

# **User Release Notes**

for eRAD RIS  
Version 1.0  
Build 37

## **Table of Contents**

1. Purpose.....	5
2. Intended Audience .....	5
3. Installing/Accessing the Application .....	5
4. New Features and Enhancements .....	6
Activity Work List .....	6
Labwork work list .....	7
Orders to Schedule WL Flags Column .....	10
Export WL to CSV file type .....	10
Referring Column Added to Radiologist WL's .....	11
Patient First and Last Name Columns Added to Document Distribution WL .....	12
Remove Change to...Arrived Status from Reception WL .....	13
Default WL view.....	14
Statuses and Outside Reads Removed from IVT Work List .....	15
Work List Filtering Changes.....	15
Context Menus Added to Patient Search Results .....	16
Void Signed and Abort Exam Done Studies.....	17
Add and Remove Patient Alternate MRN's.....	18
Last Menstrual Period Approximate Date .....	20
Save As Order from Schedule Order Window .....	21
Default CPT .....	22
Changes to Patient Merge window .....	22
Show Report for Prior Exam for Mammo Follow-ups .....	24
Patient Address Updates – Relation to Patient .....	25
Order Follow Up Tracking.....	26
Zip Code Field Enhancements .....	27
Copy Contents from Grids .....	27
New Required Fields.....	28
Editing Data of Exam for Outside Reads.....	29
Meaningful Use (MU) Enable Controls.....	30
Meaningful Use Changes .....	30
Appointment Book Change Schedule Time by Dragging .....	33
External Reporting Workflow / No Report Workflow .....	35
IVT Additions and Data Window changes .....	36
Mammo Diagnostic Reporting BI-RADS picker changes.....	39
Follow-up Screen Enhancements.....	40
Xkeys Integration framework .....	41
Maximum Open Tabs by User Group.....	44
Min Max Wait Time .....	44

PreCert Notes in View Edit and Billing.....	45
Billing Code Grid Changes .....	45
Technologist Notes Locking After Completion.....	46
Tech Only – Patient Class Workflow .....	46
Technologist No longer Menstruating .....	49
View Images from Technologist Screen.....	49
Backend Interface with RADAR .....	49
Outbound file for RADAR.....	50
Response File from RADAR .....	52
Change Default User for New Install.....	52
Core Version Check.....	53
New Management Reports Added .....	53
Reporting – Rewind and Fast Forward Speed Setting .....	64
User Preferences for Radiologist and Technologist window buttons .....	65
Reporting – Sign Button Removed for Batch Dictation .....	68
Reporting – Problem and QA Work Lists for Radiologists .....	68
Reporting – Dictation Control Stop When Play or Record Released .....	70
Reporting – Bolding Current Value in “Assign To” Lists .....	72
Reporting – Audit History Change for CDSManager.....	72
Reporting – Column “Dictated By” Added to Patient Folder Work List .....	73
Reporting – Hybrid Navigation for Fields/Sections .....	73
Reporting - Request Addendum.....	74
Reporting - Resend Interpretation for VR .....	75
Reporting – Report Editor Preferences for Color, Fonts and Font Size .....	75
Report Text .....	76
Sections .....	76
Site Level Report Templates.....	77
Calculating Default and Normal Templates .....	78
Reporting – Macro and Template Browser Navigation Enhancements.....	79
Reporting – Assign To Panel .....	79
Reporting – Miscellaneous Enhancements and Fixes.....	82
Send To button access string.....	82
Transcription Summary Fixes.....	82
Prompt to Run SpeechMike Wizard .....	82
Editor Ctrl +Shift + Up or Down Arrows .....	82
Transcribing Assigned Studies .....	83
Transcription Polling Lock Issue .....	83
New Fields for Physician Details.....	84
Button and Context Menu Options Added to Patient Search .....	86
Modality Type Selection for Outside Reads.....	87

Dynamic Printer to Document Type Configuration.....	88
Exam Search .....	89
Generalized Procedure Name .....	92
Scheduling Date Time Control Enhancement.....	93
Referring Physician Addresses .....	94
Notes Text Boxes Copy / Paste Option.....	94
Multiple Schedule Groups Per User .....	95
Organization Picker Enhancements .....	96
Unknown Referring Required Address Removed .....	96
Verify Credentials Enhancements.....	96
No Report Required Work Flow Enhancements .....	97
5. Resolved Defects .....	99
6. Known Limitations .....	107

## **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.

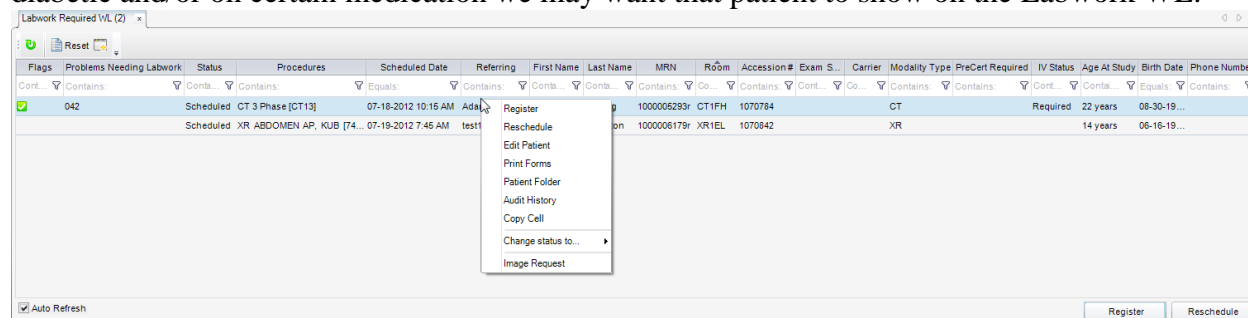


Figure 4.2 – Labwork Required WL

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”

The screenshot shows a "Lookup Tables - Indication" window. On the left is a tree view with categories: General, Insurance, Mammography, Procedure, BillingCode, BodyPart, Indication (selected), Laterality, MModalDocumentModel, PracticeSiteXProcedureOverride, PrepInstruction, ProcedureChangeReason, ProcedureCode, ProcedureGeneralDescription, and ProcedureGroup. The main table has columns: Indication Code, Description, Display Order, Bloodwork Required Flag, and Active. The table contains several rows of medical conditions, with the first row being "042 HUMAN IMMUNODEFICIENCY VIRUS (HIV) DISEASE".

Indication Code	Description	Display Order	Bloodwork Required Flag	Active
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						
<ul style="list-style-type: none"> <li>General</li> <li>Insurance</li> <li>Mammography</li> <li>Procedure <ul style="list-style-type: none"> <li>BillingCode</li> <li>BodyPart</li> <li>Indication</li> <li>Laterality</li> <li>MModelDocumentModel</li> <li>PracticeSiteXProcedureOverride</li> <li>PreInstruction</li> </ul> </li> </ul>						
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		
Borg/IDE		Test XYZ DEXA (77032)	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.

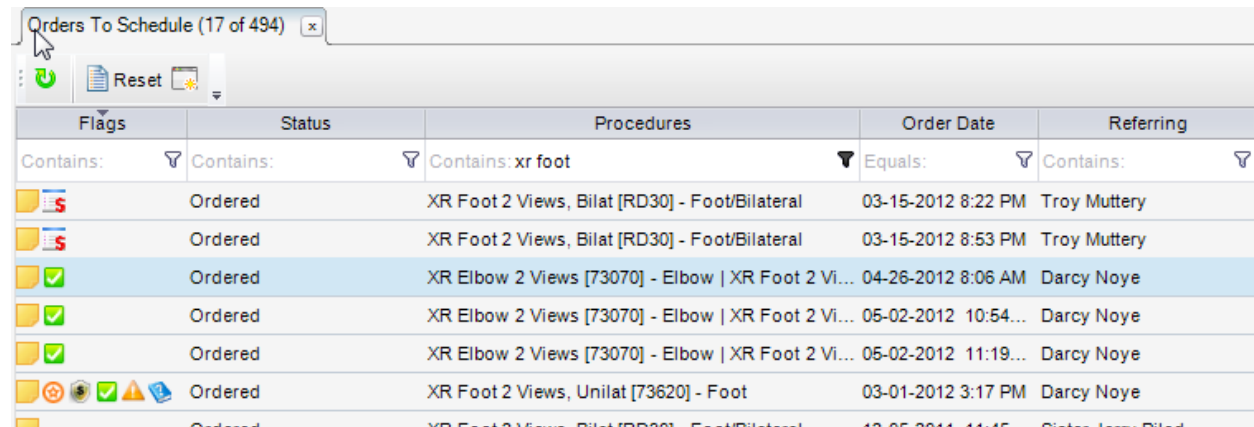
The screenshot displays the 'View/Edit: Adam Testing # 1000005293r' window with the 'MU' tab selected. The interface is divided into several sections:

- 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.



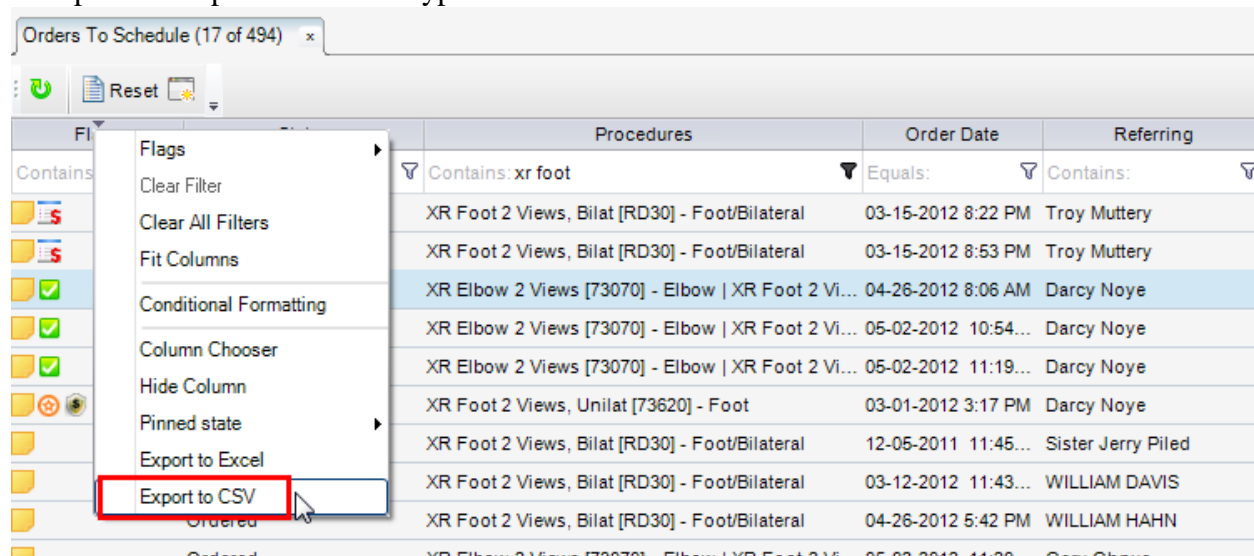
The screenshot shows a window titled "Orders To Schedule (17 of 494)". It contains a table with the following columns: Flags, Status, Procedures, Order Date, and Referring. The "Flags" column contains various icons representing different order statuses or types. The "Status" column shows "Ordered" for 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.



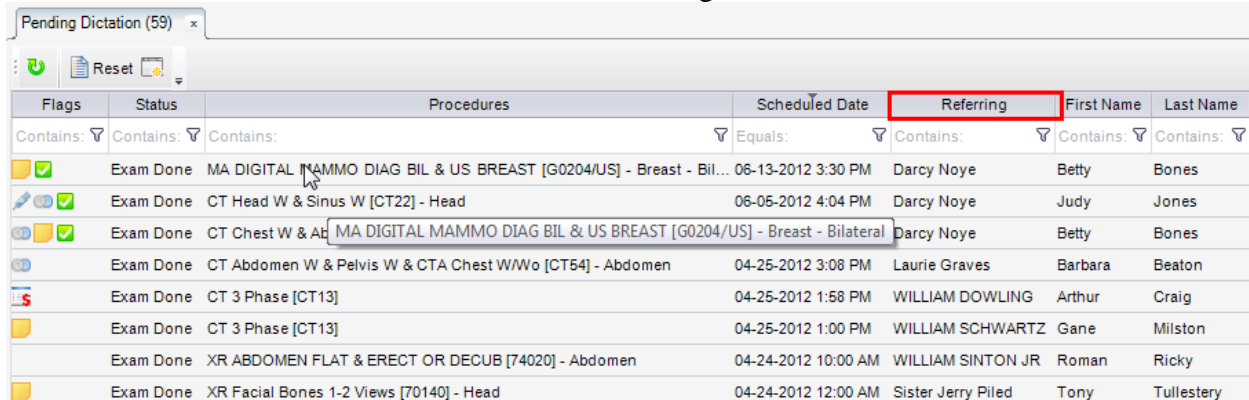
The screenshot shows the same "Orders To Schedule" window as Figure 4.8, but with a context menu open over the "Flags" column. The menu includes options like "Clear Filter", "Clear All Filters", "Fit Columns", "Conditional Formatting", "Column Chooser", "Hide Column", "Pinned state", "Export to Excel", and "Export to CSV". The "Export to CSV" option is highlighted with a red box.

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...”

