



synthesis

HEALTH

Synthesis Vision Viewer (US)

User Manual v 2.7.0, February 2026

Document Version: 2.0
Effective Date: February 11, 2026

Support information

For technical support or any service related to your product, call the toll-free number at 833-816-2024.

Standard support includes software troubleshooting, software updates covered under your active Support and Maintenance Agreement, and assistance with issue triage and escalation. Software and hardware coverage levels and response expectations are defined in your Support and Maintenance Agreement.

For any serious incident that has occurred in relation to Synthesis Health Viewer, a report should be made to Synthesis Health Support.

Reader comments

Comments or suggestions regarding this publication are welcome. Contact Synthesis Support at support@synthesis.health.

Updates since last release

The following sections have been added, reflecting improvements added to the viewer with version 2.7.0:

Section	Details
-	About Box Update for 2.7.0
7.0	Product Information – Now includes 7.2 - Help and Other User Directions
7.19	W/L Settings
7.20	Compare Mode
7.21	Calibration Tool
8.4	W/L Accelerator Keyboard Shortcuts

Screenshot disclaimer

- The names and any personal and medical information in the screenshots do not belong to real individuals. Any similarity or likeness to actual individuals is purely coincidental and not intentional.
- The screenshots do not reflect release-specific details.

Table of Contents

1	Introduction	6
2	Regulatory Information	6
3	Definitions and Symbols	7
3.1	<i>Definitions</i>	7
3.2	<i>Symbols</i>	7
3.3	<i>Recommended Cybersecurity Controls</i>	7
3.4	<i>Recommended Browser for Accessing the Viewer</i>	8
3.5	<i>Mobile Device Compatibility</i>	8
4	Manual Information	8
4.1	<i>Purpose</i>	8
4.2	<i>Intended Audience</i>	8
5	Intended Use / Indications for Use	8
5.1	<i>Limitations</i>	9
5.2	<i>Contraindications</i>	9
6	Warnings and Precautions	9
6.1	<i>Prerequisites</i>	9
6.2	<i>Warnings</i>	9
6.3	<i>Adverse Effects</i>	10
6.4	<i>Exceptions</i>	10
7	Product Information	10
7.1	<i>How Synthesis Health Viewer Works</i>	10
7.2	<i>Help and other User Directions</i>	11
7.2.1	Accessing the Help Center	11
7.2.2	Accessing the Viewer's Electronic Labeling (eIFU)	11
7.3	<i>Device Outputs</i>	11
7.4	<i>Product Lifetime</i>	11
7.5	<i>Basics of Clinical and Diagnostic Viewing</i>	11
7.6	<i>Using Thumbnails</i>	13
7.6.1	Series Name & Image Count on Thumbnails	13
7.7	<i>Using Tools</i>	13
7.8	<i>Default Mouse Settings</i>	14
7.9	<i>Hanging Protocols</i>	15

7.9.1	Series Presentation Hanging Protocol	15
7.9.2	Toolbar Display Default Settings	16
7.9.3	Warning Display for Unviewed Images	17
7.9.4	Mammography Hanging Protocols	18
7.10	<i>Annotations</i>	21
7.11	<i>Fusion of images</i>	22
7.12	<i>Managing Window and Level and Color LUT Favorites</i>	23
7.13	<i>Montage Panel Toggle and Key Image Workflow</i>	23
7.14	<i>Mammography CAD Findings</i>	23
7.15	<i>Image Deletion</i>	23
7.16	<i>DICOM Overlay Improvements</i>	24
7.17	<i>Key Images in PDF</i>	24
7.18	<i>Edge Enhancement Tool</i>	25
8	Keyboard Shortcuts	26
8.1	<i>Quick Flip</i>	26
8.2	<i>Reverse Series Order</i>	26
8.3	<i>Comparison Navigation</i>	27
9	Reference Information	27
9.1	<i>Viewer Integration Testing</i>	27
9.2	<i>DICOM Conformance Standards</i>	27



For continued safe use of this device, follow the instructions contained in this user manual. Read this guide carefully before using the device and refer to it as necessary.

Users should be aware of potential network issues that may affect the speed and reliability of image loading.

Carefully inspect image labels to identify and validate the patient and exam information. Take notice of image annotations and labels, including those related to image cropping or lossy data compression.

Interpretation of medical images with Synthesis VISION should only be performed by appropriately trained, licensed, and credentialed personnel.

Synthesis Vision Viewer is designed to be used with 2–10-megapixel monitors that meet clinical quality standards established by the American College of Radiology or other applicable organizations.

UDI | (01)75401622502271(8012)2.7.0

MD | Medical Device

 | [Click here to view user manual](#), or contact support@synthesis.health

VERSION | 2.7.0

Product Name | Synthesis Vision Viewer

Caution: Federal law restricts this device to sale by or on the order of a physician.



Synthesis Health Intelligence Inc.
22420 Dewdney Trunk Road, Suite 300
Maple Ridge, BC, V2X 3J5

Note: The information provided in this user guide applies only to Synthesis Health Viewer. Due to product innovation, specifications in this guide are subject to change without notice.

1 Introduction

The Synthesis Health Viewer is a medical imaging viewing software used with off-the-shelf workstation hardware and web browsers for the 2D & 3D diagnostic visualization of DICOM and non-DICOM medical images by intended users such as trained radiologists, technologists and all others involved in the patient's care.

Synthesis Health Viewer consists of configurable software-only modules that display and process DICOM and non-DICOM images and associated medical information to aid in the day-to-day operations and workflow of imaging healthcare professionals, clinicians and other healthcare practitioners.

Synthesis Health Viewer has the following primary features and functions –

- Medical image display for diagnostic and clinical purposes, including mammography images
- Access to images for all participants in the healthcare process, including reading physicians, technologists, referrers, nurses, and others who participate in patient care
- Information and data management of DICOM and non-DICOM medical images
- Industry-standard tools for image manipulation, annotation, and measurement
- Metadata information and orientation labels display
- Advanced image manipulation functions (3D rendering, multi-planar reconstruction, maximum and minimum intensity projections. Transmission of encrypted medical images through secured networks.)
- Storage of encrypted medical images
- HIPAA-compliant data management, including centralized storage of user activities via audit trails

2 Regulatory Information



Manufactured for Change Healthcare Canada Company
10711 Cambie Road
Richmond, BC V6X 3G5
Canada



synthesis
HEALTH

Synthesis Health Intelligence Inc.
22420 Dewdney Trunk Road, Suite 300
Maple Ridge, BC, V2X 3J5

3 Definitions and Symbols

3.1 Definitions

Item	Definition
DICOM	Digital Imaging and Communications in Medicine
PACS	Picture Archiving and Communication System
DSR	DICOM Structured Report
PHI	Protected Health Information
SOP	Standard Operating Procedure

3.2 Symbols

Item	Definition
	Indicates the need for the user to consult the instructions for use
	Indicates that caution is necessary when operating the device to where the symbol is placed, or that the current situation needs physician/user awareness in order to avoid undesirable consequences
	Manufacturer
	Unique Device Identifier
	Medical Device
	Importer

3.3 Recommended Cybersecurity Controls

Anti-Malware Software: Install reputable anti-malware software on all systems hosting this viewer. Configure the software to perform regular scans of the system and update malware definitions regularly. Ensure that the anti-malware software provides real-time protection and has the capability to scan incoming and outgoing data.

