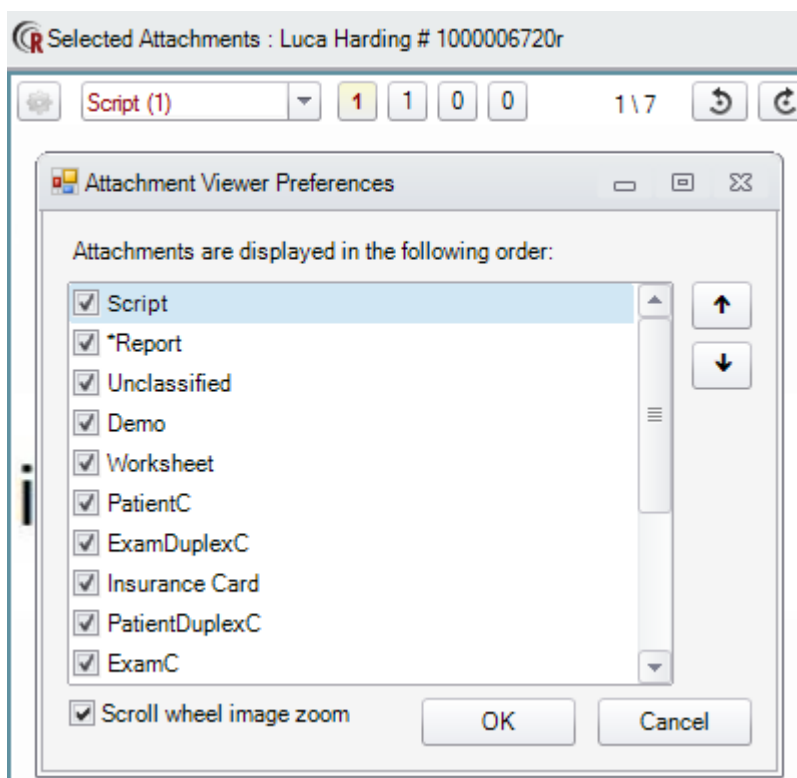


Figure 5.45 – Next image control

The top left icon in the attachments viewer (in the attachment data nugget or diagnose) is used to configure the users preferences as shown in the following screen shot. The user can uncheck a document type so that it will never show. This is useful if a Rad never wants to see a patients drivers licence. Also they can change the order in which the documents appear.

The first four document types are mapped to the numbered buttons at the top of the screen. Hovering over one of those numbered buttons will provide a tooltip explaining the document type it represents. The number refers to the total number of pages for that document type. In the following screen shot there is 1 page for the Script, 1 page for the \*Report and zero pages for Unclassified and Demo document types. A fifth button will appear if there are other document types.



**Figure 5.46 – Attachment Viewer Preferences**

\*Report, refers to the actual report, although we don't scan in the report and it technically isn't a scanned attachment. If available a '1' will show in the second button (based on the above configuration) and clicking on that will display the report in the attachments screen. The report, because it isn't a scanned image, displays as a Web Page with selectable text but in the same attachment viewer so that the rad doesn't have to float separate windows for viewing both attachments and reports. \*Report is a special attachment type code that can't be re-used via administration for another scan document type code.

The data nugget version of the attachments viewer didn't display the rotate and flip icons, previously these were only visible during the process of acquiring scans/attachments. The "Invert Colors" icon is new in this build. The "Invert Colors" button inverts the white to black and black to white and is automatically invoked in the Rad screens if the user has configured the background of that data pane to dark and the foreground to light.



Selected Attachments : Luca Harding # 1000006720r

Worksheet (5) 1 1 0 0 417

**CT/MRI TECH NOTES**  
 Diagnostic Radiological Imaging  
 75 Scripps Drive, Suite 100, Sacramento, CA 95825 Tel: (916) 921-1300 Fax: (916) 921-1890

Invert Colors

Date of service: \_\_\_\_\_ Patient MRN #: \_\_\_\_\_

Patient Name: \_\_\_\_\_  
 Last name First name

1. \*Patient History Please provide as much detail as possible: \_\_\_\_\_

2. How long has this problem/symptom(s) existed? \_\_\_\_\_

3. Have you had prior surgery or an operation of any kind pertaining to this visit(surgery)? ☐ No ☐ Yes  
 If yes, explain: \_\_\_\_\_

4. Date of patient's next appt. with referring physician: \_\_\_\_\_

5. Do you have a follow up appt. with a specialist? ☐ No ☐ Yes Name of Specialist: \_\_\_\_\_

6. Have you seen a specialist in the past? ☐ No ☐ Yes Name of Specialist: \_\_\_\_\_

7. Contrast? ☐ Yes ☐ No Dyeage Amount: \_\_\_\_\_

8. Sedated? ☐ Yes ☐ No Dyeage Amount: \_\_\_\_\_

9. Prior images? ☐ Yes ☐ No Circle type: MRI CT US X-Ray Nuclear Medicine Other: \_\_\_\_\_

Exam: Facility Name & Address that the exam was performed at: \_\_\_\_\_

Ordered: ☐ Yes ☐ No Report attached? ☐ Yes ☐ No  
 REMEMBER TO INCLUDE ALL PRIOR DRJ REPORTS AND FAX TO DR. STROME

Diagram of a human figure with labels: RIGHT, LEFT, RIGHT, LEFT.

Attachments Selected Attachments

**Figure 5.47 – Data nugget attachment viewer**

There are three places where these changes will be visible:

1. Data Nuggets from patient history
2. Data Panes in the Rad Screens for both ‘Attachments’ and ‘Selected Attachments’
3. In the Attachment Viewer when scanning or reviewing scanned documents from screens such as View Edit. For example, screen: “View Edit”, tab: “Attachments”, double clicking on an attachments row will display the “Attachments Viewer”, which has the next, previous page, zoom and panning enhancements.

### Reporting – Tool Window Borders

With the recent changes to the Patient History control we needed a method to show if the details being displayed in tool windows such as selected summary and selected attachments were for the current study or for another selected study.

We decided we would go with drawing a border around the tool windows in different colors, one color for tool windows showing current data, and another color for the ones showing prior data. These colors are also used to draw a border around the applicable row in the patient history tool window.

Currently these are the toolwindows that are configure to show borders:

- Summary
- Selected Summary
- Attachments
- Selected Attachments
- Selected Report
- Exam Details

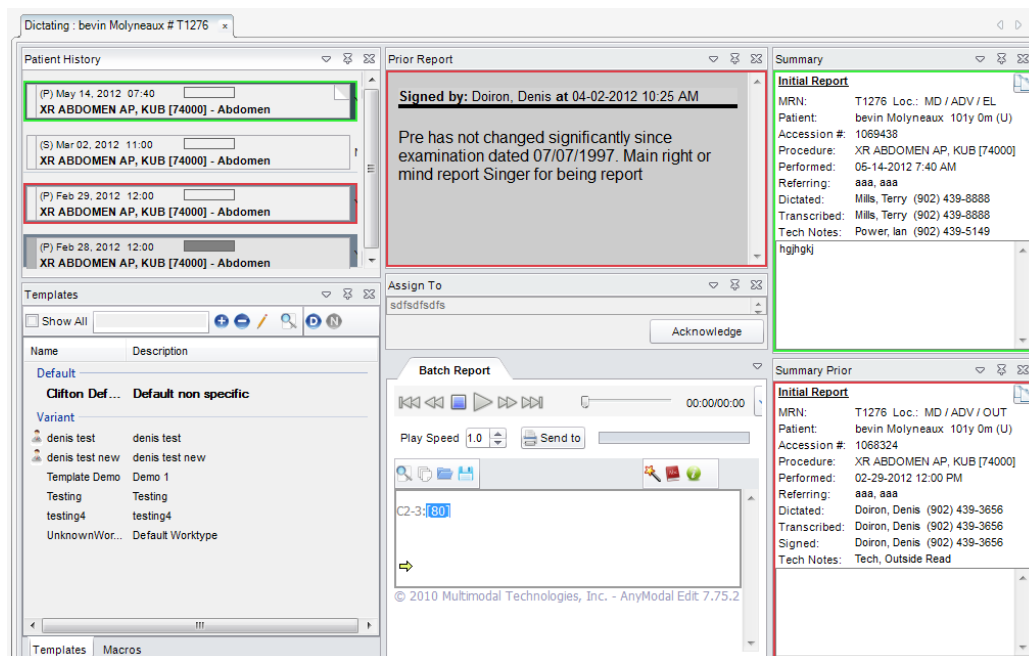
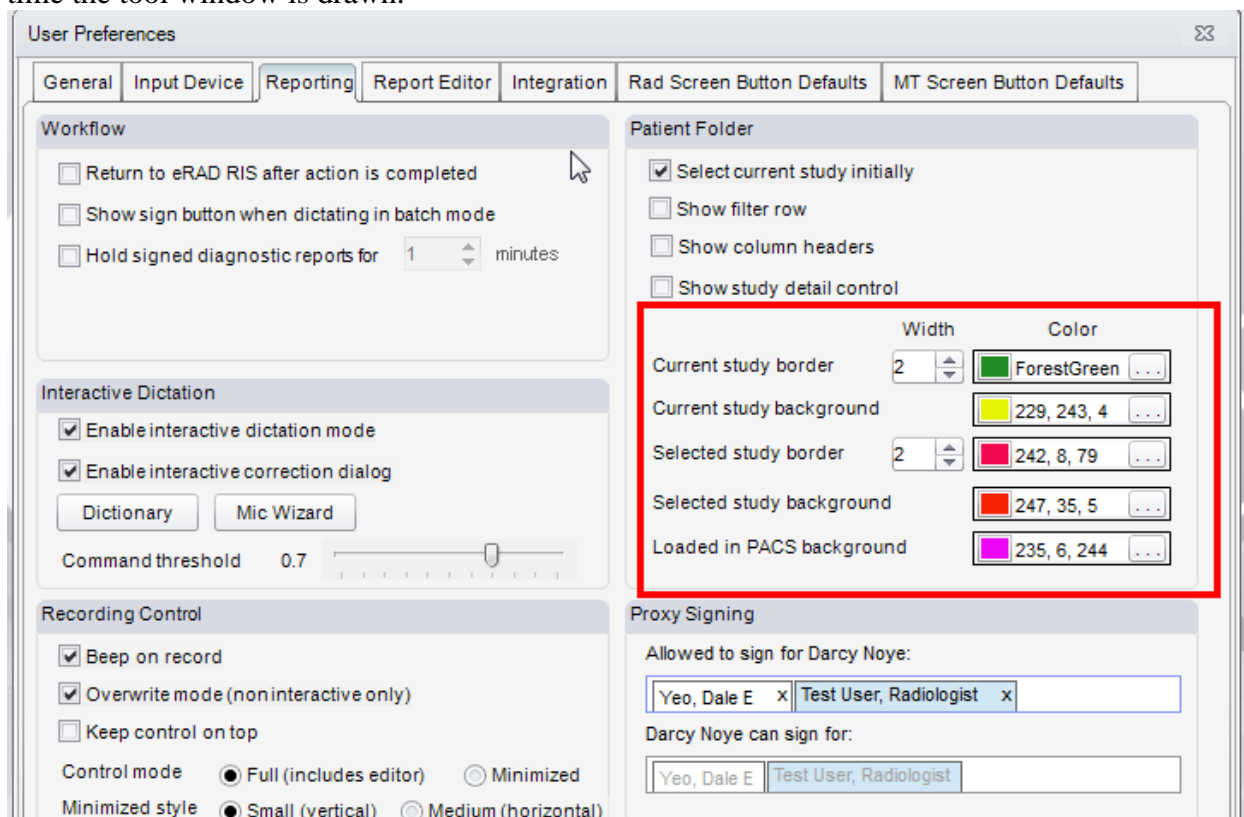


Figure 5.48 – Reporting window displaying colored boarders

These colors are user selectable along with the width of the borders in question. This is accessed through user preferences and is on the “Reporting” tab. The changes will take effect the next time the tool window is drawn.



**Figure 5.49 – User preferences for boarder width and color**

The border on the patient history row will follow the width when it's between 0 and 4. When it's higher than 4 it will use 4, as anything higher doesn't work well in the patient history rows. The tool windows will use the exact width specified by the user preference.

If the user doesn't want to see these borders they can be turned off by setting the width to 0.

## Reporting – Patient Folder Back color Preferences

As mentioned earlier in this document the background color can be set in the Patient History control to display which study is currently selected

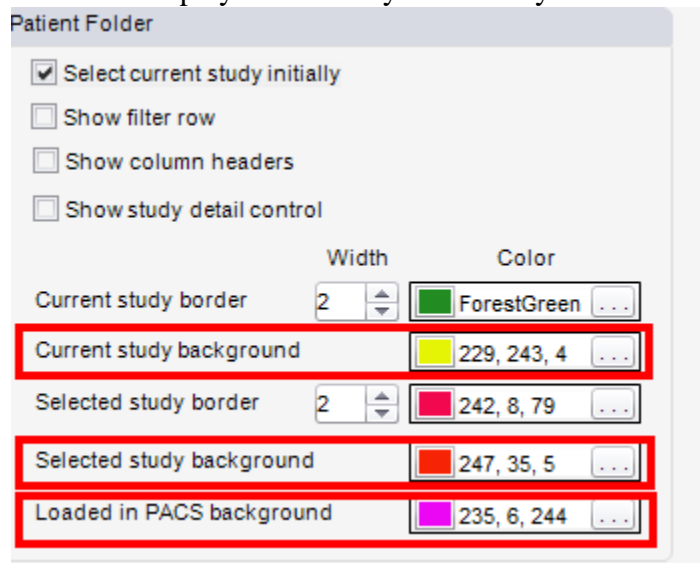


Figure 5.50 – User preferences to set background study colors

Looking at the background colors above, you can see in the figure below how this would look to the user. I used colors to be sure to stand out.

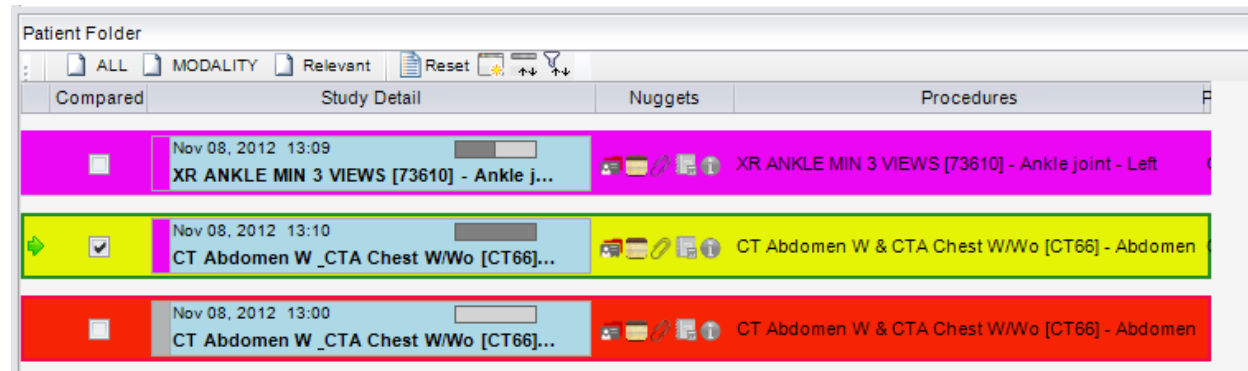


Figure 5.51 – Patient history control in reporting window

Notice that only two of the studies are loaded in the PACS. The red row is not, we know this because of the grey color next to the study detail control where the other 2 are purple.

## **Meaningful Use - Scorecard Rollup Tables**

This feature will be completed over two builds 39 and 40. Phase 1 is completed in Build 39(Automated Measures). To resolve we added a new table `c_mu_automated_measure_history` which will be used to store automated measures for each patient, a Radiologist signs off on a report, at the specific practice for a specific reporting period(in Years). This table will be used by the mu scorecard report to show users a snap shot of the site with regards to mu. This table will get populated by the new stored procedure `c_mu_SetAutomatedMeasures` which will receives updates from a nightly job which will called `c_ProcessPostEvents`. This job checks the `c_study_post_processing` (this is a new table that gets populated by a new trigger on the `c_action` table storing action from within rRIS). Note studies will receive updates via the trigger even before the study is signed off but mu statistics will not get accounted for until the study is signed off. There is a new column added on the `c_study` table that will stamp the last time the mu measure was calculated(`mu_automated_measures_last_updated`). The reporting period in this table will be for scheduled exams between Oct. 1 2012 to Dec. 31 2012 signed off by a Rad for Year 1 and then Jan. 1 to Dec. 31 for each year after 2012.

Data Migration will have to take place on the `c_mu_automated_measure_history` to backfill all scheduled exams between Oct 1 and Dec 31 that have been signed off by a Rad.

We modified the existing management Report (MU Scorecard this will be completed in B40) which will eventually replace the existing MU Scorecard Report calling data from the new rollup tables. To better retrieve Automated Measure % on this report we created a new table “`s_mu_measures`” which will be used to store the MU Automated Measures and their appropriate Measure %’s for each Meaningful Use Stage. (stage 1 is accurate will modify stage 2 when requirements released).

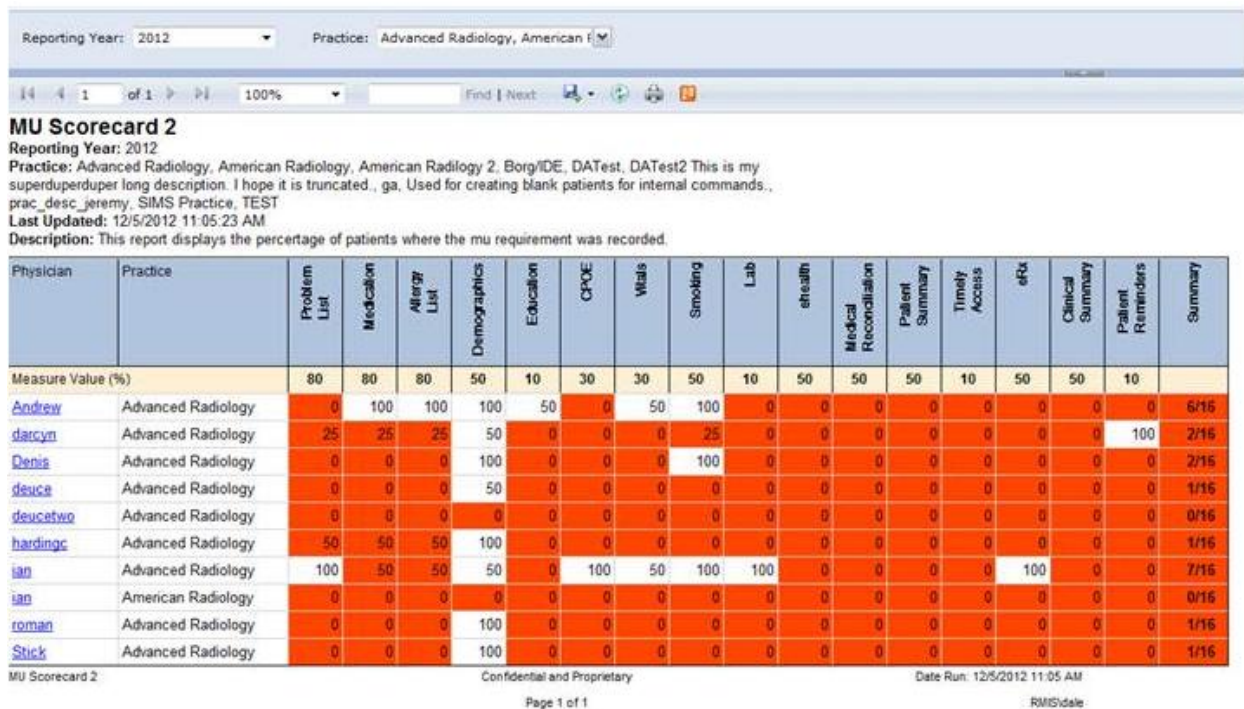
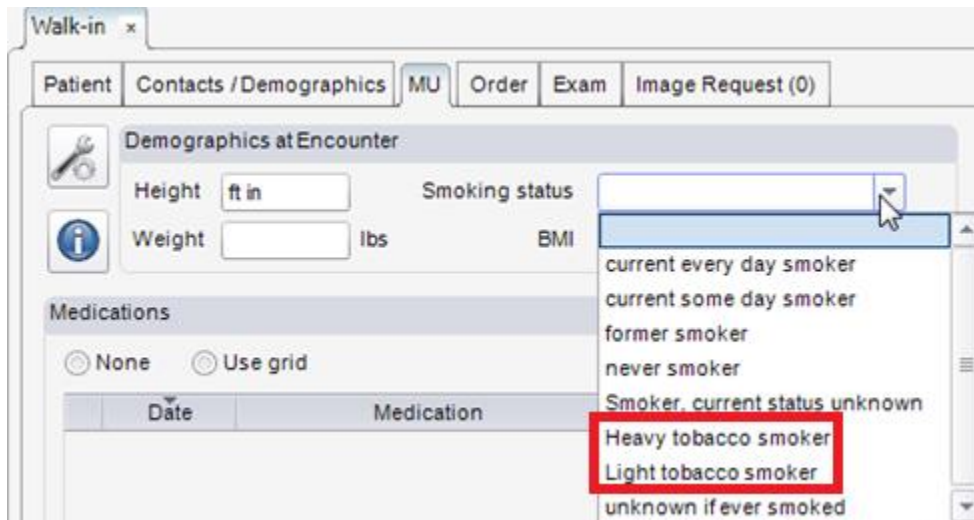


Figure 5.52 – MU Scorecard 2

## Meaningful Use – Smoking Status Phase 2

A new column (snomed\_ct\_id) has been added to the existing smoking dataset. The l\_smoking\_status table we added the two new rows for “Heavy tobacco smoker” and “Light tobacco smoker”.

Only administrators should see the Smoking Status lookup. To prevent non admins from changing these values we have an access string that prevents these users from seeing the lookups...”Config.LookupEditor.SmokingStatus”



**Figure 5.53 – New smoking statuses**

## Scan Document Archive

Scan documents are used extensively by the RIS to capture requisitions, worksheet, waivers, etc. These scan documents occupy a significant amount of space in the db. There are some real benefits to storing the scan document in the db, at least initially, but there are some real concerns with db size. It is estimated that for every million exams we would need 1 TB for scan documents. The db backup time becomes longer as the db gets larger. In the event of equipment failure, disaster, etc. we may need to restore the db. A db recovery time ideally should be relatively short. With large db a short recovery time becomes difficult and expensive to implement.

We have added a new lookup table “ScanDocumentArchiveLocation” with access controlled by a new access string “Config.LookupEditor.ScanDocumentArchiveLocation”

Scan Document Archive Code	Description	Path	Display Order	Active
PEIDEV1_1	Scan Archive 1	\\peidev1\DS\ScanDocumentArchive\RIS_Dev	1	Y

Figure 5.54 – ScanDocumentArchiveLocation lookup

**1 scan document archive**  
Lookup Table of possible scan document archive locations.

Name	Data type	Max Length	Default	Allow Nulls	Identity
<b>scan_document_archive_code (PK)</b> The abbreviated, or short name for this archive code. Used as a natural key in referenced tables.	varchar	20			
<b>description</b> The description for this archive path.	varchar	500		x	
<b>path</b> The path to where this archive location refers to. This path must be accessible to all eRISServices.	varchar	1000			
<b>active_flag</b> (Y/N) Used to indicate if this row can be referenced in the future.	char	1	'Y'		
<b>display_order</b> Used to indicate where the sort order position for this row when it appears in a dw combo box, or a list box.	int	4			
<b>last_updated</b> The date and time that this row was last updated.	datetimeoffset	10			
<b>last_updated_by_user_id</b> The user id of the person who last updated this row.	varchar	100			

Figure 5.55 – Scan document archive db values

### Reading scan document from archive:

A scan document will exist in the db if its archive\_dirty\_flag = “Y”. All new scan documents add to the db have this flag set to “Y”. If this flag is set to “N” it means that the scan document has been moved from the db to a scan document archive. If this is the case, then the system will read the scan document from the archive. This is all transparent to the user. If the scan document is not accessible, a message will be presented to the user indicating that this “page is not available”.



## New columns for scan document page table

**c\_scan\_document\_page**

Contains the images of the documents for the scan type

Name	Data type	Max Length	Default	Allow Nulls	Identity
<b>rowguid</b> A unique identifier for this used by SQL Server FileStream feature.	uniqueidentifier	16	newid()		
<b>scan_document_page_key (PK)</b> Primary Key, autogenerated, internal use only.	int	4			x
<b>scan_document_key (FK)</b> Identifies the scan document that this images belong to. (see c_scan_document scan_document_key)	int	4			
<b>page_number</b> The page number of the scanned document	int	4			
<b>front_face</b> An image of the front side of the scan document	varbinary	-1		x	
<b>last_updated</b> The date and time that this row was last updated.	datetimeoffset	10			
<b>last_updated_by_user_id</b> The user id of the person who last updated this row.	varchar	100			
<b>size</b> The size in kilobytes of the image.	int	4			
<b>archive_code (FK)</b> Identifies the path information for the scan document. (see l_scan_document_archive scan_document_archive_code)	varchar	20		x	
<b>archive_datetime</b> Identifies when this image was archived.	datetimeoffset	10		x	
<b>archive_path</b> The path within the archive to where this scan document is archived.	varchar	300		x	
<b>archive_dirty_flag</b> If yes we need to archive or re-archive the page	char	1	'Y'		

Figure 5.56 – Scan document page possible data values

There also new system configuration settings to go with the new access string. The table shows the new settings and descriptions of each.

ScanDocumentMaxSizeInDB	The maximum size in GB that the system will persist scans documents directly in the db. When this value is exceeded the archive process will begin (at its next run time interval) to move scan documents to the archive.
ScanDocumentMinSizeInDB	When scan document archiving is initiated, this is the minimum size in GB that the system will reduce the amount of scans documents that are persist directly in the db.
ScanDocumentArchiveCurrentLocation	The archive location where the archive process will move scan documents to. The value must match a value in the l_scan_document_archive lookup table.
ScanDocumentArchiveStartTime	The time of day in hh:mi format (24 hour) that the scan document archive process can wake up.
ScanDocumentArchiveStopTime	The time of day in hh:mi format (24 hour) that the scan document archive process must stop. <del>Does not have to be greater</del> <b>greater</b> If less than ScanDocumentArchiveStartTime <b>then the process will continue to the next day until the time is reached.</b>
ScanDocumentArchiveDaysOfTheWeek	A comma separated list of days that the archive process will wake up to see if there is work. The list is contains numbers representing the day number within the week, where:

	0 is Sunday 1 is Monday 2 is Tuesday 3 is Wednesday 4 is Thursday, 5 is Friday 6 is Saturday  For example, a value of 0,1,2,3,4,5,6 means that the archive process will run every day of the week.
ScanDocumentArchiveServerNames	A comma separated list of server names that are allowed to run the archive service.
ScanDocumentArchiveMaxThreads	The maximum number of thread the scan document archive process can use within one process.

**Table 5.2 – Scan document archive system configuration settings**

**When writing to the archive:**

The archive process must be scalable. It should be able to run on multiple archive process, possibly running on many services.

Moving scan documents to the archive should be done by oldest first.

The archive process will calculate the value of the c\_scan\_document\_page.archive\_path based on the last\_updated date of the scan\_document\_page row using

“\yyyy\mm\dd\hh\{scan\_document\_page\_key}.jpg, where yyyy is the year, mm is the month ~~and~~, dd is the day and hh is the hour from the last\_updated date.

If a scan document is retrieved from the archive and if and only if it is updated by the user (cropped, rotated, etc), the scan document will be persisted to the db again. When this scan document gets moved to the archive again, the archive process will delete the original file in the archive, then update archive\_path based on the new value of the last\_updated, then write the file to the new archive location.

Once the document is successfully written to and verified from the archive document we would clear it from the db.

### **IMPLEMENTATION ADDITIONS TO THE DESIGN**

All configuration values changes take effect within 30 seconds after saving the change.

Processing starts once the MaxSizeInDB, Start/Stop Time and day of week conditions are met. After the MinSizeInDB is reached processing will stop. If the scan document allocation does go above the MaxSizeInDB in the same archive start/stop window, the archive process will resume archiving. If the RIS service is restarted or if a configuration value for archiving is changed the conditions will be tested and if archiving is necessary processing will also start again.

## Management Report – Daily Summary Report

We modified all queries on this report to allow the user the ability to filter the report by one or more site(s). Also, on each report within the report we added another group level for “site\_code” so now each report will be broken up by totals based on what took place at the individual site.

### Daily Summary Report

Practice: American Radiology Services

Site: Annapolis Bel Air

Date Range: 11-19-2012

Total Exams Performed		Average Wait Time		Total Exams Cancelled	
Site Procedure Group Accession#	Total	Site Procedure Group Accession#	Total	Site Reason Accession#	Total
<input type="checkbox"/> Annapolis	52	<input type="checkbox"/> Annapolis	11	<input type="checkbox"/> Annapolis	22
<input type="checkbox"/> Bel Air	7	<input type="checkbox"/> Bel Air	11	<input type="checkbox"/> Bel Air	11
Total	59	Total Average Wait Time	11	Total	33

Total Exams Created		Orders to be Scheduled		Reports Queue	
Site Scheduled Exams Accession#	Total	Site Status Accession#	Total	Site Reports	Total
<input type="checkbox"/> Annapolis	16	<input type="checkbox"/> Annapolis	78	<input type="checkbox"/> Annapolis	21
<input type="checkbox"/> Bel Air	7	<input type="checkbox"/> Bel Air	71	<input type="checkbox"/> Bel Air	9
Total	23	Total	149	Total	30

Over The Counter Collections		Top 5 Primary Payers on Performed Exams		Fax Report	
Site Payment Method	Total	Site Carrier	Total	InProgress	Total
<input type="checkbox"/> Annapolis	\$190.00	<input type="checkbox"/> Annapolis	51	Hold	1
Total	\$190.00	<input type="checkbox"/> Bel Air	7	<a href="#">Error</a>	17
		Total	58	Completed	559
				Pending	7
				Total	590

Figure 5.57 – Daily Summary Report

### **Management Report – Biopsy Results Pending**

Created new report under the operations deployment Biopsy Results Pending Letter as well as a sample form with the same name. To identify there is a column on the c\_study for mammo\_fup\_required\_flag and the report\letter will be looking for a value of 'Y'.

Screenshot: The form and report both have the same look. Difference is the parameters passed to the letter are more refined to the patient and exam where the report pulls all exams in the specified range that meet the criteria.

Parameters for report:

Practice(s), Site(s), and Date range based on scheduled date

Data references

- mammo\_dataset
- l\_practice
- l\_site

Parameters for letter

- Study\_key

Data references

- mammo\_dataset (for the study selected)

<b>Advanced Radiology 193 Stoner Avenue Suite 200 Westminster, MD 21157</b>	
 John A Demo	
RE: Marcy25 04918 Scott Medical Record Number: T.3475	Date of Birth: July 19, 1997 Date of Study: February 06, 2012
Dear: John A Demo	
Our records indicate that the above patient had an abnormal or indeterminate breast imaging study at Advanced Radiology. Per the Mammography Quality Standards Act, we must attempt to correlate breast imaging findings with surgical results.	
Please take a few moments to fill out the information below and return it along with any biopsy reports.	
FOLLOW-UP MAMMOGRAPHY DATA	
<input type="checkbox"/> Patient underwent cyst aspiration	
<input type="checkbox"/> Patient underwent biopsy (Please send results)	
<input type="checkbox"/> Positive (Please send results)	
<input type="checkbox"/> Negative (Please send results)	
<input type="checkbox"/> Referred to surgeon	
<input type="checkbox"/> Surgeon's Name _____	
<input type="checkbox"/> Follow-up mammogram (date) _____	
<input type="checkbox"/> We are unable to provide additional information.	
Please fax to (443) 436-1332 or mail to: Advanced Radiology 193 Stoner Avenue Suite 200 Westminster, MD 21157 Attn: mammo tracking	
Sincerely	
Fisher	
Biopsy Results Pending Letter	****RadNet - Confidential and Proprietary****
Print Date: 11/21/2012	

**Figure 5.58 – Biopsy Results Pending Report**

## Management Report – Chief Complaint Audit Enhancement

The “location” (sites) parameter has been added to this report for filtering.

Practice(s):  Site(s)   
 From:  To:   
 1 of 1 100% Find | Next

### Chief Complaint Audit

Practice(s): Advanced Radiology  
 Site(s): Eldersburg, Fisher, Lutherville, PowerVille  
 Date: 11/21/2012  
 Description: This report displays a list of the chief complaints identified on exams based on the date of service falling between the dates selected.

Patient Name	Status	Scheduled By	Arrived By
<b>Advanced Radiology</b>			<b>1528</b>
<input checked="" type="checkbox"/> <b>Eldersburg</b>			<b>358</b>
<input checked="" type="checkbox"/> <b>11-21-2012</b>			<b>358</b>
<b>[REDACTED]</b>	Arrived		merlin
Accession #: [REDACTED] Procedure(s): AMCT INJECTION SPINE [AMCTINJSPINE] Chief Complaint: bilateral l4 nrb			
<b>[REDACTED]</b>	Arrived		merlin
Accession #: [REDACTED] Procedure(s): AMCT INJECTION SPINE [AMCTINJSPINE] Chief Complaint: bilateral l4 nrb			

Figure 5.59 – Chief Complaint Audit Report

## Management Report – Daily Schedule Add Ons

Description: This report displays the details for exams scheduled on the specified date for the practice, site(s) and scanners selected. As well it filters to pull exams that were added after or including to the specified "added after" date and time.

Parameters:

Scheduled Date (one only), Practice, Site, Scanners and Added after (created date)

Data references:

scheduledappointments\_dataset

l\_practice

l\_site

l\_modality

### Daily Schedule Add Ons

Practice: Advanced Radiology

Site(s): Eldersburg, Fisher, Lutherville, OutsideMed, PowerVille

Date: 11/27/2012

Scanner(s): CT1EL, CT1FH, CT1LU, CT1PO, CTModality, DE1EL, DE1FH, DX1LU, MA1EL, MA1FH, MA1LU, MA2FH, MA3FH, MR1EL, MR1FH, MR1LU, MR3T, NM1FH, NM2FH, PT1FH, rp, US1EL, US1FH, US1LU, US2EL, US2FH, US2LU, US3FH, XR1EL, XR1FH, XR1LU, XR2FH

Description: This report displays the details for exams scheduled on the specified date for the practice, site(s) and scanners selected. As well it filters to pull exams that were added after or including to the specified "added after" date and time.

Scanner	Time Sched	Patient Name	MRN#	DOB	Exam(s)
CT1LU	3:41 PM		1000407160r	1/7/1991	E&M New Patient [EM01] Body Part\Lat:
		Home Phone:	Age: 21 years	Referring: Power, Ian	
		Cell Phone:		Copay:	
		Current Exam Status: Signed1	Enc #: 322647099		Acc #: 1469169
		Insurance: No Insurance	Insurance:		
		Scheduler Notes:			
		Chief Complaint: Test			
		Alternate MRN's: 999888777555a, 112455687x			
Added to schedule: 27-Nov-2012 02:42 PM by ian					

Figure 5.60 – Daily Schedule Add Ons report



## Management Report – ICM Dashboard Enhancements

Add location (site) to the dashboard.

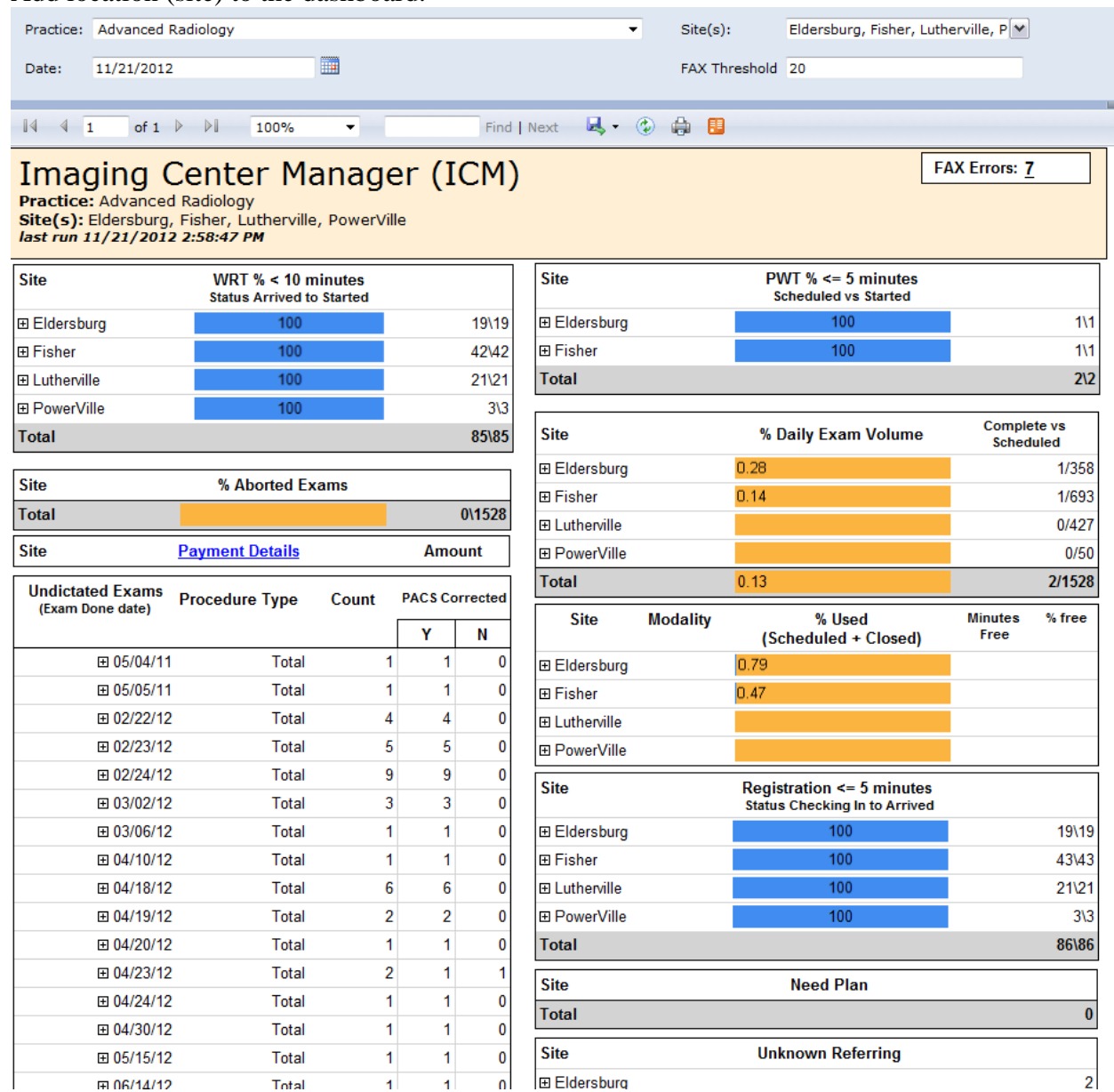


Figure 5.61 – ICM Dashboard Report

## Management Report – Image Request History

This report displays the history of Image Requests where requests fall between the specified dates for the selected practices and locations.

### Parameters:

Practice, Site, and Date range based on requested date

### Data references:

- c\_vw\_image\_request\_worklist
- l\_practice
- l\_site
- request\_status

### Image Request History

Practice: Advanced Radiology

Site(s): Eldersburg, Fisher, Lutherville, PowerVille

Date Range: 9/23/2012 - 11/23/2012

Description: This report displays the history of Image Requests where requests fall between the specified dates for the selected practices and locations.

Requested Date	Completed by	Completed Date	Request Type	Requested By	Image Medium	Delivery Method	Status	MRN	Accession #
Advanced Radiology									11
Eldersburg									3
11-21-2012									3
Fisher									5
11-08-2012									2
			Other	test	CD	Courier	Pending	1000007857r	1072084
			Other	test	CD	Courier	Pending	1000007857r	1072084
11-06-2012									2
11-02-2012									1
Lutherville									3
11-22-2012									3
Total Requests:									11
Image Request History									
Confidential and Proprietary									
Page 1 of 1									
Date Run: 11/23/2012 10:06 AM									
RMISdale									

Figure 5.62 – Image request history

## Management Report – IVT User Activity

This report displays the counts # of patients IVT activity has been logged by users within the selected sites/practice. Report is tracking any edits user(s) have made to study verification and pre-certification notes.

Parameters:

Practice, Site, and Date range based on audit log last\_updated date

Data references:

- c\_mgmt\_IVT\_activity
- l\_practice
- l\_site
- users in practice

### IVT User Activity

Practice: Advanced Radiology

Site(s): Eldersburg, Fisher, Lutherville, PowerVile

Date Range: 10/21/2012 - 11/21/2012

Description: This report displays the counts # of patients IVT activity has been logged by users within the selected sites/practice. Report is tracking any edits user(s) have made to study verification and pre-certification notes.

Date / Practice / Site - User	MRN	Patient Name	Accession #
<input type="checkbox"/> 11-13-2012	3		
<input type="checkbox"/> ADV	3		
<input type="checkbox"/> FH	2		
<input type="checkbox"/> dale	2		
Notes made on: e329cd1e-2fb6-4191-b7eb-2478933d4bcb	TEST_SaveCompleteStudy dale	1060653	
Notes made on: e9b52584-cc21-44a4-9093-5fc1296b3f61	TEST_SaveCompleteStudy dale	1060610	
<input type="checkbox"/> LU	1		
<b>Total Patients:</b>	<b>3</b>		

IVT User Activity

Confidential and Proprietary

Date Run: 11/21/2012 2:07 PM

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RMIS\dale

Figure 5.63 – IVT User Activity report

## Management Report – MQSA Outcome Report

This report displays outcome results for BIRAD 4 and BIRAD 5 exams. All Exams are Signed exams.

Report parameters are:

- Practice
- Site(s)
- Date Range
- Signing Radiologist
- Procedure Codes

**Description:** This report displays outcome results for BIRAD 4 and BIRAD 5 exams. All Exams are Signed exams.

Signing Radiologist	# Studies	# Benign ( + )	# Malignant ( - )	No Biopsy on file	% ( + )	% ( - )	% NA
☐ Darcy j233456 Aiken	1	1	0	0	100.00 %	0.00 %	0.00 %
☐ Darcy T Noye	15	11	3	1	73.33 %	20.00 %	6.67 %
☐ Stick da Powell	1	0	1	0	0.00 %	100.00 %	0.00 %
Total:	17	12	4	1	70.59 %	23.53 %	5.88 %

**Figure 5.64 – MQSA Outcome Report**

## Management Report – NM Therapy Patient Listing

New report under the operations deployment

Parameters:

Practice, Site, and Date range based on scheduled date

Data references:

- NM\_I131\_dataset
- l\_practice
- l\_site

### NM Therapy Patient Listing

**Practice:** Highway Imaging Associates, Pinnacle Diagnostic Radiology

**Site(s):** Flatbush Ave, 49th Street, New Kirk Ave

**Date Range:** 10/1/2012 - 12/31/2012

**Description:** This report shows all exams within the specified parameters where the procedure description contains I-131.

Scheduled	Patient Name	MRN #	DOB	Encounter ID
10-17-2012			03-07-1957	
Exam: NM I-131 Whole Body Scan [78018] - Body Status: Signed1			Location: Flatbush Ave	
Referring:				
10-19-2012			03-07-1957	
Exam: NM I-131 Therapy For Cancer [79005C] Status: Signed1			Location: Flatbush Ave	
Referring:				
10-26-2012			03-07-1957	
Exam: NM I-131 Whole Body Scan [78018] - Body Status: Signed1			Location: Flatbush Ave	
Referring:				

**Figure 5.65 – NM Therapy Patient Listing**

## Management Report – Patients Without Insurance

Parameters:

Practice(s), Site(s) and date range (appointment date)

Data references:

- patientsWithoutInsurance
- l\_practice
- l\_site

Practice(s): Advanced Radiology Site(s) Eldersburg, Fisher, Lutherville, P

From: 11/21/2012 To: 11/21/2012

1 of 1 100% Find | Next

### Patients Without Insurance

Practice: Advanced Radiology  
 Site(s): Eldersburg, Fisher, Lutherville, PowerVille  
 Date: 11-21-2012  
 Description: This report lists the exams where no insurance was identified for the selected practice(s), site(s), and date range.

Appointment Date	Patient	MRN	Procedure Code	Procedure Description	Appt Time
11-21-2012	Rowan Ball	1000345678r	74183	MR Abdomen W/Wo [74183] - Abdomen	10:00 AM
	Site: Eldersburg	Modality:	MR1EL		
	Chief Complaint: Test				
	Order Notes:				

Count: 1

Patients Without Insurance Confidential and Proprietary Date Run: 11/21/2012 10:45 AM

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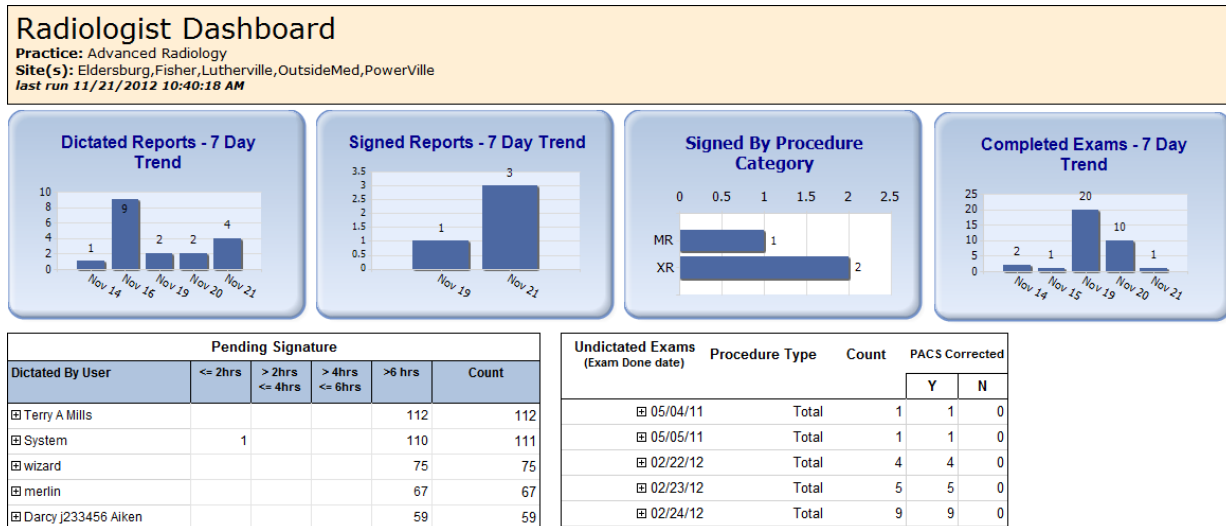
Figure 5.66 – Patients without insurance report

## Management Report – Radiologist Dashboard Enhancement

Added control for for completed exams.

Screenshot:

New control is called Completed Exams – 7 Day Trend



**Figure 5.67 - Radiologist Dashboard Enhancement**

## Management Report – Referrals by Physician List

This report shows what activity by physician and procedure types. **\*\*including all statuses except cancelled and discontinued.**

Report parameters are:

- Practice
- Site(s)
- Date Range
- Modality Types

### Referrals by Physician Patient List

**Practice:** Highway Imaging Associates,Pinnacle Diagnostic Radiology

**Site(s):** Becker,Flatbush Ave,49th Street,New Kirk Ave,Petrosova

**Date Range:** 12-01-2012 to 12-03-2012

**Description:** This report shows what activity by physician and procedure types. **\*\*including all statuses except cancelled and discontinued.**

Referring Physician	MRN	Patient Name	Procedure Type	Procedures	Modality
<input type="checkbox"/> [REDACTED]	1				
	[REDACTED]	[REDACTED]	MR	MR Cervical Spine WO [72141] - Cervical spine	FLMR1 - Flatbush Ave MR Rm 1
<input checked="" type="checkbox"/> [REDACTED]	1				
<input checked="" type="checkbox"/> [REDACTED]	1				
<input checked="" type="checkbox"/> [REDACTED]	1				

**Figure 5.68 - Referrals by Physician List**



## Management Report – RTAT Detail Mammo

Created new report under the operations deployment called RTAT Detail Mammo.

Parameters for report:

Procedure group where the mammo type code is not null, and Date range based on signed date

Data references:

- rtat\_dataset
- l\_procedure\_group\_dataset

### RTAT Detail Mammo

Date Range: 11/16/2012 - 11/22/2012

Procedure Group(s): Mammography

Excluding exams signed on weekends

Radiologist: Pending Dictation - Pending Transcription (% of reports completed in < 3 hours)		
Week Ending	ARS	# Signed Exams
⊞ 11/16/2012	44.98 %	269
⊞ 11/23/2012	36.71 %	1,038
Total	38.41 %	1,307

Transcriptionist: Pending Transcription - Pending Signature (% of reports completed in < 3 hours)		
Week Ending	ARS	# Signed Exams
⊞ 11/16/2012	97.77 %	269
⊞ 11/23/2012	99.04 %	1,038
Total	98.78 %	1,307

Radiologist: Pending Signature - Signed (% of reports completed in < 2 hours)		
Week Ending	ARS	# Signed Exams
⊞ 11/16/2012	79.93 %	269
⊞ 11/23/2012	88.44 %	1,038
Total	86.69 %	1,307

Figure 5.69 – RTAT Detail Mammo report

## Management Report – Technologist Unfinished Exams

Report to identify exams that have been left uncompleted on the technologist work list for a given date range based on appointment date and status of arrived, started or suspended.

Parameters:

Practice, Site, and Date range based on scheduled date

Data references:

- techUnfinishedExams\_dataset
- l\_practice
- l\_site

### Technologist Unfinished Exams

Practice: American Radiology Services

Site(s): Annapolis, Bel Air, Bel Air PET/CT, Clinical Associates, Calvert Medical Imaging Center, Frederick Ortho III, Frederick Ortho II, Frederick, Fleet Street, Glen Burnie, Howard County, Knoll North, Owings Mills, Owings Mills Women's Center, Quarry Lake, Timonium Crossings, Texas Station, Waldorf

Date Range: 11/13/2012 - 11/20/2012

Description: This report lists the exams currently in status started, arrived and suspended between the dates specified for the selected practice(s), site(s).

Date	Patient	MRN	Accession	Procedure Code	Procedure Description	Appt Time
11-16-2012						Count: 1
	[REDACTED]	[REDACTED]		MR104	MR Brain and Pituitary W WO [MR104] - Head	08:30 AM
	Site: Waldorf	Modality:	WDMR1 - WALDORF MR 1.0			
	Status: Started-Suspended	User:	[REDACTED]			
11-19-2012						Count: 4
	[REDACTED]	[REDACTED]		76705	US Abdomen Limited [76705] - Abdomen	11:00 AM
	Site: Waldorf	Modality:	WDUS1 - WALDORF US 1			
	Status: Arrived	User:	[REDACTED]			
	[REDACTED]	[REDACTED]		76645HOLD	US Breast Hold Code [76645HOLD] - Breast	11:30 AM
	Site: Owings Mills Women's Center	Modality:	OMWCUS1 - OWINGS MILLS WOMENS CENTER US1			
	Status: Arrived	User:	[REDACTED]			
	[REDACTED]	[REDACTED]		71250	CT Chest WO [71250] - Chest	01:00 PM
	Site: Owings Mills	Modality:	OMCT1 - OWINGS MILLS CT 64			
	Status: Started	User:	[REDACTED]			
	[REDACTED]	[REDACTED]		76645HOLD	US Breast Hold Code [76645HOLD] - Breast	03:00 PM
	Site: Owings Mills Women's Center	Modality:	OMWCUS1 - OWINGS MILLS WOMENS CENTER US1			
	Status: Started	User:	[REDACTED]			

Figure 5.70 – Technologist Unfinished Exams

## Management Report – West Coast Transcription Dashboard

Created new dashboard report called West Coast Transcription Dashboard. Only difference is represented in the first table of the dashboard called Exam Done to Signed Turnaround Times (in Hrs).

These calculations calculate hrs difference regardless of hrs of operations.

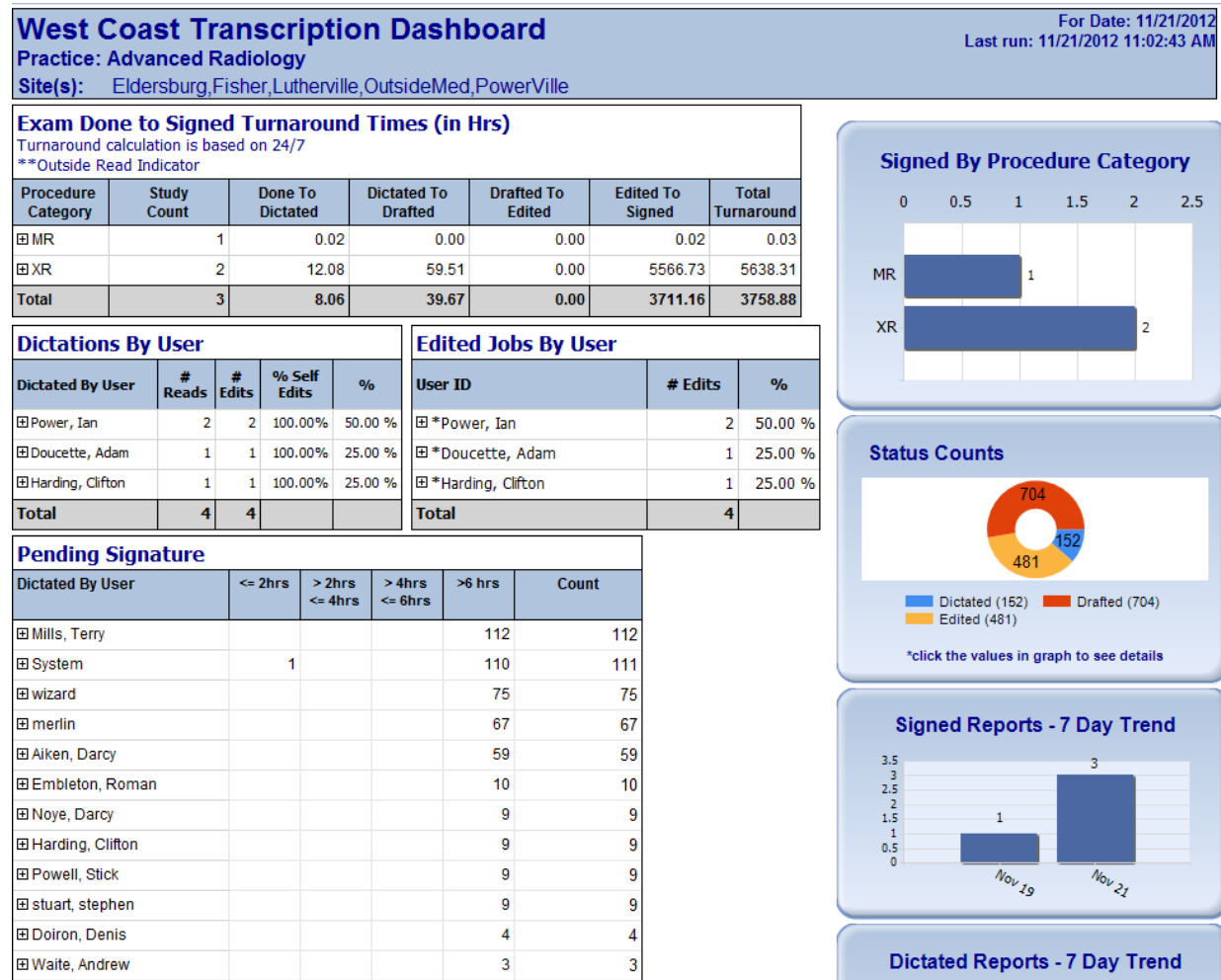


Figure 5.71 – West Coast Transcription Dashboard report

As part of this change we also enhanced the accession milestone times subreport to contain both tables as the accession milestone report is used on both coasts and referenced on several reports. Creating a West Coast version would make updating all referencing reports a major activity.

## Accession Milestone Times

**Patient:** [REDACTED]

**Current Exam Status:** Signed1

**Site:** Lutherville

Accession #	Procedure Category	Procedure Description			
1407693	XR	XR ABDOMEN AP, KUB [74000] - Abdomen			

Exam Milestone Times					
Order Date	Scheduled Date	Checking In Date	Arrival Date	Started Date	Performed End Date
11/21/2012 6:57 AM	11/20/2012 7:45 AM	11/21/2012 6:59 AM	11/21/2012 6:59 AM	11/20/2012 6:59 AM	11/20/2012 6:59 AM
ian	ian	ian	ian	ian	

Report Milestone Times				
Version	Dictated date	Drafted Date	Edited Date	Signed Date
Original	11/21/2012 7:00 AM	11/21/2012 7:02 AM	11/21/2012 7:02 AM	11/21/2012 7:28 AM
	ian		ian	ian

Turnaround Times (in Hrs)				
<i>**calculated at 8:00-6:00 Mon-Fri</i>				
Done To Dictated	Dictated To Drafted	Drafted To Edited	Edited To Signed	Done To Signed
10.00	0.00	0.00	0.00	10.00

Turnaround Times (in Hrs)				
<i>**calculated at 24 / 7</i>				
Done To Dictated	Dictated To Drafted	Drafted To Edited	Edited To Signed	Done To Signed
24.02	0.03	0.00	0.43	24.48

**Figure 5.72 – Accession Milestone Times subreport**

## 6. RIS Release Version Numbers

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	Just WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we really did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	
37	12	1.2.37.14267	1.2.37.13040	1.2.37.14161	1.2.37.14267	
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	
38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	
39	-	1.3.39.	1.3.39.	1.3.39.	1.3.39.	

## 7. Resolved Defects

Bugs Suggested Features and Support Issues resolved in build 1.39. The extract is taken from Redmine bug tracking system and only displays defects resolved in 1.39.

Bug #	Tracker	Priority	Subject	Category	Found Version
2758	Bug	Immediate	Scanning - Errors with colour and duplex settings	Thick Client GUI	1.38
2662	Bug	Urgent	billing file missing GT1 segments for outside read study		1.37
2457	Bug	Urgent	upgrade scripts take too long to run with large databases.	Web Services/DB	1.38
2156	Bug	Urgent	Webservices - UI_StudyStarted_StudyUpdated ( wrong study key in clob vs StudyContainer)	Thick Client GUI	37.13
2145	Bug	Urgent	Over Book Reason - Not logged to the Audit history	Thick Client GUI	37.13
2082	Bug	Urgent	From River Ranch: When you have 2 orders for the same patient and you 'view / edit' one of the orders and change the referring, the change is applied to both orders on that day.	Thick Client GUI	37.11
2724	Bug	High	attachment viewer shows out of date / stale results	Thin Client GUI	1.38
2354	Bug	High	Data nugget alignment and backcolor issue	Thick Client GUI	1.38
2348	Bug	High	Billing exception can be cleared before all notes cleared	Thick Client GUI	1.2.38.14486
2335	Bug	High	audit history does not display scrollbar when required	Thick Client GUI	1.38.0

2287	Bug	High	Order notes are not preserved when rescheduling		1.38
2234	Bug	High	ReSchedule - ( schedule later) required laterality,, not checked		37.13
2233	Bug	High	Re-Schedule ( Schedule Later) does not save added procedures.		37.13
2225	Bug	High	View / Edit -> Billing codes tab - showing billing codes for NOT active study items	Thick Client GUI	37.13
2223	Bug	High	Reconcile Unknown Insurance Carrier --> Foreign Key error	Thick Client GUI	37.13
2209	Bug	High	All QA studies WL missing	Thick Client GUI	1.2.38
2208	Bug	High	Registration --> Save prompts a check to validate Scheduled Date	Thick Client GUI	37.13
2172	Bug	High	changing the insurance does not cause the precert rules to run		1.2.37
2144	Bug	High	Precert Status - "Not Required" does not get logged to the database	Thick Client GUI	37.13
2128	Bug	High	River Ranch - modality availability check is not running upon pressing 'schedule'	Thick Client GUI	37.12
2118	Bug	High	River Ranch - Tech worklist is showing multiple studies flag even if one of those studies is in 'cancelled' status.	Thick Client GUI	37.12

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2114	Bug	High	Status changes initiated from an open screen in RIS can overwrite a status update from HL/7	Web Services/DB	1.37.12
2048	Bug	High	Tech - Error Completing exam	Thick Client GUI	37.11
2035	Bug	High	Appointment book.. some appointments do not show tome of exam		37.1
2030	Bug	High	Delete -Personnel		37.1
2000	Bug	High	Transportation required flag - when populated in order, then re-opened for View / Edit, user no longer sees check in box	Thick Client GUI	1.1.2.37
1960	Bug	High	Column size for Referring ImagingNotes, SpecialtyNotes	Thick Client GUI	1.37
1924	Bug	High	rRISServices deployed with throttling turned on leading to poor performance	Thick Client GUI	1.37.13858
1862	Bug	High	If modality code has trailing space in code name, scheduled appointments will not show on appointment book	Web Services/DB	1.1.2.37.13807
1829	Bug	High	Memory leak introduced in B38, needs to be fixed.	Thick Client GUI	1.38
1537	Bug	High	When entering outside read info, if you put 'asf' into the study data panel, and you click outside the panel RIS throws a loop of the same error, and you cannot get out of it.	Thick Client GUI	1.2.37.12724



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1116	Bug	High	Procedure can be scheduled when laterality is required but not selected	Thin Client GUI	1.35
2705	Bug	Normal	Automated Measures eHealth calculation	Thick Client GUI	1.38
2696	Bug	Normal	forms not generated when arriving patient after changing procedure	Thick Client GUI	1.37
2653	Bug	Normal	PACS integration is passing showstudyinfo=Y even if config setting is turned off	Thick Client GUI	1.37
2525	Bug	Normal	Appointment book drag and drop time not working	Thick Client GUI	1.38.002
2497	Bug	Normal	Management Report - Referrals by Physician	Mgt Reports	1.38
2495	Bug	Normal	ris hangs on registration save	Thick Client GUI	38.15138
2472	Bug	Normal	Management Reports - Transcription Dashboard issue with external reports	Mgt Reports	1.38
2468	Bug	Normal	User Preference - opens on wrong tab		1.38
2466	Bug	Normal	Management Report - Payments Received	Mgt Reports	1.37
2464	Bug	Normal	Reporting - Radiologist resource is required to dictate	Thick Client GUI	1.37
2463	Bug	Normal	Mammo - Annual reports freeze	Mgt Reports	38
2462	Bug	Normal	c_Calculate_BMI error when weight has a decimal	Mgt Reports	1.37
2458	Bug	Normal	Mgmt Report - Room Utilization	Mgt Reports	1.37
2456	Bug	Normal	User Preference - clean up task to remove ":" from labels with controls beside them	Thick Client GUI	1.37

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2452	Bug	Normal	audit history for tech workflow reflects the status of the exam prior to the status change	Thick Client GUI	1.38
2447	Bug	Normal	right click - Cancel Study does not release lock after cancelling study	Thick Client GUI	1.38
2446	Bug	Normal	FT1.4 date not as expected in billing file.	Web Services/DB	1.35
2442	Bug	Normal	Reporting - next previous field navigation with command bar buttons	Thick Client GUI	1.38
2440	Bug	Normal	Reporting - document model information dialog	Thick Client GUI	1.38
2439	Bug	Normal	Reporting - interactive tool options available in the editor	Thick Client GUI	1.38
2438	Bug	Normal	Color pickers in user preferences	Thick Client GUI	1.38
2437	Bug	Normal	MU Error timely_access_date	Thick Client GUI	1.38
2435	Bug	Normal	Reporting - Addendum message box cleanup	Thick Client GUI	1.37
2433	Bug	Normal	Scan Documents, documents should be renamed to "Attachements".	Thick Client GUI	38
2417	Bug	Normal	Resolve Problem : Problem set by not setting properly	Thick Client GUI	1.37
2413	Bug	Normal	Management Report - Transcription Dashboard	Mgt Reports	1.38
2411	Bug	Normal	Mgmt Report - Room Utilization	Mgt Reports	1.37
2410	Bug	Normal	This row has been removed when using the up/down arrows on keyboard from the personnell editor person grid		1.38

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2381	Bug	Normal	Reporting Layout gets config file every time from DB	Thick Client GUI	1.38
2380	Bug	Normal	Patient Folder - Issues with floating toolwindows	Thick Client GUI	1.38
2373	Bug	Normal	Tool Window Focussing Issue	Thick Client GUI	1.38
2352	Bug	Normal	Patient Folder - rename view menu and corresponding tool windows.	Thick Client GUI	1.38
2338	Bug	Normal	Reset Open Skipped Rows Window/Menu Clean up		1.38
2325	Bug	Normal	(intermittent) Null Reference error in scheduling after picking a timeslot that has a hold	Thick Client GUI	1.37
2322	Bug	Normal	Change existing insurance to a new insurance, follows rules applied to original insurance.	Thick Client GUI	1.38
2318	Bug	Normal	confirmation for multiple orders shows verbiage for registration, not confirmation	Thick Client GUI	1.38
2312	Bug	Normal	Management Reports - RTAT Detail	Mgt Reports	1.37
2309	Bug	Normal	error on getdata/display data -- invalid cast exception on open of confirmation exception	Thick Client GUI	1.38
2293	Bug	Normal	Reporting - Two release report context menu items	Thick Client GUI	1.38
2282	Bug	Normal	Mgmt Report Sales Marketing Dashboard	Mgt Reports	1.38
2281	Bug	Normal	Bill To Types - dropdown displays inactive items	Thick Client GUI	v37.13
2275	Bug	Normal	Reporting - interactive popup mixed case	Thick Client GUI	1.38

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2245	Bug	Normal	Stored function c_getcontrastrequiredflag is using a cursor and does need to.	Web Services/DB	1.38
2244	Bug	Normal	userid case sensitive for domain logins	Web Services/DB	1.38
2238	Bug	Normal	Management Report Deployment - timeout	Mgt Reports	1.38
2235	Bug	Normal	Inactivity message showing at inappropriate time	Thick Client GUI	1.2.38.14486
2232	Bug	Normal	IVT worklist not loading / refreshing ... constraint violation not presented to user (or not reported by user)	Thick Client GUI	1.37.13
2227	Bug	Normal	Sales Dashboard	Mgt Reports	1.37
2224	Bug	Normal	Dx Templates - Delver to address	Mgt Reports	1.37.13
2218	Bug	Normal	Sales Reports ARS - performance Problems	Mgt Reports	1.37
2214	Bug	Normal	Image request with scheduled study tab show (0) in registration window	Thick Client GUI	1.2.38.14443
2200	Bug	Normal	Reporting - Reset/Open Skipped Rows	Thick Client GUI	1.38
2189	Bug	Normal	Management Reports - Special Accomodations	Mgt Reports	1.37
2185	Bug	Normal	eRx - Practice Zip Code Invalid characters	Thick Client GUI	1.38.14426
2177	Bug	Normal	Management Reports - update parameter to initialize to single day of yesterday	Mgt Reports	1.38.14391
2176	Bug	Normal	Error on fast clicking schedule button	Thick Client GUI	1.2.38.14391

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2159	Bug	Normal	QA Work flow - Reports verified are sent to Signed, Pending Release WL again	Thick Client GUI	1.2.38.14350
2150	Bug	Normal	Audit log displaying user who released report as UI_ReportSigned	Admin Tools	1.2.38.14350
2149	Bug	Normal	Lookup Editor - Image Uploader	Thick Client GUI	1.38
2137	Bug	Normal	Reporting - Skip and continue external reports loop	Thick Client GUI	1.2.38.14327
2130	Bug	Normal	Typo - Attachement Viewer	Thick Client GUI	1.37.
2112	Bug	Normal	Management Report - Referrals by Physician	Mgt Reports	1.37.12
2108	Bug	Normal	Referring Physician Volume Report	Mgt Reports	1.37.12
2099	Bug	Normal	can't clear selection of dataset when creating an auto macro	Thick Client GUI	1.1.2.38.14294
2056	Bug	Normal	Reporting - Dictatoin control (minimized) not visible if saved on multiple monitor configurations	Thick Client GUI	1.37
2039	Bug	Normal	Print preview of Dx Report within transcription window when multiple addendums	Mgt Reports	1.38
2037	Bug	Normal	CDS Manager Service attempting to update signed studies.	Web Services/DB	1.37
2022	Bug	Normal	Reporting - Assign To problem when radiologist doesn't exist.	Thick Client GUI	1.37
1996	Bug	Normal	Reporting - VR2 environment signle spacing between sentences on report rendering.	Mgt Reports	1.37

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1796	Bug	Normal	Reporting - CdsInteractive Text Color	Thick Client GUI	1.38
1569	Bug	Normal	schedule later does not save procedures that haven't been committed yet	Thick Client GUI	1.2.37.12782
1373	Bug	Normal	Minimize Dictation - When doing WPR "000" Submit buttun text not legible	Thick Client GUI	1.36
1254	Bug	Normal	Shortcut keys are not working from floating panes	Thick Client GUI	1.36.10931
1139	Bug	Normal	When running MT polling workflow, lock is not being released	Thick Client GUI	35.10273
1129	Bug	Normal	Access to Diagnose / dictate window	Thick Client GUI	1.35
965	Bug	Normal	Dictate Screen does not lock after period of inactivity	Thick Client GUI	1.35
917	Bug	Normal	Minimizing application by moving another application over top of RIS throws error	Thick Client GUI	1.34
909	Bug	Normal	First time launch of a study does not find the image	Thick Client GUI	1.34
876	Bug	Normal	Error accessing transcribed records	Thick Client GUI	1.32
2723	Bug	Low	tooltip "fit to width" appears over zoom in and zoom out buttons on scan doc attachment viewer	Thick Client GUI	1.38
2106	Bug	Low	Lookup Editor - TemplateMacro Should have Double click functionality	Thick Client GUI	1.38.14294
2105	Bug	Low	Lookup Editor -TemplateMacro	Thick Client GUI	1.38.14294
2088	Bug	Low	Macro Editor - Tab Order needs to be reveiwed	Admin Tools	1.1.2.38.14194

1853	Bug	Low	QualityReviewDistribution is not listed alphabetically in General menu	Admin Tools	1.1.2.38.13809
1769	Bug	Low	Reporting - Selecting "Show All" templates can change the default selected	Thick Client GUI	1.1.2.37.13580
1678	Bug	Low	GUI - Macro + Template editor.. base templates field does not display in min resolution	Thick Client GUI	1.2.37.13040
1612	Bug	Low	Locking - message box modifictaions perhaps	Thick Client GUI	1.37
1485	Bug	Low	On the Input tab of the Preferences screen there is a Label that can't be read	Thick Client GUI	1.37
1113	Bug	Low	Lang item for rRIS to system try need to be updated.	Thick Client GUI	1.35
670	Bug	Low	Diagnose > Report preview can be opened multiple times	Thick Client GUI	1.25

## 8. Known Limitations

The following are Bugs Suggested Features and Support Issues found in build 1.39. This build is the current QE build and testing is ongoing. The list may increase in size. This document will not be updated or re-released.

#	Status	Priority	Subject	Resolved Build
2775	New	High	Mammo letter config lookup active column values incorrect	
2727	New	High	PACS errors flipping between open dictate windows	
2699	Resolved	High	Inserting template is navigating all fields twice	40
2532	New	High	access to changing the access strings needs to read only.	
2478	Resolved	High	Title bar color does not change if Practice is set to transparent	40
2782	Resolved	Normal	ICM Dashboard - Need plan and Unknown Referring returning no results	40
2777	New	Normal	Appointment book - double click on open time	
2761	Resolved	Normal	Sales Mgmt Reports - 6 and 13 Mth Variance Data	
2759	New	Normal	Distribution WL - Message box should display in the center of the screen	
2757	New	Normal	Problem with doing multiple Verify Externals in a row.	
2754	New	Normal	Patient Folder context menu for Report History	



2752	Resolved	Normal	Patient Merge: ShowID Button does not auto select thumbnail	40
2750	New	Normal	Reporting - Select command does not work for words that are at the start or end of a field	
2747	Resolved	Normal	Reporting - Fields Navigator - Previous section does not highlight position in Fields tool window	40
2746	Resolved	Normal	Organization Picker Problem	40
2744	New	Normal	null exception when attempting to show/hide titlebars on report document	
2743	New	Normal	Personnel Editor - Tab/NewLine issues in notes fields	
2741	Resolved	Normal	Lookup Editor - Column Header Alignment is Messed up.	40
2737	New	Normal	Patient Folder - multiselect is true and it should be false	
2734	New	Normal	Reporting - Floating data panes do not stay on top	
2728	New	Normal	Study locked in PACS message on initial load	
2713	Resolved	Normal	Report History tab name	40
2695	New	Normal	parameter not specified error in preview report for tables	
2690	New	Normal	Show/Hide Titlebar issue	
2683	New	Normal	Patient folder > Study detail column color bleeds outside of row	

2677	New	Normal	Create Report from Reset Open skipped rows	
2676	New	Normal	Reset open skipped rows - If you dictate and save, it does not remove skipped row from list	
2672	New	Normal	Appointment book cannot obtain lock error	
2661	New	Normal	Template Macro Editor - Double click template or macro	
2660	New	Normal	Template Macro Editor - Adv Assignment - user not defaulting	
2648	New	Normal	Reporting - Attachments are not realigned when the data pane is resized	
2647	New	Normal	Reproting window - can't save layout to default Attachments tab	
2646	New	Normal	Reporting - field navigator using section headers are not navigating if report contains 0 fields	
2645	New	Normal	Overbook Reason title change	
2643	New	Normal	Multiple loads of Selection Aware controls	
2641	New	Normal	Duplicating report fields	
2637	New	Normal	Next field command selecting multiple fields	
2635	New	Normal	Unchecking No Longer Menstruating doesnt enable pregnancy fields	
2632	New	Normal	Perform Exam window doesnt update with changes made in another window	

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2630	In Progress	Normal	PACS - Close call could fail if user has been logged off	
2628	New	Normal	Reporting screen not drawing in, if user make worklists active	
2568	In Progress	Normal	View menu disappears	
2561	New	Normal	reception WL retrieval time is slow	
2540	New	Normal	scan document association	
2536	New	Normal	Report Permissions,	
2534	New	Normal	Mammo followup - Newly entered data does not carry forward	
2533	New	Normal	Scheduling order from follow up mammo work list doesnt return to work list	
2515	Resolved	Normal	Create/Edit Report not in context menu in Problem WL	40
2513	Resolved	Normal	Create Edit Report missing from context on Pending Review WL	40
2512	Resolved	Normal	Verify Edits context missing on Edits Pending QA WL	40
2511	New	Normal	size and location information is not saved when client is close while minimized	
2509	Resolved	Normal	Create/Edit Report not in context menu in Report Drafted WL	40
2493	New	Normal	Management Report - RTAT Summary Poor Performance	
2751	New	Low	Object overlap on Order tab	

2749	Resolved	Low	Reporting - Fields Navigator - Selecting section before field changes cursor selection	40
2729	New	Low	Able to bring up two menus at once	
2679	New	Low	CDS Management Console	
2664	New	Low	Billing Exception - Post button	
2658	New	Low	Stored function c_getcontrastrequiredflag could return wrong value if multiple study items exist	
2652	New	Low	administration -> management report screen doesn't show any folders if permissions aren't configured	
2535	New	Low	Region, unable to deactivate	

# **Server Update**

**For eRAD RIS  
Version 1.0  
Build 39  
Update 39.001**

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### **1. New Features**

This server update has 4 new features added. This section will describe each feature in detail

#### **Multiple Signature Workflow**

Multiple signature workflow has 3 signing levels. They are Contribute B, Contribute A and Final. Contribute B and Contribute A signatures will change or leave the status (depending on current status) of the study to / at transcribed. Only users with Final signature rights can move the study to Signed status.

Multi Signature Workflow allows for multiple radiologists to work a study by having a radiologist dictate/contribute B a study, then having another radiologist review/contribute A and finally a radiologist review/Final sign the study. Only the Final Sign is a required step in this workflow, assuming proper configuration/permissions.

If a study is modified by an MT or Radiologist and is sent back to dictated, report drafted or transcribed status, contributing signatures will be removed from the latest interpretation. Suspending at any level will not reset contributing signatures, unless it is resumed with one of the above actions. Only the final signature is permanent.

Contributed A and B studies can be directed to a “Supervising Radiologist”. The Supervising Dictation WL is used to monitor the studies he/she is marked as the supervising radiologist.

A user will get their highest level signature defaulted when opening a study, unless they override it using the button default functionality. If they do override them, and the overridden signature level isn't available for some reason (it's already contributed at that level or it's been disabled at a system level) then his highest level will be defaulted.

The pending signature work list will show the studies that the radiologist can sign based on his default signature level, and his overrides per modality types. If he can't sign it, it won't show. There are no separate work lists for contribution signatures.

QA workflow does not change with this feature; QA workflow applies only to Final Signatures, Verifying the study will not reset the contributing signatures neither will rejecting.





## **RADNET, Inc. – eRAD RIS Server Update**

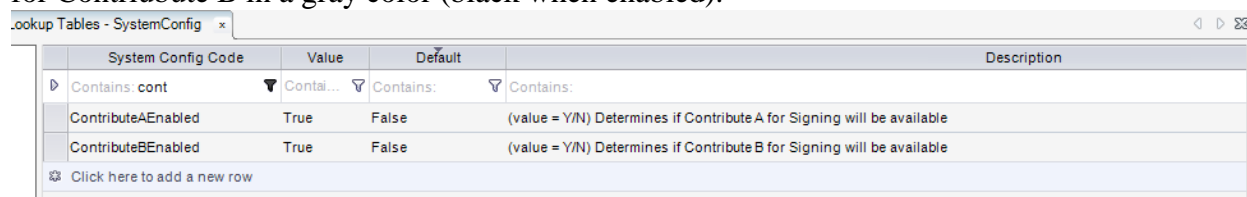
### **Setup and Configuration**

In order to support multi-signature workflow the following items must be set up...

#### **System config settings:**

ContributeAEnabled - Determines if contribute A is available to use on the system. If this system config setting is disabled (=false), the sign level field in personnel editor will display the value for Contribute A in a gray color (black when enabled).

ContributeBEnabled - Determines if contribute B is available to use on the system. If this system config setting is disabled (=false), the sign level field in personnel editor will display the value for Contribute B in a gray color (black when enabled).



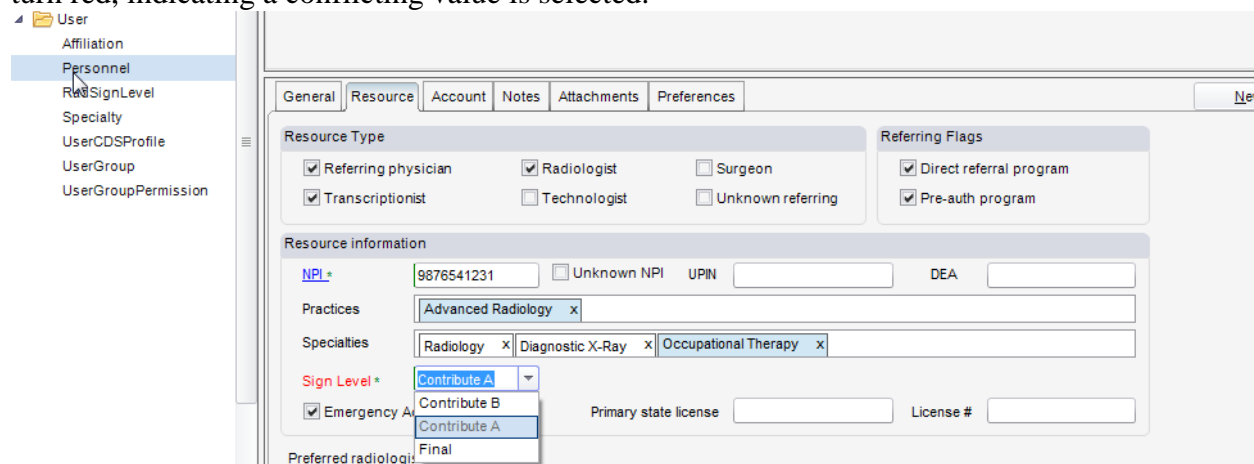
System Config Code	Value	Default	Description
Contains: cont	Contai...	Contains:	Contains:
ContributeAEnabled	True	False	(value = Y/N) Determines if Contribute A for Signing will be available
ContributeBEnabled	True	False	(value = Y/N) Determines if Contribute B for Signing will be available

[Click here to add a new row](#)

**Figure 1.1 – SystemConfig tables displaying new system config setting for multiple signature**

#### **Personnel Editor -Radiologist Level Sign:**

In the personnel editor on the “Resource” tab there is a drop down to identify the radiologist’s sign level. This is only enabled when the “Resource Type” of “Radiologist” is checked. Items shown in light gray in the drop down identify that it is disabled at the system level, based on system config settings above. When one of these items is selected, the label for “Sign Level” will turn red, indicating a conflicting value is selected.



**Personnel Editor -Radiologist Level Sign**

**Resource Type**

☒ Referring physician ☒ Radiologist ☐ Surgeon

☒ Transcriptionist ☐ Technologist ☐ Unknown referring

**Referring Flags**

☒ Direct referral program ☒ Pre-auth program

**Resource information**

NPI\* 9876541231 ☐ Unknown NPI UPIN DEA

Practices Advanced Radiology x

Specialties Radiology x Diagnostic X-Ray x Occupational Therapy x

**Sign Level \*** Contribute A (selected) Contribute B Final

☒ Emergency A Primary state license License #

Preferred radiologist

**Figure 1.2 – Personnel editor displaying new list box to assign signature level at user level**

## **RADNET, Inc. – eRAD RIS Server Update**

### **Radiologist Sign Level Overrides:**

In the Lookup table editor, under “User” you will see a new lookup table titled “RadSignLevel”. This table contains the modality level overrides for radiologist’s sign level. If a radiologist has “Final Sign” privileges set in the personnel editor, that users sign level can be overridden at the modality level in this table. For instance, perhaps this radiologist should not be signing off on MRs studies. In this table you would see an entry for that radiologist, MR modality type, and a lesser sign level, either contribute A or B. There can be an unlimited number of overrides, but limited to 1 per modality type/user.

The screenshot shows the eRAD RIS application interface. The title bar indicates 'eRAD RIS (Development as denis to East Chair)'. The menu bar includes File, Administration, Scheduling, Front Desk, Technologist, Radiologist, Mammo, Transcription, and Help. The user 'denis' is logged in. The 'Lookup Tables - SystemConfig' tab is active, showing a tree view on the left with 'User' expanded and 'RadSignLevel' selected. The main table displays the following data:

Rad Person Key	Modality Type Code	Sign Level Code
No filter: ▼	Contains: ▼	Contains: ▼
denis	MR (MRI)	Contribute_A
		None

**Figure 1.3 – RadSignLevel lookup table showing user override sign level for MR modality**

### **Radiologist user preferences:**

In user preferences under the “Reporting” tab you will see in the “Signing” section 5 new user preferences.

The screenshot shows the 'Signing' section of user preferences. It includes the following options and fields:

- ☐ Enable lower level signing
- ☒ Include supervising radiologist's pending dictations
- Supervising radiologist: Clifton Harding
- ☐ Use supervising radiologist's templates
- ☐ Use supervising radiologist's macros
- Allowed to sign for Darcy Noye:
- Yeo, Dale E x Test User, Radiologist x
- Darcy Noye can sign for:
- Yeo, Dale E Test User, Radiologist

**Figure 1.4 – New user preferences**

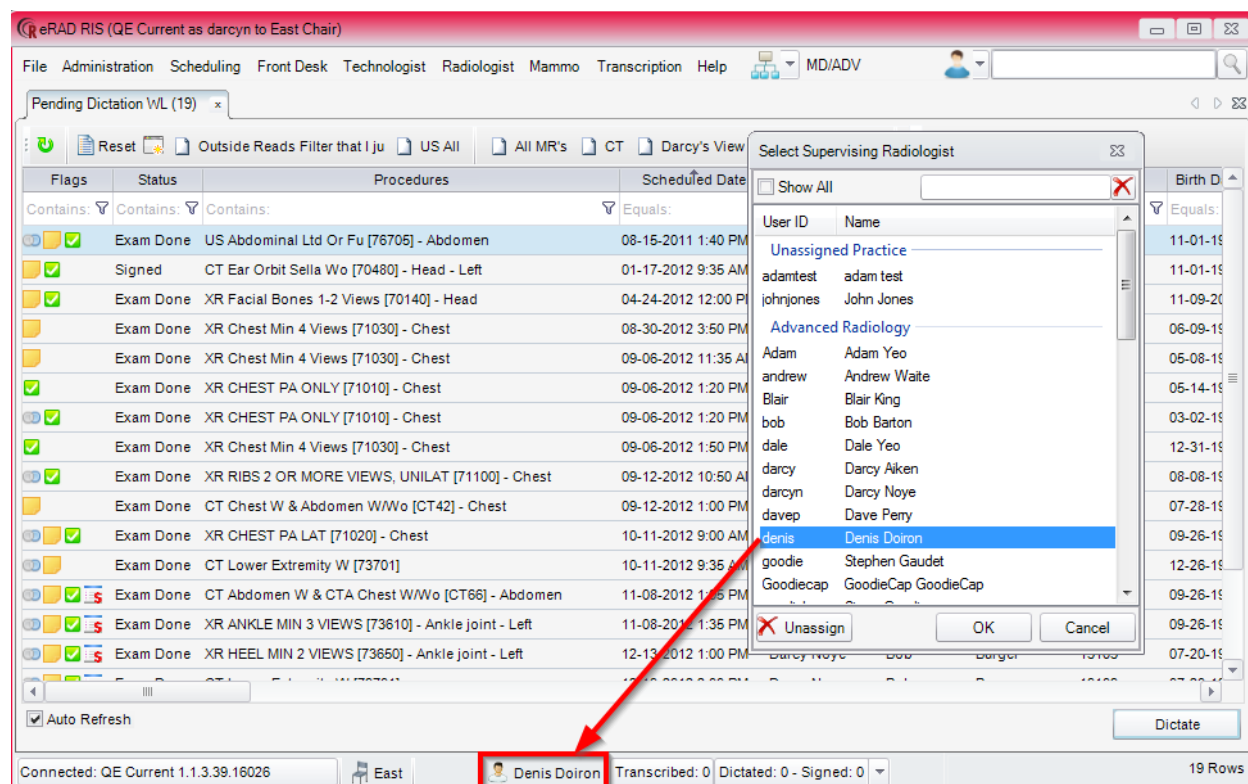
## **RADNET, Inc. – eRAD RIS Server Update**

- 1.) Enable signing at lesser values** (Default OFF): This allows the user to be able to sign at less than his specified maximum level for the current study. What this mean is if this user is allowed final signature on a study, he would still have the options to contribute A or B. Disabling this option will clean up the gui by removing these items from his drop down “Sign” button.
- 2.) Show supervising radiologist’s pending dictation** (Default OFF): This allows the user to decide if items assigned to the supervising radiologist will appear in his Pending Dictation WL. If this is false, items assigned to the supervising radiologist would then have to be assigned to his RPA/fellow radiologist to be worked. If this is on then the RPA/fellow radiologist would see them in his work list automatically.
- 3.) Supervising Radiologist:** This identifies who the user will normally be working for when logging into eRad Ris. This value will not be affected by the picker in the main screen.
- 4.) Default to Supervising Radiologist’s Templates** (Default OFF): This determines what user will be used to filter the “Template” browser when a study is opened. If this is off the the current user will be used, as normal. If this is on the supervising radiologist assigned will be used.
- 5.) Default to Supervising Radiologist’s Macros** (Default OFF): This determines what user will be used to filter the “Macro” browser when a study is opened. If this is off the current user will be used, as normal. If this is on the supervising radiologist assigned will be used.

### **Supervising Radiologist Control:**

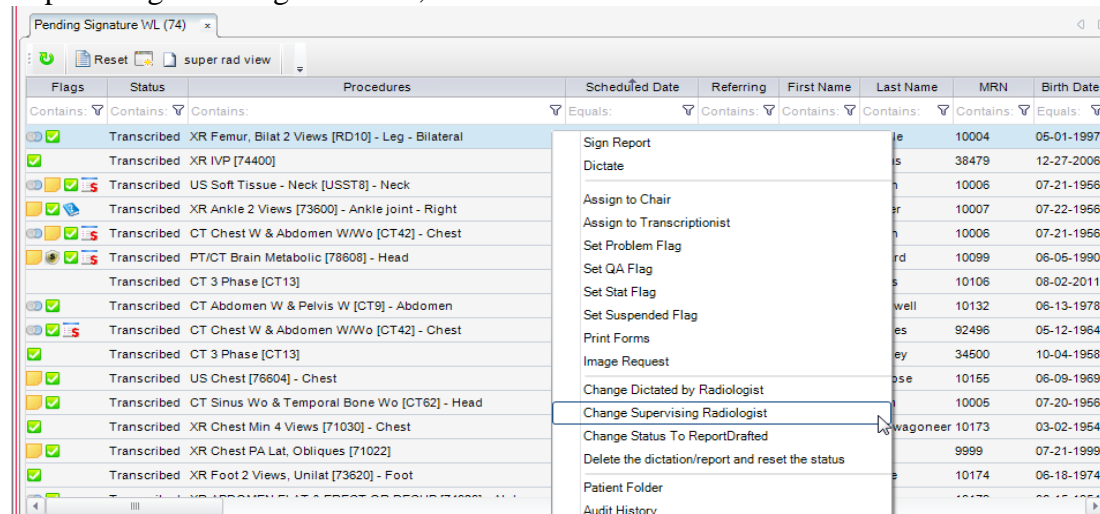
This refers to the control in the status area of eRad Ris which shows the currently assigned Supervising Radiologist. It also allows changing this value for the session. Clicking on this item will show the “Supervising Radiologist Picker”.

## RADNET, Inc. – eRAD RIS Server Update



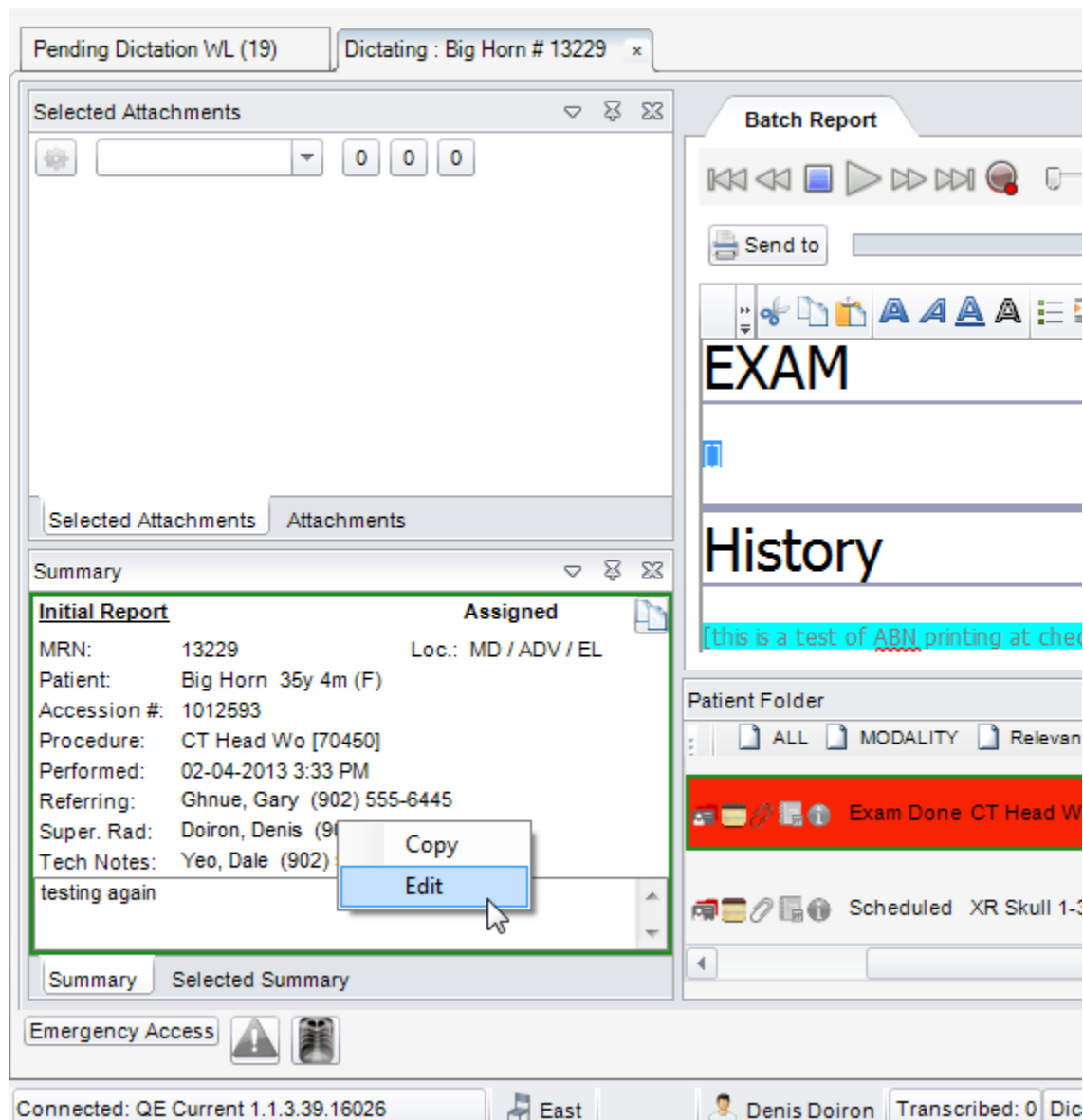
**Figure 1.5 – Select Supervising Radiologist window opened from the control on status bar**

The value here identifies which Radiologist the user is working for, and will insert this value into every report the user dictates, assuming the study didn't already contain a different value. This will only be used on NEW dictations. Previously dictated studies will keep the value they were created with unless it is manually changed using the work list's context menu. If the user has "Show supervising radiologist's pending dictation" turned on, when he changes the value in this Supervising Radiologist control, it will refresh the work list with this new value.



**Figure 1.6 – Context menu option to change supervising radiologist**

## **RADNET, Inc. – eRAD RIS Server Update**

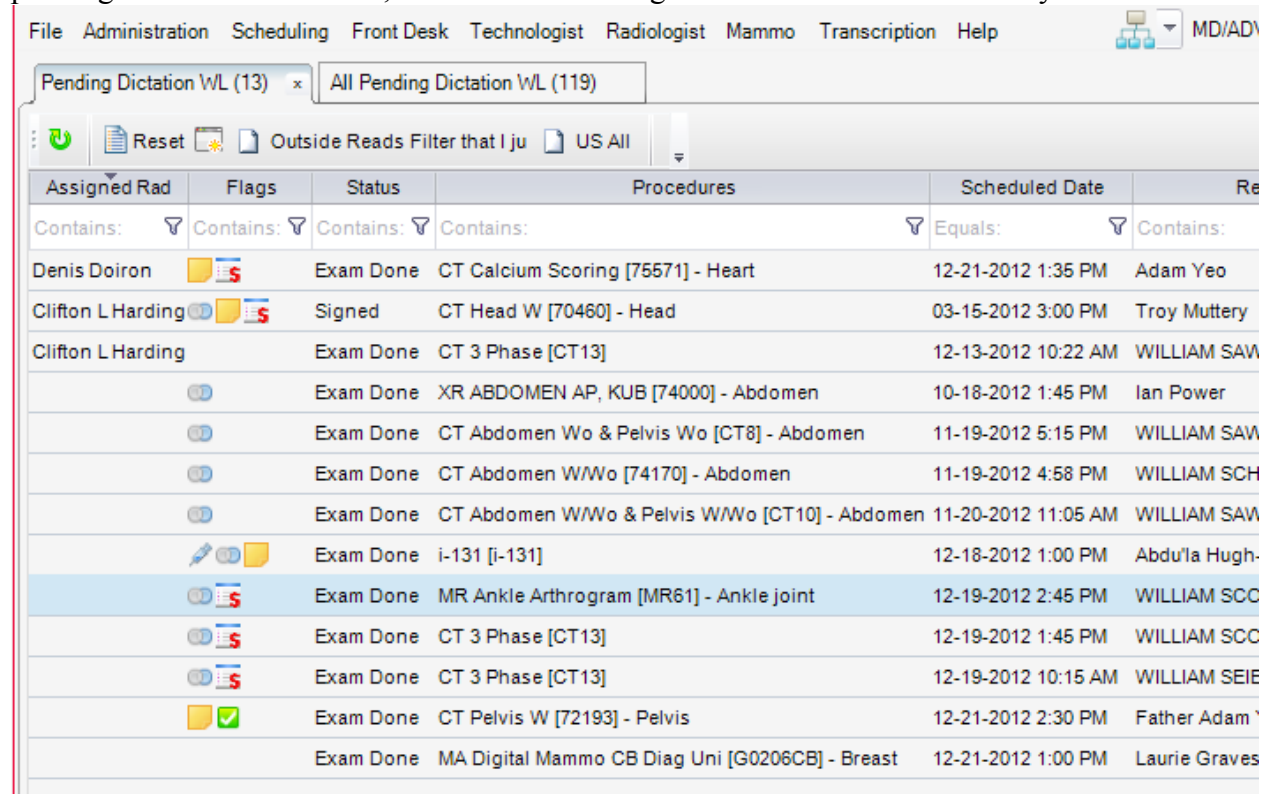


**Figure 1.7 – Context menu from Summary allows changing supervising radiologist**

The radiologist can also change the supervising radiologist from within the reporting window. From within the summary pane, hover the mouse pointer over Super. Rad: and from a right click select Edit. This will also open the Select Supervising Radiologist window.

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I am currently set up to see my supervising radiologists assigned pending dictation items. Here is a screen capture of my pending dictation worklist. If I had “Show supervising radiologist’s pending dictation” turned off, then Clifton Harding’s items wouldn’t show on my worklist.

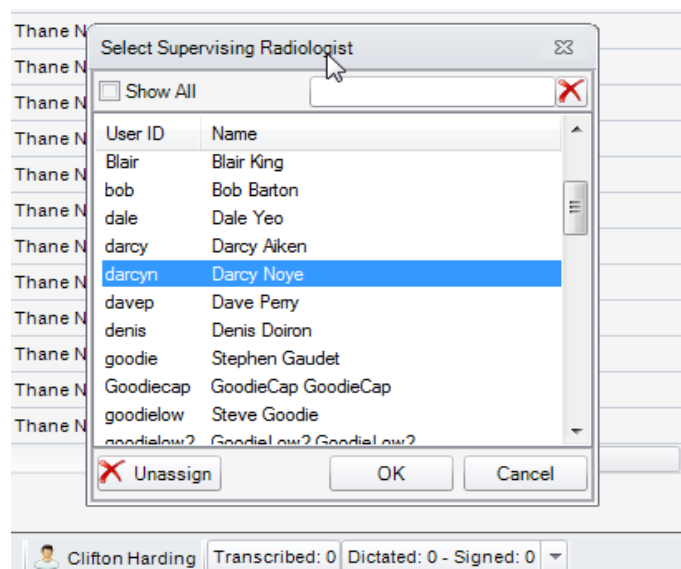


Assigned Rad	Flags	Status	Procedures	Scheduled Date	Re
Contains: ▼	Contains: ▼	Contains: ▼	Contains: ▼	Equals: ▼	Contains: ▼
Denis Doiron		Exam Done	CT Calcium Scoring [75571] - Heart	12-21-2012 1:35 PM	Adam Yeo
Clifton L Harding		Signed	CT Head W [70460] - Head	03-15-2012 3:00 PM	Troy Muttery
Clifton L Harding		Exam Done	CT 3 Phase [CT13]	12-13-2012 10:22 AM	WILLIAM SAV
		Exam Done	XR ABDOMEN AP, KUB [74000] - Abdomen	10-18-2012 1:45 PM	Ian Power
		Exam Done	CT Abdomen Wo & Pelvis Wo [CT8] - Abdomen	11-19-2012 5:15 PM	WILLIAM SAV
		Exam Done	CT Abdomen W/Wo [74170] - Abdomen	11-19-2012 4:58 PM	WILLIAM SCH
		Exam Done	CT Abdomen W/Wo & Pelvis W/Wo [CT10] - Abdomen	11-20-2012 11:05 AM	WILLIAM SAV
		Exam Done	i-131 [i-131]	12-18-2012 1:00 PM	Abdu'la Hugh-
		Exam Done	MR Ankle Arthrogram [MR61] - Ankle joint	12-19-2012 2:45 PM	WILLIAM SCC
		Exam Done	CT 3 Phase [CT13]	12-19-2012 1:45 PM	WILLIAM SCC
		Exam Done	CT 3 Phase [CT13]	12-19-2012 10:15 AM	WILLIAM SEIE
		Exam Done	CT Pelvis W [72193] - Pelvis	12-21-2012 2:30 PM	Father Adam '
		Exam Done	MA Digital Mammo CB Diag Uni [G0206CB] - Breast	12-21-2012 1:00 PM	Laurie Graves

**Figure 1.8 – Assigned Rad’s studies appear in my pending dictation work list when that Rad is my supervising radiologist**

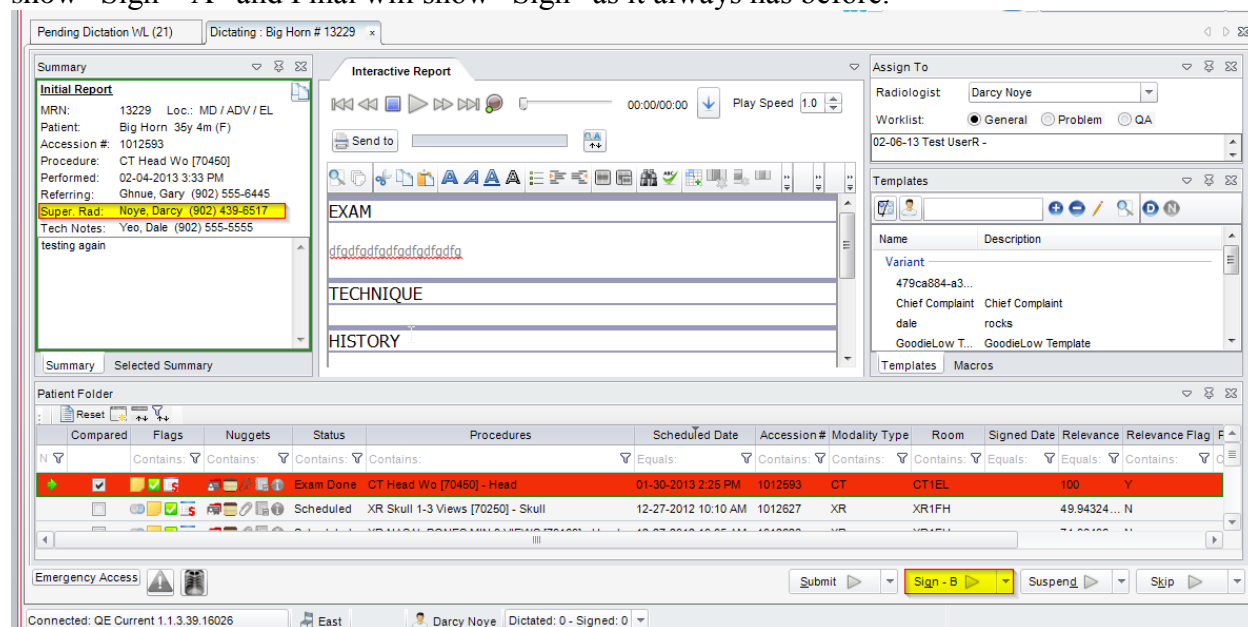
Since I am not working for Clifton today, I will click on the “Assigned Radiologist” control and change my supervising radiologist to “Darcy Noye”. This automatically refreshes my worklist and will show items assigned to “Darcy Noye”.

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**Figure 1.9 – Assign a different Supervising Radiologist**

I now select to “Dictate” a study. Things to notice on this new screen are the Supervising Radiologist listed in the Summary panel, and the Sign button, which shows what level signature I am on. This is indicated like so: Contribute B Level will show a “Sign – B”, Contribute A will show “Sign – A” and Final will show “Sign” as it always has before.



**Figure 1.10 – Dictate window displaying my Supervising Radiologist and my signing level**

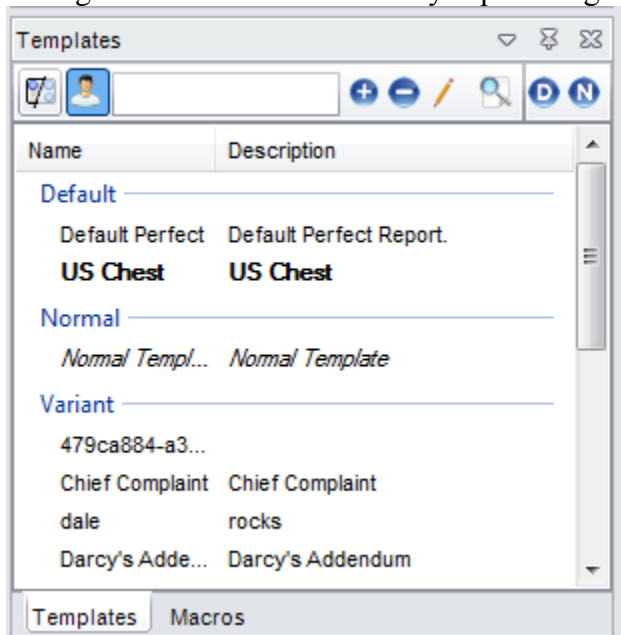
I dictate the study. I select Sign B. The study is transcribed. It will now appear in the Pending Signature work list and the Supervising Dictation work list of the user who I have assigned as my Supervising Radiologist. It will also appear on the All Pending Signature worklist.



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It is possible to have it go through 2 different Supervising Radiologists. If I read for Rad A, who read for Rad X then when I signed it (level B) it would go to Rad A for signature, then when Rad A signs it, it will then go to Rad X for final signature.

When I open a screen to dictate, my templates / macros will load based on my “Default to Supervising Radiologist’s Templates” and “Default to Supervising Radiologist’s Macros” settings. If it is on it will show my supervising rads, and if it’s off it will show mine.



**Figure 1.11 – Templates loaded as my Supervising Radiologist**

This initial load will determine which default template gets inserted automatically in the report. Once the screen is loaded I can toggle between mine and his using the toggle button shown in the image on the right.

The button to the left of the supervising radiologist will toggle the “Show All” functionality. This was a check box control, now for real estate issues it is a toggle button as well. This show all option simply removed the procedure code from the equation, and will show templates for a procedure code that are accessible to me.

Based on what template I used to populate the report, the related user id will be saved to the interpretation row so that the system can then reopen the study using this user id as a filter for the templates. This allows future edits to display a template list that actually contains the template used to dictate. This is important for MT workflow.

Although macros work the same way, we don’t save anything to the database for these, only the templates we track. We will still open the Macro filtered based on the template though.

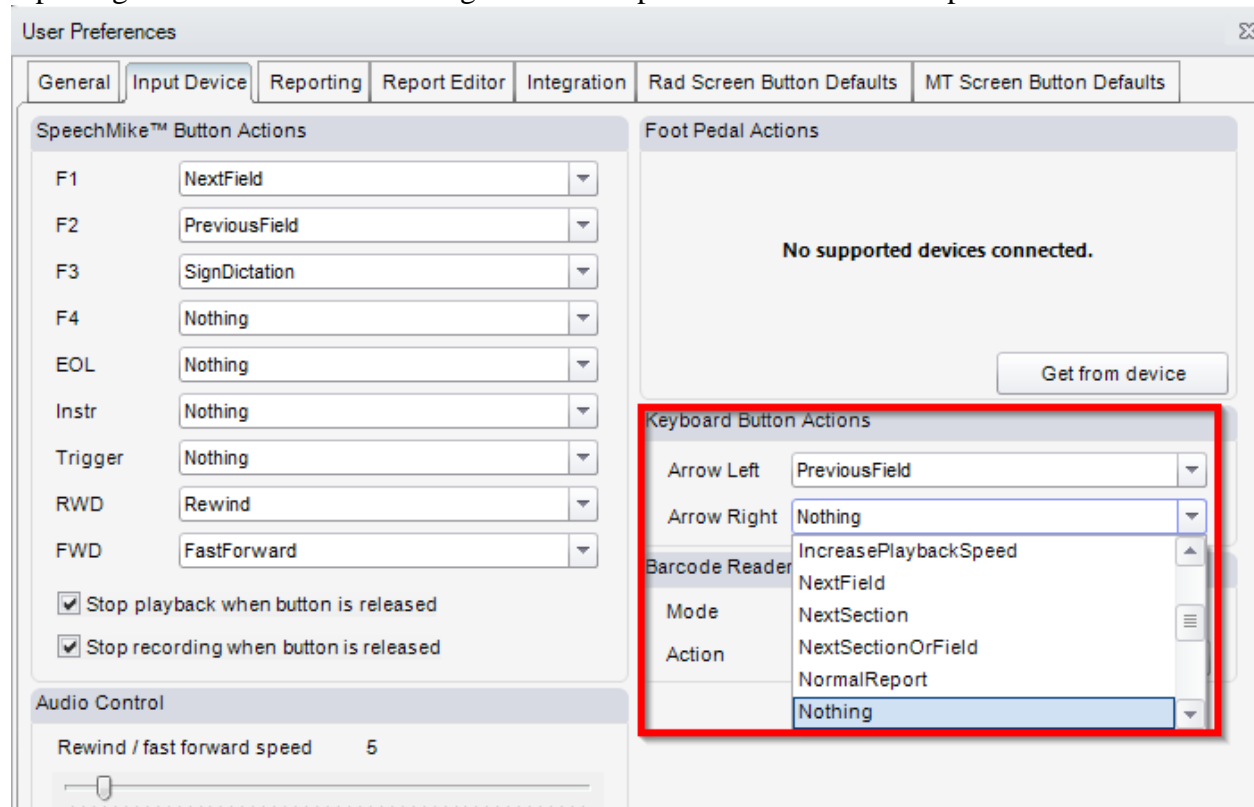


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\*\*If a study is Signed A or Signed B and the signing radiologist did not have a supervising radiologist assigned or if the supervising radiologist does not have the appropriate signing level for that study, the study moves to transcribed status, it won't appear on a Pending Signature Worklist nor the Supervising Dictation work list. The study then must be accessed from the All Pending Signature wl by an admin and from here a supervising radiologist can be assigned. The who signed A or B will also be able to access the study from their Dictated by Date work list. This could happen if a supervising rad didn't have the required signature level for the study type. Or if a rad dictates studies without having a supervising radiologist selected.

