

Indian Health Service

IHS Certified Health IT - RPMS/EHR

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'RPMS IMAGING SUPPORT UPDATES: VISTA IMAGING, RADIOLOGY, EHR IMAGING VIEWERS, AND ISI RAD'

TUESDAY, AUGUST 13, 1:00 PM



Presented by

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This Session is Suitable for the Following Health IT Roles

- Clinical Informatics
- Radiology Information System (RIS) owner
- VistA Imaging/PACS Coordinator
- Health Information Management
- Nursing Informatics
- Business Office and Coding staff



Today's TOPICS

The VistA Imaging MAG Bundle releases – previous and upcoming

RPMS RAD/NUC MED Updates

EHR All Images Viewer Updates – previous and upcoming

VistA Rad Deprecation

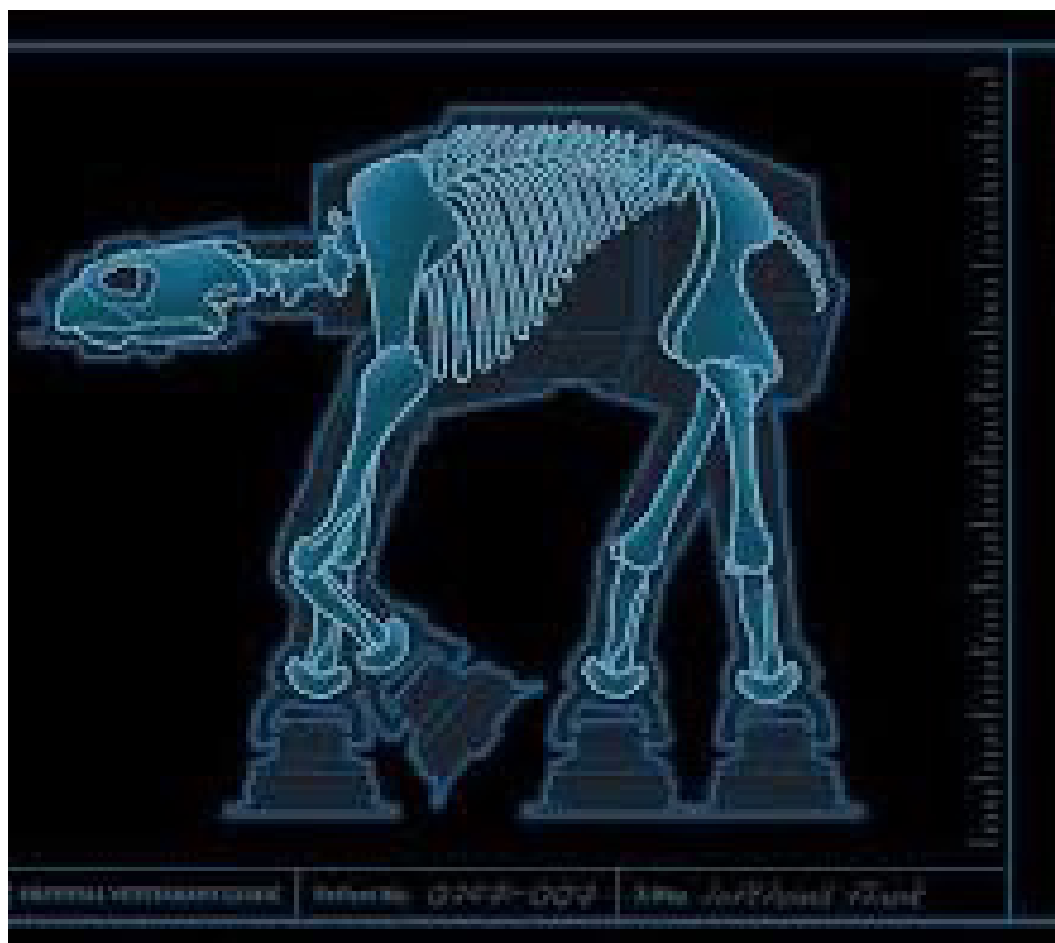
New Imaging topics related to the Certified EHR



Important Acronyms

- **AE_Title** - The unique name assigned to a DICOM application to identify the application to other DICOM applications on the network. AE_Title will be used to log machine-to-machine communication within this patch.
- **BGP** – Background Processer
- **DICOM** - Digital Imaging and Communications in Medicine
- **DICOM Gateway** - Interface between Vista and external DICOM application entities.
- **HDIG** - Hybrid DICOM Image Gateway
- **KIDS** - Kernel Installation and Distribution System
- **LDGW** – Legacy Gateway
- **OS** – Operating System for Microsoft Windows
- **PACS** - Picture Archiving and Communications System
- **RPC** – Remote Procedure Call
- **TWAIN** - An interface standard for scanners, cameras and other input devices. A TWAIN driver is generally supplied by the equipment vendor.





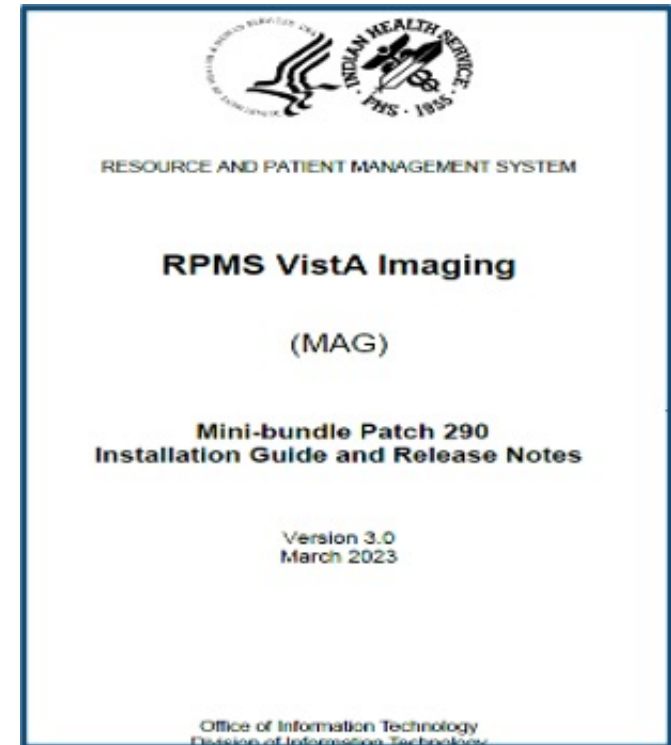
Vista Imaging -
Recent Updates

MAG!

VistA Imaging Last MAG 'mini' Bundle

MAG v3.0 p1 Minibundle Patch 290 Overview:

- MAG*3.0*321 Capture
- MAG*3.0*290 Display
- MAG*3.0*325 Background Processor
- MAG*3.0*305 LDGW - Legacy DICOM Gateway
- MAG*3.0*302 HDIG – Hybrid DICOM Gateway
- MAG*3.0*255 VistARad has been replaced by ISI RAD



VA / MAG Patches included in Mini-bundle Patch 290 for IHS: RPMS KID files installed

Patch Name	Sequence Number	Patch Description	Release date
MAG*3*258	205	CLINICAL DISPLAY DEFECTS	7/20/2021
MAG*3*306	206	DICOM AUTOMATIC Q/R IMPROVEMENT	9/10/2021
MAG*3*257	207	VISTA IMAGING - HDIG DEFECT(S) FIX a DICOM Gateway patch	9/10/2021
MAG*3*284	208	VIX INGEST SERVICES - ADDITIONAL IMAGE FILE FORMATS patch that provides fixes to the Vista Imaging Clinical Display	9/22/2021
MAG*3*267	209	VISTA IMAGING CLINICAL CAPTURE DEFECT FIX	9/27/2021
MAG*3*301	210	VISTA UPDATES TO ALLOW IHS TO UPGRADE TO LATEST VISTA IMAGING VERSION a KIDS only patch that provides fixes to the Vista Study Tracker	10/20/2021
MAG*3*306	211	DICOM AUTOMATIC Q/R IMPR	
MAG*3*316	212	Clinical Display (200CRNR FIX)	11/17/2021
MAG*3*326	214	LOG4SHELL VULNERABILITY REMEDIATION	12/21/2021
MAG*3*273	215	HDIG JAVA & TOMCAT Upgrade	1/25/2022

Patch Name	Sequence Number	Patch Description	Release date
MAG*3*330	216	HDIG Defect SMB2	3/09/2022
MAG*3*274	217	Legacy DICOM GW defect patch	3/21/2022
MAG*3*292	218	TeleReader patch	4/12/2022
MAG*3*289	219	DICOM Importer III patch	4/13/2022
MAG*3*325	220	Vista IMAGING Background Processor patch	4/25/2022
MAG*3*302	221	HDIG Defect and Adaptive Maintenance	6/06/2022
MAG*3*305	222	DICOM Export Enhancement	6/08/2022
MAG*3*269	223	VIX Query Retrieve	6/09/2022
MAG*3*321	224	Clinical Capture (w/o IE-11 browser)	12/1/2021
MAG*3*318	225	DICOM EXPORTER ENHANCEMENTS	6/29/2022
MAG*3*290	226	Display patch w/o IE11	6/30/2022



Vista Imaging Clinical Capture MAG*3.0*321 Client

Cumulative software updates – sustainment fixes.

