# VistARad
# Quick Start Guide for Radiologists
## Version 3.0, Patch 18

VistA Imaging
Health Systems Design & Development
Veterans Health Administration

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Department of Veterans Affairs

**VistARad Quick Start Guide for Radiologists**
**Vista Imaging 3.0 Patch 18**
**April 2006**

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## Revision Table

| Date | Rev | Notes/Authors |
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| May 23 2005 | .9 | VEHU draft. A. McFarren, J. Christensen. |
| Jun 20 2005 | .91 | Pre-alpha draft. A. McFarren, J. Christensen. |
| Jul 22 2005 | .92 | Updated to reflect latest pre-alpha build. A. McFarren, J. Christensen. |
| Aug 22 2005 | .93 | Updated to reflect pre-alpha build 104. A. McFarren, J. Christensen. |
| Sep 16 2005 | .94 | Updated to reflect alpha test s/w; build 112 (client), T2 (KIDS). A. McFarren, J. Christensen. |
| Oct 18 2005 | .95 | Updated to alpha test build 119. A. McFarren, J. Christensen. |
| Dec 22 2005 | .96 | Updated to reflect build 126. A. McFarren, J. Christensen. |
| Feb 3 2006 | .97 | Updated to reflect build 128. Detailed hanging protocol content removed and put in separate document. A. McFarren, J. Christensen. |
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# Introduction

This document is intended for radiologists and clinicians that are using or are being trained to use the VistARad diagnostic workstation.

It is assumed that:

- Users are familiar with the Windows environment.
- The Patch 18 client is installed on a Windows XP-based diagnostic workstation.
- The Patch 18 KIDS is installed and configured on the VistA Host.
- Appropriate test exams are available.

For more information about the changes in patch 18, refer to the Patch 18 *Patch Description*.

For information about creating templates and hanging protocols, refer to the *Template & Hanging Protocol Quick Start Guide*.

## Before You Begin

This document covers the Patch 18 version of the VistARad client and host software. Software version numbers can be displayed by going to the Viewer window and clicking **Help** | **About**.

Note The Patch 18 and Patch 32 versions of the VistARad client software can be installed and used on the same workstation, but both clients cannot be run at the same time.

## Terms of Use

The use of the VistARad diagnostic workstation is subject to the following provisions:

Caution: Federal law restricts this device to use by or on the order of either a licensed practitioner or persons lawfully engaged in the manufacture or distribution of the product.

No modifications may be made to the VistARad diagnostic workstation without the express written consent of the VistA Imaging National Project Manager.

The Food and Drug Administration classifies the VistARad software as a medical device. Modifications to the VistARad diagnostic workstation, such as the installation of unapproved software, will adulterate the medical device. The use of an adulterated medical device violates US federal law (21CFR820).

Image presentation quality depends on monitor resolution, which must be suitable for rendering the types of images to be displayed, and on regular monitor testing and calibration, which correct for display degradation over time. It is the responsibility of the clinical practitioner to determine if images presented on a VistARad workstation are of sufficient quality for clinical interpretation. Any concerns regarding monitor resolution or calibration should be reported immediately to the Imaging Coordinator before interpretation is performed.

For more information, refer to the "ACR Standard for Digital Image Data Management" and " ACR Standard for Teleradiology." These documents are located at www.acr.org, under Publications/Products | Standards.

## Getting Help

If you encounter any problems using VistARad, contact your local Imaging Coordinator or support staff. If the problem cannot be resolved locally, use Remedy to place a service request, or contact the National Help Desk between 8:00AM and 6:00PM Eastern time, Monday through Friday, at 1-888-596-4357.

Urgent after-hours service requests can be directed to the Expertise Center at 1-800-299-7282.

# Where to Start

## Returning Users

The next page summarizes the differences between Patch 18 and the previous version of VistARad. Also, margin notes throughout this document indicate new or updated features in Patch 18.

## New Users

The sections listed below provide essential information needed to interpret an exam with VistARad.

| Basic Workflow | More Info... |
|---|---|
| Log in | Page 3 |
| Open exam | Page 5 |
| Display requisition | Page 25 |
| Survey Images | Page 12 |
| Work with images | Page 16 |
| Close/Update | Page 27 |

For information about speeding up and fine-tuning the interpretation process, see the sections listed below.

| Workflow Refinements | More Info... |
|---|---|
| Use 'ReadList' | Page 6 |
| Select hanging protocol | Page 6 |
| Change layout | Page 18 |
| Move, clone, split | Page 19 |
| Use Presets | Page 20 |
| Annotate/measure images | Page 21 |
| Mark key images | Page 23 |
| Health Summary preferences | Page 25 |