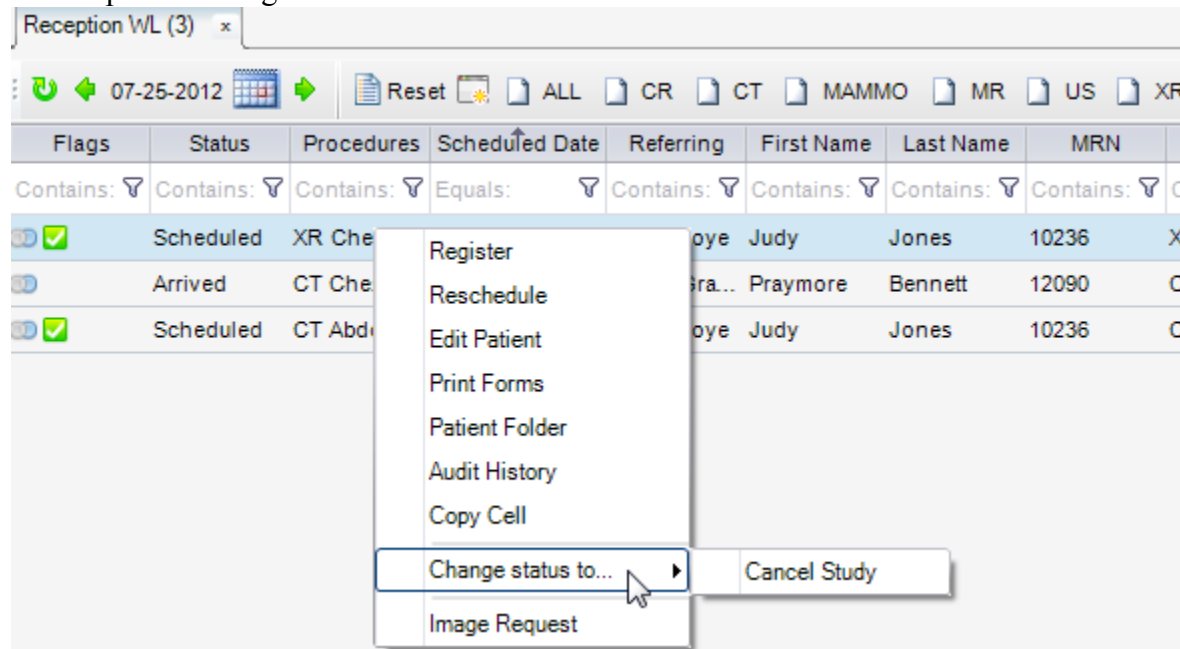
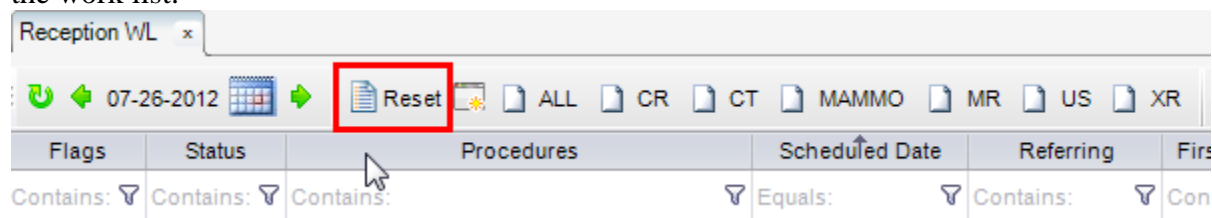


Figure 4.12 – Arrived status removed from context menu

## 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 input 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		

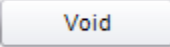
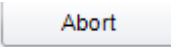
**Figure 4.14 - Patient Search**

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

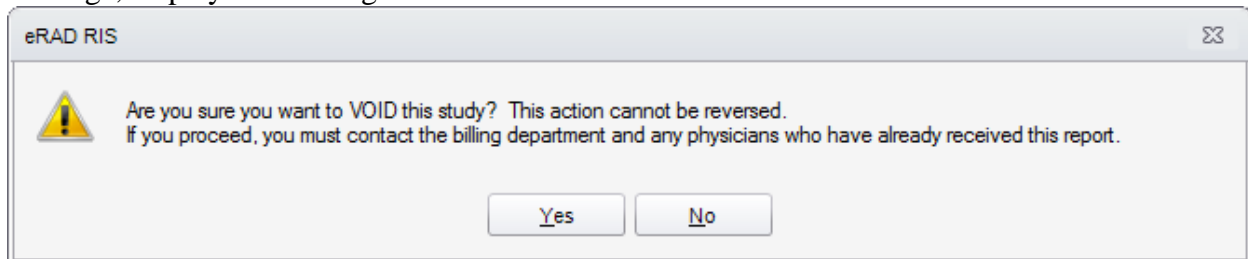


Figure 4.15 – Confirm Void message

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

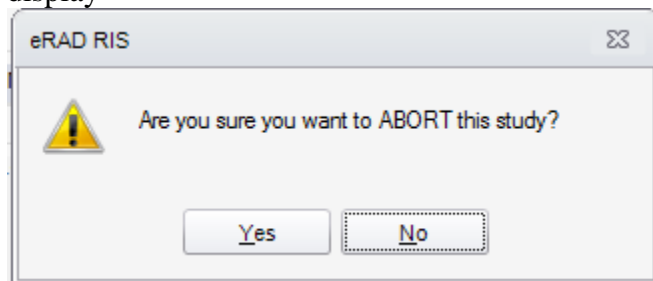


Figure 4.16 – Confirm Abort

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.

The following error must be corrected:

'MRN' is assigned to: Clare Cone.

OK

**Figure 4.21 – MRN already assigned**

The alternate MRN can be used for patient search.

Search Criteria

First Name:  Birth Date: mm-dd-yyyy

Last Name:  Phone #:

☐ Search Other Variations

MRN:  Search Reset New Patient

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 <F3>'. The checkbox 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, 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.

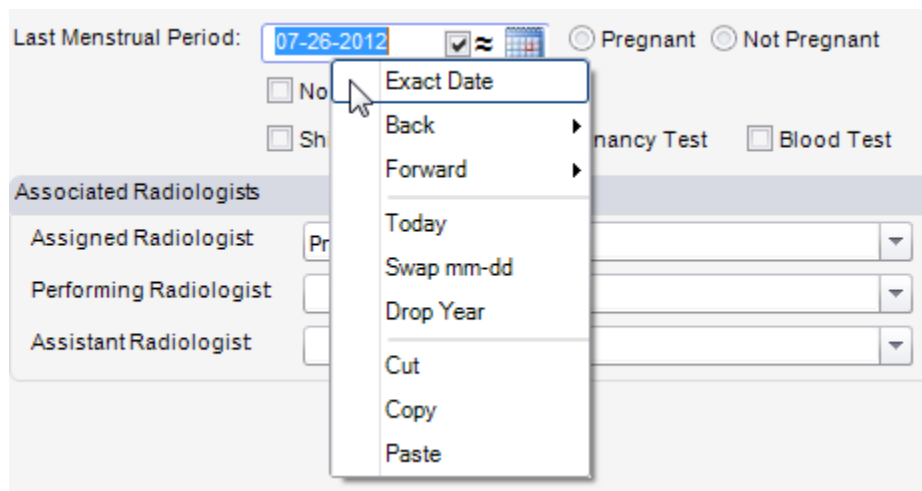


Figure 4.24 – LMP date field context menu

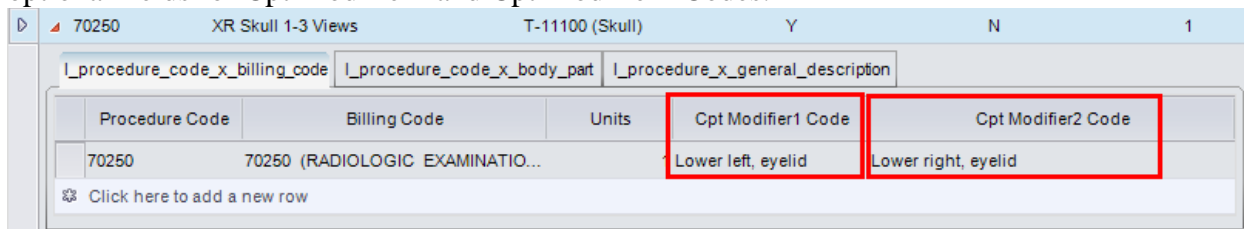
### Save As Order from Schedule Order Window

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 web interface for a procedure code lookup. At the top, there is a header bar with the following information: 70250, XR Skull 1-3 Views, T-11100 (Skull), Y, N, and 1. Below this is a table with three columns: I\_procedure\_code\_x\_billing\_code, I\_procedure\_code\_x\_body\_part, and I\_procedure\_x\_general\_description. The table has one row with the following data: 70250, 70250 (RADIOLOGIC EXAMINATIO..., and Lower left, eyelid. The columns Cpt Modifier1 Code and Cpt Modifier2 Code are highlighted with red boxes. The Cpt Modifier1 Code is Lower left, eyelid and the Cpt Modifier2 Code is Lower right, eyelid. Below the table is a link: Click here to add a new row.

Procedure Code	Billing Code	Units	Cpt Modifier1 Code	Cpt Modifier2 Code
70250	70250 (RADIOLOGIC EXAMINATIO...		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

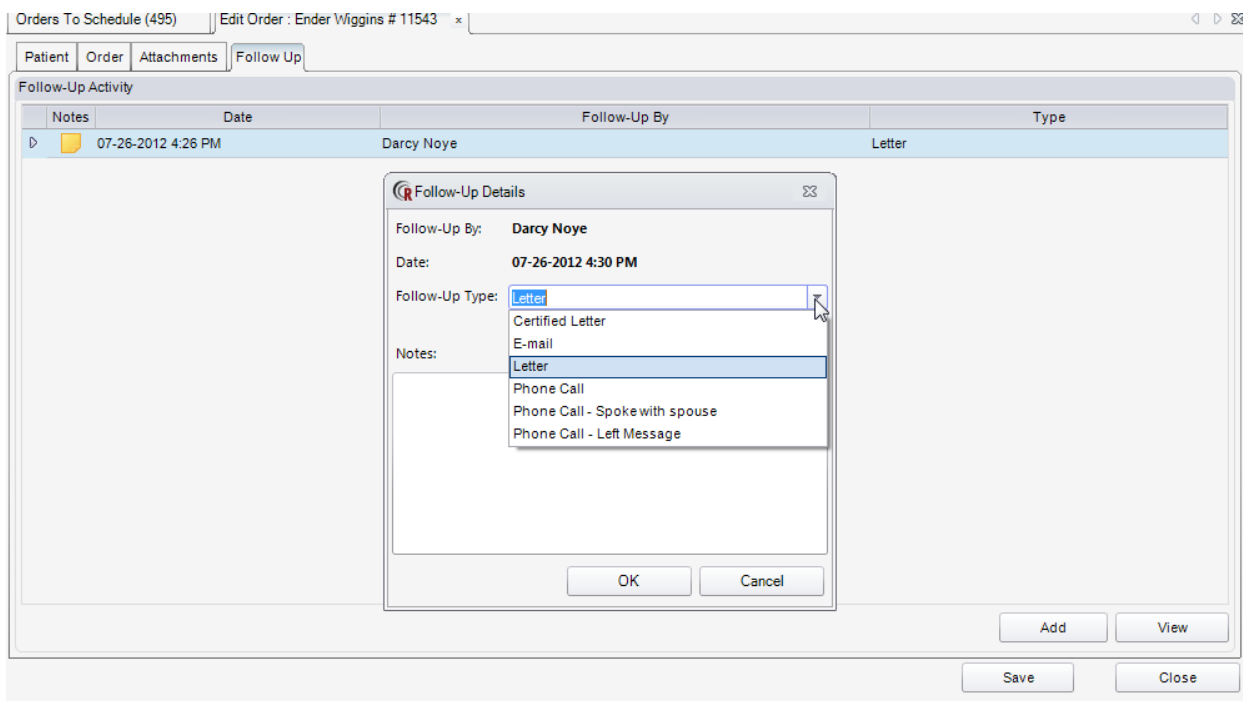
City: Dallas Phone:

**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.

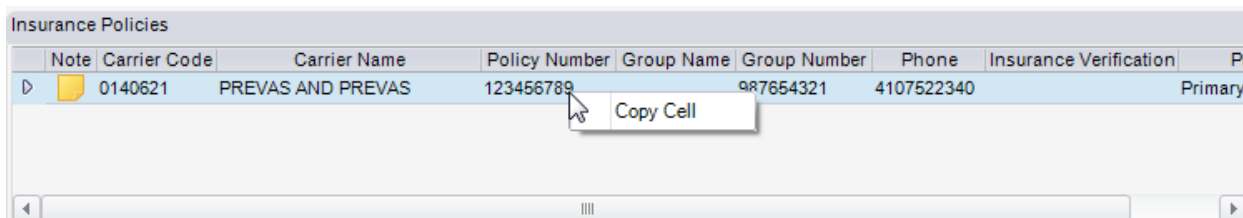
## **Zip Code Field Enhancements**

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.

