

Vitrea® View

Vitrea View User Guide

Canon

VPMC-16869 B

Legal and Regulatory Information

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VPMC-16869 B Vitrea View User Guide

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Any serious incident that has occurred in relation to the device should be reported to Canon Medical at 1.800.208.3005 and the competent authority of the Member State in which the user and/or patient is established.



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Overview

Vitre@ View software is a web-based, cross-platform, zero-footprint enterprise image viewer solution capable of displaying both DICOM and non-DICOM medical images. The Vitrea View software enables clinicians and other medical professionals to access patients' medical images with integrations into a variety of medical record systems, such as Electronic Health Record (EHR), Electronic Medical Record (EMR), Health Information Exchange (HIE), Personal Health Record (PHR), and image exchange systems. The Vitrea View software is a communication tool, which supports the physician in the treatment and planning process by delivering access to images at the point of care.

Vitre@ View software offers medical professionals an enterprise viewer for accessing imaging data in context with reports from enterprise patient health information databases, fosters collaboration, and provides workflows and interfaces appropriate for referring physicians and clinicians. IT departments will not have to incur time to install client systems, due to the web-based zero-footprint nature of the Vitrea View software. The software offers scalability to add new users as demand grows, may be deployed in a virtualized environment.

Some of the general features include:

- Fast time-to-first-image
- Contextual launch integration with single-sign-on
- Easy study navigation and search capability
- Supports multi-modality vendor-neutral DICOM images
- Supports non-DICOM images
- Images display at full diagnostic quality (with appropriate hardware)
- Basic 2D review tools (zoom, pan, measure)
- Radiology key images
- Comparative side-by-side review, regardless of image types
- Leverages traditional DICOM as well as next-generation DICOMweb image transfer protocols
- Enables federated access to across multiple data sources across multiple sites
- Web-based zero-footprint architecture
- Secure access on various Windows® and Mac computers through standard internet browsers
- Secure access on various iOS®, Android™, and Windows® tablet devices through the device's Internet browser
- Secure access on various iOS and Android smartphones through the device's Internet browser

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Safety and Regulatory Considerations



CAUTION

Federal law restricts this device to sale by or on the order of a physician as delineated in 21 CFR 801.109 (b) (1).



CAUTION

READ THE TOPICS IN THIS SECTION CAREFULLY BEFORE USING THE SOFTWARE.

This section contains information essential for the safe and effective use of the Vitrea View software. You must understand this information before using the product.

Medical professionals typically access the Vitrea View software from their health information systems, which have a web-based link to patient images. Users can access the patient images and can conduct the functionalities listed in the *Overview* section.

The Vitrea View software displays patient imaging studies and other patient data but does not interpret or provide a diagnosis. Medical diagnosis is the responsibility of users. The Vitrea View software is not intended for primary diagnosis.

Indications for Use

Vitrea View software is a medical image viewing and information distribution application that provides access, through the internet and within the enterprise to multi-modality softcopy medical images (including mammography and digital breast tomosynthesis), reports, and other patient-related information. This data is hosted within disparate archives and repositories for diagnosis, review, communication, and reporting of DICOM and non-DICOM data.

Lossy compressed mammography images and digitized film screen images must not be reviewed for primary image interpretations. Mammographic images may only be interpreted using an FDA cleared display that meets technical specifications reviewed and accepted by FDA or displays accepted by the appropriate regulatory agency for the country in which it is used.

Display monitors used for reading medical images for diagnostic purposes must comply with the applicable regulatory approvals and quality control requirements for their use and maintenance.

Vitrea View software is indicated for use by qualified healthcare professionals including, but not restricted to, radiologists, non-radiology specialists, physicians and technologists.

When accessing Vitrea View software from a mobile device, images viewed are for informational purposes only and not intended for diagnostic use.

Caution Statements



CAUTION

The medical professional retains the ultimate responsibility for making a pertinent diagnosis based on his or her standard procedures, including visual comparison of separate images.

General Caution Statements

- Federal law (USA) restricts this device to sale by, or on the order of, a physician.
- This product is intended for use only by appropriately qualified and trained personnel.
- This device is a multiple patient, multiple use device.
- The Vitrea View software displays patient studies and other patient data but does not interpret or provide a diagnosis. Medical diagnosis is the responsibility of users.
- As with any medical imaging process, you must be fully conversant with the limitations of the basic imaging modality and of ensuing image processing. This includes understanding the limitations of the initial series acquisition, image processing technology used, and image display methods. Also, be aware that medical imaging is valid only when appropriate measures have been taken to obtain optimal images with correct orientation and correct patient identifiers.
- Canon Medical assumes no liability for problems attributable to unauthorized modifications, additions, or deletions to this product, or unauthorized installation of third-party software.
- Always use best professional judgment when viewing Vitrea View software images. Do not use for diagnosis or planning if you notice improper or unexpected images.
- Always verify patient information and DICOM headers to ensure the correct patient study is loaded.
- Before saving, editing, or reviewing the patient data, ensure that the contents correspond to the patient name. This provides additional assurance that the stored data correspond to the correct patient.

Features Caution Statements

- The minimum recommended computer screen resolution for the Vitrea View software is 1024 X 768. A warning message displays for lower screen resolutions. The minimum recommended screen resolutions for multi-touch devices are 1280 X 800 for Android devices and 1024 x 768 for iOS devices.
- Vitrea View software automatically logs users out after 10 minutes of inactivity, but this time can be configured. Contact your system administrator for information on configuring the time-out value.
- It is possible to render important image areas too transparent using the Window/Level tool. This could make areas of an image invisible.
- On secondary capture images, intensity values are displayed as RGB (red, green, blue) color model values and linear measurements are indicated in number of pixels.
- Vitrea View software allows non-DICOM objects to be attached to a patient study. In some cases, these objects can be viewed by the user. These attachments do not have the DICOM headers need to ensure consistency of patient information. The user must ensure any non-DICOM objects viewed in the Vitrea View software are appropriate for the current patient and study.
- Once the Vitrea View software detects a study download is complete and the DICOM association is closed,

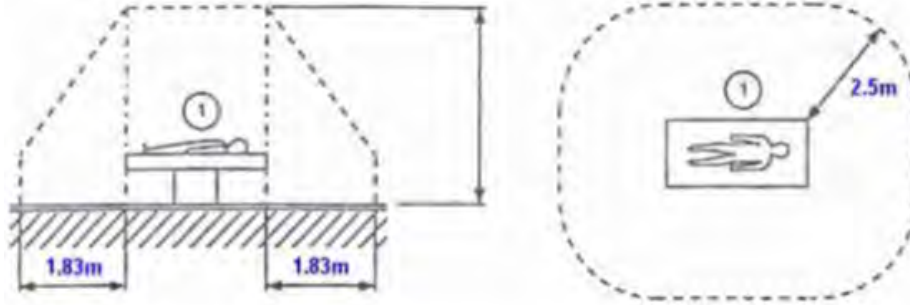
the Vitrea View software will no longer seek updates to the study. Closing the study and viewing the study after a few minutes will show any received update

- When the history feature is used, the Vitrea View software will show all studies relevant to the patient ID being viewed. This behavior is present even when integrated with an EHR or other system.

Hardware and Safety Caution Statements

- Users should be aware that environments with high levels of ambient lighting are not ideal for viewing medical images. This risk may especially be present when viewing medical images on tablet and smartphone devices. Please use the ambient lighting check to verify whether use is appropriate.
- Users should log out promptly after completing use of the Vitrea View software. Users should also not leave a logged-in device unattended, which could result in unauthorized access by another individual.
- Some computer monitors are unshielded. Do not place the monitor, whether in its shipping carton or unpacked, inside the 1.3 Gauss line of any Magnetic Resonance Imaging (MRI) magnet. Exposure to this strength of magnetic field will permanently damage the monitor and may void the manufacturer's warranty. Assume all monitors, regardless of the manufacturer or source, are unshielded unless the manufacturer specifically states otherwise.
- Most monitors and PCs use 24-bit color resolution or 8-bit grayscale resolution, both of which are lower than that of radiologic film. You must use professional judgment at all times in interpreting images that may be influenced by resolution level. Ideally, images are viewed on calibrated monitors in low-background light. Please be aware that if viewing images with non-diagnostic monitors in normally-lit environments, small differences in areas of the image may go unseen.
- If the PC does not have sufficient RAM, you may experience a significant decrease in performance. If you think you are experiencing low memory issues, contact your system administrator.
- Canon Medical is not responsible for any DIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES to the client PC resulting from the downloading and installation of the software from the server.
- Do not use the client PC or server if any unsafe condition exists. If your client PC or server hardware fails, resulting in a hazardous condition such as smoke or fire, turn off the power and unplug the device. Do not use the equipment if a malfunction takes place. Contact your system administrator to correct any malfunctions before proceeding.
- If the screen goes blank or the system locks up at any time while you are using it, it could disrupt the interpretation of an image. Should this occur, be sure to restart the system.
- Do not install or operate the server or the client PC within six feet of a patient area. Patient vicinity is defined in Medical Electrical Equipment - Safety Requirements for Medical Electrical Systems (IEC 601-1-1), as "any volume in which intentional or unintentional contact between the PATIENT and any parts of the SYSTEM or some other persons touching parts of the SYSTEM can occur." See the following diagram for clarification:

Patient Vicinity Diagram



- Be sure to limit access to patient data to authorized individuals. Access control can be achieved by physical security measures (locking systems), by software based password security systems, or both. If you have questions, contact your system administrator.

General Safety Considerations

- The software is intended to be used by the following individuals:
 - Physicians Referring Physicians
 - Other medical personnel under a physician's supervision
- Review the operating instructions on a regular basis, paying special attention to Caution Statements and Notes. Click on the Notes icon for the full note text. Contact Canon Medical for your specific computer hardware configuration requirements and for any other system software for additional safety information.
- Be sure to limit access to patient data to authorized individuals. Access control can be achieved by physical security measures (locking systems), by software-based password security systems, or both. If you have questions, contact your system administrator or Canon Medical.

Display Settings

There are three platforms in which Vitrea View can be used, depending on the device used:

Desktop:

- Ensure your Windows display settings are set at "Normal size" (96 DPI). If settings other than 96 DPI are used, the Vitrea View software interface items such as buttons, dialog boxes, and image viewers will not be positioned correctly on the display.



NOTE

If the Vitrea View software window does not display properly (buttons, menus, and other items are in the wrong locations), check the Windows display driver is set at Normal size (96 DPI)

- The minimum screen resolution for the Vitrea View software on desktop versions is 1024 X 768. A warning

message displays for lower screen resolutions.

Tablet:

- The minimum screen resolutions are 1280 X 800 for Android multi-touch devices and 1024 X 768 for iOS.

Smartphone:

- The minimum screen resolution is 640 X 960 at 326 ppi.

Supported Platforms and Browsers

Vitrea View has been tested on the following operating systems and browsers:

Platform		Browser	Display Settings
Desktop	Microsoft® Windows® 10	<ul style="list-style-type: none"> Internet Explorer 11 (11.864.17763.0CO) Firefox 79.0 Edge 44 Microsoft Edge Chromium (Version 84.0.522.63) Chrome 84.0.4147.135 	<p>Ensure your Windows display settings are set at "Normal size" (96 DPI). If settings other than 96 DPI are used, the Vitrea View software interface items such as buttons, dialog boxes, and image viewers will not be positioned correctly on the display.</p> <p>The minimum screen resolution for the Vitrea View software on desktop versions is 1024 X 768. A warning message displays for lower screen resolutions.</p> <p>NOTE: If the Vitrea View software window does not display properly (buttons, menus, and other items are in the wrong locations), check the Windows display driver is set at Normal size (96 DPI).</p>
	Mac OS X (up to 10.15)	<ul style="list-style-type: none"> Safari 13.0.4 	
Tablet	iPad (iOS 13.5)	<ul style="list-style-type: none"> Mobile Safari 13.5 	<p>The minimum screen resolutions are 1280 X 800 for Android multi-touch devices and 1024 X 768 for iOS.</p>
	Android (9.x)	<ul style="list-style-type: none"> Chrome for Mobile 	
Smart Phones	Android (9.x)	<ul style="list-style-type: none"> Chrome for Mobile 	<p>The minimum screen resolution is 640 X 960 at 326 ppi.</p>
	iPhone (iOS 13.5)	<ul style="list-style-type: none"> Mobile Safari 13.5 	



NOTE

For Apple iPad users: The Request Desktop Website feature must be disabled prior to running or accessing Vitrea View. See the [Tablets](#) chapter for instructions.

Password security for devices using Internet Explorer 11

Although Vitrea View marks password fields so they are not remembered, Internet Explorer 11 overrides this setting and offers to remember them on your behalf. This may lead to unauthorized access if a user sets a device with Internet Explorer 11 (currently found on Windows 7) to auto-complete passwords and another person gets a hold of the device. Canon Medical recommends lock codes on all mobile devices as a measure of security.

You can complete the following steps to clear any saved passwords:

1. Open Internet Explorer.
2. Select **Tools | Internet Options**.
3. Select the **Content** tab.
4. In the AutoComplete section, click the **Settings** button.
5. Clear the usernames and passwords on forms check box.
6. Click the **Delete AutoComplete History** button.
7. On the Delete Browsing History screen, select the **Passwords** check box.
8. Click the **Delete** button.
9. Click **OK** twice.

Customer and Technical Support

For general, non-technical support questions, contact Canon Medical through our website:





us.medical.canon/HIT

For technical support, contact your institution's network administrator.

Unique Device Identification

The UDI (Unique Device Identification) number can be found by selecting **About** in the menu options. For general, non-technical support questions, contact Canon Medical through our website: us.medical.canon/HIT

Mouse Interactions

Mouse	Action	Description
	Click and drag navigation	<p>Scroll the image. Click drag a small distance, and release to initiate navigation. Manual navigation is used in all non-cineing modalities (CT, MR, CR).</p>
	Click	Initiate tool such as the Ruler.
	Middle Roll	<p>Scroll the image or series. In CR, scroll the series to go through views.</p> <p>In US, the series auto-cine. Multi-frame stacks play by default, and you can manually roll through the stacks.</p>
	Right-click (show Context menu)	<p>The Context menu is active and different for images, thumbnails, and markups. For example, a right-click Context menu on a Markup allows the deletion of markup.</p>

Accessing Vitrea View

Integrating with Hospital Systems

Vitrea View software may be launched from EHR, EMR, and HIE or other medical record systems using in context based on either the Patient or Study ID.

Click the provided URL to search the archive(s) for the patient study associated with the link. If a single study is found, Vitrea View will load it in the Viewer.

If the study is found in more than one archive, the software will display a pick list for you to select the specific study needed for display.



NOTE

When performing a DICOM query/retrieve request from an archive, verify the study has been fully transferred to the target archive prior to viewing. Some archives may not be searched or may be inaccessible at a given time.

If you wish to use encrypted URLs, contact your system administrator.

Logging In

Log in directly to the Vitrea View software with your username and password.

Select **Remember me** to set the Vitrea View software to remember your username.



CAUTION

Ensure that unauthorized viewers do not have access to your computer or device.



NOTE

If you clear the **Remember Me** check box, the Vitrea View software marks the fields so they are not remembered. However, some browsers may override and offer to remember them on your behalf. This may lead to unauthorized access if another person uses the computer or device. Canon Medical recommends lock codes on all computers, tablets, and smartphones as a measure of security.

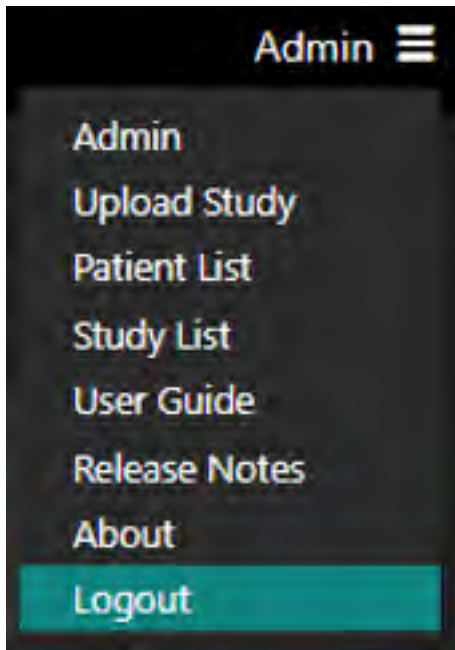
This is a configurable feature. If the button does not display, contact your system administrator.

You will be taken to one of the following based on the default page and your permissions configured by your system administrator:

- Patient List
- Study List

If you only have upload permissions you will be taken to the "Upload Medical Imaging Records" page.

Logging Out



Select the Logout link to clear all patient information and return to the login screen.

When you log out from a loaded study, or if the Vitrea View software logs you out due to time out, the software will bookmark the study. The layout and window/level settings are saved, allowing you to restore your workflow when you log back in.

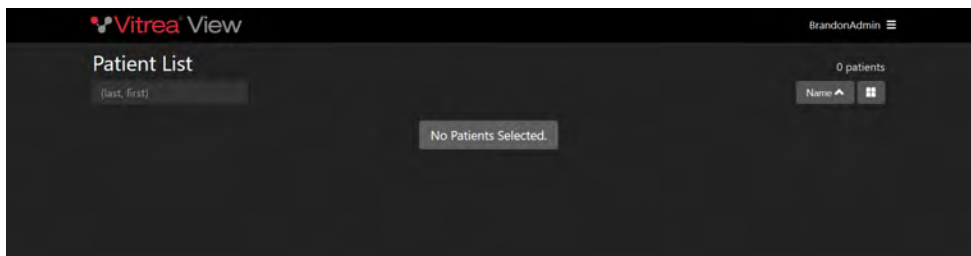
- The bookmark will be available when you log in from any device.
- The bookmark is tied to the primary study (the one initially loaded).
- When you log back in to the study, you will be given the option to load the bookmark or reset the study.
- The bookmark expires 48 hours (or a configurable amount of time) after it was created.
- The bookmark expires when the study is loaded and changed by another user.
- On EMR launches with generic user sign-ons (all users use the same sign-on), the bookmark duration should be set at 0 hours to avoid user confusion.

Viewing Patients

Patient List

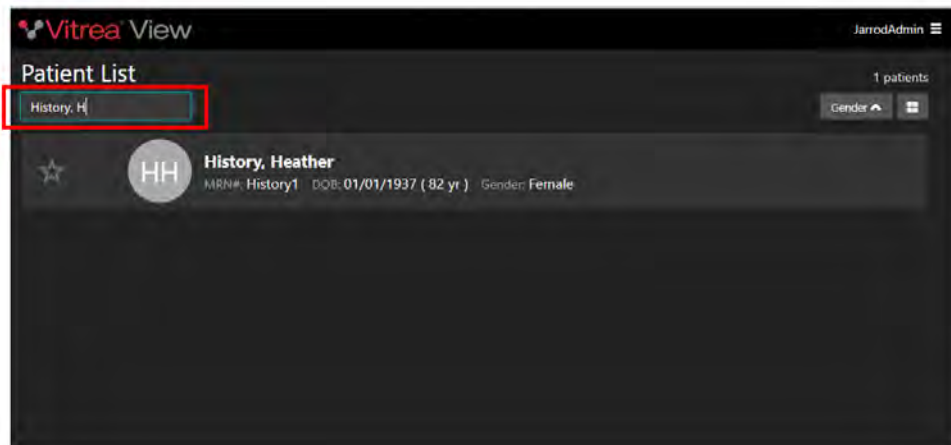
The Vitrea View software allows you to access patients' medical images via a patient-centric workflow starting with a patient list (This is an option when logging into Vitrea View standalone).

On initial launch, if you do not have any patients starred you will see the following:



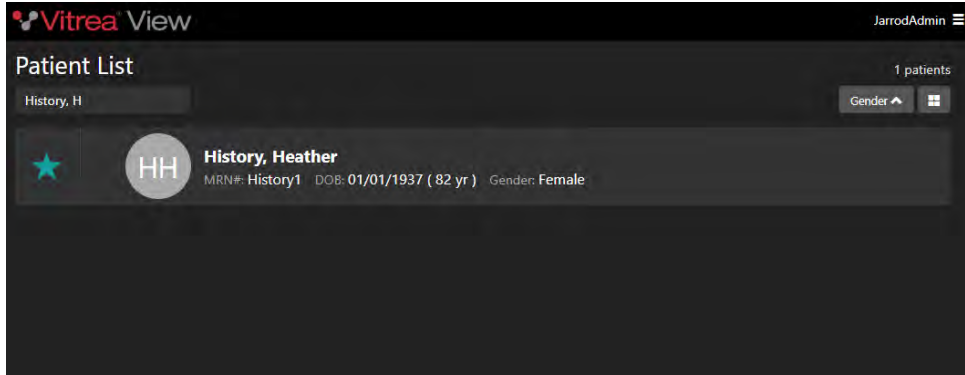
Searching for a Patient

Search for patients by Last Name, First Name in the patient search box.

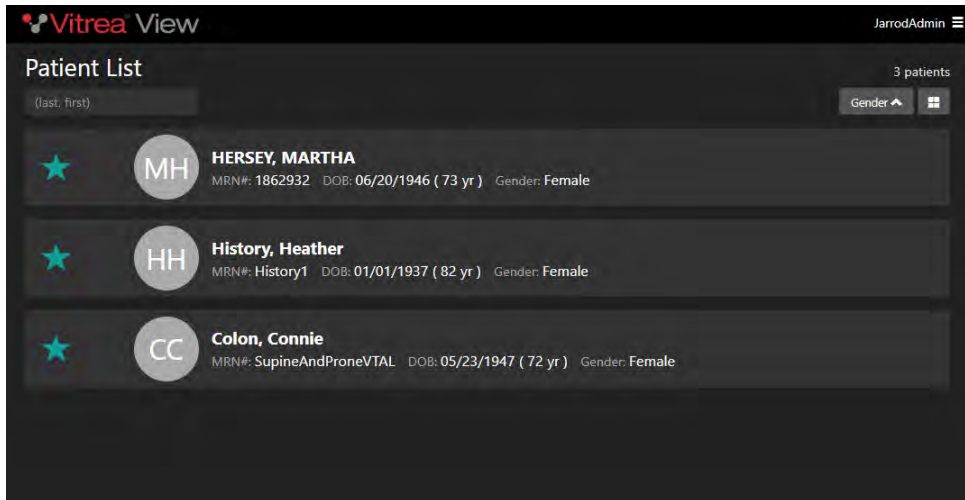


Starring a Patient

Star a patient to allow that patient to show on the list by default.

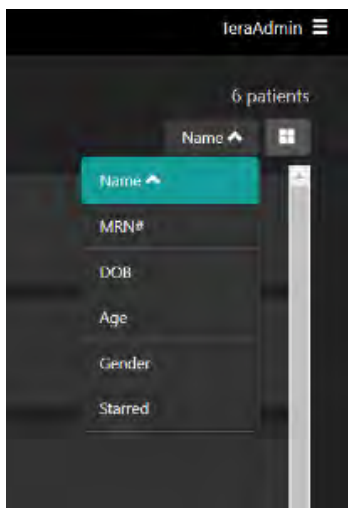


Clear the search results or refresh the page to show the list of patients you have starred.




Sorting Patients

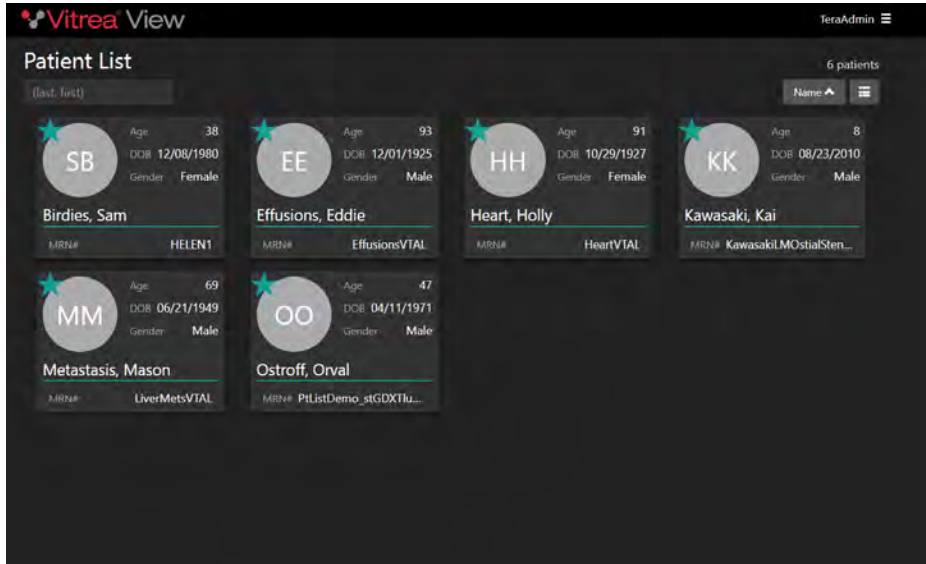
The drop down option on the upper right allows you to filter starred patients based on the following demographics. The most commonly used filter will be the Name.



Card Layout View

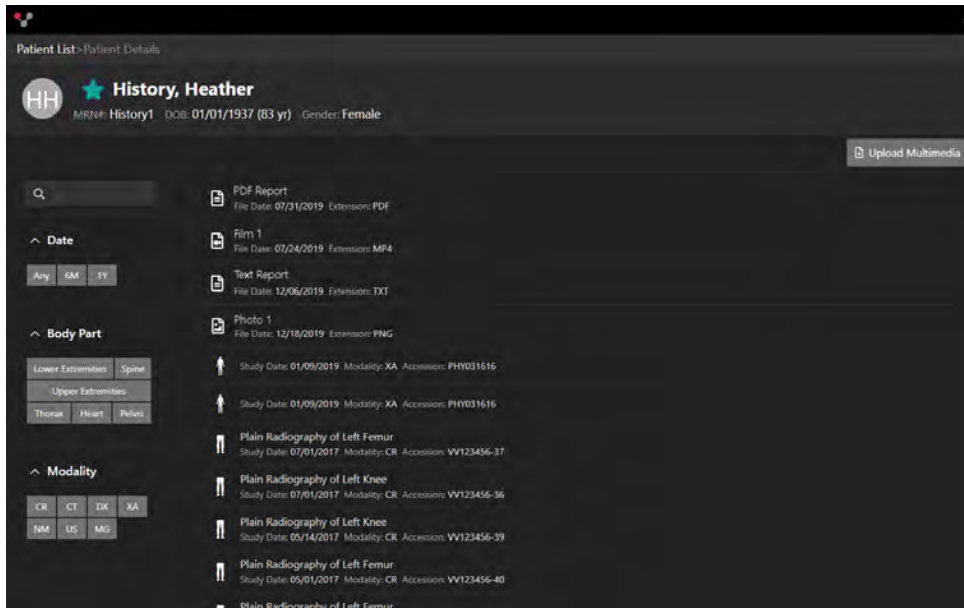
The  button allows you to switch from the patient list view to the card view.

If you select card view, this view will be saved and used each time you login or switch from another page to view the list of patients.



Patient Details


Select a patient to open the Patient Details page. The Patient Detail page displays DICOM and non-DICOM images, videos, documents, and reports related to the patient. It also provides upload capabilities.



Use the left panel to filter or search the patient records on the page. The panel displays the available filters based on the data.

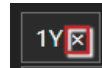
- Click the appropriate buttons to filter by Date, Body Part, or Modality.

NOTE

 You can make multiple selections, except for the Date filter.

OR

- Enter search criteria in the search box.
 - non-DICOM: title, author
 - Studies: modality, body part, accession number, description, archive name
 - Future Studies: modality, body part, requested procedure, requesting physician, reason for procedure



To clear a filter or search item, click the X in the identifier.

To return to the Patient List, click the **Patient List** breadcrumb at the top of the page.

The sidebar shows the following filters:

- Date:** Any, 6M, 1Y
- Body Part:** Lower Extremities, Spine, Upper Extremities, Thorax, Heart, Pelvis
- Modality:** CR, CT, DX, XA, NM, US, MG

Future Imaging Orders

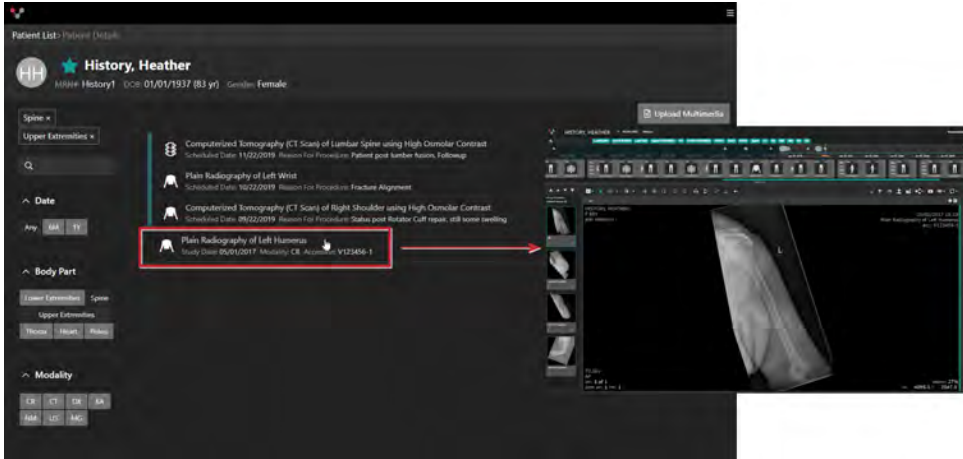
If any future imaging orders have been entered for a patient, a blue/green indicator displays in the left margin of the patient detail item.

The screenshot shows the patient detail page for Heather History. The left sidebar has filters for Date (Any, 6M, 1Y) and Body Part (Lower Extremities, Spine, Upper Extremities, Thorax, Heart, Pelvis). The main content area lists three future imaging orders:

- Computerized Tomography (CT Scan) of Lumbar Spine using High Osmolar Contrast. Scheduled Date: 11/22/2019. Reason For Procedure: Patient post lumbar fusion. Followup.
- Plain Radiography of Left Wrist. Scheduled Date: 10/22/2019. Reason For Procedure: Fracture Alignment.
- Computerized Tomography (CT Scan) of Right Shoulder using High Osmolar Contrast. Scheduled Date: 09/22/2019. Reason For Procedure: Status post Rotator Cuff repair, still some swelling.

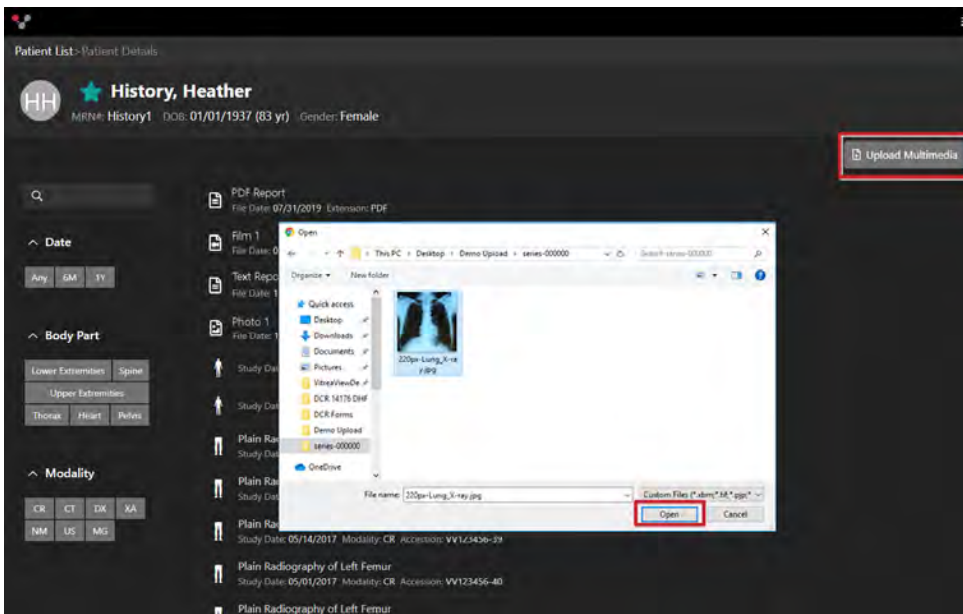
View A Study

Select a study to launch into the viewer.

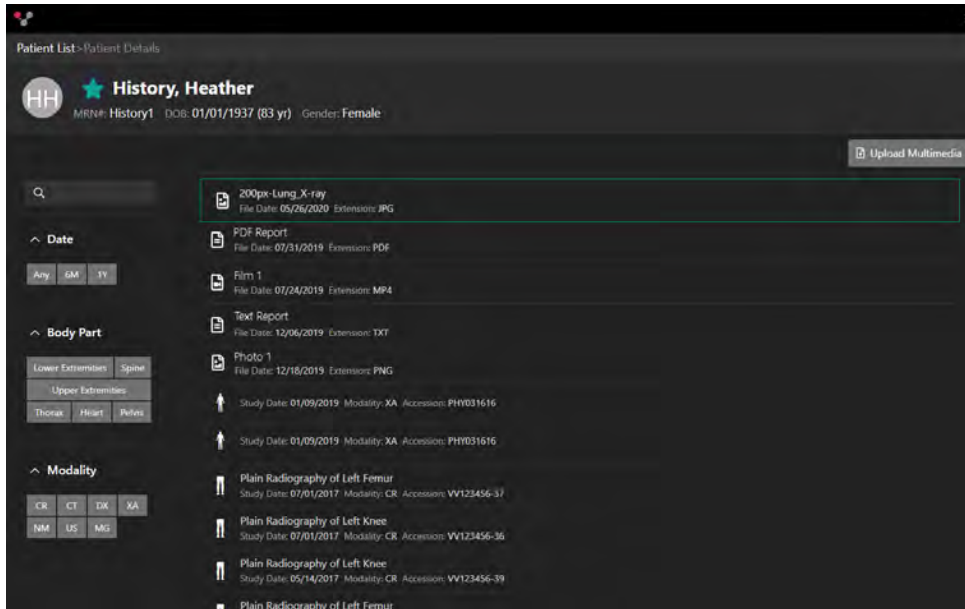


Multimedia Image Upload

To upload images, videos, or documents from your system, click the **Upload Multimedia** button and select the file you wish to upload.



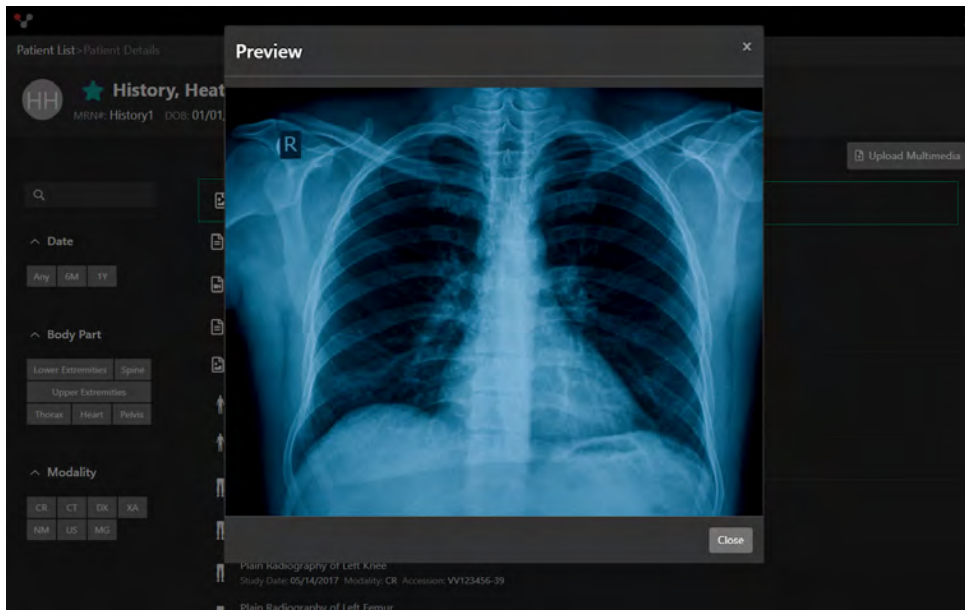
Once the file has been uploaded you'll see it at the top of the list.



View Multimedia and Documents

Select a desired image and a preview window will open.

You can also view the multimedia and documents in the viewer or document viewer once a study is launched.



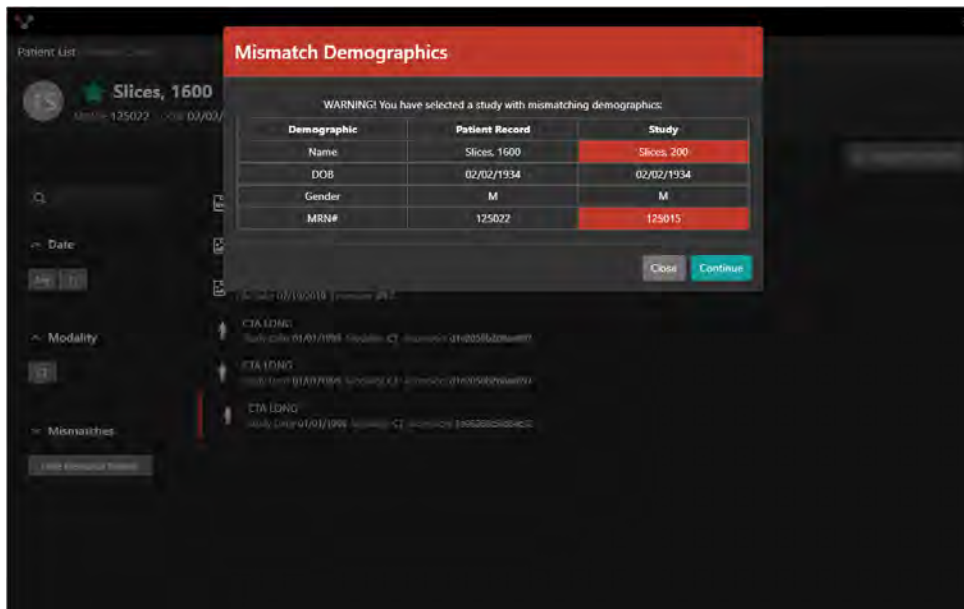
Data Mismatch

When there is a mismatch in demographics, a red indicator displays in the left margin of the study.