- Reminder that the MAG*3.0*321 will be the .exe installed.
 - Vista Imaging Clinical Capture Defect Fix for MAG*3.0*267
MAG*3.0*321 Clinical Capture *P321 (non-IE browser)



Capture Client Review

- Changed process to save Font settings made during users Imaging session. This is the font used when selecting a progress note window. Issue found when testing MAG3_0_251-The font window did not remember last selected settings, it defaults back to MS Sans Serif, black and font size 9
- Changed call to correct API, returning the correct version of Microsoft Windows Operating System.
- The code was changed so that the Clinical Capture User Manual will now launch via Google Chrome, Microsoft Edge or Firefox



IHS reported issue with MAG*3.0* 291 Capture Client

VA SNOW INC34271694 - Vista Capture freezing when using Vista Capture

1. Open Capture and sign in
2. Open Display and sign in
3. In Capture, File -> Open Image for Annotation after Image OK
4. Scan or import an image
5. Click Capture
6. Click Ok (the image viewer pops up to check if image made it to the patient's profile)
7. Do the same for a second patient and Capture freezes and becomes unresponsive.



VistA Imaging Clinical Display MAG*3.0*290 Client

Cumulative software updates – sustainment fixes.

- Reminder that the MAG*3.0*290 will be the .exe installed.
 - MAG*3.0*258 Display defects
 - MAG*3.0*316 Clinical Display (200CRNR FIX) – KIDS only
 - MAG*3.0*290 Clinical Display IE Fix *



Display Client Review

- VI Display will now view images side-by-side in 2X1 stack view settings
- Advance Directive patient filter results will now filter documents listed correctly with expected results.
- Added "Duplicate Entry" to the VistA Imaging QA Review function in VistA Imaging
- View side-by-side images in RPMS>VISTA IMAGING without the image moving in the opposite direction of the arrows selected.
- MAG*3.0*p256 Clinical Display message history log file was showing unencrypted Password
- MAG.INI Workstation timeout setting was not working correctly for Vista Imaging Display



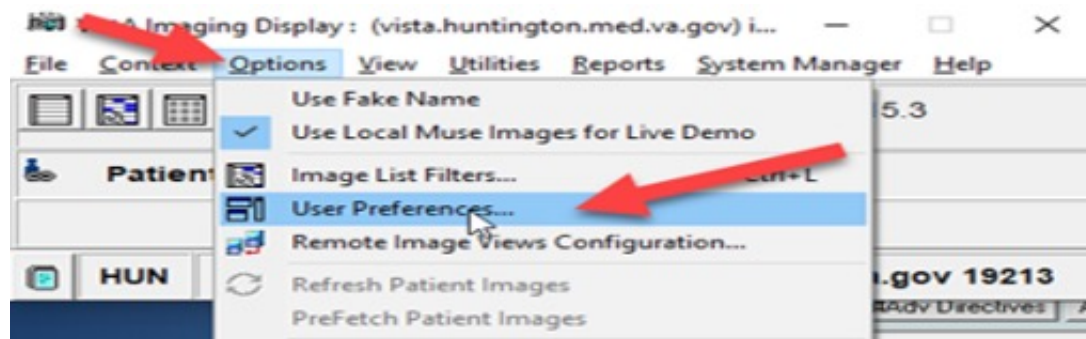
Display Review

- MAG*3.0*290 Clinical Display IE Fix
- As IE support went away, a solution was needed to open PDF in Acrobat Reader and Edge, XML files using the inbuilt viewer. Code was changed so that the VI Display help manual will be launched under the browser that is associated with the default file type. Also, changed code such that when previewing an XML file in the browser for the Display process, the XML file will be opened with the inbuilt XML Viewer.



Display Review – PDF Issue

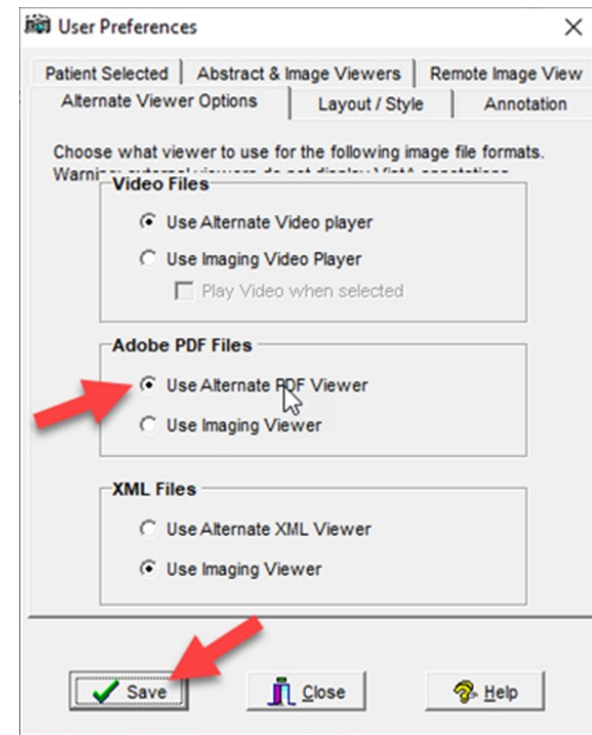
- After changes made in Clinical Display Patch MAG*3.0*315 (likely MAG 290 since we/IHS are seeing it), XML Forms Architecture(XFA) based PDF documents, other types of PDF documents, and flowsheet documents can sporadically fail to display and/or print using either Print Options or Release of Information (ROI) Print Options within the Imaging viewer of Clinical Display
- The current known workarounds for users experiencing this issue are as follows:
 - Configure Clinical Display Patch MAG*3.0*315 to use the External PDF Viewer, which will be Adobe Reader in almost all cases, rather than the Imaging/internal viewer. This change can be accomplished by end users with no special privileges by accessing “Options” on the menu, then selecting “User Preferences” (see below).



Display Review –PDF Issue (Continued)

Within the User Preferences dialog box that opens, under the section labeled “AdobePDF Files” select the option “Use Alternate PDF Viewer”, then save the changes.

**** Notice for using an external PDF viewer **** The Adobe Reader application maintains multiple open documents in separate tabs until they are **closed so there is a possibility of an incorrect document** or even a document for an unintended patient being displayed. Please exercise caution with this workaround.



VistA Imaging Background Processor MAG*3.0*325 Client

Cumulative software updates – sustainment fixes.

- Reminder that the MAG*3.0*325 will be the .exe installed.
 - MAG*3.0*308 Back Ground Processor (KIDS only)
 - MAG*3.0*325 Defect Patch - VI Background Processor

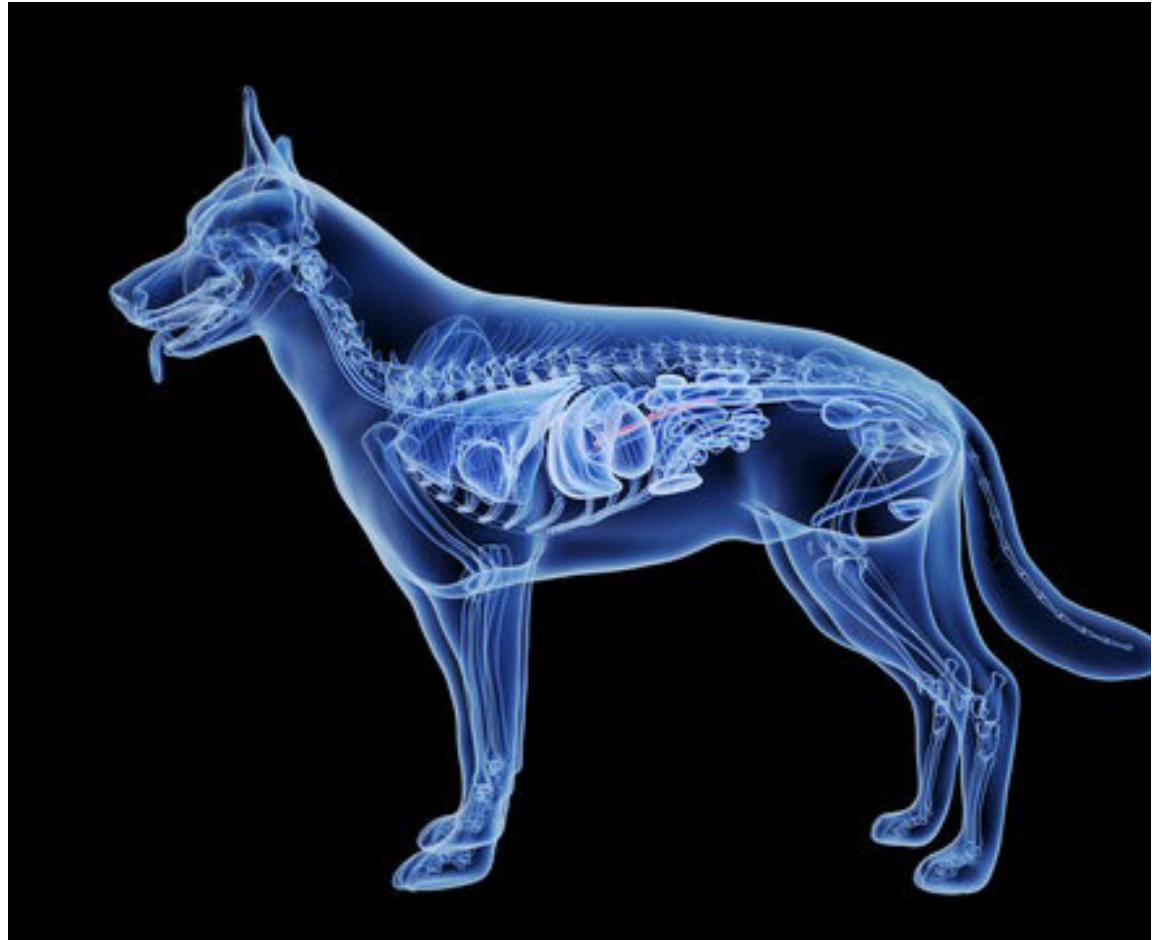


Background Processer Client Review

- Intermittently stops processing, due to a "Certificate error" that pops up, causing the queue to stop processing. Forcing to consistently entering the access/verify code; it goes through and the certificate reappears has been fixed.