Schedule Order : Barney Hubble # 10369

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

**Chief Complaint**

Referring Details

Referring: Noye, Darcy T | Direct Referral

Visited at: 154 Workdown Dr., 1, Worktown, MD, 45742

Img Notes:

CC Physicians

Visit Location for CC:

Preferred Location

Practice: eRAD RIS

Site:

Insurance:

Flags

Transportation Req'd:

Special Accommodation:

Class: Outpatient

Sedation:

Transition of Care:

Billing Method

(Bill to insurance)

07-26-12 NoyeD -

Number / Group Name / Group Number / Phone / Priority

Verification REQUIRED

Insurance verified

Amount to collect:

Order Notes

07-26-12 NoyeD -

Save as Order | Schedule | Close

Saved: Edit Order : Ender Wiggins # 11543 | Dictated: 0 - Signed: 0 | Transcribed: 0

There are 2 Errors

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 selected), 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 text '07-26-12 NoyeD -'. The 'Outside Read' section contains three fields: 'Exam Date:' with a value of '02-22-2012 12:00 AM' and a calendar icon, 'Created Date:' with a value of '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 text '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

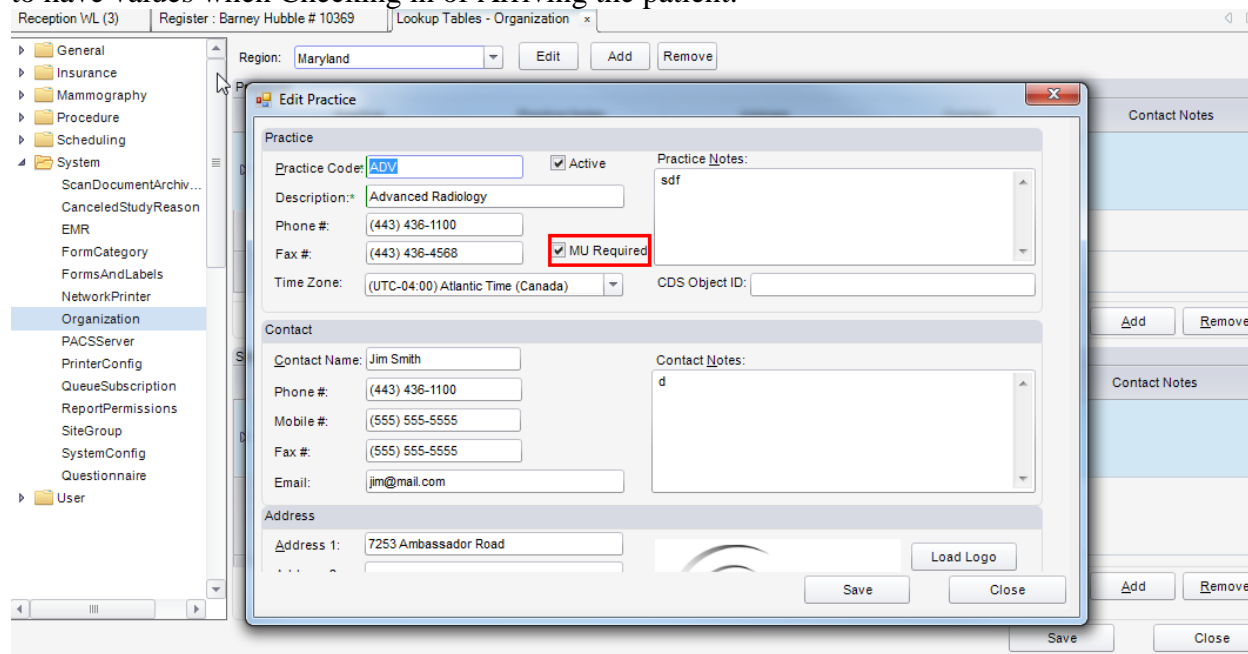
## Meaningful Use Changes

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.**

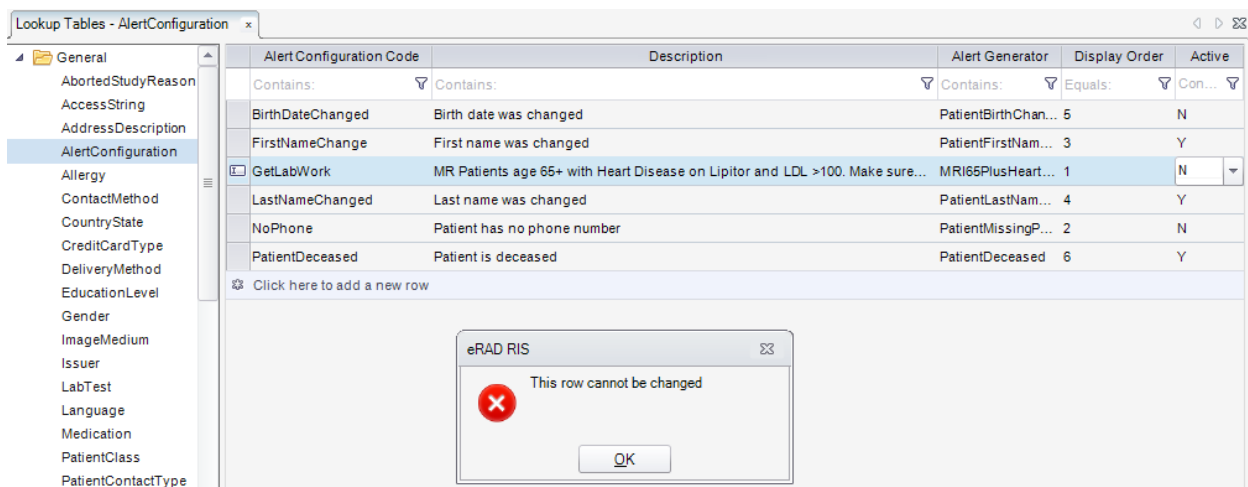
The access string for the Meaningful Use Quick Add Edit button was also as MU.QuickAddEditDialog, while the old access string MU.WizardDialog has been removed.

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



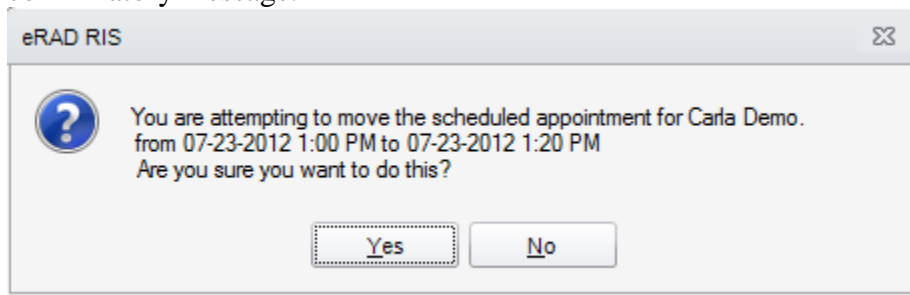
<input type="checkbox"/> NQF 0038	Childhood Immunization ***					
	<input checked="" type="checkbox"/> Administrator Test User					
	<input checked="" type="checkbox"/> Andrew WaiteW					
	<input checked="" type="checkbox"/> Clifton Harding					
	<input checked="" type="checkbox"/> Dale Yeo					
	<input 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

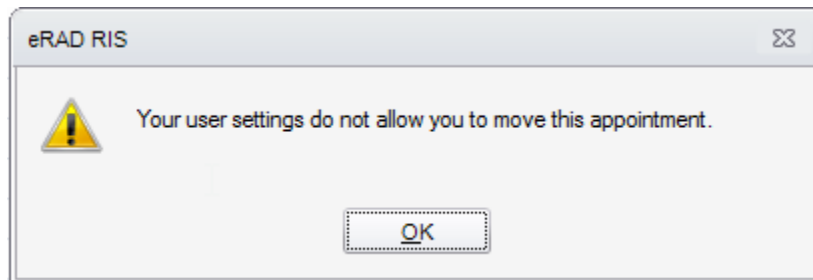
A limited piece of functionality was added to the Appointment book window. Users with the permission “Clinical.AppointmentsBooked.AppointmentDragging” will be permitted to move studies in the status of “Scheduled” only to different time slots. This will only work for studies that have 1 procedure in 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 is a toolbar with icons for ADV/LU and a search function. The main interface has several tabs: Patient, Contacts / Demographics, MU, Order, Documentation, Billing Codes, Attachments, and Notes / Exam Times. The 'Documentation' tab is currently selected, displaying 'Tech Notes' and 'Procedure' sections. The 'Tech Notes' section includes a text area with the placeholder text 'ASDFASDF' and a 'Copy / Paste' button. The 'Procedure' section contains dropdown menus for 'Scanner' (set to CT13), 'Performed Procedure' (set to CT 3 Phase (CT13)), 'Body Part', 'Laterality', 'Change Reason Code', and 'Change Reason Note'. To the right of the 'Tech Notes' section, there are fields for 'Primary Tech' (stuart, stephen), 'Assisting Tech 1', 'Assisting Tech 2', 'Last Menstrual Period' (mm-dd-yyyy), 'Pregnant' (radio button), 'Not Pregnant' (radio button), 'Shielded Patient' (checkbox), 'Pregnancy Test' (checkbox), 'Blood Test' (checkbox), and 'No Longer Menstruating' (checkbox). Below these fields is the 'Associated Radiologists' section with dropdowns for 'Assigned Radiologist', 'Performing Radiologist', and 'Assistant Radiologist'. At the bottom of the window are buttons for 'View Images', 'Verify External Report', 'Save', and 'Close'. The status bar at the bottom indicates 'Connected: Debug' and 'Dictated: 0 - Signed: 0'.

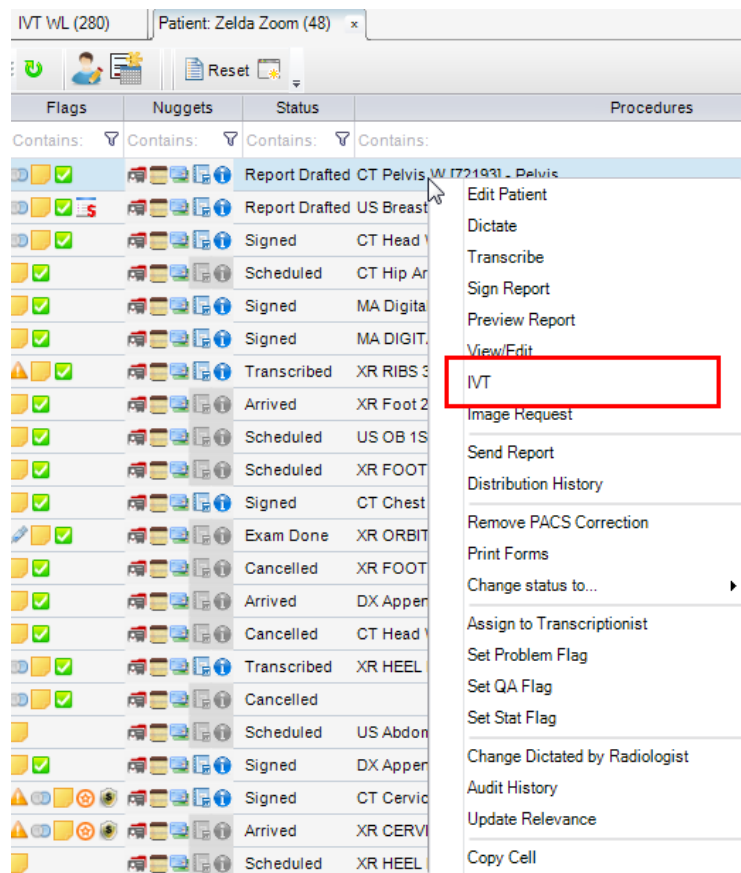
**Figure 4.42 – Verify External window accessed from patient folder**

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 initializes 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.

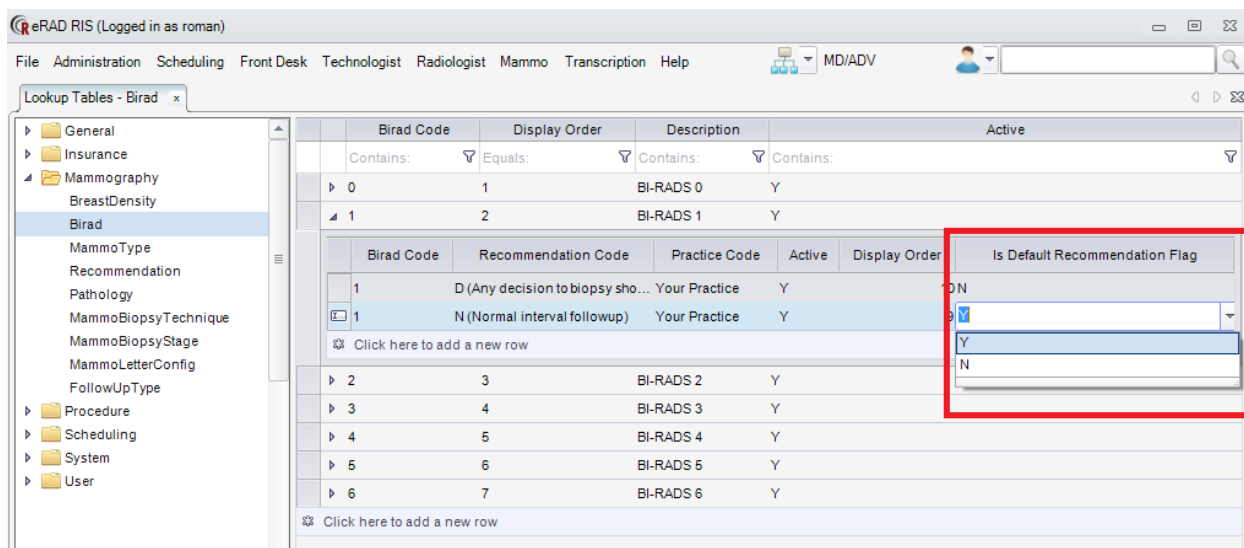


Figure 4.46 – Configuration example for BI-RADS picker

In RIS, once configured, if user selects a BI-RADS level, the corresponding ‘default’ recommendation will automatically populate the ‘Recommendation’ dropdown.