## Major Changes in Patch 18

This table summarizes some of the most significant changes made in Patch 18. Other changes are flagged with a “Patch 18” sidebar in the rest of this document.

| Area | Patch 32 | Patch 18 | More Info... |
|---|---|---|---|
| Hanging protocols | A few exam presentation-related options such as series processing and case presets were available. | Customizable hanging protocols can be applied automatically or selected manually. Hanging protocols can automatically retrieve priors and apply display processing to images, allowing the radiologist to review priors and interpret an exam with minimal manual adjustment. | Page 28 |
| ReadList | Each exam is opened manually from the Manager; there is a delay while images are loaded. | While an exam is being reviewed, VistARad can load the next exam into memory. When the Radiologist closes one exam, images in the next exam are displayed immediately. Radiologists can step from one unread exam to the next with minimal delay. | Page 6 |
| Image display | The Layout Viewer and the Stack Viewer were each oriented to displaying different types of exams. Some functions were only available in one of the two viewers. | New *viewports* are used as the basic unit of display space. Viewports retain the efficient navigation/scrolling functions of stacks while also allowing flexible row/column settings. | Page 12 |
| Voice Dictation | Dictation software, if present, ran in stand-alone mode. | VistARad can send exam ID information to a properly configured dictation system, opening the correct report automatically. | Page 30 |
| Key images | The user had no way to permanently flag images of interest while reviewing large exams. | Users can mark an image of interest by copying the image into the new Scrapbook window. Images added to the Scrapbook while the exam is locked are saved automatically as *key images*. | Page 23 |
| Annotations | Users could annotate and measure image features, but markup was discarded when the exam was closed. | Annotations and measurements added to locked exams are saved automatically and will be displayed when the exam is next opened. | Page 21 |

# Starting & Exiting VistARad

Note The Patch 18 and Patch 32 versions of the VistARad client software can be installed and used on the same workstation, but both clients cannot be run at the same time.

### *Starting VistARad*

1. If voice dictation software has been integrated with VistARad, start the voice dictation software before logging into VistARad.
2. Select **Start | Programs | VistA Imaging | VistARad_Patch 18**, or double-click the VistARad shortcut on the Windows desktop.

3. If the Connect To box displays, select which VistA System you want to connect to, then click **OK**.
4. In the VistA Sign-on box, enter your access and verify codes, then click **OK**. Keystrokes will be displayed as asterisks (*).
5. If the Select Division box displays, double-click the division you want to log in to.
6. When VistARad starts, both the Manager and Viewer windows will open.

### *Exiting VistARad*

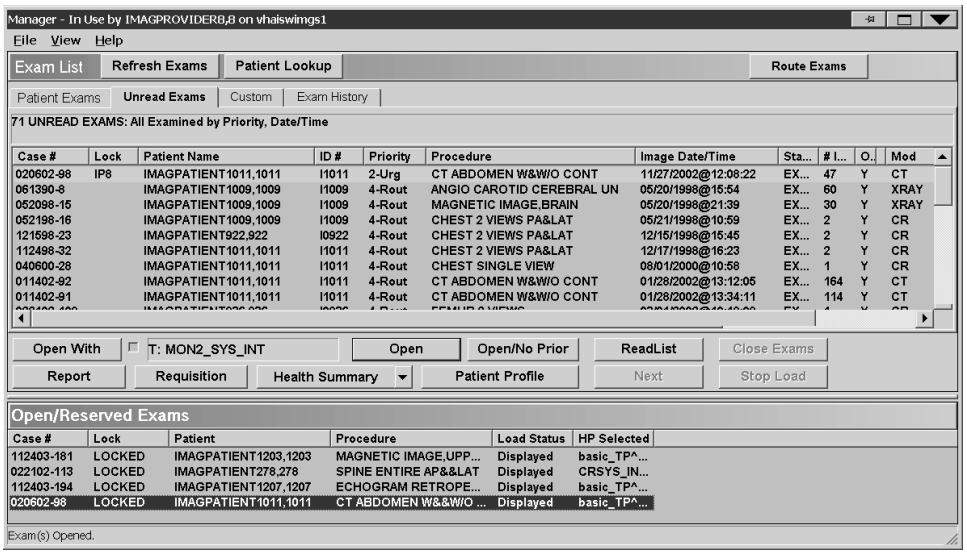
To exit VistARad, go to the menu bar in either the Manager or the Viewer and click **File | Exit**.

Note If exams are opened when you try to exit, the Close/Update Exams dialog will display. In this window, make sure the Interpret field is set as desired for all listed exams, then close the exams. For more information, see page 27.