Click on the indicated study. A window opens displaying the mismatched demographics in red.

You can choose to close this warning box and not load the data, or you can choose to continue with your

workflow and load the study.




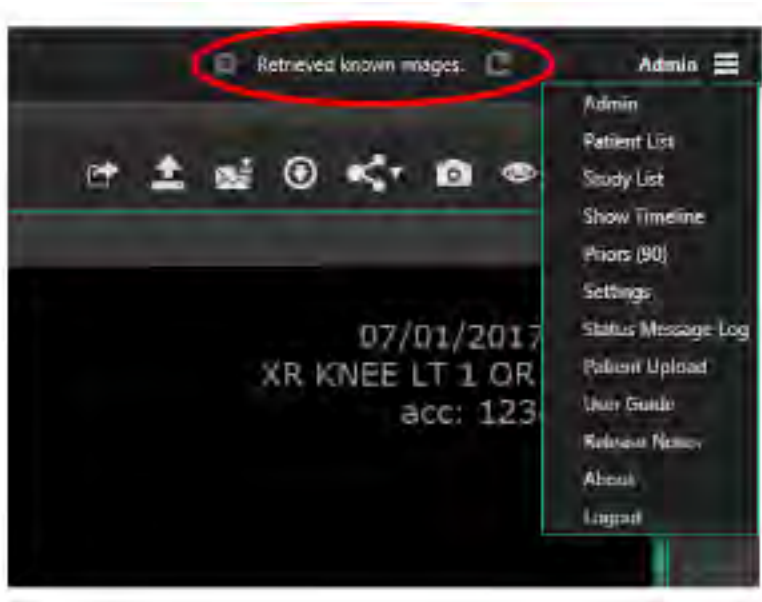
To hide the mismatched studies from the patient list, click **Hide Mismatch Studies** in the left panel.

Study Updates

While the Vitrea View software is in use, the system checks for updates to images received and the presence of new images for the active study, as well as updates to the active study demographics.

- The system checks for updates after 30 seconds (or a configurable number of seconds) after the initial load.
- The system continues to check for updates in 30 second (or a configurable number of seconds) intervals. The Vitrea View software displays a message when new images or demographics are received.

To refresh the study, click or tap the refresh icon  on the message. To continue working without refreshing, ignore the message.



Searching For Studies

Study Lists

Vitre View software includes a directory of studies with search capabilities and navigation. The directory displays upon login and enables you to search for studies by various criteria.



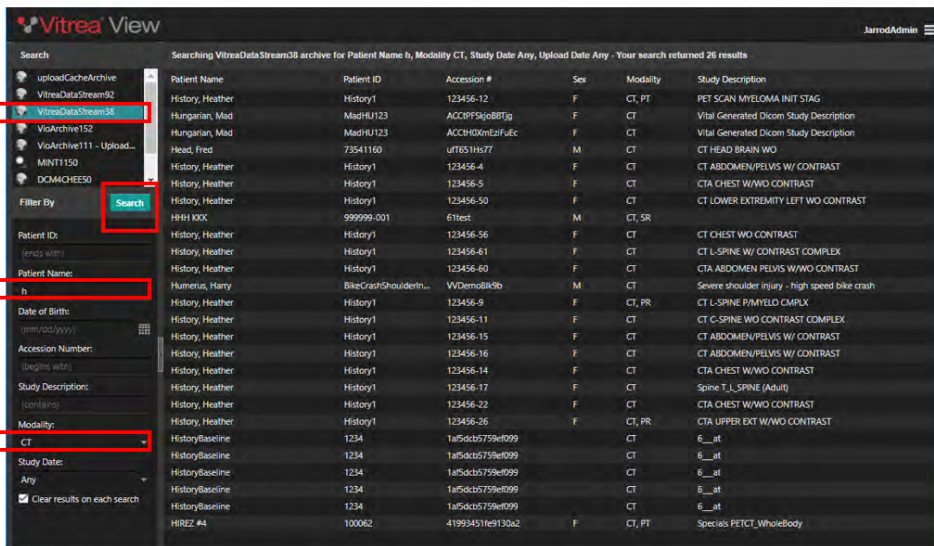
NOTE

When performing a query/retrieve from archive, verify images are received and complete prior to viewing. Some archives may not be searched or may be inaccessible at a given time.

Study Search

To search for a study:

1. Select an archive.
2. Enter filter criteria to narrow your search results.
3. Select the Search button.



The panel can be hidden by clicking on the arrow to the right of the panel. Clicking on the arrow again will restore the panel.

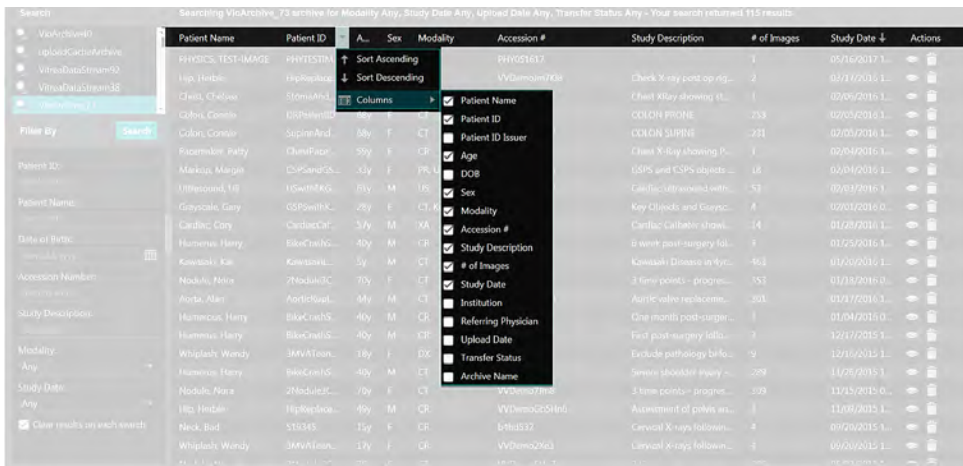
Column Display and Sorting

There are two options for sorting:

1. Click on the column name to toggle between ascending or descending.
2. Hover to the right of the column name and select the arrow that appears. Select Sort Ascending or Sort Descending from the drop down.

To change visible columns:

1. Hover on the right side of the column and select the down arrow that appears.
2. Select columns.
3. Choose the columns by checking or un-checking the boxes.



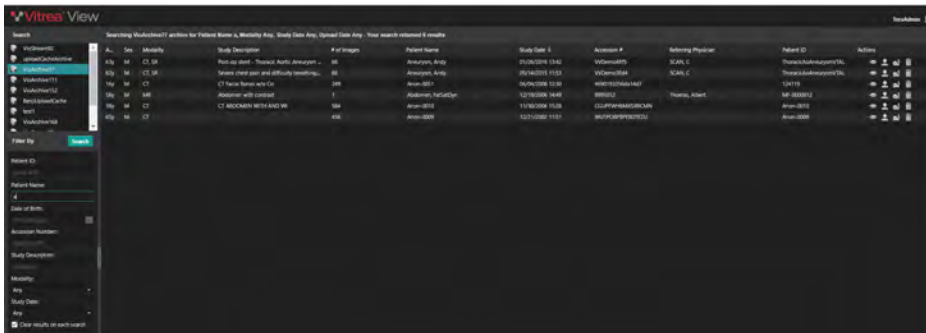
Opening A Study



To open a study, click on the **View** button in the **Actions** column associated with the study row.

You can also launch into a study by double clicking on the row OR right-click and select **Open** in Vitrea View.

Be sure to verify the patient demographic information to ensure you have selected the correct study.





Deleting A Study



If you have permissions to delete a study, the **Delete Study** button will appear when you select a study.





Depending on the configured integration, this may or may not delete the study from the archive.

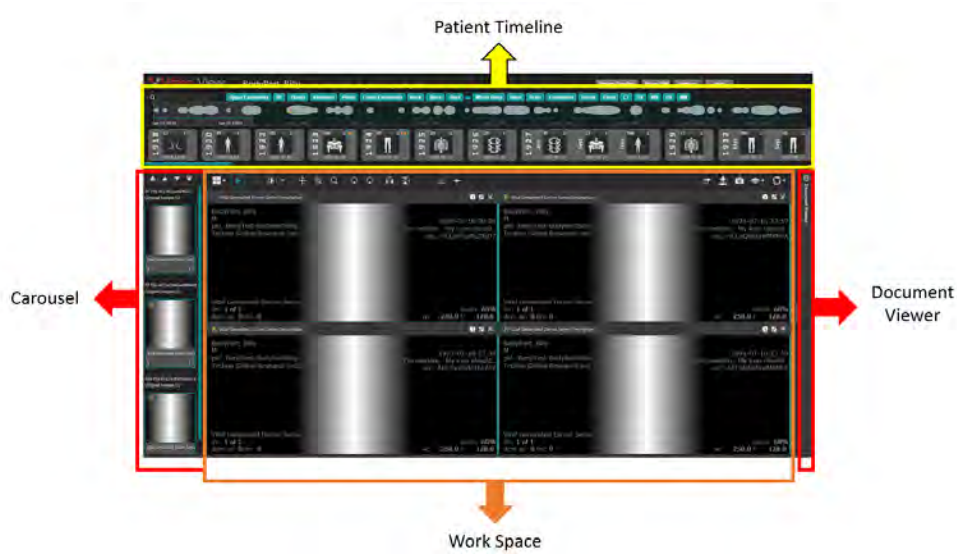
Patient Name	Patient ID	A...	Sex	Modality	Accession #	Study Description	# of Images	Study Date ↓	Actions
PHYSICS, TEST-IMAGE	PHYTESTIM...		O	CR	PHY051617		1	05/16/2017 1...	
Hip, Herbie	HipReplac...	49y	M	CR	VVDemoIm708	Check X-ray post op rig...	2	03/17/2016 1...	

Viewing Studies

Viewer Overview

The Viewer is where all imaging and documentation for a patient is displayed as well tools for working with a study. It consists of four components described below.

Viewer Components	
Carousel	<p>The Carousel is a list of the series in the study. Selected priors, related images and videos will also be displayed in the Carousel.</p> <p> See the Carousel section for more information.</p>
View Ports	<p>Make up the layout of images from the Carousel. Replace an image in the Viewer by dragging a thumbnail for a different image over the current image.</p> <p> See the View Ports section for more information.</p>
Patient Timeline	<p>A patient's prior studies can also be displayed within the current view when selected from the priors list or from the patient timeline.</p> <p> See the Viewing Prior Studies section for more information.</p>
Document Viewer	<p>The Document Viewer displays related PDF, text, and other documents related to the patient.</p> <p> See the Viewing Documents section for more information.</p>



Carousel

Thumbnails represent the number of series of source images for the study with Key Images (if any) on top followed by the Original Image with the most recent images first. The first study or studies in the Carousel automatically load into the Viewer. (This is also dependent on how the archive sends the series when a query retrieve is requested).

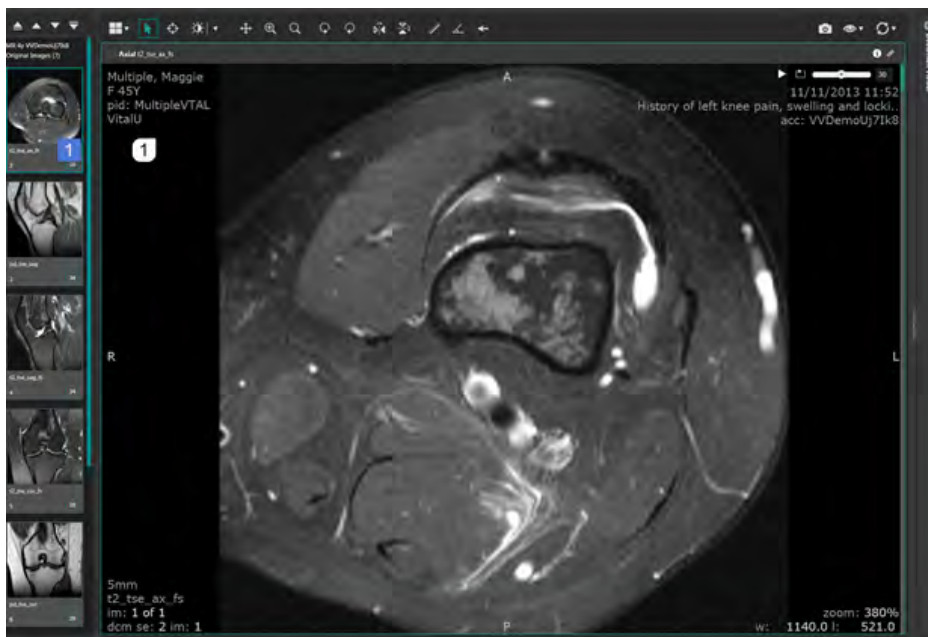


The Page navigation tools are used to automatically navigate series in conjunction with page layout options.



Automatic Series Navigation

Default Layout



Layout changed to 2x2

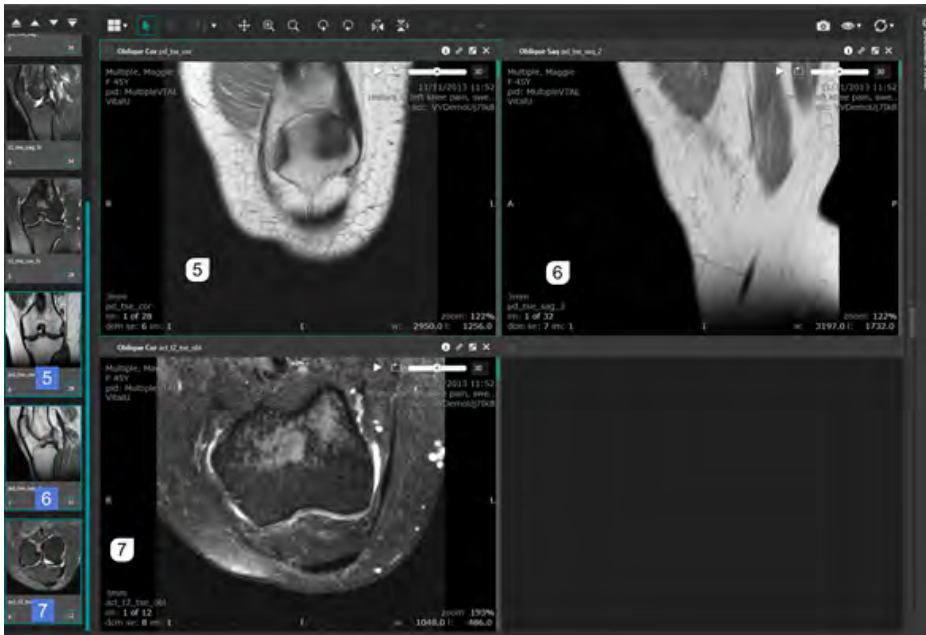


The first four series is represented in each of the view ports.

Page Down button



When the page down button is selected the next set of series is displayed.

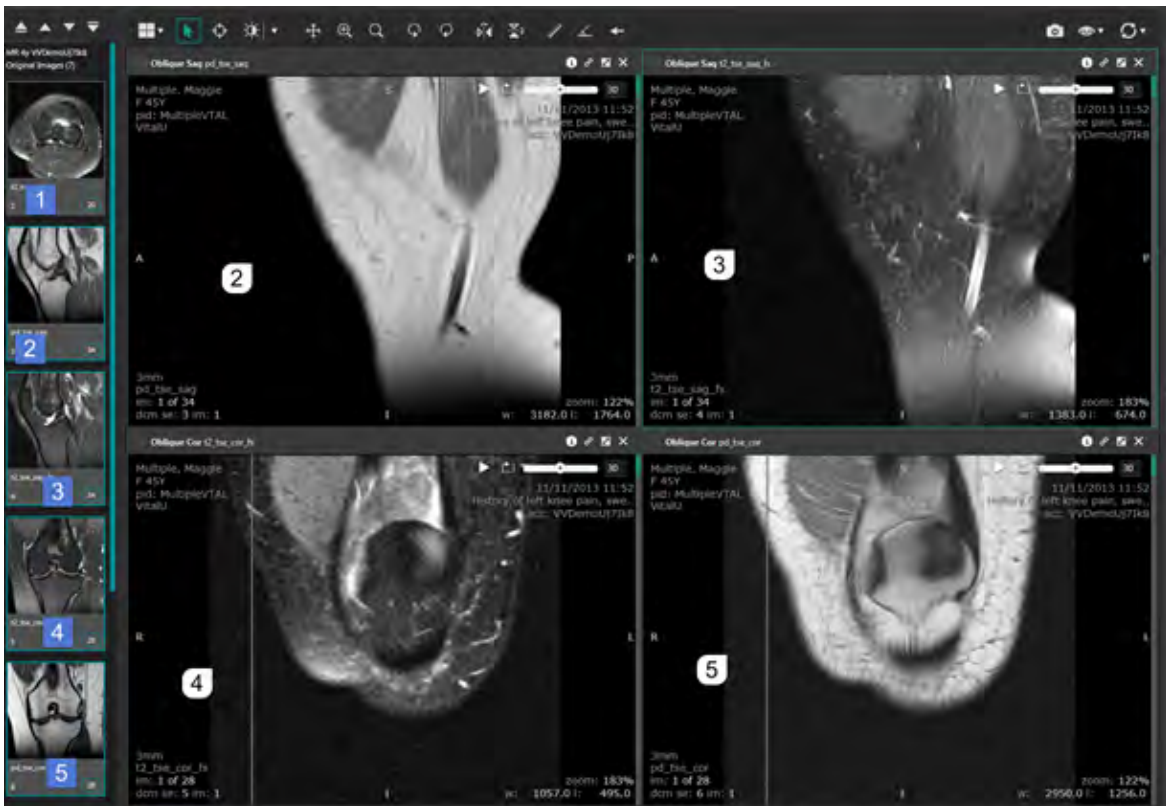


Previous/Next Navigation Tools

When you select **Next**, the system will move the series by one series at a time.



Series 2 is now in the first view port and series 5 has been added to the last view port. Each series will be incrementally advanced until the last four series are display. If you select **Previous** then the series moves the previous series one at a time until you are back to the top.









NOTE

If you drag and drop series within view ports, the system assumes you are no longer in automatic mode but in manual drag and drop mode. At this point the page up/page down buttons are no longer applicable and will not select series in proper order.

Manual Series Navigation

At the top of the Carousel is the series navigation options. These options will allow you to quickly scroll through the series in an exam or study without having to insert images.

To use the series navigation, select your layout for viewing then insert an image into one of the view ports and use the series navigation select whether to move through the series by one step, or by page.

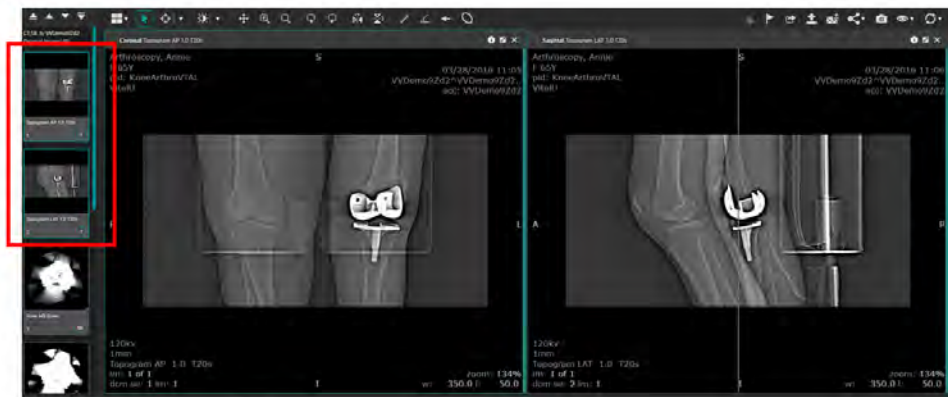
			
Move up by page	Move up by one series	Move down by one series	Move down by page



NOTE

If you are using a 1x2 layout it will move you forward or backward by two series.

Thumbnails outlined in the Carousel are the images displayed in your layout. See the image below.



View Ports

View ports display various types of images, text, markers and status.

When you move a study to a view port, the first image of the study displays.

The total number of images in the study displays in the lower right corner of the carousel thumbnail. Scroll through the images by rolling the mouse wheel or using the scroll bar.

A blue outline of the thumbnail indicates that the image is displayed in a view port.

A view port has the following components:

- Orientation Markers: The primary orientation markers are anterior, posterior, inferior, superior, right and left.

- An outline to indicate the active (selected) view port.
- View menu to show or hide certain features on the view port, including slice thickness (mm).

Replace Images

Drag a thumbnail from the carousel to a view port.



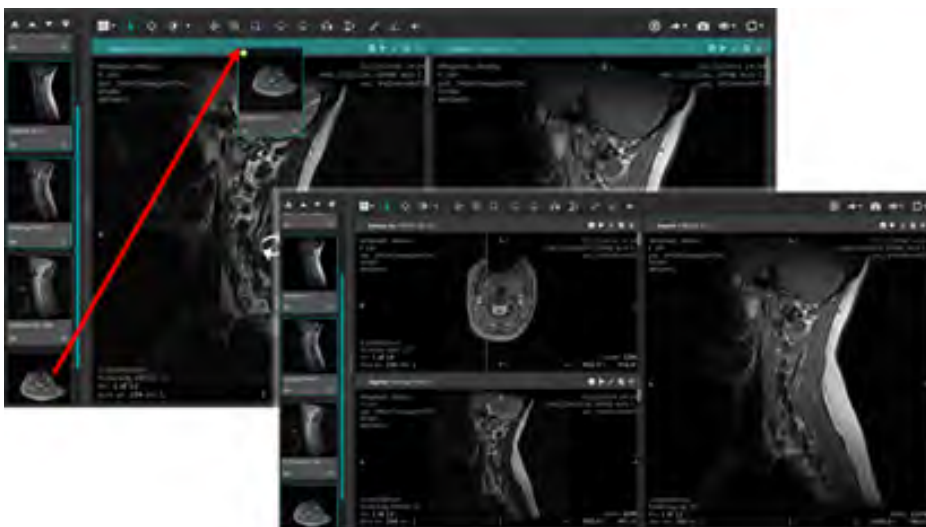
NOTE

With 1 X 1 orientation, simply click on the thumbnail in the Carousel.

The cursor changes to two opposite-pointing arrows to indicate you are swapping images.

Insert Images

Drag and drop a Carousel thumbnail to the margin of a view port (you will see the margin highlight in teal). This will increase the number of viewing panes in the viewer.



For example, a 1x1 viewer will become a 1x2 viewer.



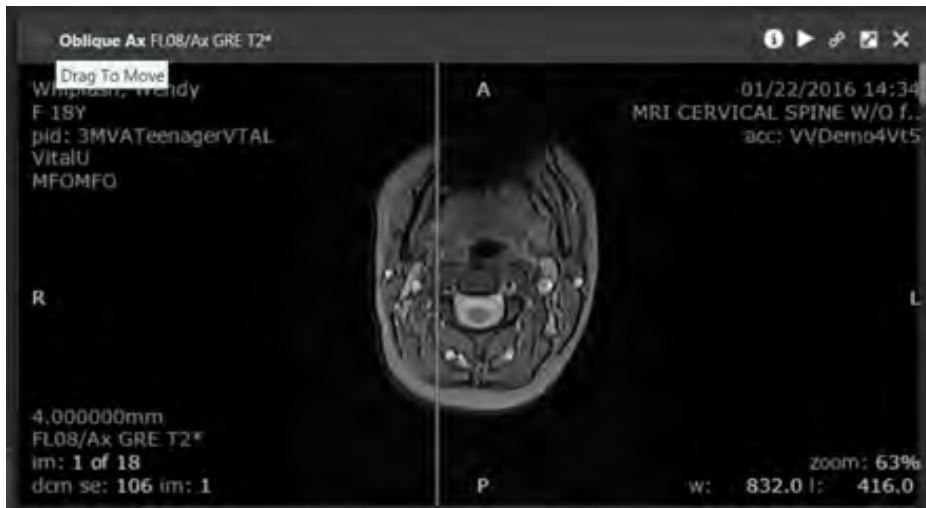
NOTE

The margin is highlighted when the cursor is in the correct position to insert the image.
If you insert an image from the carousel that is already in a view port, the Vitrea View software will create a duplicate image with separate image properties.

Rearrange Images

1. Click the texture icon in the upper left corner of a View Port
2. Drag the thumbnail to another View Port

The Vitrea View software retains any zoom, markup window/level, and image position properties you applied.

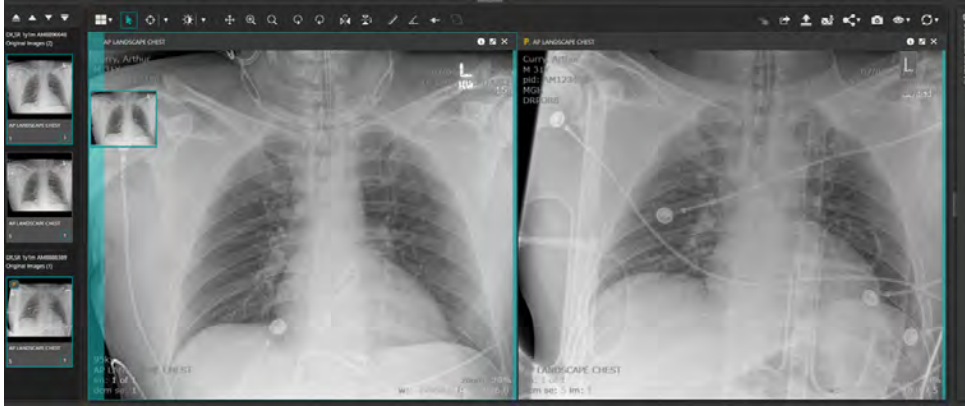


Clone Images

Click the Texture icon of the image you want to clone and drag the thumbnail to the margin of the View Port.

OR

Drag the carousel thumbnail of the same series you want to clone to the margin of the view port or into an open view port.

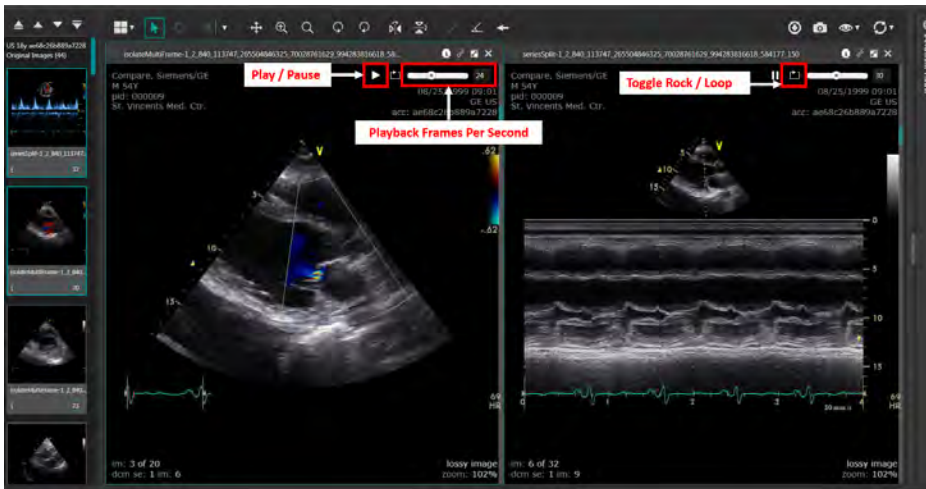








Cloned images will be marked in the header.



Cine

Cine is available in modalities where multiple slices are included in the study (such as XA, US, NM, and CT). Cine through images to see the anatomic artifacts in motion that cannot be seen in any one frame.



Icon	Action	Description
	Play	Press to cine through images
	Pause	Press to pause cine
	Loop	Indicates you are in loop mode. Use Loop to start again with the first frame when the series reaches the last frame. For example, after playing from frame 1 to 100, the cine will play from 1, 2...until 100, and then again from 1, 2...until 100.
	Rock	Indicates you are in rock mode. Use Rock to go backward through the frames when the series reaches the last frame. For example, after playing from frame 1 to frame 100, the cine will play from 99, 98...until 1, and then from 2, 3...until 100.
	Cine Speed	<p>Use the Speed slider bar to adjust the speed of the cine or enter a value between 0 and 60 in the FPS text box.</p> <p>Cine speed is a complex factor in imaging, as there are many standards for how DICOM specifies frame rate.</p> <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p>NOTE</p> <p> When scrolling or cine through a stack of images, the display is not fully rendered until you stop. This enables faster and smoother scrolling and cine performance.</p> </div>

Maximize a View Port to 1-up

Double-click an image to maximize the size of the image in the view port in a 1-up view.



NOTE

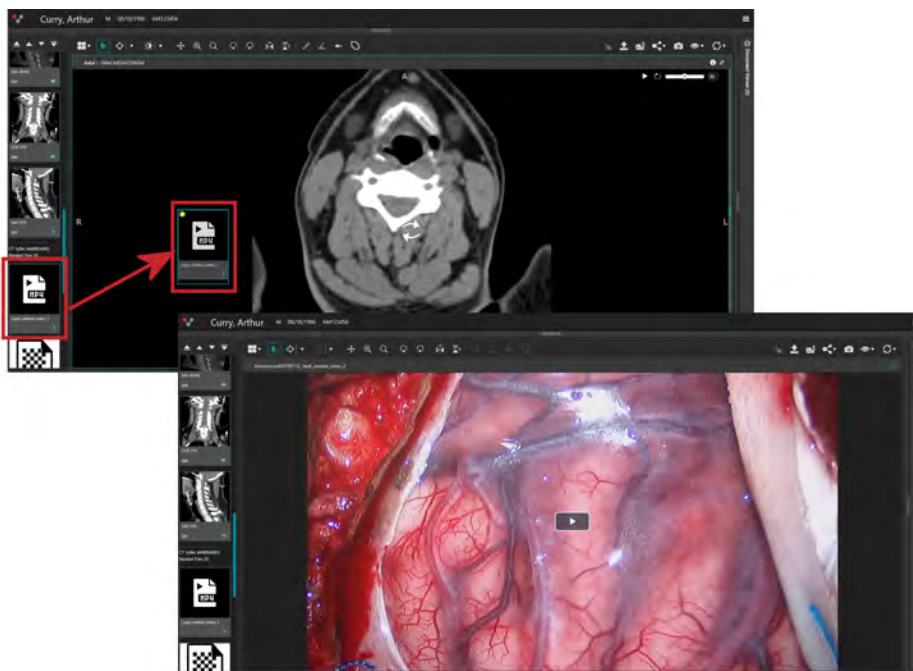
This behavior is the same as the Full screen  button that can be accessed from the Image Header Tools menu.

Double-click again to return to the last layout used.

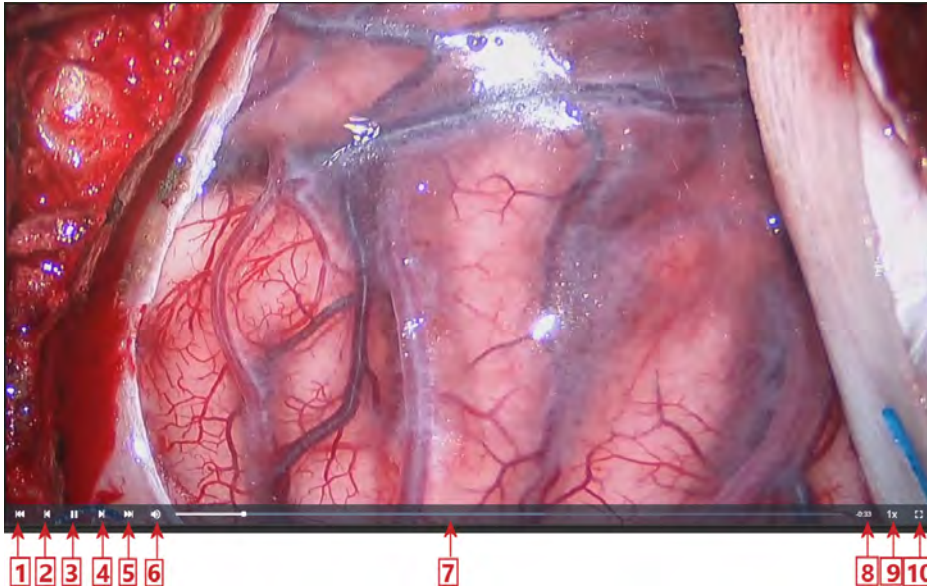
Video Playback

Video playback is a configurable feature. Contact your system administrator to enable video playback.

Videos will appear in the carousel below the images in the Related File section and in the Patient Timeline. Viewing videos is similar to viewing images in a view port.




Click the Play button in the center of the view to start the movie.



Use the movie controls as follows in the table below.

Callout	Description
1	Click to step back 5 frames
2	Click to step back 1 frame
3	<ul style="list-style-type: none"> Click to Pause/Play Alternatively, click within the video to pause or play
4	Click to step forward 1 frame
5	Click to step forward 5 frames
6	<ul style="list-style-type: none"> Volume Control Click to mute/unmute Hover to display the Volume Control slider
7	<ul style="list-style-type: none"> Video seek Hover on the dot to display the time point Drag the dot to move the video to a time point Click on the seek bar to jump to a specific time point
8	Time remaining (no action)

Callout	Description
9	<p>Playback Speed</p> <ul style="list-style-type: none"> Hover to display the Playback Speed menu 
10	<p>Click to enter full screen mode</p> <ul style="list-style-type: none"> Press ESC to exit full screen mode

Video Editing


Clip long video files into a shorter segment(s) to showcase only the relevant content.

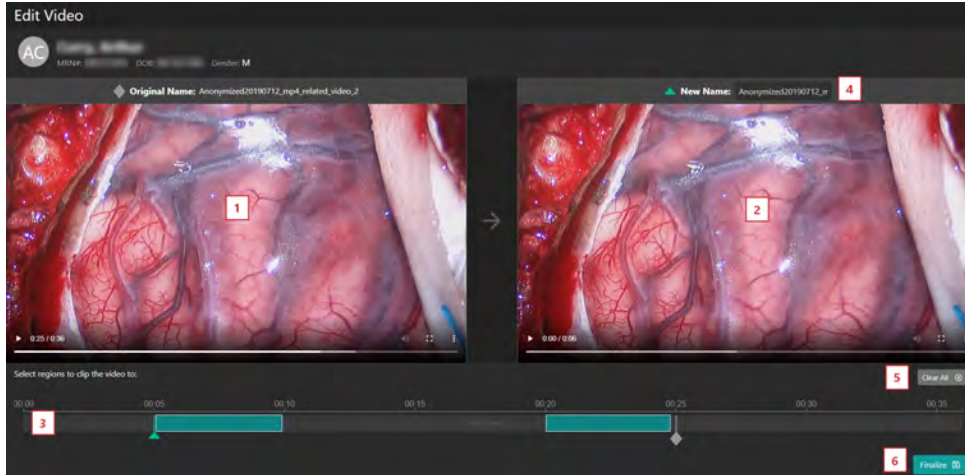



NOTE

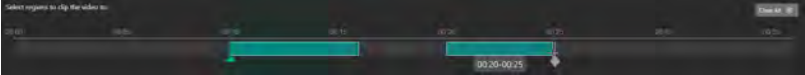
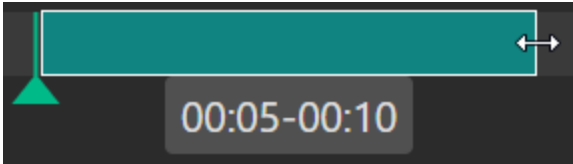
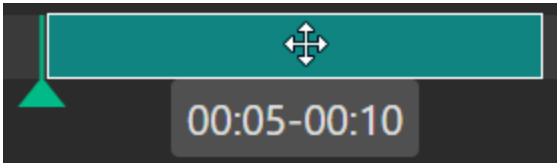
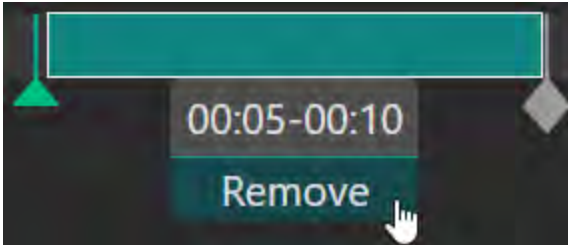
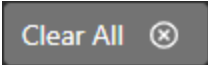
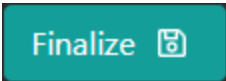
- Video editing is available with certain permissions. For users without appropriate permissions, the Video Edit button will not display.
- Video editing requires Vitrea Connection 7.5 or greater.



With a video file displayed in the view, click  in the upper-right corner. The Edit Video window opens in a new tab.



Callout	Description
1	<p>The Original Video displays in the left viewer.</p> <p>Use the tools at the bottom of the viewer to:</p> <ol style="list-style-type: none"> Play/pause Video seek Mute Enter full screen mode 
2	<p>The Edited Video displays in the right viewer.</p> <p>Use the tools at the bottom of the viewer as in callout 1 above.</p> <p>The right viewer remains blank until you have selected clips.</p>

Callout	Description
3	<p>Edit Track</p> <p>Click at the starting point of clip and drag to the ending point of the clip. You can select multiple, non-overlapping, clips.</p> <p>The time span of the clip(s) displays as you select. The gray line with a diamond shape indicates the original video time point. The green line with a triangle shape indicates the edited video time point.</p>  <ul style="list-style-type: none"> • Hover over either end of the clip indicator and drag to change the start/end time  <ul style="list-style-type: none"> • Hover within the clip indicator and drag to move the selection range  <ul style="list-style-type: none"> • Click within the clip indicator to remove the selection 
4	<p>New File Name</p> <p>Enter a name for the edited video. The default value is the original name with "_clipped" added to the end.</p>
5	<p>Click Clear All to remove all clips. </p>
6	<p>Click Finalize to save the edited video. </p>

Tools

The toolbar will appear directly above the View Ports and provide for image navigation, orientation, measurements, and sharing.



