RadNet Technology Solutions

Customer Release Notes

for eRAD RIS
Version 2
Build 2017.3

PURPOSE

This is the Customer Release Notes document for eRAD RIS Version 2.2017.3.

Not every feature will be described in this document. Typically, only features which can be visually demonstrated are outlined here.

INTENDED AUDIENCE

The intended audience for this document is the RIS Administration team for eRAD RIS customers.

NEW SETTINGS

NEW ACCESS STRINGS

Setting	Default	Purpose
Clinical.Schedule.AllowManualSchedulingInClosed	None	Allows appointments to be manually scheduled in closed (gray) appointment book time slots.
Clinical.Schedule.AllowManualSchedulingInHoliday	None	Allows appointments to be manually scheduled in holiday (pink) appointment book time slots.
Clinical.Schedule.AllowManualSchedulingInRestricted	None	Allows appointments to be manually scheduled in restricted (yellow) appointment book time slots.
Clinical.Schedule.AllowManualSchedulingInUnavailable	None	Allows appointments to be manually scheduled in unavailable (blue) appointment book time slots.
Clinical.Tech.AllowAddExam	None	Allows access to the "Add exam to current order" button on Perform Exam screen.
Config.LookupEditor.OrderExtraInfo	None	Controls access to the lookup table editor for Order Extra Info.
Config.LookupEditor.PortalProcedureGroup	None	Controls access to the lookup table editor for Portal Procedure Group.
Clinical.CTRM	None	Controls access to Edit button and context menu on the Critical Results worklists.
Clinical.ReceptionBarcodeWorkflow.DesktopScanner	Full	Controls access to the Scan ID button in Identify Patient workflow.
Clinical.ReceptionBarcodeWorkflow.MagneticStripe	None	Controls access to the Swipe Card button in Identify Patient workflow.
Config.LookupEditor.BrowserType	None	Controls access to the lookup table editor for Browser Type.
Config.LookupEditor.UrgencyLevel	None	Controls access to the lookup table editor for Urgency Level.
Custom.Visibility.Data.Organization.l_site.location_character	None	Controls the visibility of the location character introduced for the Australian market. Full access shows the fields in the Organization table, while any other level will hide them.
Custom.Visibility.Data.Personnel.l_person_address.location_character	None	Controls the visibility of the location character introduced for the Australian market. Full access shows the fields in the Personnel table, while any other level will hide them.
These access strings have been removed.		
Clinical.UserPreferences.CacheReportingScreen		
Clinical.UserPreferences.ReuseReportingScreen		

NEW SYSTEM CONFIGURATION SETTINGS

Setting	Default	Purpose
AllowLZWImageCompression	True	(value = bool) Setting this to true will enable LZW Image Compression when saving attachments.
AppointmentSearchMaxResults	-1	(value = int) Specify the number of appointment slot results to be returned by the scheduling engine. -1 turns off the feature. Changing the default is only recommended for customers scheduling via an External Interface Service. These customers should use a number higher than the recommended minimum of 500.
AutoCopyPasteLinkedStudies	False	(value = True/False) Determines if data is copied to all linked studies when one study in a collection is saved on the Perform Exam screen.
AutoIncludeLinkedStudiesForTech	False	(value = True/False) Determines if linked studies are automatically included (checked) on Perform Exam screen when a linked study is opened.
EnableExtraCompressionOnStudyUpdates	True	(value = bool) Setting this to true will enable gzip and other compression techniques and is ideal for sites with limited upload bandwidth. Set it to false to default to the legacy Microsoft data serialization.
PortalEradPacsNewAccountTemplateUserID		(value = string) The PACS user ID to be used as a template when creating eRAD PACS accounts for users on the Portal.
PortalEradPacsNewAccountUserGroup	Radiologist	(value = string) Default user group to use when creating eRAD PACS accounts for users on the Portal.
PortalFaxCoverSheetUnavailableMessage	This Fax cover sheet is currently unavailable on the portal. Please contact the imaging center to request the cover letter.	The message to display to the Connect portal user when the Fax Cover sheet is not available due to unexpected error (e.g. SSRS report server is unavailable or not configured). *This setting is for a CONNECT Provider Portal feature and will be explained in the Provider Portal user guide.
PortalFaxCovertLetterReportPath		(value = path and name) The path and name of the Fax Cover Sheet for the Provider Portal. *This setting is for a CONNECT Provider Portal feature and will be explained in the Provider Portal user guide.
CountyToZipCodeAutoFill	False	(value = bool) True to have zip and state fields auto-filled when entering a county.
MaxLogoFileSize	250000	(value = int) Maximum number of bytes for image files uploaded for Practice/Site logos and images uploaded via the ImageUploader configuration screen.

MaxLogoWidthOrHeight	1000	(value = int) Maximum number of pixels for Practice/Site logos and images uploaded via the ImageUploader configuration screen.
Removed TechContrastRequired		This was removed because the contrast required and CT dosage for techs is now controlled with Validation Rules. See feature #15150.
NPILength	0	(value = string) Required length of the NPI field. If blank or zero, any length is allowed up to 20, which is the maximum length of the column.
NPILengthErrorText	N/A	(value = string) Text to display when the NPI length is invalid. If blank or null, the default error text will be displayed.
PortalAllowEveningWeekendScheduling	True	(value = bool) If true, the portal will allow scheduling on evenings and weekends when appointments are available based on Availability Templates.
PortalAuthorizationNotRequiredHourPadding	0	(value = int) The number of hours before a patient can schedule through the portal if they do not have an Authorization.
PortalAuthorizationRequiredHourPadding	0	(value = int) The number of hours before a patient can schedule through the portal if they have an Authorization.
PortalMaxSearchDays	30	(value = int) When searching for an appointment time in the Portal, if no appointment times are available within this number of days, RIS will inform the user and display information to call the scheduling department.
PortalNoSelectedInsuranceHourPadding **REPLACES** PortalNoSelectedInsuranceDayPadding	5	(value = int) Used by online scheduling to add hours to the start search criteria to allow time to gather insurance from the patient for this appointment.
PPSchedulingNoPrescriptionHourPadding **REPLACES** PPSchedulingNoPrescription	0	(value = int) The number of hours before a patient can schedule through the portal if they do not have a prescription.
XmlIntegrationMainMenuText	Integrate	(value = string) The text that will appear on the XML Integration main menu item in RIS.

NEW FEATURES

SCHEDULING AND REGISTRATION

FEATURE #15086 – LOG CONTROL SUPPORTS AUTOTEXT ENTRY IN "DISPLAY AS TEXTBOX" MODE

Previously, it was only possible to utilize Autotext in notes fields that were configured to use Log Control.

It was not supported for Textbox style notes fields, which were not able to take advantage of the Autotext feature.

It is now possible to turn on Autotext for a notes field that is set up as "Display as Textbox."
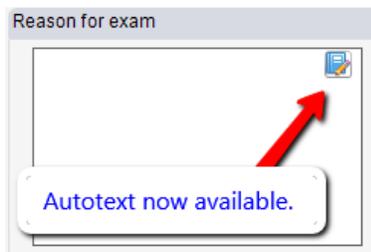
To configure, open the Log Control configuration table. Locate any notes fields that are set to "Display as Textbox," indicated with a Y. Enable Autotext by changing the Type to FreeAndAutoText. To restrict the user from entering anything *except* Autotext, choose a type of AutoText.

Log Control Code	Description	Type	Display As Textbox Flag	Spellcheck Enabled
Contains:	Contains:	Contains:	Contains:	Contains:
▷ Click here to add a new row				
DDNotes	Document Distribution Notes	FreeText	N	N
SignsAndSymptoms	Signs And Symptoms	FreeAndAutoText	Y	Y
ReasonForExam	Reason For Exam	FreeAndAutoText	Y	Y
SchedulingNotes	Scheduling Notes	FreeAndAutoText	N	Y
TechNotes	Technologist Notes	FreeAndAutoText	N	Y
UMExternalNotes	Utilization Management External Notes	FreeAndAutoText	N	Y

If needed, configure Autotext options for the notes field in the Autotext table.

Description	Language Content	Log Control Code	Display Order
Contains: ▽	Contains: ▽	Contains: ▽	Equals:
Click here to add a new row			
Screening	Annual screening. Asymptomatic.	ReasonForExam (Reason For Exam)	1
FUfromPrior	Follow-up from prior study dated	ReasonForExam (Reason For Exam)	1

FEATURE #15026 – MAGNETIC STRIPE CARD INTERPRETATION ADDED TO IDENTIFY PATIENT WORKFLOW

Some eRAD RIS customers are located in countries where government issued insurance cards with a magnetic stripe are common. This magnetic stripe contains information in a designated format, which can be interpreted to help identify the patient's account in RIS. To take advantage of this information, eRAD's Identify Patient feature has been expanded to support swiping cards with magnetic stripes.

Because different issuers will have different configurations for the data included on the magnetic stripe, RIS allows for different configurations to be defined in an XML file, which is included in the RIS zip file. At this time, the XML file contains configuration for Australian Medicare cards, as well as Prince Edward Island health cards. Contact eRAD Support to inquire about additional configurations.

There are three Access Strings associated with the Identify Patient workflow:
- Clinical.ReceptionBarcodeWorkflow
    - This access string previously controlled access to the Identify Patient workflow. There are now two additional access strings that control the different types of searches.
- Clinical.ReceptionBarcodeWorkflow.DesktopScanner
    - This access string controls access to the existing feature in which Patient IDs with 2D barcodes are scanned using a desktop scanner.
    - The default setting is FULL to maintain existing behavior.
- Clinical.ReceptionBarcodeWorkflow.MagneticStripe
    - This access string controls access to the new magnetic stripe search.
    - The default setting is NONE.

If a user has FULL access to all three of the above access strings, when opening the Identify Patient screen, they will have three options for initiating a search: Scan ID (which will scan an ID Card on the desktop scanner, as before), Swipe Card (will accept input from a magnetic card reader), and Patient Search (a new manual search option in the case that either of the previous options is unable to read the card).
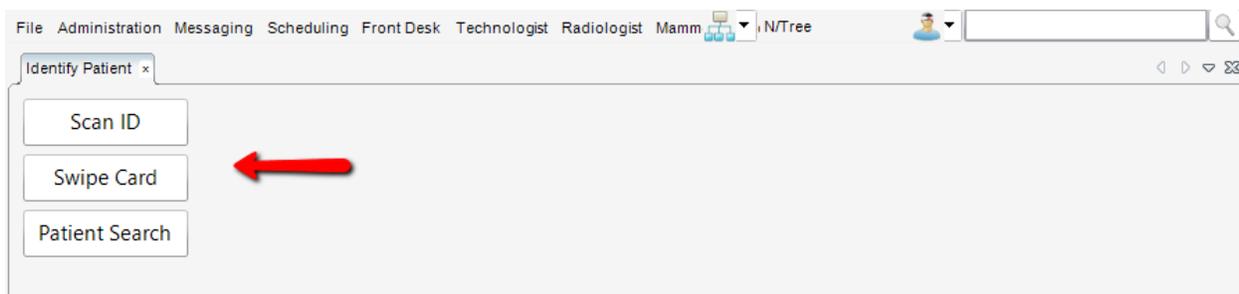
When using the Swipe Card option, the user will be prompted with the following message:
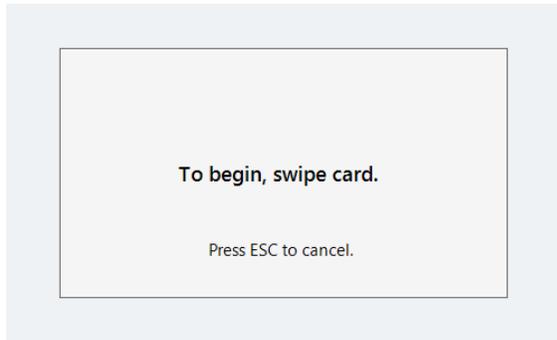
After RIS detects a successful read from the magnetic stripe reader, the results will display on the tab. The following example will refer to the configuration for an Australian Medicare card.

The upper right hand portion of the screen displays a summary of the information read from the Medicare card. At this time, the only information that can be interpreted from the card is the policy number and issue number. Though one or more patient names may be printed on the card, the magnetic stripe itself does not contain patient names.

The upper portion of the screen will show the most appropriate ID for the patient. In "Desktop Scanner" mode, this area shows the ID that was scanned. In Patient Search or Swipe Card mode, this area will show the most recent ID on file for the currently selected patient. In the event that a matching patient record does not have a patient ID on file, a generic image will be displayed to indicate No ID found.
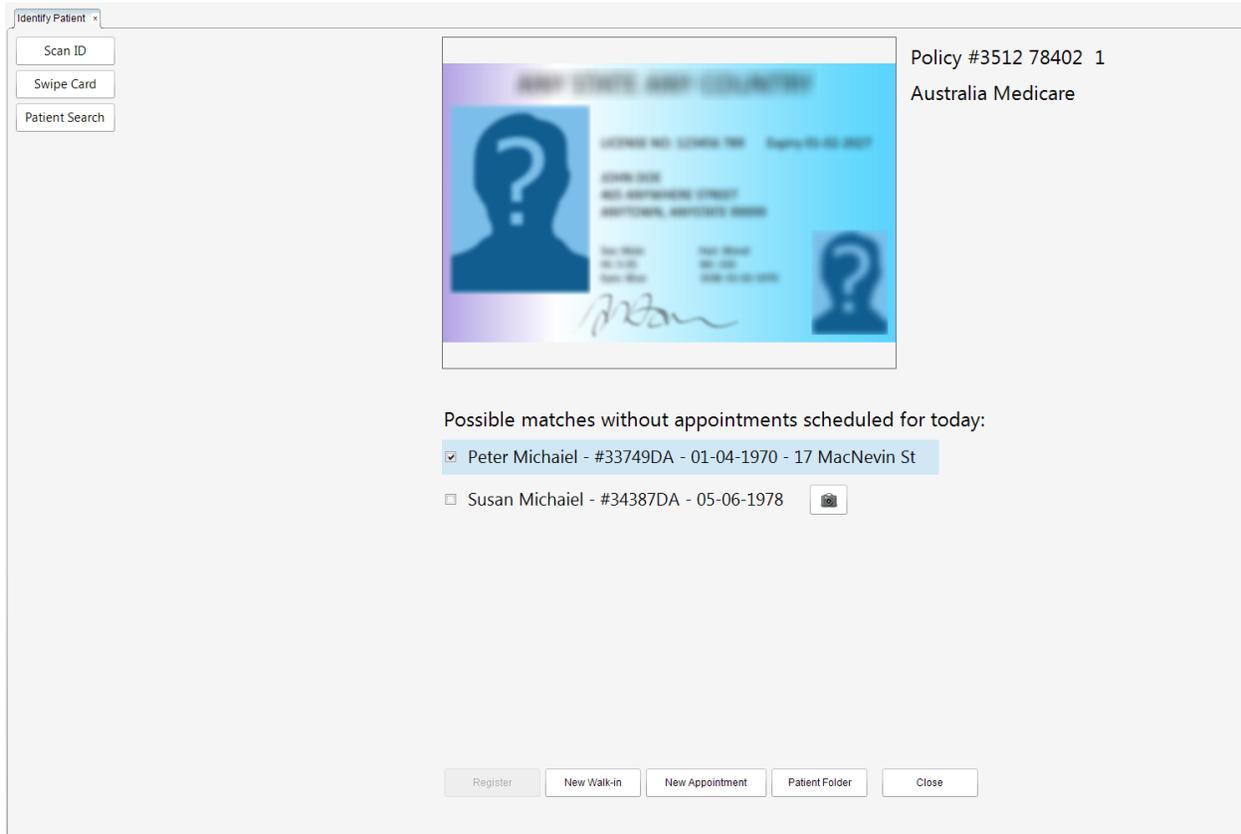
Because multiple patients can share the same Medicare card, RIS performs a search for all patients with a carrier code that represents Australia Medicare and the policy number read from the card. The issue number of the card (the last number on the right) is not included in this search as this number may have changed since the patient's last visit.

As with the Patient ID search, possible matches to the search will be displayed in the bottom half of the screen, with results that have an appointment scheduled that day at the top of the list. A patient from the search results can be selected with a checkmark. The buttons at the bottom of the screen can initiate the desired action.

Magnetic Stripe Configuration

Different types of swipe cards may have the data stored in different formats. RIS allows for different configurations to be defined in an XML file which is included in the RIS zip file.

StripeDataConfig
Class

☐ Properties
- 🔧 DefaultKeys
- 🔧 DefaultValues
- 🔧 EndsWith
- 🔧 FieldConfig
- 🔧 FieldLength
- 🔧 MainDelimiter
- 🔧 RegularExpression
- 🔧 StartWith

FieldInfo
Class

☐ Properties
- 🔧 CharsToRemove
- 🔧 Delimiters
- 🔧 FieldName
- 🔧 FieldNumbers
- 🔧 FormatString
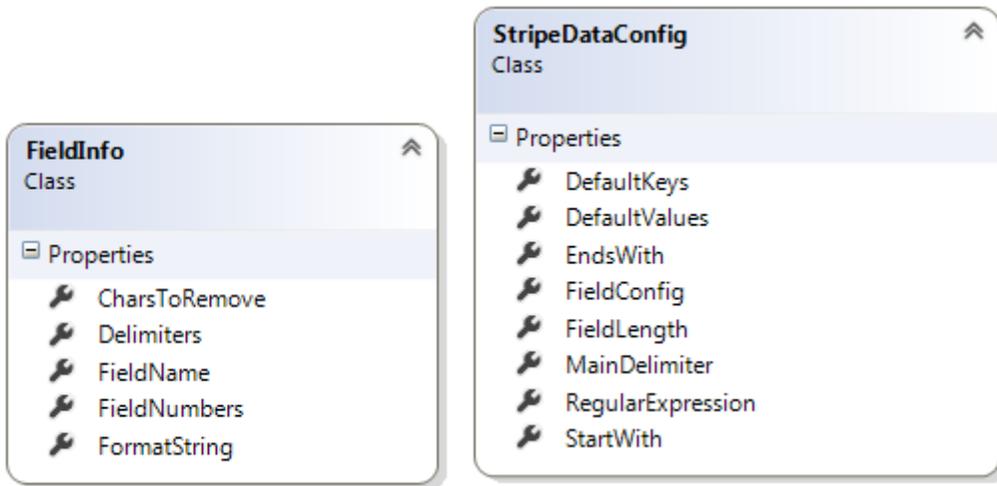
Each card type can be described in an XML file that contains a list of *StripeDataConfig* objects with the properties shown above. The *FieldConfig* property is a list of *FieldInfo* objects that provide a name for the field and some instructions to extract and format the data.

The released zip file presently contains an Australia Medicare card configuration and a PEI Health card configuration. These can be used for reference when building additional configurations.

Field Names

The following case sensitive field names are given special meaning:
- LastName – The patient's last name.
- FirstName – The patient's first name.
- MRN – If present, will be displayed as the patient ID and used to trigger an MRN search.
- BirthDate – The patient's date of birth.
- PolicyNumber – If present (and in the absence of MRN), will be displayed as the insurance policy number and used to trigger a "StartsWith" type policy number search for a specific carrier code.
- IssueNumber – If present, will be displayed along with the Policy Number. It is not included in the policy number search. If an insurance policy is recorded in RIS that includes the Issue Number as a suffix, searching by Insurance Policy StartsWith should still include a match.
- CarrierCode – Will be used together with the insurance policy for an insurance policy search. The carrier code will be displayed in the upper right search criteria area. Note that the packaged zip file presently includes the carrier code of "Australia Medicare," but this can be configured by service with a text editor (see MagneticStripeConfig.xml).

Clipboard Conveniences

When a code is successfully detected by RIS, if the parsed fields contain an MRN, it will be copied to the clipboard. If there is no field called MRN but both PolicyNumber and IssueNumber exist, those numbers are copied to the

clipboard. If there is only a PolicyNumber, then PolicyNumber is copied to the clipboard. This data can then be pasted into a field if desired.

Unrecognized Swipe Cards

If the user swipes a card that has a magnetic stripe that is not in one of the expected formats, a message will be displayed to the user:

Patient Search

If the Card Swipe or Patient ID search is unsuccessful, users now have the ability to click the Patient Search button in the top right portion of the screen.
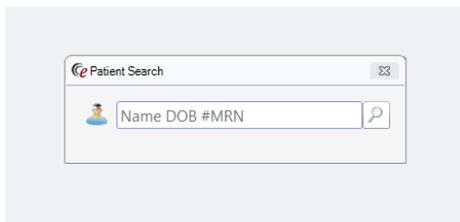
Rather than requiring the user to enter name and date of birth in different fields, Identify Patient's Patient Search uses an approach similar to the Quick Search box in the upper right hand corner of RIS. The user can enter partial name and DOB or MRN and see a list of matching patients; and the search results are categorized to show patients with exams today at the top.

Because this query with information on today's exams is heavier weight than the simple patient search, there are minimum requirements on the search criteria in order to ensure more specific results. The user is required to enter either the MRN with a # prefix, or enter at least part of the last name, part of the first name and the patient's date of birth. The full name portion of the search criteria needs to include at least 5 characters total with at least two characters in the first name and at least two characters in the last name.

Examples of valid search criteria are:

Jo Doe 040477

Doe, John 04-04-1977

#00836725

The Patient Search dialog can be dismissed by pressing the Escape key or clicking the X in the upper right of the dialog.

FEATURE #15475 – PROVIDE AN ALERT IN RIS WHEN A PRIOR BALANCE EXISTS IN AN EXTERNAL BILLING SYSTEM

Customers have requested that eRAD RIS support the ability to receive messages from an external billing system in order to notify RIS users that an outstanding balance exists for the patient. This can now be supported using the Validation Rules capability.

An external billing system can now update a new Outstanding Balance field in the eRAD RIS database with a Y or N value via HL7. A validation rule has been added that will display an alert when the patient is marked as "Checking In" if a prior balance exists in the billing system.

The following alert will display to the RIS user: "Patient has an outstanding balance. Please review before proceeding with registration." The timing and content of the alert can be adjusted to match customer preferences.

FEATURE #14796 – ABILITY TO SEARCH BY BISN IN QUICK SEARCH

This feature is for customers using Imagine Billing. The BISN (Billing Interface Serial Number) used in the Billing Confirmation workflow should be searchable using the Quick Search. This will enable a user to quickly find a record when they only have a BISN.

To trigger this type of patient search, simply type a tilde (~) character before the number.

Hovering over the Quick Search box will provide a list of the search type indicators.
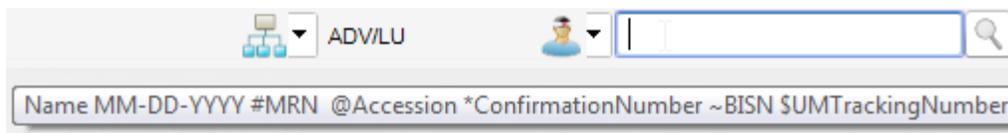
The search will bring up the Patient Folder for the matching patient and the exam row corresponding to the BISN will be highlighted.

FEATURE #16603 – COLLECT THE DATE A REFERRAL WAS RECEIVED

In some markets, it is important to record the date that a referral was received from the patient's provider. In fact, in some areas it is even required that this date be provided in the billing file. A new field has been added to the Referring Details panel to capture the date when the patient received the referral from the doctor.

The field has an abbreviated label of "Ref. date" and the tool tip displays the full label for the field: *Referral Received Date*.

The date is manually entered into this field. It is possible to create a validation rule to require the field, if desired.

FEATURE #15806 - SUPPORT A CONFIGURABLE URGENCY LEVEL

For hospital workflow, the existing fields for "STAT Read" and "STAT Exam" are not flexible or specific enough. There is a need to capture and display an "Urgency Level" at an Order level. This will allow customers to define their own specific levels of urgency that can then be displayed on worklists and sorted according to severity.

To this end, a new data field called *Urgency Level* has been added to Order tab within eRAD RIS. The data field has a dropdown control allowing a user to select from a configured list of urgency level values.
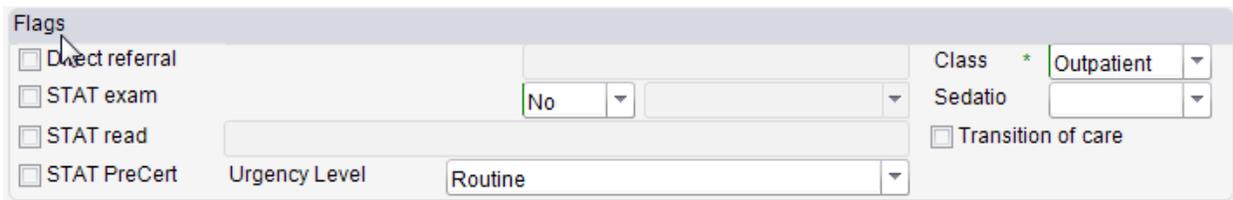
The options available in the dropdown are defined in a new lookup table, also labeled Urgency Level. When adding items to this configuration table, it is important to define the Display Order. This not only controls the display order in the field's dropdown, but also the sort order on the worklists. Display Order should be defined so that the most urgent option has a display order of 1.