VistA Imaging –
What is coming
in your way for
MAG?



VistA Imaging – next MAG bundle update!

MAG*3.0*p345 – Name of the next ‘mini’ bundle. Naming convention follows the last VA/IHS MAG release for RPMS in the bundle.

This is a pending release after Alpha/Beta testing.

Kickoff call for alpha/beta testing is Aug 21.. Testing sites are Phoenix Indian Medical Center Chinle, Kayenta, Crownpoint, and Desert Sage Youth Wellness Center/Sacred Oaks Healing Center.

- MAG*3.0*291 Capture
- MAG*3.0*351 Display
- MAG*3.0*319 LDGW
 - Windows server 2019 - is in MAG p319 LDGW Application and supports 2019 R2.
- MAG*3.0*345 HDIG
- MAG*3.0*347 BGP



Next MAG Bundle Update - continued

- Capture

- Correction of Progress Note window expanding and goes out of screen when font size is changed
- Correction of VistA Imaging Capture cuts off the word Cancel on the button in Create New Note window

- Display

- The symbolic link/application data link junction appears on ALL workstations
- When switching patients in EHR, VistA Imaging changes onto the new patient
- RPC(Broker) version number now appears on VistA Imaging Display Help

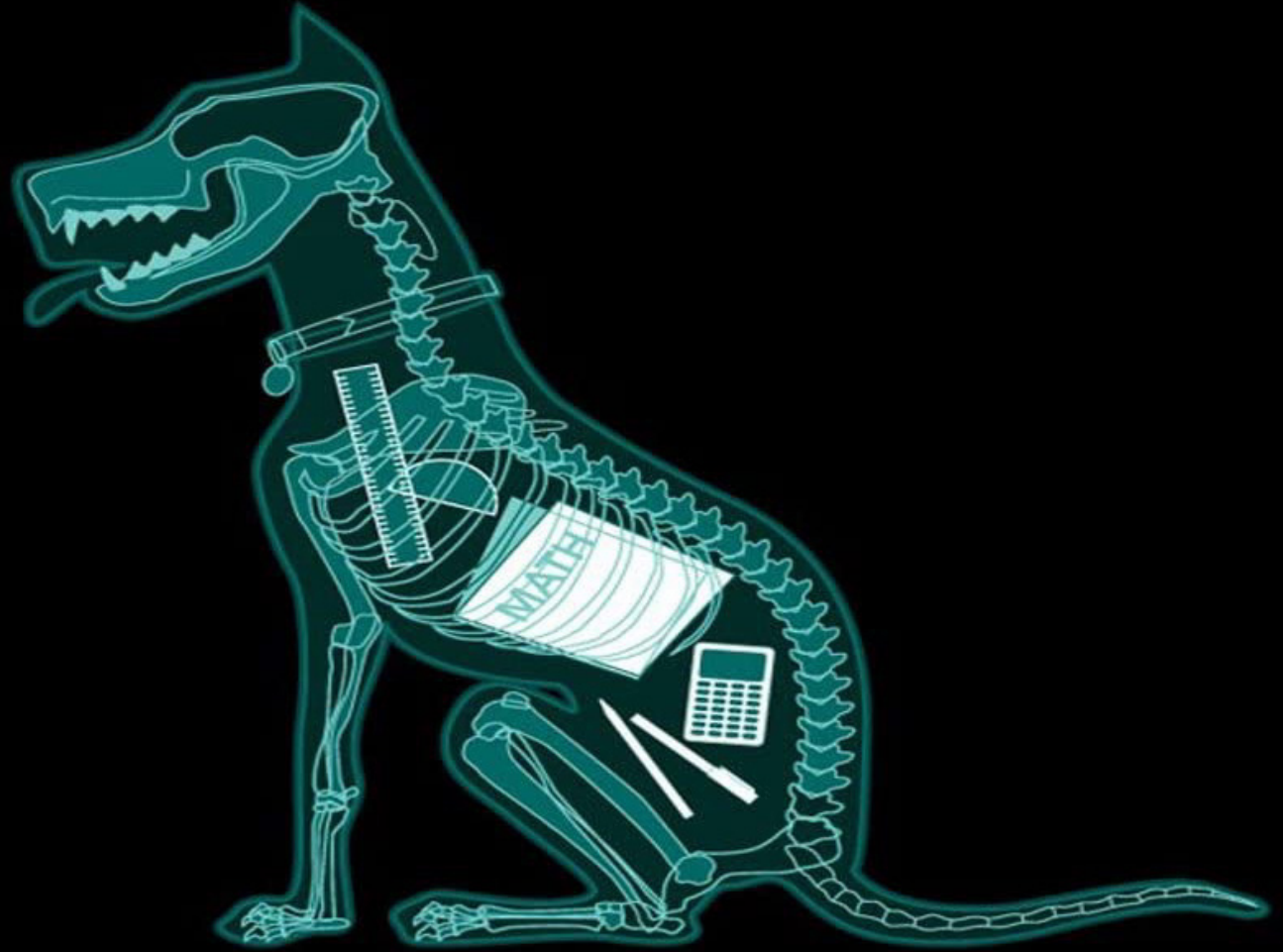


BMAG p195 –
Upcoming features to be included with bundle release.
Separate KIDS for IHS.

- An issue at a site with 4 digit HRN's is causing the viewers to believe it was a Last 4 SSN and pulling up incorrect patients has been dealt with
- After the Mega/Mini bundles installations, an issue to get the Q/R to work with the new HDIG. The new routines changed the AE title to all upper case when we sent it back through the HDIG. So, if a PACS system uses mixed-case AE titles, they would be rejected. This has been corrected.
- An issue with odd number health record numbers were pulling up wrong patients when reports returned from a vendor.
- Image Routing updates to alleviate need for continuous site support when errors occur. Instead of erroring out and stopping transmission, it will bypass error and continue to transmitting information.



Radiology –
and RPMS
RAD/NUC MED
Updates



Radiology

Radiology v3.0 Patch 1010 Background. Released March 2024

- Highlight several software updates for the RPMS RAD/NUC MED Total System and keep IHS in alignment with the Veteran's Administration RA application as applicable for IHS.
- Detail enhancements or fixes address reported RAD/NUC MED issues, requested enhancements, help/support desk ticket required fixes and development from the VA related to COVID-19 and radiology information system enterprise updates.



Radiology v3.0 Patch 1010 Overview

What is included in this release – bundle for RA*5.0*1010:

- **4 Features for IHS** approved for RA*5.0*1010 by OIT/DIT Change Control Board.
- IHS routines were tested with a MAG VistA Imaging environment.
- The 1010 addresses are unrelated to the RPMS/EHR Certification.
- Includes the RPMS “AUPN DISPLAY PPN” parameter functionality and is defaulted to OFF until Patient Preferred Name (PPN) is available across the enterprise.



RPMS RAD/NUC MED Total System Enhancements & Updates:

1. Display of the Patient Preferred Name in RPMS RAD/NUC MED

```
>>Rad/NM Consultation for RADIOLOGY DEPARTM<<Printed:AUG 10,2023 12:52Page 2
Division: 2021 DEMO HOSPITAL (INST) - RADIOLOGY DEPARTMENT -4913
=====
Name          : DEMO,DONNA SUE - UPPER*      Urgency       : ROUTINE
Pt ID Num     : 137711                       Transport    : AMBULATORY
Date of Birth : NOV 10,1986                   Patient Loc  : RADIOLOGY DEPARTMENT
Age at req    : 36                           Phone Ext    :
Sex           : FEMALE
Height (in.)  :                               Height Date:
Weight (lbs)  : 210                           Weight Date: DEC 23, 2020
=====
226 CHEST X-RAY (71045)                       (RAD Detailed 71045) WAIT
Procedure Modifiers: AP
Request Status: ACTIVE
Exam Status:   WAITING FOR EXAM
```



RPMS RAD/NUC MED HL7 Interface correction, update:

3. Default modality is sending CR to vendor/modality when undefined the RAD/NUC MED Procedure file. Address from RA 1009 - The addition or capture of the RAD/NUC MED Procedure Modality code in the HL7 outbound OBR-24.

```
HL7 MESSAGE TEXT SEARCH                AUG 30,2023  10:42    PAGE 1
-----
NUMBER: 374863                          DATE/TIME ENTERED: AUG 30, 2023@10:39:48
SERVER APPLICATION: RA-VOICE-SERVER      TRANSMISSION TYPE: OUTGOING
MESSAGE ID: 8992374863                  PARENT MESSAGE: AUG 30, 2023@10:39:48
PRIORITY: DEFERRED                      RELATED EVENT PROTOCOL: RA REG 2.3
MESSAGE TYPE: SINGLE MESSAGE
MESSAGE TEXT:
PID|890777^6^AM10|9012^6^AM10||DEMO^GABRIEL^ISAAC||19520910|M|||||122423626
ORC|NW||||IP||||20230830103948-0700
OBR
|083023-236|6769169.8961-1^083023-236^L|71045^X-RAY EXAM CHEST 1 VIEW^C4^752^CH
EST X-RAY (71045)^99RAP|
|202308301038|""|""|||""||2985^REDLEGS^ALEE||RADIOLOGY DEPARTMENT -4913||1^RADIO
LOGY DEPARTMENT -4913^2906^2021 DEMO HOSPITAL (INST)|RAD^GENERAL RADIOLOGY|20230
830103948-0700||^AAAA^R||^ATEST P1010|||202308301038-0700
```



RPMS RAD/NUC MED HL7 Interface update, continued:

4. HL7 Diagnostic Code errors

- ✓ Eliminate RAD/NUC MED HL7 error message when the diagnosis segment comes in blank.
- ✓ Errors can be found here:

Rad/Nuc Med Total System Menu>Supervisor Menu>Radiology HL7 Menu>Rad/Nuc Med HL7 Voice Reporting Errors

```
There was a problem processing an HL7 message sent by  
FT DEFIANCE on NOV 16, 2022@09:06:09.  Message ien = 8564088
```

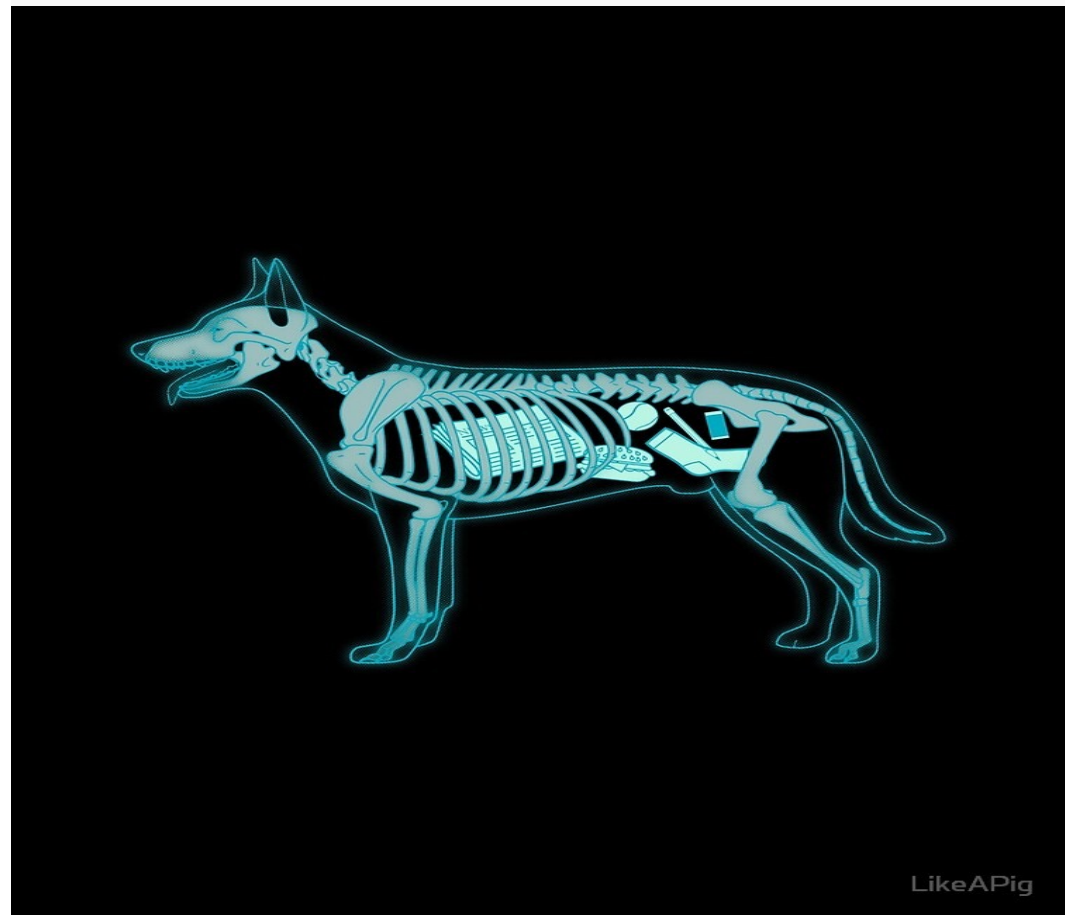
```
The report entered on Case #343 for XXX XXXX,XXXXX X  
was rejected by Radiology/Nuclear Medicine.
```

```
The reason given was:  
Invalid Diagnostic Code
```

```
( This message has been sent to G.RAD HL7 REJECTIONS  
and to the verifying physician, XXXXXXXXXXX,XXXXXX X )
```



Radiology –
What's next
in RPMS
RAD/NUC
MED?



Radiology – PENDING release

Radiology v3.0 Patch 1011

- A one feature fix was discovered in Patch 1010. Several sites reported that patient reports could not be seen or printed from RPMS and EHR. This patch addresses this issue and is due to release end of August.
- Feature 109310 - Report and Impression section missing in some of the Radiology reports when printing.
- Issue due RPMS RAD/NUC MED 'Select Patient Report to Print'.
- Beta testing is complete with national release imminent.



BMAG 193/EHRp34
All Images Viewer

NEW!! - Display client in the
EHR.



EHR Imaging Viewers

- All Images Viewer implemented in IHS BMAG p193. The All Images plug in allows end users to navigate new functionality introduced with this component

- Image Viewers (BMAG)

Version: 3.0

Patch: 193

- MAG Security Keys are needed for viewing in the All Images Viewer

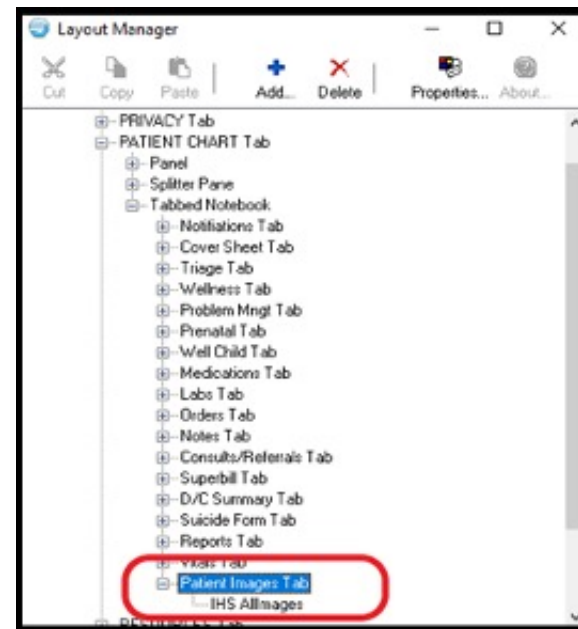
MAGDISP ADMIN

MAGDISP CLIN



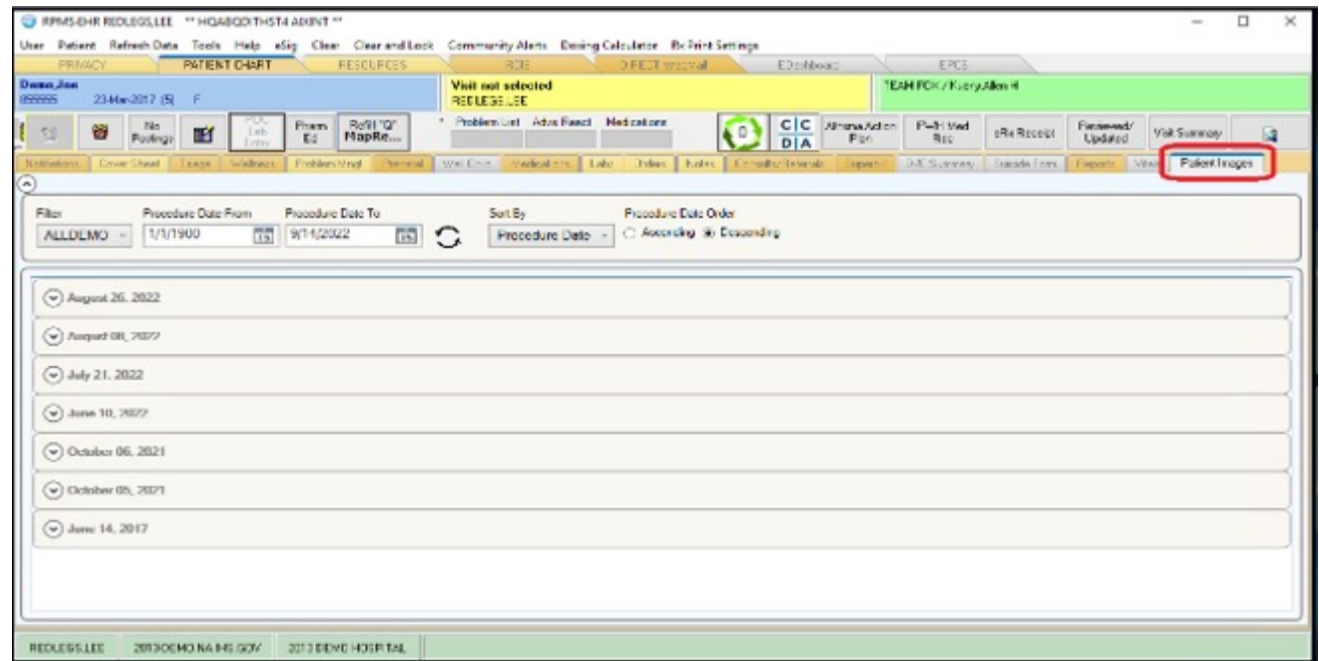
Addition of the IHS All Images Object (1)

Layout Manager>Select Patient Images>Choose +Add>Expand Name and scroll down to and choose IHS ALLImages



Addition of the IHS All Images Object (2)

Patient Image tab on the EHR GUI



Confirm assignment of appropriate security keys for users

MAG Security Keys are needed for viewing in the All Images Viewer

- MAGDISP ADMIN
- MAGDISP CLIN

Like VistA Imaging Clinical Display and IHS Image Viewer, local IT should assign the appropriate MAG security keys for staff that need to view patient clinical and/or administrative image files. This should reflect local job duties for appropriate image views



Navigate the All Images Viewer (1)

The screenshot displays the 'All Images Viewer' interface within an EHR system. The window title is 'RPMS-EHR REDLEGS.LEE ** HQABQDITHST4 AXDINT **'. The top navigation bar includes 'User Patient Refresh Data Tools Help eSig Clear Clear and Lock Community Alerts Dosing Calculator Rx Print Settings'. Below this, the patient information section shows 'Demos, Joe' with ID '992655' and birth date '23-Mar-2017 (5) F'. The 'Visit not selected' section shows 'REDLEGS.LEE'. The 'TEAM FDX / Query Allen H' is also visible. The main toolbar contains various icons and buttons, with 'Patient Images' highlighted in a red box. Below the toolbar, there are search and filter options: 'Filter' (circled in red), 'ALLDEMO', 'Procedure Date From' (1/1/1900), 'Procedure Date To' (9/8/2022), 'Sort By' (circled in red), 'Procedure Date', and 'Procedure Date Order' (Ascending/Descending). The main content area shows a list of procedure dates with expandable arrows: August 26, 2022; August 08, 2022; July 21, 2022; June 10, 2022; October 06, 2021; October 05, 2021; and June 14, 2017. The bottom status bar shows 'REDLEGS.LEE 2013-DEMO NA.IHS.GOV 2013 DEMO HOSPITAL 09-Sep-2022 20:16'.