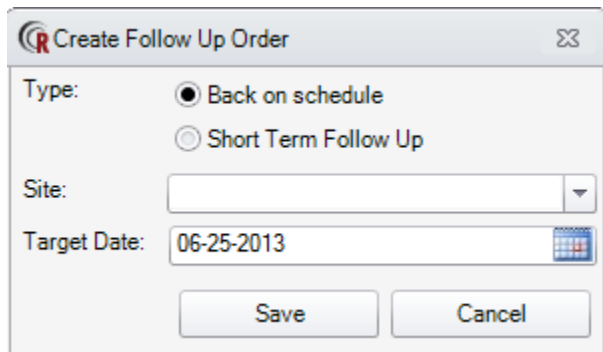


Figure 4.47 – BI-RADS selector in RIS

## **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.

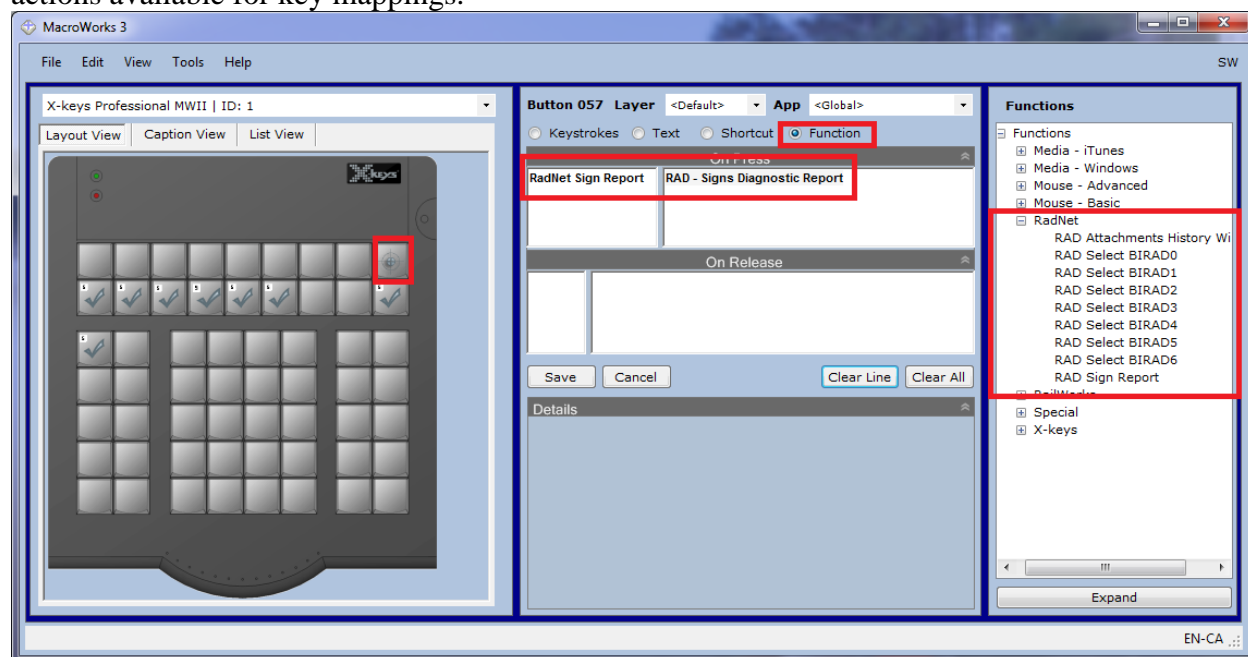
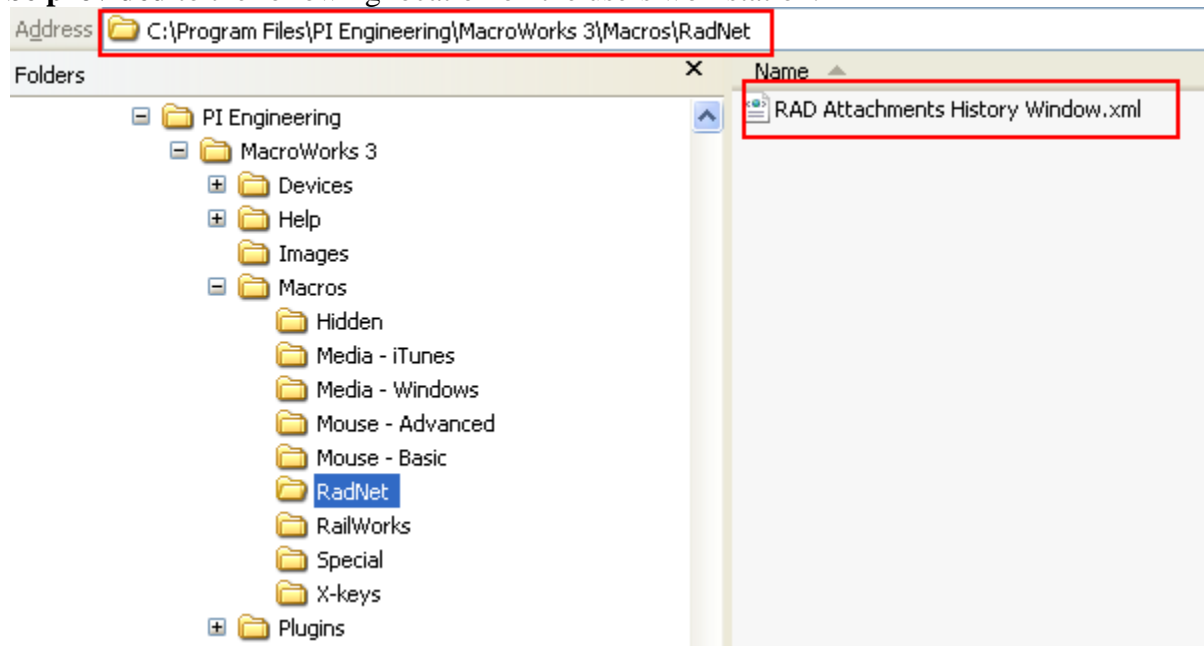


Figure 4.50 – XKey Configuration Utility

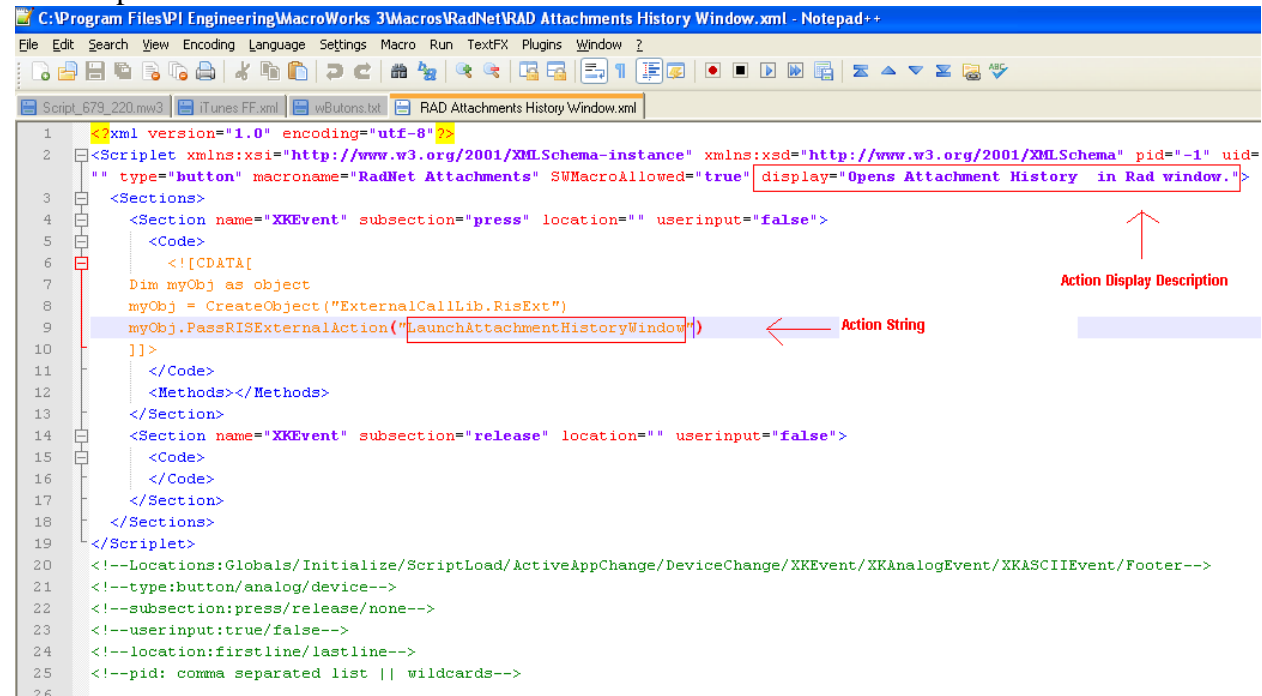
**For every “Function” listed on the right hand of the screen under RadNet, an XML file will be provided** to the following location on the users workstation:



**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

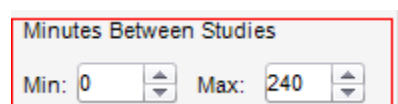
It was determined that a need for a maximum number of open tabs, defined by user group. Code was added to all places that create tabs within RIS. If the maximum number has been exceeded, a message will appear asking the user to close some open tabs.

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**

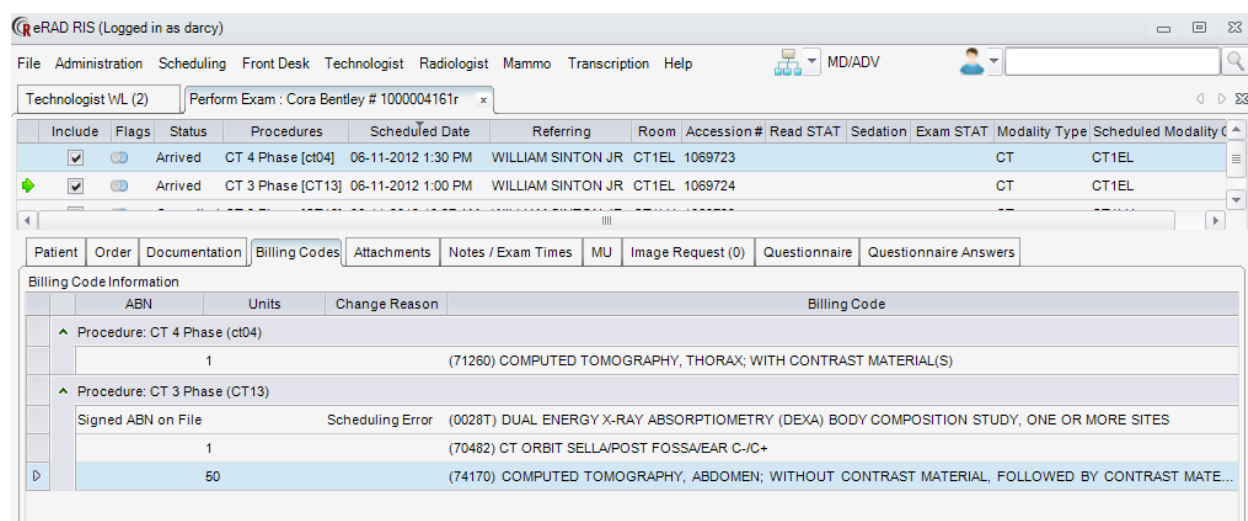
As described above this selection process applies to all non-procedure plan studies, but there is no visible distinction to the user which one will be affected by the selection, there is a desired addition to have an advanced selection that will allow for the selection of min/max for each procedure and 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.

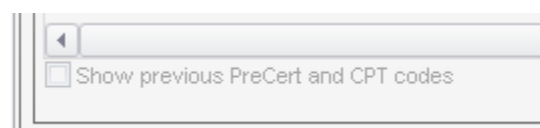
### Billing Code Grid Changes

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**

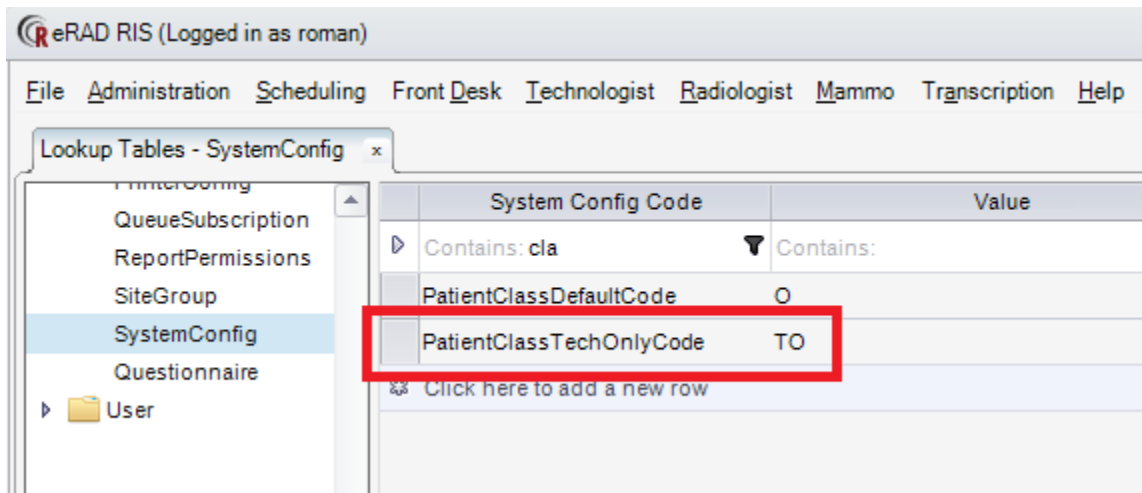
A new permission was added, "**Clinical.Tech.ModifyTechNotesAfterCompletion**" to allow the locking of Technologist Notes to be permission based.

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.

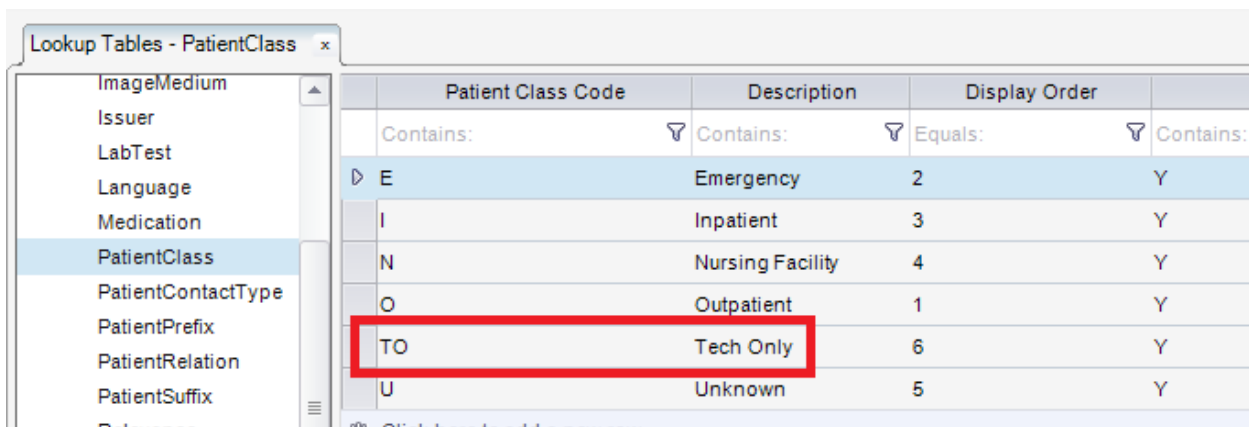
## **Tech Only – Patient Class Workflow**

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.