Pointer



The **Pointer Tool** allows you to click 2D images without affecting the images. The common mouse navigation and right-click options are enabled with this tool.

Crosshair

Use the Crosshair option to synchronize and scroll through multiple views.

1. In the View menu, select **Crosshair**.

A crosshair displays on the views.

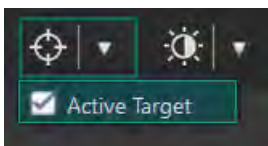
2. To navigate all views to a single location, drag the center of the crosshair.
3. To scroll, drag a horizontal line to move the crosshair up and down, or drag a vertical line to move the crosshair left and right.

The corresponding view(s) will scroll and keep the crosshair location synchronized.

- For example, move the crosshair up and down in the Axial view or move the crosshair left and right in the Sagittal view to scroll through the Coronal view.
- Move left and right in the Axial or Coronal view to scroll through the sagittal view.
- Move up and down in the Coronal or Sagittal view to scroll through the axial view

If you right click on the crosshair in the image you can also show or hide the data value for that position (HU for CT for instance).

Active Target



The Active Target allows you to view a single target point within multiple views with the same frame of reference.

1. Click the drop down arrow.

2. Click the check box to switch to the active target tool.
3. Drag the cursor within a view.
4. Click on a point of interest in the view. As you move the cursor, the other views synchronize to that location.
5. The target location in the other view ports will match the position of the Active Target cursor.
6. Release the mouse button to re-display the reference lines.

Window/Level Settings



Adjust the Window/Level

1. Select the Window/Level Tool from the toolbar.
2. Click and drag in the view.
 - a. Drag left or right to increase or decrease the contrast.
 - b. Drag down or up to increase or decrease the brightness.
 - c. Drag diagonally to adjust window width and level at the same time.

Adjust the Window/Level Using Presets

Window/Level presets are based on the active series. For example, if a CT series and an MR series are on the screen at the same time they will have different presets.

1. Click on the Window/Level Tool.
2. Select the desired preset value.

Reset Window/Level Presets to Default Value

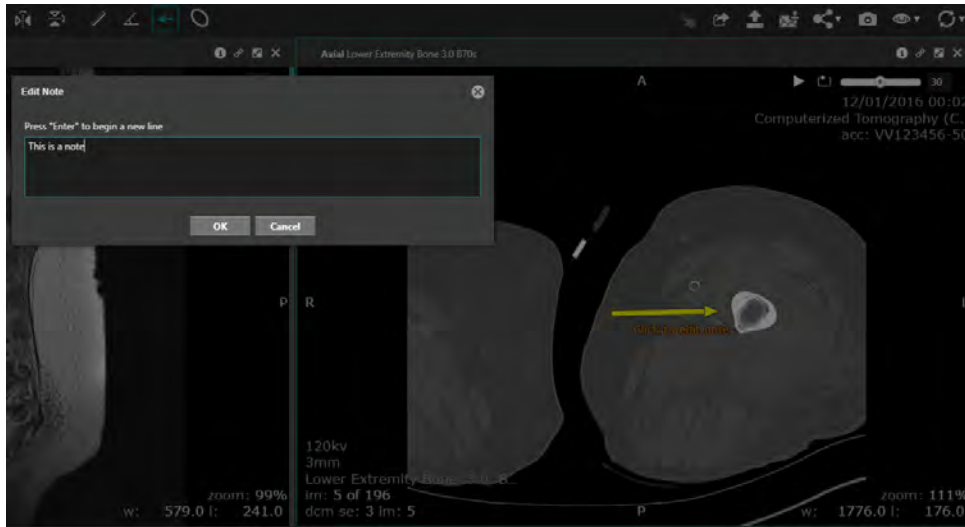
Click on the Window/Level Tool and select Reset. The window level value resets to the default value for the active series in the study.

Arrow

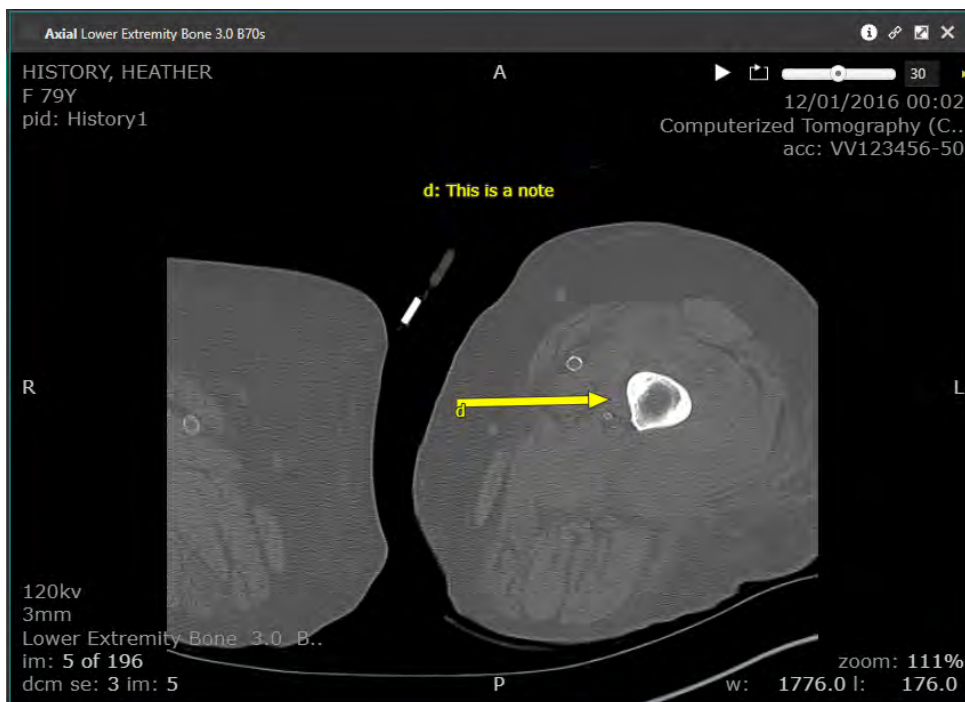


Click in the view to place the tail end then drag to place the arrowhead.

To add an annotation to the arrow, click the orange text Click to edit note then type comment in dialog box.



To move the note, click it and drag to desired location.



To resize the arrow, click and drag the endpoint to the desired location, and release the mouse button.

To hide the note, right-click the arrow and select Hide Note.

To delete the arrow, select the arrow, right-click and select Delete.



NOTE

Be aware that measurement values or annotations may go partially off the screen, especially with zoomed or panned images. With markups close to the edge of the screen, be sure to zoom out or pan the image to be sure you see the entire markup. A red arrowhead

 displays near the edge of the screen where a markup annotation goes off the screen.

View Menu



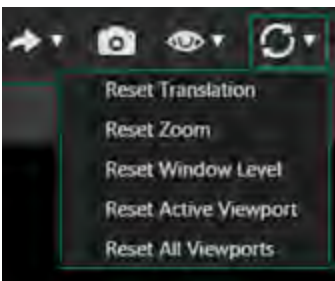
Use the View Menu to show or hide certain features that display in the views.

Menu Item	Description
Markups	Select Markups to toggle whether markups are displayed or not.
Demographics	Display or hide patient information on all view ports. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>NOTE</p> <p>If this option is checked in the menu it means the option is enabled.</p> </div>
Reference Lines	Displays reference lines on any applicable view port.
Select Presentation	Allows you to display presentation state markups.

Reset



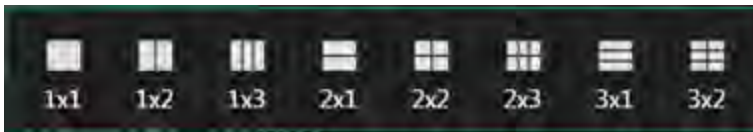
The Reset icon provides a menu of actions that can be reset back to the original setting.



Orientation Tools

Layouts

Click the Layouts button to display a panel of Viewer window layout options. Select an option for a new layout.



Pan



With the Pan tool selected, click in the viewer window and drag (Pan) the image to the desired location.

OR

Click and hold the mouse wheel button with the cursor on the image and then drag (Pan) the image in the view port.

Zoom



With the Zoom tool selected, click and hold the mouse button.

A square will display on the screen identifying the focus area of the zoom.

Drag up to increase the zoom factor (magnify) or drag down to decrease the zoom factor. The zoom factor displays in the lower right corner of the Image Area.

To reset to the default zoom factor, click on the Reset icon and select **Reset Zoom**.

Magnify



Drag magnification box onto image.

Click to anchor the magnification box on the desired location.

Click to reactivate the magnification box in order to move it.

OR

Right-click to delete the magnification box.



NOTE

Multiple magnification boxes can be created and placed on images.

You can drag the box around the image in order to pinpoint your area for magnification.



Simultaneously, you can use the mouse wheel to adjust the magnification level inside the magnification box.

Rotate Left 90 degrees



Click the Rotate Left icon to rotate the image 90 degrees to the left. Each click will rotate it another 90 degrees.

Rotate Right 90 degrees

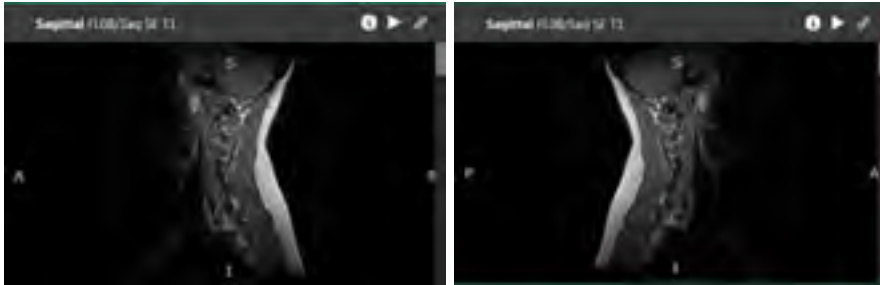


Click the Rotate Right icon to rotate the image 90 degrees to the right. Each click will rotate it another 90 degrees.

Flip Horizontally



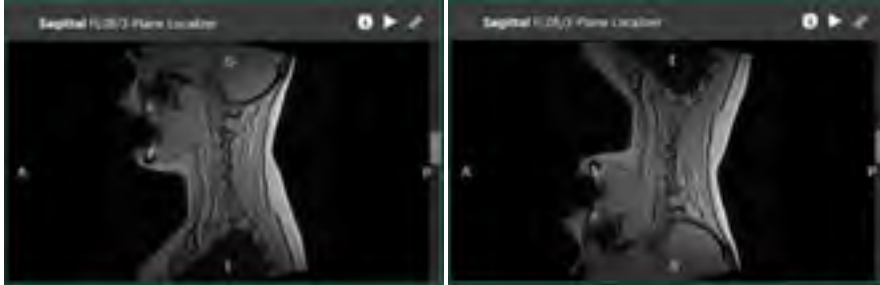
Select the Flip Horizontally icon to flip the image along a horizontal axis.



Flip Vertically



Select the Flip Vertically icon to flip the image along a vertical axis.



Measurement Tools

Ruler



Move to the image and click the desired starting point to indicate the beginning of the line.

Click and drag in the image to place the desired end-point of the line.

To Move the Ruler

1. Hover over the ruler markup text until the handles display.
2. Click and drag the ruler markup to the desired location and release the mouse button.

When you move the ruler markup text more than 40 pixels away from the markup object, markup lettering is automatically enabled. The Vitrea View software places a letter as an identifier near the markup and adds a row of text to the markup text with the letter.

Once a markup is created with a legend entry, that letter is not used again within that study even if the markup is deleted. Thus, the Vitrea View software will not re-letter the markups.

Delete the Ruler

1. Hover over the ruler markup text until the handles display.
2. Click the markup to select it.
3. Right-click the markup to access the edit menu and select Delete.



NOTE

When images are not calibrated, measurement markups display in pixels rather than millimeters. Pixels do not represent an actual measurement and no conversion to millimeters is possible.



See the [Understanding Measurement Values and Units](#) section below.

Be aware that measurement values or annotations may go partially off the screen, especially with zoomed or panned images. With markups close to the edge of the screen, be sure to zoom out or pan the image to be sure you see the entire markup. A red arrowhead displays near the edge of the screen where a markup annotation

goes off the screen.

Angle



Move to the image, then click to set the first point of the angle.

Now use the mouse cursor to move the yellow line to the point of the apex. Click again to set the apex of the angle.

To finalize the angle, pull the yellow line from the apex to the desired end point.

To modify the angle, click either anchor point or the center point and modify the angle as desired.



NOTE

If you select the angle without selecting the anchor point, you move the location of the angle without changing its dimensions.

The angle is established by the direction you move. When you move above the first established line, the angles increment from 0-360 degrees counter-clockwise. If you cross the line, the angles increment from 0-360 degrees clockwise. Crossing the actual first line flips the angle.

Be aware that measurement values or annotations may go partially off the screen, especially with zoomed or panned images. With markups close to the edge of the screen, be sure to zoom out or pan the image to be sure you see the entire markup. A red arrowhead displays near the edge of the screen where a markup annotation goes off the screen.

Elliptical Region of Interest



Ellipse Region of Interest (ROI) is available on CT and MR images.

The ellipse tool allows you to select an area to display the following:

- Mean (in hounsfield units if CT, pixels if MR)
- Standard deviation (in hounsfield units if CT, pixels for MR)
- Area (in square millimeters).

To initiate the tool, select the ellipse icon from the tool bar, click on the image and drag your cursor to create the desired ROI dimensions.

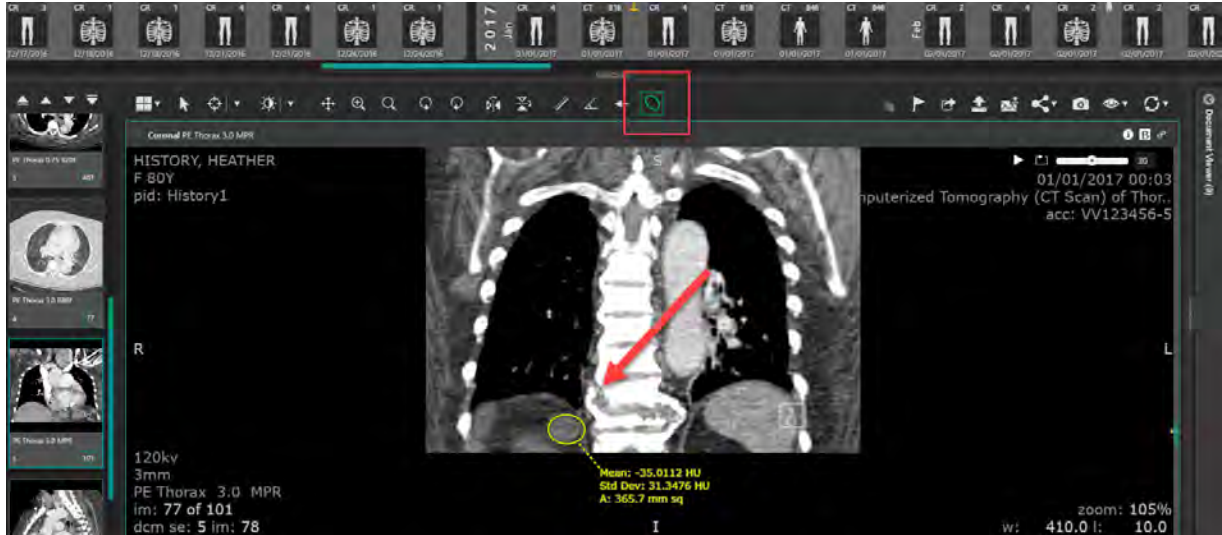
You can resize the ellipse by clicking and dragging the handles of the ellipse.

You can also move the ellipse by selecting the middle handle.

The measurement label can also be moved by clicking and dragging on it.

You can delete the ROI by clicking on the perimeter, right clicking, and then selecting the “delete” option.

An ellipse cannot be moved off of the image.



Working with Markups

Resize or Move

1. Hover on a markup to select it.
2. To resize a line or arrow, click and drag the endpoint to the desired location, and release the mouse button.
3. To move a markup, click and drag the line to the desired location, and release the mouse button.

Delete

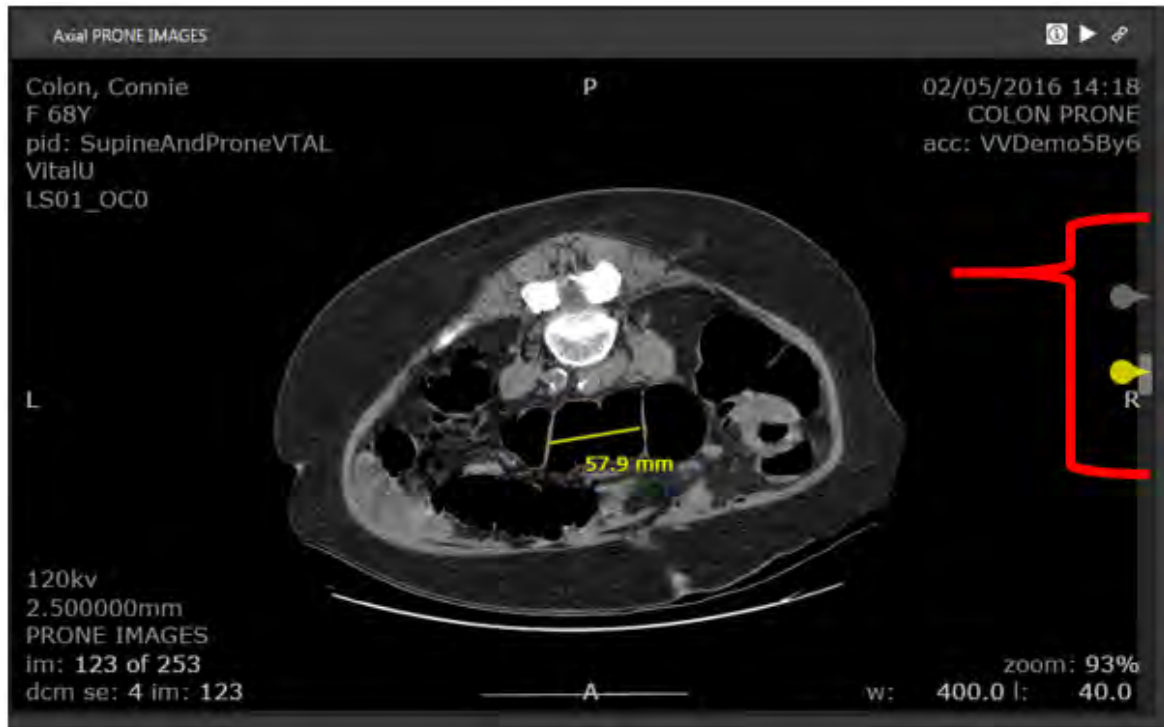
1. Hover on a markup to select it.
2. Right-click and select Delete.

On touch-screen devices, select the Markup Tools icon and select Reset to delete markups. This deletes all the markups in the Viewer.

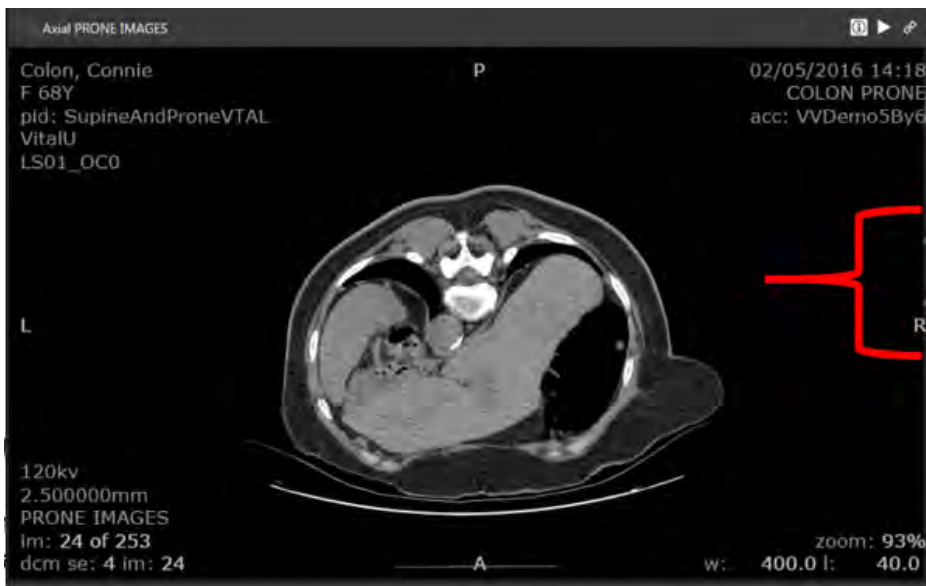
Navigate to a Slice Containing Markups

Click a gray flag in the scrollbar to jump to the slice containing the markup. A yellow flag indicates the displayed slice contains a markup.

Full flags display when hovering on the scroll bar.



Partial flags display when not hovering on the scrollbar.



Measurement Accuracy

There are many factors that can affect the accuracy of measurements. The majority of the accuracy is determined by the acquisition resolution, slice spacing, and measurement point placement.

When using measuring functions, keep the following factors in mind:

- Select slice thickness and slice spacing in image acquisition so that details of diagnostic interest are not

lost due to too large interslice spacing. Keep in mind that the inherent limitations of scan slice thickness set the ultimate available resolution limit.

- The accuracy of these measurements depends on the accuracy of the scale factors that describe the image resolution and the spacing between source images. It is your responsibility to determine if the results of measurements are satisfactory. To reduce the margin of error introduced when you create measurements:
 - Pay attention to the zoom factor you apply to the image. The more you zoom in on the image before creating the measurement, the more accurate the measurement will be.
 - Adjust window/level and other visualization settings to achieve the best possible view of the anatomy before you create the measurement.
 - Draw contour lines around the anatomy as accurately as possible.
 - Place ruler endpoints as precisely as possible, exactly where you want them to display on the image.
 - Whenever possible, create measurements on the acquisition orientation of the image. The acquisition axis typically has the highest resolution and therefore contributes the smallest percentage of error.

Supported Modalities

Cross-sectional SOP Class UIDs

Name	SOP Class UID
CT Image Storage	1.2.840.10008.5.1.4.1.1.2
Enhanced CT Image Storage	1.2.840.10008.5.1.4.1.1.2.1
MR Image Storage	1.2.840.10008.5.1.4.1.1.4
Enhanced MR Image Storage	1.2.840.10008.5.1.4.1.1.4.1
Positron Emission Tomography Image Storage	1.2.840.10008.5.1.4.1.1.128
Enhanced PET Image Storage	1.2.840.10008.5.1.4.1.1.130
Nuclear Medicine Image Storage	1.2.840.10008.5.1.4.1.1.20
Breast Tomosynthesis Image Storage	1.2.840.10008.5.1.4.1.1.13.1.3
Ultrasound Image Storage	1.2.840.10008.5.1.4.1.1.6.1
Ultrasound Multi Frame Image Storage	1.2.840.10008.5.1.4.1.1.3.1

Projection modality SOP Class UIDs

(ERMF = Estimated Radiographic Magnification Factor)

Name	SOP Class UID	Supports ERMF
X-Ray Angiographic Image Storage	1.2.840.10008.5.1.4.1.1.12.1	✓
X-Ray 3D Angiographic Image Storage	1.2.840.10008.5.1.4.1.1.13.1.1	✓
Enhanced XA Image Storage	1.2.840.10008.5.1.4.1.1.12.1.1	✓
X-Ray Radio-Fluoroscopic Image Storage	1.2.840.10008.5.1.4.1.1.12.2	✓
Enhanced XRF Image Storage	1.2.840.10008.5.1.4.1.1.12.2.1	✓
Digital X-Ray Image Storage For Presentation	1.2.840.10008.5.1.4.1.1.1.1	✓
Digital X-Ray Image Storage For Processing	1.2.840.10008.5.1.4.1.1.1.1.1	✓
Digital Mammography X-Ray Image Storage For Presentation	1.2.840.10008.5.1.4.1.1.1.2	✓
Digital Mammography X-Ray Image Storage For Processing	1.2.840.10008.5.1.4.1.1.1.2.1	✓
Computed Radiography Image Storage	1.2.840.10008.5.1.4.1.1.1	✗

Measurement Tolerances

The following table gives general information about measurement accuracy. On phantom data sets with the listed conditions, the following accuracy tolerances can be expected.

Measurement Type	Modality	Condition	Vitre View Accuracy	Accuracy factoring in non-Vitre View controlled items
Ruler	CT	In plane measurement: Pixel Spacing <= 0.468 mm	+/- 0.05 mm	+/- 0.7 mm
	CT	Out of plane measurement: Slice Spacing <= 1.0 mm	+/- 0.05 mm	+/- 1.5 mm
	MR	In plane measurement: Pixel Spacing <= 0.5468 mm	+/- 0.05 mm	+/- 0.8 mm
	MR	Out of plane measurement: Slice Spacing <= 2.0 mm	+/- 0.05 mm	+/- 2.9 mm
	PET	In plane measurement: Pixel Spacing <= 2.038750 mm	+/- 0.05 mm	+/- 2.9 mm
	NM	In plane measurement: Pixel Spacing <= 1.72 mm	+/- 0.05 mm	+/- 2.4 mm
	CR	In plane measurement: Pixel Spacing <= .25 mm	+/- 0.05 mm	+/- 0.4 mm
	DX	In plane linear measurement: Pixel Spacing 0.5 mm	+/- 0.05 mm	+/- 0.53 mm
	XA	In plane linear measurement: Pixel Spacing 0.5 mm	+/- 0.05 mm	+/- 0.53 mm
	MG	In plane linear measurement: Pixel Spacing 0.5 mm	+/- 0.05 mm	+/- 0.53 mm

Measurement Type	Modality	Condition	Vitrea View Accuracy	Accuracy factoring in non-Vitrea View controlled items
	US	In plane linear measurement: Pixel Spacing 0.16635 mm	+/- 0.05 cm	+/- 0.3 mm

Measurement Type	Modality	Condition	Vitrea View Accuracy	Accuracy factoring in non-Vitrea View controlled items
Angle	CT, MR	In plane measurement: Pixel Spacing \leq 1.5 mm and Reference line \geq 60 mm	+/- 0.5 degrees	+/- 3 degrees
	CT, MR	Out of plane measurement: Pixel Spacing \leq 2.0 mm and Reference line \geq 60 mm	+/- 0.5 degrees	+/- 4 degrees
	PET	In plane measurement: Pixel Spacing \leq 2.038750 mm and Reference line \geq 60 mm	+/- 0.5 degrees	+/- 4 degrees
	NM	In plane measurement: Pixel Spacing \leq 1.72 mm and Reference line \geq 75 mm	+/- 0.5 degrees	+/- 3 degrees
	CR	In plane measurement: Pixel Spacing \leq .1 mm and and Reference line \geq 70 mm	+/- 0.5 degrees	+/- 1 degrees
	DX	In plane measurement: Pixel Spacing \leq 0.139 mm and Reference line \geq 70 mm	+/- 0.5 degrees	+/- 1 degrees
	XA	In plane measurement: Pixel Spacing \leq 0.12478 mm and Reference line \geq 30 mm	+/- 0.5 degrees	+/- 1 degrees

Measurement Type	Modality	Condition	Vitrea View Accuracy	Accuracy factoring in non-Vitrea View controlled items
	MG	In plane measurement: Pixel Spacing \leq 0.065238 mm and Reference line \geq 70 mm	+/- 0.5 degrees	+/- 1 degrees
Area	Maximum of pixel spacing and slice spacing \leq 2 mm and shape diameter $>$ 20 mm		+/- 0.05 mm ²	+/- 5%
Mean of an ROI	Maximum of pixel spacing and slice spacing \leq 1 mm. ROI area \geq 100 mm ² . Standard deviation \leq 25		+/- .05 voxel value units	+/- 5.0 voxel value units
Standard Deviation of an ROI	Maximum of pixel spacing and slice spacing \leq 1 mm. ROI area \geq 100 mm ² . Standard deviation \leq 25		+/- .05 voxel value units	+/- 3.55 voxel value units



NOTE

Vitrea View Accuracy: This column indicates how accurate the Vitrea View software is with respect to the measurement inputs. In general, the Vitrea View software is accurate to the significant digits displayed on the screen.



NOTE

Accuracy factoring in non-Vitrea View controlled items: This column represents accuracy observed by measuring a representative phantom. This takes into consideration point placement, w/l, acquisition resolution, and other factors beyond the control of the Vitrea View software. Actual accuracy varies based on the external factors involved.

Understanding Measurement Values and Units

In the Vitrea View software, measurements are calibrated based on information in the DICOM image header. Most modalities that produce volumetric data provide calibration information; the Vitrea View software explicitly supports calibration for CT, MR, XA, DX, MG and PT.

If calibration information is present in a supported modality, the measurement is converted and displayed in millimeters.

For CR studies, the measurement will be converted to millimeters and calibration information will display (for example: "measured size at detector").



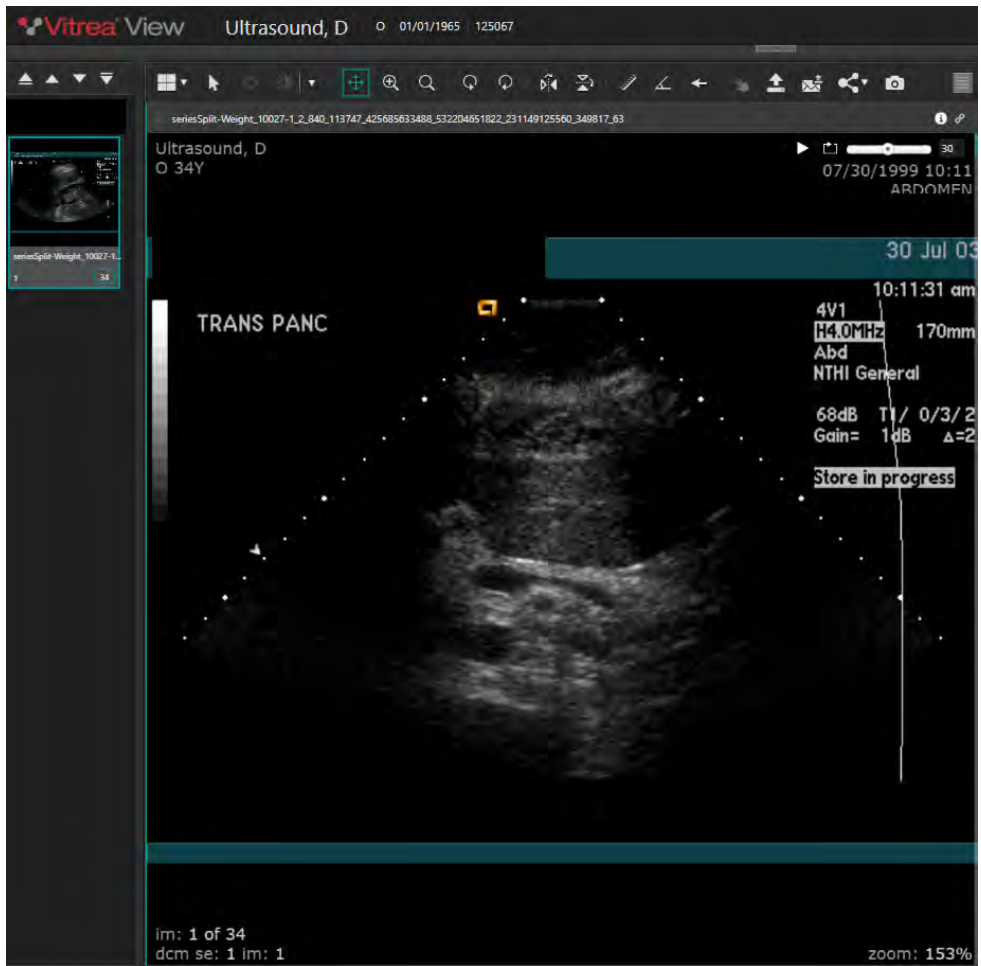
NOTE

For certain modalities that are based on projection of X-rays (e.g. CR) body-parts can be smaller or larger in the image based on their distance from the X-ray source and the X-ray detector plate. When calibration values appear in these images, they are either valid only at the detector plane (and of course a human is wider than a single plane) or are based on some assumptions of the area of interest. Measurements for CR will be available only if appropriate calibrations are present and they have the same value. Otherwise, no measurements will be displayed.

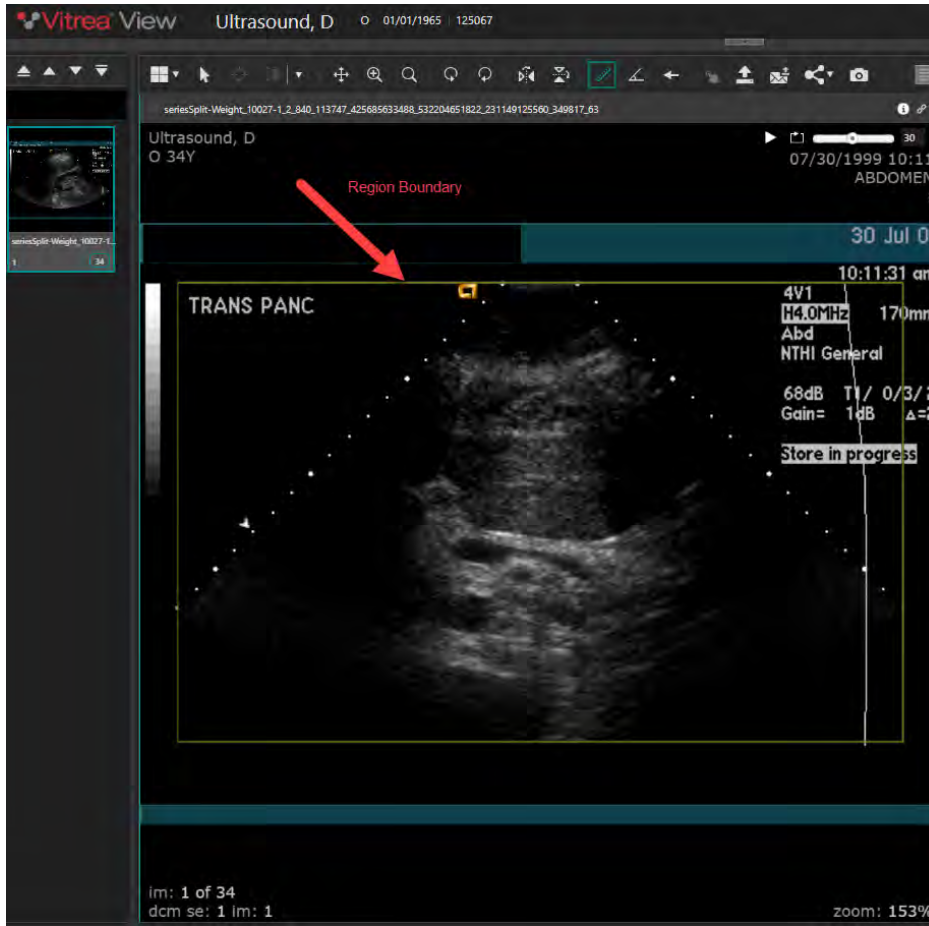
Ultrasound Measurements

For Ultrasound studies, users will notice that selecting the measurement tool automatically highlights the region for measurements.