If an Urgency Level is selected for a patient's order, it will be displayed in a new column labeled Urgency Level available on the following worklists:

- Orders to Schedule WL
- Technologist WL
- Reception WL
- Pending Dictation WL
- All Pending Dictation WL
- Reports Drafted WL
- All Reports Drafted WL
- Activity WL
- Patient Folder

As mentioned above, when sorting this column, RIS will refer to the Display Order and sort according to this setting, instead of sorting alphabetically.
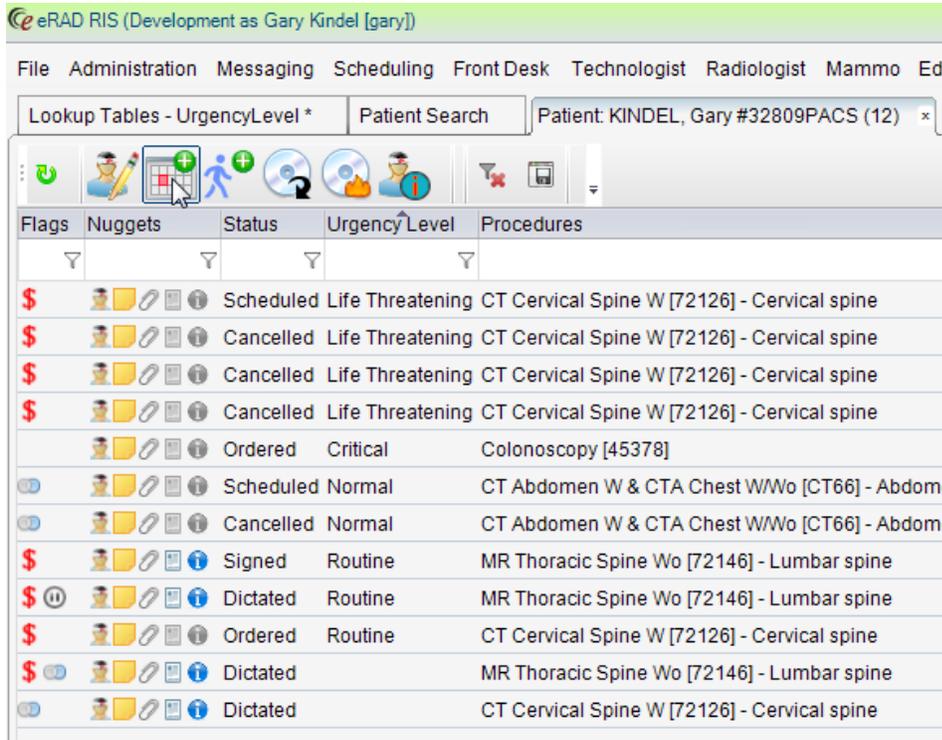
A new access string has been created to grant the appropriate users permission to edit the Urgency Level configuration table: *Config.LookupEditor.UrgencyLevel* (default = None).

FEATURE #11864 – "PATIENT FLAG" FUNTIONALITY IS NOW CALLED "PATIENT ALERTS"

eRAD RIS has the ability for users to add information about a patient that can be displayed to the user as a pop-up notification when the patient's order or exam is opened. This was previously known as "Patient Flags." The name did not accurately represent the intention of this feature, which is to *alert* the user about key information related to the patient. For this reason, the existing feature set has been renamed to "Patient Alerts."

The tool tip on the button has been updated:
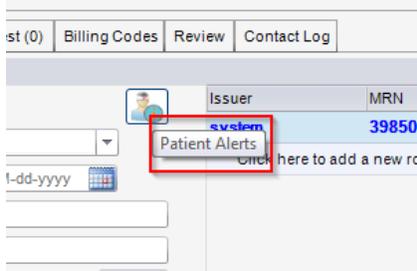
The title on the selection screen has also been updated:
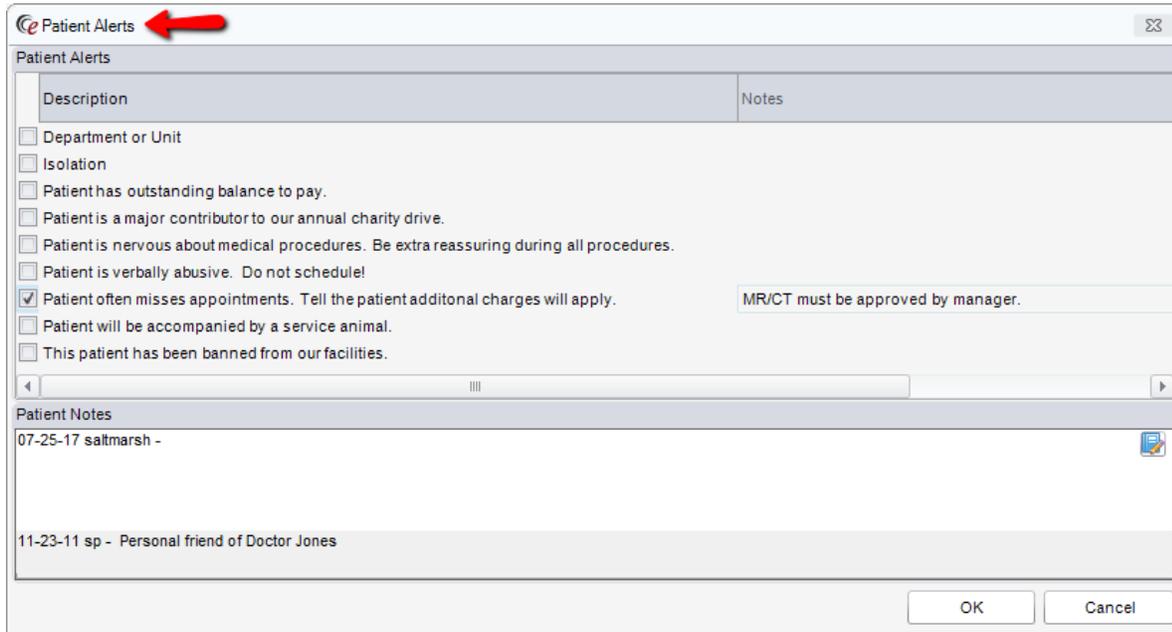
The configuration table is temporarily still labeled with the underlying database label of Patient Flag, but this will be updated in a future build.

FEATURE #9202 – NEW ACCESS STRINGS FOR APPOINTMENT BOOKING

In eRAD RIS, there are four different types of appointment slots that are outside of the routine:

1. Room Closure
2. Holiday
3. Unavailable (outside of the configured hours for the room)
4. Restricted (configured to indicate to the scheduler that only certain appointments can be scheduled in a particular slot)

It may be undesirable to allow certain schedulers to access one or more of these special types of appointment slots. For instance, perhaps a new scheduler would be allowed to schedule in Restricted time slots, but not holidays, or times when the room is closed due to business hours or holidays. A scheduling manager may need to book in any of these slots on a case by case basis. To allow for this type of flexibility, new access strings have been added to allow or disallow users to schedule in unavailable, modality restricted, modality closed or holiday time slots.

The access strings will determine whether a given user can schedule using the Appointment Book, by manually entering the room/date/time in the scheduling screen, or by using the calendar view in the scheduling screen. All access strings are configured with defaults that replicate previous functionality, which can be adjusted to provide the desired permissions.

Room/Modality Closure:

Access string *Clinical.Schedule.AllowManualSchedulingInUnavailable* must be set to FULL to schedule in unavailable time slots, which are time slots that are outside of the room's normal business hours. These time slots appear in blue in the appointment book. The default setting is FULL (scheduling *is* allowed).
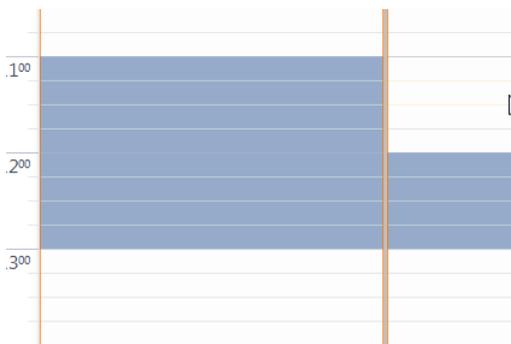
Holiday:

Access string *Clinical.Schedule.AllowManualSchedulingInHoliday* must be set to FULL to schedule in the Holiday time slots. These time slots appear pink in the appointment book. The default setting is NONE (scheduling *not* allowed).
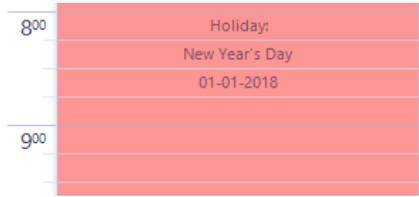
Restriction:

Access string *Clinical.Schedule.AllowManualSchedulingInRestricted* must be set to FULL to schedule in modality restricted time slots. These time slots appear yellow in the appointment book. The default setting is FULL (scheduling *is* allowed).

Closures:

Access string *Clinical.Schedule.AllowManualSchedulingInClosed* must be set to FULL to schedule in closed time slots. These time slots appear gray in the appointment book. The default setting is NONE (scheduling *not* allowed).
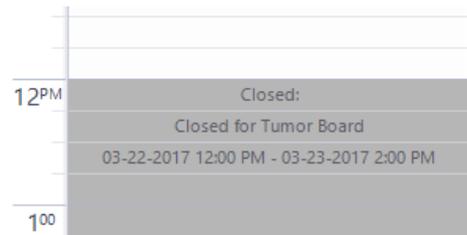
If a user without full permission to the applicable access string chooses an unavailable time slot, the user will receive an error that the room is unavailable and will not be able to schedule.

Modality Restrictions will continue to display the reason for the restriction, but without the appropriate permission, the user will be informed that they cannot schedule in restricted time slots.
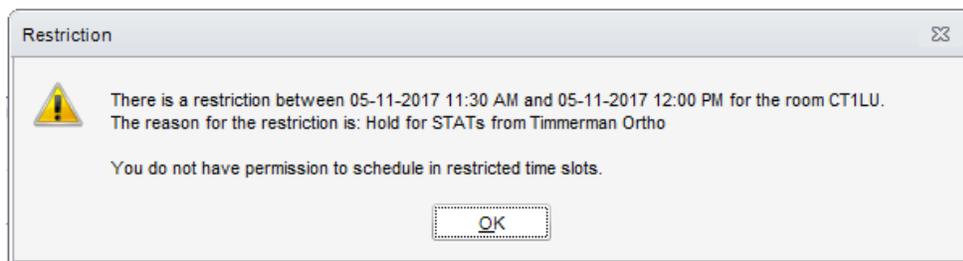
INSURANCE

FEATURE #16074 - INSURANCE POLICY EXPIRY DATE NOW AVAILABLE ON THE MANAGE POLICIES SCREEN

Some insurance policies have a listed Expiry Date which would be beneficial to collect on the Manage Policies screen. In fact, in some markets, the Expiry Date is required for billing.

To accommodate this, a new column, *Expiration*, has been added in the Policies grid on the Manage Policies screen. This is an optional field with a date format of MMYYYY. It can be displayed to the user as MM-YYYY or MM/YYYY depending upon whether "-" or "/" is used in the *DateFormat* System Configuration setting.

If an Expiry Date has been entered, RIS will now control whether the policy has expired and will prevent the user from using an expired policy. Each time the Manage Policies screen is opened, a new evaluation of the Expiration date will be performed and the Expired checkbox will be checked accordingly. Cards expire at midnight on the last day of the month entered as the expiry date.

Because the RIS is responsible for evaluating whether the policy is expired when a date has been entered, the Expired checkbox will be Read Only when a date has been entered in the Expiration column. If the patient's policy has a new expiry date, the user can update the expiration to a future date and the check will be removed from the Expired column.

Policies without an Expiration listed can still be manually expired (or un-expired) by checking the box.

When entering Expiration dates the user can enter MMYY, MMYYYY, MM-YYYY, MM-YY, MM/YY, MM/YYYY and many other variations where the month and year are separated by any non-numeric character. The RIS will attempt to parse the date and display it in a MMYYYY format.

If the user attempts to use a policy that has been expired, a warning will be issued and the policy cannot be selected.

Updating the Expiration to a future date will make the policy available for use.

FEATURE #16523 – STORE INSURANCE CARRIER'S PATIENT DATA WHEN PATIENT IS NOT SUBSCRIBER

This feature is for customers using the integration with Eligible API. When the patient is the subscriber to the insurance, we update the demographic information in the Policy Details section as it is known by the insurance carrier. For example, if we send the patient's name as "Hillary O'Bryan" and the message from Eligible API indicates that the insurance carrier has the last name as "O'Brian," the Policy Details screen will automatically update to store the version that matches the insurance policy.

When the patient is *not* the subscriber, the information in the Policy Details section is for the policy holder, so there was not a place to store the insurance version of the *patient's* information. eRAD RIS can now store this information in the background, so that the insurance carrier will receive the matching information when the study is billed. In the database, eRAD stores the last known patient information for the policy, including the patient's first name, last name, middle name, birth date and gender. If the carrier changes, these fields will be cleared until they are updated with the information from the new carrier, if applicable.

UTILIZATION MANAGEMENT

FEATURE #15435 – CONFIRMATION WARNING MESSAGE FOR SCHEDULERS

During the utilization review process, there can be certain scenarios that require confirmation from the referring physician before the order can proceed to be scheduled. For example, if the UM nurse or doctor recommends an alternative or additional procedure, confirmation by signature is required.

The confirmation workflow is determined by the Confirmation Required Flag in the UM Resolution look-up table. For example, "Recommended as Alternative" would typically have this flag enabled.

As soon as the ordered procedure is marked as "Recommended as Alternative," eRAD RIS determines that this is a **final** status and advances the UM Flag from UM Required to UM Complete—even though confirmation has yet to be received. The reason behind this logic is that the reviewers are done with the review at this point. The clock stops and the order drops from the Utilization Management worklist.

The Schedule functionality is disabled until confirmation is received. However, it is beneficial to notify schedulers that the order is waiting for confirmation when they open the schedule screen. This will help the user understand why scheduling is disabled.

RIS will now prompt the user:
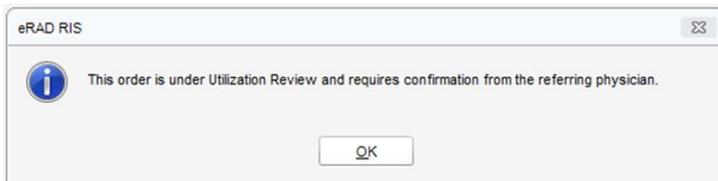
Once confirmation is received either from the inbound document workflow, verbally, or via the provider portal, the order can be scheduled.

FEATURE #15892 – TRIGGER UTILIZATION REVIEW FROM THE IVT SCREEN

The eRAD RIS Utilization Management (UM) workflow is driven by the primary insurance that belongs to the order. Often orders will come into RIS either manually, from EMR integration, or eventually through the provider portal, *without an insurance carrier* assigned. RIS can be configured to push orders missing a primary insurance to the IVT Worklist. The IVT user will enter the insurance information at this point. It is important that a UM check takes place at this time and a visual indicator is supplied to the IVT user if review is required.

The eRAD RIS IVT screen now has the ability to trigger the UM workflow (UM Required Flag) based on an insurance addition or modification.   To make the UM tab appear without a valid study assigned, the IVT screen will now show the UM tab based on the state of the UM Required Flag for the order. Once the insurance is added or modified, the system will review the value of the UM Required Flag and show the UM tab dynamically. This will allow the IVT user to see that UM is required for the insurance they have added or modified.

The IVT user can view the UM tab as Read Only, unless they have UM permissions. The UM Required flag will also appear on the IVT WL.

FEATURE #15219 – EXCLUDED EXAMS WORKFLOW

Capitation contracts with medical groups often contain procedures which are listed as "excluded." This means that the procedure is excluded from capitation and the service is not available unless authorized by the medical group. eRAD RIS can now prevent scheduling or registration for any excluded procedures, unless a manager override is obtained. There is also an option to configure warning messages for other UM coverage types.

The eRAD RIS Utilization Management solution contains the authorization rules by medical group that determine which billing codes require utilization review. Although an excluded billing code typically does not require utilization review and the order will not be pushed to the Utilization Management Worklist, the UM solution will be utilized to identify excluded procedures.

The UM Coverage look-up table in eRAD RIS has been enhanced with the following two additional columns to drive the new workflow:

1. **Schedule Warning Type** – The following two options are available:
   a. **Prevent** – A warning message is displayed and the user is *prevented* from scheduling the procedure.
   b. **Prompt** – A warning message is displayed and the user is *allowed* to schedule the procedure.
2. **Schedule Warning Content** – The language content of the warning that is displayed to the scheduling user.

Um Coverage Code	Description	Schedule Warning Type	Schedule Warning Content
Contains:	Contains:	Contains:	Contains:
⚙ Click here to add a new row			
▷ A	Capitated service, authorization required	Prompt	This procedure requires utilization review per the medical group.
FFS	Fee for service, authorization required	Prompt	This procedure is fee for service for the medical group. Ensure proper authorization has been received
EX	Excluded	Prevent	This procedure is excluded from the contract unless authorization has been provided by the medical group
CAP	In Cap		
FFS_N	Fee for service, authorization not required		
IN	In Cap		
TBD	To be determined		
X	Capitated service, direct referral (no authorization required)		

If the user is a RIS Administrator or has the *Clinical.UtilizationManagement.ScheduleOverride* permission, scheduling will not be prevented; however, the warning message will still be presented.
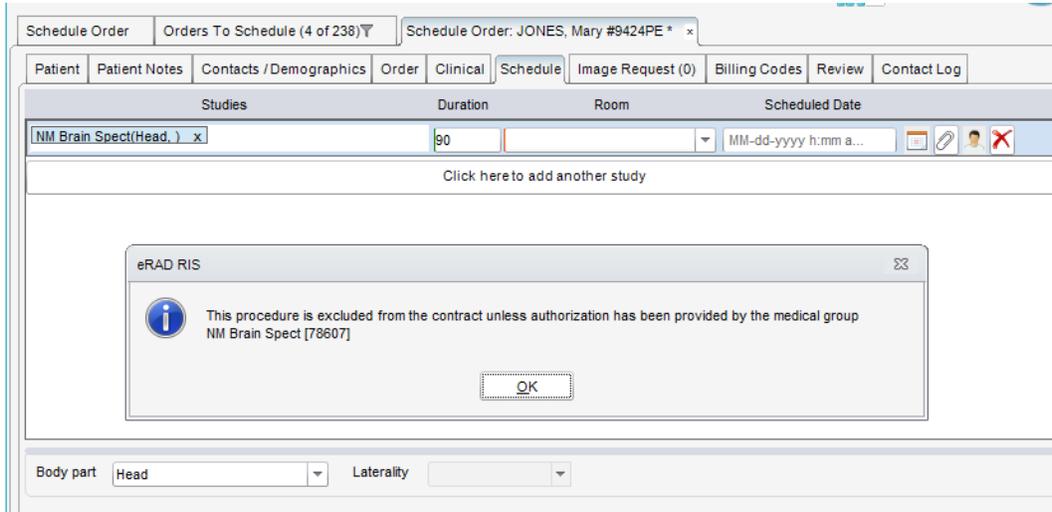
This framework is also utilized by the Registration screen to account for Walk-ins or added procedures. The front desk user will not be permitted to Arrive or Check-In the patient if a configured Excluded procedure is added. However, saving is still permitted.
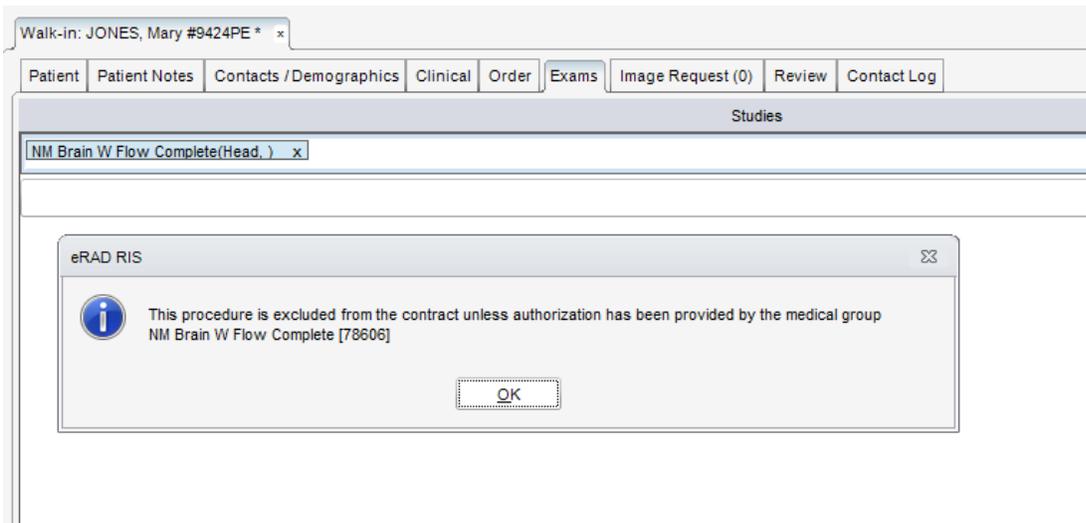
The following is an example of utilizing the feature to provide a warning for a different UM Coverage Type, in order to inform the scheduler that authorization is required:

When configuring Schedule Warnings in the UM Coverage look-up table, if a Schedule Warning Type is configured, the Schedule Warning Content becomes a required field.

The Utilization Management module must be enabled to utilize this functionality.

CEHRT

Certification of Electronic Health Records Technology (CEHRT) is a program that defines standards of performance that must be met in order to be considered a Certified EHR. eRAD RIS is certified under version 2014, which (despite the misleading year) is the version under which EHRs must *currently* be certified in order to maintain their Certified EHR status. The standards for the latest version (2015) are available and eRAD RIS is preparing to obtain this latest certification by undergoing a testing process with an authorized certification body. Some new features related to the standards for version 2015 will be merged into the commercial RIS after certification has been completed. However, some components can be added now, in preparation for the certification testing. The following features have been added to the current eRAD RIS build as part of this effort.

FEATURE #16009 – MODIFICATIONS TO AUDIT LOG MANAGEMENT REPORT

The CEHRT requirement for 170.315(d)(3) states that the system must generate an audit report for a specific time period.

The system must also provide the ability to sort the following data elements in ascending or descending order:
- Date and time of event
- Patient identification
- User identification
- Type of action
- Identification of the patient data that is being accessed

The existing Audit Log management report in eRAD RIS has been modified to support the above requirement. Interactive sorting capabilities have been added to the table header. The User ID column has been removed, as only one user can be selected in the User parameter. Patient ID (MRN) and Patient Name columns have been added. This will allow the user to sort by either MRN or Name.

The revised Audit Log management report supports the following parameters:
- Date Range – This is based on the last updated date for the audit log entry.
- Exclude Inactive Users – This will filter the User(s) parameter by eliminating any users that are flagged as inactive in the RIS.
- User – The selected RIS users for which the Audit Log report is being generated.
- Include Login\Logout – Determines if Login and Logout audit events will be included in the report.

The columns represented in the Audit Log management report are as follows:
- Date\Time – This is the date and time the audit event was last updated.
- Patient ID – The ID or MRN of the audited patient.
- Patient Name – The last name and first name of the audited patient.
- Description – A description of the audit event.
- Audit Action – How the data was accessed or modified.
- Changes – A detailed description of what data was modified, if applicable.

From:	03-06-17		To:	03-07-17	
Exclude Inactive Users:	Y		User:	MacDougall, Spencer (spencer)	
Include Login\Logout:	Y				

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Audit Log
Date Range: 03-06-2017 - 03-07-2017
User: MacDougall, Spencer (spencer)
Description: This report displays the audit information for the period and user specified.

Date\Time ⊙	Patient ID ↕	Patient Name ↕	Description ↕	⊟ Audit Actions ↕	Changes ↕
03-06-2017 9:18 AM			Login	Login	
03-06-2017 9:19 AM	9424PE	Jones, Mary	UI_OrderRetrieved_UtilizationManagement	Query	
03-06-2017 9:22 AM			Logout	Logout	
03-06-2017 10:31 AM			Login	Login	
03-06-2017 11:10 AM			Login	Login	
03-06-2017 11:45 AM			Login	Login	
03-06-2017 1:36 PM			Login	Login	
03-06-2017 1:36 PM	9424PE	Jones, Mary	Patient retrieved	Query	
03-06-2017 1:38 PM			Login	Login	
03-06-2017 1:48 PM	9424PE	Jones, Mary	Patient retrieved	Query	
03-06-2017 1:48 PM	9424PE	Jones, Mary	Patient retrieved	Query	
03-06-2017 1:48 PM	9424PE	Jones, Mary	Patient retrieved	Query	
03-06-2017 1:48 PM	9424PE	Jones, Mary	Patient retrieved	Query	
03-06-2017 1:49 PM	9424PE	Jones, Mary	Patient retrieved	Query	
03-06-2017 1:49 PM	9424PE	Jones, Mary	Patient retrieved	Query	
03-06-2017 1:49 PM	9424PE	Jones, Mary	Patient retrieved	Query	
03-06-2017 1:51 PM	9424PE	Jones, Mary	Order submitted	Order submitted	`<Changes><AddedRows><c_visit /><c_visit_x_patient_insurance /></AddedRows></Changes>`
03-06-2017 1:51 PM	9424PE	Jones, Mary	Order submitted	Order submitted	`<Changes><AddedRows><c_order /><c_order_item procedure_code="71260" /><c_order_item procedure_code="70210" /><c_order_item_certification /><c_order_item_certification /></AddedRows></Changes>`

FEATURE #16371- AUTOMATED MEASURES MANAGEMENT REPORTS WILL CALCULATE STATISTICS FOR EDUCATION RESOURCES USING 2017 ACI TRANSITION MEASURE CRITERIA

eRAD RIS has three management reports that are related to CEHRT: "Automated Measures," "Automated Measures by Radiologist" and "Automated Measures Raw Data." A new stored procedure has been created to calculate statistics for these reports differently for *2017 ACI Transition Measures*. There is a filter on the Management reports that can be selected to run the report using this methodology. Currently this filter is labeled *Stage 3*.

The changes in this feature are related to the requirement for eRAD RIS to identify patient-specific education resources based on the patient's appointment. When Stage 3 is selected, the management reports will provide statistics displaying whether these education resources were provided to the patient for all exams/patients seen by the reporting radiologist during the reporting period. Under the current certification, these reports only count the number of patients given patient-specific education for procedures that were identified as "office visits" by the associated billing codes. After selecting the new Stage 3 option, these management reports will calculate statistics according to the following numerator (number of patients meeting the criteria) and denominator (all possible patients):

Numerator: Any unique patient seen by the reporting radiologist where either the Prep Instructions Reviewed checkbox has been checked *or* the Provided Educational Resources checkbox on the Documentation tab has been checked.