# Using the Manager

## Manager Fundamentals

The Manager window is used to select the exams and reports you want to display. The top part of the Manager window contains tabs for exam lists. The bottom part of the window displays information about any exams that are opened or pre-loaded.




### About Exam Lists

Exam lists are used to organize exams into manageable groups. Exam lists are displayed as a row of tabs near the top of the Manager window.

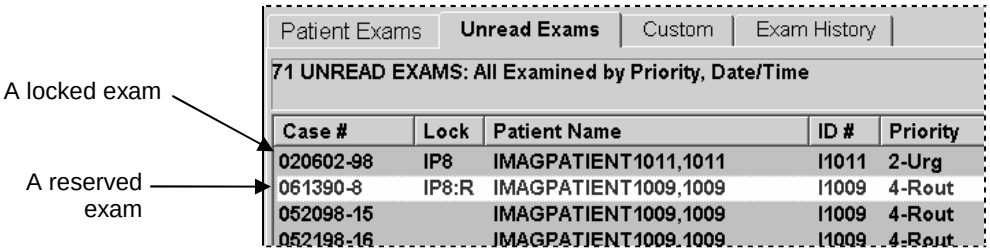
| Exam List | Exam Status | Used For |
|---|---|---|
| NEW IN 18 ➤ Patient | any | Contains two sub-tabs. One tab shows all exams for the active patient in the Viewer. The other tab shows all exams for the active patient in the Manager. |
| Unread | Examined | Exams waiting for interpretation. |
| Custom | varies | Contains sub-tabs for site-defined custom lists; custom lists are often subsets of the Unread list broken down by modality type. |
| NEW IN 18 ➤ Exam History | any | Contains an entry for each exam that you have displayed. For this list to be populated, the **Generate History List** option must be checked (**View \| Settings \| Manager \| General** ). |
| Recent* | Interpreted, Transcribed | Exams waiting for report verification (report verification is performed outside of VistARad). |
| All Active* | Examined, Interpreted, Transcribed | All exams that are not yet completed. |

* Hidden by default; Use **View | Settings | Manager | General** to show or hide this list.

#### Locks and Reserves Explained

Exam *locks* prevent other users from attempting to interpret an exam that you are in the process of interpreting. Unread exams are locked on a first come, first served basis—the first radiologist to display an unread exam will automatically have the exam locked in their name.

If a radiologist closes a locked exam without updating its status, the exam lock is removed, and the exam can be locked and interpreted by a different radiologist.




NEW IN 18 ➤ Exam *reserves* are used for exams that have been loaded into memory as part of the ReadList process. A reserved exam is automatically locked when it is displayed. For more information about ReadList, see page 6.

## Opening Exams

#### Opening an Exam I

NEW IN 18 ➤ Use these steps to open an exam using an automatically selected hanging protocol (hanging protocols are described on page 28).

1. Display the Manager window by clicking in the Viewer toolbar.
2. In the Manager window, click the **Unread Exams** tab.
3. Select the exam you want to open.
4. Double-click the exam, or click **Open**.
   - The hanging protocol that is most appropriate for the type of exam being opened will be selected automatically.
   - If there are multiple matching hanging protocols, you will be prompted to select the hanging protocol you want to use. For more information, see page 29.
   - If VistARad's voice dictation interface is enabled, the report for the exam being opened will display in the voice dictation window. Any findings you enter should be saved before opening the next exam in VistARad.

### Opening an Exam II

NEW IN 18 ➤ Use these steps to open an exam using a manually selected hanging protocol (hanging protocols are described on page 28).

1. Display the Manager window by clicking in the Viewer toolbar.
2. In the Manager window, click the **Unread Exams** tab.
3. Select the exam you want to open.
4. Make sure the checkbox to the right of the **Open With** button is *cleared*.
5. Click **Open With**.
6. Use the dialog that opens to select a hanging protocol or template.
   - Hanging protocols and templates are grouped under each username, and a default collection is available under the 'sysAdmin' group.
   - The viewport arrangement of the selected hanging protocol or template is shown in the Preview area near the bottom of the dialog.
   - By default, only hanging protocols and templates that are appropriate for the state of the Viewer window (size, number of monitors, and aspect ratio) are displayed. To display all hanging protocols and templates, clear the **Apply Filter** check box.
7. Select the hanging protocol or template you want to use, and click **OK**.
   - If you are using a template, images will be loaded into the Preview window, but not into viewports. Viewports can be loaded manually as described in *Using the Preview Window* on page 10.
   - If VistARad's voice dictation interface is enabled, the report for the exam being opened will display in the voice dictation window. Any findings you enter should be saved before opening the next exam in VistARad.