Firewall Protection: Enable and configure firewalls on network perimeters, as well as on individual systems hosting the PACS viewer. Set firewall rules to allow only necessary network traffic, blocking unauthorized access.

Encryption: Enable encryption for data in transit (e.g., TLS/SSL) to protect data while being transmitted over the network. Implement encryption for stored data to safeguard patient information within this viewer.

3.4 Recommended Browser for Accessing the Viewer

To ensure optimal performance and compatibility, we recommend using **Google Chrome** as the preferred browser for accessing the device viewer. Chrome has been **verified for full functionality** with the viewer platform, including support for all interactive features and secure data handling.

3.5 Mobile Device Compatibility

The Viewer is not supported on mobile devices, including smartphones and tablets. It has not been verified or validated for performance, usability, or safety on mobile platforms. Accessing the Viewer from a mobile device may result in degraded functionality, display issues, or an incomplete user experience. For optimal performance and full feature access, please use a desktop or laptop computer with a supported browser.

4 Manual Information

4.1 Purpose

This manual contains the instructions necessary to safely operate Synthesis Health Viewer in accordance with its functions and intended use.

4.2 Intended Audience

This manual is intended for use by qualified and trained healthcare professionals and information technology staff using Synthesis Health Viewer. Patients may use the software for non-diagnostic viewing of medical images.

5 Intended Use / Indications for Use

Synthesis Health Viewer is a software application that can be used within a web browser to process and view DICOM and non-DICOM image data and associated medical information to aid in the day-to-day diagnostic activities of medical imaging professionals and those involved in the care of a patient.

Synthesis Health Viewer displays both lossy-compressed and lossless images. Lossy compressed images are always clearly labeled with the type and degree of data compression. The user must determine if the degree of lossy compression is acceptable for their purposes. Prior to making any medical decisions, the user must view the images within the user's scope of practice.

Synthesis Health Viewer allows for 2D, multi-planar reformatted and 3D image display and manipulation of medical images, including rotation, measurement, annotation, zoom, window width/level and a variety of other standard tools that a user might need to aid in their diagnostic work.

Any display devices must adhere to applicable regulatory standards. Mobile use for mammography is only for reference and referrals.

Synthesis Health Viewer utilizes modern authorization and authentication mechanisms that enforce secure access for permissioned users who view the imaging data. The system extends beyond the hospital/clinic/health care

provider and its internal network. With proper authorization, Synthesis Health Viewer can be accessed by users outside of the provider's internal network.

Synthesis Health Viewer does not contact the patient.

5.1 Limitations

Worklists, reporting information, image storage, image transmission, users, roles, and permissions are provided via connectivity to other information systems such as EMRs, Radiology Information Systems, Cardiology Information Systems, and Lab Information Systems and are not a part of the viewer.

5.2 Contraindications

Synthesis Health Viewer should not be used for diagnostic interpretation of medical images by non-qualified personnel. When used for diagnostic reading of mammograms, FDA-cleared monitors must be used, calibrated, and maintained. The software should not be used for clinical or diagnostic purposes in environments that violate security and/or confidentiality regulations. Users should not share passwords or usernames.

6 Warnings and Precautions

6.1 Prerequisites

To operate Synthesis Health Viewer safely and according to the intended use, the following prerequisites must be met:

- The network where Synthesis Health Viewer is used must be secured from any external threat.
- The user must read and understand the Intended Use, Warnings, and Operating Instructions that are available through this user manual and the help center that can be accessed through the workflow and reporting software used to launch the viewer.

6.2 Warnings

User warnings are shown below and are visible when clicking HELP at the upper right of the display.

Item	Definition
	For continued safe use of this device, follow the instructions contained in this user manual. Read this guide carefully before using the device and refer to it as necessary.
	Users should be aware of potential network issues that may affect the speed and reliability of image loading.
	Carefully inspect image labels to identify and validate the patient and exam information. Note image annotations and labels, including those related to image cropping or lossy data compression.
	Interpretation of medical images with Synthesis Health Viewer should only be performed by appropriately trained, licensed, and credentialed personnel.



Synthesis Health Viewer is designed to be used with 2–10-megapixel monitors that meet clinical quality standards established by the American College of Radiology or other applicable organizations.

6.3 Adverse Effects

There are no known direct risks to the health or safety of the patient from the implementation of Synthesis Health Viewer.

6.4 Exceptions

The list below contains SOP Classes that the software accepts through DICOM, however, it does NOT display in the viewer.

- 1.2.840.10008.5.1.4.1.1.66.4 Segmentation
- 1.2.840.10008.5.1.4.1.1.88.11 Basic Text SR
- 1.2.840.10008.5.1.4.1.1.88.22 Enhanced SR
- 1.2.840.10008.5.1.4.1.1.88.33 Comprehensive SR
- 1.2.840.10008.5.1.4.1.1.88.34 Comprehensive 3D SR
- 1.2.840.10008.5.1.4.1.1.88.59 Key Object Selection Document
- 1.2.840.10008.5.1.4.1.1.88.65 Chest CAD SR
- 1.2.840.10008.5.1.4.1.1.88.67 X-Ray Radiation Dose SR
- 1.2.840.10008.5.1.4.1.1.88.69 Colon CAD SR
- 1.2.840.10008.5.1.4.1.1.9.1.2 General ECG Waveform Storage << audio
- 1.2.840.10008.5.1.4.1.1.9.4.1 Basic Voice Audio Waveform Storage
- 1.2.840.10008.5.1.4.1.1.104.1 Encapsulated PDF Storage
- 1.2.840.10008.5.1.4.1.1.481.3 RT Structure Set
- 1.2.840.10008.5.1.4.1.1.481.5 RT Plan Storage
- 1.2.826.0.1.3680043.2.93.1.0.1 eRAD PACS private report

7 Product Information

7.1 How Synthesis Health Viewer Works

Synthesis Health Viewer software displays medical images for diagnostic interpretation, clinical communication, and patient education. Images are presented with labels derived from the DICOM metafile that accompanies medical images. The image labels are designed to display patient demographics, exam date/time/modality/type, and image information. The date annotation label of each image is designed to clearly distinguish images of the current exam from comparison exams, and to clearly label images that are lossy data compressed or displayed at less than full resolution.