Denominator: Any unique patient seen by the reporting radiologist during the reporting period.

When the Prep Instructions Reviewed checkbox or the Provided Educational Resources checkbox has been checked, the system will automatically capture patient-specific education resources as a numerator/denominator for the measure.

FEATURE #16541 – AUTOMATED MEASURES REPORTS NOW INCLUDE SUB-REPORTS WITH PATIENT DETAILS

The CEHRT Automated Measures Report allows a provider to track which measures have been met. The report displays the numerator, denominator, percentage of the criteria the provider has met, and the threshold required to meet the measure.

The CEHRT requirement for 170.315(g)(2) states that the system must also provide details for the numerator and denominator values in the Automated Measures report.

The following core Management Reports in eRAD RIS have been updated to include a "Stage 3" option in the MU Stage parameter:

- Automated Measures
- Automated Measures by Radiologist
- Automated Measures Raw Data

Both the *Automated Measures* and *Automated Measures by Radiologist* reports have been updated to include drill down capabilities to provide the necessary study details for the numerator and denominator, as well as the list of patients that make up the numbers. Clicking the blue hyperlinks, seen in the image below, will load the sub-report.
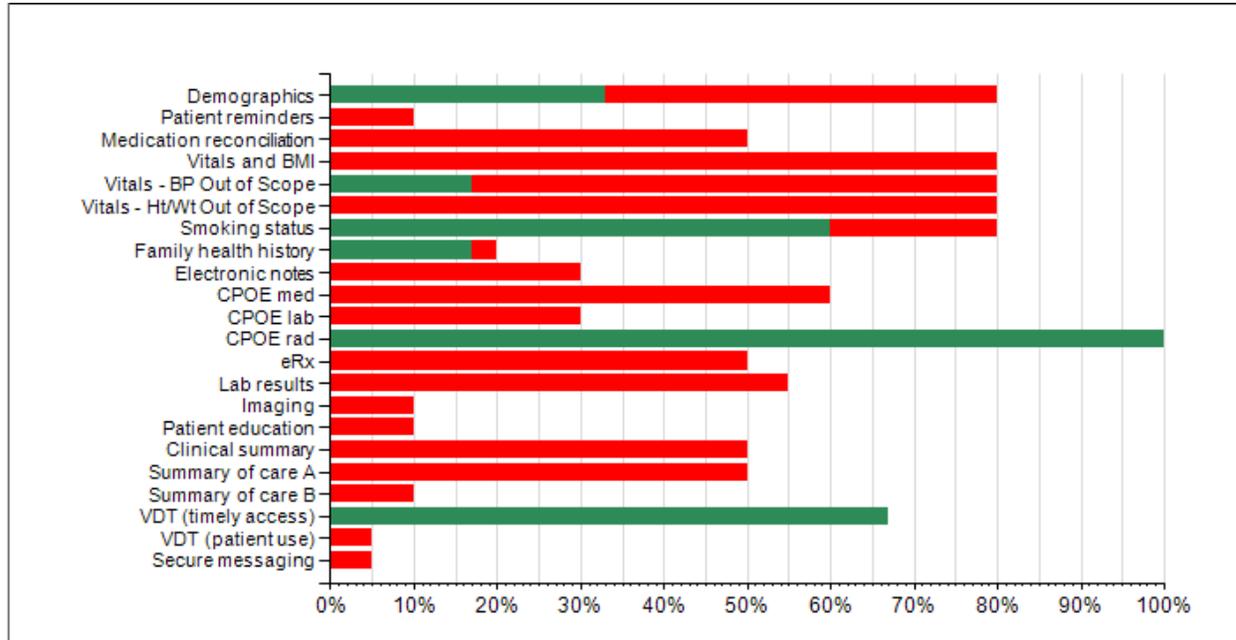
Meaningful Use Measure	Numerator	Denominator	%	Goal	Pass/Fail
Demographics	2	6	33.00%	80%	
Patient reminders	0	0	0.00%	10%	
Medication reconciliation	0	0	0.00%	50%	
Vitals and BMI	0	6	0.00%	80%	
Vitals - BP Out of Scope	1	6	17.00%	80%	
Vitals - Ht/Wt Out of Scope	0	6	0.00%	80%	
Smoking status	3	5	60.00%	80%	
Family health history	1	6	17.00%	20%	
Electronic notes	0	6	0.00%	30%	
CPOE med	0	0	0.00%	60%	
CPOE lab	0	0	0.00%	30%	
CPOE rad	2	2	100.00%	30%	
eRx	0	0	0.00%	50%	
Lab results	0	0	0.00%	55%	
Imaging	0	0	0.00%	10%	
Patient education	0	0	0.00%	10%	
Clinical summary	0	0	0.00%	50%	
Summary of care A	0	0	0.00%	50%	
Summary of care B	0	0	0.00%	10%	
VDT (timely access)	4	6	67.00%	50%	
VDT (patient use)	0	6	0.00%	5%	
Secure messaging	0	6	0.00%	5%	

The additional sub-report is referred to as *Automated Measures Details*. The user can return to the parent report simply by selecting the "Back" button in the reports title bar.

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Stage 3 Automated Measures Details for Patient education

Radiologist: MacDougall, Spencer (spencer)
Date Range: 01-01-2010 - 12-31-2017
Practice(s): Advanced Radiology,American Radilogy 2,American Radiology,Borg/IDE,DATest,Get Well Clinic,PEI Radiology,SIMS Practice,TEST
Description: This report displays the patient specific details used to generate the MU automated measures report.

Patient Name	Patient ID	Accession #	Practice Code	Scheduled Date	Signed Date	Office Visit	Status Code	Patient Education
Carter, Jeff William	4							
		1	ADV	12-04-2014	12-05-2014	N	Signed1	N
		3398	ADV	07-20-2015	07-20-2015	N	Signed1	N
		4878	ADV	10-06-2015	11-02-2015	N	Signed1	N
		5105	ADV	10-22-2015	11-02-2015	N	Signed1	N
		5571	ADV	11-02-2015	11-02-2015	N	Signed1	N
Hextall, Ron	12							
		107	ADV	03-27-2015	06-29-2015	N	Signed1	N
		120	ADV	04-17-2015	06-29-2015	N	Signed1	N
Judson, Jenny	3392							
		1896	ADV	05-14-2015	10-28-2015	N	Signed1	Y
Obermann, Mary	654							
		4413	ADV	08-13-2015	09-02-2015	N	Signed1	N
		4510	ADV	08-27-2015	08-27-2015	N	Signed1	N
test, a12501 Ben	893247							
		5816	ADV	12-04-2015	12-04-2015	N	Signed1	N
Test, IVT	50							
		5108	ADV	10-22-2015	10-22-2015	N	Signed1	N

MEDICAL RECORDS

FEATURE #7258 – SELECT INDIVIDUAL IMAGES/SERIES WHEN BURNING CDS

The following feature is applicable for customers using eRAD RIS with eRAD PACS.

When burning CDs, it is sometimes preferable to select only certain series or images to include. This allows the user to customize the contents of the CD to meet the referring provider's preferences, or to follow an established organizational protocol. It is now possible to specify individual images/series when burning CDs from eRAD RIS.

After opening the Burn CD window, the user will right-click the exam(s) to be included and choose "Image Selection."
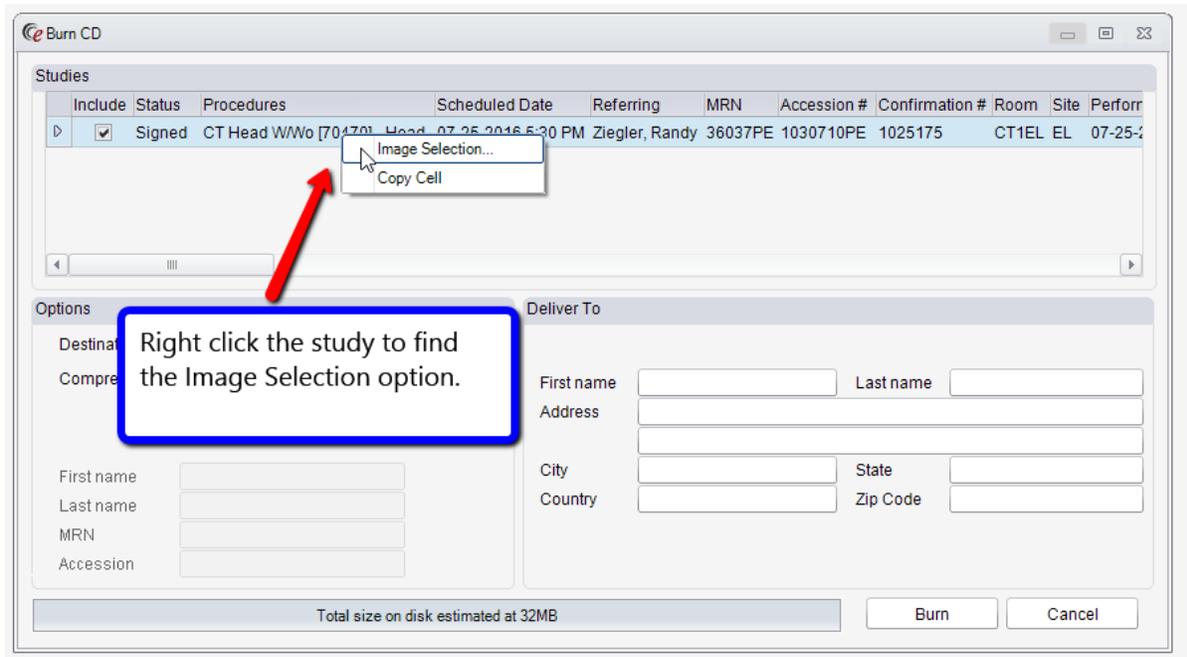
The Image Selection screen will open, displaying PACS images in thumbnails that are grouped by series.
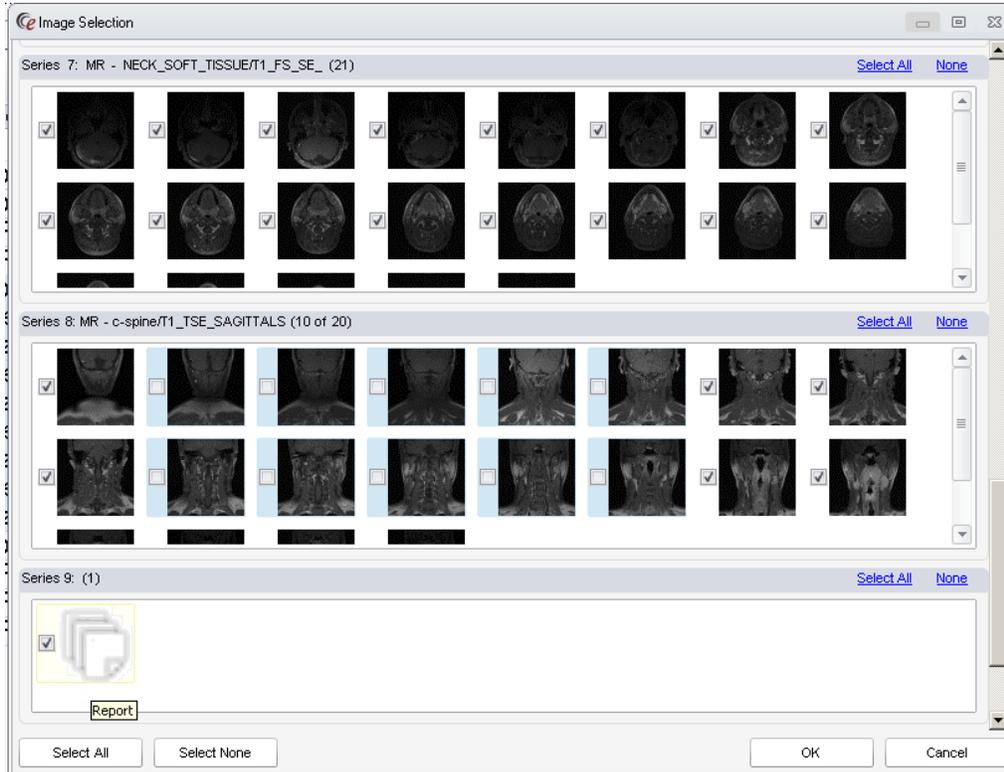
Each series group has a title, which is taken from the PACS study description field. In parentheses after the series name, there is an indication of how many images in that series are selected for burning. In the example above, Series 8 has 10 of 20 images selected. By default, all images in every series will be selected. Selected images have a check in the box to the left of each image thumbnail.

The blue link labeled "None" at the top of each series allows the user to easily uncheck all of the images in that series, in order to re-select the individual images or to remove the series from the CD altogether. Click the blue Select All link to re-select all of the images in the series. The user can also use the mouse to click and drag to select multiple images. Once multiple image thumbnails are selected, highlighted in light blue, click the checkbox to select or deselect the highlighted images.

To quickly uncheck, or re-check, all of the images for the entire exam (all series), the user can click the Select All or Select None buttons at the bottom of the Image Selection window.

While most thumbnails in the Image Selection window are for PACS images, some thumbnails may represent other PACS items, such as diagnostic reports. Hovering over a thumbnail will display a tooltip that indicates the thumbnail's type (e.g. Image, Report or RAWDATA).
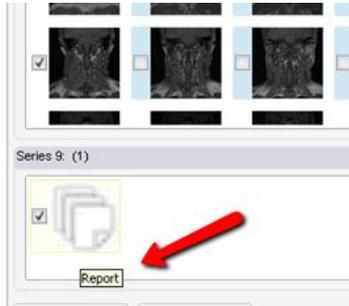
Sometimes, it may be necessary to look more closely at an image to determine whether it should be included on the CD. To see a larger view of the image thumbnail, right-click on the thumbnail and choose "View Image." This will download and display a larger version of the thumbnail.
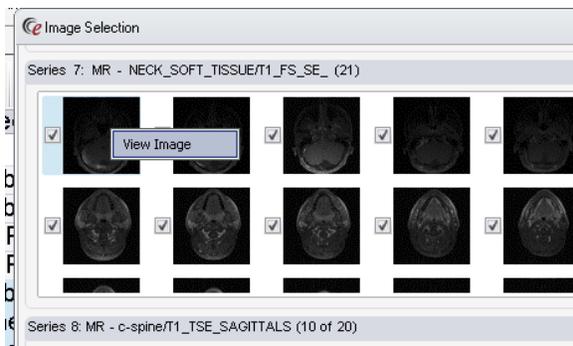
If the user clicks "Cancel" on the Image Selection screen, the image selection will be re-set to what it was before the screen was opened. If the user chooses "OK" after modifying which images to include on the CD, then the Burn CD screen will show a new column with the text "(custom)" to indicate that a custom selection of images will be burned to the CD.

The Image Selection process is recorded in the Audit History.

Filters

○ Patient   ○ Order   ● Study   ☑ Include retrievals

Date	Action	Description	User	Linked Id	Accession #	Order #
Equals: ▽	Contains: ▽	Contains: ▽	Contains: ▽	Equals: ▽	Contains: ▽	Contains: ▽
01-17-2017 1:42 PM	Accessed audit history		Molyneaux, kevin (kevin)			
▷ 01-17-2017 1:42 PM	Viewed PACS Images	Custom image selection for CD Burning	Molyneaux, kevin (kevin)		21	
01-17-2017 1:42 PM	Study retrieved		Molyneaux, kevin (kevin)			9582

FEATURE #9368, 12240 – OPTIONS FOR UNCOMPRESSED CD BURNING

This feature is applicable for customers using eRAD RIS with eRAD PACS.

Some physicians or other healthcare institutions require or prefer uncompressed images when reviewing a patient's imaging studies or importing them into an external system. In order to provide this option, eRAD RIS now supports three different compression options, including Uncompressed.

The compression field was added to the Burn CD dialog, as shown in the following image. Users have the option to select between Uncompressed, JPEG and JPEG 2000. In the Personnel editor, a referring physician's preferred Compression format can now be configured. By default, the Compression preference will be set to Compressed – JPEG, which is the compression format that was previously the only option when burning CDs from eRAD. If a referring physician indicates an alternative compression preference, this can be updated accordingly.

When burning a study from a worklist such as Patient Folder or from the Perform Exam screen, the default format for the CD will be based on the referring's preference. The user has the option to change the compression format manually on the Burn CD screen.
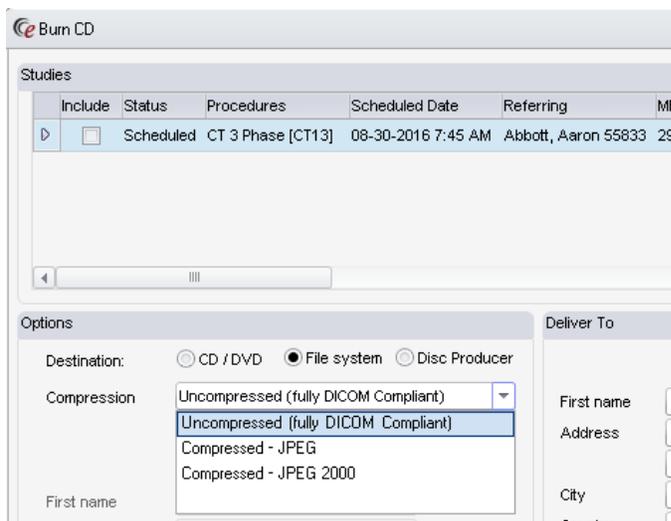
As stated above, at the time of the upgrade, all referring physicians will have "Compressed – JPEG" as their default compression preference. This can be updated in the Personnel table on the Referring Preferences tab.
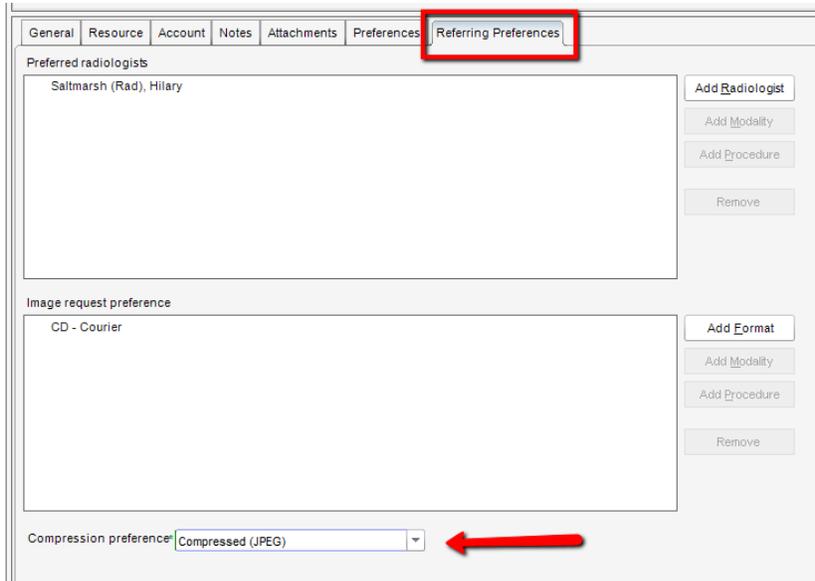
The compression format was also added to the Image Request screen. Again, the compression will default based on the selected study's referring physician's preference. The compression will update if a different referring physician is selected as the recipient and that doctor's compression preference is different.
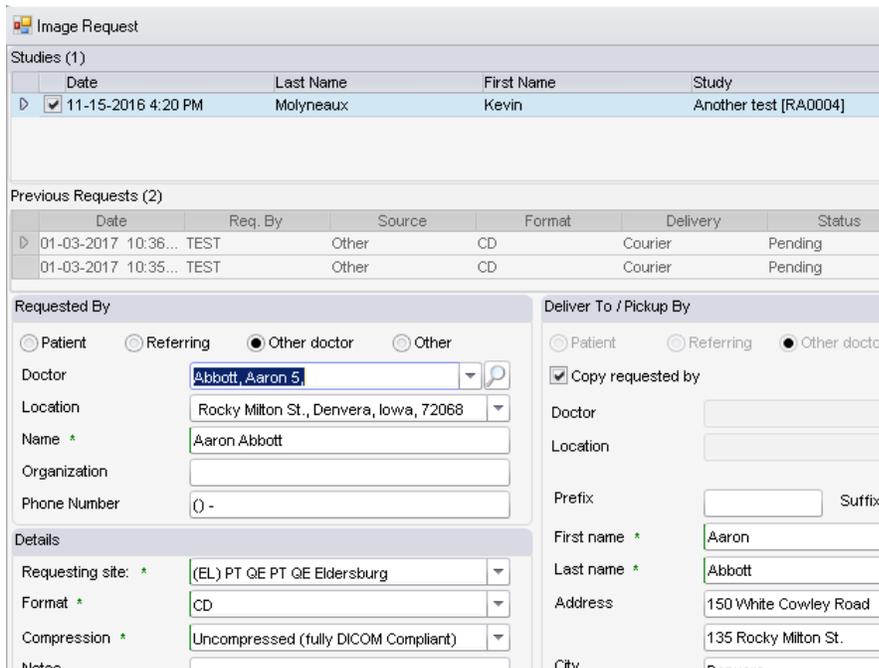
When right-clicking on the Image Request WL and choosing "Burn CD," the default compression will be based on what had been specified in the image request.

If a user selects multiple Image Requests or Studies, the active row at the time of the right click will be used to determine the default compression.

A CD can only have one compression setting; therefore, the Image request worklist was modified to include compression level in its grouping logic.

For example, in the following image, there are multiple image requests, all going to the doctor "Test ABC." Two have been requested as Compressed JPEG and the other is Uncompressed.

The grouping is there to prevent users from inadvertently trying to burn all three studies on the same CD. Instead, they need to burn two CDs: one for the JPEG compression and another for the uncompressed.

GENERAL WORKLIST ENHANCEMENTS

FEATURE #15710 – SPECIAL ACCOMMODATIONS COLUMN AVAILABLE ON WORKLISTS

Some users may find it beneficial to see any Special Accommodations when reviewing patients on a worklist. A new column labeled *Special Accommodations* is now available for the Receptionist, Technologist and Orders to Schedule worklists. This will allow a user to create a custom view to display particular accommodations. For example, a user responsible for making arrangements for translation services may want to have a custom view on the Reception WL to find all of the appointments requiring translation for a given day.
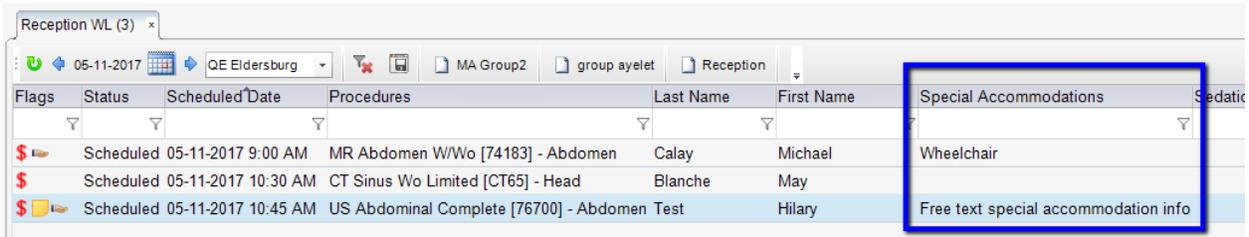
In the blue highlighted row in the above image, there is an example illustrating that it is also possible to display free text special accommodation information from the Special Accommodation Notes field, if the dropdown for the type of Special Accommodation is not selected.
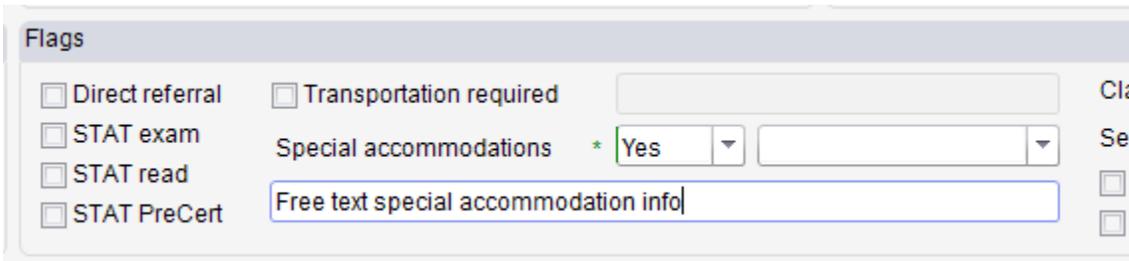
For this to be possible, it would be necessary to disable any validation rules that require the dropdown to be filled in when Special Accommodations is set to Yes. If the type of special accommodation is selected in the dropdown, only this information will be displayed in the column.

FEATURE #16111– RELATIVE DATE AND TIME FILTERING FOR WORKLIST COLUMNS

Often eRAD RIS users wish to create a worklist filter that will display items on the worklist for a certain date/time range. For example, a radiologist may want to have an "Overdue" Custom View saved for the Pending Dictation worklist that shows exams that have been waiting for a report for more than 5 days. A lead technologist may want to have a Custom View saved on the Reception worklist that shows only exams scheduled between tomorrow and 2 days in the future, so that upcoming appointments can be reviewed for accuracy. A manager may want to see a list of STAT exams on the IVT worklist that have been pending for more than 3 hours.

In any of these scenarios, eRAD RIS previously had limited options. A user could re-set a new date/time range whenever they wanted to view the information *or* they could rely on columns such as "Elapsed Time Suspended" that would display the number of minutes suspended. The user would then need to figure out the number of minutes in their desired time range (e.g. 2.5 days equals 3,600 minutes) and create a filter.

Now eRAD RIS has a **new option** that will allow a user to filter worklists based on a *relative* date/time. This will allow the user to easily create Custom Views with filters like "last 3 hours" that will continually update to show the last 3 hours from the current time.