### **Reporting - Keyboard Shortcuts for Reporting Window**

The right and left arrow keys on the keyboard can now be mapped as functional keys within the reporting window. These are configured as user preferences under the Input Device tab.

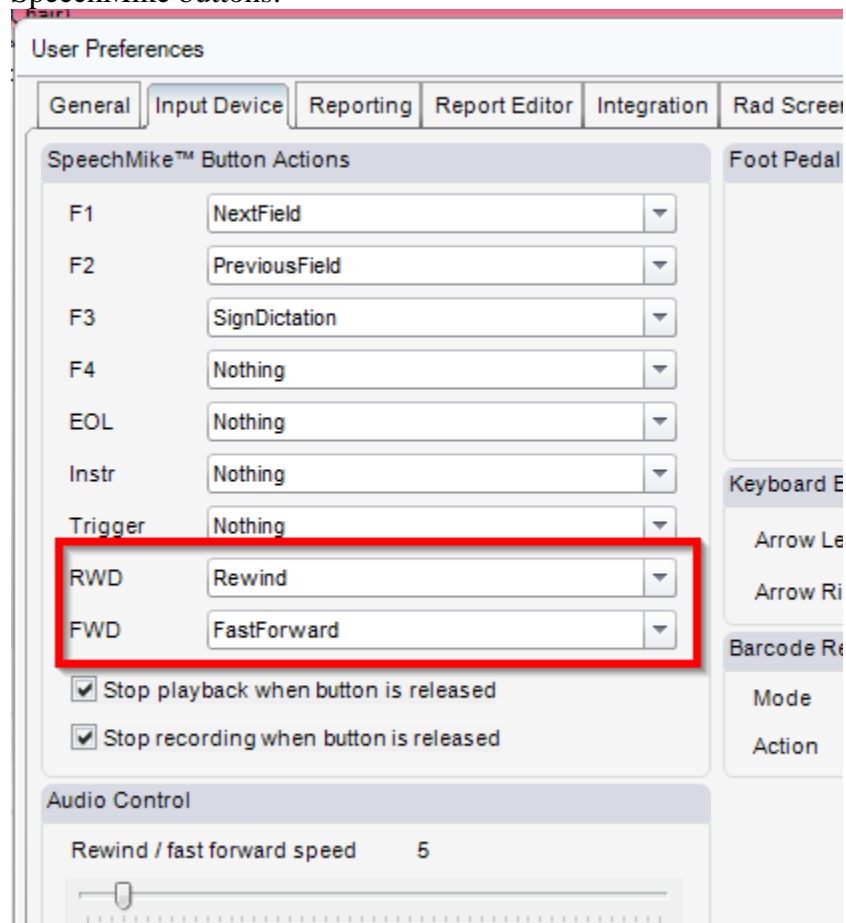


**Figure 1.12 – Keyboard arrow button actions as user preferences**

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### **Reporting – Additional buttons for mapping on SpeechMike**

The rewind and fast forward buttons can now be mapped to serve a different purpose in the reporting window. Also the options for “Rewind” and “FastForward” can be mapped to the other SpeechMike buttons.



**Figure 1.13 – New SpeechMike buttons to allow mappings**

### Side by Side registration – Eliminate Core Install Requirement

The elimination of the core install is desirable because of the time consuming task of completing an upgrade when every work station needs personnel action. Also, administrators who are managing different practices with different versions would not need to constantly run the core install for the different versions.

Going forward from Build 39, users will be able to switch between versions simply by selecting the environment from the eRAD RIS login window.



Figure 1.14 – eRAD RIS login displaying the ability to switch between versions without core install

**NOTE:** because of the core version number associated with Build 38 and 39 are different this feature will not allow going back to earlier versions before 39. The users will still need to run the core install to change between Build 39 and earlier versions.

Below is the explanation of how this was achieved.

To resolve we introduced side-by-side registration of the libraries requiring registration in the application. This document isn't going to explain what side-by-side registration is fully. In short most application that require a registered dll will look to windows for the registered version

## **RADNET, Inc. – eRAD RIS Server Update**

which could be located anywhere on the file system and re-registering would/could change the version everyone points to. Side-by-side will simply use the library located next to executable. So in our application we will use the libraries in the same folder as the ris.exe program.

To make this happen we first have to tell the ris.exe application that it should look in the same directory and use this type of reference instead of the previous method. To do this need to include a manifest file and tell the application to use this manifest file when running.

To create a side-by-side manifest file you need to include a reference to the library file. You then must set the isolated property to true so the manifest gets created properly. In our case that would be the SpMikeCtrl.dll, AnyModalEditCtrl2.dll, and AnyModalCaptureCtrl.dll file. This posed a couple problems as our application references the interop versions of these files and doing so would create some crazy reference compilation issues.

So we cleverly created a sample windows application, added the library references (3), set the isolated property to true and built the application. The build created a manifest file called “WindowsFormsApplication1.exe.manifest”. If we inspect this file we can see the three libraries and a bunch of stuff. We rename this file to “ris.exe.manifest” and included it in our MainApp project as a file reference.

So at this point we have created our manifest file and placed it in root directory of our MainApp project. Ensure the application uses the manifest file by altering the properties of the project application manifest drop down to point appropriately.

Now we have setup our application to use the manifest created in the other application. We previously had file references in the MainApp project to include AnyModalEditCtrl2.dll and AnyModalCaptureCtrl.dll so we had to add SpMikeCtrl.dll as a file reference also that copies to the build directory.

To complete the task we need to change how we deploy the application. Currently we only put a limited number of files in the zip folder for deployment. These files in the zip can be updated and will automatically be copied to the client PC when changing builds or upgrading. So as we previously relied on the core setup to include the libraries and the supporting files for the libraries we now need to include these in the zip file also.

This will create a much larger zip file and include many more files. Not great but it will allow us to switch from one version to another without installing which is worth it. We also had to consider that this larger zip file is only downloaded once per version or hotfix not everytime we switch. As long as the local copy is up-to-date we will not download it again.

## **2. New Access Stings and Configuration Settings**

Setting Placeholder	Setting	Default	Controls Access to
SystemConfig lookup	ContributeAEnabled	False	Determines in contribute A is available to use on the system.
SystemConfig lookup	ContributeBEnabled	False	Determines in contribute B is available to use on the system.
SystemConfig lookup	BypassSignedQAWorkflow AfterCorrection	False	Determines if a Signed QA study is rejected, it is excluded from the QA workflow when corrected and signed again
AccessString lookup and UserGroupPermission Lookup	Config.LookupEditor.RadSignLevel	None	Controls access to the Lookup table RadSignLevel
AccessString lookup and UserGroupPermission Lookup	WL.Rad.SupervisingDictation	None	Controls access to the Supervising Dictation menu option under Radiologist menu

### 3. Defects resolved

Redmine #	Subject	Priority
2963	Resend for recognition not resetting template applied to draft variable	Immediate
2959	River Ranch - when multiple MR Arthrogram and FL Arthrogram procedures exist for a patient, the 'Exam Information' show all FL Arthrogram Shoulder studies	Urgent
2929	River Ranch - New & Cloned radiologists are not appearing in the 'Assigned Radiologist' dropdown	Urgent
2904	HL7 messages are changing study status back in the workflow post-ExamDone	Urgent
2958	Templates loading for wrong user when dictating in batch mode.	High
2957	Apply template to draft firing when it shouldn't	High
2950	Multiple signature - can't sign a report that was dictated by another rad	High
2923	Error attempting to view locked study in read-only mode	High
2910	Template/Macro editor, NewField inserts.	High
2898	Verify and continue does not work.	High
2846	Reporting - radiologist pending release worklist not showing reports in QA status	High
2824	Reporting - rejected reports should never go back to QA after signing again	High
2978	Date worklists where criteria looks at USERID	Normal
2955	Reporting - Status counts including action pending and action complete for radiologists	Normal
2928	River Ranch - HL7 Translation into RIS	Normal
2925	Dictated by user id and date not getting updated	Normal
2924	Transcribed by user id populated with Rad user	Normal
2911	BI-RADS control not defaulting recommendations properly and has some display issues	Normal
2895	QA Workflow - All Signed Pending QA worklist tab not consistent with menu	Normal
2888	Mammo Reporting - BI-RAD picker text does not display properly	Normal
2887	Mammo Reporting - Default recommendation not selected if study had previous birad / recommendation selected	Normal
2886	Reporting - Volume meter missing	Normal
2881	Reporting - User preference Bring RIS To Front not working	Normal
2879	Reporting - Delete dictation and report exception if quality review table has an entry	Normal

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2870	MU - electronic access to health information measure	Normal
2866	Minimized dictation mode hiding Sign message box	Normal
2849	xKeys integration broken	Normal
2744	null exception when attempting to show/hide titlebars on report document	Normal
2730	Change dictating radiologist loading assigned rad as initial value.	Normal
2686	no prompt for no screen actions when multiple rows were selected and the action is only a single row action	Normal
1714	CDSInteractive hanging when multiple hyphens are inserted.	Normal

## **4. Package Contents**

Files included for this server update:

1. GUI ZIP Updates folder contains
  - a. rRIS\_1.3.39.15943.zip
2. rRISCore folder contains:
  - a. rRisSetup.msi
  - b. setup.exe
3. RIS Service Updates folder contains
  - a. CDSJobManager.pdb
  - b. CDSJobManager.dll
  - c. CommonLib.pdb
  - d. CommonLib.dll
  - e. DDEngine.pdb
  - f. DDEngine.dll
  - g. rRISServices.pdb
  - h. rRISServices.exe
  - i. rRISServices.vshost.exe
  - j. ScheduledTaskManager.pdb
  - k. ScheduledTaskManager.dll
  - l. SignatureApprovalService.pdb
  - m. SignatureApprovalService.exe
  - n. WCFService.pdb
  - o. WCFService.dll
  - p. WebApi.pdb
  - q. WebApi.dll
  - r. Wedge.pdb
  - s. Wedge.exe
4. SQL folder contains:
  - a) B39\_001.sql
5. MirthMappings folder contains:
  - a. Inbound\eRAD\08\_c\_interpretation\_html.js
  - b. Inbound\ORDPLC\06\_c\_order.js



## **5. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

## **6. Who is affected**

Build 39 installs. This server update must be applied directly to the build 39 core install.

## 7. eRAD RIS Release Version Numbers

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	Full version release
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	Core install, GUI.zip, web service and database updates
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	GUI.zip and Web service updates
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	GUI.zip, web service, and database updates
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	GUI.zip and Web service updates
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	GUI.zip and Web service updates. Also MIRTH mapping changes
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	Web service update
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	Web service update
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	GUI.zip, Web service and database updates
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	GUI.zip, Web service, database updates and SQL Management reporting
37	12	1.2.37.14267	1.2.37.13040	1.2.37.14161	1.2.37.14267	GUI.zip, Web service and database updates
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	GUI.zip, Web service and database updates
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	Full version release
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	Core install required
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	GUI.zip and Web service updates
38	5	1.2.38.15513	1.2.38.14748	1.2.38.15513	1.2.38.15451	GUI.zip, Web service and database updates
38	6	1.2.38.15618	1.2.38.14748	1.2.38.15513	1.2.38.15618	GUI.zip and database updates
38	7	1.2.38.15768	1.2.38.14748	1.2.38.15768	1.2.38.15618	GUI.zip and Web Service updates
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	Requires Core Install. GUI.zip, Web Service, and Database updates

## 8. Installing

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.2.39.16026.zip file provided with this release. The previous GUI.zip should have been renamed to rRIS\_1.2.39.15389. Be sure to make a backup of the ris.exe.config file contained within the .zip folder.
- 2) Copy and replace the setup.exe file and the rRisSetup.msi files from the \_setup folder to the Build\core\\_setup folder.
- 3) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config and rRISServices.vshost.exe.config files.  
*rRISService directories include:*
  - a) *rRISService*
  - b) *CDS rRISService*
  - c) *Wedge rRISService*
  - d) *DDE rRISService*

Restart each service.

- 3) Run the B39\_001.sql file against the eRAD RIS database instance.
- 4) MirthMappings:

The sites current MirthMapping files may already have custom configurations applied. Replacing with the files supplied with this server update may overwrite any custom configurations.

Please contact eRAD RIS Development before copying or making changes to the MirthMapping files.

# **User Release Notes**

for eRAD RIS  
Version 1  
Build 40

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## **1. Purpose**

This document describes some of the new features and changes implemented in eRAD RIS as of the end of Sprint 39. This version of eRAD RIS is referred to as Build 1.3.40.

Only features which can be visually demonstrated to the user will be outlined in this document.

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS management team.

## **3. Installing/Accessing the Application**

The installation guide for the eRAD RIS client have been posted to the RadNet Wiki page at <http://mdbal01rdtweb/Wiki/>

Under the RIS menu click on the rRIS page. The credentials to access the page are:

Username: rRIS

Password: Summerside

*Please note that Build 1.40 is considered a new core release of the application and will require a reinstallation of eRAD RIS. This is accomplished by navigating to the eRAD RIS shared installation drive and running the CoreInstall.bat file (ex: I:\RISDeployment\CoreInstall.bat)*

If you experience difficulties accessing the application please do not hesitate to contact Darcy Noye with the PEI RIS Development Team.

## 4. New Access Strings and Configuration Settings

Setting Placeholder	Setting	Default	Purpose / Controls Access to
Access string / User Group Permission tables	Clinical.Rad.AssignToRadiologistDropDown	Full	Controls access to the Assign To – Radiologist list box in reporting window
Access string / User Group Permission tables	Config.LookupEditor.ReferringPractice	None	Controls access to the Referring Practice lookup table
Access string / User Group Permission tables	Clinical.ManuallyResolveMammoFollowUp	Full	Controls access to the window that is displayed to select a reason when Follow Up Resolved check box is selected
Access string / User Group Permission tables	Clinical.Schedule.AssignRadiologist	Full	Controls access to the Assign Radiologist feature in the New Appointment and Registration windows
Access string / User Group Permission tables	Clinical.ReadPreCertNotes	Full	Allow the user to read preCert and verification notes on non-IVT screens
SystemConfig lookup	MaxWorklistItem	500	Value will be the max number of rows to display on a work list
Ris.exe.config	<p>BEFORE:</p> <pre>&lt;startup&gt;   &lt;supportedRuntime     version="v4.0"     sku=".NETFramework,Version=v4.0" /&gt; &lt;/startup&gt;</pre> <p>AFTER:</p> <pre>&lt;startup useLegacyV2RuntimeActivationPolicy="true"&gt;   &lt;supportedRuntime     version="v4.0"     sku=".NETFramework,Version=v4.0" /&gt; &lt;/startup&gt;</pre>	N/A	<p>Addition to start up added for sites that will be using PACS IW Integration.</p> <p>(useLegacyV2RuntimeActivationPolicy="true")</p>





## 5. New Features and Enhancements

### Reporting – Auto rewind functionality on play back

The auto rewind functionality has been added for transcription users. This is controlled by a new user preference “Rewind <value> seconds on play-back. The default is 0 with a maximum of 10.

The screenshot shows the 'User Preferences' dialog box with the 'Input Device' tab selected. The 'Audio Control' section is visible, containing a slider for 'Rewind / fast forward speed' set to 5, and two checkboxes: 'Enable rewind / fast forward play-back' and 'Resume play-back after rewinding'. Below these is a text field 'Rewind 0 seconds on play-back' which is highlighted with a red box. The 'SpeechMike™ Button Actions' section on the left lists various buttons (F1-F4, EOL, Instr, Trigger, RWD, FWD) and their assigned actions. The 'Foot Pedal Actions' section on the right shows 'No supported devices connected.' and a 'Get from device' button. The 'Keyboard Button Actions' section shows 'Arrow Left' and 'Arrow Right' both set to 'Nothing'. The 'Barcode Reader Action' section shows 'Mode' set to 'Keyboard text' and 'Action' set to 'PatientSearchOnMrnNumber'.

Figure 5.1 – New user preference to set rewind play-back in seconds

The new preference is located on the input device tab under Audio Control section.

## Reporting – Resume play-back after rewinding

A new user preference “Resume play-back after rewinding” has been added on the input device tab under Audio Control section.

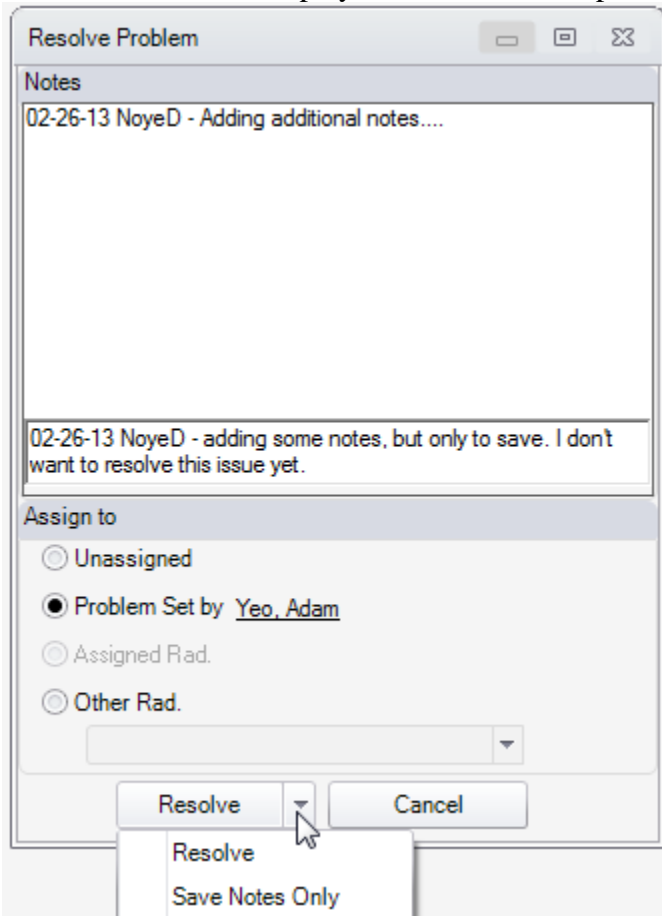
The screenshot shows the 'User Preferences' dialog box with the 'Input Device' tab selected. The 'Audio Control' section is visible, containing a slider for 'Rewind / fast forward speed' set to 5. Below the slider are two checkboxes: 'Enable rewind / fast forward play-back' and 'Resume play-back after rewinding'. The 'Resume play-back after rewinding' checkbox is highlighted with a red box. Below these checkboxes is a 'Rewind' field set to 0 seconds on play-back. The 'SpeechMike™ Button Actions' section on the left lists various buttons (F1, F2, F3, F4, EOL, Instr, Trigger, RWD, FWD) with their corresponding actions. The 'Foot Pedal Actions' section on the right shows 'No supported devices connected.' with a 'Get from device' button. The 'Keyboard Button Actions' section shows 'Arrow Left' and 'Arrow Right' both set to 'Nothing'. The 'Barcode Reader Action' section shows 'Mode' set to 'Keyboard text' and 'Action' set to 'PatientSearchOnMrnNumber'.

Figure 5.2 – New user preference “Resume play-back after rewinding”

When enabled (checkbox selected), if the transcription user rewinds a part or all of the dictation, it will automatically begin play back. When disabled it will behave as before and the user will need to initiate the play back.

## **Reporting – Save notes in problem work flow**

Studies that are on the problem work list could not have notes added without resolving the problem, which would remove the study from the Problem work list. To fix this issue, the resolve button has a drop list addition with a new option to “Save notes only”. The notes field displays in a similar fashion to other notes fields within the applications (Ex: patient notes). The date stamp and users last name first initial are displayed for the notes being added. Additionally historical notes will display with the date stamp and user who entered the comment.



**Figure 5.3 – Displaying new option to “Save notes only” for studies on problem work list.**

Select the Save Notes Only option will close the Resolve Problem window and return the user to the work list and the study will remain on the Problem work list

### Reporting – Open at end of dictation

In previous builds of eRAD RIS, if a batch dictation user re-opened a study to add additional dictation, the window would open at the start of the dictation. The user would need to go the end of the dictation manually.

For batch dictation users a user preference “Open at the end of dictation (non interactive only)” has been added to allow them set if the dictate window opens at the start or end for studies that already have a dictation.

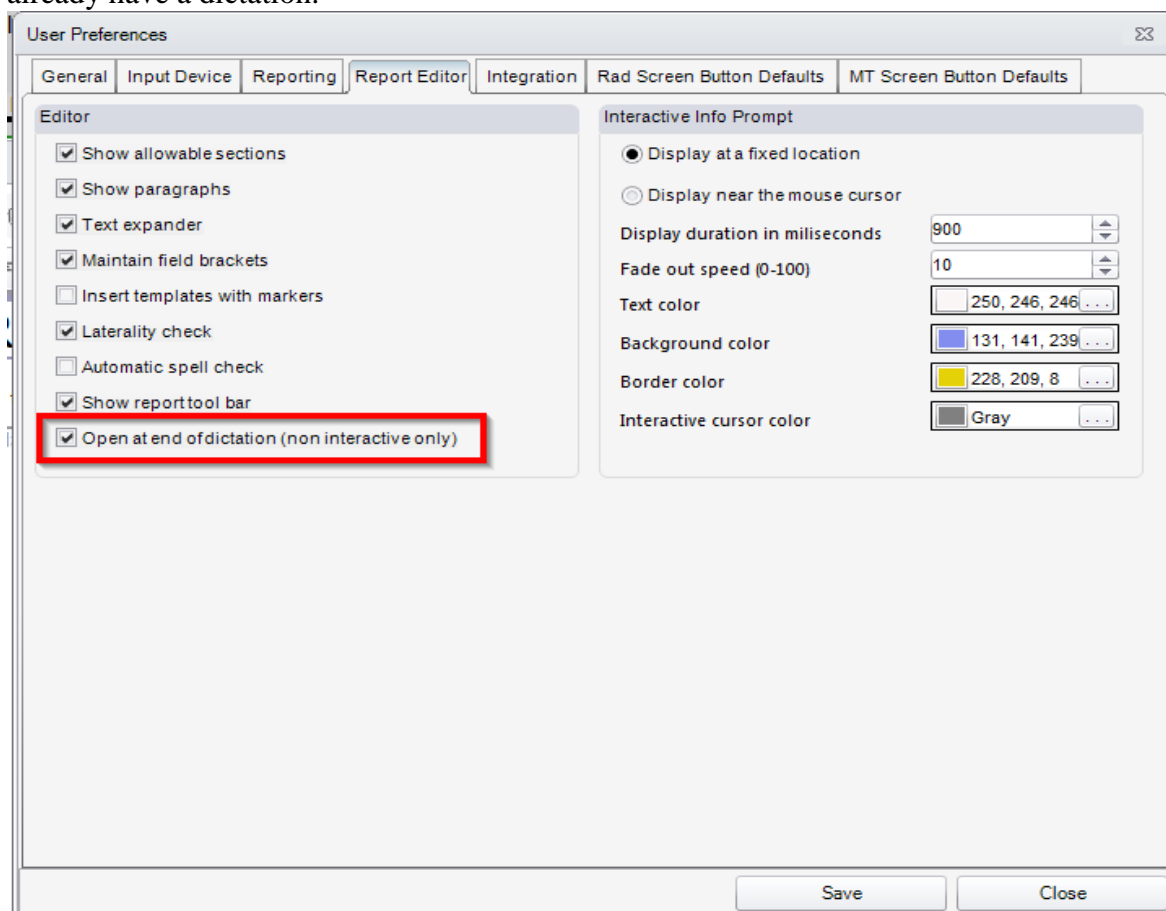


Figure 5.4 – New user preference “Open at end of dictation (non interactive only)”

When this preference is enabled (checkbox selected) when a study that already has a dictation recorded via batch mode is opened in the dictate window, it will be defaulted to the end of the dictation. If disabled it works as before and will open at the start of the dictation.

## Assign to Radiologist permission

Within the reporting window, we have a data pane “Assign To”. In the “Assign To” data pane there is a list box to assign to a particular radiologist. This field was available to all user groups. To control access, the access string “**Clinical.Rad.AssignToRadiologistDropDown**” has been added in this build to restrict who can use this field.

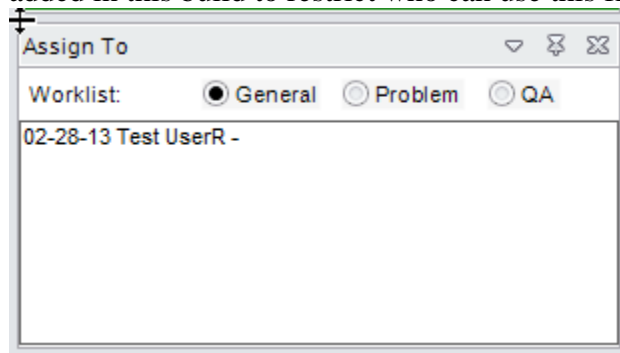


Figure 5.5 – Clinical.Rad.AssignToRadiologistDropDown = none

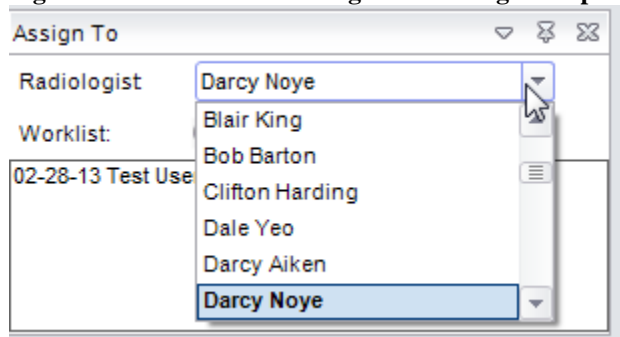


Figure 5.6 – Clinical.Rad.AssignToRadiologistDropDown = full

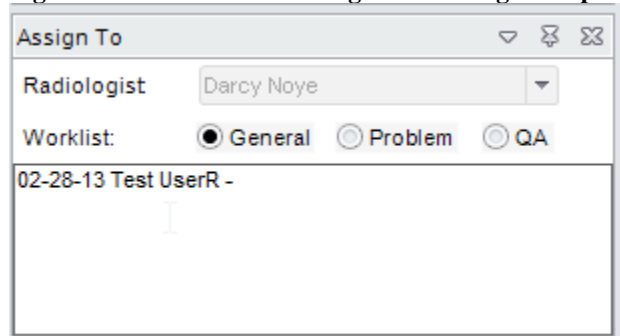


Figure 5.7 – Clinical.Rad.AssignToRadiologistDropDown = read only / disabled

## Scheduling – Existing orders prompt

When creating a new appointment or walk in schedule, the patient name is entered into the first / last name fields and a search is performed. If the patient entered is an existing patient with orders or short term follow orders, the user will be prompted with the “Existing Orders” window. The “Existing Orders” window allows the user to select a pre-existing order to schedule instead of continuing with the current new appointment.

The user also has the option to select multiple existing orders to schedule instead of the current new appointment, or the user can choose to continue creating the new appointment with the current and add additional existing orders to be scheduled.

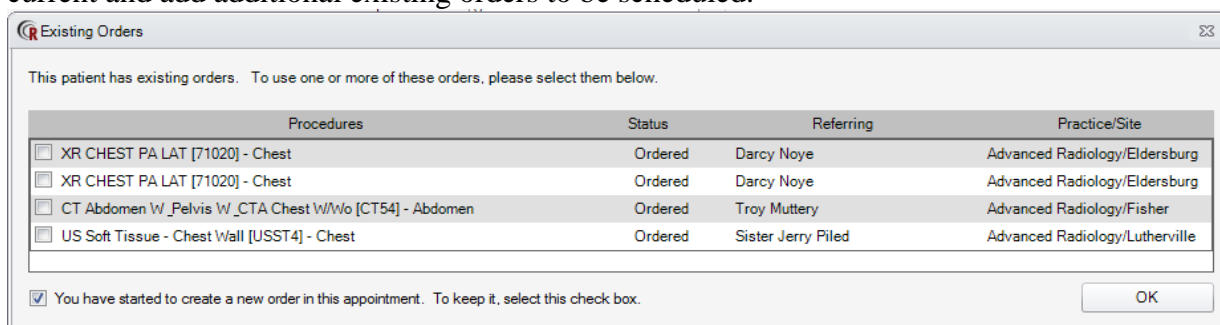


Figure 5.8 – Existing orders window

The “You have started to create a new order...” check box is selected by default when the window opens. If this is unchecked, the initial order will be destroyed, but to close (select OK button) the Existing Order window a one of an existing order or the current order must be selected.

If the new appointment window is opened from the patient folder, we assume that you want to create a new order / schedule. The Existing Orders window is still presented but the option to exclude the current new appointment is not available.

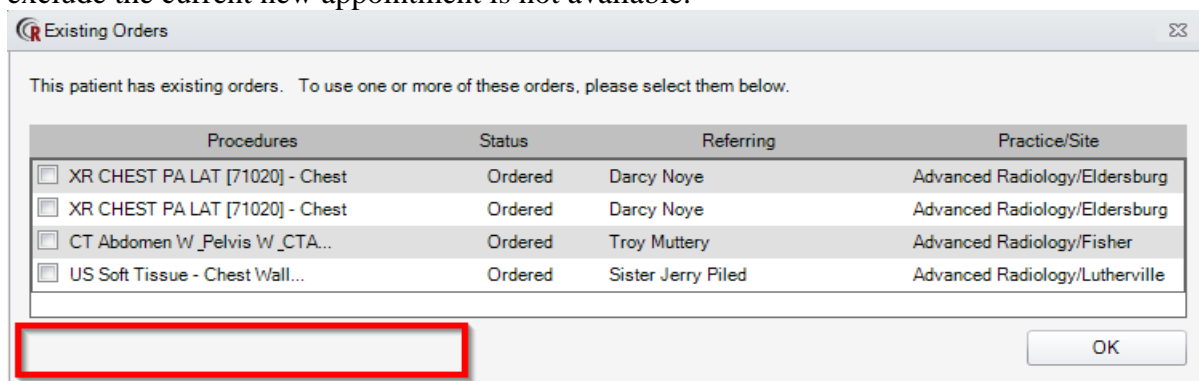


Figure 5.9 – Existing Orders window presented from patient folder.

## Registration – IVT Info Provided

The registration window now displays a read only PreCert status. The column was added to the existing billing code grid on the Exam tab.

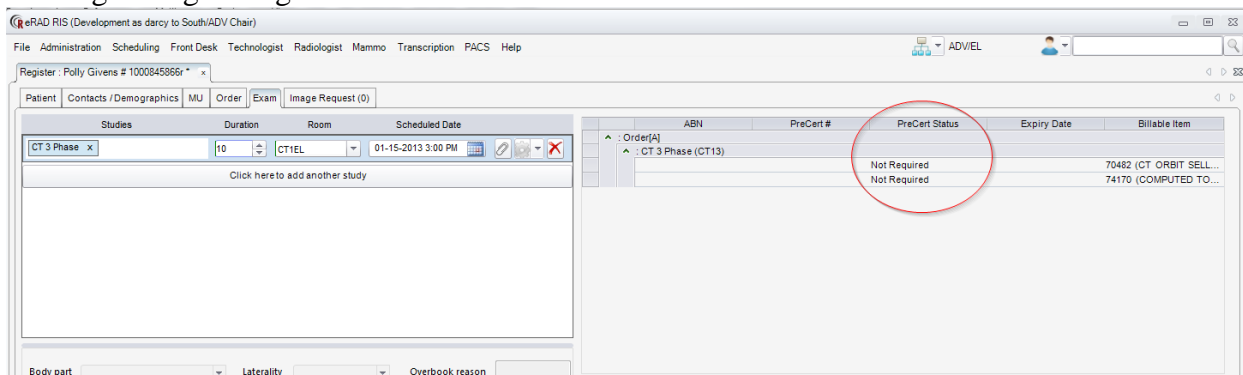


Figure 5.10 – PreCert status in registration

An IVT Notes button was added to the Insurance Policies Grid. The expected behavior of the button is as follows:

1. If the parent screen is IVT, the button should be invisible
2. If the current exam(s) do not have notes, the IVT Notes button is disabled
3. If the user does not have permissions (**Clinical.ReadPreCertNotes**) to see IVT Notes, the button is disabled
4. If there is only one open order, display the notes on a pop-up window
5. If there are two open orders (e.g. Order[A], Order[B]), show “Order[A]” and “Order[B]” with the notes for each grouped under a header.
6. The IVT Notes button should be disabled when scheduling a new order.

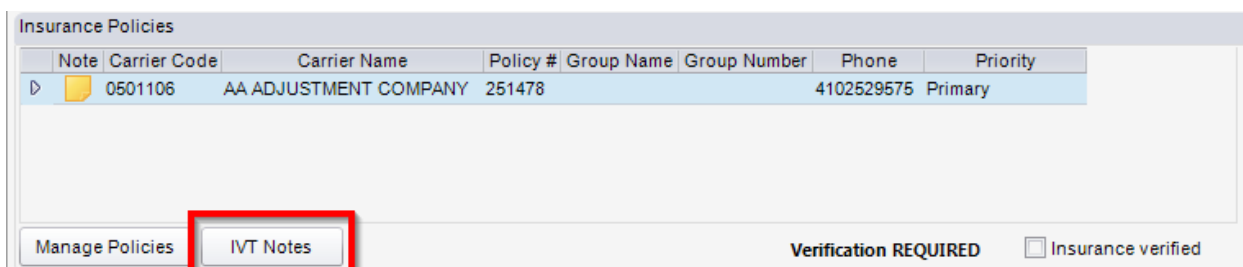
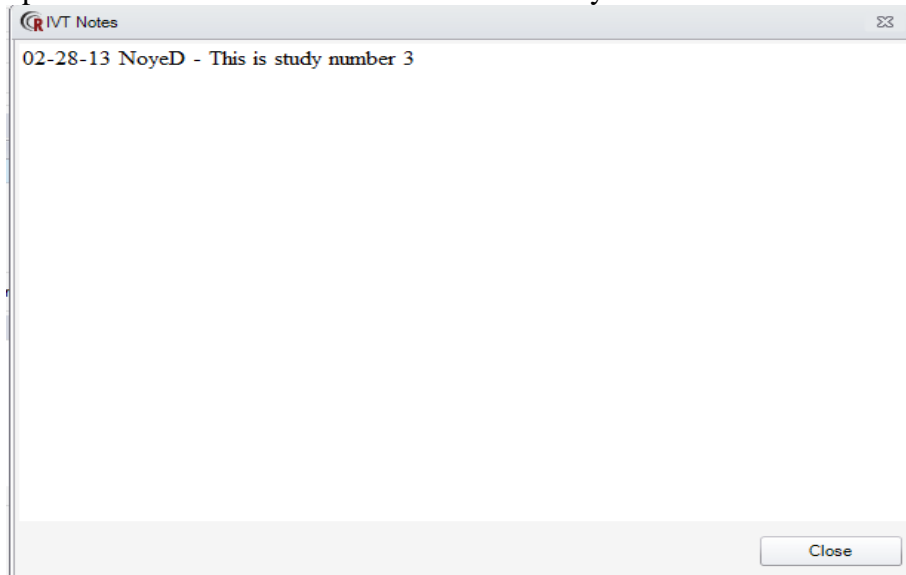


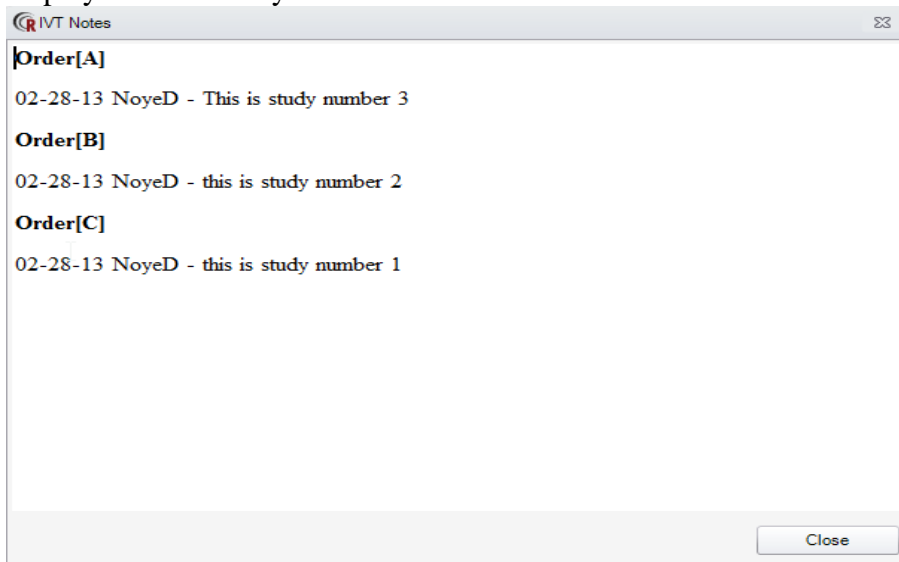
Figure 5.11 – IVT button to display notes added. This button is available from registration and view/edit

If the patient only has one study for the day, or if the patient has multiple studies for the day and the user chose to arrive only one of the studies in the registration window, the notes window opens with the notes associated with that study.



**Figure 5.12 – IVT note accessed from registration on one study**

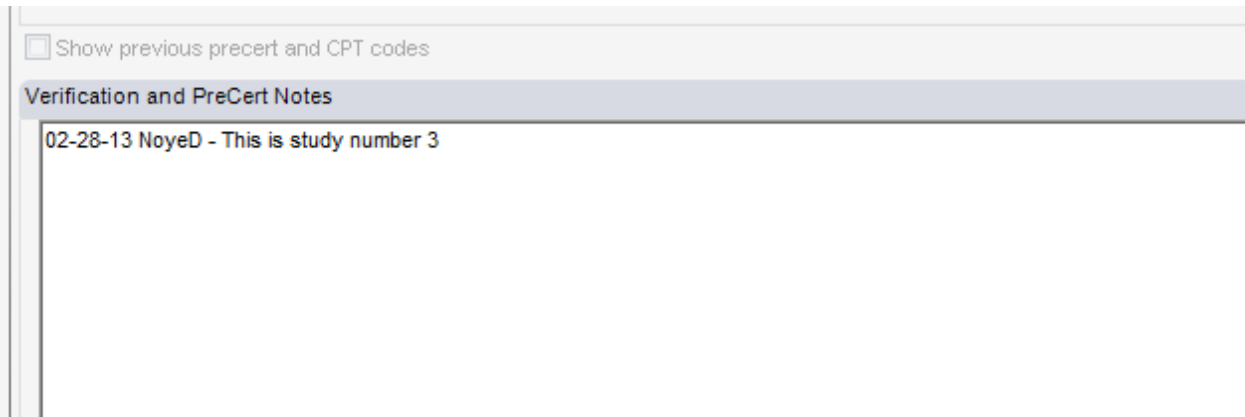
If the patient has multiple studies and the user chooses to arrive multiple, the IVT notes will display for each study in the same notes window.



**Figure 5.13 – Notes displayed for multiple studies opened in registration window**



The perform exam window (tech window) also displays a read only version of the Verification and PreCert Notes field. This display only notes field is located on the Billing Codes tab.

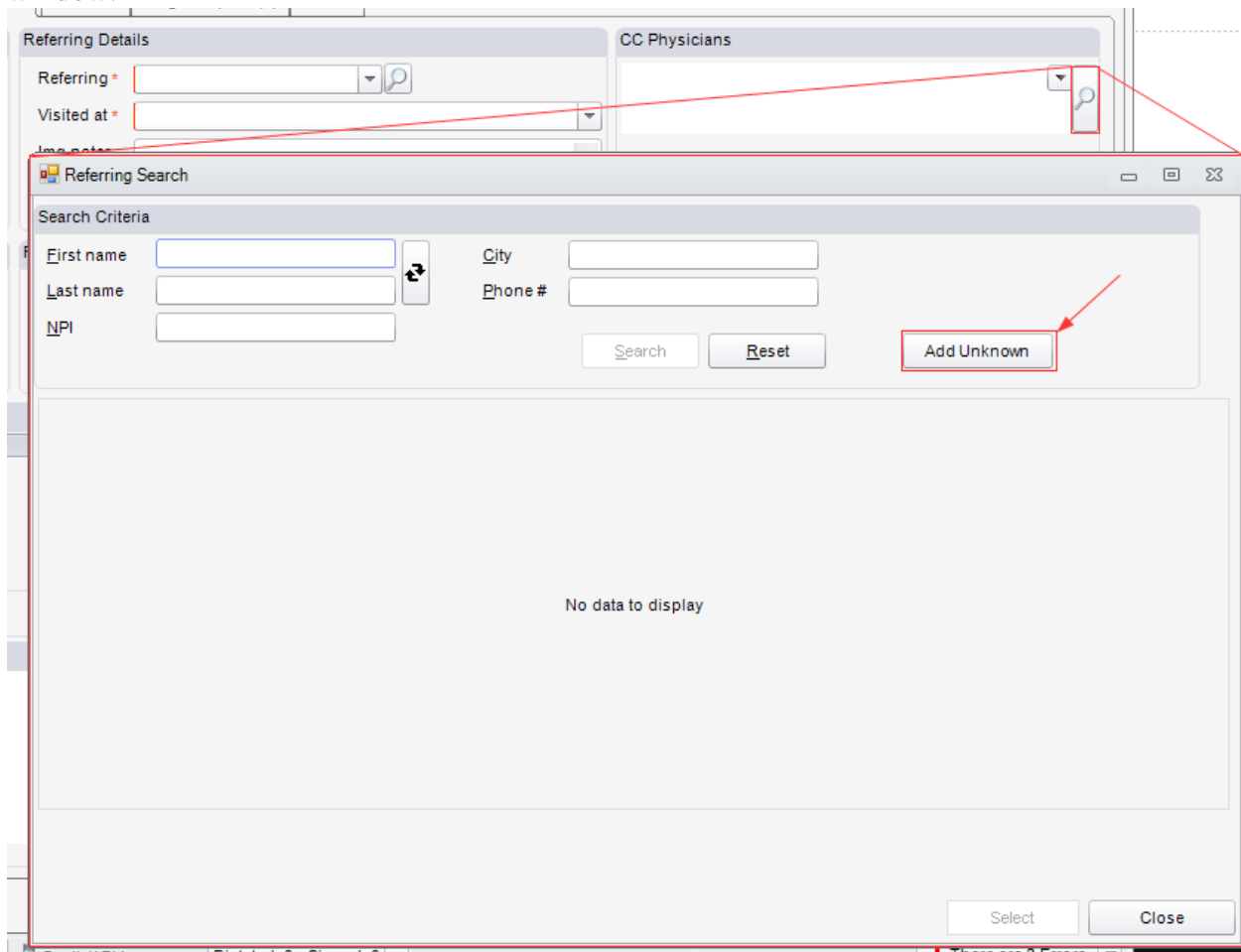


**Figure 5.14 – IVT notes on the Billing Codes tab of the Perform Exam window.**

## Unknown CC Physician

Users of eRAD RIS have always had the ability to add the referring physician as an “Unknown Referring Physician” when the referrer was not already known, and /or the details for referrer are not completely known at the time of entering the order.

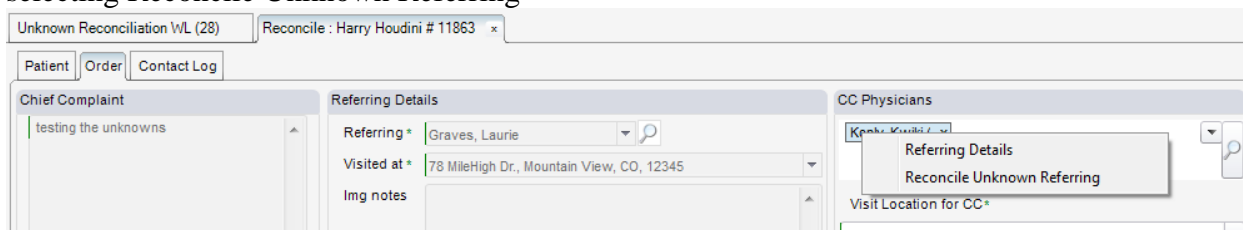
In build 40, this has been extended to the CC Physician field. Unknown CC Physicians are added in the same manner as the unknown referrer. If the physician entered in the CC Physician field is not found in a search the user can select the “Add Unknown” button in the search window.



**Figure 5.15 – Add unknown CC Physician.**

Selecting the Add Unknown button in the Referring Search window that is opened will open the personnel editor (with limited functionality). The Physicians first and last name, gender and D.O.B are required. The Unknown Referring flag is auto selected.

Once the study in which the Unknown CC Physician is being added to is saved, a row is added to the Unknown Reconciliation work list. The Unknown CC Physician can be reconciled from this work list and also from other data windows such as the Schedule/Reschedule window, Registration window, View/Edit window, etc... by a right click on the CC Physician name and selecting Reconcile Unknown Referring



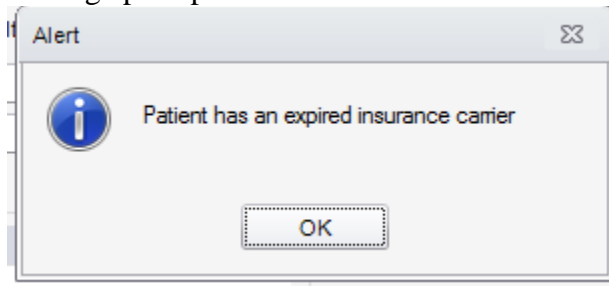
**Figure 5.16 – Reconcile unknown CC Physician**

**NOTE:** A limitation of this release. When a Unknown CC Physician is added, the row added to the Unknown Reconciliation work list will have the Referring Physician displayed in the under the referring column instead of the Unknown CC. The flag on the Unknown Reconciliation work list is added to the Unknown Referring column to indicate the purpose for the row being added to the work list

## **Expired Insurance and Inactive Carrier Warnings**

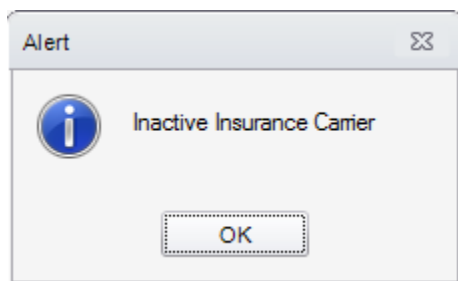
Two new alerts have been added in build 40. eRAD RIS can be configured to inform the user if the patient insurance has expired or the insurance carrier is inactive in the RIS.

An expired insurance carrier may arise if the patient has an active order or scheduled appointment with insurance A assigned to the study. Another order or study is created and the patient informs that insurance carrier A has expired, and they now use insurance carrier B. Now when the first study is worked on (scheduled, registered, etc...) it will inform the user by a message prompt.



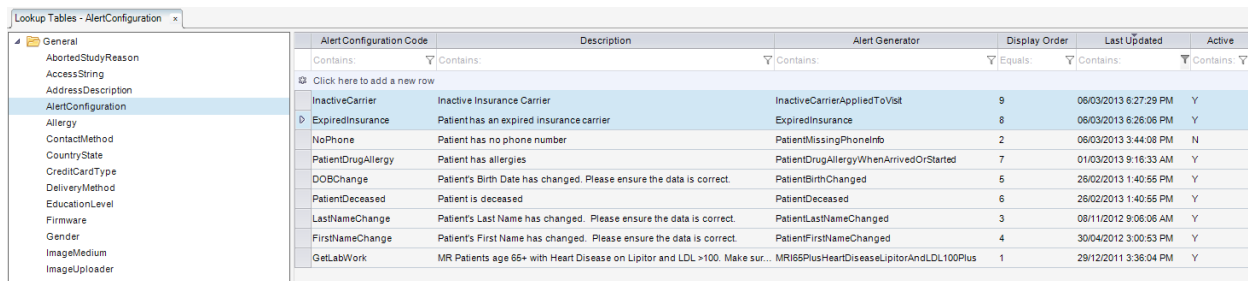
**Figure 5.17 – Expired insurance alert**

Also an Insurance Carrier may be set to inactive in the Carrier lookup table with patients active studies assigned to this carrier. Accessing this study in schedule, reschedule, registration, view / edit, etc... they will be prompted that an inactive carrier is selected



**Figure 5.18 – Inactive carrier alert**

The alerts are added / activated in the AlertConfiguration lookup editor. The messages that prompt the user are configurable, as what is entered in the Description field of the alert. To add the alert, open the AlertConfiguration lookup table. Add an Alert Configuration Code. The message you want the user to see is entered in the Description field. The Alert Generators column is a list box that will contain all of the possible systems alerts. To add expired insurance, select ExpiredInsurance, and the inactive carrier alert you must select InactiveCarrierAppliedToVisit.



The screenshot shows the 'AlertConfiguration' lookup table. On the left is a sidebar with a tree view containing various system categories like 'General', 'AbortedStudyReason', 'AccessString', 'AddressDescription', 'AlertConfiguration' (selected), 'Allergy', 'ContactMethod', 'CountryState', 'CreditCardType', 'DeliveryMethod', 'EducationLevel', 'Firmware', 'Gender', 'ImageMedium', 'ImageUploader', and 'ImageUploader'. The main area displays a table with the following columns: Alert Configuration Code, Description, Alert Generator, Display Order, Last Updated, and Active. The table contains several rows of alert configurations, including 'InactiveCarrier', 'ExpiredInsurance', 'NoPhone', 'PatientDrugAllergy', 'DOBChange', 'PatientDeceased', 'LastNameChange', 'FirstNameChange', and 'GetLabWork'.

Alert Configuration Code	Description	Alert Generator	Display Order	Last Updated	Active
InactiveCarrier	Inactive Insurance Carrier	InactiveCarrierAppliedToVisit	9	06/03/2013 6:27:29 PM	Y
ExpiredInsurance	Patient has an expired insurance carrier	ExpiredInsurance	8	06/03/2013 6:26:06 PM	Y
NoPhone	Patient has no phone number	PatientMissingPhoneInfo	2	06/03/2013 3:44:08 PM	N
PatientDrugAllergy	Patient has allergies	PatientDrugAllergyWhenArrivedOrStarted	7	01/03/2013 9:16:33 AM	Y
DOBChange	Patient's Birth Date has changed. Please ensure the data is correct.	PatientBirthChanged	5	28/02/2013 1:40:55 PM	Y
PatientDeceased	Patient is deceased	PatientDeceased	6	28/02/2013 1:40:55 PM	Y
LastNameChange	Patient's Last Name has changed. Please ensure the data is correct.	PatientLastNameChanged	3	08/11/2012 9:06:06 AM	Y
FirstNameChange	Patient's First Name has changed. Please ensure the data is correct.	PatientFirstNameChanged	4	30/04/2012 3:00:53 PM	Y
GetLabWork	MR Patients age 66+ with Heart Disease on Lipitor and LDL >100. Make sur...	MRI65PlusHeartDiseaseLipitorAndLDL100Plus	1	29/12/2011 3:36:04 PM	Y

**Figure 5.19 – AlertConfiguration lookup displaying new alert codes**

## **Assign Radiologist at Scheduling / Registration**

Before build 40 the radiologist could only be assigned in the Perform Exam window before the study was in a status before exam done. Once in exam done status a radiologist could be assigned in various reporting windows, and also from radiologists work lists context menu as well as the Patient Folder work list as long as the study was in at least a status of exam done.

Now in the New Appointment and Registration windows the Radiologist can be assigned to the study. On the procedure picker row a next to the Attachment button is an expandable list.

The screenshot shows the 'New Appointment and Registration' window. At the top, there's a 'Reception WL (14)' button and a 'Register : Fred James # 13820 \*' field. Below these are tabs for 'Patient', 'Contacts / Demographics', 'MU', 'Order', 'Exam', and 'Image Request (0)'. The 'Exam' tab is active, showing a table with columns: 'Studies', 'Duration', 'Room', and 'Scheduled Date'. The first row contains 'CT 3 Phase x', '60', 'CT1EL', and '03-06-2013 4:55 PM'. To the right of the 'Scheduled Date' column is an 'Assign to Radiologist' button. Below the table is a link that says 'Click here to add another study'.

**Figure 5.20 – Assign Rad from new appointment / registration windows**

Selecting the Assign to Radiologist will open a window of the same name. The list of available Radiologists is populated when the “Studies” and “Room” fields are populated.

The screenshot shows the 'Assign to Radiologist' window. It has a title bar with the text 'Assign to Radiologist' and a close button. Below the title bar is a list of radiologists. The first item is '(unassigned)'. The list includes: Adam Doucette, adam radtest, Adam Radtest, adam radtest2, Adam Yeo, Andrew Waite, aszdfasdf stuart, Blair King, Bob Barton, Clifton Harding, Dale Yeo (which is highlighted), Darcy Aiken, and Darcy Nove. At the bottom of the window are two buttons: 'Assign' and 'Cancel'.

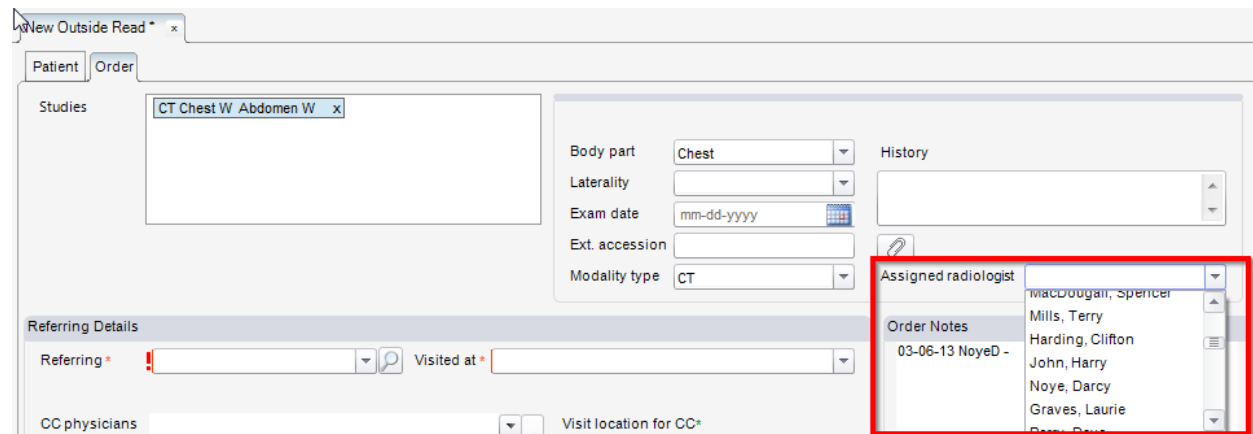
**Figure 5.21 – Assign to Radiologist window**

Access is controlled by the new access string “**Clinical.Schedule.AssignRadiologist**”

## **Assign Radiologist in New Outside Read**

When creating an Outside Read users can now assign a Radiologist within the New Outside Read window.

The field becomes enabled when the procedure is added to the Studies list. The list of available Radiologists is based on the procedure and modality type selected.

The screenshot shows the 'New Outside Read' window with tabs for 'Patient' and 'Order'. The 'Studies' section contains a list with 'CT Chest W Abdomen W'. To the right, there are input fields for 'Body part' (Chest), 'Laterality', 'Exam date' (mm-dd-yyyy), 'Ext. accession', and 'Modality type' (CT). A 'History' section is also present. Below these is the 'Referring Details' section with 'Referring' and 'Visited at' dropdowns. At the bottom, there are 'CC physicians' and 'Visit location for CC+' fields. A red rectangle highlights the 'Assigned radiologist' dropdown menu, which is open and shows a list of names: MacDougall, Spencer; Mills, Terry; Harding, Clifton; John, Harry; Noye, Darcy; Graves, Laurie; and Davis, David.

**Figure 5.22 – Assigned radiologist field in New Outside Read window**

Similar to the Assigned Radiologist field in the Perform Exam window, if the Referring selected has preferred radiologist(s) defined, that radiologist(s) name will be prefixed with “Preferred:” If the referring is selected before a value is chosen in the Assigned Radiologist field, and that referring has a preferred radiologist, the Assigned Radiologist field will be auto populated with the preferred radiologist. If the referring has multiple preferred radiologists, the preferred radiologist will not be selected.

## **Scheduling – Retain Attachments on Reschedule**

In previous versions of eRAD RIS, when an scheduled study that has exam level attachments was rescheduled, the RIS was not carrying those scans over to the rescheduled study.

Going forward, when a study is being rescheduled all documents that are associated at the exam level to that study and are of the appropriate scan type, we will create a new association for the newly created study that will be scheduled.

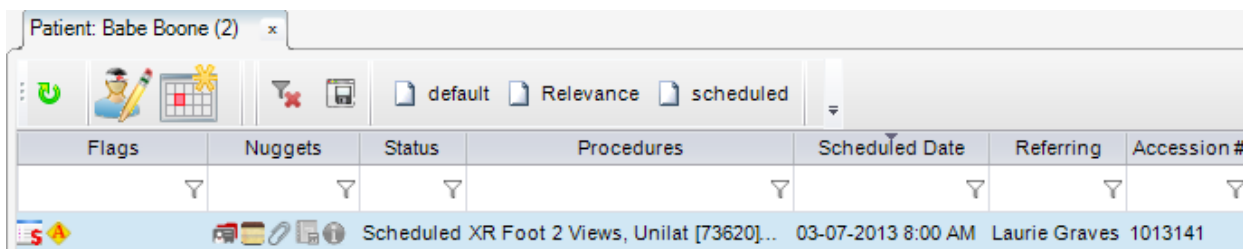
If the study has documents attached at the exam level and at the time of rescheduling the option to schedule later is selected, the RIS will prompt the user to store the attachments at the patient level.



## **Patient Allergy Notifications**

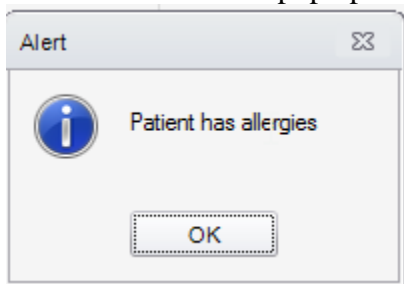
If a patient has allergies, the users of the RIS should be aware. In build 40 we have added two notifications for patient allergies.

The first is a new flag. If the patient has an allergy added to the Allergies grid under the MU tab, when the study is saved, the flags column on the work lists will be updated to include the new icon 🚩. This ICON is added regardless of the allergy selected, it is not limited to only drug allergies.



**Figure 5.23 – Patient Folder work list display allergy flag**

The second is a new alert that will prompt the user when the Technologist opens the study is Perform Exam data window. Again regardless if the allergy is drug related, the user will see the alert in the form of a pop up window.



**Figure 5.24 – Allergy alert**

Lookup Tables - AlertConfiguration						
General	Alert Configuration Code	Description	Alert Generator	Display Order	Last Updated	Active
AbortedStudyReason	Contains:	Contains:	Contains:	Equals:	Contains:	Contains:
AccessString	Click here to add a new row					
AddressDescription	InactiveCarrier	Inactive Insurance Carrier	InactiveCarrierAppliedToVisit	9	06/03/2013 6:2...	Y
AlertConfiguration	ExpiredInsurance	Patient has an expired insurance carrier	ExpiredInsurance	8	06/03/2013 6:2...	Y
Allergy	NoPhone	Patient has no phone number	PatientMissingPhoneInfo	2	06/03/2013 3:4...	N
ContactMethod	PatientDrugAllergy	Patient has allergies	PatientDrugAllergyWhenArrivedOrStarted	7	01/03/2013 9:1...	Y
CountryState	DOBChange	Patient's Birth Date has changed. Please ensure the data is correct.	PatientBirthChanged	5	26/02/2013 1:4...	Y
CreditCardType	PatientDeceased	Patient is deceased	PatientDeceased	6	26/02/2013 1:4...	Y
DeliveryMethod	LastNameChange	Patient's Last Name has changed. Please ensure the data is correct.	PatientLastNameChanged	3	08/11/2012 9:0...	Y
EducationLevel	FirstNameChange	Patient's First Name has changed. Please ensure the data is correct.	PatientFirstNameChanged	4	30/04/2012 3:0...	Y
Firmware	GetLabWork	MR Patients age 65+ with Heart Disease on Lipitor and LDL >100. Make s...	MRIG65PlusHeartDiseaseLipitorAndLDL100Pl...	1	29/12/2011 3:3...	Y
Gender						
ImageMedium						
ImageUploader						

**Figure 5.25 – Alert configuration**

As with the other alerts that can be configured in eRAD RIS, an entry can be added and set to active or inactive in the AlertConfiguration lookup table. The Description is a free form field that the administrator may enter. The Alert Generator to select is PatientDrugAllergyWhenArrivedOrStarted

## Specialty Read and Referring Protocol Note Changes

When a referrer is added on the Order tab, the specialty read and referring protocol notes have been changed in build 40. Previously when the user would hover the mouse over the icon a tooltip would pop up with the associated notes.

We have changed this to be a pop up window when the associated icon is selected.

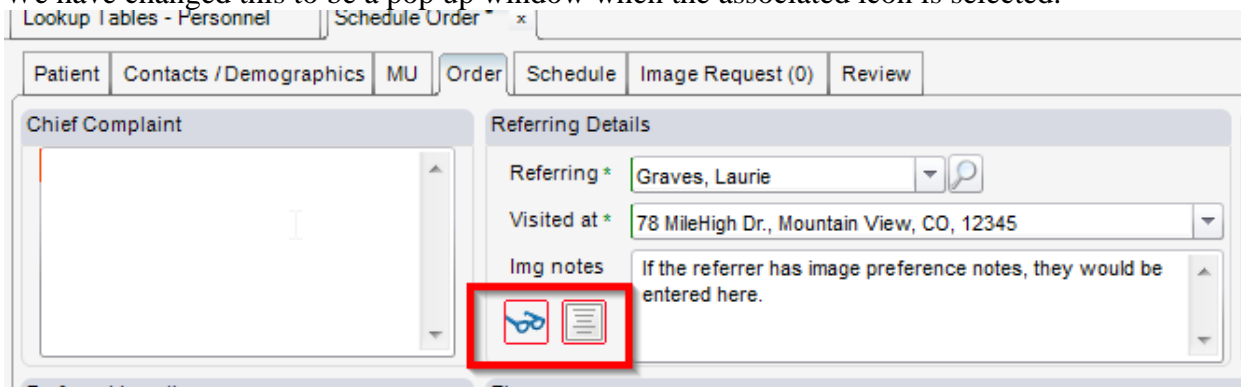



Figure 5.26 – Specialty Read and Referring Protocol Note icons.

Selecting the Specialty Read icon  will open the associated notes for the referrer.

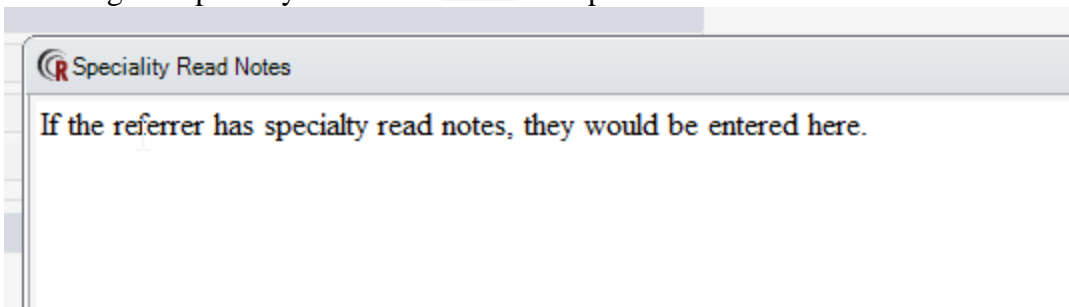


Figure 5.27 – Specialty Read Notes window.

Selecting the Referring Protocol Notes icon  will open the associated notes for the referrer.

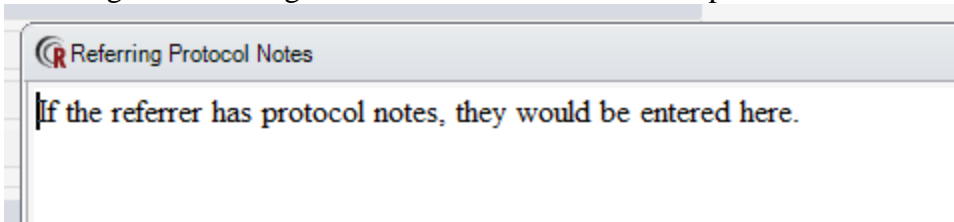


Figure 5.28 – Referring Protocol Notes window

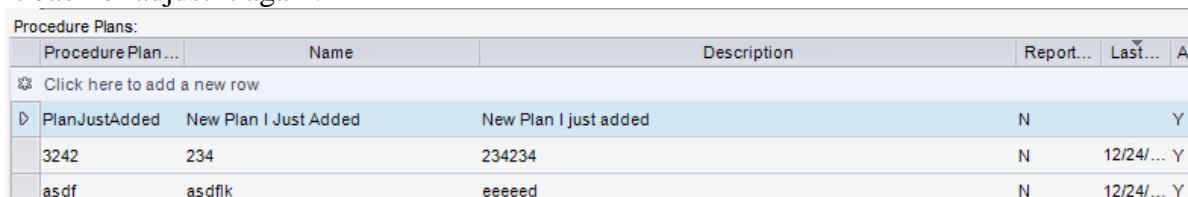


## Administration – Adding Rows to Lookup Enhancements

Previously we added new rows at the bottom of the lookup editor and after saving the rows the rows appear in the grid according to the DB or UI sort order. This can make it seem like the rows are jumping into a random grid location. The solution to these issues has two parts.

1. Rows will be added to the top of the grid preventing the user from having to continually scroll down to the bottom of the file.
2. Data will be sorted by last updated date so that the more recently updated rows will always be at the top of the list.

Having the last updated date (as read-only) in the lookup tables will allow them to see entries they recently modified. Often we change an entry, and then in testing realize we want to change it back or adjust it again.



ProcedurePlan...	Name	Description	Report...	Last...	Action
Click here to add a new row					
PlanJustAdded	New Plan I Just Added	New Plan I just added	N		Y
3242	234	234234	N	12/24/...	Y
asdf	asdfik	eeeeed	N	12/24/...	Y

**Figure 5.30 – Adding rows to lookup from top of work list**

As you can see in the above, new rows are added at the top so that the user doesn't have to continually scroll down the grid and even after a save the last updated or newly added row will be at the top.

## Administration – Referring Address Enhancements

Referring addresses in previous versions of eRAD RIS had to be added one at a time, unless the user was cloned from another user and the addresses were carried to the next user.

A new lookup table has been added under the User folder. From this lookup the administrator can add in Referring Practices and with each Referring Practice, multiple addresses can be associated. Access to the ReferringPractice lookup table is controlled by access string **Config.LookupEditor.ReferringPractice**

Lookup Tables - Personnel    Lookup Tables - ReferringPractice x

Referring Practices

Name	Description	Active
QE practice	This is a test practice for QE	Y
QE Practice 2	QE Practice 2	Y
QE Practice 3	QE Practice 3	Y
QE Practice 4	QE Practice 4	Y
QE Practice 5	QE Practice 5	Y

Edit    Add    Remove

Address

Address	Active
250 Water St. Summerside, MD	N
45 South Dr. address2	Y
251 Water St. Summerside, md	Y
252 Water St. PO BOX 639021-R	Y
253 Water St. Summerside, md	N

Edit    Add    Remove

Figure 5.31 – Referring Practice lookup table

The Referring Practice and addresses can be set to inactive / active.

The Personnel editor has a new type ahead field on the General tab that looks at the Referring Practice table. When the Referring Practice is added, it will also add all of the addresses that are associated with the practice including inactive ones.

**General** | Resource | Account | Notes | Attachments | Preferences

First name \*  Prefix  Birth date

Last name \*  Suffix  Gender \*

Middle name  ☒ Active person

**Contact information**

Mobile #

Email

Referring practices

Referring Practice (QE Practice 2)

Referring Practice Address (QE practice)	Address	Phone	Fax	Status
Referring Practice Address (QE practice)	250 Water St. Summerside, MD 20124	Phone: (902) 555-5555	Fax to 9025555555 Print Reports	N
Referring Practice Address (QE practice)	45 South Dr. address2 Summerside, MA 02145		Print Reports	Y

**Figure 5.32 – Personnel editor adding referring practices**

The referring added will have the practice name to differentiate what address belongs to what practice. As before, addresses can be removed if they are not required for this user.

Editing a referring practice address has limited capabilities from the personnel editor. The address can be changed to Active/Inactive, and the deliver to options can be flagged if it for referring, CC physician or both.

## GUI Worklist Refactor

The worklists function very similar to how they did before with a few minor changes. We only show the filter compare text such as ‘starts with:’ or ‘equals:’ when a filter is applied or the filter is focused. Filters now default to ‘StartsWith’ instead of ‘Contains’ because the ‘contains’ search prevents the DB indexes from being used. In addition columns such as Last Name and MRN don’t support the ‘contains’ filter.

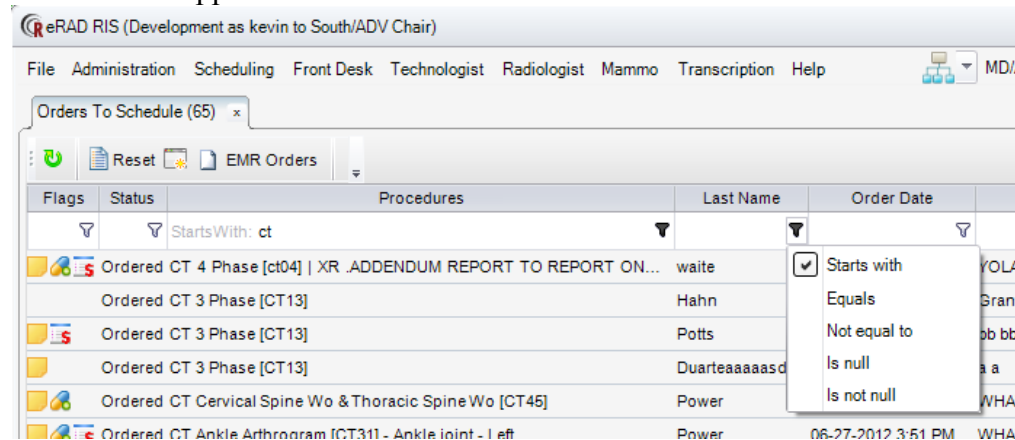


Figure 5.33 – Filtering options have changed

The amount of worklist items that can be displayed or retrieved is configurable in the SystemConfig lookup as shown in the following. The default value is 100. It cannot be set to more than 500. Any number greater than 500 entered as a value will be interrupted as 500.

System Config Code	Value	Default	Description
Contains: maxw	Contains: ▼	Contains: ▼	Contains: ▼
Click here to add a new row			
MaxWorklistItem	500	100	(value = int) The maximum number of worklist items that can ben returned. Default is 100 worklist items. The maximum is 500 worklist item... 07

Figure 5.34 – New system config code entry

Using a value of 100, if the worklist has more than 100 rows then we only display the first 100 based on the view’s sort column/primary key and a status area is introduced at the top of the worklist to explain that we are only displaying the first 100 of the results:



Flags	Status	Procedures	Order Date	Referring	Last Name	First Name	MRN	Filler Order Number	Practice	Site	Patient
531 total rows; Displaying the first 100											
	Ordered	PT/CT.OR Tumor Img Sk Th (Outside Read) [PT2]	05-05-2011 4:06 PM	WILLIAM SINTON JR	Procsal	Cathern	11308	1005006	ADV	FH	Outpa
	Ordered	PT/CT Myocardial Multi Study [78492]	05-05-2011 4:10 PM	WILLIAM BLEAM	Lendt	Kimberlie	5572	1005156	ADV		
	Ordered	PT/CT Myocardial Multi Study [78492]	05-05-2011 4:12 PM	WILLIAM BLEAM	Buss	Mickey	2944	1005244	ADV		Emerg
	Ordered	PT/CT Myo Imag Perf Study [78459]	05-05-2011 4:22 PM	WILLIAM NYLAND	Hussein	Drusilla	5754	1005338	ADV		Outpa
	Ordered	PT/CT Myo Imag Perf Study [78459]	05-05-2011 4:22 PM	WILLIAM JONES	Ganzer	Marybelle	5763	1005347	ADV		
	Ordered	PT/CT Myocardial Multi Study [78492]	05-05-2011 4:23 PM	WILLIAM BLEAM	Szarek	Charles	6733	1005372	ADV		Emerg
	Ordered	PT/CT Myo Imag Perf Study [78459]	05-05-2011 4:24 PM	WILLIAM NYLAND	Landenberger	Magan	5830	1005414	ADV		Outpa
	Ordered	PT/CT Myocardial Multi Study [78492]	05-05-2011 4:24 PM	WILLIAM HERZOG	Lendt	Cira	5835	1005419	ADV		Outpa

**Figure 5.35 – Work list displaying subset based on system config value.**

To view specific items the user needs to reduce the result set by specifying additional search criteria. For example, in the following we are filtering the Procedure column for studies that start with ‘PT’

Flags	Status	Procedures	Order Date	Referring	Last Name	First Name	MRN	Filler Order Number	Practice	Site	Patient
		StartsWith: pt									
Search											
	Ordered	PT/CT.OR Tumor Img Sk Th (Outside Read) [PT2]	05-05-2011 4:06 PM	WILLIAM SINTON JR	Procsal	Cathern	11308	1005006	ADV	FH	Outpa

**Figure 5.36 – Work list filtering**

Then after clicking “Search” or pressing <enter> the worklist will look as follows:

Flags	Status	Procedures	Order Date	Referring	Last Name	First Name	MRN	Filler Order Number	Practice	Site	Patient
		StartsWith: pt									
292 of 531 total rows; Displaying the first 100											
	Ordered	PT/CT.OR Tumor Img Sk Th (Outside Read) [PT2]	05-05-2011 4:06 PM	WILLIAM SINTON JR	Procsal	Cathern	11308	1005006	ADV	FH	Outpa
	Ordered	PT/CT Myocardial Multi Study [78492]	05-05-2011 4:10 PM	WILLIAM BLEAM	Lendt	Kimberlie	5572	1005156	ADV		
	Ordered	PT/CT Myocardial Multi Study [78492]	05-05-2011 4:12 PM	WILLIAM BLEAM	Buss	Mickey	2944	1005244	ADV		Emerg
	Ordered	PT/CT Myo Imag Perf Study [78459]	05-05-2011 4:22 PM	WILLIAM NYLAND	Hussein	Drusilla	5754	1005338	ADV		Outpa
	Ordered	PT/CT Myo Imag Perf Study [78459]	05-05-2011 4:22 PM	WILLIAM JONES	Ganzer	Marybelle	5763	1005347	ADV		
	Ordered	PT/CT Myocardial Multi Study [78492]	05-05-2011 4:23 PM	WILLIAM BLEAM	Szarek	Charles	6733	1005372	ADV		Emerg

**Figure 5.37 – Work list display after search performed**

The Reception and Technologist WLs now require a site selection. The site selection is displayed at the top of the worklist next to the day selection as shown in the following:

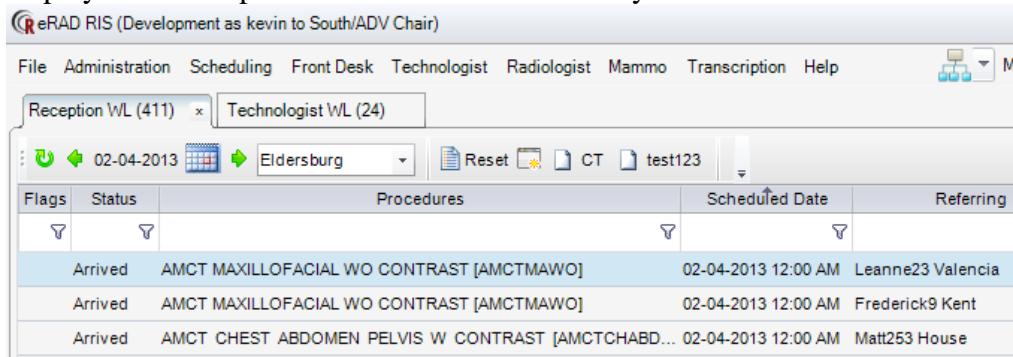


Figure 5.38 – List box filter for sites on Reception and Technologist work list

Several columns such as 'Flags', 'Status' and 'Modality Type' now have a "Select Values..." option under the filter button as shown in the following:

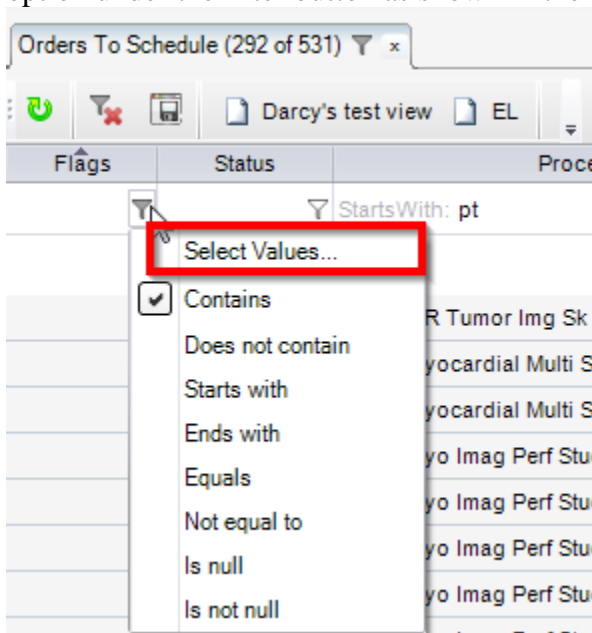
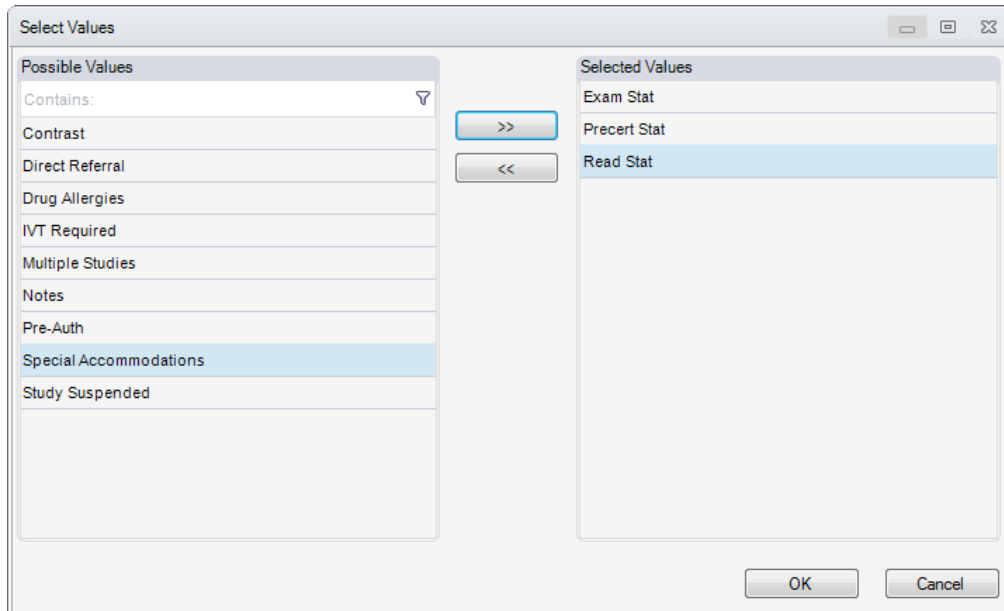


Figure 5.39 – New filter option

The ‘Select Values...’ option displays a popup which allows you to select specific values you would like to match. The following is an example of the ‘Select Values...’ popup for the Flags column:

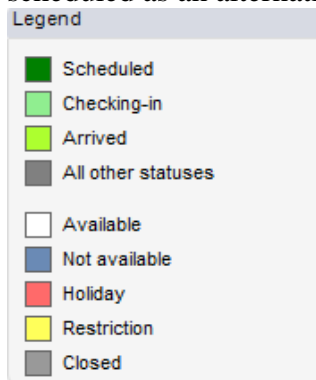


**Figure 5.40 – Select values work list filter options**

## **Scheduling – Restrictions Enhancement for Appointment Book**

In previous versions of eRAD RIS, scheduling restrictions such as holiday's, room closures and restrictions would display similar to an appointment with a different background color.

In build 40 we are not displaying the items that could restrict an appointment from being scheduled as an alternative color to the appointment calendar.



**Figure 5.41 – Appointment Book legend**

The description is displayed as the type of restriction (Holiday, Closed or Restriction), if there is a description configured it will appear on the next line, and will word wrap to fit inside the available space, at the point of painting the background, until finished or the interval will repeat again. The date span will appear on its own line, based on the restriction the date could be formatted in different ways.

The advantage of this will allow for the repeating of the description at set intervals to be user friendly. With the color change, we still display what the color change would relate to when it is not the normal template available/unavailable, but we have also include a legend for the different background colors.



## PACS IW Integration

A particular customer required eRAD RIS integration with PACS IW. We also needed to preserve the current integration with eRAD PACS.

We used to associate the PACS server at the site level. This has been moved to the Practice level.

The screenshot shows the 'Edit Practice' form. The 'PACS Server' dropdown menu is open, displaying a list of servers: 'helen', 'eRAD PACS', and 'PACS IW Test Server'. The 'PACS Server' field is currently set to 'helen'. Other fields include 'Practice Code', 'Description', 'Phone #', 'Fax #', 'Time Zone' (set to '(UTC-04:00) Atlantic Time (Canada)'), and 'MU Required' (checked). The 'Contact' section shows 'Contact Name' as 'PACS IW Test Server'.

Figure 5.43 – Practice lookup displaying new PACS Server list box

This allows the decision of which PACS server should be launched to be based on the selected practice of the org picker. In order to temporarily change from one PACS server to another the user simply changes the selected practice in the org picker.

Also the PACSServer lookup table has a new column “PACS Server Type Code”.

The screenshot shows the 'PACSServer' lookup table. The table has columns: 'Pacs Server Code', 'Description', 'Protocol', 'Url', 'Port', 'Display Order', 'Pacs Ae Title', 'Pacs Server Type Code', 'Last Updated', and 'Active'. The 'Pacs Server Type Code' column is highlighted. The table contains several rows, including 'eRAD PACS' and 'PACS IW Test Server'.

Pacs Server Code	Description	Protocol	Url	Port	Display Order	Pacs Ae Title	Pacs Server Type Code	Last Updated	Active
eRAD PACS	eRAD PACS	http	10.10.10.10	80	1	ERAD		07/03/2013 2.2...	Y
PACS IW Test Server	PACS IW Test Server	http	10.10.10.10	80	1	IW		26/02/2013 3.4...	Y

Figure 5.44 – PACSServer lookup table

The c\_study table now has an external\_identifier\_column that will hold the NCDStudyId from PACS IW when it is received. Integration with eRAD will continue to be by MRN and accession number.

The PACS menu on the main menu bar is controlled by whichever PACS integration manager is in use at the time. Selecting the Enable or Disable menu items affects all integration managers. Selecting a practice that is not associated to a PACS server will disable all integration and remove the integration menu entirely.

On the initial opening of a study where the org picker's practice is associated to PACS IW, login is attempted using the username and password that logged into RIS. If these credentials fail, the user is prompted for additional credentials. On successful login, the study continues to open in the PACS.

Calls to IW to display images are triggered by either the View Images action accessed from the context menu on the Patient Folder work list. Also when opening the Dictate window the images for the study will be opened. From the patient history list in the Dictate window, the user can double click on a row to open the images for that study if they were not already loaded a relevant prior.

Attaching priors after the initial opening is very problematic. If study 1 is opened with 4 and 7 as priors on the initial open IW opens a session with 1, 4, and 7. If the RIS then uses the DisplayStudyContext to try to append 10 as a prior, the view session loses 4 and 7 and ends up with only 1 and 10 loaded.

Closing the RIS window from which studies were opened (either dictation or patient folder) will cause the images to close in PACS.

Opening a second active dictation window will result in a second instance of IW. Changing between tabs in RIS will focus the related IW viewer window. Switching between the PACS viewer windows will cause the tab focus in RIS to change, however the event coming from the viewer doesn't seem to be as reliable as it should be. Particularly in cases of minimizing and restoring the RIS does not always receive the event indicating that the viewer session is now active.

User Action	eRAD PACS Behaviour	PACS IW Effect Behaviour
<b>User opens first study via:</b> - <b>Right-click -&gt; View Images on the main patient folder.</b>	Login attempt with RIS credentials. Upon failure, RIS prompts for additional credentials. On successful	Same

<ul style="list-style-type: none"> <li>- <b>View Images button on Tech window</b></li> <li>- <b>Opening Dictation window</b></li> </ul>	login, the attempt to open images continues.	
<b>Opening study via</b> <ul style="list-style-type: none"> <li>- <b>Right-click -&gt; View Images on the main patient folder.</b></li> <li>- <b>View Images button on Tech window</b></li> <li>- <b>Opening Dictation window</b></li> </ul>	<p>eRAD PACS is instructed to open images using the MRN+Accession number of the given study. Additional priors can be sent using their accession numbers as well.</p> <p>eRAD PACS returns a list of opened accession numbers as well as data indicating which studies could be found but weren't opened (ie. In Archive).</p>	<p>PACS IW is instructed to open a study's images using NCDStudyID, which is an internal IW identifier. Additional NCDStudyIDs can be sent to load priors.</p> <p><b>IW gives no indication on whether or not a study opened successfully.</b></p>
<b>Adding priors after initial opening of a study via:</b> <ul style="list-style-type: none"> <li>- <b>Double click in the Reporting Patient Folder</b></li> <li>- <b>A second Right-click-&gt; View images from main patient folder</b></li> </ul>	<p>PACS provides a call to add priors to the open session based on MRN+Accession(s). It reports back on which studies were opened or at least found.</p>	<p><b>Instructing IW to add a prior to a given session results in all other priors being removed from the session. No result is returned and no query method is provided to see what is available.</b></p>
<b>Opening a second PACS integrated window, ie. Tech, Patient Folder, or Dictation</b>	<p>PACS bookmarks its currently opened study and then replaces it with the one associated to the new tab.</p>	<p>IW opens a new window with the new study and gives it focus. It is visible in the task bar and the previous window remains available.</p>
<b>Switch between two PACS integrated tabs, ie. Some combination of patient folder, tech, and dictation windows.</b>	<p>eRAD PACS bookmarks its currently opened study and replaces it with the one associated to the new tab.</p>	<p>IW will focus on the window associated to this form.</p>
<b>Close the PACS associated window</b>	<p>The open session in PACS is closed. If the RIS focuses on another PACS related form, PACS will load the related bookmarked images.</p>	<p>The PACS IW session will close. If the RIS focuses on another PACS related form, IW will focus on the related session window.</p>



<b>Switch between active sessions in the PACS.</b>	Action not possible in the PACS	IW raises an event to tell the RIS which window now has focus. <b>This event is not entirely reliable, particularly in cases of Minimizing and Restoring the IW windows.</b> Upon receiving the event RIS will switch its focus to the appropriate tab.
<b>Close the session in the PACS</b>		

**Table 5.1 – Actions in eRAD PACS compared to PACS IW.**

## **Meaningful Use - Image Medium Request Enhancements**

There have been minor changes to the Image Request window. The “Copied” radio button had been relabelled “Ready”. When the “Ready” button is selected and the window is saved, it is also saved to the database.

Image Request (47) Edit Image Request : AdamY Test # 11799

Patient Order Documentation Notes / Exam Times Attachments Image Request

Requested By  
☐ Patient ☐ Referring ☐ Other doctor ☒ Other

Doctor  
Location  
Name \* test  
Organization test  
Phone number () -

Details  
Format \* CD  
Notes

Delivery Instructions  
Method \* Pickup  
Instructions

Image Request Status  
☐ Pending ☐ Cancelled ☒ Ready ☐ Sent ☐ Picked up ☐ Identification

Deliver To / Pickup By  
☐ Patient ☐ Referring ☐ Other doctor ☒ Other

☐ Copy requested by  
Doctor  
Location  
Prefix Suffix  
First name \* testt  
Last name \* testt  
Address  
City  
State  
Country Zip  
Phone number () -

**Figure 5.45 – Image Request window**

We will report off this new date and if the patient does not return within 3 business days to pick up the request the statistic will not count.

### Auto Resolving BI-RADS® 0 and 4/5 Exams

In previous versions of eRAD RIS we would auto-resolve whenever the follow up order was scheduled. This has been changed. Auto resolve for exams on the ACR Cat. 0 Follow-up WL will now occur when the scheduled study is Report Signed.

Exams on the ACR Cat. 4/5 follow-up work list will auto resolve when the user enters a biopsy and indicates “No Surgery Required”.

### Manually Resolve BI-RADS® 0 and 4/5 Exams

The label for “Lost to Follow Up” has been renamed to “Follow Up Resolved”. This checkbox appears on the mammography tab in View/Edit and on the Contact screen on the Follow Up screen.

When the user checks the checkbox, we check the permission Clinical.ManuallyResolveMammoFollowUp and if the user is authorized, we then show a dialog box prompting for a manual resolution reason:

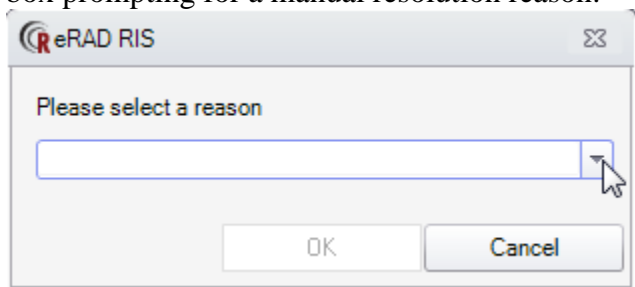


Figure 5.46 – Follow up reason

The list of reasons is specified in a new lookup table accessible from Administration > Configure > Mammography > FollowUpReason

## Management Report – Cancelled Reasons

The report has parameters to select the Date Range, Cancelled Reasons (default is Weather), and also if you'd like to see the ones that have been rescheduled or not (Default is to see both).

Scheduled date	Procedure(s)	First Name	Last Name	Acc #	Rescheduled?	:
Reason: Employee Error						1/6
12-26-12 10:00 AM	US Scrotal [76870] - Scrotum			109035	N	
12-26-12 05:00 PM	MA Digital Screening Mammo [G0202] - Breast - B			97502	N	
12-26-12 02:20 PM	MA Digital Diagnostic Mammo Bilat W Breast US [G0204BRUS] - Breast - B			126824	N	
12-26-12 02:30 PM	US Breast Hold Code [76645HOLD] - Breast			126823	N	
12-26-12 10:10 AM	CT Chest Abdomen and Pelvis WO [CT312] - Chest			129204	N	
12-26-12 10:20 AM	CT Chest WO [71250] - Chest			129211	Y	
Reason: Inclement Weather						26/38
12-26-12 01:00 PM	MR Cervical Spine WO [72141] - Cervical spine			129200	Y	
12-26-12 01:30 PM	MR Lumbar Spine WO [72148] - Lumbar spine			129199	Y	
12-26-12 01:00 PM	MR Hand WO [73218HAN] - Hand - L			130824	Y	
12-26-12 09:50 AM	MA Digital Diagnostic Mammo Callback Unilat [G0206CB] - Breast - L			98264	Y	
12-26-12 10:30 AM	US Breast Hold Code [76645HOLD] - Breast			98263	Y	
12-26-12 03:30 PM	MR Neuroquant Brain WO [MR110] - Head			134421	Y	
12-26-12 01:30 PM	MA Digital Screening Mammo [G0202] - Breast - B			104946	Y	
12-26-12 02:10 PM	MA Digital Diagnostic Mammo Callback Unilat W Breast Us			132906	N	

Figure 5.47 – Cancelled Reasons Report

## **Management Report – Unknown Referring Report Enhancements**

Enhancements to the Unknown Referring report are

- Adding a date range based on scheduled date
- Add Void in the Ignored Status parameter

The screenshot displays the 'Unknown Referring' report configuration window. At the top, there are fields for 'From:' (12/14/2012) and 'To:' (12/21/2012), each with a calendar icon. Below these are 'Practice:' (American Radiology Services) and 'Site(s):' (Annapolis, Bel Air, Bel Air PE) dropdown menus. A section labeled 'Ignored Statuses:' contains a list of checkboxes: (Select All), Cancelled, Discontinued, Aborted, Scheduled, and Void. The 'Cancelled' checkbox is currently selected. To the left of the status list, a patient ID '360f7a46-e' is visible. To the right, a patient ID 'ofdad24105' is shown above a list of medical facilities: 'Cal Associates, Calvert Medical Imaging Center, F...', 'Owings Mills Women's Center, Quarry Lake, Tin...', and 'requested by physician is "Unknown referring" f...'. Below the facilities list, the text 'orted, Scheduled, Void' is partially visible.

**Figure 5.48 – Unknown Referring report enhancements**

## Management Report – Modality Duration Override Report

The parameters for the report are

- Practice(s)
- Site(s)

This report lists modality duration overrides for the selected location

Practice(s): Advanced Radiology

Site(s): Eldersburg, Fisher, Lutherville, C

1 of 1

100%

Find | Next

### Modality Duration Override

Practice(s): Advanced Radiology  
Site(s): Eldersburg, Fisher, Lutherville, OutsideMed, PowerVille  
Description: This report lists modality duration overrides for the selected location.

Modality	Procedure Code	Override Duration	Regular Duration
CT1EL			
	CT13	50	30
	BPTBD	2	15
CT1PO			
XR1FH			

Modality Duration Override

Confidential and Proprietary  
Page 1 of 1

Date Run: 12/21/2012 2:41 PM  
RMISdale

Figure 5.49 – Modality Duration Override report

## Management Report – RTAT by Radiologist

This report displays report turnaround times for all practices within the RIS install for the procedure groups (\*excluding mammo), and date range selected. There are three tables within this report that break down statistics of:

1. Radiologist: Pending Dictation - Pending Transcription (% of reports completed in < 3 hours)
2. Radiologist: Pending Transcription - Pending Signature (% of reports completed in < 8 hours)
3. Radiologist: Pending Dictation- Signed (% of reports completed in < 8 hours)

The report has groupings for each practice in the install and expands using the + symbol to show the accession numbers that are hitting the targets for each table within the report.

The report has parameters to select the practice(s), and site(s).

- RTAT dataset
- L\_procedure\_group\_dataset
- Radiologist dataset

### RTAT by Radiologist

Date: 2/28/2013

Procedure Groups: Diagnostic CT,DEXA,Evaluation Mgmt,Fluoroscopy,MRI and MRA,Nuclear Med,OTHER,EPET Procedures,PET,Diagnostic Imagt,Radiation Oncol,Intervntnl Rad,Intervntnl Surg,Ultrasound Vasc,Plain Film/Xray/CR  
Excluding exams signed on weekends

Pending Dictation - Pending Transcription (% of reports completed in < 3 hours)		
Radiologist	ADV	# Signed Exams
☒ Kevin Lloyd Molyneaux	0.00 %	1
Total	0.00 %	1

Pending Transcription - Pending Signature (% of reports completed in <= 8 hours)		
Radiologist	ADV	# Signed Exams
☒ Kevin Lloyd Molyneaux	100.00 %	1
Total	100.00 %	1

Pending Signature - Signed (% of reports completed in <= 8 hours)		
Radiologist	ADV	# Signed Exams
☒ Kevin Lloyd Molyneaux	100.00 %	1
Total	100.00 %	1

Figure 5.50 – RTAT by Radiologist report

## Management Report – Continuing Experience Radiologist

The report has parameters to select the Date Range and the amount of addendums per exam.

From :	01/03/2013	To :	07/03/2013
Addendum Version:	0 (Original study)		

1	of 1	100%	Find	Next
---	------	------	------	------

User ID	Month	Year	CT	CCA	DX	MA	BRE	ST	MR	MB	MC	US	UB	UBX	UO	UV	NM	PT	XR	FL
adam	March	2013	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
dale	March	2013	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
darcy	March	2013	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
darcyn	March	2013	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
gordon	March	2013	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
hardingc	March	2013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ian	March	2013	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
jessie	March	2013	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
radtest	March	2013	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

**Figure 5.51 – Continuing Experience Radiologist report**



## Management Report – Continuing Experience Technologist

The report has parameters to select the Practice(s), Site(s) and date range.

Practice(s): 

Advanced Radiology

Site(s): 

Eldersburg, Fisher, Lutherville, I

From Date 

01/03/2013

To Date 

07/03/2013

1 of 1

100%

Find | Next

User ID	Month	Year	CT	CCA	DX	MA	ST	MR	MB	MC	US	UB	UBX	UO	UV	NM	PT	XR	FL
andrew	March	2013	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
bettyg	March	2013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
dale	March	2013	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
denis	March	2013	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
harold	March	2013	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ian	March	2013	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
OutsideReadTech	March	2013	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
romane	March	2013	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
techtest	March	2013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

**Figure 5.52 – Continuing Experience Technologist report**

## 6. RIS Release Version Numbers

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	Full version release. <b>Core install required.</b>
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	<b>Core install required.</b> GUI.zip, web service and database updates
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	GUI.zip and Web service updates
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	Just WebAPI updated, no version changes. . Web service updates
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	GUI.zip, web service, and database updates
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we really did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	GUI.zip and Web service updates
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	GUI.zip and Web service updates. Also MIRTH mapping changes
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	Web service update
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	Web service update
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	GUI.zip, Web service and database updates
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	GUI.zip, Web service, database updates and SQL Management reporting
37	12	1.2.37.14267	1.2.37.13040	1.2.37.14161	1.2.37.14267	GUI.zip, Web service and database updates
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	GUI.zip, Web service and database updates
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	Full version release. <b>Core install required.</b>

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38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	<b>Core install required</b>
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	GUI.zip and Web service updates
38	5	1.2.38.15513	1.2.38.15513	1.2.38.15513	1.2.38.15451	<b>Core install required.</b> GUI.zip, Web service and database updates.
38	6	1.2.38.15618	1.2.38.15513	1.2.38.15513	1.2.38.15618	GUI.zip and database updates
38	7	1.2.38.15768	1.2.38.15513	1.2.38.15768	1.2.38.15618	GUI.zip and Web Service updates
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release. <b>Core install required.</b>
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	<b>Core install required.</b> GUI.zip, Web service and database updates
40	-	1.3.40.16659	1.3.40.16659	1.3.40.16659	1.3.40.16659	<b>Core install required.</b> Full version release

## 7. Resolved Defects

Bugs Suggested Features and Support Issues resolved in build 1.40. The extract is taken from Redmine bug tracking system and only displays defects resolved in 1.40.

Bug #	Priority	Subject	Category	Found Version
3370	Normal	Appointment Book not filter practices that the user is assigned to	Thick Client GUI	1.39
2899	Urgent	Fax Service is not using all of the available fax ports	Web Services/DB	1.37
3007	Urgent	Inbound Reporting bypasses Core business rules in GetData	Thick Client GUI	1.38
1375	High	hit eRx button on Patient tab get exception	Thick Client GUI	1.38.14391
1620	High	Error when scheduling an exam with an image request	Thin Client GUI	1.37
1956	High	IVT Verified/Approved.	Thick Client GUI	1.37
1980	High	Too many modality restrictions kills the appointment book.		1.37
2074	High	Patient distribution history - New button throws exception	Thick Client GUI	1.38
2101	High	Index out of bound scheduling..	Thick Client GUI	37.11
2136	High	Administration - lookup making changes ( refreshes you to the top of the grid)		37.12

2193	High	Image request not saving "Same as requested by"	Thick Client GUI	1.38.14426
2351	High	When user reschedules an order that contains scans at the 'Exam' level, RIS is not carrying those scans over to the newly scheduled exam as it should be.	Thick Client GUI	38.14486
2467	High	When lab work for BUN or Creatine (maybe others too, but those were all I could find) tests are on the lab work worklist, orders placed after are bypassing the worklist regardless of the state of the 'skip lab worklist' check box.		38.14748
2478	High	Title bar color does not change if Practice is set to transparent	Admin Tools	1.39
2504	High	Book X attachments for Order B are not associated with correct procedure at time of scheduling	Thick Client GUI	1.38.002
2671	High	Failure to "save as order" on a cancelled appointment.	Thick Client GUI	1.39.15268
2699	High	Inserting template is navigating all fields twice	Thick Client GUI	1.39
2775	High	Mammo letter config lookup active column values incorrect	Admin Tools	1.39
2865	High	PersonSearch does not properly use database indexes and triggers excessive load	Web Services/DB	1.39
2883	High	My Views - If view has hidden columns, a reset to does not restore hidden columns	Thick Client GUI	1.39

2916	High	Exception on logout	Thick Client GUI	1.38.007
2948	High	IVT - Remove insurance can throw error	Thick Client GUI	1.39.001
2953	High	ORDER PLACER or EMR order not showing up on Orders to Schedule worklist	Modality Worklist	1.39.001
3006	High	Not able to cancel an EMR / order	Thick Client GUI	39.1
3092	High	Unable to add new value to static lookup tables in an upgrade and get those values pushed to the client	Thick Client GUI	1.38
3321	High	referring portal returns order cc PERSON_KEYS instead of order cc person "IDs"	Web Services/DB	1.39
956	Normal	When in "pending signature" WL, there is no context menu option for "Sign Report"	Thin Client GUI	1.35
1085	Normal	Scheduling an aborted exam, removing a completed exam from the order and adding a new procedure	Thick Client GUI	1.35
1140	Normal	Unknown referring billing exception not in billing notes	Thick Client GUI	1.35
1154	Normal	Removing procedure from study cell can throw exception if Scheduled Date field is selected.	Thick Client GUI	1.36
1168	Normal	User is able to add multiple procedures in one row.	Thick Client GUI	1.36

1258	Normal	Arriving multiple studies for one day, the Relation to Patient is not captured to the other studies	Thick Client GUI	1.36
1329	Normal	Procedures with mutiple billing codes can be orphaned if procedure row is removed	Thick Client GUI	1.36
1754	Normal	Entering / Editing Availability templates - object reference error	Admin Tools	1.1.2.37.13347
1775	Normal	Filter work list using Customer filter does not allow "is null" or "is not null"	Thick Client GUI	1.1.2.37.13580
1804	Normal	View / Edit a cancelled exam prompts for required fields on Documentation tab	Thick Client GUI	1.2.38.13666
1844	Normal	After patient merge, data nugget does not update correctly		1.37
1873	Normal	Object error in system config lookup	Admin Tools	1.1.2.38.13809
1882	Normal	Image request > Referring Location is not saved from Image request WL > edit	Thick Client GUI	1.1.2.37.13842
1887	Normal	Patient History Control leaking memory		1.37
1958	Normal	Carrier type and address information on IVT WL		1.37
2034	Normal	Null exception when delivery address key is missing.		37.1
2073	Normal	Error changing scan associations in perform exam window	Thick Client GUI	1.2.37.14267
2080	Normal	Modality Type lookup object reference error	Admin Tools	1.2.37.14267
2125	Normal	No Scheduling credit for entering Outside Reads	Thick Client GUI	37.12

2178	Normal	RED X appearing on Insurance Policies grid	Thick Client GUI	1.2.38.14412
2194	Normal	Tech Only - External Report Workflow	Thick Client GUI	1.38.14426
2270	Normal	Template configuration issue	Mgt Reports	1.37
2280	Normal	Scanning - error import a scanned document on to multiple exams. (River Ranch)		v38
2306	Normal	Sales Marketing Dashboard	Mgt Reports	1.37
2444	Normal	Dataset Visualizer - copy function is available in the context menu, but the function does not work.	Thick Client GUI	38.001
2470	Normal	Reporting - CDS Management console mystery button removal	Thick Client GUI	1.37
2484	Normal	Resolve - inactive insurances are still showing on patients record although the user is not aware that it is no longer active	Thin Client GUI	1.3
2491	Normal	The way we extract report text from XML is expensive on the CPU	Web Services/DB	1.38
2493	Normal	Management Report - RTAT Summary Poor Performance	Mgt Reports	1.39
2502	Normal	Management Report - copay vs collected issue	Mgt Reports	1.38
2505	Normal	Outside Read procedure label partially hidden	Thick Client GUI	1.38.002
2509	Normal	Create/Edit Report not in context menu in Report Drafted WL	Thick Client GUI	1.39



2512	Normal	Verify Edits context missing on Edits Pending QA WL	Thick Client GUI	1.39
2513	Normal	Create Edit Report missing from context on Pending Review WL	Thick Client GUI	1.39
2515	Normal	Create/Edit Report not in context menu in Problem WL	Thick Client GUI	1.39
2521	Normal	Reporting - next/previous field or section	Thick Client GUI	1.37
2540	Normal	scan document association	Thick Client GUI	1.39
2543	Normal	When "Sedation" was added to the reception worklist, users were not able to see 'sedation' on the worklist or in the column chooser.	Thick Client GUI	38.15182
2548	Normal	When you double-click an outside read that is in cancelled status, RIS throws an error because the double click action is opening the reschedule window	Thick Client GUI	38.001
2568	Normal	View menu disappears	Thick Client GUI	1.39
2646	Normal	Reporting - field navigator using section headers are not navigating if report contains 0 fields	Thick Client GUI	1.39
2648	Normal	Reporting - Attachments are not realigned when the data pane is resized	Thick Client GUI	1.39

2654	Normal	Mammo Annual Radiologist Summary - data returned by querying the view is inconsistent with the data returned in the report.	Mgt Reports	39.15226
2668	Normal	Management report - Radiologist Dictation Activity is displaying an error message upon execution	Mgt Reports	39.15226
2702	Normal	SNOMED CT Concept IDs did not make the QE drop for B39 I_smoking_status table	Thick Client GUI	39.1533
2709	Normal	Configuration - Create Duplicate User - You are warned twice.	Admin Tools	1.1.3.39.15330
2710	Normal	Configuration - Create Duplicate User - Causes Error	Admin Tools	1.1.3.39.15330
2713	Normal	Report History tab name	Thick Client GUI	1.39
2725	Normal	Radiologist Dashboard - Completed Exams 7 Day trend is showing Dec. 8, even though it is not in the last 7 days.	Mgt Reports	39.15355
2735	Normal	Billing Exceptions WL - responsible party information problem	Thick Client GUI	39.15355
2741	Normal	Lookup Editor - Column Header Alignment is Messed up.	Admin Tools	1.39
2743	Normal	Personnel Editor - Tab/NewLine issues in notes fields	Admin Tools	1.39
2746	Normal	Organization Picker Problem	Thick Client GUI	1.39
2747	Normal	Reporting - Fields Navigator - Previous section does not highlight position in Fields tool window	Thick Client GUI	1.39

2748	Normal	When doing walk-in, and you scan a document at the order level, RIS is throwing an error upon check-in / Save / Arrive	Thick Client GUI	39.15371
2752	Normal	Patient Merge: ShowID Button does not auto select thumbnail		1.39
2753	Normal	Image Request - Unable to send request when required field are populated	Thick Client GUI	1.1.3.39.15371
2761	Normal	Sales Mgmt Reports - 6 and 13 Mth Variance Data	Mgt Reports	1.39
2762	Normal	Scanning - Printing - Right Click - "Print Forms" item is misleading	Thick Client GUI	1.1.3.39.15376
2763	Normal	Reporting - deleting local dictation file prematurely when getting a save exception	Thick Client GUI	1.37
2773	Normal	carrier related forms not printing on checkin using right click change status to	Thick Client GUI	1.38
2782	Normal	ICM Dashboard - Need plan and Unknown Referring returning no results	Mgt Reports	1.39
2785	Normal	Reporting - Hide Titlebar for Fields tool window throws exception	Thick Client GUI	1.3.39
2826	Normal	carrier editor confusing	Thick Client GUI	1.39
2849	Normal	xKeys integration broken	Thick Client GUI	39
2856	Normal	dbnull error when processing outsidersrules	Thick Client GUI	1.38

2859	Normal	c_audit table shows visit key as -1 or less when after scheduling a new exam	Web Services/DB	1.39
2860	Normal	c_audit table shows visit_key as null for study retrievals	Web Services/DB	1.39
2867	Normal	Mgmt Report Referring Physician Search Details	Mgt Reports	1.39
2868	Normal	Mgmt Reports - 6/13 Mth Variance Data	Mgt Reports	1.39
2874	Normal	c_businessdays procedure results	Web Services/DB	1.39
2878	Normal	MU Automated Measures Report	Mgt Reports	1.39
2891	Normal	Age is calculated wrong in Daily Schedule report	Mgt Reports	38
2901	Normal	Reporting - Macro explorer selection is selecting wrong template	Thick Client GUI	1.38
2902	Normal	unkown referring with no address throws exception on save	Web Services/DB	1.39
2906	Normal	Lock not immediately released if user receives a row out of date error when opening IVT	Thick Client GUI	1.39
2909	Normal	Billing codes are not showing in exams.	Thick Client GUI	38
2933	Normal	Patient Folder - Scroll wheel move through scan documents doesn't include report	Thick Client GUI	1.39
2949	Normal	Management Report - Transcription Dashboard	Mgt Reports	1.38
3001	Normal	multi sign - supervising dictations worklist shouldn't be chair enabled.	Thick Client GUI	1.39.001

3094	Normal	RIS sending status of DC to PACS for a discontinued study. PACS wants CA	HL7	1.38
3117	Normal	tech worklist includes discontinued exams	Web Services/DB	1.39
1236	Low	Patient Folder Preview window issue on patient search	Thick Client GUI	1.36
1482	Low	Personnel editor - create new validates fields on search	Admin Tools	1.37
1738	Low	Prep Instructions Issue	Thick Client GUI	1.37
1797	Low	Perferred Language field is not marked as required when on the patient tab	Thick Client GUI	1.1.2.38.13666
2003	Low	Data Nuggets appear across monitors, or only show partial screen if....		1.37
2032	Low	Pinned billing codes disappear from view	Thick Client GUI	1.2.37.14161
2070	Low	Internal Person Search - Can search with blank criteria causing exception	Thick Client GUI	1.1.2.38.14194
2075	Low	Error when entering access strings for a user group	Admin Tools	37.11
2089	Low	Referring Search	Thick Client GUI	1.38.14194
2091	Low	Confirmation Review tab	Thick Client GUI	1.38.14194
2169	Low	UserGroupPermission - Able to enter non validate access strings		1.38

2173	Low	Configure Save button	Thick Client GUI	1.38.14391
2679	Low	CDS Management Console	Thick Client GUI	1.39
2703	Low	Management Reports - IVT User Activity Report - hardcoded to filter out radiologists, which is not necessary	Mgt Reports	39.1533
2721	Low	printed scan docs have page numbers that start at 0	Thick Client GUI	39.1533
2722	Low	plus and minus on the numeric keyboard should zoom in and out on document viewer	Thick Client GUI	39.1533
2749	Low	Reporting - Fields Navigator - Selecting section before field changes cursor selection	Thick Client GUI	1.39
2779	Low	Change Document Type window shouldn't have a minimize or maximize button.		1.1.3.39.15389
2784	Low	Copy cell that is empty throws exception	Thick Client GUI	1.3.39

## 8. Known Limitations

The following are Bugs Suggested Features and Support Issues found in build 1.40. Bugs reported in previous versions are not captured as Known Limitation in this document.