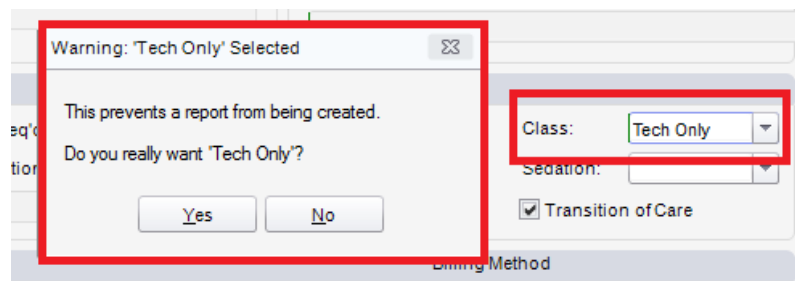


**Figure 4.56 – Configuration to define Patient Class Tech Only**



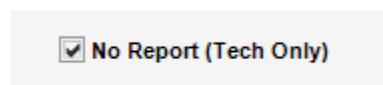
**Figure 4.57 – Patient Class code for Tech Only**

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	Var
Physician	Specialties	Affiliations	Site	Mod type	Jun 2012	Jul 2012	
⊞ 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	22	13	Variance
			May 2012	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)
Total			8.45	8.77	0.32

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
	aa aa	1
	Andrew WaiteW	Optometrist (for aphakia)
	WILLIAM SCHWARTZ	General Practice
☐ MA		4
☐ MR		2
☐ NM		1
☐ PT		31
☐ Your Site C		27
☐ OutsideMed		18
☐ PowerVille		3
☐ test1		2
Total for: Jun 2012		134

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.

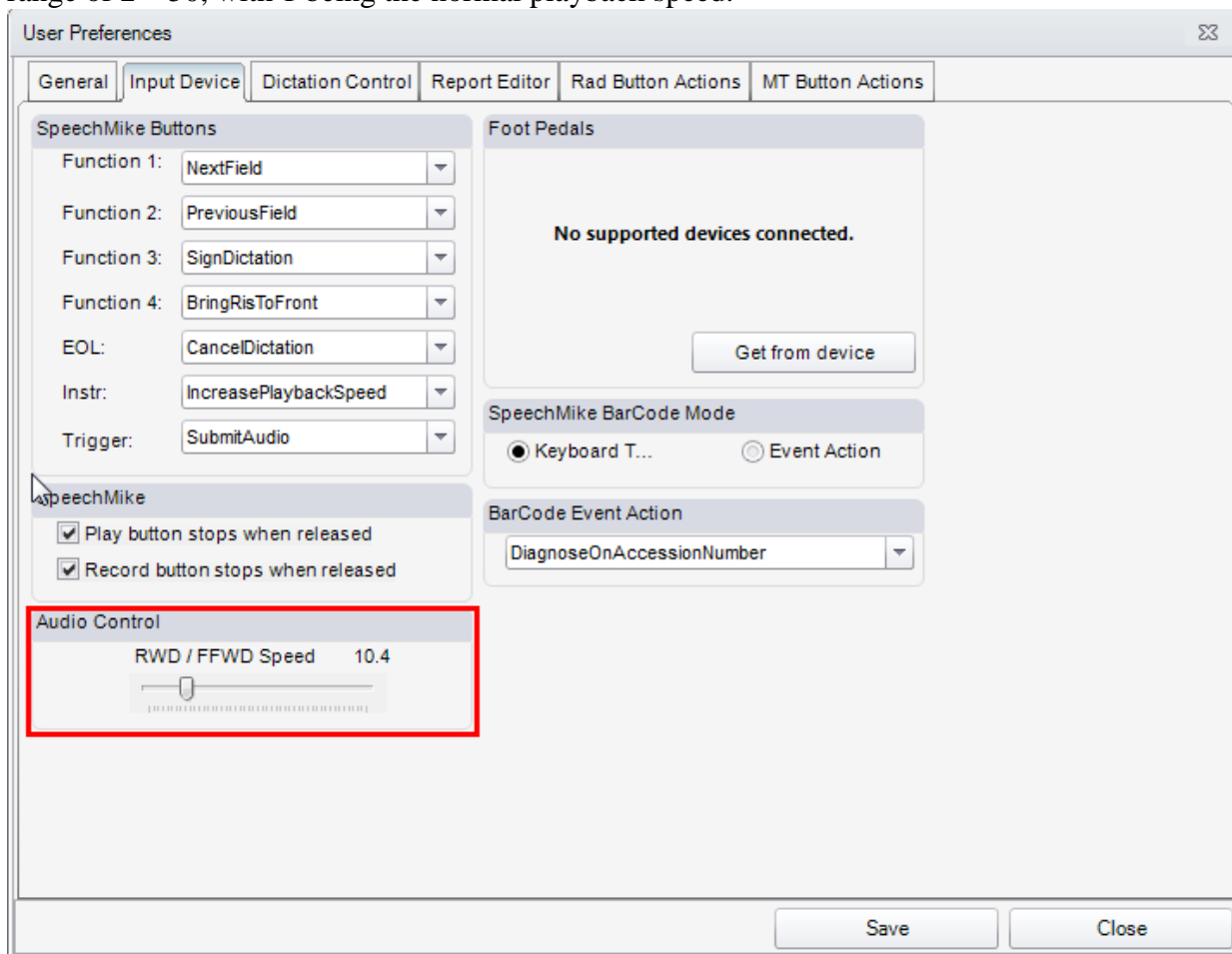
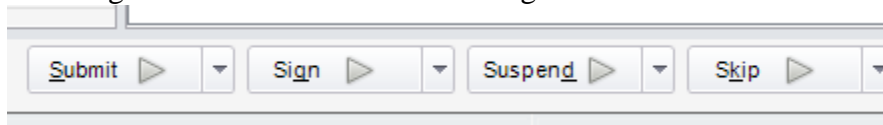


Figure 4.81 – User preference Audio Control rewind/fast forward speed

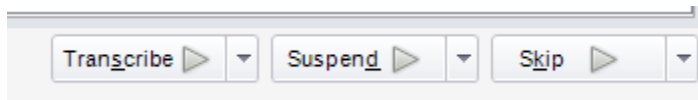


## **User Preferences for Radiologist and Technologist window buttons**

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

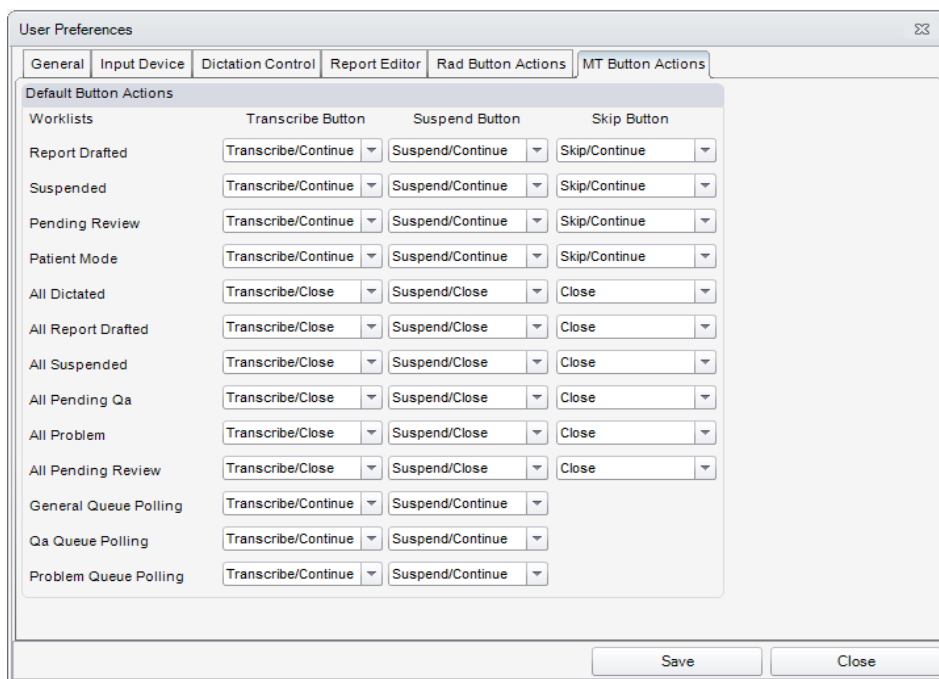
General Input Device Dictation Control Report Editor **Rad Button Actions** MT Button Actions

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**

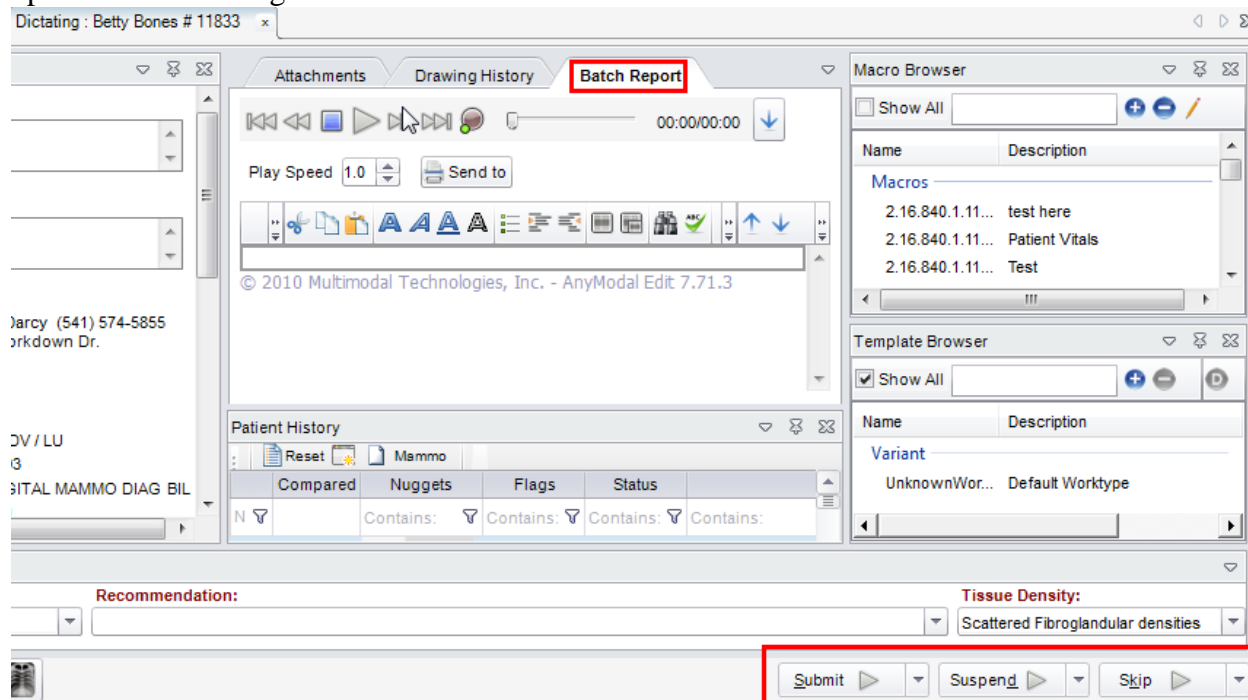
The values available in the dropdowns should relate to the workflow. In some cases when workflow starts in certain work lists the available actions will vary. For instance, since work lists intended for user exclude suspended items from their view, these work lists wouldn't need an unsuspend option, 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.



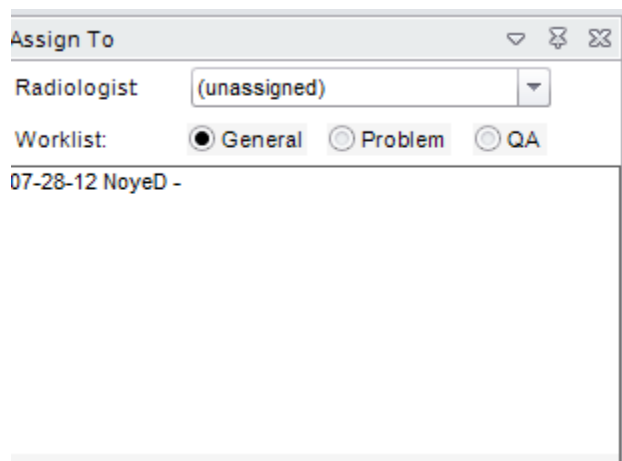
**Figure 4.86 – Sign button removed from Pending Dictation when recording in Batch**

## 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.

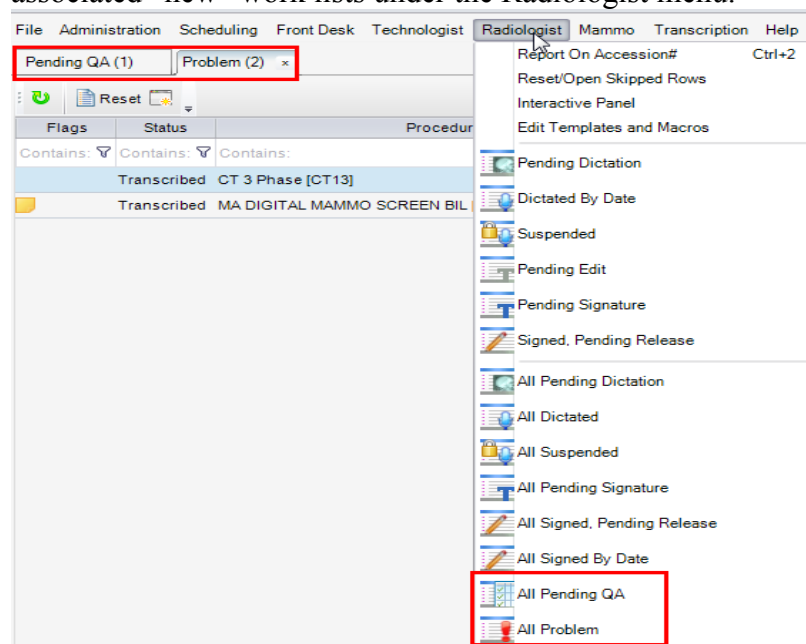
Access to these work lists are controlled by two new user permission access strings

- 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



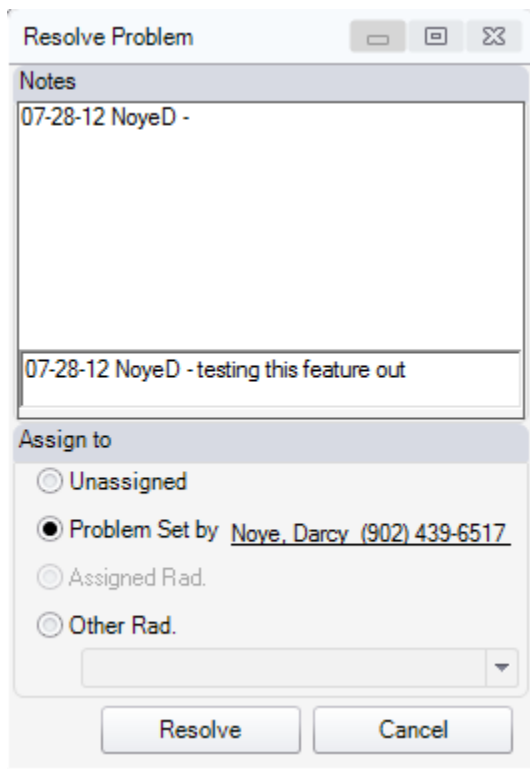
**Figure 4.87 – Assign To in radiologist window**

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.