## Using ReadList

NEW IN 18 ➤ The new *ReadList* feature can be used to successively display all unread exams in an exam list. When ReadList is active, you can step from one unread exam to the next with a single mouse click, without displaying the Manager, and with minimal wait times.

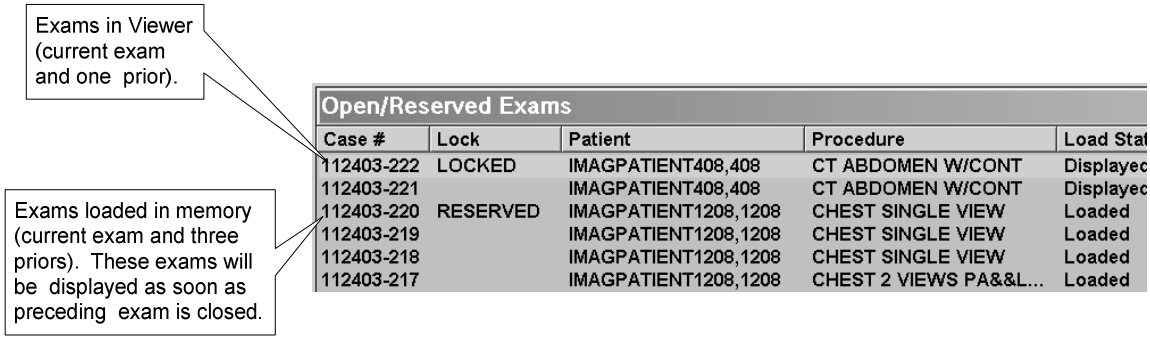
### Starting ReadList

1. Display the Manager window by clicking in the Viewer toolbar.
2. In the Manager window, click the **Unread Exams** tab.

3 Click the **ReadList** button, located near the middle of the Manager window. The first unread exam in the list will be opened.

- A matching hanging protocol will be selected automatically. If there are multiple matching hanging protocols, you will be prompted to select the hanging protocol you want to use. For more information, see page 29.
- Any priors identified by the selected hanging protocol will also be opened automatically.

4 The exam and any priors will be displayed. As you are reviewing the displayed exam, the next exam in the Unread list is reserved and loaded into memory. Any applicable priors are loaded as well.




Note If VistARad's voice dictation interface is enabled, the report for the exam being opened will display in the voice dictation window. Any findings you enter should be saved before opening the next exam in VistARad.

#### Stepping through Exams with ReadList

When ReadList is active, you can step through exams without using the Manager. When you are ready to close an exam:

1 Click **Next** in the Manager, or click in the Viewer toolbar. The Close/Update dialog will open.

2 Set the values in the Close/Update dialog as desired.

- For information about using the **Close?** and **Interpret?** fields, see *Closing Exams* on page 27.
- For information about suppressing the display of the Close/Update dialog see *Setting up Automatic Close/Updates* on page 8.

3 Click **OK** to close the Close/Update dialog.

- After the dialog is closed, the next exam in the ReadList sequence will be displayed.
- VistARad will automatically refresh the active exam list and will preload and reserve the next exam in the ReadList sequence. ReadList mode will continue until all unread exams have been displayed or until ReadList is stopped manually.

#### Stopping ReadList Manually

To stop ReadList manually, click the **Stop RL button** located near the middle of the Manager window. (This button is visible only when ReadList is active.) The currently displayed exam will remain open, but no additional exams will be opened once the currently displayed exam is closed.

#### Setting up Automatic Close/Updates

Automatic close/updates can be used to further automate ReadList mode, letting you move from one exam to the next without using the Close/Update dialog. To set up automatic close/updates:

1. While in ReadList mode, open the Close/Update dialog by clicking **Next** in the Manager, or by clicking the button.
2. Note the initial value of the **Interpret?** field. This is the value that will be used for each exam that is closed. If this value is not set as desired, click **Cancel**, then perform the following steps:
   a. From the Viewer or Manager menu bar, choose **View | Settings**, then click the **Manager** tab.
   b. **Set the Default Status Update Prompt to NO** checkbox as desired.

      Note This setting should be used with caution to prevent unintentional exam updates.

   c. Click **Apply**, then click to close the Settings dialog.
3. In the Close/Update dialog (reopen the dialog if necessary), disable the **Show this dialog in ReadList mode** box.
   - This setting applies only for ReadList mode. The Close/Update dialog can always be opened by clicking , regardless of this setting.
   - This setting will remain disabled until you log out of VistARad. However, to prevent inadvertent exam updates, this setting is re-enabled at the beginning of each VistARad session.
4. Click **OK** to close the Close Exams/Update Status dialog.