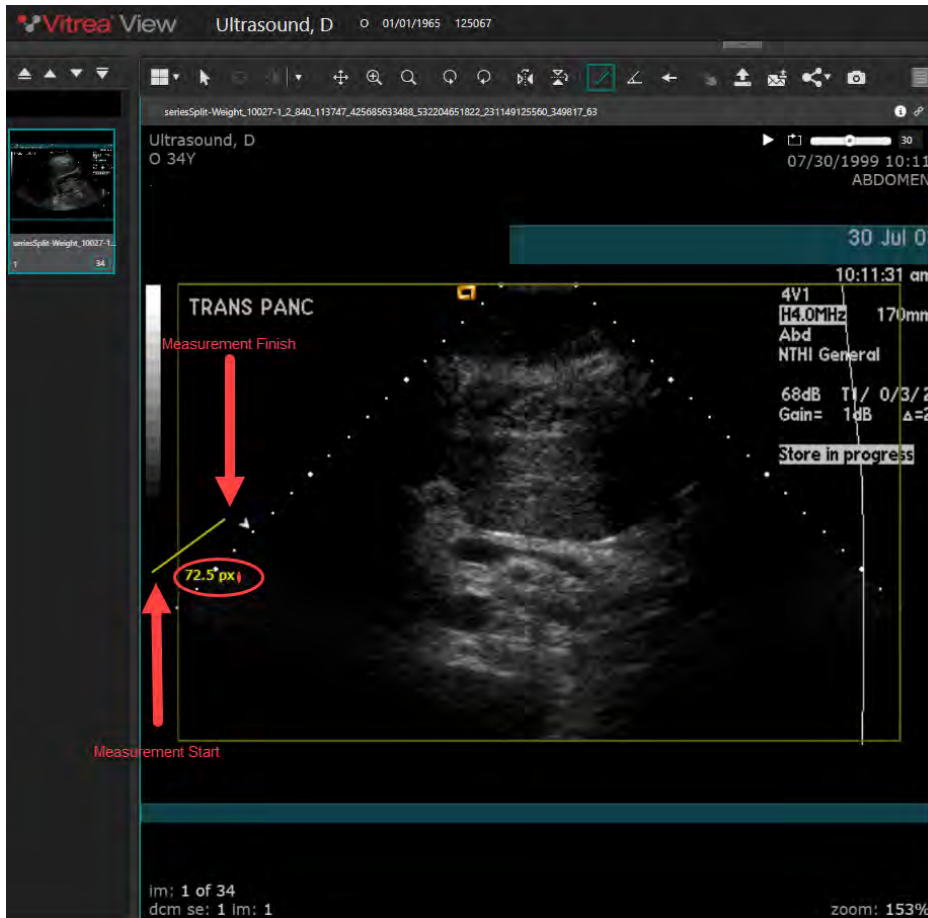
No tool selected:



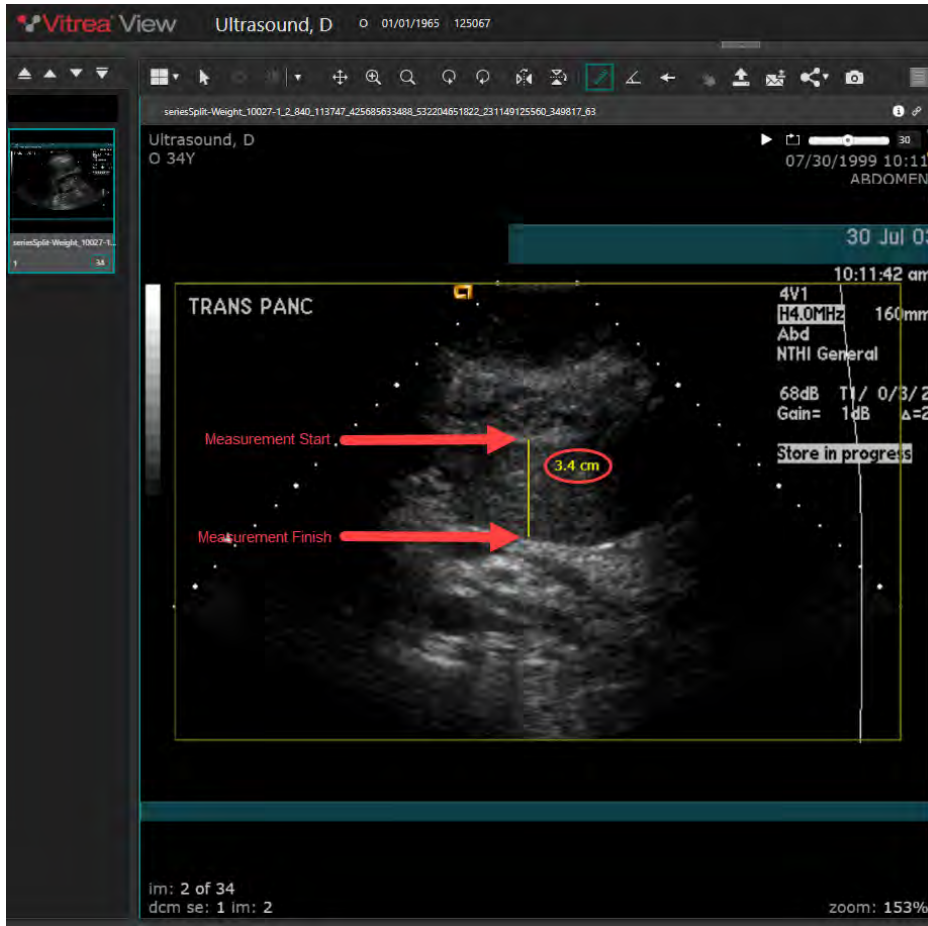
Measurement tool selected:



When measurements start outside a highlighted region, the ruler can be used throughout the viewer in addition to crossing region boundary lines. This will result in a measurements calculated in pixels.



When a measurement is taken within the highlighted region, all measurements will be calculated in cm.



NOTE


Measurements started within the highlighted region can not be extended beyond the boundary.

Image Sharing Tools

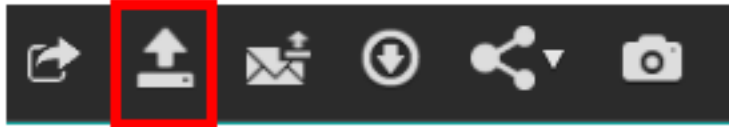
Transfer Study



When properly configured and with the appropriate permissions, Vitrea View provides the ability to transfer studies to a different archive.

 See the [Transferring Studies](#) section to view the transfer workflow.

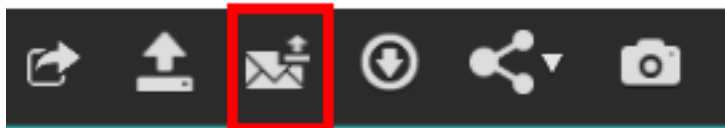
Upload




When properly configured and with the appropriate permissions, Vitrea View provides the ability to upload studies, non-DICOM images, and documents.

 See the [Uploading Studies and Images](#) section to view the uploading workflow.

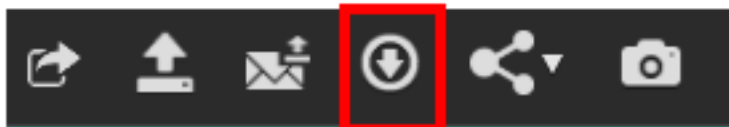
Email Upload Link



Email Upload Link allow you to send a link to someone else so they can upload images with the patient in context.

 See the [Uploading Studies and Images](#) section to view details around the upload link workflow.

Download



When configured, a study can be downloaded as a .zip file by selecting this icon.

 See the [Downloading Studies](#) section for more information.

Share Studies



When configured, this option allows you to copy a link to a study, or send a link to the study via email.

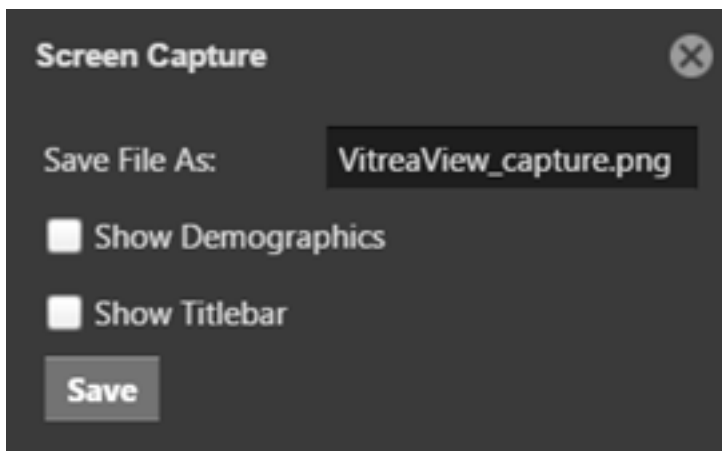
 See the [Sharing Images and Studies](#) section to view the study sharing workflow.

Screen Capture



The screen capture tool gives you the ability to save the image on screen to their local workstation. The screen capture by default removes demographic information and the title bar from the screen before capturing the image for use.

1. Click the screen capture tool.
2. The following dialogue box will be displayed:



3. You can perform the following options prior to saving the image:
 - a. Edit the Save File As file name.
 - b. Choose to show demographics.



NOTE

Turning this selection on could be a HIPAA or PHI issue. Please consult your administrator.

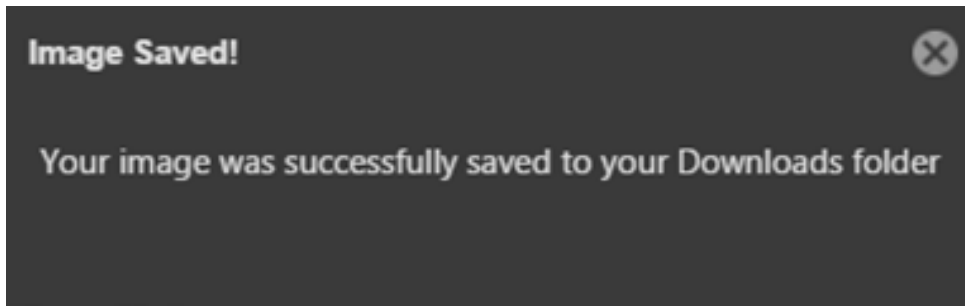
- c. Show the titlebar in the picture.



NOTE

Turning this selection on could be a HIPAA or PHI issue. Please consult your administrator.

4. To complete action select the Save button.
5. A confirmation screen will be displayed like below:



NOTE

Different browsers may have different default Save folders. In general, the screen capture will be saved in the browser's Downloads folder.



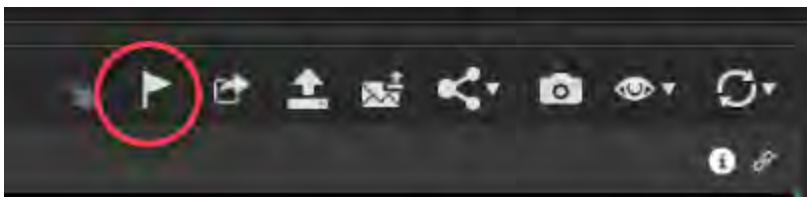
CAUTION

The captured image is for information and review purposes only.

2nd Read

Select to request a second read of a study from the viewer.

See the 2nd Read Request section for details on requesting 2nd reads.

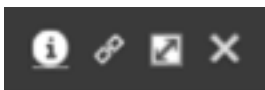


NOTE

Requires Vitrea Connection

Image Header Tools

Image level tools for viewing DICOM, linking, and full-screen. Specific tools depend on series context.



All image level tools are driven by the context of the image. For example, a US echo series will require different cine functionality from a CT series.

Use the tools on the Image Headers to perform the following tasks:

- View DICOM Metadata
- Link
- Full Screen

- Close Image

View DICOM Metadata

Select the DICOM Metadata button  to view the DICOM information specific to that image.



NOTE

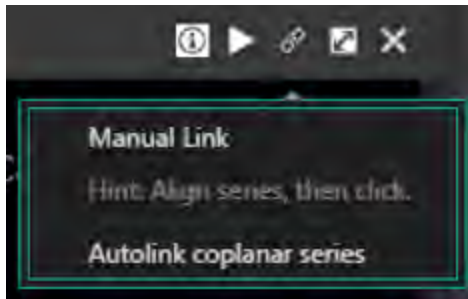
This information is dependent upon the data the sends to Vitrea View and may be different from one archive to another.

```

'Series 1' image #1
0002,0010 UI Transfer Syntax UID 1.2.840.10008.1.2 (ImplicitLittleEndian)
0008,0005 CS Specific Character Set ISO_IR 100
0008,0016 UI SOP Class UID 1.2.840.10008.5.1.4.1.1.6.1
0008,0018 ?? SOP Instance UID 1.2.840.113747.273181330033.92695769993.162723208649.602201.55
0008,0020 DA Study Date 19990825
0008,0021 DA Series Date 19990825
0008,0023 DA Content Date 19990825
0008,0030 TM Study Time 090121
0008,0031 TM Series Time 090121
0008,0033 TM Content Time 102957
0008,0050 SH Accession Number ae68c26b889a7228
0008,0080 CS Modality US
0008,0070 LO Manufacturer GE Vingmed Ultrasound
0008,0080 LO Institution Name St Vincents Med. Ctr
0008,1030 LO Study Description GE US
0008,1090 LO Manufacturer's Model Name Vivid7
0010,0010 PN Patient's Name Compare^Siemens/GE
0010,0020 LO Patient ID 000009
0010,0030 DA Patient's Birth Date 19450101
0010,0040 CS Patient's Sex M
0012,0082 CS Patient Identity Removed YES
0012,0083 LO De-identification Method Deidentified | Descriptors cleaned | Times retained | Institution retained | UIDs remapped
0012,0084 SQ De-identification Method Code Sequence
0008,0100 SH Code Value 113100
0008,0102 SH Coding Scheme Designator DCM
0008,0104 LO Code Meaning Basic Application Confidentiality Profile
0008,0100 SH Code Value 113107
0008,0102 SH Coding Scheme Designator DCM
0008,0104 LO Code Meaning Retain longitudinal Temporal Information with modified dates
0008,0100 SH Code Value 113108
0008,0102 SH Coding Scheme Designator DCM
0008,0104 LO Code Meaning Retain Patient Characteristics
0008,0100 SH Code Value 113111
0008,0102 SH Coding Scheme Designator DCM
0008,0104 LO Code Meaning Retain Safe Private
0018,1020 LO Software Versions Vivid7:2.3.0
0018,1088 IS Heart Rate 69
0018,8011 SQ Sequence of Ultrasound Regions
0018,8012 US Region Spatial Format 1
0018,8014 US Region Data Type 1
0018,8016 UL Region Flags 0
0018,8018 UL Region Location Min X0 38
0018,801a UL Region Location Min Y0 8
0018,801c UL Region Location Max X1 596
0018,801e UL Region Location Max Y1 398
0018,8020 SL Reference Pixel X0 242
0018,8022 SL Reference Pixel Y0 -8
0018,8024 US Physical Units X Direction 3
0018,8026 US Physical Units Y Direction 3
0018,8028 FD Reference Pixel Physical Value X 0.0
0018,802a FD Reference Pixel Physical Value Y 0.0
0018,802c FD Physical Delta X 0.04603580745589703
0018,802e FD Physical Delta Y 0.04603580745589702
0018,8030 UL Transducer Frequency 1667
0020,000d ?? Study Instance UID 1.2.840.113747.350943207688.62115031022.692597588127.981433.1140
0020,000e UI Series Instance UID 1.2.840.113747.265504946325.70028761629.994263816618.584177.150
0020,0011 IS Series Number 1
0020,0013 IS Instance Number 4
0021,0010 LO <Unknown> KINETDX_GRAPHICS
0021,0011 LO <Unknown> KINETDX
0021,10a4 UN <Unknown> Binary (0 bytes)
0021,11a5 UN <Unknown> Binary (2 bytes)
0028,0002 US Samples per Pixel 3
0028,0004 CS Photometric Interpretation RGB
0028,0006 US Planar Configuration 0
0028,0010 US Rows 434
0028,0011 US Columns 636
0028,0100 US Bits Allocated 8
0028,0101 US Bits Stored 8
0028,0102 US High Bit 7
0028,0103 US Pixel Representation 0
0028,2110 CS Lossy Image Compression 01
0028,2112 DS Lossy Image Compression Ratio 16.7
7fe0,0010 OW Pixel Data Binary (828072 bytes)

```


Linking



Vitrea View supports Auto and Manual Linking for the same coplanar series.

Linking Rules

- There are two modes of linking:
 - Auto linking – This will apply to the same coplane (example: axial to axial, coronal to coronal; sagittal to sagittal and within the same study)
 - Manual linking – this implies you will physically link the same plane and allow different studies
 - Manual link option is available when you have two or more studies with the same procedure.
- When linking across modalities a user will be in manual linking mode and must select the coplane and viewports to link.



NOTE


When you select the same series, but different slice thickness the image will the thinner slices will appear to be scrolling more than the image with thicker slices. These will not scroll simultaneously until the image hits the same spot on the thicker slice image.



NOTE

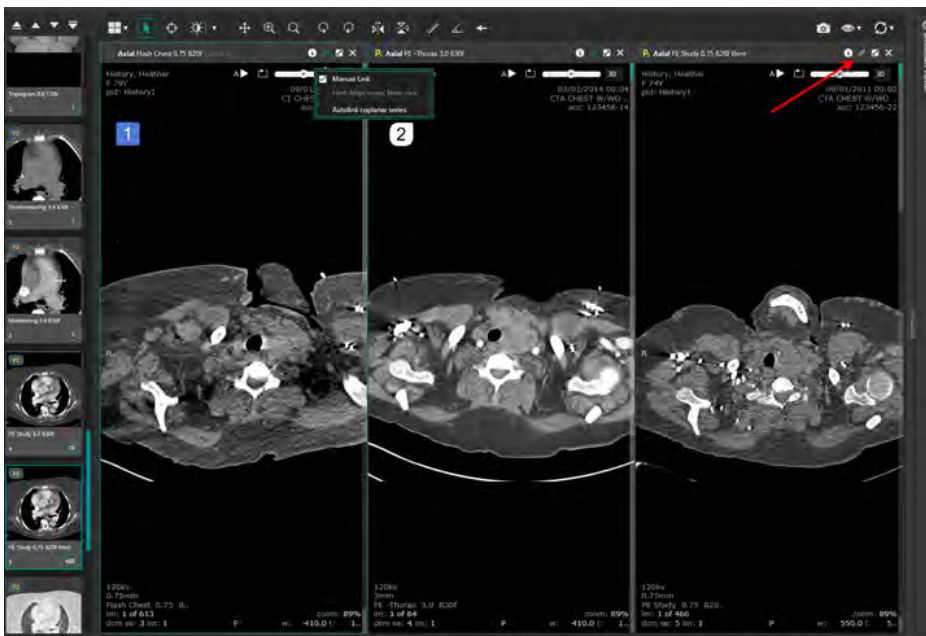
Auto linking is a global setting. If you select auto linking in Study A, then open Study B, Study B will have auto linking enabled.

Manual Linking

1. Select a current study and then select a prior for the same modality.
2. Hover over the  icon and select Manual Link.
3. The study is now linked and will scroll simultaneously through both series.

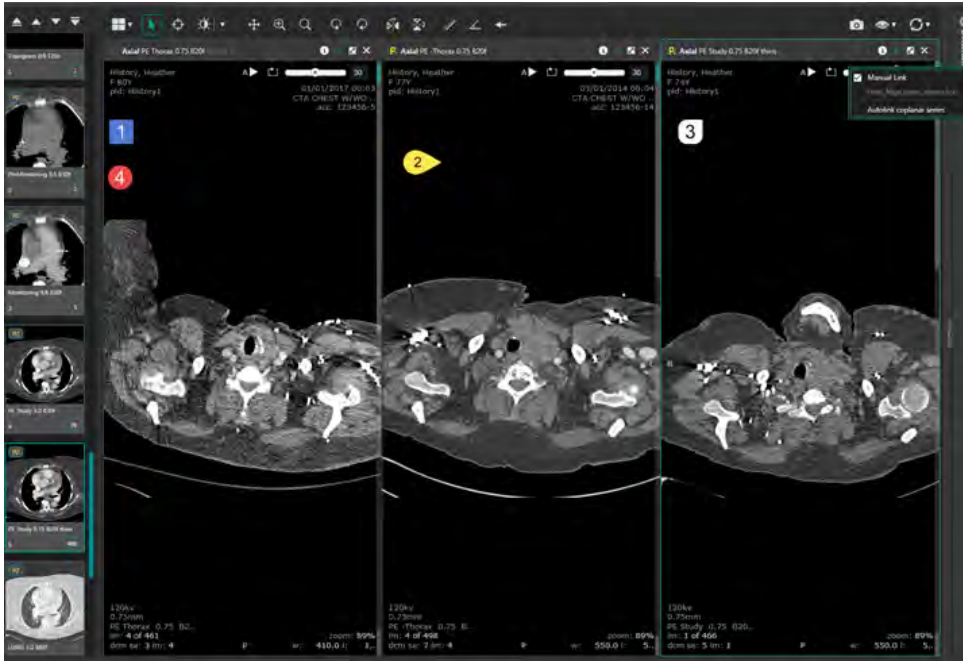


When you want to compare and link multiple priors to the current study the rule for manual linking will associate series 1 and 2. Note below that the link icon is not highlighted.

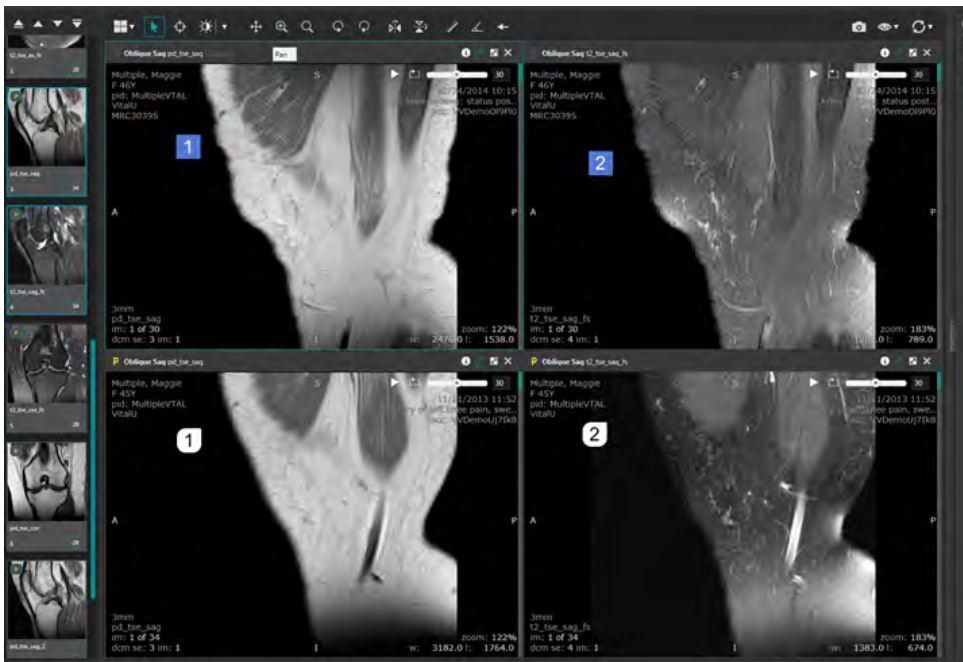


To link more than two view ports you must select each additional view port and select the first view port again indicating all the selected view ports are now linked.

When you select manual linking from view port 1, the system will manual link viewport 2. To add in the additional view port(s) you must go to the link icon on viewport 3 and select manual linking then put the focus back on viewport 1 to complete the loop. Once this is done all viewports will be linked and you can simultaneously scroll through the images.



When you combine multiple series where you select two series in the current study and two series from a previous study, you can select both Manual and Auto link modes to scroll all view ports simultaneously.




Manual Image Number Linking

- Volumetric series cannot be linked with non-volumetric.
- Non-volumetric series can include series from normally volumetric modalities (for example:

Rotational MR series) if the images are in a format that makes it hard to link because they are not coplanar.

Autolink Coplanar Series

1. Hover over the  icon and select Autolink Coplanar Series
2. All series that are selected in the same plane are linked.

Coplanar linking keeps series relatively aligned, even if the slice thicknesses are different between series.

If one series is longer than the other, then the longer series continues navigating and picks up again when possible.



Unlinking

When you unlink a series, it is unlinked from all links. It is possible to have coplanar (axial-axial), and manual links (current-prior) all at the same time. Unlinking delists a series from all updates immediately. Re-linking re-engages all types of links.

Full Screen

Click the Full Screen button  to expand the view to use the entire viewer.


Full screen can also be toggled by double-clicking on a view port.



NOTE

Once you switch to Full Screen view, the arrow icon changes to a different icon.

Close Image

Click the  button to close the individual image.

GSPS and CSPA Markups

Grayscale Softcopy Presentation State (GSPS) and Color Softcopy Presentation State (CSPA) markups created in a PACS system can be displayed in the Vitrea View software on original DICOM acquisition slices.

The software will display the most recent GSPS/CSPA markups created for a study, plus those within 5 minutes of the most recent markup. GSPS/CSPA is not applied to transformed images in axial, coronal, or sagittal planes.

The GSPS/CSPA markup is applied to images on launch when there are no key images defined. When key images are defined, and they have a corresponding linked GSPS/CSPA (in the key image note, which is supported by DICOM), those GSPS/CSPA markups will be shown preferentially for the key images in view on the corresponding images in the study.

The presentations states shown include these modules:

- Graphic annotation
- Graphic layers
- Displayed area (including scale to fit and magnify, not true size) spatial transformation

The GSPS/CSPA markups menu items contain creation time and date and username.

Select the GSPS/CSPA markups to display:

1. Click View.
2. Clear or select the individual GSPS/CSPA markup(s) to display.

If the study contains more than five GSPS/CSPA markups, choose Select Presentation, then clear or select the individual GSPS/CSPA markups from the sub-menu.

If you display GSPS/CSPA markups after modifying an image, the modifications are merged with the GSPS/CSPA markups. The latest change applies. Manipulations may override GSPS/CSPA transformations (such as a flipped image).




CAUTION

Be aware that some attributes of presentation state markups (such as font size) may display differently when shown in the Vitrea View software than when they were created on the PACS.

View Menu

Use the View Menu to show or hide certain features that display in the views.

Menu Item	Description
Markups	Select Markups to toggle whether markups are displayed or not.
Demographics	Display or hide patient information on all view ports. <div data-bbox="518 548 1388 688" style="border: 1px solid black; border-radius: 10px; padding: 10px;"> NOTE If this option is checked in the menu it means the option is enabled.</div>
Reference Lines	Displays reference lines on any applicable view port.
Select Presentation	Allows you to display presentation state markups.

Bitmap Overlay Support

Bitmap Overlay allows you to import images with monochrome text or graphic overlays created in another system. These overlays can be helpful in labeling or accentuating a feature in the image.

Key Images

Radiology Key Images

Radiology key images come to Vitrea View from PACS systems or VNA and have been flagged or selected to be more significant images, waveforms, or other composite objects from one or more studies for a patient. These images are typically used to aid communication with referring clinicians and help with understanding of a specific patient case. Key images are also used to:

- Identify images or other objects for review, teaching, conferencing, or presentation to the referring physician.
- Record notes within a slice of an image for later reference.
- Identify images that have quality-related defects, are rejected, or otherwise separated from other images in the study.

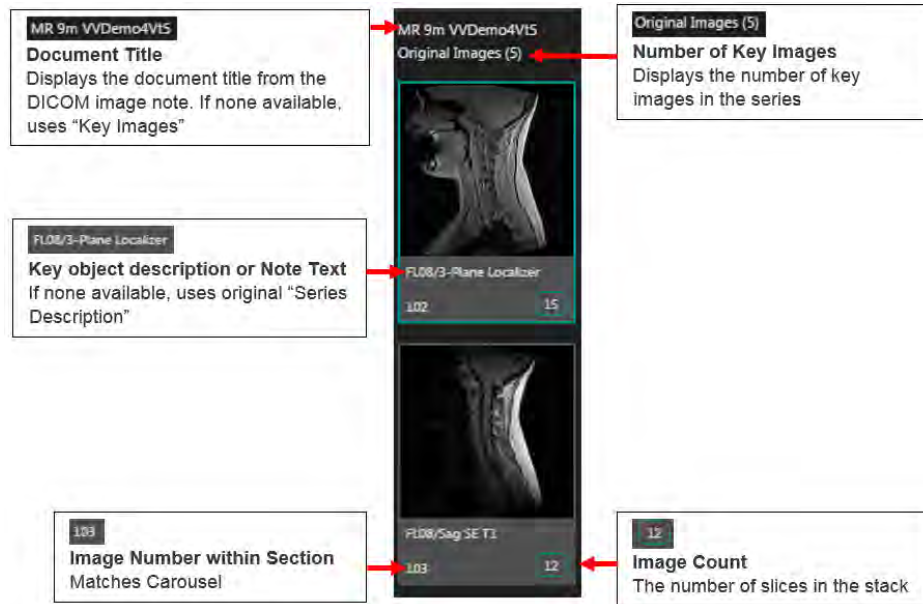
To take advantage of Vitrea View software's key image features, a PACS, VNA, or other software which generates the proper DICOM object (DICOM SR-Key Images), must be used, along with a workflow to both create and export these reports to the Vitrea View software using DICOM export. Please contact your PACS administrator to determine if your PACS has this feature and for information on how to engage this on your PACS workflow.

Other features for Key Images are:

- Key Image Note
- Autopresent Key Images
- Present Key Images

Show DICOM Key Image in Carousel

The DICOM key image is shown in the Carousel upon loading. Various elements of the DICOM key image note populate various sections of the Carousel and the Key Image Panel as noted below.



Show Multiple Key Image Sections

Multiple key image sections are organized by date, with the newest first. Any section can be closed or expanded via the icon or the text (e.g. Original).

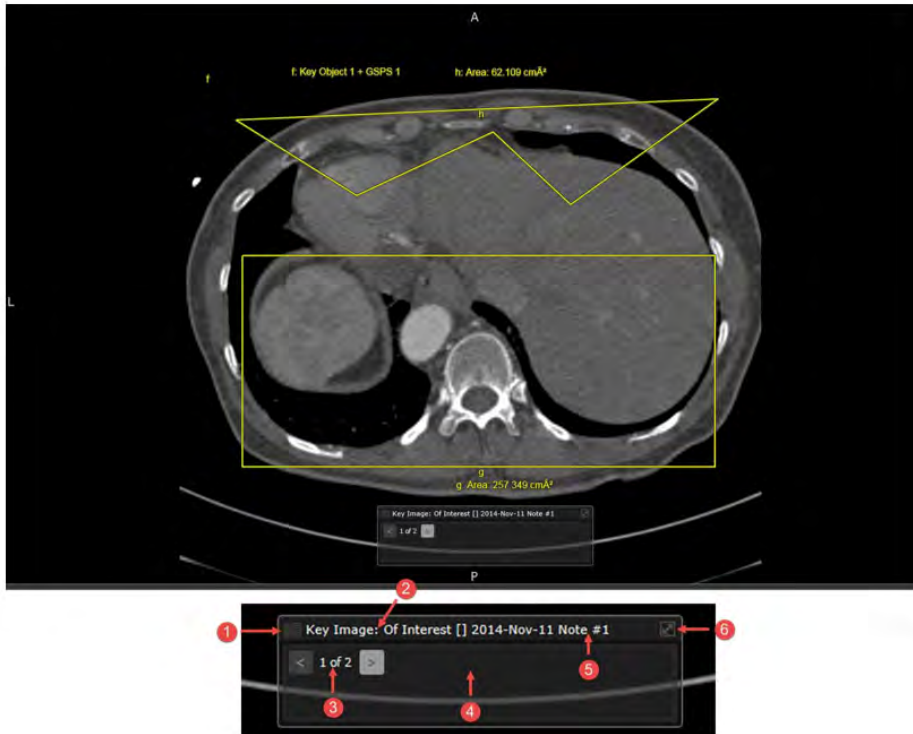
Key Image Note

Key Images may have a note attached at the bottom of the image and applies to a set of images instead of just one. In that case, each key image will be displayed separately in the Carousel using the same note number.



NOTE

If a given key image does not have a note, the panel is still present, but the Note text and Note # would be blank. The panel allows navigation of the key images.



No.	Area	Description
1	Drag handle	To move the panel around if it obscures and image.
2	Document Title, Modifier and Date	Displays the title of the document, who modified it, and the date it was modified. This field may be empty.
3	Navigation and count	Navigates forward and backward through key images. <div style="border: 1px solid black; border-radius: 10px; padding: 10px; margin-top: 10px;"> <p>NOTE</p> <p>Navigation feature is not present in 1x1 Present Mode.</p> </div>
4	Note Text or Key Object Description	Displays an entire note or key object description and scales to fit in the view port.

No.	Area	Description
5	Note #	When a textual note is present, the number of that note with regard to the total in the Key Image Section
6	Note Collapse / Open	Selecting this button shrinks an open note to allow focus on the image. If the note was on subsequent images it would be closed for all those images.

Autopresent Key Images

Key images with the tag “Of Interest” or “For Referring Physician” activated the Autopresent mode. In Autopresent mode, you can view key images without viewing other notations. Main features when Autopresent is active are:

- The original images section is closed
- May open original image, and then select and drag an image to the right edge of the view port for comparison.
- The key image is shown 1x1
- The key image panel is open allowing for rapid navigation using the forward arrow.

Present Key Images

When a key image is clicked, the layout changes to 1x1 and the Key Image Panel is shown. This is Present mode.


However, if you drag and drop a key image, it is treated like any other series (can be inserted or swapped). In this case the Key Image Panel is not shown when multiple series are on the screen at once. Usually, you would drag and drop an image for comparison of a new study and an old key image to see how change is trending.

A key image is a bookmark into the original series. Therefore, key images can be scrolled and the series underlying will scroll. If series A has key image #1 on image #66 and key image #2 on image #67, then:

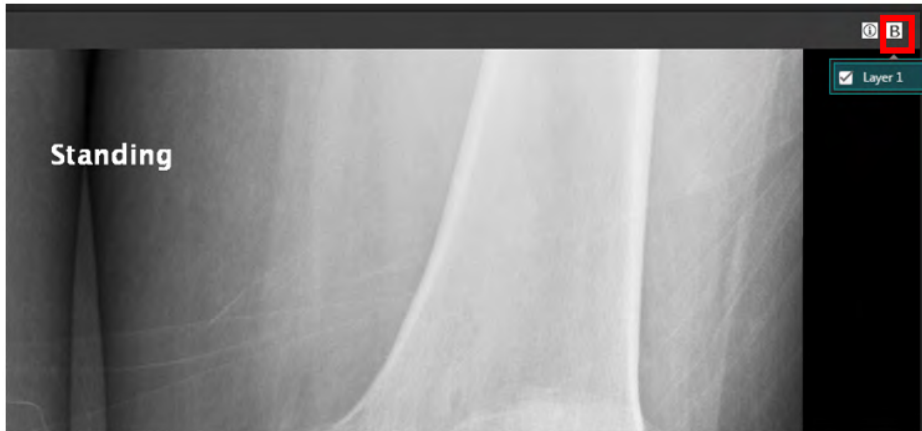
- There would be two key images in the Carousel.
- Dragging key image #1 into view, and then mouse-navigating the series one image forward, key image #2 would be in view.
- If two key images indicate the same image, the first in the carousel generally applies unless the second is dragged in (edge case).

Bitmap Overlays

When a bitmap is detected on the image it is displayed by default. This default behavior may be turned off through an administrative option.

You can choose to toggle the display of the bitmap overlay by selecting the  button in the upper right hand corner of the view port. You can turn it on and off by selecting or unselecting the layer.

Selection is noted by a checkmark.




NOTE

Vitrea View software supports single frame bitmap overlay in accordance with the DICOM standard. A message will display if we can detect that the bitmap overlay is not presentable. If bitmap data is not presentable, please check with the manufacturing device to determine if their implementation is either multi-frame or in private tags.

Viewing Prior Studies

View Prior Imaging from the Patient Timeline

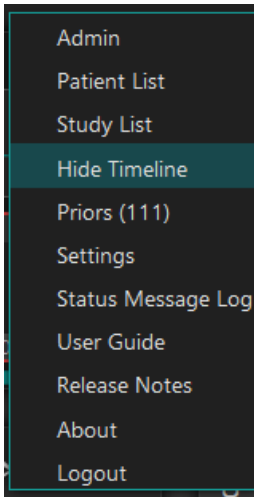
The Patient Timeline allows you to navigate and view the history of a patient's studies, documents, images, and videos.



NOTE
Patient Timeline is not available on mobile or tablet devices



The Patient Timeline can be toggled on or off by selecting the **Hide Timeline** button in the menu options.



Future Imaging Orders

If available, these orders will appear on the far right of the Patient Timeline. They will be separated into a "Scheduled" section and highlighted in a blue/green color.



Search and Relevant Filters



Search and filtering allows you to quickly find or filter out studies, documents, images, and video.



NOTE

Filters that appear are relevant to the modalities of your patient. If the patient has never had an MRI then you will not see a filter for an MRI study.

Text Search

The text search box provides a means to search the study description, accession number, and modality. For images, video, and documents, the text search will query the title and author fields.

1. Enter your search criteria.



2. Press ENTER to add the criteria as a filter.



Relevant Filters

Relevant filters will display based on the patient's study data. The following categories of filters will be displayed and ordered in relevance to the anchor study:

- Last 6 Months
- Last Year
- Body Part
- Modality

Selecting a filter will update the Overview and Detail sections, as well as updating the list of Relevant Filters.

Active filters will show up as gray boxes prefixed with an "X". Select the active filter to remove it.



History Overview

The History Overview provides a snapshot of events in the patient's medical imaging history. This allows you to make inferences about the patient imaging history based on time.

Shows the relative location of the selected Detail item

Anchor study



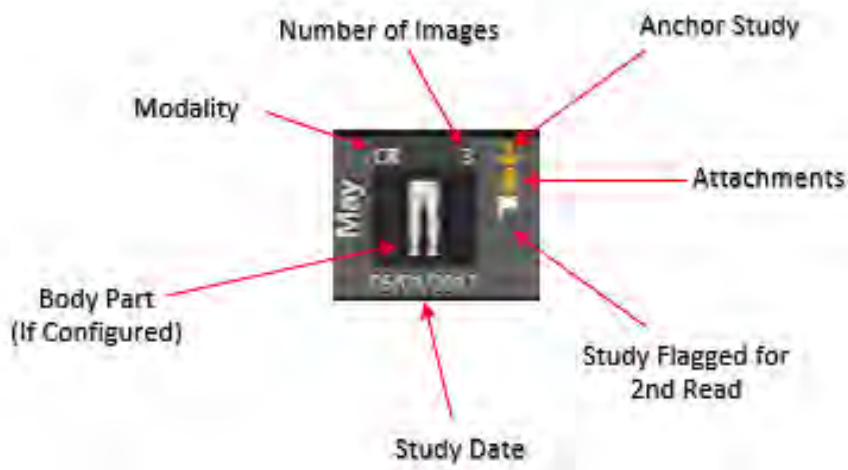
Reflects items visible in the Detail section

History Detail



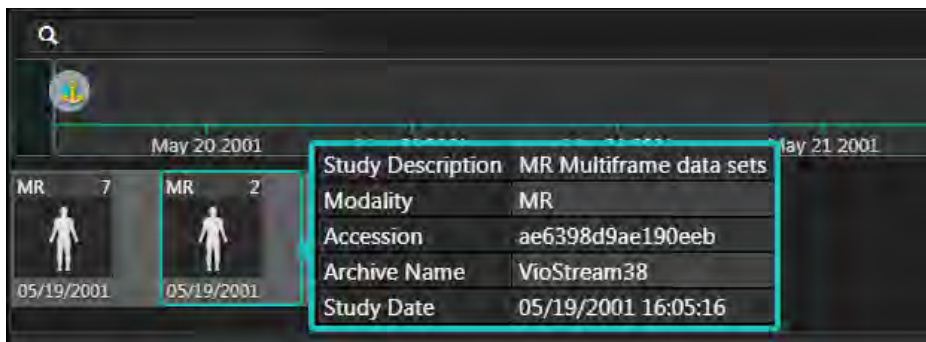
Studies, documents, images, and videos will be represented as chronological cards in the History Detail section.