#	Status	Priority	Subject	Resolved Build
2775	New	High	Mammo letter config lookup active column values incorrect	
2727	New	High	PACS errors flipping between open dictate windows	
2699	Resolved	High	Inserting template is navigating all fields twice	40
2532	New	High	access to changing the access strings needs to read only.	
2478	Resolved	High	Title bar color does not change if Practice is set to transparent	40
2782	Resolved	Normal	ICM Dashboard - Need plan and Unknown Referring returning no results	40
2777	New	Normal	Appointment book - double click on open time	
2761	Resolved	Normal	Sales Mgmt Reports - 6 and 13 Mth Variance Data	
2759	New	Normal	Distribution WL - Message box should display in the center of the screen	
2757	New	Normal	Problem with doing multiple Verify Externals in a row.	
2754	New	Normal	Patient Folder context menu for Report History	

2752	Resolved	Normal	Patient Merge: ShowID Button does not auto select thumbnail	40
2750	New	Normal	Reporting - Select command does not work for words that are at the start or end of a field	
2747	Resolved	Normal	Reporting - Fields Navigator - Previous section does not highlight position in Fields tool window	40
2746	Resolved	Normal	Organization Picker Problem	40
2744	New	Normal	null exception when attempting to show/hide titlebars on report document	
2743	New	Normal	Personnel Editor - Tab/NewLine issues in notes fields	
2741	Resolved	Normal	Lookup Editor - Column Header Alignment is Messed up.	40
2737	New	Normal	Patient Folder - multiselect is true and it should be false	
2734	New	Normal	Reporting - Floating data panes do not stay on top	
2728	New	Normal	Study locked in PACS message on initial load	
2713	Resolved	Normal	Report History tab name	40
2695	New	Normal	parameter not specified error in preview report for tables	
2690	New	Normal	Show/Hide Titlebar issue	
2683	New	Normal	Patient folder > Study detail column color bleeds outside of row	



2677	New	Normal	Create Report from Reset Open skipped rows	
2676	New	Normal	Reset open skipped rows - If you dictate and save, it does not remove skipped row from list	
2672	New	Normal	Appointment book cannot obtain lock error	
2661	New	Normal	Template Macro Editor - Double click template or macro	
2660	New	Normal	Template Macro Editor - Adv Assignment - user not defaulting	
2648	New	Normal	Reporting - Attachments are not realigned when the data pane is resized	
2647	New	Normal	Reproting window - can't save layout to default Attachments tab	
2646	New	Normal	Reporting - field navigator using section headers are not navigating if report contains 0 fields	
2645	New	Normal	Overbook Reason title change	
2643	New	Normal	Multiple loads of Selection Aware controls	
2641	New	Normal	Duplicating report fields	
2637	New	Normal	Next field command selecting multiple fields	
2635	New	Normal	Unchecking No Longer Menstruating doesnt enable pregnancy fields	
2632	New	Normal	Perform Exam window doesnt update with changes made in another window	

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2630	In Progress	Normal	PACS - Close call could fail if user has been logged off	
2628	New	Normal	Reporting screen not drawing in, if user make worklists active	
2568	In Progress	Normal	View menu disappears	
2561	New	Normal	reception WL retrieval time is slow	
2540	New	Normal	scan document association	
2536	New	Normal	Report Permissions,	
2534	New	Normal	Mammo followup - Newly entered data does not carry forward	
2533	New	Normal	Scheduling order from follow up mammo work list doesnt return to work list	
2515	Resolved	Normal	Create/Edit Report not in context menu in Problem WL	40
2513	Resolved	Normal	Create Edit Report missing from context on Pending Review WL	40
2512	Resolved	Normal	Verify Edits context missing on Edits Pending QA WL	40
2511	New	Normal	size and location information is not saved when client is close while minimized	
2509	Resolved	Normal	Create/Edit Report not in context menu in Report Drafted WL	40
2493	New	Normal	Management Report - RTAT Summary Poor Performance	
2751	New	Low	Object overlap on Order tab	

2749	Resolved	Low	Reporting - Fields Navigator - Selecting section before field changes cursor selection	40
2729	New	Low	Able to bring up two menus at once	
2679	New	Low	CDS Management Console	
2664	New	Low	Billing Exception - Post button	
2658	New	Low	Stored function c_getcontrastrequiredflag could return wrong value if multiple study items exist	
2652	New	Low	administration -> management report screen doesn't show any folders if permissions aren't configured	
2535	New	Low	Region, unable to deactivate	

# Server Update

For eRAD RIS  
Version 1.0  
Build 40  
Update 40.001

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## 1. Defects resolved

Redmine #	Subject	Priority
3407	DDEngine reports a failed fax when the faxed was actually successful	Urgent
3381	The EMR order list is not appearing on a study that was imported from one order to another order	Normal
3378	EMR: Order Cancel message cancels studies in scheduled status	High
3390	Action queues hang whenever a queue entry has a null container	Normal
2507	Enhance Security for Practice level Mgt Report access	Normal
3377	Is Null filter causes error on refresh	High
3417	deleting the procedure from procedure picker row will delete study item cert row	Normal
3418	the "Show previous PreCert and CPT Codes" filter was showing the inactive PreCerts for inactive study items	Normal
3423	Specifying a CPT level PreCert rule was not being checked correctly at the point of selection	Normal

## **2. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.40.16849.zip
- 2) RIS Service Updates folder contains
  - a) CDSJobManager.pdb
  - b) CDSJobManager.dll
  - c) CommonLib.pdb
  - d) CommonLib.dll
  - e) DDEngine.pdb
  - f) DDEngine.dll
  - g) rRISServices.pdb
  - h) rRISServices.exe
  - i) rRISServices.vshost.exe
  - j) ScheduledTaskManager.pdb
  - k) ScheduledTaskManager.dll
  - l) SignatureApprovalService.pdb
  - m) SignatureApprovalService.exe
  - n) WCFService.pdb
  - o) WCFService.dll
  - p) WebApi.pdb
  - q) WebApi.dll
  - r) Wedge.pdb
  - s) Wedge.exe
- 3) SQL folder contains:
  - a) B40\_001.sql
- 4) SQLReporting folder contains 4 subfolders and 1 batch file:
  - a) ParentFolder contains 6 subfolders
    - i) Dashboards folder contains 10 .rdl files
    - ii) Management Reports folder contains 6 subfolders each of the subfolder contains .rdl files. These are the main management reports accessed from the GUI
    - iii) Marketing folder contains 6 .rdl files
    - iv) Order Templates folder contains 1 .rdl file (default.rdl)
    - v) Referring Portal folder contains 8 .rdl files
    - vi) SubReports folder contains 11 .rdl files

## **RADNET, Inc. – eRAD RIS Server Update**

- b) Scripts folder contains 7 .rss files. These files are used by the DeployReports.bat file to install and deploy the management reports, dashboards, marketing, etc... reports
- c) Upload Diagnostic Templates folder contains 1 subfolder titled SubReports. The SubReports folder is empty.
- d) Upload Forms folder contains 1 subfolder titled SubReports. The SubReports folder is empty.
- e) DeployReports.bat file is the batch file used to deploy the management reports.



### **3. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **4. Who is affected**

Build 40 installs. This server update must be applied directly to the build 40 core install.

## 5. eRAD RIS Release Version Numbers

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	Full version release
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	Core install, GUI.zip, web service and database updates
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	GUI.zip and Web service updates
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	GUI.zip, web service, and database updates
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	GUI.zip and Web service updates
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	GUI.zip and Web service updates. Also MIRTH mapping changes
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	Web service update
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	Web service update
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	GUI.zip, Web service and database updates
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	GUI.zip, Web service, database updates and SQL Management reporting
37	12	1.2.37.14267	1.2.37.13040	1.2.37.14161	1.2.37.14267	GUI.zip, Web service and database updates
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	GUI.zip, Web service and database updates
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	Full version release
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	Core install required
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	GUI.zip and Web service updates
38	5	1.2.38.15513	1.2.38.14748	1.2.38.15513	1.2.38.15451	GUI.zip, Web service and database updates
38	6	1.2.38.15618	1.2.38.14748	1.2.38.15513	1.2.38.15618	GUI.zip and database updates
38	7	1.2.38.15768	1.2.38.14748	1.2.38.15768	1.2.38.15618	GUI.zip and Web Service updates
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	Requires Core Install. GUI.zip, Web Service, and Database updates
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting

## 6. Installing

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.40.16849.zip file provided with this release. The previous GUI.zip should have been renamed to rRIS\_1.3.40.16659. Be sure to make a backup of the ris.exe.config file contained within the .zip folder.
- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config and rRISServices.vshost.exe.config files.  
*rRISService directories include:*
  - a) *rRISService*
  - b) *CDS rRISService*
  - c) *Wedge rRISService*
  - d) *DDE rRISService*

Restart each service.
- 3) Run the B40\_001.sql file against the eRAD RIS database instance.
- 4) SQL Reporting. Please refer to the eRAD RIS Reporting Services Installation.docx supplied with the Build 40 release in the \_Documentation\Installation folder.

# Server Update

For eRAD RIS  
Version 1.0  
Build 40  
Update 40.002

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## 1. Defects resolved

Redmine #	Subject	Priority
3424	null reference / object reference not set error when doing a check in + advanced scan	High
3426	web API / Yellow Sticker fails to update order notes if order lock fails	High
3428	IVT - When you reschedule a study that does not require any precert	Urgent
3429	Walk in error adding study that requires IV and PreCert	Normal

## **2. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.40.16878.zip
- 2) RIS Service Updates folder contains
  - a) CDSJobManager.pdb
  - b) CDSJobManager.dll
  - c) CommonLib.pdb
  - d) CommonLib.dll
  - e) DDEngine.pdb
  - f) DDEngine.dll
  - g) rRISServices.pdb
  - h) rRISServices.exe
  - i) rRISServices.vshost.exe
  - j) ScheduledTaskManager.pdb
  - k) ScheduledTaskManager.dll
  - l) SignatureApprovalService.pdb
  - m) SignatureApprovalService.exe
  - n) WCFService.pdb
  - o) WCFService.dll
  - p) WebApi.pdb
  - q) WebApi.dll
  - r) Wedge.pdb
  - s) Wedge.exe

### **3. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **4. Who is affected**

Build 40 installs. This server update must be applied directly to the build 40 core install.



## 5. eRAD RIS Release Version Numbers

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	Full version release
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	Core install, GUI.zip, web service and database updates
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	GUI.zip and Web service updates
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	GUI.zip, web service, and database updates
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	GUI.zip and Web service updates
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	GUI.zip and Web service updates. Also MIRTH mapping changes
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	Web service update
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	Web service update
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	GUI.zip, Web service and database updates
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	GUI.zip, Web service, database updates and SQL Management reporting
37	12	1.2.37.14267	1.2.37.13040	1.2.37.14161	1.2.37.14267	GUI.zip, Web service and database updates
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	GUI.zip, Web service and database updates
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	Full version release
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	Core install required
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	GUI.zip and Web service updates
38	5	1.2.38.15513	1.2.38.14748	1.2.38.15513	1.2.38.15451	GUI.zip, Web service and database updates
38	6	1.2.38.15618	1.2.38.14748	1.2.38.15513	1.2.38.15618	GUI.zip and database updates
38	7	1.2.38.15768	1.2.38.14748	1.2.38.15768	1.2.38.15618	GUI.zip and Web Service updates
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	Requires Core Install. GUI.zip, Web Service, and Database updates
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service

## 6. Installing

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.40.16878.zip file provided with this release. The previous GUI.zip should have been renamed to rRIS\_1.3.40.16849. Be sure to make a backup of the ris.exe.config file contained within the .zip folder.
- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config and rRISServices.vshost.exe.config files.  
*rRISService directories include:*
  - a) *rRISService*
  - b) *CDS rRISService*
  - c) *Wedge rRISService*
  - d) *DDE rRISService*

Restart each service.

# Server Update

For eRAD RIS  
Version 1.0  
Build 40  
Update 40.003

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## **1. Defects resolved**

Redmine #	Subject	Priority
3456	trigger c_action_insert needs to be disabled	Normal

## **2. Package Contents**

Files included for this server update:

- 1) SQL folder contains:
  - a) B40\_003.sql

## **3. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

## **4. Who is affected**

Build 40 installs. This server update must be applied directly to the build 40 core install.

## 5. eRAD RIS Release Version Numbers

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	Full version release
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	Core install, GUI.zip, web service and database updates
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	GUI.zip and Web service updates
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	GUI.zip, web service, and database updates
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	GUI.zip and Web service updates
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	GUI.zip and Web service updates. Also MIRTH mapping changes
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	Web service update
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	Web service update
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	GUI.zip, Web service and database updates
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	GUI.zip, Web service, database updates and SQL Management reporting
37	12	1.2.37.14267	1.2.37.13040	1.2.37.14161	1.2.37.14267	GUI.zip, Web service and database updates
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	GUI.zip, Web service and database updates
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	Full version release
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	Core install required
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	GUI.zip and Web service updates
38	5	1.2.38.15513	1.2.38.14748	1.2.38.15513	1.2.38.15451	GUI.zip, Web service and database updates
38	6	1.2.38.15618	1.2.38.14748	1.2.38.15513	1.2.38.15618	GUI.zip and database updates
38	7	1.2.38.15768	1.2.38.14748	1.2.38.15768	1.2.38.15618	GUI.zip and Web Service updates
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	Requires Core Install. GUI.zip, Web Service, and Database updates
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service

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40	3	1.3.40.16868	1.3.40.16659		1.3.40.16727	DB updated only
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### **6. Installing**

- 1) Run the B40\_003.sql file against the eRAD RIS database instance.

# Server Update

For eRAD RIS  
Version 1.0  
Build 40  
Update 40.004



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**PLEASE READ** – This server release was created to support west coast operations with the addition of Order Level IVT (see new features). As development began on this server release additional issues were identified with east coast operations. The next server release of 1.40.005 (GUI file version 1.3.40.17087) has also been released with the additions made in this server release with additional features and bug fixes.

If you install this server release, proceed to install the 1.40.005. Keep in mind that .sql scripts are unique for each release and will have to be run on you eRAD RIS database.

## 1. New Features

### Order Level IVT

This patch release contains a new feature to have orders requiring Insurance Verification and/or PreCert approval. Essentially the IVT list will be the same, except now it will have the addition of procedures in Ordered status.

This is a configurable option that is controlled by a new systemconfig setting **OrderLevelIVT**. The default value is **False** (off).

System Config Code	Value	Default	Description
Contains: ▼	Contains: ▼	Contains: ▼	Contains: ▼
Click here to add a new row			
OrderLevelIVT	False	(value = true/false)	Determines if IVT will first be calculated at order level

**Figure 1.1 – SystemConfig lookup table displaying OrderLevelIVT code**

Once this setting is turned on, opening the IVT WL you will see the Ordered Status procedures on the work list. The procedures PreCert can be approved and insurance verified before the procedure is scheduled.

Flags	Status	Procedures	Order Date	Scheduled Date
▼ Starts... order ▼	▼	▼	▼	▼
✓	Ordered	CT Abdomen W & Pelvis W & CTA Chest W/Wo [CT54] - Abdomen	04-01-2013 2:08 PM	C
📄	Ordered	CT Abdomen W & Pelvis W [CT9] - Abdomen	03-28-2013 10:53 AM	L
	Ordered	FL Arthrogram Elbow CT [FL9] - Elbow	03-25-2013 3:29 PM	J
	Ordered	XR ABDOMEN AP, KUB [74000] - Abdomen	03-22-2013 1:55 PM	A
📄	Ordered	CT Chest W & Abdomen W/Wo [CT42] - Chest	03-18-2013 2:33 PM	03-18-2013 1:55 PM F

**Figure 1.2 – IVT WL displaying Ordered status procedures**

Users may notice the Scheduled Date column is populated for procedures in Ordered status on the IVT work list. The reason for this is because EMR orders may have been scheduled and after the order is scheduled, the EMR order is cancelled because a new EMR order was required (missing information, procedure change, etc...). The cancelled EMR order remains in Ordered status until the new EMR order is matched with the scheduled study, thus the cancelled EMR order on the IVT WL shows a Scheduled Date.

The Status will update for the study on the IVT work list accordingly as the study proceeds through the work flow.

## 2. Defects resolved

Redmine #	Subject	Priority
3421	Spelling dictionaries not practice specific - cross contamination possible	High

### **3. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.40.16967.zip
- 2) RIS Service Updates folder contains
  - a) CDSJobManager.dll
  - b) CDSJobManager.pdb
  - c) CommonLib.dll
  - d) CommonLib.pdb
  - e) DDEngine.dll
  - f) DDEngine.pdb
  - g) Interop.FAXCOMEXLib.dll
  - h) Microsoft.Practices.EnterpriseLibrary.Caching.dll
  - i) Microsoft.Practices.EnterpriseLibrary.Caching.pdb
  - j) Microsoft.Practices.EnterpriseLibrary.Common.dll
  - k) Microsoft.Practices.EnterpriseLibrary.Common.pdb
  - l) Microsoft.Practices.EnterpriseLibrary.Logging.dll
  - m) Microsoft.Practices.EnterpriseLibrary.Logging.pdb
  - n) Microsoft.Practices.ServiceLocation.dll
  - o) Microsoft.Practices.ServiceLocation.pdb
  - p) Microsoft.Practices.Unity.dll
  - q) Microsoft.Practices.Unity.Interception.dll
  - r) Microsoft.Practices.Unity.Interception.pdb
  - s) Microsoft.Practices.Unity.pdb
  - t) Microsoft.Web.Infrastructure.dll
  - u) Newtonsoft.Json.dll
  - v) Newtonsoft.Json.xml
  - w) Ninject.dll
  - x) Ninject.Web.Common.dll
  - y) Ninject.Web.Common.xml
  - z) Ninject.xml
  - aa) O2S.Components.PDFRender4NET.dll
  - bb) PDFToImages.exe
  - cc) rRISServices.exe
  - dd) rRISServices.pdb
  - ee) rRISServices.vshost.exe
  - ff) ScheduledTaskManager.dll
  - gg) ScheduledTaskManager.pdb
  - hh) SignatureApprovalService.exe
  - ii) SignatureApprovalService.pdb
  - jj) System.Net.Http.dll
  - kk) System.Net.Http.Formatting.dll

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- ll) System.Net.Http.Formatting.xml
- mm) System.Net.Http.xml
- nn) System.Web.Helpers.dll
- oo) System.Web.Helpers.xml
- pp) System.Web.Http.dll
- qq) System.Web.Http.SelfHost.dll
- rr) System.Web.Http.SelfHost.xml
- ss) System.Web.Http.WebHost.dll
- tt) System.Web.Http.WebHost.xml
- uu) System.Web.Http.xml
- vv) System.Web.Mvc.dll
- ww) System.Web.Mvc.xml
- xx) System.Web.Optimization.dll
- yy) System.Web.Providers.dll
- zz) System.Web.Razor.dll
- aaa) System.Web.Razor.xml
- bbb) System.Web.WebPages.Deployment.dll
- ccc) System.Web.WebPages.Deployment.xml
- ddd) System.Web.WebPages.dll
- eee) System.Web.WebPages.Razor.dll
- fff) System.Web.WebPages.Razor.xml
- ggg) System.Web.WebPages.xml
- hhh) Tourreau.Gilles.FaxDotNet.dll
- iii) Tourreau.Gilles.FaxDotNet.pdb
- jjj) Tourreau.Gilles.FaxDotNet.xml
- kkk) WCFService.dll
- lll) WCFService.pdb
- mmm) WebApi.dll
- nnn) WebApi.pdb
- ooo) Wedge.exe
- ppp) Wedge.pdb

- 3) SQL folder contains:
  - a) B40\_004.sql

## **4. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

## **5. Who is affected**

Build 40 installs. This server update must be applied directly to the build 40 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.

## 6. eRAD RIS Release Version Numbers

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	Full version release
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	Core install, GUI.zip, web service and database updates
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	GUI.zip and Web service updates
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	GUI.zip, web service, and database updates
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	GUI.zip and Web service updates
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	GUI.zip and Web service updates. Also MIRTH mapping changes
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	Web service update
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	Web service update
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	GUI.zip, Web service and database updates
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	GUI.zip, Web service, database updates and SQL Management reporting
37	12	1.2.37.14267	1.2.37.13040	1.2.37.14161	1.2.37.14267	GUI.zip, Web service and database updates
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	GUI.zip, Web service and database updates
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	Full version release
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	Core install required
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	GUI.zip and Web service updates
38	5	1.2.38.15513	1.2.38.14748	1.2.38.15513	1.2.38.15451	GUI.zip, Web service and database updates
38	6	1.2.38.15618	1.2.38.14748	1.2.38.15513	1.2.38.15618	GUI.zip and database updates
38	7	1.2.38.15768	1.2.38.14748	1.2.38.15768	1.2.38.15618	GUI.zip and Web Service updates
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	Requires Core Install. GUI.zip, Web Service, and Database updates
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service

## **RADNET, Inc. – eRAD RIS Server Update**

40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web Service, and Database updates

## **7. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.40.16967.zip file provided with this release.  
Be sure to make a backup of the ris.exe.config file contained within the .zip folder.

- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config and rRISServices.vshost.exe.config files.

*rRISService directories include:*

- a) *rRISService*
- b) *CDS rRISService*
- c) *Wedge rRISService*
- d) *DDE rRISService*

Restart each service.

- 3) Run the B40\_004.sql file against the eRAD RIS database instance.



# Server Update

For eRAD RIS  
Version 1.0  
Build 40  
Update 40.005

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## 1. New Features

### Order Level IVT

This patch release contains a new feature to have orders requiring Insurance Verification and/or PreCert approval. Essentially the IVT list will be the same, except now it will have the addition of procedures in Ordered status.

This is a configurable option that is controlled by a new systemconfig setting **OrderLevelIVT**. The default value is **False** (off).

System Config Code	Value	Default	Description
Contains: ▼	Contains: ▼	Contains: ▼	Contains: ▼
Click here to add a new row			
OrderLevelIVT	False	(value = true/false)	Determines if IVT will first be calculated at order level

**Figure 1.1 – SystemConfig lookup table displaying OrderLevelIVT code**

Once this setting is turned on, opening the IVT WL you will see the Ordered Status procedures on the work list. The procedures PreCert can be approved and insurance verified before the procedure is scheduled.

Flags	Status	Procedures	Order Date	Scheduled Date
▼ Starts... order ▼	▼	▼	▼	▼
✓	Ordered	CT Abdomen W & Pelvis W & CTA Chest W/Wo [CT54] - Abdomen	04-01-2013 2:08 PM	C
■	Ordered	CT Abdomen W & Pelvis W [CT9] - Abdomen	03-28-2013 10:53 AM	L
	Ordered	FL Arthrogram Elbow CT [FL9] - Elbow	03-25-2013 3:29 PM	J
	Ordered	XR ABDOMEN AP, KUB [74000] - Abdomen	03-22-2013 1:55 PM	A
■	Ordered	CT Chest W & Abdomen W/Wo [CT42] - Chest	03-18-2013 2:33 PM	03-18-2013 1:55 PM F

**Figure 1.2 – IVT WL displaying Ordered status procedures**

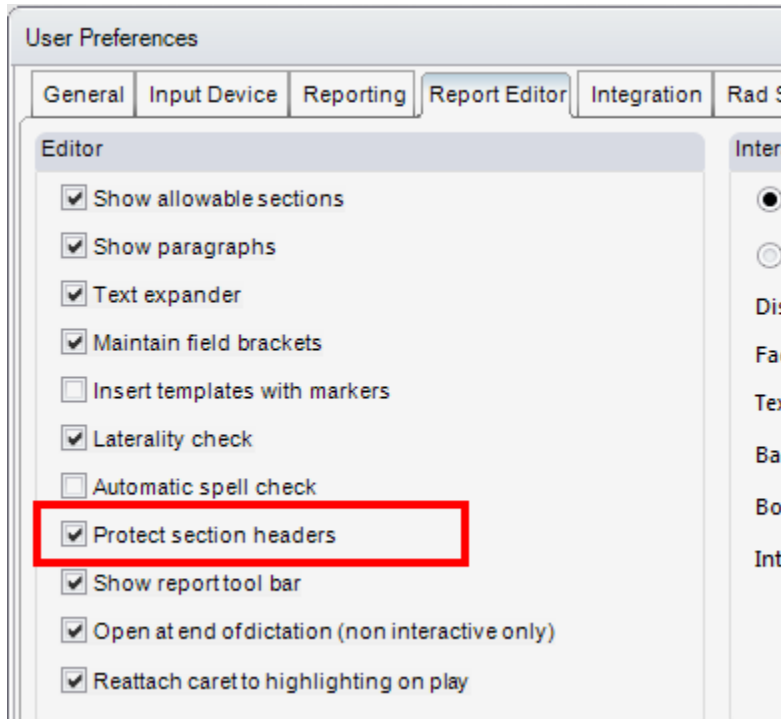
Users may notice the Scheduled Date column is populated for procedures in Ordered status on the IVT work list. The reason for this is because EMR orders may have been scheduled and after the order is scheduled, the EMR order is cancelled because a new EMR order was required (missing information, procedure change, etc...). The cancelled EMR order remains in Ordered status until the new EMR order is matched with the scheduled study, thus the cancelled EMR order on the IVT WL shows a Scheduled Date.

The Status will update for the study on the IVT work list accordingly as the study proceeds through the work flow.

### **Reporting – Lock Section Titles**

In the past section titles could be inadvertently removed, edited, etc... as the section titles were not locked down from the user.

In Server Release 1.40.005 a user preference was added under the Report Editor tab called “Protect section headers”.

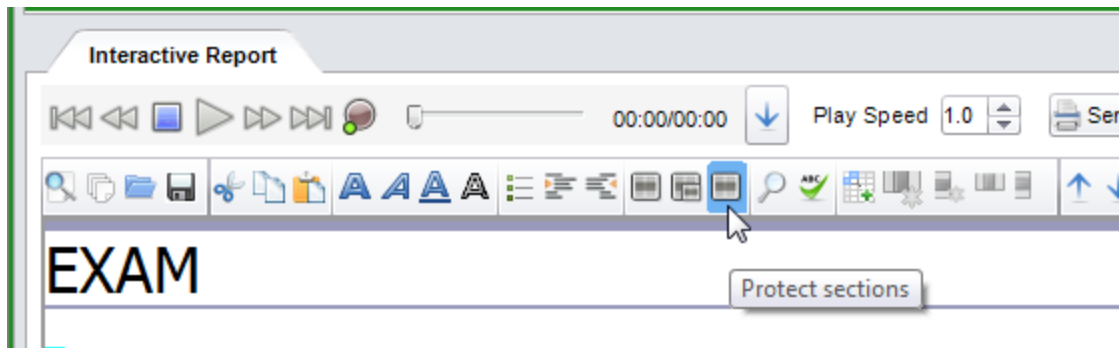


**Figure 1.3 – User preference “Protect section headers”**

When this User Preference is selected, the section titles in the reporting window will be “locked down”. The user will not be able to add, edit, or remove section titles.

In addition to the new user preference, a new icon/toggle button called “Protect sections” has been added to the formatting toolbar in the reporting window. When the user preference is selected as shown in figure 1.3, the Protect section button will be toggled on.

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**Figure 1.4 – Protect sections button added to formatting toolbar in reporting window**

If the user does want to add, edit or remove a section title while in the reporting window, they can simply click on the Protect sections button to toggle off the lock of the section titles. Once they changes are made, they can toggle it back on if they so choose.

When the window is committed, closed or skipped, the next study that is opened in the reporting window will take the default action of the user preference.

## 2. Defects Resolved

Redmine #	Subject	Priority
3506	Precert rule on CPT code not working when more than one procedure scheduled	High
3488	PreCert - Add study that requires precert at time of reschedule, precert is not required	High
3503	Add procedure row at new appointment or at the time registration throws error.	High
3515	User preference for Locking Section Titles is not visible in User Preferences window	Normal
3516	IVT - Orders from cancelled studies don't have Precert and are not added to the IVT work list	High
3511	DTC exception when attempting to manually change status	High
2397	Reporting - ability to lock down section titles and not allow editing	Normal
3517	appointment book background not coloring	Normal
3421	Spelling dictionaries not practice specific - cross contamination possible	High
3529	Unread exams slow	Normal
3512	WL Filter not working when like "!breast!dexamammo" or like "!breast & !dexamammo"	High
3530	Billing ORU files no longer formatted correctly	Immediate
3536	RADAR integration at SE resulted in a patient being called more than once	Immediate
3557	CC Physicians not getting reports	Immediate
3523	some columns not populated in worklist	High
3528	Magview reports come in via HL7 containing &#13;	High
3535	object reference error in forms and labels editor and row selection issues	High
3539	My pending signature WL no show rows if transcribed studies are updated after they have been transcribed	High
3552	original_study_key not being set when scheduling a followUp order BIRADS 0 wl	High
3520	CC doctors were not getting faxes	Urgent
3555	SystemSkin Error in CDImport Grid	Normal
3549	Order from cancelled study does not have Billing code in IVT window	High
3556	ARS - SpeechMike issue with play/record - can lose dictation (Batch)	High

### **3. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.40.17087.zip
- 2) RIS Service Updates folder contains
  - a) CDSJobManager.dll
  - b) CDSJobManager.pdb
  - c) CommonLib.dll
  - d) CommonLib.pdb
  - e) DDEngine.dll
  - f) DDEngine.pdb
  - g) Interop.FAXCOMEXLib.dll
  - h) Microsoft.Practices.EnterpriseLibrary.Caching.dll
  - i) Microsoft.Practices.EnterpriseLibrary.Caching.pdb
  - j) Microsoft.Practices.EnterpriseLibrary.Common.dll
  - k) Microsoft.Practices.EnterpriseLibrary.Common.pdb
  - l) Microsoft.Practices.EnterpriseLibrary.Logging.dll
  - m) Microsoft.Practices.EnterpriseLibrary.Logging.pdb
  - n) Microsoft.Practices.ServiceLocation.dll
  - o) Microsoft.Practices.ServiceLocation.pdb
  - p) Microsoft.Practices.Unity.dll
  - q) Microsoft.Practices.Unity.Interception.dll
  - r) Microsoft.Practices.Unity.Interception.pdb
  - s) Microsoft.Practices.Unity.pdb
  - t) Microsoft.Web.Infrastructure.dll
  - u) Newtonsoft.Json.dll
  - v) Newtonsoft.Json.xml
  - w) Ninject.dll
  - x) Ninject.Web.Common.dll
  - y) Ninject.Web.Common.xml
  - z) Ninject.xml
  - aa) O2S.Components.PDFRender4NET.dll
  - bb) PDFToImages.exe
  - cc) rRISServices.exe
  - dd) rRISServices.pdb
  - ee) rRISServices.vshost.exe
  - ff) ScheduledTaskManager.dll
  - gg) ScheduledTaskManager.pdb
  - hh) SignatureApprovalService.exe
  - ii) SignatureApprovalService.pdb
  - jj) System.Net.Http.dll
  - kk) System.Net.Http.Formatting.dll

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- ll) System.Net.Http.Formatting.xml
- mm) System.Net.Http.xml
- nn) System.Web.Helpers.dll
- oo) System.Web.Helpers.xml
- pp) System.Web.Http.dll
- qq) System.Web.Http.SelfHost.dll
- rr) System.Web.Http.SelfHost.xml
- ss) System.Web.Http.WebHost.dll
- tt) System.Web.Http.WebHost.xml
- uu) System.Web.Http.xml
- vv) System.Web.Mvc.dll
- ww) System.Web.Mvc.xml
- xx) System.Web.Optimization.dll
- yy) System.Web.Providers.dll
- zz) System.Web.Razor.dll
- aaa) System.Web.Razor.xml
- bbb) System.Web.WebPages.Deployment.dll
- ccc) System.Web.WebPages.Deployment.xml
- ddd) System.Web.WebPages.dll
- eee) System.Web.WebPages.Razor.dll
- fff) System.Web.WebPages.Razor.xml
- ggg) System.Web.WebPages.xml
- hhh) Tourreau.Gilles.FaxDotNet.dll
- iii) Tourreau.Gilles.FaxDotNet.pdb
- jjj) Tourreau.Gilles.FaxDotNet.xml
- kkk) WCFService.dll
- lll) WCFService.pdb
- mmm) WebApi.dll
- nnn) WebApi.pdb
- ooo) Wedge.exe
- ppp) Wedge.pdb

- 3) SQL folder contains:
  - a) B40\_005.sql



## **4. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

## **5. Who is affected**

Build 40 installs. This server update must be applied directly to the build 40 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.

**6. eRAD RIS Release Version Numbers**

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	Full version release
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	Core install, GUI.zip, web service and database updates
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	GUI.zip and Web service updates
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	GUI.zip, web service, and database updates
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	GUI.zip and Web service updates
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	GUI.zip and Web service updates. Also MIRTH mapping changes
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	Web service update
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	Web service update
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	GUI.zip, Web service and database updates
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	GUI.zip, Web service, database updates and SQL Management reporting
37	12	1.2.37.14267	1.2.37.13040	1.2.37.14161	1.2.37.14267	GUI.zip, Web service and database updates
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	GUI.zip, Web service and database updates
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	Full version release
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	Core install required
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	GUI.zip and Web service updates
38	5	1.2.38.15513	1.2.38.14748	1.2.38.15513	1.2.38.15451	GUI.zip, Web service and database updates
38	6	1.2.38.15618	1.2.38.14748	1.2.38.15513	1.2.38.15618	GUI.zip and database updates
38	7	1.2.38.15768	1.2.38.14748	1.2.38.15768	1.2.38.15618	GUI.zip and Web Service updates
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	Requires Core Install. GUI.zip, Web Service, and Database updates
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service

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40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web service, database updates
40	5	1.3.40.17087	1.3.40.16659	1.3.40.17069	1.3.40.17087	GUI.zip, Web service, database updates

## **7. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.40.17087.zip file provided with this release.

Be sure to make a backup of the ris.exe.config file contained within the .zip folder.

- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config and rRISServices.vshost.exe.config files.

*rRISService directories include:*

- a) *rRISService*
- b) *CDS rRISService*
- c) *Wedge rRISService*
- d) *DDE rRISService*

Restart each service.

- 3) Run the B40\_005.sql file against the eRAD RIS database instance.

# Server Update

For eRAD RIS  
Version 1.0  
Build 40  
Update 40.006

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## 1. Defects Resolved

Redmine #	Subject	Priority
3540	Historic Studies that are updated in view edit are re-running IVT and appearing on the IVT WI	Normal
3567	Historical studies throw exception on save of view/edit	Normal
3568	user is able to change the insurance priority but will not save changes	Normal
3560	red x error over grid on print forms dialog box	Normal
3553	object reference error when saving walkin with multiple exams	Normal
3579	Reporting - QA Edit text color not appearing after reopening an rejected report	High
3583	CDS Jobs not getting Finalized	Normal
3588	Inbound Reporting - Error loading XML file: c:\Dictaphone\exam.xml	High
3589	Issue where in Magview they doubleclick the VR icon	High
3591	Memory Leak in reporting window(s)	Normal

## **2. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.40.17146.zip
- 2) RIS Service Updates folder contains
  - a) CDSJobManager.dll
  - b) CDSJobManager.pdb
  - c) CommonLib.dll
  - d) CommonLib.pdb
  - e) DDEngine.dll
  - f) DDEngine.pdb
  - g) rRISServices.exe
  - h) rRISServices.pdb
  - i) rRISServices.vshost.exe
  - j) ScheduledTaskManager.dll
  - k) ScheduledTaskManager.pdb
  - l) SignatureApprovalService.exe
  - m) SignatureApprovalService.pdb
  - n) WCFService.dll
  - o) WCFService.pdb
  - p) WebApi.dll
  - q) WebApi.pdb
  - r) Wedge.exe
  - s) Wedge.pdb
- 3) SQL folder contains:
  - a) B40\_006.sql

### **3. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **4. Who is affected**

Build 40 installs. This server update must be applied directly to the build 40 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.



## 5. eRAD RIS Release Version Numbers

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	Full version release
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	Core install, GUI.zip, web service and database updates
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	GUI.zip and Web service updates
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	GUI.zip, web service, and database updates
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	GUI.zip and Web service updates
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	GUI.zip and Web service updates. Also MIRTH mapping changes
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	Web service update
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	Web service update
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	GUI.zip, Web service and database updates
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	GUI.zip, Web service, database updates and SQL Management reporting
37	12	1.2.37.14267	1.2.37.13040	1.2.37.14161	1.2.37.14267	GUI.zip, Web service and database updates
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	GUI.zip, Web service and database updates
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	Full version release
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	Core install required
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	GUI.zip and Web service updates
38	5	1.2.38.15513	1.2.38.14748	1.2.38.15513	1.2.38.15451	GUI.zip, Web service and database updates
38	6	1.2.38.15618	1.2.38.14748	1.2.38.15513	1.2.38.15618	GUI.zip and database updates
38	7	1.2.38.15768	1.2.38.14748	1.2.38.15768	1.2.38.15618	GUI.zip and Web Service updates
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	Requires Core Install. GUI.zip, Web Service, and Database updates
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service

## **RADNET, Inc. – eRAD RIS Server Update**

40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web service, database updates
40	5	1.3.40.17087	1.3.40.16659	1.3.40.17069	1.3.40.17087	GUI.zip, Web service, database updates
40	6	1.3.40.17146	1.3.40.16659	1.3.40.17146	1.3.40.17146	GUI.zip, Web service, database updates

## **6. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.40.17146.zip file provided with this release.

Be sure to make a backup of the ris.exe.config file contained within the .zip folder.

A change has been made the ris.exe.config file. Edit the existing ris.exe.config file and change the following.

BEFORE:

```
<startup>
  <supportedRuntime version="v4.0" sku=".NETFramework,Version=v4.0" />
</startup>
```

AFTER:

```
<startup useLegacyV2RuntimeActivationPolicy="true">
  <supportedRuntime version="v4.0" sku=".NETFramework,Version=v4.0" />
</starup>
```

- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config and rRISServices.vshost.exe.config files.

*rRISService directories include:*

- a) *rRISService*
- b) *CDS rRISService*
- c) *Wedge rRISService*
- d) *DDE rRISService*

Restart each service.

- 3) Run the B40\_006.sql file against the eRAD RIS database instance.

# Server Update

For eRAD RIS  
Version 1.0  
Build 40  
Update 40.007

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## 1. New Features

### Patient DOB in Reporting Window

The patient's date of birth was requested to be displayed within the reporting window. This was added to the Summary panel of the Reporting window.

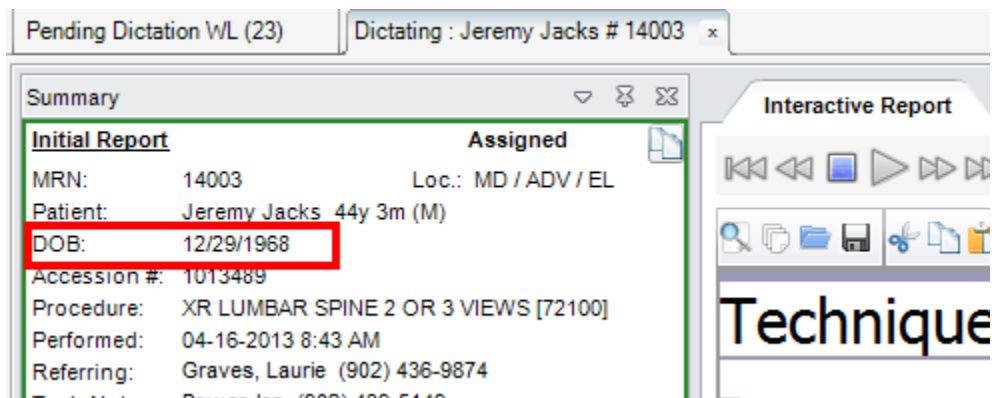


Figure 1.1 – Patient's DOB added the Summary Panel of the Reporting window

## 2. Defects Resolved

Redmine #	Subject	Priority
3627	Need to indicate to the billing system that a study is an external report	Immediate
3650	Studies flagged with External Report do not appear on pending signature work lists	Urgent
3628	Patient Folder - when a default view is applied and no relevant studies wrong report is selected.	High
3643	Scanning - Need to improve Not Responding Message	High
3593	Scroll wheel when zooming images is a bit jumpy.	Normal
3594	Patient Folder - Loading prior in PACS with double click not working	Normal
3595	Patient Folder - Legacy report not displaying signed by radiologist in the document viewer or nugget.	Normal
3611	Patient Folder - DOB should be somewhere in the patient folder.	Normal
3626	Need report to display multi sign data	Normal
3634	Error opening report for addendum from inbound reporting	Normal
3638	ambiguous column error when opening dictate from My Signed By Date WL	Normal
3647	memory leak in gridflagcellement	Normal
3649	Memory management techniques may contribute to perceived performance issues	Normal
3652	Scanning - Not prompted to save when adding/modifying an image	Normal
3654	memory leak of dgridworklist	Normal
3613	Error on checking in/save - splitting order in registration	High
3655	UI_Interpretation_Verified not firing the UI_ReportReleased action	Urgent
3657	poor error logging when exception occurs disposing of a form	Normal
3624	CPT Modality column	High
3666	I_referring_practice_address_Add_person_address	Normal
3660	POST button does not enable on outside read studies	High

## **2. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.40.17268.zip
- 2) RIS Service Updates folder contains
  - a) CDSJobManager.dll
  - b) CDSJobManager.pdb
  - c) CommonLib.dll
  - d) CommonLib.pdb
  - e) DDEngine.dll
  - f) DDEngine.pdb
  - g) rRISServices.exe
  - h) rRISServices.pdb
  - i) rRISServices.vshost.exe
  - j) ScheduledTaskManager.dll
  - k) ScheduledTaskManager.pdb
  - l) SignatureApprovalService.exe
  - m) SignatureApprovalService.pdb
  - n) WCFService.dll
  - o) WCFService.pdb
  - p) WebApi.dll
  - q) WebApi.pdb
  - r) Wedge.exe
  - s) Wedge.pdb
- 3) SQL folder contains:
  - a) B40\_007.sql

### **3. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **4. Who is affected**

Build 40 installs. This server update must be applied directly to the build 40 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.



## 5. eRAD RIS Release Version Numbers

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	Full version release
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	Core install, GUI.zip, web service and database updates
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	GUI.zip and Web service updates
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	GUI.zip, web service, and database updates
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	GUI.zip and Web service updates
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	GUI.zip and Web service updates. Also MIRTH mapping changes
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	Web service update
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	Web service update
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	GUI.zip, Web service and database updates
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	GUI.zip, Web service, database updates and SQL Management reporting
37	12	1.2.37.14267	1.2.37.13040	1.2.37.14161	1.2.37.14267	GUI.zip, Web service and database updates
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	GUI.zip, Web service and database updates
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	Full version release
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	Core install required
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	GUI.zip and Web service updates
38	5	1.2.38.15513	1.2.38.14748	1.2.38.15513	1.2.38.15451	GUI.zip, Web service and database updates
38	6	1.2.38.15618	1.2.38.14748	1.2.38.15513	1.2.38.15618	GUI.zip and database updates
38	7	1.2.38.15768	1.2.38.14748	1.2.38.15768	1.2.38.15618	GUI.zip and Web Service updates
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	Requires Core Install. GUI.zip, Web Service, and Database updates
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service

## **RADNET, Inc. – eRAD RIS Server Update**

40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web service, database updates
40	5	1.3.40.17087	1.3.40.16659	1.3.40.17069	1.3.40.17087	GUI.zip, Web service, database updates
40	6	1.3.40.17146	1.3.40.16659	1.3.40.17146	1.3.40.17146	GUI.zip, Web service, database updates
40	7	1.3.40.17268	1.3.40.16659	1.3.40.17268	1.3.40.17259	GUI.zip, Web service, database updates

## **6. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.40.17268.zip file provided with this release.

Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config and rRISServices.vshost.exe.config files.

*rRISService directories include:*

- a) *rRISService*
- b) *CDS rRISService*
- c) *Wedge rRISService*
- d) *DDE rRISService*

Restart each service.

- 3) Run the B40\_007.sql file against the eRAD RIS database instance.

# Server Update

For eRAD RIS  
Version 1.0  
Build 40  
Update 40.008

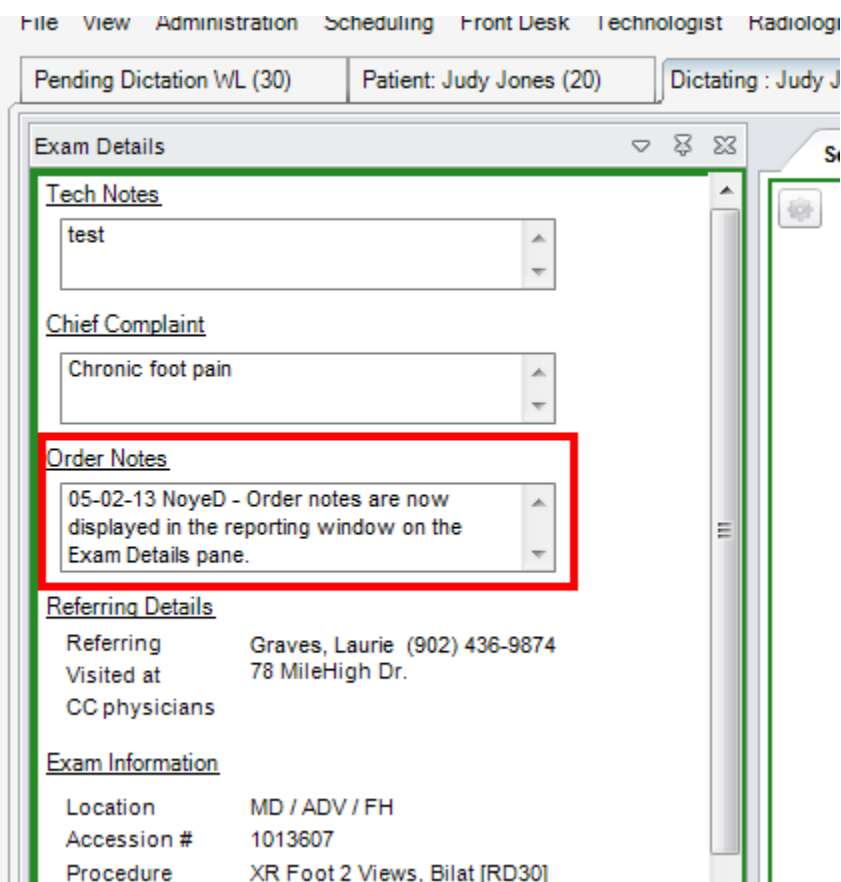
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## 1. New Features

### Reporting - Order Notes Added To Exam Details Pane

Order Notes were missing from reporting window. Previously the users would have to access the Order Notes from the data nugget or the View / Edit window on the Patient Folder WL.

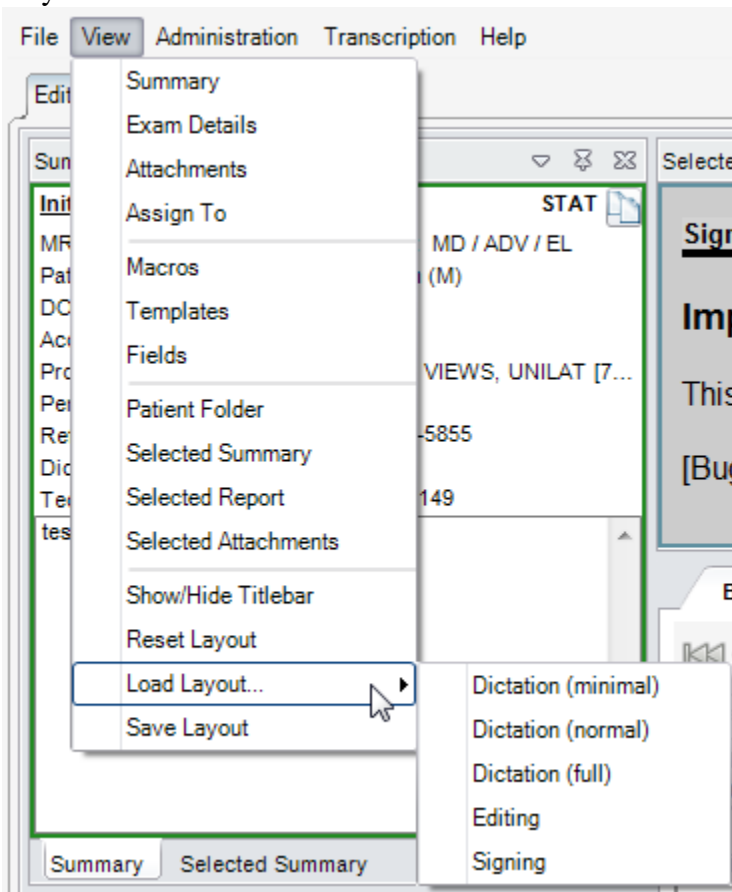


**Figure 1.1 – Order Notes in Exam Details pane**

In Server release 1.40.008, the Order notes have been added to the Exam Details data pane in the reporting window. Users must be aware that in order to view the Order notes they must dock the Exam Details data pane and save layout for it to display in future reporting window sessions.

## Reporting – Alter and Save Default Layouts

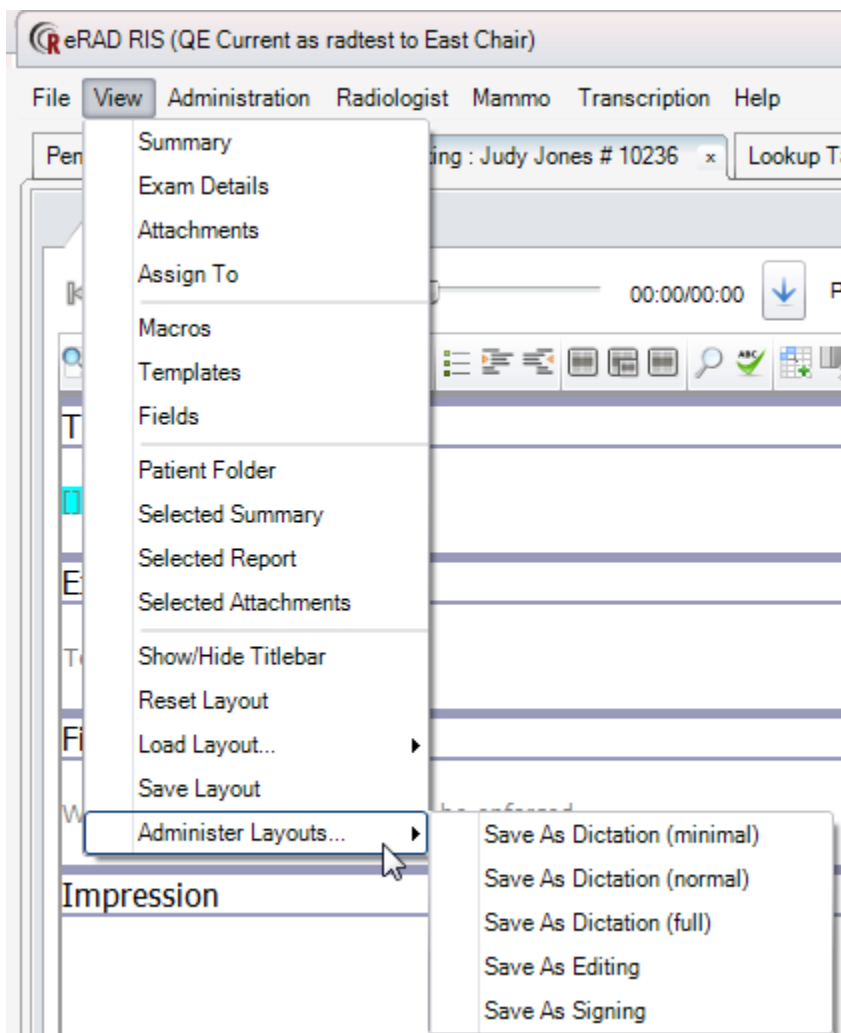
In the reporting windows view menu users had the option to choose from of a list of default layouts. These layouts came “canned” with eRAD RIS and if changes were desired to the layout, they could not be saved.



**Figure 1.2 – View Menu - Load Layout**

It was requested that these layouts could be altered and changes saved. We have added a new menu and sub-menu to the View menu. Under the report editor screens View menu, administrators will find a new menu item. **Administer Layouts...** this will lead to a **Save As** option for each of the standard layouts. The administrator simply designs an open screen as they desire then use this menu item to save to the database as one of the default layouts for all users. Availability of this set of menu items is based on a **new access string “View.Administration”**. Users must have full access to the mentioned access string in order to use this feature.

## **RADNET, Inc. – eRAD RIS Server Update**



**Figure 1.3 – View Menu – Administer Layouts**

## 2. Defects Resolved

Redmine #	Subject	Priority
3696	Attachments - Wrong Patient Key Data	Urgent
3422	On the Order tab, "Visit location for" field value is incorrect for the physician that is highlighted	High
3614	Cancelled orders not appearing on Patient Folder	High
3693	Scheduling availability templates rules - times can appear as open in schedule search	High
3713	Open/Wide Board Modalities are difficult to identify from search results	High
3715	Insert macro/template voice commands not working.	High
3718	Error applying default view to patient folder when patient folder is pinned.	High
3720	Prompt for more pages does cause issues if multiple documents are scanned before the prompt comes up	High
3737	the binary string truncated error	High
3636	IVT WL showing cancelled studies as scheduled	Normal
3672	External Report checkbox does not stay checked	Normal
3673	Reporting - reports of double dictation text intermittently	Normal
3678	Billing messages to correctly specify the correct site code when the study is an outside read	Normal
3694	booking locks not released in b40 when cancelling studies in some cases	Normal
3695	booking locks not released when moving a study to a new order	Normal
3702	override templates are not painting in calendar control	Normal



## **2. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.40.17364.zip
- 2) RIS Service Updates folder contains
  - a) CDSJobManager.dll
  - b) CDSJobManager.pdb
  - c) CommonLib.dll
  - d) CommonLib.pdb
  - e) DDEngine.dll
  - f) DDEngine.pdb
  - g) rRISServices.exe
  - h) rRISServices.pdb
  - i) rRISServices.vshost.exe
  - j) ScheduledTaskManager.dll
  - k) ScheduledTaskManager.pdb
  - l) SignatureApprovalService.exe
  - m) SignatureApprovalService.pdb
  - n) WCFService.dll
  - o) WCFService.pdb
  - p) WebApi.dll
  - q) WebApi.pdb
  - r) Wedge.exe
  - s) Wedge.pdb
- 3) SQL folder contains:
  - a) B40\_008.sql

### **3. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **4. Who is affected**

Build 40 installs. This server update must be applied directly to the build 40 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.

## 5. eRAD RIS Release Version Numbers

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	Full version release
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	Core install, GUI.zip, web service and database updates
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	GUI.zip and Web service updates
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	GUI.zip, web service, and database updates
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	GUI.zip and Web service updates
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	GUI.zip and Web service updates. Also MIRTH mapping changes
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	Web service update
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	Web service update
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	GUI.zip, Web service and database updates
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	GUI.zip, Web service, database updates and SQL Management reporting
37	12	1.2.37.14267	1.2.37.13040	1.2.37.14161	1.2.37.14267	GUI.zip, Web service and database updates
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	GUI.zip, Web service and database updates
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	Full version release
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	Core install required
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	GUI.zip and Web service updates
38	5	1.2.38.15513	1.2.38.14748	1.2.38.15513	1.2.38.15451	GUI.zip, Web service and database updates
38	6	1.2.38.15618	1.2.38.14748	1.2.38.15513	1.2.38.15618	GUI.zip and database updates
38	7	1.2.38.15768	1.2.38.14748	1.2.38.15768	1.2.38.15618	GUI.zip and Web Service updates
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	Requires Core Install. GUI.zip, Web Service, and Database updates
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service

## **RADNET, Inc. – eRAD RIS Server Update**

40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web service, database updates
40	5	1.3.40.17087	1.3.40.16659	1.3.40.17069	1.3.40.17087	GUI.zip, Web service, database updates
40	6	1.3.40.17146	1.3.40.16659	1.3.40.17146	1.3.40.17146	GUI.zip, Web service, database updates
40	7	1.3.40.17268	1.3.40.16659	1.3.40.17268	1.3.40.17259	GUI.zip, Web service, database updates
40	8	1.3.40.17364	1.3.40.16659	1.3.40.17362	1.3.40.17343	GUI.zip, Web service, database updates

## **6. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.40.17364.zip file provided with this release.  
Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config and rRISServices.vshost.exe.config files.  
*rRISService directories include:*

- a) *rRISService*
- b) *CDS rRISService*
- c) *Wedge rRISService*
- d) *DDE rRISService*

Restart each service.

- 3) Run the B40\_008.sql file against the eRAD RIS database instance.

# Server Update

For eRAD RIS  
Version 1.0  
Build 40  
Update 40.009

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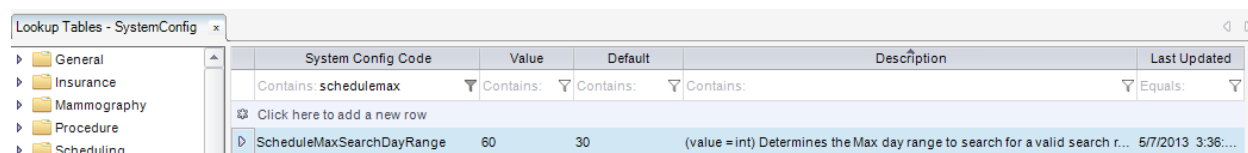
### 1. New Features

#### Scheduling – Limit Search Results for Appointment Schedules

This is feature 3844

Before this feature, users didn't have a restriction on the number of days that they could search for available times when scheduling a new appointment. If the search was repeatedly performed over an entire year, it is a waste of system resources.

A new system config variable was introduced to limit how many days users can search for time. The name of the variable is titled **“ScheduleMaxSearchDayRange”** and has a default of 30 days. The value column can override the default, so an administrator can reduce or extend the allowed days to search.



System Config Code	Value	Default	Description	Last Updated
Contains: schedulemax	Contains: ▼	Contains: ▼	Contains: ▼	Contains: ▼
Click here to add a new row				
ScheduleMaxSearchDayRange	60	30	(value = int) Determines the Max day range to search for a valid search r...	5/7/2013 3:36:...

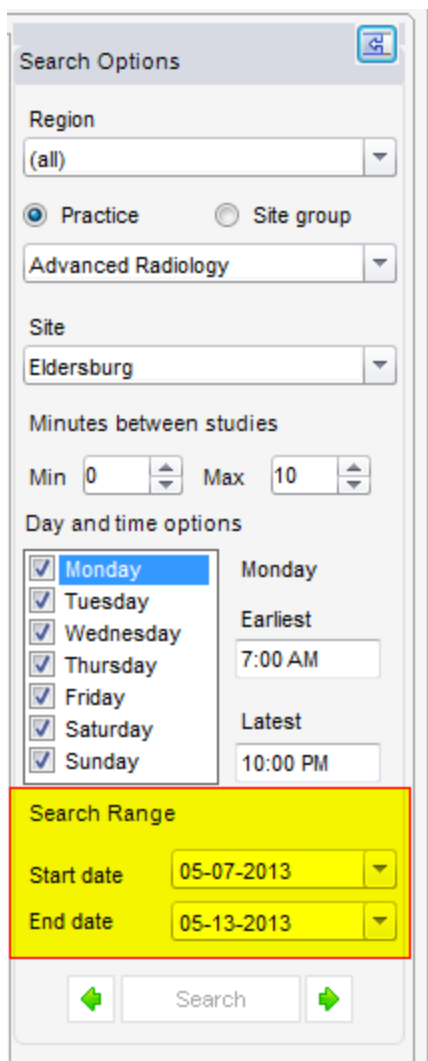
**Figure 1.1 – SystemConfig table displaying new config setting “ScheduleMaxSearchDayRange”**

In the example above the Value has been increased to 60 days.

When the user is creating a New Appointment, the Schedule Order window opens. On the Schedule tab we have the Search Options on the right of this tab.

The Search Range will default to the value set from an existing system config variable “ScheduleDefaultSearchDayRange”. In my example below it is set for 7 days.

## RADNET, Inc. – eRAD RIS Server Update



Search Options

Region  
(all)

☒ Practice ☐ Site group

Advanced Radiology

Site  
Eldersburg

Minutes between studies  
Min 0 Max 10

Day and time options

☒ Monday ☒ Tuesday ☒ Wednesday ☒ Thursday ☒ Friday ☒ Saturday ☒ Sunday

Monday  
Earliest  
7:00 AM  
Latest  
10:00 PM

Search Range

Start date 05-07-2013

End date 05-13-2013

Search

Figure 1.2 – Search Range is defaulted to “ScheduleDefaultSearchDayRange”

Since I have the system config setting for “**ScheduleMaxSearchDayRange**” = 60, if I change the end date of my search range to August 31, the start date will automatically change to July 2<sup>nd</sup> (end date minus 60)



## **RADNET, Inc. – eRAD RIS Server Update**

Search Options

Region  
(all)

☒ Practice ☐ Site group

Advanced Radiology

Site  
Eldersburg

Minutes between studies  
Min 0 Max 10

Day and time options

☒ Monday ☒ Tuesday ☒ Wednesday ☒ Thursday ☒ Friday ☒ Saturday ☒ Sunday

Monday  
Earliest  
7:00 AM  
Latest  
10:00 PM

**Search Range**

Start date 07-02-2013

End date 08-31-2013

Search

**Figure 1.3 – Search range end date set months ahead, the start date will change to equal that of new variable**

If the above start date Search Range is changed to June 1st, the End Date will automatically change to be that of the start date + 60 days.

However, if in the example above, the start date Search Range is changed to be after the end date (example September 1st), it will not move the end date to be Start Date + 60. It will instead use the value for the system config variable “ScheduleDefaultSearchDayRange” which in my case would be 7 days. So the end date would be September 7<sup>th</sup>.

## **2. Defects Resolved**

Redmine #	Subject	Priority
3843	Appointment search was skipping available time slots because of appeared conflict	Normal

## **2. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.40.17370.zip
- 2) RIS Service Updates folder contains
  - a) CDSJobManager.dll
  - b) CDSJobManager.pdb
  - c) CommonLib.dll
  - d) CommonLib.pdb
  - e) DDEngine.dll
  - f) DDEngine.pdb
  - g) rRISServices.exe
  - h) rRISServices.pdb
  - i) rRISServices.vshost.exe
  - j) ScheduledTaskManager.dll
  - k) ScheduledTaskManager.pdb
  - l) SignatureApprovalService.exe
  - m) SignatureApprovalService.pdb
  - n) WCFService.dll
  - o) WCFService.pdb
  - p) WebApi.dll
  - q) WebApi.pdb
  - r) Wedge.exe
  - s) Wedge.pdb
- 3) SQL folder contains:
  - a) B40\_009.sql

### **3. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **4. Who is affected**

Build 40 installs. This server update must be applied directly to the build 40 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.

## 5. eRAD RIS Release Version Numbers

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	Full version release
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	Core install, GUI.zip, web service and database updates
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	GUI.zip and Web service updates
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	GUI.zip, web service, and database updates
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	GUI.zip and Web service updates
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	GUI.zip and Web service updates. Also MIRTH mapping changes
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	Web service update
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	Web service update
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	GUI.zip, Web service and database updates
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	GUI.zip, Web service, database updates and SQL Management reporting
37	12	1.2.37.14267	1.2.37.13040	1.2.37.14161	1.2.37.14267	GUI.zip, Web service and database updates
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	GUI.zip, Web service and database updates
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	Full version release
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	Core install required
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	GUI.zip and Web service updates
38	5	1.2.38.15513	1.2.38.14748	1.2.38.15513	1.2.38.15451	GUI.zip, Web service and database updates
38	6	1.2.38.15618	1.2.38.14748	1.2.38.15513	1.2.38.15618	GUI.zip and database updates
38	7	1.2.38.15768	1.2.38.14748	1.2.38.15768	1.2.38.15618	GUI.zip and Web Service updates
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	Requires Core Install. GUI.zip, Web Service, and Database updates
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service

## **RADNET, Inc. – eRAD RIS Server Update**

40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web service, database updates
40	5	1.3.40.17087	1.3.40.16659	1.3.40.17069	1.3.40.17087	GUI.zip, Web service, database updates
40	6	1.3.40.17146	1.3.40.16659	1.3.40.17146	1.3.40.17146	GUI.zip, Web service, database updates
40	7	1.3.40.17268	1.3.40.16659	1.3.40.17268	1.3.40.17259	GUI.zip, Web service, database updates
40	8	1.3.40.17364	1.3.40.16659	1.3.40.17362	1.3.40.17343	GUI.zip, Web service, database updates
40	9	1.3.40.17370	1.3.40.16659	1.3.40.17370	1.3.40.17370	GUI.zip, Web service, database updates

## **6. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.40.17370.zip file provided with this release.  
Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config and rRISServices.vshost.exe.config files.

*rRISService directories include:*

- a) *rRISService*
- b) *CDS rRISService*
- c) *Wedge rRISService*
- d) *DDE rRISService*

Restart each service.

- 3) Run the B40\_009.sql file against the eRAD RIS database instance.

# Server Update

For eRAD RIS  
Version 1.0  
Build 40  
Update 40.010

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## **1. New Features**

### **64 Bit Web Service**

This server update includes new web service files for the Core RIS service, allowing it to utilize more of the server memory that 32 bit will not allow.

Included are 2 new files.

- rRISServicesx64.exe
- rRISServicesx64.exe.config

The 64 bit version is only to be used for the Core RIS Service. The CDS / SAPS, DD Engine, and Wedge services will continue to use the 32 bit version (rRISServices.exe).

For information on installing the 64 bit service for the Core RIS Service see section 6 of this document.

## **2. Defects Resolved**

Redmine #	Subject	Priority
1899	outofmemory exceptions logged on ris services server	Urgent

## **2. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.40.17435.zip
- 2) RIS Service Updates folder contains
  - a) CDSJobManager.dll
  - b) CDSJobManager.pdb
  - c) CommonLib.dll
  - d) CommonLib.pdb
  - e) DDEngine.dll
  - f) DDEngine.pdb
  - g) rRISServices.exe
  - h) rRISServices.exe.config**
  - i) rRISServices.pdb
  - j) rRISServicesx64.exe**
  - k) rRISServicesx64.exe.config**
  - l) rRISServices.vshost.exe
  - m) ScheduledTaskManager.dll
  - n) ScheduledTaskManager.pdb
  - o) SignatureApprovalService.exe
  - p) SignatureApprovalService.pdb
  - q) WCFService.dll
  - r) WCFService.pdb
  - s) WebApi.dll
  - t) WebApi.pdb
  - u) Wedge.exe
  - v) Wedge.pdb

### **3. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **4. Who is affected**

Build 40 installs. This server update must be applied directly to the build 40 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.

## 5. eRAD RIS Release Version Numbers

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	Full version release
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	Core install, GUI.zip, web service and database updates
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	GUI.zip and Web service updates
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	GUI.zip, web service, and database updates
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	GUI.zip and Web service updates
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	GUI.zip and Web service updates. Also MIRTH mapping changes
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	Web service update
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	Web service update
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	GUI.zip, Web service and database updates
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	GUI.zip, Web service, database updates and SQL Management reporting
37	12	1.2.37.14267	1.2.37.13040	1.2.37.14161	1.2.37.14267	GUI.zip, Web service and database updates
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	GUI.zip, Web service and database updates
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	Full version release
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	Core install required
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	GUI.zip and Web service updates
38	5	1.2.38.15513	1.2.38.14748	1.2.38.15513	1.2.38.15451	GUI.zip, Web service and database updates
38	6	1.2.38.15618	1.2.38.14748	1.2.38.15513	1.2.38.15618	GUI.zip and database updates
38	7	1.2.38.15768	1.2.38.14748	1.2.38.15768	1.2.38.15618	GUI.zip and Web Service updates
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	Requires Core Install. GUI.zip, Web Service, and Database updates
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service

## **RADNET, Inc. – eRAD RIS Server Update**

40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web service, database updates
40	5	1.3.40.17087	1.3.40.16659	1.3.40.17069	1.3.40.17087	GUI.zip, Web service, database updates
40	6	1.3.40.17146	1.3.40.16659	1.3.40.17146	1.3.40.17146	GUI.zip, Web service, database updates
40	7	1.3.40.17268	1.3.40.16659	1.3.40.17268	1.3.40.17259	GUI.zip, Web service, database updates
40	8	1.3.40.17364	1.3.40.16659	1.3.40.17362	1.3.40.17343	GUI.zip, Web service, database updates
40	9	1.3.40.17370	1.3.40.16659	1.3.40.17370	1.3.40.17370	GUI.zip, Web service, database updates
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.

## 6. Installing

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.40.17435.zip file provided with this release.

Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

**NOTE:** If any port changes are made to the rRISServices.exe.config or the rRISServicesx64.exe.config files because of the changes for X64 webservice, make sure these port number changes are also updated in the ris.exe.config file.

- 2) Build 40, patch 10 includes a 64 bit version for RIS Services. Only the Core Services should be configured to run the 64 bit version. The other services such as DD Engine, CDS Manager, SAPS, etc. are not validated to run the 64 bit version at this time. Specifically, the DD Engine needs to run in 32 bit and the 64 bit version will fail.

In this package there are now 2 executable programs for the RISServices, namely rRISService.exe and rRISServicex64.exe. The rRISService.exe continues to be the 32 bit application. If you were to leave the services configured as is and you deploy the new RIS Services you will be running the 32 bit version.

Similar to the 32 bit version, the 64 bit version, rRISServicex64.exe has a configuration file called rRISServicesx64.exe.config. The contents of this file is identical to the 32 bit version. Stop each service listed below.

To run the 64 bit version for RIS Services you need to do the following (only the RIS Core Services are validated to use the 64 bit version):

- a. Configure the rRISServicex64.exe.config by copying the current rRISServices.exe.config to rRISServicesx64.exe.config
- b. Uninstall the RIS Service as “Windows Service”.
- c. Install the RIS Services as “Windows Service” using the rRISServicesx64.exe application
- d. Start the service.
- e. Verify the service is running.

## **RADNET, Inc. – eRAD RIS Server Update**

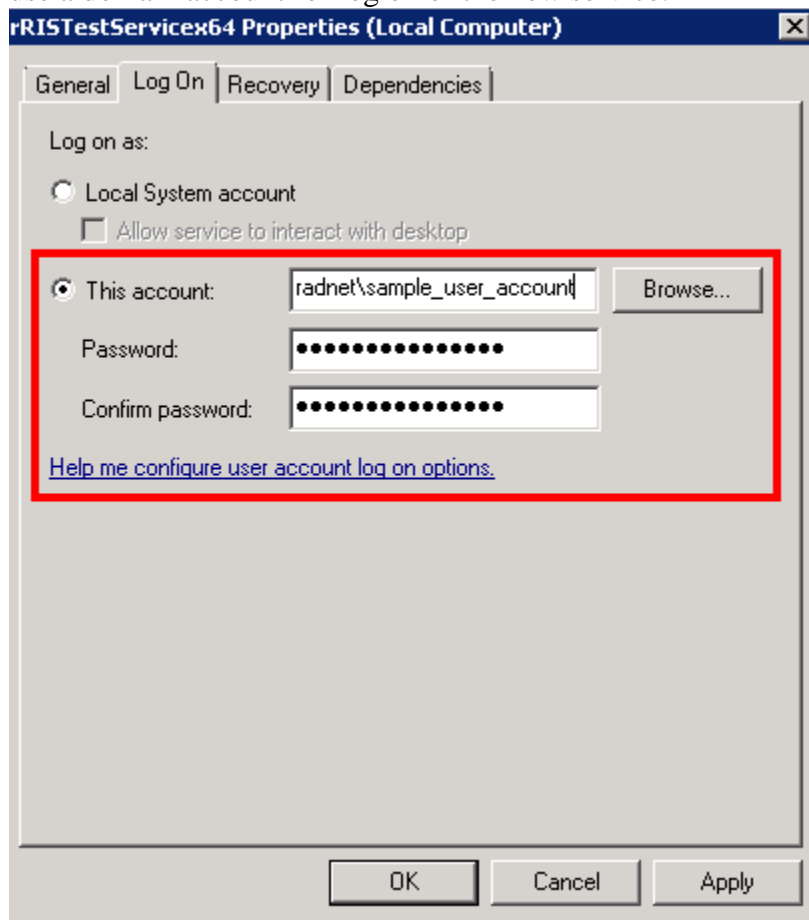
Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config and rRISServices.vshost.exe.config files.

*rRISService directories include:*

- i. rRISService
- ii. CDS rRISService
- iii. Wedge rRISService
- iv. DDE rRISService

Restart each service.

**REMINDER:** After the new 64 bit service is installed for rRISServicesx64.exe, remember to use a domain account for log on of the new service.





# Server Update

For eRAD RIS  
Version 1.0  
Build 40  
Update 40.011

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## **RADNET, Inc. – eRAD RIS Server Update**

### **1. Defects Resolved**

Redmine #	Subject	Priority
3863	errors getting/updating lookups can lead to deadlocks	Normal

### **2. Package Contents**

Files included for this server update:

- 1) RIS Service Updates folder contains
  - a) CDSJobManager.dll
  - b) CDSJobManager.pdb
  - c) CommonLib.dll
  - d) CommonLib.pdb
  - e) DDEngine.dll
  - f) DDEngine.pdb
  - g) rRISServices.exe
  - h) rRISServices.pdb
  - i) rRISServicesx64.exe
  - j) ScheduledTaskManager.dll
  - k) ScheduledTaskManager.pdb
  - l) SignatureApprovalService.exe
  - m) SignatureApprovalService.pdb
  - n) WCFSservice.dll
  - o) WCFSservice.pdb
  - p) WebApi.dll
  - q) WebApi.pdb
  - r) Wedge.exe
  - s) Wedge.pdb

### **3. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **4. Who is affected**

Build 40 installs. This server update must be applied directly to the build 40 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.

**5. eRAD RIS Release Version Numbers**

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	Full version release
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	Core install, GUI.zip, web service and database updates
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	GUI.zip and Web service updates
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	GUI.zip, web service, and database updates
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	GUI.zip and Web service updates
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	GUI.zip and Web service updates. Also MIRTH mapping changes
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	Web service update
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	Web service update
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	GUI.zip, Web service and database updates
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	GUI.zip, Web service, database updates and SQL Management reporting
37	12	1.2.37.14267	1.2.37.13040	1.2.37.14161	1.2.37.14267	GUI.zip, Web service and database updates
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	GUI.zip, Web service and database updates
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	Full version release
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	Core install required
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	GUI.zip and Web service updates
38	5	1.2.38.15513	1.2.38.14748	1.2.38.15513	1.2.38.15451	GUI.zip, Web service and database updates
38	6	1.2.38.15618	1.2.38.14748	1.2.38.15513	1.2.38.15618	GUI.zip and database updates
38	7	1.2.38.15768	1.2.38.14748	1.2.38.15768	1.2.38.15618	GUI.zip and Web Service updates
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	Requires Core Install. GUI.zip, Web Service, and Database updates
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service

## **RADNET, Inc. – eRAD RIS Server Update**

40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web service, database updates
40	5	1.3.40.17087	1.3.40.16659	1.3.40.17069	1.3.40.17087	GUI.zip, Web service, database updates
40	6	1.3.40.17146	1.3.40.16659	1.3.40.17146	1.3.40.17146	GUI.zip, Web service, database updates
40	7	1.3.40.17268	1.3.40.16659	1.3.40.17268	1.3.40.17259	GUI.zip, Web service, database updates
40	8	1.3.40.17364	1.3.40.16659	1.3.40.17362	1.3.40.17343	GUI.zip, Web service, database updates
40	9	1.3.40.17370	1.3.40.16659	1.3.40.17370	1.3.40.17370	GUI.zip, Web service, database updates
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.
40	11	1.3.40.17435	1.3.40.16659	1.3.40.17525	1.3.40.17370	Web service update

## **6. Installing**

- 1) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config, rRISServicesx64.exe.config and rRISServices.vshost.exe.config files.

*rRISService directories include:*

- a) *rRISService*
- b) *CDS rRISService*
- c) *Wedge rRISService*
- d) *DDE rRISService*

Reminder: in the previous Server Update 40.010, the Core RIS service may have been converted to 64 bit. If this is the case with your installation, there will be a new service using created for the Core RIS service

Restart each service.

# Server Update

For eRAD RIS  
Version 1.0  
Build 40  
Update 40.012



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### 1. New Features

#### Configurable dataset retrieval interval

When lookup tables are updated, the client was hard coded to look for dataset updates every 5 minutes. Also when logging in, the datasets would be retrieved.

In Build 40.012 the hard coded value has been removed. A new ris.exe.config entry has been created and the value, set in minutes will be set for all users.

```
<add key="LookupTableTimeToLiveInMinutes" value="5"/>
```

In the ris.exe.config file, this new key is to be added to the <appSettings> section.

Before:

```
<appSettings>
  <add key="defaultEndPointName" value="NetTcpBinding_IStudyService" />
  <add key="ClientSettingsProvider.ServiceUri" value="" />
  <!--<add key="RowLevelCacheDataSetNamesCSV" value="*" /> -->
</appSettings>
```

After:

```
<appSettings>
  <add key="defaultEndPointName" value="NetTcpBinding_IStudyService" />
  <add key="ClientSettingsProvider.ServiceUri" value="" />
  <add key="LookupTableTimeToLiveInMinutes" value="5"/>
  <!--<add key="RowLevelCacheDataSetNamesCSV" value="*" /> -->
</appSettings>
```

If a user wants to get the latest lookup table updates they can log out and back in. This will always download the lookup table changes. An alternative method has also been added. Under the Help Menu a new menu option titled “**Refresh Configuration**” has been added. When selected, the next time the user opens a data window, the latest lookup changes will be obtained.

## **RADNET, Inc. – eRAD RIS Server Update**



**Figure 1.1 – Refresh Configuration menu option.**

## **RADNET, Inc. – eRAD RIS Server Update**

### **Technologist – Remove chair assignment when Assigned Radiologist changed**

In previous versions if the chair was assigned to the study in the Perform Exam window and saved, the next time the window was opened and a Radiologist was assigned, or the Assigned Radiologist was changed, this would remove the chair assignment.

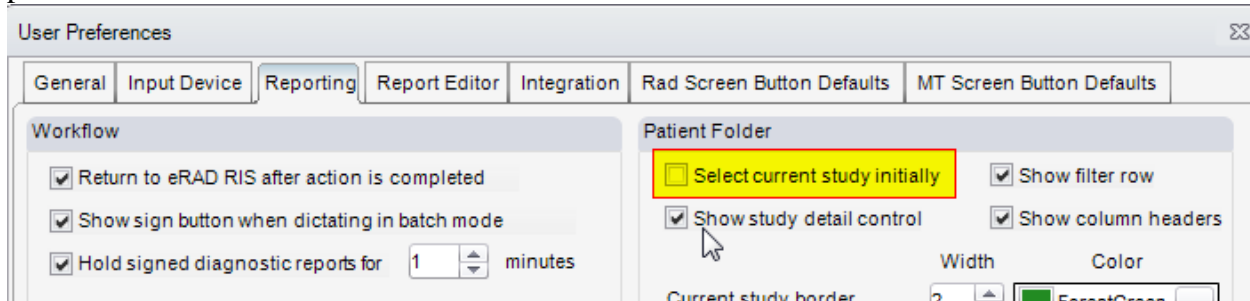
In Build 40.012 a system configuration setting was added to have this behavior configurable. The SystemConfig setting of **ClearChairOnAssignedRadChanged** has been added with a default value of False, meaning that if the Assigned Radiologist is changed, the chair assignment will be retained. When a value of true is entered for the **ClearChairOnAssignedRadChanged**, it work as before.

System Config Code	Value	Default	Description
Contains:	Contains:	Contains:	Contains:
Click here to add a new row			
ClearChairOnAssignedRadChanged	false	False	(value = Y/N) Used for Chair workflow. Determines whether the chair should be cleared in the event that the assigned radiologist is changed.

**Figure 1.2 – New SystemConfig code of ClearChairOnAssignedRadChanged**

### **Reporting - Display selected attachments for current study**

Using the existing User Preference of “Select current study initially” under the Patient folder section on the Reporting tab of the User Preferences window, will now also control whether the attachments associated with the current study will be displayed in the Selected Attachments data pane.



**Figure 1.2 – Existing User Preference “Select current study initially”**

A breakdown of how it will work:

- If the user preference "Select current study initially" is not selected and the study doesn't have relevant priors, the selected attachment pane will be empty.
- If the user preference "Select current study initially" is not selected and the study does have relevant priors, the select attachment pane will display the attachment (most likely the report) for the most relevant study.
- If the user preference "Select current study initially" is selected and the study doesn't have relevant priors, the selected attachment pane will be of the current study.
- If the user preference "Select current study initially" is selected and the study does have relevant priors, the selected attachment pane will be of the current study.

## 2. New Configuration settings and Changes

Setting Placeholder	Setting	Default	Purpose / Controls Access to
SystemConfig lookup	ClearChairOnAssignedRad Changed	False	Controls if the Chair assignment is retained when if the Assigned Radiologist is added or changed in the Perform Exam window. Possible values are True and False. True = The Chair assignment will be removed. False = The Chair assignment will be retained.
Ris.exe.config	<p>Before:</p> <pre>&lt;appSettings&gt;   &lt;add     key="defaultEndPointName"     value="NetTcpBinding_IStudyService" /&gt;   &lt;add     key="ClientSettingsProvider.ServiceUri" value="" /&gt;   &lt;!--&lt;add     key="RowLevelCacheDataSetNamesCSV" value="*" /&gt; --&gt; &lt;/appSettings&gt;</pre> <p>After:</p> <pre>&lt;appSettings&gt;   &lt;add     key="defaultEndPointName"     value="NetTcpBinding_IStudyService" /&gt;   &lt;add     key="ClientSettingsProvider.ServiceUri" value="" /&gt;   &lt;add     key="LookupTableTimeToLiveInMinutes" value="5" /&gt;   &lt;!--&lt;add     key="RowLevelCacheDataSetNamesCSV" value="*" /&gt; --&gt; &lt;/appSettings&gt;</pre>	5	Controls the interval in which the application will retrieve dataset lookup updates.

### 3. Defects Resolved

Redmine #	Subject	Priority
3698	RIS Core Services are not configured to best utilize load balancers	Urgent
3848	Cancelled studies are appearing on the IVT worklist	Urgent
3849	IVT B40 upgrade script missing that updates Approved, to Verfiied	Urgent
3963	Creating template, when adding Procedures and Uses, clicking ALL button produces an error	Urgent
3744	RadNet - From ADV go-live - redesign the lookup editor for Scheduler Group	High
3868	Push signature service is getting hung up on some jobs	High
3580	View/Edit screen does not build interpretation body if not already built	Normal
3629	missing index slowing diagnostic report rendering	Normal
3706	Document Viewer	Normal
3725	Procedure code picker when creating macros/template	Normal
3748	Quality Review Rate	Normal
3758	Reporting - Shortcut popup message 50+ times.	Normal
3861	Reporting - cross thread exceptions if getdata take x amount of time (slower get)	Normal
3924	Scanning - Cannon scanning lookup when error is on the scanner when we click the scan button	Normal
3943	Scanning - Cropping on some scanners defaults to 8.5x14 instead of 8.5x11	Normal
3948	rTwain build with optimized code to improve performance	Normal
3952	Patient Folder - new setting to not display current study in selected attachments	Normal
3954	Patient Folder Attachments - If there is an error getting the data we show the previously selected	Normal
3956	chair is nulled out when assigned rad is changed	Normal
3957	MU - Get Automated Measures	Normal
3958	IVT correction of casing of word, for migrated data	Normal
3960	Reporting - Floating windows flicker	Normal
3962	Lookup Tables are retrieved excessively during the day	Normal
3964	Create a new template, add 1 or more procedures, click Close then No to save prompt, error is produced.	Normal

## **4. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.40.17685.zip
- 2) RIS Service Updates folder contains
  - a) CDSJobManager.dll
  - b) CDSJobManager.pdb
  - c) CommonLib.dll
  - d) CommonLib.pdb
  - e) DDEngine.dll
  - f) DDEngine.pdb
  - g) rRISServices.exe
  - h) rRISServices.pdb
  - i) rRISServicesx64.exe
  - j) ScheduledTaskManager.dll
  - k) ScheduledTaskManager.pdb
  - l) SignatureApprovalService.exe
  - m) SignatureApprovalService.pdb
  - n) WCFService.dll
  - o) WCFService.pdb
  - p) WebApi.dll
  - q) WebApi.pdb
  - r) Wedge.exe
  - s) Wedge.pdb
- 3) SQL folder contains:
  - a) B40\_012.sql



## **5. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

## **6. Who is affected**

Build 40 installs. This server update must be applied directly to the build 40 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.

## 7. eRAD RIS Release Version Numbers

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	Full version release
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	Core install, GUI.zip, web service and database updates
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	GUI.zip and Web service updates
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	GUI.zip, web service, and database updates
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	GUI.zip and Web service updates
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	GUI.zip and Web service updates. Also MIRTH mapping changes
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	Web service update
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	Web service update
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	GUI.zip, Web service and database updates
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	GUI.zip, Web service, database updates and SQL Management reporting
37	12	1.2.37.14267	1.2.37.13040	1.2.37.14161	1.2.37.14267	GUI.zip, Web service and database updates
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	GUI.zip, Web service and database updates
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	Full version release
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	Core install required
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	GUI.zip and Web service updates
38	5	1.2.38.15513	1.2.38.14748	1.2.38.15513	1.2.38.15451	GUI.zip, Web service and database updates
38	6	1.2.38.15618	1.2.38.14748	1.2.38.15513	1.2.38.15618	GUI.zip and database updates
38	7	1.2.38.15768	1.2.38.14748	1.2.38.15768	1.2.38.15618	GUI.zip and Web Service updates
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	Requires Core Install. GUI.zip, Web Service, and Database updates
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service

## **RADNET, Inc. – eRAD RIS Server Update**

40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web service, database updates
40	5	1.3.40.17087	1.3.40.16659	1.3.40.17069	1.3.40.17087	GUI.zip, Web service, database updates
40	6	1.3.40.17146	1.3.40.16659	1.3.40.17146	1.3.40.17146	GUI.zip, Web service, database updates
40	7	1.3.40.17268	1.3.40.16659	1.3.40.17268	1.3.40.17259	GUI.zip, Web service, database updates
40	8	1.3.40.17364	1.3.40.16659	1.3.40.17362	1.3.40.17343	GUI.zip, Web service, database updates
40	9	1.3.40.17370	1.3.40.16659	1.3.40.17370	1.3.40.17370	GUI.zip, Web service, database updates
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.
40	11	1.3.40.17435	1.3.40.16659	1.3.40.17525	1.3.40.17370	Web service update
40	12	1.3.40.17685	1.3.40.16659	1.3.40.17685	1.3.40.17648	GUI.zip, Web service, database updates

## 8. Installing

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.40.17685.zip file provided with this release.

Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

**NOTE:** there is a change to the ris.exe.config file.

See Sections

1 New Features - Configurable dataset retrieval interval and

2 New Configuration settings and Changes

- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config and rRISServices.vshost.exe.config files.

*rRISService directories include:*

- a) *rRISService*
- b) *CDS rRISService*
- c) *Wedge rRISService*
- d) *DDE rRISService*

Restart each service.

- 3) Run the B40\_012.sql file against the eRAD RIS database instance.

# Server Update

For eRAD RIS  
Version 1.0  
Build 40  
Update 40.013

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## **1. Defects Resolved**

<b>Redmine #</b>	<b>Subject</b>	<b>Priority</b>
3803	MU lab_order_received Error	Normal
3966	Telerik memory leak opening and closing Rad Screen	Normal
4003	Implementation of optimized code	Normal
4004	3GB flag included in part of the release for everyone	Normal

## **2. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.40.17776.zip
- 2) RIS Service Updates folder contains
  - a) CDSJobManager.dll
  - b) CDSJobManager.pdb
  - c) CommonLib.dll
  - d) CommonLib.pdb
  - e) DDEngine.dll
  - f) DDEngine.pdb
  - g) rRISServices.exe
  - h) rRISServices.pdb
  - i) rRISServicesx64.exe
  - j) ScheduledTaskManager.dll
  - k) ScheduledTaskManager.pdb
  - l) SignatureApprovalService.exe
  - m) SignatureApprovalService.pdb
  - n) WCFService.dll
  - o) WCFService.pdb
  - p) WebApi.dll
  - q) WebApi.pdb
  - r) Wedge.exe
  - s) Wedge.pdb
  - t) Tourreau.Gilles.FaxDotNet.dll
  - u) Tourreau.Gilles.FaxDotNet.pdb
  - v) Tourreau.Gilles.FaxDotNet.xml



### **3. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **4. Who is affected**

Build 40 installs. This server update must be applied directly to the build 40 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.

## 5. eRAD RIS Release Version Numbers

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	Full version release
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	Core install, GUI.zip, web service and database updates
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	GUI.zip and Web service updates
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	GUI.zip, web service, and database updates
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	GUI.zip and Web service updates
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	GUI.zip and Web service updates. Also MIRTH mapping changes
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	Web service update
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	Web service update
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	GUI.zip, Web service and database updates
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	GUI.zip, Web service, database updates and SQL Management reporting
37	12	1.2.37.14267	1.2.37.13040	1.2.37.14161	1.2.37.14267	GUI.zip, Web service and database updates
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	GUI.zip, Web service and database updates
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	Full version release
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	Core install required
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	GUI.zip and Web service updates
38	5	1.2.38.15513	1.2.38.14748	1.2.38.15513	1.2.38.15451	GUI.zip, Web service and database updates
38	6	1.2.38.15618	1.2.38.14748	1.2.38.15513	1.2.38.15618	GUI.zip and database updates
38	7	1.2.38.15768	1.2.38.14748	1.2.38.15768	1.2.38.15618	GUI.zip and Web Service updates
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	Requires Core Install. GUI.zip, Web Service, and Database updates
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service

## **RADNET, Inc. – eRAD RIS Server Update**

40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web service, database updates
40	5	1.3.40.17087	1.3.40.16659	1.3.40.17069	1.3.40.17087	GUI.zip, Web service, database updates
40	6	1.3.40.17146	1.3.40.16659	1.3.40.17146	1.3.40.17146	GUI.zip, Web service, database updates
40	7	1.3.40.17268	1.3.40.16659	1.3.40.17268	1.3.40.17259	GUI.zip, Web service, database updates
40	8	1.3.40.17364	1.3.40.16659	1.3.40.17362	1.3.40.17343	GUI.zip, Web service, database updates
40	9	1.3.40.17370	1.3.40.16659	1.3.40.17370	1.3.40.17370	GUI.zip, Web service, database updates
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.
40	11	1.3.40.17435	1.3.40.16659	1.3.40.17525	1.3.40.17370	Web service update
40	12	1.3.40.17685	1.3.40.16659	1.3.40.17685	1.3.40.17648	GUI.zip, Web service, database updates
40	13	1.3.40.17776	1.3.40.16659	1.3.40.17776	1.3.40.17648	GUI.zip, Web service

## 6. Installing

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.40.17776.zip file provided with this release.

Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config and rRISServices.vshost.exe.config files.

*rRISService directories include:*

- a) *rRISService*
- b) *CDS rRISService*
- c) *Wedge rRISService*
- d) *DDE rRISService*

Restart each service.

# **Server Update**

**For eRAD RIS  
Version 1.0  
Build 40  
Update 40.014**

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### 1. New Features

#### PACS Integration Update

At times it is possible that the eRAD RIS application will see a delay in the Reporting window when PACS is waiting for the “close session” reply. To mitigate this delay we have introduced a new ris.exe.config application setting “**ShouldCloseViewSessionOnThread**”. The default value is false, meaning the close session happens on the main application thread and we pause for reply, so the reporting window will see a delay loading next. When set to true it closes on a background task and the reporting window will not see the delay. The next study will load in dictate window, although the PACS may still be loading images.

A new ris.exe.config entry has been created with a default value of false.

```
<add key="ShouldCloseViewSessionOnThread" value="false"/>
```

**NOTE:** With a value of false, the behaviour will be unchanged compared to previous versions.

In the ris.exe.config file, this new key is to be added to the <appSettings> section.

Before:

```
<appSettings>
  <add key="defaultEndPointName" value="NetTcpBinding_IStudyService" />
  <add key="ClientSettingsProvider.ServiceUri" value="" />
  <!--<add key="RowLevelCacheDataSetNamesCSV" value="*" /> -->
</appSettings>
```

After:

```
<appSettings>
  <add key="defaultEndPointName" value="NetTcpBinding_IStudyService" />
  <add key="ClientSettingsProvider.ServiceUri" value="" />
  <add key="LookupTableTimeToLiveInMinutes" value="5"/>
  <add key="ShouldCloseViewSessionOnThread" value="false"/>
  <!--<add key="RowLevelCacheDataSetNamesCSV" value="*" />-->
</appSettings>
```

## **RADNET, Inc. – eRAD RIS Server Update**

### **Reporting – Pending Dictation WL to Omit Studies not Assigned to a Chair**

The Pending Dictation WL content has been modified. Now if a study does not have chair assigned, and the study is not assigned to me (Radiologist user) I will not see the study on my work list. If the study is assigned to me, but is not assigned a chair, it will appear on my Pending Dictation WL. If the study is assigned to the chair I am currently accessing, but is not assigned to a user, it will appear on my work list. Finally, if the study is assigned to the chair I am currently accessing, but is assigned to a different user, it will not appear on my work list. The tables below describe this in better detail. The values in red are what has changed for this build.

If I am sitting in Chair1, then:

Chair	Assigned To	Include in My Pending Dictation WL		
		<= B40.013	>= B40.014	
			Chair WF Enabled	Chair WF Disabled
<null>	<null>	Yes	<b>No</b>	Yes
<null>	Me	Yes	Yes	Yes
<null>	NotMe	No	No	No
Chair1	Me	Yes	Yes	Yes
Chair1	<null>	Yes	Yes	Yes
Chair1	NotMe	No	No	No
Chair2	<null>	No	No	<b>Yes</b>
Chair2	Me	No	<b>Yes</b>	<b>Yes</b>
Chair2	NotMe	No	No	No

If my chair is not set (viewing all chairs), then:

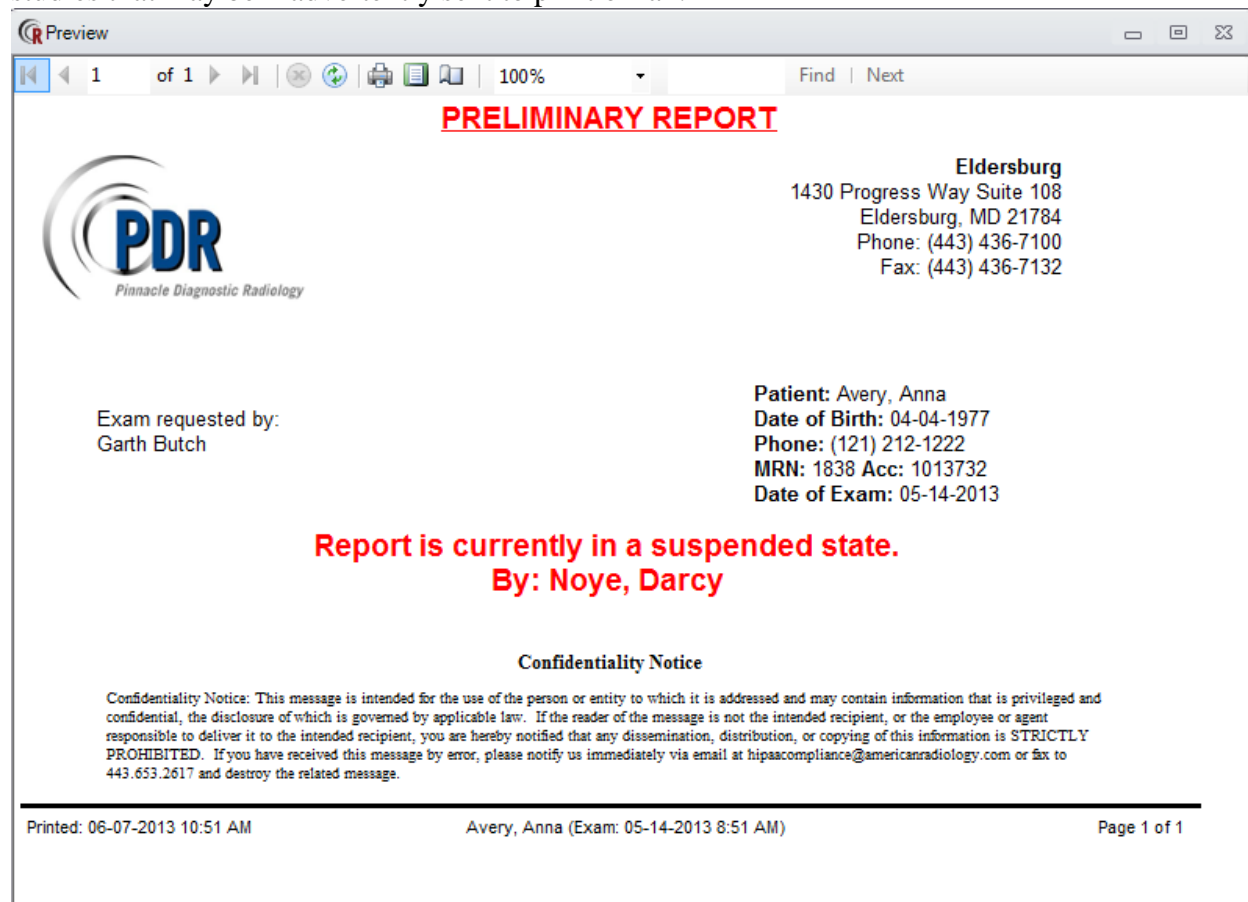
Chair	Assigned To	Include in My Pending Dictation WL		
		<= B40.013	>= B40.014	
			Chair WF Enabled	Chair WF Disabled
<null>	<null>	Yes	<b>No</b>	Yes
<null>	Me	Yes	Yes	Yes
<null>	NotMe	No	No	No
Chair1	Me	Yes	Yes	Yes
Chair1	<null>	Yes	Yes	Yes
Chair1	NotMe	No	No	No
Chair2	<null>	Yes	Yes	Yes
Chair2	Me	Yes	Yes	Yes
Chair2	NotMe	No	No	No



## **RADNET, Inc. – eRAD RIS Server Update**

### **Hide Report Contents on Suspended Studies**

The report template (when modified, this is a customization that is not packaged in the build) will not show the contents of the report for a study that is in suspended status. Looking at the screenshot below, you can see that the report contents are not displayed, but rather a message informing the viewer that the study is suspended. This will also be the case for suspended studies that may be inadvertently sent to print or fax.



**Figure 1.1 – Preview of report in suspended status**

Also a new Access String “**Clinical.PreviewSuspendedReport**” has been added to control who has access to preview a report that has been suspended by another user. When a user that does not have this permission tries to preview the report, the option will not be available in the context menu. The data nugget for report will be disabled when the study is in suspended status. Lastly, like the Preview Report context menu option, Send To will not be available, thus removing the option for these users the ability to send the report to Document Distribution.

## 2. New Configuration settings and Changes

Setting Placeholder	Setting	Default	Purpose / Controls Access to
AccessString lookup  UserGroupPermission lookup	Clinical.PreviewSuspended Report	None	Controls access to previewing reports that were suspended by another user
Ris.exe.config	<p>Before:</p> <pre>&lt;appSettings&gt;   &lt;add     key="defaultEndPointName"     value="NetTcpBinding_IStudyService" /&gt;   &lt;add     key="ClientSettingsProvider.ServiceUri" value="" /&gt;   &lt;!--&lt;add     key="RowLevelCacheDataSetNamesCSV" value="*" /&gt; --&gt; &lt;/appSettings&gt;</pre> <p>After:</p> <pre>&lt;appSettings&gt;   &lt;add     key="defaultEndPointName"     value="NetTcpBinding_IStudyService" /&gt;   &lt;add     key="ClientSettingsProvider.ServiceUri" value="" /&gt;   &lt;add     key="LookupTableTimeToLiveInMinutes" value="5"/&gt;   &lt;add     key="ShouldCloseViewSessionOnThread" value="false"/&gt;   &lt;!--&lt;add     key="RowLevelCacheDataSetNamesCSV" value="*" /&gt; --&gt; &lt;/appSettings&gt; &lt;/appSettings&gt;</pre>	False	

### 3. Defects Resolved

Redmine #	Subject	Priority
4019	Patient search error on patient who had multiple merges	Urgent
4091	(Stale cache issue) Can't open scan doc nugget if you have no preference set...	Urgent
3989	Reporting - Error on submit and next	Urgent
3919	RadNet - Prevent users from distributing "SUSPENDED CASES"	Urgent
4040	RadNet - Chair - Don't show null chairs in pending dictation worklist	High
3513	DB showing expensive query on retrieve image of doctors signature for diagnostic report	High
3518	Procedure Plans may not appear correctly on IVT work list	High
4080	logging of failures to obtain a lock	Normal
4075	PACS integration can pause main application thread while waiting for a close session reply	Normal
4069	Memory Leak specific to Reporting and Break Lock	Normal
4064	YellowSticker XML notes sometimes fail and don't properly handle the error	Normal
4059	Reporting - Writing Yellow Sticker not writing exception	Normal
4056	Reporting - Activate/Deactivate errors.	Normal
4050	Reporting - Invoke begininvoke cannot be called...	Normal
4032	Scanning - Canon Flatbed scanners are locking up RIS	Normal
4024	Reporting - Reduce # of WS Calls	Normal
3979	Performance - recently accessed patients should only be saved on app exit	Normal

## **4. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.40.18063.zip
- 2) RIS Service Updates folder contains
  - a) CDSJobManager.dll
  - b) CDSJobManager.pdb
  - c) CommonLib.dll
  - d) CommonLib.pdb
  - e) DDEngine.dll
  - f) DDEngine.pdb
  - g) rRISServices.exe
  - h) rRISServices.pdb
  - i) rRISServicesx64.exe
  - j) ScheduledTaskManager.dll
  - k) ScheduledTaskManager.pdb
  - l) SignatureApprovalService.exe
  - m) SignatureApprovalService.pdb
  - n) WCFService.dll
  - o) WCFService.pdb
  - p) WebApi.dll
  - q) WebApi.pdb
  - r) Wedge.exe
  - s) Wedge.pdb
- 3) SQL folder contains:
  - a) B40\_014.sql

## **5. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

## **6. Who is affected**

Build 40 installs. This server update must be applied directly to the build 40 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.

## 7. eRAD RIS Release Version Numbers

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	Full version release
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	Core install, GUI.zip, web service and database updates
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	GUI.zip and Web service updates
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	GUI.zip, web service, and database updates
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	GUI.zip and Web service updates
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	GUI.zip and Web service updates. Also MIRTH mapping changes
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	Web service update
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	Web service update
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	GUI.zip, Web service and database updates
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	GUI.zip, Web service, database updates and SQL Management reporting
37	12	1.2.37.14267	1.2.37.13040	1.2.37.14161	1.2.37.14267	GUI.zip, Web service and database updates
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	GUI.zip, Web service and database updates
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	Full version release
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	Core install required
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	GUI.zip and Web service updates
38	5	1.2.38.15513	1.2.38.14748	1.2.38.15513	1.2.38.15451	GUI.zip, Web service and database updates
38	6	1.2.38.15618	1.2.38.14748	1.2.38.15513	1.2.38.15618	GUI.zip and database updates
38	7	1.2.38.15768	1.2.38.14748	1.2.38.15768	1.2.38.15618	GUI.zip and Web Service updates
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	Requires Core Install. GUI.zip, Web Service, and Database updates
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service

## **RADNET, Inc. – eRAD RIS Server Update**

40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web service, database updates
40	5	1.3.40.17087	1.3.40.16659	1.3.40.17069	1.3.40.17087	GUI.zip, Web service, database updates
40	6	1.3.40.17146	1.3.40.16659	1.3.40.17146	1.3.40.17146	GUI.zip, Web service, database updates
40	7	1.3.40.17268	1.3.40.16659	1.3.40.17268	1.3.40.17259	GUI.zip, Web service, database updates
40	8	1.3.40.17364	1.3.40.16659	1.3.40.17362	1.3.40.17343	GUI.zip, Web service, database updates
40	9	1.3.40.17370	1.3.40.16659	1.3.40.17370	1.3.40.17370	GUI.zip, Web service, database updates
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.
40	11	1.3.40.17435	1.3.40.16659	1.3.40.17525	1.3.40.17370	Web service update
40	12	1.3.40.17685	1.3.40.16659	1.3.40.17685	1.3.40.17648	GUI.zip, Web service, database updates
40	13	1.3.40.17776	1.3.40.16659	1.3.40.17776	1.3.40.17648	GUI.zip, Web service
40	14	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18063	1.3.40.18063	GUI.zip, Web service, database updates

## 8. Installing

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.40.18063.zip file provided with this release.

Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

**NOTE:** there is a change to the ris.exe.config file.

See Sections

1 New Features - Configurable dataset retrieval interval and

2 New Configuration settings and Changes

- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config and rRISServices.vshost.exe.config files.

*rRISService directories include:*

- a) *rRISService*
- b) *CDS rRISService*
- c) *Wedge rRISService*
- d) *DDE rRISService*

Restart each service.

- 3) Run the B40\_014.sql file against the eRAD RIS database instance.



# Server Update

For eRAD RIS  
Version 1.0  
Build 40  
Update 40.014.1

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## **RADNET, Inc. – eRAD RIS Server Update**

### **1. Defects Resolved**

<b>Redmine #</b>	<b>Subject</b>	<b>Priority</b>
4121	All signed studies falling to billing exceptions worklist in b40.14	High

### **2. Package Contents**

Files included for this server update:

- 1) RIS Service Updates folder contains
  - a) CDSJobManager.dll
  - b) CDSJobManager.pdb
  - c) CommonLib.dll
  - d) CommonLib.pdb
  - e) DDEngine.dll
  - f) DDEngine.pdb
  - g) rRISServices.exe
  - h) rRISServices.pdb
  - i) rRISServicesx64.exe
  - j) ScheduledTaskManager.dll
  - k) ScheduledTaskManager.pdb
  - l) SignatureApprovalService.exe
  - m) SignatureApprovalService.pdb
  - n) WCFService.dll
  - o) WCFService.pdb
  - p) WebApi.dll
  - q) WebApi.pdb
  - r) Wedge.exe
  - s) Wedge.pdb

### **3. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **4. Who is affected**

Build 40 installs. This server update must be applied directly to the build 40 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.

### **5. eRAD RIS Release Version Numbers**

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	Full version release
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	Core install, GUI.zip, web service and database updates
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	GUI.zip and Web service updates
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	GUI.zip, web service, and database updates
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	GUI.zip and Web service updates
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	GUI.zip and Web service updates. Also MIRTH mapping changes
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	Web service update
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	Web service update
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	GUI.zip, Web service and database updates
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	GUI.zip, Web service, database updates and SQL Management reporting
37	12	1.2.37.14267	1.2.37.13040	1.2.37.14161	1.2.37.14267	GUI.zip, Web service and database updates
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	GUI.zip, Web service and database updates
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	Full version release
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	Core install required
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	GUI.zip and Web service updates

## **RADNET, Inc. – eRAD RIS Server Update**

38	5	1.2.38.15513	1.2.38.14748	1.2.38.15513	1.2.38.15451	GUI.zip, Web service and database updates
38	6	1.2.38.15618	1.2.38.14748	1.2.38.15513	1.2.38.15618	GUI.zip and database updates
38	7	1.2.38.15768	1.2.38.14748	1.2.38.15768	1.2.38.15618	GUI.zip and Web Service updates
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	Requires Core Install. GUI.zip, Web Service, and Database updates
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service
40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web service, database updates
40	5	1.3.40.17087	1.3.40.16659	1.3.40.17069	1.3.40.17087	GUI.zip, Web service, database updates
40	6	1.3.40.17146	1.3.40.16659	1.3.40.17146	1.3.40.17146	GUI.zip, Web service, database updates
40	7	1.3.40.17268	1.3.40.16659	1.3.40.17268	1.3.40.17259	GUI.zip, Web service, database updates
40	8	1.3.40.17364	1.3.40.16659	1.3.40.17362	1.3.40.17343	GUI.zip, Web service, database updates
40	9	1.3.40.17370	1.3.40.16659	1.3.40.17370	1.3.40.17370	GUI.zip, Web service, database updates
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.
40	11	1.3.40.17435	1.3.40.16659	1.3.40.17525	1.3.40.17370	Web service update
40	12	1.3.40.17685	1.3.40.16659	1.3.40.17685	1.3.40.17648	GUI.zip, Web service, database updates
40	13	1.3.40.17776	1.3.40.16659	1.3.40.17776	1.3.40.17648	GUI.zip, Web service
40	14	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18063	1.3.40.18063	GUI.zip, Web service, database updates
40	14.1	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18107	1.3.40.18063	Web service

## **6. Installing**

- 1) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config and rRISServices.vshost.exe.config files.

*rRISService directories include:*

- a) *rRISService*
- b) *CDS rRISService*
- c) *Wedge rRISService*
- d) *DDE rRISService*

Restart each service.