## Using Selection ReadList

NEW IN 18 ➤ *Selection ReadList* is a variation of the ReadList feature that lets you work through a set of exams you select, rather than an entire exam list.

### Starting Selection ReadList

1. Display the Manager window by clicking in the Viewer toolbar.
2. Click the exam list tab containing the exams you want to select.
3. Select the exams you want to open.
   - You can click the column headings in the active exam list to group exams with similar properties.
   - Use SHIFT-click to select multiple exams that are listed continuously, or use CTRL-click to select successive exams that are not listed continuously.
4. Click the **Selection RL** button (this button replaces the **ReadList** button whenever multiple exams are selected).
   - All of the exams you selected are reserved (provided that those exams are lockable).
   - If there are multiple matching hanging protocols, you will be prompted to select one of the matching hanging protocols. For more information, see page 29.
5. The exams you selected will be displayed in a new Selection ReadList tab. Before proceeding, you may want to:
   - Use the **Clear** button to remove any unwanted exams from the list.
   - Sort the contents of the list (once ReadList is activated, exams will be displayed in the order that they are shown in the list).

   Note If you want to abort the process to select other exams or to return to standard reading mode, you can click the **Clear All** button.
6. Click the **ReadList** button.
7. The first exam in the list will be displayed.

   Note If VistARad's voice dictation interface is enabled, the report for the exam being opened will display in the voice dictation window. Any findings you enter should be saved before opening the next exam in VistARad.
8. While ReadList is active, you can step through exams without using the Manager. For more details, see:
   - *Stepping through Exams with ReadList* on page 7.
   - *Stopping ReadList Manually* on page 8.
   - *Setting up Automatic Close/Updates* on page 8.

## Working with Routed Exams

NEW IN 18 ➤ The following features are used to manage routed exams.

### *Remote reading features for sites that receive routed exams*

When you log into a site to read exams from a remote location, VistARad automatically filters exam lists (except the patient lists) to show only the exams that have been routed to you. This filter is displayed as the Remote Read Filter button in the Manager window. Disabling this setting lets you view the complete exam list.

By default, when you are using ReadList while reading remotely, VistARad automatically opens only exams with images that have been routed to you. If you want to disable this setting and include-non routed exams using ReadList, go to **View | Settings | Remote/Local Reading** and enable the **In Auto ReadList mode, include exams that are NOT routed** checkbox.

By default, when you open any exam, VistARad only opens priors that have been routed to you. If you want to see priors that have not been routed to you, go to **View | Settings | Remote/Local Reading** and enable the **Retrieve Priors/Related Exams that are NOT routed** checkbox.

Note Images from non-routed exams need to be retrieved from the source site when they are opened. The amount of time needed to display images is based on network capacity.

### *Local reading features for sites that send routed exams*

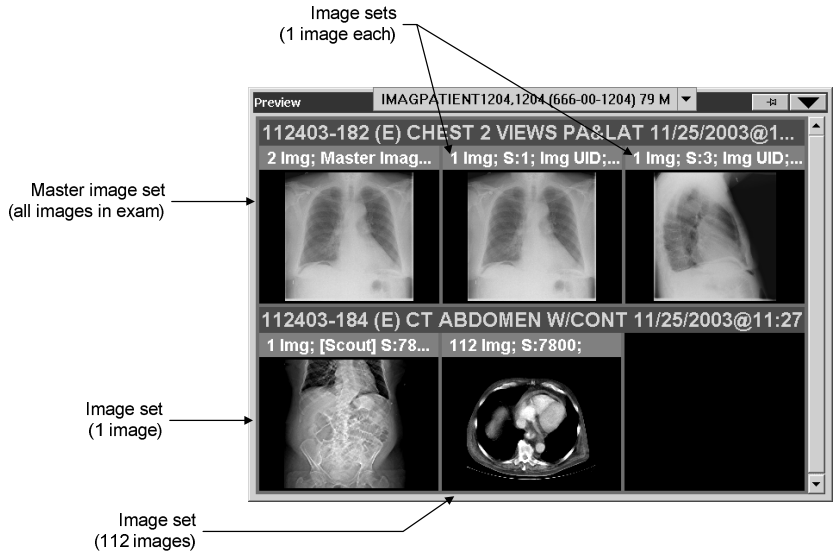
By default, at a site where exams are routed to other locations, ReadList excludes routed exams, and only opens non-routed exams. If you want to include routed exams, go to **View | Settings | Remote/Local Reading** and enable the **Retrieve Priors/Related Exams that ARE routed** checkbox. If you want this setting to be retained across user sessions, enable the **Preserve this Setting** checkbox.