Study cards represent a single study, document, image, or video. Study cards will contain the following information:



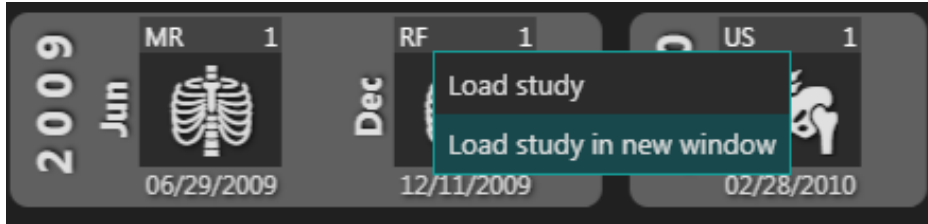
Hovering over a study card will show a tool tip with the following information about the study:

- Study Description
- Modality
- Accession Number
- Archive Name
- Study Date



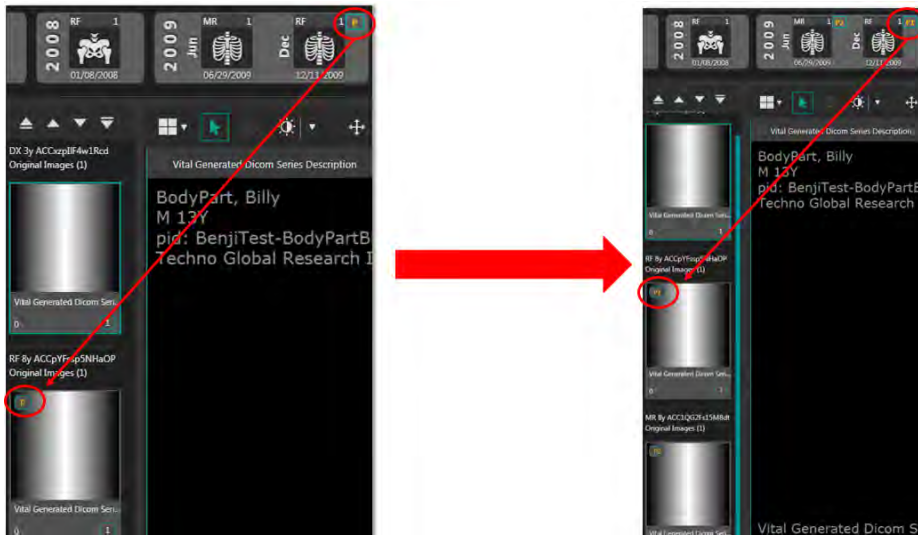
Loading History Detail Items

Items from the History Detail section can be loaded in the Viewer or in a new window. Click on the item and select either **Load study** or **Load study in new window**.



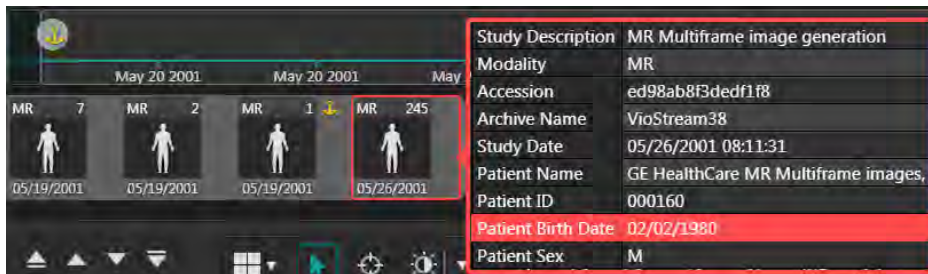
Once a study has been loaded, a badge will display next to the card indicating that a prior has been loaded as part of the current viewing session.

If multiple priors are loaded, a number will display next to the "P" based on the study's chronological order in comparison to the other loaded priors. Studies are shown in reverse chronological order (newest to oldest).

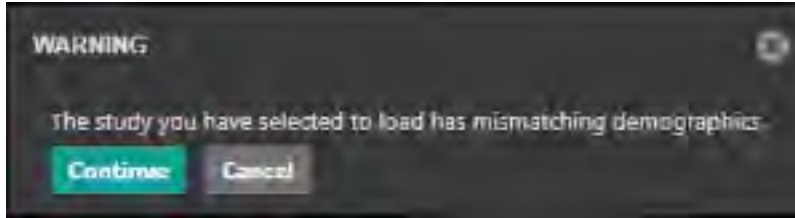


Mismatched Patient Information

If Vitrea View finds studies that may be the same patient, but have mismatches of last name, DOB, or sex, the study card will be highlighted in red and the patient demographics will be shown in the tool tip on hover, with the mismatched field being highlighted as well. If this occurs and data needs to be reconciled, please contact your system administrator.

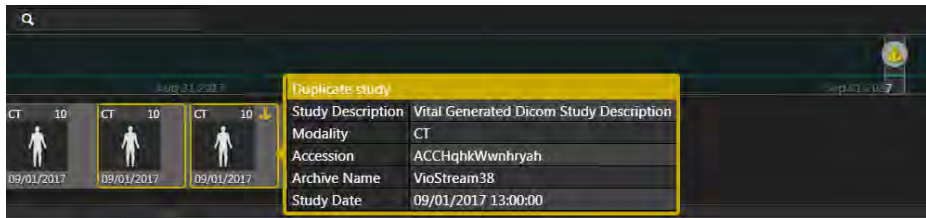


If you attempt to load a mismatched study, you will be presented with the following message:



Duplicate Studies

When properly configured, Vitrea View will display and highlight duplicate studies. Contact your system administrator to enable displaying duplicates.

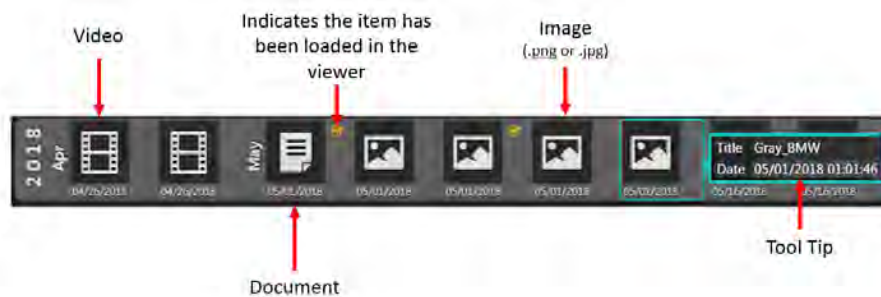


NOTE

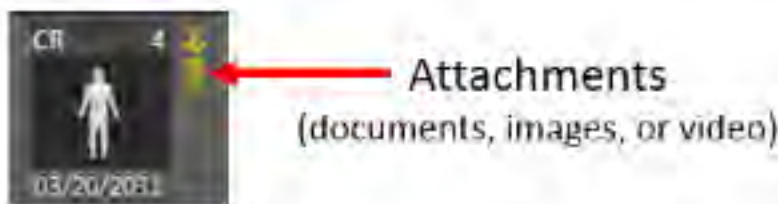
Only one of the highlighted duplicate studies is allowed to be loaded into the same session. Alternately, any duplicate study can be loaded into a new browser tab by selecting "Load study in new window".

Documents, Images, and Videos

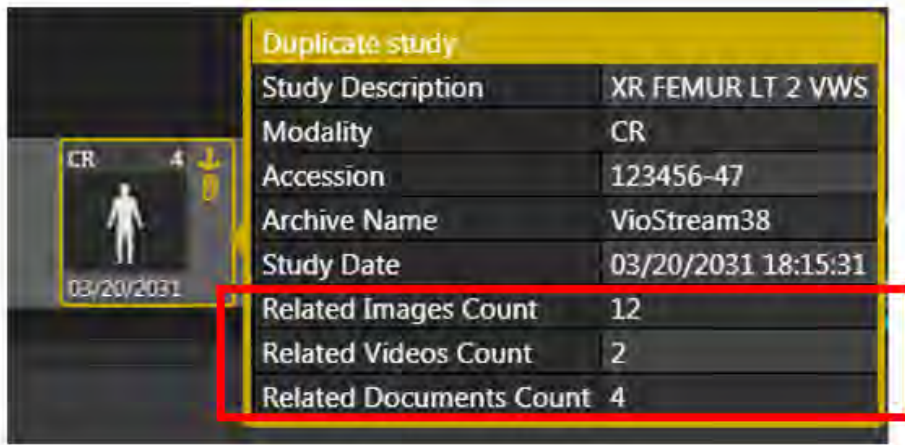
When configured properly, videos, images, and videos can be loaded from the Patient Timeline.



If a study has associated documents, videos, or images, the attachment badge will display next to the study card. Attachments will automatically load in the Viewer (Carousel for images and video, Document Viewer for documents) when you load the study.

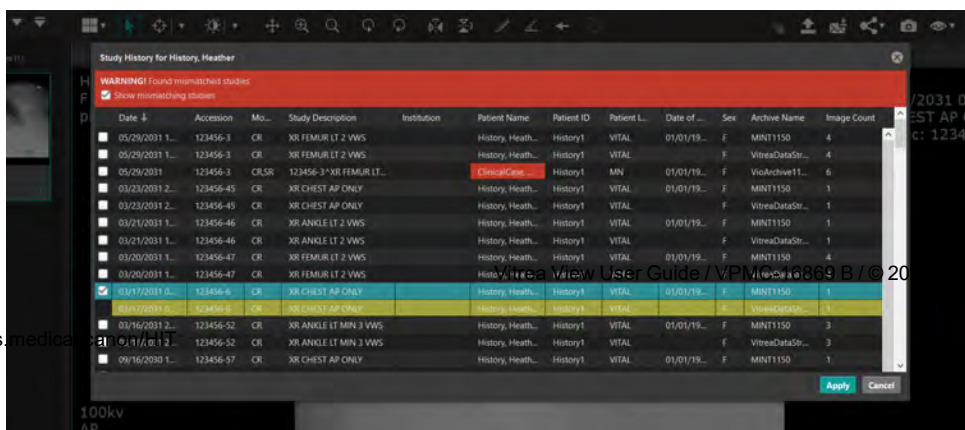
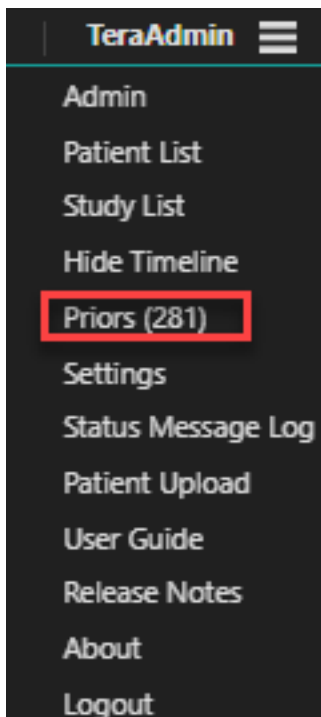


When you hover over a card with the attachments badge, you will see a summary of the attachments in the tool tip.



View Prior Studies from the Priors List

Alternatively, prior patient studies can be accessed from the Priors List.



The Priors option includes the count of prior studies including the one being displayed.

Use the Priors option in the menu to load multiple studies for comparative review or to track and evaluate changes. The Priors List window shows studies that match the patient ID and issuer ID.



NOTE

Blank issuer ID's return matches of all blank issuers IDs.

Launching Studies from Priors List

Click the **Priors** button to access the Priors List window. Select the study(ies) to launch, and click **Apply**.



NOTE

The default sort order is by date in reverse chronological order. If you sort by modality, the sort results will preserve their date order. Selected studies are outlined in gray to show which study is in or out of view.

Select the check box and click **Apply** to launch the study in the viewer.

Click the **Cancel** button or the **X** in the corner to close the Priors List screen.



NOTE

When performing a query/retrieve from archives, verify images are received and complete prior to viewing. Some archives may not be searched or may be inaccessible at a given time.

Launching Mismatched Studies from Priors List

Vitrea View software will notify you if it finds studies that MAY be the same patient, but have mismatches of last name, DOB, or sex. Select the **Show mismatching studies** check box to view these types' studies. If you select a study with mismatching demographics, the software will display a warning message. Select the **I understand and wish to continue** check box to load the mismatching study.

The screenshot shows a window titled "Study History for History, Baseline". At the top, there is a red warning banner: "WARNING! Found mismatched studies" with a checked checkbox "Show mismatching studies". Below this, a message states "One or more archives failed to respond." The main part of the window is a table with the following columns: Date, Accession, Modality, Study Description, Institution, Patient Name, Patient ID, Patient ID Issuer, Date of Birth, Sex, Archive Name, and Image Count. Several rows are highlighted in yellow, indicating mismatching studies. At the bottom, another red warning banner says "WARNING! You have selected studies with mismatching demographics." with a checked checkbox "I understand and wish to continue". "Apply" and "Cancel" buttons are visible at the bottom right.

Date ↓	Accession	Modality	Study Description	Institution	Patient Name	Patient ID	Patient ID Issuer	Date of Birth	Sex	Archive Name	Image Count
	3a26a579b...	CT	6...at	BLDEACONESS H...	History, Baseline	1204	pat2Eswan			VitreaDataStream82	50
	3a26a579b...	CT	6...at	BLDEACONESS H...	History, Baseline	1204	pat2Eswan			M0011150	45
	3a26a579b...	CT	6...at	BLDEACONESS H...	History, Baseline	1204	pat2Eswan			M0011150	50
	3a26a579b...	CT	6...at	BLDEACONESS H...	History, Baseline	1234	pat2Eswan			M0011150	45
	3a26a579b...	CT	6...at	BLDEACONESS H...	History, Baseline	1234	pat2Eswan			VitreaDataStream82	45
	3a26a579b...	CT	6...at	BLDEACONESS H...	History, Baseline	1234	pat2Eswan			VitreaDataStream82	45



CAUTION

Always review the patient demographics to verify you are loading the proper studies. Take care that you are loading the correct studies when loading studies with mismatching demographics. It is possible to load studies from multiple patients.

For tablet devices, mismatched studies will not be shown, and no ability to load them will be provided.

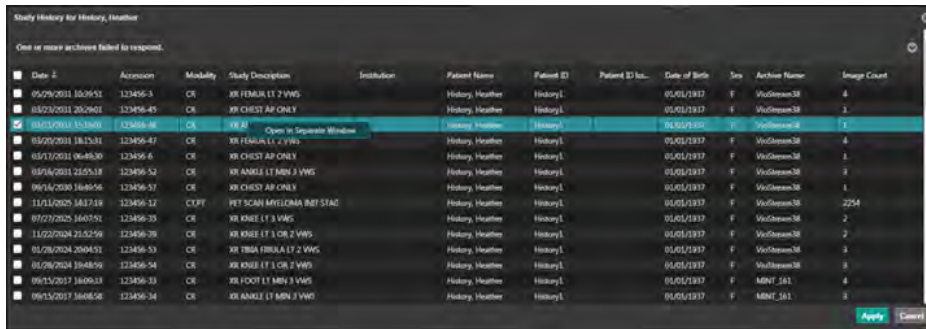
Launching Priors in a New Session

Vitre View provides the ability to view studies side-by-side by launching them in a new browser tab or “session”.

Open the Priors window by clicking on the Priors option in the menu.

Right click on the study you wish to view in a new session.

The study will launch in a new browser tab.



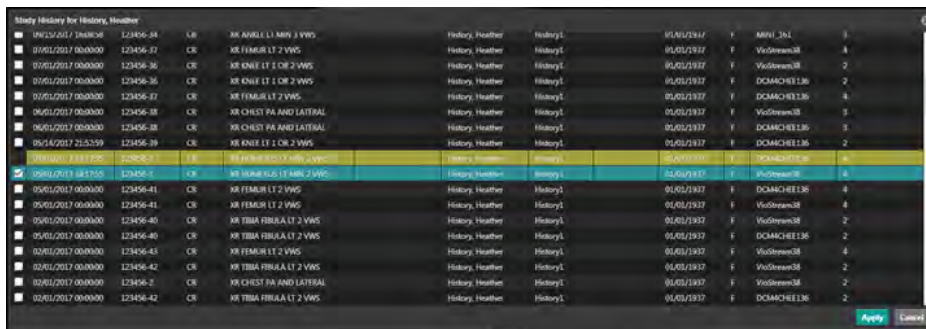
Display Duplicate Studies

When configured, Vitrea View will display and highlight duplicate studies. Contact your system administrator to enable displaying duplicates.

Click on the Prior option found in the menu.

Select a study in the Priors window.

If a duplicate exists, it will be highlighted in yellow.



Selecting another study, its corresponding duplicate will also be highlighted in yellow.

Study History for History_Heather

Study ID	Study Name	Modality	Protocol	Study Type	Study Date	Study Time	Study Location	Study Count	
11/11/2021 14:17:19	CT PI	PET SCAN	AMELONIA 3RD STAG	History_Heather	HistoryL	01/01/2017	F	Viv@Home-38	254
07/27/2021 16:01:36	CR	XR ANKLE LT MIN 3 VWS		History_Heather	HistoryL	01/01/2017	F	Viv@Home-38	1
07/27/2021 16:07:51	CR	XR KNEE LT 3 VWS		History_Heather	HistoryL	01/01/2017	F	Viv@Home-38	2
01/26/2024 20:04:53	CR	XR THOR FIBRA LT 2 VWS		History_Heather	HistoryL	01/01/2017	F	Viv@Home-38	1
01/26/2024 19:48:19	CR	XR KNEE LT 1 OR 2 VWS		History_Heather	HistoryL	01/01/2017	F	Viv@Home-38	1
09/15/2017 16:09:11	CR	XR FOOT LT MIN 3 VWS		History_Heather	HistoryL	01/01/2017	F	MINT_141	4
09/15/2017 16:06:11	CR	XR FOOT LT MIN 3 VWS		History_Heather	HistoryL	01/01/2017	F	Viv@Home-38	4
09/15/2017 16:06:36	CR	XR ANKLE LT MIN 3 VWS		History_Heather	HistoryL	01/01/2017	F	MINT_141	1
07/05/2017 00:00:00	CR	XR FEMUR LT 2 VWS		History_Heather	HistoryL	01/01/2017	F	Viv@Home-38	4
07/05/2017 00:00:00	CR	XR KNEE LT 1 OR 2 VWS		History_Heather	HistoryL	01/01/2017	F	Viv@Home-38	2
07/05/2017 00:00:00	CR	XR KNEE LT 1 OR 2 VWS		History_Heather	HistoryL	01/01/2017	F	DCMACH1136	2
07/05/2017 00:00:00	CR	XR FEMUR LT 2 VWS		History_Heather	HistoryL	01/01/2017	F	DCMACH1136	4
06/05/2017 00:00:00	CR	XR CHEST PA AND LATERAL		History_Heather	HistoryL	01/01/2017	F	Viv@Home-38	3
06/05/2017 00:00:00	CR	XR CHEST PA AND LATERAL		History_Heather	HistoryL	01/01/2017	F	DCMACH1136	3
06/05/2017 11:11:30	CR	XR KNEE LT 1 OR 2 VWS		History_Heather	HistoryL	01/01/2017	F	DCMACH1136	2
06/05/2017 11:11:30	CR	XR ANKLE LT 1 AND 2 VWS		History_Heather	HistoryL	01/01/2017	F	DCMACH1136	4
06/05/2017 11:11:53	CR	XR ANKLE LT 1 AND 2 VWS		History_Heather	HistoryL	01/01/2017	F	Viv@Home-38	4





NOTE

Only one of the highlighted duplicate studies is allowed to be loaded into the same session. Click the checkbox next to the duplicate study you want to load and then click Apply to load it in. Alternately, any duplicate study can be loaded into a new browser tab by right-clicking on its line and selecting "Open in a Separate Window".

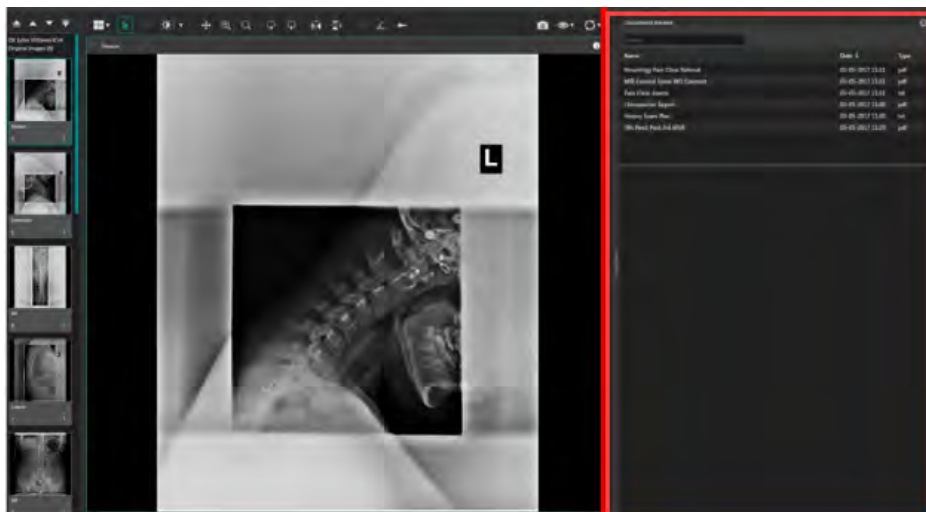
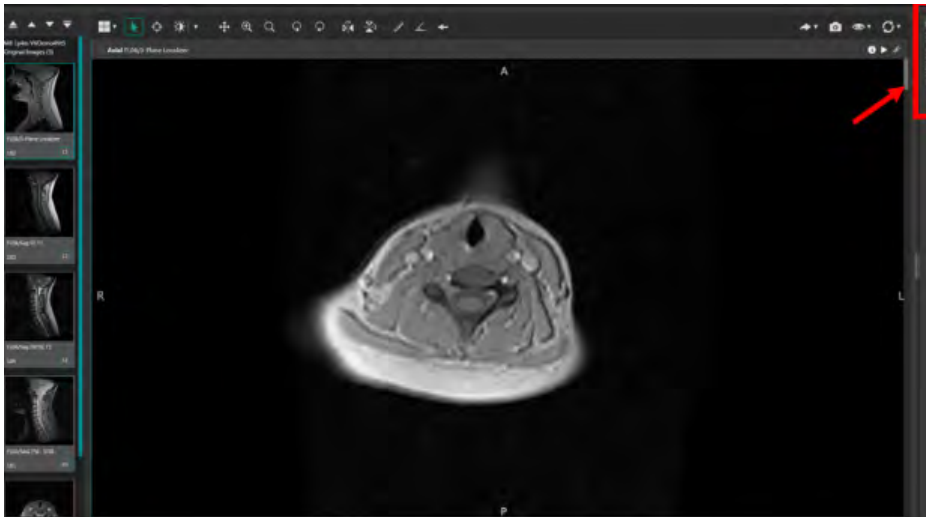
Viewing Documents

Document Viewer

When a study is launched, you will see a collapsed pane to the right of the viewer. By clicking the , the Document Viewer pane will expand to display related PDF and text documents.

Selecting  will collapse the Document Viewer pane.


There is a system setting that allows you to set your preferred view (with the document viewer expanded or collapsed).



If there are documents associated with the loaded study or studies, they will be populated in the document list. If

there are no documents associated with the patient the list will be blank.

1. You can search by document name by using the search box above the document list.
2. You can sort the document list by Name, Date, or Type by selecting the column headings.



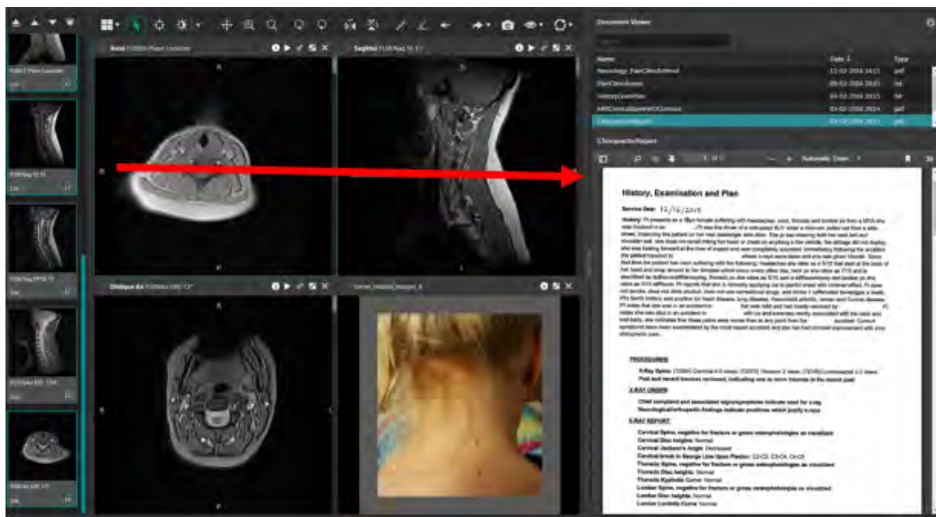
NOTE
The date is provided by the archive.

Name	Date	Type
Neurology Pain Clinic Referral	03-05-2017 11:31	pdf
MRI Cervical Spine WO Contrast	03-05-2017 11:31	pdf
Pain Clinic Assess	03-05-2017 11:31	txt
Chiropractor Report	03-05-2017 11:30	pdf
History Exam Plan	03-05-2017 11:30	txt
XR's Neck Post 3rd MVA	03-05-2017 11:29	pdf

Viewing PDFs

Selecting a PDF from the document list will open the PDF in the space below the list.

The Document Viewer pane can be resized by moving your cursor between the view ports and the Document Viewer.



PDF Viewing Functions

Page Navigation

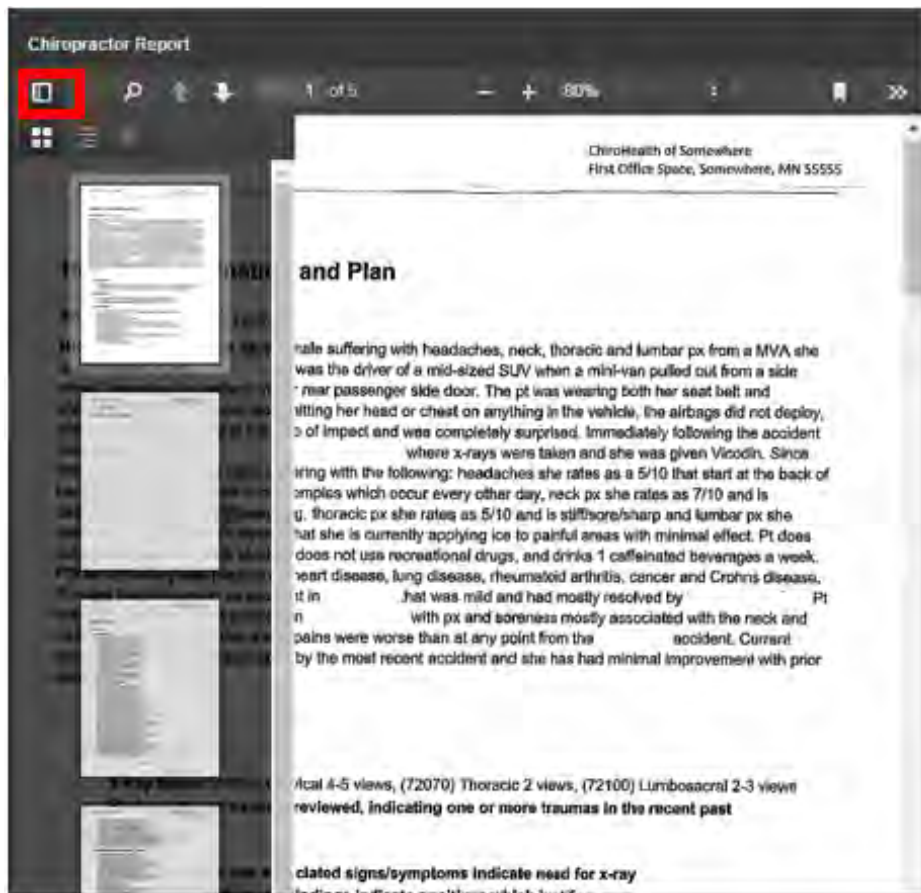
There are several options for navigating a PDF.

Toggle Sidebar

The sidebar allows you to preview pages of the PDF and provides a shortcut to the specific page.

Select any page in the Document Viewer carousel to jump to that page.

Select the toggle button again to hide the sidebar.



Arrow Navigation



Select the Up or Down arrows to page up or down within the document.

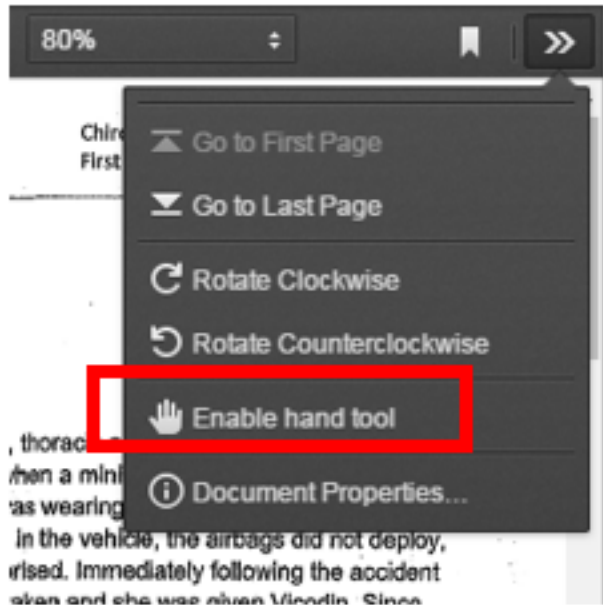
Scroll Navigation

Use the mouse wheel to page up or down within the document.

Hand Tool Navigation

Select the  button to access the PDF tools. Then select Enable hand tool.

With the hand tool enabled, click and drag the document up or down or side-to-side within the view.



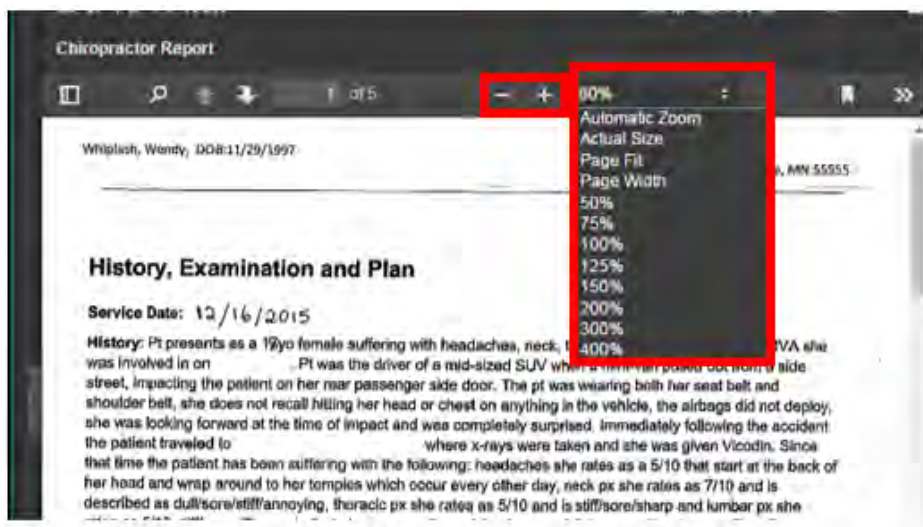
PDF Zoom

The Document Viewer has several zoom options.


Select a zoom option from the drop down to the right of the "+".

OR

Select the "-" or "+" to the left of the drop down to increase or decrease the zoom in 10% increments.



Additional PDF Tools

The Document Viewer has additional options by selecting the  button.

- Go to First Page
- Go to Last Page
- Rotate Clockwise
- Rotate Counterclockwise
- Enable hand tool
- Document Properties



Viewing Text Files

Text files can be viewed in the Document Viewer but do not contain the viewing options available to PDFs.



Sharing Images and Studies



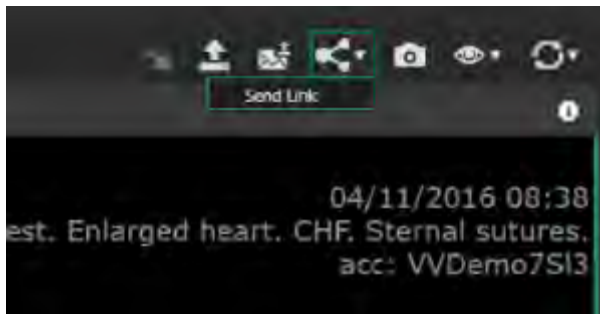
NOTE

Image sharing requires elevated permissions.

Vitreia View software enables you to share patients' medical images from the Viewer.

Sharing Images from the Viewer

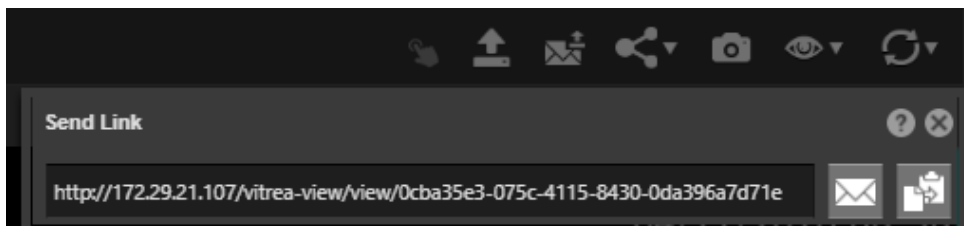
The 'Send Link' capability is available from the "Share Images" button on the Viewer. This allows you to generate a link to the study, including text, measurements and other markups you may have performed. This link can be copied and sent via email or text message to another Vitrea View user.



NOTE

If the software encounters an error during the Image Sharing action, an email notification will be sent to you indicating that the Image Sharing action failed.

1. Click the Image Sharing button and select Send Link.



2. A window will appear with a link to the study. You can choose to:

- a. Copy the link with the copy button



- b. Email the link using the email button

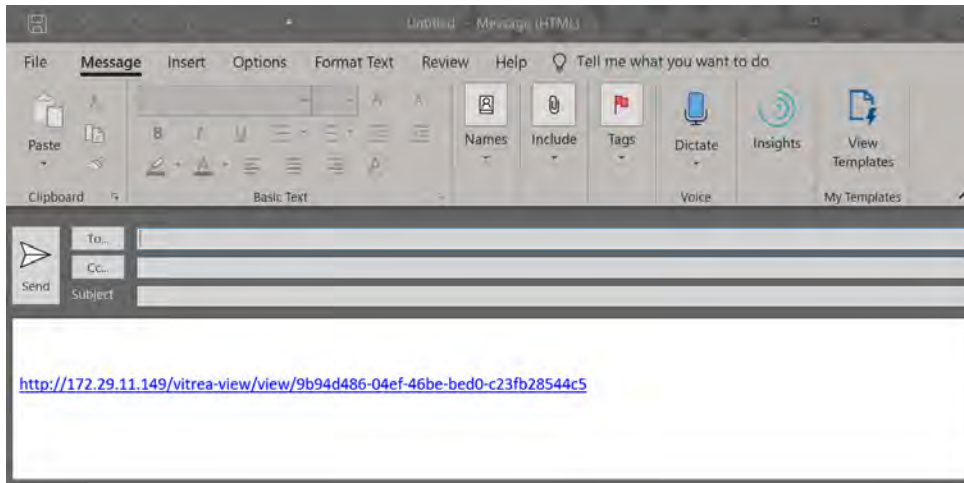




NOTE

The recipient of the link must have previously-established Vitrea View software credentials.

Selecting the email icon will open into the configured email system with the link to the study pre-populated in the body of the email.



The following states are included with the link to be seen by the recipient:

- Layout (except if received on a smartphone)
- Specific series and images in those layouts
- Modified window/level settings
- Markups
- Zoom and pan



NOTE

If the receiving device is a smartphone, and the layout is not a supported smartphone layout, a notification displays requesting the smartphone user open the study on the full desktop version of the Vitrea View software.

Downloading Studies



NOTE

The DICOM download feature is not available on mobile, tablet, or archives that do not have a WADO-RS connection.

Vitrea View allows you to download DICOM studies for a patient from the Study List and the Viewer. Downloading priors and non-DICOM data is not currently supported.

Download a Study from the Study List

To download a study from the Study List, navigate to the actions column and select the **download study** icon.

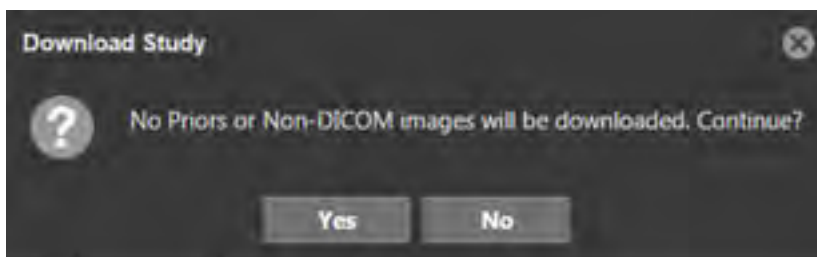
Patient Name	Patient ID	A...	Sex	Modality
History, Heather	History1	94y	F	CR
History, Heather	History1	94y	F	CR
History, Heather	History1	94y	F	CR
History, Heather	History1	94y	F	CR
History, Heather	History1	94y	F	CR
History, Heather	History1	94y	F	CR
History, Heather	History1	93y	F	CR



NOTE

If the selected archive does not have a WADO-RS connection, the download icon will not be visible.