Navigate the All Images Viewer (2)

Viewing Images

- Click, select down arrow. Click on Blue Description (Image Link) or double click on thumbnail to open Image Window.

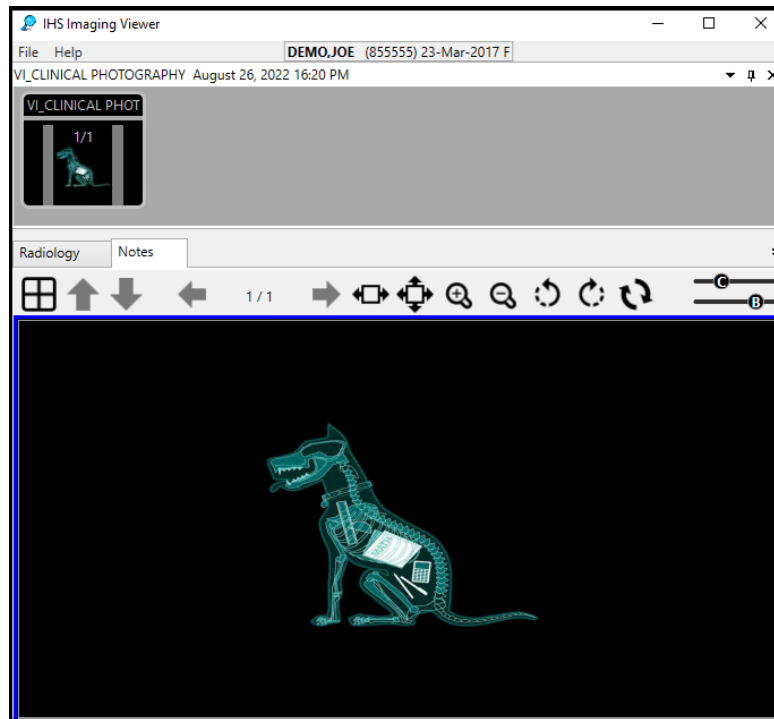
The screenshot shows the EHR interface for patient Joe (ID 65555). The 'Patient Images' tab is active. The filter is set to 'Clin All' and the procedure date range is from 9/11/2017 to 9/11/2022. The list of images is sorted by 'Procedure Date' in descending order. The date 'August 26, 2022' is highlighted with a red box.

Procedure Date	Procedure Date Order
August 26, 2022	Descending
August 08, 2022	
July 21, 2022	
June 10, 2022	
October 06, 2021	
October 05, 2021	

The screenshot shows the EHR interface for patient Joe (ID 65555). The 'Patient Images' tab is active. The filter is set to 'Clin All' and the procedure date range is from 9/11/2017 to 9/11/2022. The list of images is sorted by 'Procedure Date' in descending order. The date 'August 26, 2022' is expanded to show a list of images. The image 'VL_CLINICAL PHOTOGRAPHY' is highlighted with a red box, and its thumbnail is also highlighted with a red box.

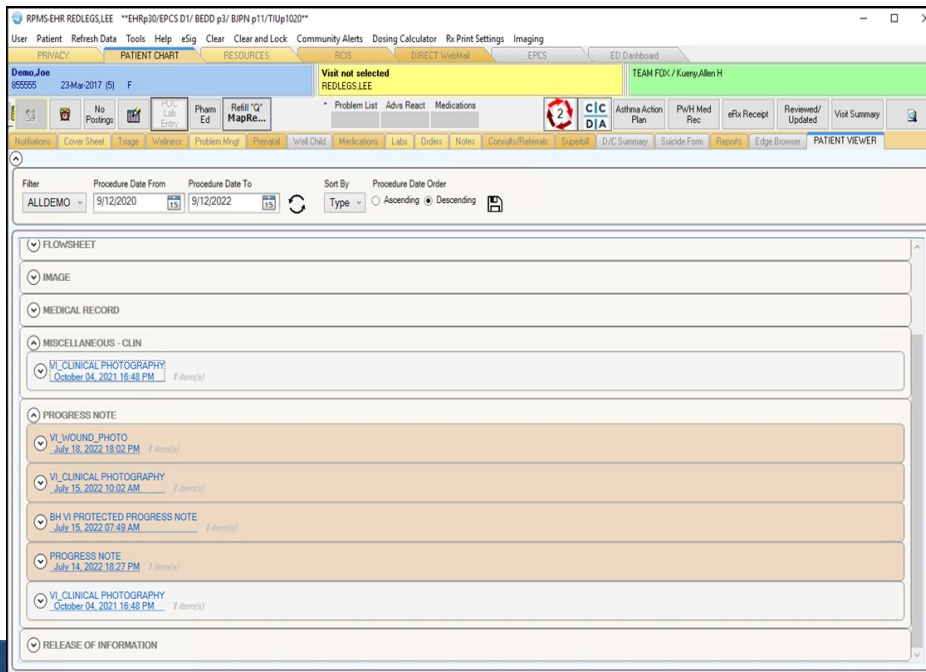
Image Descr	Note Title	Type	Specialty	Event	Captured By
VL_CLINICAL PHOTOGRAPHY	VL_CLINICAL PHOTOGRAPHY	IMAGE	ORTHOPEDICS	PHOTOGRAPHY	REDLEGS.LEE

Navigate the All Images Viewer (3)



Navigate the All Images Viewer (4)

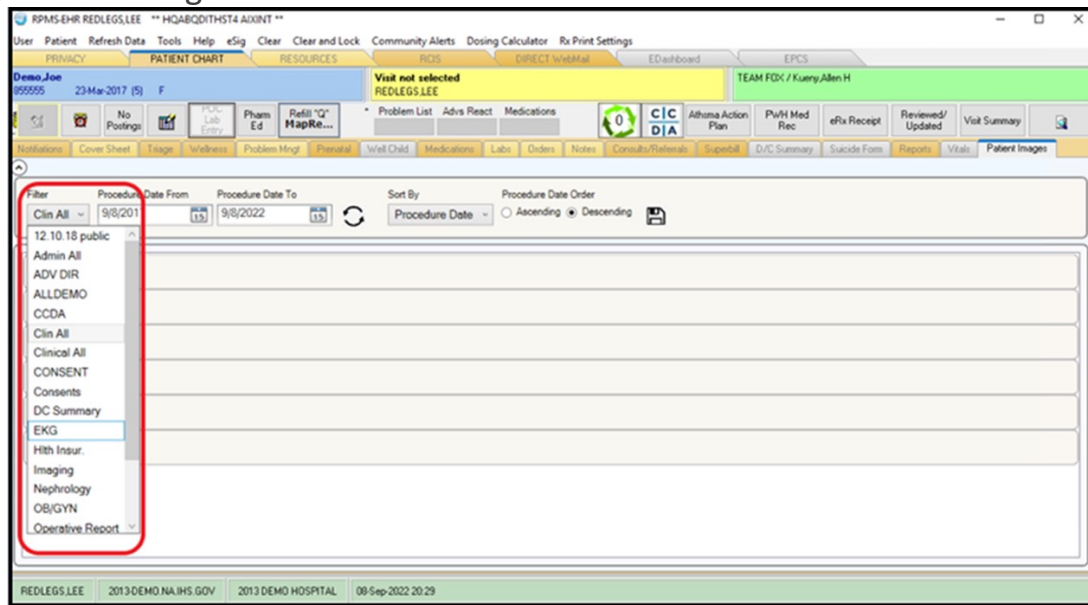
Selecting multiple images. To select a group of images hold Shift down and select the first image and while holding down the Shift key, select the last image of the group. Then select the first image.