7.2 Help and other User Directions

Users can access help and other resources for the viewer from the integrated workflow and reporting platform as well as the link from the viewer electronic label.

7.2.1 Accessing the Help Center

To access the Help Center:

- Click on the “HELP” button located in the upper-right corner of the software interface.
- This launches a link to the Learning Center.

7.2.2 Accessing the Viewer’s Electronic Labeling (eIFU)

To view the electronic label for the viewer:

1. Open a study to launch the viewer.
2. Press Shift-F1 to open the electronic label.

7.3 Device Outputs

Synthesis Health Viewer receives DICOM images and metafiles from imaging devices and storage devices. It may output images to third-party archives, secure networks, and appropriate printers.

7.4 Product Lifetime

Synthesis Health Viewer is designed to be updated and upgraded in accordance with customer service contracts. However, the defined product lifetime of the viewer is 2 years. Users are advised to maintain and replace hardware as needed in accordance with clinical practice guidelines and applicable regulatory requirements—particularly in use cases such as diagnostic mammography reading, where specific standards may apply.

The software safety and performance is monitored as part of the post-market surveillance. Any emergent risks that require further mitigation are managed in accordance with the Change Control process.

7.5 Basics of Clinical and Diagnostic Viewing

Synthesis Health Viewer presents medical images in rectangular containers called viewports. The display may contain one or many such viewports (Figure 2 below). Each viewport may contain a single image or may contain multiple images virtually stacked in a series. The user may select from various “hanging protocols” that specify the arrangement and number of viewports.

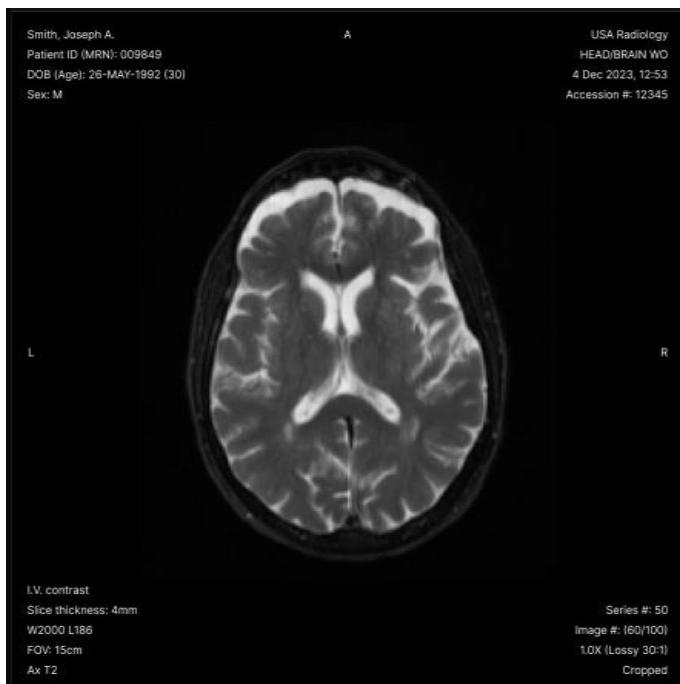
For example, below the screen is divided into two panels, one on the left for the current exam and one on the right for the comparison exam. In this example, each panel included four viewports. The exam date in each of the prior exam’s viewports is shown with a white background to provide strong visual discrimination between the current and comparison images.



Figure 1: Synthesis Health Viewer showing multiple viewports where the current exam is in the left panel and comparison exam in the right panel.

Thumbnail views of the available image series for the current and comparison exam(s) are shown at the bottom of Figure 1. The system may be configured such that the display shown in Figure 1 is provided on a single landscape monitor, or alternatively, each panel may be shown on a portrait monitor.

Three icons in the thumbnail bar show whether the panel display shows exam images, key selected images, or the multiplanar views for a particular image series.



An Intelligent Health Imaging Platform

Benefiting imaging healthcare specialists and those they serve.

www.synthesis.health

PRO_116_V2_02.26

Figure 2: Viewport with image annotations.

Figure 2 shows a viewport displaying an axial MR image with DICOM annotations. Note that at the lower right, the text annotation shows the level of magnification (in this example 1.0x means all image pixels are displayed and none are replicated). “Cropped” indicates if a portion of the image is cropped (this actual image is not cropped, but Figure 2 shows the cropped annotation at the lower right for illustrative purposes). The patient’s name, ID, DOB, and exam always appear, although under special circumstances a user with appropriate rights may display a redacted image. Note also that location/orientation markers always appear in the mid-upper, mid-left, and mid-right margin of the image.

7.6 Using Thumbnails

Left click on a thumbnail (see Figure 1) to select it, then drag to a desired viewport on either panel to display the selected image series.

7.6.1 Series Name & Image Count on Thumbnails

The display of key series details directly on thumbnails now helps the user with more clarity.



Figure 3: Series Thumbnail

Series Thumbnail Figure 3 shows a thumbnail displaying a multi-image series with the updated design. At the top of the thumbnail, the series name and image count are displayed. When the series name exceeds the available width, it is truncated and appended with an ellipsis (“...”) for readability. This ensures that essential details remain accessible immediately without disrupting the layout.

7.7 Using Tools

To access image manipulation and navigation tools (Figure 4), right-click anywhere within a viewport or press the <T> keyboard shortcut. The toolbox appears centered within the viewport, as shown in Figure 4.

- Using right-click: While holding the right mouse button, drag the cursor over the desired tool and release to select it.
- Using the <T> shortcut: Press <T>, then left-click the desired tool.

Once a tool is selected, the cursor changes to reflect the chosen tool icon. Move the cursor to the target viewport and left-click to activate the tool. Right-click to open a submenu with additional tool options.