# Using the Preview Window

NEW IN 18 ➤

The Preview window serves as staging area between the Manager and the window you use to display images. In cases were all images have been loaded into the Viewer window using a hanging protocol, use of the Preview window is not required. If it is not visible, the Preview window can be opened by clicking in the Viewer toolbar.

In the Preview window, each open exam for the current patient is displayed as a row of one or more thumbnail images. Each thumbnail represents an *image set* of one or more related images. (Image sets are described on page 12.) Depending on the type of exam, a *master image set* icon may also be displayed.




In situations were all images are not automatically displayed, you can use the Preview window in two ways:

- You can drag an image set into an open area (viewport) in the Viewer window.
- You can double-click an image set to display the entire exam in the Browser window.

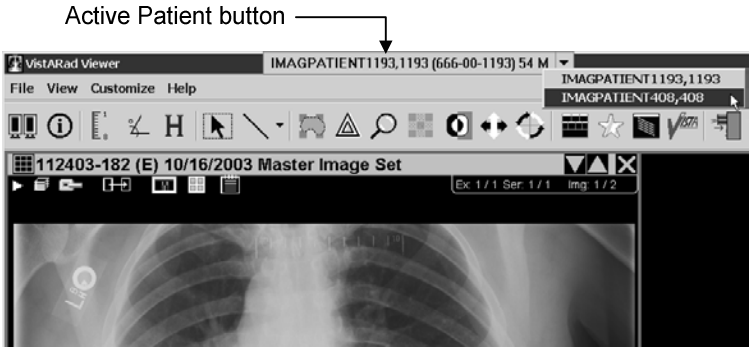
The Preview window displays an icon for each image set that is loaded in the Viewer or the Browser windows. The Viewer and Browser windows are described in detail in the next section.

# Surveying Exams

## About the "Active Patient"

NEW IN 18 ➤ Except for the Manager window, all VistARad windows are designed to display information for only one patient at a time. While exams for multiple patients may be open, only exams related to the *active patient* are visible.

The Viewer window, the Browser window, and any other window that displays images contains the **Active Patient** button in the title bar. This button displays the name, SSN, age, and sex of the patient associated with the currently displayed exam.




When exams for multiple patients are open, you can click the **Active Patient** button to switch between patients with open exams. Switching to a different patient will update all windows in VistARad.

## The Viewer Window

NEW IN 18 ➤ The Viewer window occupies most of the display space on a VistARad workstation, and is intended to be the primary workspace for exam interpretation. When exams are opened using a hanging protocol, images are automatically loaded into the Viewer window. (You can also load images manually as described in the previous section).

The Viewer window contains one or more *viewports* where images can be manipulated.

## The Browser Window

NEW IN 18 ➤ The Browser window provides a dynamic display area for exams opened on an as-needed basis for exams that do not lend themselves for display with a hanging protocol. You can load images in the Browser window by double-clicking an image thumbnail in the Preview window (see the previous page for details about the Preview window).

Like the Viewer, the Browser window contains one or more *viewports* where images can be manipulated. Optionally, you can drag images from the Browser window to the Viewer window. If this is done, any alterations made to the images are retained when they are copied into the Viewer.

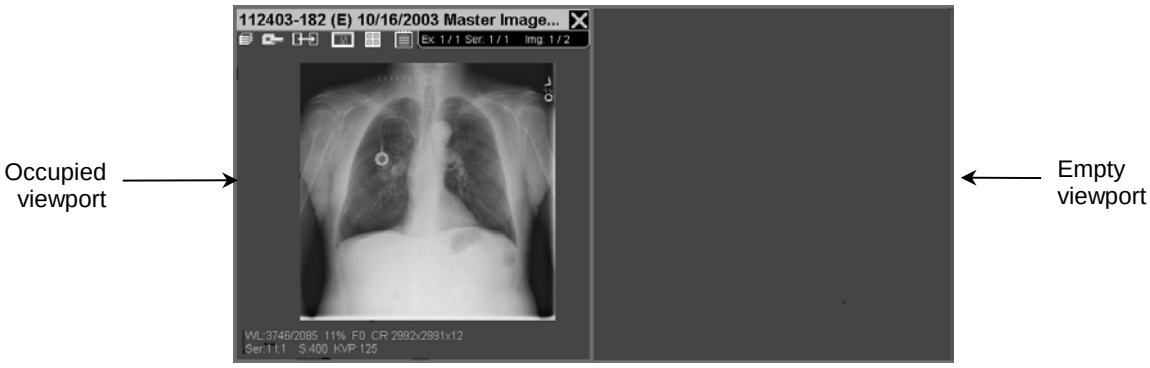
## Anatomy of a Viewport

NEW IN 18 ➤

### *Viewport Basics*

A *viewport* is the basic unit of display space in the Viewer and Browser windows. Depending on the type of exam being displayed, a viewport can contain an entire exam or part of an exam (such as a series).