Filter Images

Filter

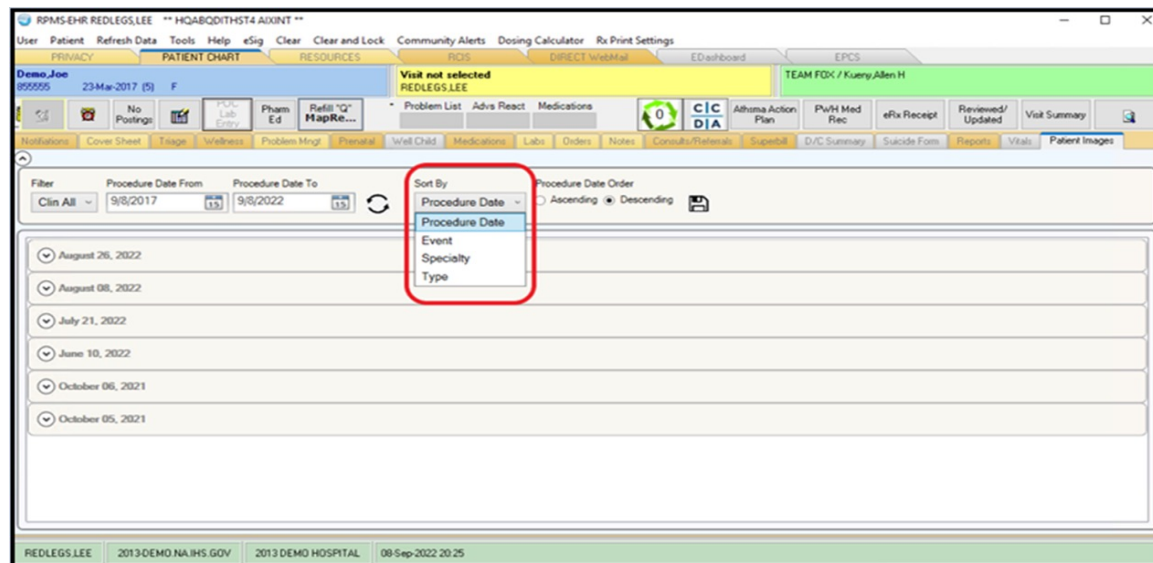
- The ability to apply filters from VistA Imaging Clinical Display for both Public and Private filter settings. Public filter settings are controlled by the MAG SYSTEM security key. Private filters pull from VI Clinical Display and these are unique to each local VistA Imaging site's setting.



Sort Images (1)

Sort

- Viewing criteria can be sorted for either: Procedure Date, Event, Specialty, and Type as saved by VistA Imaging Clinical Capture and viewed in VistA Imaging Clinical Display.



Sort Images (2)

Sort by Procedure Date. The Procedure Date & time is the date of image capture.

The screenshot shows an EHR interface for patient 'Demo Joe' (ID: 855555) on 23-Mar-2017. The 'Patient Images' tab is active, displaying search results for 'ALLDEMO' filtered by 'Procedure Date' from 1/1/1900 to 9/14/2022. The results are sorted by 'Procedure Date' in descending order. A red box highlights the 'Sort By' dropdown menu, which is set to 'Procedure Date'. A red arrow points to the 'VI_PROGRESS NOTE' entry, which includes a thumbnail image of a dog. The entry details are as follows:

Image Descr	VI_PROGRESS NOTE
Note Title	VI_PROGRESS NOTE
Type	IMAGE
Specialty	Unknown
Event	Unknown
Captured By	REDLEGS.LEE



Sort Images (3)

Sort by Event

The screenshot shows an EHR interface for a patient named Demo, Joe (ID: 955555). The interface includes a top navigation bar with tabs like 'PRIVACY', 'PATIENT CHART', 'RESOURCES', 'RCIS', 'DIRECT WebMail', 'EDashboard', and 'EPCS'. Below this is a patient information bar showing 'Visit not selected' and 'REDLEGS.LEE'. A secondary bar identifies the team as 'TEAM FOX / Kuery, Allen H'. A toolbar contains various icons for actions like 'No Postings', 'PUC Lab Entry', 'Pharm Ed', and 'Refill "Q" MapRe...'. A secondary toolbar includes 'Problem List', 'Advs React', 'Medications', and other clinical tools. The main content area is titled 'Patient Images' and features a filter section with 'Filter' set to 'ALLEDMO', 'Procedure Date From' as '1/1/1900', and 'Procedure Date To' as '9/14/2022'. The 'Sort By' dropdown is highlighted with a red box and set to 'Event'. The 'Procedure Date Order' is set to 'Descending'. Below the filter, a list of images is displayed under the heading 'ARTHROGRAM'. The first image is titled 'VL_CLINICAL PHOTOGRAPHY' with a timestamp of 'August 08, 2022 10:00 AM' and is marked as '1 item(s)'. A red arrow points to the 'BIOPSY' event in the list. The image details for the first entry are: Image Descr: VL_CLINICAL PHOTOGRAPHY, Note Title: VL_CLINICAL PHOTOGRAPHY, Type: IMAGE, Specialty: ORTHOPEDICS, Event: ARTHROGRAM, and Captured By: REDLEGS.LEE. A small thumbnail image of a blue dog is visible next to the details. The bottom status bar shows 'REDLEGS.LEE', '2013-DEMO.NA.IHS.GOV', '2013 DEMO HOSPITAL', and '14-Sep-2022 10:18'.

Sort Images (4)

Sort by Specialty

The screenshot shows an EHR interface for patient 'Demo, Joe'. The 'Patient Images' tab is active. In the filter section, the 'Sort By' dropdown is set to 'Specialty' and is highlighted with a red box. Below the filter, the 'CARDIOLOGY' section is expanded, showing a single image entry: 'VI_CLINICAL PHOTOGRAPHY' captured on June 10, 2022. A red arrow points to this entry. Below the image entry, other specialties are listed: 'CHIROPRACTIC', 'COLON & RECTAL SURGERY', and 'DERMATOLOGY'. The status bar at the bottom shows the user 'REDLEGS.LEE' and the date '14-Sep-2022 10:27'.

Sort Images (5)

Sort by Type

The screenshot shows an EHR interface for patient 'Demo Joe'. The 'Patient Images' tab is active, displaying a list of images. The 'Sort By' dropdown is set to 'Type', and the 'Descending' radio button is selected. The list contains two 'CERTIFICATE OF INDIAN BLOOD' images and one 'IMAGE' entry. A red arrow points to the 'IMAGE' entry.

Image Descr	Type	Specialty	Event	Captured By
CERTIFICATE OF INDIAN BLOOD	CERTIFICATE OF INDIAN BLOOD	Unknown	Unknown	REDLEGS.LEE
CERTIFICATE OF INDIAN BLOOD	CERTIFICATE OF INDIAN BLOOD	Unknown	Unknown	REDLEGS.LEE
DEATH CERTIFICATE				
IMAGE				

Sort Images (6)

'Unknown' from Sort by Specialty and/or Event occurs when these index fields are not filled in during the VistA Imaging Capture process. Neither are required fields or indexes.

NOTE:
While Specialty and Event are not required for file saves, this is a good opportunity to remind scanning staff that both do have value. Do ensure all of the fields are documented.

The screenshot shows the VistA Imaging interface for patient 'Demo Joe' (ID 855555). The 'Sort By' dropdown is set to 'Specialty'. The list of images includes:

- Unknown
- VI_PROGRESS NOTE - August 26, 2022 16:22 PM (1 item(s))
 - Image Descr: VI_PROGRESS NOTE
 - Note Title: VI_PROGRESS NOTE
 - Note Title: IMAGE
 - Time: Unknown
 - Specialty: Unknown
 - Event: Unknown
 - Captured by: REDLEGS,LEE
- VI_DIAGNOSTIC_IMAGING - August 08, 2022 08:18 AM (1 item(s))
- VI_PROGRESS NOTE - July 21, 2022 14:34 PM (1 item(s))
- CERTIFICATE OF INDIAN BLOOD - July 21, 2022 00:01 AM (1 item(s))



Date Ranges

Date Ranges

- The Ascending or Descending date **option** can be toggled and saved for user interface.
- The *Procedure Date From* and *Procedure Date To* come from VistA Imaging Display filter settings.
- If a user observes **Procedure Date From 1/1/1900** and the **Procedure Date To Today**, this is by design from Clinical Display and associated Filter. (All Images)
- Date ranges can be changed as needed during user interface. To 'save' for later use, a Display Filter must be updated or applied. Filter date ranges can be saved or set to six months, one year, two years, five years or customized.

The screenshot shows the VistA Imaging Display interface for patient Demo Joe (ID 85555). The filter settings are as follows:

Filter	Procedure Date From	Procedure Date To	Sort By	Procedure Date Order
Clin All	9/8/2017	9/8/2022	Procedure Date	Ascending

The list of procedure dates displayed is:

- August 26, 2022
- August 08, 2022
- July 21, 2022
- June 10, 2022
- October 06, 2021
- October 05, 2021

The screenshot shows the VistA Imaging Display interface for patient Demo Joe (ID 85555). The filter settings are as follows:

Filter	Procedure Date From	Procedure Date To	Sort By	Procedure Date Order
ALLDEMO	1/1/1900	9/14/2022	Procedure Date	Descending

The list of procedure dates displayed is:

- August 26, 2022
- August 08, 2022
- July 21, 2022
- June 10, 2022
- October 06, 2021
- October 05, 2021
- June 14, 2017

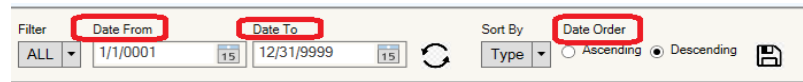
Saving Default View

Users can save a default view via the Filter and Sort of their choosing. Reminder: the Procedure Date From and To will not be saved though as this is controlled by the filter in VistA Imaging Display.

The screenshot shows the VistA Imaging Display interface. The top menu bar includes options like 'User', 'Patient', 'Refresh Data', 'Tools', 'Help', 'eSig', 'Clear', 'Clear and Lock', 'Community Alerts', 'Dosing Calculator', 'Rx Print Settings', and 'Imaging'. Below the menu bar, there are tabs for 'PRIVACY', 'PATIENT CHART', 'RESOURCES', 'RCIS', 'DIRECT WebMail', 'EPCS', and 'ED Dashboard'. The main content area displays patient information for 'Demo, Joe' (ID: 855555, DOB: 23-Mar-2017, Sex: F) and a yellow banner indicating 'Visit not selected REDLEGS.LEE'. The 'TEAM FOX / Kueng, Allen H' is also visible. Below this, there are various tool icons and a 'PATIENT VIEWER' tab. The 'Filter' section shows 'ALLDEMO' as the filter, 'Procedure Date From' as 9/14/2020, and 'Procedure Date To' as 9/13/2022. The 'Sort By' is set to 'Event' and 'Procedure Date Order' is set to 'Descending'. A red box highlights the 'Save' icon (a floppy disk) next to the 'Descending' option.