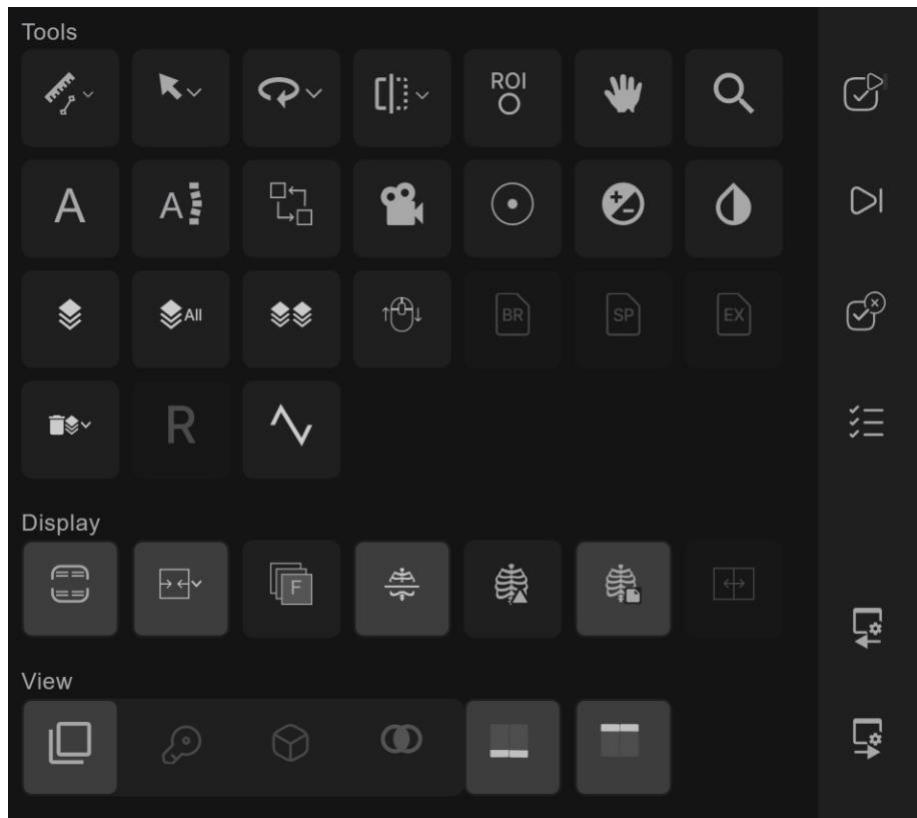


Figure 4: This figure shows the toolbox.

7.8 Default Mouse Settings

If a standard two button mouse with clickable scroll wheel is employed, the default settings are:

- Left button activates the Image page tool. Drag forward or back to page through a series of images in a viewport. If the mouse is dragged quickly, the system may skip over images in a stack.
- Center wheel scroll to page through a stack of images in a viewport. The system will not skip images when the center wheel scroll is used.
- Right button press while holding the mouse still displays the toolbox.
- Simultaneously press left and right buttons to adjust window/level.
- Double left click or single wheel click to toggle a viewport to fill the entire panel or return to prior display.
- Wheel press and push to magnify an image or pull to de-magnify an image.
- Press and drag the mouse to pan an image.

7.9 Hanging Protocols

The system provides a wizard for user configuration of image hanging protocols. Access the wizard by clicking on the username/profile displayed at the far right of the upper ribbon (Figure 1). There is an option to subscribe to the Default Protocols updated with each system update. The default protocols are available through the workflow and reporting module that is used to access the viewer.

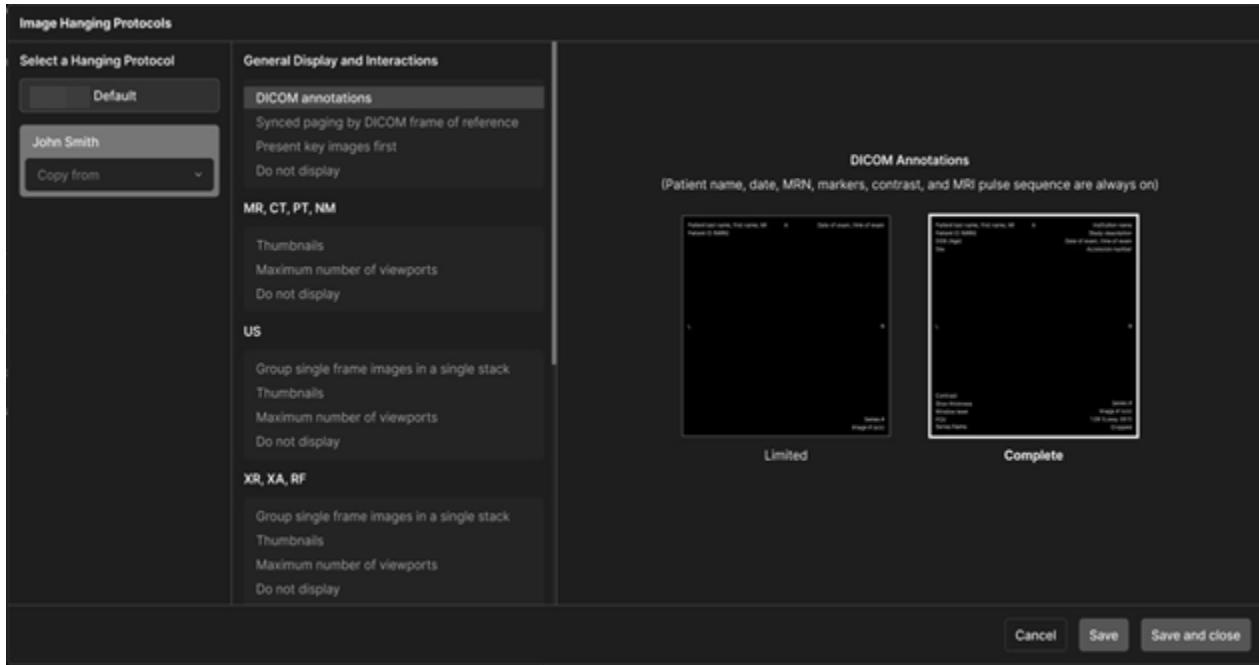


Figure 5. The hanging protocol wizard.

7.9.1 Series Presentation Hanging Protocol

By default, exams display series in the order they were acquired. However, users can now customize how series are organized across MR, CT, PT, and NM exams to better suit their viewing preferences.

When an exam is loaded, the viewer reads the “Series Presentation” setting for the exam modality from the Hanging Protocol configuration.

Default Behavior: Display Order as Imaged

If “Display series in the order imaged” is selected, series are shown in the order they were acquired.

Custom Sort: Set Series Order Preference

If “Set series order preference” is selected, Vision applies a multi-level sorting logic with primary, secondary, tertiary preferences under the following attributes:

- Plane (Sagittal, Coronal, Axial)
- Contrast (With, Without)
- Thickness (Thinner, Thicker)

Users can drag and drop boxes (sort dimensions) and rows (options within each box) to customize the order to allow switching between All, MR, CT, PT, NM.

Displaying Centre Slice First

Optionally, users can check boxes for Sagittal, Coronal, and Axial planes to display the center slice first for those planes.