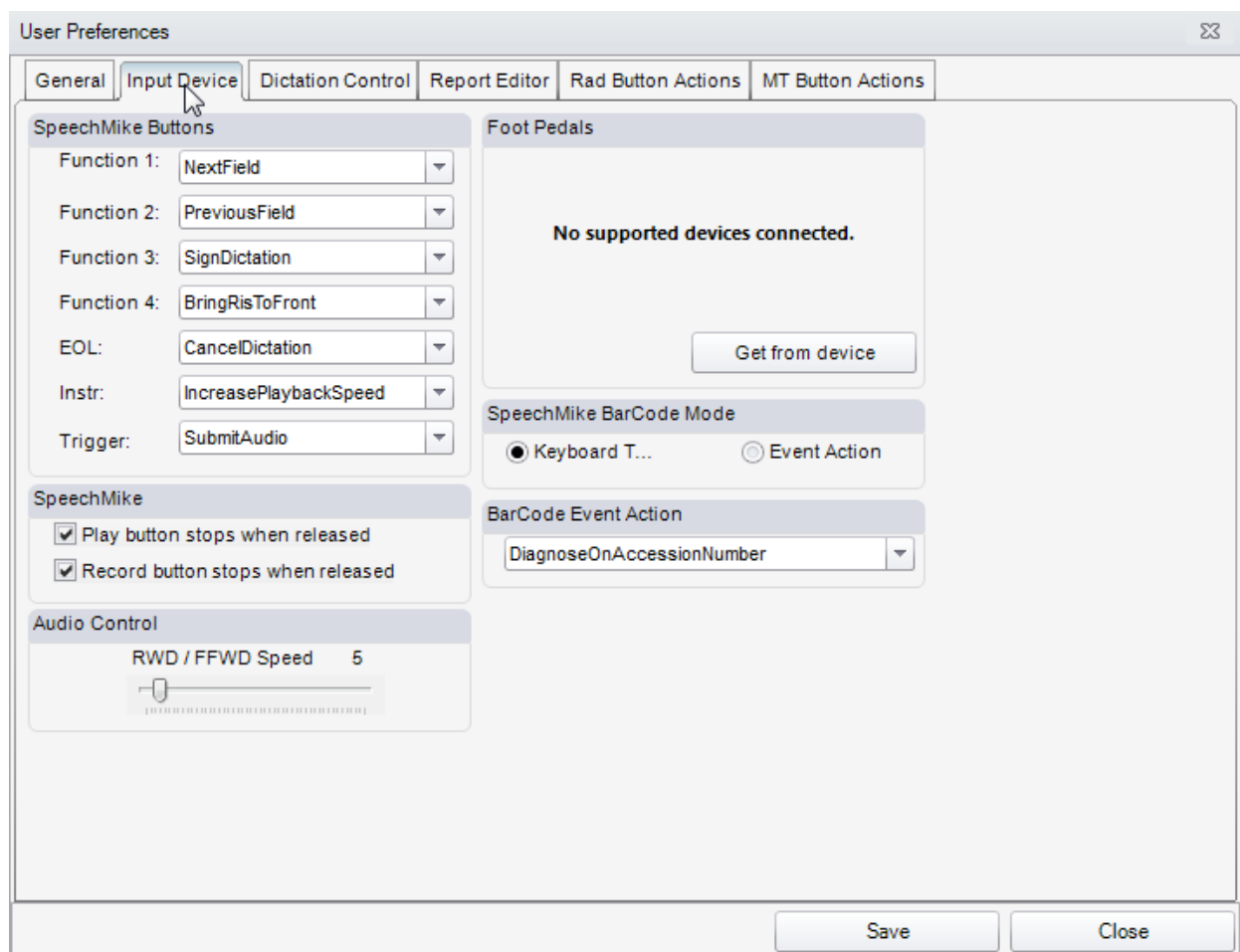


Figure 4.90 – SpeechMike user preferences

## 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.

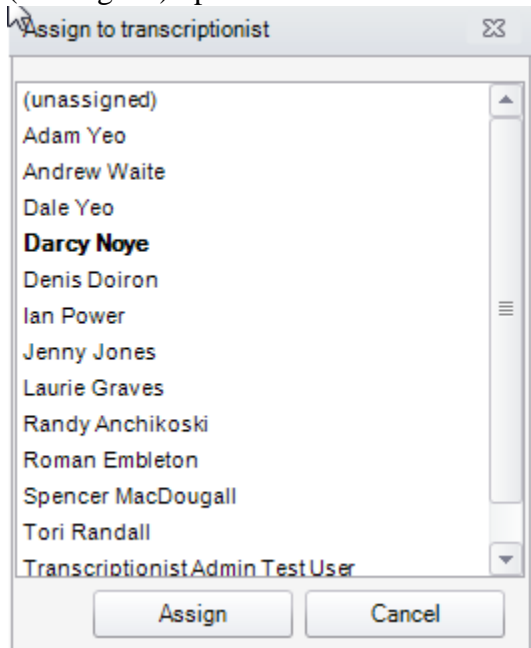


Figure 4.91 – Assign to Transcriptionist with current assigned user bolded

## Reporting – Audit History Change for CDSManager

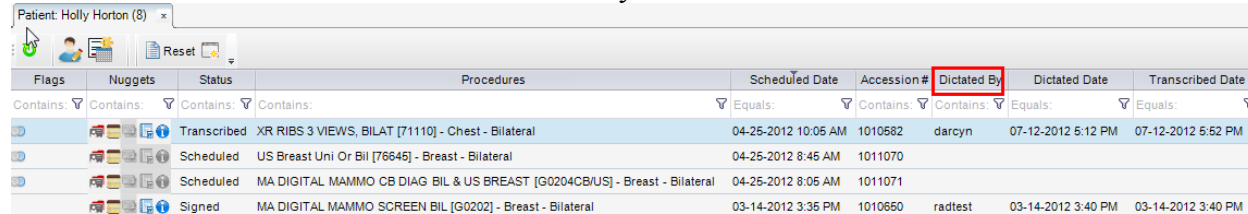
Audit log used to show “Study drafted” message for all studies was processed by the job manager, whether it retrieved a draft or only a typing document. Now when a Typing document is the result it will show in the audit log with a “Study not drafted, typing document retrieved” message instead.



## Reporting – Column “Dictated By” Added to Patient Folder Work List

As the title indicates the column of “Dictated By” has been added to the Patient Folder work list.

Patient: Holly Horton (8) x



Flags	Nuggets	Status	Procedures	Scheduled Date	Accession #	Dictated By	Dictated Date	Transcribed Date
Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Equals: ▾	Contains: ▾	Contains: ▾	Equals: ▾	Equals: ▾
		Transcribed	XR RIBS 3 VIEWS, BILAT [71110] - Chest - Bilateral	04-25-2012 10:05 AM	1010582	darcyn	07-12-2012 5:12 PM	07-12-2012 5:52 PM
		Scheduled	US Breast Uni Or Bil [76645] - Breast - Bilateral	04-25-2012 8:45 AM	1011070			
		Scheduled	MA DIGITAL MAMMO CB DIAG BIL & US BREAST [G0204CB/US] - Breast - Bilateral	04-25-2012 8:05 AM	1011071			
		Signed	MA DIGITAL MAMMO SCREEN BIL [G0202] - Breast - Bilateral	03-14-2012 3:35 PM	1010650	radtest	03-14-2012 3:40 PM	03-14-2012 3:40 PM

Figure 4.92 – Patient Folder with new column of Dictated By added

## Reporting – Hybrid Navigation for Fields/Sections

Added to the available options that the SpeechMike keys can be assigned are the hybrid option to move to the next section or field. In previous versions there were option for either or. Now when working in a document and the option for NextSectionOrField is assigned to the F1 key, the next available section or field will be selected.

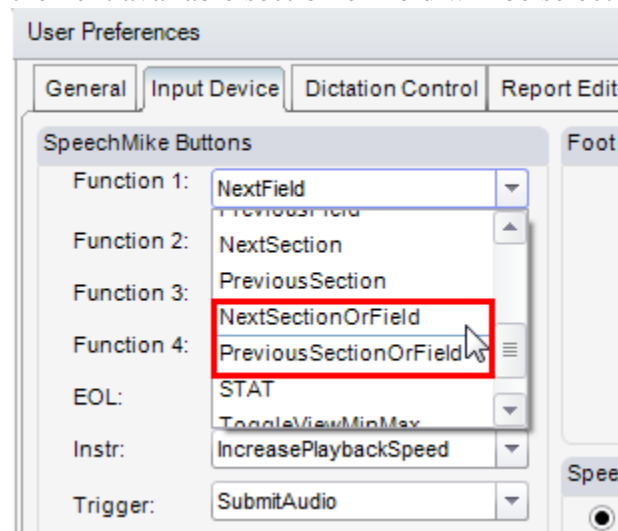
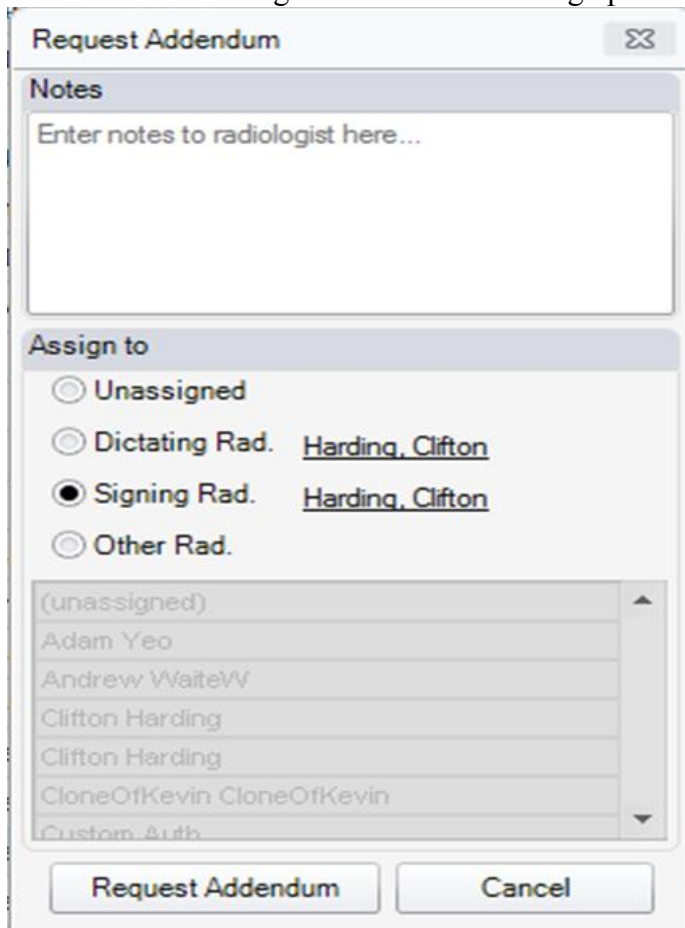


Figure 4.93 – New available options to assign SpeechMike buttons

## 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.

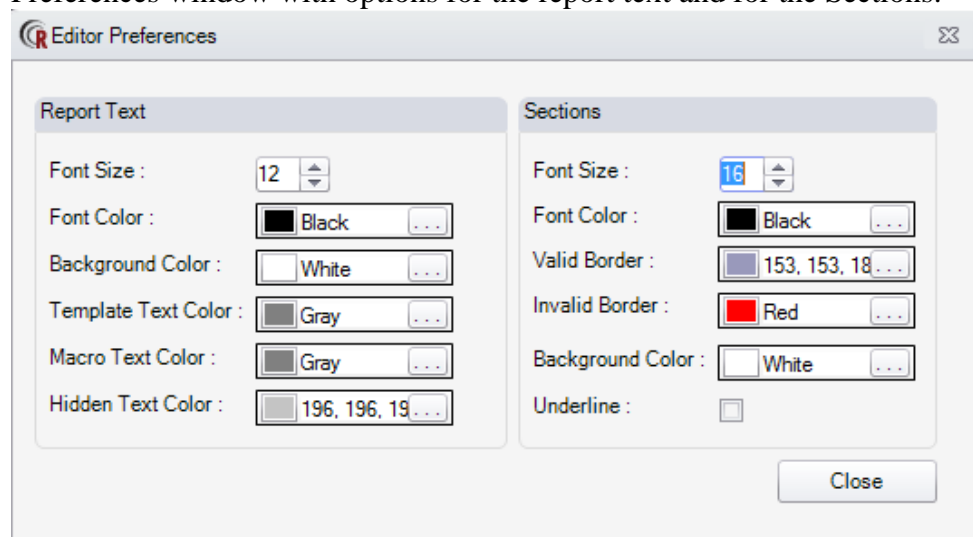


Figure 4.95 – Editor Preferences

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.