Because the Viewer and the Browser windows can display multiple exams at once, the title bar viewport always displays the case number, exam status*, and other identifying information for the images being displayed.




In the Browser window, the size and number of viewports is flexible, and can be changed as needed by the user. Viewports are always loaded manually.

In the Viewer window, the size and number of viewports is based on the active hanging protocol or template. With the use of hanging protocols, viewports are automatically loaded with both current and prior exams, and display settings can be set automatically.

In the Viewer window only, a viewport can extend across multiple screens. If this is the case, the layout is automatically set to 1 x *n*, where *n* is the number of screens that the viewport extends across.

### *Image Sets*

NEW IN 18 ➤

VistARad treats an exam as a collection of one or more *image sets*. This allows flexibility in how many viewports are used to display an exam. Some exams may be displayed in a single viewport, while other exams may be displayed in several viewports.

The division of an exam into image sets is dictated by the characteristics of the exam and by the hanging protocol applied when the exam is opened. Some examples of how exams can be split into image sets are listed below:

- In radiographic and angiographic exams, each image can be treated as a separate image set, or all images can be combined into a single ‘master’ image set.
- In CT and MRI exams, each series (or sequence) is treated as an image set. Each scout (or localizer) is treated as an image set.
- In fluoroscopic exams, images are divided into image sets based on modality.

* E = examined, I = interpreted, C = complete.

### Navigating in Viewports

NEW IN 18 ➤ The label in the upper right corner of each occupied viewport indicates how many images, image sets, and exams are in the viewport..

In the Browser window, a viewport can contain multiple images, but it cannot contain more than one exam or image set.

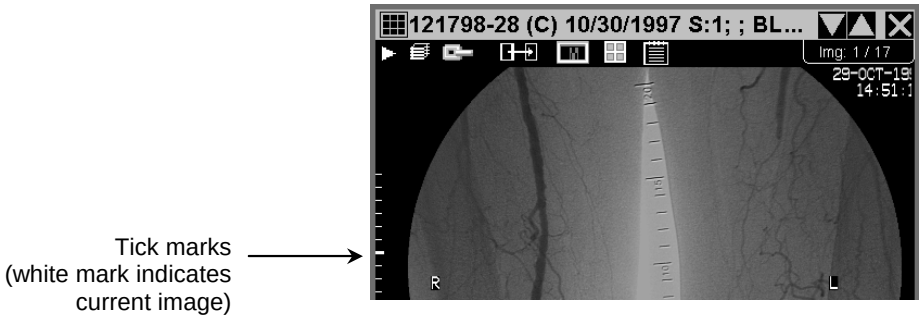
In the Viewer window, a viewport can contain one or more images, one or more image sets, or one or more exams.

To display a hidden exam or series, click the appropriate label on the button to display a list of all exams or series, then click the item you want to display. Note that if a viewport was loaded manually by dragging images into it from the Preview or Browser windows, it will not contain any hidden exams or image sets.

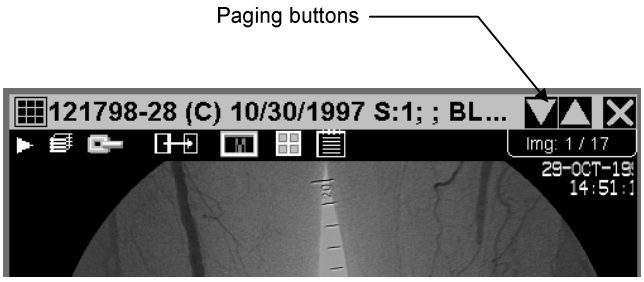
### Scrolling and Paging

The simplest way to survey or *scroll* through images in a viewport is to roll your mouse's scroll wheel up or down while pointing to the viewport. As you scroll through images in a viewport, *tick marks* show the selected image relative to the beginning and end of the image set.

NEW IN 18 ➤



NEW IN 18 ➤ You can also use the paging buttons located near the top of the viewport. Note that a ‘page’ is based on the current layout (number of visible images) in the viewport.