To accomplish this, worklists have been enhanced with a new filter type that will allow the creation of these relative date/time filters for relevant worklist columns. This can be accessed via the filter type dropdown, using the "Relative date/time" option.

Clicking the new option opens the following screen where the user can create the new filters:
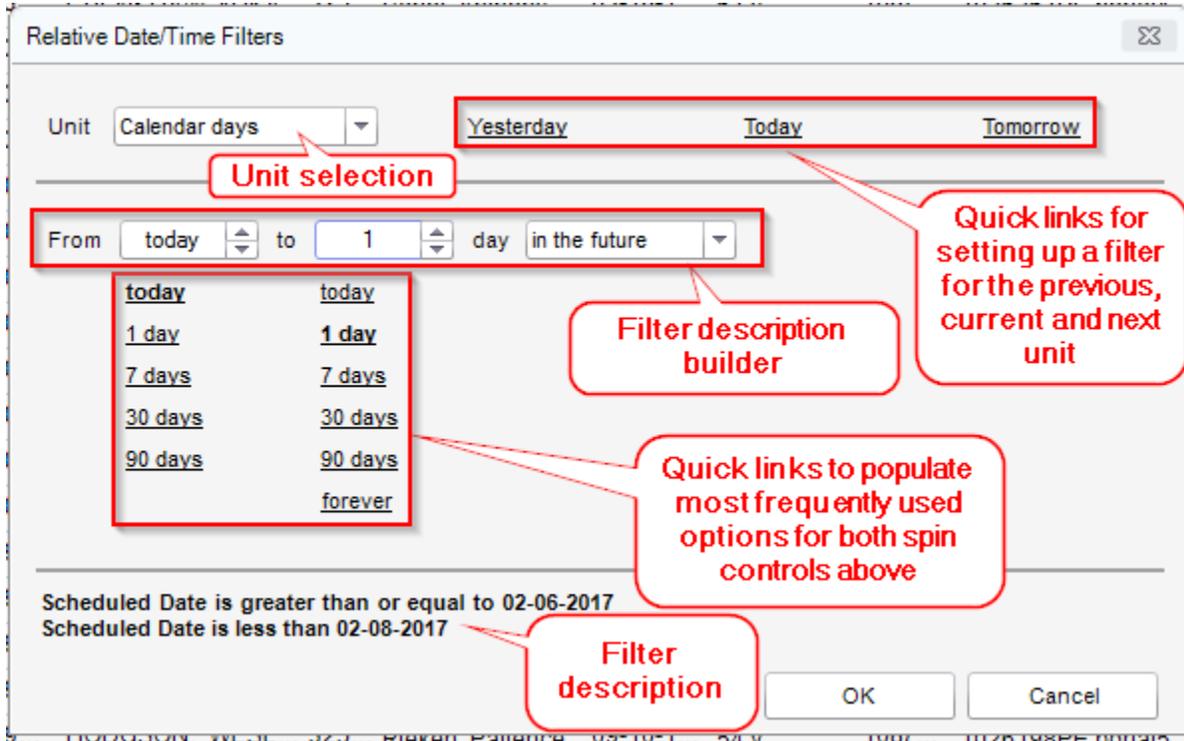
The user starts by choosing what unit to utilize for their filter. There are two types of choices:

- Options that relate to *right now*, as in this very minute:
    - Minutes
    - Hours
    - Days
    - Weeks
    - Months

    Example: "From now to 1 week in the past" will return all the values between right now, and 7 days ago up to the minute. If it is currently 12:51 pm, the worklist would *not* display an item from 7 days ago at 12:50 pm.

- Options that return only **whole units**:
    - Calendar days
    - Calendar weeks
    - Calendar months

    Example: "From this week to 1 week in the past" will return all of this week and all of the previous week.

After selecting the preferred option, the user then populates the different controls to reflect the date/time ranges they want to have returned. A plain language description of what the filter will display will be shown at the bottom of the window to help the user understand what the result will be. Once satisfied with the filter, the user can click "OK" to set the filter or at any point click "Cancel" to leave the screen without changing the column's current filter.

As with other Worklist filters, a Custom View must be saved in order to access the saved filter in the future. When this has been done, the filters are recalculated when the Custom View is loaded and whenever the worklist refreshes, so that they always reflect a **relative** date/time period.

FEATURE #16059 – PATIENT CLASS IS AVAILABLE AS A SEARCH FILTER FOR EXAM SEARCH

Patient Class has been added to the list of possible filters for the Exam Search screen. To add one or more Class filters to an Exam Search, click the filter symbol in the top right corner and find Class in the "Add filter" dropdown. Once added, the Class dropdown will contain the options from the Patient Class look-up table.

Results matching the search criteria will be displayed in the list below after searching.

FEATURE #16082 – STUDY EXTRA INFO FEATURE EXTENDED TO INCLUDE ORDER EXTRA INFO

eRAD RIS has had the ability to store extra information received from an external ordering system at the study level, using a feature called *StudyExtraInfo*. In this build, this functionality has been extended to store information at the **order** level.

Sometimes there is a need to store additional information that may be customer specific, particularly information received from one system that also needs to be passed to corresponding systems at certain points in the workflow.

A new lookup table labeled *OrderExtraInfo* was created to specify the Code with which the RIS will be receiving information to be stored.   Access to the table is controlled by a new access string titled *Config.LookupEditor.OrderExtraInfo* with a default of None. The table consists of the Order Extra Info Code, Display Name, Description, Display Order, Last Updated and Active columns.

Order Extra Info Code	Display Name	Description	Display Order	Last Updated	Active
Contains:	Contains:	Contains:	Equals:	Contains:	Contains:
⚙ Click here to add a new row					
▷ Test external system	Test external system	Test external system	1	02-22-2017 11:22 AM	Y
▒▒-BACKUP	▒▒BACKUP	Backup Order Extra Info Code	1	02-15-2017 1:38 PM	Y
▒▒-OEIC1	▒▒-OEIC1	▒▒Order Extra Info Code 1	1	02-15-2017 1:38 PM	Y

Messages sent will specify the Order Extra Info Code and have a value field. These messages will be stored in another new Database table *c_order_extra_info* that is not accessible from the GUI.

FEATURE #16591 – STRIP LAST CHARACTER FROM VARIABLES PASSED TO EXTERNAL PORTALS

The existing portal feature in eRAD RIS allows the customer to pass patient data to external portals, such as a Health Information Exchange (HIE), in order to pull up records in the external portal.   There was an international requirement to strip the last character from the MRN before passing it to the portal.

A new plugin has been added which allows the user to strip the last character from any variable.

When creating/updating an entry in BrowserConfig, the URL can support using "filters" in the URL string. For example, to get the patient id into the URL of the portal page to be opened, the variable would be specified as {patient.c_patient.patient_id}. To strip the last character from the patient id, this would need to be changed to: {patient.c_patient.patient_id**|StripLastChar**}. The additional text in blue tells the RIS to send the patient_id value through the StripLastChar filter before adding the value to the URL that passes the data to the external portal.

FEATURE #16527 - ENHANCE DROP XML FILE FUNCTIONALITY

eRAD RIS has markedly enhanced its XML file drop functionality. Custom configuration in the XML Integration editor now allows administrators to:

- Create custom menu items, Patient Folder view buttons, context menu items and worklist action buttons that will allow a permissioned user to manually drop an XML file.
- Configure automatic XML file drops for events, including login, logout, RIS locked, RIS unlocked, screen activated and screen deactivated.

A new panel has been added to the XML integration lookup table editor. It displays two tabbed pages: one for automatic, or event driven, XML drops, the other for manual drop via customizable controls available to the user, such as context menus or buttons. Each page allows the selection of different drop options via checkboxes.

For the options that are screen or worklist dependent, it is possible to choose the specific screens or worklists for the action to occur by moving available options to the Selected section.

For instance, in the screenshot below, RIS will drop an XML file when any of the selected screens are opened and closed. This is in addition to the automatic file drops that will occur upon login and logout, as well as locking or unlocking RIS, as the checkboxes for these events are also checked.

2017.3
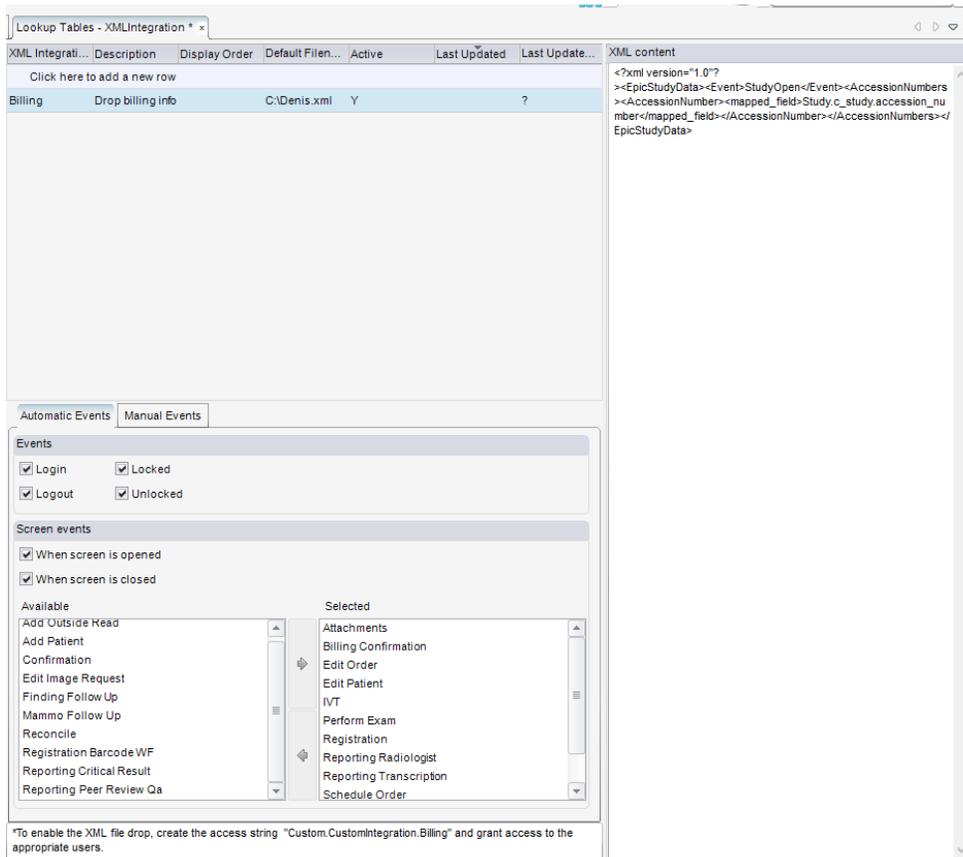
On the Manual Events tab, the same Available/Selected section will control whether a particular worklist has a context menu item and/or an action button for the file drop.
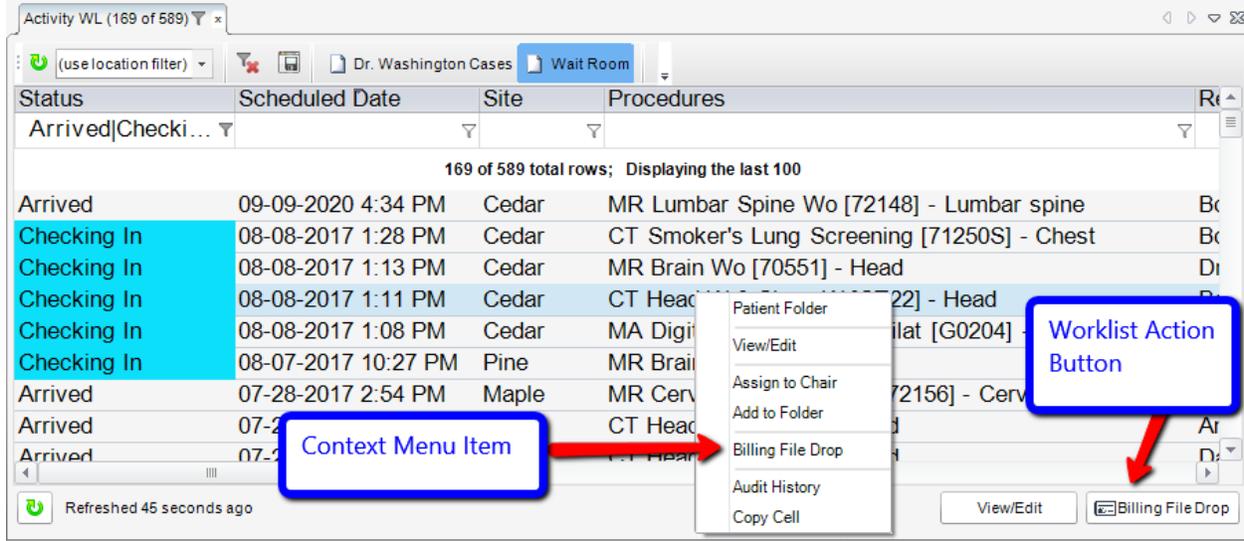
In the Item Location section, it is also possible to add:

- Main Menu Item – This will add a file drop option to a new menu at the top of the RIS screen to the left of the Help menu.
  - By default, the name of the menu will be *Integrate* and the menu items for all configured XML file drops with the "Main menu item" option checked will be found here. It is possible to re-name this menu via a new System Configuration setting labeled *XmlIntegrationMainMenuText*.
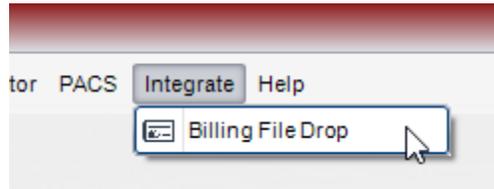
  -
  - This type of file drop action will not contain patient or study context.
- Patient Folder Button – This will add a file drop option as an action button at the top of the Patient Folder screen to the right of the Patient Alerts button.

  -
  - This type of file drop will contain patient context only.

In the Item Details section, the associated icon can be uploaded and the name of the XML file drop can be defined. Free icons are available for download on the internet or users can create their own icons. Clicking the Browse button will allow the administrator to select the image from their computer's file system.
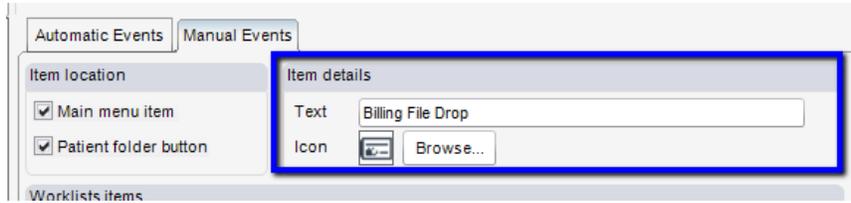
Access strings must be used to enable access to each XML integration file drop. The access string uses the Custom Access String framework. To assist the user in creating the correct access string, the XML Integration lookup editor will provide the name for the access string, as illustrated in the image below. If an access string is not created and assigned to the appropriate User Groups, then the XML file will not be available to any users.
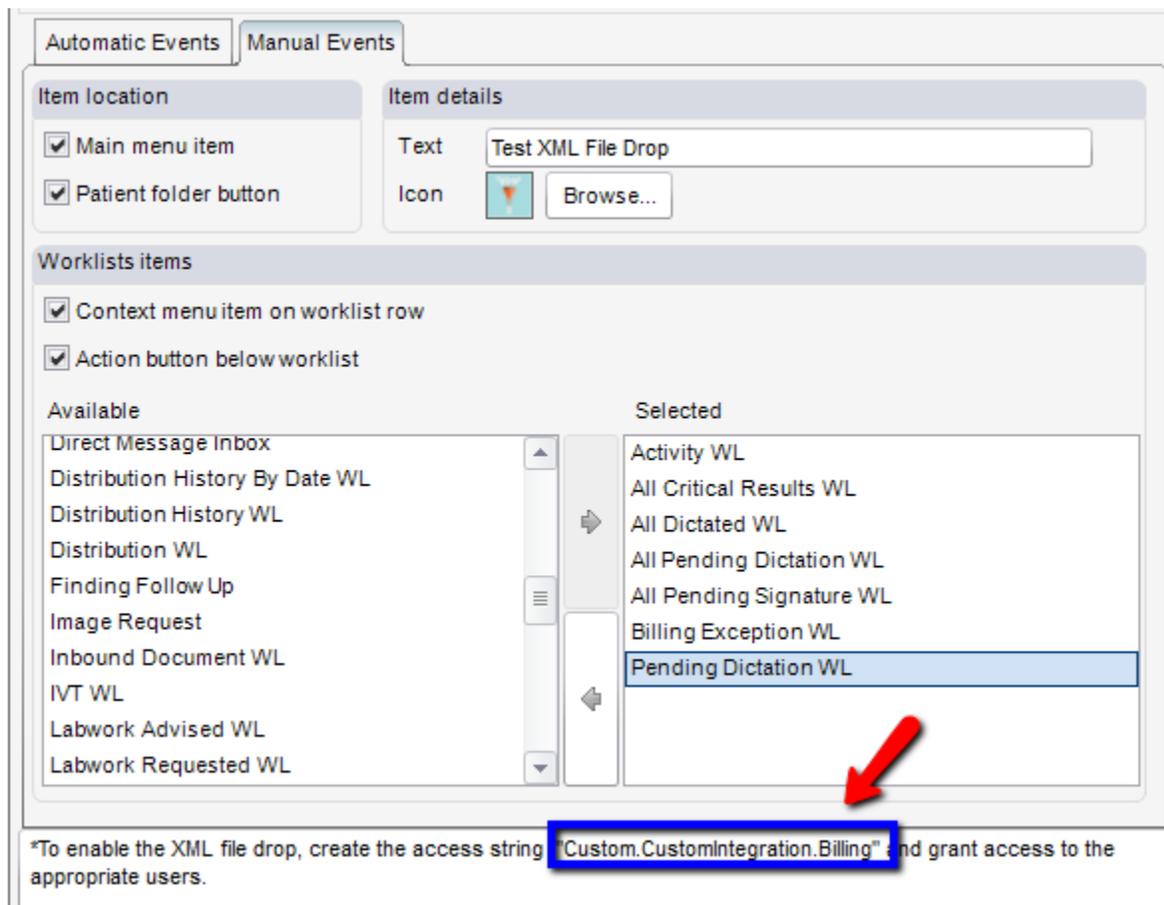
While the rest of the XML Integration editor remains mostly unchanged, there is one other piece of new functionality: the ability to add non-study container driven fields to the XML content. The two possibilities are:

- %Event% - displays the **name** of the XML integration option that dropped the flag.
  - None
  - MenuItem
  - PatientFolderButton
  - WlContentMenu
  - WlActionButton

- o OnLogin
- o OnLogout
- o OnLockScreen
- o OnUnlockScreen
- o OnScreenActivated
- o OnScreenDeactivated
- %CURRENT_USER_ID% - displays the user id of the currently logged in user.

Customers who are interested in taking advantage of this new functionality are welcome to contact eRAD Support for assistance.

FEATURE #16137 – CARESTREAM PACS INTEGRATION – OPEN PRIOR STUDIES WHEN PRIMARY STUDY IS NOT AVAILABLE

This feature is applicable for customers using our integration with Carestream PACS.

Before an exam is performed, it is sometimes necessary for the radiologist to view the prior images for the patient. Previously, when a radiologist opened the reporting screen, the **view session** would not be initiated if the current study was unavailable. Without this, the prior studies could not be launched from the reporting screen.

To allow for this functionality, a new setting is now available in the CSHConfig.xml file: *empty_view_session_on_fail*.

Changing this setting to True will adjust the CSH integration behavior to make the *ShowStudy* call to PACS act as if the primary study opened correctly, even if it has failed because current images do not yet exist. Please note that with this setting turned on, the radiologist will not be prompted that the primary study failed to open and the mini-Patient Folder will indicate that the PACS status for the primary study is Open. At this point, the radiologist can double click on the desired prior study. RIS will ask the PACS what studies have loaded and upon finding that nothing is loaded, the normal Append call will be replaced with a ShowStudy call. At this point, images for the prior will open, and both current and prior studies will be listed as Open.

To support this behavior, the *supports_append* setting in the CSHConfig.xml file needs to be set to True.

INFRASTRUCTURE

FEATURE #14351, 15615 – NEW RIS SETTINGS TO REDUCE BANDWITH FOR UPDATES

Two new System Configuration settings have been created in an effort to reduce the amount of bandwidth consumed by saving/uploading updates to the server. Both features will be automatically enabled at the time of the upgrade to version 2.2017.3, but will present no detectable changes to the RIS user.

Both of these configuration options will decrease the network bandwidth utilization, which will deliver some performance benefits for networks which have slow upload speeds.

Uploading patient/order updates:

When saving edits to screens such as ViewEdit or Registration, the data is sent to the server in an XML format, which is fairly bulky and uses more bandwidth than necessary. For example, saving a change to a patient's middle name costs approximately 60KB when sent via XML. A new system configuration setting will enable a *binary serializer* to send the update data in binary format, which reduces the size of the data to be uploaded. When sending in binary format, the same update that cost 60KB when sent via XML is reduced to approximately 8KB.

To enable this feature, the new System Configuration setting, *EnableExtraCompressionOnStudyUpdates*, must be set to True. The default for this setting is True, so it will be enabled at the time of the upgrade, unless the setting is changed to False.

Uploading Attachments:

Another new System Configuration setting is available to reduce the size of **attachments** for upload. Attachments are typically saved as a JPEG file. However, in many cases, a smaller file size could be achieved by applying LZW compression and saving the attachment as a TIFF file. The image quality on the resulting TIFF file is typically equal or superior to the JPEG image.

When *AllowLZWImageCompression* is set to True, RIS will compress attachments twice: once as a JPEG and once, using LZW Compression, as a TIFF file. The version with a smaller file size will be used for the attachment, unless the compressed TIFF image is significantly different from the original. If 80% of the pixels are different between the JPEG and the TIFF, RIS will choose the JPEG compression for that attachment.

The default for this System Configuration setting is True, which means that this compression process will be enabled at the time of upgrade, unless the setting is changed to False.

Note: There are some Patient Portal features that are related to the new CONNECT Provider Portal which will be announced in the near future. These features are not described here and will be described in detail at the time that the CONNECT Provider Portal is released.

FEATURE #14260 – PUSH OUT THE FIRST AVAILABLE APPOINTMENT BASED ON CONDITIONS

When patients schedule appointments online in the Patient Portal, it is sometimes helpful to add padding to ensure that the first appointment offered to the patient will be a certain number of hours into the future. This allows the imaging center staff time to review appointments that are scheduled online, in case any changes need to be made or additional actions taken. Without padding, the patient could theoretically schedule the appointment within minutes or hours of the scheduling event, which would not allow staff adequate time to prepare.

Additional padding to the first available appointment may be indicated due to:

- Selection of a certain type of Procedure.
- Indicating a Special Accommodation.
- Giving a certain answer to an exam question.
- Selection of a particular Insurance Carrier.
- Choosing an Unknown Insurance.
- Not having a referral/prescription.
- Not having an Insurance Authorization number.
- Scheduling on weekends or evening hours.

Time slot padding is responsive to weekends and holidays defined by the portal Imaging Group. For example, if padding of 48 hours is indicated for a patient scheduling on Friday, Monday will not be available because 48 business hours would not have elapsed.

Three new System Configuration settings have been created for this feature. Two are replacements for older settings that previously handled Padding using days. These are now replaced with settings that will handle Padding using hours instead.

1. *PortalNoSelectedInsuranceHourPadding*
   a. Replaces *PortalNoSelectedInsuranceDayPadding*
   b. Will use hours instead of days.
   c. Adds hours to the start search criteria to allow time to gather insurance from the patient when no insurance information is available.
2. *PPSchedulingNoPrescriptionHourPadding*
   a. Replaces *PPSchedulingNoPrescription*.

   b. Will use hours instead of days.
   c. Adds hours to the start search criteria if the patient indicates that they do not have a prescription (referral).
3. *PortalAllowEveningWeekendScheduling*
   a. Brand new setting.
   b. If set to N, the Portal will always prevent scheduling on the weekend or outside business hours.
   c. This can be overridden at the Imaging Group level.
   d. RIS will determine weekends and evenings according to the existing system configuration settings *WeekEndDays*, *ScheduleMorningTimeOfDay*, and *ScheduleEveningTimeOfDay*.

The above settings cover scenarios when the patient's insurance information or prescription is not available, as well as evening/weekend scheduling. Padding adjustment for the remaining scenarios is as follows:

-By Carrier:

To allow padding to occur based on a particular insurance which may require additional time, the Carrier table has a new column: *Portal_schedule_hour_padding*. Previously, a setting existed for padding by number of days; this will be deprecated in a future build. This can be overridden at an Imaging Group configuration level.

-By Procedure:

A new column called *portal_schedule_hour_padding* has been added to the Procedure Code table. This will define the number of hours to pad the available search results for the procedure. If there are certain procedures that require extra preparation or verification, this will ensure that enough time is available for these activities. An additional column, *portal_schedule_allow_evening_weekend_flag*, will prevent the procedure from being scheduled on the weekend or evening via the Portal when set to N. If the availability template does not contain weekend or evening hours, this is not necessary. However, if there are procedures that schedulers are allowed to schedule in the evening or weekend hours, but online users should not have access to these time slots, this setting will be beneficial. This can be overridden at an Imaging Group configuration level.

-By Special Accommodation:

The new column called *portal_schedule_hour_padding* has been added to the Special Accommodations table. This will define the number of hours to pad the available search results for a particular accommodation. The rule will check all Special Accommodations selected by the patient and the highest value will be used for the applied padding. An additional column, *portal_schedule_allow_evening_weekend_flag*, will prevent appointments with the selected Special Accommodation from being scheduled during evening and weekends when the necessary staff might not be available to accommodate the patient's need. The setting can be configured separately for each Special Accommodation. This can be overridden at an Imaging Group configuration level.

-By Authorization:

Two new system configurations have been created for different padding depending on the patient's answer to the question of whether they have an authorization number.