# Server Update

For eRAD RIS  
Version 1.0  
Build 40  
Update 40.015

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## **RADNET, Inc. – eRAD RIS Server Update**

### **1. New Configuration settings and Changes**

Setting Placeholder	Setting	Default	Purpose / Controls Access to
AccessString lookup  UserGroupPermission lookup	Clinical.PreviewSuspended Report	None	Controls access to previewing reports that were suspended by another user



## 2. Defects Resolved

Redmine #	Subject	Priority
4108	Audio disappears when QA rejects/edits the study	High
4103	Report Attachment - Mouse Performance Issue	High
4099	Macros not always loading deeming them inoperable via voice command	High
4015	Missing access string in 40.014 for previewing suspended studies	High
4124	PACS IW: Often not closing images	High
4121	All signed studies falling to billing exceptions worklist in b40.14	High
4058	Patient Folder - users getting exception in attachment viewer often	Normal

### **3. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.40.18127 (3GB).zip
- 2) RIS Service Updates folder contains
  - a) CDSJobManager.dll
  - b) CDSJobManager.pdb
  - c) CommonLib.dll
  - d) CommonLib.pdb
  - e) DDEngine.dll
  - f) DDEngine.pdb
  - g) rRISServices.exe
  - h) rRISServices.pdb
  - i) rRISServicesx64.exe
  - j) ScheduledTaskManager.dll
  - k) ScheduledTaskManager.pdb
  - l) SignatureApprovalService.exe
  - m) SignatureApprovalService.pdb
  - n) WCFService.dll
  - o) WCFService.pdb
  - p) WebApi.dll
  - q) WebApi.pdb
  - r) Wedge.exe
  - s) Wedge.pdb
- 3) SQL folder contains:
  - a) B40\_015.sql

## **4. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

## **5. Who is affected**

Build 40 installs. This server update must be applied directly to the build 40 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.

**6. eRAD RIS Release Version Numbers**

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	Full version release
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	Core install, GUI.zip, web service and database updates
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	GUI.zip and Web service updates
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	GUI.zip, web service, and database updates
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	GUI.zip and Web service updates
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	GUI.zip and Web service updates. Also MIRTH mapping changes
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	Web service update
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	Web service update
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	GUI.zip, Web service and database updates
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	GUI.zip, Web service, database updates and SQL Management reporting
37	12	1.2.37.14267	1.2.37.13040	1.2.37.14161	1.2.37.14267	GUI.zip, Web service and database updates
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	GUI.zip, Web service and database updates
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	Full version release
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	Core install required
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	GUI.zip and Web service updates
38	5	1.2.38.15513	1.2.38.14748	1.2.38.15513	1.2.38.15451	GUI.zip, Web service and database updates
38	6	1.2.38.15618	1.2.38.14748	1.2.38.15513	1.2.38.15618	GUI.zip and database updates
38	7	1.2.38.15768	1.2.38.14748	1.2.38.15768	1.2.38.15618	GUI.zip and Web Service updates
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	Requires Core Install. GUI.zip, Web Service, and Database updates
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service

## **RADNET, Inc. – eRAD RIS Server Update**

40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web service, database updates
40	5	1.3.40.17087	1.3.40.16659	1.3.40.17069	1.3.40.17087	GUI.zip, Web service, database updates
40	6	1.3.40.17146	1.3.40.16659	1.3.40.17146	1.3.40.17146	GUI.zip, Web service, database updates
40	7	1.3.40.17268	1.3.40.16659	1.3.40.17268	1.3.40.17259	GUI.zip, Web service, database updates
40	8	1.3.40.17364	1.3.40.16659	1.3.40.17362	1.3.40.17343	GUI.zip, Web service, database updates
40	9	1.3.40.17370	1.3.40.16659	1.3.40.17370	1.3.40.17370	GUI.zip, Web service, database updates
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.
40	11	1.3.40.17435	1.3.40.16659	1.3.40.17525	1.3.40.17370	Web service update
40	12	1.3.40.17685	1.3.40.16659	1.3.40.17685	1.3.40.17648	GUI.zip, Web service, database updates
40	13	1.3.40.17776	1.3.40.16659	1.3.40.17776	1.3.40.17648	GUI.zip, Web service
40	14	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18063	1.3.40.18063	GUI.zip, Web service, database updates
40	14.1	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18107	1.3.40.18063	Web service
40	15	1.3.40.18127(3GB)	1.3.40.16659	1.3.40.18127	1.3.40.18127	GUI.zip, Web service, database updates

## 7. Installing

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.40.18127 (3GB).zip file provided with this release.  
Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.
- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config and rRISServices.vshost.exe.config files.  
*rRISService directories include:*
  - a) *rRISService*
  - b) *CDS rRISService*
  - c) *Wedge rRISService*
  - d) *DDE rRISService*

Restart each service.
- 3) Run the B40\_015.sql file against the eRAD RIS database instance.

# Server Update

For eRAD RIS  
Version 1.0  
Build 40  
Update 40.016

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## **RADNET, Inc. – eRAD RIS Server Update**

### **1. New Configuration settings and Changes**

- None

### **2. Defects Resolved**

<b>Redmine #</b>	<b>Subject</b>	<b>Priority</b>
4420	Scanning - Cannot attach a scanned document when editing a patient	Immediate
4268	Patient Folder - Nugget not displaying data if there are no selected priors initially.	High
4175	MAMMO - BACK on TRACK workflow	High
4345	users are accidentally changing the referring's fax number from distribution worklist	Normal
4297	Sales - 13 Mth Variance Data Report	Normal
4257	description not displaying for restriction on appointment book	Normal
4245	Form x Printer logic is backward when form category not provided	Normal
4244	Configuring printing rules Foreign Key error	Normal
4240	Mammo Letters WL & Mammo Orders WL	Normal
4236	the call to show images in the RadScreen can cause RIS to crash if an error occurs	Normal
4221	Reporting - Signed using the hold pending release goes to QA before hold time expires	Normal
4214	configfilelist not cleared when user chews Help/Refresh Configuration	Normal
4204	Lookup - User doesn't get lookup table change	Normal
4169	Report - Legacy Reports Not Showing	Normal
4021	RadNet - fix Arbitration Signed checkbox	Normal

### **3. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.40.18585 (3GB).zip
- 2) RIS Service Updates folder contains
  1. CDSJobManager.dll
  2. CDSJobManager.pdb
  3. CommonLib.dll
  4. CommonLib.pdb
  5. DDEngine.dll
  6. DDEngine.pdb
  7. rRISServices.exe
  8. rRISServices.pdb
  9. rRISServicesx64.exe
  10. ScheduledTaskManager.dll
  11. ScheduledTaskManager.pdb
  12. SignatureApprovalService.exe
  13. SignatureApprovalService.pdb
  14. WCFService.dll
  15. WCFService.pdb
  16. WebApi.dll
  17. WebApi.pdb
  18. Wedge.exe
  19. Wedge.pdb
- 3) SQL folder contains:
  - a) B40\_016.sql

## **RADNET, Inc. – eRAD RIS Server Update**

### **4. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **5. Who is affected**

Build 40 installs. This server update must be applied directly to the build 40 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.

### **6. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	Full version release
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	Core install, GUI.zip, web service and database updates
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	GUI.zip and Web service updates
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	GUI.zip, web service, and database updates
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	GUI.zip and Web service updates
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	GUI.zip and Web service updates. Also MIRTH mapping changes
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	Web service update
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	Web service update
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	GUI.zip, Web service and database updates
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	GUI.zip, Web service, database updates and SQL Management reporting
37	12	1.2.37.14267	1.2.37.13040	1.2.37.14161	1.2.37.14267	GUI.zip, Web service and database updates
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	GUI.zip, Web service and database updates
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	Full version release
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	Core install required
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only

## **RADNET, Inc. – eRAD RIS Server Update**

38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	GUI.zip and Web service updates
38	5	1.2.38.15513	1.2.38.14748	1.2.38.15513	1.2.38.15451	GUI.zip, Web service and database updates
38	6	1.2.38.15618	1.2.38.14748	1.2.38.15513	1.2.38.15618	GUI.zip and database updates
38	7	1.2.38.15768	1.2.38.14748	1.2.38.15768	1.2.38.15618	GUI.zip and Web Service updates
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	Requires Core Install. GUI.zip, Web Service, and Database updates
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service
40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web service, database updates
40	5	1.3.40.17087	1.3.40.16659	1.3.40.17069	1.3.40.17087	GUI.zip, Web service, database updates
40	6	1.3.40.17146	1.3.40.16659	1.3.40.17146	1.3.40.17146	GUI.zip, Web service, database updates
40	7	1.3.40.17268	1.3.40.16659	1.3.40.17268	1.3.40.17259	GUI.zip, Web service, database updates
40	8	1.3.40.17364	1.3.40.16659	1.3.40.17362	1.3.40.17343	GUI.zip, Web service, database updates
40	9	1.3.40.17370	1.3.40.16659	1.3.40.17370	1.3.40.17370	GUI.zip, Web service, database updates
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.
40	11	1.3.40.17435	1.3.40.16659	1.3.40.17525	1.3.40.17370	Web service update
40	12	1.3.40.17685	1.3.40.16659	1.3.40.17685	1.3.40.17648	GUI.zip, Web service, database updates
40	13	1.3.40.17776	1.3.40.16659	1.3.40.17776	1.3.40.17648	GUI.zip, Web service
40	14	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18063	1.3.40.18063	GUI.zip, Web service, database updates
40	14.1	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18107	1.3.40.18063	Web service
40	15	1.3.40.18127(3GB)	1.3.40.16659	1.3.40.18127	1.3.40.18127	GUI.zip, Web service, database updates
40	16	1.1.3.40.18585 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip, Web service, database updates

## **7. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.40.18585.zip file provided with this release.

Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config and rRISServices.vshost.exe.config files.

*rRISService directories include:*

- a) *rRISService*
- b) *CDS rRISService*
- c) *Wedge rRISService*
- d) *DDE rRISService*

Restart each service.

- 3) Run the B40\_016.sql file against the eRAD RIS database instance.

# Server Update

For eRAD RIS  
Version 1.0  
Build 40  
Update 40.016.1

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## **RADNET, Inc. – eRAD RIS Server Update**

### **1. New Configuration settings and Changes**

- None

### **2. Defects Resolved**

Redmine #	Subject	Priority
4478	Patient folder navigation	High
4439	Report Fields Control exception	Normal

### **3. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.40.18705 (3GB).zip

### **4. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **5. Who is affected**

Build 40 installs. This server update must be applied directly to the build 40 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.



## **6. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	Full version release
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	Core install, GUI.zip, web service and database updates
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	GUI.zip and Web service updates
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	GUI.zip, web service, and database updates
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	GUI.zip and Web service updates
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	GUI.zip and Web service updates. Also MIRTH mapping changes
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	Web service update
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	Web service update
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	GUI.zip, Web service and database updates
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	GUI.zip, Web service, database updates and SQL Management reporting
37	12	1.2.37.14267	1.2.37.13040	1.2.37.14161	1.2.37.14267	GUI.zip, Web service and database updates
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	GUI.zip, Web service and database updates
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	Full version release
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	Core install required
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	GUI.zip and Web service updates
38	5	1.2.38.15513	1.2.38.14748	1.2.38.15513	1.2.38.15451	GUI.zip, Web service and database updates
38	6	1.2.38.15618	1.2.38.14748	1.2.38.15513	1.2.38.15618	GUI.zip and database updates
38	7	1.2.38.15768	1.2.38.14748	1.2.38.15768	1.2.38.15618	GUI.zip and Web Service updates
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	Requires Core Install. GUI.zip, Web Service, and Database updates
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service

## **RADNET, Inc. – eRAD RIS Server Update**

40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web service, database updates
40	5	1.3.40.17087	1.3.40.16659	1.3.40.17069	1.3.40.17087	GUI.zip, Web service, database updates
40	6	1.3.40.17146	1.3.40.16659	1.3.40.17146	1.3.40.17146	GUI.zip, Web service, database updates
40	7	1.3.40.17268	1.3.40.16659	1.3.40.17268	1.3.40.17259	GUI.zip, Web service, database updates
40	8	1.3.40.17364	1.3.40.16659	1.3.40.17362	1.3.40.17343	GUI.zip, Web service, database updates
40	9	1.3.40.17370	1.3.40.16659	1.3.40.17370	1.3.40.17370	GUI.zip, Web service, database updates
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.
40	11	1.3.40.17435	1.3.40.16659	1.3.40.17525	1.3.40.17370	Web service update
40	12	1.3.40.17685	1.3.40.16659	1.3.40.17685	1.3.40.17648	GUI.zip, Web service, database updates
40	13	1.3.40.17776	1.3.40.16659	1.3.40.17776	1.3.40.17648	GUI.zip, Web service
40	14	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18063	1.3.40.18063	GUI.zip, Web service, database updates
40	14.1	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18107	1.3.40.18063	Web service
40	15	1.3.40.18127(3GB)	1.3.40.16659	1.3.40.18127	1.3.40.18127	GUI.zip, Web service, database updates
40	16	1.1.3.40.18585 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip, Web service, database updates
40	16.1	1.1.3.40.18705 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip

## **7. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.40.18705.zip file provided with this release.  
Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

# **Server Update**

**For eRAD RIS  
Version 1.0  
Build 40  
Update 40.017**

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## 1. New Features

### Optimize field navigation

We have a concept of FFF (Form Filling Fields) and regular commands. Until now FFF were using the default M\*Modal optimized field navigation. This is believed to be the cause of the second form of jumping. M\*Modal is working on a solution but it will take some time before completion.

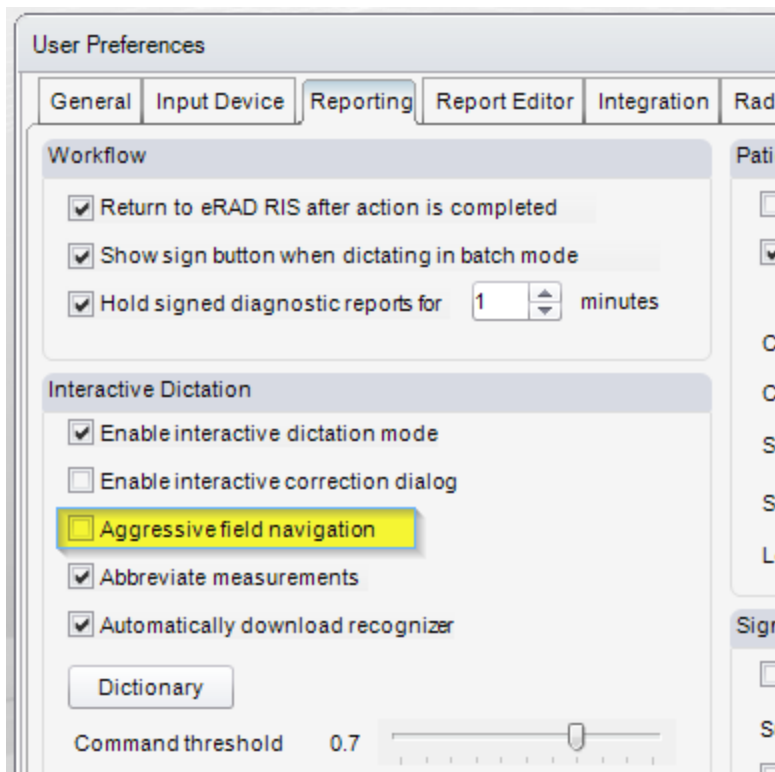
We have implemented a new user preference setting titled “Aggressive field navigation” that will turn off FFF navigation when unselected. The result will be less aggressive field navigation but it should result in less jumping. To accomplish this we had to create our own voice commands for each field in a similar manner as our macros and other RadNet commands.

To summarize:

- Added new method to ReportTemplateEditor.cs called CreateVoiceCommandsForFields
- Added the call to load the field commands in ReportingRadiologist activate method and to unload the commands in the unloadshortcuts method
- Had to move GetCurrentReportFields methods back to build 40.017 so I could use them to get field data
- Place a check in the CreateVoiceCommandsForFields method to look at the newly created user preference. If on, it will behave as it did before otherwise use our own RadNet commands to navigate.
- Overloaded the NavigateToField method to include by cue or by title
- Handled the new voice commands in ReportingRadiologist to raise the proper navigate to field

The new user preference “Aggressive field navigation” can be found in the Interactive Dictation section on the Reporting tab of the User Preferences window.

## **RADNET, Inc. – eRAD RIS Server Update**



**Figure 1.1 – New user preference “Aggressive field navigation”**


### Locking section titles enhanced

In a previous build the user preference Protect section headers was added to lock the section title and header area to be locked so it could not be deleted or altered. Also within the reporting window a new button was added to toggle this feature on and off when needed. While this feature did not protect the section title completely it did add to the section title from being removed.

In this patch release the section title will also be protected when using interactive dictation. Users were finding the section title could be selected and altered via dictation. For instance, a range of text is completely selected that resided directly above or below a section title, empty spaces may be also selected which may include the start or beginning of the section title. When the user dictated to overwrite the selected text, it would inadvertently remove the section title as well. This has been improved, but is not perfect yet. We have discovered that inserting a macro over the selected text, or if the section title is completely selected, it can overwrite the section title. We have logged an additional bug for this issue.

### New M\*Modal Recognizer File

A new recognizer file has been supplied with this patch release. The new version is v13\_v5\_351.12341.

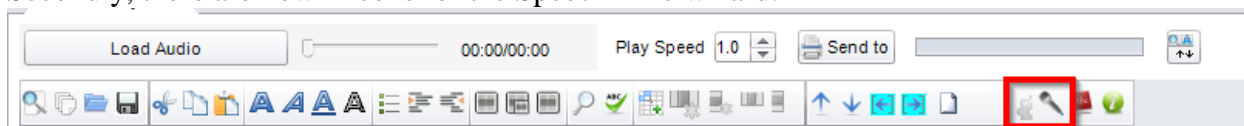
 7~Recognizer.MtiRecognitionUS.Radiology_Interactive_v13_v5_351.12341.xc	XC File	85,642 KB
---	---------	-----------

**Figure 1.2 – New M\*Modal Recognizer file**

This file can be replaced manually or via the use of the User Preference on the Reporting tab titled “Automatically download recognizer” and at next login, the newest will be downloaded from M\*Modal. If this **option** is selected, the user **must be aware** that the Recognizer could change at each login.

### **Reporting – Microphone wizard changes**

Accessing the microphone wizard has seen some changes in this patch release. First, you will no longer find the wizard in the user preferences section. It will only be accessible from the Reporting windows such as Dictate, or Sign Reports on the editor toolbar. Secondly, there are now 2 icons for the SpeechMike wizard.



**Figure 1.3 – New icons for speechmike**

The first one is to select Microphone Setting. This window will show you recording devices attached and capturing sound. For instance in testing I was getting poor recognition and this window helped me determine that the internal mic on my laptop was also capturing speech.

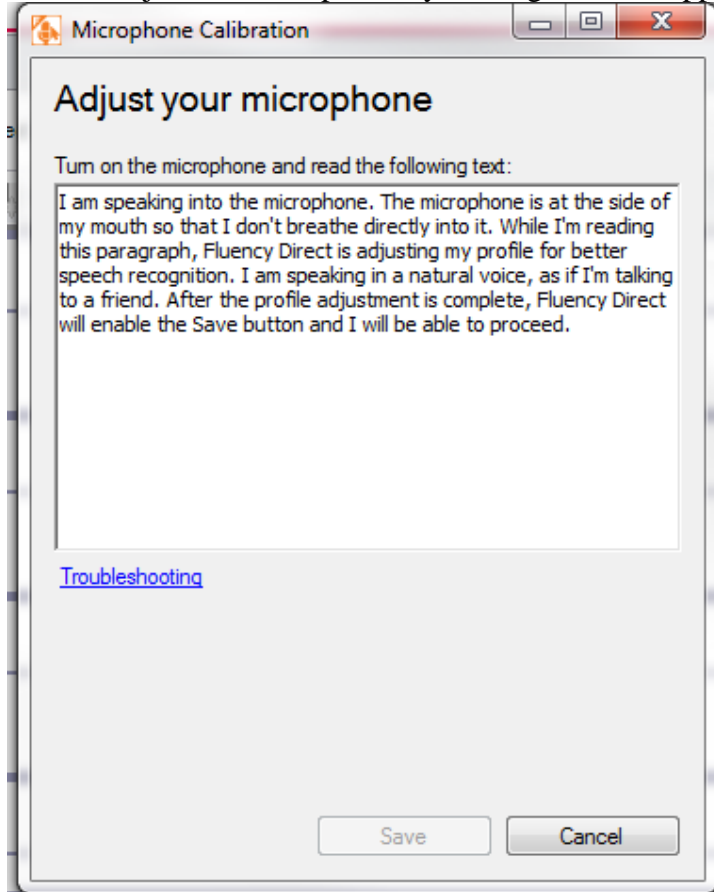


**Figure 1.4 – Microphone setting window**



## **RADNET, Inc. – eRAD RIS Server Update**

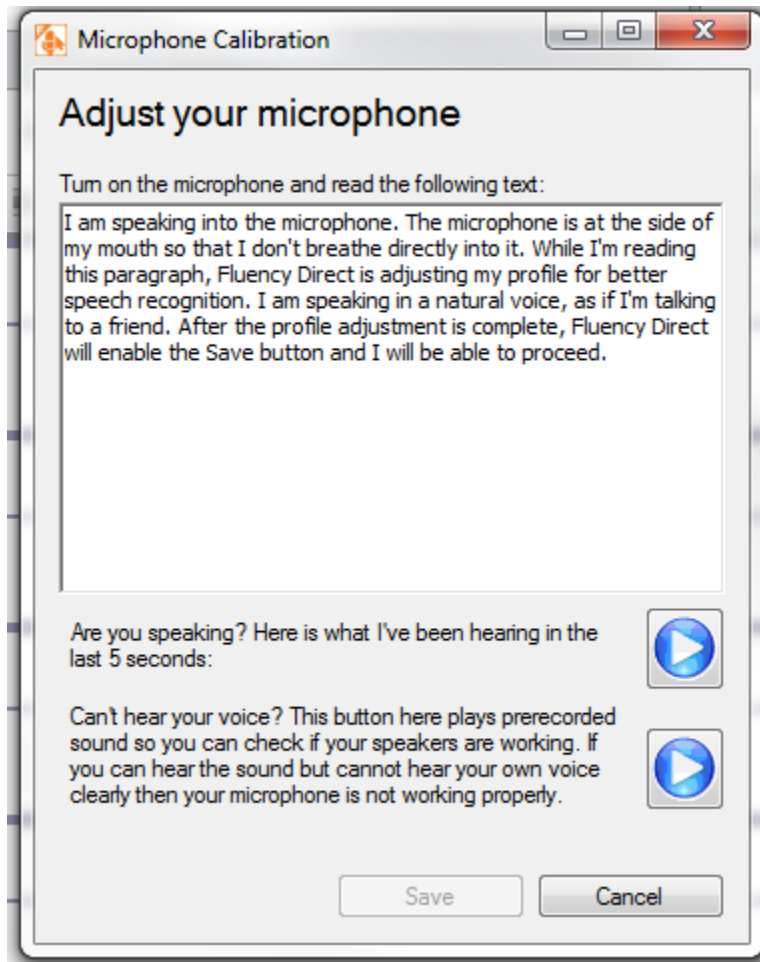
The second icon will open the Microphone Calibration window. This simple window will allow the user adjust the microphone by reading the text supplied within the window.



**Figure 1.5 – Microphone calibration window**

## **RADNET, Inc. – eRAD RIS Server Update**

Selecting the Troubleshooting link will give the user 2 options. After reading the text, you can play back what the system has picked up in the last 5 seconds. The second play button will play a prerecorded to verify the sound is being played back.



**Figure 1.6 – Troubleshooting options**

NOTE: for Build 40.017, the prerecorded message was not supplied. A message can be recorded and inserted into the appropriate directory with the file name gainWizardTroubleShooting.wav.

Selecting the Play ICON for “Can’t hear your voice”... will inform the user that the file was not found and display the directory in which the .wav file should reside.

### **2. Defects Resolved**

<b>Redmine #</b>	<b>Subject</b>	<b>Priority</b>
4485	CD Import - Fails with error unable to insert duplicate	Urgent
4476	CD Import - Crashes when the Date of Service on the CD is less than equal to the year 1753-01-01	Urgent
4493	Error when testing 40.17 - Transcription Reort Drafted WL (Create Edit report)	High
4478	Patient folder navigation	High
4427	Reporting - implement new M*Modal libraries and functionality 7.82 suite (Feature)	Normal
4293	Inappropriate activation of verbal cued field	Normal
4226	Reporting - Need microphone icon	Normal
3734	Reporting - protect section headers not working with interactive	Normal

### **3. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.40.18780 (3GB).zip
- 2) Installer Updates folder contains 1 subfolder called \_setup. This subfolder contains
  - a) rRISSetup.msi
  - b) setup.exe
- 3) RIS Service Updates folder contains the following files and 1 subfolder titled XSL
  1. CDSJobManager.dll
  2. CDSJobManager.pdb
  3. CdsLib.dll
  4. CdsLib.XmlSerializers.dll
  5. CdsLib.xml
  6. CommonLib.dll
  7. CommonLib.pdb
  8. DDEngine.dll
  9. DDEngine.pdb
  10. rRISServices.exe
  11. rRISServices.pdb
  12. rRISServicesx64.exe
  13. ScheduledTaskManager.dll
  14. ScheduledTaskManager.pdb
  15. SignatureApprovalService.exe
  16. SignatureApprovalService.pdb
  17. WCFService.dll
  18. WCFService.pdb
  19. WebApi.dll
  20. WebApi.pdb
  21. Wedge.exe
  22. Wedge.pdb
  23. Tourreau.Gilles.FaxDotNet.xml
  24. XSL subfolder contains a stylesheets subfolder which contains
    - a. CDAToHTMLCompleteReport.xslt
    - b. CDAToHTMLImpressionSection.xslt
    - c. CDAToRIS.xslt
    - d. CDAToTxt.xslt
    - e. DocumentModelReport.xslt
    - f. DocumentModelReportAsXml.xslt

## **RADNET, Inc. – eRAD RIS Server Update**

### **4. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **5. Who is affected**

Build 40 installs. This server update must be applied directly to the build 40 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.

### **6. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	Full version release
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	Core install, GUI.zip, web service and database updates
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	GUI.zip and Web service updates
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	WebAPI updated, no version changes
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	GUI.zip, web service, and database updates
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	GUI.zip and Web service updates
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	GUI.zip and Web service updates. Also MIRTH mapping changes
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	Web service update
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	Web service update
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	GUI.zip, Web service and database updates
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	GUI.zip, Web service, database updates and SQL Management reporting
37	12	1.2.37.14267	1.2.37.13040	1.2.37.14161	1.2.37.14267	GUI.zip, Web service and database updates
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	GUI.zip, Web service and database updates
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	Full version release
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	Core install required
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only

## **RADNET, Inc. – eRAD RIS Server Update**

38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	GUI.zip and Web service updates
38	5	1.2.38.15513	1.2.38.14748	1.2.38.15513	1.2.38.15451	GUI.zip, Web service and database updates
38	6	1.2.38.15618	1.2.38.14748	1.2.38.15513	1.2.38.15618	GUI.zip and database updates
38	7	1.2.38.15768	1.2.38.14748	1.2.38.15768	1.2.38.15618	GUI.zip and Web Service updates
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	Requires Core Install. GUI.zip, Web Service, and Database updates
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service
40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web service, database updates
40	5	1.3.40.17087	1.3.40.16659	1.3.40.17069	1.3.40.17087	GUI.zip, Web service, database updates
40	6	1.3.40.17146	1.3.40.16659	1.3.40.17146	1.3.40.17146	GUI.zip, Web service, database updates
40	7	1.3.40.17268	1.3.40.16659	1.3.40.17268	1.3.40.17259	GUI.zip, Web service, database updates
40	8	1.3.40.17364	1.3.40.16659	1.3.40.17362	1.3.40.17343	GUI.zip, Web service, database updates
40	9	1.3.40.17370	1.3.40.16659	1.3.40.17370	1.3.40.17370	GUI.zip, Web service, database updates
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.
40	11	1.3.40.17435	1.3.40.16659	1.3.40.17525	1.3.40.17370	Web service update
40	12	1.3.40.17685	1.3.40.16659	1.3.40.17685	1.3.40.17648	GUI.zip, Web service, database updates
40	13	1.3.40.17776	1.3.40.16659	1.3.40.17776	1.3.40.17648	GUI.zip, Web service
40	14	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18063	1.3.40.18063	GUI.zip, Web service, database updates
40	14.1	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18107	1.3.40.18063	Web service
40	15	1.3.40.18127(3GB)	1.3.40.16659	1.3.40.18127	1.3.40.18127	GUI.zip, Web service, database updates
40	16	1.1.3.40.18585 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip, Web service, database updates
40	16.1	1.3.40.18705 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip
40	17	1.3.40.18780 (3GB)	1.3.40.18756	1.3.40.18756	1.3.40.18646	<b>Core install required for Radiologist User Group.</b> GUI.zip, Core setup, and Web Service updates

## **7. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.40.18780.zip file provided with this release.  
Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.
- 2) Copy the \_setup folder and its contents and replace the \_setup folder and its contents. The \_setup folder is located in the RISDeployment \Core folder.

**NOTE:** Core install is required for radiologist users to register the new M\*Modal .dll files provided with this build. Other users are not required to run the core install, but may do so if they wish to.

- 3) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config and rRISServices.vshost.exe.config files.  
*rRISService directories include:*
  - a) *rRISService*
  - b) *CDS rRISService*
  - c) *Wedge rRISService*
  - d) *DDE rRISService*

Restart each service.

# Server Update

For eRAD RIS  
Version 1.0  
Build 40  
Update 40.018



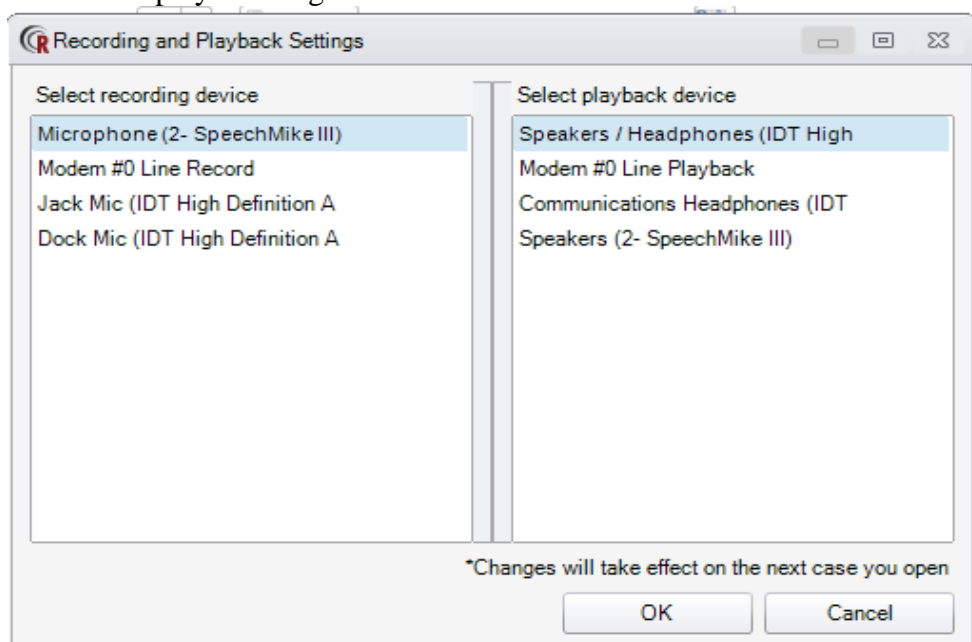
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## 1. New Features

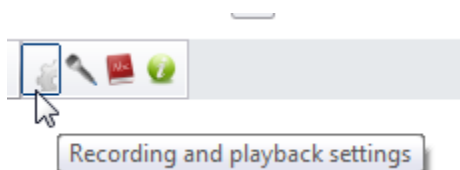
### Optimize field navigation

In build 40.017 we introduced a change to the mic wizazrd. The selection of the recording device and Speechmike calibration. Missing in the GUI was the ability to select a playback device. (This can be accomplished in the windows control panel > sound option.) In build 18 we have replaced the Microphone Settings window, with the Recording and Playback Settings window displayed in Figure 1.1.



**Figure 1.1 – Recording and Playback Settings**

This window is accessed from within the Reporting window and selecting the Recording and playback settings option on the toolbar.



**Figure 1.2 – Recording and Playback Settings toolbar button**

In this window the recording and playback devices can be selected. As noted in the Recording and Playback Settings window the changes will take affect

## **RADNET, Inc. – eRAD RIS Server Update**

### **Recognizer deployment**

In previous builds the MModal Recognizer file was included with the install process. This has been removed from the install process.

This file can be replaced manually or via the use of the User Preference on the Reporting tab titled “Automatically download recognizer” and at next login, the newest will be downloaded from M\*Modal. If this **option** is selected, the user **must be aware** that the Recognizer could change at each login.

### **2. Defects Resolved**

<b>Redmine #</b>	<b>Subject</b>	<b>Priority</b>
4564	Batch users lost ability to run microphone wizard to set gain on the microphone	High
4710	Reporting - inserting a template or macro with interactive timestamps will cause playback corruption and confusion	Urgent
4715	Portions of reports are not showing in distributed report	Immediate
4717	Sections from incorrect practice loading into template editor	High
4563	Inability to change playback device for rads.	High

### **3. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.40.19253 (3GB).zip
- 2) RIS Service Updates folder contains the following files and 1 subfolder titled XSL. The XSL folder also contains 1 subfolder titled Stylesheets. The following files are contained in the Stylesheets folder
  - a) CDAToHTMLCompleteReport.xslt
  - b) CDAToHTMLImpressionSection.xslt
  - c) CDAToRIS.xslt
  - d) CDAToTxt.xslt
  - e) DocumentModelReport.xslt
  - f) DocumentModelReportAsXml.xslt
- 3) SQL folder contains:
  - a) B40\_018.sql

### **4. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **5. Who is affected**

Build 40 installs. This server update must be applied directly to the build 40 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.

## **6. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	Requires Core Install. GUI.zip, Web Service, and Database updates
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service
40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web service, database updates
40	5	1.3.40.17087	1.3.40.16659	1.3.40.17069	1.3.40.17087	GUI.zip, Web service, database updates
40	6	1.3.40.17146	1.3.40.16659	1.3.40.17146	1.3.40.17146	GUI.zip, Web service, database updates
40	7	1.3.40.17268	1.3.40.16659	1.3.40.17268	1.3.40.17259	GUI.zip, Web service, database updates
40	8	1.3.40.17364	1.3.40.16659	1.3.40.17362	1.3.40.17343	GUI.zip, Web service, database updates
40	9	1.3.40.17370	1.3.40.16659	1.3.40.17370	1.3.40.17370	GUI.zip, Web service, database updates
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.
40	11	1.3.40.17435	1.3.40.16659	1.3.40.17525	1.3.40.17370	Web service update
40	12	1.3.40.17685	1.3.40.16659	1.3.40.17685	1.3.40.17648	GUI.zip, Web service, database updates
40	13	1.3.40.17776	1.3.40.16659	1.3.40.17776	1.3.40.17648	GUI.zip, Web service
40	14	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18063	1.3.40.18063	GUI.zip, Web service, database updates
40	14.1	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18107	1.3.40.18063	Web service
40	15	1.3.40.18127(3GB)	1.3.40.16659	1.3.40.18127	1.3.40.18127	GUI.zip, Web service, database updates
40	16	1.1.3.40.18585 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip, Web service, database updates
40	16.1	1.3.40.18705 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip
40	17	1.3.40.18780 (3GB)	1.3.40.18756	1.3.40.18756	1.3.40.18646	<b>Core install required for Radiologist User Group.</b> GUI.zip, Core setup, and Web Service updates
40	18	1.3.40.19253(3GB)	1.3.40.18756	1.3.40.18756	1.3.40.19253	GUI.zip, Web Service and database updates

## **7. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.40.19253.zip file provided with this release.

Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config and rRISServices.vshost.exe.config files.

*rRISService directories include:*

- a) *rRISService*
- b) *CDS rRISService*
- c) *Wedge rRISService*
- d) *DDE rRISService*

Restart each service.

- 3) Run the B40\_018.sql file against the eRAD RIS database instance.

# Server Update

For eRAD RIS  
Version 1.0  
Build 40  
Update 40.019

Due to a few bugs discovered this software release will not be available for installation. The bugs fixes and new features listed in this document will be available in 40.020



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## **1. New Features**

### **Reporting - Limit or convert special characters in cue names, macros and templates**

Conversion of special characters in cue names, macros and templates.

In a template if you have a field with a value in the cue like this "Technique :"

When you save the template and reopen it, the : is converted as follows "Technique %colon%".

This feature does the following, while dictating an exam and you say the words Technique colon, your cursor will be brought to the field that has a value of "Technique %colon%" in the cue.

NOTE: The user preference "Aggressive field navigation" must be checked for this feature to work, after checking this preference, a restart of RIS is required.

### **Reporting - Ability to map “delete last word” to input devices**

Mappings were added to delete last word functionality with keyboard, foot pedal and speechmike buttons.

This is User Preference > Input Device > SpeechMike Button Actions > DeleteWordLeftOfCursor

Known limitation: At some point we were able to delete last word multiple times, then redo each word individually. But if the input devices are set up to perform these actions, the Undo and Redo does nothing after executing this action.

### **Reporting - Ability to map “Redo” and “Undo” to input devices**

Mappings were added for Redo and Undo functionality with keyboard, foot pedal and speechmike buttons.

This is User Preference > Input Device > SpeechMike Button Actions > Redo or Undo

### **Reporting - Radiologist edit text color**

Added the ability to see what text was typed into the report by a radiologist. A new user preference was added to the editor appearance settings in Dictation window “Radiologist Typed Text”. The editor will use the selected color.

### **Reporting - field tooltips staying on top of other screens after displaying**

When you hover the mouse over a field it will display the tooltip popup, this is great. Now when you alt+tab, so that another application comes up on top of the report editor, you will notice the tooltip popup is still there.

## **RADNET, Inc. – eRAD RIS Server Update**

A new user preference was added "Show report field tooltips", which will disable the tooltip feature.

### **2. Defects Resolved**

<b>Redmine #</b>	<b>Subject</b>	<b>Priority</b>
4857	Wrong document model is loading in template editor	Urgent
4952	Reporting - ability to navigate cued fields without pausing	High
4798	Reporting - 7.82+ Numbering paragraphs creates an unwanted list	High
4740	Reporting - playback is not in order of dictated	High
4717	Sections from incorrect practice loading into template editor	High
3767	Using next field button while dictating (Fisher site visit)	High
1441	Interactive VR - Voice Commands not recognized efficiently	High
5148	Reporting - speech mics 3500 and 3600 showing incorrectly in Help>About	Normal
5048	Reporting - New recognizer for 7.88	Normal
4975	Next field voice command, showing field popup for one field too far	Normal
4961	Reporting - improper capitalization of measurements outside of a field	Normal
4960	Reporting - structured lists splitting when dictating next item in the middle of an existing item	Normal
4959	Reporting - ability to dictate 'next item' without pausing	Normal
4958	Reporting - integrate M*Modal 7.88 release into 40.019 code stream.	Normal
4957	Reporting - negative two views rendering	Normal
4954	Reporting - ability to dictate negative or minus numbers	Normal
4732	Reporting - AudioReplacementEnabled on causes "undo that" to malfunction	Normal
3838	Improve performance of "next field" (CRA site visit)	Normal
3072	Reporting - Not a field exception causing application hang	Normal
2981	M*Modal - select command will not select first or last word in a field	Normal
2520	Reporting - interactive number lists are not consistent	Normal
3840	Unable to dictate "+" into a report (CRA site visit)	Low

### **3. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.40.19909(3GB).zip
  
- 2) RIS Service Updates folder contains the following files and 2 subfolders titled config and XSL.
  - a) CDSJobManager.dll
  - b) CDSJobManager.pdb
  - c) CdsLib.dll
  - d) CdsLib.xml
  - e) CdsLib.XmlSerializers.dll
  - f) CommonLib.dll
  - g) CommonLib.pdb
  - h) DDEngine.dll
  - i) DDEngine.pdb
  - j) Interop.FAXCOMEXLib.dll
  - k) Microsoft.Practices.EnterpriseLibrary.Caching.dll
  - l) Microsoft.Practices.EnterpriseLibrary.Caching.pdb
  - m) Microsoft.Practices.EnterpriseLibrary.Common.dll
  - n) Microsoft.Practices.EnterpriseLibrary.Common.pdb
  - o) Microsoft.Practices.EnterpriseLibrary.Logging.dll
  - p) Microsoft.Practices.EnterpriseLibrary.Logging.pdb
  - q) Microsoft.Practices.ServiceLocation.dll
  - r) Microsoft.Practices.ServiceLocation.pdb
  - s) Microsoft.Practices.Unity.dll
  - t) Microsoft.Practices.Unity.Interception.dll
  - u) Microsoft.Practices.Unity.Interception.pdb
  - v) Microsoft.Practices.Unity.pdb
  - w) Microsoft.ReportViewer.Common.dll
  - x) Microsoft.ReportViewer.WinForms.dll
  - y) Microsoft.ReportViewer.WinForms.dll
  - z) Newtonsoft.Json.dll
  - aa) Ninject.dll
  - bb) Ninject.Web.Common.dll
  - cc) Ninject.Web.Common.xml
  - dd) Ninject.xml
  - ee) O2S.Components.PDFRender4NET.dll
  - ff) PDFToImages.exe
  - gg) rRISServices.exe
  - hh) rRISServices.exe.config

## **RADNET, Inc. – eRAD RIS Server Update**

- ii) rRISServices.pdb
- jj) rRISServicesx64.exe
- kk) rRISServicesx64.exe.config
- ll) ScheduledTaskManager.dll
- mm) ScheduledTaskManager.pdb
- nn) SignatureApprovalService.exe
- oo) SignatureApprovalService.pdb
- pp) System.Net.Http.dll
- qq) System.Net.Http.Formatting.dll
- rr) System.Net.Http.WebRequest.dll
- ss) System.Web.dll
- tt) System.Web.Helpers.dll
- uu) System.Web.Helpers.xml
- vv) System.Web.Http.dll
- ww) System.Web.Http.SelfHost.dll
- xx) System.Web.Http.WebHost.dll
- yy) System.Web.Http.WebHost.xml
- zz) System.Web.Mvc.dll
- aaa) System.Web.Mvc.xml
- bbb) System.Web.Optimization.dll
- ccc) System.Web.Providers.dll
- ddd) System.Web.Razor.dll
- eee) System.Web.Razor.xml
- fff) System.Web.WebPages.Deployment.dll
- ggg) System.Web.WebPages.Deployment.xml
- hhh) System.Web.WebPages.dll
- iii) System.Web.WebPages.Razor.dll
- jjj) System.Web.WebPages.Razor.xml
- kkk) System.Web.WebPages.xml
- lll) Tourreau.Gilles.FaxDotNet.dll
- mmm) Tourreau.Gilles.FaxDotNet.pdb
- nnn) Tourreau.Gilles.FaxDotNet.xml
- ooo) WCFService.dll
- ppp) WCFService.pdb
- qqq) WebApi.dll
- rrr) WebApi.pdb
- sss) Wedge.exe
- ttt) Wedge.pdb

The config folder contains the following files:

- a) Applicationsettings.config
- b) Connectionstrings.config
- c) Services.config

## **RADNET, Inc. – eRAD RIS Server Update**

The XSL folder also contains 1 subfolder titled Stylesheets. The following files are contained in the Stylesheets folder

- a) CDAToHTMLCompleteReport.xslt
- b) CDAToHTMLImpressionSection.xslt
- c) CDAToRIS.xslt
- d) CDAToTxt.xslt
- e) DocumentModelReport.xslt
- f) DocumentModelReportAsXml.xslt

3) Recognizer folder contains:

- a) 7~Recognizer.MtiRecognitionUS.Radiology\_Interactive\_v13\_v5\_401.12893.xc
- b) 7~Recognizer.MtiRecognitionUS.Radiology\_Interactive\_v13\_v5\_401.12893-descriptor.xc

### **4. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **5. Who is affected**

Build 40 installs. This server update must be applied directly to the build 40 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.

## **6. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	Requires Core Install. GUI.zip, Web Service, and Database updates
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service
40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web service, database updates
40	5	1.3.40.17087	1.3.40.16659	1.3.40.17069	1.3.40.17087	GUI.zip, Web service, database updates
40	6	1.3.40.17146	1.3.40.16659	1.3.40.17146	1.3.40.17146	GUI.zip, Web service, database updates
40	7	1.3.40.17268	1.3.40.16659	1.3.40.17268	1.3.40.17259	GUI.zip, Web service, database updates
40	8	1.3.40.17364	1.3.40.16659	1.3.40.17362	1.3.40.17343	GUI.zip, Web service, database updates
40	9	1.3.40.17370	1.3.40.16659	1.3.40.17370	1.3.40.17370	GUI.zip, Web service, database updates
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.
40	11	1.3.40.17435	1.3.40.16659	1.3.40.17525	1.3.40.17370	Web service update
40	12	1.3.40.17685	1.3.40.16659	1.3.40.17685	1.3.40.17648	GUI.zip, Web service, database updates
40	13	1.3.40.17776	1.3.40.16659	1.3.40.17776	1.3.40.17648	GUI.zip, Web service
40	14	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18063	1.3.40.18063	GUI.zip, Web service, database updates
40	14.1	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18107	1.3.40.18063	Web service
40	15	1.3.40.18127(3GB)	1.3.40.16659	1.3.40.18127	1.3.40.18127	GUI.zip, Web service, database updates
40	16	1.1.3.40.18585 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip, Web service, database updates
40	16.1	1.3.40.18705 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip
40	17	1.3.40.18780 (3GB)	1.3.40.18756	1.3.40.18756	1.3.40.18646	<b>Core install required for Radiologist User Group.</b> GUI.zip, Core setup, and Web Service updates
40	18	1.3.40.19253(3GB)	1.3.40.18756	1.3.40.18756	1.3.40.19253	GUI.zip, Web Service and database updates
40	19	1.3.40.19909 (3GB)	1.3.40.18756	1.3.40.19831	1.3.40.19253	GUI.zip, Web services, Recognizer files



## **7. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.40.19909.zip file provided with this release.

Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config and rRISServices.vshost.exe.config files.

*rRISService directories include:*

- a) rRISService*
- b) CDS rRISService*
- c) Wedge rRISService*
- d) DDE rRISService*

Restart each service.

- 3) Copy the Recognizer files to your local machine to the following folder.

Note: this could be a hidden folder.

C:\ProgramData\RadNet\Recognizer\2.16.840.1.113883.3.21\

# Server Update

For eRAD RIS  
Version 1.0  
Build 40  
Update 40.020

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## 1. New Features

### Reporting - Limit or convert special characters in cue names, macros and templates

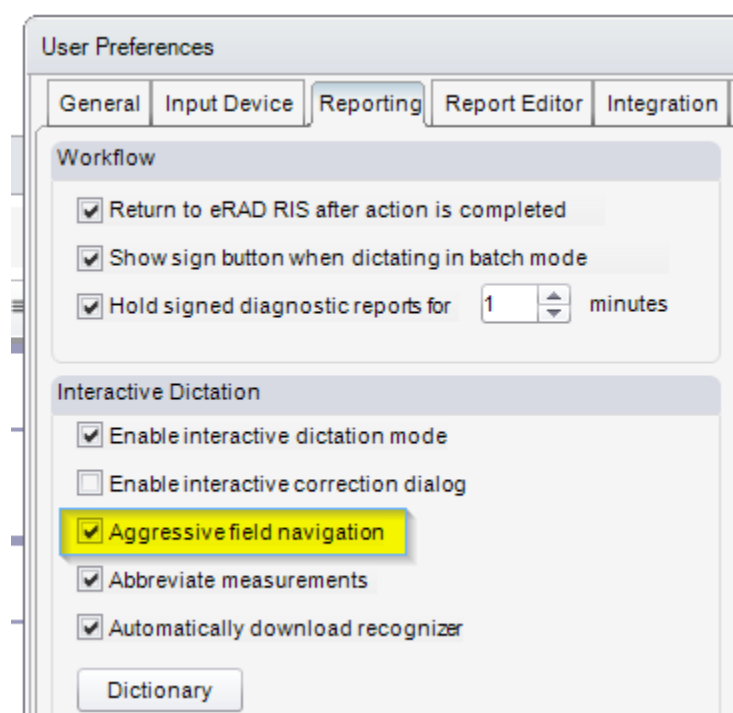
Conversion of special characters in cue names, macros and templates.

In a template if you have a field with a value in the cue like this "Technique :"

When you save the template and reopen it, the : is converted as follows "Technique %colon%".

This feature does the following, while dictating an exam and you say the words Technique colon, your cursor will be brought to the field that has a value of "Technique %colon%" in the cue.

NOTE: The user preference "Aggressive field navigation" must be checked for this feature to work, after checking this preference, a restart of RIS is required.

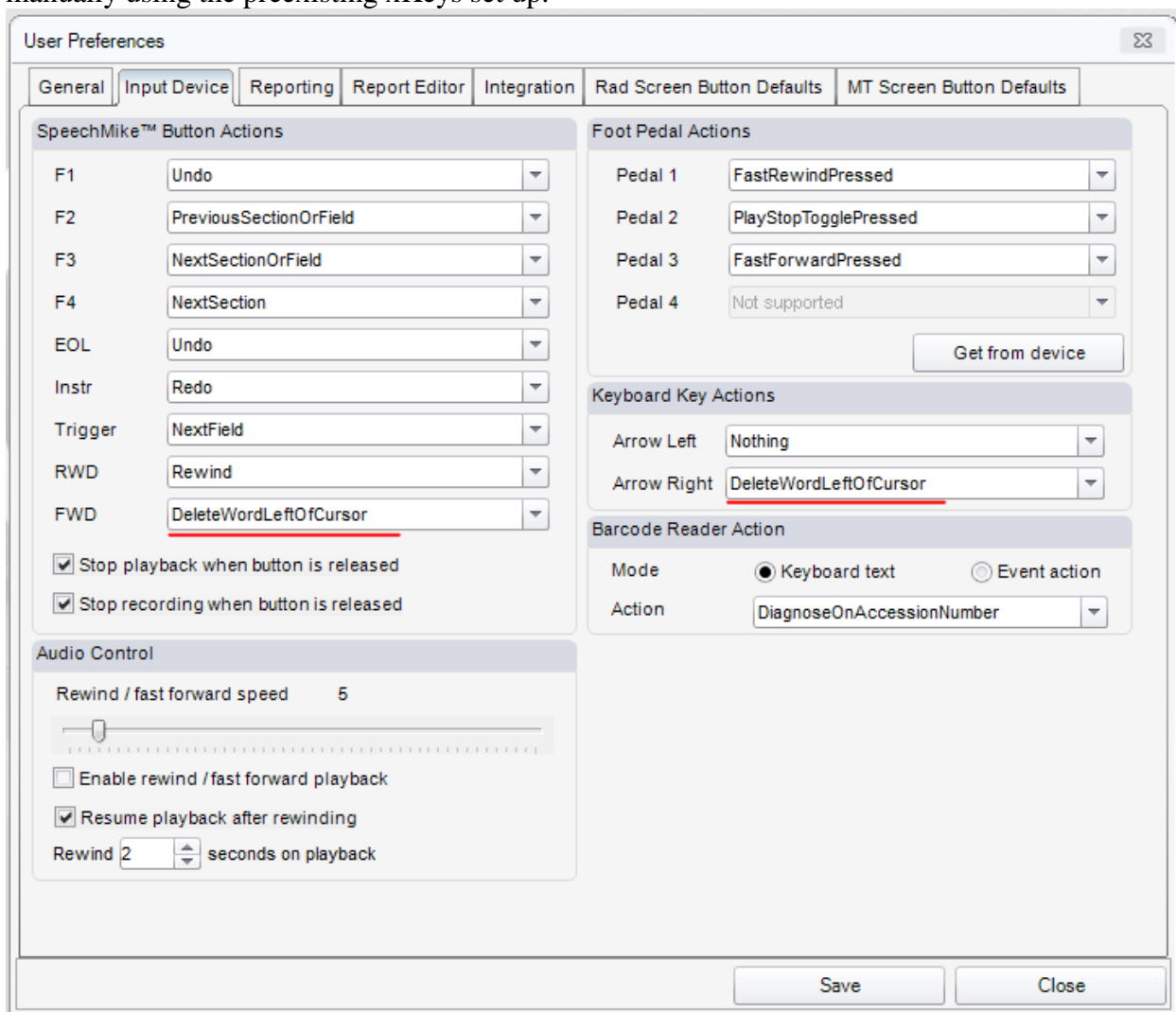


**Figure 1.1 – User preference “Aggressive field navigation”**

NOTE: the user preference “Aggressive field navigation” will need to be selected for “No Wait Navigate”. We had issues in the past when dictating in Field 1 and before the text was inserted the command for next field was issued. The text that had not yet been inserted in Field 1 would appear in Field 2. This has been addressed, but as mentioned above the Aggressive field navigation user preference needs to be enabled.

### **Reporting - Ability to map “delete last word” to input devices**

This new feature titled “DeleteWordLeftOfCursor” can be mapped as SpeechMike button, keyboard left/right arrow key, Foot Pedal button and also implemented as an xKeys command manually using the preexisting xKeys set up.



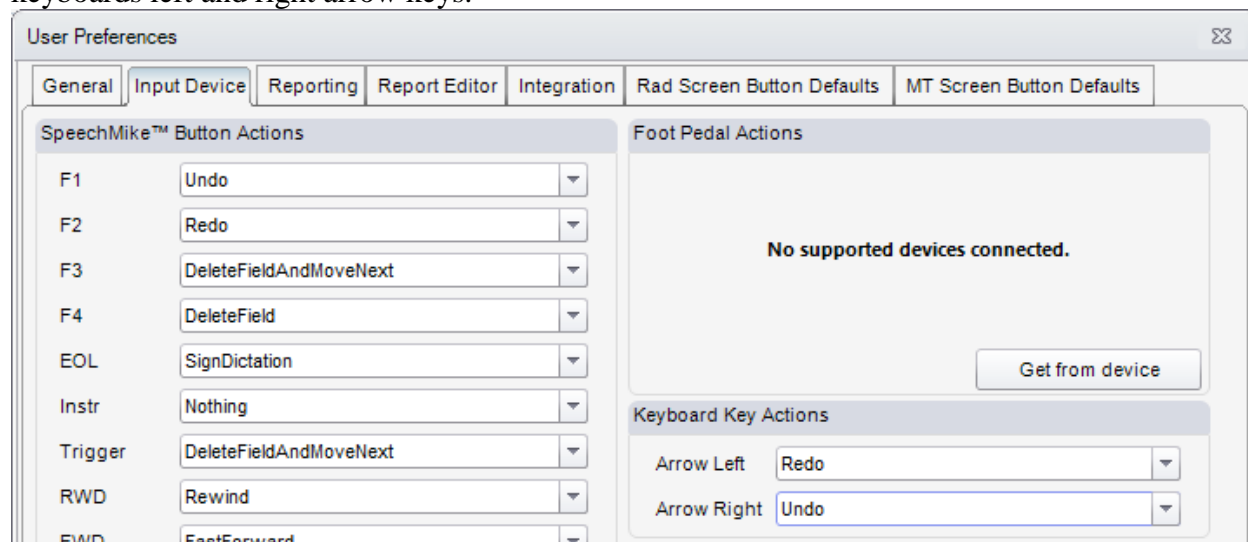
**Figure 1.2 - DeleteWordLeftOfCursor function in user preferences**

Support has been added for itemized lists. If you reach the end of a list item while deleting the last word, the empty item will be removed and the cursor will go to the end of the previous item.

Known limitation: At some point we were able to delete last word multiple times, then redo each word individually. But if the input devices are set up to perform these actions, the Undo and Redo does nothing after executing this action.

### **Reporting - Ability to map “Redo” and “Undo” to input devices**

We have added two new SpeechMike function key options that can be assigned. The options of Undo and Redo have been added. These new options can also be made the default action of the keyboards left and right arrow keys.

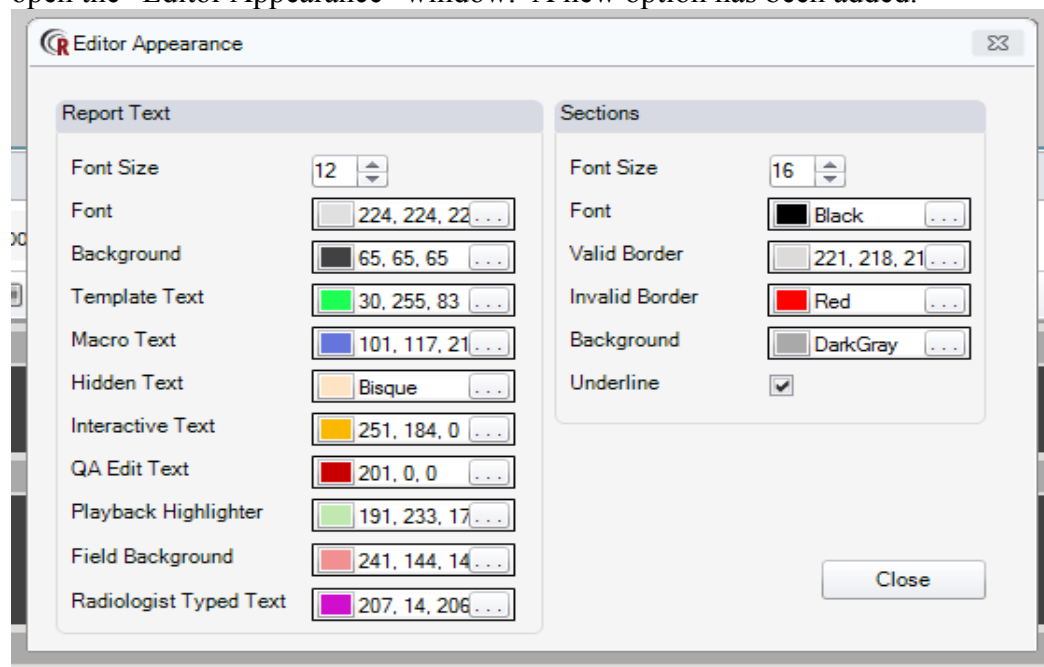


**Figure 1.3 – The Undo and Redo options added for SpeechMike buttons and Keyboard arrow actions**

It should be noted that these options can also be set as default Foot Pedal Actions and also mapped as an xKey command manually using the existing xKeys set up.

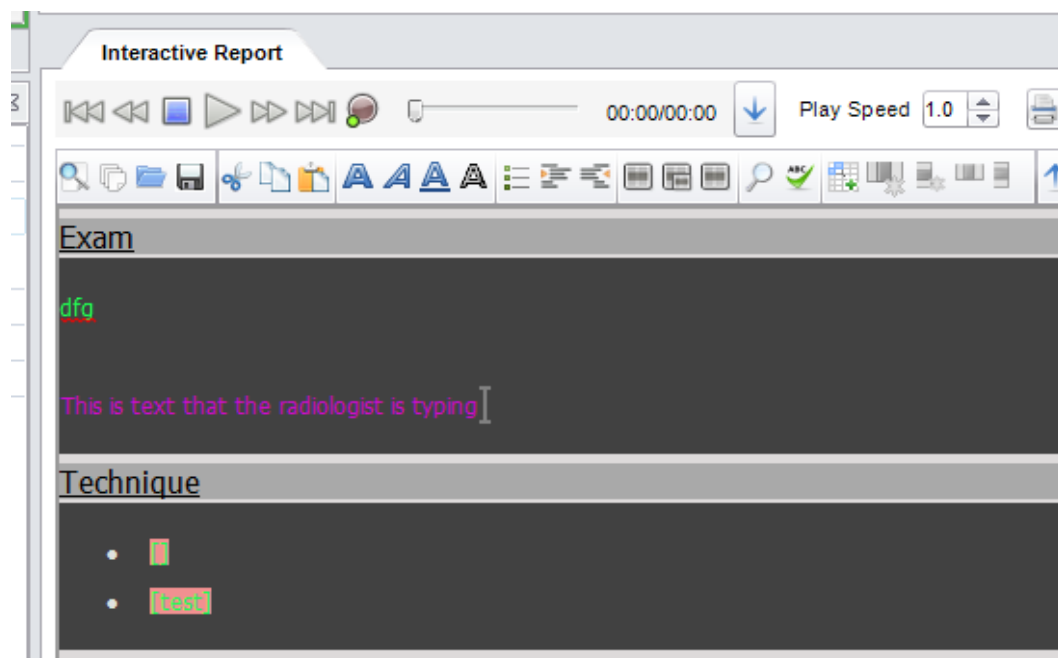
### **Reporting - Radiologist edit text color**

Within the reporting window, the user can open the context menu (right click) on the editor. This will present the user with a list of options. Selecting the “Editor Appearance” option will open the “Editor Appearance” window. A new option has been added.



**Figure 1.4 – Editor Appearance window with new Radiologist Typed Text option**

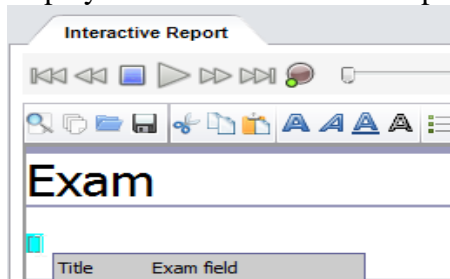
This new option controls the color of the manually entered/edited text by the radiologist



**Figure 1.5 – Editor displaying the text color when manually entered by the radiologist.**

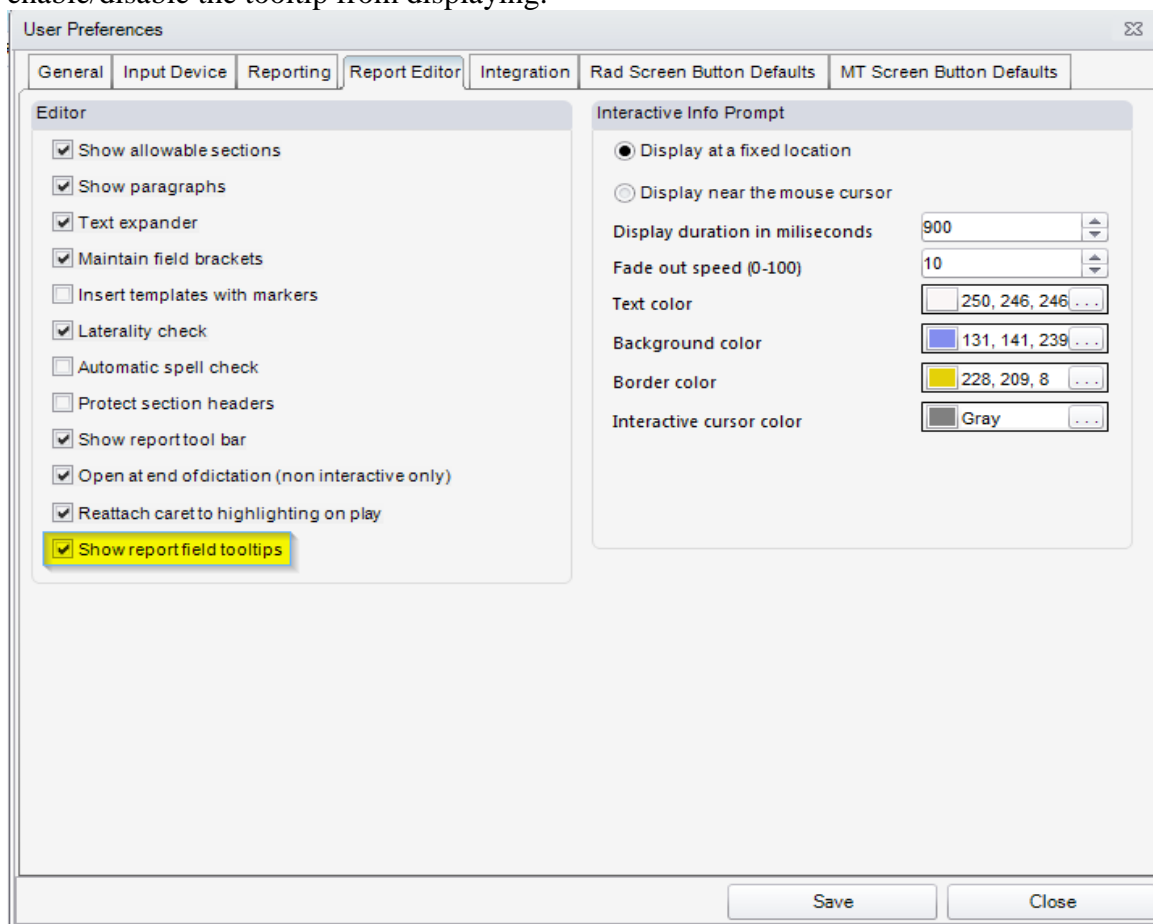
### **Reporting - field tooltips staying on top of other screens after displaying**

Templates used in the reporting window can have navigational fields pre-defined in the template. Each of these fields has a name associated with it. If the mouse pointer hovers over a field it will display the field name in a tooltip.



**Figure 1.6 – Reporting field tooltip.**

A new user preference on the Report Editor tab called “Show report field tooltips” will enable/disable the tooltip from displaying.



**Figure 1.7 – New User Preference “Show report field tooltips”**

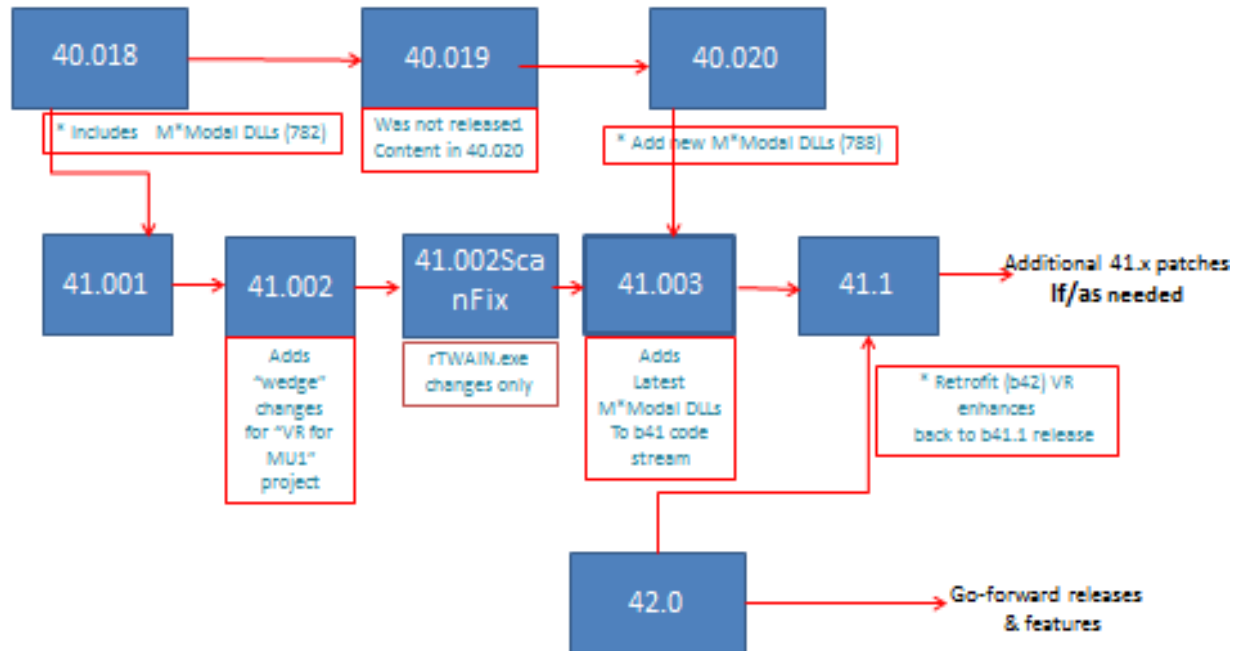


### **2. Defects Resolved**

<b>Redmine #</b>	<b>Subject</b>	<b>Priority</b>
4857	Wrong document model is loading in template editor	Urgent
4952	Reporting - ability to navigate cued fields without pausing	High
4798	Reporting - 7.82+ Numbering paragraphs creates an unwanted list	High
4740	Reporting - playback is not in order of dictated	High
4717	Sections from incorrect practice loading into template editor	High
3767	Using next field button while dictating (Fisher site visit)	High
1441	Interactive VR - Voice Commands not recognized efficiently	High
5148	Reporting - speech mics 3500 and 3600 showing incorrectly in Help>About	Normal
5048	Reporting - New recognizer for 7.88	Normal
4975	Next field voice command, showing field popup for one field too far	Normal
4961	Reporting - improper capitalization of measurements outside of a field	Normal
4960	Reporting - structured lists splitting when dictating next item in the middle of an existing item	Normal
4959	Reporting - ability to dictate 'next item' without pausing	Normal
4958	Reporting - integrate M*Modal 7.88 release into 40.019 code stream.	Normal
4957	Reporting - negative two views rendering	Normal
4954	Reporting - ability to dictate negative or minus numbers	Normal
4732	Reporting - AudioReplacementEnabled on causes "undo that" to malfunction	Normal
3838	Improve performance of "next field" (CRA site visit)	Normal
3072	Reporting - Not a field exception causing application hang	Normal
2981	M*Modal - select command will not select first or last word in a field	Normal
2520	Reporting - interactive number lists are not consistent	Normal
3840	Unable to dictate "+" into a report (CRA site visit)	Low

### 3. Code Stream

#### eRad RIS – code merge



### **4. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.40.20086(3GB).zip
  
- 2) RIS Service Updates folder contains the following files.
  - a) CDSJobManager.dll
  - b) CDSJobManager.pdb
  - c) CommonLib.dll
  - d) CommonLib.pdb
  - e) DDEngine.dll
  - f) DDEngine.pdb
  - g) rRISServices.exe
  - h) rRISServices.pdb
  - i) rRISServicesx64.exe
  - j) ScheduledTaskManager.dll
  - k) ScheduledTaskManager.pdb
  - l) SignatureApprovalService.exe
  - m) SignatureApprovalService.pdb
  - n) WCFService.dll
  - o) WCFService.pdb
  - p) WebApi.dll
  - q) WebApi.pdb
  - r) Wedge.exe
  - s) Wedge.pdb
  
- 3) Recognizer folder contains:
  - a) 7~Recognizer.MtiRecognitionUS.Radiology\_Interactive\_v13\_v5\_401.12965.xc
  - b) 7~Recognizer.MtiRecognitionUS.Radiology\_Interactive\_v13\_v5\_401.12965-descriptor.xc

### **5. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **6. Who is affected**

Build 40 installs. This server update must be applied directly to the build 40 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.

## **7. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	Requires Core Install. GUI.zip, Web Service, and Database updates
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service
40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web service, database updates
40	5	1.3.40.17087	1.3.40.16659	1.3.40.17069	1.3.40.17087	GUI.zip, Web service, database updates
40	6	1.3.40.17146	1.3.40.16659	1.3.40.17146	1.3.40.17146	GUI.zip, Web service, database updates
40	7	1.3.40.17268	1.3.40.16659	1.3.40.17268	1.3.40.17259	GUI.zip, Web service, database updates
40	8	1.3.40.17364	1.3.40.16659	1.3.40.17362	1.3.40.17343	GUI.zip, Web service, database updates
40	9	1.3.40.17370	1.3.40.16659	1.3.40.17370	1.3.40.17370	GUI.zip, Web service, database updates
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.
40	11	1.3.40.17435	1.3.40.16659	1.3.40.17525	1.3.40.17370	Web service update
40	12	1.3.40.17685	1.3.40.16659	1.3.40.17685	1.3.40.17648	GUI.zip, Web service, database updates
40	13	1.3.40.17776	1.3.40.16659	1.3.40.17776	1.3.40.17648	GUI.zip, Web service
40	14	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18063	1.3.40.18063	GUI.zip, Web service, database updates
40	14.1	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18107	1.3.40.18063	Web service
40	15	1.3.40.18127(3GB)	1.3.40.16659	1.3.40.18127	1.3.40.18127	GUI.zip, Web service, database updates
40	16	1.1.3.40.18585 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip, Web service, database updates
40	16.1	1.3.40.18705 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip
40	17	1.3.40.18780 (3GB)	1.3.40.18756	1.3.40.18756	1.3.40.18646	<b>Core install required for Radiologist User Group.</b> GUI.zip, Core setup, and Web Service updates
40	18	1.3.40.19253(3GB)	1.3.40.18756	1.3.40.18756	1.3.40.19253	GUI.zip, Web Service and database updates
40	19	1.3.40.19909 (3GB)	1.3.40.18756	1.3.40.19831	1.3.40.19253	GUI.zip, Web services, Recognizer files

### **8. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.40.20086.zip file provided with this release.

Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config and rRISServices.vshost.exe.config files.

*rRISService directories include:*

- a) *rRISService*
- b) *CDS rRISService*
- c) *Wedge rRISService*
- d) *DDE rRISService*

Restart each service.

- 3) Copy the Recognizer files to your local machine to the following folder.

Note: this could be a hidden folder.

C:\ProgramData\RadNet\Recognizer\2.16.840.1.113883.3.21\

### **9. Known Limitations**

Known limitations listed in this document may not have been introduced in 40.020, but have been discovered during testing of 40.020.

Redmine #	Subject	Info
5245	Reporting - Spine navigational cues are not recognized	<p>My cues were configured as</p> <ol style="list-style-type: none"><li>1. C two dash three colon</li><li>2. C three dash four colon</li><li>3. C four dash five colon</li></ol> <p>I changed them to be</p> <ol style="list-style-type: none"><li>1. C two colon</li><li>2. C three colon</li><li>3. C four colon</li></ol> <p>The change in cues names worked much better</p>
5248	Reporting - Edit template from reporting window error	<p>This was only occurring with one of my templates. If this occurs try "refresh configuration". If that does not work</p>

## **RADNET, Inc. – eRAD RIS Server Update**

		open the same template in the TemplateMacro editor and save.
5249	Reporting - Shift Tab in the template editor or reporting editor will return error	
5219	Reporting - Function key action DeleteWordLeftOfCursor will delete fields and section titles	If you continue to select the function key after the text has been removed it will jump to the section title and can also delete it as well
5220	Reporting - Interactive Info Prompt can show fields that have been jumped over when using Next Section command	If in a section that has multiple field with default text, issue the command Next Section, the interactive info prompt will display the text from the fields that were skipped.
5254	Reporting - using the undo feature, the cursor is not following the text that is being removed.	Seems to occur when the “undo” feature is used multiple times concurrently.

# Server Update

For eRAD RIS  
Version 1.0  
Build 40  
Update 40.021



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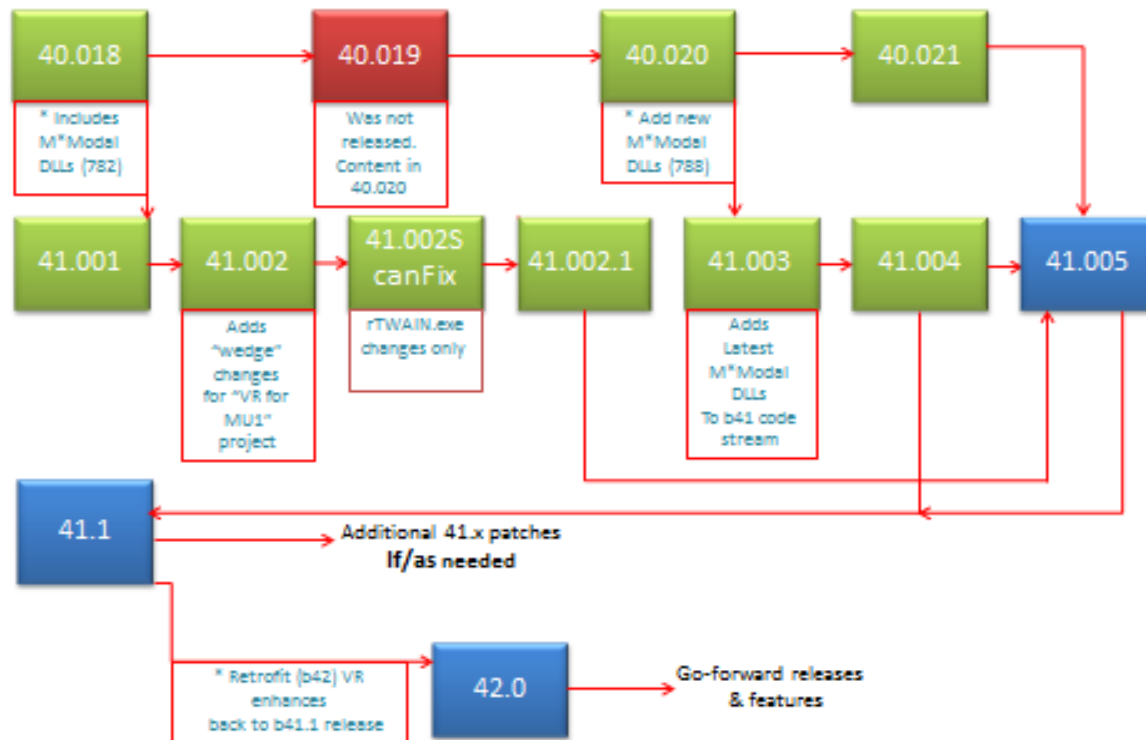
## **RADNET, Inc. – eRAD RIS Server Update**

### **1. Defects Resolved**

<b>Redmine #</b>	<b>Subject</b>	<b>Priority</b>
5306	Reporting - Dictionary Add / Train changes	Urgent
5435	Reporting - possible wrong document model loading if more than one practice	High
5431	Reporting - dictating negative 5 percent will render the word percent not the symbol	Normal
5390	Reporting - rad edit text default color is yellow - should be "#810000"	Normal
5314	Reporting - Laterality check causing duplicate words	Normal
5313	Reporting - no wait navigate fails when dictating and then clicking next field > 1 time without pausing	Normal
5312	Dictating previous field moves two fields back instead of one.	Normal
5267	Reporting - Automatic spell check "on the fly" marks words as misspelled that are at the beginning of a field	Normal
5215	Playback with bouncing ball, preventing word selection with double click.	Normal
4965	Reporting - ability to configure the completeTimeout setting for interactive dictation	Normal
4964	Reporting - ability to configure the finalTimeout setting for interactive dictation	Normal
4963	Reporting - ability to configure the speedVsAccuracy setting for interactive dictation	Normal
4764	Reporting - interactive dictation of the word "through" appearing as "-" not ideal	Normal

## 2. Code Stream

eRad RIS – source code evolution



### **Legend:**

**Green = Released software**

**Red = Will not be released**

**Blue = Future release**

### **3. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.40.20703(3GB).zip

### **4. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **5. Who is affected**

Build 40 installs. This server update must be applied directly to the build 40 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.

## **6. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	Requires Core Install. GUI.zip, Web Service, and Database updates
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service
40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web service, database updates
40	5	1.3.40.17087	1.3.40.16659	1.3.40.17069	1.3.40.17087	GUI.zip, Web service, database updates
40	6	1.3.40.17146	1.3.40.16659	1.3.40.17146	1.3.40.17146	GUI.zip, Web service, database updates
40	7	1.3.40.17268	1.3.40.16659	1.3.40.17268	1.3.40.17259	GUI.zip, Web service, database updates
40	8	1.3.40.17364	1.3.40.16659	1.3.40.17362	1.3.40.17343	GUI.zip, Web service, database updates
40	9	1.3.40.17370	1.3.40.16659	1.3.40.17370	1.3.40.17370	GUI.zip, Web service, database updates
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.
40	11	1.3.40.17435	1.3.40.16659	1.3.40.17525	1.3.40.17370	Web service update
40	12	1.3.40.17685	1.3.40.16659	1.3.40.17685	1.3.40.17648	GUI.zip, Web service, database updates
40	13	1.3.40.17776	1.3.40.16659	1.3.40.17776	1.3.40.17648	GUI.zip, Web service
40	14	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18063	1.3.40.18063	GUI.zip, Web service, database updates
40	14.1	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18107	1.3.40.18063	Web service
40	15	1.3.40.18127(3GB)	1.3.40.16659	1.3.40.18127	1.3.40.18127	GUI.zip, Web service, database updates
40	16	1.1.3.40.18585 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip, Web service, database updates
40	16.1	1.3.40.18705 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip
40	17	1.3.40.18780 (3GB)	1.3.40.18756	1.3.40.18756	1.3.40.18646	<b>Core install required for Radiologist User Group.</b> GUI.zip, Core setup, and Web Service updates
40	18	1.3.40.19253(3GB)	1.3.40.18756	1.3.40.18756	1.3.40.19253	GUI.zip, Web Service and database updates
40	19	1.3.40.19909 (3GB)	1.3.40.18756	1.3.40.19831	1.3.40.19253	GUI.zip, Web services, Recognizer files. <b>NOT RELEASED</b>
40	20	1.3.40.20086(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	GUI.zip, Web services, Recognizer files
40	21	1.3.40.20703(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	GUI.zip

## **7. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.40.20703.zip file provided with this release.  
Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

# Server Update

For eRAD RIS  
Version 1.0  
Build 40  
Update 40.022

## **Table of Contents**

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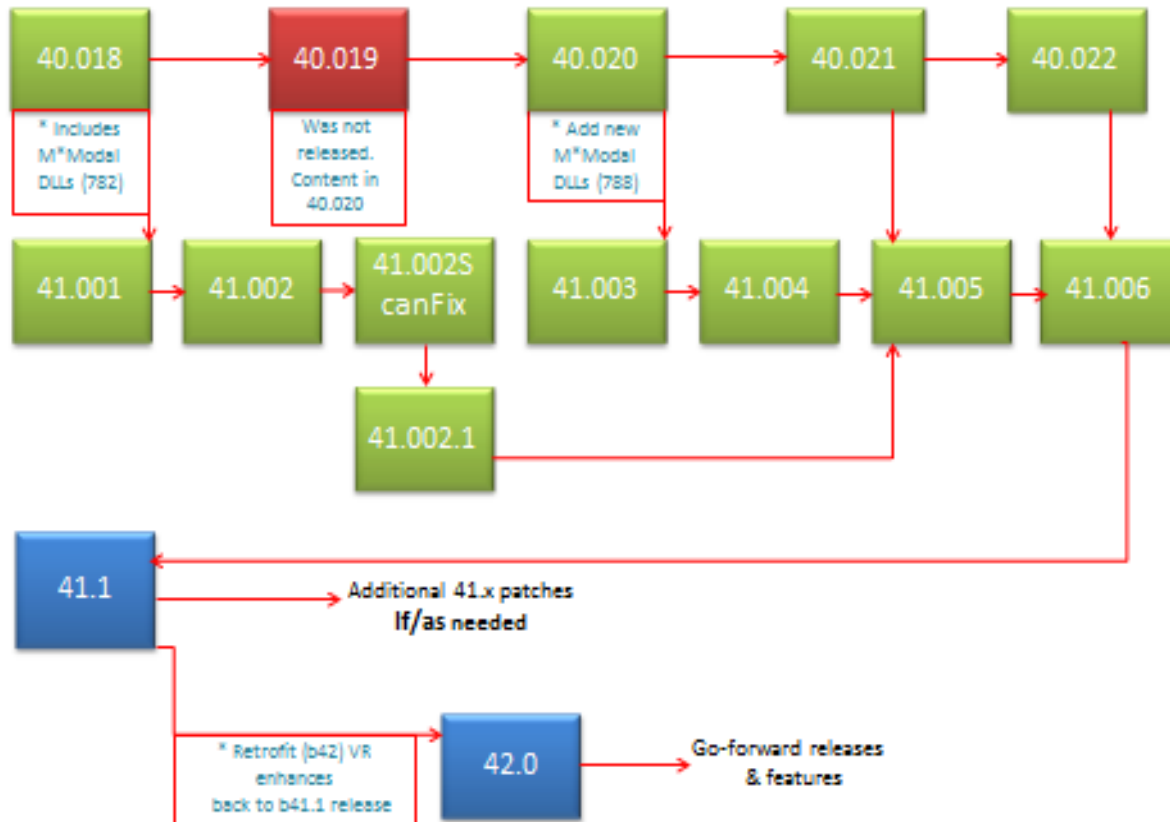
## **RADNET, Inc. – eRAD RIS Server Update**

### **1. Defects Resolved**

<b>Redmine #</b>	<b>Subject</b>	<b>Priority</b>
5556	Transcription users will get null exceptions when trying to activate ReportTemplateEditor	Urgent
5558	Reporting - Transcription user error on first study opened in create report window	High
5579	Spell check on the fly no longer turned on. Squigly lines are not shown under misspelled words	Normal

## 2. Code Stream

eRad RIS – source code evolution



### **Legend:**

**Green = Released software**

**Red = Will not be released**

**Blue = Future release**

### **3. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.40.20898(3GB).zip

### **4. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **5. Who is affected**

Build 40 installs. This server update must be applied directly to the build 40 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.

## **6. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service
40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web service, database updates
40	5	1.3.40.17087	1.3.40.16659	1.3.40.17069	1.3.40.17087	GUI.zip, Web service, database updates
40	6	1.3.40.17146	1.3.40.16659	1.3.40.17146	1.3.40.17146	GUI.zip, Web service, database updates
40	7	1.3.40.17268	1.3.40.16659	1.3.40.17268	1.3.40.17259	GUI.zip, Web service, database updates
40	8	1.3.40.17364	1.3.40.16659	1.3.40.17362	1.3.40.17343	GUI.zip, Web service, database updates
40	9	1.3.40.17370	1.3.40.16659	1.3.40.17370	1.3.40.17370	GUI.zip, Web service, database updates
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.
40	11	1.3.40.17435	1.3.40.16659	1.3.40.17525	1.3.40.17370	Web service update
40	12	1.3.40.17685	1.3.40.16659	1.3.40.17685	1.3.40.17648	GUI.zip, Web service, database updates
40	13	1.3.40.17776	1.3.40.16659	1.3.40.17776	1.3.40.17648	GUI.zip, Web service
40	14	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18063	1.3.40.18063	GUI.zip, Web service, database updates
40	14.1	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18107	1.3.40.18063	Web service
40	15	1.3.40.18127(3GB)	1.3.40.16659	1.3.40.18127	1.3.40.18127	GUI.zip, Web service, database updates
40	16	1.1.3.40.18585 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip, Web service, database updates
40	16.1	1.3.40.18705 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip
40	17	1.3.40.18780 (3GB)	1.3.40.18756	1.3.40.18756	1.3.40.18646	<b>Core install required</b> for Radiologist User Group. GUI.zip, Core setup, and Web Service updates
40	18	1.3.40.19253(3GB)	1.3.40.18756	1.3.40.18756	1.3.40.19253	GUI.zip, Web Service and database updates
40	19	1.3.40.19909 (3GB)	1.3.40.18756	1.3.40.19831	1.3.40.19253	GUI.zip, Web services, Recognizer files. <b>NOT RELEASED</b>
40	20	1.3.40.20086(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	GUI.zip, Web services, Recognizer files
40	21	1.3.40.20703(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	GUI.zip
40	22	1.3.40.20898(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	GUI.zip

## **7. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.40.20898.zip file provided with this release.  
Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

# **Server Update**

**For eRAD RIS  
Version 1.0  
Build 40  
Update 40.022.1**

## **Table of Contents**

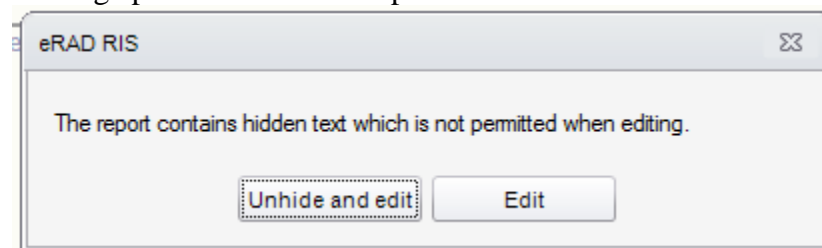
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4. Intended Audience .....	5
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### **1. Defects Resolved**

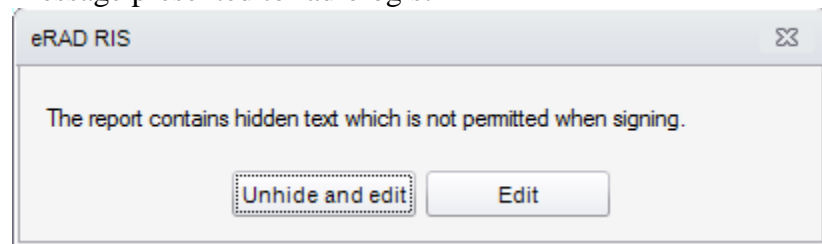
Redmine #	Subject	Priority
6190	Hidden text in editor counts as text when validating fields and section	High

The resolved bug listed above resolves an issue in which users had the option to hide text within the reporting window. This option was available to radiologist and transcription users. The workflow for this option has been altered. You can no longer hide text, only unhide. If there is hidden text in a report, transcription users cannot transcribe and radiologist users cannot sign. They will be presented with a message like the one displayed below.

Message presented to transcription



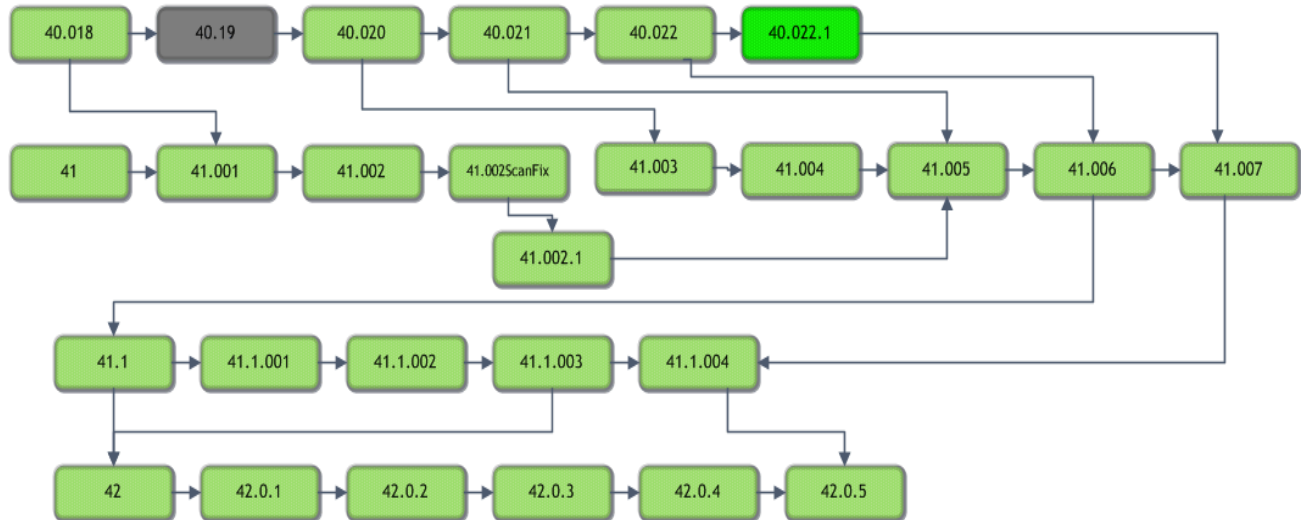
Message presented to radiologist





## 2. Code Stream

### eRAD RIS - Source Code Evolution



#### **Legend:**

Light Green = Released software

Gray = Will not be released

Bright Green = Current Release

### **3. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.40.21936(3GB).zip

### **4. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **5. Who is affected**

Build 40 installs. This server update must be applied directly to the build 40.020.

## **RADNET, Inc. – eRAD RIS Server Update**

### **6. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
40	16	1.1.3.40.18585 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip, Web service, database updates
40	16.1	1.3.40.18705 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip
40	17	1.3.40.18780 (3GB)	1.3.40.18756	1.3.40.18756	1.3.40.18646	<b>Core install required</b> for Radiologist User Group. GUI.zip, Core setup, and Web Service updates
40	18	1.3.40.19253(3GB)	1.3.40.18756	1.3.40.18756	1.3.40.19253	GUI.zip, Web Service and database updates
40	19	1.3.40.19909(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	GUI.zip, Web Service
40	20	1.3.40.20086(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip and Recognizer
40	21	1.3.40.20703(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip
40	22	1.3.40.20898(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip
<b>40</b>	<b>22.1</b>	<b>1.3.40.21936(3GB)</b>	<b>1.3.40.18756</b>	<b>1.3.40.19878</b>	<b>1.3.40.19253</b>	<b>Gui.zip</b>
41	-	1.3.41.19135(3GB)	1.3.41.19135	1.3.41.19135	1.3.41.19135	Full version release
41	1	1.3.41.19356(3GB)	1.3.41.19135	1.3.41.19346	1.3.41.19346	GUI.zip, Web Service and database updates
41	2	1.3.41.19620(3GB)	1.3.41.19135	1.3.41.19620	1.3.41.19346	GUI.zip and Web Service
41	2sf	1.3.41.19620SF(3G)	1.3.41.19135	1.3.41.19620	1.3.41.19346	GUI.zip
41	2.1	1.3.41.20622(3GB)	1.3.41.19135	1.3.41.20617	1.3.41.19346	GUI.zip and Web Service
41	3	1.3.41.20171(3GB)	1.3.41.19135	1.3.41.20171	1.3.41.19346	GUI.zip , Web Service and Recognizer
41	4	1.3.41.20285(3GB)	1.3.41.19135	1.3.41.20171	1.3.41.19346	GUI.zip
41	5	1.3.41.20809(3GB)	1.3.41.20708	1.3.41.20792	1.3.41.20738	GUI.zip, Core install, Web Service and database updates
41	6	1.3.41.20912(3GB)	1.3.41.20708	1.3.41.20792	1.3.41.20738	GUI.zip
41	7	1.3.41.21963(3GB)	1.3.41.20708	1.3.41.20792	1.3.41.20738	GUI.zip
41.1	-	1.3.41.20918(3GB)	1.3.41.20791	1.3.41.20918	1.3.41.20739	GUI.zip, Core install, Web Service and DB updates, Help files
41.1	1	1.3.41.20987(3GB)	1.3.41.20791	1.3.41.20918	1.3.41.20739	GUI.zip
41.1	2	1.3.41.21162(3GB)	1.3.41.20791	1.3.41.21162	1.3.41.21150	GUI.zip, Web Service and DB updates,
41.1	3	1.3.41.21264(3GB)	1.3.41.20791	1.3.41.21162	1.3.41.21150	GUI.zip
41.1	4	1.3.41.21931(3GB)	1.3.41.20791	1.3.41.21162	1.3.41.21150	GUI.zip
42	1	2.42.0.0.21577	2.42.0.0.21261	2.42.0.0.21577	2.42.0.0.21187	GUI and Web Service updates
42	2	2.42.0.1.21702	2.42.0.0.21261	2.42.0.1.21702	2.42.0.0.21187	GUI and Web Service updates
42	3	2.42.0.2.21806	2.42.0.0.21261	2.42.0.2.21806	2.42.0.0.21187	GUI and Web Service updates
42	4	2.42.0.4.21862	2.42.0.0.21261	2.42.0.2.21806	2.42.0.4.21870	GUI and Database updates
42	5	2.42.0.5.21924	2.42.0.0.21261	2.42.0.2.21806	2.42.0.4.21870	GUI

## **7. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.40. 21936.zip file provided with this release.  
Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

**NOTE:** If your upgrade is coming from 40.016.1 or prior a core install will be required. Versions (builds) of 40.017 and greater do not require a core install as long as you are at least at 40.017 (Core Version 1.3.40.18756)

# Server Update

For eRAD RIS  
Version 1.0  
Build 40  
Update 40.024

## **Table of Contents**

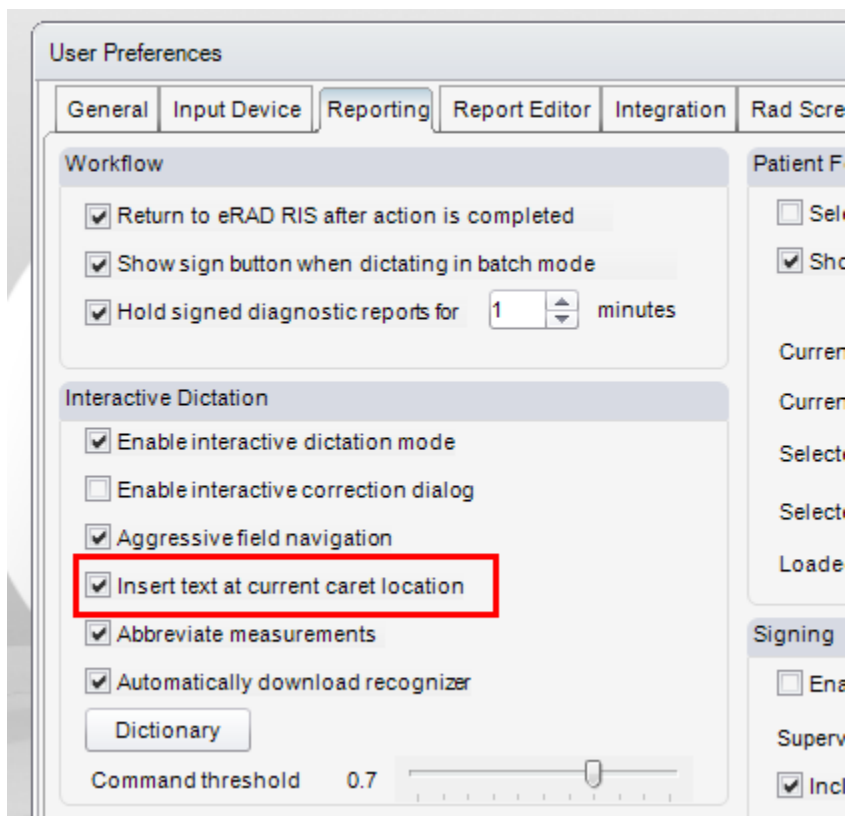
1. Defects Resolved .....	3
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5. Who is affected .....	5
6. eRAD RIS Release Version Numbers .....	6
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## RADNET, Inc. – eRAD RIS Server Update

### 1. Defects Resolved

Redmine #	Subject	Priority
5823	Hidden text in editor counts as text when validating fields and section	High

With the above bug a new user preference has been added. The user preference titled “**Insert text at current caret location**” is located on the Reporting tab and is for use only with Interactive Dictation users.

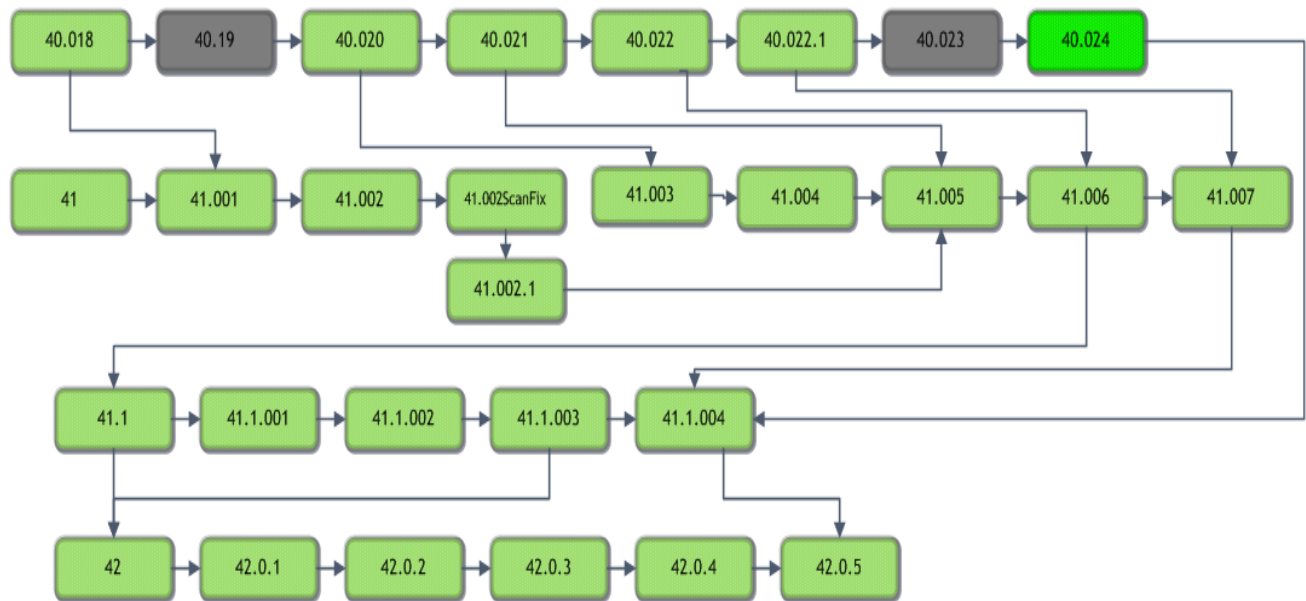


When selected, the dictated text will be inserted where the current cursor position is. Example: User starts dictation and then moves the cursor from point A to point B, the text will be inserted at point B

When un-selected it will put the text in the place where the cursor was when the dictation started. Example: User starts dictation and then moves the cursor from point A to point B, the text will be inserted at point A.

## 2. Code Stream

### eRAD RIS - Source Code Evolution



#### **Legend:**

Light Green = Released software

Gray = Will not be released

Bright Green = Current Release



### **3. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.40.21976(3GB).zip

### **4. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **5. Who is affected**

Build 40 installs. This server update must be applied directly to the build 40.020.

## **RADNET, Inc. – eRAD RIS Server Update**

### **6. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
40	16	1.1.3.40.18585 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip, Web service, database updates
40	16.1	1.3.40.18705 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip
40	17	1.3.40.18780 (3GB)	1.3.40.18756	1.3.40.18756	1.3.40.18646	<b>Core install required</b> for Radiologist User Group. GUI.zip, Core setup, and Web Service updates
40	18	1.3.40.19253(3GB)	1.3.40.18756	1.3.40.18756	1.3.40.19253	GUI.zip, Web Service and database updates
40	19	1.3.40.19909(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	GUI.zip, Web Service
40	20	1.3.40.20086(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip and Recognizer
40	21	1.3.40.20703(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip
40	22	1.3.40.20898(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip
40	22.1	1.3.40.21936(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip
<b>40</b>	<b>24</b>	<b>1.3.40.21976(3GB)</b>	<b>1.3.40.18756</b>	<b>1.3.40.19878</b>	<b>1.3.40.19253</b>	<b>Gui.zip</b>
41	-	1.3.41.19135(3GB)	1.3.41.19135	1.3.41.19135	1.3.41.19135	Full version release
41	1	1.3.41.19356(3GB)	1.3.41.19135	1.3.41.19346	1.3.41.19346	GUI.zip, Web Service and database updates
41	2	1.3.41.19620(3GB)	1.3.41.19135	1.3.41.19620	1.3.41.19346	GUI.zip and Web Service
41	2sf	1.3.41.19620SF(3G)	1.3.41.19135	1.3.41.19620	1.3.41.19346	GUI.zip
41	2.1	1.3.41.20622(3GB)	1.3.41.19135	1.3.41.20617	1.3.41.19346	GUI.zip and Web Service
41	3	1.3.41.20171(3GB)	1.3.41.19135	1.3.41.20171	1.3.41.19346	GUI.zip , Web Service and Recognizer
41	4	1.3.41.20285(3GB)	1.3.41.19135	1.3.41.20171	1.3.41.19346	GUI.zip
41	5	1.3.41.20809(3GB)	1.3.41.20708	1.3.41.20792	1.3.41.20738	GUI.zip, Core install, Web Service and database updates
41	6	1.3.41.20912(3GB)	1.3.41.20708	1.3.41.20792	1.3.41.20738	GUI.zip
41	7	1.3.41.21963(3GB)	1.3.41.20708	1.3.41.20792	1.3.41.20738	GUI.zip
41.1	-	1.3.41.20918(3GB)	1.3.41.20791	1.3.41.20918	1.3.41.20739	GUI.zip, Core install, Web Service and DB updates, Help files
41.1	1	1.3.41.20987(3GB)	1.3.41.20791	1.3.41.20918	1.3.41.20739	GUI.zip
41.1	2	1.3.41.21162(3GB)	1.3.41.20791	1.3.41.21162	1.3.41.21150	GUI.zip, Web Service and DB updates,
41.1	3	1.3.41.21264(3GB)	1.3.41.20791	1.3.41.21162	1.3.41.21150	GUI.zip
41.1	4	1.3.41.21931(3GB)	1.3.41.20791	1.3.41.21162	1.3.41.21150	GUI.zip
42	1	2.42.0.0.21577	2.42.0.0.21261	2.42.0.0.21577	2.42.0.0.21187	GUI and Web Service updates
42	2	2.42.0.1.21702	2.42.0.0.21261	2.42.0.1.21702	2.42.0.0.21187	GUI and Web Service updates
42	3	2.42.0.2.21806	2.42.0.0.21261	2.42.0.2.21806	2.42.0.0.21187	GUI and Web Service updates
42	4	2.42.0.4.21862	2.42.0.0.21261	2.42.0.2.21806	2.42.0.4.21870	GUI and Database updates
42	5	2.42.0.5.21924	2.42.0.0.21261	2.42.0.2.21806	2.42.0.4.21870	GUI

## **7. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.40.21976.zip file provided with this release.  
Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

**NOTE:** If your upgrade is coming from 40.016.1 or prior a core install will be required. Versions (builds) of 40.017 and greater do not require a core install as long as you are at least at 40.017 (Core Version 1.3.40.18756)

# **User Release Notes**

for eRAD RIS  
Version 1  
Build 41

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## **1. Purpose**

This document describes some of the new features and changes implemented in eRAD RIS as of the end of Sprint 40 and subsequent server releases. This version of eRAD RIS is referred to as Build 1.3.41.

Only features which can be visually demonstrated to the user will be outlined in this document.

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS management team.

## **3. Installing/Accessing the Application**

The installation guide for the eRAD RIS client have been posted to the RadNet Wiki page at <http://mdbal01rdtweb/Wiki/>

Under the RIS menu click on the rRIS page. The credentials to access the page are:

Username: rRIS

Password: Summerside

*Please note that Build 1.41 is considered a new core release of the application and will require a reinstallation of eRAD RIS. This is accomplished by navigating to the eRAD RIS shared installation drive and running the CoreInstall.bat file (ex: I:\RISDeployment\CoreInstall.bat)*

If you experience difficulties accessing the application please do not hesitate to contact Darcy Noye with the PEI RIS Development Team.

#### 4. New Access Strings and Configuration Settings

Setting Placeholder	Setting	Default	Purpose / Controls Access to
Access string / User Group Permission tables	Clinical.PersonMerge	None	Controls access to the Personnel Merge window access from the Administration menu. Allows the user to “Suggest” a person merge.
Access string / User Group Permission tables	Clinical.PersonMergeAdmin	None	Controls access to the options of Complete or Reject a Person merge.
Access string / User Group Permission tables	WL.PersonMergeRequest	None	Provides access to the Personnel Merge WL accessed under the Administration menu.
Access string / User Group Permission tables	View.Custom.Layout	None	Controls access to the View menu options of Save as Custom Layout and Delete Custom Layouts...
Access string / User Group Permission tables	WL.Rad.CriticalResults	None	Controls access to the All Critical Results work list menu item under the Radiologist Menu
Access string / User Group Permission tables	WL.Rad.MyCriticalResults	Full	Controls access to the Critical Results work list menu item under the Radiologist Menu
Access string / User Group Permission tables	Clinical.CTRNNotification	None	Controls access to the CTRN button in the reporting window
Access string / User Group Permission tables This access string has been removed.	View.Administration  <b><u>OBSOLETE</u></b>	n/a	This access string is no longer used and has been removed. The access string view.preset.administration has replaced this one.