Upcoming BMAGp196/EHRp37 December 2024

1. IHS All Images Viewer - dual screens.
2. Print from the patient images tab (non-DICOM images).
3. Modify the labels to "Date From," "Date To," "Sort By "Date," and "Date Order" rather than using the word "Procedure".



4. Notes in all images is associated with the note and report for Radiology.
Has a link to TIU and/or report.
5. All images viewer include ability to add or edit the filters similar to clinical display.
6. IHS Image viewer ultrasound in EHR notes - VistA Imaging DICOM only.
7. Style Sheet Import Issue for CCDA impacting display in Imaging Viewer.
8. Billings & Kayenta - All Image Viewer issue - VistA Imaging DICOM only.

Print from the patient images tab (non-DICOM images).

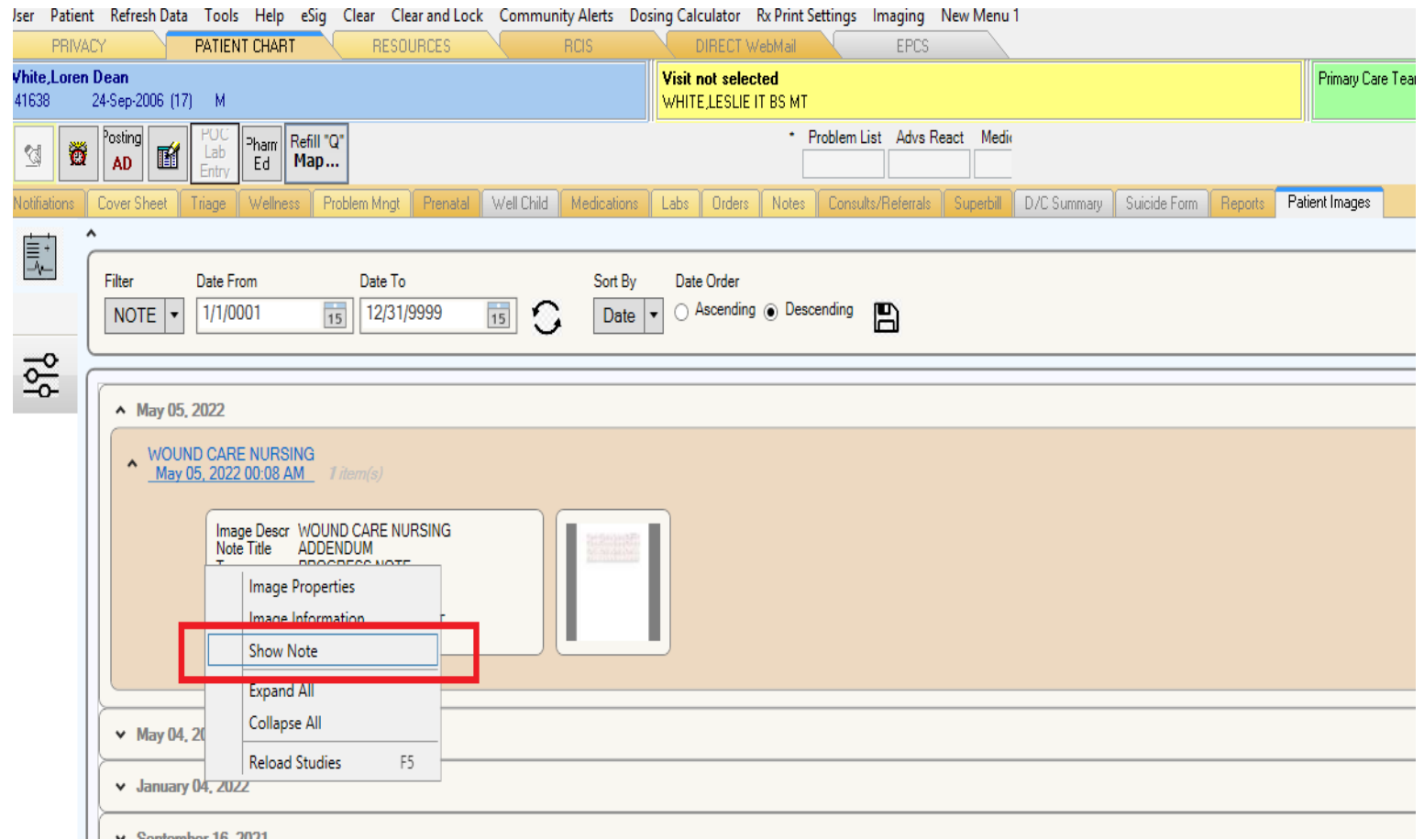
The screenshot shows a patient image list with a filter set to 'ALL' and dates from '1/1/0001' to '12/31/9999'. The list is sorted by date, with the most recent entry highlighted in red:

- March 15, 2024
- February 13, 2024
- May 01, 2023
- May 23, 2022
 - PHOTO ID**
May 23, 2022 12:11 PM 1 item(s)
- May 05, 2022
- May 04, 2022
- April 22, 2022
- January 04, 2022
- September 16, 2021
- August 20, 2021
- August 15, 2021
- April 23, 2018
- February 09, 2018
- February 06, 2018
- December 01, 2017
- July 20, 2017
- July 19, 2017

The screenshot shows a patient image viewer window titled 'PHOTO ID May 23, 2022 12:11 PM'. The patient name is 'WHITE, LOREN DEAN (141638) 24-Sep-2006 M'. The image is a photograph of a fox. A context menu is open over the image, with the 'Print...' option highlighted in blue. The menu options are:

- Copy Selection
- Copy Image
- Select All
- Print...**





Notes in all images is associated with the note and report for Radiology.

Has a link to TIU NOTE.

Notes in all images is associated with the note and report for Radiology.

Has a link to an IMAGING report.

The screenshot displays a medical software interface with a top navigation bar containing tabs for various medical categories: Notifications, Cover Sheet, Triage, Wellness, Problem Mgmt, Prenatal, Well Child, Medications, Labs, Orders, Notes, Consults/Referrals, Superbill, D/C Summary, and Suicid. Below the navigation bar is a filter and sorting section. The filter section includes a 'Filter' dropdown set to 'Clin All', 'Date From' (1/1/0001), 'Date To' (12/31/9999), a refresh icon, 'Sort By' (Event), and 'Date Order' (Ascending/Descending). The main area shows a list of radiology studies under the 'MAMMOGRAPHY' category. A context menu is open over the second item, 'MAMMOGRAM BILAT June 12, 2017 20:12', with the 'Show Report' option highlighted. Other menu options include Image Properties, Image Information, Expand All, Collapse All, and Reload Studies (F5). The 'Show Report' option is circled in red.

Filter: Clin All | Date From: 1/1/0001 | Date To: 12/31/9999 | Sort By: Event | Date Order: Ascending / Descending

BIOPSY

CARDIOVERSION

COMPUTED RADIOGRAPHY

DENTAL IMAGE PA

EKG

MAMMOGRAPHY

- MAMMOGRAM BILAT SCREENING (w/CAD IF PERFORMED) June 13, 2017 13:01 F 1 item(s)
- MAMMOGRAM BILAT June 12, 2017 20:12 F 1 item(s)
- MAMMOGRAM BILAT May 10, 2017 15:00 F 1 item(s)

MISCELLANEOUS

Context Menu Options: Image Properties, Image Information, Show Report, Expand All, Collapse All, Reload Studies (F5)

VistA Rad Deprecation , Introducing ISI Rad



ISI RAD Version 1.1 Patch 0, ISI Version 1.1 Patch 110 and MAG Version 3.0 Patch 341

ISI Rad is a commercial cousin of VistARad, with a few enhancements and minor differences.

Overview of Changes

The ISI and MAG releases will allow sites to run the ISI Rad software within the VistA Imaging suite of applications.

ISI Rad is replacing the VistARad software which will no longer be supported 30 days after the installation date for the MAG*3.0*341 and ISI*1.1*0 and 110 patches.

The ISI Rad functionality and user interactions are virtually the same as VistARad, however, there are some minor cosmetic changes and changes to certain behaviors. In addition, some new features have been added to the product. Some of these new features are available based on Site Parameters settings and/or User-level settings.

Required software updates for IHS include the RPMS MAG KIDS Mega-bundles that include the **MAG*3.0*255** for VistA Rad which is a dependency for the MAG*3.0*341.