-By Exam Question:

For exam questions that are defined in the Procedure Picker, a new section is now available on the Question Details screen.
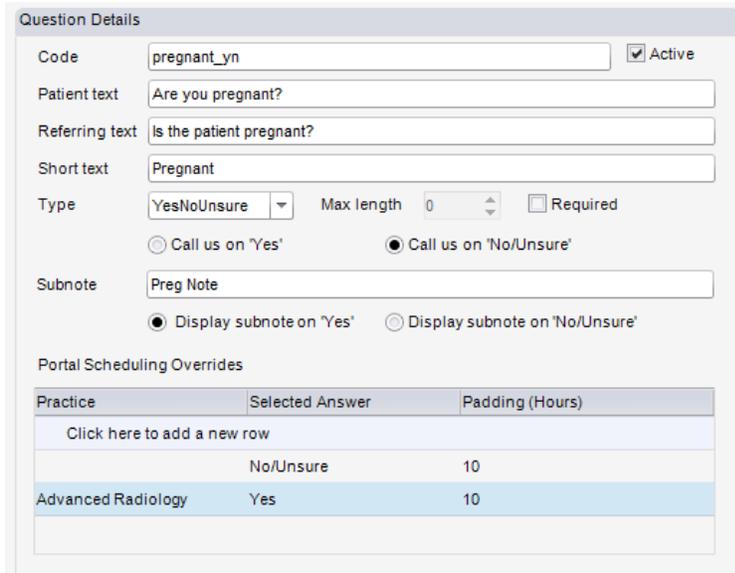
The section allows padding to be defined to the yes/no and yes/no/unsure type questions, with a different value depending on the patient's answer.

Due to the structure of these questions, the Imaging Group (practice) padding can be defined inside the Procedure Picker exams question screen, as additional entries can be added for any Imaging Groups that require different settings.

For other settings, Imaging Group differences in the amount of hours to pad are handled via override settings in the Organization table. Under the Practice section, on the Portal tab, there is a section called *Portal Scheduling Overrides*.

Clicking the button […] will open a new window with tabs for the various types of overrides. The settings for the Imaging Group that are different from the main settings described above can be overridden here.
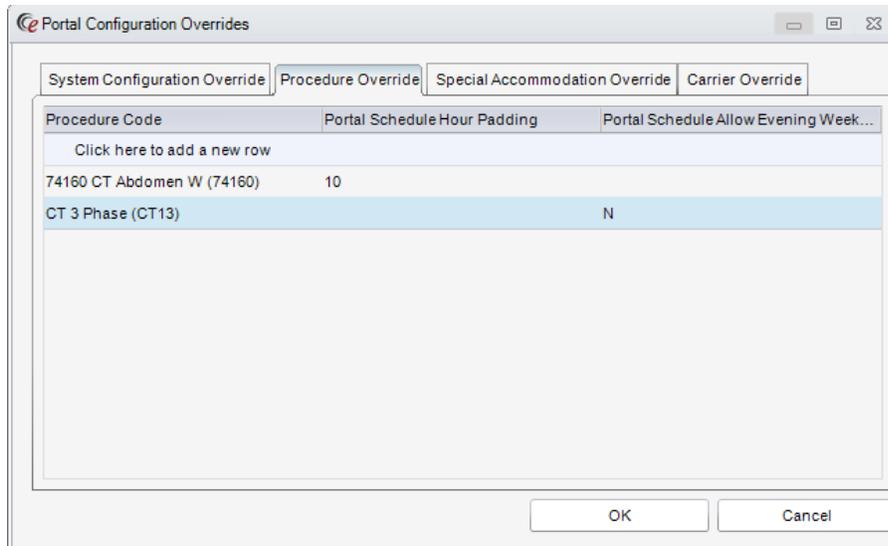
With such a variety of ways to pad the first appointment offered to the patient, RIS needs to determine which padding rule to follow when an appointment contains more than one characteristic that requires padding. To do this, the system will evaluate all applicable rules and apply the padding with the greatest number of hours.

After calculating the first appointment based on the padding hours, RIS will then evaluate whether there is a setting that prevents weekend/evening appointments as well as whether the appointment slot is in one of those time slots. If so, the first available time slot will be pushed to the next business day for the configured morning hours. Holidays are also evaluated and will push out the first available appointment to the next applicable day.

After determining the first time slot that would be appropriate to allow the patient to schedule, RIS will begin to look for an available time slot. If no results are found, RIS will continue searching for a predefined number of days, based on the System Configuration setting *PortalMaxSearchDays*. If no results are available within the allotted number of days, the patient will be presented with a message.

There are no available time slots for your appointment in the next 30 days. Call us for assistance or continue to search for available time slots using the calendar controls. ✕

(443) 436-1100

Call Center Hours:

MRN: 1000001841

Please provide us with this ID so that we can quickly locate your appointment when you call.

CANCEL APPOINTMENT   CONTINUE TO SCHEDULE

FEATURE #16480 – STREET NUMBER WATERMARK REMOVED FROM STREET NUMBER FIELD IN ACCOUNT CREATION WORKFLOW

When patients see the three watermarks (###) in the street number input field during Account Creation workflow, they often assume the field will only accept three digits even though the field is very wide. This can cause the patient to abandon the workflow and contact the Portal Administration team to ask what they should do if their address is more than three digits.

To eliminate confusion, the watermarks in the image above have been removed from the street number input field.

FEATURE #13708 – PREPARATION INSTRUCTIONS DISPLAY IN A POP-UP WINDOW AFTER SCHEDULING IN THE PATIENT PORTAL

A common problem in radiology is that patients can arrive for their appointment without having followed the preparation instructions. In order to further emphasize the importance of following prep instructions, the portal will now present the preparation instructions in a pop-up window that must be acknowledged by the patient before they can continue.
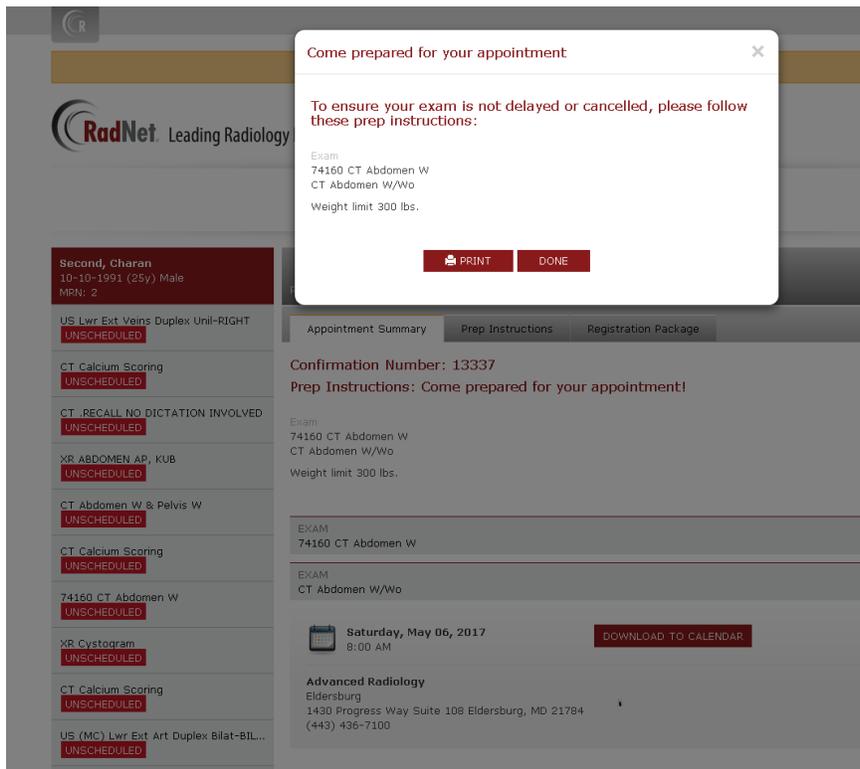
After the patient clicks the Confirm Appointment button, the dialog box will appear with the instructions in order for the patient to be fully aware of those instructions before their appointment. There is also a **PRINT** button on the window, so that the patient could choose to print the instructions for an additional reminder. Clicking the print button will dismiss the dialog box and initiate the browser's print function.

FEATURE #14535 – PRINT A SUMMARY OF APPOINTMENT INCLUDING PREPARATION INSTRUCTIONS

A printer icon has been added to the Appointment Confirmation page. The patient can print a copy of their Appointment Summary, including Preparation Instructions. Previously, only the webpage could be printed.
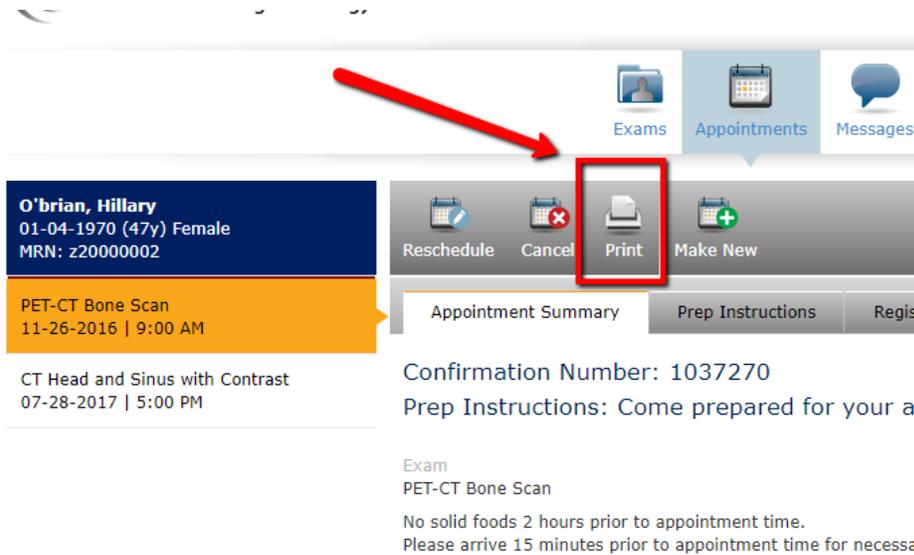
FEATURE #8310 - PATIENT PORTAL LOGIN PAGE PICTURE IS NOW CONFIGURABLE

Customers would like to have the option to insert their own image on the Patient Portal login page, instead of using the default image of a group of patients.

It is now possible to substitute a custom image in this area of the screen. Different images can be used for specific Imaging Group portals, so that the Treesdale Radiology portal can have a different image that the Spectrum Radiology portal.
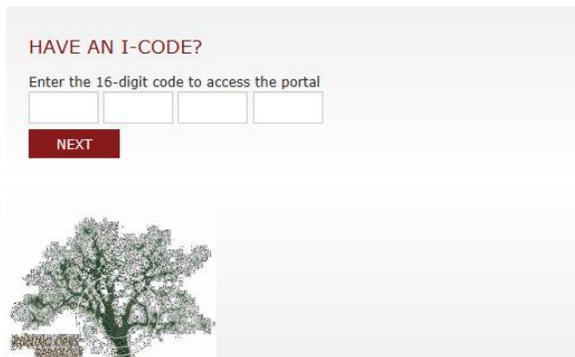
Please contact the eRAD Support Team to set this up for your Connect Patient Portal.

FEATURE #15025 – REPORTS PRINTED FROM THE PORTAL WILL CONTAIN A FOOTER INDICATING THE PRINT DETAILS

A footer is now added to all reports when they are printed from the portal. The footer will read:

"This report was printed from the {Practice Name of selected image group} - {Patient/UM/Referring} portal on {Date}{Time}."

For example, "This report was printed from Advanced Radiology – Patient portal on 08-14-2017 5:23 PM."

The Date and Time reflect when the report was generated in the portal. If the patient opened the report at 5:23 PM but did not print it for another 10 minutes, the time would still read 5:23 PM. This will ensure that if an addendum was signed within those 10 minutes, the hard copy printed version will not be stamped with a date/time that occurs after the addendum.

This section will only appear on the printed document at the bottom of each page.

FEATURE #12827 – PROVIDE SYSTEM MESSAGES TO INDIVIDUAL IMAGING GROUPS

Previously, Portal System Messages could only be applied for all Imaging Groups at once. This did not allow for the flexibility to provide custom messages that were specific to a particular Imaging Group, which equates to a specific target **portal** with its own branding and target audience.

It is now possible to select the specific Portals/Imaging Groups that should receive the message.

When creating a new System Message in the Admin Portal, it will be applied to all Portals by default. The administrator can click the dropdown to select a subset of Portals.
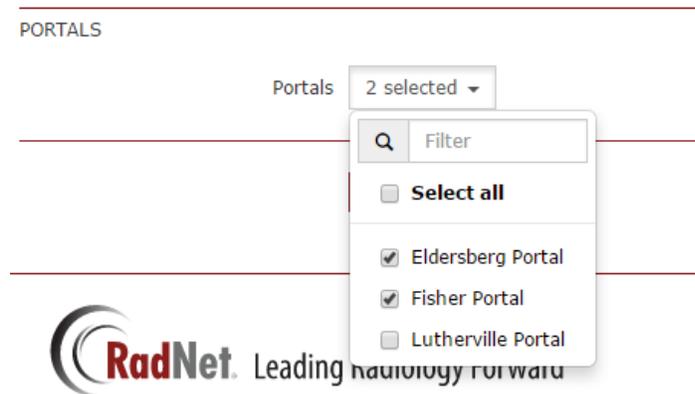
This can be helpful when there are alerts or marketing campaigns that are specific to one instance of the portal.

FEATURE #13253 – SEARCH WORKFLOW FAILURES BY DATE RANGE IN ADMIN PORTAL

It is now possible to specify a date range on the Workflow Failures tab in the Patient Portal Admin Portal.

Specific dates can be entered or the user can use quick links to select common choices like "Today" or "Previous 7 Days."

FEATURE #13960 - AUDIT OPENING PATIENT EXAM LIST IN THE ADMIN PORTAL

The Patient Portal Admin Portal will now record an audit event for the opening and viewing of a patient record (Exam list), even if no other actions are taken.

When the user visits the Exam list in the CONNECT Patient Portal, an audit entry will be made in the database (c_audit). This audit action can be pulled into management reports and database queries.

FEATURE #16590 - DOB IS A VALID SEARCH IN THE ADMIN PORTAL

On the User Management tab in the Patient Portal Admin Portal, it is now possible to use Date of Birth as part of the search criteria. It is possible to search by DOB, first name, last name, telephone, or MRN. Using Date of Birth is an easy way to narrow down a Name search.

The DOB search will accept a variety of date formats, similar to searching by date of birth in the RIS.

	Last Name	First Name	Date Of Birth	Issuer	MRN
EDIT	Molyneaux	Kevin	10-29-1975	system	29006PE
VIEW	Molyneaux	Kevin	10-29-1975	Portal	14865
VIEW	Molyneaux	Kevin	10-29-1975	system	26891

Search: kevin moly 10-29-75   Status: All   SEARCH

FEATURE #15702 - PASSWORD FAILURE INFORMATION NOW LISTED IN ADMIN PORTAL ACTIVITY TAB

When supporting patients who are experiencing difficulty logging into the Patient Portal, it is helpful to know that they have entered an invalid password. The Admin Portal will now display this information in the patient's Activity Log.

FEATURE #16066 - SECURITY TAB AND ACCOUNT TAB NOW COMBINED IN ADMIN PORTAL

To reduce the need to flip between multiple tabs when supporting the Patient Portal, the Admin Portal has eliminated the Security tab and added the information from this tab to the existing Account tab.

FEATURE #16358 – REFERENCE KEY IS NOW ADDED TO PORTAL NOTIFICATION EMAILS

When a Portal administrator views secure messages that have been sent from the Patient Portal via notification emails, it is difficult to match up the email with the patient information, as identifying information is not included in the email for privacy reasons. For this reason, a Reference Key has been added in the subject line and body of the secure emails.

The portal administrator can log into the Admin Portal and sort by the Reference Key in question to find the message with the patient information associated, after securely logging into the portal where the patient information can be safely displayed.

FEATURE #16449 – FORCE PATIENT TO USE GET HELP TO CREATE/REACTIVATE THEIR PORTAL ACCOUNT IF THE ACCOUNT HAS BEEN DISABLED IN THE ADMIN PORTAL OR IN RIS

Previously, an administrator could disable a patient's portal account via the Admin Portal; however, it was still possible for the patient to go through the "create an account" workflow and reactivate their account.

The portal will now prevent the patient from continuing with a message indicating that their account is disabled and to "Get Help" to activate the account.
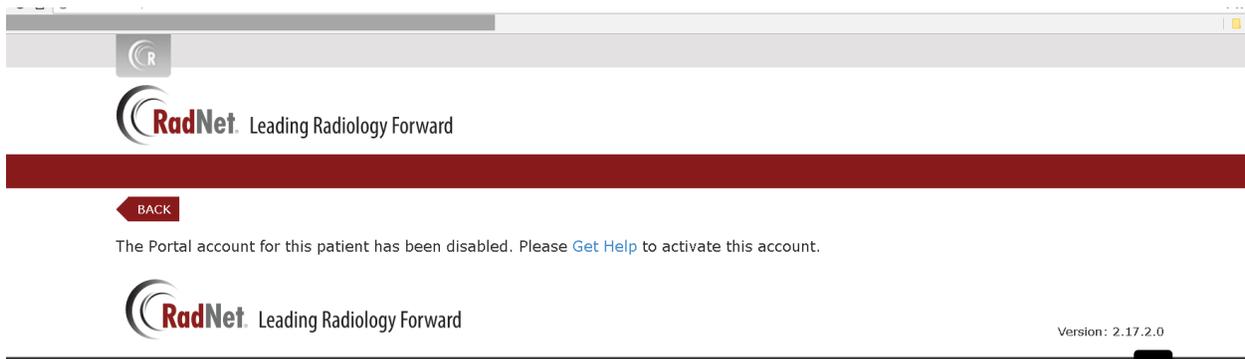
It is also now possible to disable a Patient Portal account from the RIS. A new checkbox has been added to the Patient tab to *Disable Patient Portal*.
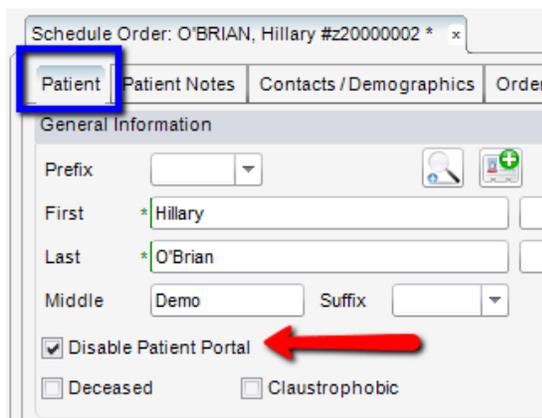
When checked, the patient will not be able to create a new account or access an existing account. They will receive the same message that is displayed when the account is disabled via the Admin Portal.

RIS ADMINISTRATION

FEATURE #16299 - ERAD RIS NOW SUPPORTS BOTH DEFAULT AND "RECOMMENDED" BILLING CODES

Note: this functionality was originally introduced in the previous patch, 2017.1.2. The description is included here because there have been further changes to the feature.

Previously, all billing codes associated to a procedure were active by default. In some cases, it may be useful to also associate billing codes that are *sometimes* used for a particular procedure. For example, some customers use a workflow in which procedure codes are broad, such as CT Sinus. In this case, the billing code might be the CPT for CT Sinus "with contrast," "without contrast," *or* "with and without contrast." Also, the CPT for contrast material may or may not be relevant depending on what is performed.

In these cases, being able to associate the billing codes that are most likely to be used for a particular procedure is more beneficial than creating default billing codes that are always active for the exam and have to be deactivated by the technologist.

To allow for this workflow, a new column has been added to the *l_procedure_code_x_billing_code* sub-table, which is found in the Procedure Code lookup table. The column, **Add By Default**, will default to Y, meaning that the billing code will be associated and active for that procedure. This is the same as the previous behavior.

To associate billing codes without actively adding them to the procedure, set the Add By Default column to N. As you can see in the table below, it is possible to have a combination of Default billing codes and recommended/possible billing codes.
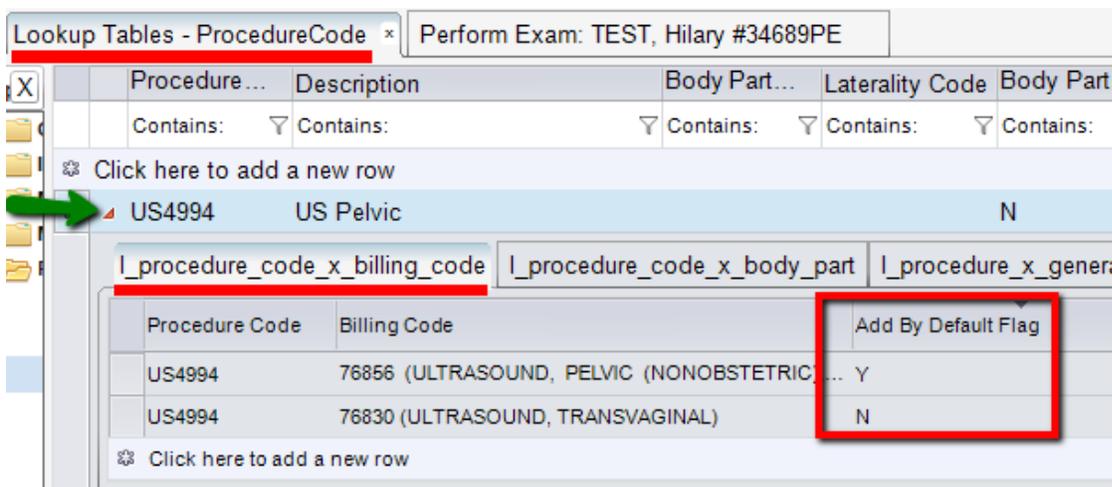
In the example above, the only billing code that will be automatically added for the US Pelvic procedure is 76856. The billing code 76830 will now be available from a quick pick list, as shown below.
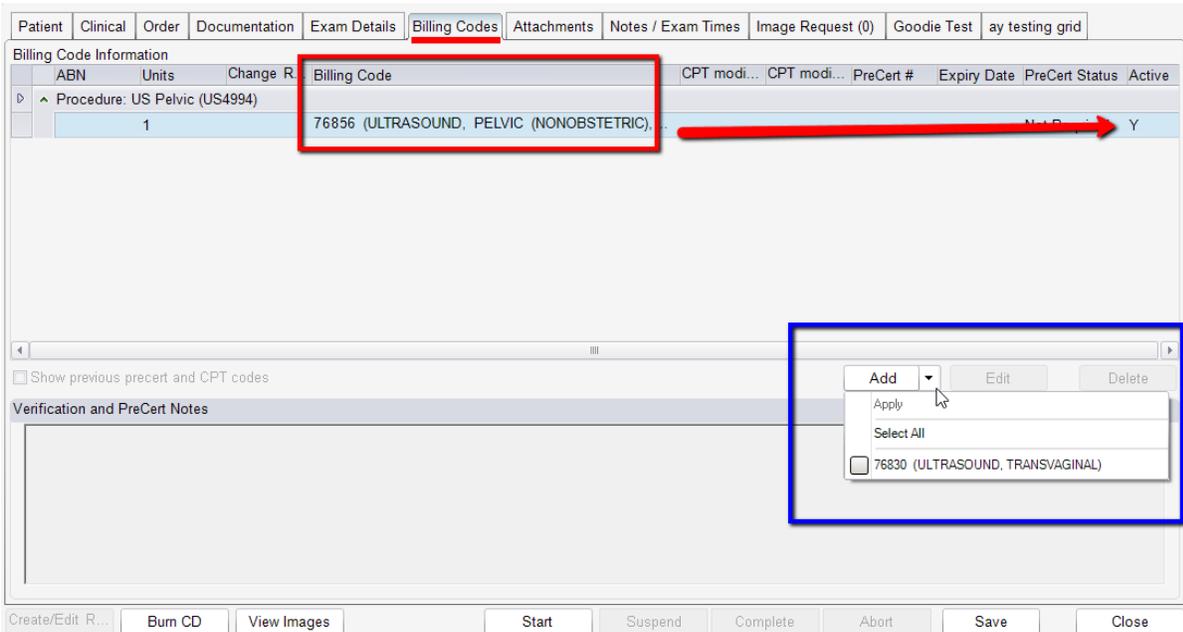
When suggested codes are available for a procedure, the Add button will have a dropdown arrow allowing the user to quickly select and apply the suggested billing codes. Clicking the main Add button, instead of the dropdown arrow, will open the normal Add Billing Code screen where the entire list of Billing Codes can be accessed.
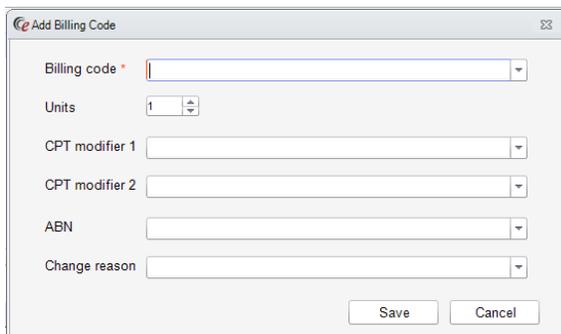
If no recommendations exist, the Add button will not have the dropdown arrow and the Add Billing Code screen is the only option for adding additional billing codes.

To use suggested billing codes, click the dropdown arrow and check the box(es) to be added. Then click Apply.
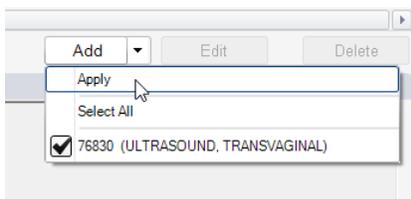
This will add the billing code to the procedure in an Active status.

If a technologist is performing multiple exams at once using the "Include" workflow, suggested billing codes will be available for each included procedure (if any).

Suggested billing codes will not trigger IVT workflow. Once the suggested billing code has been added to the exam, it will be treated like normal active billing codes and IVT workflow will apply.