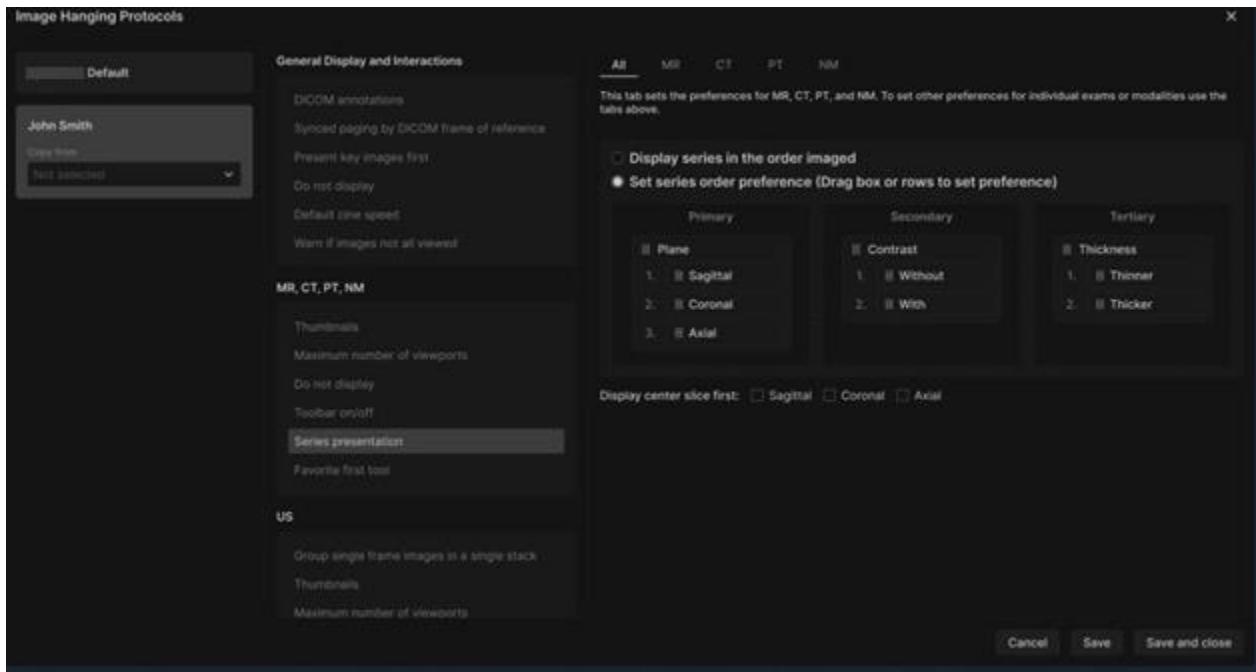


Figure 6: Series presentation hanging protocol

7.9.2 Toolbar Display Default Settings

Users have the option to set a preference using the Hanging Protocol setting for toolbar display (Figure 7). The toolbar is applied by default for exams viewed by non-radiologist users.

1. Toolbar Off

When the top toolbar is set to Off, the toolbar is hidden by default. In this configuration, users access image manipulation and navigation tools through the toolbox.

2. Toolbar On

When the top toolbar is set to On (default), the toolbar is displayed automatically on every exam the user views. The toolbox is visible within the toolbar, allowing immediate access to the default modality-specific tools without additional interaction.

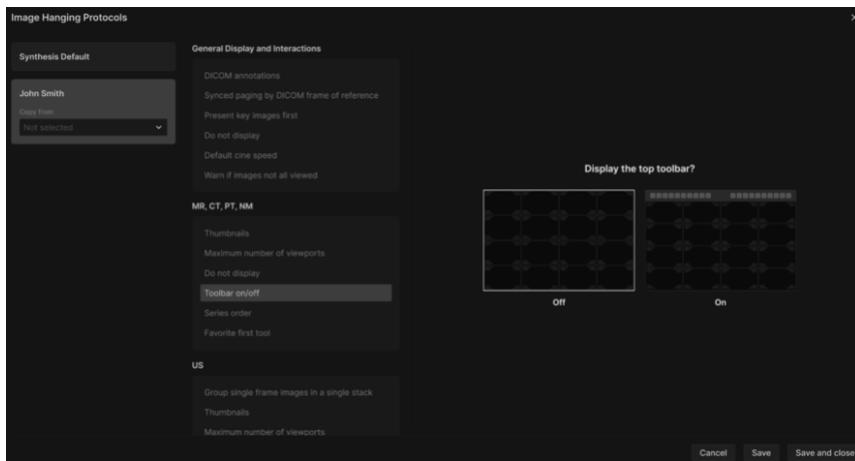


Figure 7: Toolbar display hanging protocol

3. Default Tool & Power Wheel

As shown in Figure 8, each newly opened exam resets to the default tool and power wheel state defined by this configuration, regardless of any tool selections made in prior exams.

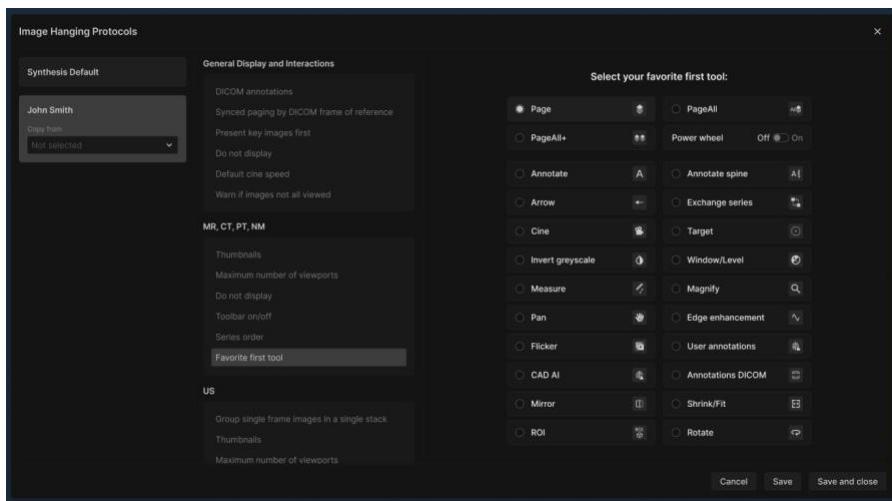


Figure 8: Favorite First Tool Hanging Protocol

7.9.3 Warning Display for Unviewed Images

When the Warning Display for Unviewed Images setting is enabled in the Hanging Protocol, the Viewer displays a warning message if a user attempts to sign off on a report before all images in the exam have been viewed. This warning allows the user to return to image review before completing the exam. This enhancement applies to 2D panels and primary exams only.

Default Behavior (HP Setting = "Yes")

- The warning display setting is enabled by default.
- If not all images have been viewed at the time of exam completion, a confirmation message is displayed.

An Intelligent Health Imaging Platform

Benefiting imaging healthcare specialists and those they serve.

www.synthesis.health

PRO_116_V2_02.26

- Selecting Cancel closes the message and keeps the exam in progress, allowing the user to continue reviewing images.
- Selecting Continue closes the message and allows the exam to be signed off and completed.

HP Setting = "No"

- When the setting is disabled, the Viewer allows exam completion without displaying any warning.
- Exam sign off proceeds regardless of image viewing status.