ISI RAD Version 1.1 Patch 0, ISI Version 1.1 Patch 110 and MAG Version 3.0 Patch 341

Required software for current VistA Rad Sites and installation order for new ISI Rad:

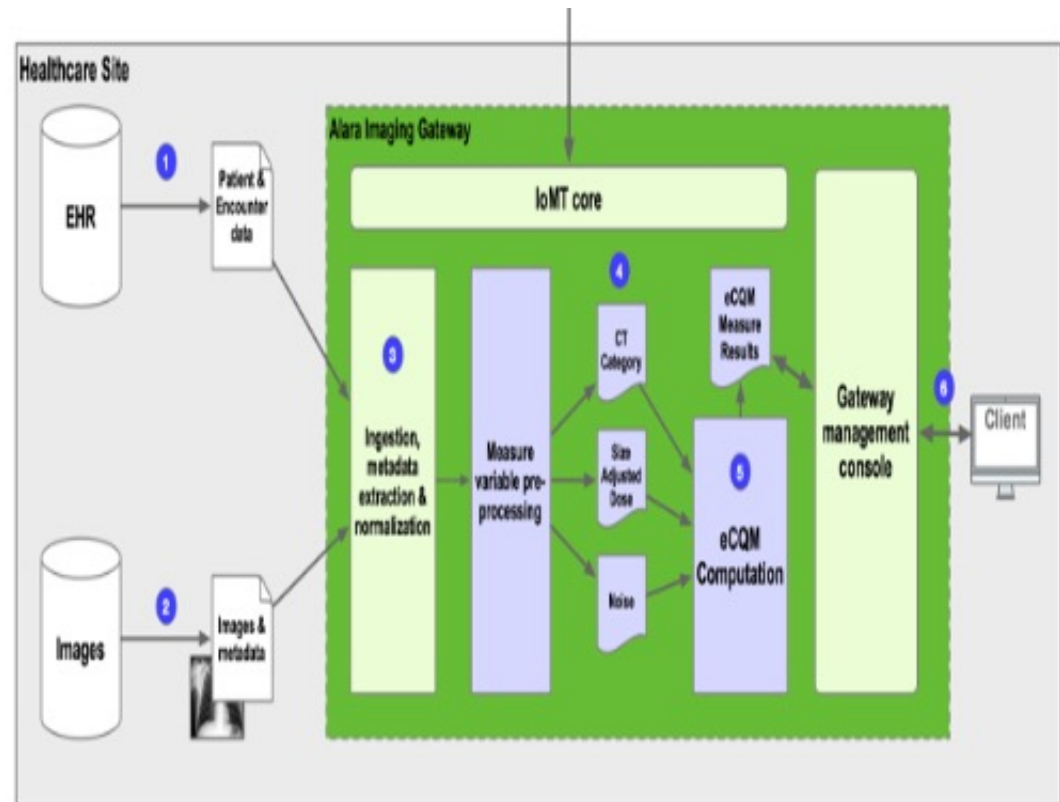
- ISI1_1P0.KID
 - ISI1_1P110_IHS.KID
 - MAG3_0P341.KID
 - ISI_Rad_1.1.1.228_Setup_x64.exe
-
- ViTel Net provides support for ISI RAD
 - For urgent technical support needs, call 855-vitelnet (855-848-3563)**
 - 1-800-ViTel Net provides assistance for issues with the ISI Rad software (replacement for VistA Rad)**
 - For all other technical support needs, email support@vitelnet.com**



Imaging in support
of Electronic Clinical
Quality Measures

And

ONC Certified Health
IT, *Proposed* HTI-2
Rule



Mandatory eCQM for Eligible Hospitals 2025 data computation for 2026 reporting

CMS1074v2

Excessive Radiation Dose or Inadequate Image Quality for Diagnostic Computed Tomography (CT) in Adults (Facility IQR)

This measure provides a standardized method for monitoring the performance of diagnostic CT to discourage unnecessarily high radiation doses, a risk factor for cancer, while preserving image quality. This measure is expressed as a percentage of CT exams that are out-of-range based on having either excessive radiation dose or inadequate image quality relative to evidence-based thresholds based on the clinical indication for the exam.

All diagnostic CT exams of specified anatomic sites performed in hospital inpatient care settings are eligible. This eCQM requires the use of additional software to access primary data elements stored within radiology electronic health records and translate them into data elements that can be ingested by this eCQM. Additional details are included in the Guidance field



New to IHS RPMS IMAGING

- 1.) New Outbound HL7 ORM Message to the Alara Imaging Gateway (IG)
- 2.) DICOM Header extraction using Compass Router to Alara IG
- 3.) Introduction of Clinical Indication in EHR Computer Provider Order Entry for Imaging Type and Category. And the RPMS back door request.
 - * CT SCAN
 - * Inpatient
- 4.) Clinical Indication is mapped to SNOMED CT and ICD-10 Code.



Additions of HL7 information in HL7 Segments

For HL7 v2 messages to be successfully matched with DICOM studies, the Patient ID and Accession Number combination must match between the HL7 message and the DICOM header.

HL7v2 Integration Requirements Table

Variable	Segment /Field(s)	Required?	Notes
ICD-10 Codes	OBR.31.1 DG1.3.1	Yes	These codes are expected only in ORM or DFT messages
CPT-4 Codes	OBR4.1 PR1.3.1 FT1.7.1	Yes	These codes are expected only in ORM or DFT messages
Patient's Race	PID.10.1	Yes	Encoded as per CDC Race And Ethnicity Code Set
Patient's Ethnicity	PID.22.1	Yes	Encoded as per CDC Race And Ethnicity Code Set
Insurance Provider	IN1.4.1 IN1.15.1	Yes	If the provider is Medicare or Medicaid, either HL7 should contain "Medicare" or "Medicaid" explicitly (case-insensitive).
Insurance Coverage Dates	IN1.12.1 IN1.13.1	Yes	
Encounter Class	PV1.2	Yes	"I" for inpatient, everything else is treated as outpatient



DICOM

DICOM studies should be forwarded in their entirety, i.e. All primary series and images contained within those series, plus DICOM **Radiation Dose Structured Reports (RDSR)**

The Gateway performs an analysis on the image pixel data and RDSR to calculate two of the intermediate variables: **A) Image Quality and B) Size-Adjusted Dose.**

Compass Router: can point modalities to the router and have the router forward the images to Vista Imaging, Commercial PACS, **Dose Reporting systems**, or any other desired DICOM destinations.

Alara Imaging Gateway ensures consistency in measure calculation while minimizing burden for reporting entities. It performs all calculations within the hospital's firewall to ensure data security, integrity, and availability. Additionally, the Gateway has security protocols to safeguard sensitive patient information



Alara Gateway Computations back to RPMS

The Alara Gateway calculates the data necessary to calculate these variables, which comes from a combination of HL7 v2 and DICOM sources. The intermediate variables are:

CT Dose and Image Quality Category: Reflects the type of exam performed based on body region and clinical indication. Each CT Dose and Image Quality Category has a specific set of dose and image quality (global noise) thresholds.

Based on the study's **ICD-10 and CPT-4 codes**, the logic classifies the study into one of pre-defined categories, i.e. binning, based on body part.

Calculated CT Size-Adjusted Dose: Reflects the total radiation dose received during CT, risk-adjusted by patient size. The Calculated CT Size-Adjusted Dose thresholds vary by the CT Dose and Image Quality Category. The calculation for this variable takes into account the Dose Length Product (DLP) parsed from the DICOM RDSR and a patient 'size' approximation, obtained by analyzing the images, and determining the diameter of the patient's body part (e.g. chest) being scanned.

Calculated CT Global Noise: Reflects the image quality of the CT specific to the image noise, which is used as a proxy indicator that the dose used to generate the images is not low enough to affect clinical interpretability. The Calculated CT Global Noise thresholds vary by the CT Dose and Image Quality.



Computation returned with LOINC term

Intermediate Variable Data Elements

Variable name	Description	LOINC Code	Data type	Units	Sources
CT dose and image quality category	Classification of computed tomography (CT) studies based on a combination of ICD 10 and CPT codes. Each category has image quality and	96914-7	Text	N/A	- ICD code list - CPT code list
Calculated CT global noise	The aggregation of noise calculations based on pixel data for an entire computed tomography (CT) exam.	96912-1	Float	Hounsfield Units [hnsFU]	CT Series pixel data
Calculated CT size-adjusted dose	The dose length product (DLP) adjusted for patient size using the average mid-scan diameter.	96913-9	Float	mGy.cm	- CT Series pixel data - CT dose and image quality category

Lower score indicates higher quality, and a decreased score over time indicates improvement



Health Data, Technology, and Interoperability: Patient Engagement, Information Sharing, and Public Health Interoperability (HTI-2) Proposed Rule

U.S. Department of Health and Human Services (HHS), through the Office of the National Coordinator for Health Information Technology (ONC).

ONC's HTI-2 proposed rule implements provisions of the [21st Century Cures Act](#) and reflects ONC's focused efforts to advance interoperability and improve information sharing among patients, providers, payers, and public health authorities.

Technology and standards updates that build on the [HTI-1 final rule](#), ranging from the capability to exchange clinical images (e.g., X-rays) to the addition of multi-factor authentication support.



From ONC's HTI-2 Proposed Rule...

- New Imaging Requirements for Health IT Modules
- We propose, as explained in section III.B.6, to revise the certification criteria adopted in § 170.315(b)(1), (e)(1), (g)(9), and (g)(10) to include new certification requirements to support access, exchange, and use of diagnostic images via imaging links.
- a health IT developer of a Health IT Module certified to the certification criteria related to “transitions of care” in § 170.315(b)(1), “view, download, and transmit” in § 170.315(e)(1), “application access—all data request,” in § 170.315(g)(9), and “standardized API for patient and population services,” in § 170.315(g)(10) must update their Health IT Module and provide the updated version to their customers to maintain certification of that Health IT Module

We believe that support for imaging links in these certification criteria will promote the availability of electronic image access for patients and providers. To enable a consistent understanding of “imaging link” across certification criteria requirements in the Program, we propose to define “imaging link” in § 170.102 to be “technical details which enable the electronic viewing or retrieval of one or more images over a network.”



Questions and Discussion



Key Contact and Resource Information

Contact	Purpose	Links
Tiered Support	Set up/IIS support/Issues/ General Support	Elevate through appropriate tiered support structure. 1. Local IT or Informaticist 2. Area IT or Informaticist 3. IT Service Desk- User Support (IHS) ITSupport@ihs.gov or directly via ServiceNow Self Service Portal at https://www.ihs.gov/itsupport/ .
Resource and Patient Management (RPMS) Clinical Applications	User manual Technical Manual Install Manual	https://www.ihs.gov/rpms/applications/
RPMS Training Website	End-user training/support	https://www.ihs.gov/rpms/training/
RPMS Training Recording and Material	End-user training/support	https://www.ihs.gov/rpms/training-and-material-library/

RPMS training.
Ctrl+Click to follow link