It is also now possible to select multiple lines in the active Billing Codes grid in order to delete them all at once, if needed. Selecting rows and clicking the Delete key on the keyboard is also allowed. The user will be prompted to confirm that they want to delete the selected billing code(s). Deleting a saved billing code row is the same as marking the row as "Active = N". If suggested billing codes are added, but deleted *before* the exam is saved, the row will simply be deleted.

The billing codes associated to any procedure code prior to this upgrade will all be set as Add By Default = Y, which means that they will continue to behave as they did prior to upgrading.

FEATURE #16310 – VALIDATION RULE TO ALERT USER WHEN NO BILLING CODES ARE PRESENT

Previously, the RIS had a hard coded warning when there were no active billing codes for a procedure. Because the workflow for the above feature includes the possibility that some procedures will legitimately have no active billing codes at the time of scheduling or registration, the hard coded warning has been replaced with a validation rule that allows the customer to customize the timing for the warning (or change it to a hard stop if desired).

The original hard coded rule looked at procedure codes to see if any billing codes were mapped by the RIS administrators. The previous warning that stated: "There Are No Billing (CPT) Codes Mapped To This Procedure" has been removed and a new configurable rule has been added. The new rule does not look at Procedure/Billing Code mappings, but actually checks whether there are any studies that do not currently have billing codes attached.

The new rule will be enabled by default to replicate existing functionality.

FEATURE #16138 - VALIDATION RULES FRAMEWORK HAS BEEN EXTENDED TO CONSIDER TABLES

Validation rules can now be created based off of patient/exam information that exists in tables, such as associated insurance carriers, MRNs and attachments.

Using the enhanced capability, the following validation rules are now possible:

1. Ability to require that at least one insurance is added if Self Pay is not selected.
2. Ability to warn the user, or prevent them from continuing, if a particular issuer of MRN has not been added for the patient.
3. Ability to warn the user, or prevent them from continuing, if a particular scanned document type (such as Referral) is not associated to an order.

As with all validation rules, the timing of the warning or hard stop can be customized.

These are only a few examples of rules that can be created. Please contact eRAD Support to inquire about creating validation rules for your organization.

FEATURE #14171 – VALIDATION RULES CAN DISPLAY BASED ON PATIENT ALERTS

It is now possible to utilize Validation Rules to support custom logic based on Patient Alerts. Rules can be built to either allow or prevent an action in RIS based on whether a patient has a given Alert.

There are two types of rules that are now possible:
1. Prevent actions in RIS when a Patient Alert is present.
   a. Example: Prevent scheduling if the patient has an Alert of "Lifetime Ban."
2. Conditionally allow actions in RIS based on a Patient Alert.
   a. Example: Prevent arriving a minor when the Responsible Party is "Self" unless the patient has an Alert of "Emancipated Minor."

For example #1, it was previously only possible to alert a user that a patient had been banned from the facility. The Validation Rule will allow an administrator to actually ***prevent*** scheduling. When the rule is configured, the user will receive the usual Alert informing them of the ban. However, if they attempt to schedule anyway, the Validation Rule warning will display and will prevent them from scheduling the appointment.

For example #2, it is now possible to create a Validation Rule that does not apply to all types of patients. Previously, a rule requiring a Responsible Party other than Self for minors was not possible because there was no way to get around the rule for emancipated minors. Now a condition can be created that excludes patients with an Emancipated alert.

These are just examples of what is possible using the new Validation Rule functionality. If you are interested in setting up Validation Rules, please contact eRAD Support.

FEATURE #15150 – HARD-CODED CONTRAST AND CT DOSAGE REQUIREMENTS ARE NOW VALIDATION RULES

Previously, it was possible to require the technologist to enter Contrast and CT dose information, but the timing of the requirements could not be altered. Because the requirement was enforced at the time the technologist *started* the exam, many customers chose not to use the requirements (or to use Digital Forms instead) because the technologist could not know the information before starting the exam.

To allow more flexibility and a more practical approach, Contrast and CT Dosage requirements can now be controlled using Validation Rules, which will allow the timing of the requirement to be changed to when the technologist *completes* the exam (or any other desired point in the workflow). Custom validation rules have been created to reproduce the logic of the previously hard coded rules with the added flexibility to alter them according to preference.

At the time of the upgrade, your current configuration will be evaluated and the new Validation Rules will be applied accordingly with one exception: All rules will be enforced at the time the technologist **completes** the exam. This is done with the understanding that this will be the most common point at which customers will want to require this information, though this can be changed if desired. If you are not using this functionality today, the Validation Rules will be added with the upgrade but will be set to Inactive.

Please let eRAD Support know if you would like to start requiring either Contrast or CT Dose now that the more flexible framework is available. They can assist in getting this set up according to your needs.

FEATURE #12141 – ABILITY TO VIEW THE CITRIX BRIDGE VERSION NUMBER

Previously, Citrix Bridge users did not have an option to view the current version number.

Changes have been made to the Citrix Bridge context menu to allow the user to access an "About" screen very similar to the RIS Help/About screen. This screen lists the version number and additional details.

Clicking the Citrix Bridge icon in the system tray will now open the following context menu:
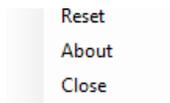
Selecting the About option will bring up the following screen:
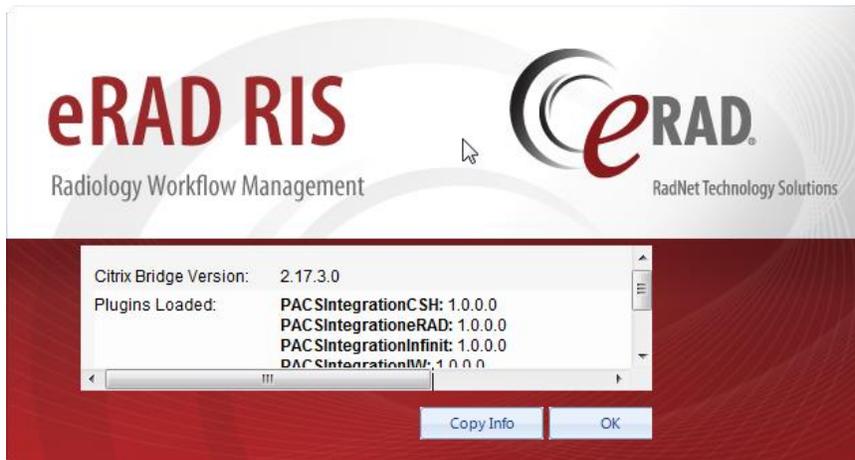
Note the Citrix Bridge Version on the first line. It is also possible to view the version number from within the *RIS* Help/About screen, provided that the Citrix Bridge is up and running.

FEATURE #14681 – UPLOAD A WORKSTATION'S VERBOSE FILES TO THE SERVER FROM HELP/ABOUT SCREEN

When troubleshooting an issue, eRAD Support often needs to view a workstation's log files, referred to as "verbose files." Previously, users had to follow instructions to navigate to the files in an Appdata\eRAD folder in order to find the files, then go to the trouble of sending them to Support. To make this process easier and allow eRAD Support to quickly access the information needed to troubleshoot an issue, it is now possible for a user to upload their verbose logs to the database by clicking a button on the Help/About screen.

The Help/About screen has a new button labeled "Upload Verbose." If instructed by the eRAD Support team, all the user has to do is go to the Help screen and click the button.
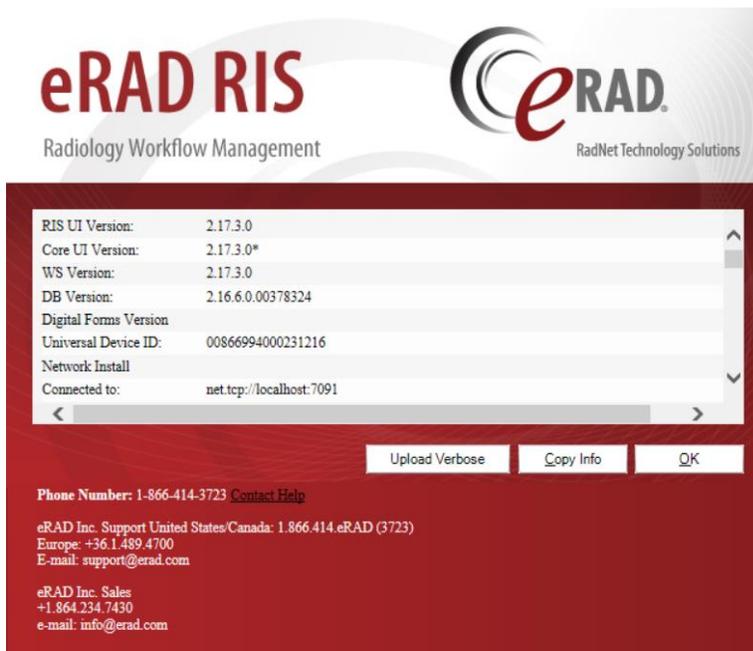
The user will have the option to enter details regarding the reason the Verbose logs are being uploaded.
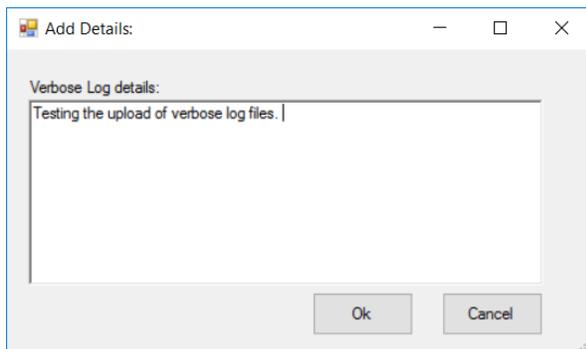
Upon clicking OK, the verbose files and a relative message log will be uploaded to the database, where the eRAD Support team can retrieve them. The verbose files are compressed when added to the database.

FEATURE #16109 - RIS WILL PREVENT UPLOADING EXCESSIVELY LARGE FILES FOR LOGOS

Excessive file sizes can cause document distribution to fail, particularly for encrypted email reports. This can happen if the logo used on a report is too large. To prevent this from occurring, two new System Configuration settings have been created to indicate the maximum file size and the maximum file dimension. If an image or logo is uploaded that exceeds either of these settings, the user will be warned.

The new settings are as follows:

- **MaxLogoFileSize** – maximum number of bytes for image files uploaded for Practice or Site logos, as well as images uploaded via the ImageUploader configuration screen.
- **MaxLogoWidthOrHeight** – maximum number of pixels for Practice or Site logos, as well as images uploaded via the ImageUploader configuration screen.

If either setting is exceeded when uploading an image, the upload will be prevented and the user will be presented with a warning displaying the maximum for the value that was exceeded:

- The selected image file must be less than 250,000 bytes.
- The selected image's width must be less than 1,000 pixels.
- The selected image's height must be less than 1,000 pixels.

A label has been added to the image preview window, so that file sizes and dimensions are visible for uploaded images. The file type is also listed.

FEATURE #16292 – TECHNOLOGIST CAN NOW ADD ADDITIONAL EXAMS TO THE ORDER FROM PERFORM EXAM TAB

Technologists often need to add additional studies to the order when the patient is already on the table, after receiving feedback from the radiologist or upon realizing that the referral contains a separate exam that was not registered. Technologists need a method to add additional studies with fewer steps, as long as the study belongs to the same order (which would also necessitate the same referring physician and payment method).

To increase efficiency for this workflow, users can be granted a new access string named *Clinical.Tech.AllowAddExam*. The default for this access string is None. If set to Full, a technologist will have access to a new button on the Perform Exam tab labeled "*Add exam to current order*." The button is located beneath the list of today's exams at the top of the Perform Exam tab.
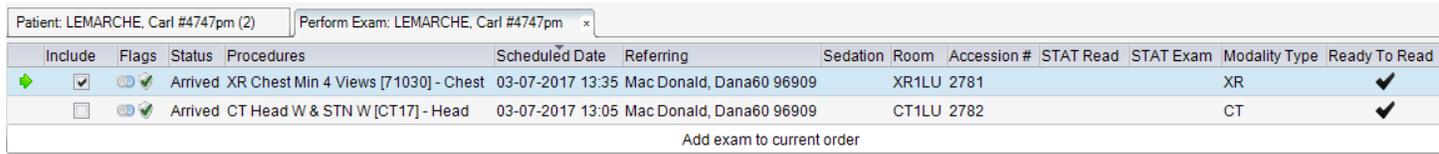
Clicking the "Add exam to current order" button will allow the technologist to add a new exam to the currently selected Order without going through the registration process.

A new window will open for the technologist to select the procedure, along with Body Part and Laterality if applicable.
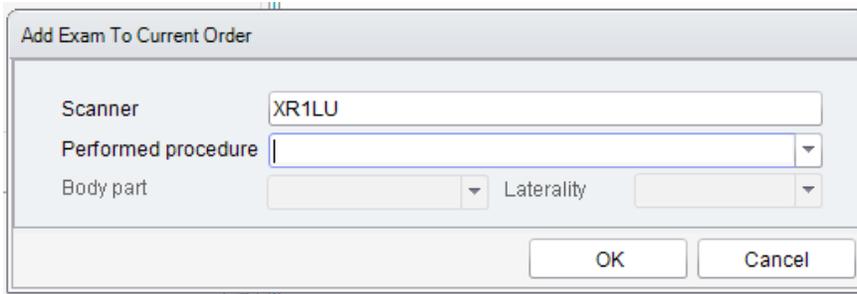
Currently, the scanner (room) is hard coded to match the same scanner as the existing procedure. In the next phase, this will be expanded to allow the technologist to select a different scanner.

The procedures available in the dropdown will include any procedure code that is part of the Schedule Group for the scanner.

Upon clicking OK, a new exam will be added to the existing order. The Date and Time will default to the current date and time, similar to a Walk In.

For customers using Linked Reports, another option will be available if the current study is part of a set of linked studies.
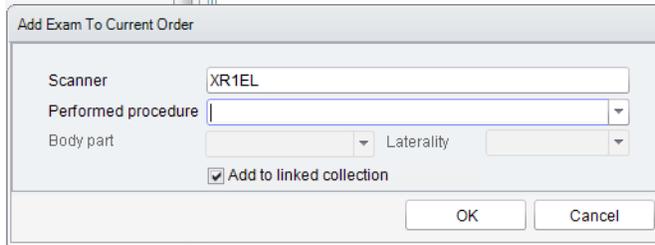
Checking the "Add to linked collection" checkbox will automatically add the new procedure to the linked set. RIS will set the linked id and display the linked flag for the new study. This box will be checked by default.

It has always been possible to adjust the height of the list of today's procedures at the top of the Perform Exam tab by hovering on the dividing line and click/dragging when the double arrow appears. RIS will now remember this position and re-open with the same height for the next patient.

FEATURE #16294 – COPY/PASTE FEATURE NOW INCLUDES "TECHNOLOGIST VERIFIED ID"

On the Perform Exam screen (Documentation tab), there is an option to Copy/Paste certain data elements to other included studies (via the Include checkbox). An option to include the "Technologist Verified ID" field in the Copy/Paste options has been added.   This option will be checked by default.
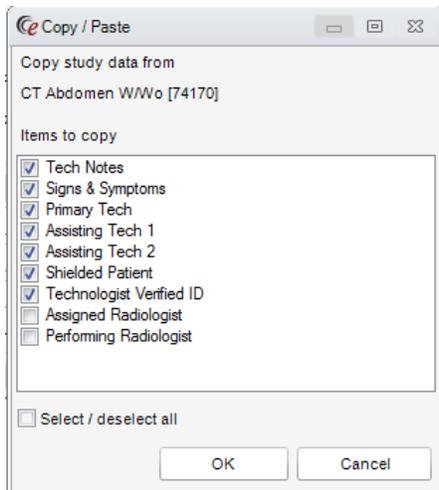
FEATURE #16293 – TECHNOLOGIST INFORMATION CAN AUTOMATICALLY COPY TO ALL LINKED STUDIES

When using the Linked Reporting feature, linked studies are not sent to the radiologist for dictation until all studies are completed by the technologist. For customers using linked reporting for exams that are performed on different days or in different modalities, it is preferable to prevent the radiologist from dictating before all of the images are available. However, for customers who routinely use Linked Reporting for multiple x-ray exams performed at the same time by the same technologist, this can cause workflow problems for linked reporting if the technologist forgets to complete one of the studies. In these environments, it is also desirable for certain information, such as primary technologist, technologist notes, and pregnancy status, to automatically copy to all of the studies that are part of the linked set.

For these purposes, the following System Configuration options are now available:

- *AutoIncludeLinkedStudiesForTech* – When set to True, RIS will automatically "include" all studies in a linked collection when the perform exam window is opened. This allows the technologist to Start and Complete all of the exams together. The default for this setting is False. In a future build, RIS will exclude studies in the linked collection if they have a different Modality Type. For this first phase, this behavior will apply to all studies in the linked collection *regardless* of Modality Type.

- *AutoCopyPasteLinkedStudies* – When set to True, RIS will automatically copy/paste all available fields from the most recently saved exam to all other checked exams in the linked collection. The Copy/Paste will occur any time a user saves any of the studies in the linked set from the Perform Exam screen. The default for this setting is False. To use this setting, the first setting, *AutoIncludeLinkedStudiesForTech*, must also be set to True.

Setting both of the above System Configuration settings to True will make the following workflow possible:

The technologist can open a study from the Technologist worklist and other studies that are part of the linked set will automatically be Included.

The technologist can fill in any fields that are required upon Start (e.g. entering the Primary Technologist). Clicking Start will copy the information to all of the checked studies and all of the studies will move to Started status.

Additional information can be added on the Documentation tab and upon the next action which includes a save, such as Complete, Suspend or Save, the fields will copy to all of the included exams that are part of the linked set.

Fields that will be copied include: Tech Notes, Signs & Symptoms, Primary Tech, Assisting Tech 1, Assisting Tech 2, Shielded Patient, Pregnancy Status information, Technologist Verified ID, Assigned Radiologist, and Performing Radiologist. These are the same fields that are available for manual (optional) copy/paste workflow, which is still available for customers who would not benefit from this new feature.

Please note that when the new feature is used, it is not possible to handle any of the linked studies separately. In other words, they cannot be de-selected from the Include workflow if they are part of the linked set.

FEATURE #15107 – DECREASED LIKELIHOOD THAT A RADIOLOGIST COULD SELF-REVIEW A LEGACY STUDY

Typically, imported legacy studies do not contain a User ID for dictating, signing, or contributing radiologists. This can cause an issue for Peer Review because RIS does not identify that Sue Smith without a User ID is actually the same person as Sue Smith with User ID smiths. This lack of recognition means that eRAD RIS would allow the radiologist to review their own legacy study, which is not appropriate.

To decrease the likelihood of this issue for legacy reports, new logic has been added that will evaluate the first and last names of the involved radiologists when there is no User ID available for comparison.

If the name of any radiologist for the legacy study contains both the first and last name of the current user, eRAD RIS will disable Peer Review. While this can lead to some amount of false positives or negatives, it will greatly reduce the risk of a radiologist doing peer review inappropriately.

Data migrations typically insert the full name of the radiologist into the applicable fields without any manipulation of that name (e.g. attempts to parse out what is first or last name or suffix, etc.). Therefore, the names can be found in any order when evaluating for a match. If a radiologist name was imported as Dr. Kate Ellington or Ellington, Kate, M.D. or Kate Ann Ellington, the match will still be made because each contains the current user's first name (Kate) and last name (Ellington) somewhere in the field.

As mentioned above, it is possible to have false negatives and false positives with this strategy. For example, if Kate Ellington and Katerina Ellington are two different doctors, Kate will be prevented from peer reviewing Katerina's legacy studies because the name Katerina contains the name Kate. This would be a false positive. If Sheila Warring was listed in the legacy system with her maiden name Sheila Thomas, eRAD RIS would not catch the match, which would lead to a false negative and Dr. Sheila would be permitted to review her own legacy report.

Despite the potential for some amount of discrepancy, this change will drastically reduce the potential for an inappropriate Peer Review. If it is identified that a mismatch is occurring (either a false negative or false positive) for a particular radiologist, this can be addressed by running a script to add the current user's User ID to the legacy studies.

FEATURE #15330 – IMPROVEMENTS TO MANUAL CACHING AND CACHING WORKLIST VIEWS

Three important changes related to the caching of PACS images on the Pending Dictation worklist have been added with this feature.

1. Improvements have been made to selecting studies for manual caching.
2. It is now possible to toggle automatic caching on and off.
3. Custom views on Worklists can be created with a setting to either include or exclude caching.

Previously, when studies were selected for manual caching, the manual request would override the studies that were supposed to automatically cache. Now, the manual cache requests will be added *in addition* to the automatic PACS requests.

Some new settings are also in place for the number of studies that can be manually cached. The user will be allowed to manually cache the same number of studies as their user preference for automatic study caching.
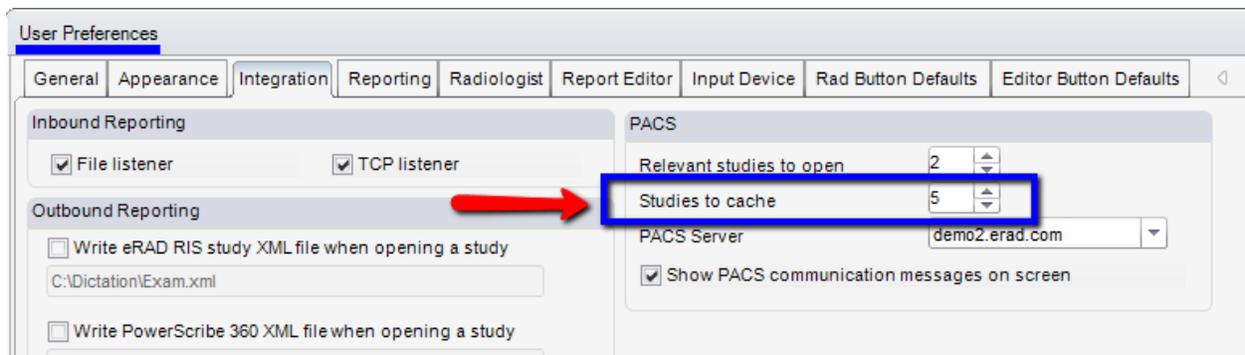
In other words, if the user preference is configured to allow 5 studies to be automatically cached, as illustrated in the above screenshot, the user will be able to add an additional 5 studies manually to the cache list for a maximum total of 10 cached studies.

If the user selects more than their allowed number of studies for manual caching, the newest requests will be cached and will bump the oldest manual requests off the list of studies to cache, so that the number of manual studies to be cached is not higher than their limit. Depending on the timing, the oldest manual requests may have already finished caching.

For example, consider the following scenario:
- Dr. Ko has a user preference for Studies to Cache = 5.
- She opens the Pending Dictation WL and the first 5 studies begin to cache automatically.
- She selects 5 additional studies to manually cache, using the existing context menu item "Add to PACS Cache."

- After some time elapses, Dr. Ko selects 2 additional studies for manual caching. She has now exceeded her allowed number of studies to manually cache. The two oldest manual cache requests will be cleared, though in this example, they have already finished caching.
  - ~~Manual Cache #1~~ - Complete
  - ~~Manual Cache #2~~ - Complete
  - Manual Cache #3 - Complete
  - Manual Cache #4
  - Manual Cache #5
  - Manual Cache #6
  - Manual Cache #7

When the user selects more than their allowed number of studies, a notification will inform the radiologist that the list has been modified and the studies that were added. The notification style message does not need to be acknowledged by the user.

A new column has been added to display which studies have been selected for caching, with an A to indicate Automatic Caching and an M to indicate Manual Cache requests.
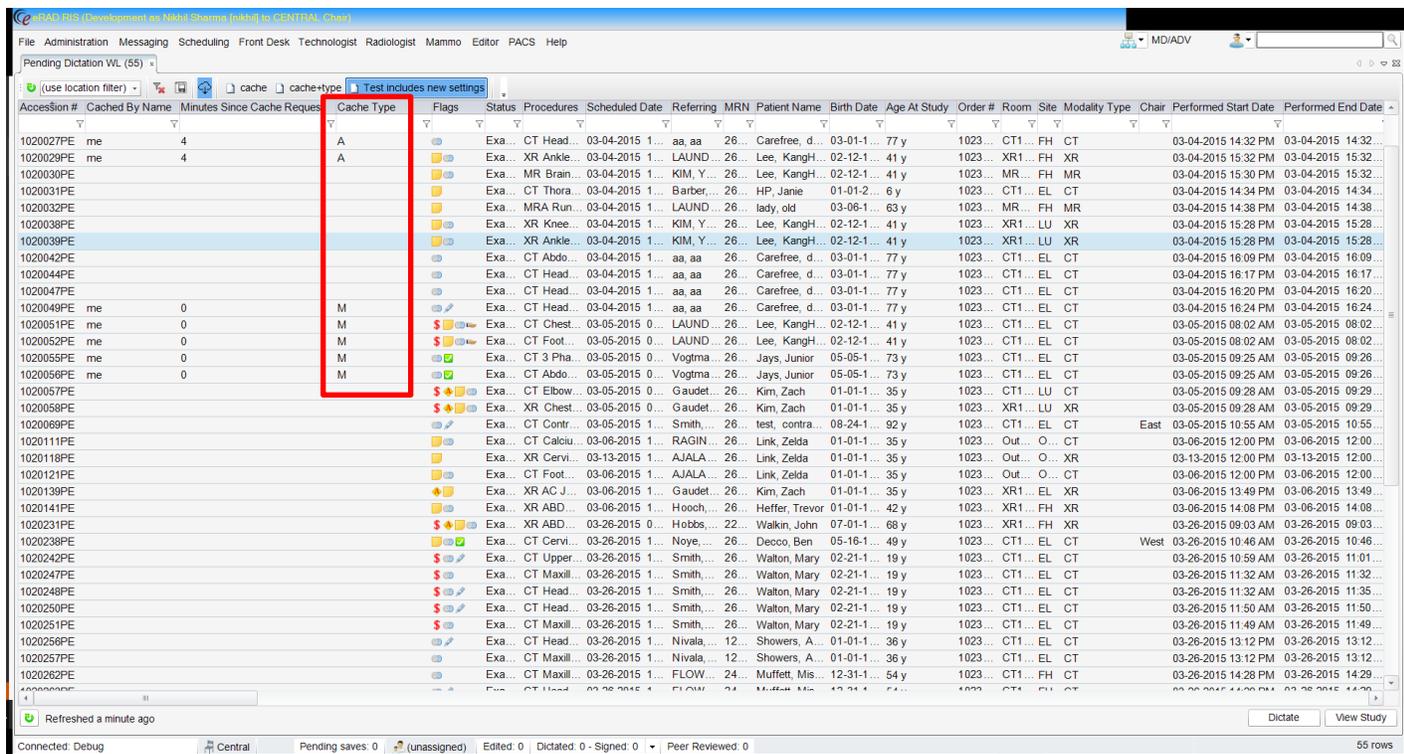
The user can remove a cache request by right-clicking the study and choosing the context menu option "Remove from Cache."