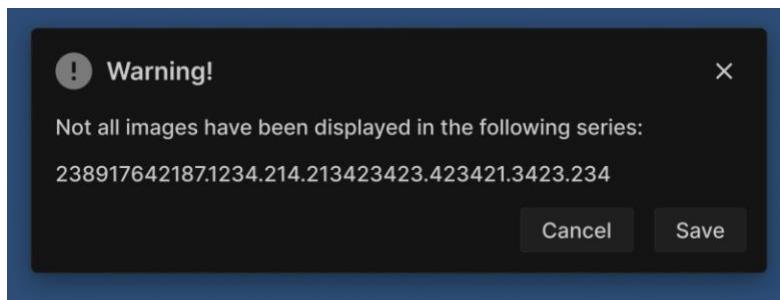


Figure 9 - Confirmation Message

7.9.4 Mammography Hanging Protocols

Below are the available mammography hanging protocols:

Protocol #	Left Panel	Right Panel
1	All Current	All Prior
2	Current RCC	Current LCC
3	Current RMLO	Current LMLO
4	Current CCs	Current MLOs
5	Current RCC	Comparison RCC
5F	Current RCC	Comparison RCC Flipped
6	Current RMLO	Comparison RMLO Flipped
6F	Current RMLO	Comparison RMLO Flipped
7	Current LCC	Comparison LCC
7F	Current LCC Flipped	Comparison LCC
8	Current LMLO	Comparison LMLO
8F	Current LMLO Flipped	Comparison LMLO

Protocol #	Left Panel	Right Panel
9	Current RCC	Current RCC Tomo
10	Current LCC	Current LCC Tomo
11	Current RMLO	Current RMLO Tomo
12	Current LMLO	Current LMLO Tomo
13	Current CCs Comparison CCs	Current MLOs Comparison MLOs
13A	Comparison CCs Current CCs	Comparison MLOs Current MLOs
14	Current RCC/RMLO Comparison RCC/RMLO	Current LMLO/LCC Comparison LMLO/LCC
14A	Comparison RCC/RMLO Current RCC/RMLO	Comparison LMLO/LCC Current LMLO/LCC
15	Current LMLO	Current LCC
16	Current LCC	Current LMLO
17	Current RCC	Current RMLO
18	Current RCC	Current RMLO
19	Current RCC tomo	Comparison RCC tomo
20	Current LCC tomo	Comparison LCC tomo
21	Current RMLO tomo	Comparison RMLO tomo
22	Current LMLO tomo	Comparison LMLO tomo
23	Current LCC flipped	Current RCC flipped
24	Current LMLO flipped	Current RMLO flipped
25	Current LCC tomo flipped	Current LMLO tomo flipped

Protocol #	Left Panel	Right Panel
26	Current LCC flipped tomo flipped	Current RCC tomo flipped
27	Current LMLO tomo flipped	Current RMLO tomo flipped
28	Current RCC tomo flipped	Current RMLO tomo flipped
29	Current LCC tomo flipped Current LCC flipped	Current RCC flipped Current RCC tomo flipped
30	Current LMLO tomo flipped Current LMLO flipped	Current RMLO flipped Current RMLO tomo flipped
31	Current CC flipped Comparison CC flipped	Current MLO flipped Comparison MLO flipped
32	Current RCC flipped	Current RMLO flipped
33	Current LCC flipped	Current LMLO flipped
34	Current RCC flipped	Comparison RCC flipped
35	Current LCC flipped	Comparison LCC flipped
36	Current RMLO flipped	Comparison RMLO flipped
37	Current LMLO flipped	Comparison LMLO flipped
38	Current RCC flipped	Current RCC tomo flipped
39	Current LCC flipped	Current LCC tomo flipped
40	Current RMLO flipped	Current RMLO tomo flipped
41	Current LMLO flipped	Current LMLO tomo flipped
42	Documents	Four Screening Views

Table 1: Mammogram Hanging Protocols

The protocol now helps support advanced and flexible comparison layouts in MG exams.

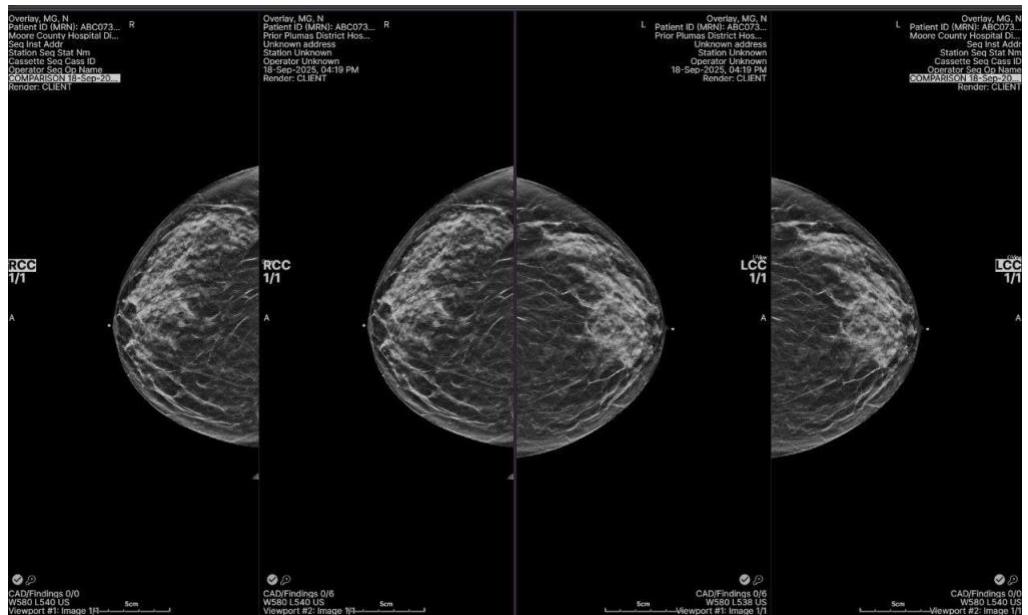


Figure 10 – Enhanced Protocols

Figure 10 shows the Mammography Hanging Protocol layout for advanced comparisons. In this configuration, four images are displayed in a single row from right to left: Old RCC, Current RCC, Current LCC, and Old LCC. As with other protocols, images can be reorganized or moved to the right panel, and keyboard shortcuts are dynamically assigned based on the updated order—providing flexibility for radiologists during interpretation.

7.10 Annotations

The viewer automatically saves annotation changes, including additions, deletions, and modifications, in the following scenarios:

- Returning to the worklist
- Skipping to the next exam or selecting “Next”
- Clicking the eye icon in Exam Details for an already loaded exam

However, annotations **will not be saved** in the following cases:

- Annotations are made on a comparison exam
- Closing the viewer window
- Logging out of the system
- Closing Chrome or the Chrome tab in which Viewer appears
- Closing the browser

7.11 Fusion of images

Fusion of images from different or the same images series is supported for CT, MR, and PT. The fusion features allow interactive adjustment of image alignment, magnification, relative contribution, and application of color. Images can be reformatted in the axial, coronal, or sagittal planes.