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Access string / User Group Permission tables	View.Preset.Administration	None	Access to preset layout administration submenu
Access string / User Group Permission tables	View.Preset.Administration.PresetSigning	None	Access to preset layout administration for Signing
Access string / User Group Permission tables	View.Preset.Administration.PresetEditing	None	Access to preset layout administration for Editing
Access string / User Group Permission tables	View.Preset.Administration.PresetDictationNormal	None	Access to preset layout administration for Dictation Normal
Access string / User Group Permission tables	View.Preset.Administration.PresetDictationMinimal	None	Access to preset layout administration for Dictation Minimal
Access string / User Group Permission tables	View.Preset.Administration.PresetDictationFull	None	Access to preset layout administration for Dictation Full
Access string / User Group Permission tables	UserPreference.Theme.AllowDark Mode	None	Controls if user has the ‘enable dark mode’ checkbox in user preferences screen
Access string / User Group Permission tables	Clinical.UserPreferences.ReportingAutoSave	None	Controls access to the user preference “Enable Autosave Reports”
Access string / User Group Permission tables	Clinical.PatientMergeMixer <b>Replaces</b> Clinical.PatientMerge	None	Controls access to the Patient Merge window
Access string / User Group Permission tables	DataNugget.Attachments <b>Replaces</b> DataNugget.Documents	None	Controls access to the nugget for attachments
Access string / User Group Permission tables	Flag.Allergy <b>Replaces</b> Flag.DrugAllergies	Full	Controls access to see the Allergy flag
Access string / User Group Permission tables	WL.Rad.PendingSignature <b>Replaces</b> WL.PendingSignature	None	Controls access to the Pending Signature menu option under the Radiologist menu

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Access string / User Group Permission tables	WL.Rad.TentativelySigned <b>Replaces</b> WL.TentativelySigned	None	Controls access to the Signed, Pending Release
Access string / User Group Permission tables	MT.ReportDraftedProblem <b>Replaces</b> MT.ReportDraftedProblemAll	None	Controls access to the 'All Problem' menu option under the Transcription menu
The following access strings were added in B41 for work lists, buttons, etc... that existed in previous versions but missing access string to control function/access			
Access string / User Group Permission tables	WL.Rad.PendingEdit	None	Controls access to the Pending Edit menu option from the Radiologist menu
Access string / User Group Permission tables	Clinical.Confirmation	None	Controls access to the Confirmation button and context menu option of the Confirmation work list.
Access string / User Group Permission tables	Clinical.MarkForAddendum	None	Controls access to the context menu options of Request Addendum and Cancel Addendum Request
Access string / User Group Permission tables	Clinical.ChangeSupervisingRadiologist	None	Controls access to the context menu option for Change Supervising Radiologist
Access string / User Group Permission tables	Clinical.TemplateEditing	None	Controls access to the Edit Template option in the reporting window\template browser data pane
SystemConfig lookup	SignAndSymptomsRequiredByTech	False	Determines in the Signs and Symptoms text box in the Perform Exam window on Documentation tab is required. Possible values: True or

			False.
SystemConfig lookup	HeightRequiredOnArrival	False	Determines if the Height field is required at the time of Arrival from the Registration window. Possible values: True and False
SystemConfig lookup	WeightRequiredOnArrival	False	Determines if the Weight field is required at the time of Arrival from the Registration window. Possible values: True and False
SystemConfig lookup	ProcessPostEventInterval	60	The number in seconds to sleep between each call to stored procedure c_ProcessPostEvent
Ris.exe.config	<code>&lt;add name="Rolling Flat File Trace Listener" type="Microsoft.Practices.EnterpriseLibrary.Logging.TraceListeners.RollingFlatFileTraceListener, Microsoft.Practices.EnterpriseLibrary.Logging, Version=5.0.414.0, Culture=neutral, PublicKeyToken=31bf3856ad364e35" listenerDataType="Microsoft.Practices.EnterpriseLibrary.Logging.Configuration.RollingFlatFileTraceListenerData, Microsoft.Practices.EnterpriseLibrary.Logging, Version=5.0.414.0, Culture=neutral, PublicKeyToken=31bf3856ad364e35" rollFileExistsBehavior="Increment" rollInterval="Hour" fileName="verbose_log/trace.log" formatter="Text Formatter" /&gt;</code>  <b>This is entered under</b> <b>&lt;SpecialSources&gt;</b> <code>&lt;allEvents switchValue="Verbose" name="All Events"&gt;</code> <code>&lt;listeners&gt;</code> <code>&lt;add name="Rolling Flat File Trace Listener" /&gt;</code> <code>&lt;/listeners&gt;</code>	None	<p>See new feature “Verbose trace logging to a flat file” For more details on this ris.exe config change.</p> <p>This is not a required change.</p>

## 5. New Features and Enhancements

### Reporting – Radiologist Notifications

Under User Preferences, we have renamed the configuration section to **Feedback**. Also we have divided the configuration into logical sections based on when, in the user's workflow the feedback occurs.

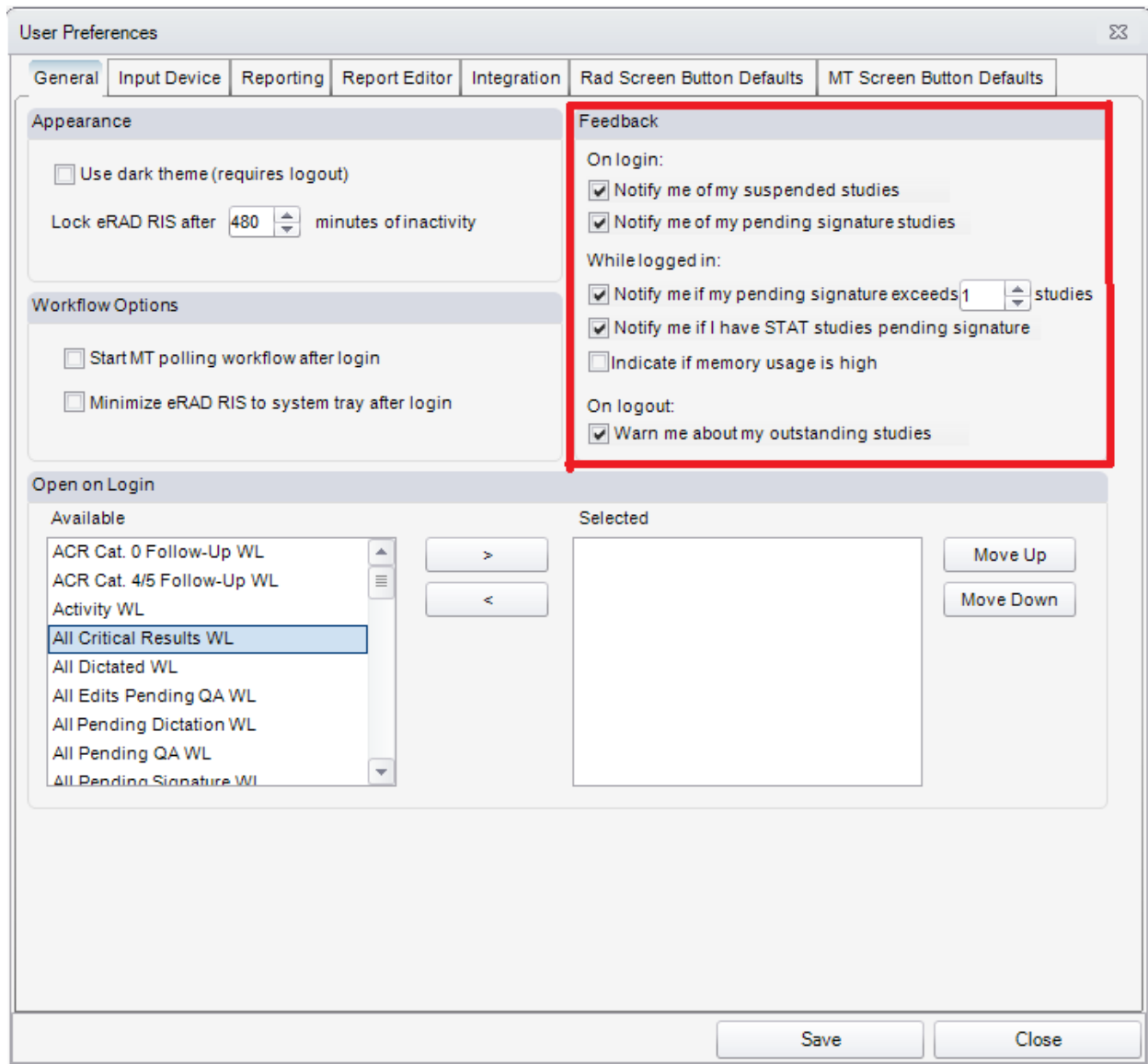


Figure 5.1 – User Preferences\General Tab\Feedback options

### On Login

Users can now subscribe to two optional notifications that occur on login.

*Pending Signatures* - the notification will display the user's pending signature count. The action button will take the user to the pending signatures work-list.

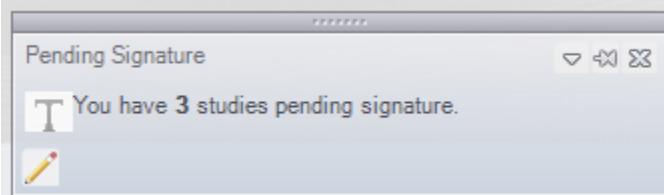


Figure 5.2 – Prompt on login for outstanding reports to be signed

*Suspended Studies* - the notification will display the user's suspended studies count. The action button will take the user to the suspended work-list.

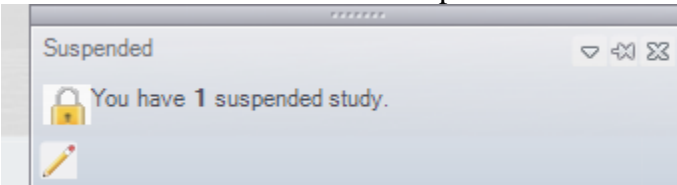


Figure 5.3 – Prompt on login for exams you have in suspended status

### While Logged In

Users can now subscribe to three feedback options that occur during their session.

*Pending Signatures* - the notification will display the user's pending signature count. The action button will take the user to the pending signatures work-list. This happens when the signature count exceeds the pre-set value. This notification is only executed with the pending signature work list open. The work-list can be open in a background tab.

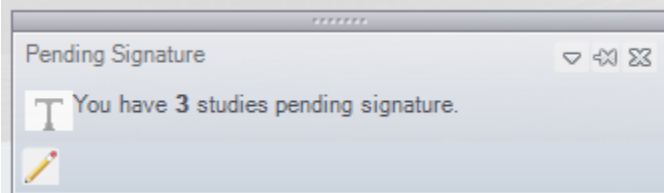
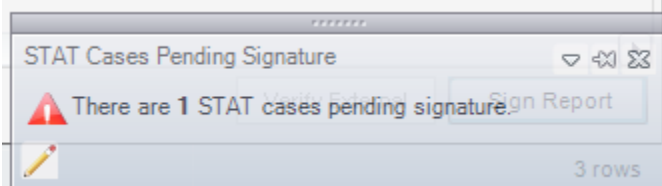


Figure 5.4 – Prompt when pending signature count reaches defined threshold.

*STAT Pending Signature Studies* - the notification will display when the user has a STAT case enter their pending signature list. This notification is only executed with the pending signature work list open. The work-list can be open in a background tab.



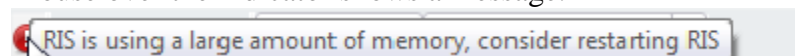
**Figure 5.5 – Prompt on STAT cases pending signature**

*High Memory Indicator* – If memory usage is high the user is displayed an indicator.



**Figure 5.6 – Status bar indicator**

Mouse over the indicator shows a message.

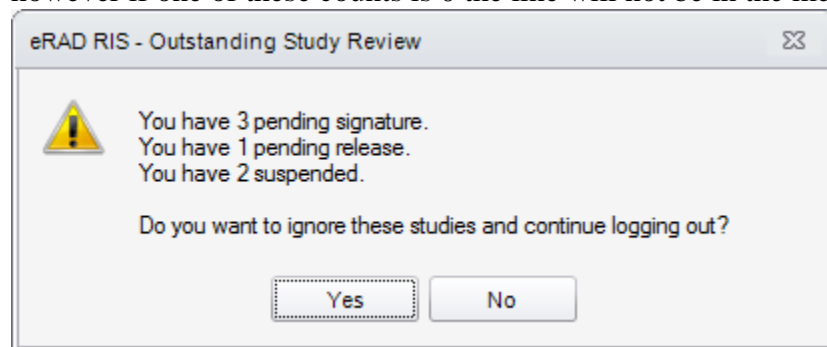


**Figure 5.6a – Message displayed on mouse hover**

### On Logout

Users can now subscribe to one optional warning that occurs on logout.

*Outstanding Studies* – the outstanding studies prompt will occur on log out if the user has any pending signature, pending release or suspended exams. The example below shows all 3, however if one of these counts is 0 the line will not be in the message.



**Figure 5.7 – Notification on logout**

## Reporting - Dark Theme

There is now a darker theme that can be used by the radiologist. This is controlled by a new user preference titled “Use dark theme (requires logout)”. The user preference itself is controlled by a new Access String titled **“UserPreference.Theme.AllowDarkMode”**

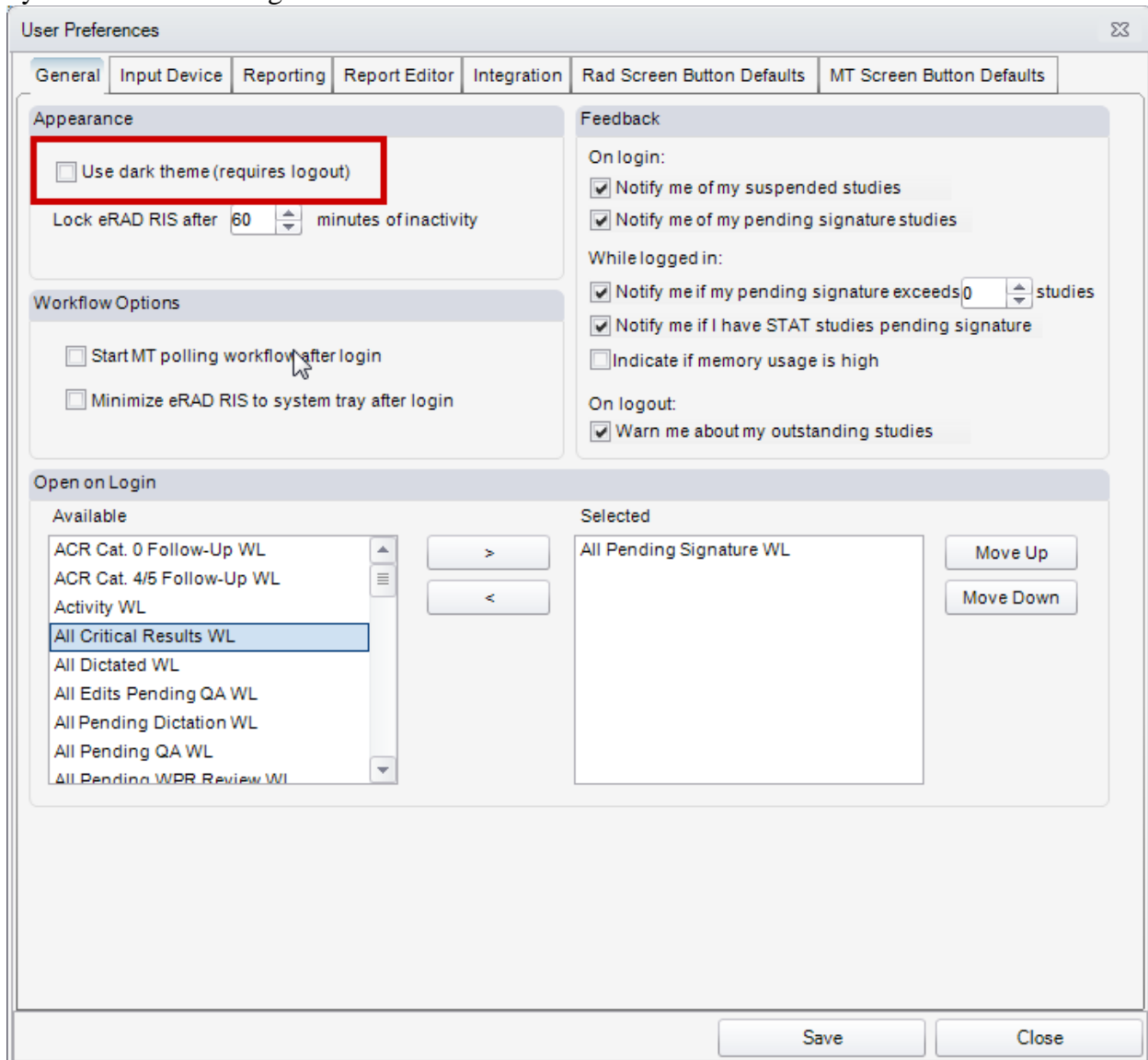


Figure 5.8 – Preferences showing Dark Mode

After selecting/unselecting the new user preference, the user must logout and login for it to take effect.

## Reporting – Editor Field Background Color

Within the reporting window, the user can open the context menu (right click) on the editor. This will present the user with a list of options. Selecting the “Editor Appearance” option will open the “Editor Appearance” window. A new option of “Field Background” color has been added. Adjusting this color will change the color of the fields within the editor template. This will apply to any fields that are inserted with a Macro too.

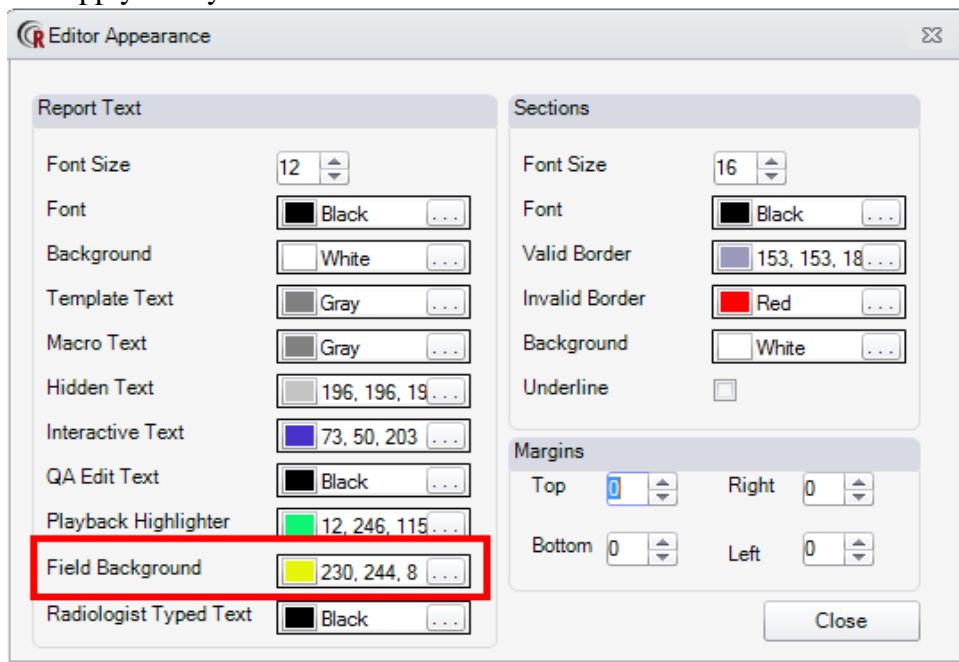


Figure 5.9 – Editor Appearance window showing option for Field Color.

With the color selected above for Field Background and fields within the template will appear in that color

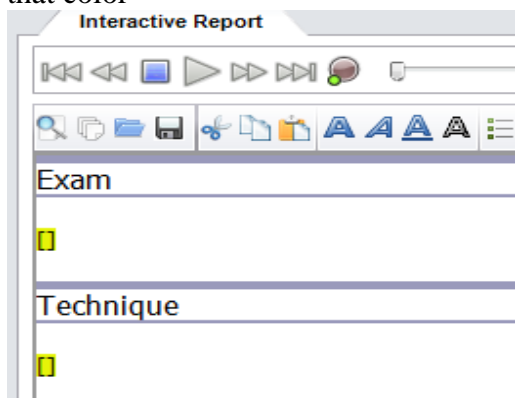
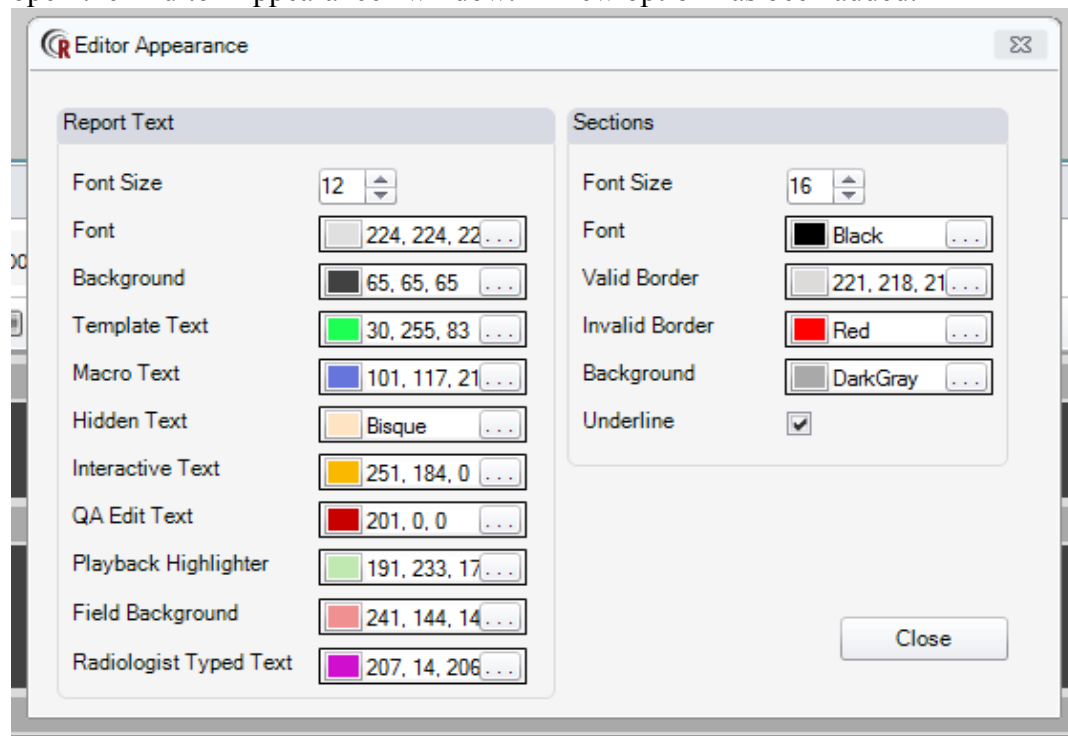


Figure 5.10 – Field Color in editor



## **Reporting – Radiologist Edit Text Color**

Within the reporting window, the user can open the context menu (right click) on the editor. This will present the user with a list of options. Selecting the “Editor Appearance” option will open the “Editor Appearance” window. A new option has been added.



**Figure 5.11 – Editor Appearance window with new Radiologist Typed Text option**

This new option controls the color of the manually entered/edited text by the radiologist

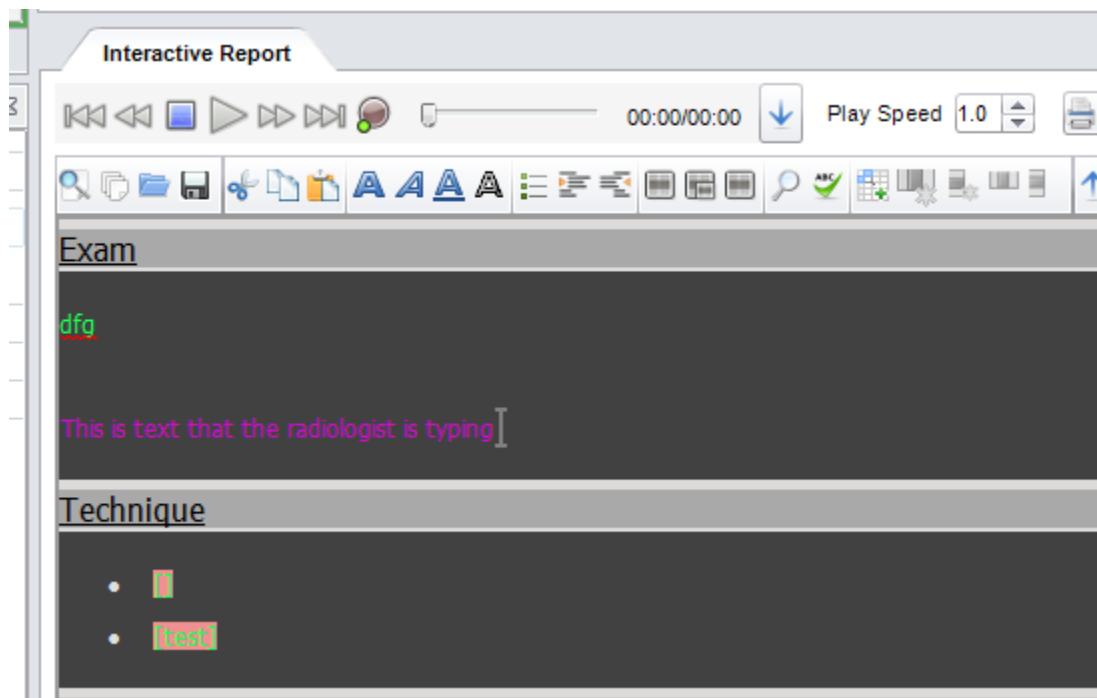


Figure 5.12 – Editor displaying the text color when manually entered by the radiologist.

## Reporting – Editor Margins

Within the reporting window, the user can open the context menu (right click) on the editor. This will present the user with a list of options. The “Margins” section of the Editor Appearance window has been added. This will allow the user to set their margins within the editor.

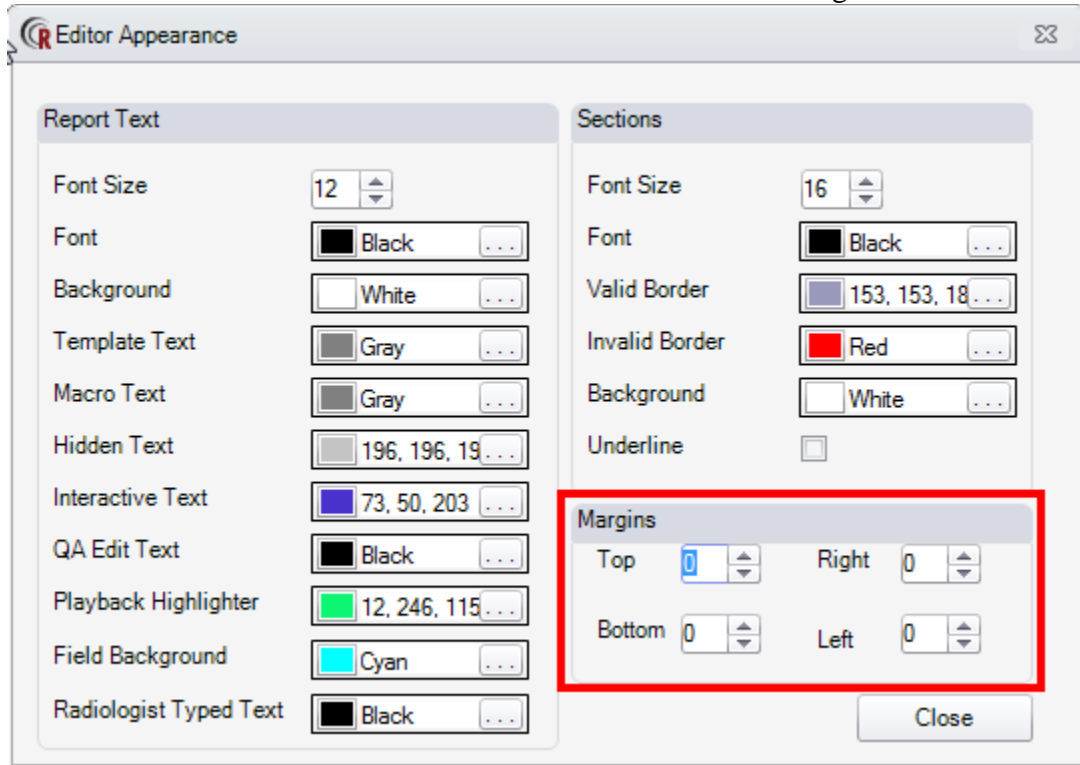
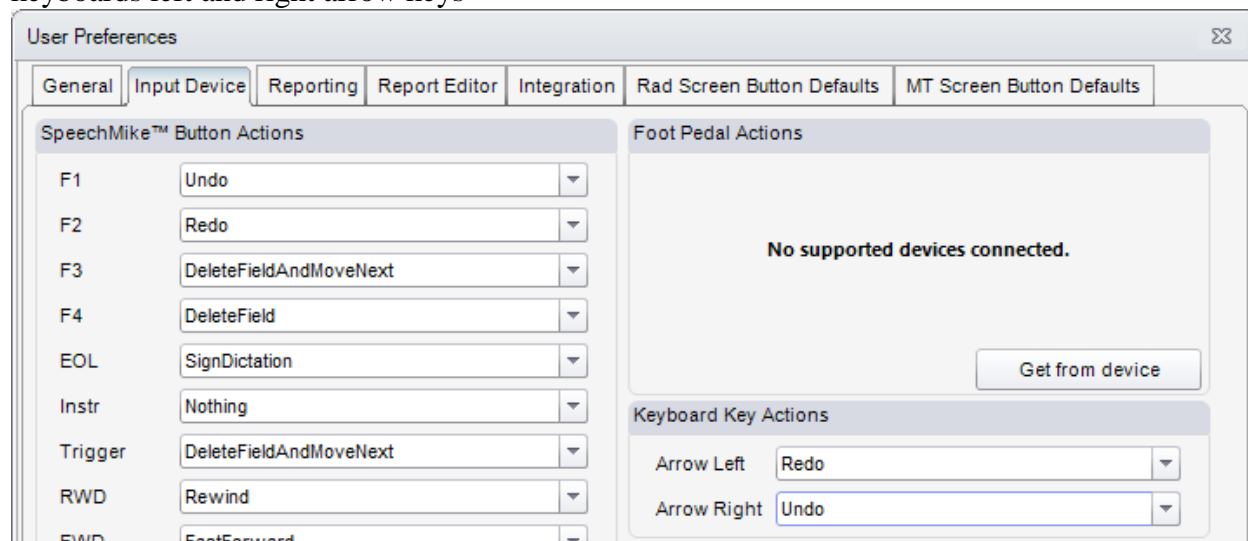


Figure 5.13 – Editor Appearance window displaying new Margins options

## **Reporting – New SpeechMike mapping options**

We have added two new SpeechMike function key options that can be assigned. The options of Undo and Redo have been added. These new options can also be made the default action of the keyboards left and right arrow keys



**Figure 5.14 – The Undo and Redo options added for SpeechMike buttons and Keyboard arrow actions**

It should be noted that these options can also be set as default Foot Pedal Actions and also mapped as an xKey command manually using the existing xKeys set up.

## Reporting – Delete Last Word

This new feature titled “DeleteWordLeftOfCursor” can be mapped as SpeechMike button, keyboard left/right arrow key, Foot Pedal button and also implemented as an xKeys command manually using the preexisting xKeys set up.

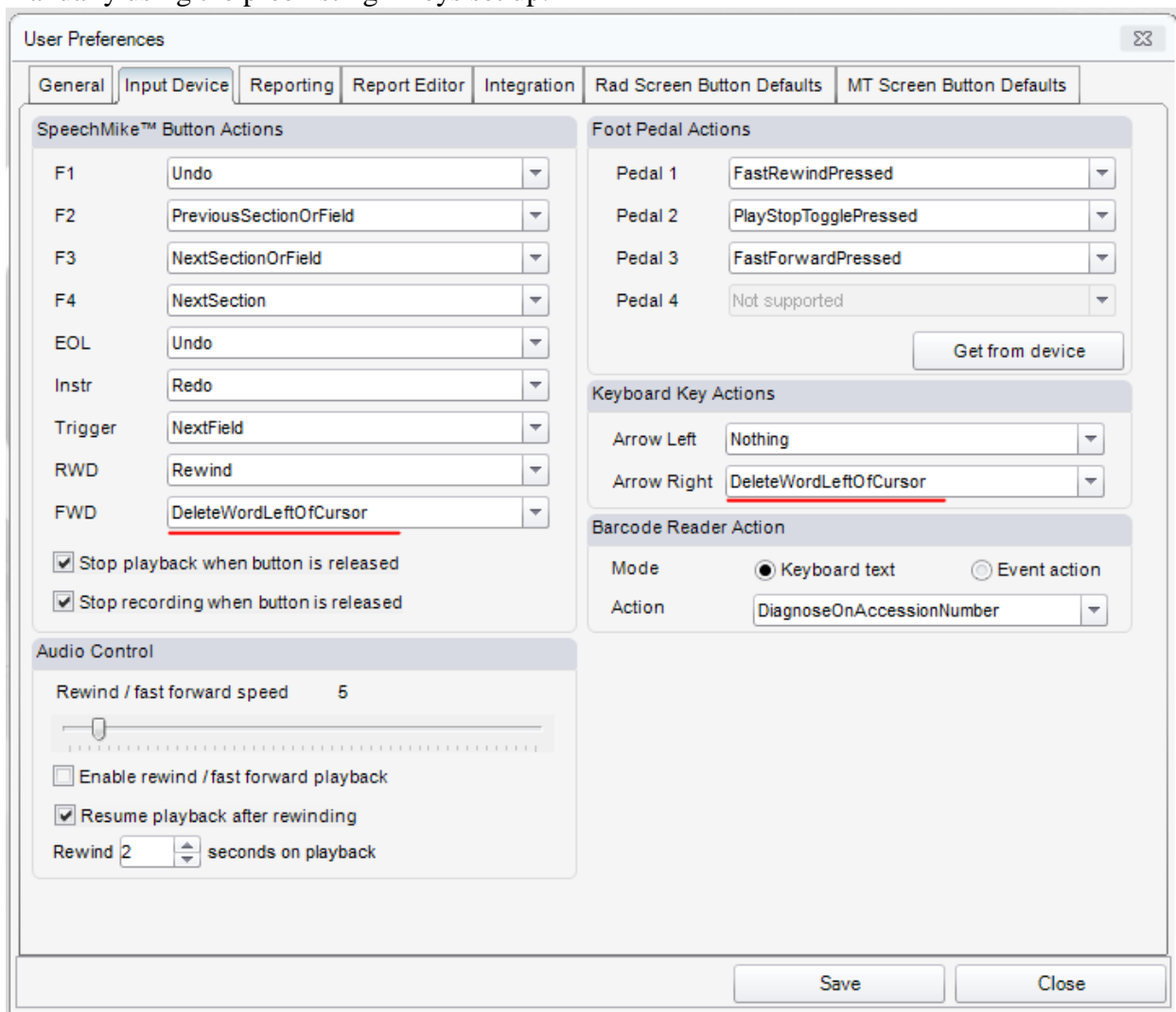


Figure 5.15 – DeleteWordLeftOfCursor function in user preferences

Support has been added for itemized lists. If you reach the end of a list item while deleting the last word, the empty item will be removed and the cursor will go to the end of the previous item.

## Reporting – Message Prompt on Submit

A new user preference option of “Enable submit warning” has been added under the Reporting tab of the User Preferences window.

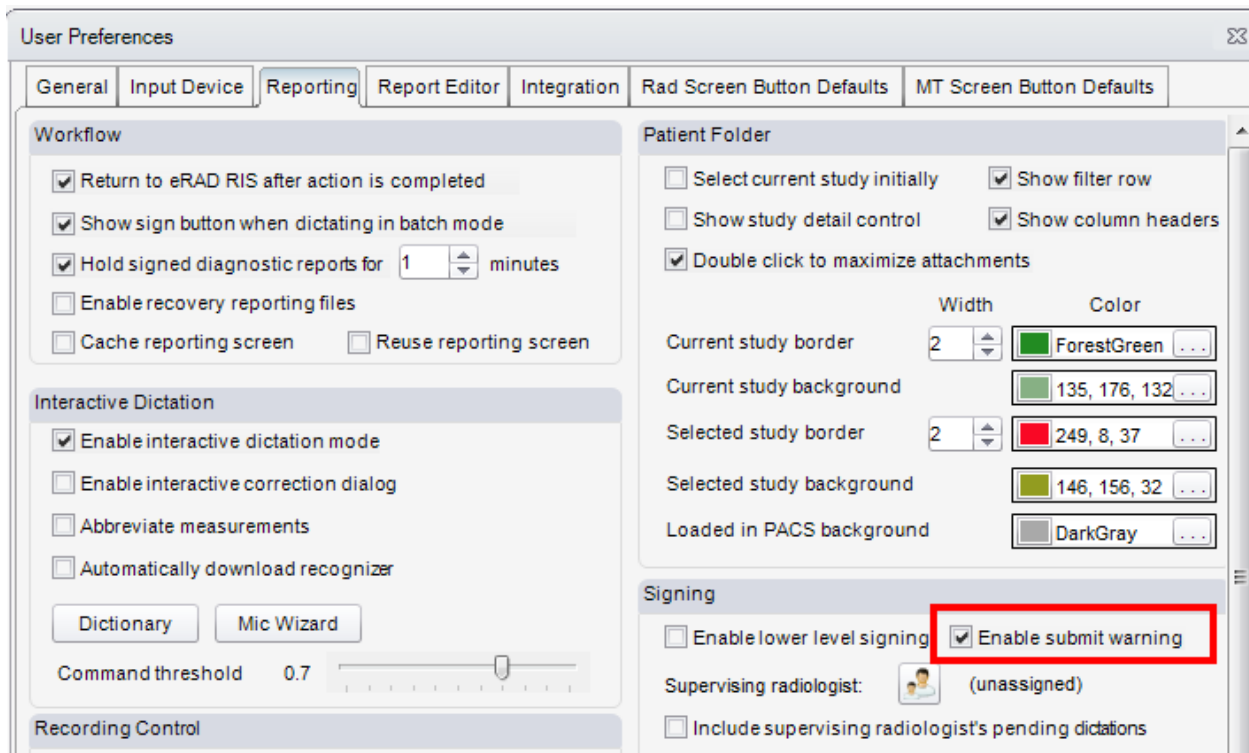


Figure 5.16 – User Preference of “Enable submit warning”

When enabled, and the user is in Signing mode and the Submit button is selected, they will receive a message prompt asking if this was the intended action.

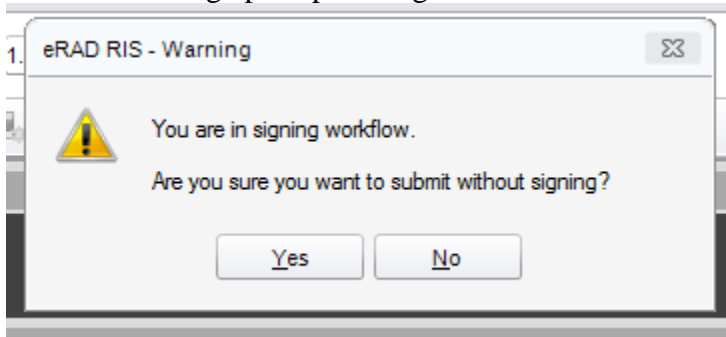


Figure 5.17 – Submit warning message from signing workflow.

## Reporting – Addendum Show All Templates

In previous versions of eRAD RIS when dictating an addendum, the user only had access to one template titled “Addendum”. We have added the “Show All Templates” option when creating an addendum. This was previously only available when creating the report initially.

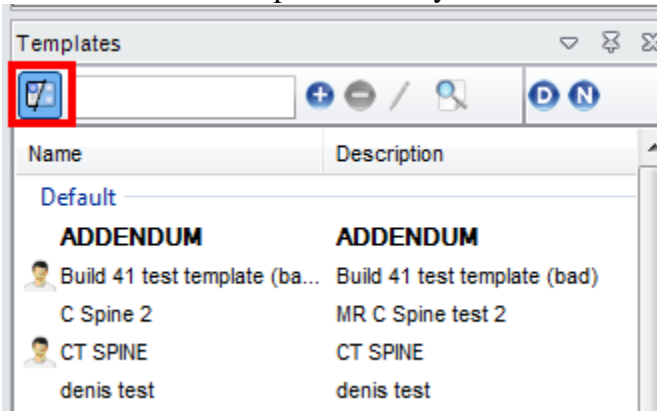
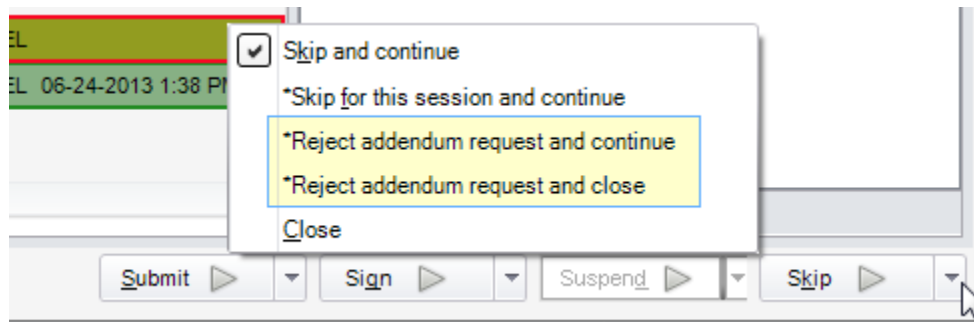


Figure 5.18 – Show All available on Addendums

## **Reporting – Reject Addendum Request**

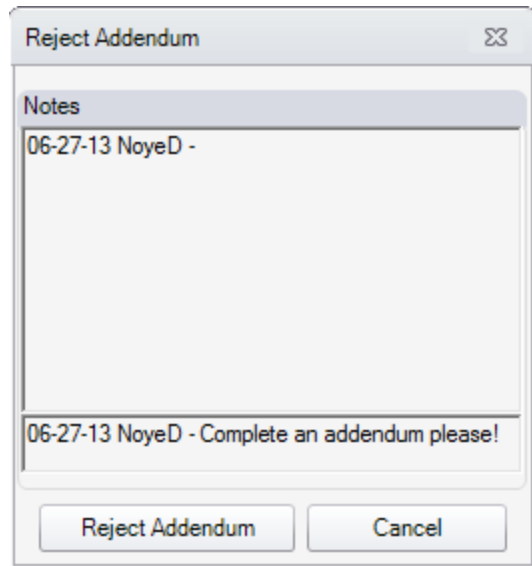
It had been requested that the Radiologists wanted a way to reject addendum requests from within the reporting (dictate) window.

This is now possible. The last split button for Close/Skip now has 2 additional options that will be available if the current study open in the Dictate window is flagged as “\*Request Addendum”. The 2 new options are “\*Reject addendum request and continue” and “Reject addendum request and close”. These 2 new options are prefixed with an asterisk, which informs the user that they cannot be set as default.



**Figure 5.19 – New options added to the Close split button in reporting window**

If one of these options is selected, the user will be prompted with the Reject Addendum window. In this window the user can enter in notes and reject the addendum or cancel the window



**Figure 5.20 – Reject Addendum window.**



## Reporting – Verify Report from All Signed Pending Release WL

The Verify Report button has been added to the All Signed, Pending Release WL.

All Signed, Pending Release WL (49)

Flags	Status	Procedures	Scheduled Date	Referring	MRN	Patient Name	Birth Date	Age At Study	Acc
S	Signed*	XR ABDOMEN AP, KUB [74000] - Abdomen	06-28-2013 2:09 PM	Power, Ian MD	1002540438r	Jefferson, Jeff	05-28-1999	14 years	360
S	Signed*	XR ABDOMEN AP, KUB [74000] - Abdomen	06-14-2013 9:25 AM	Arsenault, Janet	1002421699r	save test, auto2	01-05-2004	9 years	348
U	Signed*	AMCT FOOT WO CONTRAST - RIGHT [AMCTFOOTWOR]	06-07-2013 12:00 AM	Gordon, Moses949	1002200846	Schupp, Mike	08-29-1926	86 years	326
	Signed*	AMCT VIRTUAL CARDIAC SCORING [AMCTVCARDIAC]	01-31-2013 12:00 AM	Atkins, Cesar059	1000887981	Gamm, Silva	08-27-1956	56 years	194
	Signed*	AMCT CHEST WO CONTRAST [AMCTCHWO]	01-31-2013 12:00 AM	Zamora, Bridgett14	1000888006	Olivas, Hermelinda	07-16-1945	67 years	194
	Signed*	AMCT CHEST ABDOMEN PELVIS W CONTRAST [AMCTCHABD...	01-31-2013 12:00 AM	Galvan, Dallas63	1000888007	Donalds, Kassandra	02-28-1947	65 years	194
	Signed*	AMCT CHEST ABDOMEN PELVIS W CONTRAST [AMCTCHABD...	01-31-2013 12:00 AM	delmeUT_1_3009, UT_1_3009	1000888034	Valant, Catrina	02-28-1947	65 years	194
	Signed*	AMCT VIRTUAL CARDIAC SCORING [AMCTVCARDIAC]	01-31-2013 12:00 AM	delmeUT_1_6057, UT_1_6057	1000888035	Jandreau, Sadie	08-27-1956	56 years	194
	Signed*	AMCT CHEST WO CONTRAST [AMCTCHWO]	01-31-2013 12:00 AM	Mc Cormick, Rosemary	1000888060	Dimodica, Yoshie	07-16-1945	67 years	194
	Signed*	AMCT CHEST ABDOMEN PELVIS W CONTRAST [AMCTCHABD...	01-31-2013 12:00 AM	Sullivan, Norman776	1000888061	Melendres, Awilda	02-28-1947	65 years	194

☒ Auto Refresh

Sign Report Dictate **Verify Report**

**Figure 5.21 – All Signed, Pending Release with Verify Report option**

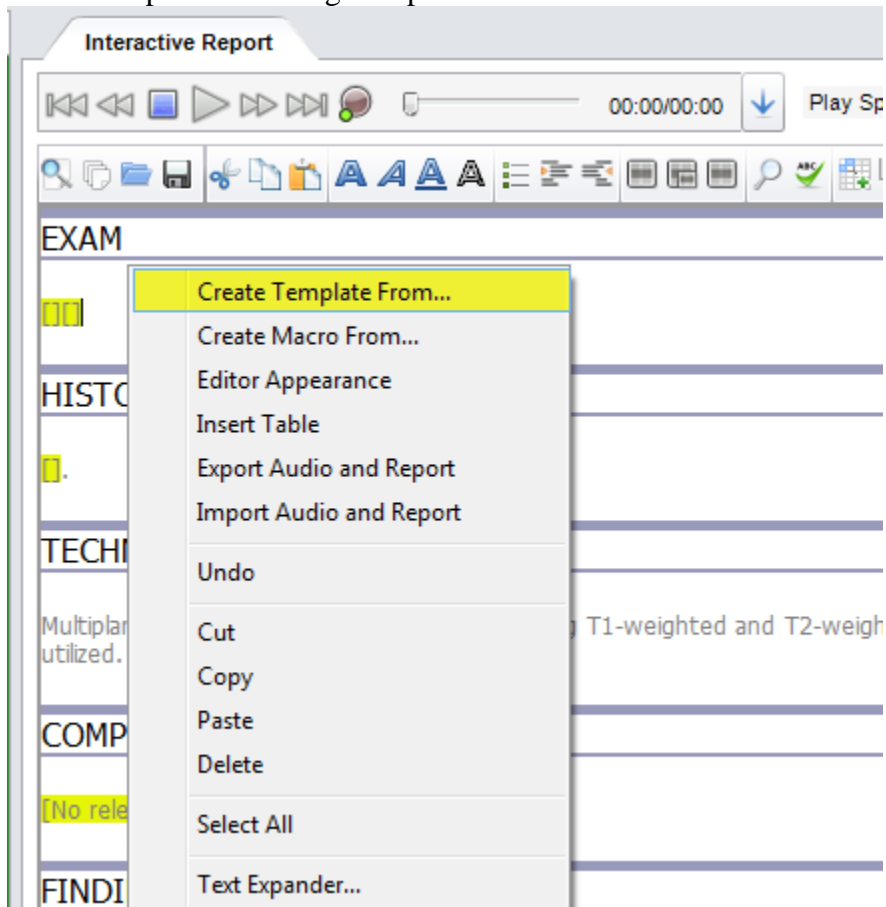
## **Reporting – Create Template from Current Report**

In build 41 users can now create a Template from the current report in the reporting window. This is similar to the existing feature of creating a macro from the selected text.

When the user has a template configured with desired text, formatting, macros inserted, etc... they now have the option to create a template from this report.

From the context menu in the report editor select Create Template From...

This will open the Editing Template: New window



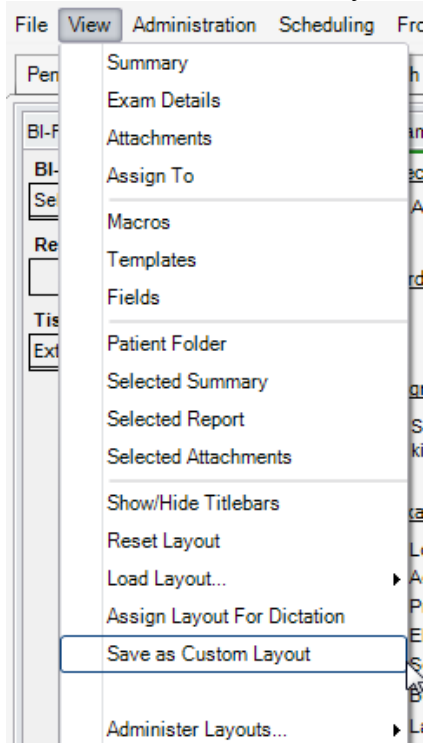
**Figure 5.22 – Create Template option in reporting window**

Once the edit template window is open, the user can create a new template as before.

## **Reporting – Support Multiple Layouts**

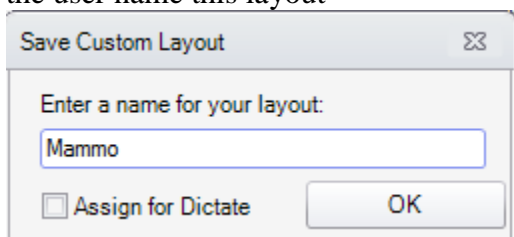
In build 40 we introduced the concept of having multiple default layouts. These layouts could not be altered and saved by the user or an admin.

We have taken this concept a step further in build 41 allowing the user to create a custom layout and save. Once the user has a desired layout, from the view menu select Save as Custom Layout. This feature is controlled by new access string “**View.Custom.Layouts**” with a default of None.



**Figure 5.23 – Saving custom layout**

Selecting the View menu option of “Save as Custom Layout” a new window will open allowing the user name this layout



**Figure 5.24 – Save custom layout**

The next the reporting window is accessed, the custom layout can be loaded from the current load layout menu; they appear below the standard admin pre-sets.

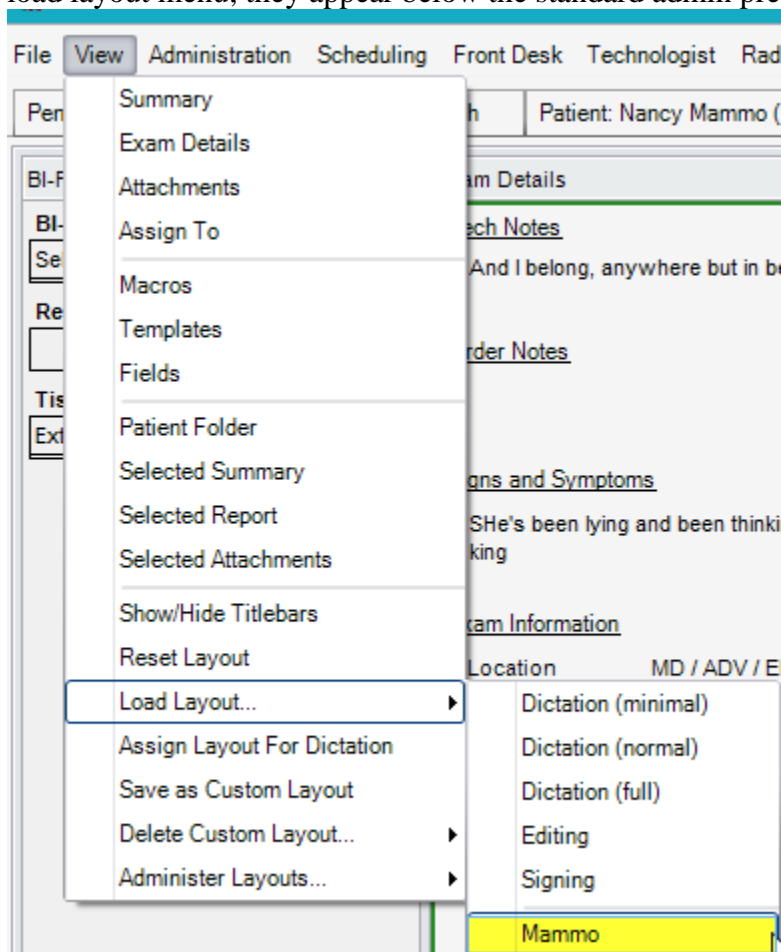


Figure 5.25 – Displaying how to load a custom layout

Custom layouts can be removed using the View menu “Delete Custom Layout” option.

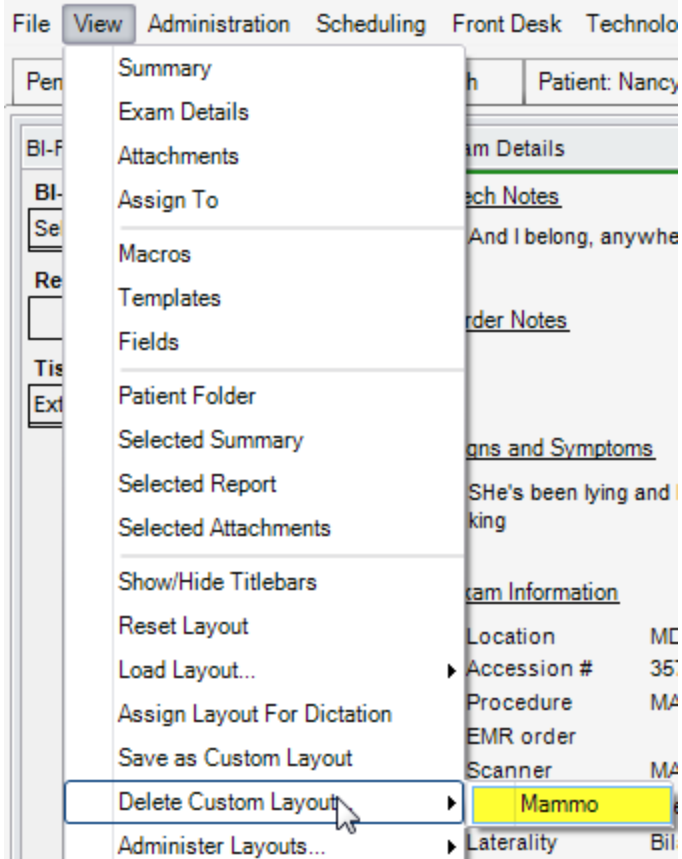


Figure 5.26 – Displaying how to remove a custom layout.

Before the layout is removed, the user is prompted with a confirmatory message.

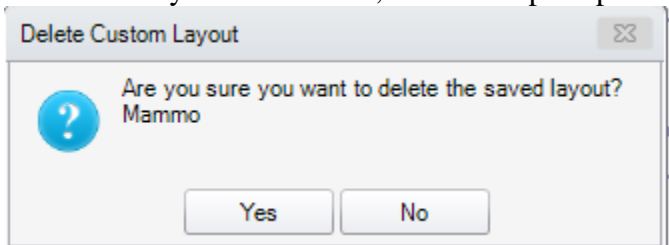


Figure 5.27 – Confirmatory message displayed when deleting a custom layout

In addition to the Custom Layouts, in build 40.008 an administration user was given the ability to administer layouts, meaning they could configure a layout and save it as Dictation (minimal), Dictation (normal), Dictation (full), Save as Editing and Save as Signing.

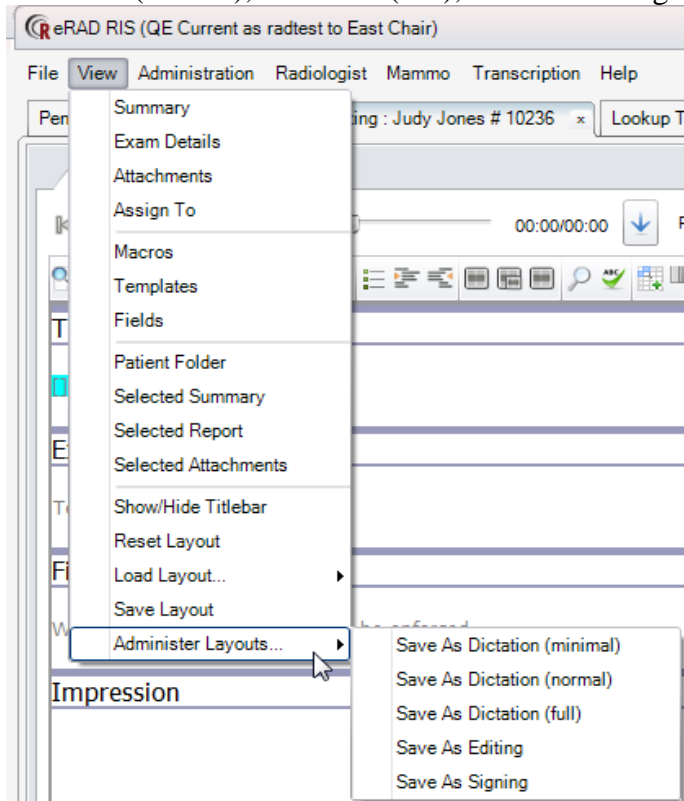


Figure 5.28 – Administer Layouts...

Access to all of these was controlled by one access string titled **View.Administration**. The View.Administration access string has been removed and replaced with the following

**View.Preset.Administration** - Access to preset layout administration submenu

**View.Preset.Administration.PresetSigning** - Access to preset layout administration for Signing

**View.Preset.Administration.PresetEditing** - Access to preset layout administration for Editing

**View.Preset.Administration.PresetDictationNormal** - Access to preset layout administration for Dictation Normal

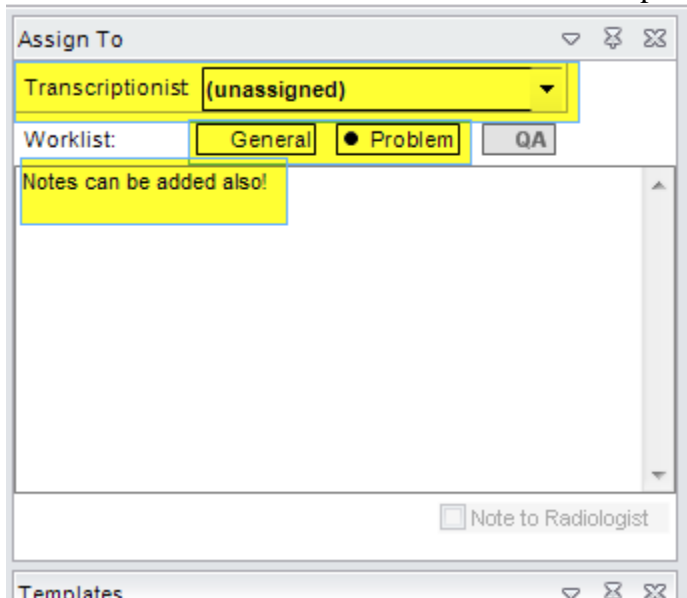
**View.Preset.Administration.PresetDictationMinimal** - Access to preset layout administration for Dictation Minimal

**View.Preset.Administration.PresetDictationFull** - Access to preset layout administration for Dictation Full

## **Reporting – Set Problem Flag without Rejecting Report**

The verify reports window in the QA work flow previously had all the on screen controls and forms locked down until your reject the report.

Now we have enabled the Problem radio button option, notes box and assign to drop down.

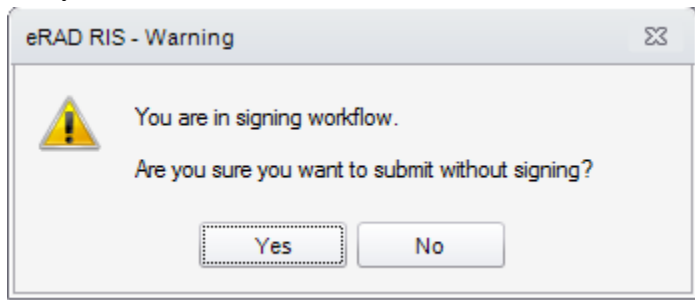


**Figure 5.29 – Set problem flag in QA window without rejecting the report**

This will allow the user to set a problem flag and note from the QA verify report work flow without having to reject the report.

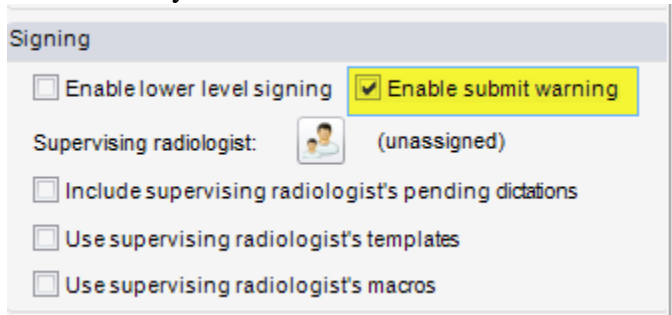
## **Reporting – Warn when Submitting From Sign Reports Window**

When in the Sign Reports window, the user also has the option to submit the report and change the status to Report Drafted. It may happen on occasion that the Submit button is selected mistakenly instead of the Sign button. We have introduced a confirmatory message on the selection of the Submit button from the Sign Reports window. Selecting Yes will complete the Submit action, while selecting No will return the user to the Sign Reports window on the current study.



**Figure 5.30 – Submit confirmatory message from Sign Report window.**

This message is controlled by a new user preference. The user preference “Warn submit warning” which is located under the Reporting tab, when selected will ensure that the user is informed they have selected the Submit button.



**Figure 5.31 – Enable submit warning user preference**



## **Reporting – Report Verification Checks on QA Windows**

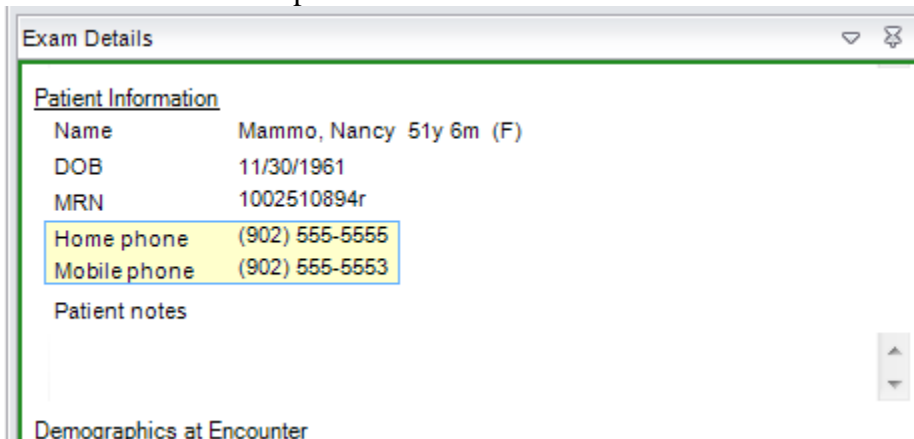
When signing off a report a series of report checks are completed before the study can be advanced to “Signed” status. It has been requested that these report checks also happen when verifying reports in the QA work flow.

The report checks includes

- Section validation against document model.
- Report formatting (sections, fields, etc...)
- BI-RADS, Recommendation, and Tissue Density
- Auto spell check (this is optional driven by user preference)

## **Reporting – View Patient’s Phone Number in Reporting Window**

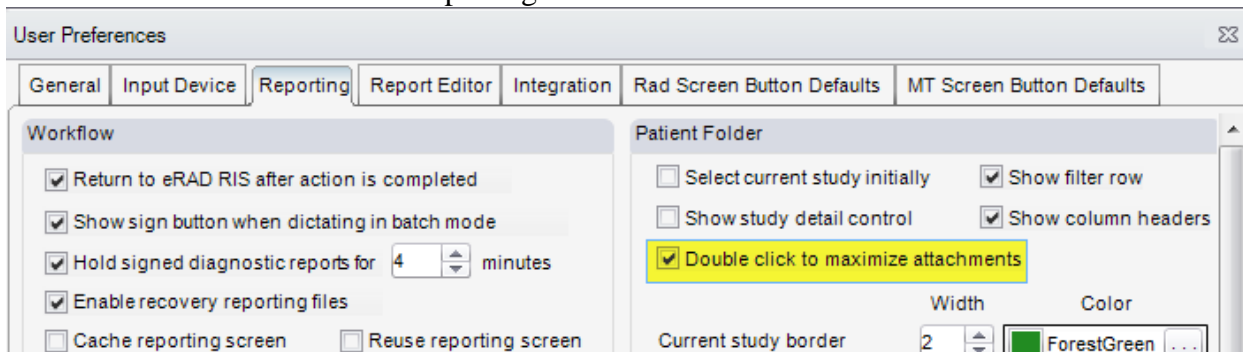
The reporting window now has the patient’s home and mobile phone numbers displayed under the Exam Details data pane > Patient Information section.



**Figure 5.32 – Patients home and mobile numbers displayed in the reporting window**

## Reporting - View Attachments in Full Screen Launched via Double Clicking

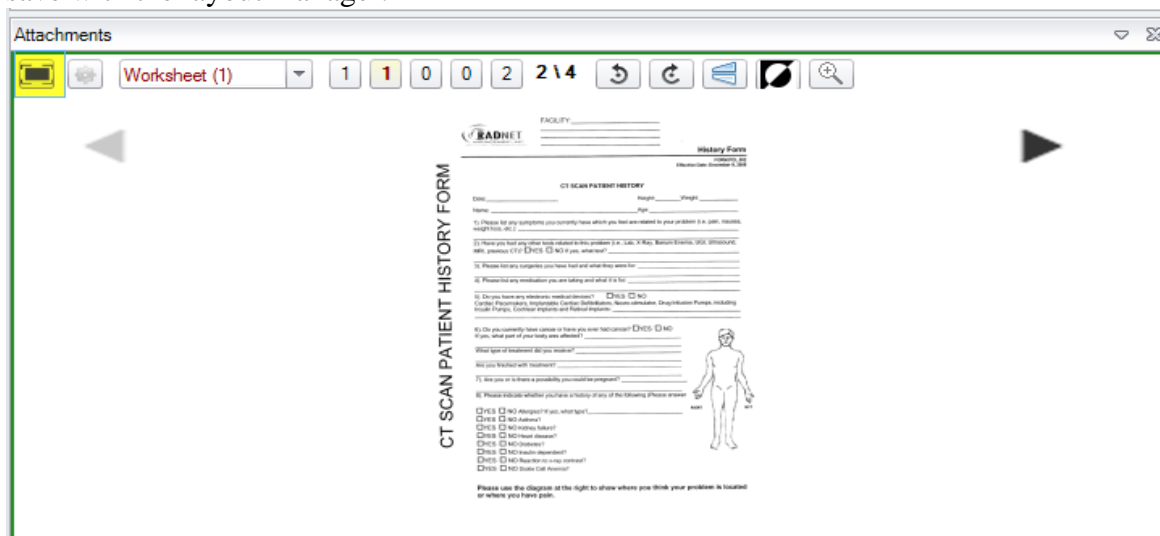
This new feature is driven by a new user preference titled “Double click to maximize attachments” located under the Reporting tab of the User Preferences window.



**Figure 5.33 – Displaying new user preference “Double click to maximize attachments”**

With this set double clicking on an attachment will maximize the tool window to the current screen. Once maximized you can double click to restore it to its previous location or in the case of a RAD Floating Dockable window you can close the window with the “X” in the top right corner (when in full screen maximized mode).

If you are to save your layout with this configuration, the full screen maximized toggle will not save with the layout manager.



**Figure 5.34 – Attachment data pane displaying button open in Full view mode**

In addition to the double click to maximize the user can also click on the full screen icon shown in the above screen shot (top left).

## Reporting – Document Model to be Stored in TemplateMacro Table

All along the document model has been stored in the template itself. In this build we will now be storing the document model in the Macro Template database table. If there happens to be a template that does not have a document model, the user will find a new context menu item in the TemplateMacro table titled **\*Load Document Model Value**. Selecting this menu option will extract the document model from the template and insert the value in the new column of Base Template.

Practice: ADV - Advanced Radiology    ☒ Templates    ☐ Macros    ☐ Auto Macros    ☐ Show inactive items

Search    Results

Name	Description	Base template	Owner	Normal	Default	Active	Last updated	Last updated by
Contains: ▼	Contains: ▼	Contains: ▼	Contains: ▼	C... ▼	C... ▼	C... ▼	No filter: ▼	Contains: ▼
1	1					✓	6/20/2013 8:57:53 AM -03:00	denis
11	11					✓	6/20/2013 8:57:53 AM -03:00	denis
11111	11111					✓	6/25/2013 8:38:55 AM -03:00	denis
4212_test	4212					✓	6/20/2013 9:30:31 AM -03:00	deuce
adam	adam					✓	6/20/2013 8:57:53 AM -03:00	denis
adam	adam test				✓	✓	6/20/2013 8:57:53 AM -03:00	denis
adam	test 3				✓	✓	6/20/2013 8:57:53 AM -03:00	denis
Addendum For...	This be my addendum					✓	6/20/2013 8:57:53 AM -03:00	denis
ADV test	ADV test	PERFECT REPORT				✓	6/20/2013 8:57:53 AM -03:00	denis

Edit

Delete

Deactivate

Export List To Excel

Export Selected Template(s)

Preview Selected Template(s)

\*Load Document Model Value

Figure 5.35 – TemplateMacro table displaying context menu option of Load Document Model Value

## Reporting – TemplateMacro Editor Enhancements

The look and feel of this lookup table is quite different in build 41. First thing you may notice when opening the TemplateMacro lookup table is that there are now two tabs.

The First tab allows you to set criteria to search/filter on (Practice, Users, Procedures and Scanners) and the second tab is similar to the old worklist of template/macros. However in this new version, the worklist is filtered based on the criterion that was listed in the first tab. Also there is additional information on the templates and macros in the work list as well as visible below in a grid.

This should add exceptionally more control for the administrators when it pertains to finding and working with a set of macro/templates.

Filter tab shown here with no filters set (include ALL in the results)

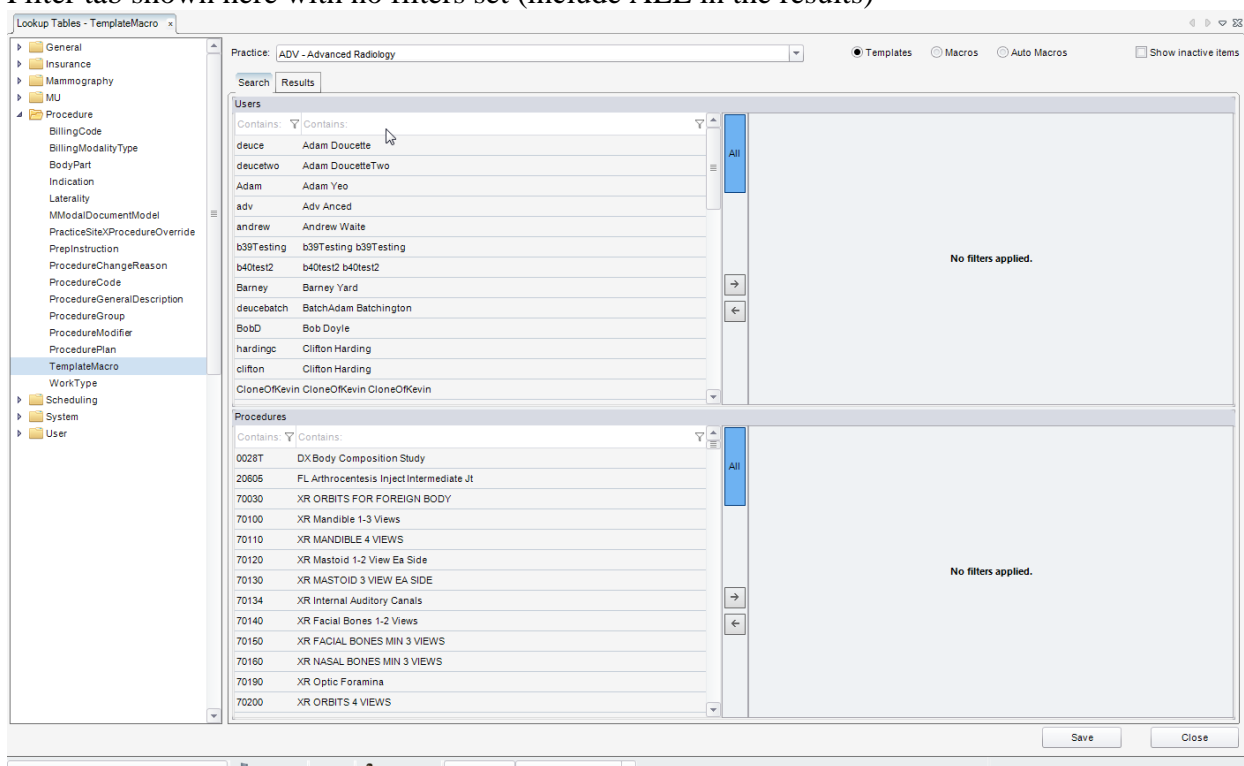
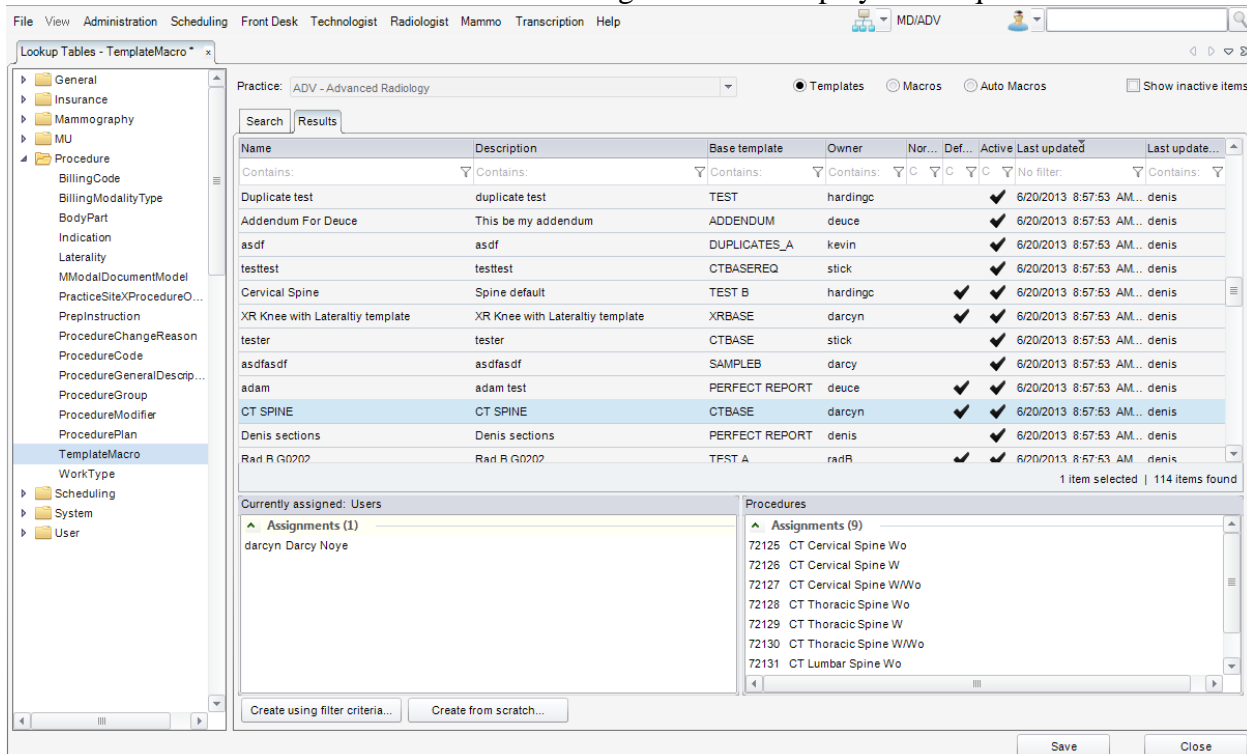


Figure 5.36 – New and improved TemplateMacro lookup editor window

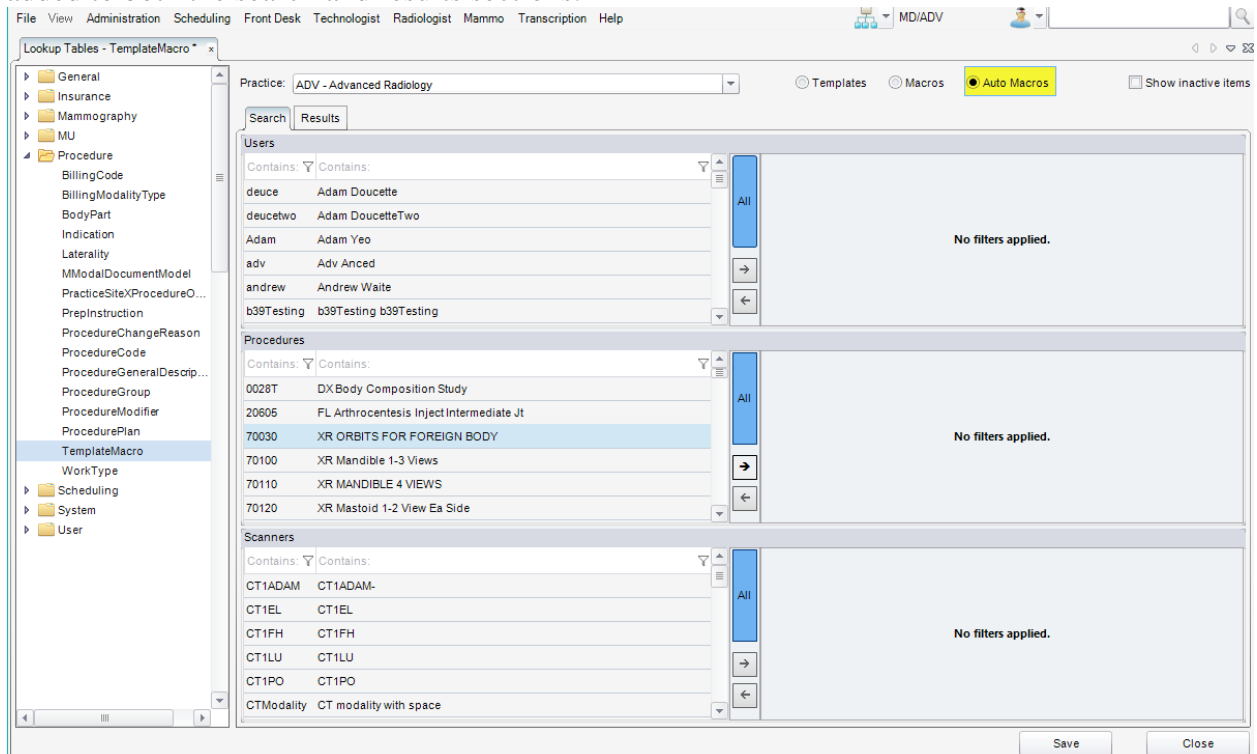
A look at the Results tab below you will see that additional columns have been added so the user can see the template row selected is a Normal or Default template. The others columns are like before with the Name and Description of the template, what the Base template is, the owner, if the template is active and last updated date and user.

Also notice the details section below where assignments are displayed in a quick view fashion.



**Figure 5.37 – Results tab of the TemplateMacro lookup editor**

When the Auto-Macros option is selected from the top radio button group, a Scanners grid is added to both the search and results sections.



**Figure 5.38 – Auto Macros search tab**

On the Results tab the Normals and Defaults columns do not appear as they are not relevant to Auto-Macros. Also the Scanners details are listed in the quick view area of the window.

Practice: ADV - Advanced Radiology Templates Macros **Auto Macros** Show inactive items

Search **Results**

Macro type	Name	Description	Owner	Active	Last updated	Last updated by
Contains:	Contains:	Contains:	Contains:	C...	No filter:	Contains:
ExamTitle	XR Knee	XR Knee		✓	5/27/2013 4:24:57 PM -03:00	denis
Technique	Technique for CT scanners	Technique for CT scanners	denis	✓	5/27/2013 4:24:57 PM -03:00	denis
Technique	Darcy Technique Test	Darcy Technique Test		✓	5/27/2013 4:24:57 PM -03:00	denis
ExamTitle	test	test		✓	5/27/2013 4:24:57 PM -03:00	denis
ExamTitle	ct chest exam title	ct		✓	5/27/2013 4:24:57 PM -03:00	denis
ExamTitle	G0202	G0202		✓	5/27/2013 4:24:57 PM -03:00	denis
ExamTitle	Another Test by Darcy N	Another Test by Darcy N		✓	5/27/2013 4:24:57 PM -03:00	denis
Technique	XR Foot Technique	XR Foot Technique		✓	5/27/2013 4:24:57 PM -03:00	denis
ExamTitle	XR foot with laterality	XR foot with laterality	denis	✓	5/27/2013 4:24:57 PM -03:00	denis

9 items found

Currently assigned: Users

Assignments (1)

denis Denis Doiron

Procedures

Scanners

Assignments (3)

CTBO CTBO

CTDA CTDA1

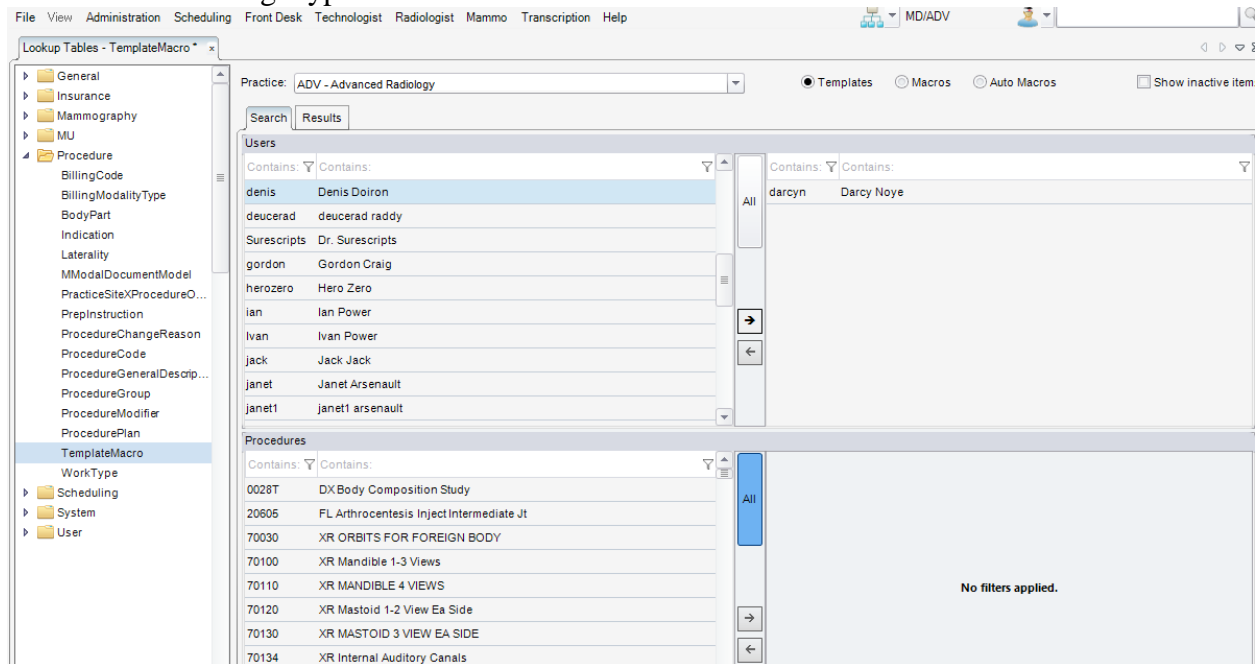
CTTes CT Test

Create using filter criteria... Create from scratch...

Save Close

**Figure 5.39 – Auto-Macros Results tab**

Filter/Search screen allows you to double click items to move them to the filter list as well as use the on screen arrow buttons. Items on the right will be used to filter on. If you select the **All** button, the filter is removed from use and the items are returned to the left. However if you select **All** again, the previously filtered on items will return. This will persist so long as you don't close the window or change types.





Here we see the results screen using the above filters. The work list is filtered based on the one filter we applied in the figure above. Also notice the details section below lists the assignments on a template/macro in two groups. Matched assignments and assignments (like before). In his case if an assignment is a match to the criteria you searched on, then it is listed under Matched Assignments

The screenshot shows the 'Results' tab of the 'emplateMacro' window. The 'Practice' is set to 'ADV - Advanced Radiology'. The 'Show inactive items' checkbox is checked. The search criteria are: 'Equals: Contains: CT66'. The results table lists various templates/macros with columns for Name, Description, Base template, Owner, Normal, Default, Active, Last updated, and Last updated by. The '1 CT Abdomen W & CTA Chest W/Wo [CT66]' template is highlighted. Below the table, the 'Currently assigned: Users' section shows 'Matched assignments (1)' for 'darcy Darcy Noye' and 'Assignments (2)' for 'darcy Darcy Aiken' and 'radtest Radiologist Test User'. The 'Procedures' section shows 'Assignments (1)' for 'CT66 CT Abdomen W & CTA Chest W/Wo'. At the bottom, there are buttons for 'Create using filter criteria...' and 'Create from scratch...'.

Matches	Name	Description	Base template	Owner	Normal	Default	Active	Last updated	Last updated by
requiredtest	requiredtest	requiredtest	CTBASEREQ				✓	6/27/2013 4:01:...	jessie
Test101	Test101	Test101	TEST B				✓	6/27/2013 1:56:...	jessie
1 CT Abdomen W & CTA Chest W/Wo [CT66]	CT Abdomen W & CTA Chest W/Wo [CT66]	CT Abdomen W & CTA Chest W/Wo [CT66]	CTBASE				✓	6/27/2013 12:45:...	darcyn
C Spine 2	MR C Spine test 2	MR C Spine test 2	PERFECT RE... hardingc				✓	6/26/2013 11:39:...	denis
1 Clifton Defaults	Default non specific	Default non specific	PERFECT RE... hardingc		✓		✓	6/25/2013 10:14:...	darcy
11111	11111	11111	DUPLICATES...				✓	6/25/2013 8:38:...	denis
1 Template for all	Template for all	Template for all	SAMPLEA	darcyn			✓	6/24/2013 2:57:...	darcyn
1 Testing bug 4212	Testing bug 4212	Testing bug 4212	SAMPLEA				✓	6/24/2013 2:53:...	darcyn
1 janet test of macro	Macro test janet	Macro test janet	TEST D	janet			✓	6/24/2013 2:44:...	janet
damacro27	27	27						6/20/2013 8:57:...	denis
damacro270	270	270						6/20/2013 8:57:...	denis
damacro271	271	271						6/20/2013 8:57:...	denis

Currently assigned: Users

- Matched assignments (1)
  - darcy Darcy Noye
- Assignments (2)
  - darcy Darcy Aiken
  - radtest Radiologist Test User

Procedures

- Assignments (1)
  - CT66 CT Abdomen W & CTA Chest W/Wo

1 item selected | 1073 items found

Create using filter criteria... Create from scratch...

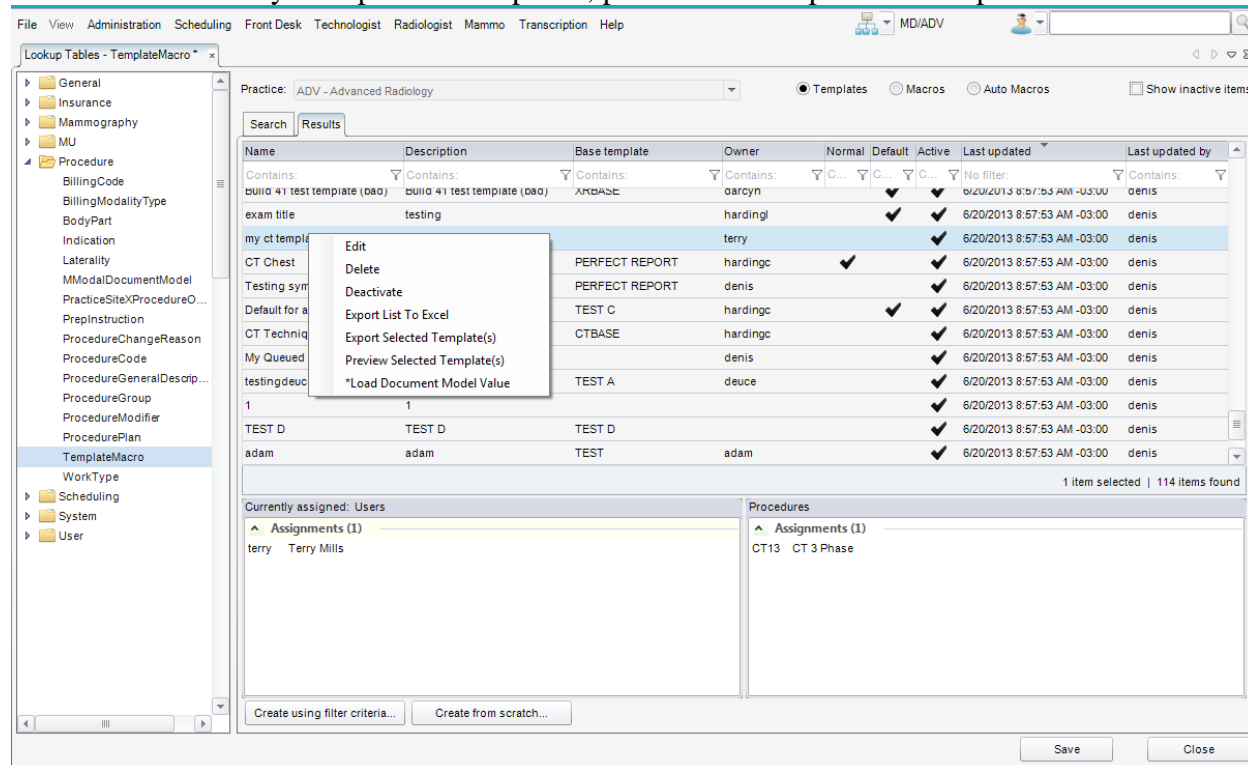
**Figure 5.41 – Results displayed on the entered filtered criteria of the Search tab.**

If the “Show Inactive items” check box is selected, the inactive templates will also appear in the results.

Loading the results screen based on a filtered criteria, you will have a “Create using filter criteria...” button as well as a “Create from scratch...” button. The “Create from scratch” option is the same as we had in previous versions. The “Create from filter criteria” button is new and uses the filter criteria to prepopulate assignments when creating a new template/macro.

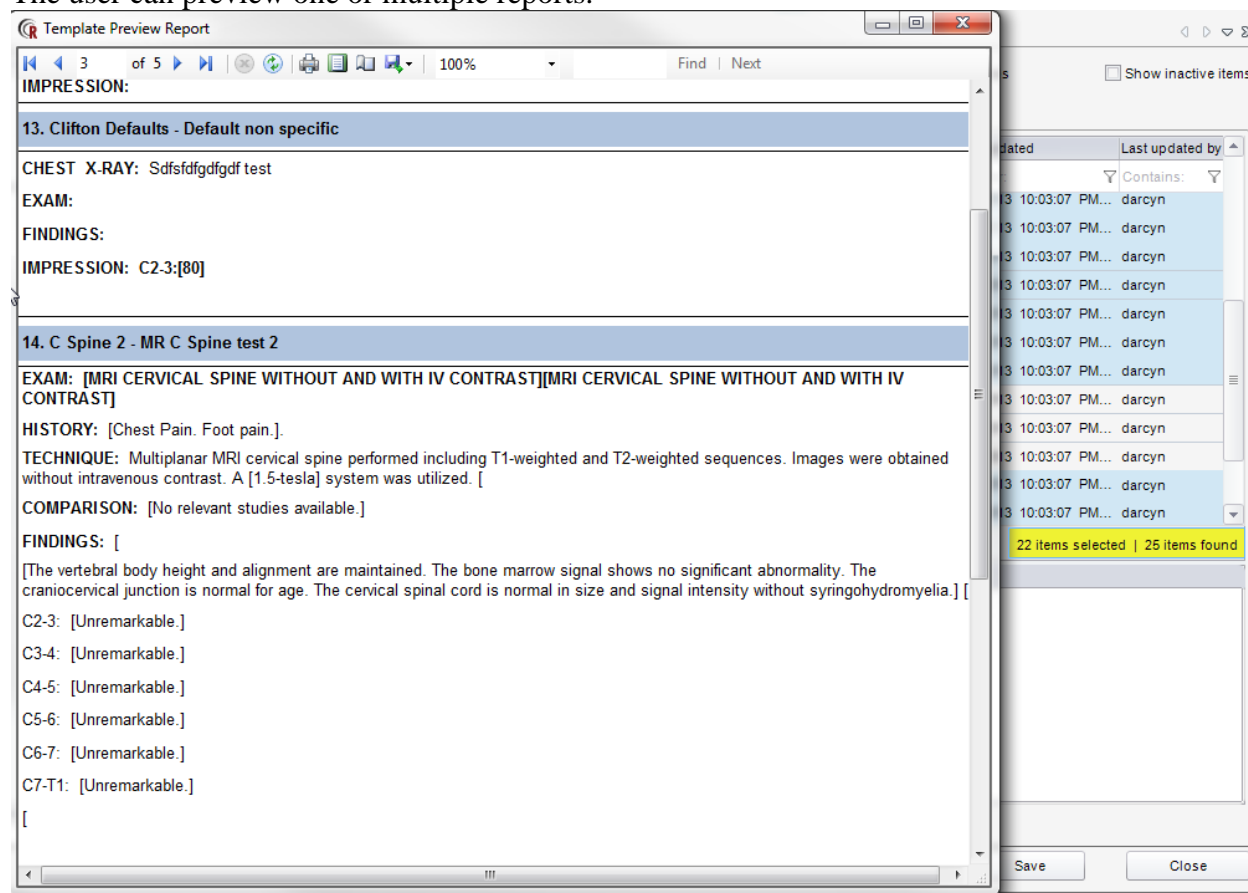
In addition to the new design of the TemplateMacro editor, some new context menu items have also been introduced.

The first is the ability to export the templates, preview the templates and export the list to excel.



**Figure 5.42 – Context menu in the TemplateMacro lookup table window**

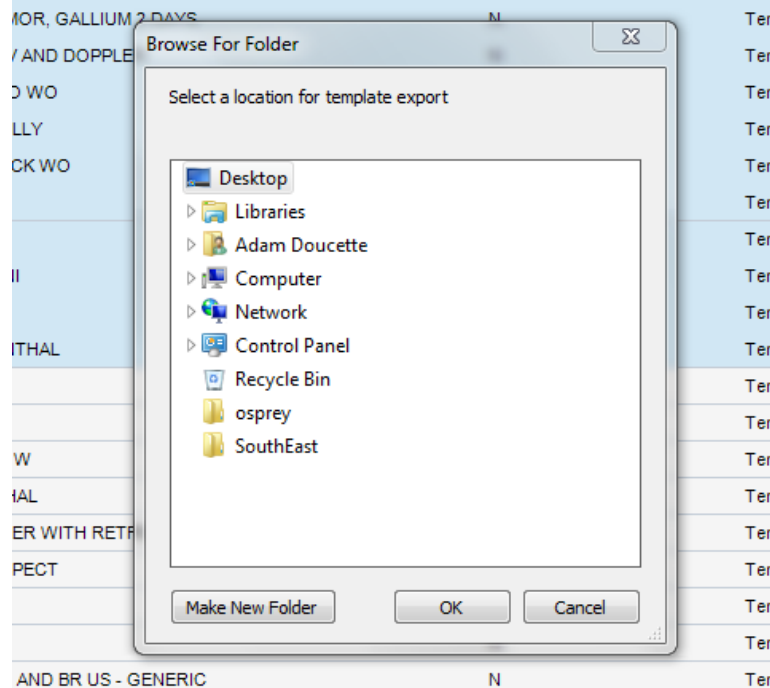
The style sheet and the report were adjusted so that we would show empty sections and fields. Since we are previewing templates and macros, we want to show everything it contains. The user can preview one or multiple reports.



**Figure 5.43 – Template preview**

In the example above you can see that it tells me in the on the TemplateMacro lookup results tab how many rows I have selected compared with the total number of rows in my list (22 items selected | 25 items found)

For exports, users are prompted for a directory to save to, and then all files are saved in that location. In this case this exports the documents in their raw form, which is a CDA document, an XML representation of the document and all of its contents.



**Figure 5.44 – Exporting templates**

## Reporting – Verbose Trace Logging to a Flat File

We now log verbose log statements to a subdirectory entitled **verbose\_log**. By default config, the files are named trace.log and when they are rolled hourly the names will get tagged with the date, such as **trace.2013-03-14.14.log.1**, **trace.2013-03-14.14.log.2**, etc.

They are configured in the ris.exe.config

```
<add name="Rolling Flat File Trace Listener"
type="Microsoft.Practices.EnterpriseLibrary.Logging.TraceListeners.RollingFlatFileTraceLi
stener, Microsoft.Practices.EnterpriseLibrary.Logging, Version=5.0.414.0,
Culture=neutral, PublicKeyToken=31bf3856ad364e35"

listenerDataType="Microsoft.Practices.EnterpriseLibrary.Logging.Configuration.RollingFlat
FileTraceListenerData, Microsoft.Practices.EnterpriseLibrary.Logging, Version=5.0.414.0,
Culture=neutral, PublicKeyToken=31bf3856ad364e35"
    rollFileExistsBehavior="Increment" rollInterval="Hour"
    fileName="verbose_log/trace.log" formatter="Text Formatter" />
```

Also under the specialSources directive, we need to add the listener for use.

```
<allEvents switchValue="Verbose" name="All Events">
  <listeners>
    <add name="Rolling Flat File Trace Listener" />
  </listeners>
</allEvents>
```

The *rollInterval* can be changed to any of the following values:

Member Name	Description
None	No Interval
Minute	Minute Interval
Hour	Hour Interval
Day	Day Interval
Week	Week Interval
Month	Month Interval
Year	Year Interval
Midnight	At Midnight

Table 5.1 – Possible rollInterval values

### Reporting - Autosave

If a Radiologist user has a report open for dictate or signing, RIS has the ability to temporarily autosave the report and audio files.

This feature can be enabled or disabled via configuration. The new user preference is titled “Enable Autosave Reports” and is controlled by a new access string titled **“Clinical.UserPreferences.ReportingAutoSave”** that has a default of None

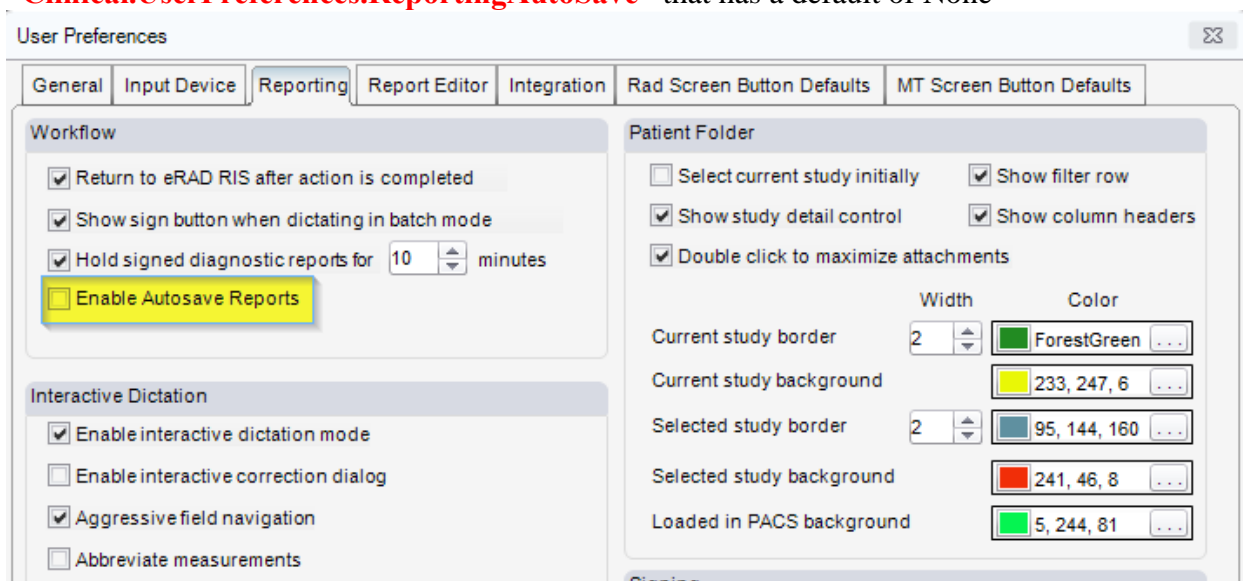


Figure 5.45 – User preference “Enable Autosave Reports”

The files are stored in the *application\_path* + */Reporting/autosave/username/* where **username** would be the logged in user’s username.

The files have the following naming convention:  
**MODE-#-ACCESSION**

Both audio and report files have the base filename. The report has no extension and the audio file has the extension of **.audio**.

The **MODE** is either DICT or SIGN, depending on the mode in which the report was open.  
**-#-** is a delimiter used by the system

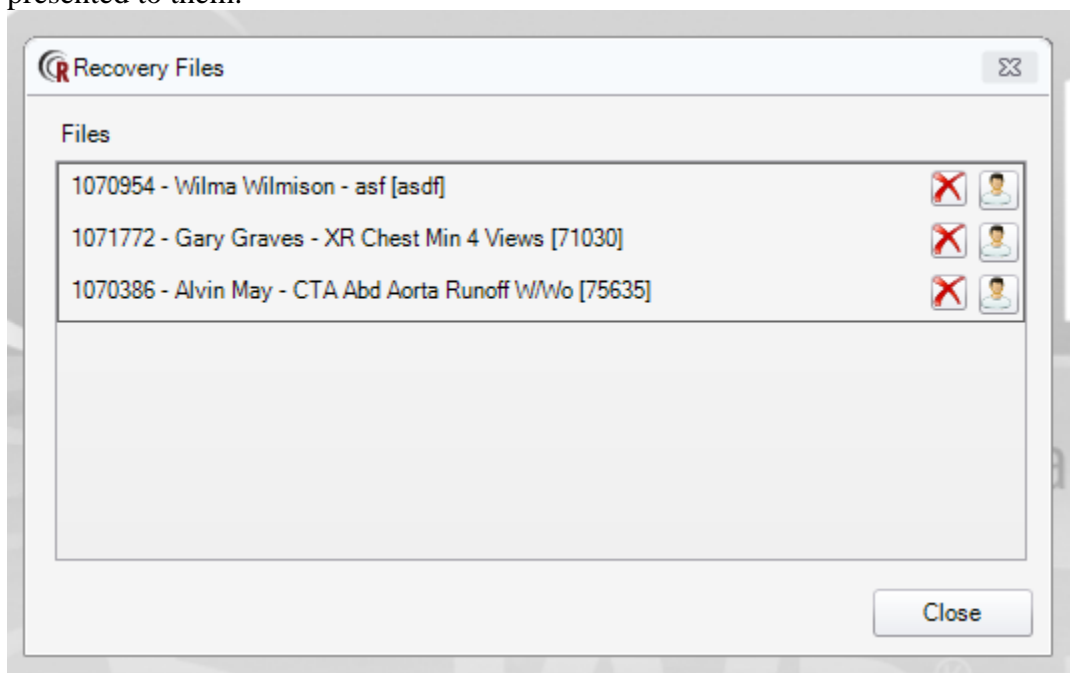
**ACCESSION** would be replaced with the accession number of the report in question.  
Here is an example of an actual set of files:

**DICT-#-1070954**  
**DICT-#-1070954.audio**

When a radiologist opens an exam for dictation or signing the auto save fires up in the background and begins saving both the report file and dictation every 5 seconds. If the exam window is dismissed properly; application closed, action button, Xed out, basically as long as RIS doesn't crash, these files are cleaned up and deleted.

In the event that RIS crashes or does not get to properly close (killed from task manager) while a radiologist has the reporting window open, these files do not have the opportunity to clean up. As a result they remain saved.

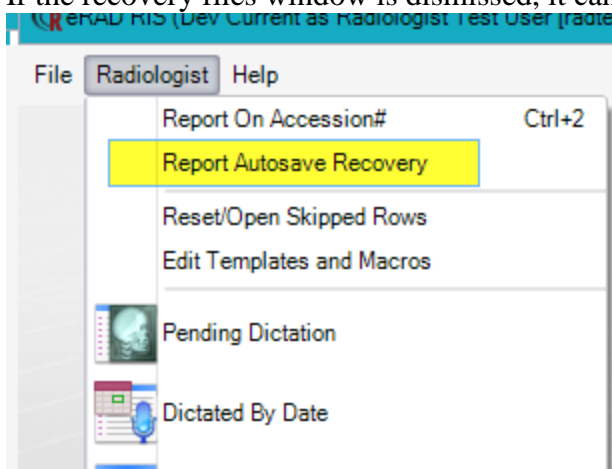
When a user with saved recovery files logs into eRAD RIS, the Select Recovery Files window is presented to them:



**Figure 5.46 – Recovery Files window on login**

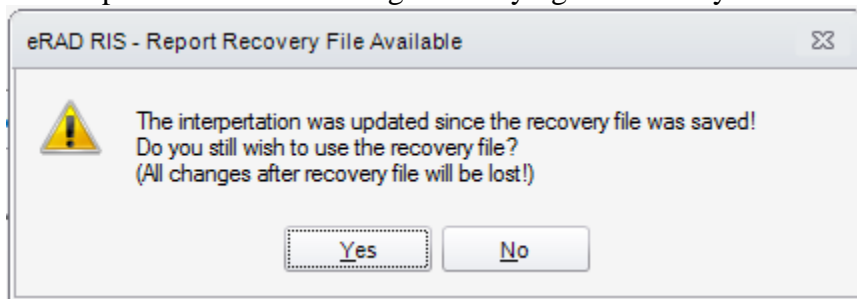
Here the user is shown the accession number, patient name and exam type of each available recovery. They have two actions that can be taken on each recovery item. The X button will delete the files and remove the item from the current list. The Doctor button will launch the exam, restore the report and audio files from the save location as well as remove the item from the list.

If the recovery files window is dismissed, it can be reopened from the main radiologist menu:



**Figure 5.47 – Autosave Recovery menu option**

In the event that another user has altered the interpretation (and committed it to the database) you will be presented the following while trying to recover your reading:



**Figure 5.48 – Confirmatory message presented if the study has already been updated**

If you chose to open the report with recover then the previous changes will be overwritten. If you do not SAVE during this session your override will be unwound, as it was not committed yet. If you chose to not use the recovery file then you will open the report normally loading the most recent interpretation.



## Reporting - Bypass QA From Reporting Screen

The reporting window Sign split button has 2 new options that can be selected but not defaulted. When “\*Sign for immediate release and continue” or “\*Sign for immediate release and close” is selected the report will be moved directly to signed status bypassing QA workflow and bypassing Hold signed diagnostic reports.

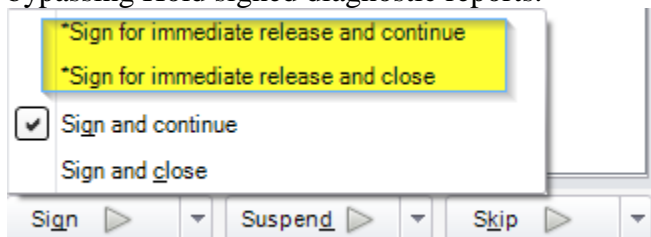


Figure 5.48a – New options for Sign split button in reporting window

A change was also made to the Quality Review Distribution editor.

- a. Added ability to turn on/off QA at practice level, for stat and non-stat studies separately
  - i. All/None option that will turn all practices to the relevant value.
- b. Quality review distribution rows are now filtered by practice using a drop down.

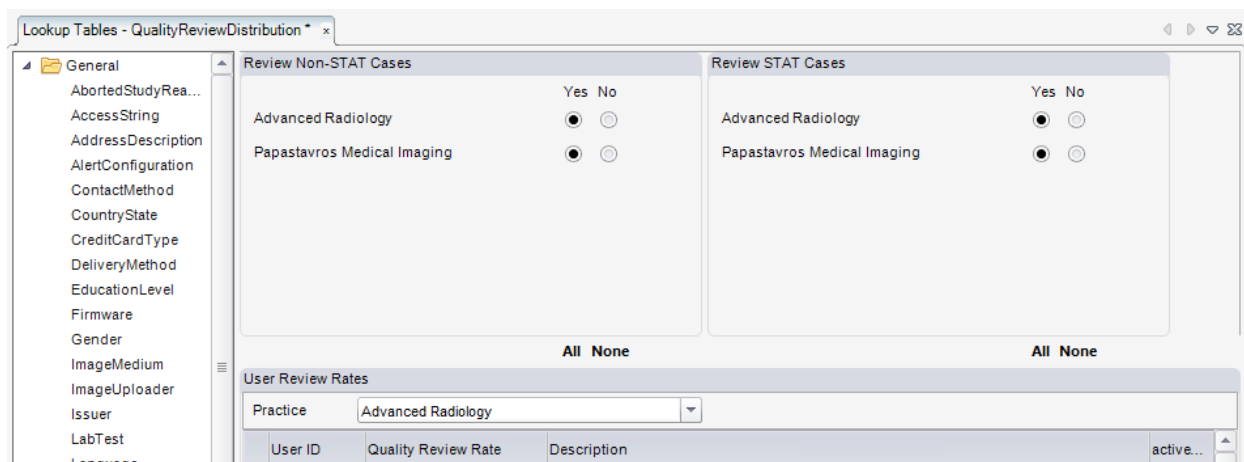




Figure 5.48b – Additions to the Quality Review Distribution lookup table

## CTRM Integration Support

A new button was created on the reporting screen located in the lower left, that will be available if the user has full access permission to the “**Clinical.CTRNNotification**” access string. The CTRN notification has two primary states, when the study does not have any notifications

currently saved in the dataset it will appear greyed out; , if there is currently a notification that has been created it will be appeared pressed and with color; .

From within the notification screen the currently selected referring physician will be selected by default, with phone numbers and email address listed to be used. An additional referring can be selected, either from the dropdown or by searching from the available referring in the database.

When a referrer is selected the configured notification Phone Number, SMS (cell Phone) Number and email address will be used to populate the text box. If the referrer has chosen to be contacted by one of these options, it will be checked by default.

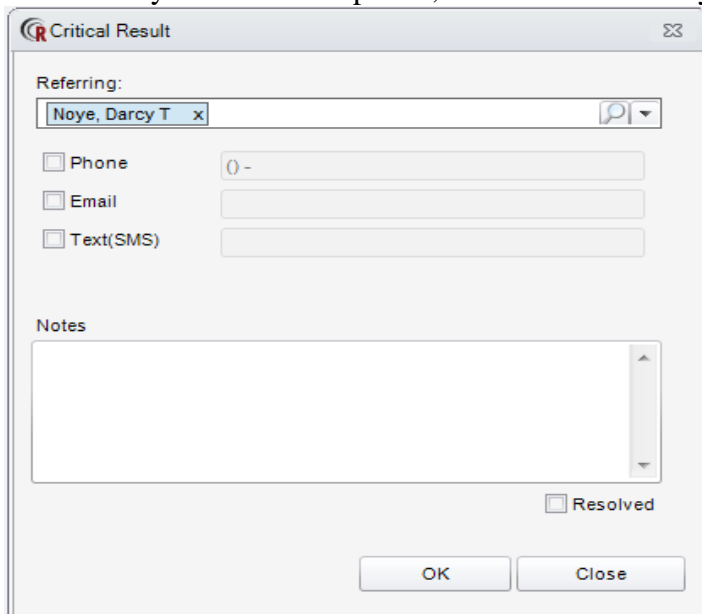


Figure 5.49 – Critical Result window

We have also added to new work lists located under the Radiologist menu.