When selected, you will see a prompt stating that, "No Priors or Non-DICOM images will be downloaded. Click Yes to continue or No to abort the download."



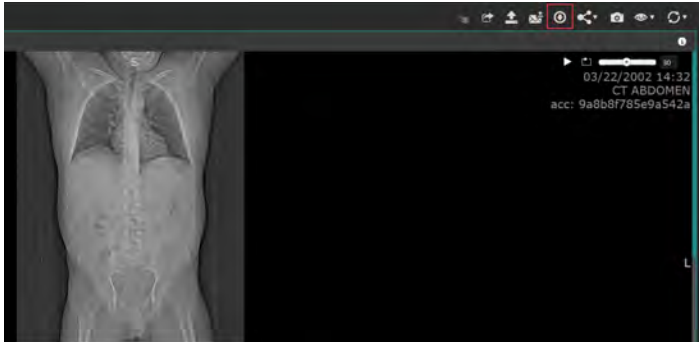
When Yes is selected, the DICOM images will be downloaded as a .zip file to your download directory.

Download a Study from the Viewer



When a study is launched in the viewer, the study can be downloaded by selecting the download icon in the upper right corner of the screen.

As noted above, you will be prompted to acknowledge that non-DICOM and priors will not be available for download. Clicking 'Yes' will allow the DICOM images to be downloaded as a .zip file to your download directory.



Uploading Studies and Images



NOTE
Image upload requires elevated permissions.

Uploading Images


Vitre View provides the ability to upload images to an archive that come from external sources. This feature is available with a separate license and can be completed from the following Vitrea View pages:

- Study List
- Patient List
- Viewer

To acquire the proper license, contact your system administrator.

Limitations of Uploading Images

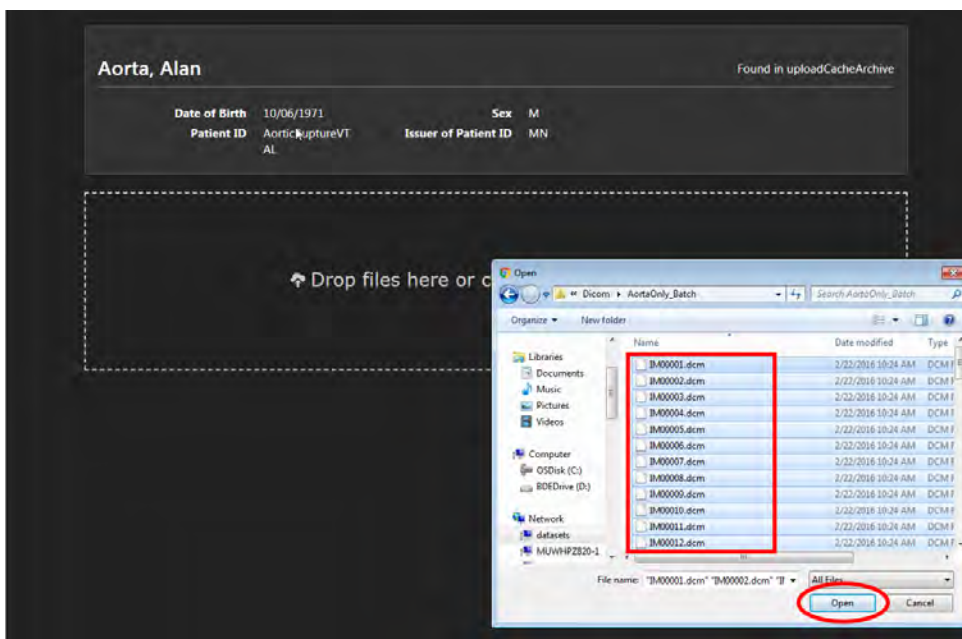
Some browsers may behave differently in how they handle file browser functionality.

OS	
Windows 7+	File Path Character Limit: If the file path of the files is larger than 160 characters no action will be taken.
Browser	Limitations
Chrome	<p>File Size Limit: The upload will fail if an individual file is larger than 1 GB.</p> <p>Session Limit: The upload will fail if the total size of all files uploaded exceeds 3 GB.</p>
Firefox	<p>File Size Limit: The upload will fail if an individual file is larger than 1 GB.</p> <p>Session Limit: The upload will fail if the total size of all files uploaded exceeds 3 GB.</p> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; margin-top: 10px;">  <p style="margin: 0;">NOTE Some image attachments may not upload</p> </div>

Browser	Limitations
Safari	<p>Drag and Drop: You must select all the files to be uploaded and drag them to the drop zone. Dragging a folder containing image files to the drop zone in Safari will have no results.</p> <p>File Size Limit: The upload will fail if an individual file is larger than 1 GB.</p> <p>Session Limit: The upload will fail if the total size of all files uploaded exceeds 3 GB.</p>
Internet Explorer 11	<p>Drag and Drop: You must select all the files to be uploaded and drag them to the drop zone. Dragging a folder containing image files to the drop zone in IE11 will have no results.</p> <p>File Size Limit: The upload will fail if an individual file is larger than 1 GB.</p> <p>Session Limit: The upload will fail if the total size of all files uploaded exceeds 3 GB.</p>
Edge	<p>File Size Limit: The upload will fail if an individual file is larger than 1 GB.</p> <p>Session Limit: The upload will fail if the total size of all files uploaded exceeds 3 GB.</p>

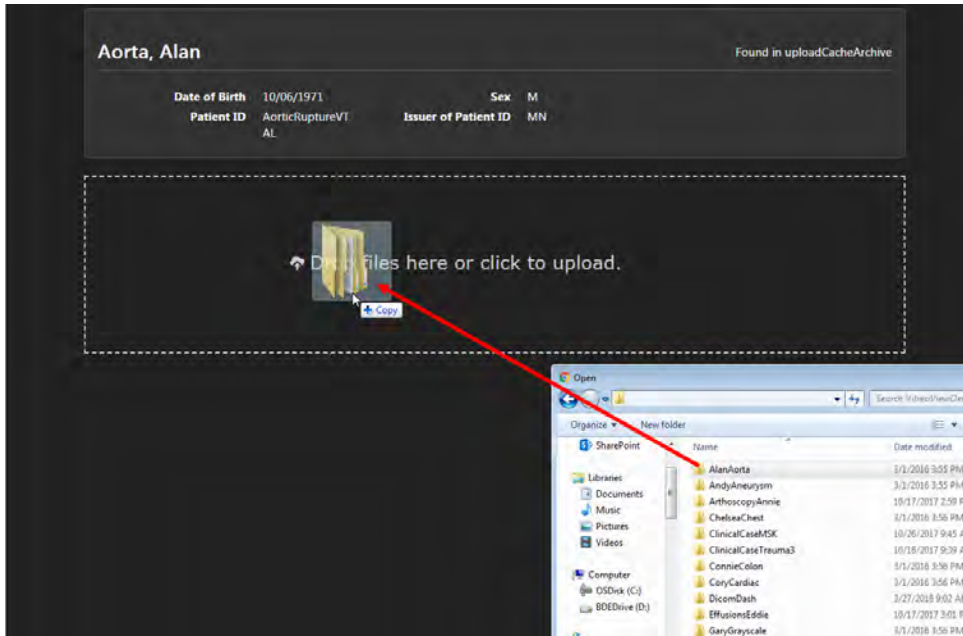
Internet Explorer 11 and Safari support selecting one or many individual files for upload.


- Click inside the dotted drop zone to open the file browser to select your files and select Open.



In addition to individual file selection, Edge, Chrome, and Firefox support drag and drop of a folder containing image files.

- Drag and drop folders into the dotted drop zone.



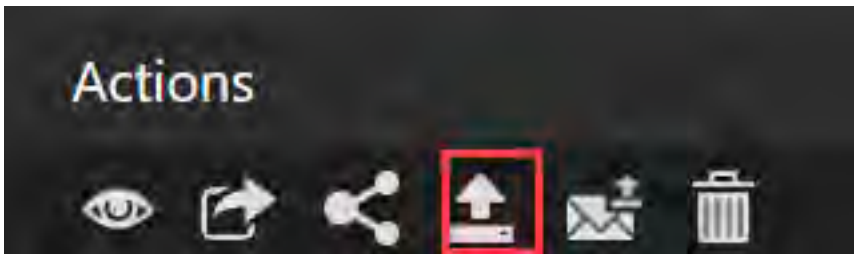
NOTE  Attempting to upload a DICOM file that is in progress of uploading may cause an error.

Uploading Studies

Uploading with a patient in context

You can upload a study with a patient in context in the following ways:

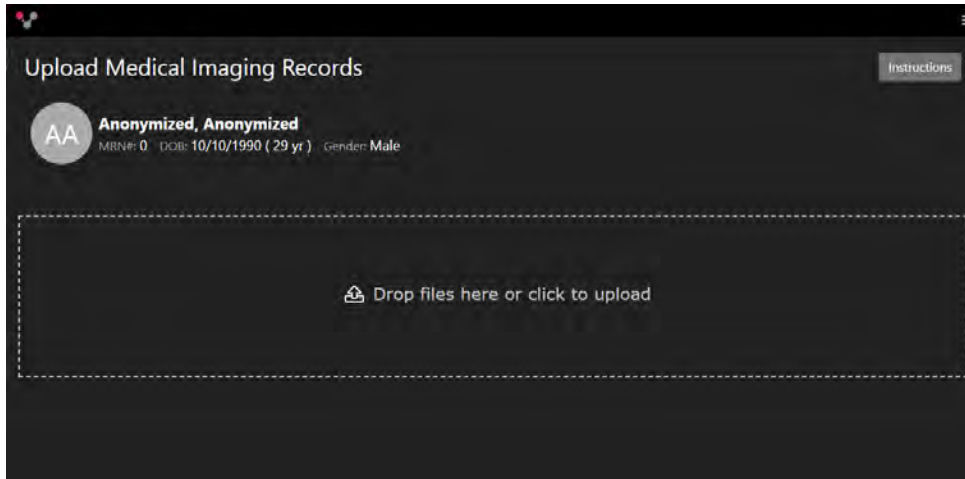
- Select a study on the Study List and click the upload button,



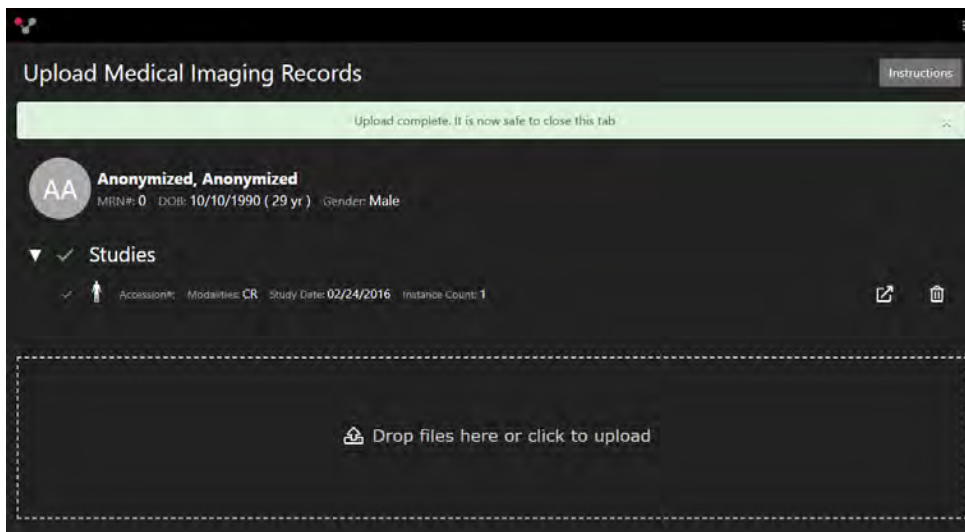
- Receive and click on emailed upload link, or
- Click the upload button from within the Viewer.



The 'Upload Medical Imaging Records' page opens in a separate tab in the browser with the selected patient in context.



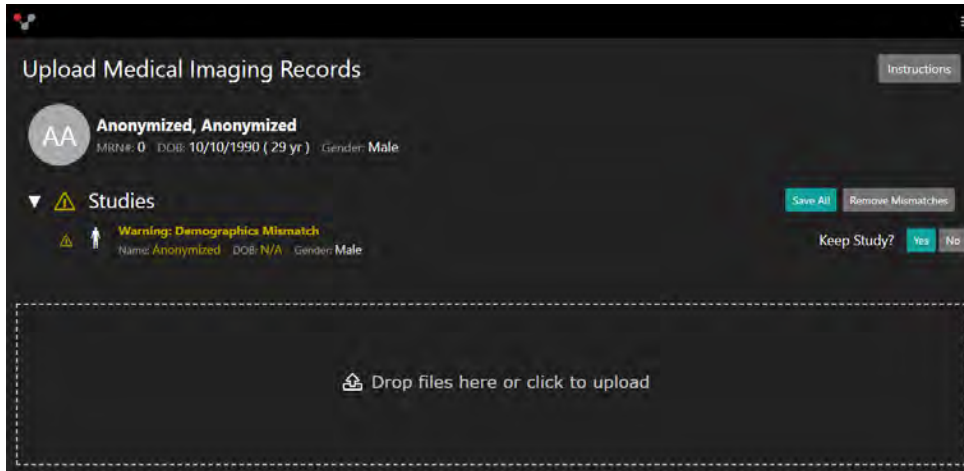
Drag and drop files into the defined area or click to select files for upload. With a patient in context you are able to upload DICOM or certain non-DICOM files (mp4, PDF, txt, jpg, png).



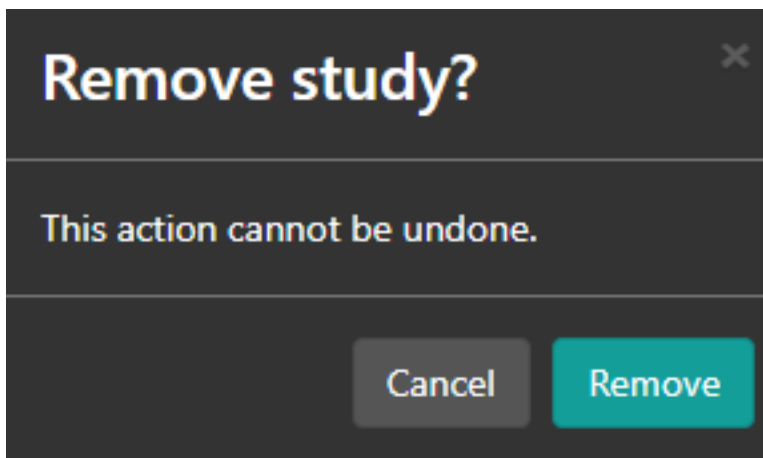
If successful, a green check mark will appear to the left of the uploaded study.

You will see a warning icon if there are conflicts between the study and the patient data.

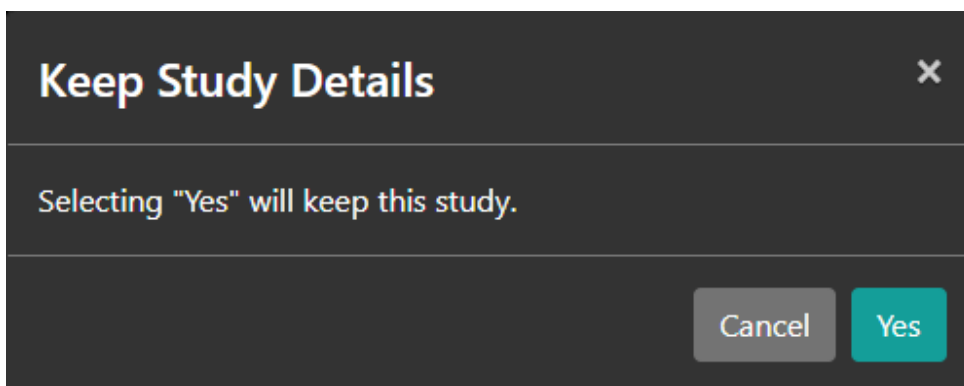
If more than one study appears with a mismatch, you can chose to save all the uploaded studies by selecting the 'Save All' button. Or, to remove and delete the mismatched studies, select the 'Remove Mismatch' button.



By selecting 'No' the study will be deleted from the upload cache, thus removing the association to the patient in context. A confirmation is needed to acknowledge that deleting the study from the upload cache cannot be undone.



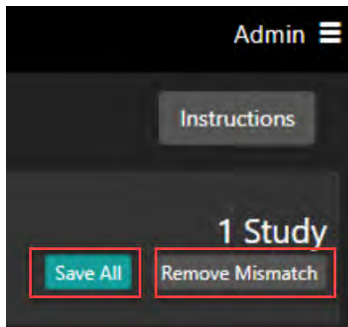
Click **Yes** to keep the study. All study demographics will be preserved as it was uploaded.



Clicking 'Cancel' will close this window and allow you to return to the uploader.

Save All/ Remove Mismatch options

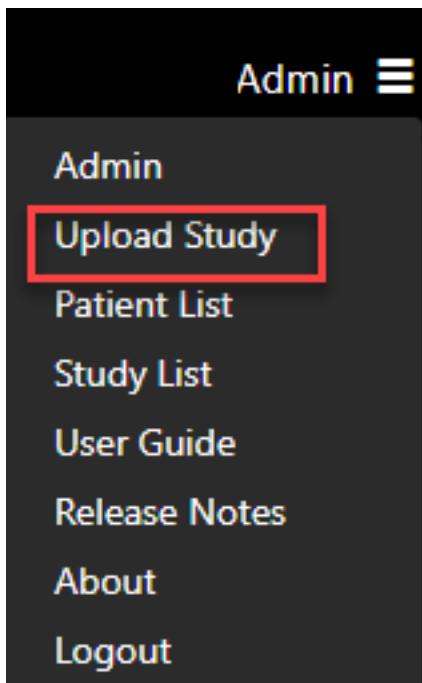
If an uploaded study has several mismatched instances, you have the option to 'Save All' uploaded items or 'Remove All' instances.



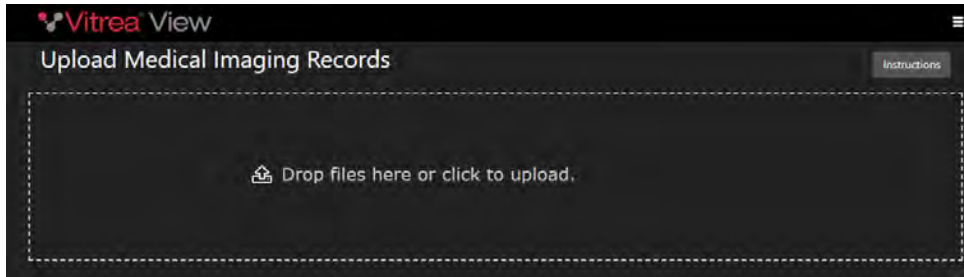
'Save All' preserves the demographics as the studies were uploaded. When selecting 'Remove Mismatch' all instances that have been uploaded with mismatched demographics will be deleted from the upload cache.

Uploading without a patient in context

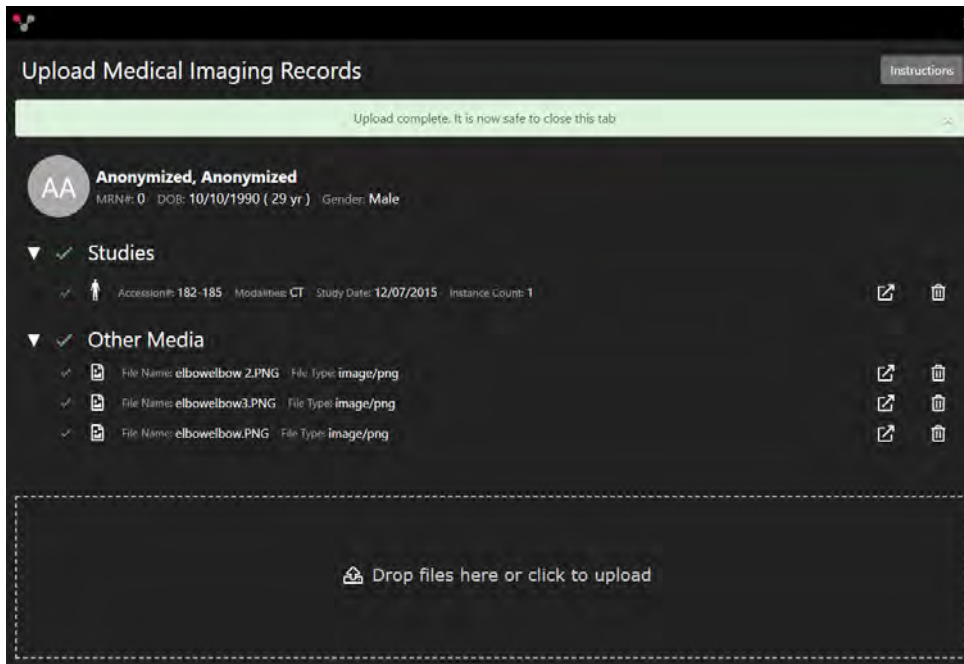
Navigate to the drop down menu in the upper right corner of the screen and select **Upload Study** or **Email Upload Link**.



If selecting the upload study link from the menu option, the 'Upload Medical Imaging Records' window will appear without a patient in context. This is typical if the patient does not exist in the system.



Drag and drop files into the defined area or click to select files for upload. The upload will pull the patient demographics from the DICOM being uploaded.

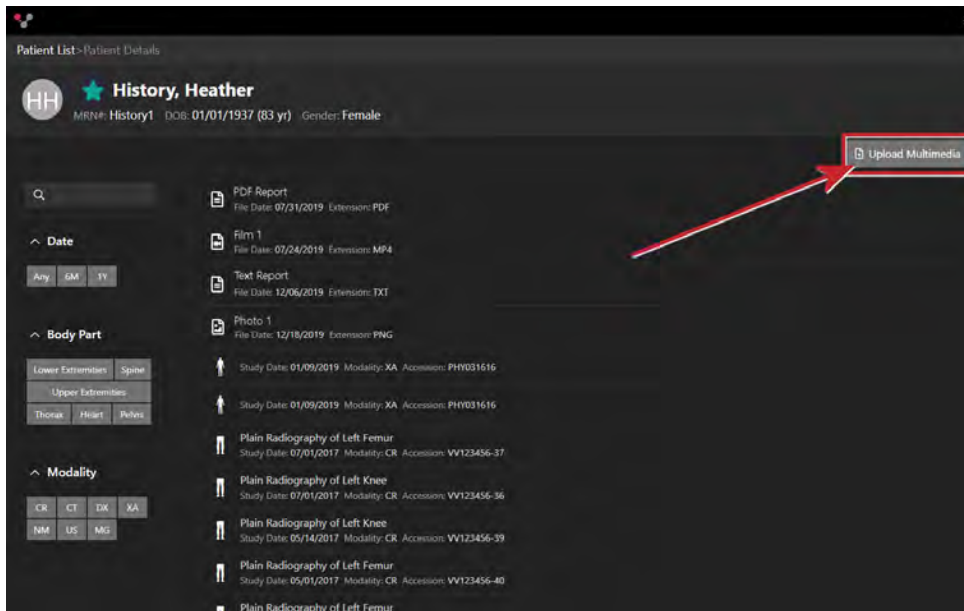
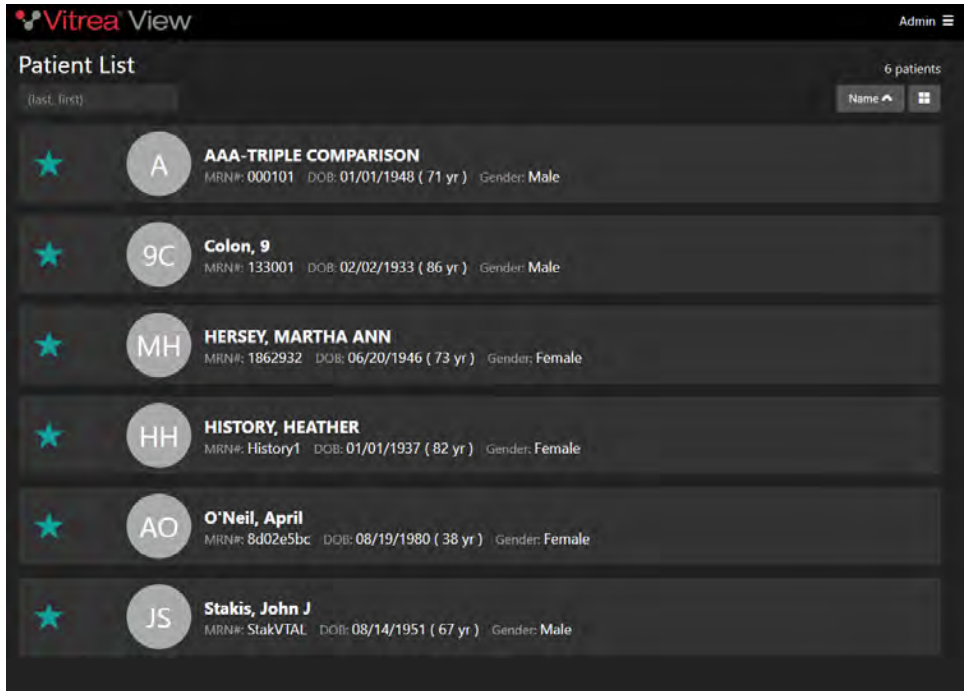


All files uploaded will be stored in the Upload Cache until transferred to another archive or deleted.

Image upload from the Patient List


Multimedia images can be uploaded from the Patient List to a specific patient's chart.

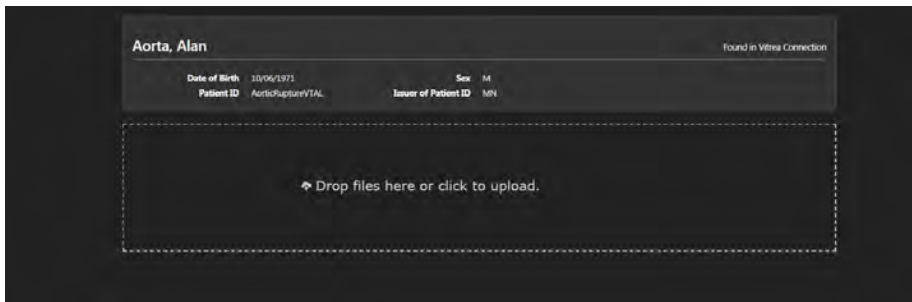
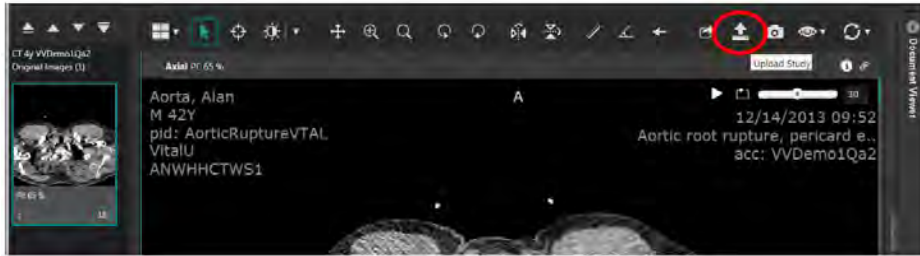
From the Patient list, select a patient and open to the detail page.



The **Upload Multimedia** button at the upper-right of the page will allow you to select non-dicom images from your computer for upload to the patient in context.

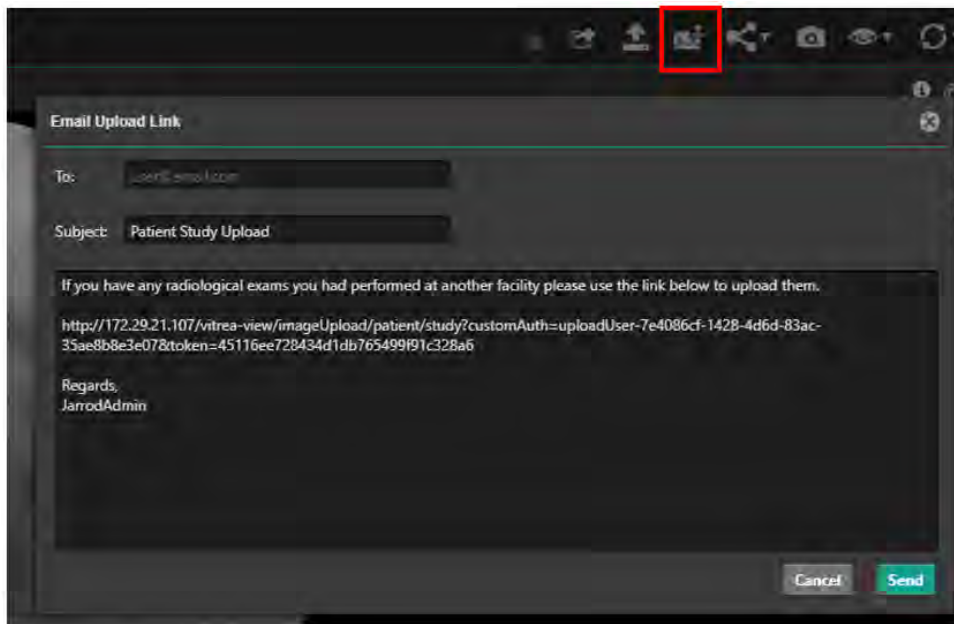
Uploading From The Image Viewer

When in the viewer, you can select the Upload  button. This maintains context of the patient to easily upload DICOM or multimedia images.



Sending an email link for upload

In the viewer, select the email upload icon to email a link to someone to upload images to this patient.



Upload from EMR into Vitrea View Upload Tool (EMR Integration)

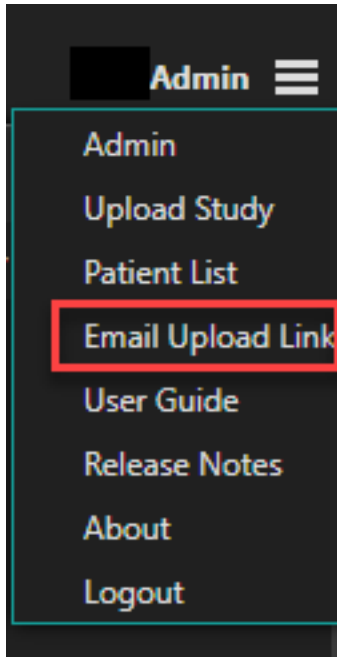
If you want to launch directly into the Vitrea View Image Uploader with a patient, contact your system administrator to configure Vitrea View for EMR integration.

Emailing a link to the Upload Tool

In this workflow, a user with the appropriate privileges can send another person an email that contains a link to

the upload tool. This allows the email recipient to directly upload images into Vitrea View and eliminates the need for a patient to bring or obtain CD's from another facility.

- Select 'Email Upload Link' from the drop down menu on the upper right corner of the screen.
- The Email Upload Link template will open giving you the ability to edit the information.



To:

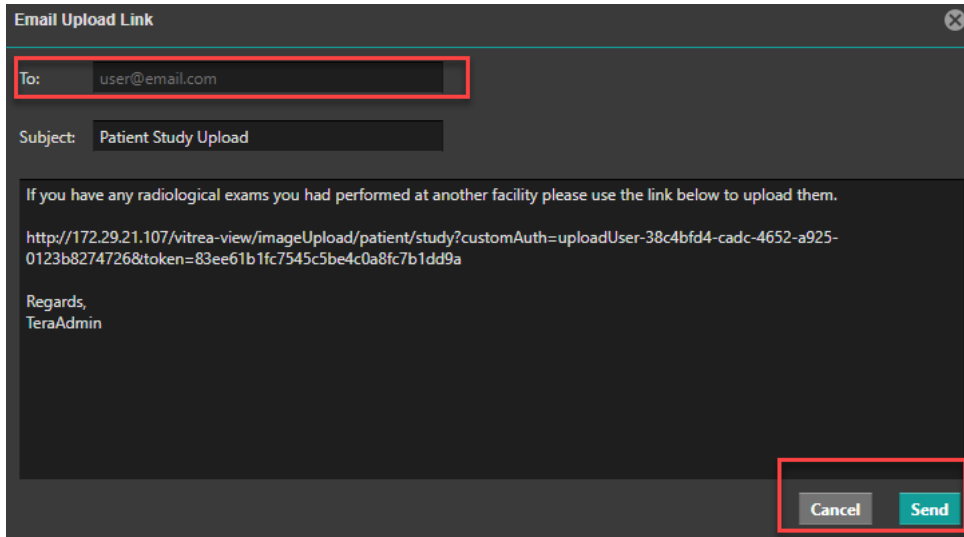
Add patient's email address

Send:

Sends the message to the email provided

Cancel:

Closes window without sending an email



Uploading Documents



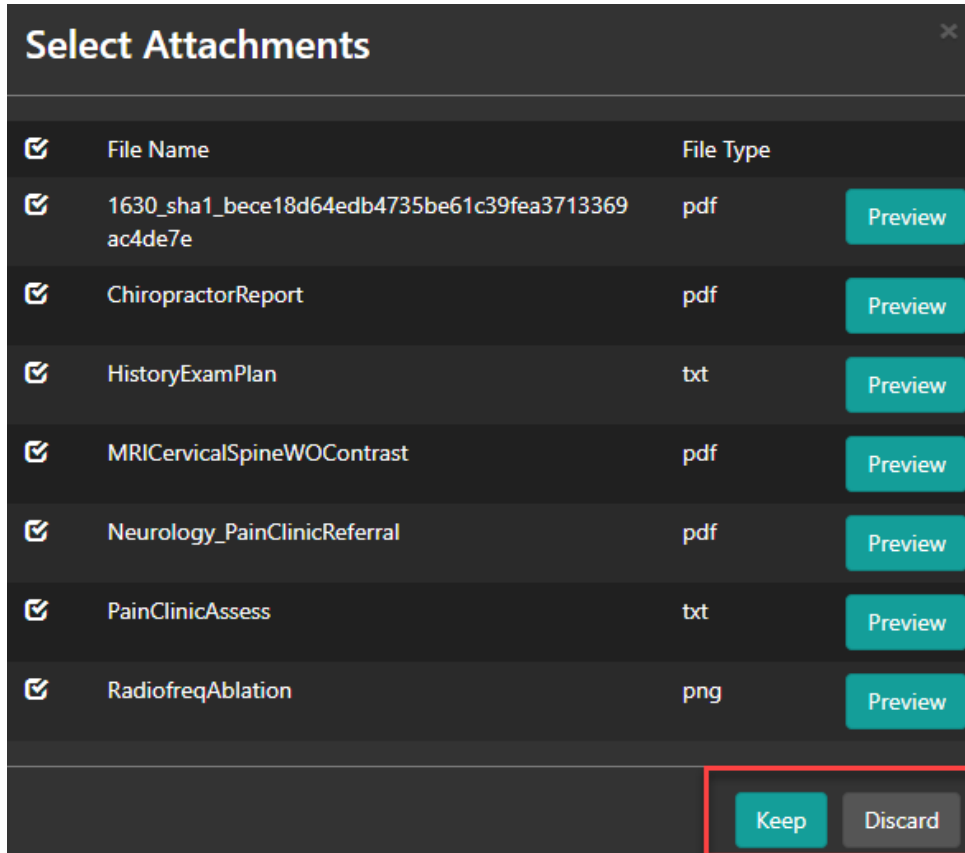
CAUTION

Document upload is available only with a patient in context or along with a DICOM upload.

After the study upload process is completed, you are provided a popup with a list of available documents that can be uploaded. Currently supported file types are:

- PDF
- PNG
- JPG
- MP4
- TXT

By default all files are selected. The preview button allows you to view the document prior to keeping or discarding it.



Once you have selected the documents you wish to upload, click 'Keep'. If there are no items you wish to keep, simply select 'Discard'.

The documents you chose to save will be available under the DICOM images in the uploader in the section called 'Other Media'.

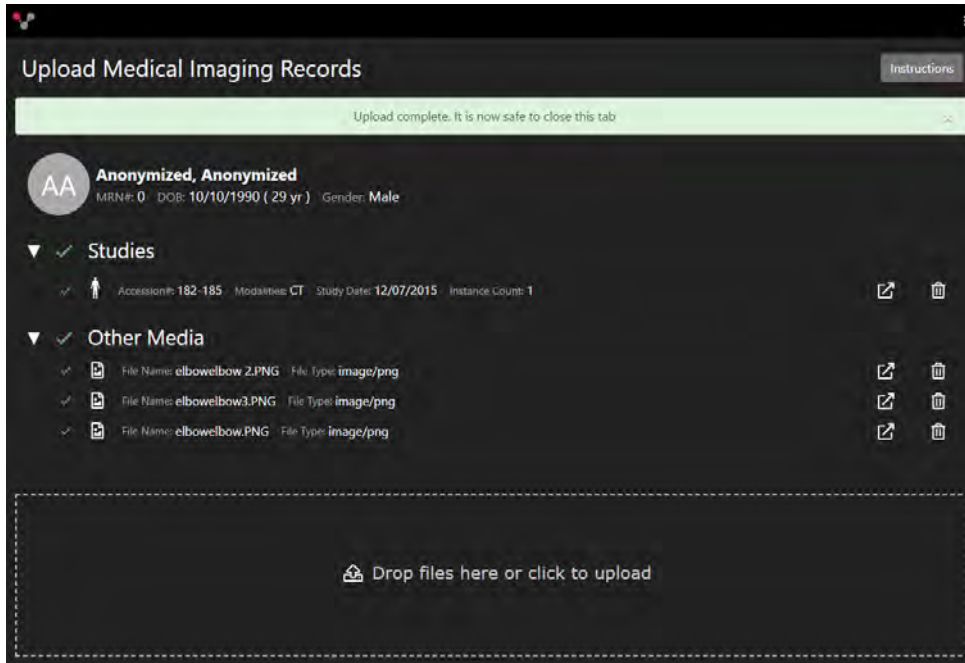


Image Upload Work List

If you have Work List permissions, uploaded studies can be viewed by selecting the View Work List link on the Uploader page or by going to <http://hostname/vitrea-view/studies/list>.