Figure 11: Fusion of two images

Workflow Steps

1. Open the Fusion panel via the toolbar button, toolbox button, thumbnail bar button or keyboard shortcut.
2. Follow the on-screen instructions.
 - a. Pan series
 - b. Magnify series
 - c. Window/Level
3. Use the on-screen graphic user interface to:
 - a. Adjust the opacity of the overlay series.
 - b. Apply color LUTs.
 - c. Adjust slice thickness and increment.

An Intelligent Health Imaging Platform

Benefiting imaging healthcare specialists and those they serve.

www.synthesis.health

PRO_116_V2_02.26

- d. Reset to the original state (pan, mag, W/L, LUT).

4. Viewing Options

- a. Switch between axial, sagittal, and coronal planes.
- b. Enable linked scrolling and zooming across series for synchronized review.

7.12 Managing Window and Level and Color LUT Favorites

Enable adjustment of window-level settings for grayscale images to optimize image contrast, enhance visibility of subtle structures, and highlight specific features for more accurate diagnosis and interpretation.

At the lower right of each viewport is a symbol for accessing and setting favorite window and level settings for CT and color LUTs for PT and NM images.

- Adjust W/L to the desired setting.
- Open the W/L menu and select save the favorite.
- With Num Lock ON, the number pad keys (1–9) act as shortcuts to apply the corresponding favorite instantly.

7.13 Montage Panel Toggle and Key Image Workflow

The viewer now includes a streamlined way to access the Montage panel by using the M keyboard shortcut, making it easier to review a patient's imaging story before dictation.

- Toggle Montage Panel
- Press M to switch between the Montage panel and the previously displayed panel.
- Suggested Key Mapping

For faster reading, physicians are encouraged to map 'K' (Create Key Image) and 'M' (Toggle Montage On/Off) to mouse thumb buttons for quick access.

7.14 Mammography CAD Findings

Each image now clearly shows whether it was processed by CAD, even when no findings are present. The indicator now clearly displays the number of CAD findings per image and across the entire exam (e.g., "CAD Findings 2/6"), even when no findings are present (e.g., "CAD Findings 0/0"). When CAD is toggled for an exam with zero findings, a subtle sound alert is triggered to inform the user for timely reporting.

7.15 Image Deletion

The Viewer allows authorized users to delete individual images or entire series from an exam. Exams in Completed status cannot have images or series deleted.

How to Delete an Image or Series

1. In the series or image thumbnail panel, look for the delete icon next to the image or series you wish to remove. Click the delete tool to access the following options:

- Delete image
- Delete this and following images within a series by UID
- Delete all entire series by UID

2. Select the image or series you want to delete, review the confirmation message, and complete the deletion

The deleted image or series is removed from the opened exam. The viewport will display as blank. The series numbers will be updated when the exam is relaunched. Audit logs are updated to record the deletion event.

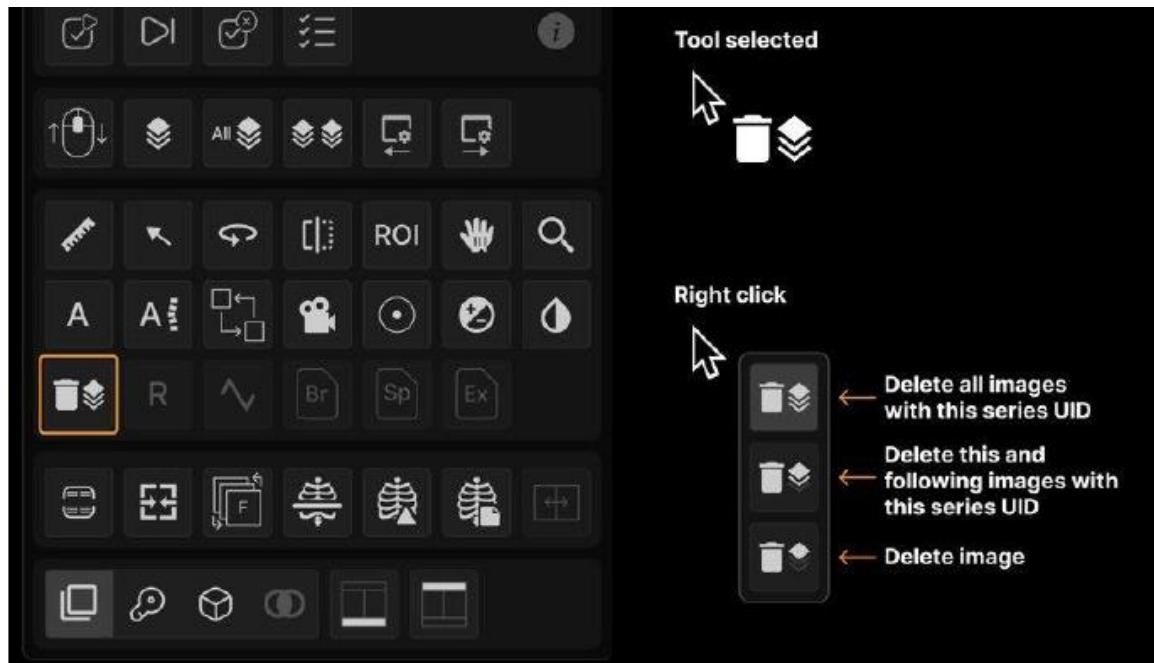


Figure 12 Image Deletion.

7.16 DICOM Overlay Improvements

The DICOM overlay text is now adjustable directly in the viewer to improve readability on high resolution displays.

1. Hover over the patient's name.
2. Left click to increase overlay font size by 2 px per click (up to 30 px).
3. Right-click to decrease the font size by 2 px per click (down to 12 px).

7.17 Key Images in PDF

This feature now enables reading physicians to select up to four key images to include in the final PDF report. Key images, however, will not be included in addendums or revisions, and this applies only to initial signed reports.

- Select & Annotate: To mark images, use the key icon or shortcut 'K'.
- Saved on Sign: Only selected images would appear on the report – if none selected, the section is omitted.

- Metadata Included.