The first is titled **Critical Results**, controlled by access string **“WL.Rad.MyCriticalResults”**

reRAD RIS (Dev Current as Darcy T Noye [darcyn] to SOUTH/ADV Chair)

FileViewAdministrationSchedulingFront DeskTechnologistRadiologistMammoTranscriptionHelp

MD/ADV

Critical Results WL (0)

Flags	Status	Procedures	Referring	Site	First Name	Last Name	MRN	Birth Date	Age At Stud
S	Signed1	MA DIGITAL MAMMO DIAG BIL & US BREAST [G0204/US] - Bre...	Noye, Darcy EL	Nancy	Mammo	1002510894r	11/30/1961 12:00:00 AM	51 years	
S	ReportDrafted	CT Cervical Spine Wo [72125] - Cervical spine	Noye, Darcy EL	Ian	Tired	1002566246r	5/13/1963 12:00:00 AM	50 years	

☒ Auto Refresh

CTR

Figure 5.50 – Critical Results WL

The second is titled **All Critical Results**, controlled by access string **“WL.Rad.CriticalResults”**.

reRAD RIS (Dev Current as Darcy T Noye [darcyn] to SOUTH/ADV Chair)

File View Administration Scheduling Front Desk Technologist Radiologist Mammo Transcription Help MD/ADV

All Critical Results WL (0)

Flags	Status	Procedures	Referring	Site	First Name	Last Name	MRN	Birth Date
		ReportDrafted XR HAND 2 VIEWS, BILAT [RD23] - Hand - Bilateral	Gray, Virgil72	LU	Mary	Noven	1000005870r	7/2/197
S		ReportDrafted CT 4 Phase [ct04]	Ajala, Yolanda MD	FH	andrew	waite	1000001841	10/14/19
S		ReportDrafted CT Abdomen W/Wo & Pelvis W/Wo [CT10] - Abdomen	STANDIFORD, WILLARD	FH	Drabinsky	Mayor	1000007357r	4/4/197
S		ReportDrafted CT 3 Phase [CT13]	STANDIFORD, WILLARD	FH	Chibon	Givens	1000007852r	4/4/197
		ReportDrafted AMCT ABDOMEN PELVIS W CONTRAST [AMCTABDPELW]	Williams, Vanessa	EL	Doug	Chalupsky	1000020761	5/20/19
		ReportDrafted AMCT VIRTUAL CARDIAC SCORING [AMCTVCARDIAC]	Williams, Vanessa	EL	Lindsay	Saxena	1000020762	6/24/19
		ReportDrafted AMCT ABDOMEN PELVIS W CONTRAST [AMCTABDPELW]	Williams, Vanessa	EL	Samira	Lamas	1000020763	3/20/19
		ReportDrafted AMCT CHEST WO CONTRAST [AMCTCHWO]	Williams, Vanessa	EL	Conception	Manery	1000020773	9/19/19
		ReportDrafted AMCT ABDOMEN PELVIS W CONTRAST [AMCTABDPELW]	Williams, Vanessa	EL	Albertina	Stromer	1000020774	5/9/195
		ReportDrafted AMCT CHEST W CONTRAST [AMCTCHW]	Williams, Vanessa	EL	Lyndia	Henrickson	1000020775	12/8/19
		ReportDrafted AMDX WRIST MIN 3 VIEWS - BILAT [AMXWRICOMB]	Golden, Lori9	EL	Nick	Accomando	1001659823	3/29/19
S		ReportDrafted CT 3 Phase [CT13]	Noye, Darcy	LU	andrew	waite	1000001841	10/14/19
S		ReportDrafted PT/CT Tumor Img Wb [78816]	Power, Ian MD	FH	Larry	Burke	1002158345r	1/4/200
		ReportDrafted AMMG DIGITAL SCREENING MAMMO [AMDMASCR]	Beck, Tammy2	FH	Annmarie	Lechel	1002341036	7/23/19
		ReportDrafted AMDX WRIST MIN 3 VIEWS - BILAT [AMXWRICOMB]	Arnold, Monique1	FH	Mabel	Zrake	1002421665	12/22/19
S	Signed1	MA DIGITAL MAMMO DIAG BIL & US BREAST [G0204/US] - Bre...	Noye, Darcy	EL	Nancy	Mammo	1002510894r	11/30/19

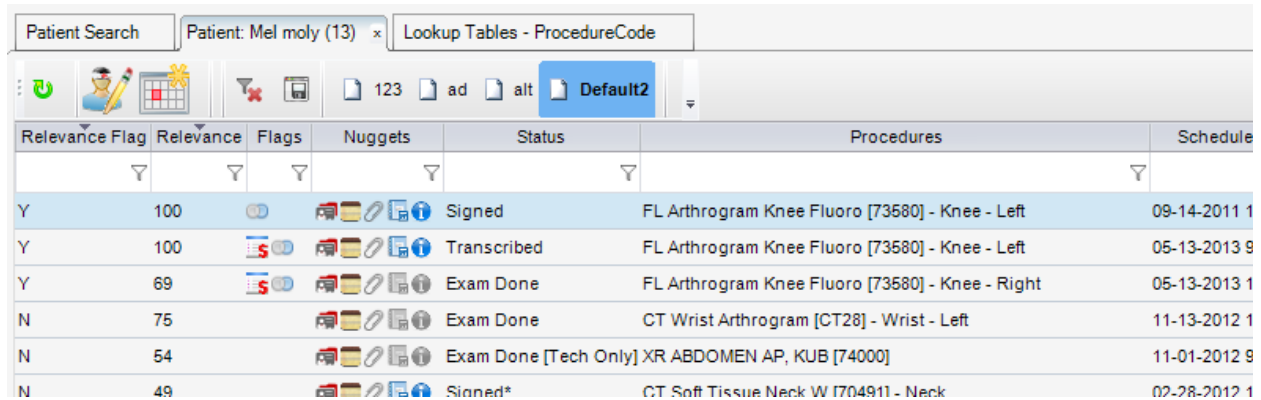
Auto Refresh CTRN

**Figure 5.51 – All Critical Results**

Each work list has a context menu that consists of CTRN and Audit History.

## Increase Weighting of Laterality in Relevancy Calculation

Now placing more weight on the ordering of relevant studies if the matching study's laterality matches, as shown in the following example where the Right Knee, gets a score of 69 instead of 100.



Relevance Flag	Relevance	Flags	Nuggets	Status	Procedures	Schedule
Y	100			Signed	FL Arthrogram Knee Fluoro [73580] - Knee - Left	09-14-2011 1
Y	100			Transcribed	FL Arthrogram Knee Fluoro [73580] - Knee - Left	05-13-2013 9
Y	69			Exam Done	FL Arthrogram Knee Fluoro [73580] - Knee - Right	05-13-2013 1
N	75			Exam Done	CT Wrist Arthrogram [CT28] - Wrist - Left	11-13-2012 1
N	54			Exam Done [Tech Only] XR ABDOMEN AP, KUB [74000]		11-01-2012 9
N	49			Signed*	CT Soft Tissue Neck W I704911 - Neck	02-28-2012 1

**Figure 5.52 – Relevancy calculation**

## Personnel Merge

There is now a Personnel Merge option on the Administration menu. The new menu option is controlled by the access string “**Clinical.PersonMerge**”. The Personnel Merge screen is modeled after the Patient Merge screen, in that the user can search for 2 people (e.g. referring physicians), choose which one is the Source (i.e. the person that will be marked as deleted), which one is the Destination (i.e. the person that will survive the merge), and there is also a limited ability to choose some criteria from the Source that will be used to update the destination (currently only the NPI can be retained from the source).

The screenshot displays the 'Personnel Merge' window within the eRAD RIS application. The window title is 'eRAD RIS (Development as darcy to South/ADV Chair)'. The menu bar includes 'File', 'Administration', 'Scheduling', 'Front Desk', 'Technologist', 'Radiologist', 'Mammo', 'Transcription', and 'Help'. The user is logged in as 'MD/ADV'.

The main content area is divided into four sections:

- Source Person Details:** Includes a 'Search' button and fields for Name (Ball, Jason2), Birth date (10-08-1957), Gender (Female), Address (227 North Green Milton Blvd. Shreveport, Nebraska 39235 (Gambia)), and NPI (radio button selected for N/A).
- Destination Person Details:** Includes a 'Search' button and fields for Name (Ballard, Jason4), Birth date (07-20-1962), Gender (Unknown), Address (27 Old Avenue 359 Green Nobel Way Oakland, Hawaii 88516 (Andorra)), and NPI (radio button selected for N/A).
- Summary:** A text box stating: 'The source person (upper left) will be marked as deleted. All orders will be moved to the destination person (upper right).'.
- Comments:** An empty text box for additional notes.

A switch button with two arrows is located between the Source and Destination panels. At the bottom of the window are four buttons: 'Suggest', 'Reject', 'Merge', and 'Close'.

**Figure 5.53 – Personnel Merge window**

The Person Detail panels show the Name, Birth date, Gender, Address, NPI and User ID if applicable. As in the Patient Merge screen, there is a switch button located in between the two person detail panels that allows the user to swap the source person and the destination person.

### **Merge Suggestions**

A comment section is designed for users that do not have sufficient authorization to perform a merge, but would like to leave a comment or detailed explanation for the RIS Administrator who will perform the merge at a later date. When the user clicks the Suggest button, the screen will save their suggestion and close. The details of the merge suggestion will then appear on the Personnel Merge Request Worklist.

### **Personnel Merge Request Worklist**

The Personnel Merge Request Worklist displays all of the outstanding Merge Suggestions. Access to this work list item is controlled by access string “**WL.PersonMergeRequest**”. Items on this worklist will disappear when one of the following occurs:

- a) The merge is performed
- b) The merge is rejected
- c) Any merge occurs that results in the source or destination person being marked as deleted (i.e. an alternate/conflicting merge took place)

The administrator who performs the action on the suggested merges will need the access string “**Clinical.PersonMergeAdmin**”. These actions are to complete or reject the merge.

### **Reject Merge Suggestions**

A RIS Administrator or other authorized user can open the Personnel Merge Request worklist and then double-click any row (or click Personnel Merge) to open the Personnel Merge screen and see the details of the Suggested Merge. The administrator can Reject the Merge if it is felt that the suggestion was inappropriate, and the row will disappear from the worklist. The ability to reject a merge is controlled by access string “**Clinical.PersonMergeAdmin**”.

### **Effect of a Merge on Source Person Record**

The source person will be marked as deleted, and no longer be returned in Internal Person Search results. Additionally, their NPI will be set to Null.

For a referring physician, all orders that are marked as being “Requested By” or “CC” for this physician, will be marked as “Requested By” or “CC” as the new physician (destination person of the merge).

The addresses associated with the source person will be moved to the Destination Person, but marked as inactive. A RIS Administrator or other authorized personnel can make the

determination as to which addresses should be set as active. We make no effort to determine which addresses may be duplicated between the source and the destination.

### **Effect of a Merge on Destination Person Record**

The destination person's internal notes will be updated to show that a person merge took place. The message will be similar to the following:

Internal notes
03-27-13 AikenD -
03-27-13 System - Performed merge with person with id: 45194/system

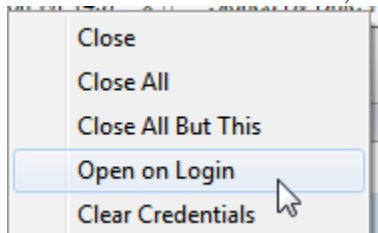
**Figure 5.54 – Destination person notes after person merge**



## **Auto Open Work List Tabs**

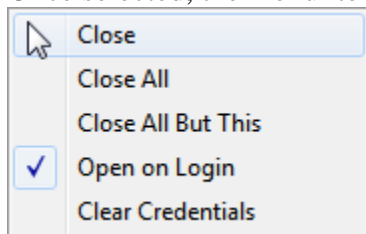
This feature will allow the user to pre-set which worklists they would like to have automatically open at the time of login. The worklists to be open at login can be set up in 2 ways.

The first is from the context menu of the work list tab itself. The user can select the option to Open on Login. This context menu option will only be available for work list. If context menu of a data window is accessed, this menu option will be disabled.



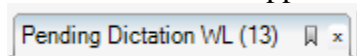
**Figure 5.55 – Open on Login context menu option**

Once selected, the menu item will become checked



**Figure 5.56 – Open on Login selected**

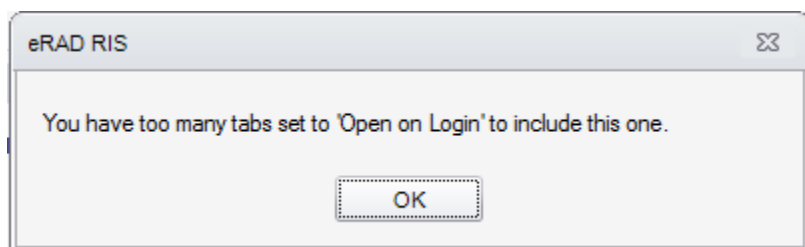
This tab will then automatically open when the user launches eRAD RIS. This is identified by the small icon will appear in the tab header to indicate that it has been set to automatically open.



**Figure 5.57 – Work list tab displaying icon for Open on Login**

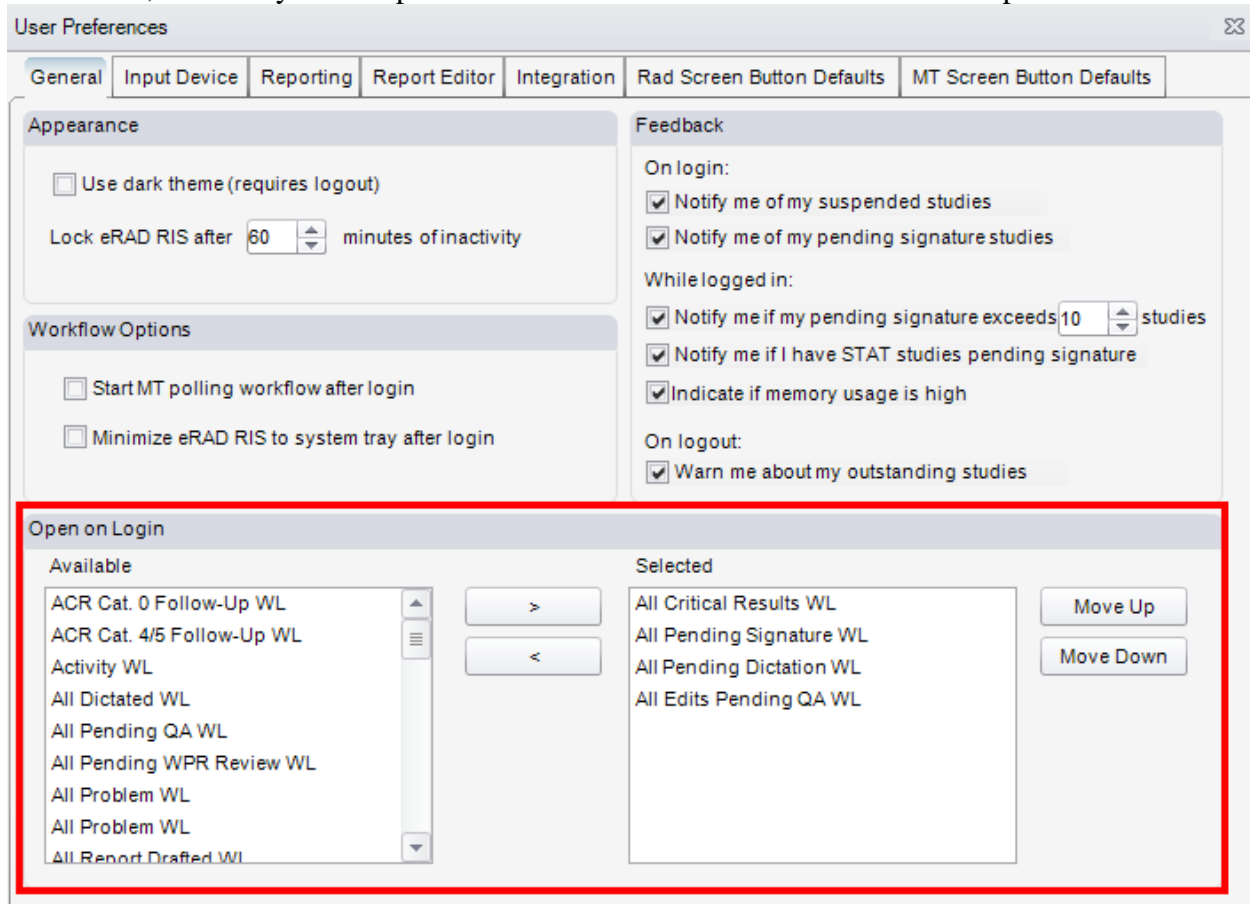
Multiple worklist tabs may be selected, although the system will limit you to approximately 7 tabs, based on the length of the tab name. The selected tabs are automatically saved to each user's preferences, so the same tabs will auto load on any workstation the user uses.

The user also has a new feature to allow all RIS tabs to be re-arranged by dragging them. When any auto-open tabs are re-arranged, their loading order is adjusted so that on re-loading, this order will be reflected. If the maximum number of tabs to Open on Login has been reached, the user will be informed with a pop up message.



**Figure 5.58 – Message informing maximum number of tabs to open on login has been reached**

In addition, the ability to manipulate these screens has been added to the user preferences screen:

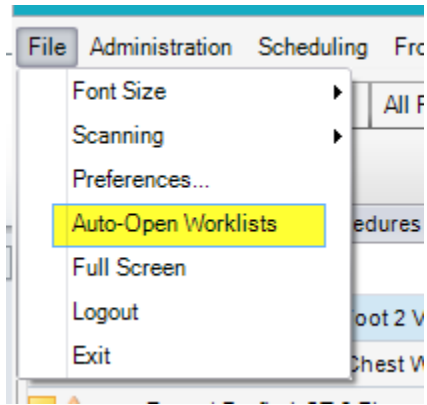


**Figure 5.59 – User preference window displaying Open on Login**

This screen allows the user to re-arrange the loading order for the tabs by using the up and down and also to add or remove tabs from the list of all available tabs that can auto-open. By design,

the list of available worklists is a complete set of all worklists, but if the user does not have permission to the worklist, it will not open on his/her workstation.

Lastly, if the user closes one or all of the work lists they have set to be Open at Login and they wish to load those work lists again, they can select the File menu option of Auto-Open Worklists. If the user has one of the four work lists open, the other 3 will load in their pre-defined order.



**Figure 5.60 – File menu option to Auto-Open Worklists**

## Enhance Work List Filtering

Under the filter icon menu you will see a new option of “Select Values...” that will open the self-titled Select Values window. Columns such as Flags, Status, Procedures, and Modality Type to name a few will have this option.

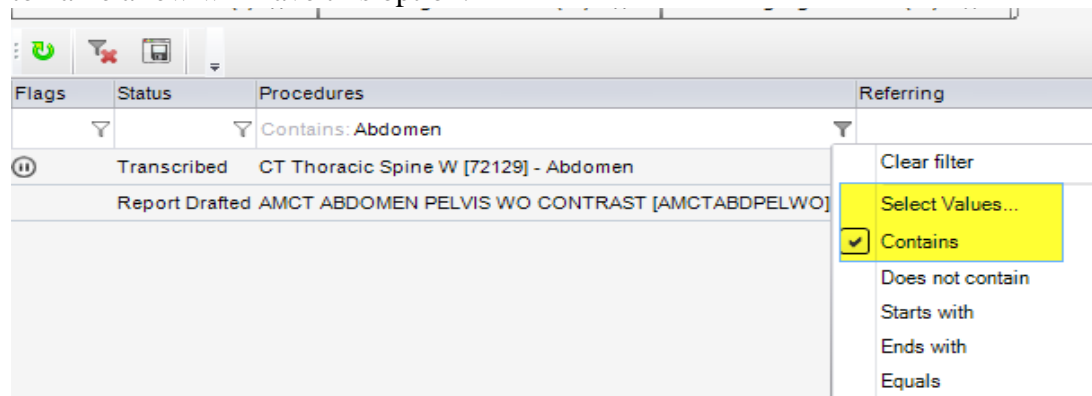


Figure 5.61 – Select values filter option

Once the filter is applied, it defaults to contains, from Starts with.

The Procedures column is somewhat unique as this columns Select Values list will have the Modality Type, Body Part and Laterality values available for selection. A double click on the Possible Values / Selected Values item will move the value to opposite side. The arrows will also perform this action, but allow the user to multi select values to be moved to the opposing side.

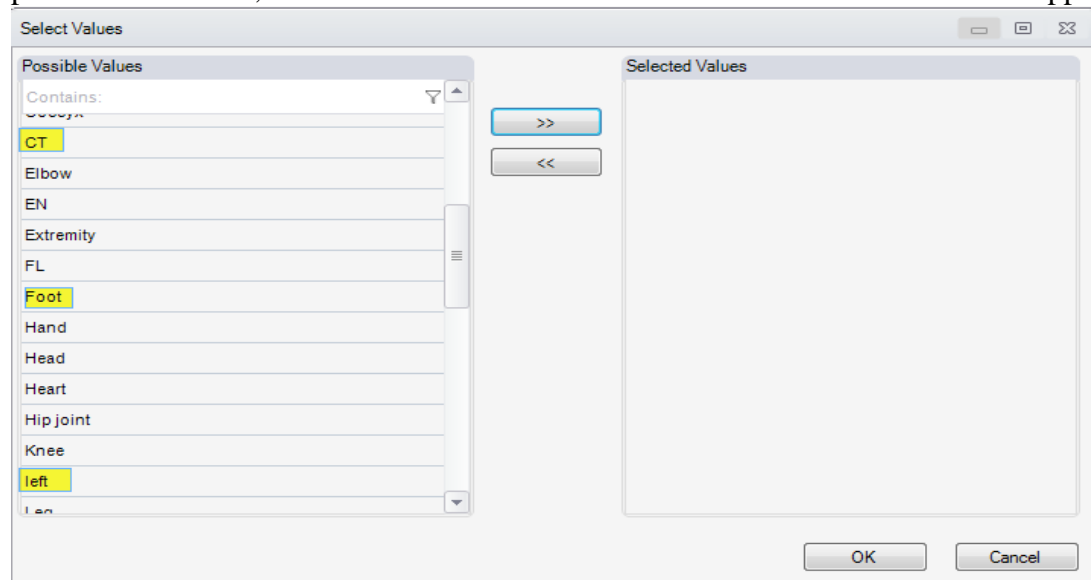
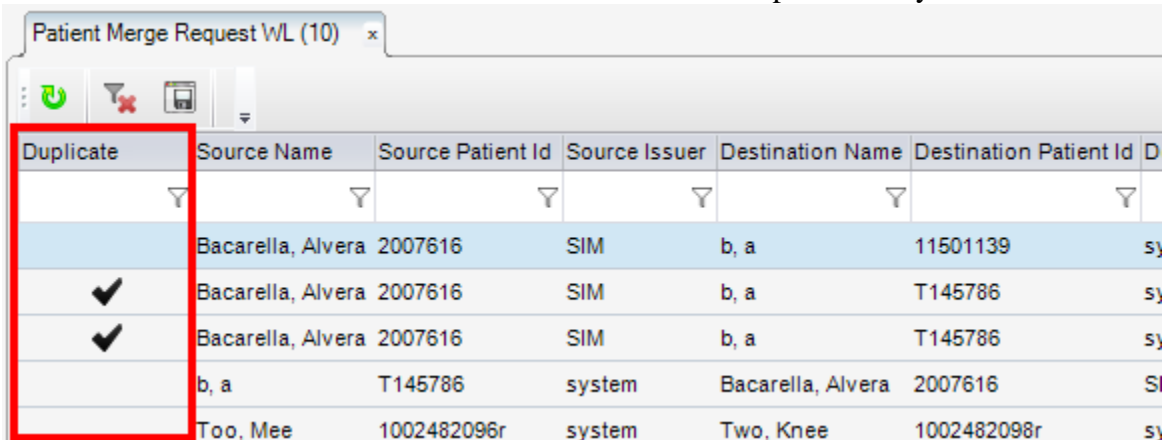


Figure 5.62 – Select Values window

## Patient Merge Requests Work List Enhancement

An additional column titled “Duplicate” was added to the Patient Merge Request. If the Source Patient Id and Destination Patient Id are suggested more than once in the same merge request, this column will have a check mark to indicate that it is a duplicate entry.

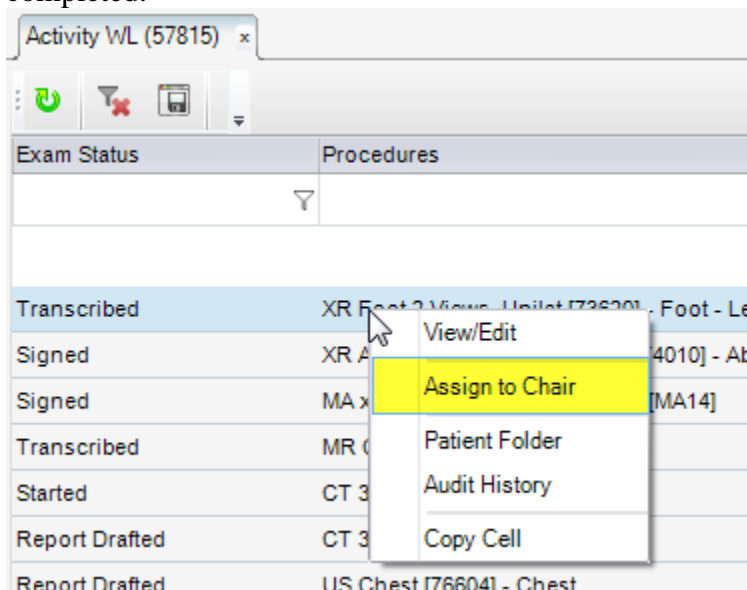


Duplicate	Source Name	Source Patient Id	Source Issuer	Destination Name	Destination Patient Id	D
	Bacarella, Alvera	2007616	SIM	b, a	11501139	sy
✓	Bacarella, Alvera	2007616	SIM	b, a	T145786	sy
✓	Bacarella, Alvera	2007616	SIM	b, a	T145786	sy
	b, a	T145786	system	Bacarella, Alvera	2007616	SI
	Too, Mee	1002482096r	system	Two, Knee	1002482098r	sy

Figure 5.63 – Patient Merge Requests WL

## Remove Date Filter from Activity Work List

In the previous build the Activity work list was controlled and displayed in a daily view. The user would be required to move from day to day to see what was on the Activity work list. This date control has been removed. The Activity work list will now display all studies that are not completed.



**Figure 5.64 – Activity WL**

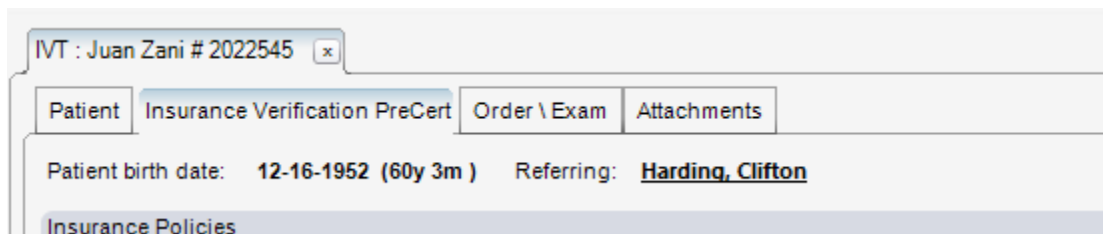
Additionally, a new column was added to the Chair lookup table called “Hold\_On\_Activity\_WL\_Flag”. When this flag is set to “Y”, any updates to a study assigned to that chair will remain in the activity worklist until the study is removed from that chair. Note, any studies assigned to a chair that just had the “Hold\_On\_Activity\_WL\_Flag” changed will not be automatically added or removed to or from the activity WL. An update to the study row has to occur for it to recognize whether it should or should not appear on the activity WL.

All studies recently updated and assigned to a chair with this flag will appear on the activity WL until it is unassigned from the chair or its status changes from “Cancelled”, “Discontinued” and “Void”.

The Assign to Chair context menu option is also available.

## **IVT – Insurance Verification PreCert tab Enhancements**

At the top of the Insurance Verification PreCert tab will now have the Patients date of birth and the Referring physician.

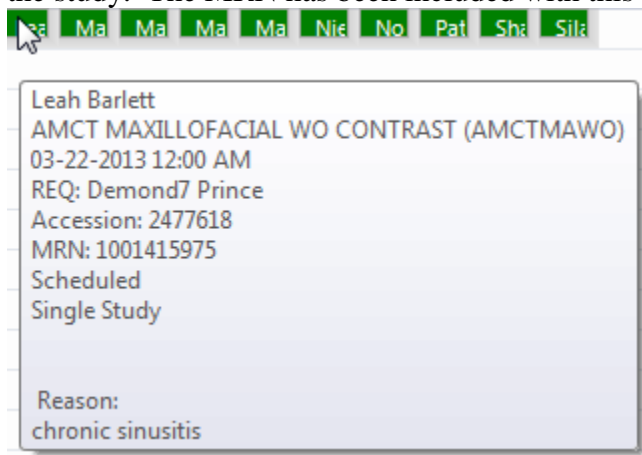


The screenshot shows a web application interface for the IVT (Insurance Verification PreCert) tab. At the top, there is a tab header "IVT : Juan Zani # 2022545" with a close button. Below the header, there are four tabs: "Patient", "Insurance Verification PreCert" (which is the active tab), "Order \ Exam", and "Attachments". Under the "Insurance Verification PreCert" tab, the "Patient birth date" is displayed as "12-16-1952 (60y 3m )" and the "Referring:" physician is listed as "Harding, Clifton". At the bottom of the tab, there is a link for "Insurance Policies".

**Figure 5.65 – Insurance Verification PreCert enhancements**

## **Scheduling - MRN Added to Appointment Book**

From with the Appointment Book, if the user hovers over the study, it would display details of the study. The MRN has been included with this information that is presented to the user.



The screenshot shows a portion of an Appointment Book with a row of appointment slots. A mouse cursor is hovering over one of the slots, which has triggered a tooltip. The tooltip contains the following information: "Leah Barlett", "AMCT MAXILLOFACIAL WO CONTRAST (AMCTMAWO)", "03-22-2013 12:00 AM", "REQ: Demond7 Prince", "Accession: 2477618", "MRN: 1001415975", "Scheduled", "Single Study", and "Reason: chronic sinusitis".

**Figure 5.66 – MRN included in the hover value in Appointment Book**

## Scheduling – Repeating Modality Restrictions

The modality lookup table has an additional option added to the modality restriction grid. The Repeat column has a list of values that include days of the week, weekday, weekend, all week and full range.

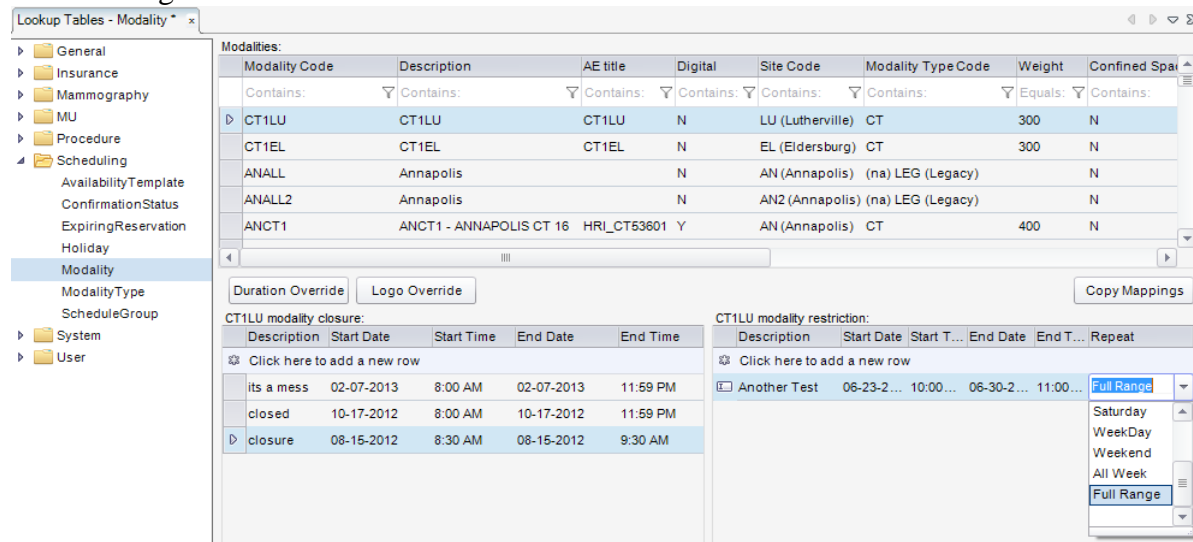


Figure 5.67 – Modality repeat restriction

An example of this would be restriction on the weekend between 7am – 5pm, selecting the Weekend option would apply the restriction to Saturdays and Sundays in your specified date range.

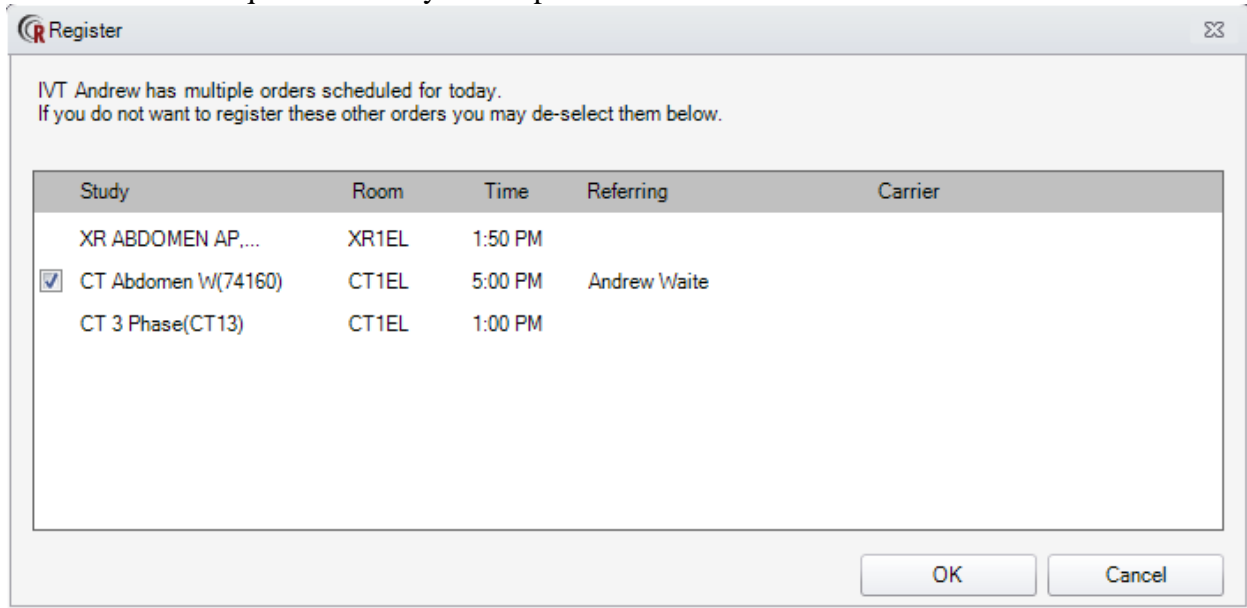
	1 Sunday	2 Monday	3 Tuesday	4 Wednesday	5 Thursday	6 Friday	7 Saturday
12 am							
1:00							
2:00							
3:00							
4:00							
5:00							
6:00							
7:00							
8:00							
9:00							
10:00							
11:00							
12 pm							
1:00							
2:00							
3:00							
4:00							
5:00							
6:00							
7:00							
8:00							
9:00							
10:00							
11:00							

Figure 5.68 – Calendar displaying the configured weekend restriction



## **Scheduling – Ability to Check-In Procedures Separately**

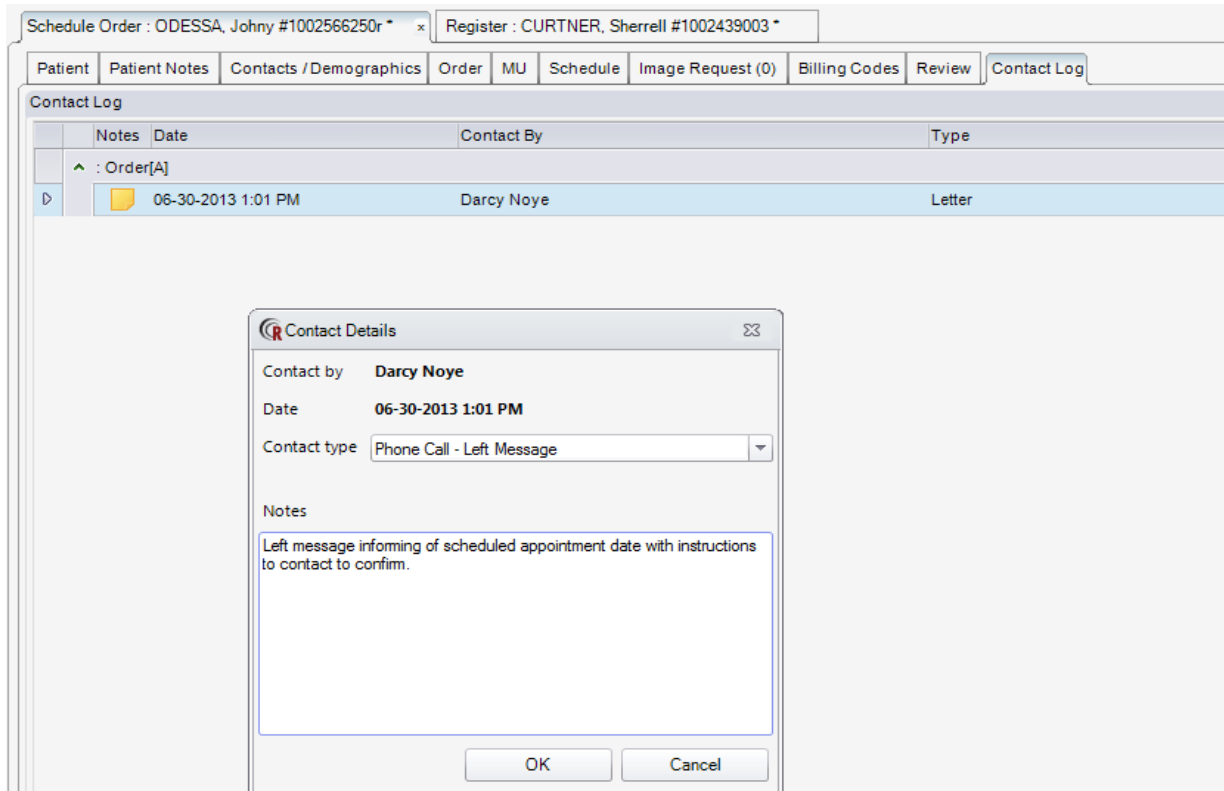
We will now scan for studies that span more than 3 hours between the end of one study and the start of the next and display a slightly modified version of the prompt to allow for the selection of individual studies; with the study that was opened from the WL would be a disabled checked box which does require that study to be opened.



**Figure 5.69 – Ability to unselect order to be checked in.**

## Scheduling – Enter Follow-Up Information

The scheduling windows, including Schedule Order, Confirmation, Register, etc... will now include the Contact Log tab. On this tab the user can add contact log information. Add new contact information the user can select a pre-defined contact type and notes pertaining to the contact. The tab will display each contact attempt with the date, Contact by, captures the logged in user, and the contact type. The first column will display a Notes icon to let the user know if there were notes entered in the Contact Details.



**Figure 5.70 – Contact log**

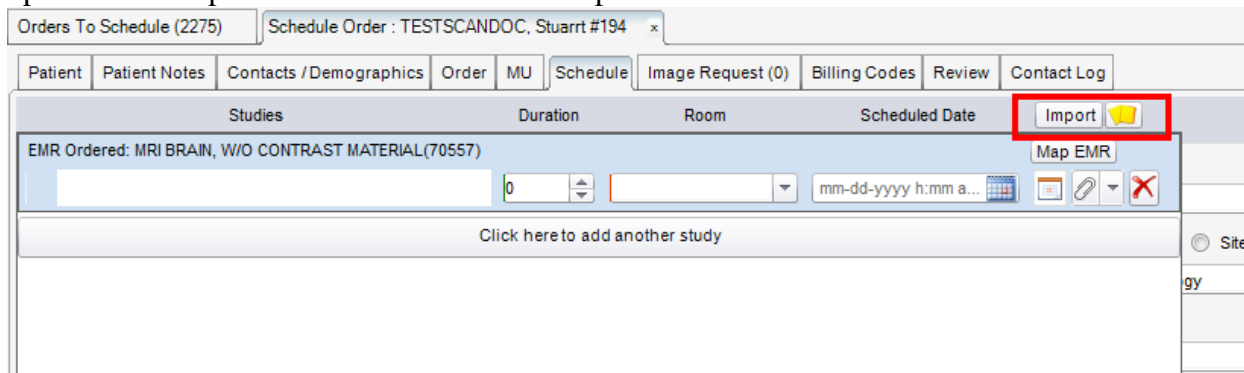
The Orders to Schedule WL and the IVT WL have two additional columns added to show Last Follow Up Date and Last Follow Up Type

Last Follow Up Date	Last Follow Up Type Code
05-13-2013 11:00 AM	PhoneCall

**Figure 5.71 – New columns added to Orders to Schedule and IVT WL's**

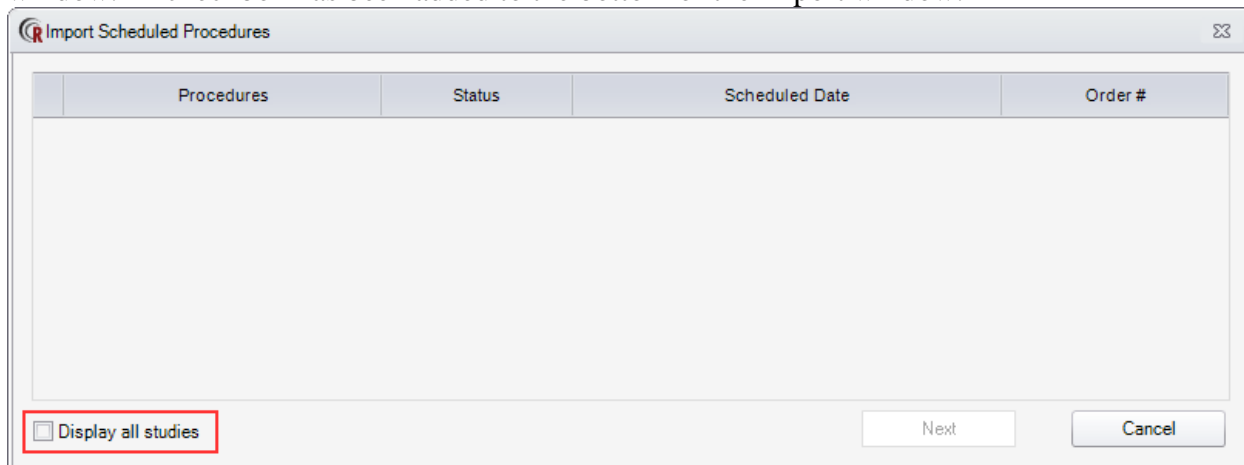
## Scheduling – Import EMR Scheduled Procedures Filtering

Scheduling an order from an EMR, the ordered procedure will sometimes have to be matched up that ordered procedure with an eRAD RIS procedure.



**Figure 5.72 – Import procedure**

This list could be extensive, showing too many rows in the Import Scheduled Procedures window. A checkbox has been added to the bottom of the import window.



**Figure 5.73 – Import Scheduled Procedures window**

By default we will display studies that have occurred in the last 2 days, in the appropriate status. If there are more studies that to be displayed then the check box will be enabled to allow for a larger list of items.

Upon checking, the grid will display all studies in a valid status that have been performed in the 60 days or scheduled within the next year.

## Signs and Symptoms Field and Renaming Chief Complaint

In previous versions a field titled Chief Complaint was present on all Order tabs. This field's name has been changed to "Reason for Exam". An additional change has also been made to all Order tabs. A new field titled "Scheduling Notes" has been included, and is positioned to the right of the Order Notes field.

The screenshot displays the 'Schedule Order' window with the following sections:

- Reason for Exam:** A text area containing 'My title has changed'.
- Referring Details:** Includes fields for 'Referring' (with a search icon), 'Visited at' (with a dropdown arrow), and 'Img notes' (with a search icon).
- CC Physicians:** A field for 'Visit Location for CC' with a search icon.
- Preferred Location:** Includes 'Practice' (set to 'Advanced Radiology') and 'Site' (with a dropdown arrow).
- Flags:** Includes checkboxes for 'Direct referral', 'STAT exam', 'STAT read', 'STAT precert', 'Transportation req'd', 'Special accommodations', 'Class' (set to 'Unknown'), 'Sedation', and 'Transition of care'.
- Insurance Policies:** A table with columns: Note, Carrier Code, Carrier Name, Policy #, Group Name, Group Number, Phone, Priority.
- Billing Method:** Includes a dropdown for '(Bill to insurance)' and a text area for '06-30-13 NoyeD -'.
- Order Notes:** A text area containing '06-30-13 NoyeD - I have always been here but now smaller'.
- Scheduling Notes:** A text area containing '06-30-13 NoyeD - New text box field introduced'.

**Figure 5.74 – New Scheduling Notes field and Chief Complaint changed to Reason for Exam**

Another new field titled “Signs & Symptoms” is being added to the Documentation tab of the Perform Exam window. If the Signs & Symptoms field is required will be determined by a new system configuration setting “**SignAndSymptomsRequiredByTech**” which has a default value of False (not required).

Include	Flags	Status	Procedures	Scheduled Date	Referring	Sedation	Room	Accession #	Read STAT	Exam STAT	Modality Typ
	<input checked="" type="checkbox"/>	Started	AMMR LUMBAR SPINE [AMMRLSP]	06-30-2013 12:00 AM	Aguilar, Candace 06596		MR1EL	3499813			

Patient	MU	Order	Documentation	Billing Codes	Attachments	Notes / Exam Times	Image Request (0)	Questionnaire
---------	----	-------	---------------	---------------	-------------	--------------------	-------------------	---------------

**Tech Notes**

Technologists notes

☐ Provided Clinical Summary to patient
☐ Provided Educational Resources

**Procedure**

Scanner \* MR1EL
Performed procedure \* AMMR LUMBAR SPINE (AMMRLSP)
Body part
Laterality
Change reason code \*
Change reason note

☐ External report workflow

**Associated Radiologists**

Assigned radiologist
Performing radiologist
Assistant radiologist

Chair: not set. QC flag not set.

☐ No longer menstruating
☐ Shielded patient
☐ Pregnancy test
☐ Blood test

Last menstrual period mm-dd-yyyy
Pregnant
Not pregnant

Primary tech \* Test User, Technologist
Assisting tech 1
Assisting tech 2

Signs & Symptoms

**Figure 5.75 – Signs & Symptoms field on Documentation tab**

### **NOTE:**

Macro and report document templates will have to be manually changed if “Signs and Symptoms” are to be used in diagnostic reports.

## Direct Referral Enhancements

In previous versions the Direct Referral flag was set on Referring Physician Personnel account. If the referrer selected on the Order tab had the Direct Referral flag, a label would appear next to the Referring field.

In build 41 this has changed. In addition to the referrer personnel account that may have the flag, a “Direct referral” check box has been added to the Order tab in the Flags section of this window that will always be present.

The screenshot shows a software window with two main sections: 'Referring Details' and 'Flags'. In the 'Referring Details' section, there is a 'Referring' dropdown menu. To its right, the text '(Pre-auth program)' is displayed. A red box labeled 'Was Here' with an arrow points to the dropdown menu. Below this is a 'Visited at' dropdown and an 'Img notes' text area containing the numbers 'One two three four five six seven eight nine ten eleven twelve thirteen'. In the 'Flags' section, there is a list of checkboxes: 'Direct referral', 'STAT exam', 'STAT read', and 'STAT precert'. A red box labeled 'Now Here' with an arrow points to the 'Direct referral' checkbox. To the right of these checkboxes are fields for 'Transportation req'd:' (a text box labeled 'radTextBox1'), 'Special accommodations' (a dropdown menu labeled 'rDropD' and a text box labeled 'radDropDownList'), and another text box labeled 'radTextBox1'.

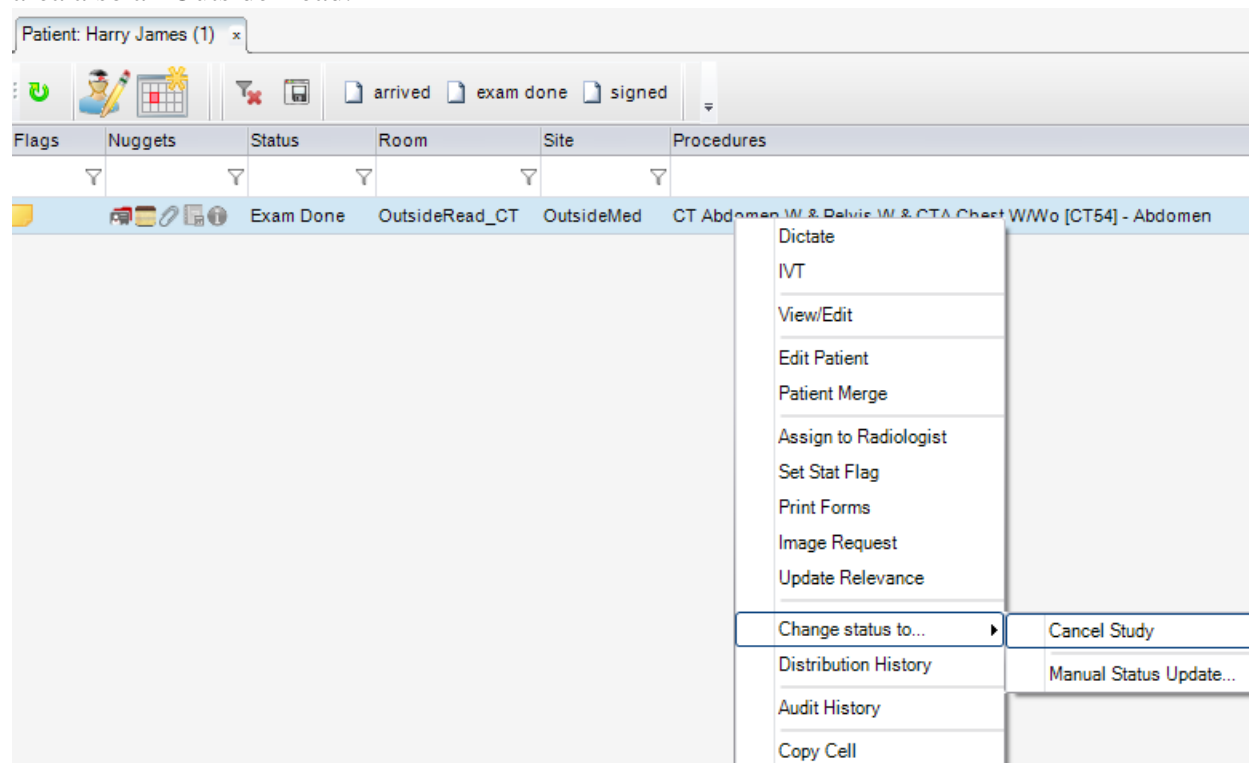
No data to display

Figure 5.76 – Direct referral flag added to the Order tab

If the referrer selected for the order has the Direct referral flag set in the Personnel editor, the Direct referral label on the order tab will be bolded, but not required to be selected.

## Allow Cancellation of Outside Reads

In previous versions the user did not have the ability to cancel the study if the study was an Outside Read. An appropriateness check was added for studies that are Exam Done status and area also an Outside Read.



**Figure 5.77 – Cancelling and Outside Read**

## **Abort Reason added To View/Edit**

In previous versions if the study was aborted from the Perform Exam window, the user would be prompted with the Abort Exam window and would be required to select a predefined reason for aborting the exam.

If the study was already completed, the user could abort the study from the view edit window, but they were not required to select a reason for aborting the study.

In build 41, we have added this to the View/Edit > Abort window and the user will be prompted with the same Abort Exam window that is produced in the Perform Exam window.

**Abort Exam**

Procedure  
CT Abdomen W\_Pelvis W\_CTA Chest W/Wo (CT54)

Reason for abort

Description
Contains: <span>▼</span>
b39Testing.
Claustrophobic
Patient Refused
Patient sick

OK Cancel

**Figure 5.78 – Abort exam reason**



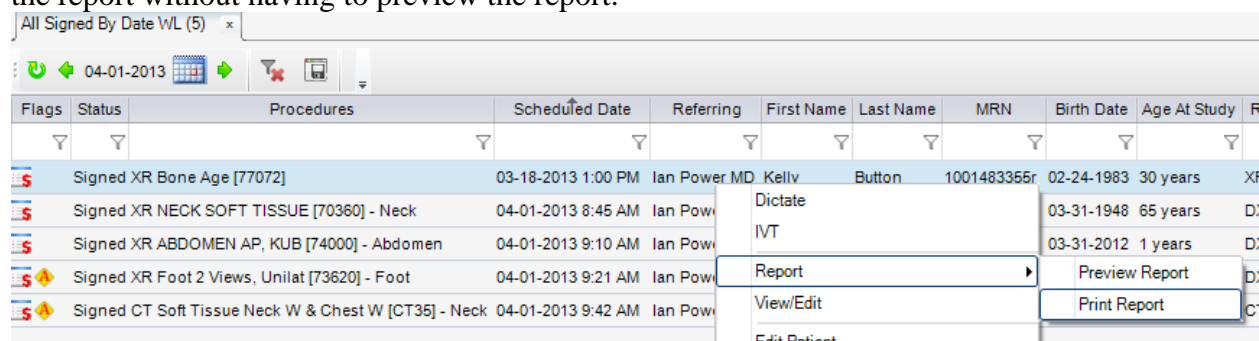
## Ability to Add Attachments and Check-In another Patient

The Attachment Viewer window is now a non-modal window, meaning that a user can have the be scanning attachments for patient A and have the ability to Check-In, Schedule, create Walk-In, etc... on patient B.

With the Attachment Viewer open the user can change tabs/enter information within the same study window or can access another patient in the Register window, patient search, etc...

## Print Diagnostic Report to Local Printer

Studies with a report now have a context menu “Report/Print Report”, which can be used to print the report without having to preview the report.



**Figure 5.79 – Report context menu and sub menu**

Also multi-select for this feature is supported so you can select multiple studies and print the reports for all of them at once.

When you select the “Print Report” feature you are prompted with a print dialog and your selection of printer for that first print dialog will apply to all documents that will be printed (in the multi select case).

## **Mammography Enhancements**

### **Item #1**

In the Follow Up window on the Contact Log tab, the check box labelled “Follow Up Resolved” has been relabelled “Resolved”.

eRAD RIS (Development as roman)

File Administration Scheduling Front Desk Technologist Radiologist Mammo Transcription Help

ACR Cat. 0 Follow-Up WL (37) Follow Up : Joan Hamilton # 1000004156r x

Patient Order Biopsies Contact Log

Contact Log

Notes	Date	Contact By	Type
-------	------	------------	------

Add View

☐ Resolved

Patient Note  
05-14-13 I

**Figure 5.80 – Check box renamed “Resolved”**

**Item #2**

Added "Breast Density Required Flag" to the procedure code lookup table ( if set to "N" Breast Density drop down will not be visible or required ). During upgrade to v41 all existing procedures that are BIRAD enabled will be set to “Y” for breast density required flag.

The screenshot shows the eRAD RIS interface with the 'ProcedureCode' lookup table open. The table has columns: Procedure Code, Description, work Required, Age, External Report, Workflow Flag, Hold Code Flag, Confirmation Required Flag, and Breast Density Required Flag. The 'Breast Density Required Flag' column is highlighted with a red box. The 'ProcedureCode' option in the left sidebar is also highlighted with a red box.

Procedure Code	Description	work Required	Age	External Report	Workflow Flag	Hold Code Flag	Confirmation Required Flag	Breast Density Required Flag	Last U...
testb40	testb40.....	N		N	N	N	N		26/03/...
CT66	CT Abdomen W & CTA Chest W/Wo	N		N	N	Y	N		12/03/...
76499LL	XR Long Leg Study	N		N	N	Y	N		20/02/...
76645	US Breast Uni Or Bil	N		N	N	Y	Y		07/02/...
AMCTABDPE...	AMCT ABDOMEN PELVIS W CONT...	N		N	N	N	N		01/02/...
AMCTCHABD...	AMCT CHEST ABDOMEN PELVIS...	N		N	N	N	N		01/02/...
AMCTPELW	AMCT PELVIS W CONTRAST	N		N	N	N	N		01/02/...
MA509	MA Digital Needle Loc 1 Site W Clip	N		N	N	N	N		09/01/...
MA510	MA Digital Needle Loc 2 Sites Unilate...	N		N	N	N	N		09/01/...
MA511	MA Digital Needle Loc 3 Sites Unilate...	N		N	N	N	N		09/01/...
ct04	CT 4 Phase	N		N	N	Y	N		13/11/...

Figure 5.81 – Breast Density Required Flag on Procedure codes

**Item # 3**

A permission already exists to control if user is allowed to manually "Resolve" a mammo follow-up **Clinical.ManuallyResolveMammoFollowUp**

**Item # 4**

New management report has been created that will identify patients that have possible orphaned mammography orders. The report looks for any patient that in the system that has a mammography study advanced to a status of scheduled or further. (that still has an outstanding mammography order)

## Mammo Orphaned Orders

**Practice:** Advanced Radiology

**Description:** This report will identify patients that have possible orphaned mammography orders. The report looks for any patient that in the system that has a mammography studie(s) advanced to a status of scheduled or further. (that still have an outstanding mammography order). This report does not look at studies that are Signed as these studies normally have a mammography follow up order.

Practice / Site	Patient ID	Study Status in Progress	Orphan Filler Order Number	Orphan Order Request Date	Orphan Order Procedure
<input type="checkbox"/> ADV		3			
<input type="checkbox"/> EL		1			
	1000005490r	Started	1070395	07-10-2012	US Breast Uni Or Bil [76645] - Breast - Left
<input type="checkbox"/> FH		1			
<input type="checkbox"/> LU		1			
<b>Total Patients:</b>		3			

Mammo Orphaned Orders

Advanced Radiology Confidential and Proprietary

Date Run: 5/14/2013 12:45 PM

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RMISvroman

**Figure 5.82 – Mammo Orphaned Orders**

### Item #5

Added RIS logic to bring back the Mammography order if study is Cancelled.

If a study that was generated from a mammography short term follow-up , callback or invitation has been cancelled a new order will be placed back on Mammography orders worklist for follow-up from the original mammo study info.

In case of Discontinued workflow user is given a manual choice to bring the order back for scheduling  
via "Would you like to send this to the Orders To Schedule WL?" prompt

"Void" actions is designed to be end of workflow so no action is taken to bring back the Mammo order.

### **Item # 6**

Added functionality to allow per site Mammography Tracking.

If Mammography Tracking is enabled for a site (default = enabled)..RIS will generate layletters, follow-up orders, all follow-up letters, and will forward studies to the "Mammo Followup worklists".

If tracking is turned off. RIS will still capture the BIRADS, Recommendation and breast density data, but will not generate letters or any follow-up workflow (It is assumed that a third party product or system is responsible for follow-up at the site.)

The screenshot shows the 'Edit Site' window with the following fields and values:

- Site Code:** Modesto\_Advanced\_Pat
- Description:** Modesto Advanced Imaging Center - P
- Phone #:** (209) 892-9100
- Fax #:** (209) 892-9102
- PACS Child Server:** Baltimore Sand Box Child
- Site Notes:** Speed Dial:81-087
- Report Template Path:** (empty)
- AvailabilityTemplate:** (empty)
- Mammography Tracking Enabled:** ☒ (highlighted with a red box)
- Outside Read Location:** ☐
- Insurance required:** ☐
- Contact Name:** (empty)
- Phone #:** () - (empty)
- Mobile #:** () - (empty)
- Fax #:** () - (empty)
- Email:** (empty)
- Contact Notes:** (empty)
- Address 1:** (empty)
- Address 2:** (empty)
- City:** Patterson
- State:** CA
- Zip Code:** 95363-8529
- Country:** (empty)

Buttons at the bottom: Load Logo, Delete Logo, Save, Close.

**Figure 5.83 – Mammography Tracking Enabled at Site level**

## **Standalone Mammography Tracking**

---

For Standalone mode: Only one management report had to be re-written to function in standalone.

(\*\*Please Read Note\*\*) for standard MQSA Tracking → The below report should be used for tracking standard follow-ups as well as Stand Alone Mode. This report will produce the same results as the standard RIS “MQSA List of Positive Exam Follow-ups” with one major difference. The report below does not look for the relationship to the system generated mammography follow up order. So for rear cases where mammography follow-up order was not used to schedule (user created a new order from scratch) for the mammography study. This report will catch these cases.

**"MQSA List of Positive Exam Follow-ups (Stand Alone System)"** is the new report. The report pulls back follow ups, NOT based on the follow-up order from original exam ( RIS Normal Workflow). This new report looks for additional exams/studies for the patient in the system as follow-up. (not looking at orders - Stand Alone workflow.)

#### **MQSA List of Positive Exam Followups (Stand Alone System)**

Practice: Advanced Radiology

Site(s): Eldersburg, Fisher, Lutherville, OutsideMed, PowerVille

Date Range: 1/1/2013 - 5/7/2013

Description: This report displays the list of Follow-up (Orders / Exams) for Positive Exams, by date, location. All Exams are Signed exams. This report is intended for use with RIS Mammography Stand Alone module.

Original ACC# - Patient Name		Next Accession	Next Accession Status	Next Procedure performed
☐ BIRAD 0	24			
☐ BIRAD 4	3			
☐ 1067177 - Power Yvonne,				
		No Followup		
☐ 2164615 - Johnson Mora,				
		2164615	Signed1	MA Digital Mammo Screen Uni [G0202UN] - Breast
☐ 2164621 - Jenkins Sylvia,				
		2164621	Signed1	MA Digital Mammo Screen Uni [G0202UN] - Breast
Report Total:				27

MQSA List of Positive Exam Followups (Stand Alone System)

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Date Run: 5/7/2013 11:34 AM

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#### **Figure 5.84 – MQSA List of Positive Exam Followups (Stand Alone System) report**

Additional Notes:

Patient Correspondence should be tracked through Audit History in RIS / and mammo Follow-up Contact Log.

New GENERAL MQSA report has been created to audit historic exams to make sure LAYLETTERS went out within 30 days.

"MQSA Layletter Audit" -> This report looks only at letter distribution via Document Distribution Engine.

**MQSA Layletter Audit**

Practice: Advanced Radiology

Site(s): Eldersburg, Fisher, Lutherville, OutsideMed, PowerVille

Date Range: 1/1/2013 - 5/7/2013

Description: This report displays the list of mammography exams that LAYLETTERS were not distributed to via Document Distribution Engine within 30 days, by date, location. All Exams are Signed exams.

BIRAD	Patient ID	Patient Name	Accession	Signed Date	DDE Status	DDE Last Updated Date	DDE Last Updated User
☐ BIRAD 0	1000815124r	Short Helen,	1876920	01-09-2013	Hold	01-09-2013	System
	1001483355r	Button Kelly,	2544984	03-15-2013	Hold	03-15-2013	System
☐ BIRAD 2	1000002899	Bones Bonnie,	1068829	01-30-2013	Cancelled	07-12-2012	STUART-LAPTOP
Total:							3

MQSA Layletter Audit

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Date Run: 5/7/2013 11:32 AM

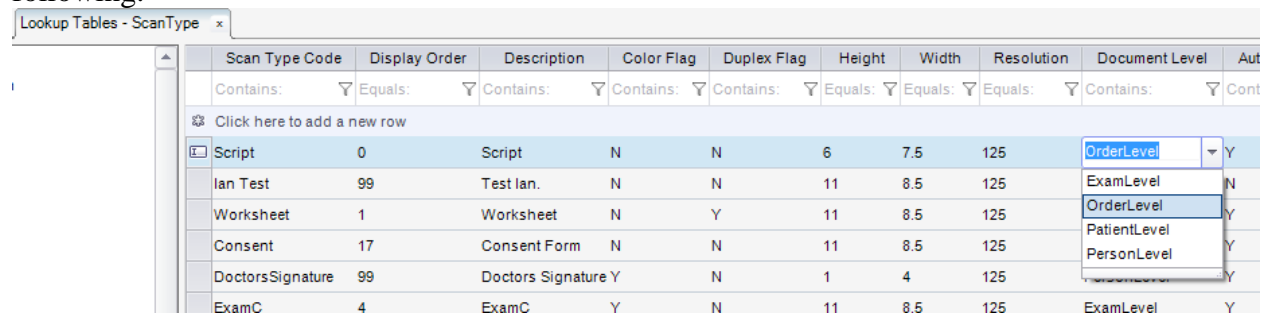
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**Figure 5.85 – MQSA Layletter Audit report**

## Administration - Order Level Document Type (Scan Docs)

In a previous sprint order level scanning was added in via the advanced section at the time of scanning but it wasn't possible to associate a default scan type with the order level, because the dropdown item for "OrderLevel" scanning wasn't available in the scantype lookup table. With this sprint that option is now available in the scan doc type lookup as shown in the following:



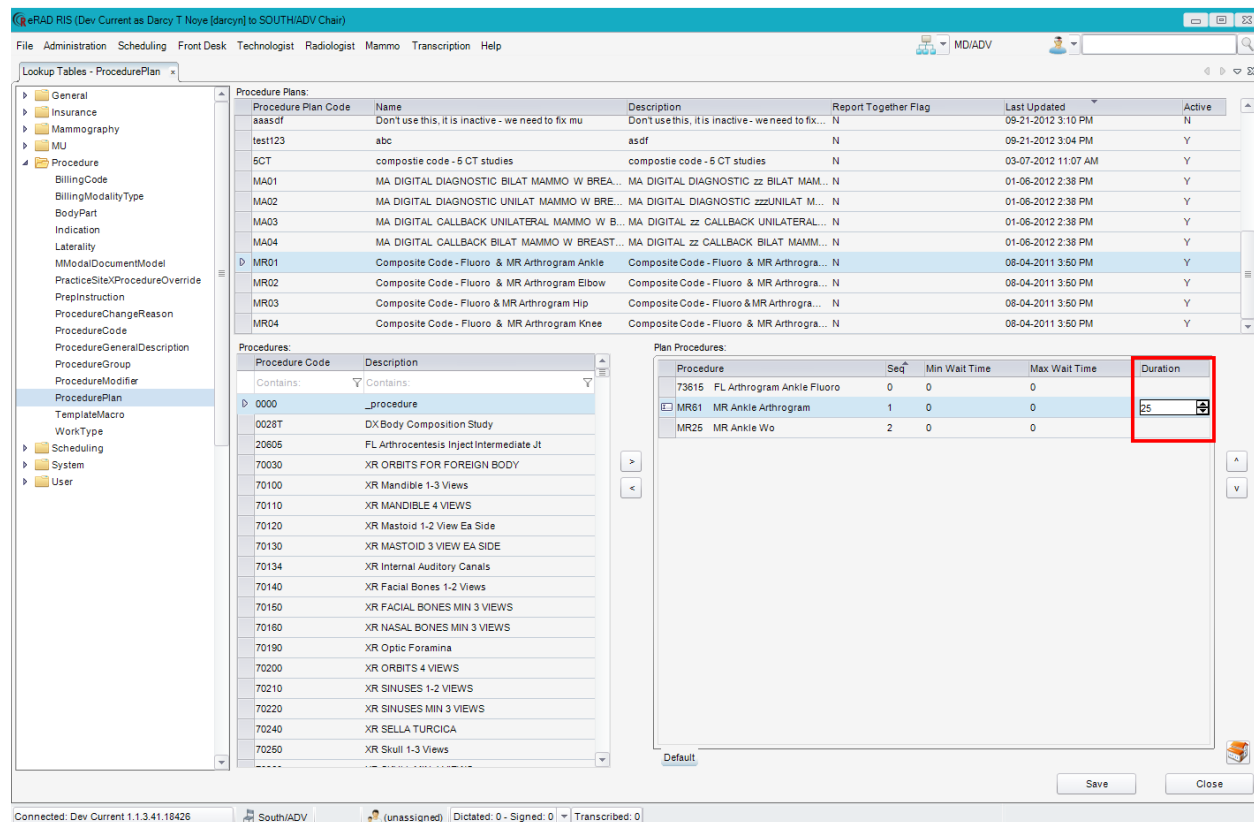
Scan Type Code	Display Order	Description	Color Flag	Duplex Flag	Height	Width	Resolution	Document Level	Aut
Contains:	Equals:	Contains:	Contains:	Contains:	Equals:	Equals:	Equals:	Contains:	Cont
Click here to add a new row									
Script	0	Script	N	N	6	7.5	125	OrderLevel	Y
Ian Test	99	Test Ian.	N	N	11	8.5	125	ExamLevel	N
Worksheet	1	Worksheet	N	Y	11	8.5	125	OrderLevel	Y
Consent	17	Consent Form	N	N	11	8.5	125	PatientLevel	Y
DoctorsSignature	99	Doctors Signature	Y	N	1	4	125	PersonLevel	Y
ExamC	4	ExamC	Y	N	11	8.5	125	ExamLevel	Y

Figure 5.86 – Order Level Document Type



## Administration – Procedure Plan Duration Override

A new field was created in the procedure plan editor that will allow for the selection of a duration override:



**Figure 5.87 – Procedure Plan Duration Override**

The default duration value is null, but can range anywhere from 0 and up.

If there are already pre-existing site overrides for the procedure plan then the duration will not propagate across the different sites when a value is provided, but when new site overrides are created then the default duration will be used on the new site overrides.

Currently the order of overrides for duration is

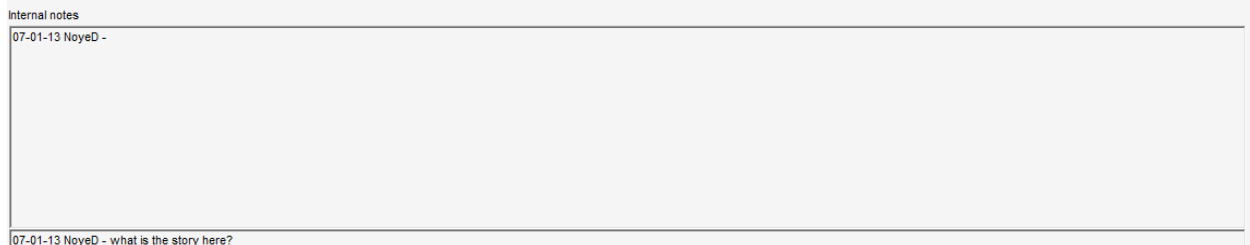
- Procedure duration
- Modality override
- Template time duration
- Procedure plan duration

### Administration - Schedule Group Performance Enhancement

Build 41 includes a Schedule Group lookup editor performance enhancement allowing users to switch and filter quicker between schedule groups.

### Administration – Personnel Internal Notes

The notes field text box has been changed to a text box control that will track the date and User ID for the Internal Notes field of the Personnel Editor. User will be familiar with this type of tracking as the notes fields such as Order Notes, Patient Notes, etc... have this tracking.



Internal notes

07-01-13 NoyeD -

07-01-13 NoyeD - what is the story here?

**Figure 5.88 – Internal Notes field tracking date and user ID**

### Administration – Internal Person Search Enhancements

Added middle name to the person search results and sorted the results by last\_name, first\_name as requested.

Removed the quick search by (City/State) feature.

## Administration – Client IP Address Captured in Audit Table

Added client IP address for all new entries in the audit table for build 41 and going forward.

Patient: Janet Test (16)    Audit (Test Janet) x

Filters

☐ Patient   
 ☐ Order   
 ☒ Study   
 ☐ Include retrievals

Date	Action	Description	User	Accession #	Order #	Status
Equals: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾
06-28-2013 9:42 AM	Study completed	Set Study Status to ExamDone	Arsenault Janet (janet)	3601145	5875281	Exam Done
06-28-2013 9:42 AM	Patient study data updated	Study updated	Arsenault Janet (janet)	3601145	5875281	Started
06-28-2013 9:42 AM	UI_StudyStarted	Set Study Status to Started	Arsenault Janet (janet)	3601145	5875281	Started
06-28-2013 9:42 AM	Patient study data updated	Study updated	Arsenault Janet (janet)	3601145	5875281	Arrived
06-28-2013 9:42 AM	Patient study data updated	Patient updated	Arsenault Janet (janet)			
06-28-2013 9:37 AM	Patient arrived	Study updated	Arsenault Janet (janet)	3601145	5875281	Arrived
06-28-2013 9:37 AM	Patient arrived	Order updated	Arsenault Janet (janet)		5875281	Ordered
06-28-2013 9:37 AM	Patient arrived	Visit updated	Arsenault Janet (janet)			
06-28-2013 9:37 AM	Patient arrived	Patient updated	Arsenault Janet (janet)			
06-28-2013 9:36 AM	Study scheduled	Study updated	Arsenault Janet (janet)	3601145	5875281	Scheduled
06-28-2013 9:36 AM	Study scheduled	Order updated	Arsenault Janet (janet)		5875281	Ordered
06-28-2013 9:36 AM	Study scheduled	Visit updated	Arsenault Janet (janet)			

Event Time: 06-28-2013 09:42:11.197 AM

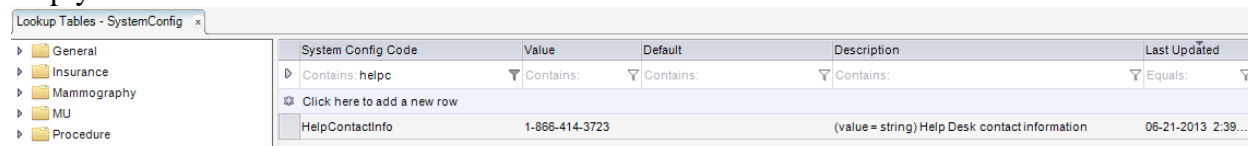
Client IP Address: 10.100.16.206

Changed c\_study  
pacs\_corrected\_flag: 'Y' (was 'N')

**Figure 5.89 – Audit history displaying entry that captured Client IP Address**

## Administration – Add Support Phone # to Help About Window

Created a new configuration variable called **“HelpContactInfo”**, the default value for this is empty.

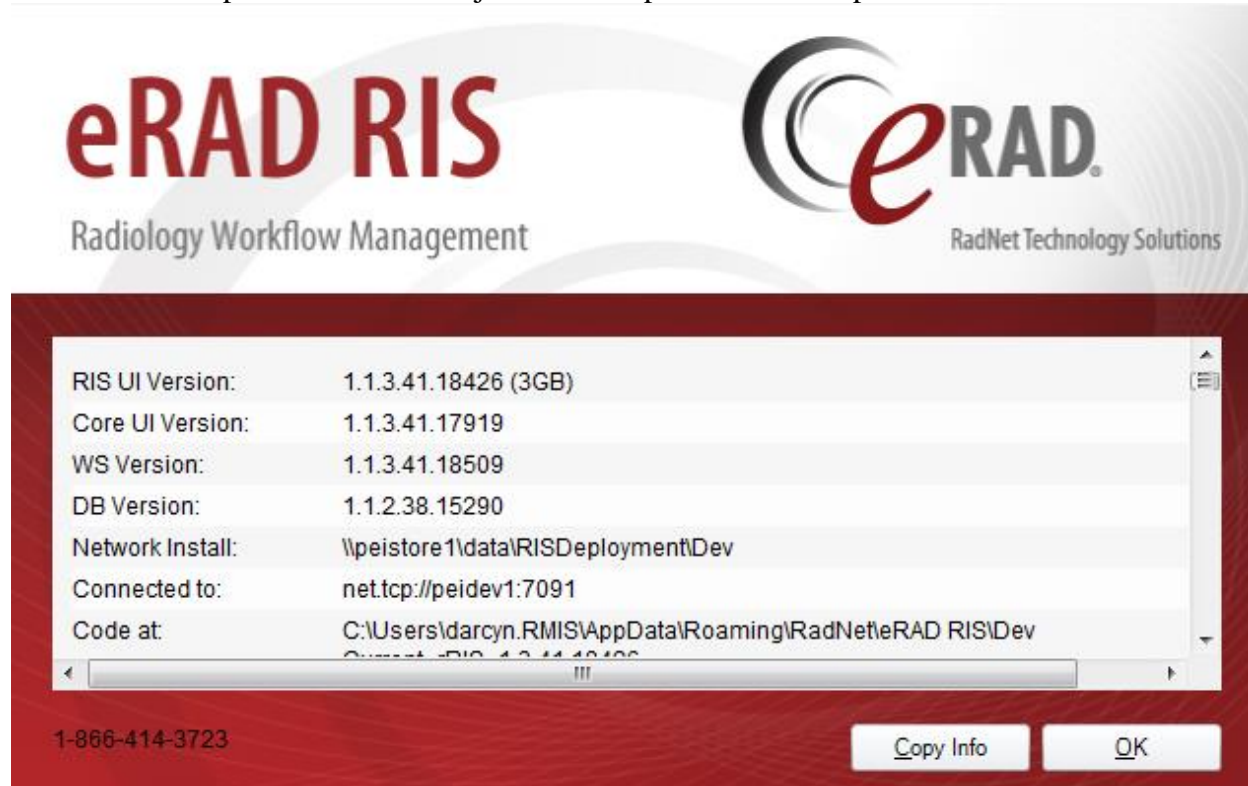


System Config Code	Value	Default	Description	Last Updated
Contains: helpc	Contains:	Contains:	Contains:	Equals:
Click here to add a new row				
HelpContactInfo	1-866-414-3723		(value = string) Help Desk contact information	06-21-2013 2:39...

**Figure 5.90 – New system config setting HelpContactInfo**

The variable will allow for html text to be provided, this will allow for the formatting of the desired phone number, or allow for additional information to be provided also, such as a webpage or email link

Ex: `<b>Phone Number:</b> 1-866-414-3723 &nbsp; &nbsp; <a href="mailto:help@radnet.com?Subject=RIS Help"> Contact Help</a>`



**Figure 5.91 – Support phone # added to Help About window**

### Administration – Process Events Service

All studies that have been modified via the GUI are stored in c\_study\_post\_processing table. We need the ability for the system to automatically call this procedure.

A sub services to the RIS Core Services was added to wake up every “X” seconds and call the c\_ProcessPostEvents stored procedure.

This sub service starts with every RIS Core Service.

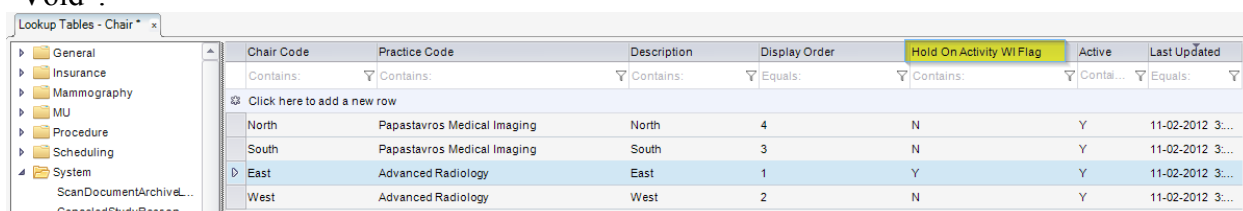
A new system configuration setting titled **“ProcessPostEventInterval”** was added to control the frequency of the call to c\_ProcessPostEvent. The default is 60 seconds. A value of 0 will mean the events will not be processed.

The ProcessPostEvent sub service may take up to five minutes to detect any changes to the ProcessPostEventInterval configuration setting.

## Administration – Hold Study on Activity Work List

A new column was added to the Chair lookup table called “Hold\_On\_Activity\_WL\_Flag”. When this flag is set to “Y”, any updates to a study assigned to that chair will remain in the activity worklist until the study is removed from that chair. Note, any studies assigned to a chair that just had the “Hold\_On\_Activity\_WL\_Flag” changed will not be automatically added or removed to or from the activity WL. An update to the study row has to occur for it to recognize whether it should or should not appear on the activity WL.

All studies recently updated and assigned to a chair with this flag will appear on the activity WL until it is unassigned from the chair or its status changes from “Cancelled”, “Discontinued” and “Void”.



Chair Code	Practice Code	Description	Display Order	Hold On Activity WL Flag	Active	Last Updated
North	Papastavros Medical Imaging	North	4	N	Y	11-02-2012 3:...
South	Papastavros Medical Imaging	South	3	N	Y	11-02-2012 3:...
East	Advanced Radiology	East	1	Y	Y	11-02-2012 3:...
West	Advanced Radiology	West	2	N	Y	11-02-2012 3:...

**Figure 5.91a – Hold on Activity WL Flag added to Chair lookup table**

## **Management Reports – Dashboard Color Picker for Practice**

The eRAD RIS GUI will display a different color for a practice selected from the Organization picker. This is configured in the Organization lookup Editor on the Practice. In build 41 we have also added the title bar color to the Dashboard.

The screenshot shows the 'Edit Practice' window with the following fields and options:

- Practice Code:** ADV
- Description:** Advanced Radiology
- Phone #:** (443) 436-1100
- Fax #:** (443) 436-4568
- Time Zone:** (UTC-05:00) Eastern Time (US & Canada)
- PACS Server:** Helen
- Active:** ☒
- MU Required:** ☒
- Chair workflow enabled:** ☒
- Practice Notes:** ..
- CDS Object ID:** 2.16.840.1.113883.3.21.11740.361961.362921/9~
- Title Color:** ☐ Transparent ☐ Gradient
- Dashboard Primary Color:** 15, 158, 172

**Figure 5.92 – Edit Practice displaying Dashboard Primary Color selector.**

## Management Report – ADA added to Special Accommodations

The Special Accommodation lookup table first had to have the flag added.

Lookup Tables - SpecialAccommodations x

General	Special Accommodations Code	Description	Display Order	American Disability Act Flag	Last Updated	Active
AbortedStudyRea...	Contains:	Contains:	Equals:	Contains:	Equals:	Contai
AccessString	Click here to add a new row					
AddressDescription	HA	Hearing Assistance	1	Y	06-18-2013 3...	Y
AlertConfiguration	test	test	1	Y	02-11-2013 2...	N
ContactMethod	IN	Interpreter Assistance	1	N	09-10-2012 3...	Y
CountryState	LA	Lift Assistance	1	N	09-10-2012 3...	Y
CreditCardType	VA	Vision Assistance	1	N	09-10-2012 3...	Y
DeliveryMethod	TransRequired	Transportation Required	1	N	08-11-2011 11...	Y
EducationLevel	walker	walker	1	N	07-19-2011 2...	Y
Firmware	wheelchair	wheelchair	1	N	07-19-2011 2...	Y

Figure 5.93 – American Disability Act flag (ADA)

When an appointment is created and a value for Special Accommodations is selected that is flagged as an ADA Special Accommodation code, the management report can reflect this flag. The report can be filtered to show only ADA, exclude ADA or both.

Practice: Advanced Radiology Site(s): Eldersburg, Fisher, Lutherville, ( ) View Report

Exam Date: 6/28/2013 Special Accommodation (s): Hearing Assistance, Interpreter

ADA flag: ADA Only, Exclude ADA

1 of 1 100% Find Next

### Special Accommodations

Practice: Advanced Radiology  
 Site: Eldersburg, Fisher, Lutherville, OutsideMed, PowerVille  
 Date: 06-28-2013  
 Special Accommodation(s): Hearing Assistance, Interpreter Assistance, Lift Assistance, Transportation Required, Vision Assistance, walker, wheelchair  
 Description: This report displays studies where special accommodations have been identified as required for the selected practice/site(s), date and special accommodation filter.

Time Sched	Patient Name	Home Phone	Address	Exam(s)	ADA
<b>Eldersburg</b>					
3:15 PM	Wiggins, Sam			Acc#: 3601152 MR Lower Ext Not Joint W/o [73718]	N
Flag On:Y	Special Accomodation: Transportation Required		Other: To and From		
2:30 PM	Floss, Fred			Acc#: 3601158 CT Chest W & Abdomen W/Wo [CT42] - Chest	Y
Flag On:Y	Special Accomodation: Hearing Assistance		Other: interpreter required		

Special Accommodations Advanced Radiology Confidential and Proprietary Date Run: 6/28/2013 2:31 PM  
 Page 1 of 1 RMISFormsGuestUser

Figure 5.94 – Special Accommodations management report with ADA column



## Management Report – Modality to CPT to Procedure Mapping

This management report will identify the mappings to a schedule group to modality to procedure and associated CPT codes

Schedule Group: Lutherville SG

1 of 27

100%

Find | Next

Modality to CPT to Procedure Mapping

Schedule Group(s): Lutherville SG

Description: This report displays the available procedures mapped to billing (cpt) codes per modality and selected scheduling group.

Schedule Group	Modality	CPT Code	CPT Description	Proc Code	Procedure Description	
Lutherville SG						891
		(ANCT1) - ANCT1 - ANNAPOLIS CT 16				28
		70450	COMPUTED TOMOGRAPHY, HEAD OR BRAIN; WITHOUT CONTRAST MATERIAL	70450	CT Head Wo	
		70460	COMPUTED TOMOGRAPHY, HEAD OR BRAIN; WITH CONTRAST MATERIAL(S)	70460	CT Head W	
		70470	COMPUTED TOMOGRAPHY, HEAD OR BRAIN; WITHOUT CONTRAST MATERIAL, FOLLOWED BY CONTRAST MATERIAL(S) AND FURTHER SECTIONS	70470	CT Head W/Wo	
		70480	COMPUTED TOMOGRAPHY, ORBIT, SELLA, OR POSTERIOR FOSSA OR OUTER, MIDDLE, OR INNER EAR; WITHOUT CONTRAST MATERIAL	70480	CT Ear Orbit Sella Wo	
		70481	COMPUTED TOMOGRAPHY, ORBIT, SELLA, OR POSTERIOR FOSSA OR OUTER, MIDDLE, OR INNER EAR; WITH CONTRAST MATERIAL(S)	70481	CT Ear Orbit Sella W	
		70482	CT ORBIT SELLA/POST FOSSA/EAR C-/C+	70482	CT Ear Orbit Sella W/Wo	
		70486	COMPUTED TOMOGRAPHY, MAXILLOFACIAL AREA; WITHOUT CONTRAST MATERIAL	70486	CT Maxillofacial Wo	
		70487	COMPUTED TOMOGRAPHY, MAXILLOFACIAL AREA; WITH CONTRAST MATERIAL(S)	70487	CT Maxillofacial W	
		70488	COMPUTED TOMOGRAPHY, MAXILLOFACIAL AREA; WITHOUT CONTRAST MATERIAL, FOLLOWED BY CONTRAST MATERIAL(S) AND FURTHER SECTIONS	70488	CT Maxillofacial W/Wo	
		70490	COMPUTED TOMOGRAPHY, SOFT TISSUE NECK; WITHOUT CONTRAST MATERIAL	70490	CT Soft Tissue Neck Wo	
		70491	COMPUTED TOMOGRAPHY, SOFT TISSUE NECK; WITH CONTRAST MATERIAL(S)	70491	CT Soft Tissue Neck W	

Figure 5.95 – Modality to CPT to Procedure Mapping management report

## Management Report – BI-RAD to Recommendation Mapping

New report created that will show the BI-RAD and Recommendations assigned to that BI-RAD. There are no filters required for this management report

### Birad to Recommendation Mapping

**Description:** This report displays the Birad to recommendation mappings configured within the system.

Birad				Recommendation	Default Recommendation?
Radnet Central					
0	Need additional imaging evaluation				
	P	Additional Projections			N
	U	Ultrasound			N
	O	Old films for comparison			N
	Z	Breast MRI			N
	PU	Additional Projections and Ultrasound			N
	PXIF	Additional Projections if no old films can be obtained			N
	UXIF	Additional Ultrasound if no old films can be obtained			N
	PUXIF	Additional Projections and Ultrasound if no old films can be obtained			N
	C0	ADDENDUM FOR COMPARISION - NEED ADDITIONAL IMAGING			N
1	Negative				
	N	Normal interval follow up			Y
	F-11M	11 months			N
	F-10M	10 months			N
	F-9M	9 months			N
	F-8M	8 months			N
	F-7M	7 months			N

Figure 5.96 – BI-RAD to Recommendation Mapping management report.

## Management Report – MR Breast Dictated

The MR Breast Dictated report was created to monitor Breast MR. The parameters for the report are Practice, Site, To and From date and Procedure Code.

The report will display the Site, patient name, Procedure, date of service, dictated date, MRN and Accession number.

Practice(s): Highway Imaging Associates, Pir Site(s): Becker, Bay Parkway, Flatbush  
From: 4/1/2013 To: 5/30/2013  
Procedure Codes: (77058) MR Breast W WO Unilate

1 of 1 100% Find | Next

### MR Breast Dictated

Practice(s):  
Site(s):  
Date Range: 4/1/2013 - 5/30/2013  
Description: This report displays the studies which include procedures starting with MR Breast within the selected sites/practice and date range.

Site	Patient Name	DOS	Dictated	MRN	Accession
Flatbush Ave					2
		04-23-13	04-23-13		
	Procedure(s): MR Breast W WO Bilateral W Cad [77059] - Breast - B				
		05-09-13	05-13-13		
	Procedure(s): MR Breast W WO Bilateral W Cad [77059] - Breast - B				
Total					2

MR Breast Dictated Confidential and Proprietary Date Run: 5/31/2013 9:44 AM  
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Figure 5.97 – MR Breast Dictated management report

## Management Report – New Sales Mgmt Report for Referring Practice

We need to get all sales data into a rollup table and call this rollup data to improve performance for sales mgmt reports. To do this we created a stored procedure “c\_SummaryMaster” that will be called nightly by a job. These new reports will report off this rollup data(“c\_summary\_sales\_trend”). I talked to Sean Clark and he is fine if we return 36 months of data only in this rollup table. I confirmed that counts will be based off cpt counts. I will add a note to **create a script** to create this job on the B41 build directory to call this new stored procedure “c\_SummaryMaster”.

Created a new management report “Sales Referring Practice Raw Data“ where the results can be exported to either csv or excel based off the following parameters [a practice\_code, multiple sites, multiple referring physician practice, multiple modalities, a monthly variance(6 or 13 variance), and a date. Note: if the report contains more than 65636 rows the report will not be able to export to excel.

PHYSICIAN	MODALITY	LOCATION	SPECIALTIES	November	December	January	February	March	April	May	Total
Jacobson, Kyle8 35939	XR	Lutherville	Accupuncturist   Breast Surgery			1			1		2
JONES, WHAY	CT	Eldersburg	General Practice				1				1
JONES, WHAY	CT	Fisher	General Practice	1							1
JONES, WHAY	CT	Lutherville	General Practice				1				1
JONES, WHAY	MA	Lutherville	General Practice				1				1
JONES, WHAY	MR	Eldersburg	General Practice	1							1

Figure 5.98 – Sales Referring Practice Raw Data

Created a new mgmt. report “Sales Referring Practice Raw Quarter Data “ the sales team can export to csv or excel based off the following parameters [a practice\_code, multiple sites, multiple referring physician practice, multiple modalities, a monthly variance(6 or 13 variance), and a date.

PRACTICE	PHYSICIAN	MODALITY	Qtr 1 2012	Qtr 4 2012	Qtr 1 2013	Total	Qtr 2 2013	Qtr 1 2012 Avg	Qtr 4 2012 Avg	Qtr 1 2013 Avg	Qtr 2 2013 Avg
ADV	HODGSON, WESLEY	MA	0	1	0	1	0	0.0	0.3	0.0	0.0
ADV	HODGSON, WESLEY	MR	0	1	0	1	0	0.0	0.3	0.0	0.0
ADV	HODGSON, WESLEY	XR	0	2	0	2	0	0.0	0.7	0.0	0.0
ADV	Jacobson, Kyle8 35939	XR	0	0	1	1	1	0.0	0.0	0.3	0.3
ADV	JONES, WHAY	CT	4	1	2	7	0	1.3	0.3	0.7	0.0
ADV	JONES, WHAY	MA	0	0	1	1	0	0.0	0.0	0.3	0.0
ADV	JONES, WHAY	MR	0	1	0	1	0	0.0	0.3	0.0	0.0

Figure 5.99 – Sales Referring Practice Raw Quarter Data

Created a new mgmt. report “Monthly Variance Raw Data” replaces the previous 6/13Mth Variance Report and the sales team can export to csv or excel based off the following parameters [a practice\_code, multiple sites, a monthly variance(6 or 13 variance), and a date.

Physician	Physician Last Name	Physician First Name	NPI	Affiliation	Specialty	Location	Modality	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	Total	Mth Avg	May-13
Abbott, Aaron 55833	Abbott	Aaron				Eldersburg	US							0	0.00	1
Abbott, Aaron 55833	Abbott	Aaron				Fisher	CT						2	2	0.33	
Abbott, Aaron 55833	Abbott	Aaron				Fisher	XR						1	1	0.17	
Abbott, Alberto3 24490	Abbott	Alberto3				Fisher	NM							0	0.00	1
Abbott, Alberto3 24490	Abbott	Alberto3				Lutherville	XR							0	0.00	1

Figure 5.100 – Monthly Variance Raw Data

Created a number of new management reports.

“Sales Referring Practice Data” where the sales team can view data without exporting to csv or excel based off the following parameters [a practice\_code, multiple sites, multiple referring physician practice, multiple modalities, a monthly variance (6 or 13 variance), and a date.

PHYSICIAN	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	Mth Avg	May-13	Vari/May 13
HODGSON, WESLEY	0	0	0	0	155	4	0	0	0	0	0	0	13	0	(13)
JONES, WHAY	1	6	23	0	54	0	4	0	0	3	0	0	8	0	(8)
Jacobson, Kyle8 35939	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
Power MD, Ian	0	0	0	0	0	0	0	0	0	3	7	135	12	67	55
<b>Total</b>	<b>1</b>	<b>6</b>	<b>23</b>	<b>0</b>	<b>209</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>6</b>	<b>7</b>	<b>136</b>	<b>33</b>	<b>67</b>	<b>34</b>

**Figure 5.101 – Sales Referring Practice Data**

“Sales Referring Practice Data by Affiliation” where the sales team can view data without exporting to csv or excel based off the following parameters [a practice\_code, multiple sites, multiple referring physician practice, multiple modalities, a monthly variance(6 or 13 variance), and a date.

PHYSICIAN	Affiliation	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Total
Power MD, Ian	chesapeake	0	0	0	3	7	135	67	212
JONES, WHAY	referrer	4	0	0	3	0	0	0	7
Jacobson, Kyle8 35939	Borneo	0	0	1	0	0	1	0	2
<b>Grand Total</b>		<b>4</b>	<b>0</b>	<b>1</b>	<b>6</b>	<b>7</b>	<b>136</b>	<b>67</b>	<b>221</b>

**Figure 5.102 - Sales Referring Practice Data by Affiliation**

“Sales Referring Practice Data by Modality” where the sales team can view data without exporting to csv or excel based off the following parameters [a practice\_code, multiple sites, multiple referring physician practice, multiple modalities, a monthly variance(6 or 13 variance), and a date.

Advanced Radiology By Modality May 2013								
MODALITY	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	May daily avg
CT	1	0	0	2	1	108	54	5.40
MA	0	0	0	1	1	0	0	0.00
MR	1	0	0	0	0	0	0	0.00
XR	2	0	1	3	5	28	13	1.30
<b>Total</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>6</b>	<b>7</b>	<b>136</b>	<b>67</b>	<b>6.70</b>

**Figure 5.103 - Sales Referring Practice Data by Modality**

“Sales Referring Practice Data by Specialty” where the sales team can view data without exporting to csv or excel based off the following parameters [a practice\_code, multiple sites, multiple referring physician practice, multiple modalities, a monthly variance(6 or 13 variance), and a date.

PHYSICIAN	Specialties	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13
JONES, WHAY	General Practice	4	0	0	3	0	0	0
Jacobson, Kyle8 35939	Accupuncturist   Breast Surgery	0	0	1	0	0	1	0
Power MD, Ian	Breast Surgery	0	0	0	3	7	135	67
<b>Grand Total</b>		<b>4</b>	<b>0</b>	<b>1</b>	<b>6</b>	<b>7</b>	<b>136</b>	<b>67</b>

**Figure 5.104 - Sales Referring Practice Data by Specialty**

“Sales Referring Practice Monthly Volume and Daily Avg” where the sales team can view data without exporting to csv or excel based off the following parameters [a practice\_code, multiple sites, multiple referring physician practice, a modality. The volume is the number of cpt codes performed for a particular month. The Daily average is valoume /number of business Days.

Year	Month	Volume	Daily Avg
2011	May	3	0.1
	June	5	0.2
	July	5	0.2
	August	5	0.2
	September	2	0.1
	October	5	0.2
	<b>Total</b>	<b>25</b>	<b>0.2</b>
2012	February	2	0.1
	March	4	0.2
	May	2	0.1
	June	4	0.2
	July	24	1.2
	August	2	0.1
	September	16	0.8
	November	3	0.2
	December	19	1.0
	<b>Total</b>	<b>76</b>	<b>0.4</b>
2013	January	4	0.2
	February	12	0.7
	March	3	0.1
	April	10	0.5
	May	7	0.4
	<b>Total</b>	<b>36</b>	<b>0.4</b>

**Figure 5.105 - Sales Referring Practice Monthly Volume and Daily Avg**

## **Management Report – Upload Custom Management Reports**

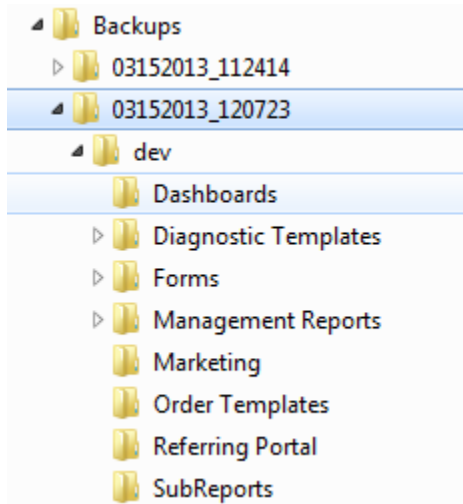
The DeployReports.bat tool has been modified to prompt the user if they would like to upload Custom Management reports. When the customer reports are uploaded the DeployReports.bat tool will create a sub folder called “Uploads” that will be created under the Custom folder. The uploaded custom reports will be placed in the “Uploads” folder. The user will then be responsible to move the report in the Custom folder.

To summarize:

1. In the deployment folder created a folder called Upload Custom Management Reports
2. Modified scripts to prompt: Do you wish to upload Custom Management Reports?
3. Modified scripts to upload from the Upload Custom Management Reports folder to create a folder below Custom called Uploads and Upload the reports there.

## **Management Report – Automate Backup of Management Report Deployment**

When deploying the newest management reports a backup will now be created to ensure that no existing report that was to be kept. This backup will serve not only as a backup but an easy way to download forms\templates or custom reports to deploy to another installation.



**Figure 5.106 – Displaying management report backups**

In the example above you can see it creates a folder called backups, below that a folder named the datetime of the backup and below that the report structure for the installation you are deploying to. In this example it backed up the dev deployment on Mar 15 2013 at 12:07.

- Do you wish to create a backup of the existing reports?
- Do you wish to deploy core management reports?
- Do you wish to upload Forms?
- Do you wish to upload Diagnostic Templates?
- Do you wish to upload Custom Management Reports?
- Do you wish to create a datasource?



## Management Report – Mammo Back on Track

This report has been created to allow the user to determine when the “Back on Track” date for the patient’s next mammo screening is. Looking at all "ShortTermFollowup" and "CallBack" orders where recommendation is "BACK ON TRACK" ( target date cannot be manually adjusted. Staff can cancel the order and generate a new Mammo follow-up order with correct target date).

### Mammo Back on Track

Practice: Radnet Central

Site(s): Modesto Advanced Imaging Center, Stockton Diagnostic, Stockton Diagnostic Outside Read, Outside CD

Description: The intention of this report is to identify any patient in the system that has order type of "CallBack" or "ShortTermFollowup" where the mammo orders have come for an original study with a diagnosis of "BIRAD 1 or 2".

Patient	MRN	Study Status	Requested Date	Order Status	Original Accession	Recommendation	Birad
		Signed1	07-08-2013	ShortTermFollowUp	29172	4 months	2-Benign finding
		Signed1	04-05-2013	ShortTermFollowUp	10740	10 months	2-Benign finding
		Signed1	04-05-2013	ShortTermFollowUp	10751	11 months	1-Negative
		Signed1	04-07-2013	ShortTermFollowUp	11923	11 months	1-Negative
		Signed1	04-09-2013	ShortTermFollowUp	12458	10 months	1-Negative
		Signed1	06-26-2013	ShortTermFollowUp	24177	6 months	1-Negative
		Signed1	07-09-2013	ShortTermFollowUp	25744	5 months	1-Negative
		Signed1	06-26-2013	ShortTermFollowUp	27608	3 months	2-Benign finding
		Signed1	07-12-2013	ShortTermFollowUp	32782	5 months	2-Benign finding
		Signed1	07-05-2013	ShortTermFollowUp	27012	5 months	1-Negative
		Signed1	04-23-2013	ShortTermFollowUp	12040	8 months	2-Benign finding
Total							11

Mammo Back on Track

Confidential and Proprietary

Date Run: 7/16/2013 11:51 AM

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Figure 5.160a – Mammo Back on Track management report

## **Management Report – User ID Parameter on Reports with Practice Code**

This feature affects the reports that can be viewed based on what Practices the user belongs to. If the user has access to Practice A and C, but not B when the view a report that is filtered on Practice, they will not be able to view it for Practice B.

Below is the list of reports that use the Practice parameter and were modified:

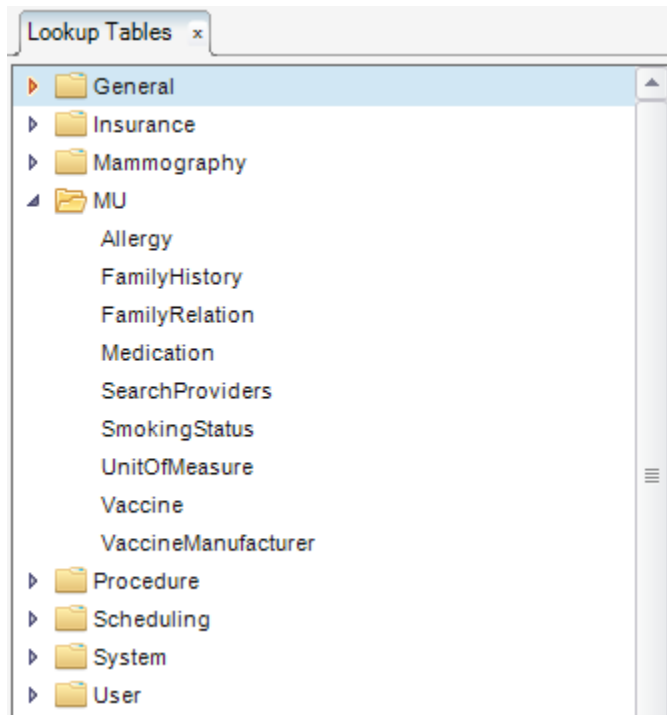
Management Reports/Billing/Charge Audit Report	Management Reports/Billing/Charge Audit Report no header
Management Reports/Maintenance/Procedure Codes	Management Reports/Meaningful Use/Automated Measures
Management Reports/Meaningful Use/MU Automated Measures Details	Management Reports/Meaningful Use/MU Scorecard
Management Reports/Meaningful Use/Patient Reminder List	Management Reports/Meaningful Use/RRR Meaningful Use
Management Reports/MQSA/Mammo Annual Radiologist Summary	Management Reports/MQSA/Mammo Annual Technologist Summary
Management Reports/MQSA/Mammo Document_Distribution Status	Management Reports/MQSA/Mammo Ignored Reminder List
Management Reports/MQSA/Mammo Radiologist Summary	Management Reports/MQSA/Mammo Technologist Summary
Management Reports/MQSA/MQSA General Exam List	Management Reports/MQSA/MQSA List of Exams Performed by Technologist
Management Reports/MQSA/MQSA List of False Negative Exams	Management Reports/MQSA/MQSA List of False Positive Exams
Management Reports/MQSA/MQSA List of Positive Exam Followups	Management Reports/MQSA/MQSA List of Positive Exams with Outstanding Biopsies
Management Reports/MQSA/MQSA Location Summary Group By BIRAD	Management Reports/MQSA/MQSA Location Summary Group By Procedure
Management Reports/MQSA/MQSA Outcome Report	Management Reports/MQSA/MQSA Radiologist Reporting Summary
Management Reports/Operations/Aborted Exams	Management Reports/Operations/Addended Mammography Exams
Management Reports/Operations/Amount Collected By User	Management Reports/Operations/Appointment Schedule
Management Reports/Operations/Biopsy Results Pending Letter	Management Reports/Operations/Cancellations by Referring
Management Reports/Operations/Cancelled Exams	Management Reports/Operations/Cancelled Reasons
Management Reports/Operations/Check-in Counts	Management Reports/Operations/Chief Complaint Audit
Management Reports/Operations/Confirmation Status Cancelled or Rescheduled	Management Reports/Operations/Confirmed Appointments
Management Reports/Operations/Copay vs Collected	Management Reports/Operations/CPT Quantity
Management Reports/Operations/Daily Log by Status	Management Reports/Operations/Daily Schedule
Management Reports/Operations/Daily Schedule Add Ons	Management Reports/Operations/Front Desk Activity
Management Reports/Operations/Front Desk Trending by Hour	Management Reports/Operations/Image Request History
Management Reports/Operations/IVT 7 Day Trend	Management Reports/Operations/IVT Cancelled
Management Reports/Operations/IVT Idle Time	Management Reports/Operations/IVT Turnaround
Management Reports/Operations/IVT User Activity	Management Reports/Operations/Modality Duration Override
Management Reports/Operations/Need Plan	Management Reports/Operations/NM Therapy Patient Listing
Management Reports/Operations/No Shows	Management Reports/Operations/Open Capacity
Management Reports/Operations/Patient Wait By Room	Management Reports/Operations/Patient Wait Time Trending by Site
Management Reports/Operations/Patient Wait Times	Management Reports/Operations/Patients Without Insurance
Management Reports/Operations/Payments Details	Management Reports/Operations/Payments Received

Management Reports/Operations/Performed Procedures and Patients	Management Reports/Operations/Performed Procedures Count
Management Reports/Operations/Pre-Auth Daily Count	Management Reports/Operations/Pre-Auth Referring Physician
Management Reports/Operations/Radiologist Queues	Management Reports/Operations/Referrals by Physician
Management Reports/Operations/Referrals by Physician Patient List	Management Reports/Operations/Referring Physician Volumes
Management Reports/Operations/Referring RTAT	Management Reports/Operations/Report Turnaround
Management Reports/Operations/Reschedules and Cancellations	Management Reports/Operations/Room Activity
Management Reports/Operations/Room Closures	Management Reports/Operations/Room Utilization
Management Reports/Operations/RTAT by Radiologist	Management Reports/Operations/RTAT Detail
Management Reports/Operations/RTAT Detail - Monthly	Management Reports/Operations/RTAT Detail Mammo
Management Reports/Operations/RTAT RAD Signing	Management Reports/Operations/RTAT Summary
Management Reports/Operations/Scheduled Counts by Site	Management Reports/Operations/Scheduled vs Completed
Management Reports/Operations/Scheduler Activity	Management Reports/Operations/Scheduler Activity By Hour
Management Reports/Operations/Scheduler Activity by Modality	Management Reports/Operations/Scheduling 7 Day Trend
Management Reports/Operations/Special Accommodations	Management Reports/Operations/Technologist Activity
Management Reports/Operations/Technologist Activity by Modality	Management Reports/Operations/Technologist Unfinished Exams
Management Reports/Operations/Time to Schedule (seconds)	Management Reports/Operations/Transportation Report
Management Reports/Operations/Unknown Referring	Management Reports/Operations/Unread Exams
Management Reports/Operations/Wait Room Times	Management Reports/Operations/Wait Room Turnover
Management Reports/Operations/Wrong Study Ordered	Management Reports/Statistics/Editors/Edited Jobs Activity Report
Management Reports/Statistics/Editors/Edited Jobs By User By Hour	Management Reports/Statistics/Editors/Edited Jobs By User Detail
Management Reports/Statistics/Editors/Editors Activity	Management Reports/Statistics/Radiologists/QA Radiologist Review
Management Reports/Statistics/Radiologists/Radiologist Dictation Activity	Management Reports/Statistics/Radiologists/Radiologist Dictation Activity by Date
Management Reports/Statistics/Radiologists/Radiologist Signing Activity	Management Reports/Statistics/Technologists/Continuing Experience Technologist

**Table 5.2 – Management reports with Practice parameter**

## **Meaningful Use – MU Administration > Configure Directory**

For ease of use and the MU lookups have been grouped together in the Configure window. As displayed in the figure below, the lookups grouped under MU are Allergy, FamilyHistory, FamilyRelation, Medication, SearchProviders, SmokingStatus, UnitOfMeasure, Vaccine and VaccineManufacturer.



**Figure 5.107 – MU Category in containing lookup tables pertaining to MU**

## Meaningful Use – Vital Signs, BMI and Growth Chart

Only numeric values can be entered for height/length, weight and blood pressure. These values can be changed on edit. The height/length, weight and blood pressure are all captured on the MU tab available in View/Edit, Scheduling, Registration and Perform Exam windows.

The screenshot displays the 'Meaningful Use' window in the eRAD RIS application. The 'Demographics at Encounter' section shows the following data: Height (5ft 10in), Weight (200 lbs), and BMI (28.7). The 'Meaningful Use' window has tabs for Medical Reconciliation, Immunizations, and Lab Orders. The 'Blood pressure' field is highlighted with a red box, showing 124 / 85. The 'Immunizations' table is empty.

Figure 5.108 – Height, weight, BMI and blood pressure captured

In the figure about the BMI value is auto calculated based on the height and weight values entered. Blood pressure is entered in the Meaningful Use window and is accessed via the Meaningful Use Information button outlined in red.