Two additional columns will be visible when an archive that is configured as an upload cache is selected.

Upload Date: The date the study was uploaded.

Transfer Status: This is the status of the study on the upload cache. Valid statuses include:

Status	Description
Ready	The study was successfully uploaded to the upload cache and is ready to be transferred.
Error	Something went wrong with the study during the upload (upload was canceled, interrupted, corrupt data, etc.). The only action that can be taken on a study with an Error status is Delete.
Transfer Failed	Something went wrong during the transfer process. You can make additional attempts to transfer studies with a Transfer Failed status.
Transferred	The study was successfully transferred to the target archive.

Searching uploadCacheArchive archive for Modality Any, Study Date Any, Upload Date Any, Transfer Status Any - Your search returned 32 results

Actions	Transfer Status	Upload Date ↓	Patient Name
→  	Ready	10/03/2017 14:11	Markup, Margie
→  	Ready	10/03/2017 14:05	Nodule, Nora
→  	Ready	10/03/2017 13:56	Nodule, Nora
→  	Ready	10/03/2017 13:56	Nodule, Nora
→  	Ready	10/03/2017 13:32	Anon-0018
→  	Ready	10/03/2017 12:12	Anon-0019
→  	Ready	10/03/2017 11:57	Anon-0017
→  	Ready	10/03/2017 09:44	Cardiac, Cory
 	Error	10/03/2017 08:35	Colon, Connie
→  	Transfer Failed	10/03/2017 02:00	AAA-Comp-MHI 2, S-D
 	Error	10/03/2017 02:00	AAA-Comp-MHI 2, S-D
→  	Ready	10/03/2017 01:36	Multiple, Maggie
→  	Ready	10/03/2017 01:36	Multiple, Maggie
→  	Ready	10/03/2017 01:34	Kawasaki, Kai
→  	Ready	10/03/2017 01:34	Kawasaki, Kai
→  	Transferred	09/29/2017 15:22	Anon-0070
→  	Transferred	09/29/2017 14:48	Carotid 4
→  	Ready	09/28/2017 10:33	SecondSeriesFails, Stan

View A Study

To view a study from the Worklist, perform one of the following:


- Double-click the study.

- Click the **View** button  .

- Right-click and select "**Open in Vitrea View**".


Delete A Study


To delete a study from the upload cache, perform one of the following:

- Select the study and then select the **Delete Study** button  .
- Right-click the study and select "**Delete Study**".

Transferring Studies

When configured, Vitrea View provides the ability to transfer studies to a different archive.

To transfer a study to another archive, navigate on the Study List, right-click the study and select **"Transfer Study"** or select the **Transfer Study** button  associated with the study.

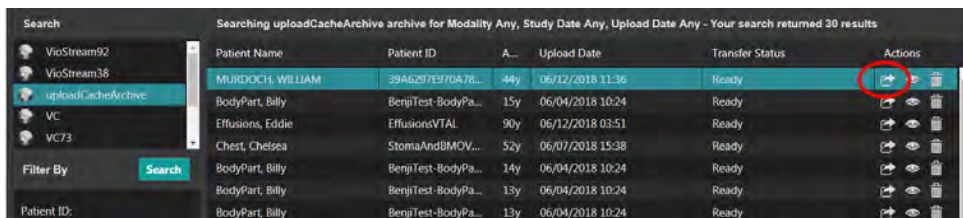























NOTE

Studies cannot be transferred if they are in an Error, Preparing, or Transferring status.

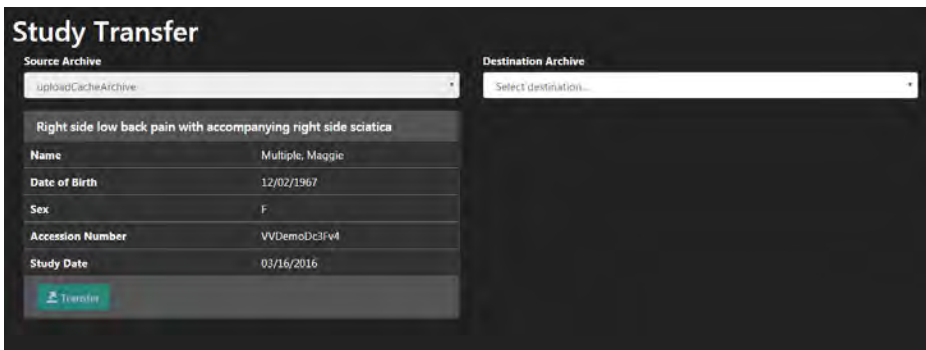
Selecting Transfer Destination

After selecting "Transfer Study" you will be taken to the **Study Transfer** page.



Search	Patient Name	Patient ID	A...	Upload Date	Transfer Status	Actions
VioStream92	MURDOCH, WILLIAM	39A6207E970A78...	44y	06/12/2018 11:36	Ready	  
VioStream38	BodyPart, Billy	BenjiTest-BodyPa...	15y	06/04/2018 10:24	Ready	  
uploadCacheArchive:	Effusions, Eddie	EffusionsVTAL	90y	06/12/2018 03:51	Ready	  
VC	Chest, Chelsea	StomaAndBMOV...	52y	06/07/2018 15:38	Ready	  
VC73	BodyPart, Billy	BenjiTest-BodyPa...	14y	06/04/2018 10:24	Ready	  
	BodyPart, Billy	BenjiTest-BodyPa...	13y	06/04/2018 10:24	Ready	  
	BodyPart, Billy	BenjiTest-BodyPa...	13y	06/04/2018 10:24	Ready	  

Select the archive you wish to transfer to from the drop down list on the right.



Study Transfer

Source Archive:

Destination Archive:

Right side low back pain with accompanying right side sciatica

Name: Multiple, Maggie

Date of Birth: 12/02/1967

Sex: F

Accession Number: VVDemoDc3f4

Study Date: 03/16/2016

Transferable Destination Archives

System configurations can be made by the System Administrator to determine which archives are transferable. Contact your System Administrator for more information.

Searching For Patients on Study Transfer

The transfer page will search the selected archive for a potential match as long as the archive has been

configured with a QIDO-RS or VioArchive patient search connection. Contact your system administrator if you need this configured.

Auto Search

After a destination archive has been selected, a search will be performed on that archive to find potential patient matches that exist on the destination archive.



NOTE

The patient search will search on **First and Last Name, Date of Birth, and Gender**. If it does not find an exact match for all three criteria no search results will be found.

When using the Vitrea Connection EMPI API, only Last Name will be used.

The screenshot shows the 'Study Transfer' interface. On the left, under 'Source Archive', a dropdown menu is set to 'uploadCacheArchive'. Below it, a table displays patient information: 'Right side low back pain with accompanying right side sciatica', Name: Multiple, Maggie, Date of Birth: 12/02/1967, Sex: F, Accession Number: VVDemoDC3Fv4, and Study Date: 03/16/2016. A 'Transfer' button is at the bottom. On the right, under 'Destination Archive', a dropdown menu is set to 'VitreaDataStream92'. Below it, a card displays the patient's name 'Multiple, Maggie' and details: Date of Birth: 12/02/1967, Sex: F, Patient ID: MultipleVTAL, and Issuer of Patient ID. A 'Remove' button is at the bottom.

Manual Search

If no results are returned in the auto search, you will see a screen like below:

The screenshot shows the 'Study Transfer' interface. At the top, a yellow banner displays the message: '[Patient] does not exist on the destination archive.' Below this, the 'Source Archive' dropdown is set to 'uploadCacheArchive'. The patient information table shows: 'Vital Generated Dicom Study Description', Name: Pauline Reedy, Date of Birth: 06/29/1968, Sex: F, Accession Number: ACCJx7r9R0K0t6, and Study Date: 12/15/2014. A 'Transfer' button is at the bottom. On the right, under 'Destination Archive', the dropdown is set to 'VitreaDataStream92'. The main area displays 'No patient selected' with a 'Search' button below it.



Select the Search button to perform a manual search of the archive for the patient. From the manual search page you can:

- Select an archive to search
- Search by Patient ID, Date of Birth, Patient Last Name, Patient First Name



NOTE

You must include either Last Name or Patient ID in your search.

Search for a Patient

Search Archive: VitreaDataStream92

Patient ID: (Starts with) Date of Birth: (mm/dd/yyyy)

Patient Name: Humer| (First') Search

Patient Name	Date of Birth	Sex	Patient ID	Issuer of Patient ID	Source Archive
Humerus, Harry	10/26/1975	M	BikeCrashShoulderInjury\	82317	VitreaDataStream92

Click on the result you wish to associate the study with.

The patient information will be populated on the right. Any attributes from the source that do not match the patient selected will be highlighted.

Study Transfer

Patient does not exist on the destination archive.

Source Archive: uploadCacheArchive Destination Archive: VoStream38

Vital Generated Dicom Study Description

Name	Pauline Roody
Date of Birth	06/29/1968
Sex	F
Accession Number	ACCx679R0K06
Study Date	12/15/2014

Transfer

Humerus, Harry

Source Archive: VitreaDataStream92
 Date of Birth: 10/26/1975
 Sex: M
 Patient ID: BikeCrashShoulderInjuryVTAL
 Issuer of Patient ID: 82317

Remove Search

If you find an exact match, a screen like the following will be displayed:

Study Transfer

Source Archive: uploadCacheArchive Destination Archive: VitreaDataStream92

3 time points - progression of 2 right-sided nodules

Name	Nodule, Nora
Date of Birth	06/01/1945
Sex	F
Accession Number	VVDemo6Hn7
Study Date	06/07/2015

Transfer

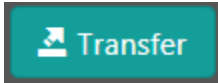
Nodule, Nora

Source Archive: VitreaDataStream92
 Date of Birth: 06/01/1945
 Sex: F
 Patient ID: 2Nodule3CompareVTAL
 Issuer of Patient ID:

Remove Search

Transferring

Selecting the Transfer button



will bring you to the Demographics modal window where you can select which values to associate with the study.

The values highlighted are the values that will be associated with the study.



CAUTION

Editing the study attributes and executing a transfer will also change the attributes on the source archive.

Transfer study to destination?

	New Value		uploadCacheArchive	VitreaDataStream92
Patient Name	Anon-0017		Anon-0017	Anon-0017
Patient Date of Birth	01/01/1935		01/01/1935	01/01/1935
Patient Sex	F		F	F
Patient ID	124090		124090	124090
Issuer of Patient ID				
Accession Number	f10ee814d8d9b4c1			
Study Description	CT ANGIO THORAX			
Clear Procedure		Select Procedure		
Code Value				
Coding Scheme Designator				
Coding Scheme Version				
Code Meaning				

Cancel Transfer



To edit any of the listed study attributes, select the edit button on the right.

Transfer study to destination?

	New Value	uploadCacheArchive	VitreaDataStream92
Patient Name	Anon-0017	Anon-0017	Anon-0017
Patient Date of Birth	01/01/1935	01/01/1935	01/01/1935
Patient Sex	F	F	F
Patient ID	124090	124090	124090
Issuer of Patient ID			
Accession Number	f10ee814d8d9b4c1		
Study Description	CT ANGIO THORAX		
Clear Procedure	Select Procedure		
Code Value			
Coding Scheme Designator			
Coding Scheme Version			
Code Meaning			

Cancel Transfer

When you are satisfied with the values to be associated with the study, click the **Transfer** button. The transfer will be initiated.

Study Transfer

Transferring study to VitreaDataStream92...

Source Archive: uploadCacheArchive

Destination Archive: VitreaDataStream92

Right side low back pain with accompanying right side sciatica

Name	Multiple, Maggie
Date of Birth	12/02/1967
Sex	F
Accession Number	VVDemoDc3Fv4
Study Date	03/16/2016

Transfer

Multiple, Maggie

Source Archive	VitreaDataStream92
Date of Birth	12/02/1967
Sex	F
Patient ID	MultipleVIAL
Issuer of Patient ID	

Remove Search

If the transfer is successful you will see a screen similar to that shown below.

Study Transfer

The study was successfully transferred.

Source Archive: uploadCacheArchive

Destination Archive: VitreaDataStream92

3 time points: progression of 2 right-sided nodules

Name	Nodule, Nora
Date of Birth	06/01/1945
Sex	F
Accession Number	VVDemo64In7
Study Date	06/07/2015

Transfer

Nodule, Nora

Source Archive	VitreaDataStream92
Date of Birth	06/01/1945
Sex	F
Patient ID	2Nodule3CompareVTAL
Issuer of Patient ID	

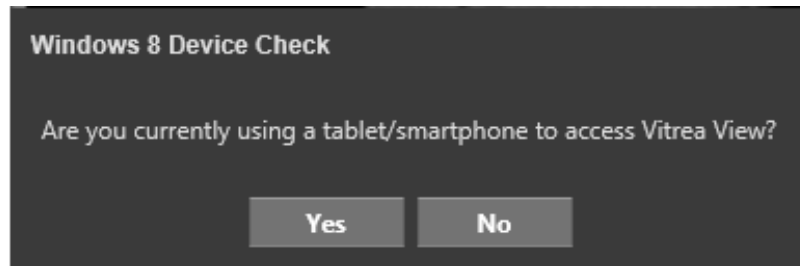
Remove Search

Tablets And Smartphones



NOTE

Laptops, tablet devices, and smartphones running the Windows 8 and later operating systems require a device check prompt on the first use. The reply to the prompt is saved, for each browser, as a cookie. Each time the cookies are cleared, or if cookies are disabled, the prompt will display upon loading. This prompt can be disabled and overridden by a system administrator.



Patient List

After logging in you will be taken to the Patient List. From here you can choose your layout option by selecting

the layout button  to toggle between views.

1. List view
2. Card

Whatever option you choose, this will be the preferred view going forward unless you switch your layout option again.

Vitrea View TeraAdmin

Patient List

6 patients

(last, first) Name ^

- Birdies, Sam**
MRN#: HELEN1 DOB: 12/08/1980 (38 yr) Gender: Female
- Effusions, Eddie**
MRN#: EffusionsVTAL DOB: 12/01/1925 (93 yr) Gender: Male
- Heart, Holly**
MRN#: HeartVTAL DOB: 10/29/1927 (91 yr) Gender: Female
- Kawasaki, Kai**
MRN#: KawasakiLMOstiaStenosisVTAL DOB: 08/23/2010 (8 yr) Gender: Male
- Metastasis, Mason**
MRN#: LiverMetsVTAL DOB: 06/21/1949 (69 yr) Gender: Male

Vitrea View TeraAdmin

Patient List

3 patients

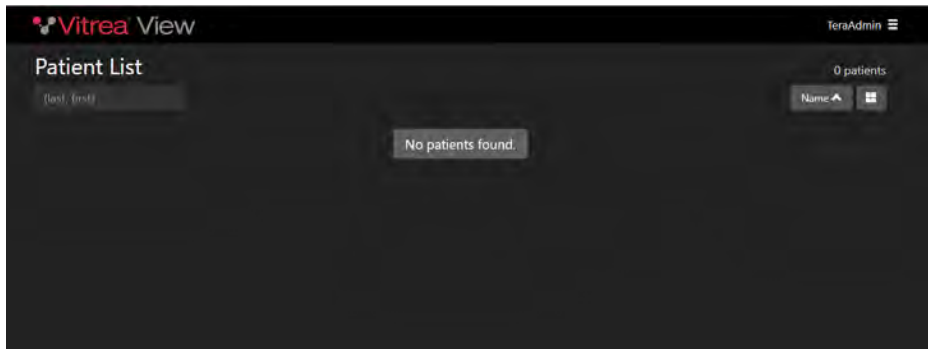
(last, first) Name ^

- Birdies, Sam**
Age: 38 DOB: 12/08/1980 Gender: Female
MRN#: HELEN1
- Kawasaki, Kai**
Age: 8 DOB: 08/23/2010 Gender: Male
MRN#: KawasakiLMOstiaSten...
- Ostroff, Orval**
Age: 47 DOB: 04/11/1971 Gender: Male
MRN#: PtListDemo_stGDXTlu...

Returning A List of Patients

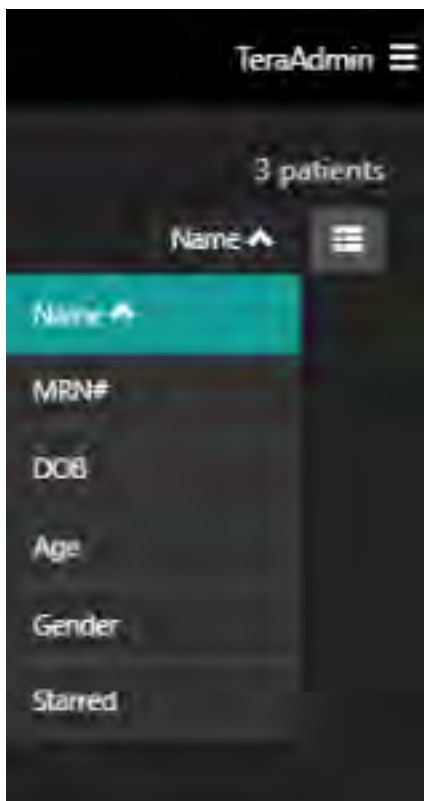
1. Begin typing the patient name into the search bar
2. Click the star next to the patient you wish to add to the patient list

If no patients are searched for or "starred", no patients will show on the patient list. You will see a message indicating that "No patients found".



Sorting Options

You can sort your patient list on the following criteria:

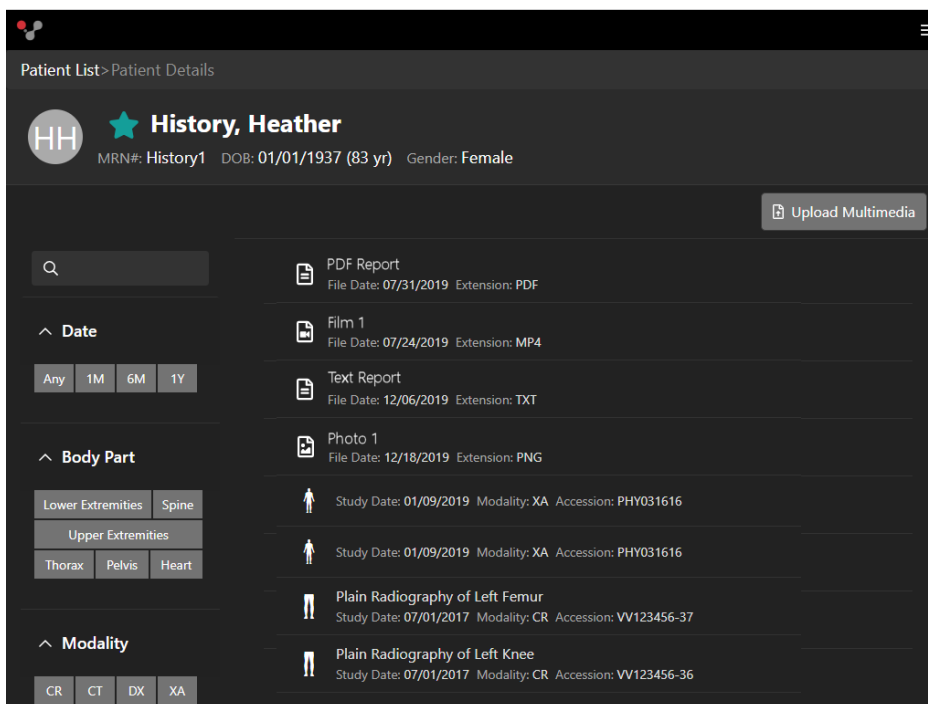


The most commonly used criteria will be Name.

Patient Detail Page

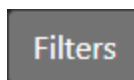
Select a patient to open the Patient Details page. The Patient Detail page displays DICOM and non-DICOM images, videos, documents, and reports related to the patient. It also provides upload capabilities.

To launch a study in the viewer, select the preferred study.



Use the left panel (tablet view) to filter or search the patient records on the page. The panel displays the available filters based on the data.

To access the search filters on a smartphone, tap the **Filters** button.



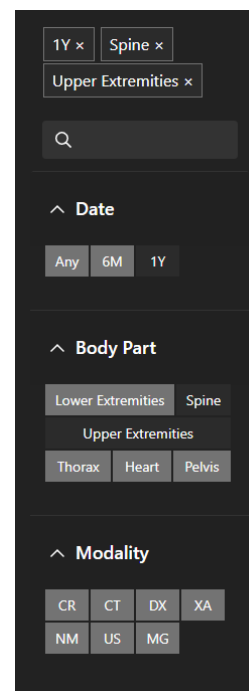
- Click the appropriate buttons to filter by Date, Body Part, or Modality.

NOTE You can make multiple selections, except for the Date filter.

OR

- Enter search criteria in the search box.
 - non-DICOM: title, author
 - Studies: modality, body part, accession number, description, archive name
 - Future Studies: modality, body part, requested procedure, requesting physician, reason for procedure

To clear a filter or search item, tap the X in the identifier.





To return to the Patient List, tap the **Patient List** breadcrumb at the top of the page.

Future Imaging Orders

If any future imaging orders have been entered for a patient, a blue/green indicator displays in the left margin of the patient detail item.

HH ★ **History, Heather**
MRN#: History1 DOB: 01/01/1937 (83 yr) Gender: Female

1Y x Spine x Upload Multimedia

Upper Extremities x

Q

^ Date
Any 1M 6M 1Y

- Computerized Tomography (CT Scan) of Lumbar Spine using High Osmolar Contrast
Scheduled Date: 11/22/2019 Reason For Procedure: Patient post lumbar fusion. Followup
- Plain Radiography of Left Wrist
Scheduled Date: 10/22/2019 Reason For Procedure: Fracture Alignment
- Computerized Tomography (CT Scan) of Right Shoulder using High Osmolar Contrast
Scheduled Date: 09/22/2019
Reason For Procedure: Status post Rotator Cuff repair, still some swelling

Data Mismatch

When there is a mismatch in demographics, a red indicator displays in the left margin of the study.

When you select the indicated study, a window will pop up with the demographic warning highlighting the area that is mismatched in red.

You can choose to close this warning box and not load the data, or you can choose to continue with your workflow and load the study.

The screenshot shows a mobile application interface for patient details. At the top, there is a navigation bar with a hamburger menu icon on the right and the text "Patient List > Patient Details". Below this, a patient's information is displayed: a circular icon with "1S", a teal star icon, and the text "Slices, 1600". Further down, the patient's MRN#, DOB, and gender are listed. Two buttons, "Filters" and "Upload Multimedia", are visible. Below the buttons is a list of three study entries, each labeled "CTA LONG" and including study date, modality, and accession numbers. A red arrow points to the second study entry in the list.

Patient List > Patient Details

Slices, 1600

1S MRN#: 125022
DOB: 02/02/1934 (86 yr)
Gender: Male

Filters Upload Multimedia

CTA LONG
Study Date: 01/01/1999 Modality: CT
Accession: d1e2058b2b8ae897

CTA LONG
Study Date: 01/01/1999 Modality: CT
Accession: 1a98268c5fd04c32

CTA LONG
Study Date: 01/01/1999 Modality: CT
Accession: d1e2058b2b8ae897

Mismatch Demographics

WARNING! You have selected a study with mismatching demographics:

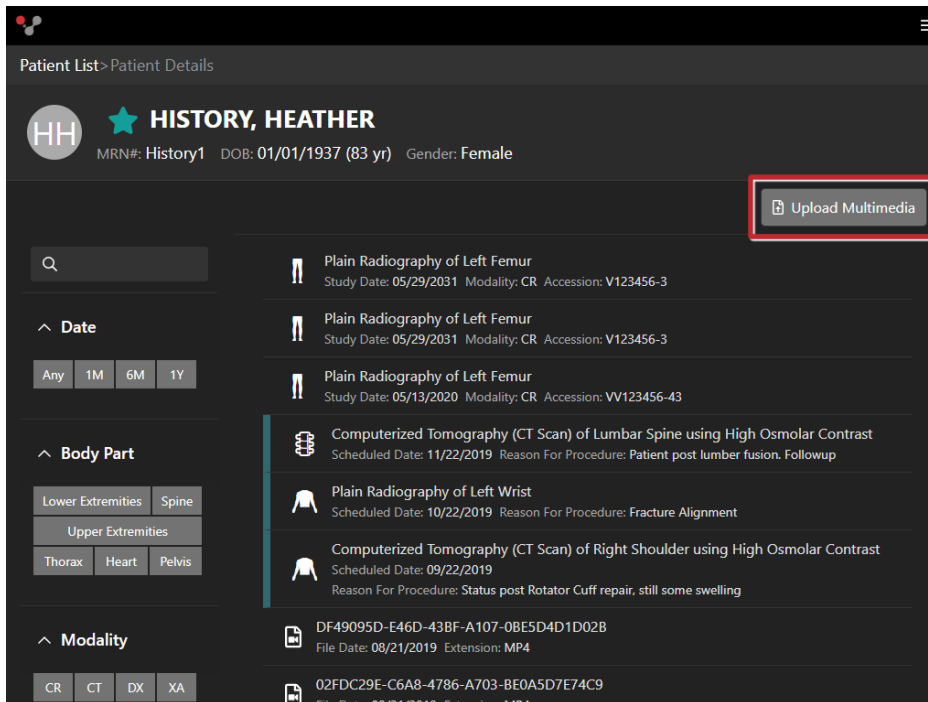
Demographic	Patient Record	Study
Name	Slices, 1600	Slices, 200
DOB	02/02/1934	02/02/1934
Gender	M	M
MRN#	125022	125015

CTA LONG
Study Date: 01/01/1999 Modality: CT
Accession: 1a98268c5fd04c32

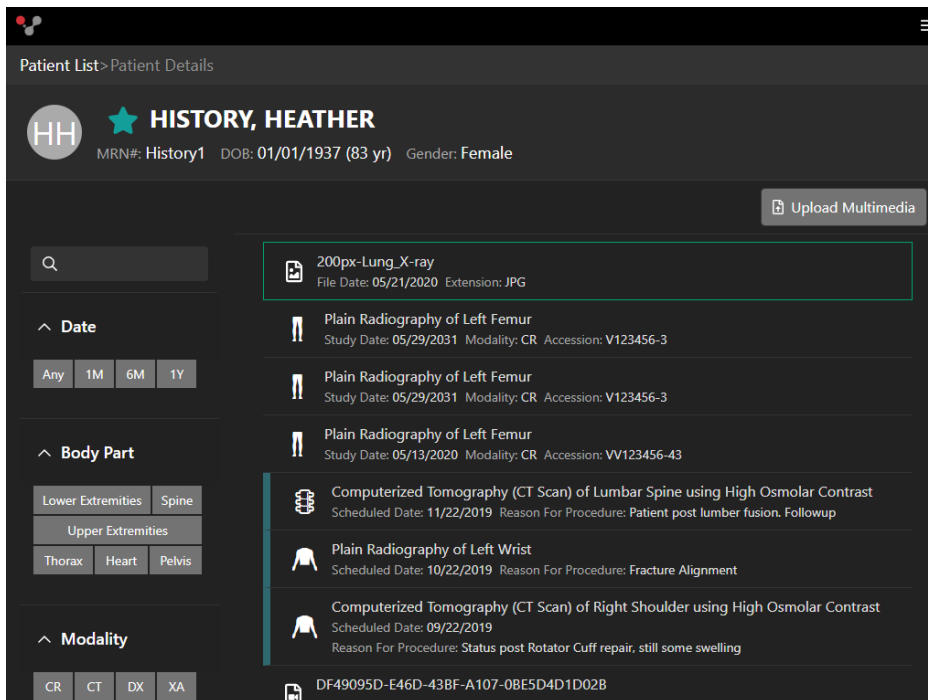
Uploading Multimedia Images

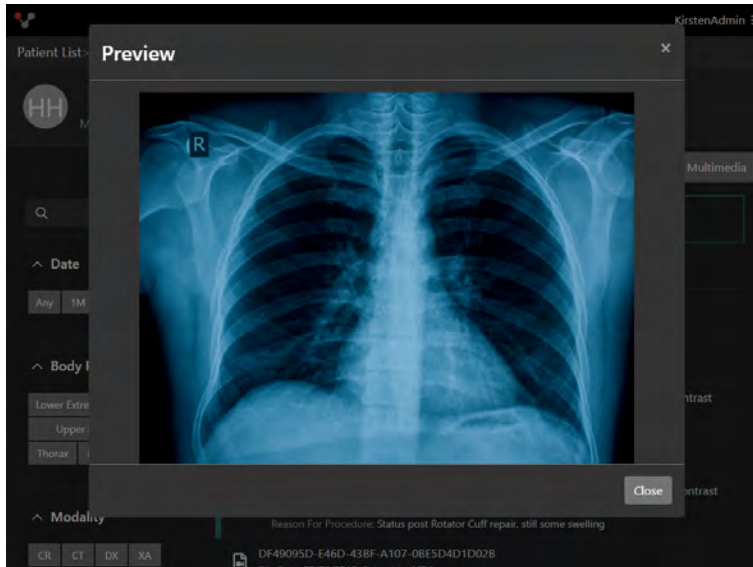
1. Tap the **Upload Multimedia** button.
2. The device camera opens.

3. Capture an image or video.



The multimedia image (non-dicom) will appear at the top of the detailed list. Tap the item to preview it.





Modify AutoFill Settings for iPhones and iPads

Canon Medical requests browsers to not save passwords for its login screens. However, browsers do not have to respect this setting. Often, browsers on mobile devices will provide a configuration mechanism to control this behavior. Canon Medical recommends that all devices that are shared in your enterprise have the browser configured to honor the request to not save passwords. On Apple devices, this can be done using the procedure listed below.



NOTE

Saving the password is less of a concern on a user's personal device if it is not shared.

To navigate to the **Screen Settings** menu, complete the following steps.

1. On the mobile device, select the **Settings** app.
2. Select **Safari | Passwords & AutoFill**.

An example of the following screen displays.



3. Set the **Names and Passwords** option to off.
4. Set the **Always Allow** option to off.

Tablets

This section is specifically for users who access the Vitrea View software on various iOS, Android, and Windows tablet devices through the default internet browser.



NOTE

Tablet use is for informational purposes only and not intended for diagnostic use.



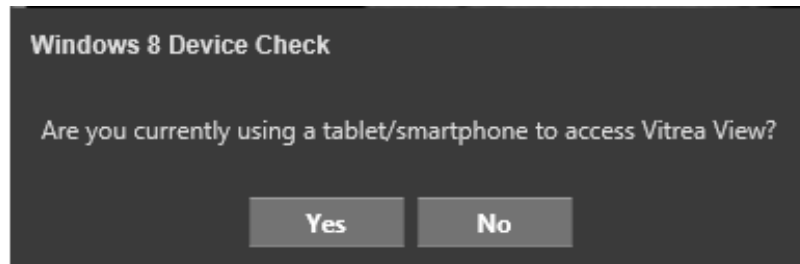
NOTE

The minimum recommended screen resolution for the Vitrea View software is 1024 X 768. On tablets or phones with resolution less than 800 X 600, the software displays a message.



NOTE

Laptops, tablet devices, and smartphones running the Windows 8 and later operating system require a device check prompt on the first use. The reply to the prompt is saved, for each browser, as a cookie. Each time the cookies are cleared, or if cookies are disabled, the prompt will display upon loading. This prompt can be disabled and overridden by a system administrator.



Glossary of Terms

The following is a list of terms used especially with touch devices

- **Tap** - tap with one finger once.
- **Drag** - touch with one finger and drag.
- **Two-finger drag** - touch with two fingers slightly apart and drag.
- **Pinch open / Pinch closed** - touch with two fingers and bring them together or spread them apart.

Logging In

When accessing Vitrea View on a tablet or mobile device, you will see the following screen to enter your credentials.



Ambient Light Check

Vitre View software includes an Ambient Light Check so you can check that the ambient lighting conditions are sufficient for image viewing. For example, the ambient light in a well-lit room may be too bright, or the screen brightness setting on the device may be set too dimly, to adequately visualize the details of the image.

To launch the Ambient Light Check, select Check Lighting Conditions from the Help Menu. The Ambient Light Check will also appear automatically, once per day, on some devices that are known to be mobile devices (such as iPads).



NOTE

Some devices that are considered by users to be mobile devices may not be recognized as mobile devices by the Vitrea View software. Such devices may not receive an automatic ambient light check.

The dialog box will randomly display a shape on a dark background. Choose the shape you see. If you correctly identify the shape, you will be able to proceed to the Vitrea View software.

If you incorrectly identify the shape, or if you choose **No Shape Visible**, a warning dialog displays to advise that the environment may be too bright in your location or your device brightness or contrast may not be suitable to view images. It is recommended that you change your environment and try again. You will be able to continue to the Vitrea View software or to logout.




CAUTION

The device is not suitable for image viewing if the lighting level is not appropriate.

Tablet Interactions

The table below describes the touch actions needed to perform certain tasks on a tablet:

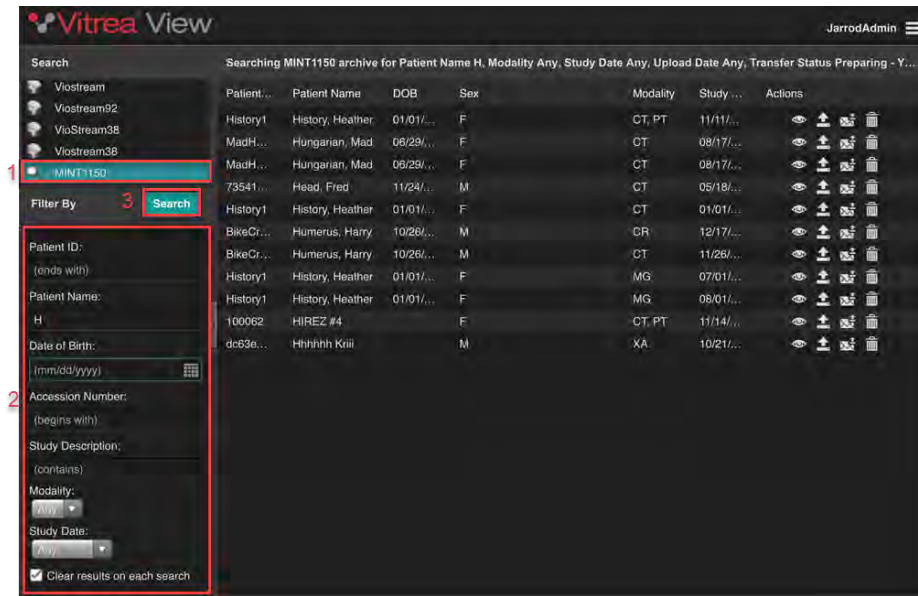
Task	Action
Zoom	Pinch open or closed on the image to zoom in or out. User can also select the Zoom option in the toolbar to use as a one-finger tool
Scroll	With the Pointer tool active, drag up or down on the image to scroll through the stack.
Pan	Two-finger drag to pan the image. User can also select the Pan option in the toolbar to use as a one-finger tool
Replace images	<p>Tap a thumbnail in the Carousel.</p> <div style="border: 1px solid black; border-radius: 10px; padding: 10px;"> <p>NOTE</p>  <p>If there are multiple image panes in the workspace, drag and drop and image to the workspace.</p> </div>
Add the Vitrea View software icon to the home screen (iOS devices only)	Tap Add To icon and select Add to Home Screen. Subsequently, when you open the Vitrea View software from the icon, it will display in full-screen mode.
Return to the Study List from full-screen mode (iOS devices only)	Tap the back arrow in the upper left corner of the Viewer window.

Study List


Returning a List of Studies

1. Tap the archive you wish to search
2. Use the search filters to filter by:
 - Patient ID
 - Patient Name
 - Patient Date of Birth
 - Accession Number
 - Study Description
 - Modality
 - Study Date (range)

3. Tap the Search  button.

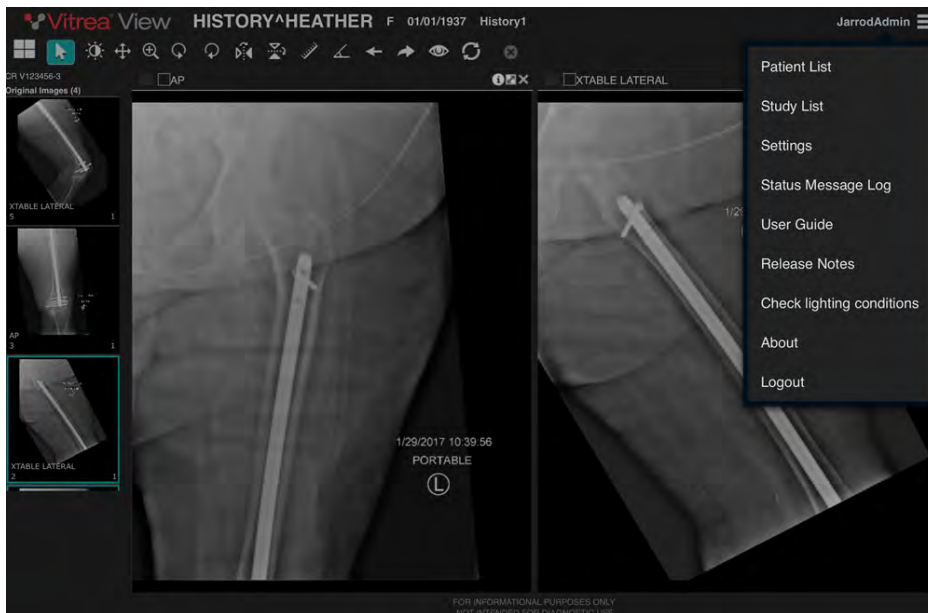
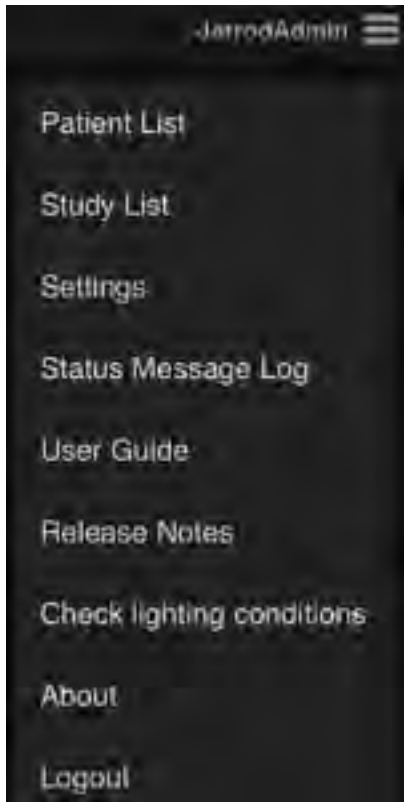


Viewing A Study

To view a study, select the study and then tap the Open  button.