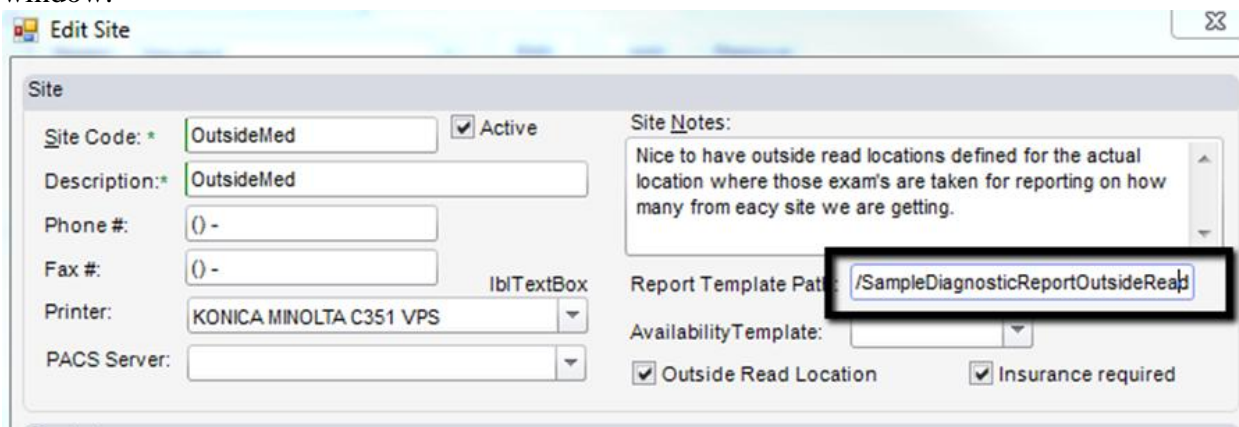
## **Sections**

- 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". On the left, there are several input fields: "Site Code:" with the value "OutsideMed" and an "Active" checkbox checked; "Description:" with the value "OutsideMed"; "Phone #:" and "Fax #:" both with empty parentheses and dashes; "Printer:" with a dropdown menu showing "KONICA MINOLTA C351 VPS"; and "PACS Server:" with an empty dropdown. On the right, there is a "Site Notes:" text area containing the text "Nice to have outside read locations defined for the actual location where those exam's are taken for reporting on how many from eacy site we are getting." Below the notes is the "Report Template Path:" field, which is highlighted with a red rectangular box and contains the text "/SampleDiagnosticReportOutsideRead". Below this field is the "AvailabilityTemplate:" dropdown menu. At the bottom right, there are two checkboxes: "Outside Read Location" (checked) and "Insurance required" (checked).

**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>

DiagnosticReportDefatultBody: /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**

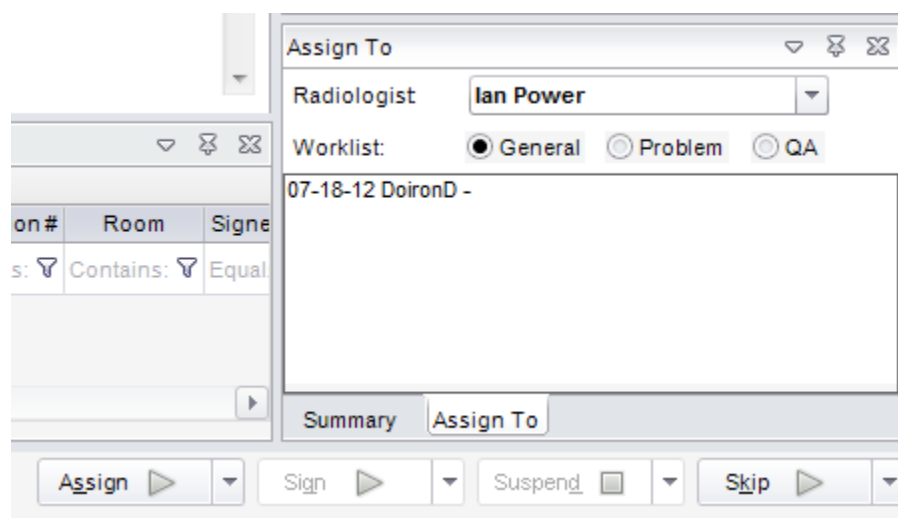
Fixed were several bugs and focus problems with the browsers but more notably we added the CTRL+UP and CTRL+DOWN shortcuts. The CTRL+UP places the cursor into the search box within the currently selected browser. CTRL + DOWN move the cursor out of the search box and selects the first item in the browser 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.

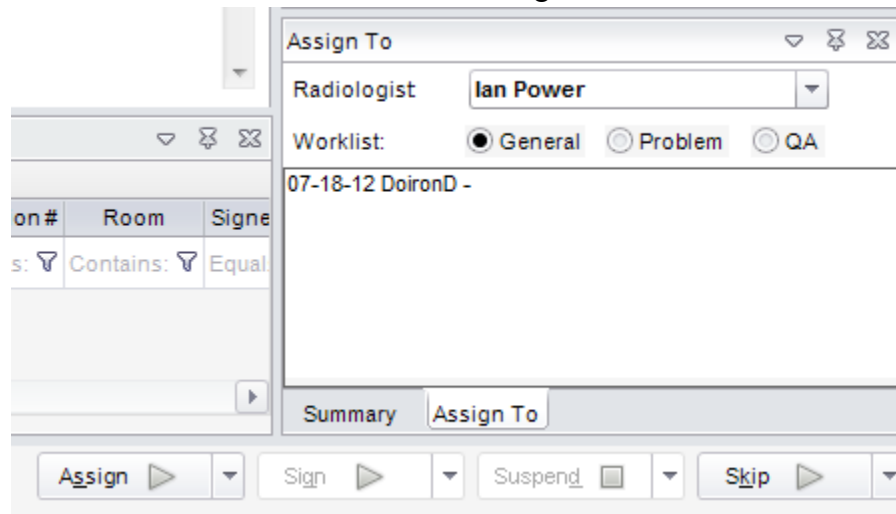


Figure 4.98 – Assign To data pane user in bolded text

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.

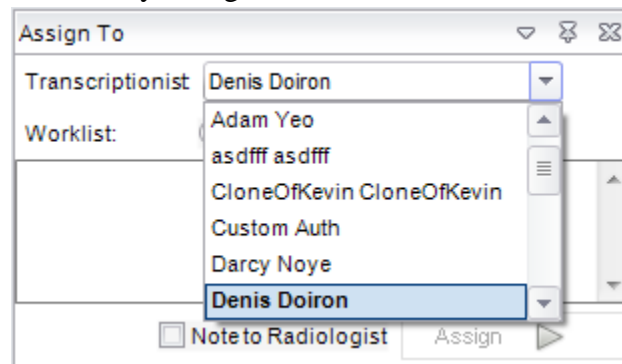
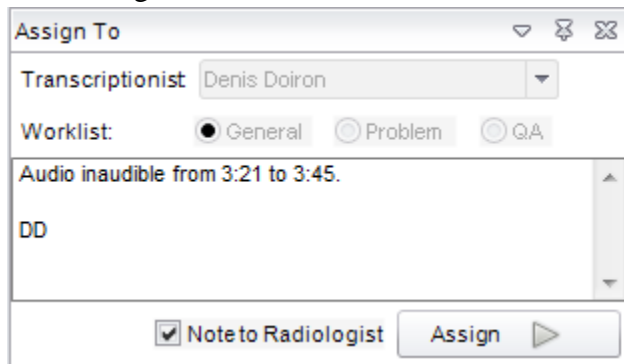


Figure 4.99 – Assign To list box showing user in bold

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



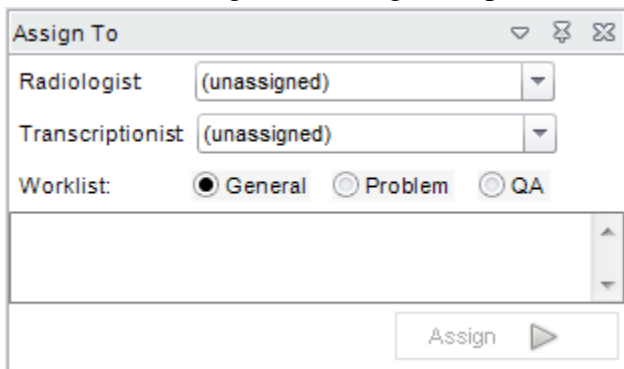
“Notes to Radiologist” check box is checked. Also any changed to these controls will be reverted to their original values.



The screenshot shows a window titled "Assign To" with a close button (X) and a help button (?). 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 (X) and a help button (?). It contains a "Radiologist" dropdown menu with "(unassigned)" selected. Below it is a "Transcriptionist" dropdown menu also with "(unassigned)" selected. Below that 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)

The screenshot shows the 'Lookup Tables - Personnel' window with the 'Personnel' tree on the left. The 'Notes' tab is selected for user 'darcyn'. The 'Notes' section contains three new fields highlighted with red boxes:

- 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.

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.

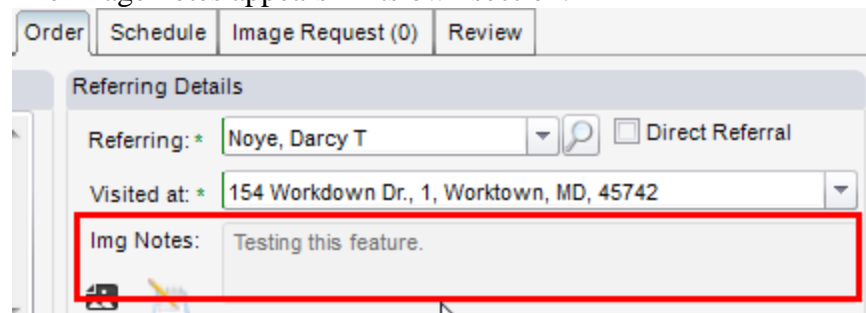
The screenshot shows the 'Referring Search' window. The search criteria include First Name, Last Name (noye), NPI, City, and Phone #. The search results table is shown below:

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

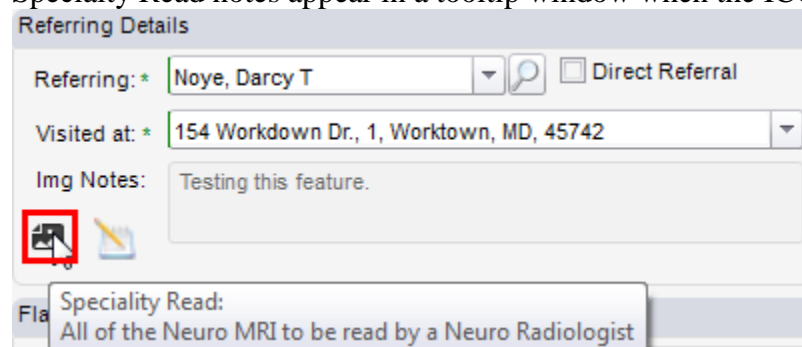
Referring: \* Noye, Darcy T  ☐ Direct Referral

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

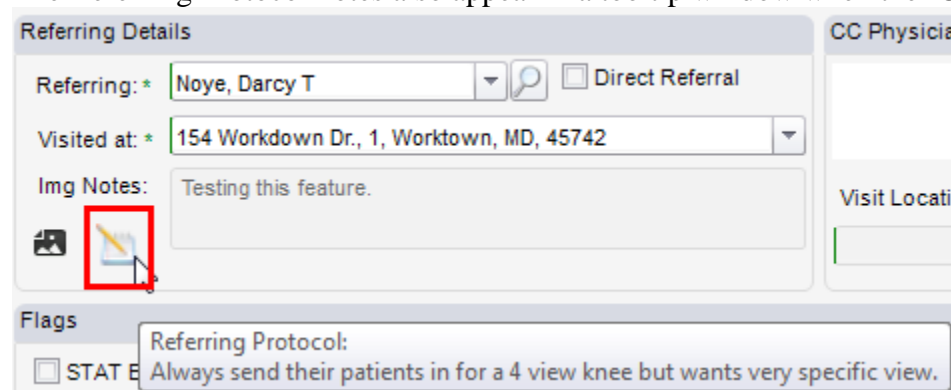
Visited at: \* 154 Workdown Dr., 1, Worktown, MD, 45742

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 is a 'Search' button, a 'Reset' button, and a 'New Patient' button. Below the search criteria is a table of search results. A context menu is open over the first row of the table, 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.

New Outside Read \* x

Patient Order

Study(ies): CT Abdomen W Pelvis W CTA Chest W/Wo x

Body Part: Abdomen

Laterality:

Exam Date: mm-dd-yyyy

Ext. Accession:

Modality Type: CT

Angiography

Bone Density

CT

Endoscopy

Fluoroscopy

History:

Referring Details

Referring: \* [Redacted] Visited at: \*

CC Physicians:

Visit Location for CC:

Performed Location

Practice: Advanced Radiology External MRN:

Site:

Flags

☐ STAT Read ☐ STAT Precert

☒ Digital

Order Notes

07-28-12 NoyeD -

Save Close

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.