The height and weight fields can also now be configured to be required on arrival. This is based on the value of two new system configuration settings “**HeightRequiredOnArrival**” and “**WeightRequiredOnArrival**”. They both have a default value of False

System Config Code	Value	Default	Description
Contains: requiredon	Contains:	Contains:	Contains:
Click here to add a new row			
HeightRequiredOnArrival	True	False	(value = string) height is required when arriving the patient
WeightRequiredOnArrival	True	False	(value = string) weight is required when arriving the patient

Figure 5.109 – Displaying new SystemConfig settings

The screenshot shows the 'Demographics at Encounter' section of the eRAD RIS interface. The 'Height' field is marked with a red exclamation mark and 'ft in', and the 'Weight' field is also marked with a red exclamation mark and 'lbs'. A modal dialog box titled 'eRAD RIS' is open, displaying the message: 'The following errors must be corrected: 'Height' is required, 'Weight' is required.' with an 'OK' button at the bottom.

**Figure 5.110 – Height and Weight required on arrival**

If the patients Height and Smoking status was captured in a previous visit, this data will auto populate in the appropriate fields when the next study is registered.

The screenshot shows the 'Demographics at Encounter' section of the eRAD RIS interface. The 'Height' field is populated with '5ft 10in' and the 'Smoking status' dropdown is set to 'former smoker'. The 'Weight' field is empty, and the 'BMI' field is also empty. The 'Is pregnant' checkbox is unchecked. The 'Medications' section is visible below the demographics section.

**Figure 5.111 – Height and Smoking status auto populates from previous visit**

## Meaningful Use – Family Health History

Family health history is meaningful use requirement #170-314-a-13. The user needs to be able to record, access and edit patient's family health history.

To start, two new lookup tables have been introduced under the MU category on the Configure windows.

FamilyRelation lookup was added and its access is controlled by a new access string **“Config.LookupEditor.FamilyRelation”** with a default of none. This table contains the “first degree” relation options for the patient. This table will be pre-populated with build 41 and these values should not change or be altered.

Family Relation Code	Description	Display Order	Last Updated	Active
Contains: ▼	Contains: ▼	Equals: ▼	Contains: ▼	Contains: ▼
✱ Click here to add a new row				
▶ Brother	Brother	5	04-09-2013 2:24 PM	Y
Daughter	Daughter	6	04-09-2013 2:24 PM	Y
Father	Father	2	04-09-2013 2:24 PM	Y
Mother	Mother	1	04-09-2013 2:24 PM	Y
Sister	Sister	3	04-09-2013 2:24 PM	Y
Son	Son	4	04-09-2013 2:24 PM	Y

Figure 5.112 – FamilyRelation lookup table

The second new lookup table is the FamilyHistory table and access is controlled by **“Config.LookupEditor.FamilyRelation”** with a default of none. This table will also be pre-populated with snomed codes and descriptions. These values should not be altered.

Family History Code	Description	Display Order	Last Updated	Active
Contains: ▼	Contains: ▼	Equals: ▼	Contains: ▼	Contains: ▼
✱ Click here to add a new row				
160302006	Family history: Thyroid disorder	1	04-08-2013 3:22 PM	Y
160357008	Family history: Hypertension	1	04-08-2013 1:53 PM	Y
160364005	Family history: Congenital heart disease	1	04-08-2013 1:53 PM	Y
160377001	Family history: Asthma	1	04-08-2013 2:21 PM	Y
275937001	Family history of cancer	1	04-08-2013 1:53 PM	Y
429959009	Family history of heart failure	1	04-08-2013 3:22 PM	Y

Figure 5.113 – FamilyHistory lookup table

On the GUI side a new data pane titled “Family History” was added on the Patient tab. It replaces the Patient Notes data pane which has been moved to its own tab immediately following the Patient tab.

Family History				
	Relationship	Family History	Age At Diagnosis	Age At Death
▶	Mother	Family history of heart failure	40-49 years	
	Father	Family history: Hypertension	50-59 years	62
✎ Click here to add a new row				

**Figure 5.114 – Family History data pane**

**Relationship** - is populated with a new lookup FamilyRelation and we will load with first degree relatives (“Brother”, “Daughter”, “Father”, “Mother”, “Sister”, “Son”).

**Family History** - is populated with a new lookup FamilyHistory and this table must contain valid snomed ct concept codes. With the build 41 upgrade the following will be marked as active (“Family history: Thyroid disorder”, “Family history: Hypertension”, “Family history: Congenital heart disease”, “Family history: Asthma”, “Family history of cancer”, “Family history of heart failure”).

**Age of Diagnosis** - Are hard coded with the following values ("Pre-Birth", "Newborn", "In Infancy", "In Childhood", "In Adolescence", "20-29 years", "30-39 years", "40-49 years", "50-59 years", "60 years and older", "Unknown"). Values were added based of the Surgeon General's Family Health History Initiative.

**Age of Death** - field will take a numeric value for the age the family member passed away.



## Meaningful Use – Immunization Updates

Four new fields have been added to the Immunization data pane. Expiration Date, Route, Administration Site and a Notes field.

The screenshot shows the 'Meaningful Use' window. The top section contains various checkboxes for meaningful use criteria: Medical Reconciliation, Electronic Access to Health Record, Transition of Care to Another Provider, Transition of Care Summary Provided, Administered Influenza Vaccine, BMI Follow Up Plan, BMI Dietary Consultation, and Cessation Counseling. Below these are input fields for Blood pressure and Lab Orders Placed/Received.

The 'Immunizations' section features a table with the following columns: Expiration Date, Route, Administration Site, and Notes. The first row shows '07-24-2013', 'Intravenous', 'Left Lower Forearm', and 'This is a free text field'. A dropdown menu is open for the 'Administration Site' column, showing a list of options: Left Deltoid, Left Gluteus Med..., Left Lower Forearm (selected), Left Thigh, Left Upper Arm, and Left Vastus Later... Below the table is a button to 'Click here to add a new row'. At the bottom right of the table area are 'Encrypt file' and 'Export HL7' buttons. An 'OK' button is located at the bottom right of the entire window.

Expiration Date	Route	Administration Site	Notes
07-24-2013	Intravenous	Left Lower Forearm	This is a free text field
Click here to add a new row			

Figure 5.115 – Immunizations data pane additions

The values for Route and Administration Site are taken from hidden lookup tables that Admins will not be able to altered (hard coded values).

### Meaningful Use – CQM Filtered by Practice

In Build 41 we modified all meaningful use stored procedure for calculating cqm measures to pass in a practice code as a parameter so that users can only view data from practices they have access to see ( reason for change: B40 change on how management reports work. Management Reports are also filtered by practice the logged in user has access to.)

### Lastname, Firstname

It was requested that many fields in the application conform to Lastname, Firstname. Therefore, on all worklists, tabs, combo boxes and fields that refer to people, the names are now formatted Lastname, Firstname. If the person is a user of the RIS system, it will show as Lastname, Firstname (userid). In the case of referring doctors, it will show as Lastname, Firstname Middlename Suffix.

Throughout the code, the name format was changed as appropriate.

#### **User:**

The current user of this RIS will have their name in the titlebar of the application as First Middle Last [userid]

#### **RIS tabs (ie, Walk-in, Registration)**

RIS tab header will display LASTNAME, Firstname #accession for all work tabs.

#### **Order tab within a workflow tab set**

(unchanged) Referring doctor and CC doctors in the order tab for all roles is unchanged from 40:

**Last, First M**

#### **Perform exam window:**

In the mini-patient-history at the top of the screen, referring is: **Last**, (unchanged): **First Middle Suffix**  
Assigned radiologist, performing, assisting...

**(unchanged) Last, First**

### **Radiologist Dictate Screen:**

Assign To Radiologist

**Last, First Middle**

### **Audit screen**

Tab Title: Last, First #MRN

User who did the audit event:

**Last, First (userid)**

### **Worklists columns:**

Virtually all worklists in RIS were updated to this new pattern. In most cases, there was dependant code on the \_userid column, so these were left intact, and new columns were added to the worklist datasets to represent the names.

Referring column – now formatted to Last, First suffix

Radiologist, Tech, Transcriptionist, : Last, First Middle suffix (userid)

Patient: A new Patient name column was created which is Last, First

## 6. RIS Release Version Numbers

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	Full version release. <b>Core install required.</b>
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	<b>Core install required.</b> GUI.zip, web service and database updates
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	GUI.zip and Web service updates
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	Just WebAPI updated, no version changes. . Web service updates
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	GUI.zip, web service, and database updates
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we really did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	GUI.zip and Web service updates
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	GUI.zip and Web service updates. Also MIRTH mapping changes
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	Web service update
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	Web service update
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	GUI.zip, Web service and database updates
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	GUI.zip, Web service, database updates and SQL Management reporting
37	12	1.2.37.14267	1.2.37.13040	1.2.37.14161	1.2.37.14267	GUI.zip, Web service and database updates
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	GUI.zip, Web service and database updates
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	Full version release. <b>Core install required.</b>
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	<b>Core install required</b>
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	GUI.zip and Web service updates

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38	5	1.2.38.15513	1.2.38.15513	1.2.38.15513	1.2.38.15451	<b>Core install required.</b> GUI.zip, Web service and database updates.
38	6	1.2.38.15618	1.2.38.15513	1.2.38.15513	1.2.38.15618	GUI.zip and database updates
38	7	1.2.38.15768	1.2.38.15513	1.2.38.15768	1.2.38.15618	GUI.zip and Web Service updates
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release. <b>Core install required.</b>
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	<b>Core install required.</b> GUI.zip, Web service and database updates
40	-	1.3.40.16659	1.3.40.16659	1.3.40.16659	1.3.40.16659	<b>Core install required.</b> Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service
40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web service, database updates
40	5	1.3.40.17087	1.3.40.16659	1.3.40.17069	1.3.40.17087	GUI.zip, Web service, database updates
40	6	1.3.40.17146	1.3.40.16659	1.3.40.17146	1.3.40.17146	GUI.zip, Web service, database updates
40	7	1.3.40.17268	1.3.40.16659	1.3.40.17268	1.3.40.17259	GUI.zip, Web service, database updates
40	8	1.3.40.17364	1.3.40.16659	1.3.40.17362	1.3.40.17343	GUI.zip, Web service, database updates
40	9	1.3.40.17370	1.3.40.16659	1.3.40.17370	1.3.40.17370	GUI.zip, Web service, database updates
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.
40	11	1.3.40.17435	1.3.40.16659	1.3.40.17525	1.3.40.17370	Web service update
40	12	1.3.40.17685	1.3.40.16659	1.3.40.17685	1.3.40.17648	GUI.zip, Web service, database updates
40	13	1.3.40.17776	1.3.40.16659	1.3.40.17776	1.3.40.17648	GUI.zip, Web service
40	14	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18063	1.3.40.18063	GUI.zip, Web service, database updates
40	14.1	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18107	1.3.40.18063	Web service
40	15	1.3.40.18127(3GB)	1.3.40.16659	1.3.40.18127	1.3.40.18127	GUI.zip, Web service, database updates
40	16	1.1.3.40.18585 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip, Web service, database updates
40	16.1	1.3.40.18705	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip

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		(3GB)				
40	17	1.3.40.18780 (3GB)	1.3.40.18756	1.3.40.18756	1.3.40.18646	Core install required for Radiologist User Group. GUI.zip, Core setup, and Web Service updates
41	-	1.3.41.19135(3GB)	1.3.41.19135	1.3.41.19135	1.3.41.19135	Full version release

## 7. Resolved Defects

Bugs Suggested Features and Support Issues resolved in build 1.41. The extract is taken from Redmine bug tracking system and only displays defects resolved in 1.41.

Bug #	Priority	Subject	Category	Found Version
3664	Immediate	Wedge-Mirth speed needs to be improved!!!! CRA CANNOT GO LIVE ON THIS SAME BOX BEFORE THIS IS ADDRESSED	HL7	1.40
4186	Urgent	Multitab next workflow	Radiology Reporting	1.40
4149	Urgent	Reporting - Potential hazard of loading/saving incorrect dictation	Thick Client GUI	1.39.001
4094	Urgent	RadNet - Support HP ScanJet 3000 s2	Thick Client GUI	1.40.11
3700	Urgent	Billing detail table contains an unneeded copy of the study container	Web Services/DB	1.40
3463	Urgent	RIS Billing interface needs to send unique numeric MRN to MDIV	HL7	1.40
4461	High	Patient Wait Times	Mgt Reports	1.40
4305	High	Get attached user id not populating properly when making addendum requests	Web Services/DB	1.40
4213	High	PACS Caching Framework Busted	PACS Integration	1.40
4133	High	View Edit - Change scan type when patient has study open in reporting window will throw error	Thick Client GUI	1.40.014
4084	High	RRR - Forms 'criteria' - insurance criteria not recognized by right-click print forms from work list	Thick Client GUI	39.16

3871	High	Magview reports need addendums to be signed in Magview	Thick Client GUI	1.40
4125	High	Scheduling - User not informed at time of scheduling if study doesn't have billing code	Thick Client GUI	1.40
3810	High	Patient folder notes text boxes autosizing. (Fisher site visit)	Thick Client GUI	40.01
3690	High	WCF Services can be enumerated using the http mex binding	Web Services/DB	1.40
3689	High	c_SelectReportBodyAddendums need to add multi-sign information	Web Services/DB	1.40
3550	High	Scheduled study can appear on IVT work list twice	Thick Client GUI	1.40.005
3402	High	Push signature service stops processing all jobs when performed_end_date is null	Web Services/DB	1.38
3336	High	Required sections not being enforced	Thick Client GUI	1.40
2922	High	Reporting - insert macro doesn't select first field in macro moves to first field in report	Thick Client GUI	1.39
2824	High	Reporting - rejected reports should never go back to QA after signing again	Thick Client GUI	1.38
1691	High	Perform Exam - Error on click of complete button: "error determining study keys for status update"	Thin Client GUI	1.2.37.13040
4062	High	DD: Default option on saving new address info should be No when changing fax number.	Document Distribution	1.40
4500	Normal	Reporting - Missing speechmike setup file on Microphone Calibration wizard	Radiology Reporting	1.40.017



4496	Normal	Management Reports - Cancelled Reasons too slow	Mgt Reports	1.40
4490	Normal	Protect section headers does not protect against macro insertions	Radiology Reporting	1.40.017
4475	Normal	c_mgmt_study_details date of service	Web Services/DB	1.40
4362	Normal	abort study is sending all procedures back to orders to schedule	Thick Client GUI	1.40
4316	Normal	Add access string "Clinical.ResolveRadProblem "	Radiology Reporting	1.40
4306	Normal	Scanning - able to modify scan types even if they don't have access to Config.LookupEditor.ScanType		1.40
4288	Normal	having a ( ' ) single quote in a scan type description, causes the attachments data nugget from loading		1.40.15
4252	Normal	Reporting - custom fields list not displayed in logical order	Radiology Reporting	1.40
4217	Normal	Caching - Performance Can Be Improved.		1.40
4206	Normal	errors deserializing lookups when called by multiple threads	Thick Client GUI	1.40.015
4178	Normal	billing message will not build for tech only studies.	HL7	1.40
4156	Normal	ActiveAudioControl.DictationModeCurrent not reflecting actual Dictation Mode	Radiology Reporting	1.40
4131	Normal	Need index on c_visit.insurance_verification_approved_on_date	Web Services/DB	1.40
4089	Normal	Payment Detail Report - does not run at SE	Mgt Reports	1.40
4088	Normal	Scanning - cropping too much for ID cards		1.40

3996	Normal	HL7 Billing interface change the PID.18 to contain the accession number	HL7	1.40
3994	Normal	Activity WL is showing non active studies	Web Services/DB	1.40
3975	Normal	Verify External - button is greyed out in Patient Folder, even if you have permission	Thick Client GUI	39.10
3973	Normal	Scanning - Color issues	Thick Client GUI	1.40.012
3972	Normal	Blank Modality Lookup --> new site Index out of Range	Thin Client GUI	40.10
3971	Normal	RIS Administrator - permissions	Web Services/DB	39.10
3968	Normal	Mammo - Recall, Call back, Shor term follwup letter configuration.	Thick Client GUI	40.11
3967	Normal	Mammo Letters --> Manual printing of letters	Thick Client GUI	40.11
3965	Normal	Management Reports - RTAT Detail too slow	Mgt Reports	1.40
3959	Normal	screen access counts are inflated	Thick Client GUI	1.40.16638
3951	Normal	MU - Duplicate records for Merge Patients	Thick Client GUI	1.40
3950	Normal	MU - Get the following error when View/Print CQM Measures from rRIS	Thick Client GUI	1.40
3945	Normal	Remove Edit Order		1.00
3929	Normal	RadNet - Ranjan - fix MyView default issue	Thick Client GUI	1.40

3925	Normal	Reporting - Extra get config file not needed when opening a report.	Thick Client GUI	1.40
3923	Normal	Patch Updates - Unable to easily hide patch builds	Thick Client GUI	1.40
3922	Normal	RIS Referring Physician Search Details	Mgt Reports	1.40
3921	Normal	PatientWorkList - GetConfigFile / GetConfigFileList are going to the WS too often.		1.40
3915	Normal	ambiguous error on My Pending Signature WL	Web Services/DB	1.40
3906	Normal	Outside Reads: In viewedit the Assigned Radiologist dropdown doesn't have the Rad's for the "site_code" specified.		1.40
3897	Normal	Billing to Modality Type	Thick Client GUI	1.40
3864	Normal	Error on opening attachment window of Schedule Order window	Thick Client GUI	1.40.010
3859	Normal	Mgmt Reports c_study needs a field to store the version of the original signed off reprot	Mgt Reports	1.40
3855	Normal	Remove 6 -Mth / 13 -Mth Variance Report	Mgt Reports	1.40
3854	Normal	CD Import - Cast exception if an image set does not have a study_instance_uid		1.40
3768	Normal	Mammo - Ignored Reminder report - performance	Mgt Reports	40.01

3760	Normal	Management Report - Radiologist Dashboard	Mgt Reports	1.40
3748	Normal	Quality Review Rate	Thick Client GUI	40.00
3746	Normal	Scanning - Auto cropping needs to be improved		1.40
3736	Normal	Management Reports - remove defaulting of the sites value	Mgt Reports	1.40
3735	Normal	Management Reports - Radiologist Dashboard	Mgt Reports	1.40
3733	Normal	Medication Reconciliation should be checked when medication rb checked	Thick Client GUI	1.40
3726	Normal	Procedure code picker when creating macros/template filter issue	Thick Client GUI	1.40
3697	Normal	ICM Dashboard - Add parameter for Unknown Referring ID	Mgt Reports	1.40
3668	Normal	Management Reports - Transcription Dashboard	Mgt Reports	1.40
3653	Normal	mgmt report performance - Edited Jobs By User By Hour	Mgt Reports	1.40
3641	Normal	Reporting - soft return characters showing in the report editor	Thick Client GUI	1.40
3640	Normal	Reporting - insert macro not adding space between period and captial letter.		1.40

3637	Normal	Internal voice command not working. (next field, insert template/macro, etc)	Thick Client GUI	1.40
3631	Normal	6 -Mth / 13 -Mth Variance Report	Mgt Reports	1.40
3630	Normal	Exam Details pane doesn't contain everything the Summary pane does.	Thick Client GUI	1.40
3625	Normal	Duplicate NPI	Thick Client GUI	1.40
3620	Normal	Reporting - ability to load interactive dictionaries from user management	Thick Client GUI	1.38
3618	Normal	Management Reports - QA Radiologist Review	Mgt Reports	1.40
3601	Normal	Opening and Closing Screens is slowed down by the Recently Accessed List		1.40
3599	Normal	I_person_address clustered index	Thick Client GUI	1.40
3596	Normal	Reporting - summary panel not displaying legacy users	Thick Client GUI	1.40
3581	Normal	Report rendering with empty table tags causing a misleading message	Thick Client GUI	1.40
3573	Normal	Reporting - Laterality Check throwing "cannot insert bookmark error"	Thick Client GUI	1.40
3564	Normal	message: "an error occurred while printing forms" when printing some forms from patient history	Thick Client GUI	1.40.16638

3561	Normal	Missing Access String	Web Services/DB	1.40
3558	Normal	Addendum request generates a new c_interpretation row	Thick Client GUI	1.40
3554	Normal	Errors in the Procedure code table editor		1.40
3542	Normal	Unclear error message thrown when you chose an invalid value for 'State'	Thick Client GUI	39.10
3541	Normal	front desk activity report performance issue	Mgt Reports	1.40
3527	Normal	Error from lookup tables when choosing not to save changes.	Admin Tools	1.40.002
3509	Normal	Notification popup box fade too slow when clicking the "x"	Thick Client GUI	1.40
3453	Normal	Create macro from... Not working if template or macro browser is closed.	Thick Client GUI	1.40
3452	Normal	Document Model Info popup not disabling parent content base		1.40
3442	Normal	Exception filtering lookup	Admin Tools	1.40
3441	Normal	CaptureUIControlHelper not disabling parent form when showing popups	Thick Client GUI	1.38
3430	Normal	Scroll bar is either not displayed or when it is displayed is useless	Thick Client GUI	1.1.3.40.16854

3414	Normal	RRR - CCR Doc for MU is displaying 'Radnet User' beside the From: section	Thick Client GUI	39.10
3392	Normal	Allergy flag broken in Dev		1.40
3388	Normal	Mgmt MU Reports	Mgt Reports	1.39
3374	Normal	RRR Image Request Worklist is still showing 'Patient Id' as a column header, which should be MRN		39.10
3372	Normal	Bypass PACS correction does not release lock		1.40
3364	Normal	Cancel Order Dialog + Cancel button does not release lock	Thick Client GUI	1.40.16638
3362	Normal	Admin - template macros work list loses filters when editing a template/macro	Thick Client GUI	1.40
3352	Normal	Activity WL - Clear all filters on empty wl will throw exception	Thick Client GUI	1.40
3342	Normal	Referring without a first name preventing study from being worked in rad/mt workflow.	Thick Client GUI	1.40
3320	Normal	Cast error when performing an image request from some Rad WL	Thick Client GUI	1.40
3308	Normal	issue on tech screen when documenting a procedure where the active_flag is N	Thick Client GUI	1.40.16328
3305	Normal	Image Request - Cannot choose referring physician	Thick Client GUI	1.40

3249	Normal	study item certifications are not using the user defined order item certification precert status values		1.40
3231	Normal	Transcribe/Suspend button not loading defaults properly	Thick Client GUI	1.40
3230	Normal	Reset open skipped rows, open an addendum requested study throws an exception	Thick Client GUI	1.40
3144	Normal	Radiologist Dashboard - Completed Exams 7 Day trend is showing less than 7 days.	Mgt Reports	1.40
3138	Normal	tech can accidentally take exam out of exam done status when completing together	Thick Client GUI	1.40.16328
3084	Normal	Config setting default is rRIS Reports	Thick Client GUI	1.40
3044	Normal	Meaningful Use Close button realignment	Thick Client GUI	1.40
3032	Normal	Register Context menu shouldn't be available on Tentatively Signed studies.	Thick Client GUI	1.40
3026	Normal	Selected Attachments Tool Window	Thick Client GUI	1.40
3022	Normal	PersonHyperLink throws exception due to data received from HL7	Thick Client GUI	1.40
3008	Normal	Poor performance on management report Front Desk Activity Report	Mgt Reports	1.37
2989	Normal	Attachment viewer - inverting resets zoom level	Thick Client GUI	1.39



2986	Normal	Reporting - WPR error attempting to create WPR dictation	Thick Client GUI	1.39.001
2980	Normal	Report nugget signed on verbiage	Thick Client GUI	1.39
2956	Normal	Reporting - transcribed count at the bottom of the app is not including tentatively signed studies	Thick Client GUI	1.38
2954	Normal	Reporting - WPR workflow suspend dictation does not show on my suspended worklist	Thick Client GUI	1.38
2952	Normal	Reporting - when signing a report and empty fields are present move to the first one	Thick Client GUI	1.38
2912	Normal	RRR - Tech able to enter IVT notes ( with no specific IVT permissions)	Thick Client GUI	1.38.0
2688	Normal	Voice navigation which moves the cursor/position in the document does not result in axCdsEditorCtrl1_CursorChangedEvent	Thick Client GUI	1.39
2677	Normal	Create Report from Reset Open skipped rows	Thick Client GUI	1.39
2660	Normal	Template Macro Editor - Adv Assignment - user not defaulting	Thick Client GUI	1.39
2637	Normal	Next field command selecting multiple fields	Thick Client GUI	1.39
2628	Normal	Reporting screen not drawing in, if user make worklists active	Thick Client GUI	1.39
2544	Normal	"Reset" function in worklists does not appear to be working	Thick Client GUI	38.15

2469	Normal	Red X and application hang in Administration UserGroupPermission		1.38
2426	Normal	When scheduling (outside read, new appointment, walkin) and you enter the letter 'c' into the first name field, then press 'Patient Search' RIS throws an error.	Thick Client GUI	38.14
1864	Normal	BarCode font install not included in eRAD RIS Reporting Services Installation document	Thick Client GUI	1.37
1524	Normal	MU - Grids.. When saving auto select - Use Grid option if validation fails		1.2.37.12739
1248	Normal	Reporting layout can fail to load, causing patient history to not localize correctly	Thick Client GUI	1.35
1530	Normal	Macro editor		1.37
3846	Normal	Change references to all persons (patients and doctors) to be Lastname, Firstname		1.40
3931	Normal	RadNet - Ranjan - resolve "starts with" in Audit history	Thick Client GUI	1.40
3940	Normal	RadNet - Ranjan - fix arrow on next doc when the scanned doc is a report	Thick Client GUI	1.40
3969	Normal	Mammo Letters Worklist	Thick Client GUI	40.11

3978	Normal	WL Calculated columns missing in B40		1.40
4016	Normal	Performance - Turn off global animations		1.40
4130	Normal	"collection was modified" or "datatable internal index is corrupted" error when opening a radiologist screen	Thick Client GUI	1.40.18063
4408	Normal	Inactive rooms are appearing on the Tech available rooms list		1.40
3870	Normal	Reporting - Assing to Radiologist window	Thick Client GUI	1.40.010
4098	Low	View attachment from View/edit window	Thick Client GUI	40.01
3680	Low	Font size - not saving	Thick Client GUI	1.40
3671	Low	Weight field allows user to enter non-numerical values	Thick Client GUI	1.40
3623	Low	CD Import - better handle null PACS AE Title	PACS Integration	1.40
3544	Low	PatientContactTypeLookup should be hidden	Admin Tools	1.40
3334	Low	patient merge reject does not refresh merge worklist	Thick Client GUI	1.40.16593
3322	Low	View Edit should not be the default aciton on patient folder		1.40

3261	Low	specialty read and referring protocol notes do not display new line characters	Thick Client GUI	1.40.16328
3246	Low	Date column filters AM/PM switching advances date.	Thick Client GUI	1.40
3146	Low	Required fields dropping there icon when leaving the control.	Thick Client GUI	1.40
3087	Low	Meaningful Use Dialog Close button position is off	Thick Client GUI	1.40
2658	Low	Stored function c_getcontrastrequiredflag could return wrong value if multiple study items exist	Web Services/DB	1.39
2071	Low	Window handle error from Dictate window	Thick Client GUI	1.2.38.14194
1855	Low	Reporting - Exam details - Procedure name may not display completely	Thick Client GUI	1.1.2.38.13809

## 8. Known Limitations

The following are Bugs Suggested Features and Support Issues found in build 1.41. Bugs reported in previous versions are not captured as Known Limitation in this document.

#	Status	Priority	Subject	Resolved Build
4575	New	Urgent	Critical Results - Resolving causes error when signing exams	
4574	New	High	Outside Reads - history field changed to signs and symptoms	
4479	Resolved	High	Reporting - using re-use causing confusion when getting a message box like "Addendum Requested"	42
4411	Resolved	High	WorkItemManager failes on reloading a addendum study after WS error	
4379	Resolved	High	All signed by date column sorts	42
4366	Resolved	High	Transcribe next workflow (beeps)	42
4356	QE Rejected	High	Critical Result - CTRN - Unknown referrers added in critical result window display as invalid	
4354	New	High	Long lookup time-to-live is causing problems	
4090	New	High	RIS/PACS desktop integration ( no default value on PACS Server type)	
4577	New	Normal	View Edit - open view edit window and save with no changes made logs entry to audit history	

4576	New	Normal	Personnel - Internal person notes	
4569	New	Normal	suspend button is displayed on the bottom of the reporting screen after opening a suspended case	
4567	Resolved	Normal	Reporting - notifications need to be placed above action buttons.	42
4566	Resolved	Normal	Reporting Reuse - Next workflow loads cases that are pending saving.	42
4560	New	Normal	Some message boxes don't close when hitting X	
4557	Resolved	Normal	Read only mode hides recording button, but can still record using microphone	42
4556	Resolved	Normal	Read only mode not reflecting on minimized dictation controls	42
4555	Resolved	Normal	When opening a study in read only, user should get a prompt	42
4551	Resolved	Normal	Modified GoggleSearchAction to support Multiple passed in params	42
4548	New	Normal	CTRM - Notes field isn't read only	
4547	New	Normal	CTRM - Reopening the Critical Results window caused error	
4544	Resolved	Normal	Send-to button blanks out the reporting screen	42

4543	Resolved	Normal	RXNorm is not captured from NewCrop	42
4542	Resolved	Normal	Worklist refresh exception	42
4541	Resolved	Normal	autosave - button positions should be switched	42
4540	Resolved	Normal	Autosave - close should prompt to delete	42
4539	Resolved	Normal	Autosave - double click row does nothing	42
4536	Resolved	Normal	Reporting - Reuse enabled status area messages not populating for action buttons	42
4533	Resolved	Normal	Reporting - edit template > make changes > x to close > no prompt presented about changes	42
4532	Resolved	Normal	Reporting - edit template > esc > cancel will close the form instead of cancelling	42
4527	New	Normal	Attachments - Verbal button causing error	
4525	New	Normal	Pre-Auth required before I select my referrer	
4522	New	Normal	intermittent error: transaction was deadlocked on lock resources with another process and has been chosen as the deadlock victim	
4521	Resolved	Normal	Scanning - Editing Document width and height causing error on blanks	42

4519	New	Normal	if you get an exception while opening a recovered dictation that dictation is lost	
4516	Resolved	Normal	Reporting - MT polling enabled open RIS initially will result in messed up reporting screen	42
4515	New	Normal	If you get an exception while opening a dictation with floating windows the floating windows do not close when the tab closes	
4512	New	Normal	WPR workflow not working with screen reuse	
4511	New	Normal	CDA - ordered List vs unordered lists	
4510	Resolved	Normal	Reporting - editing reports MT's have the microphone selection option available	42
4509	New	Normal	Caching reporting screen - panels stay open after close	
4508	Resolved	Normal	Transcriptionist next workflow not properly skipping	42
4503	New	Normal	Perform Exam - Complete / Start can advance a study when it shouldn't	
4497	New	Normal	Deleting a table in a report leaves the tables but deletes the section header	
4483	New	Normal	Reporting - Add patient folder control to reporting window will not display history	
4481	Resolved	Normal	LogTextBox - Permission for an admin to edit previous log details isn't always available.	42



4480	Resolved	Normal	b41 Joe Testing - you can backspace in patient notes and erase the date and name	42
4463	New	Normal	Transparency on notifications	
4457	New	Normal	B41 Joe Testing - splitting order - wrong one gets precert	
4450	New	Normal	Auto-open worklist won't open if you cancel the chair selection prompt	
4449	New	Normal	Changes made to set up do not auto refresh appt book. Have to close and relaunch appt book.	
4444	New	Normal	Scanning - Order/Patient/Exam Level can change when re-viewing the document	
4443	Resolved	Normal	External Report Workflow - changing room/procedure resets external flag.	42
4436	New	Normal	Notification wording/layout	
4434	Resolved	Normal	Outside Reads do not fall into external workflow	42
4431	New	Normal	Forms in labels require a rule otherwise they will never be available	
4429	New	Normal	Opening report drafted study in Create/Edit Report marks study dirty on open	
4426	Resolved	Normal	Reports that should have site filter	42

4423	New	Normal	User preference need to restart application	
4421	New	Normal	Shortcut for Tables not working in report editor (CTRL + T)	
4414	Resolved	Normal	Importing multiples studies into one EMR order throws an already declared exception	
4405	New	Normal	Patient ID still appearing as columns on person merge request WL	
4404	New	Normal	Pending PACS correction WL contains Contributed A/B columns	
4400	New	Normal	EMR Patient Linking causes insurance error when printing forms.	
4395	New	Normal	Report margins should indicate units.	
4392	New	Normal	alignments of MT screen buttons in user preferences are a little miss aligned	
4389	Resolved	Normal	Reporting - Addendum request make notes required on request and reject.	42
4387	QE Rejected	Normal	Reporting - auto save items not sizing appropriately in the list of files to recover	
4386	New	Normal	Report History Error	
4383	New	Normal	External Report Workflow check box loses value on open of view edit	

4382	New	Normal	Opening Editing - patient name is lower case	
4381	New	Normal	Preview report issue where new changes to report config doesn't take	
4378	New	Normal	Canceling Unscheduled orders not appearing on Patient Folder	
4377	New	Normal	Procedure code picker when creating search macros/template filter issue	
4374	New	Normal	Delete Dictation/Report and Reset Status not available for exam done status with exsisting interpretation rows	
4372	New	Normal	Creating a new appointment from the patient search window causes error.	
4359	New	Normal	Ranjan - Need all dictated by date WL	
4343	New	Normal	Change password of a credential swap user while logged on, means can't swap	
4341	Resolved	Normal	QA worflow problem flag #2894	42
4326	In Progress	Normal	Reporting - Multiple Pending Signature notifications raised	
4322	New	Normal	Dark Mode misses	
4308	New	Normal	Patient Folder - Selected Summary not resizing properly when dragging the pane	

4299	New	Normal	Administration - MModal Document Model - error on right click preview of expanded rows	
4298	New	Normal	Reporting - Show all templates will bold a template that has no connection with current study	
4274	New	Normal	All Signed By Date WL missing context menu option for Patient Folder	
4267	Resolved	Normal	Report context menu item does not have access string	42
4264	New	Normal	Ris remembers it's position but not based on user login	
4202	New	Normal	Many user-id columns still in transcription worklist	
4198	New	Normal	patient folder doesn't load unless part of the initial layout on open of rad screen	
4197	Resolved	Normal	Hard to find patient first and last name in exam search	
4193	Resolved	Normal	Contact log tab - expanding the contact log to display all rows throughs error	
4185	In Progress	Normal	Login - After logging in as a Rad user the splash screen doesn't always repaint	
4179	New	Normal	Pending dictation WL showing locked items	
4153	Resolved	Normal	Sort on audio length throws error on worklist refresh	42

4128	New	Normal	Adding insurance policies on new patient	
4118	New	Normal	Reporting - TemplateMacro editor Hitting refresh can duplicate fields or inserted text	
4101	New	Normal	Birad picker, cannot select recommendation as it doesn't load.	
4100	New	Normal	Right click on reporting drop down buttons	
4082	New	Normal	Previewing unsaved addendums from the reporting screen.	
4070	New	Normal	Patient Merge - Patient history does not show orders	
3949	New	Normal	Encrypt audio files used in report recovery autosave	
4435	New	Low	Ranjan - Age format in worklist is different than in data panes - prefer data pane look	
4385	New	Low	Reception WL still refreshing while not on the screen	
4358	New	Low	Ranjan - Terminology updates	
4357	New	Low	B42 - Missing Access Strings	
4324	New	Low	Worklist Auto Open not auto opening	

4282	New	Low	Template / macro - Create using filter criteria	
4247	New	Low	Open at login user preference (usability)	
4163	New	Low	Perform Exam - Cancelled studies in patient history list have buttons enabled	
4028	New	Low	Locking - not warned about stealing locks with pacs enabled	
4672	New	Normal	Auto Refresh Rate inconsistent	







# **User Release Notes**

for eRAD RIS  
Version 1  
Build 41.1

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## **1. Purpose**

This document describes some of the new features and changes implemented in eRAD RIS as of the end of Sprint 41 and subsequent server releases. This version of eRAD RIS is referred to as Build 1.3.41.

Only features which can be visually demonstrated to the user will be outlined in this document.

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS management team.

## **3. Installing/Accessing the Application**

The installation guide for the eRAD RIS client have been posted to the RadNet Wiki page at <http://mdbal01rdtweb/Wiki/>

Under the RIS menu click on the rRIS page. The credentials to access the page are:

Username: rRIS

Password: Summerside

*Please note that Build 1.41.1 is considered a new core release of the application and will require a reinstallation of eRAD RIS. This is accomplished by navigating to the eRAD RIS shared installation drive and running the CoreInstall.bat file (ex: I:\RISDeployment\CoreInstall.bat)*

If you experience difficulties accessing the application please do not hesitate to contact Darcy Noye with the PEI RIS Development Team.

#### 4. New Access Strings and Configuration Settings

Setting Placeholder	Setting	Default	Purpose / Controls Access to
Ris.exe.config	<b>MModalDataTransferValue</b>	None	Override the user preference for M*Modal's Data Transfer.  See feature <a href="#">Reporting – Ability to Configure MModal Transfer Task</a> in this document for more details

## **5. New Features and Enhancements**

### **Reporting – Talked to Doctor Macro**

Radiologists often call the referring physicians office while reading cases with time sensitive findings. In these cases they contact the referrer to let them be notified and take any required actions before the report has been drafted, QAed, signed and distributed.

After contact with the referring office the radiologist add details to the report. To support such calls we have added custom fields in the Template/Macro editor to insert a “Talked to Doctor” statement in the report.

Fields added are (with examples)

**TimeStamp12** - 4:30pm

**TimeStamp24** – 16:30

**Today** - 11-20-2013

**ReferringShort** – Dr. Last

**ReferringLong** – Dr. First Last

Field Attributes

Name :  
Enter field name

Cue :  
Enter cue data

Grammar :  
Enter grammar data

Default :  
Enter field's default value

Dataset :  
Custom Fields [v] [Reset]

Table :  
Custom Fields [v]

Column :  
ReferringLong  
ReferringShort  
SignsAndSymptoms  
Technique  
TechNotes  
TimeStamp12  
TimeStamp24  
Today

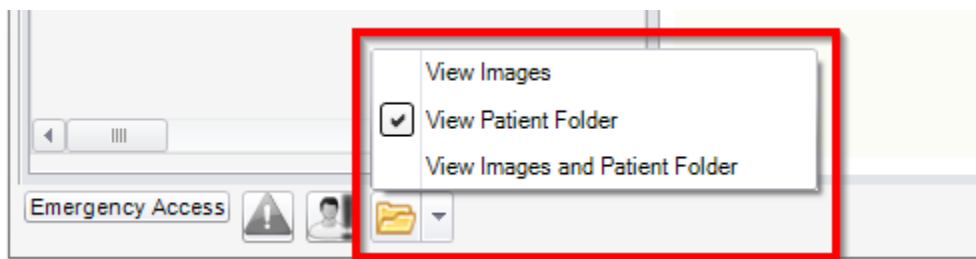
**Figure 5.1 – Custom fields added for creation of Talked to Doctor macro**

## **Reporting – Open Patient Folder when Signing**

Users currently have two main layouts. Either they are signing or dictating. Reason for this is that most signing task don't require the full patient folder detail, pacs images or dictation. So the signing layout is typically much smaller or less detailed then the dictation layout.

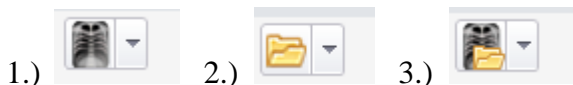
Users on occasion do want to display the Patient Folder and other detail similar to dictation when signing reports.

We now provide the user ability to load the dictation layout (patient folder) when signing reports. This is a manual click to load the dictating (patient folder) layout.



**Figure 5.2 – Signing mode layout options**

In the example above you can see that the Load Images button has been converted to be a split button with the additional options for “View Patient Folder” and “View Images and Patient Folder” with the “View Patient Folder” currently set as the default. This new dropdown button acts like other dropdown buttons for the reporting screen. Click the arrow to open other options and select option as desired. Holding the CTRL+<option> will render it the default and save in your user preferences.



**Figure 5.3 – Options available as default**

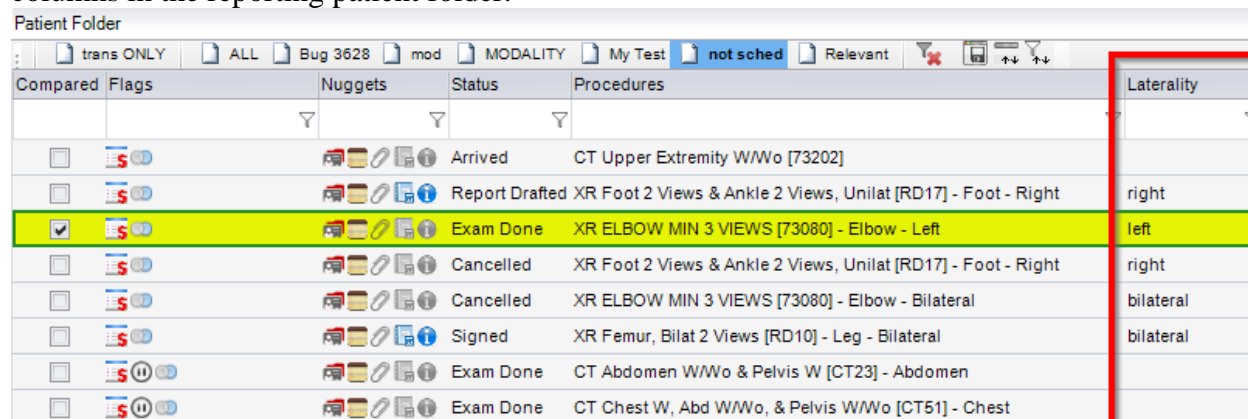
The three images above show the icon when set as default action for 1.) View Images 2.) View Patient Folder 3.) View Images and Patient Folder

When the Sign Report window is reloaded with the next study either from the work list or from the Submit/Sign/Suspend/Skip and Continue option the users Signing Layout will be used. What this means is that it will load the dictation layout when clicking Load Patient Folder but it won't be sticky.



## Reporting – Add Laterality to the Patient Folder

The patient folder within the reporting window had the laterality in the procedure description, but it was desired to have this in its own column. In 41.1 this column has been added to the patient folder. The column can be filtered, sorted, removed from current view, etc... as other columns in the reporting patient folder.

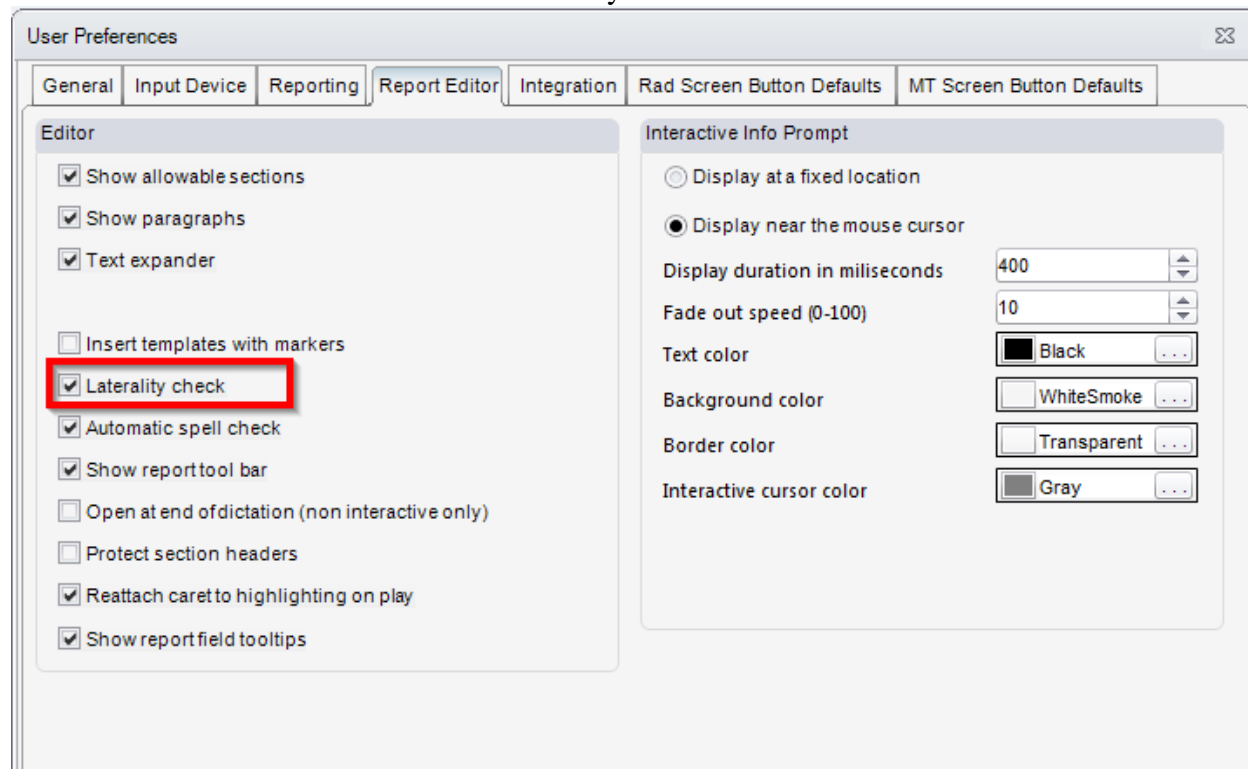


Compared	Flags	Nuggets	Status	Procedures	Laterality
<input type="checkbox"/>			Arrived	CT Upper Extremity W/Wo [73202]	
<input type="checkbox"/>			Report Drafted	XR Foot 2 Views & Ankle 2 Views, Unilat [RD17] - Foot - Right	right
<input checked="" type="checkbox"/>			Exam Done	XR ELBOW MIN 3 VIEWS [73080] - Elbow - Left	left
<input type="checkbox"/>			Cancelled	XR Foot 2 Views & Ankle 2 Views, Unilat [RD17] - Foot - Right	right
<input type="checkbox"/>			Cancelled	XR ELBOW MIN 3 VIEWS [73080] - Elbow - Bilateral	bilateral
<input type="checkbox"/>			Signed	XR Femur, Bilat 2 Views [RD10] - Leg - Bilateral	bilateral
<input type="checkbox"/>			Exam Done	CT Abdomen W/Wo & Pelvis W [CT23] - Abdomen	
<input type="checkbox"/>			Exam Done	CT Chest W, Abd W/Wo, & Pelvis W/Wo [CT51] - Chest	

Figure 5.4 – Reporting patient folder with new Laterality column

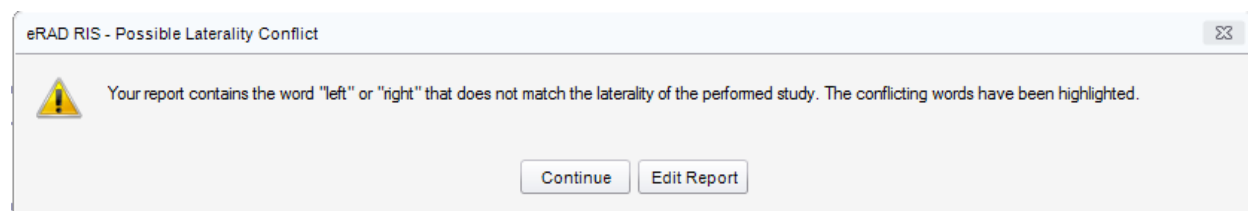
## Reporting – Laterality Check when Transcribing Reports

In previous versions a laterality check was performed when signing and when verifying reports. In 41.1 the laterality check is performed for transcription as well as signing. Transcription users will need to have the User Preference Laterality Check selected to enable this feature.



**Figure 5.5 – User Preference Laterality check**

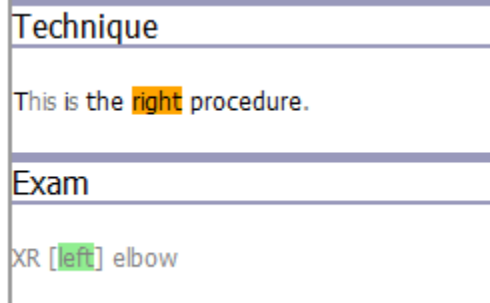
If your procedure contains laterality and your report has a conflicting left or right the user will be informed via message on selecting the Transcribe button.



**Figure 5.6 – Laterality conflict on Transcribe message.**

Selecting Continue will ignore the conflict and complete transcription. The Edit Report button will leave the editor window open and highlight the conflicting and matching literalities.

The report in my example was on a procedure with a left laterality in the screenshot below the conflicting laterality of “right” and matching laterality of ‘left’ are left highlighted in the report.



**Figure 5.7 – Conflicting and matching literalities are highlighted in report**

## **Reporting – Remove Content Tags from CDA when Creating Macros/Templates**

eRAD RIS offers the ability for a user to copy an existing report as a template for future reports. This functionality is inhibited by the fact that the new template they create contains mm:status and mm:part that should be stripped out.

As a result of the mm:status and mm:part still contained in the template, some of the jumping problems we have encountered on play back were related to time stamps being saved in templates and macros at the time of save. To correct this we found we could manually remove the time stamps from the underlying document.

We are now using the convertCdsToCda method to remove the time stamps and unneeded tags.

## **Reporting – Ability to Configure MModal Transfer Task**

The ris.exe.config now has an app setting to override the user preference for M\*Modal's Data Transfer Config: **MModalDataTransferValue**

Acceptable values are any sum of the following options:

**SUBMIT\_TRAINING\_INFO:** Upload log of user interaction (including recorded audio) to server for profile building. Applicability: only for local recognition; ignored for remote recognition. constant value = **1**

**SUBMIT\_ERROR\_LOGS:** Whether to automatically submit an error report for debugging after an uncontrolled shutdown, or when encountering another non fatal error. Applicability: all modes; requires storage manager for crash log uploads (non-fatal error reports can be submitted without). constant value = **2**

**STORE\_USER\_SETTINGS:** If set, store user preferences (including audio gain etc) on CDS server, and retrieve on next startup. Applicability: all modes. constant value = **4**

**UPDATE\_PROFILES:** If set, checks at session creation whether an updated user profile is available on the server. If yes it is downloaded in a background thread and used as soon as it becomes available. Until then the recognizer would use either a speaker independent profile, or an older locally cached profile version (only if an IStorageManager is configured). Applicability: local recognition; ignored for remote. constant value = **8**

**UPDATE\_RECOGNIZER:** If set, check in regular intervals whether an updated compatible recognizer version is available on the server. If yes, the recognizer mode is downloaded in a background thread and used when the local recognizer is next instantiated (i.e. not switched out in a running session). Applicability: local recognition; ignored for remote. Requires an IStorageManager, ignored if none is configured. constant value = **16**

**WRITE\_DEBUG\_LOG:** Like SUBMIT\_TRAINING\_INFO, but leaves information in a local IStorageManager for debug purposes instead of (or in addition to) uploading it to a server. Applicability: local recognition; ignored for remote recognition constant value = **32**

If the value is not present or invalid, we resort to existing logic. This would be to check the user config for auto download, if present use 29 else 13

13 = SUBMIT\_TRAINING\_INFO, STORE\_USER\_SETTINGS, UPDATE\_PROFILES  
29 = SUBMIT\_TRAINING\_INFO, STORE\_USER\_SETTINGS, UPDATE\_PROFILES, UPDATE\_RECOGNIZER

0 (zero) is a valid option. Zero will disable the calls.

## Reporting – MT Edit Text Color

MT edit text color has been set up as a user preference that is accessible in your editor preferences. Once a color is chosen it will take effect the next time the editor window is opened. (Doesn't take effect in current editor window)

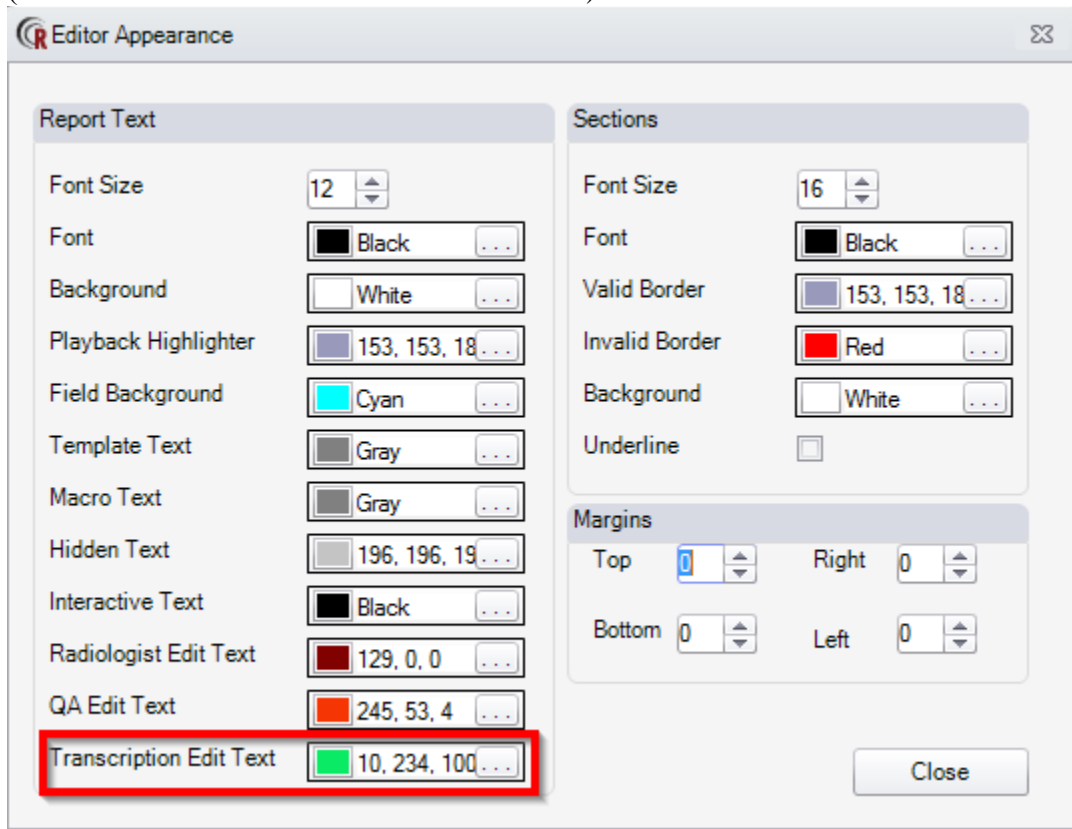
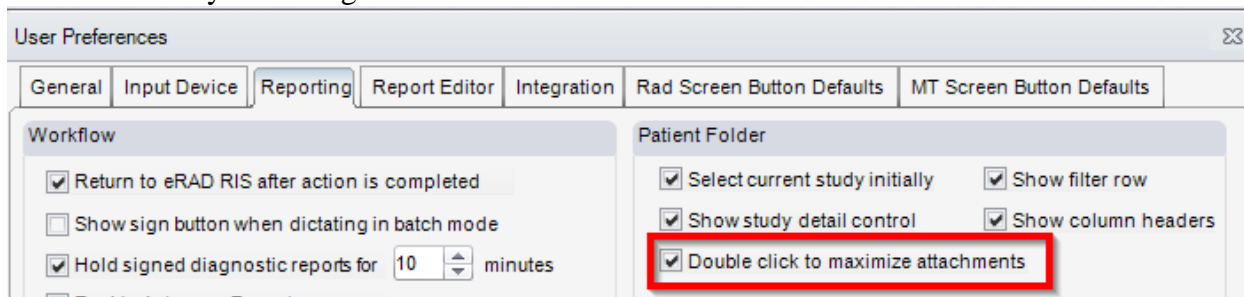


Figure 5.8 – Transcription Edit Text color in Editor Appearance window

## **Double Click to Launch Attachments in Full Screen**

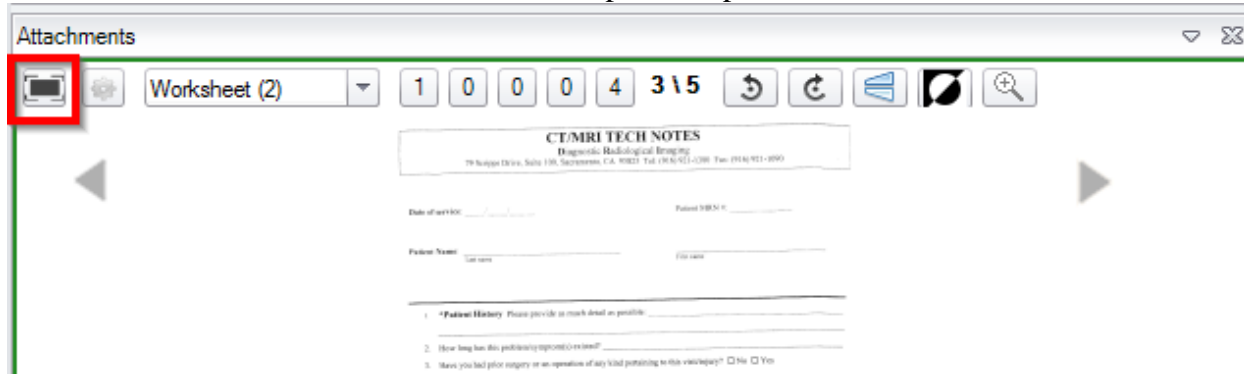
In the user preferences we have a setting for “Double click to maximize attachments”. With this set double clicking on an attachment will maximize the tool window to the current screen. Once maximized you can double click to restore it to its previous location or in the case of a reporting floating window you can close the window with the “X” in the top right corner (when in full screen maximized mode).

If you are to save your layout with this configuration, the full screen maximized toggle will not save with the layout manager.



**Figure 5.9 – User preference to enable double click to maximize attachments**

In addition to the double click to maximize the user can also use the button in the upper left of the Attachments or Selected Attachments data pane to open in full screen.




**Figure 5.10 – Button on Attachments data pane to launch in full screen.**

## Attachments “Show Me Everything” Option

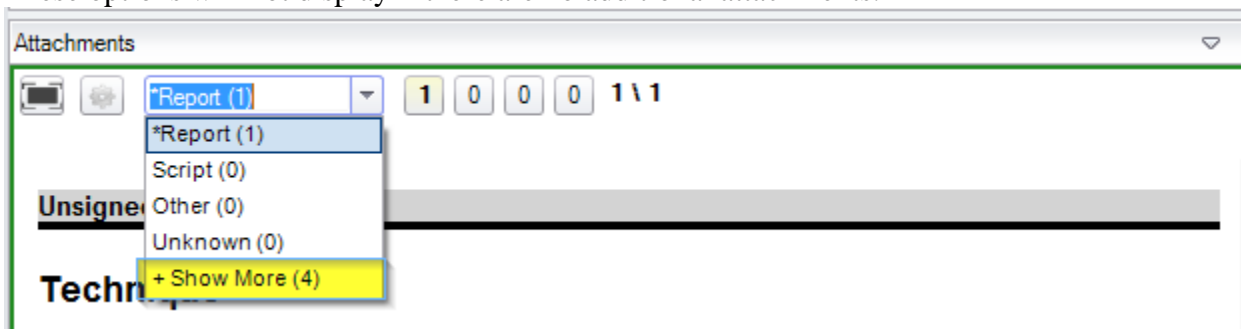
The attachment types dropdown can be configured to display only those attachments they want to see appear in the Attachments data pane or data nugget. We have added an option to enable the users to have access to the remaining attachments that may be associated with the patient.

Two new options will appear in the attachment types dropdown

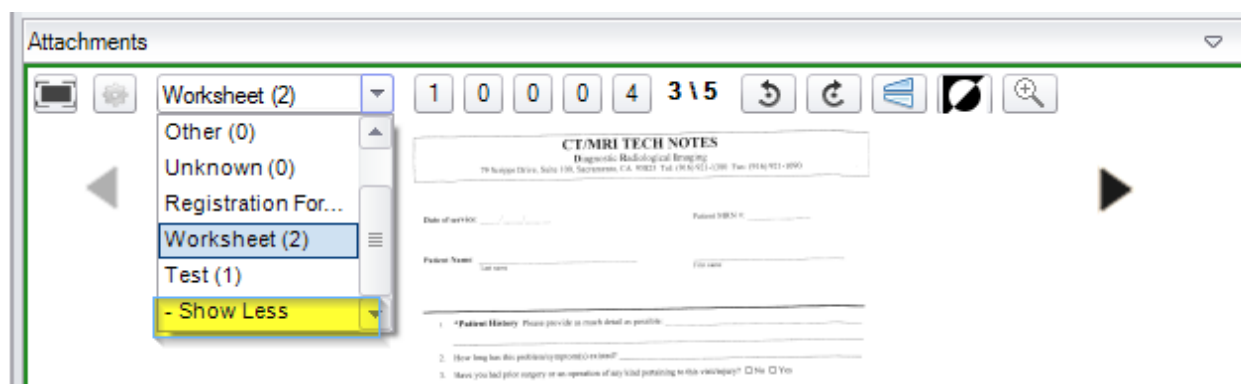
- + Show More
- Show Less

By default the attachment data nugget opens with only the scan document types the user wants to see, which is configurable via the '  button'. By choosing "+ Show More" the attachment data nugget will reopen and display all attachment types regardless of user preference.

These options will not display if there are no additional attachments.



**Figure 5.11 – Show more attachments**



**Figure 5.12 – Show less attachment options.**



## Relevancy Calculation Adjustable via Configuration

In production we have procedure codes that because of legacy data have very different names even on different modality types, but those procedures are actually exactly the same and should match exactly when assigned a relevancy score. Previous to B42 this was not possible because the relevance calculation was based entirely on word matching. A score was assigned based on the number of matching words and words that are modality type, body part or laterality are given great weight in the matching. Furthermore the administrator can setup the site so that only studies done on the same modality are considered relevant.

A new window titled Relevance Override has been added and is accessed from the “Override...” button on the Relevance lookup table.

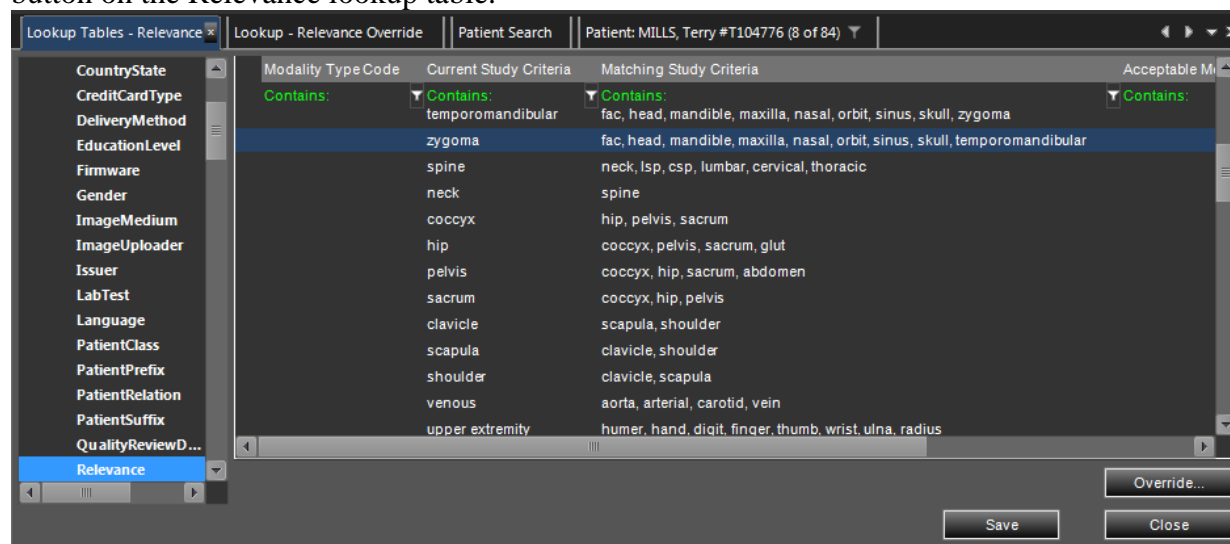


Figure 5.13 – Accessing the Relevancy Override window

When procedures in the patient’s history have a matching relevancy override the configuration defines how much weight will be assigned as part of the procedure matching score (value between 0 and 100) and if the outcome will produce a Matching or Non-Matching Relevance Flag.

This solution also allows laterality to be an option part of the matching criteria. If the laterality is blank then it isn’t considered as part of the matching criteria; however, if laterality is selected as “Same” then the rule only applies if the laterality of both procedures is identical. If the laterality is selected as “Different” then the rule only applies when the laterality differs and can be used to lower the score or make it Not Relevant, which could be useful when you want to give a high score when the laterality matches but a significantly lower score when the laterality is different.

Lookup Tables - Relevance		Lookup - Relevance Override	Patient Search	Patient: MILLS, Terry #T104776 (8 of 84)			
Procedure Code X	Procedure Code Y	Laterality	Adjusted Score	Override Relevancy	Last Updated		
Contains:	Contains:	Contains:	Equals:	Contains:	Contains:		
76645MA1 US zBREAST & MA DIGITAL MAMMO CB DIAG BI sample1 XR Chest 2 Views PA and Lateral	G0206CB/US MA DIGITAL MAMMO CB DIAG UNI & US BREAST sample2 AMDX CHEST 2 VIEWS		100	Relevant	08-19-2013 2:52 PM	Y	
71275 CTA Chest W/Wo	71270 CT Chest W/Wo		100	Relevant	08-19-2013 2:52 PM	Y	
71275 CTA Chest W/Wo	71250 CT Chest Wo		90	Relevant	08-19-2013 2:52 PM	Y	
71275 CTA Chest W/Wo	71260 CT Chest W		90	Relevant	08-19-2013 2:52 PM	Y	
71275 CTA Chest W/Wo	CT1 CT Chest Wo & Abdomen Wo		90	Relevant	08-19-2013 2:52 PM	Y	
MA511 MA Digital Needle Loc 3 Sites Unilateral W Clip	MA510 MA Digital Needle Loc 2 Sites Unilateral W Clip		0	NotRelevant	08-19-2013 2:52 PM	Y	

**Figure 5.14 – Relevance Override**

When the user clicks on the “Override...” button a tab opens up for the “Relevance Override” table, which allows you to specify two procedures (X and Y). When calculating relevancy if the studies match based on X and Y then the adjusted score will be applied and the relevancy flag will be set based on the selected value in the “Override Relevancy” column.

Note: The “Adjusted Score” and “Override Relevancy” columns are optional. If the “Adjusted Score” is blank then the score will remain as it was calculated without the override but the relevancy flag override would apply. Also, if the “Override Relevancy” column is blank only the score will be adjusted.

In the above Relevance Override configuration the procedures 76645MA1 and G0206CB/US are interesting. One is a US Breast & MA MAMMO CB and the other is a MA Mammo CB and US Breast. The default word matching produces a relevance score that is very close but not exact therefore some installations of RIS will want to correct for this. The following screen shots shows the relevancy results for a test patient’s history – the first screen is with the override rule inactive and in the second screen shot the rule has been activated.

Relevance...	Relev...	Flags	Nuggets	Status	Procedures	Scheduled Date
				StartsWith: signed	Contains: mammo	
Y	100			Signed	MA DIGITAL MAMMO CB DIAG UNI & US BREAST [G0206CB/US] - Breast - Left	12-13-2012 2:52 PM
Y	72			Signed	MA DIGITAL MAMMO CB DIAG UNI & US BREAST [G0206CB/US]	07-19-2011 10:15 AM
Y	65			Signed	MA Digital Mammo Diag Uni [G0206] - Breast	11-16-2012 8:43 AM
Y	64			Signed	MA DIGITAL MAMMO SCREEN BIL [G0202] - Breast	08-19-2012 1:37 PM
Y	64			Signed	MA DIGITAL MAMMO SCREEN BIL [G0202] - Breast	08-18-2012 12:54 PM
Y	64			Signed	MA DIGITAL MAMMO SCREEN BIL [G0202] - Breast	08-18-2012 12:54 PM
Y	64			Signed	MA DIGITAL MAMMO SCREEN BIL [G0202] - Breast	08-17-2012 1:36 PM
N	68			Signed	US zBREAST & MA DIGITAL MAMMO CB DIAG BI [76645MA1] - Breast - Bilateral	08-18-2012 9:05 AM

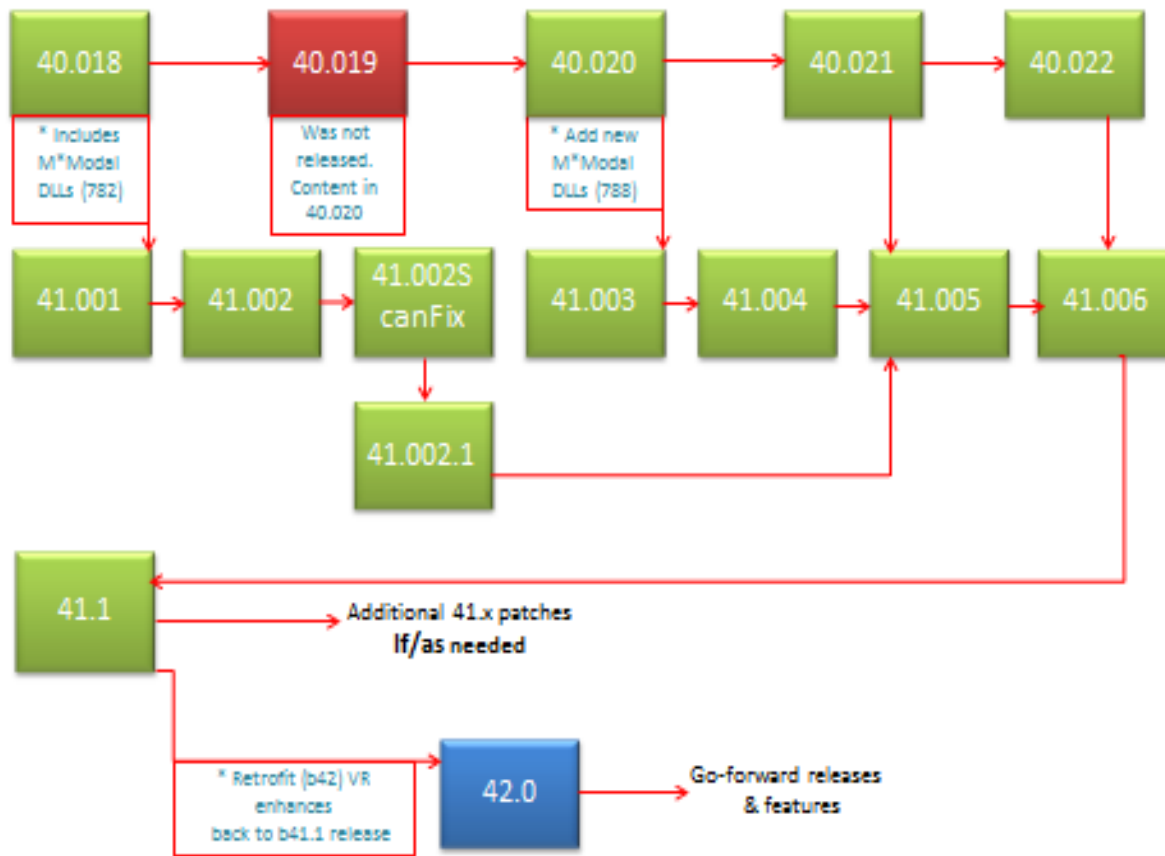
Relevance...	Relev...	Flags	Nuggets	Status	Procedures	Scheduled Date
				StartsWith: signed	Contains: mammo	
Y	100			Signed	MA DIGITAL MAMMO CB DIAG UNI & US BREAST [G0206CB/US] - Breast - Left	12-13-2012 2:52 PM
Y	99			Signed	US zBREAST & MA DIGITAL MAMMO CB DIAG BI [76645MA1] - Breast - Bilateral	08-18-2012 9:05 AM
Y	72			Signed	MA DIGITAL MAMMO CB DIAG UNI & US BREAST [G0206CB/US]	07-19-2011 10:15 AM
Y	65			Signed	MA Digital Mammo Diag Uni [G0206] - Breast	11-16-2012 8:43 AM

**Figure(s) 5.15 – Before and After Override applied**

Note: that in the first screen shot without the Relevance Override, the 76645MA1 doesn't even show up as relevant because in the base relevancy rules there is a rule that says only MA modality type studies are relevant to MA studies. In the second screen shot the rule for 76645MA1 and G0206CB/US says the procedure matching will get a score of 100% but since the procedure matching only accounts for half of the total score (the other half is used to sort by date), therefore we see the score increase from 68 to 72 and 76645MA1 actually gets placed before the older G0206CB/US study because it's a recent prior.

## 6. Code Stream

eRad RIS – source code evolution



### Legend:

**Green = Released software**

**Red = Will not be released**

**Blue = Future release**

## 7. RIS Release Version Numbers

Build	Patch	UI Version	Core Version	WS Version	DB Version	Notes
37	-	1.2.37.12843	1.2.37.12782	1.2.37.12843	1.2.37.12843	Full version release. <b>Core install required.</b>
37	1	1.2.37.13040	1.2.37.13040	1.2.37.13039	1.2.37.13003	<b>Core install required.</b> GUI.zip, web service and database updates
37	2	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	GUI.zip and Web service updates
37	3	1.2.37.13069	1.2.37.13040	1.2.37.13069	1.2.37.13003	Just WebAPI updated, no version changes. . Web service updates
37	4	1.2.37.13171	1.2.37.13040	1.2.37.13165	1.2.37.13171	GUI.zip, web service, and database updates
37	5	1.2.37.13347	1.2.37.13040	1.2.37.12979	1.2.37.12979	Bug was discovered with version numbers, this is why it appears we went backwards in the version number but we really did not.
37	6	1.2.37.13665	1.2.37.13040	1.2.37.13580	1.2.37.12979	GUI.zip and Web service updates
37	7	1.2.37.13807	1.2.37.13040	1.2.37.13799	1.2.37.13807	GUI.zip and Web service updates. Also MIRTH mapping changes
37	8	1.2.37.13807	1.2.37.13040	1.2.37.13827	1.2.37.13807	Web service update
37	9	1.2.37.13807	1.2.37.13040	1.2.37.13839	1.2.37.13807	Web service update
37	10	1.2.37.13895	1.2.37.13040	1.2.37.13895	1.2.37.13895	GUI.zip, Web service and database updates
37	11	1.2.37.14161	1.2.37.13040	1.2.37.14161	1.2.37.14161	GUI.zip, Web service, database updates and SQL Management reporting
37	12	1.2.37.14267	1.2.37.13040	1.2.37.14161	1.2.37.14267	GUI.zip, Web service and database updates
37	13	1.2.37.14326	1.2.37.13040	1.2.37.14326	1.2.37.14326	GUI.zip, Web service and database updates
38	-	1.2.38.14486	1.2.38.14486	1.2.38.14486	1.2.38.14486	Full version release. <b>Core install required.</b>
38	1	1.2.38.14748	1.2.38.14748	1.2.38.14748	1.2.38.14748	<b>Core install required</b>
38	2	1.2.38.15182	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	3	1.2.38.15251	1.2.38.14748	1.2.38.14748	1.2.38.14748	GUI.zip update only
38	4	1.2.38.15327	1.2.38.14748	1.2.38.15290	1.2.38.14748	GUI.zip and Web service updates

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38	5	1.2.38.15513	1.2.38.15513	1.2.38.15513	1.2.38.15451	<b>Core install required.</b> GUI.zip, Web service and database updates.
38	6	1.2.38.15618	1.2.38.15513	1.2.38.15513	1.2.38.15618	GUI.zip and database updates
38	7	1.2.38.15768	1.2.38.15513	1.2.38.15768	1.2.38.15618	GUI.zip and Web Service updates
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release. <b>Core install required.</b>
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	<b>Core install required.</b> GUI.zip, Web service and database updates
40	-	1.3.40.16659	1.3.40.16659	1.3.40.16659	1.3.40.16659	<b>Core install required.</b> Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service
40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web service, database updates
40	5	1.3.40.17087	1.3.40.16659	1.3.40.17069	1.3.40.17087	GUI.zip, Web service, database updates
40	6	1.3.40.17146	1.3.40.16659	1.3.40.17146	1.3.40.17146	GUI.zip, Web service, database updates
40	7	1.3.40.17268	1.3.40.16659	1.3.40.17268	1.3.40.17259	GUI.zip, Web service, database updates
40	8	1.3.40.17364	1.3.40.16659	1.3.40.17362	1.3.40.17343	GUI.zip, Web service, database updates
40	9	1.3.40.17370	1.3.40.16659	1.3.40.17370	1.3.40.17370	GUI.zip, Web service, database updates
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.
40	11	1.3.40.17435	1.3.40.16659	1.3.40.17525	1.3.40.17370	Web service update
40	12	1.3.40.17685	1.3.40.16659	1.3.40.17685	1.3.40.17648	GUI.zip, Web service, database updates
40	13	1.3.40.17776	1.3.40.16659	1.3.40.17776	1.3.40.17648	GUI.zip, Web service
40	14	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18063	1.3.40.18063	GUI.zip, Web service, database updates
40	14.1	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18107	1.3.40.18063	Web service
40	15	1.3.40.18127(3GB)	1.3.40.16659	1.3.40.18127	1.3.40.18127	GUI.zip, Web service, database updates
40	16	1.1.3.40.18585 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip, Web service, database updates

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40	16.1	1.3.40.18705 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip
40	17	1.3.40.18780 (3GB)	1.3.40.18756	1.3.40.18756	1.3.40.18646	Core install required for Radiologist User Group. GUI.zip, Core setup, and Web Service updates
40	18	1.3.40.19253(3GB)	1.3.40.18756	1.3.40.18756	1.3.40.19253	GUI.zip, Web Service and database updates
40	19	1.3.40.19909(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	GUI.zip, Web Service, Recognizer files. <b>NOT RELEASED</b>
40	20	1.3.40.20086(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip and Recognizer
40	21	1.3.40.20703(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip
40	22	1.3.40.20898(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip
41	-	1.3.41.19135(3GB)	1.3.41.19135	1.3.41.19135	1.3.41.19135	Full version release
41	1	1.3.41.19356(3GB)	1.3.41.19135	1.3.41.19346	1.3.41.19346	GUI.zip, Web Service and database updates
41	2	1.3.41.19620(3GB)	1.3.41.19135	1.3.41.19620	1.3.41.19346	GUI.zip and Web Service
41	2sf	1.3.41.19620SF(3G)	1.3.41.19135	1.3.41.19620	1.3.41.19346	GUI.zip
41	2.1	1.3.41.20622(3GB)	1.3.41.19135	1.3.41.20617	1.3.41.19346	GUI.zip and Web Service
41	3	1.3.41.20171(3GB)	1.3.41.19135	1.3.41.20171	1.3.41.19346	GUI.zip , Web Service and Recognizer
41	4	1.3.41.20285(3GB)	1.3.41.19135	1.3.41.20171	1.3.41.19346	GUI.zip
41	5	1.3.41.20809(3GB)	1.3.41.20708	1.3.41.20792	1.3.41.20738	GUI.zip, Core install, Web Service and database updates
41	6	1.3.41.20912(3GB)	1.3.41.20708	1.3.41.20792	1.3.41.20738	GUI.zip
41.1	-	1.3.41.20918(3GB)	1.3.41.20791	1.3.41.20918	1.3.41.20739	GUI.zip, Core install, Web Service and DB updates, Help files

## 8. Resolved Defects

Bugs Suggested Features and Support Issues resolved in build 1.41.1. The extract is taken from Redmine bug tracking system and only displays defects resolved in 1.41.1

Bug #	Priority	Subject	Category	Found Version
5311	Immediate	Insert macro can reset a field back to its default value	Radiology Reporting	1.42
5164	Immediate	Losing default value for fields when saving template/macro	Radiology Reporting	40.02
5585	Urgent	Maximize Attachments - does not close on deactivation of the reporting screen.		1.42
5550	Urgent	DD: Printer rules do not take effect appropriately for outside read sites	Document Distribution	1.41.002
5337	Urgent	Reporting - Dictionary Add / Train changes	Radiology Reporting	1.40.20
5571	High	MERGE - Reporting - Transcription user error on first study opened in create report window	Radiology Reporting	40.02
5542	High	Null reference error when opening appointment book -- "LoadCascadingComboBoxes"	Thick Client GUI	1.41.002.1
5437	High	Reporting - possible wrong document model loading if more than one practice	Radiology Reporting	1.40.20
5418	High	Print Report - Timeout exception handling needed		1.42
5386	High	Patient Folder work list relevancy error	Thick Client GUI	1.41.1



5382	High	RRR - Offering times that are not available for NucMed procedure plans	Thick Client GUI	1.41.002
5381	High	RRR - Procedure Plan Time Duration not correct	Thick Client GUI	1.41.002
5375	High	Exception when opening a locked studies for dictation and cancelling on the break lock message	Radiology Reporting	41.10
5374	High	Canceling Unscheduled orders not appearing on Patient Folder	Thick Client GUI	1.41.18633
5328	High	multi type ahead (procedure picker) control cuts off portion of text		1.38
5261	High	RIS does not retrieve lookup tables / configuration changes under certain circumstances	Thin Client GUI	1.40
5260	High	Skip and Continue only loads images every other study	PACS Integration	1.41.1
5243	High	The client app config contains LookupTableTimeToLiveInMinutes=400	Thick Client GUI	1.41
5197	High	Wedge processing notes ex. Visit Notes - overwrites existing notes. (MSK)	HL7	41.00
5187	High	B41.002 Scanning errors (RRR)		41.00
5176	High	Signs and Symptoms coming up required when setting is set to False (RRR)	Thick Client GUI	41.00
5120	High	Template / macro - create template from... doesn't retain custom fields		1.42

5118	High	Concurrency violation on save for byte [] results in second save's data being rejected.	Web Services/DB	1.42
5107	High	patient folder doesn't load unless part of the initial layout on open of rad screen	Thick Client GUI	1.41
5094	High	Next workflow broken when using multiple tabs of different types	Radiology Reporting	1.41
5089	High	Able to sign a report when the field(s) in a template does not have a value.	Thick Client GUI	1.41
5088	High	Infinite loop when validating empty []	Radiology Reporting	1.42
5063	High	Reporting - using re-use causing confusion when getting a message box like "Addendum Requested"	Radiology Reporting	1.41
5060	High	Transcribe next workflow (beeps)	Radiology Reporting	1.41
5054	High	Reporting Screens fail to load if unable to find a good description for the current procedure code	Thick Client GUI	1.40
4983	High	Search for appointment returns slot that should not be available due to room closure		1.40
5582	Normal	Spell check on the fly no longer turned on. Squigly lines are not shown under misspelled words	Radiology Reporting	1.40.21
5568	Normal	Transcription users will get null exceptions when trying to activate ReportTemplateEditor	Radiology Reporting	1.41.005
5533	Normal	null reference in appointment book while painting in the appointments stack trace indicates SetStatusFill	Thick Client GUI	1.40

5520	Normal	timing issue can cause null reference error loading registration	Thick Client GUI	1.41.002.1
5499	Normal	duplicate "void" payment for the same payment	Thick Client GUI	1.40
5491	Normal	Birad picker either shows on non Birads studies or doesn't show on birad studies.	Radiology Reporting	41.00
5489	Normal	Procedure code assignment screen in template editor keeps button disabled	Radiology Reporting	1.41.002
5473	Normal	Reporting - Attachments data pane default is report	Radiology Reporting	1.41
5442	Normal	Reporting - rad edit text default color is yellow - should be "#810000"	Radiology Reporting	1.40.20
5433	Normal	Reporting - dictating negative 5 percent will render the word percent not the symbol	Radiology Reporting	1.40.20
5370	Normal	Error scheduling exam: "A follow up order already exists for this exam"	Web Services/DB	1.41.003
5331	Normal	Reporting - no wait navigate fails when dictating and then clicking next field > 1 time without pausing	Radiology Reporting	1.40.019
5325	Normal	Send Report -> Delivery Method "Print" does not default to the most appropriate printer	Thick Client GUI	1.41.003
5316	Normal	Reporting - Laterality check causing duplicate words	Radiology Reporting	1.40.020
5270	Normal	Reporting - Automatic spell check "on the fly" marks words as misspelled that are at the beginning of a field	Radiology Reporting	1.40.020

5264	Normal	MERGE - Report History Window	Thick Client GUI	1.40
5263	Normal	MERGE - Report History Error	Thick Client GUI	1.41
5247	Normal	Constraint error when trying to printing forms on a study that has been dictated	Thick Client GUI	1.41
5228	Normal	error on save: Invalid column name 'inverted_face'	Thick Client GUI	1.41
5226	Normal	object reference error after locking failure	Thick Client GUI	1.41
5168	Normal	Aggressive field cue navigation fails after editing a cue on a template.	Radiology Reporting	1.40.019
5154	Normal	Prompt when creating templates if the word colon is in a cue		1.40.019
5135	Normal	Worklist refresh exception		1.41
5134	Normal	Reporting - Reuse enabled status area messages not populating for action buttons	Radiology Reporting	1.41
5133	Normal	Reporting - MT polling enabled open RIS initially will result in messed up reporting screen	Radiology Reporting	1.41
5132	Normal	Attachments - wide documents that a small height cause an out of memory exception		1.40
5131	Normal	Memory leak fixes discovered in B40		1.40

5129	Normal	Reporting buttons, when disabled, has a wider separator.	Thick Client GUI	1.40
5125	Normal	Reporting screen not drawing in, if user make worklists active	Thick Client GUI	1.39
5124	Normal	Interactive "New paragraph" with protected sections headers	Radiology Reporting	1.42
5123	Normal	Ris hangs... For a long time in template editor.	Radiology Reporting	1.41
5122	Normal	Row-level caching - Error trying to save template	Radiology Reporting	1.42
5117	Normal	Reporting Reuse - Next workflow loads cases that are pending saving.	Thick Client GUI	1.41
5115	Normal	Reporting - template/macro editor cue text box too small	Radiology Reporting	1.41
5111	Normal	QA workflow problem flag #2894	Radiology Reporting	1.41
5108	Normal	First chance exception when getting field description in report template editor.	Radiology Reporting	1.40
5097	Normal	xKeys integration - next and prev field doesn't spawn radiologist pop up text		1.42
5093	Normal	Reporting - performance - require two rad docks to support signing and dictating	Radiology Reporting	1.41
5092	Normal	Reporting - reuse enabled and open a screen for signing, skip next will not populate the tab text	Radiology Reporting	1.41

5090	Normal	Reporting - reuse when skipping reports and there are change we don't get a prompt to save changes	Radiology Reporting	1.41
5087	Normal	Reporting - reuse selected report tool window keeping previous data	Radiology Reporting	1.41
5085	Normal	Reporting - SetAccountRules not called when opening an exam for the default template	Radiology Reporting	1.41
5084	Normal	Report fields control showing as a blank canvas	Radiology Reporting	1.41
5082	Normal	Dictating previous field moves two fields back instead of one.	Radiology Reporting	1.41
5081	Normal	Interactive fast forward light up play and fast forward	Radiology Reporting	1.41
5080	Normal	Audio control allows rewinding and fastforwarding to show at the same time as active.	Radiology Reporting	1.41
5079	Normal	RCW error closing reporting window	Radiology Reporting	1.41
5078	Normal	Recording rewinding in interactive mode falls into a playback/rewind loop.	Radiology Reporting	1.41
5077	Normal	Recording interactive and rewinding	Radiology Reporting	1.41
5076	Normal	Audio starts playing when recording	Radiology Reporting	1.41
5075	Normal	Switching from record to play in batch mode	Radiology Reporting	1.41

5074	Normal	Interactive record + playback at same time	Radiology Reporting	1.41
5071	Normal	Reporting - notifications need to be placed above action buttons.		1.41
5070	Normal	Template editor, inserting a field into a section header throws an error.	Radiology Reporting	1.40
5069	Normal	Send-to button blanks out the reporting screen	Radiology Reporting	1.41
5066	Normal	Transcriptionist next workflow not properly skipping	Radiology Reporting	1.41
5065	Normal	Protect section headers does not protect against macro insertions	Radiology Reporting	1.40.017
5064	Normal	Reporting - Add patient folder control to reporting window will not display history	Thick Client GUI	1.41
5059	Normal	Reporting - next field navigating two fields when cursor immediately to the left of field	Radiology Reporting	1.40
5056	Normal	Known Limitation - Side by side registration broken from 40.016 - 40.017	Thick Client GUI	40.02
5055	Normal	Reporting - reuse only - macros are not getting reset and old command are staying around on next workflow	Radiology Reporting	1.41
3804	Normal	Double click on patient folder header (Fisher site visit)	Thick Client GUI	40.01
3800	Normal	Pacs IW shortcut for measurement inserts "m" into our report. (Fisher site visit)	Thick Client GUI	40.01

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3774	Normal	Dictating "Item one" in a field will hang the application (Fisher site visit)	Thick Client GUI	40.01
5058	Low	Template / macro - Create using filter criteria	Radiology Reporting	1.41



## 9. Known Limitations

The following are Bugs Suggested Features and Support Issues found in build 1.41.1. Bugs reported in previous versions are not captured as Known Limitation in this document.

#	Status	Priority	Subject	Resolved Build
5601	New	High	When opening an exam from All Suspended WL to sign the report, get an Error	
5416	New	High	Reporting - Switching between record / playback and playback / record has mixed results	
5387	MModal support	High	Reporting - Field is removed if SpellCheck finds error in default text	
5660	New	Normal	Reporting - Edited text selected does not highlight the same	
5606	New	Normal	When you do an import, in the Attached documents window, in the top left, the types of documents don't include types that are order level.	
5403	New	Normal	Reporting - cannot delete default text from a field in template macro editor	
5401	New	Normal	Cannot re-dock patient folder window because of exception on title bar right-click	
5385	New	Normal	Reporting - Selected summary and attachments are not initially populating	
5368	New	Normal	Reporting - Changing template in reporting window can rearrange sections	
5365	New	Normal	Reporting - Auto macro will be inserted multiple times when the same template is selected for use	

5358	New	Normal	Reporting - dictated text in a field. Some text is highlighted and some is not.	
5357	New	Normal	MU- Patient Lists MU1, lists medications that were added then deleted in NewCrop	
5350	New	Normal	Reporting - Attachment viewer does not go back into place on double click of title bar	
5330	New	Normal	Reporting / Scanning - Viewing attachments in Attachments data pane rotate image twice and received error.	
5320	New	Normal	Reporting - Attachment viewer in reporting window - double click to open the report will change to the next scan doc.	
5275	New	Normal	Reporting - Adding empty space to field will allow user to sign	
5274	New	Normal	PACS - when viewing an image in patient folder, when you try and view the same image twice image is not displayed	
4418	New	Normal	Security token error on login ( after latest build update)	
5546	New	Low	Dark Theme - behavior inconsistent if color setting are not saved in Dictation window.	
5482	New	Low	Open on Login has duplicate WL in list	
5334	New	Low	Attachment data nugget doesn't auto select "+Show More" scan doc when selected	

# **Server Update**

**For eRAD RIS  
Version 1.0  
Build 41  
Update 41.1.001**

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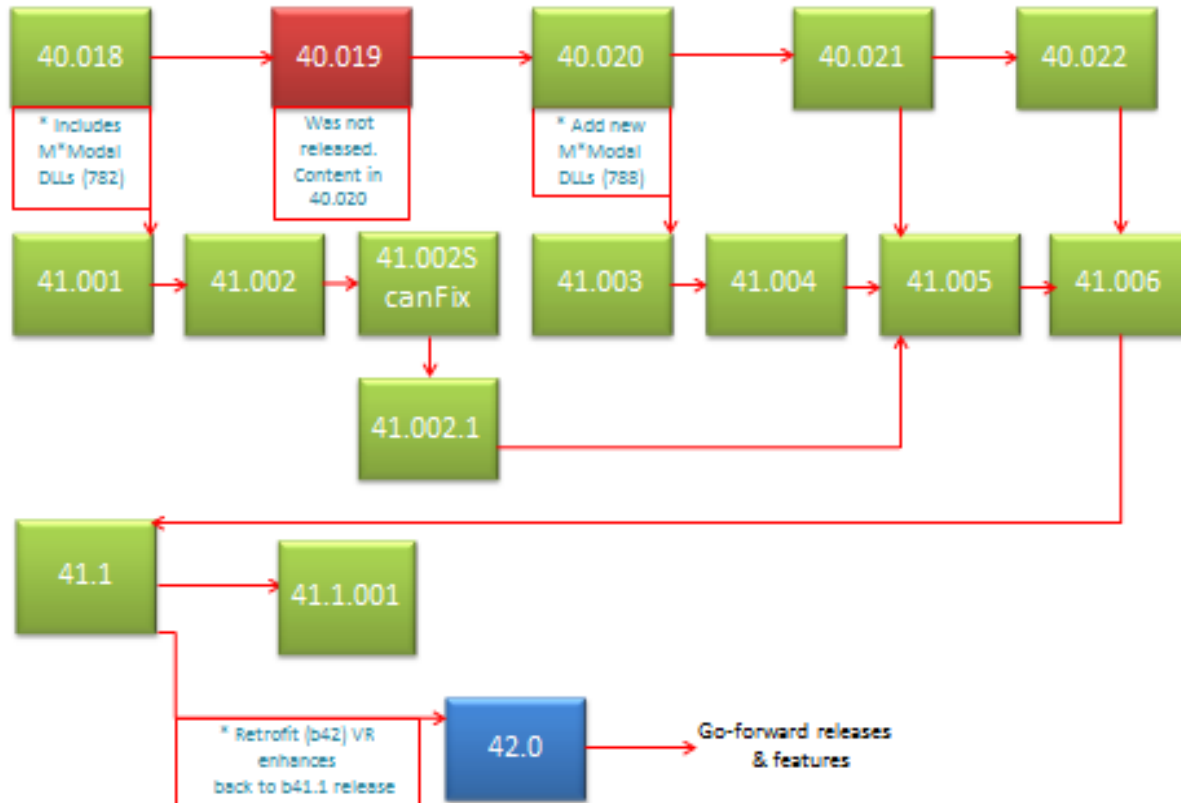
## **RADNET, Inc. – eRAD RIS Server Update**

### **1. Defects Resolved**

<b>Redmine #</b>	<b>Subject</b>	<b>Priority</b>
5781	Signed Pending signature items won't move	High
5782	Automacros containing fields lose their field attributes	Immediate

## 2. Code Stream

eRad RIS – source code evolution



### **Legend:**

**Green = Released software**

**Red = Will not be released**

**Blue = Future release**

### **3. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.41.20987 (3GB).zip

### **4. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **5. Who is affected**

Build 41.1 installs. This server update must be applied directly to the build 41.1 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.

## **6. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.
40	11	1.3.40.17435	1.3.40.16659	1.3.40.17525	1.3.40.17370	Web service update
40	12	1.3.40.17685	1.3.40.16659	1.3.40.17685	1.3.40.17648	GUI.zip, Web service, database updates
40	13	1.3.40.17776	1.3.40.16659	1.3.40.17776	1.3.40.17648	GUI.zip, Web service
40	14	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18063	1.3.40.18063	GUI.zip, Web service, database updates
40	14.1	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18107	1.3.40.18063	Web service
40	15	1.3.40.18127(3GB)	1.3.40.16659	1.3.40.18127	1.3.40.18127	GUI.zip, Web service, database updates
40	16	1.1.3.40.18585 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip, Web service, database updates
40	16.1	1.3.40.18705 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip
40	17	1.3.40.18780 (3GB)	1.3.40.18756	1.3.40.18756	1.3.40.18646	<b>Core install required for Radiologist User Group.</b> GUI.zip, Core setup, and Web Service updates
40	18	1.3.40.19253(3GB)	1.3.40.18756	1.3.40.18756	1.3.40.19253	GUI.zip, Web Service and database updates
40	19	1.3.40.19909(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	GUI.zip, Web Service
40	20	1.3.40.20086(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip and Recognizer
40	21	1.3.40.20703(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip
40	22	1.3.40.20898(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip
41	-	1.3.41.19135(3GB)	1.3.41.19135	1.3.41.19135	1.3.41.19135	Full version release
41	1	1.3.41.19356(3GB)	1.3.41.19135	1.3.41.19346	1.3.41.19346	GUI.zip, Web Service and database updates
41	2	1.3.41.19620(3GB)	1.3.41.19135	1.3.41.19620	1.3.41.19346	GUI.zip and Web Service
41	2sf	1.3.41.19620SF(3G)	1.3.41.19135	1.3.41.19620	1.3.41.19346	GUI.zip
41	2.1	1.3.41.20622(3GB)	1.3.41.19135	1.3.41.20617	1.3.41.19346	GUI.zip and Web Service
41	3	1.3.41.20171(3GB)	1.3.41.19135	1.3.41.20171	1.3.41.19346	GUI.zip , Web Service and Recognizer
41	4	1.3.41.20285(3GB)	1.3.41.19135	1.3.41.20171	1.3.41.19346	GUI.zip
41	5	1.3.41.20809(3GB)	1.3.41.20708	1.3.41.20792	1.3.41.20738	GUI.zip, Core install, Web Service and database updates
41	6	1.3.41.20912(3GB)	1.3.41.20708	1.3.41.20792	1.3.41.20738	GUI.zip
41.1	-	1.3.41.20918(3GB)	1.3.41.20791	1.3.41.20918	1.3.41.20739	GUI.zip, Core install, Web Service and DB updates, Help files
41.1	1	1.3.41.20987(3GB)	1.3.41.20791	1.3.41.20918	1.3.41.20739	GUI.zip



## **7. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.41.20987.zip file provided with this release.  
Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

# **Server Update**

**For eRAD RIS  
Version 1.0  
Build 41  
Update 41.1.002**

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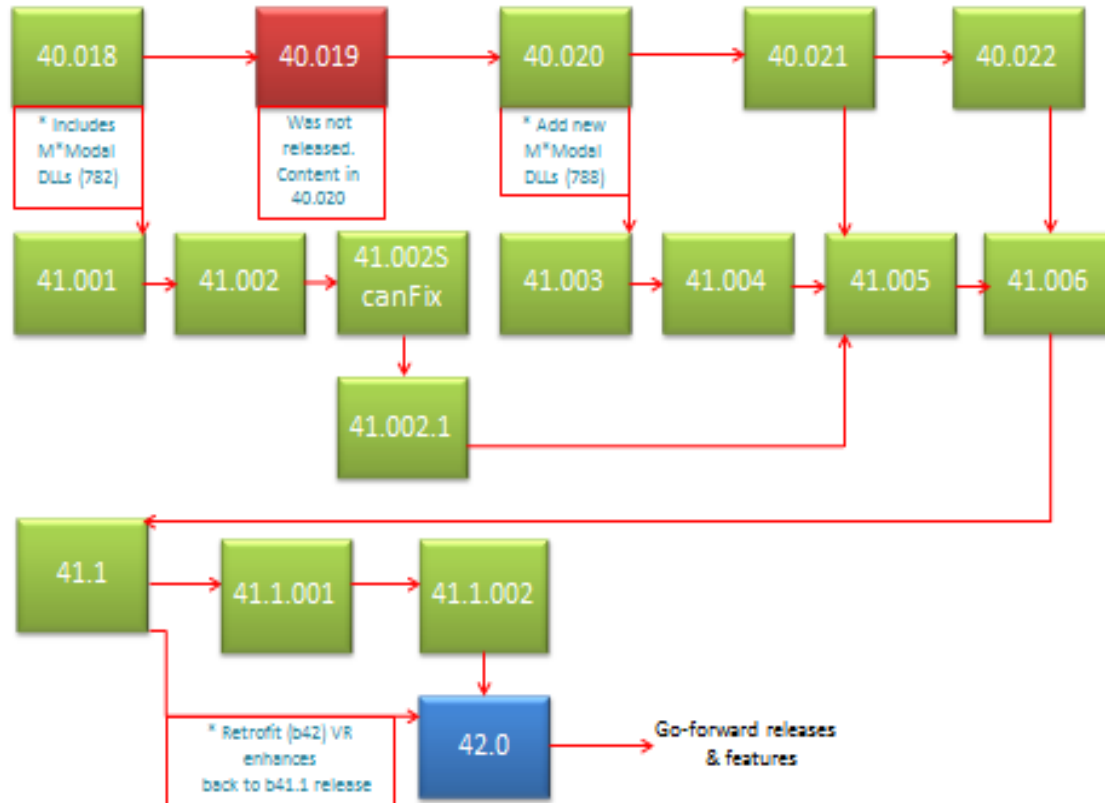
## **RADNET, Inc. – eRAD RIS Server Update**

### **1. Defects Resolved**

<b>Redmine #</b>	<b>Subject</b>	<b>Priority</b>
5778	Mammo follow-up orders no longer included in the list of outstanding orders when scheduling	Urgent
5776	Error after login: nullable object must have a value	High
5773	Parameter is not valid error while loading thumbnail images in document viewer	High
5772	Patient Folder - can't sort relevance or relevant flag	High
4978	User is able to schedule to a closed room	High
5775	null reference error when opening administration / management reports	Normal
5774	foreign key error when adding follow-up / contact log entries	Normal
5344	Playback with bouncing ball, preventing word selection with double click.	Normal

## 2. Code Stream

eRad RIS– source code evolution



### **Legend:**

**Green = Released software**

**Red = Will not be released**

**Blue = Future release**

### **3. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.41.21162 (3GB).zip
- 2) SQL folder contains:
  - a) B41\_1\_002.sql
- 3) RIS\_Service\_Updates
  - a) ABCpdf.dll
  - b) ABCpdf9-32.dll
  - c) ABCpdf9-64.dll
  - d) CDSJobManager.dll
  - e) CDSJobManager.pdb
  - f) CdsLib.dll
  - g) CdsLib.xml
  - h) CdsLib.XmlSerializers.dll
  - i) CommonLib.dll
  - j) CommonLib.pdb
  - k) DDEngine.dll
  - l) DDEngine.pdb
  - m) Interop.FAXCOMEXLib.dll
  - n) Microsoft.Practices.EnterpriseLibrary.Caching.dll
  - o) Microsoft.Practices.EnterpriseLibrary.Caching.pdb
  - p) Microsoft.Practices.EnterpriseLibrary.Common.dll
  - q) Microsoft.Practices.EnterpriseLibrary.Common.pdb
  - r) Microsoft.Practices.EnterpriseLibrary.Logging.dll
  - s) Microsoft.Practices.EnterpriseLibrary.Logging.pdb
  - t) Microsoft.Practices.ServiceLocation.dll
  - u) Microsoft.Practices.ServiceLocation.pdb
  - v) Microsoft.Practices.Unity.dll
  - w) Microsoft.Practices.Unity.Interception.dll
  - x) Microsoft.Practices.Unity.Interception.pdb
  - y) Microsoft.Practices.Unity.pdb
  - z) Microsoft.ReportViewer.Common.dll
  - aa) Microsoft.ReportViewer.Common.pdb
  - bb) Microsoft.ReportViewer.WinForms.xml
  - cc) Newtonsoft.Json.dll
  - dd) Newtonsoft.Json.xml
  - ee) Ninject.dll
  - ff) Ninject.Web.Common.dll
  - gg) Ninject.Web.Common.xml
  - hh) Ninject.xml
  - ii) O2S.Components.PDFRender4NET.dll
  - jj) PDFToImages.exe
  - kk) rRISServices.exe
  - ll) rRISServices.pdb
  - mm) rRISServicesx64.exe
  - nn) ScheduledTaskManager.dll
  - oo) ScheduledTaskManager.pdb
  - pp) ServicesConfigWizard.exe
  - qq) ServicesConfigWizard.pdb
  - rr) SignatureApprovalService.exe
  - ss) SignatureApprovalService.pdb
  - tt) System.Net.Http.dll
  - uu) System.Net.Http.Formatting.dll
  - vv) System.Net.Http.Formatting.xml
  - ww) System.Net.Http.WebRequest.dll
  - xx) System.Net.Http.WebRequest.xml
  - yy) System.Net.Http.xml
  - zz) System.Web.dll
  - aaa) System.Web.Helpers.dll
  - bbb) System.Web.Helpers.xml
  - ccc) System.Web.Http.dll
  - ddd) System.Web.Http.SelfHost.dll
  - eee) System.Web.Http.SelfHost.xml
  - fff) System.Web.Http.WebHost.dll
  - ggg) System.Web.Http.WebHost.xml
  - hhh) System.Web.Http.xml
  - iii) System.Web.Mvc.dll
  - jjj) System.Web.Mvc.xml
  - kkk) System.Web.Optimization.dll
  - lll) System.Web.Providers.dll
  - mmm) System.Web.Razor.dll
  - nnn) System.Web.Razor.xml

## **RADNET, Inc. – eRAD RIS Server Update**

ooo)	System.Web.WebPages.Deployment.dll	www)	Tourreau.Gilles.FaxDotNet.xml
ppp)	System.Web.WebPages.Deployment.xml	xxx)	WCFSservice.dll
qqq)	System.Web.WebPages.dll	yyy)	WCFSservice.pdb
rrr)	System.Web.WebPages.Razor.dll	zzz)	WebApi.dll
sss)	System.Web.WebPages.Razor.xml	aaaa)	WebApi.pdb
ttt)	System.Web.WebPages.xml	bbbb)	Wedge.exe
uuu)	Tourreau.Gilles.FaxDotNet.dll	cccc)	Wedge.pdb
vvv)	Tourreau.Gilles.FaxDotNet.pdb		

### **4. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **5. Who is affected**

Build 41.1 installs. This server update must be applied directly to the build 41.1 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.

## **RADNET, Inc. – eRAD RIS Server Update**

### **6. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.
40	11	1.3.40.17435	1.3.40.16659	1.3.40.17525	1.3.40.17370	Web service update
40	12	1.3.40.17685	1.3.40.16659	1.3.40.17685	1.3.40.17648	GUI.zip, Web service, database updates
40	13	1.3.40.17776	1.3.40.16659	1.3.40.17776	1.3.40.17648	GUI.zip, Web service
40	14	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18063	1.3.40.18063	GUI.zip, Web service, database updates
40	14.1	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18107	1.3.40.18063	Web service
40	15	1.3.40.18127(3GB)	1.3.40.16659	1.3.40.18127	1.3.40.18127	GUI.zip, Web service, database updates
40	16	1.1.3.40.18585 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip, Web service, database updates
40	16.1	1.3.40.18705 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip
40	17	1.3.40.18780 (3GB)	1.3.40.18756	1.3.40.18756	1.3.40.18646	<b>Core install required for Radiologist User Group.</b> GUI.zip, Core setup, and Web Service updates
40	18	1.3.40.19253(3GB)	1.3.40.18756	1.3.40.18756	1.3.40.19253	GUI.zip, Web Service and database updates
40	19	1.3.40.19909(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	GUI.zip, Web Service
40	20	1.3.40.20086(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip and Recognizer
40	21	1.3.40.20703(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip
40	22	1.3.40.20898(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip
41	-	1.3.41.19135(3GB)	1.3.41.19135	1.3.41.19135	1.3.41.19135	Full version release
41	1	1.3.41.19356(3GB)	1.3.41.19135	1.3.41.19346	1.3.41.19346	GUI.zip, Web Service and database updates
41	2	1.3.41.19620(3GB)	1.3.41.19135	1.3.41.19620	1.3.41.19346	GUI.zip and Web Service
41	2sf	1.3.41.19620SF(3G)	1.3.41.19135	1.3.41.19620	1.3.41.19346	GUI.zip
41	2.1	1.3.41.20622(3GB)	1.3.41.19135	1.3.41.20617	1.3.41.19346	GUI.zip and Web Service
41	3	1.3.41.20171(3GB)	1.3.41.19135	1.3.41.20171	1.3.41.19346	GUI.zip , Web Service and Recognizer
41	4	1.3.41.20285(3GB)	1.3.41.19135	1.3.41.20171	1.3.41.19346	GUI.zip
41	5	1.3.41.20809(3GB)	1.3.41.20708	1.3.41.20792	1.3.41.20738	GUI.zip, Core install, Web Service and database updates
41	6	1.3.41.20912(3GB)	1.3.41.20708	1.3.41.20792	1.3.41.20738	GUI.zip
41.1	-	1.3.41.20918(3GB)	1.3.41.20791	1.3.41.20918	1.3.41.20739	GUI.zip, Core install, Web Service and DB updates, Help files
41.1	1	1.3.41.20987(3GB)	1.3.41.20791	1.3.41.20918	1.3.41.20739	GUI.zip
41.1	2	1.3.41.21162(3GB)	1.3.41.20791	1.3.41.21162	1.3.41.21150	GUI.zip, Web Service and DB updates,



## **7. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.41.21162.zip file provided with this release.

Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config and rRISServices.vshost.exe.config files.

*rRISService directories include:*

- a) *rRISService*
- b) *CDS rRISService*
- c) *Wedge rRISService*
- d) *DDE rRISService*

Restart each service.

- 3) Run the B41\_1\_002.sql file against the eRAD RIS database instance.

# **Server Update**

**For eRAD RIS  
Version 1.0  
Build 41  
Update 41.1.003**

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## **RADNET, Inc. – eRAD RIS Server Update**

### **1. Defects Resolved**

<b>Redmine #</b>	<b>Subject</b>	<b>Priority</b>
5823	InsertTextAtPastCaretPositions is causing undesired behavior for rads when editing.	Urgent

### 2. New Features

This new feature is to resolve Redmine bug # 5823.

Some users were experiencing an issue during self-edit. If the text was highlighted after the dictation had started, the range of text selected to be corrected would leave the selected text intact and insert the new dictation before or after the selected text.

This was happening because when the dictation was started the caret position had already been detected at point A, but as the dictation had started, a range of text was then selected. Now the caret position is in point B. The dictation that supposed to be the corrected text does not overwrite the selected text but is inserted where caret position was initially.

We have created a new user preference titled “**Insert text at current caret location**”. When this preference is selected it will correct the issue described above, meaning that if the dictation is started, a range of text is then selected, it will overwrite the range of text.

The previous way of working may be desirable for some users, so if the user preference is unselected, it will behave as before.