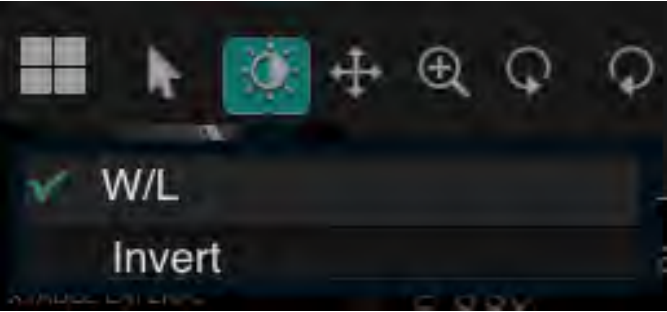



Menu options on the Tablet Viewer











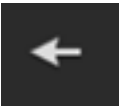



Tools

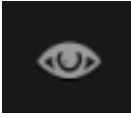
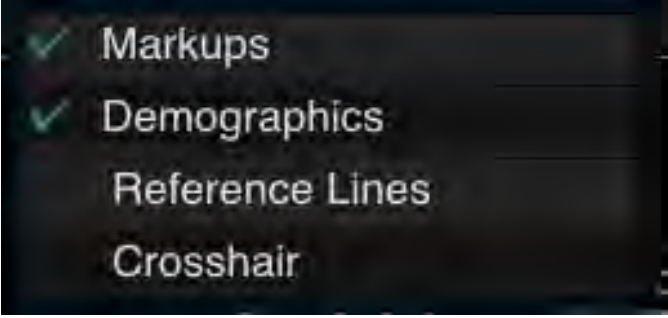


Tablet users have several tools at their disposal.

Tap on a tool to activate it.

Action	Description
 <p data-bbox="253 470 326 499">Layout</p>	<p data-bbox="548 310 1325 365">Tap the Layouts button to display a panel of Viewer window layout options. Select an option for a new layout.</p> 
 <p data-bbox="253 682 326 711">Pointer</p>	<p data-bbox="548 615 1352 644">The Pointer Tool allows you to click 2D images without affecting the images.</p>
 <p data-bbox="253 984 464 1014">Window/Level Tools</p>	<p data-bbox="548 741 1227 770">Select the Window / Level icon, then select either W/L or Invert.</p> 
 <p data-bbox="253 1297 293 1327">Pan</p>	<p data-bbox="548 1201 1380 1255">Tap the Pan tool, then tap on the image and drag (Pan) the image to the desired location.</p>
 <p data-bbox="253 1499 315 1528">Zoom</p>	<p data-bbox="548 1413 1370 1470">With the Zoom tool selected, tap on the image and drag up or down, left or right to increase or decrease the zoom factor.</p>
 <p data-bbox="253 1709 399 1764">Rotate Left 90 degrees</p>	<p data-bbox="548 1638 1383 1692">Tap the Rotate Left icon to rotate the image 90 degrees to the left. Each click will rotate it another 90 degrees.</p>

Action	Description
 <p>Rotate Right 90 degrees</p>	<p>Tap the Rotate Right icon to rotate the image 90 degrees to the right. Each click will rotate it another 90 degrees.</p>
 <p>Flip Horizontally</p>	<p>Tap the Flip Horizontally icon to flip the image along a horizontal axis.</p>
 <p>Flip Vertically</p>	<p>Tap the Flip Vertically icon to flip the image along a vertical axis.</p>
 <p>Ruler</p>	<p>Move to the image and tap the desired starting point to indicate the beginning of the line. Tap and drag in the image to place the desired end-point of the line.</p> <div style="border: 1px solid black; border-radius: 10px; padding: 10px; margin-top: 10px;"> <p>NOTE</p> <p> When images are not calibrated, measurement markups display in pixels rather than millimeters. Pixels do not represent an actual measurement and no conversion to millimeters is possible.</p> <p> See the Understanding Measurement Values and Units section.</p> <p>Be aware that measurement values or annotations may go partially off the screen, especially with zoomed or panned images. With markups close to the edge of the screen, be sure to zoom out or pan the image to be sure you see the entire markup. A red arrowhead displays near the edge of the screen where a markup annotation goes off the screen.</p> </div>

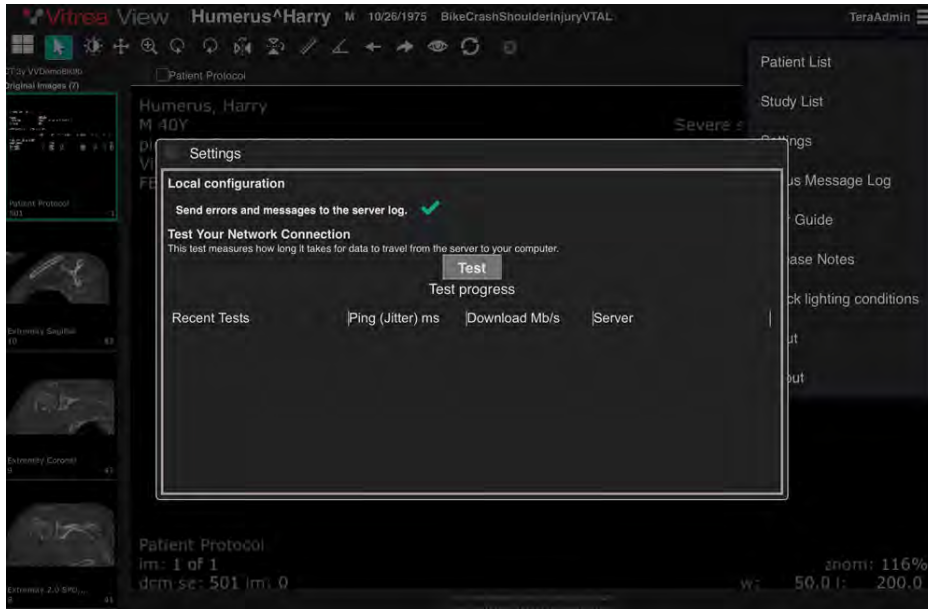
Action	Description
 <p>Angle</p>	<p>Move to the image, then tap to set the first point of the angle.</p> <p>Now drag to move the yellow line to the point of the apex. Tap again to set the apex of the angle.</p> <p>To finalize the angle, pull the yellow line from the apex to the desired end point.</p> <p>To modify the angle, tap either anchor point or the center point and modify the angle as desired.</p> <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p>NOTE</p>  <p>If you select the angle without selecting the anchor point, you move the location of the angle without changing its dimensions.</p> <p>The angle is established by the direction you move. When you move above the first established line, the angles increment from 0-360 degrees counter-clockwise. If you cross the line, the angles increment from 0-360 degrees clockwise. Crossing the actual first line flips the angle.</p> <p>Be aware that measurement values or annotations may go partially off the screen, especially with zoomed or panned images. With markups close to the edge of the screen, be sure to zoom out or pan the image to be sure you see the entire markup. A red arrowhead displays near the edge of the screen where a markup annotation goes off the screen.</p> </div>
 <p>Arrow</p>	<p>Tap in the view to place the tail end then drag to place the arrowhead.</p> <p>To add an annotation to the arrow, tap the orange text Click to edit note then type comment in dialog box.</p> <p>To move the note, tap it and drag to desired location.</p> <p>To hide the note, double-tap the arrow and select Hide Note.</p> <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p>NOTE</p>  <p>Be aware that measurement values or annotations may go partially off the screen, especially with zoomed or panned images. With markups close to the edge of the screen, be sure to zoom out or pan the image to be sure you see the entire markup. A red arrowhead displays near the edge of the screen where a markup annotation goes off the screen.</p> </div>
 <p>Share Studies</p>	<p>When configured, this option allows you to send studies to a third party image sharing service, copy a link to a study, or send a link to the study via email.</p> <p> See the Sharing Images and Studies section for more information.</p>

Action	Description
 <p data-bbox="253 594 370 621">View Menu</p>	<p data-bbox="548 310 1344 338">Use the View Menu to show or hide certain features that display in the views.</p> <p data-bbox="565 380 1149 407">See the View Menu section for more information.</p> 
 <p data-bbox="253 1098 318 1125">Reset</p>	<p data-bbox="548 800 1377 852">The Reset icon provides a menu of actions that can be reset back to the original setting.</p> 

Tablet Settings

Tap the Settings button to bring up the Settings window in order to:

1. Turn on / off sending of errors and messages to the server log.
2. Test your network connection speeds by tapping the Test button.

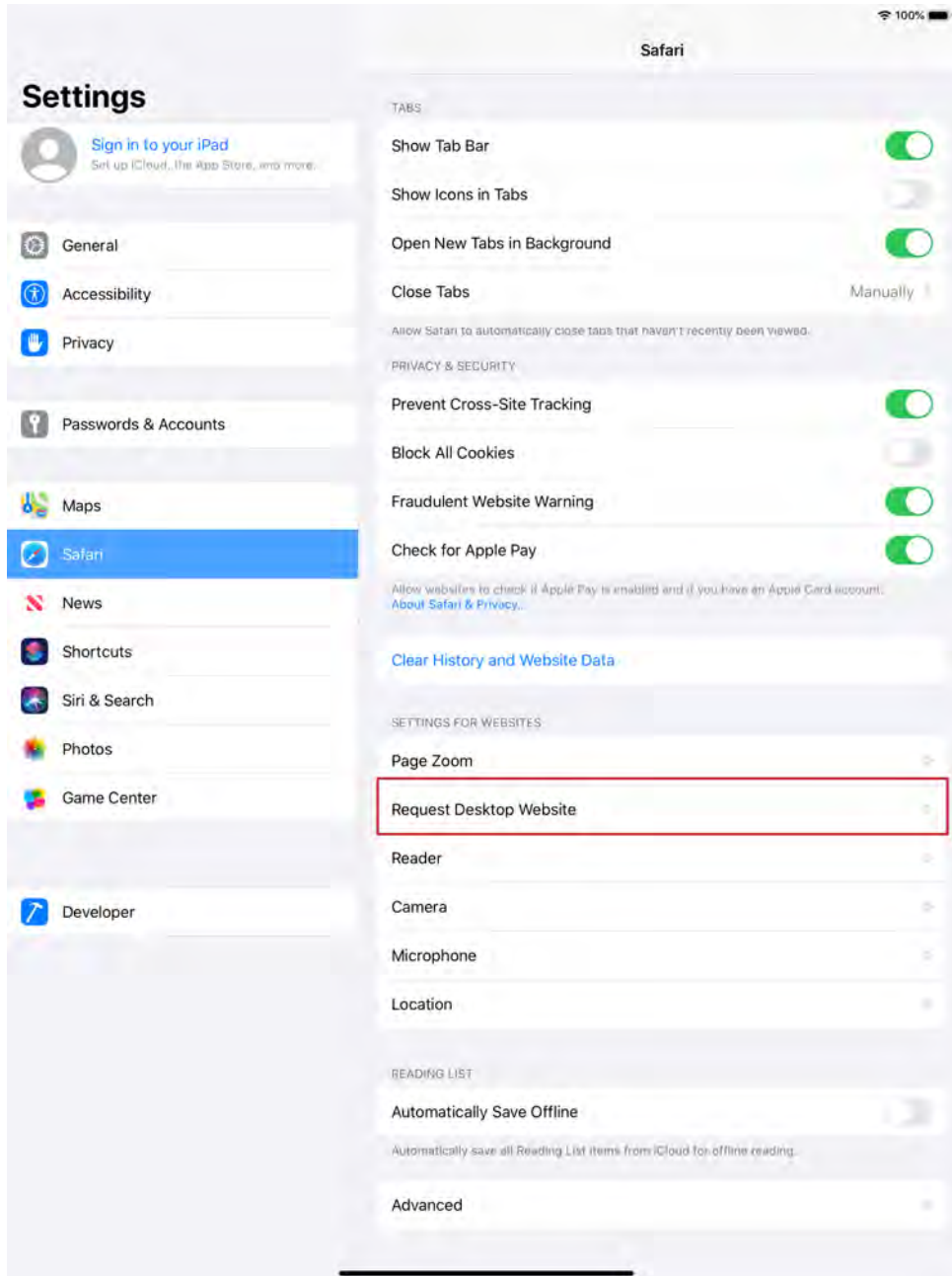


Apple iPad Safari Settings - Request Desktop Website

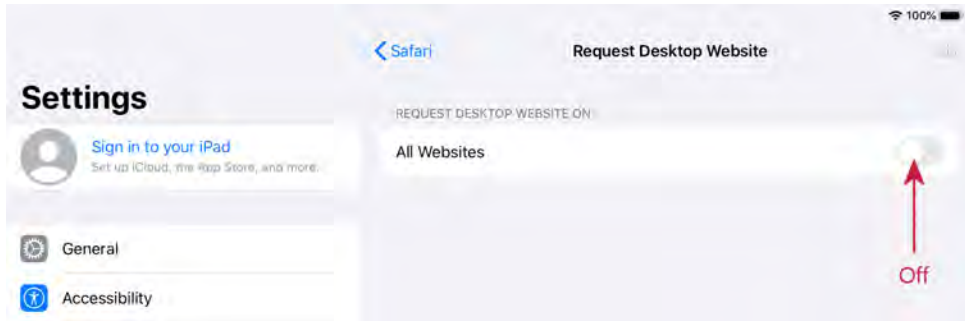
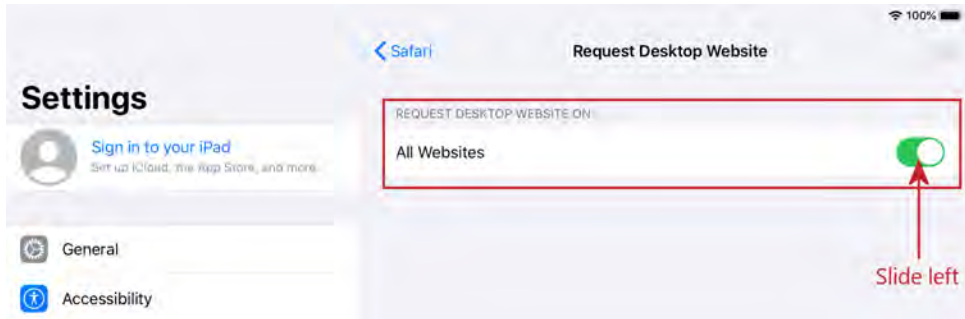
Apple iPad allows users to view desktop versions of websites using the **Request Desktop** feature. If the Request Desktop feature is enabled, Vitrea View will display a seemingly working session that does not function.

Request Desktop Websites should be always be disabled prior to running or accessing Vitrea View.

1. Open the **Settings** application.
2. In the left side list, select **Safari**.
3. Under the Settings for Websites heading, select **Request Desktop Website**.



4. Under the Request Desktop Website heading, move the slider for **All Websites** to the left to the off position.



Smartphones



NOTE

Smartphone use is for informational purposes only and not intended for diagnostic use.

This section is specifically for users who access the Vitrea View software on various iOS and Android smartphone devices through the default internet browser.



NOTE

Canon Medical no longer supports Microsoft Internet Explorer version 9 for this application. If you are using Microsoft Internet Explorer version 9, Canon Medical recommends that you update your browser to the latest version your system can support.

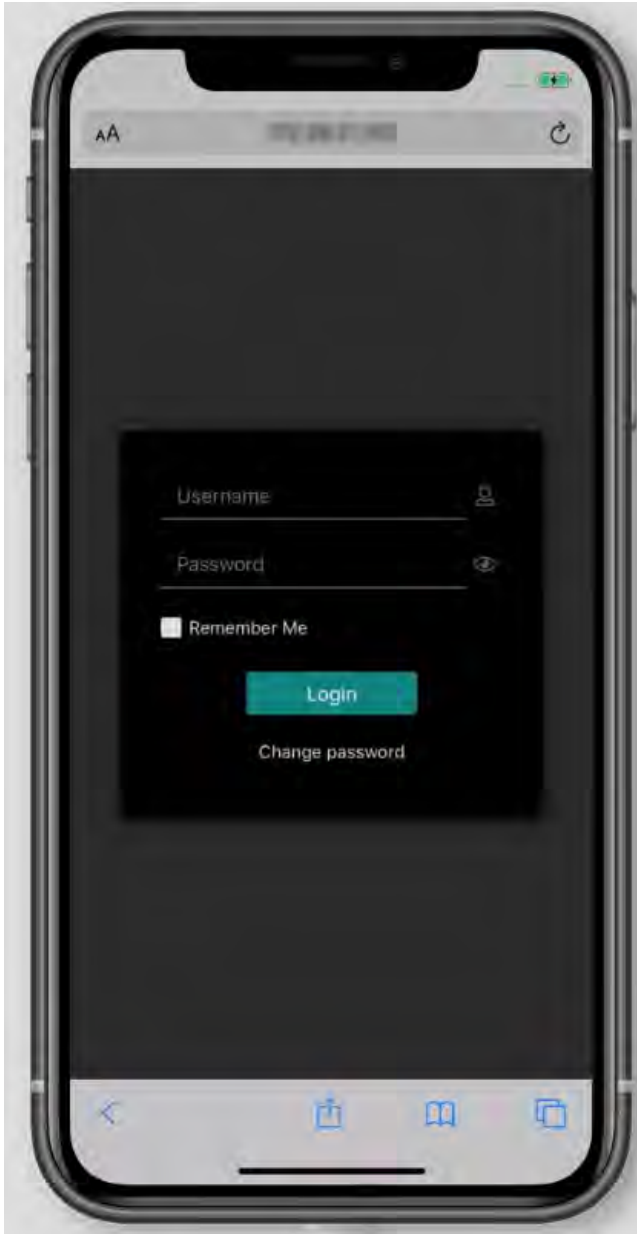
Glossary of Terms

The following is a list of terms used especially with touch devices

- **Tap** - tap with one finger once.
- **Drag** - touch with one finger and drag.
- **Two-finger drag** - touch with two fingers slightly apart and drag.
- **Pinch open / Pinch closed** - touch with two fingers and bring them together or spread them apart.

Login Page

When accessing Vitrea View on a tablet or mobile device, you will see the following screen to enter your credentials.



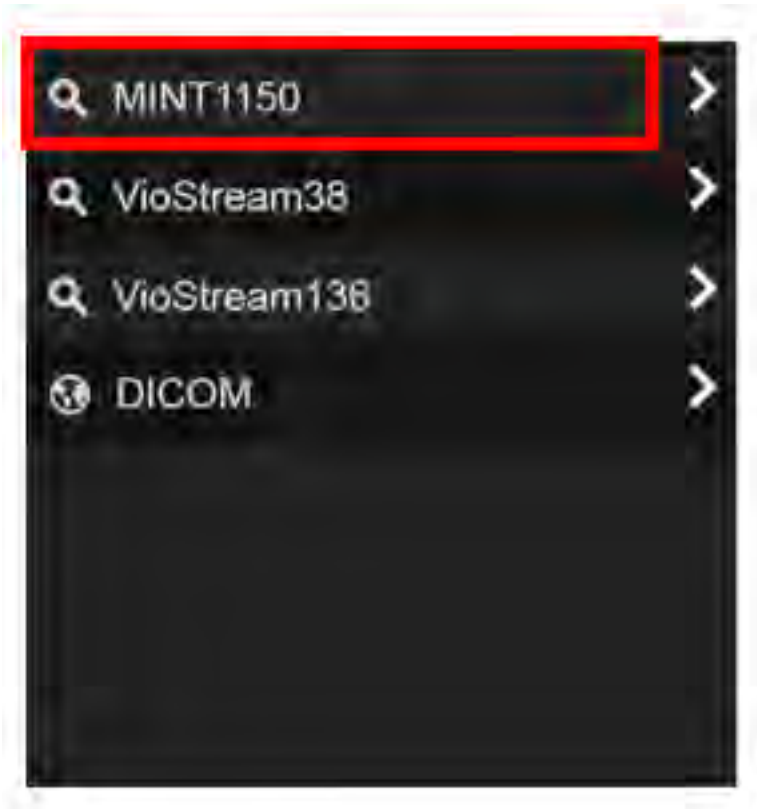
Log in to your facility's Vitrea View software with your Username and Password.

Contact your system administrator for information regarding logging into the Vitrea View software for the first time.

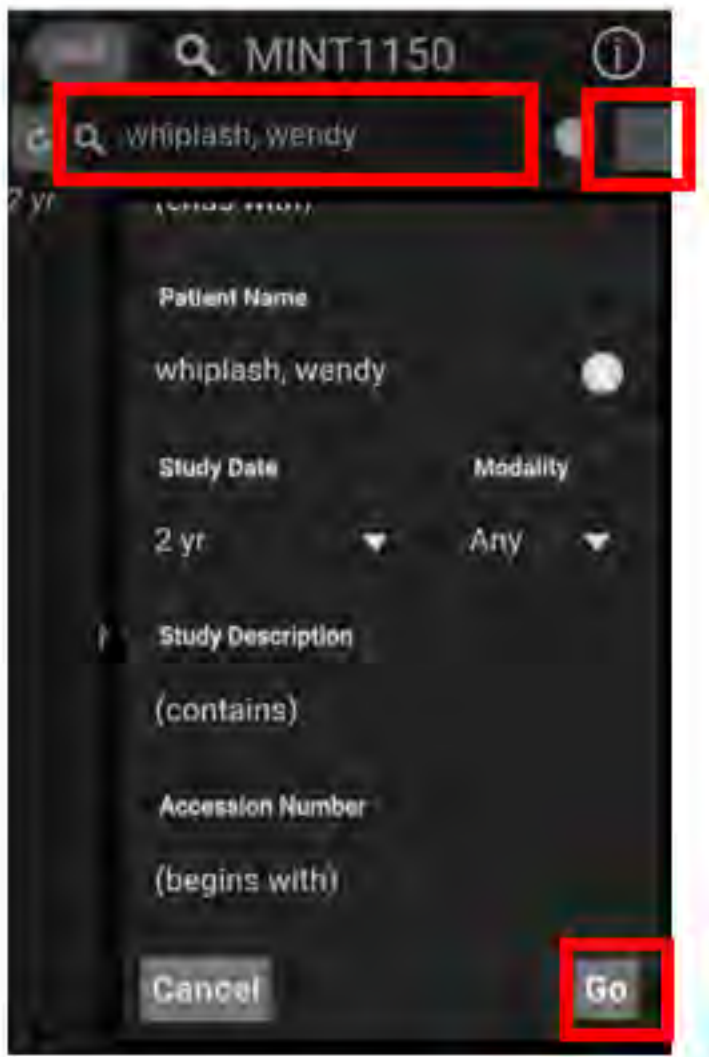
Study Search

Search patient studies by name or other search criteria.

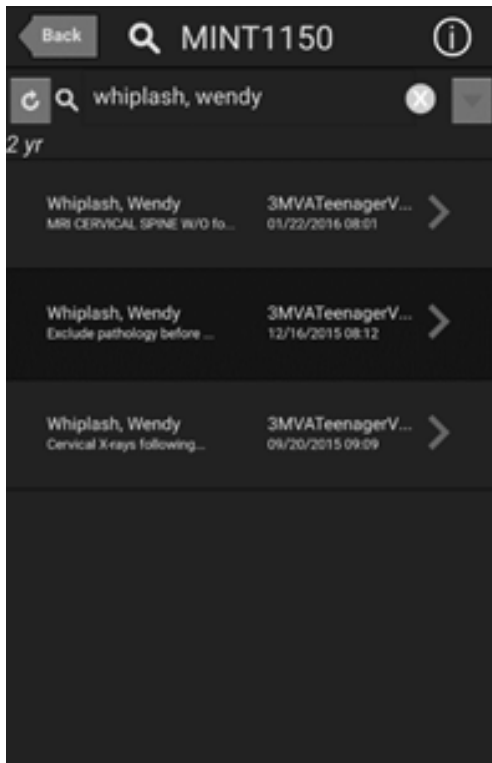
1. Select the server, if applicable.



2. Type a patient name in the search field OR tap the drop down arrow to display fields for other search criteria.



3. Tap **Go** to perform the search.
4. Select a study from the study list.



NOTE

If the smartphone is receiving a shared study, and the study layout is not a supported smartphone layout, a notification displays requesting the smartphone user open the study on the full desktop version of the Vitrea View software.

Ambient Light Check

Once a day, when the viewer is launched for the first time, the Ambient Light Check will be performed to ensure proper viewing of the images.

A dialog box will display a shape on a dark background. Choose the shape you see. If you correctly identify the shape, the lighting environment is suitable for image viewing. If you incorrectly identify the shape, or if you choose 'No Shape Visible', a warning dialog will display. This will advise that the environment may be too bright in your location or your device brightness or contrast may not be suitable to view images. It is recommended that you change your environment and try again. Once completed, you will be able to continue to the Vitrea View software or to logout.



CAUTION

The device is not suitable for image viewing if the lighting level is not appropriate.

Smartphone Viewer

View images and use basic tools on the smartphone viewer. The default layout is 1 X 1.

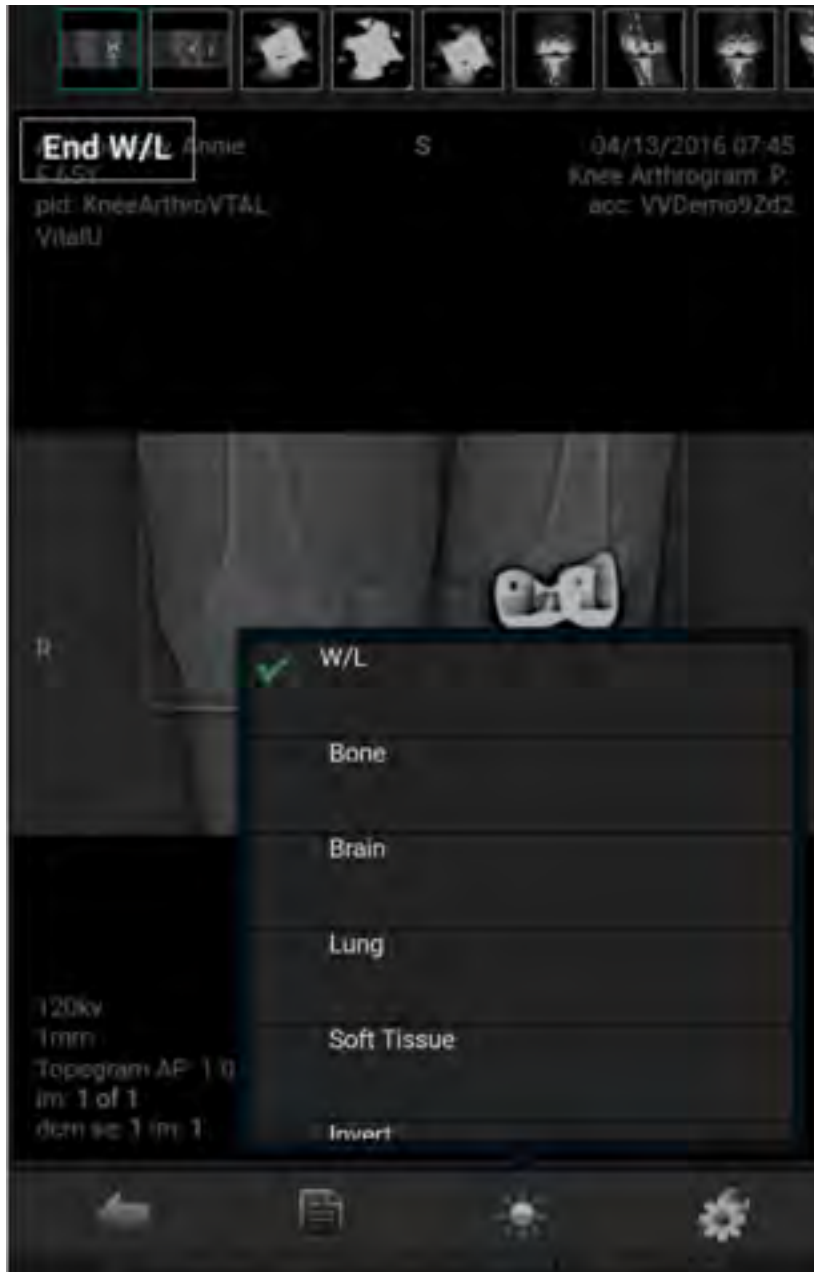


Callout	Description
1	<p>The Carousel displays on top. Tap a thumbnail to replace the image in the viewer.</p> <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p>NOTE</p> <p>Series images, key images, and related images are separated with spacers. Swipe the carousel to scroll within each section. Tap in a section to move between sections.</p> </div>
2	Tap the back arrow to go back to the study search.
3	Tap the document icon to display radiology reports related to the study.
4	Tap this icon to adjust the window/level settings. See the Smartphone Window / Level Settings section below.
5	Tap the tools icon to see more tools. See the More Tools section below.

Smartphone Window / Level Settings



Tap the icon and select a setting from the list.



OR

Tap **W/L** to adjust manually by dragging in the view.

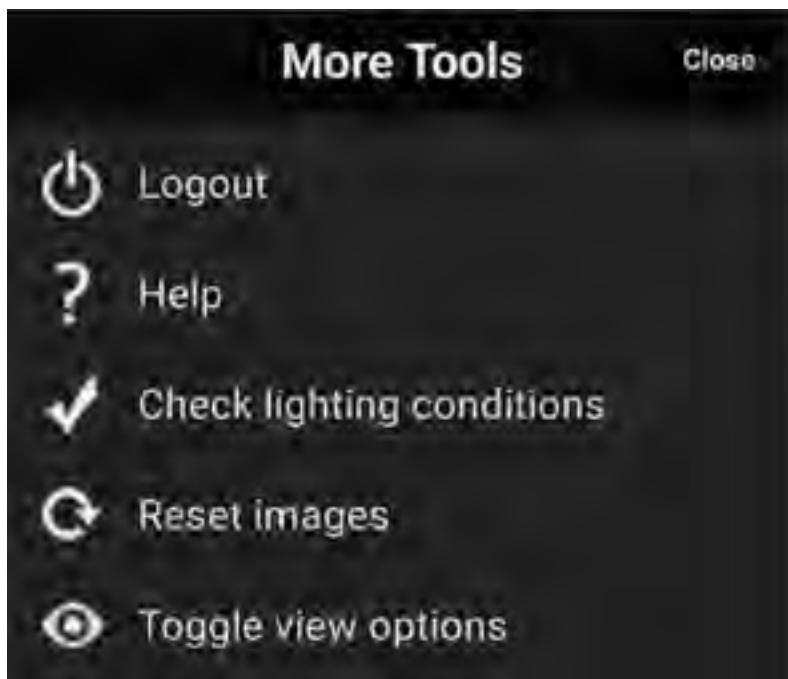
Tap



when finished.

More Tools

Tool	Action
Logout	Log out of the session.
Help	Display statement to find the Instructions for Use. Consult Instructions for Use before using this product. The instructions for use may be found when accessing the Vitrea View software through a desktop, tablet, or through MyVitrea.
Check lighting conditions	Launch the ambient light check.
Reset images	Reset the images to the default settings.
Toggle view options	Hide/show GSPS markups or patient demographic information on the images.



Smartphone Interactions

The table below describes the touch actions needed to perform certain tasks on a smartphone:

Task	Action
Expand image to entire viewer (hide Carousel and toolbar)	Tap image. Tap again to re-display Carousel and toolbar.
Zoom	Pinch open or closed on the image to zoom in or out.
Scroll	With the Select tool active, drag up or down on the image to scroll through the stack. Tap the scroll bar on the right to scroll through the images more quickly.
Pan	Two-finger drag to pan the image.
Replace images	Tap a thumbnail in the Carousel or swipe image horizontally to view next image in the Carousel.
Add the Vitrea View software icon to the home screen (iOS devices only)	Tap Add To icon and select Add to Home Screen. Subsequently, when you open the Vitrea View software from the icon, it will display in full-screen mode.

Advanced Options

Settings

1. Enable error messaging to the server log.
2. Test your network connection to determine the time it takes data to travel from the server to your computer.
 - a. On the settings screen, click Test. A status message (that includes Ping and Download measurements) displays.
 - b. When completed, test completed displays. The results are presented in the table below.

The settings screen lists the recent tests, ping (jitter), download Mb per second, and the server.



NOTE

Jitter is often used as a measure of the variability over time of the packet latency across the network.

Status Message Log

System messages, information messages, user communications, and error messages display from the Status Message Log screen.

VIP Permissions

VIP roles and permissions are broken down into 4 levels.

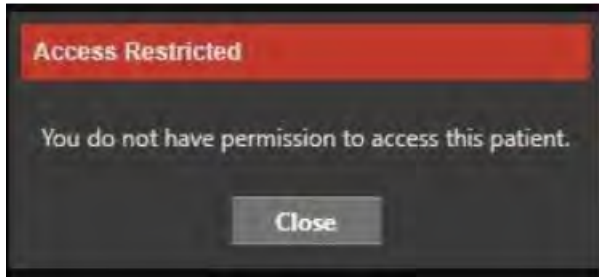
1. Basic User - no permission to search VIP patients
2. Basic User- with permission to search VIP patients
3. Break The Glass User
4. VIP User

Basic User (no permission to search VIP patients)

This user that does not have VIP search permissions will never see a patient that has been labeled with the confidentiality code sent from the EMR or upstream system.

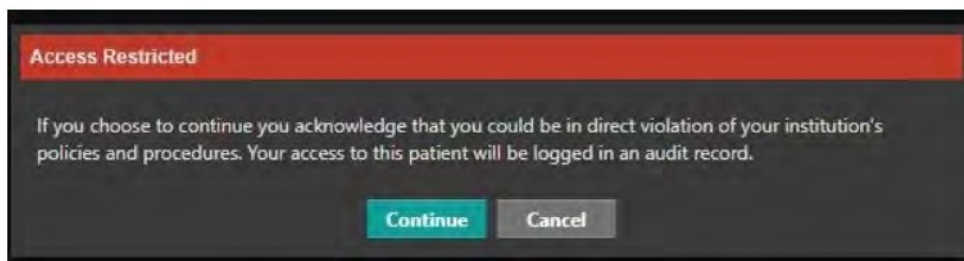
Basic User (with permission to search VIP patients)

This user has VIP search permissions. They will have visibility to VIP patients that have been labeled with the confidentiality code sent from the EMR or upstream system. However, they will not have the ability to access the patient studies.



Break the Glass User

This user has VIP search permissions. They will have visibility to VIP patients that have been labeled with the confidentiality code sent from the EMR or upstream system. They will be given an option to continue with a warning indicating that access to the particular study(ies) will result in a log to the audit record. This is what Vitrea View refers to as "Break The Glass".

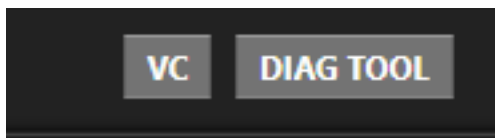


VIP User

This user has all available permissions to view and access VIP patients that have been labeled with the confidentiality code sent from the EMR or upstream system.

Custom Actions

Launch embedded actions, such as navigating to Vitrea Connection or EasyViz, that will launch a patient and study in context into a diagnostic viewer or another application. The actions are custom defined and require a custom integration. Contact your system administrator for additional information.

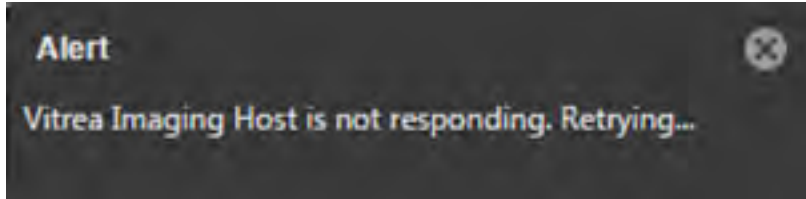


Error Messages

When images fail to load due to an issue with the network or a disk drive, an error message displays. For example, when a drive in a RAID goes down, every other image may be inaccessible.

Network Connectivity Errors

When access to the web server is uncertain, a specific error message displays. The client will detect this error and state a retry loop that grows through time.



NOTE

The error message information displays until you close it.

Errors at the Image Level

When errors occur at the image level, feedback displays in the carousel and in the view ports.

A warning icon displays on the carousel thumbnail when images in a series, or the entire series, cannot be accessed.