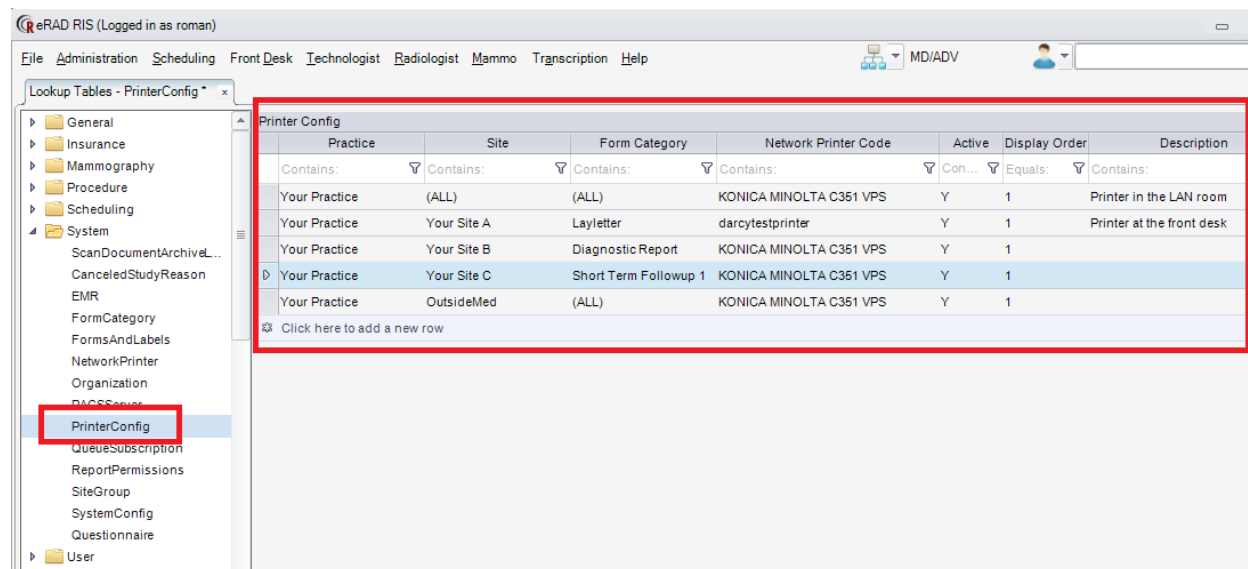


Figure 4.109 – PrinterConfig lookup table

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.

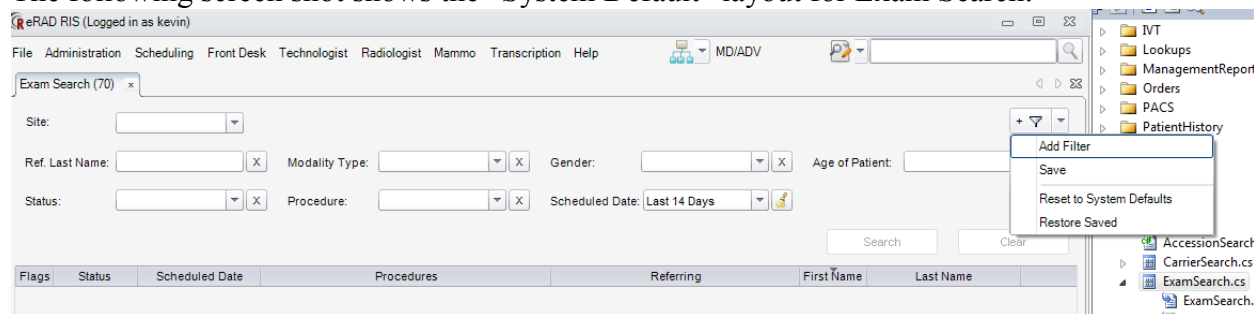


### Exam Search

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

Exam Search (100+) x

Site:

Ref. Last Name:   Modality Type:   Gender:   Age of Patient:

Status:   Procedure:   Scheduled Date: Last 14 Days

Too many matches. Results are limited to 100.

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

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

Figure 4.114 – Exam Search

## Generalized Procedure Name

A new lookup table was added (ProcedureGeneralDescription). This lookup allows you to configure a friendly description.

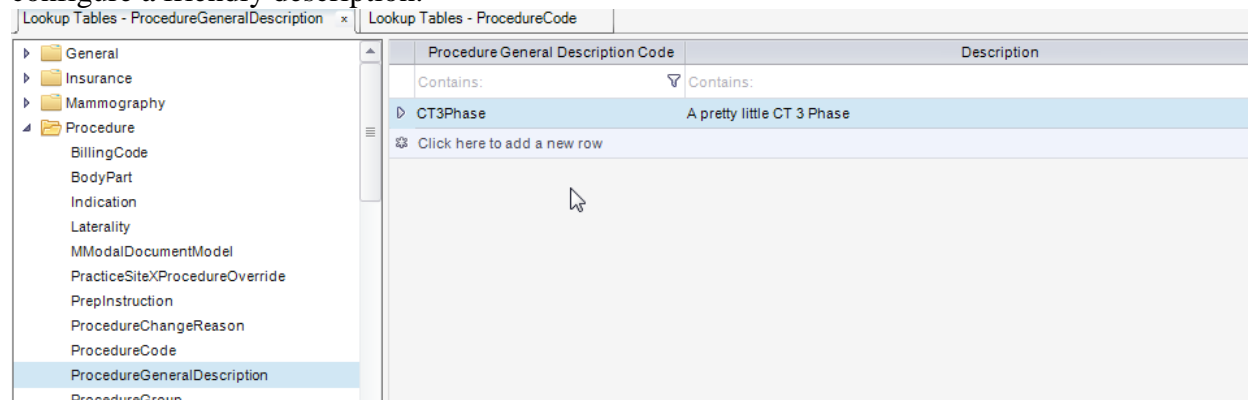


Figure 4.115 – Procedure General Description lookup

A new cross table (ProcedureXGeneralDescription) was created and included in the study data set. This cross table also includes a relation to practice.

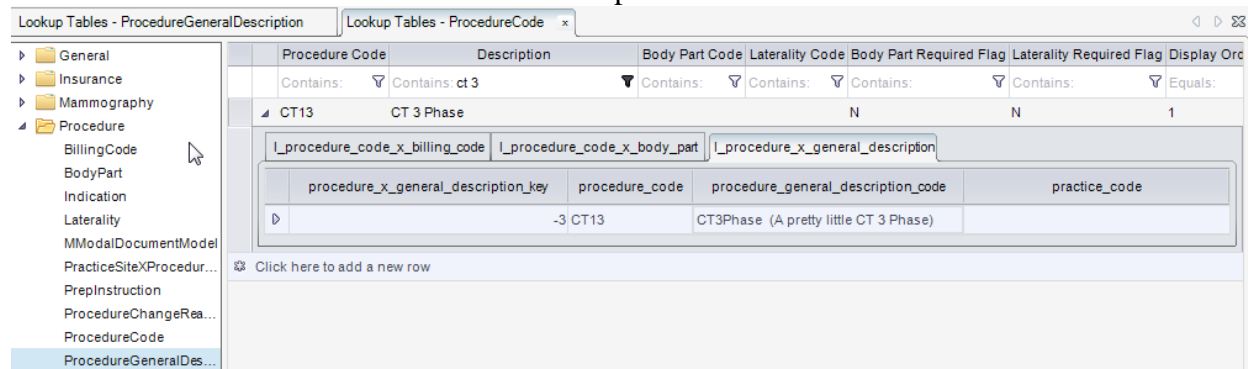


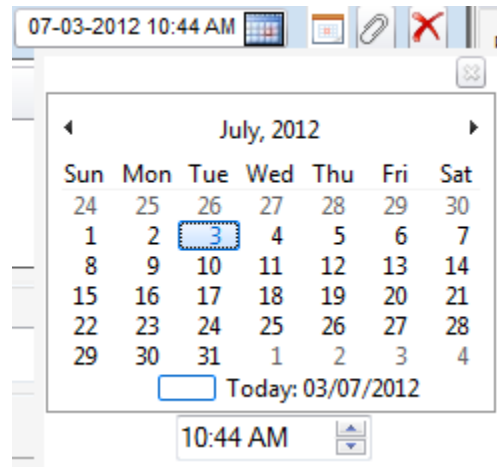
Figure 4.116 – Procedure code lookup display cross table ProcedureXGeneralDescription

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.



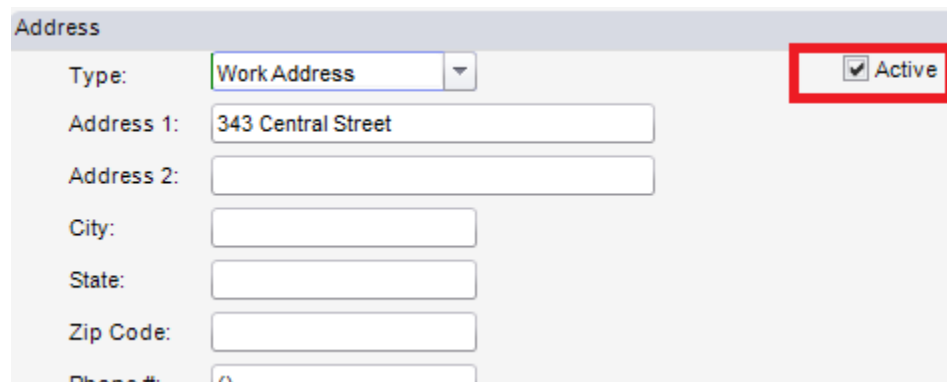
**Figure 4.117 – New date/time control**

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.

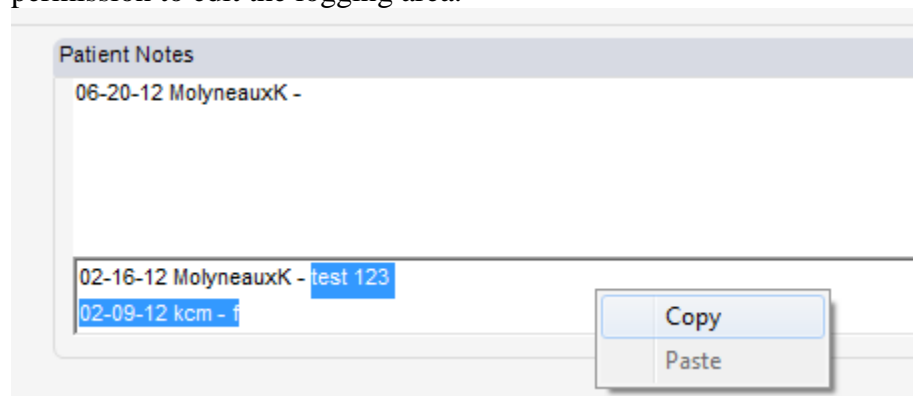


The screenshot shows a form titled "Address" with the following fields: "Type:" with a dropdown menu set to "WorkAddress", "Address 1:" with the text "343 Central Street", "Address 2:" (empty), "City:" (empty), "State:" (empty), "Zip Code:" (empty), and "Phone #:" (empty). In the top right corner, there is a checkbox labeled "Active" which is checked, and this entire checkbox area is highlighted with a red rectangular box.

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" section with a list of notes. The first note is "06-20-12 MolyneauxK -". Below it, there are two more notes: "02-16-12 MolyneauxK - test 123" and "02-09-12 kcm - f". A context menu is open over the second note, showing "Copy" and "Paste" options. The "Copy" option is highlighted in blue.

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: \* [masked]
- Schedule Group: A multi-type ahead box containing 'Eldersburg x' and 'Fisher x'. A dropdown menu is open below it, showing 'Lutherville'.
- User Groups: RIS Administrator x Radiologist x 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.

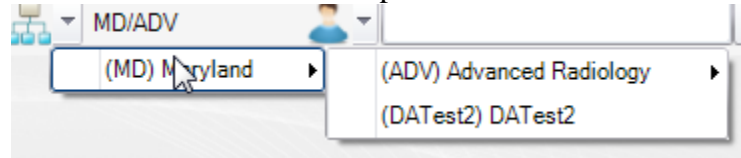


Figure 4.121 – Org picker enhancements

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.

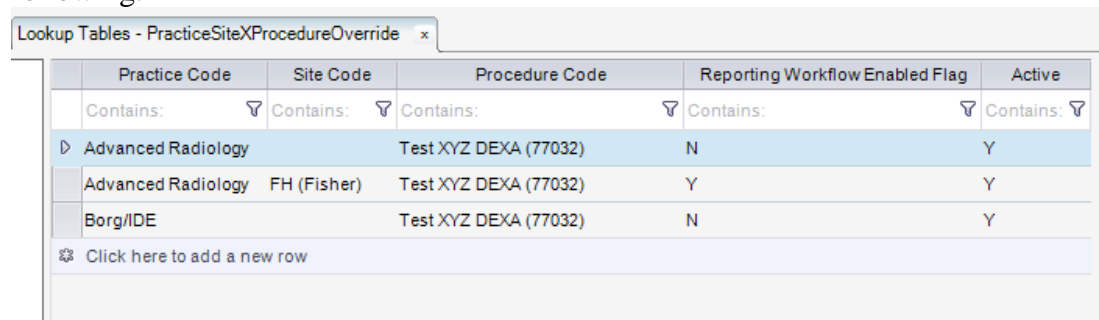
An old bug was found if the user closed the tech worklist, reopening the worklist would now adopt the credentials of the switched user. I had not accounted for this, so now the credentials used to open the original worklist are preserved, so they can always be reverted to.

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, showing 'Tech Notes'. Under 'Tech Notes', there is a section for 'Technologists Notes' with a text area. Below this is the 'Procedure' section, which includes fields for 'Scanner' (MA2FH), 'Performed Procedure' (Test XYZ DEXA (77032)), 'Body Part' (Breast), 'Laterality', 'Change Reason Code', and 'Change Reason Note'. At the bottom of the 'Procedure' section, there 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:

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

## RADNET Inc. – eRAD RIS Release Notes

---

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

## RADNET Inc. – eRAD RIS Release Notes

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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

## RADNET Inc. – eRAD RIS Release Notes

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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

## RADNET Inc. – eRAD RIS Release Notes

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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

## RADNET Inc. – eRAD RIS Release Notes

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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



## RADNET Inc. – eRAD RIS Release Notes

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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 exception 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

## RADNET Inc. – eRAD RIS Release Notes

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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 twice in macro / template throws an error on save	
1572	New	Normal	Practice Filler code vs Modality - site - practice.	

## RADNET Inc. – eRAD RIS Release Notes

---

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	

## RADNET Inc. – eRAD RIS Release Notes

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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	

## RADNET Inc. – eRAD RIS Release Notes

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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	