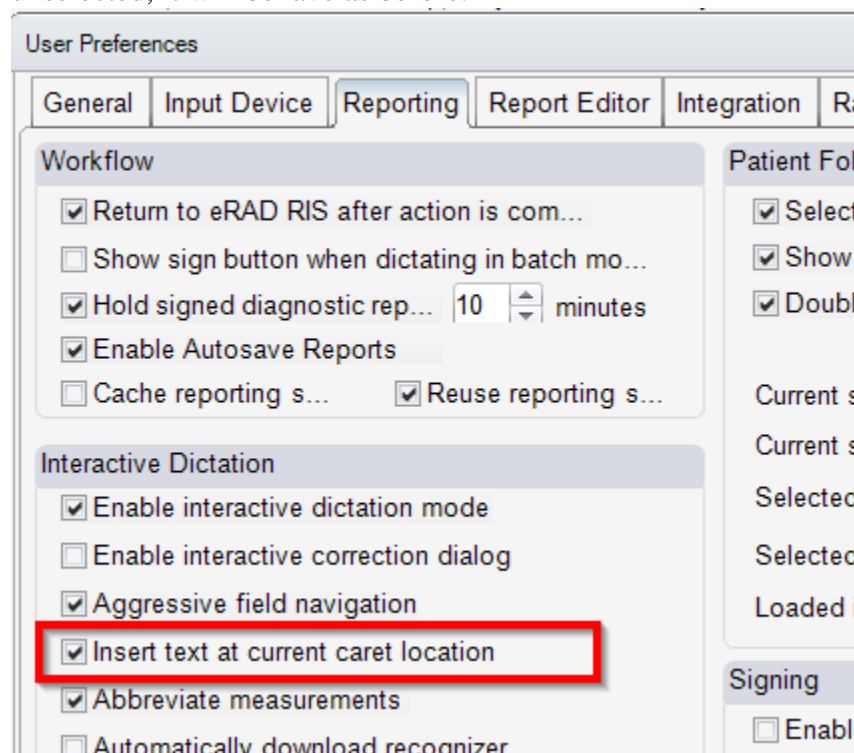
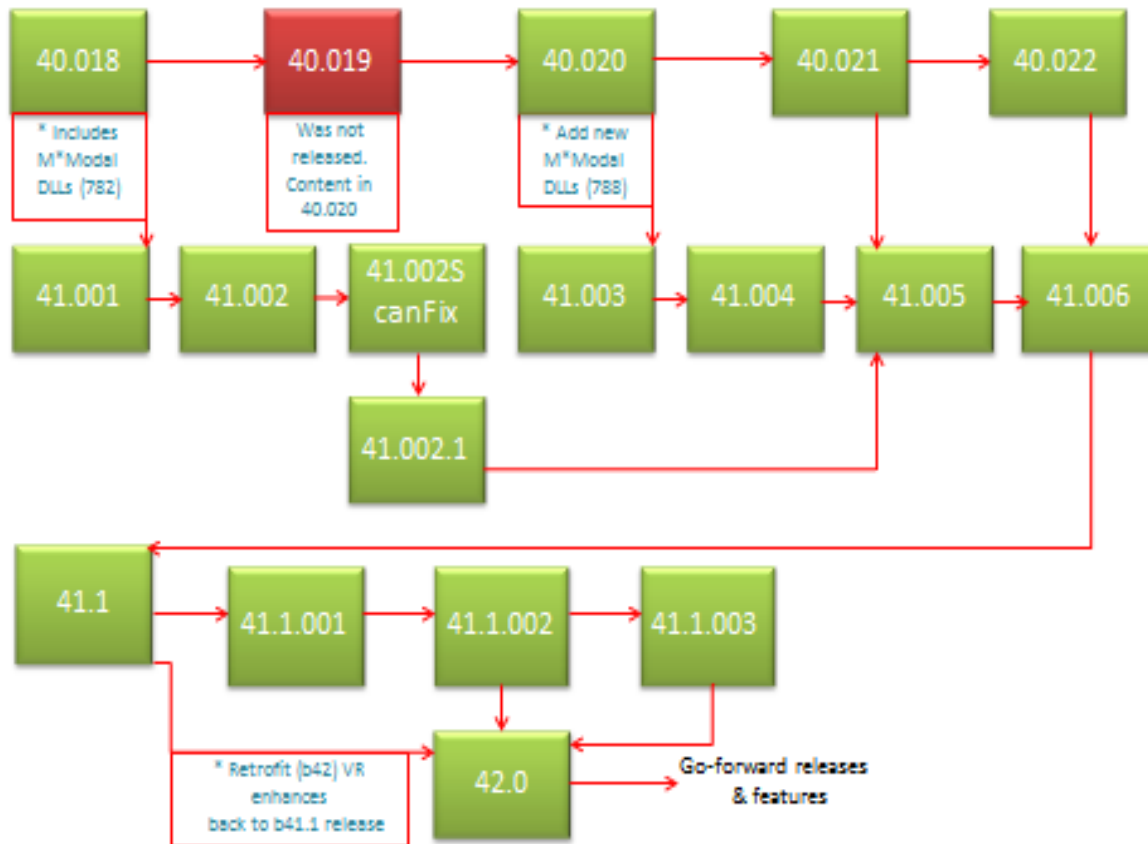


Figure 2.1 – New User Preference “Insert text at current caret location”

### 3. Code Stream

eRad RIS – source code evolution



#### **Legend:**

**Green = Released software**

**Red = Will not be released**

**Blue = Future release**

### **4. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.41.21264 (3GB).zip

### **5. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **6. Who is affected**

Build 41.1 installs. This server update must be applied directly to the build 41.1 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.

## **RADNET, Inc. – eRAD RIS Server Update**

### **7. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.
40	11	1.3.40.17435	1.3.40.16659	1.3.40.17525	1.3.40.17370	Web service update
40	12	1.3.40.17685	1.3.40.16659	1.3.40.17685	1.3.40.17648	GUI.zip, Web service, database updates
40	13	1.3.40.17776	1.3.40.16659	1.3.40.17776	1.3.40.17648	GUI.zip, Web service
40	14	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18063	1.3.40.18063	GUI.zip, Web service, database updates
40	14.1	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18107	1.3.40.18063	Web service
40	15	1.3.40.18127(3GB)	1.3.40.16659	1.3.40.18127	1.3.40.18127	GUI.zip, Web service, database updates
40	16	1.1.3.40.18585 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip, Web service, database updates
40	16.1	1.3.40.18705 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip
40	17	1.3.40.18780 (3GB)	1.3.40.18756	1.3.40.18756	1.3.40.18646	<b>Core install required</b> for Radiologist User Group. GUI.zip, Core setup, and Web Service updates
40	18	1.3.40.19253(3GB)	1.3.40.18756	1.3.40.18756	1.3.40.19253	GUI.zip, Web Service and database updates
40	19	1.3.40.19909(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	GUI.zip, Web Service
40	20	1.3.40.20086(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip and Recognizer
40	21	1.3.40.20703(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip
40	22	1.3.40.20898(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip
41	-	1.3.41.19135(3GB)	1.3.41.19135	1.3.41.19135	1.3.41.19135	Full version release
41	1	1.3.41.19356(3GB)	1.3.41.19135	1.3.41.19346	1.3.41.19346	GUI.zip, Web Service and database updates
41	2	1.3.41.19620(3GB)	1.3.41.19135	1.3.41.19620	1.3.41.19346	GUI.zip and Web Service
41	2sf	1.3.41.19620SF(3G)	1.3.41.19135	1.3.41.19620	1.3.41.19346	GUI.zip
41	2.1	1.3.41.20622(3GB)	1.3.41.19135	1.3.41.20617	1.3.41.19346	GUI.zip and Web Service
41	3	1.3.41.20171(3GB)	1.3.41.19135	1.3.41.20171	1.3.41.19346	GUI.zip , Web Service and Recognizer
41	4	1.3.41.20285(3GB)	1.3.41.19135	1.3.41.20171	1.3.41.19346	GUI.zip
41	5	1.3.41.20809(3GB)	1.3.41.20708	1.3.41.20792	1.3.41.20738	GUI.zip, Core install, Web Service and database updates
41	6	1.3.41.20912(3GB)	1.3.41.20708	1.3.41.20792	1.3.41.20738	GUI.zip
41.1	-	1.3.41.20918(3GB)	1.3.41.20791	1.3.41.20918	1.3.41.20739	GUI.zip, Core install, Web Service and DB updates, Help files
41.1	1	1.3.41.20987(3GB)	1.3.41.20791	1.3.41.20918	1.3.41.20739	GUI.zip
41.1	2	1.3.41.21162(3GB)	1.3.41.20791	1.3.41.21162	1.3.41.21150	GUI.zip, Web Service and DB updates,
41.1	3	1.3.41.21264(3GB)	1.3.41.20791	1.3.41.21162	1.3.41.21150	GUI.zip
42	-	2.42.0.0.21261(3GB)	2.42.0.0.21261	2.42.0.0.21261	2.42.0.0.21187	Full version release



## **8. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.41.21264.zip file provided with this release.

Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

Core install is not required. Users will need to exit the application and re-launch and log back in to get the latest changes.

# Server Update

For eRAD RIS  
Version 1.0  
Build 41  
Update 41.1.004

## **Table of Contents**

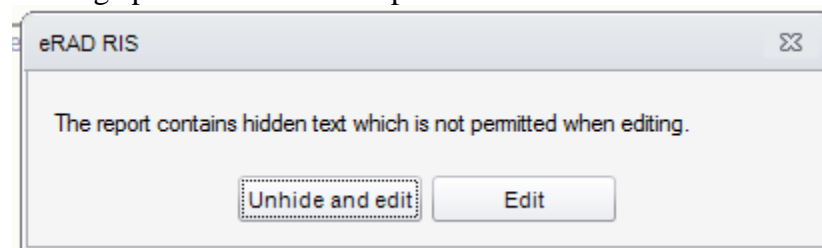
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### **1. Defects Resolved**

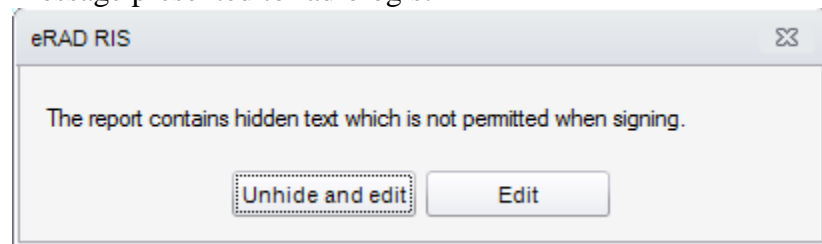
Redmine #	Subject	Priority
6192	Hidden text in editor counts as text when validating fields and section	High

The resolved bug listed above resolves an issue in which users had the option to hide text within the reporting window. This option was available to radiologist and transcription users. The workflow for this option has been altered. You can no longer hide text, only unhide. If there is hidden text in a report, transcription users cannot transcribe and radiologist users cannot sign. They will be presented with a message like the one displayed below.

Message presented to transcription

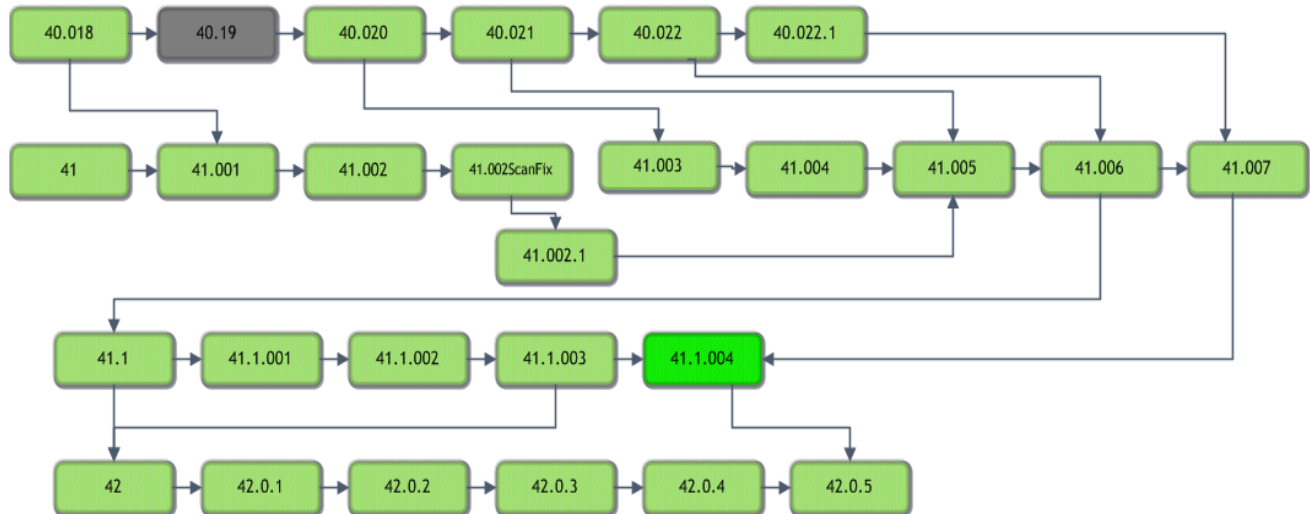


Message presented to radiologist



## 2. Code Stream

### eRAD RIS - Source Code Evolution



#### **Legend:**

Light Green = Released software

Gray = Will not be released

Bright Green = Current Release

### **3. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.41.21931 (3GB).zip

### **4. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **5. Who is affected**

Build 41.1 installs. This server update must be applied directly to build 41.1.002 server update which included database and web service updates. The 41.1.003 server update included a GUI.zip update only.

## **RADNET, Inc. – eRAD RIS Server Update**

### **6. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
40	16	1.1.3.40.18585 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip, Web service, database updates
40	16.1	1.3.40.18705 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip
40	17	1.3.40.18780 (3GB)	1.3.40.18756	1.3.40.18756	1.3.40.18646	<b>Core install required</b> for Radiologist User Group. GUI.zip, Core setup, and Web Service updates
40	18	1.3.40.19253(3GB)	1.3.40.18756	1.3.40.18756	1.3.40.19253	GUI.zip, Web Service and database updates
40	19	1.3.40.19909(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	GUI.zip, Web Service
40	20	1.3.40.20086(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip and Recognizer
40	21	1.3.40.20703(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip
40	22	1.3.40.20898(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip
40	22.1	1.3.40.21936(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip
41	-	1.3.41.19135(3GB)	1.3.41.19135	1.3.41.19135	1.3.41.19135	Full version release
41	1	1.3.41.19356(3GB)	1.3.41.19135	1.3.41.19346	1.3.41.19346	GUI.zip, Web Service and database updates
41	2	1.3.41.19620(3GB)	1.3.41.19135	1.3.41.19620	1.3.41.19346	GUI.zip and Web Service
41	2sf	1.3.41.19620SF(3G)	1.3.41.19135	1.3.41.19620	1.3.41.19346	GUI.zip
41	2.1	1.3.41.20622(3GB)	1.3.41.19135	1.3.41.20617	1.3.41.19346	GUI.zip and Web Service
41	3	1.3.41.20171(3GB)	1.3.41.19135	1.3.41.20171	1.3.41.19346	GUI.zip , Web Service and Recognizer
41	4	1.3.41.20285(3GB)	1.3.41.19135	1.3.41.20171	1.3.41.19346	GUI.zip
41	5	1.3.41.20809(3GB)	1.3.41.20708	1.3.41.20792	1.3.41.20738	GUI.zip, Core install, Web Service and database updates
41	6	1.3.41.20912(3GB)	1.3.41.20708	1.3.41.20792	1.3.41.20738	GUI.zip
41	7	1.3.41.21963(3GB)	1.3.41.20708	1.3.41.20792	1.3.41.20738	GUI.zip
41.1	-	1.3.41.20918(3GB)	1.3.41.20791	1.3.41.20918	1.3.41.20739	GUI.zip, Core install, Web Service and DB updates, Help files
41.1	1	1.3.41.20987(3GB)	1.3.41.20791	1.3.41.20918	1.3.41.20739	GUI.zip
41.1	2	1.3.41.21162(3GB)	1.3.41.20791	1.3.41.21162	1.3.41.21150	GUI.zip, Web Service and DB updates,
41.1	3	1.3.41.21264(3GB)	1.3.41.20791	1.3.41.21162	1.3.41.21150	GUI.zip
<b>41.1</b>	<b>4</b>	<b>1.3.41.21931(3GB)</b>	<b>1.3.41.20791</b>	<b>1.3.41.21162</b>	<b>1.3.41.21150</b>	<b>GUI.zip</b>
42	1	2.42.0.0.21577	2.42.0.0.21261	2.42.0.0.21577	2.42.0.0.21187	GUI and Web Service updates
42	2	2.42.0.1.21702	2.42.0.0.21261	2.42.0.1.21702	2.42.0.0.21187	GUI and Web Service updates
42	3	2.42.0.2.21806	2.42.0.0.21261	2.42.0.2.21806	2.42.0.0.21187	GUI and Web Service updates
42	4	2.42.0.4.21862	2.42.0.0.21261	2.42.0.2.21806	2.42.0.4.21870	GUI and Database updates
42	5	2.42.0.5.21924	2.42.0.0.21261	2.42.0.2.21806	2.42.0.4.21870	GUI

## **7. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.41.21931.zip file provided with this release.

Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

Core install is not required. Users will need to exit the application and re-launch and log back in to get the latest changes.

**NOTE: If your upgrade is coming from 40.016.1 or prior a core install will be required. Versions (builds) of 40.017 and greater do not require a core install as long as you are at least at 40.017 (Core Version 1.3.40.18756)**



# **Server Update**

**For eRAD RIS  
Version 1.0  
Build 41  
Update 41.001**

## **Table of Contents**

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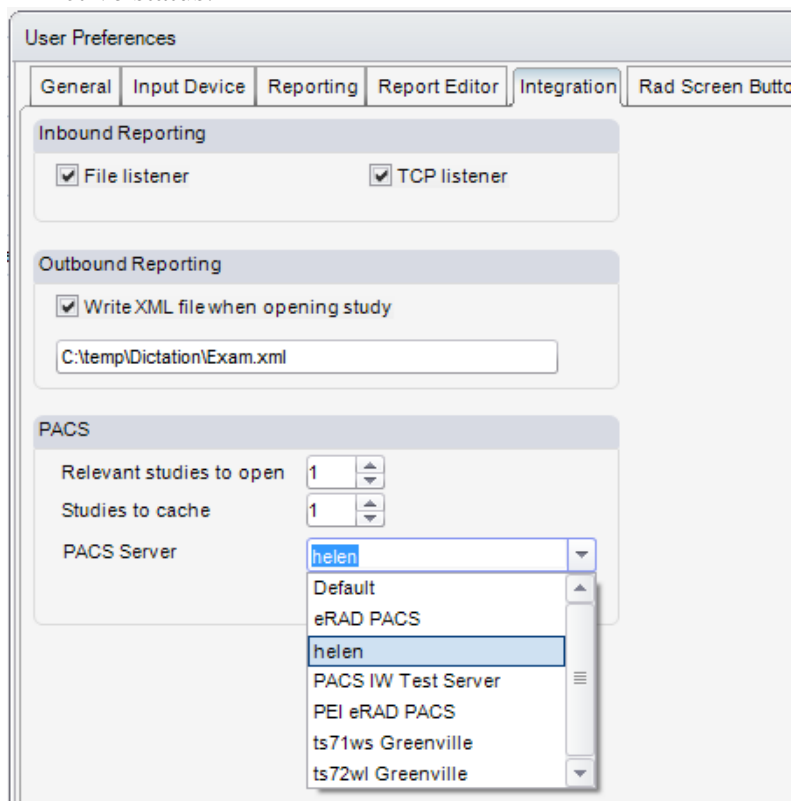
## 1. New Features

### 41.001 New Features

#### PACS Server Override

It has been requested that radiologists be able to access images on eRAD PACS and PACS IW from the same work list without changing the practice selected in the Org picker. This is now possible with the selection of a new user preference.

On the Integration tab there is a new option titled PACS Server and associated list box. This list box will contain the available PACS systems configured in the PACSServer lookup table that are in Active status.



**Figure 1.1 – PACS Server user preference**

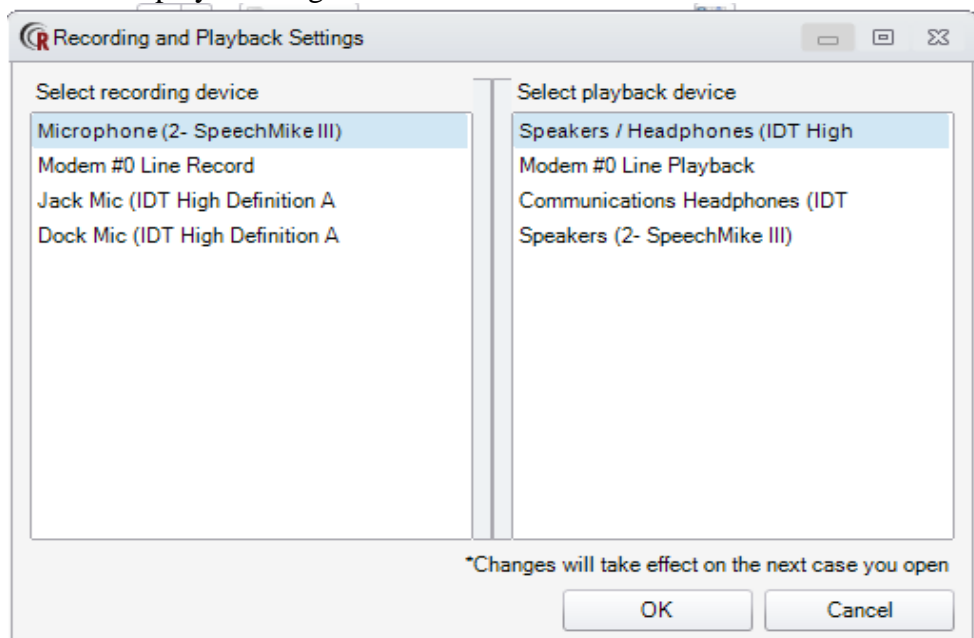
One of the PACS Server options is Default. If this is selected, the default PACS Server associated with your current practice selected in the Org picker will be used (same as before). If a specific server is selected, this will be the PACS that the images are displayed. For instance, if patient A has images on eRAD PACS and also PACS IW Test Server, when that server is selected the call for PACS will be made to that server and not the default for the practice.

**NOTE:** If the PACS Server user preference selection is changed, the user will need to log out and back in again to pick up the changes. The user may encounter an error if they don't logout after changing the user preference.

**40.018 New Features** – The features in 40.018 were not included in the original build of 41. The new features and bug fixes have been included in this 41.001 build.

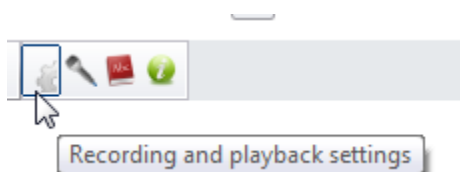
### **Optimize field navigation**

In build 40.017 we introduced a change to the mic wizard. The selection of the recording device and Speechmike calibration. Missing in the GUI was the ability to select a playback device. (This can be accomplished in the windows control panel > sound option.) In build 18 we have replaced the Microphone Settings window, with the Recording and Playback Settings window displayed in Figure 1.1.



**Figure 1.2 – Recording and Playback Settings**

This window is accessed from within the Reporting window and selecting the Recording and playback settings option on the toolbar.



**Figure 1.3 – Recording and Playback Settings toolbar button**

In this window the recording and playback devices can be selected. As noted in the Recording and Playback Settings window the changes will take affect

### **Recognizer deployment**

In previous builds the MModal Recognizer file was included with the install process. This has been removed from the install process.

This file can be replaced manually or via the use of the User Preference on the Reporting tab titled “Automatically download recognizer” and at next login, the newest will be downloaded from M\*Modal. If this **option** is selected, the user **must be aware** that the Recognizer could change at each login.

## **RADNET, Inc. – eRAD RIS Server Update**

### **2. Defects Resolved**

The following defects that have been resolved in the 41.001 server release

<b>Redmine #</b>	<b>Subject</b>	<b>Priority</b>
4622	Message boxes inaccessible when dictating in minimized mode	High
3871	Magview reports need addendums to be signed in Magview	High
4691	RRR - IVT user activity issue	Normal

The following defects were resolved in Build 41 but were missed in the release notes.

<b>Redmine #</b>	<b>Subject</b>	<b>Priority</b>
4471	Mammo - Edit Mam Target Date is missing	Urgent
4599	Message: "an error occurred while retrieving patient history worklist" when opening the biopsy screen from the FollowUp window	High
4592	Patient Merge, Patient History not showing current Patient, Show license button still active	High
4656	Input string was not in a correct format error on clicking IVT button from the billing codes	Normal

The following defects were resolved in 40.018 and added to the 41.001 server release

<b>Redmine #</b>	<b>Subject</b>	<b>Priority</b>
4564	Batch users lost ability to run microphone wizard to set gain on the microphone	High
4710	Reporting - inserting a template or macro with interactive timestamps will cause playback corruption and confusion	Urgent
4715	Portions of reports are not showing in distributed report	Immediate
4717	Sections from incorrect practice loading into template editor	High
4563	Inability to change playback device for rads.	High

The follow defects are listed as Known Limitations.

<b>Redmine #</b>	<b>Subject</b>	<b>Info</b>
4776	PACS Server override user preference requires log-out, then log-in to take effect	This bug is regarding a new feature that enables a user to use the same work list in a practice but use more than one different PACS system. Users must log out and back in to get the user preference update for PACS Server.
4780	Known Limitation - Side by side registration broken from 40.016 - 40.017	The core install must be used to move between build 40.016 and other previous versions of build 40 and 40.017, 40.018 and any version 41 builds. This is due to incompatibility with M*Modal dll's

### **3. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.40.19356 (3GB).zip
- 2) RIS Service Updates folder contains the following 19 files and 1 subfolder titled XSL. The XSL folder also contains 1 subfolder titled Stylesheets. The following files are contained in the Stylesheets folder
  - a) CDSJobManager.dll
  - b) CDSJobManager.pdb
  - c) CommonLib.dll
  - d) CommonLib.pdb
  - e) DDEngine.dll
  - f) DDEngine.pdb
  - g) rRISServices.exe
  - h) rRISServices.pdb
  - i) rRISServicesx64.exe
  - j) ScheduledTaskManager.dll
  - k) ScheduledTaskManager.pdb
  - l) SignatureApprovalService.exe
  - m) SignatureApprovalService.pdb
  - n) WCFService.dll
  - o) WCFService.pdb
  - p) WebApi.dll
  - q) WebApi.pdb
  - r) Wedge.pdb
  - s) Wedge.exe
  - t) XSL folder contains a subfolder titled Stylesheets:
    - i. CDAToHTMLCompleteReport.xslt
    - ii. CDAToHTMLImpressionSection.xslt
    - iii. CDAToRIS.xslt
    - iv. CDAToTxt.xslt
    - v. DocumentModelReport.xslt
    - vi. DocumentModelReportAsXml.xslt
- 3) SQL folder contains:
  - a) B41\_001.sql

### 4. Intended Audience

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### 5. Who is affected

Build 41 installs. This server update **must be applied directly to the build 41 core install**. Server updates are not cumulative. Any previous server updates must be applied before this one.



## **6. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	Requires Core Install. GUI.zip, Web Service, and Database updates
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service
40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web service, database updates
40	5	1.3.40.17087	1.3.40.16659	1.3.40.17069	1.3.40.17087	GUI.zip, Web service, database updates
40	6	1.3.40.17146	1.3.40.16659	1.3.40.17146	1.3.40.17146	GUI.zip, Web service, database updates
40	7	1.3.40.17268	1.3.40.16659	1.3.40.17268	1.3.40.17259	GUI.zip, Web service, database updates
40	8	1.3.40.17364	1.3.40.16659	1.3.40.17362	1.3.40.17343	GUI.zip, Web service, database updates
40	9	1.3.40.17370	1.3.40.16659	1.3.40.17370	1.3.40.17370	GUI.zip, Web service, database updates
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.
40	11	1.3.40.17435	1.3.40.16659	1.3.40.17525	1.3.40.17370	Web service update
40	12	1.3.40.17685	1.3.40.16659	1.3.40.17685	1.3.40.17648	GUI.zip, Web service, database updates
40	13	1.3.40.17776	1.3.40.16659	1.3.40.17776	1.3.40.17648	GUI.zip, Web service
40	14	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18063	1.3.40.18063	GUI.zip, Web service, database updates
40	14.1	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18107	1.3.40.18063	Web service
40	15	1.3.40.18127(3GB)	1.3.40.16659	1.3.40.18127	1.3.40.18127	GUI.zip, Web service, database updates
40	16	1.1.3.40.18585 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip, Web service, database updates
40	16.1	1.3.40.18705 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip
40	17	1.3.40.18780 (3GB)	1.3.40.18756	1.3.40.18756	1.3.40.18646	<b>Core install required for Radiologist User Group.</b> GUI.zip, Core setup, and Web Service updates
40	18	1.3.40.19253(3GB)	1.3.40.18756	1.3.40.18756	1.3.40.19253	GUI.zip, Web Service and database updates
41	-	1.3.41.19135(3GB)	1.3.41.19135	1.3.41.19135	1.3.41.19135	Full version release
41	1	1.3.41.19356(3GB)	1.3.41.19135	1.3.41.19346	1.3.41.19346	GUI.zip, Web Service and database updates

## **7. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.40.19356.zip file provided with this release.

Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config and rRISServices.vshost.exe.config files.

*rRISService directories include:*

- a) *rRISService*
- b) *CDS rRISService*
- c) *Wedge rRISService*
- d) *DDE rRISService*

Restart each service.

- 3) Run the B41\_001.sql file against the eRAD RIS database instance.

# Server Update

For eRAD RIS  
Version 1.0  
Build 41  
Update 41.002

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## **RADNET, Inc. – eRAD RIS Server Update**

### **1. New Features**

The wedge has been updated to handle the c\_patient\_medication, c\_patient\_problem\_list, and c\_patient\_drug\_allergy tables in a special way. They now activate/inactivate based on the presence or absence of rows in the message as well as the value of the problem\_list\_flag, medication\_flag, and drug\_allergy\_flag on the visit table.

The rest of the data on the MU form, such as ethnic type, race, height and weight were just fields on the visit table and required no modification to the wedge.

### **2. Defects Resolved**

The following defects that have been resolved in the 41.001 server release

<b>Redmine #</b>	<b>Subject</b>	<b>Priority</b>
4917	(Feature) Feed of MU data into the Wedge	Normal

### **3. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.41.199620 (3GB).zip
- 2) RIS Service Updates folder contains the following 19 files and 1 subfolder titled XSL. The XSL folder also contains 1 subfolder titled Stylesheets. The following files are contained in the Stylesheets folder
  - a) CDSJobManager.dll
  - b) CDSJobManager.pdb
  - c) CommonLib.dll
  - d) CommonLib.pdb
  - e) DDEngine.dll
  - f) DDEngine.pdb
  - g) rRISServices.exe
  - h) rRISServices.pdb
  - i) rRISServicesx64.exe
  - j) ScheduledTaskManager.dll
  - k) ScheduledTaskManager.pdb
  - l) SignatureApprovalService.exe
  - m) SignatureApprovalService.pdb
  - n) WCFService.dll
  - o) WCFService.pdb
  - p) WebApi.dll
  - q) WebApi.pdb
  - r) Wedge.pdb
  - s) Wedge.exe

### 4. Intended Audience

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### 5. Who is affected

Build 41 installs. This server update **must be applied directly to the build 41 core install**. Server updates are not cumulative. Any previous server updates must be applied before this one.

## **6. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	Requires Core Install. GUI.zip, Web Service, and Database updates
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service
40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web service, database updates
40	5	1.3.40.17087	1.3.40.16659	1.3.40.17069	1.3.40.17087	GUI.zip, Web service, database updates
40	6	1.3.40.17146	1.3.40.16659	1.3.40.17146	1.3.40.17146	GUI.zip, Web service, database updates
40	7	1.3.40.17268	1.3.40.16659	1.3.40.17268	1.3.40.17259	GUI.zip, Web service, database updates
40	8	1.3.40.17364	1.3.40.16659	1.3.40.17362	1.3.40.17343	GUI.zip, Web service, database updates
40	9	1.3.40.17370	1.3.40.16659	1.3.40.17370	1.3.40.17370	GUI.zip, Web service, database updates
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.
40	11	1.3.40.17435	1.3.40.16659	1.3.40.17525	1.3.40.17370	Web service update
40	12	1.3.40.17685	1.3.40.16659	1.3.40.17685	1.3.40.17648	GUI.zip, Web service, database updates
40	13	1.3.40.17776	1.3.40.16659	1.3.40.17776	1.3.40.17648	GUI.zip, Web service
40	14	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18063	1.3.40.18063	GUI.zip, Web service, database updates
40	14.1	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18107	1.3.40.18063	Web service
40	15	1.3.40.18127(3GB)	1.3.40.16659	1.3.40.18127	1.3.40.18127	GUI.zip, Web service, database updates
40	16	1.1.3.40.18585 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip, Web service, database updates
40	16.1	1.3.40.18705 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip
40	17	1.3.40.18780 (3GB)	1.3.40.18756	1.3.40.18756	1.3.40.18646	<b>Core install required for Radiologist User Group.</b> GUI.zip, Core setup, and Web Service updates
40	18	1.3.40.19253(3GB)	1.3.40.18756	1.3.40.18756	1.3.40.19253	GUI.zip, Web Service and database updates
41	-	1.3.41.19135(3GB)	1.3.41.19135	1.3.41.19135	1.3.41.19135	Full version release
41	1	1.3.41.19356(3GB)	1.3.41.19135	1.3.41.19346	1.3.41.19346	GUI.zip, Web Service and database updates
41	2	1.3.41.19620(3GB)	1.3.41.19135	1.3.41.19620	1.3.41.19346	GUI.zip and Web Service



## **7. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.40.19620.zip file provided with this release.

Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config and rRISServices.vshost.exe.config files.

*rRISService directories include:*

- a) rRISService*
- b) CDS rRISService*
- c) Wedge rRISService*
- d) DDE rRISService*

Restart each service.

# Server Update

For eRAD RIS  
Version 1.0  
Build 41  
Update 41.002.1

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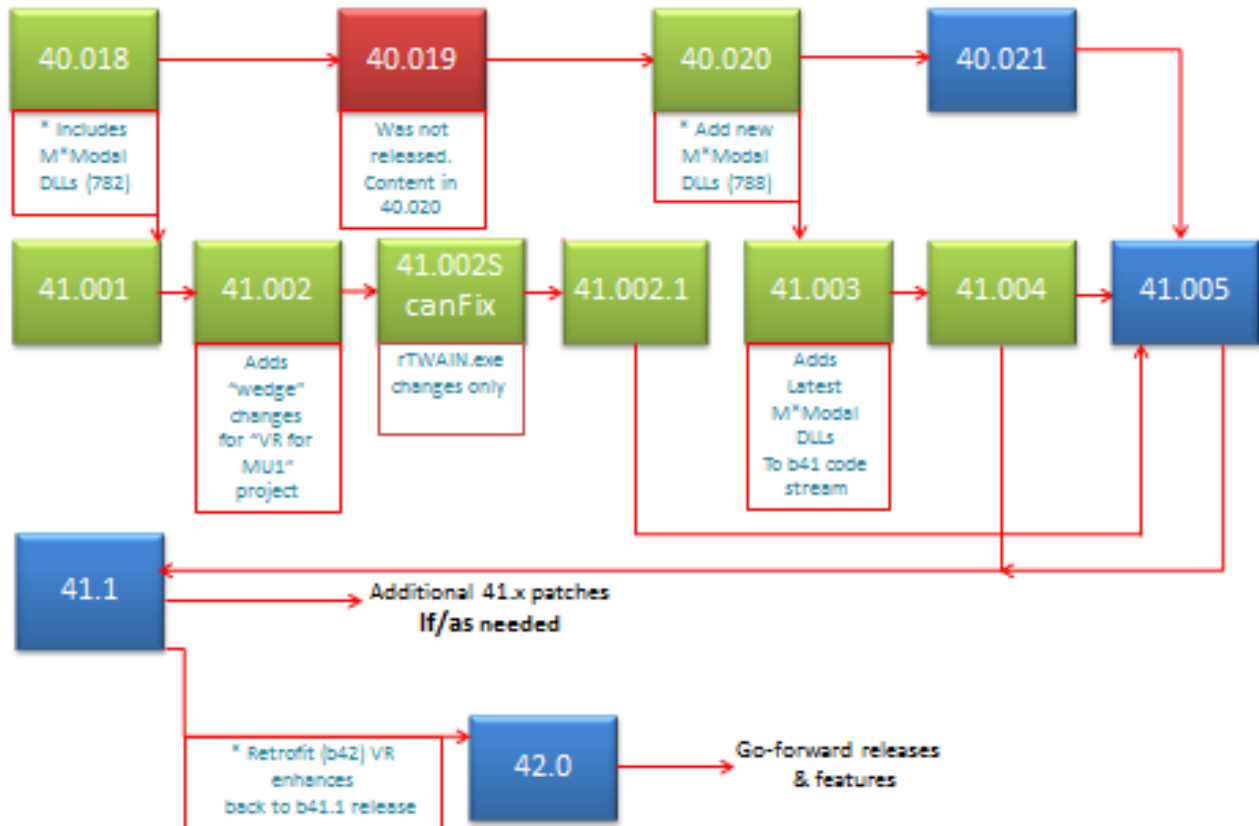
## **RADNET, Inc. – eRAD RIS Server Update**

### **1. Defects Resolved**

<b>Redmine #</b>	<b>Subject</b>	<b>Priority</b>
5415	Document Distribution - EMR Sender functionality broke in B41	Immediate
5413	RIS does not retrieve lookup tables / configuration changes under certain circumstances	High
5411	Constraint error when trying to printing forms on a study that has been dictated	Normal
5414	Scanner loads previous patients scans in preview after scanning (RRR)	Urgent
5412	User is losing practice association and getting error message	Normal
5407	Reporting - default recognizer getting picked up instead of the new one	Normal

## 2. Code Stream

eRad RIS– source code evolution



### **Legend:**

**Green = Released software**

**Red = software that will not be released**

**Blue = Future release**

### **3. Package Contents**

Files included for this server update:

1) GUI ZIP Updates folder contains

a) rRIS\_1.3.41.20622 (3GB).zip

2) RIS Service Updates folder contains the following files and 1 folder.

- |   |  |
|---|--|
| 1. CDSJobManager.dll                                  | 34.                                    |
| 2. CDSJobManager.pdb                                  | 35. SignatureApprovalService.exe       |
| 3. CommonLib.dll                                      | 36. SignatureApprovalService.pdb       |
| 4. CommonLib.pdb                                      | 37. System.Net.Http.dll                |
| 5. DDEngine.dll                                       | 38. System.Net.Http.Formatting.dll     |
| 6. DDEngine.pdb                                       | 39. System.Net.Http.Formatting.xml     |
| 7. Interop.FAXCOMEXLib.dll                            | 40. System.Net.Http.WebRequest.dll     |
| 8. Microsoft.Practices.EnterpriseLibrary.Caching.dll  | 41. System.Net.Http.WebRequest.xml     |
| 9. Microsoft.Practices.EnterpriseLibrary.Caching.pdb  | 42. System.Net.Http.xml                |
| 10. Microsoft.Practices.EnterpriseLibrary.Common.dll  | 43. System.Web.Helpers.dll             |
| 11. Microsoft.Practices.EnterpriseLibrary.Common.pdb  | 44. System.Web.Helpers.xml             |
| 12. Microsoft.Practices.EnterpriseLibrary.Logging.dll | 45. System.Web.Http.dll                |
| 13. Microsoft.Practices.EnterpriseLibrary.Logging.pdb | 46. System.Web.Http.SelfHost.dll       |
| 14. Microsoft.Practices.ServiceLocation.dll           | 47. System.Web.Http.SelfHost.xml       |
| 15. Microsoft.Practices.ServiceLocation.pdb           | 48. System.Web.Http.WebHost.dll        |
| 16. Microsoft.Practices.Unity.dll                     | 49. System.Web.Http.WebHost.xml        |
| 17. Microsoft.Practices.Unity.Interception.dll        | 50. System.Web.Http.xml                |
| 18. Microsoft.Practices.Unity.Interception.pdb        | 51. System.Web.Mvc.dll                 |
| 19. Microsoft.Practices.Unity.pdb                     | 52. System.Web.Mvc.xml                 |
| 20. Newtonsoft.Json.dll                               | 53. System.Web.Optimization.dll        |
| 21. Newtonsoft.Json.xml                               | 54. System.Web.Providers.dll           |
| 22. Ninject.dll                                       | 55. System.Web.Razor.dll               |
| 23. Ninject.Web.Common.dll                            | 56. System.Web.Razor.xml               |
| 24. Ninject.Web.Common.xml                            | 57. System.Web.WebPages.Deployment.dll |
| 25. Ninject.xml                                       | 58. System.Web.WebPages.Deployment.xml |
| 26. O2S.Components.PDFRender4NET.dll                  | 59. System.Web.WebPages.dll            |
| 27. PDFToImages.exe                                   | 60. System.Web.WebPages.Razor.dll      |
| 28. rRISServices.exe                                  | 61. System.Web.WebPages.Razor.xml      |
| 29. rRISServices.pdb                                  | 62. System.Web.WebPages.xml            |
| 30. rRISServicesx64.exe                               | 63. Tourreau.Gilles.FaxDotNet.dll      |
| 31. ScheduledTaskManager.dll                          | 64. Tourreau.Gilles.FaxDotNet.pdb      |
| 32. ScheduledTaskManager.pdb                          | 65. Tourreau.Gilles.FaxDotNet.xml      |
| 33. ServicesConfigWizard.exe                          | 66. WCFService.dll                     |
|   | 67. WCFService.pdb                     |

## **RADNET, Inc. – eRAD RIS Server Update**

- 68. WebApi.dll
- 69. WebApi.pdb
- 70. Wedge.exe
- 71. Wedge.pdb
- 72. XML folder contains and Sytlesheets subfolder. The subfolder contains:
  - a. CDAToHTMLCompleteReport.xslt
  - b. CDAToHTMLImpressionSection.xslt
  - c. CDAToRIS.xslt
  - d. CDAToTxt.xslt
  - e. DocumentModelReport.xslt
  - f. DocumentModelReportAsXml.xslt

### **4. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **5. Who is affected**

Build 41 installs. This server update must be applied directly to the build 41 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.

## **RADNET, Inc. – eRAD RIS Server Update**

### **6. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service
40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web service, database updates
40	5	1.3.40.17087	1.3.40.16659	1.3.40.17069	1.3.40.17087	GUI.zip, Web service, database updates
40	6	1.3.40.17146	1.3.40.16659	1.3.40.17146	1.3.40.17146	GUI.zip, Web service, database updates
40	7	1.3.40.17268	1.3.40.16659	1.3.40.17268	1.3.40.17259	GUI.zip, Web service, database updates
40	8	1.3.40.17364	1.3.40.16659	1.3.40.17362	1.3.40.17343	GUI.zip, Web service, database updates
40	9	1.3.40.17370	1.3.40.16659	1.3.40.17370	1.3.40.17370	GUI.zip, Web service, database updates
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.
40	11	1.3.40.17435	1.3.40.16659	1.3.40.17525	1.3.40.17370	Web service update
40	12	1.3.40.17685	1.3.40.16659	1.3.40.17685	1.3.40.17648	GUI.zip, Web service, database updates
40	13	1.3.40.17776	1.3.40.16659	1.3.40.17776	1.3.40.17648	GUI.zip, Web service
40	14	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18063	1.3.40.18063	GUI.zip, Web service, database updates
40	14.1	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18107	1.3.40.18063	Web service
40	15	1.3.40.18127(3GB)	1.3.40.16659	1.3.40.18127	1.3.40.18127	GUI.zip, Web service, database updates
40	16	1.1.3.40.18585 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip, Web service, database updates
40	16.1	1.3.40.18705 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip
40	17	1.3.40.18780 (3GB)	1.3.40.18756	1.3.40.18756	1.3.40.18646	<b>Core install required for</b> Radiologist User Group. GUI.zip, Core setup, and Web Service updates
40	18	1.3.40.19253(3GB)	1.3.40.18756	1.3.40.18756	1.3.40.19253	GUI.zip, Web Service and database updates
40	19	1.3.40.19909(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	GUI.zip, Web Service
40	20	1.3.40.20086(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip and Recognizer
41	-	1.3.41.19135(3GB)	1.3.41.19135	1.3.41.19135	1.3.41.19135	Full version release
41	1	1.3.41.19356(3GB)	1.3.41.19135	1.3.41.19346	1.3.41.19346	GUI.zip, Web Service and database updates
41	2	1.3.41.19620(3GB)	1.3.41.19135	1.3.41.19620	1.3.41.19346	GUI.zip and Web Service
41	2sf	1.3.41.19620SF(3G)	1.3.41.19135	1.3.41.19620	1.3.41.19346	GUI.zip
41	2.1	1.3.41.20622(3GB)	1.3.41.19135	1.3.41.20617	1.3.41.19346	GUI.zip and Web Service
41	3	1.3.41.20171(3GB)	1.3.41.19135	1.3.41.20171	1.3.41.19346	GUI.zip , Web Service and Recognizer
41	4	1.3.41.20285(3GB)	1.3.41.19135	1.3.41.20171	1.3.41.19346	GUI.zip



### **7. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.41.20622.zip file provided with this release.  
Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.
- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config and rRISServices.vshost.exe.config files.  
*rRISService directories include:*
  - a) *rRISService*
  - b) *CDS rRISService*
  - c) *Wedge rRISService*
  - d) *DDE rRISService*

Restart each service.

### **8. Known Limitations**

Known limitations listed in this document may not have been introduced in 41.002.1, but have been discovered during testing of 41.002.1.

Redmine #	Subject	Info
5409	Legacy PDF documents are not rendering in HTML	This is feature not completed not really a Known Limitation. Making note as it was communicated that Redmine item 5409 would be in this release.

# Server Update

For eRAD RIS  
Version 1.0  
Build 41  
Update 41.002SF

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## RADNET, Inc. – eRAD RIS Server Update

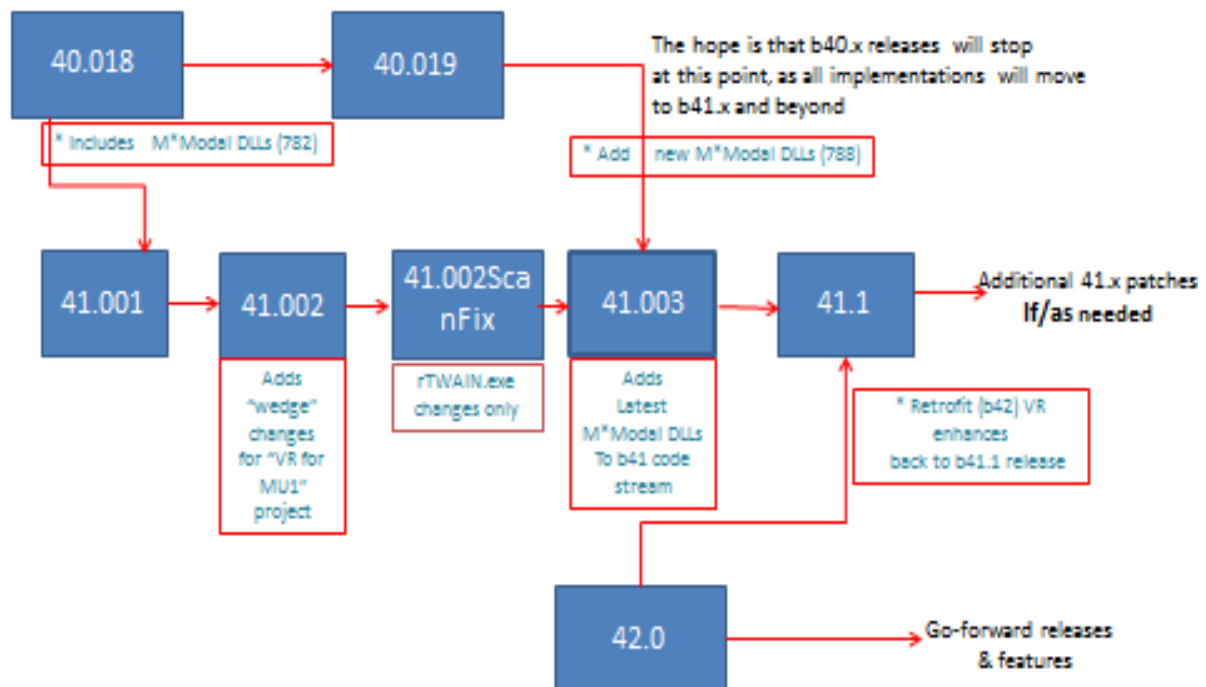
### 1. Defects Resolved

The following defects that have been resolved in the 41.001 server release

Redmine #	Subject	Priority
5212	Scanner loads previous patients scans in preview after scanning	Urgent

### 2. Code Stream

#### eRad RIS–code merge



### **3. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.41.199620SF (3GB).zip

### **4. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **5. Who is affected**

Build 41 installs. This server update **must be applied directly to the build 41 core install**. Server updates are not cumulative. Any previous server updates must be applied before this one.

## **6. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
39	-	1.3.39.15389	1.3.39.15389	1.3.39.15377	1.3.39.15355	Full version release
39	1	1.3.39.16026	1.3.39.15943	1.3.39.15943	1.3.39.15957	Requires Core Install. GUI.zip, Web Service, and Database updates
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service
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40	6	1.3.40.17146	1.3.40.16659	1.3.40.17146	1.3.40.17146	GUI.zip, Web service, database updates
40	7	1.3.40.17268	1.3.40.16659	1.3.40.17268	1.3.40.17259	GUI.zip, Web service, database updates
40	8	1.3.40.17364	1.3.40.16659	1.3.40.17362	1.3.40.17343	GUI.zip, Web service, database updates
40	9	1.3.40.17370	1.3.40.16659	1.3.40.17370	1.3.40.17370	GUI.zip, Web service, database updates
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.
40	11	1.3.40.17435	1.3.40.16659	1.3.40.17525	1.3.40.17370	Web service update
40	12	1.3.40.17685	1.3.40.16659	1.3.40.17685	1.3.40.17648	GUI.zip, Web service, database updates
40	13	1.3.40.17776	1.3.40.16659	1.3.40.17776	1.3.40.17648	GUI.zip, Web service
40	14	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18063	1.3.40.18063	GUI.zip, Web service, database updates
40	14.1	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18107	1.3.40.18063	Web service
40	15	1.3.40.18127(3GB)	1.3.40.16659	1.3.40.18127	1.3.40.18127	GUI.zip, Web service, database updates
40	16	1.1.3.40.18585 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip, Web service, database updates
40	16.1	1.3.40.18705 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip
40	17	1.3.40.18780 (3GB)	1.3.40.18756	1.3.40.18756	1.3.40.18646	<b>Core install required for Radiologist User Group.</b> GUI.zip, Core setup, and Web Service updates
40	18	1.3.40.19253(3GB)	1.3.40.18756	1.3.40.18756	1.3.40.19253	GUI.zip, Web Service and database updates
41	-	1.3.41.19135(3GB)	1.3.41.19135	1.3.41.19135	1.3.41.19135	Full version release
41	1	1.3.41.19356(3GB)	1.3.41.19135	1.3.41.19346	1.3.41.19346	GUI.zip, Web Service and database updates
41	2	1.3.41.19620(3GB)	1.3.41.19135	1.3.41.19620	1.3.41.19346	GUI.zip and Web Service
41	2SF	1.3.41.19620SF(3GB)	1.3.41.19135	1.3.41.19620	1.3.41.19346	GUI.zip

## **7. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.40.19620SF.zip file provided with this release.  
Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

# **Server Update**

**For eRAD RIS  
Version 1.0  
Build 41  
Update 41.003**



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## 1. New Features

### Reporting - Limit or convert special characters in cue names, macros and templates

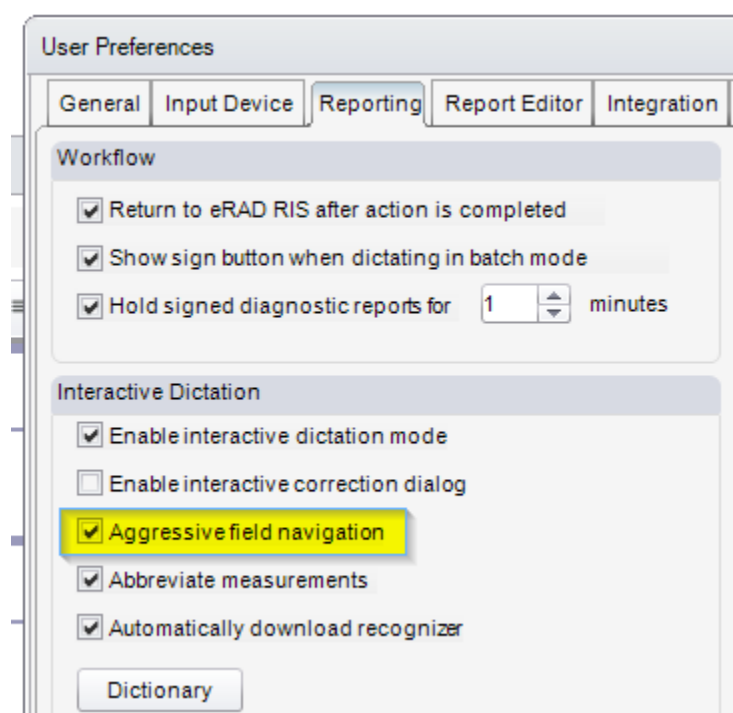
Conversion of special characters in cue names, macros and templates.

In a template if you have a field with a value in the cue like this "Technique :"

When you save the template and reopen it, the : is converted as follows "Technique %colon%".

This feature does the following, while dictating an exam and you say the words Technique colon, your cursor will be brought to the field that has a value of "Technique %colon%" in the cue.

NOTE: The user preference "Aggressive field navigation" must be checked for this feature to work, after checking this preference, a restart of RIS is required.

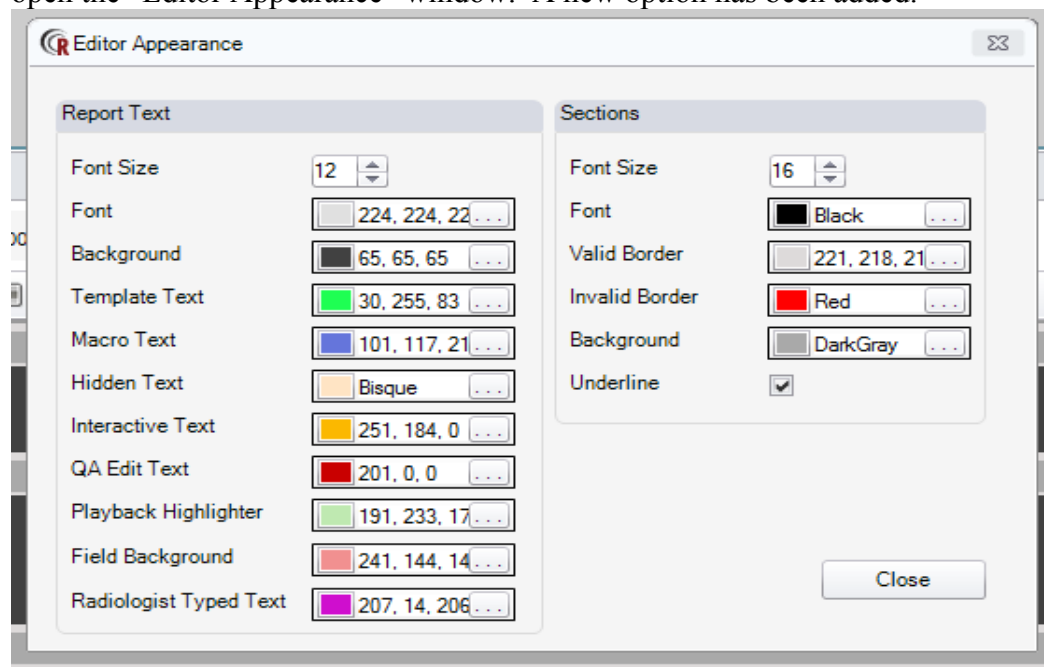


**Figure 1.1 – User preference “Aggressive field navigation”**

NOTE: the user preference “Aggressive field navigation” will need to be selected for “No Wait Navigate”. We had issues in the past when dictating in Field 1 and before the text was inserted the command for next field was issued. The text that had not yet been inserted in Field 1 would appear in Field 2. This has been addressed, but as mentioned above the Aggressive field navigation user preference needs to be enabled.

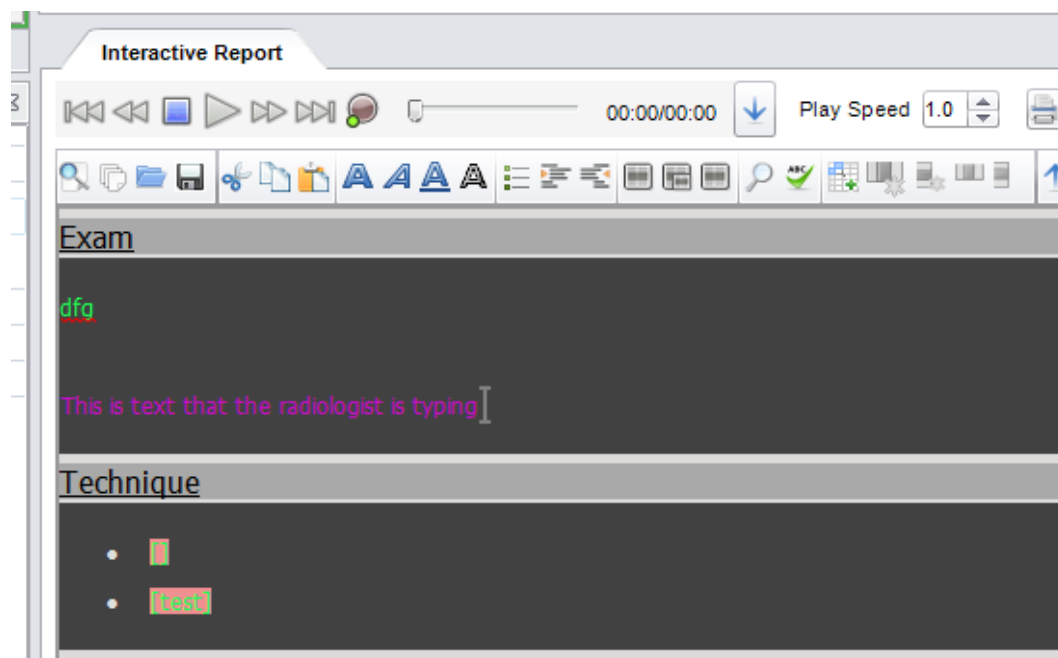
### **Reporting - Radiologist edit text color**

Within the reporting window, the user can open the context menu (right click) on the editor. This will present the user with a list of options. Selecting the “Editor Appearance” option will open the “Editor Appearance” window. A new option has been added.



**Figure 1.2 – Editor Appearance window with new Radiologist Typed Text option**

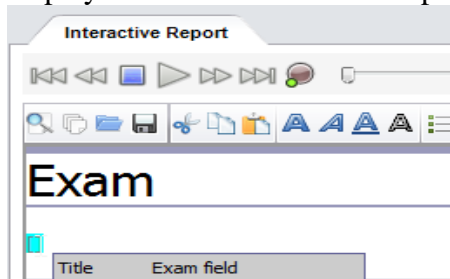
This new option controls the color of the manually entered/edited text by the radiologist



**Figure 1.3 – Editor displaying the text color when manually entered by the radiologist.**

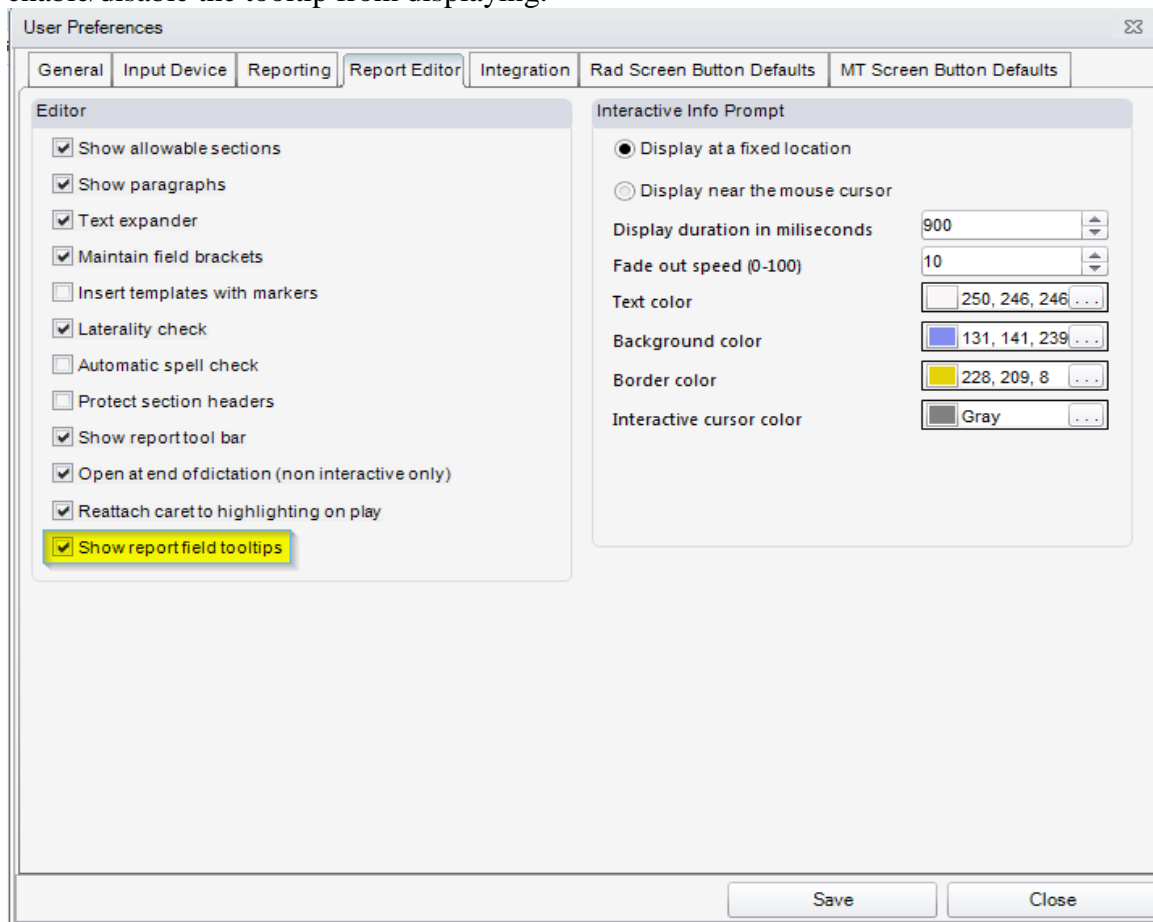
### **Reporting - field tooltips staying on top of other screens after displaying**

Templates used in the reporting window can have navigational fields pre-defined in the template. Each of these fields has a name associated with it. If the mouse pointer hovers over a field it will display the field name in a tooltip.



**Figure 1.4 – Reporting field tooltip.**

A new user preference on the Report Editor tab called “Show report field tooltips” will enable/disable the tooltip from displaying.



**Figure 1.5 – New User Preference “Show report field tooltips”**

## **RADNET, Inc. – eRAD RIS Server Update**

### **2. Defects Resolved**

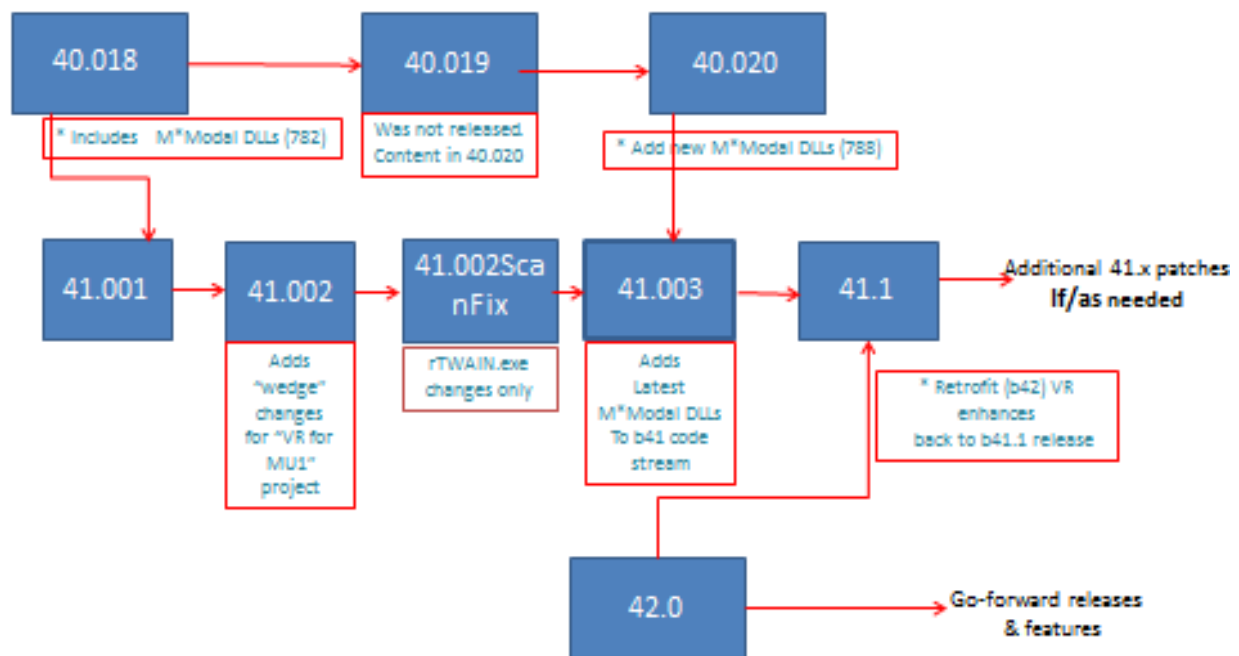
<b>Redmine #</b>	<b>Subject</b>	<b>Priority</b>
5251	Document Distribution - EMR Sender functionality broke in B41	Immediate
5163	Losing default value for fields when saving template/macro	Immediate
5212	Scanner loads previous patients scans in preview after scanning (RRR)	Urgent
5184	Arrive individual exams error (RRR)	Urgent
5035	Wrong document model is loading in template editor	Urgent
5140	Editing fields in template editor sometimes throws an exception	High
5036	Reporting - ability to navigate cued fields without pausing	High
5034	Reporting - 7.82+ Numbering paragraphs creates an unwanted list	High
5032	Reporting - playback is not in order of dictated	High
5030	Sections from incorrect practice loading into template editor	High
5027	Using next field button while dictating (Fisher site visit)	High
5167	Aggressive field cue navigation fails after editing a cue on a template.	Normal
5149	Reporting - speech mics 3500 and 3600 showing incorrectly in Help>About	Normal
5049	Reporting - New recognizer for 7.88	Normal
5047	Next field voice command, showing field popup for one field too far.	Normal
5046	Reporting - ability to configure the completeTimeout setting for interactive dictation	Normal
5045	Reporting - ability to configure the finalTimeout setting for interactive dictation	Normal
5044	Reporting - ability to configure the speedVsAccuracy setting for interactive dictation	Normal
5043	Reporting - improper capitalization of measurements outside of a field	Normal
5042	Reporting - structured lists splitting when dictating next item in the middle of an existing item	Normal
5041	Reporting - ability to dictate 'next item' without pausing	Normal
5040	Reporting - integrate M*MOdal 7.88 release into 41.1 code stream.	Normal
5039	Reporting - negative two views rendering	Normal
5038	Reporting - Limit or convert special characters in cue names, macros and templates	Normal
5037	Reporting - ability to dictate negative or minus numbers	Normal
5033	Reporting - interactive dictation of the word "through" appearing as "-" not ideal	Normal
5031	Reporting - AudioReplacementEnabled on causes "undo that" to malfunction	Normal

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5028	Improve performance of "next field" (CRA site visit)	Normal
5023	Reporting - Not a field exception causing application hang	Normal
5022	MModal - select command will not select first or last word in a field	Normal
5020	Reporting - interactive number lists are not consistent	Normal
5019	Reporting - field tooltips staying on top of other screens after displaying	Normal
4801	NewCrop UPIN problem	Normal
5029	Unable to dictate "+" into a report (CRA site visit)	Low

### 3. Code Stream

#### eRad RIS – code merge



### **4. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.41.20171 (3GB).zip
  
- 2) RIS Service Updates folder contains the following files.
  - a) CDSJobManager.dll
  - b) CDSJobManager.pdb
  - c) CommonLib.dll
  - d) CommonLib.pdb
  - e) DDEngine.dll
  - f) DDEngine.pdb
  - g) rRISServices.exe
  - h) rRISServices.pdb
  - i) rRISServicesx64.exe
  - j) ScheduledTaskManager.dll
  - k) ScheduledTaskManager.pdb
  - l) SignatureApprovalService.exe
  - m) SignatureApprovalService.pdb
  - n) WCFService.dll
  - o) WCFService.pdb
  - p) WebApi.dll
  - q) WebApi.pdb
  - r) Wedge.exe
  - s) Wedge.pdb
  
- 3) Recognizer folder contains:
  - a) 7~Recognizer.MtiRecognitionUS.Radiology\_Interactive\_v13\_v5\_401.12965.xc
  - b) 7~Recognizer.MtiRecognitionUS.Radiology\_Interactive\_v13\_v5\_401.12965-descriptor.xc

### **5. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **6. Who is affected**

Build 41 installs. This server update must be applied directly to the build 41 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.



## **RADNET, Inc. – eRAD RIS Server Update**

### **7. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service
40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web service, database updates
40	5	1.3.40.17087	1.3.40.16659	1.3.40.17069	1.3.40.17087	GUI.zip, Web service, database updates
40	6	1.3.40.17146	1.3.40.16659	1.3.40.17146	1.3.40.17146	GUI.zip, Web service, database updates
40	7	1.3.40.17268	1.3.40.16659	1.3.40.17268	1.3.40.17259	GUI.zip, Web service, database updates
40	8	1.3.40.17364	1.3.40.16659	1.3.40.17362	1.3.40.17343	GUI.zip, Web service, database updates
40	9	1.3.40.17370	1.3.40.16659	1.3.40.17370	1.3.40.17370	GUI.zip, Web service, database updates
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.
40	11	1.3.40.17435	1.3.40.16659	1.3.40.17525	1.3.40.17370	Web service update
40	12	1.3.40.17685	1.3.40.16659	1.3.40.17685	1.3.40.17648	GUI.zip, Web service, database updates
40	13	1.3.40.17776	1.3.40.16659	1.3.40.17776	1.3.40.17648	GUI.zip, Web service
40	14	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18063	1.3.40.18063	GUI.zip, Web service, database updates
40	14.1	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18107	1.3.40.18063	Web service
40	15	1.3.40.18127(3GB)	1.3.40.16659	1.3.40.18127	1.3.40.18127	GUI.zip, Web service, database updates
40	16	1.1.3.40.18585 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip, Web service, database updates
40	16.1	1.3.40.18705 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip
40	17	1.3.40.18780 (3GB)	1.3.40.18756	1.3.40.18756	1.3.40.18646	<b>Core install required for Radiologist User Group.</b> GUI.zip, Core setup, and Web Service updates
40	18	1.3.40.19253(3GB)	1.3.40.18756	1.3.40.18756	1.3.40.19253	GUI.zip, Web Service and database updates
40	19	1.3.40.19909(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	GUI.zip, Web Service
40	20	1.3.40.20086(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip and Recognizer
41	-	1.3.41.19135(3GB)	1.3.41.19135	1.3.41.19135	1.3.41.19135	Full version release
41	1	1.3.41.19356(3GB)	1.3.41.19135	1.3.41.19346	1.3.41.19346	GUI.zip, Web Service and database updates
41	2	1.3.41.19620(3GB)	1.3.41.19135	1.3.41.19620	1.3.41.19346	GUI.zip and Web Service
41	3	1.3.41.20171(3GB)	1.3.41.19135	1.3.41.20171	1.3.41.19346	GUI.zip , Web Service and Recognizer

### **8. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.41.20171.zip file provided with this release.

Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

- 2) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config and rRISServices.vshost.exe.config files.

*rRISService directories include:*

- a) *rRISService*
- b) *CDS rRISService*
- c) *Wedge rRISService*
- d) *DDE rRISService*

Restart each service.

- 3) Copy the Recognizer files to your local machine to the following folder.

Note: this could be a hidden folder.

C:\ProgramData\RadNet\Recognizer\2.16.840.1.113883.3.21\

### **9. Known Limitations**

Known limitations listed in this document may not have been introduced in 41.003, but have been discovered during testing of 41.003.

Redmine #	Subject	Info
5245	Reporting - Spine navigational cues are not recognized	<p>My cues were configured as</p> <ol style="list-style-type: none"><li>1. C two dash three colon</li><li>2. C three dash four colon</li><li>3. C four dash five colon</li></ol> <p>I changed them to be</p> <ol style="list-style-type: none"><li>1. C two colon</li><li>2. C three colon</li><li>3. C four colon</li></ol> <p>The change in cues names worked much better</p>
5248	Reporting - Edit template from reporting window error	<p>This was only occurring with one of my templates. If this occurs try "refresh configuration". If that does not work</p>

## **RADNET, Inc. – eRAD RIS Server Update**

		open the same template in the TemplateMacro editor and save.
5249	Reporting - Shift Tab in the template editor or reporting editor will return error	
5219	Reporting - Function key action DeleteWordLeftOfCursor will delete fields and section titles	If you continue to select the function key after the text has been removed it will jump to the section title and can also delete it as well
5220	Reporting - Interactive Info Prompt can show fields that have been jumped over when using Next Section command	If in a section that has multiple field with default text, issue the command Next Section, the interactive info prompt will display the text from the fields that were skipped.
5254	Reporting - using the undo feature, the cursor is not following the text that is being removed.	Seems to occur when the “undo” feature is used multiple times concurrently.
5260	Skip and Continue only loads images every other study	Two workarounds exist for this. 1. Turn off (unselect) user preference “Reuse reporting screen” 2. If using “Reuse reporting screen” select the Load images icon in the reporting window.

# Server Update

For eRAD RIS  
Version 1.0  
Build 41  
Update 41.004

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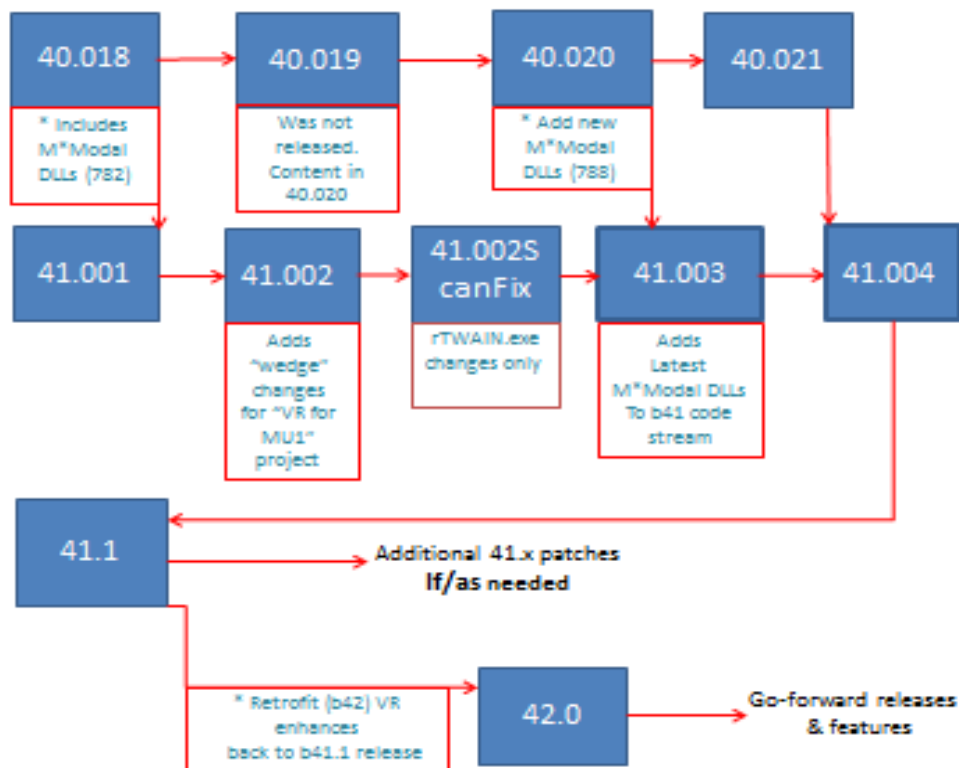
## **RADNET, Inc. – eRAD RIS Server Update**

## 1. Defects Resolved

Redmine #	Subject	Priority
5503	RIS does not retrieve lookup tables / configuration changes under certain circumstances	High
5286	Constraint error when trying to printing forms on a study that has been dictated	Normal

## 2. Code Stream

eRad RIS—source code evolution



### **3. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.41.20285 (3GB).zip

### **4. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **5. Who is affected**

Build 41 installs. This server update must be applied directly to the build 41 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.

## **RADNET, Inc. – eRAD RIS Server Update**

### **6. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
40	-	1.3.40.16628	1.3.40.16628	1.3.40.16628	1.3.40.16628	Full version release
40	1	1.3.40.16849	1.3.40.16659	1.3.40.16744	1.3.40.16727	GUI.zip, Web service, database updates and SQL Management reporting
40	2	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	GUI.zip and Web Service
40	3	1.3.40.16868	1.3.40.16659	1.3.40.16868	1.3.40.16727	DB updated only
40	4	1.3.40.16967	1.3.40.16659	1.3.40.16932	1.3.40.16961	GUI.zip, Web service, database updates
40	5	1.3.40.17087	1.3.40.16659	1.3.40.17069	1.3.40.17087	GUI.zip, Web service, database updates
40	6	1.3.40.17146	1.3.40.16659	1.3.40.17146	1.3.40.17146	GUI.zip, Web service, database updates
40	7	1.3.40.17268	1.3.40.16659	1.3.40.17268	1.3.40.17259	GUI.zip, Web service, database updates
40	8	1.3.40.17364	1.3.40.16659	1.3.40.17362	1.3.40.17343	GUI.zip, Web service, database updates
40	9	1.3.40.17370	1.3.40.16659	1.3.40.17370	1.3.40.17370	GUI.zip, Web service, database updates
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.
40	11	1.3.40.17435	1.3.40.16659	1.3.40.17525	1.3.40.17370	Web service update
40	12	1.3.40.17685	1.3.40.16659	1.3.40.17685	1.3.40.17648	GUI.zip, Web service, database updates
40	13	1.3.40.17776	1.3.40.16659	1.3.40.17776	1.3.40.17648	GUI.zip, Web service
40	14	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18063	1.3.40.18063	GUI.zip, Web service, database updates
40	14.1	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18107	1.3.40.18063	Web service
40	15	1.3.40.18127(3GB)	1.3.40.16659	1.3.40.18127	1.3.40.18127	GUI.zip, Web service, database updates
40	16	1.1.3.40.18585 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip, Web service, database updates
40	16.1	1.3.40.18705 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip
40	17	1.3.40.18780 (3GB)	1.3.40.18756	1.3.40.18756	1.3.40.18646	<b>Core install required for Radiologist User Group.</b> GUI.zip, Core setup, and Web Service updates
40	18	1.3.40.19253(3GB)	1.3.40.18756	1.3.40.18756	1.3.40.19253	GUI.zip, Web Service and database updates
40	19	1.3.40.19909(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	GUI.zip, Web Service
40	20	1.3.40.20086(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip and Recognizer
40	21	1.3.40.20232(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip
41	-	1.3.41.19135(3GB)	1.3.41.19135	1.3.41.19135	1.3.41.19135	Full version release
41	1	1.3.41.19356(3GB)	1.3.41.19135	1.3.41.19346	1.3.41.19346	GUI.zip, Web Service and database updates
41	2	1.3.41.19620(3GB)	1.3.41.19135	1.3.41.19620	1.3.41.19346	GUI.zip and Web Service
41	3	1.3.41.20171(3GB)	1.3.41.19135	1.3.41.20171	1.3.41.19346	GUI.zip , Web Service and Recognizer
41	4	1.3.41.20285(3GB)	1.3.41.19135	1.3.41.20171	1.3.41.19346	GUI.zip



### **7. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.41.20285.zip file provided with this release.  
Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

### **8. Known Limitations**

Known limitations listed in this document may not have been introduced in 41.004, but have been discovered during testing of 41.004.

Redmine #	Subject	Info
5268	Reporting - Automatic spell check "on the fly" marks words as misspelled that are at the beginning of a field	With the user preference Automatic Spell Check on, words that are at the beginning of a field will be recognized as spelling errors. Once the Radiologist selects the Sign button (transcribe for MT's) they are prompted with the Spell Check. Selecting Yes on this prompt will then determine that there were in fact no spelling mistakes. If there are spelling errors it will still detect those and highlight and provide options to correct.
5306	Reporting - Dictionary Add / Train changes	This is behaving slightly different than before. In previous versions the user opened the Dictionary window > Add / Train window, entered text, selected the Record Pronunciation once to capture the voice recording of the word entered and select the Record Pronunciation again to stop.  In 41.004 the user will open the Dictionary window > Add / Train window, enter text, NOW they must initiate the record on the SpeechMike, then select the Record Pronunciation button to capture the voice recording of the word entered. There are 2 different modes of using the record button. If user preference "Stop recording when button is released" is selected the user must select and hold the record

## **RADNET, Inc. – eRAD RIS Server Update**

		<p>button, select the Record Pronunciation button and to stop recording the pronunciation release the record button on the SpeechMike</p> <p>If user preference "Stop recording when button is released" is not selected the user must select record on the SpeechMike, select Record Pronunciation in the Add/Train window, once the voice recording is complete select record button on the SpeechMike again to complete.</p>
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# Server Update

For eRAD RIS  
Version 1.0  
Build 41  
Update 41.005

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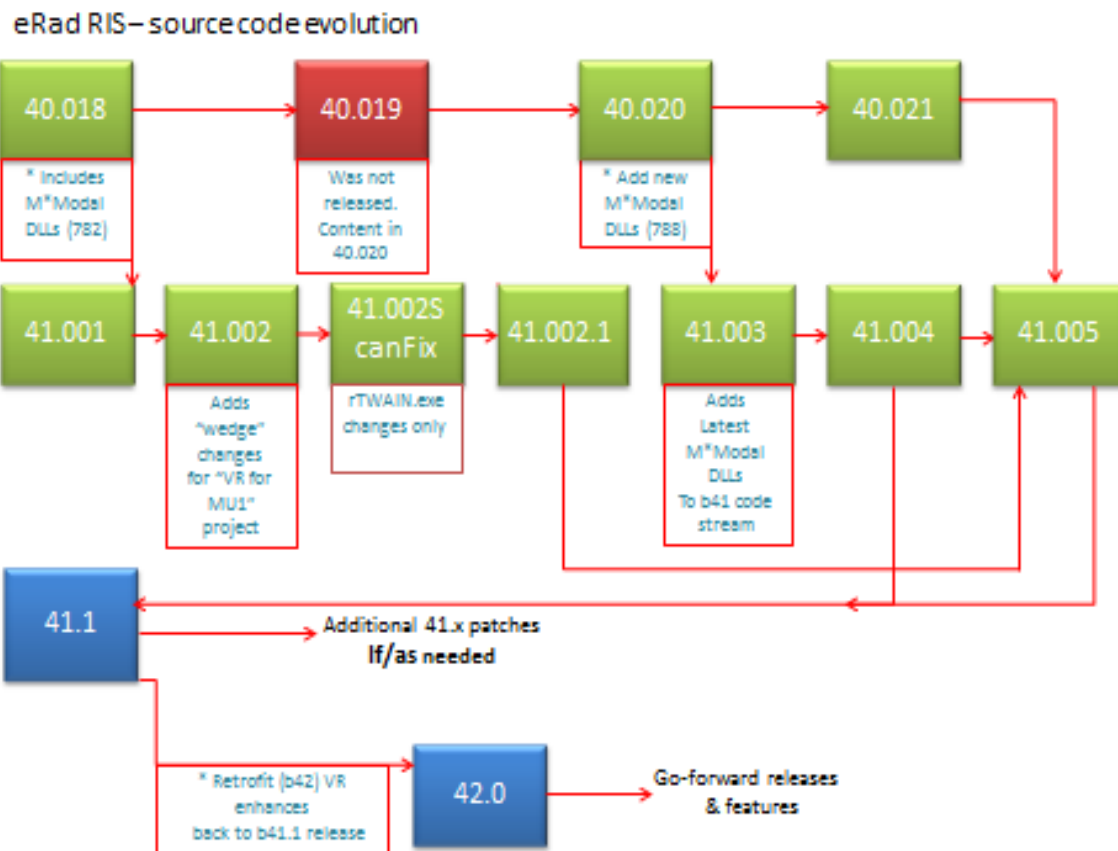
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## **RADNET, Inc. – eRAD RIS Server Update**

### **1. Defects Resolved**

<b>Redmine #</b>	<b>Subject</b>	<b>Priority</b>
5315	Insert macro can reset a field back to its default value	Immediate
5457	Merge to B41.1 - Enhance the relevancy calculation to be adjustable via configuraiton	Urgent
5336	Reporting - Dictionary Add / Train changes	Urgent
5436	Reporting - possible wrong document model loading if more than one practice	High
5409	Truxtun - Legacy PDF documents are not rendering in HTML	High
5380	RRR - Reschedule problem for procedure plans	High
5369	Canceling Unscheduled orders not appearing on Patient Folder	High
5498	duplicate "void" payment for the same payment	Normal
5486	Procedure code assignment screen in template editor keeps button disabled	Normal
5477	Birad picker either shows on non Birads studies or doesn't show on birad studies.	Normal
5472	Reporting - Attachments data pane default is report	Normal
5470	Reporting - default recognizer getting picked up instead of the new one	Normal
5441	Reporting - rad edit text default color is yellow - should be "#810000"	Normal
5432	Reporting - dictating negative 5 percent will render the word percent not the symbol	Normal
5349	Reporting - Laterality check causing duplicate words	Normal
5343	Playback with bouncing ball, preventing word selection with double click.	Normal
5318	Dictating previous field moves two fields back instead of one.	Normal
5317	Reporting - no wait navigate fails when dictating and then clicking next field > 1 time without pausing	Normal
5268	Reporting - Automatic spell check "on the fly" marks words as misspelled that are at the beginning of a field	Normal
5046	Reporting - ability to configure the completeTimeout setting for interactive dictation	Normal
5045	Reporting - ability to configure the finalTimeout setting for interactive dictation	Normal
5044	Reporting - ability to configure the speedVsAccuracy setting for interactive dictation	Normal

## 2. Code Stream



**Legend:**

**Green = Released software**

**Red = Will not be released**

**Blue = Future release**

### **3. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.41.20809 (3GB).zip
- 2) Core folder contains a subfolder titled \_setup. This subfolder contains
  - a) rRisSetup.msi
  - b) setup.exe
- 3) SQL folder contains:
  - a) B41\_005.sql
- 4) RIS\_Service\_Updates
  - a) ABCpdf.dll
  - b) ABCpdf9-32.dll
  - c) ABCpdf9-64.dll
  - d) CDSJobManager.dll
  - e) CDSJobManager.pdb
  - f) CommonLib.dll
  - g) CommonLib.pdb
  - h) DDEngine.dll
  - i) DDEngine.pdb
  - j) Interop.FAXCOMEXLib.dll
  - k) Microsoft.Practices.EnterpriseLibrary.Caching.dll
  - l) Microsoft.Practices.EnterpriseLibrary.Caching.pdb
  - m) Microsoft.Practices.EnterpriseLibrary.Common.dll
  - n) Microsoft.Practices.EnterpriseLibrary.Common.pdb
  - o) Microsoft.Practices.EnterpriseLibrary.Logging.dll
  - p) Microsoft.Practices.EnterpriseLibrary.Logging.pdb
  - q) Microsoft.Practices.ServiceLocation.dll
  - r) Microsoft.Practices.ServiceLocation.pdb
  - s) Microsoft.Practices.Unity.dll
  - t) Microsoft.Practices.Unity.Interception.dll
  - u) Microsoft.Practices.Unity.Interception.pdb
  - v) Microsoft.Practices.Unity.pdb
  - w) Microsoft.ReportViewer.WinForms.xml
  - x) Newtonsoft.Json.dll
  - y) Newtonsoft.Json.xml
  - z) Ninject.dll
  - aa) Ninject.Web.Common.dll
  - bb) Ninject.Web.Common.xml
  - cc) Ninject.xml
  - dd) O2S.Components.PDFRender4NET.dll
  - ee) PDFToImages.exe
  - ff) rRISServices.exe
  - gg) rRISServices.pdb
  - hh) rRISServicesx64.exe
  - ii) ScheduledTaskManager.dll
  - jj) ScheduledTaskManager.pdb
  - kk) ServicesConfigWizard.exe
  - ll) ServicesConfigWizard.pdb
  - mm) SignatureApprovalService.exe
  - nn) SignatureApprovalService.pdb
  - oo) System.Net.Http.dll
  - pp) System.Net.Http.Formatting.dll
  - qq) System.Net.Http.Formatting.xml
  - rr) System.Net.Http.WebRequest.dll
  - ss) System.Net.Http.WebRequest.xml
  - tt) System.Net.Http.xml
  - uu) System.Web.dll
  - vv) System.Web.Helpers.dll
  - ww) System.Web.Helpers.xml
  - xx) System.Web.Http.dll
  - yy) System.Web.Http.SelfHost.dll
  - zz) System.Web.Http.SelfHost.xml
  - aaa) System.Web.Http.WebHost.dll
  - bbb) System.Web.Http.WebHost.xml
  - ccc) System.Web.Http.xml
  - ddd) System.Web.Mvc.dll
  - eee) System.Web.Mvc.xml

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fff)	System.Web.Optimization.dll	ppp)	Tourreau.Gilles.FaxDotNet.dll
ggg)	System.Web.Providers.dll	qqq)	Tourreau.Gilles.FaxDotNet.pdb
hhh)	System.Web.Razor.dll	rrr)	Tourreau.Gilles.FaxDotNet.xml
iii)	System.Web.Razor.xml	sss)	WCFSservice.dll
jjj)	System.Web.WebPages.Deployment.dll	ttt)	WCFSservice.pdb
kkk)	System.Web.WebPages.Deployment.xml	uuu)	WebApi.dll
lll)	System.Web.WebPages.dll	vvv)	WebApi.pdb
mmm)	System.Web.WebPages.Razor.dll	www)	Wedge.exe
nnn)	System.Web.WebPages.Razor.xml	xxx)	Wedge.pdb
ooo)	System.Web.WebPages.xml		

### **4. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **5. Who is affected**

Build 41 installs. This server update must be applied directly to the build 41 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.



**6. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.
40	11	1.3.40.17435	1.3.40.16659	1.3.40.17525	1.3.40.17370	Web service update
40	12	1.3.40.17685	1.3.40.16659	1.3.40.17685	1.3.40.17648	GUI.zip, Web service, database updates
40	13	1.3.40.17776	1.3.40.16659	1.3.40.17776	1.3.40.17648	GUI.zip, Web service
40	14	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18063	1.3.40.18063	GUI.zip, Web service, database updates
40	14.1	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18107	1.3.40.18063	Web service
40	15	1.3.40.18127(3GB)	1.3.40.16659	1.3.40.18127	1.3.40.18127	GUI.zip, Web service, database updates
40	16	1.1.3.40.18585 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip, Web service, database updates
40	16.1	1.3.40.18705 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip
40	17	1.3.40.18780 (3GB)	1.3.40.18756	1.3.40.18756	1.3.40.18646	<b>Core install required for Radiologist User Group.</b> GUI.zip, Core setup, and Web Service updates
40	18	1.3.40.19253(3GB)	1.3.40.18756	1.3.40.18756	1.3.40.19253	GUI.zip, Web Service and database updates
40	19	1.3.40.19909(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	GUI.zip, Web Service
40	20	1.3.40.20086(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip and Recognizer
40	21	1.3.40.20703(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip
41	-	1.3.41.19135(3GB)	1.3.41.19135	1.3.41.19135	1.3.41.19135	Full version release
41	1	1.3.41.19356(3GB)	1.3.41.19135	1.3.41.19346	1.3.41.19346	GUI.zip, Web Service and database updates
41	2	1.3.41.19620(3GB)	1.3.41.19135	1.3.41.19620	1.3.41.19346	GUI.zip and Web Service
41	2sf	1.3.41.19620SF(3G)	1.3.41.19135	1.3.41.19620	1.3.41.19346	GUI.zip
41	2.1	1.3.41.20622(3GB)	1.3.41.19135	1.3.41.20617	1.3.41.19346	GUI.zip and Web Service
41	3	1.3.41.20171(3GB)	1.3.41.19135	1.3.41.20171	1.3.41.19346	GUI.zip , Web Service and Recognizer
41	4	1.3.41.20285(3GB)	1.3.41.19135	1.3.41.20171	1.3.41.19346	GUI.zip
41	5	1.3.41.20809(3GB)	1.3.41.20708	1.3.41.20792	1.3.41.20738	GUI.zip, Core install, Web Service and database updates

### **7. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.41.20809.zip file provided with this release.  
Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.
- 2) Copy the \_setup folder and its contents and replace the \_setup folder and its contents. The \_setup folder is located in the RISDeployment \Core folder.

**NOTE:** If your upgrade is coming from 40.016.1 or less a core install will be required.

- 3) Stop each service listed below. Copy the files from the RIS Service Updates folder to the directory for each rRISService. Be sure to make backup of all files, but especially the rRISServices.exe.config and rRISServices.vshost.exe.config files.

*rRISService directories include:*

- a) *rRISService*
- b) *CDS rRISService*
- c) *Wedge rRISService*
- d) *DDE rRISService*

Restart each service.

- 4) Run the B41\_005.sql file against the eRAD RIS database instance.

### **8. Known Limitations**

Known limitations listed in this document may not have been introduced in 41.005, but have been discovered during testing of 41.005.

Redmine #	Subject	Info
5535	Issue with Void payment, can void the same payment from Register window and from View/edit window	Two different users can void the same payment resulting in one single payment being voided twice.
5388	error on save: Invalid column name 'inverted_face'	This bug is in previous versions. Although it has not been completely corrected, the occurrence will less frequent. This only occurs when the user preference "Use Dark Mode" is on.

# Server Update

For eRAD RIS  
Version 1.0  
Build 41  
Update 41.006

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## **RADNET, Inc. – eRAD RIS Server Update**

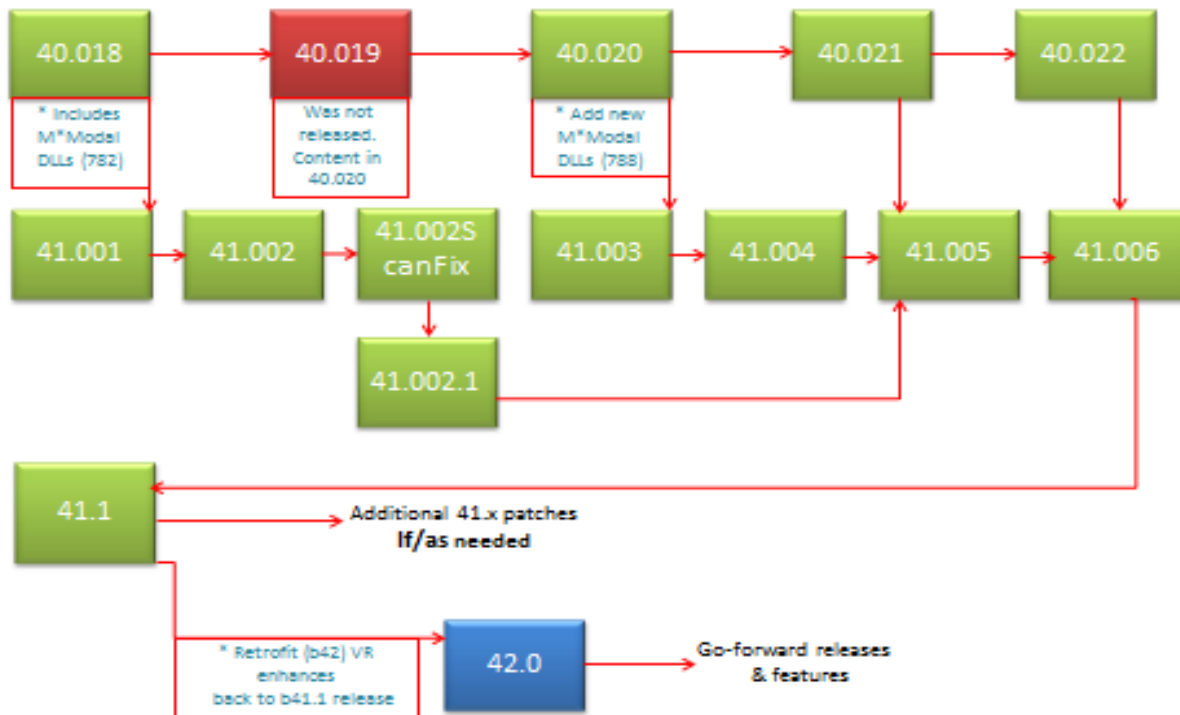
### **1. Defects Resolved**

<b>Redmine #</b>	<b>Subject</b>	<b>Priority</b>
5584	Maximize Attachments - does not close on deactivation of the reporting screen.	Urgent
5555	Transcription users will get null exceptions when trying to activate ReportTemplateEditor	Urgent
5570	MERGE - Reporting - Transcription user error on first study opened in create report window	High
5581	Spell check on the fly no longer turned on. Squigly lines are not shown under misspelled words	Normal
5559	user is losing practice association and getting error message.	Normal
5388	error on save: Invalid column name 'inverted_face'	Normal

**NOTE:** For bug number 5581 the User Preference “Automatic Spell Check” must be selected for the squiggly lines to appear in the report editor.

## 2. Code Stream

eRad RIS – source code evolution



### **Legend:**

**Green = Released software**

**Red = Will not be released**

**Blue = Future release**

### **3. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.41.20912 (3GB).zip

### **4. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **5. Who is affected**

Build 41 installs. This server update must be applied directly to the build 41 core install. Server updates are not cumulative. Any previous server updates must be applied before this one.

## **6. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
40	10	1.3.40.17435	1.3.40.16659	1.3.40.17435	1.3.40.17370	<b>64 BIT web service.</b> GUI.zip, Webservice.
40	11	1.3.40.17435	1.3.40.16659	1.3.40.17525	1.3.40.17370	Web service update
40	12	1.3.40.17685	1.3.40.16659	1.3.40.17685	1.3.40.17648	GUI.zip, Web service, database updates
40	13	1.3.40.17776	1.3.40.16659	1.3.40.17776	1.3.40.17648	GUI.zip, Web service
40	14	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18063	1.3.40.18063	GUI.zip, Web service, database updates
40	14.1	1.3.40.18063(3GB)	1.3.40.16659	1.3.40.18107	1.3.40.18063	Web service
40	15	1.3.40.18127(3GB)	1.3.40.16659	1.3.40.18127	1.3.40.18127	GUI.zip, Web service, database updates
40	16	1.1.3.40.18585 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip, Web service, database updates
40	16.1	1.3.40.18705 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip
40	17	1.3.40.18780 (3GB)	1.3.40.18756	1.3.40.18756	1.3.40.18646	<b>Core install required</b> for Radiologist User Group. GUI.zip, Core setup, and Web Service updates
40	18	1.3.40.19253(3GB)	1.3.40.18756	1.3.40.18756	1.3.40.19253	GUI.zip, Web Service and database updates
40	19	1.3.40.19909(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	GUI.zip, Web Service
40	20	1.3.40.20086(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip and Recognizer
40	21	1.3.40.20703(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip
40	22		1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip
41	-	1.3.41.19135(3GB)	1.3.41.19135	1.3.41.19135	1.3.41.19135	Full version release
41	1	1.3.41.19356(3GB)	1.3.41.19135	1.3.41.19346	1.3.41.19346	GUI.zip, Web Service and database updates
41	2	1.3.41.19620(3GB)	1.3.41.19135	1.3.41.19620	1.3.41.19346	GUI.zip and Web Service
41	2sf	1.3.41.19620SF(3G)	1.3.41.19135	1.3.41.19620	1.3.41.19346	GUI.zip
41	2.1	1.3.41.20622(3GB)	1.3.41.19135	1.3.41.20617	1.3.41.19346	GUI.zip and Web Service
41	3	1.3.41.20171(3GB)	1.3.41.19135	1.3.41.20171	1.3.41.19346	GUI.zip , Web Service and Recognizer
41	4	1.3.41.20285(3GB)	1.3.41.19135	1.3.41.20171	1.3.41.19346	GUI.zip
41	5	1.3.41.20809(3GB)	1.3.41.20708	1.3.41.20792	1.3.41.20738	GUI.zip, Core install, Web Service and database updates
41	6	1.3.41.20912(3GB)	1.3.41.20708	1.3.41.20792	1.3.41.20738	GUI.zip



## **7. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.41.20912.zip file provided with this release.  
Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

# Server Update

For eRAD RIS  
Version 1.0  
Build 41  
Update 41.007

## **Table of Contents**

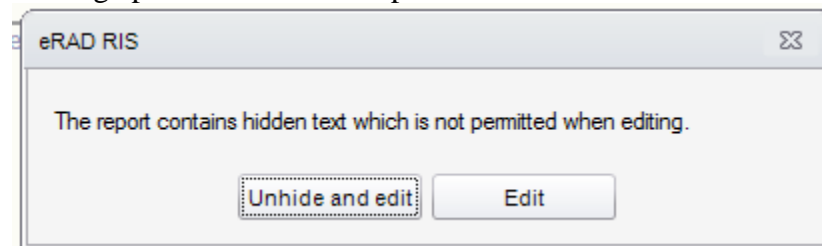
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### **1. Defects Resolved**

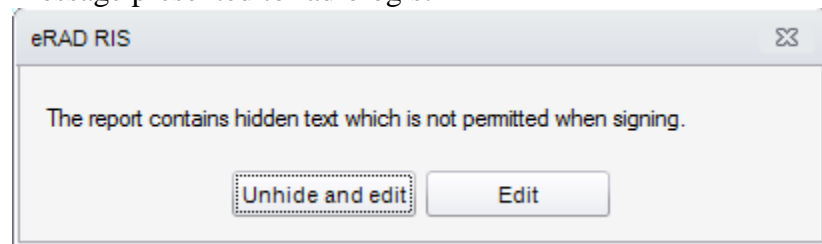
Redmine #	Subject	Priority
6191	Hidden text in editor counts as text when validating fields and section	High

The resolved bug listed above resolves an issue in which users had the option to hide text within the reporting window. This option was available to radiologist and transcription users. The workflow for this option has been altered. You can no longer hide text, only unhide. If there is hidden text in a report, transcription users cannot transcribe and radiologist users cannot sign. They will be presented with a message like the one displayed below.

Message presented to transcription

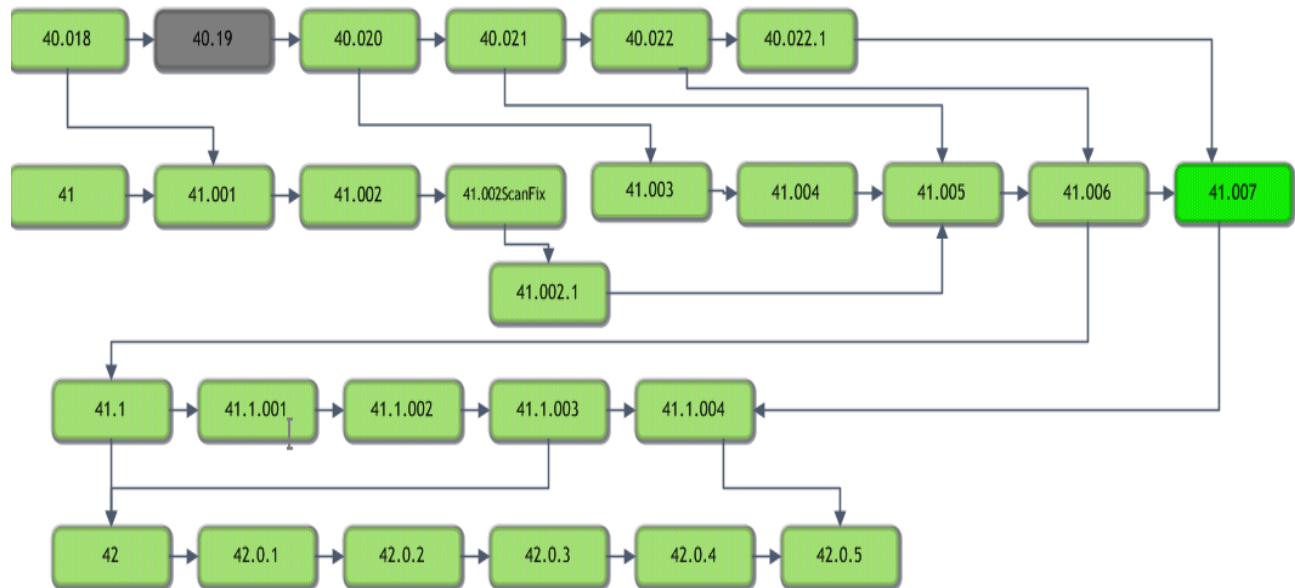


Message presented to radiologist



## 2. Code Stream

### eRAD RIS - Source Code Evolution



#### **Legend:**

Light Green = Released software

Gray = Will not be released

Bright Green = Current Release

### **3. Package Contents**

Files included for this server update:

- 1) GUI ZIP Updates folder contains
  - a) rRIS\_1.3.41.21963 (3GB).zip

### **4. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS Implementation team.

### **5. Who is affected**

Build 41 installs. This server update must be applied directly to the build 41.005.

## **6. eRAD RIS Release Version Numbers**

<b>Build</b>	<b>Patch</b>	<b>UI Version</b>	<b>Core Version</b>	<b>WS Version</b>	<b>DB Version</b>	<b>Notes</b>
40	16	1.1.3.40.18585 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip, Web service, database updates
40	16.1	1.3.40.18705 (3GB)	1.3.40.16659	1.3.40.18585	1.3.40.18646	GUI.zip
40	17	1.3.40.18780 (3GB)	1.3.40.18756	1.3.40.18756	1.3.40.18646	<b>Core install required</b> for Radiologist User Group. GUI.zip, Core setup, and Web Service updates
40	18	1.3.40.19253(3GB)	1.3.40.18756	1.3.40.18756	1.3.40.19253	GUI.zip, Web Service and database updates
40	19	1.3.40.19909(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	GUI.zip, Web Service
40	20	1.3.40.20086(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip and Recognizer
40	21	1.3.40.20703(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip
40	22	1.3.40.20898(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip
40	22.1	1.3.40.21936(3GB)	1.3.40.18756	1.3.40.19878	1.3.40.19253	Gui.zip
41	-	1.3.41.19135(3GB)	1.3.41.19135	1.3.41.19135	1.3.41.19135	Full version release
41	1	1.3.41.19356(3GB)	1.3.41.19135	1.3.41.19346	1.3.41.19346	GUI.zip, Web Service and database updates
41	2	1.3.41.19620(3GB)	1.3.41.19135	1.3.41.19620	1.3.41.19346	GUI.zip and Web Service
41	2sf	1.3.41.19620SF(3G)	1.3.41.19135	1.3.41.19620	1.3.41.19346	GUI.zip
41	2.1	1.3.41.20622(3GB)	1.3.41.19135	1.3.41.20617	1.3.41.19346	GUI.zip and Web Service
41	3	1.3.41.20171(3GB)	1.3.41.19135	1.3.41.20171	1.3.41.19346	GUI.zip , Web Service and Recognizer
41	4	1.3.41.20285(3GB)	1.3.41.19135	1.3.41.20171	1.3.41.19346	GUI.zip
41	5	1.3.41.20809(3GB)	1.3.41.20708	1.3.41.20792	1.3.41.20738	GUI.zip, Core install, Web Service and database updates
41	6	1.3.41.20912(3GB)	1.3.41.20708	1.3.41.20792	1.3.41.20738	GUI.zip
<b>41</b>	<b>7</b>	<b>1.3.41.21963(3GB)</b>	<b>1.3.41.20708</b>	<b>1.3.41.20792</b>	<b>1.3.41.20738</b>	<b>GUI.zip</b>
41.1	-	1.3.41.20918(3GB)	1.3.41.20791	1.3.41.20918	1.3.41.20739	GUI.zip, Core install, Web Service and DB updates, Help files
41.1	1	1.3.41.20987(3GB)	1.3.41.20791	1.3.41.20918	1.3.41.20739	GUI.zip
41.1	2	1.3.41.21162(3GB)	1.3.41.20791	1.3.41.21162	1.3.41.21150	GUI.zip, Web Service and DB updates,
41.1	3	1.3.41.21264(3GB)	1.3.41.20791	1.3.41.21162	1.3.41.21150	GUI.zip
41.1	4	1.3.41.21931(3GB)	1.3.41.20791	1.3.41.21162	1.3.41.21150	GUI.zip
42	1	2.42.0.0.21577	2.42.0.0.21261	2.42.0.0.21577	2.42.0.0.21187	GUI and Web Service updates
42	2	2.42.0.1.21702	2.42.0.0.21261	2.42.0.1.21702	2.42.0.0.21187	GUI and Web Service updates
42	3	2.42.0.2.21806	2.42.0.0.21261	2.42.0.2.21806	2.42.0.0.21187	GUI and Web Service updates
42	4	2.42.0.4.21862	2.42.0.0.21261	2.42.0.2.21806	2.42.0.4.21870	GUI and Database updates
42	5	2.42.0.5.21924	2.42.0.0.21261	2.42.0.2.21806	2.42.0.4.21870	GUI

## **7. Installing**

- 1) Copy and replace the current rRIS...zip file with the rRIS\_1.3.41.21963.zip file provided with this release.  
Be sure to make a backup of the ris.exe.config file contained within the current .zip folder.

**NOTE:** If your upgrade is coming from 40.016.1 or prior a core install will be required. Versions (builds) of 40.017 and greater do not require a core install as long as you are at least at 40.017 (Core Version 1.3.40.18756)