The next important part of this feature is the ability to turn caching on or off using a new Caching button. This button can be toggled on or off at the user's discretion. The background color of the button will change when

caching is turned on. Additionally, there is a tooltip that will describe the current setting. The images below illustrate the button in Caching On and Caching Off states, for light and dark modes.

Caching <u>On</u>:
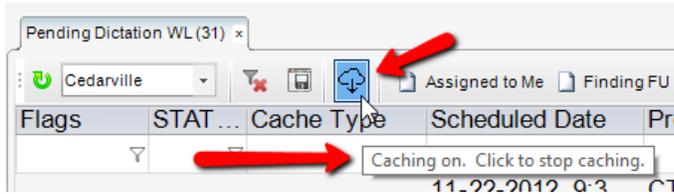
Caching <u>Off</u>:
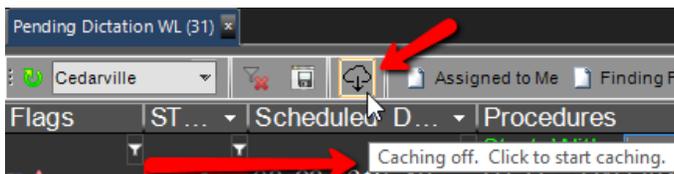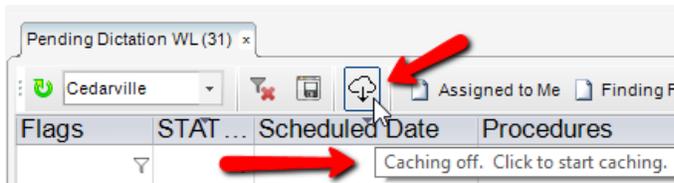
This toggle button will turn off *automatic* caching; however, the user is still able to add Manual Cache requests by right-clicking a study and selecting the "Add to PACS cache" context menu item.

Note that this Caching toggle button will not be available if the User Preference for Studies to Cache is set to 0. Users with this setting will also not have the option to manually add to cache. Therefore, if the user prefers not to use Automatic Caching but would like to manually cache, they should set the Studies to Cache preference to be greater than 0, then toggle off the Cache button. This will allow the user to select studies to manually cache without any automatic caching.

Another advantage to the new caching feature is that the Custom Views on worklists will now save the status of the Caching toggle button. This allows users to determine whether caching is used or not for a particular list. As a simple example, a user can have a main Custom View with automatic caching turned on and a secondary Custom View with caching turned off. In this case, the user can periodically switch from their main Custom View to check

the secondary Custom View without any changes to their list of studies to cache. The studies from the main Custom View will continue caching while the user is on the secondary view.

Any Custom Views that were saved prior to the upgrade will automatically include a Caching On status, assuming the user has more than 0 studies configured to cache. To adjust, the user can turn the toggle to the OFF status, right-click the Custom View button, then select Overwrite. This will update the Custom View so that caching will be turned off.

FEATURE #15696 – CREATE AN ADDENDUM FROM THE VIEW STUDY SCREEN

The recently added **View Study** screen replicates the radiologist dictation screen in a "view only" mode. One of the advantages of this screen is that it allows radiologists to view Signed studies without initiating an addendum. However, there are times when a radiologist may find it necessary to complete an addendum when viewing studies in this mode. Closing the View Study screen and re-opening in Dictate mode is not efficient, so a **Create Addendum** button has been added to the View Study screen.
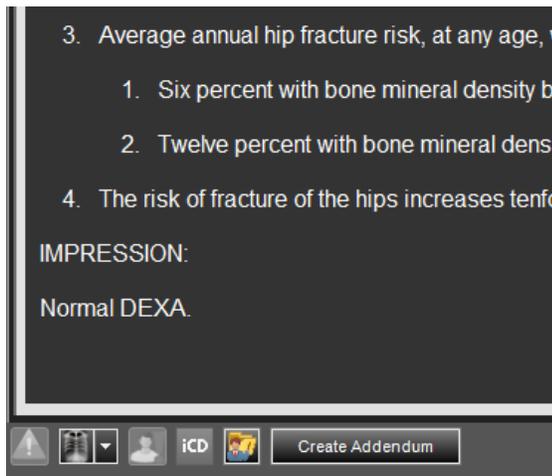
The Create Addendum button is in the bottom left corner of the screen, next to the Folders button. Clicking this button will automatically reload the screen in addendum mode and will *not* show the prompt asking if the radiologist wishes to make an addendum.

If an addendum has been requested for the study, the Addendum Request notes will be displayed in a pop-up message.

FEATURE #10975 – ACCURATE AUDIO LENGTH IN WORKLIST COLUMNS

In some cases, previous audio length columns on various worklists did not precisely reflect the length of the dictation recording.

In order to correct this issue, a property was created for all recording systems: M*Modal Interactive, M*Modal Batch and eRAD Batch.   This property will return the actual length of the audio file as recognized by the recording system. The value will update each time a radiologist inserts or otherwise updates the audio recording. The value is then converted from milliseconds to a display format of hh:mm:ss.

Audio Size (bytes)	Audio Length
933122	00:00:42
483822	00:00:21
452940	00:01:59

All worklists that previously displayed audio length in *bytes* have been updated to show both the Audio Size in bytes as well as the Audio Length in a format of hh:mm:ss.

Only audio files that are dictated after the upgrade to version 2.2017.3 will be shown in the new format. Dictations recorded prior to the upgrade will be displayed in their original format.

FEATURE #17458 – USER PREFERENCES TO DISABLE INPUT DEVICES

User preferences were added to allow disabling the Input Devices. The checkboxes illustrated below on the Input Device tab of the User Preferences screen control whether the device is enabled or disabled.
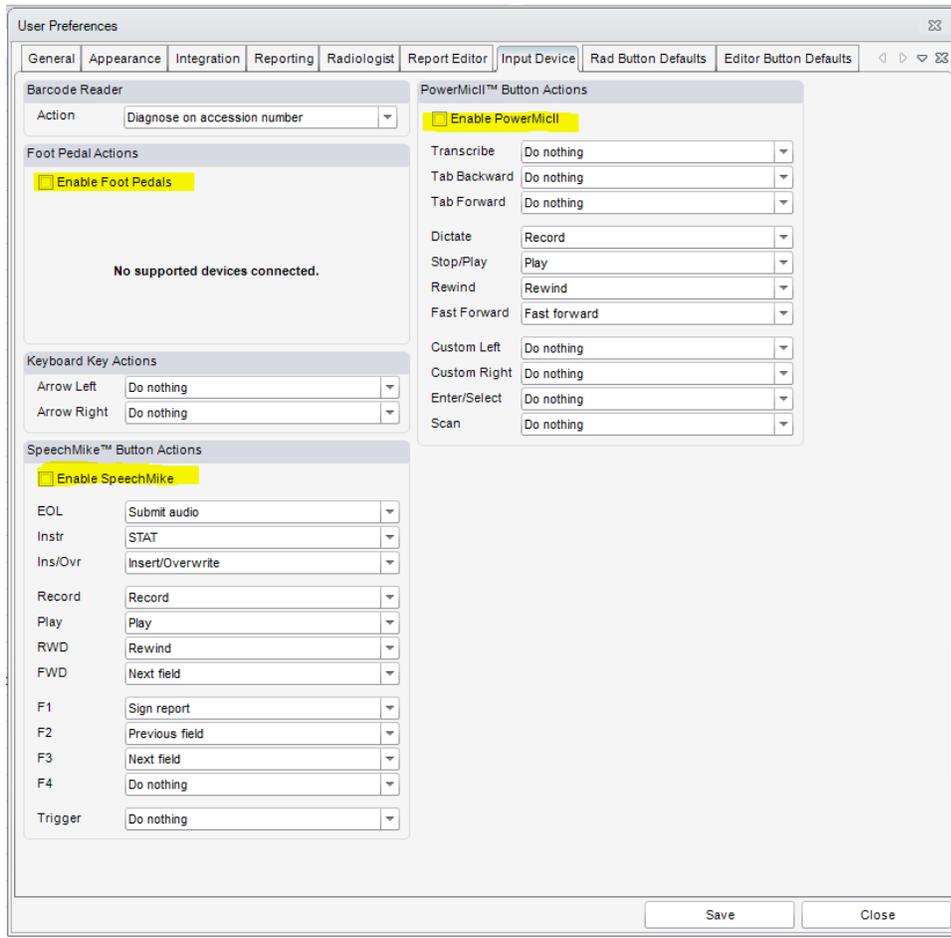
Note: "Enable Foot Pedals" and "Enable SpeechMike" are essentially the same. They will stay in sync and control what is essentially one user preference. However these were created as separate preferences because if the user is not a radiologist, they will not have access to the SpeechMike group box. Separating the preferences in this way will ensure that users are able to see and set the preference regardless of their exact role.

FEATURE #15643 – REFERRING COLUMN ADDED TO MINI-PATIENT FOLDER ON REPORTING SCREEN

The referring physician is now visible in the mini-Patient Folder panel on the Reporting screen with the addition of a Referring column. This will benefit radiologists who wish to see which doctor referred prior studies without having to look at the Selected Summary panel for each study.
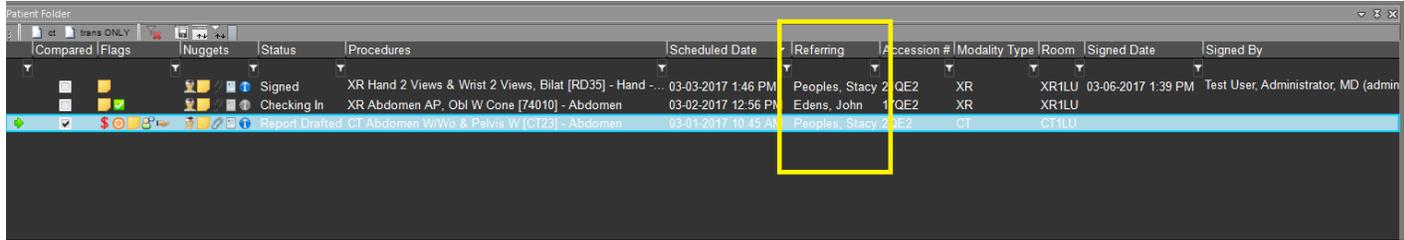
FEATURE #15812 - ALLOW RADIOLOGIST PORTAL FEATURE TO LAUNCH URLS IN EXTERNAL BROWSERS (SUPPORT GE ZFP USING THE PORTAL SCREEN)

Previously, the Portal panel that appears on the radiologist Dictation screen only used the internal .net WebBrowser object for opening pages. This does not support all of the websites customers wish to open using the Portals feature. For example, certain websites, such as the GE Zero Footprint Viewer, require a full Internet Explorer 11 or a modern browser like Firefox or Chrome. eRAD RIS can now support launching and closing pages in external web browsers for the Portal feature.

First, an administrator can add browser types to a new look-up editor labeled *Browser Type*. There are two default entries in the browser type table. One is for the Internal browser, which is the same method previously used to display Portals in the panel within the Dictation screen. The second is Internet Explorer, launched in unshared frame and session modes. Additional browsers can be added. The *External* flag should be Y if the browser is not the default internal browser.
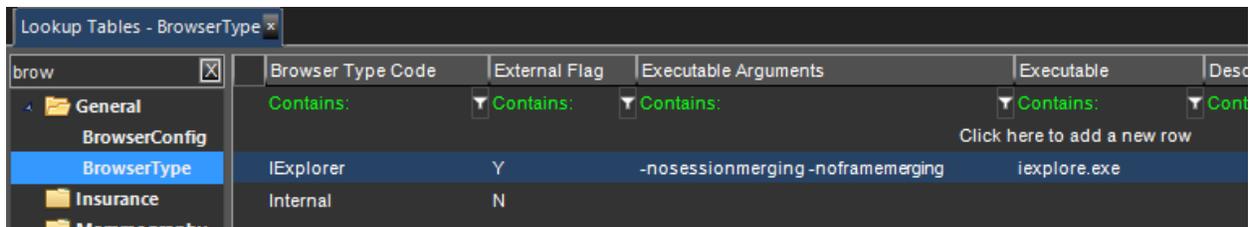
In order for an administrator to access the Browser Type lookup editor, the new access string *Config.LookupEditor.BrowserType* must be set to Full.

The existing *Browser Config* editor has been updated to allow any of the Browser Types to be selected from a dropdown menu.

For each URL defined in the Browser Config editor, the corresponding Browser Type will be used when the portal is opened.

Whenever the Browser Type for a Portal's URL is an External browser, the Portal tab in the Dictation screen will begin with an [EXT] label. Clicking on the panel will simply provide the user with a message that the page for the portal has been opened in an external browser. Additionally, when the tab is clicked, RIS will attempt to move the related browser to the front of all windows.

It should be noted that an administrator will need to configure the browser of choice to run in single window/session per URL mode in order for the "bring to front" functionality to apply. It will not work with shared sessions or windows.

RESOLVED DEFECTS

Bugs and support issues resolved in build 2.2017.3.

eRAD RIS:

Bug #	Category	Subject
14218		Resolved issue where configuration Editor did not properly handle null values.
15460		Resolved issue where a RIS failure on exit would prevent the uploading of trace data.
7459		Updated log control's border to more closely match other RIS controls.
15855	Access strings	Added access string for CTRN (Clinical.Ctrn).
15481	Admin-Clinical Data	Procedure Picker Import tool now correctly selects only active items.
15309	Admin-Other	Resolved small memory leak in reporting options editor.
2151	Admin-Other	Updated many audit log "action" values to be more descriptive.
6840	Admin-Other	Improved error handling when a holiday was entered without specifying a practice.
7594	Admin-Other	Internal person search now correctly bolds the first resource type for the person.
7965	Admin-Other	Add/Edit practice - Delete Logo button is now only enabled when there is a logo to delete.
8181	Admin-Other	Resolved issue for which doing a person search, receiving no results, then pressing enter would display an error.
12944	Admin-Other	In organization editor, the map will now display the location of the site without needing to first click on the map.
15550	Admin-Other	Updated procedure plan lookup to allow apostrophes in any of the fields.
13554	Billing	Resolved billing exception issue where patient phone # was required, and the user had to post twice to get it to resolve.
16497	CCDA	All administered medications are now added to CCDA.
11157	CD Import	Import CD - If the study fails to import because the study was already in PACS, RIS no longer creates a blank row in the patient folder.
14321	CD Import	Loading from CD progress bar is no longer cut off in Windows 10.

16348	CD Import	Upgraded to the latest fo-dicom toolkit (used for CD Import).
15742	CEHRT	Get automated measures report now returning patient portal(vdt) numerator.
16285	CEHRT	Fixed incorrect tool tip for sexual orientation field.
16751	CEHRT	Added appropriate SNOMED codes to the l_gender_identity and l_sexual_orientation lookups using the 2015 US SNOMED codes.
15546	Citrix Bridge	LOG FILE reader- Resolved issue when using Citrix bridge where log file reader would continually add the same information including the same time when refreshed.
15731	Citrix Bridge	Citrix Bridge - Uninstaller now removes reference to VcCom API.
16770	Citrix Bridge	Resolved error when launching Citrix Bridge.exe.
15727	Citrix Bridge	Citrix Bridge - Updated the manufacturer code to 'eRAD.'
15730	Citrix Bridge	Citrix Bridge - Changed the default icon so that it can be placed on the desktop and not confused with eRAD RIS.
15841	Citrix Bridge	Citrix only - Issue corrected where PACS Login window could appear behind RIS.
16160	Client Install	Help - About screen is now showing the correct CORE UI version.
16314	Client Login	User_ID can now exceed 20 characters.
14815	Connect Portal - Referring Ordering/Scheduling	Added ability to view the order details from an Order that is Pending Approval or Order Drafted in the patient folder.
15552	CTRM	Resolved issue where CTRM dialog would remain open when PowerScribe 360 issued a close command to RIS.
13490	CTRM	Corrected issue where close button on Critical Result window would not work.
15077	Digital Forms	Resolved issue where cancelling an exam with the Red X would not remove the associated digital form.
15538	Digital Forms	Resolved issue where digital form data was not saving if preceded by validation failure.
15983	Digital Forms	Corrected condition where digital forms could silently fail to save data.
16336	Digital Forms	Digital Forms Import/Export tool now copies new grid tables.
16725	Document Distribution	Resolved intermittent error when trying to Start / Retry job in Distribution History by Date WL.
16120	Exam Search	Resolved intermittent "DoSearch" error in the Exam search screen.

14338	Exam Search	Exam search screen has dropdowns for multiple 'id' fields - these fields would sometimes have what appeared to be identical values.
15468	Flags	Resolved intermittent issue where eligibility flag tooltip was stuck in "In Progress."
15879	ICD	Resolved issue where ICD codes could vanish from Medical History Grid when pressing Start on Perform Exam screen.
15804	Image Request	Resolved issue where changing the image request status for studies in Exam Done status produced an error that 'Signs and Symptoms' is required.
15208	Inbound Document Processing	Attach Inbound Document "Your lock was broken by another user" message will now only appear when the user is focused on the Attach Inbound Document window.
16040	Inbound Document Processing	Resolved issue where selecting an action button when a locked row was highlighted would throw a 'no row at position 0' error.
16406	Inbound Document Processing	Inbound Document workflow now supports both .TIF and .TIFF files.
15488	Installer	Prevented situation where the installer can be invoked more than once, which will intermittently produce a corrupt zip file error message.
13940	Insurance Eligibility	Improved error handling on misconfigured EligibilitySpecialCondition values.
7468	Insurance Eligibility	Eligible API checked studies are now not appearing on the IVT work list.
8616	Insurance Eligibility	Plan end date: date of service now includes that day.
16602	IVT / Precert	IVT - Corrected error when opening an item 'Ordered' status.
15409	Localization	Localized the Critical Results screen.
15325	Localization	Updated customer requested changes to Hebrew localization.
15383	Localization	Localized several missed fields in the dictation window.
10321	Localization	In Hebrew, add/edit region dialog box says Add/Edit Site in the title bar.
12520	Localization	Corrected issue in Right to Left mode, in the drawing tool - the yellow X icon did not have padding between it and the radio button.
14538	Localization	In the Hebrew RIS, DOB is now localized.
16778	Localization	In Hebrew, the localization of Height and Weight have been corrected.
16167	Locking	Creating a Critical Result will no longer lock the entire order.

16106	Log Control	Log Control with spellcheck enabled will no longer identify the user_id as a typo.
16481	Log Control	Resolved issue where typing beyond visible boundaries in a text box would cause the cursor to disappear.
15853	Logging	Corrected issue where trace files appeared on c:\ instead of their proper location.
15959	Lookup Tables	Corrected issue where System Config value 'UMPDefaultOrderTabCriteria' would not save.
8569	Mammography	Mammo drawing tool - Breast diagram does not change between male and female templates if the sex is altered after the drawing tool is initially opened.
14518	Management Reports	Payments Received report now works with site codes containing a dash '-'.
15294	Management Reports	Updated Mammo Annual Radiologist Summary to support future years.
15808	Management Reports	Removed an old MU Archive Reports from core folder.
15811	Management Reports	Management Report "Front Desk Activity" is corrected to only show data on selected dates.
16270	Management Reports	Management Report "Front Desk Detailed Activity by Hour" now includes all appropriate users in the user dropdown list.
16487	Management Reports	Management Report "Scheduler Activity" - Now correctly grouping on the user, not the scheduler.
15252	Mgt Reports	Improved performance of c_GetRadStatsForTodayByUserID used by management reports.
16169	Mgt Reports	Service: SSRS deployment is now uploading Verbal Order forms to the reporting server.
16409	M*Modal	Corrected "object reference error" after importing and saving an M*Modal template.
16652	MRN	Issue resolved where system could generate a 'Duplicate key row exception' when adding secondary issuer required by new validation rule.
16428	Ordering	EMR orders that are not matched to a RIS procedure code will now not allow the print dialog to appear (which was producing an error).
16968	Ordering	Corrected inadvertent change of 'Reason for exam' control to be a log control when upgrading to 2016.7 or newer.
15254	PACS (eRAD) Int - RIS only	Resolved intermittent issue where manager class could wait indefinitely.
7032	PACS (eRAD) Int - RIS only	Corrected issue where prefetch would not work if the user did not have a user preference set for

		'MaxRelevantPriors.'
7947	PACS (eRAD) Integration	Resolved issue where closing a caching worklist could throw a null reference exception.
15365/15367/15368	PACS (eRAD) Integration	Resolved an event viewer log error when RIS was unable to find PACS window.
15452	PACS (eRAD) Integration	Resolved intermittent issue where a user may be prompted for PACS login credentials even after disabling PACS integration.
15821	PACS (eRAD) Integration	Resolved a rare 'row has been removed' error.
17337	PACS (eRAD) Integration	Resolved issue where a user could not cache studies if another user cached the studies at the top of the worklist.
15558	PACS (Non - eRAD) Integration	Enabled the InfinitConfig.xml to be read when test mode is set to true.
16757	PACS (Non - eRAD) Integration	CSH PACS - Resolved issue where a 'close session' was not being sent.
16758	PACS (Non - eRAD) Integration	CSH PACS - Resolved issue where incorrect message was sent to PACS to open a 2nd study for same patient.
13880	PACS Citrix Bridge	Citrix - Resolved issue when using RIS over Citrix and working with multiple studies in the dictation window. Images can no longer get out of sync.
15960	Patient Folder	Resolved issue where County name would not persist under specific circumstances.
13928	Patient Folder	Resolved issue where 'Patient Race Required' would still be displayed, even when a race was entered.
15976	Patient Merge	Corrected issue where after an external patient was matched to an internal patient, the merge dataset was not properly populated in the external message container.
6984	Patient Search	Removed the "New Patient/New Appointment" from the patient search split button as it's already on the main button.
16642	Peer Review	Added PeerReview layout to default install.
16520	Peer Review	Changed the All Peer Review Pending Action WL to display 'Interpretation Type.'
16525	Peer Review	When using skip (next) workflow, the RIS now skips over studies that are currently open in review window.
16526	Peer Review	Peer Review - Corrected issue where the user was able to view the preliminary report even when they did not have permission to do so.
14355	Performance	Improved performance of exam search screen when searching by ID fields.
13835	PowerScribe Integration	Resolved issue where RIS reporting screen would remain open if PowerScribe is opened then quickly

		closed.
16197	PowerScribe Integration	Resolved issue where the View Study window was opened on a study that was signed in PS360 after initial RIS login, PS360 was not automatically launched.
13975	RADAR	WedgePlugin for RADAR now passes the display name for the "from" email address.
16110	RADAR	Resolved RADAR API exception which prevented a reschedule/cancel appointment.
16345	RADAR	RIS now prevents email message requests without a practice code from being added to the RADAR queue.
15210	RADAR - Nudge	Resolved an issue where the user could still preview the report via Nudge even if PreviewPreliminaryReport permission was set to None.
16189	RADAR - Secure PIC	RADAR Plugin - Added a configurable delay before attempting to reconnect if the connection was interrupted.
15217	Radiology Reporting	VR2 - Resolved issue where a new procedure code added by the inbound interface would cause the client to hang when opening via the XML file drop.
15525	Radiology Reporting	Configurable reporting options are now written into the verbose log file to assist with troubleshooting.
16080	Radiology Reporting	Resolved 3.5 minute timeout when a table is added to a report and print preview is used to view it.
16129	Radiology Reporting	Resolved an issue where audio files were not being deleted for editors.
6277	Radiology Reporting	RIS now prevents the creation of section titles with >1000 characters, which was causing document distribution to fail.
15981	Radiology Reporting	Removed user preference to reuse reporting screen since it is no longer required (re-use is always on).
16068	Radiology Reporting	Resolved issue where 'Dictated by' in the summary panel was not populated for reports initially created by a technologist.
16087	Radiology Reporting	RIS now hides the floating report history window if another patient record is opened.
16179	Radiology Reporting	Resolved error when technologist attempts to open a suspended study in View Study window.
16483	Radiology Reporting	Re-enabled the set/remove 'stat read' flag in the editor screen.
16513	Radiology Reporting	Resolved issue where original study was created in one reporting mode, then user switches to a different reporting mode and creates an addendum. The addendum can now be re-opened.