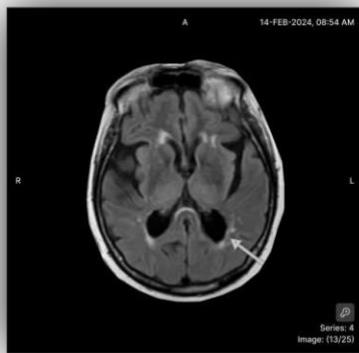


Figure 13 Key Images in PDF

7.18 Edge Enhancement Tool

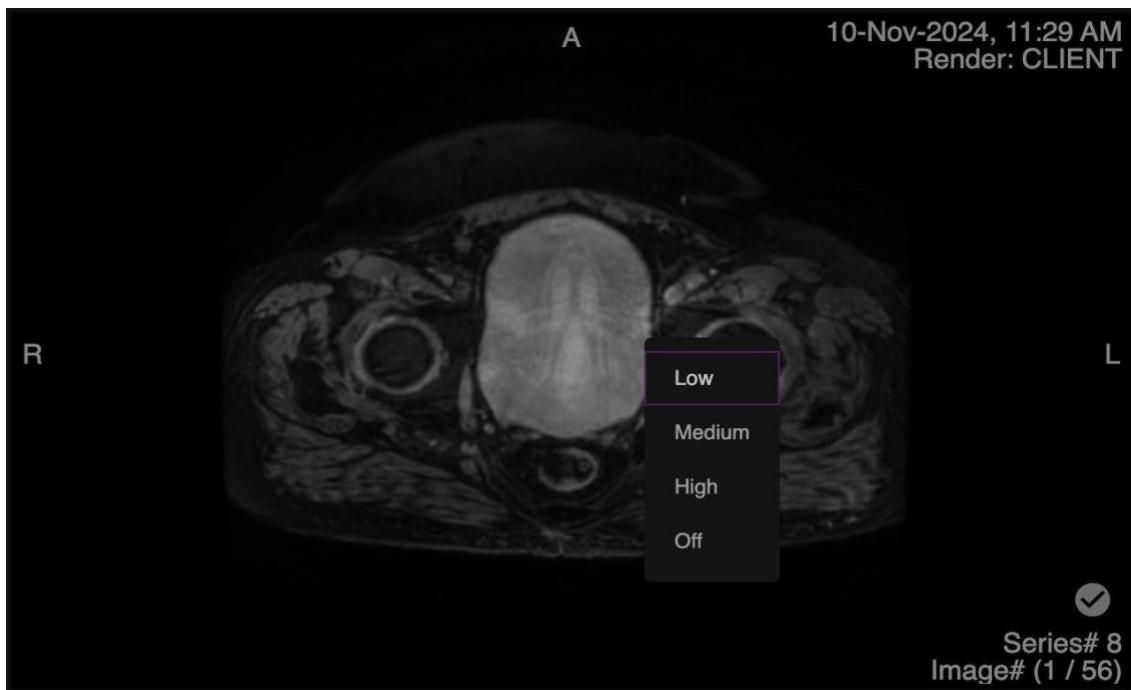


Figure 14: Edge Enhancement Tool

With the new Edge Enhancement tool in the toolbox, the user can sharpen images for better clarity and detail during review. Figure 14 shows a new dropdown tool called Edge Enhancement, through which the user can adjust the image sharpness by choosing the Low, Medium, High or Off as a setting in the toolbox. Additionally, hotkey O can be used to activate the tool for Quick Access.

8 Keyboard Shortcuts

8.1 Quick Flip

With quick flip, the user can now view an adjacent image while holding down a key, which allows for a quick way to or reference the image without completely switching your point of view. As the keyboard shortcut of F3 is pressed, the next-door image temporarily replaces the current one in an active viewport.

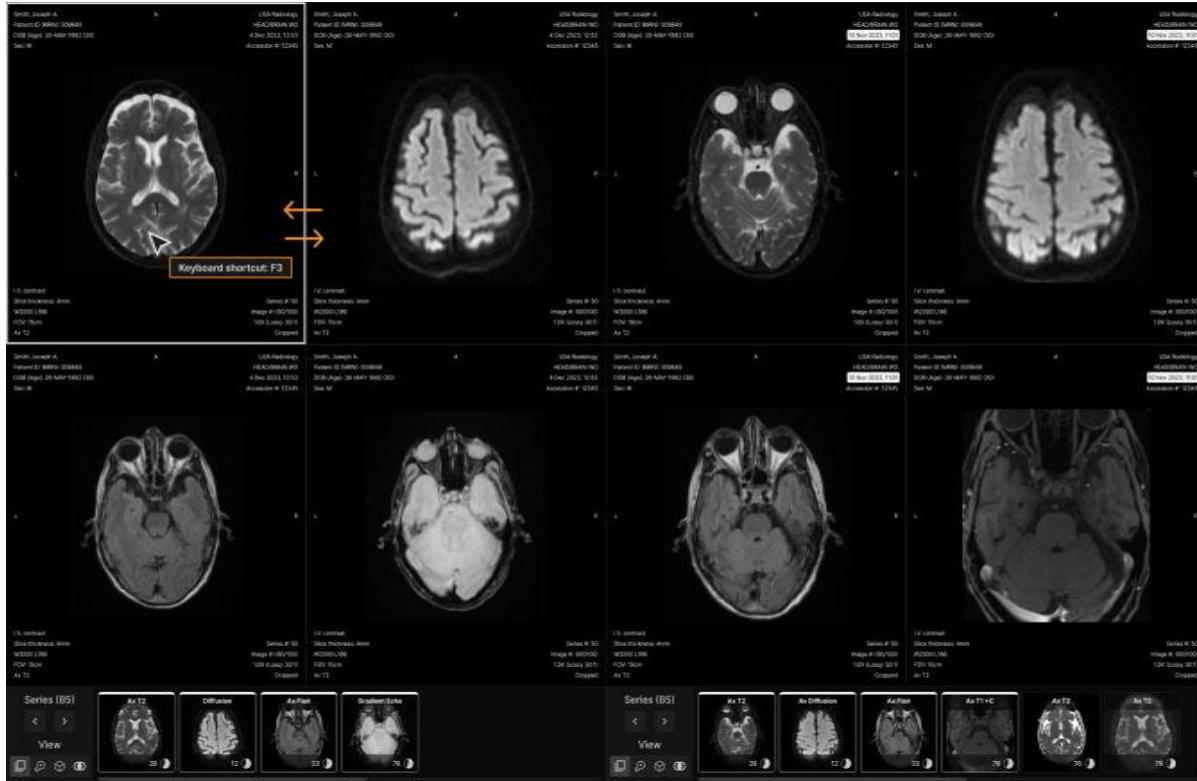


Figure 15: This figure shows how feature allows users to view an adjacent image while holding down a key.

Referring to the figure above, when the user taps the keyboard shortcut, the image flips between two viewports.

Key attributes in Quick Flip Feature:

- Hold to Preview
- Tap to Toggle
- Automatic Return.

8.2 Reverse Series Order

This enhancement lets you quickly invert the scrolling direction of image series to match modality preferences.

1. Open a CT, MR, PT, or NM.
2. Press Ctrl+R to reverse the series order as well as to return to the original order.

8.3 Comparison Navigation

Quickly toggle between previous and next comparison exams using keyboard shortcuts for faster review.

- Press Shift+Backspace to move to the next comparison exam.
- Press Backspace to move to the previous comparison exam.

9 Reference Information

9.1 Viewer Integration Testing

Synthesis Health Viewer has been successfully integrated and tested to comply with DICOM standards.

9.2 DICOM Conformance Standards

Please contact Support at for information on the DICOM conformance statement.