15840	Reception	Improved signature capture feature on MS-Surface device.
16761	Reception	Resolved issue where the 'Visited at:' required field could be bypassed.
16797	Reception	Resolved issue where after adding a scanned document to a Walk-in, user was sometimes required to re-enter the 'Special Accommodations' field.
15670	Scanning	Resolved intermittent issue where scanning in duplex mode sometimes flipped the second page of a license.
16768	Scanning	Resolved the error "A Lock Is required to update this order" when saving attachments in the Add Attachment screen.
16023	Scanning	Resolved issue where an order level scanned document would show only the 'move to order' context menu instead of 'move to patient level.'
16277	Scanning	Increased the size of attached date column in attachment list so date can always be seen.
14206	Scheduling	Resolved error when scheduling if the ProcedureGeneralDescription - Description column is empty.
15462	Scheduling	Resolved an error that could occur on the reschedule screen if a different order was selected.
15779	Scheduling	Resolved issue where Cancelled procedure (black X) was still evaluated for contrast required validation.
16458	Scheduling	Added appropriate error when attempting to overbook by a user who does not have the overbooking permission.
7175	Scheduling	Added 'reschedule' option on the context menu of a cancelled study.
7830	Scheduling	Modality Closure - Prevented the end time from being earlier that the start time.
11273	Scheduling	Resolved issue where height/weight were not required on reschedule.
16275	Scheduling	Scheduling calendar view now allows drag and drop of appointments, as was already possible in the main Appointment Book.
15327	Technologist	Resolved issue where the technologist could not delete an existing sedation.
15544	Technologist	Removed unnecessary message regarding external report workflow from the View/Edit window.
16608	Technologist	Resolved issue where a procedure that requires contrast is included in a procedure plan and the contrast amount was not populating on the Perform Exam screen.

12842	Technologist	Resolved issue where Verify Credentials feature could leave the wait cursor on the screen even though it was not waiting (spinning blue wheel).
16005	Technologist	Resolved issue where users with both Technologist and Editor resources could be assigned as the radiologist when creating a report from the Perform Exam window.
16159	Technologist	RIS now supports decimals in the contrast and sedation grids.
16614	Technologist	Resolved an error that could occur when discontinuing the primary study in a linked set when in Exam Done status.
15364	Thick Client GUI	Resolved an event viewer log error when an error occurred during a save.
15372	Thick Client GUI	Resolved an event viewer log error "Invalid cast of Appointment to AppointmentExtended."
15723	Thick Client GUI	Resolved issue where Addendum Request control in reporting screen was not reloading data after button was clicked.
16022	Thick Client GUI	Resolved a hidden memory leak in Reschedule Order screen.
16055	Thick Client GUI	If network or services are down, the client will no longer retry all collected service calls at once, which could flood the server.
16251	Thick Client GUI	Resolved issue where RIS lock screen could be invoked twice, requiring user to enter password two times.
1125	Thick Client GUI	Corrected tab order issue in schedule tab.
1352	Thick Client GUI	RIS now prevents duplicate holidays from being added to the same practice for the same day.
2529	Thick Client GUI	Made the description a required field when entering indication codes into the RIS admin screen.
3158	Thick Client GUI	Corrected issue where the laterality field was available for studies where it was not required when entering Outside Reads.
5444	Thick Client GUI	Resolved intermittent issue where null prep instructions could cause an error.
5482	Thick Client GUI	Differentiated between 'identically named' worklists in the 'Open on Login' dropdown.
5770	Thick Client GUI	Added a Cancel button to the 'Report on Accession Number' screen.
5946	Thick Client GUI	Added patient notes to Outside Read screen.
5947	Thick Client GUI	Corrected tab order issue on Outside Read screen.
6117	Thick Client GUI	Resolved intermittent issue where attachments would not save from the 'Edit Billing' window.

7153	Thick Client GUI	When removing ICD codes from an order, there is no longer a scenario in which the codes could appear to be removed but were in fact still attached to the order.
16399	Thick Client GUI	Resolved issue where if the user held the TAB key on certain RIS screens, the RIS would appear to hang.
15701	UI Look and feel	Resolved issue with Font Size not changing in Hebrew Environment.
9266	UI Look and feel	Corrected an issue where double clicking a person on the Resolve Problem screen could cause an error.
9647	UI Look and feel	Corrected ZIP code auto-populate city-state-country on the IVT screen.
15842	UI Look and feel	Amount to Collect screen - all money fields are now right justified.
16339	UI Look and feel	When correcting a spellcheck error in dark mode (which had red text), the text now returns to white instead of black.
16479	UI Look and feel	Log control spellchecking now leaves punctuation in place if it was adjacent to a corrected word.
16618	UI Look and feel	When replacing a phone number by selecting the text, the newly keyed number is now correctly entered.
15837	Unknown Reconcile	Rescheduled studies with unknown referrings are now (correctly) appearing on the Unknown Reconciliation WL.
15776	Utilization Management	UM Alert now contains both the original and alternative procedure.
16000	Utilization Management	Removed inactive UM Resolution Codes in the UM Alerts resolution code dropdown.
16002	Utilization Management	Changed 'Authorization Letter' to 'Opinion letter' in Distribution History WL.
16007	Utilization Management	Changed 'Authorization Letter' to 'Opinion letter' in Organization editor.
16026	Utilization Management	Removed the inactive orders that could show as disabled orders in the UM portal.
16177	Utilization Management	Race field no longer becomes required during UM workflow without the ability to save.
16759	Utilization Management	Resolved issue where the config value to "Bypass UM for Stat exams" would not bypass if the order was already saved with Stat flag turned off.
17060	Utilization Management	Resolved issue where the Authorization Required prompt would remain even after UM Status has been changed.
15963	Utilization Management	Scheduling an order under Utilization Review from a folder now displays the correct "this study is under utilization review" message.

16170	Utilization Management	Resolved an error in utilization review when a UM status was set to inactive.
16349	Utilization Management	Removed the 'Utilization Review' context menu option in patient folder when the study is in 'Order Pending Approval' status.
17150	Utilization Management	Updated Utilization Review to now be able to save work in progress with the status still blank.
15413	View Edit	Resolved issue when launching View Edit screen from a Management Report. RIS was once again shows the Report Tab.
16328	Web Services	Added config setting to specify whether a wedge should abort the changes associated with an http inbound request.
15945	Web Services	Resolved issue where InitPersonnelLookupByUserID didn't include the expected user.
16165	Web Services	Improved the error message to the user if a SQL error occurs while setting flags.
14620	Worklists	Resolved issue where filtering on Calculated Columns in a work list would show an error message and fail to properly filter worklist.
15895	Worklists	Resolved intermittent Issue when setting "Locked By Name" filter to "Is me."
15900	Worklists	When deleting the dictation /report and resetting status on a study that is suspended, the _status_flags are now properly reset.
15904	Worklists	Resolved error when using date filtering on worklists including keywords "or", "not" or "and."
16528	Worklists	Resolved issue in which Problem flag was not getting removed from studies in WLs when the problem was resolved.
16744	Worklists	The new audio length column now shows the correct audio length for older studies as well as new studies.
15961	Worklists	Added 'Accession number' to the Image Request WL.
16152	Worklists	Image Request WL can now be set as an Auto Open worklist.
16173	Worklists	Corrected worklist filter errors when using the 'Between' filter.
16775	Worklists	Resolved issue where worklist customization (columns, colors, etc.) might not re-apply when worklist is reopened.

CONNECT Patient Portal:

Bug #	Category	Subject
15950	Pat Admin - Activity Log	Patient Connect Admin - Activity log filter 'previous 7 days' now also includes today.
15798	Pat Admin - User Mgmt:Detail	Patient Connect Admin - Resolved error that occurred when attempting to view 'Patient Detail.'
13976	Patient Email	Patient Portal emails can now have a configured "from" email display name.
15199	Patient Exam Detail Page	Images Tab now disappears when PACS is not configured.
15703	Patient Exam Detail Page	Legacy Exams - Images will now appear in portal for legacy exams.
15179	Patient Exam Detail View	Resolved issue where a wait cursor could display indefinitely when no images were available.
15180	Patient Exam Detail View	Created a consistent mechanism to show when the report would be available on the portal.
15287	Patient Form	On the exam question review screen the question can no longer overlap the answer field.
14523	Patient Messages	Removed the 'Please verify you are a human' message on the bottom of the screen after test is successfully passed.
15440	Patient Security	Added a permission so that only authorized users can expire the lookups in the portal projects.
14705	Patient WF: Account Access	Removed case sensitivity check on answers to security questions.
15749	Patient WF: Create Account	Updated and clarified the 'required age' message displayed to minors when they are try to create an account.
15024	Patient WF: Make Appointment	When adding insurance, Policy number is now a required field.
15284	Patient WF: Make Appointment	Portal no longer allows 'Menstruation date' to be set in the future.
15415	Patient WF: Make Appointment	Fixed issue where the patient could not advance from Select Provider page when using "My provider is not listed" and searching for provider with special characters.
17012	Patient WF: Portal Pass iCode	Fixed intermittent issue with iCode (duplicate iCodes could be generated for different patients over time).
15512	Patient WF: Provider Invite to Make Appointment	Map tool now works when scheduling from an iCode.
15514	Patient WF: Provider Invite to	Clicking 'Make Appointment' during invitation

	Make Appointment	workflow will no longer return user to the login page.
15528	Patient WF: View Provider-Ordered Appointment	Scheduling in the Patient Portal via an invitation no longer defaults 12:00 AM at the top of the Review screen.
14589		Resolved error attempting to load PACS images that did not have a study instance UID.
15530		Corrected an issue with the portal's .ics file which was generating a 404 error.
15536		Corrected issue where scheduling from an invitation would not connect the new study to the existing order.
16136		Resolved issue with Get Help link.
15004	Admin-Other	Added ability to de-activate attributes in the procedure picker builder.
15978	Pat Admin - User Mgmt	DOB column can now be sorted.
16069	Pat Admin - User Mgmt	Resetting an account now clears the email field.
17087	Pat Admin - User Mgmt	After saving changes to the user profile, the profile is shown instead of hidden.
15064	Pat Admin - User Mssgs	Resolved issue where a forwarded message could get truncated.
16025	Patient Exam Detail Page	Resolved issue where thumbnail Images occasionally didn't load.
16196	Patient Exam Detail Page	Corrected issue where prep instructions would not show when the appointment was not made in the portal.
14089	Patient Exam Detail View	Resolved issue displaying an accession number contains only alpha characters.
14074	Patient General Display	Patient Portal Logo is now configurable for each portal instance per practice.
15080	Patient General Display	On mobile device, the email field and retype email field now are recognized as email fields so the keyboard will default the @ and .com.
15081	Patient General Display	Increased width of iCode verification code on mobile screen.
16039	Patient Logon	After using the incorrect password X times, tell the user at X+1 times that they have locked out their account.
16064	Patient WF: Account Access	Generalized the center names that appear in the "select the center where you had your recent appointment" to reduce unnecessary failures.

16449	Patient WF: Account Access	A user who has had their access to the portal revoked can no longer try to re-create that account.
16037	Patient WF: Authorized Access	Corrected issue where the user could press NEXT before entering the verification code, therefore disabling the Next button.
13068	Patient WF: Make Appointment	Entering insurance has 2 steps - if the user enters insurance, then authorization, then presses BACK, they are now brought to insurance step 2/2 instead of starting over on insurance.
16061	Patient WF: Make Appointment	Worker's compensation 'date of injury' field no longer allows dates in the future.
17299	Patient WF: Make Appointment	Resolved issue where the 'PortalAllowEveningWeekendScheduling' feature allowed the user to schedule timeslots earlier than 'now.'
16062	Patient WF: Portal Pass iCode	Resolved issue where 2 or more studies related to the same iCode would cause an error.
16439	System	eRAD portals now support time zones that are + UTC.

Utilization Management Portal:

Bug #	Category	Subject
16053	Exam Detail Page	The 'Opinion letter unavailable' message now supports the Get Help link.
15965	Get Help Page (Outside & Inside)	The 'Get Help' email confirmation to the user who requested no longer has the 'Sincerely' section repeated.
16012	Orders Page	Worklist will now show the paperclip icon when the record has attachments.
16051	Orders Page	Finalized date on the Orders - Pending tab now only shows valid dates.
17011	Orders Page	Improved performance of the worklist.
15510	Search Page	Resolved issues with DOB search in certain browsers.
15511	Search Page	If the user selects a date range filter, studies are filtered appropriately.
15515	Search Page	'Exam Type' search filter is no longer ignored.
15595	Themes	Ensured all deployed themes are compatible with the portal.

16736	Exam Detail Page	Resolved issue where report tab and quick-launch icon failed to load the diagnostic report.
16188	Orders Page	Now preventing more than one 'attachment' pop-up to appear at a time.
17230	Provider Utilization Management Page	Resolved issue with exam type filter not filtering properly.
16705	Web Portal Agreement Page	Updated text on Web Agreement (EULA) Page.

KNOWN LIMITATIONS

The following are new bugs found in build 2.2017.3. Bugs reported in previous versions are not captured as Known Limitations in this document.

#	Category	Subject
17119	RIS	Returned tab Status filter needs a "SELECT ALL" option.
17088	RIS	User Mgt. > Edit > Preferences - Save button does not save changes for default landing page.
17547	RIS	Numbered or bulleted list in a report are not getting transferred to PACS.
17541	RIS	The displayed Cache time can sometimes be inaccurate but corrects itself after a minute or two.
17536	RIS	The Citrix Bridge icon has been changed to the 2 circles but in the Windows tray it is still the eRAD icon.
17532	RIS	Cancelling when RIS attempts to install updates throws an error.
17518	RIS	Exception thrown when clicking "Skip Labwork Advised WL" in Utilization Review.
17494	RIS	Windows docking inside of the patient folder.
17492	RIS	PACS Integration - View Images from Patient Folder does not order studies correctly.
17487	RIS	Duplicate Issuer/MRN in grid does not trigger validation error when scheduling/creating order.
17486	RIS	Diagnostic Report lists "Copy to" providers in diagnostic report even if the CC provider is configured for no report delivery for Courtesy Copies.
17484	RIS	Provided Educational Resources checkboxes should stay in sync, with both being either checked or not checked.
17448	RIS	Loading patient with existing US address information may result in incorrect Zip Code.
17437	RIS	When user preferences fail to save, no error is shown to the user.
17427	RIS	Client performance issue when populating calculated columns.
17341	RIS	Browser Config lookup editor will not allow removing an existing value from URL without replacing it.
17010	RIS	Problem reloading dictation after an error occurs upon saving.
16250	RIS	Any dictation that fails to save, throws out the dictation on reloading.

17044	RIS	Burn CD - when studies with status 'Order pending approval' are selected, an error occurs.
17028	RIS	A number of columns are not populating in Radiologist - Signed By Date WL.
17020	RIS	UM tab remains visible after procedure change.
16995	RIS	After displaying the message that RIS is already running, an object reference error message is displayed.
16990	RIS	l_message_group > external_notification_email_address does not appear to be forwarding messages.
16970	RIS	Cannot Retry Job in Distribution History WL.
16960	RIS	When turning off the STAT flag after order is saved, UM status behaves differently depending on the screen.
16850	RIS	Body Parts not populating when adding a new procedure from the Perform Exam window.
16843	RIS	Windows 10 - Unlocking / waking PC hides locked RIS splash login in the background.
16836	RIS	For external reports, when previewing the report in the Report nugget, if the report is not available a message should be displayed to the user.
16796	RIS	Infinitt PACS - login screen flashes for each study when using next workflow.
16782	RIS	Sectra PACS - when two patient folders are open with view images, a close call is not issued when one folder is closed and focus goes to the other folder.
16742	RIS	Autotext field values get saved when switching orders, even though the order is not saved yet.
16735	RIS	If a user's system does not have a Recording device, a null value can be saved for l_user_config settings MciInputDevice which makes the account unusable.
16726	RIS	Selecting a 'named' color in Portal Worklist configuration editor throws exception when selecting worklist tab row.
16717	RIS	When a patient has multiple studies in Pending Dictation WL, after the 1st study is signed, subsequent studies may have the wrong status for the prior study in the mini Patient Folder.
16488	RIS	Context Menu in Patient Search only lists New Appointment, New Walk-in for external results.

16418	RIS	View Study Workflow opening wrong window when using Skip and Continue after creating an Addendum in View Study.
16407	RIS	When editing medical record access, cancelling out still saves information.
16401	RIS	M*Modal Text Expander not validating entries, allows duplicates.
16300	RIS	Error deleting rows from Medical History grid when rescheduling order.
16235	RIS	The function c_getBiopsyTechnique is getting only the last row for the mammo_biopsy_technique_code when multiple rows are possible from the query results.
16221	RIS	UM - UMBypassSTAT workflow requires extra step to search for scheduling times if "STAT exam" flag selected after the procedure.
16192	RIS	When trying to schedule on a holiday, the visual is wrong in the Procedure Picker.
16149	RIS	An error can be displayed when IVT window is opened alongside Utilization Review window.
17062	RIS	Age label is not present next to DOB when rescheduling.
17474	Patient Portal	Unable to delete Padding Override codes and Report and Image Hold Values.
17200	Patient Portal	When creating new appointment in Patient Portal, entering data and hitting back button doesn't retain data.
16301	Patient Portal	Need to add countermeasures for CSRF.
17144	Patient Portal	When most recent exam is "CDImport," patient account creation can't be completed.
16343	Patient Portal	Ordering Provider tool-tips do not match up with their respective ordering providers.
17496	UM Portal	Need to resolve a memory leak with portal attachments.
17119	UM Portal	Returned tab Status filter needs a "SELECT ALL" option.
17088	UM Portal	User Mgt. > Edit > Preferences - Save button does not save changes for default landing page.
17071	UM Portal	By Status' filter does not appear to be working.
17022	UM Portal	Search - 'CC'd Ordering Provider's Last Name' field is not working.
17014	UM Portal	By Timeframe' filter's state [visually] set to last selected tab's configuration.
16712	UM Portal	Page titles shown in browser tabs are incorrect or provider specific.

16298	UM Portal	UM Connect's page titles inappropriately mimic Provider Connect's.
17023	UM Portal	Admin - When a user with a locked account logs into Portal Administration, an error is displayed.
16035	UM Portal	Modifying tab filtering options in Account > Settings can remove inappropriate exams from the orders list.

RIS RELEASE VERSION NUMBERS

Build	Patch	UI Version	Core Version	WS Version	DB Version	Digital Forms	Patient Portal	UM Portal	Provider Portal	Notes
2016.2	-	2.16.2.0 (3GB)	2.16.2.0	2.16.2.0	2.16.2.0.00172540					Full Version Release - GUI.zip, Web Service, DB, Management Reports, Questionnaire and Citrix Bridge
2016.2	1	2.16.2.1 (3GB)	2.16.2.0	2.16.2.0	2.16.2.0.00172540					GUI.zip and Citrix Bridge
2016.2	2	2.16.2.2 (3GB)	2.16.2.0	2.16.2.0	2.16.2.2.00243102					GUI.zip, DB and Citrix Bridge
2016.3	-	2.16.3.0 (3GB)	2.16.3.0	2.16.3.0	2.16.3.0.00257101	2.16.3.0				Full Version Release
2016.3	1	2.16.3.1	2.16.3.0	2.16.3.1	2.16.3.1.00298834	2.16.3.0				GUI.zip, Web Service and DB
2016.3	2	2.16.3.2	2.16.3.0	2.16.3.2	2.16.3.1.00298834	2.16.3.0				GUI.zip and Web Service
2016.4	-	2.16.4.0	2.16.4.0	2.16.4.0	2.16.4.0.00301943	2.16.4.0	1.16.4.0.310284			Full Version Release
2016.4	1	2.16.4.1	2.16.4.0	2.16.4.1	2.16.4.0.00301943	2.16.4.0	1.16.4.0.310284			GUI and Web Service updates
2016.4	2	2.16.4.2 (3GB)	2.16.4.0	2.16.4.1	2.16.4.0.00301943	2.16.4.0	1.16.4.2.460241			GUI and Patient Portal updates
2016.4	3	2.16.4.3 (3GB)	2.16.4.0	2.16.4.3	2.16.4.3.00483474	2.16.4.0	1.16.4.3.489120			GUI and Patient Portal updates
2016.4	4	2.16.4.4 (3GB)	2.16.4.0	2.16.4.3	2.16.4.3.00483474	2.16.4.0	1.16.4.3.489120			GUI
2016.4	5	2.16.4.5 (3GB)	2.16.4.0	2.16.4.3	2.16.4.3.00483474	2.16.4.0				GUI
2016.4	6	2.16.4.6 (3GB)	2.16.4.0	2.16.4.3	2.16.4.3.00483474	2.16.4.0				GUI
2016.5	-	2.16.5.0 (3GB)	2.16.5.0	2.16.5.0	2.16.5.0.00349303	2.16.5.0	1.16.5.0.362009			Full Version Release
2016.6	-	2.16.6.0 (3GB)	2.16.6.0	2.16.6.0	2.16.6.0.00411295	2.16.6.0	1.16.6.0.432471			Full Version Release
2016.6	1	2.16.6.1 (3GB)	2.16.6.0	2.16.6.0	2.16.6.0.00411295	2.16.6.0	1.16.6.1.468583			GUI and Patient Portal updated
2016.7	-	2.16.7.0 (3GB)	2.16.70	2.16.70	2.16.7.00490835	2.16.70	1.16.7.0.493031	2.16.7.0.493008		Full version release
2016.7	1	2.16.7.1 (3GB)	2.16.7.0	2.16.7.1	2.16.7.0.00490835	2.16.7.0	1.16.7.0.493031	2.16.7.0.493008		GUI and Web Service updates
2016.7	2	2.16.7.2 (3GB)	2.16.7.0	2.16.7.2	2.16.7.0.00490835	2.16.7.0	1.16.7.0.493031	2.16.7.0.493008		GUI and Web Service updates
2016.7	3	2.16.7.3 (3GB)	2.16.7.0	2.16.7.3	2.16.7.0.00490835	2.16.7.0	1.16.7.0.493031	2.16.7.0.493008		GUI and Web Service updates
2016.7	4	2.16.7.4 (3GB)	2.16.7.0	2.16.7.3	2.16.7.0.00490835	2.16.7.0	1.16.7.0.493031	2.16.7.0.493008		GUI
2016.7	5	2.16.7.5 (3GB)	2.16.7.0	2.16.7.3	2.16.7.0.00490835	2.16.7.0	1.16.7.0.493031	2.16.7.0.493008		GUI
2016.7	6	2.16.7.6 (3GB)	2.16.7.0	2.16.7.6	2.16.7.0.00490835	2.16.7.0	1.16.7.0.493031	2.16.7.0.493008		GUI and Web Service updates
2016.7	7	2.16.7.7 (3GB)	2.16.7.0	2.16.7.7	2.16.7.0.00490835	2.16.7.0	1.16.7.0.493031	2.16.7.0.493008		GUI and Web Service updates
2016.7	8	2.16.7.8 (3GB)	2.16.7.0	2.16.7.7	2.16.7.8.00683507	2.16.7.0	1.16.7.0.493031	2.16.7.0.493008		GUI and DB updates
2016.7	9	2.16.7.9 (3GB)	2.16.7.0	2.16.7.9	2.16.7.9.00715012	2.16.7.0	1.16.7.0.493031	2.16.7.9.723457		GUI, Web Services, DB updates and UM Portal
2016.7	10	2.16.7.10 (3GB)	2.16.7.0	2.16.7.10	2.16.7.9.00715012	2.16.7.0	1.16.7.0.493031	2.16.7.9.723457		GUI and Web Service updates
2016.7	11	2.16.7.11 (3GB)	2.16.7.0	2.16.7.11	2.16.7.11.00761267	2.16.7.0	1.16.7.0.493031	2.16.7.9.723457		GUI, Web Service and DB updates
2016.7	13	2.16.7.12 (3GB)	2.16.7.0	2.16.7.11	2.16.7.11.00761267	2.16.7.0	1.16.7.0.493031	2.16.7.9.723457		GUI
2017.1	-	2.17.1.0 (3GB)	2.17.1.0	2.17.1.0	2.17.1.0.00559886	2.17.1.0	2.17.1.0.572290	2.17.1.0.00000		Full Version Release
2017.1	1	2.17.1.1 (3GB)	2.17.1.0	2.17.1.1	2.17.1.1.00589952	2.17.1.0	2.17.1.0.572290	2.17.1.0.00000		GUI, Web Service and DB updates
2017.1	2	2.17.1.2 (3GB)	2.17.1.0	2.17.1.2	2.17.1.2.00621962	2.17.1.0	2.17.1.0.572290	2.17.1.0.00000		GUI, Web Service and DB updates
2017.1	3	2.17.1.3 (3GB)	2.17.1.0	2.17.1.3	2.17.1.3.00640480	2.17.1.0	2.17.1.0.572290	2.17.1.0.00000		GUI, Web Service and DB updates
2017.1	4	2.17.1.4 (3GB)	2.17.1.0	2.17.1.4	2.17.1.4.00692239	2.17.1.0	2.17.1.4.701924	2.17.1.0.00000		GUI, Web Service, DB and Patient Portal updates
2017.1	5	2.17.1.4 (3GB)	2.17.1.0	2.17.1.5	2.17.1.4.00692239	2.17.1.0	2.17.1.4.701924	2.17.1.0.00000		Web Service
2017.1	6	2.17.1.6 (3GB)	2.17.1.0	2.17.1.5	2.17.1.6.00745281	2.17.1.0	2.17.1.4.701924	2.17.1.0.00000		GUI and DB Updates
2017.1	7	2.17.1.7 (3GB)	2.17.1.0	2.17.1.5	2.17.1.6.00745281	2.17.1.0	2.17.1.4.701924	2.17.1.0.00000		GUI update
2017.1	8	2.17.1.8 (3GB)	2.17.1.0	2.17.1.5	2.17.1.6.00745281	2.17.1.0	2.17.1.4.701924	2.17.1.0.00000		GUI update
2017.2	-	2.17.2.0 (3GB)	2.17.2.0	2.17.2.0	2.17.2.0.00695782	2.17.2.0	2.17.2.0.702238	2.17.2.0.702213	2.17.2.0.702226	Full Version Release. First release of Provider Portal
2017.3	-	2.17.3.0 (3GB)	2.17.3.0	2.17.3.0	2.17.3.0.00764112	2.17.3.0	2.17.3.0.321	2.17.3.0.321	2.17.3.0.321	Full Version Release. Including Patient, Provider and UM Portals

CODE STREAM DIAGRAM

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121 / 121