If your three-button mouse does not have a scroll wheel, you can point to the viewport, then use the middle mouse button to click on the left side of the image. This will shift the display towards the ‘top’ of the stack by one image. Middle-clicking on the right side of the image will shift the display towards the ‘bottom’ of the stack by one image.

### Using Scouts

NEW IN 18 ➤ Scout (or localizer) images are automatically loaded in the new Scout Image window when an exam opened. The Scout Image window can be shown or hidden by clicking in the Viewer toolbar.

Scout images can also be displayed in viewports by loading them manually from the Preview window or by opening an exam with a hanging protocol.

Scout images display *slice lines* that indicate the first, last, and selected image in the series associated with the scout. Clicking an active area between the first and last slice lines will display the intersecting image in the associated series.

In the Viewer window, you can generate a scout image if the displayed exam contains images from intersecting planes. To generate a scout, select the image you want to use, right-click, and then click **Create Scout**.

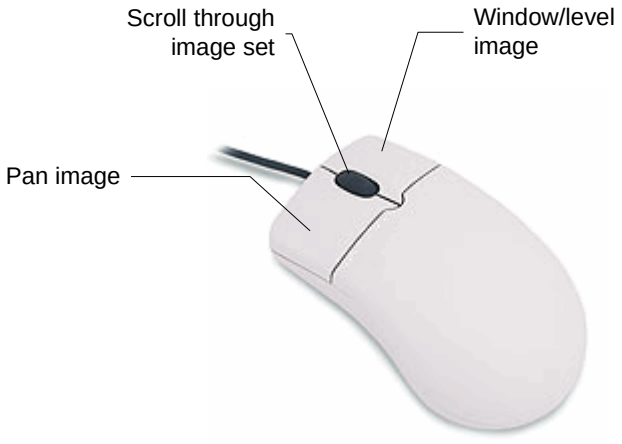
# Working with Images

## Manipulating Images

Common image manipulations can be performed in a variety of different ways.

### Using Built-in Mouse Functions

Pan, scroll, and window/level functions are assigned to each mouse button. To perform one of these operations, point to an image, click the desired mouse button, and drag the mouse.




*Note that…*

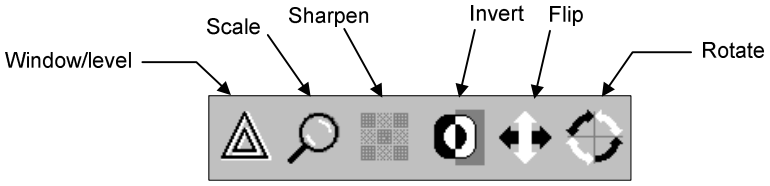
Before panning an image, make sure the mouse pointer looks like . If it does not, right-click once, then drag to pan an image.

Scrolling is used for viewports that contain more than one image. In addition to using the scroll wheel, there are other ways to scroll through images. See page 14 for more details.

The mouse button settings shown above are default settings. Some users may choose to change these settings using the options under **View | Settings | Mouse**.

### Using the Toolbar or the Shortcut Menu

The following properties can be changed using the toolbar or the shortcut (right-click) menu in the Viewer, Browser, or Scrapbook windows.




1 Display the image you want to manipulate.

2 Right-click the image and select an option, or click the appropriate tool button in the Viewer toolbar.

3 The mouse pointer will change to indicate that the tool you selected is active, and that it is now temporarily assigned to the left mouse button.

4 Use the tool by either clicking or dragging on a displayed image. Some tools are 'drag only'. Other tools will perform a different action depending on where in the image they are clicked.

| Tool | Pointer | Point to image, then... |
|---|---|---|
| Window/Level | | Drag up or down to change window; drag left or right to change level. |
| Scale | | Drag up or left to increase zoom; drag down or right to decrease zoom. |
| Sharpen | | Drag up or left to sharpen; drag down or right to smooth. |
| Invert | | Click to invert. |
| Flip | or | Click on top part of image to flip 180° vertically; click on bottom to flip 180° horizontally. |
| Rotate | or | Click on left side of image to rotate 90° counterclockwise; click on right side to rotate 90° clockwise. |

5 To disable a tool, right-click once. You can also disable the active tool by selecting a different tool.

#### Apply To... Settings

Apply To settings determine if changes to scale, orientation, window/level, or sharpness affect a single image or an entire image set. Typically, such changes affect all images in an image set.

*To change the window/level, scale, etc. of a single image only:*

1 Click the tool you want to use:

| | |
|---|---|
| Window/level | Scale (zoom) |
| Sharpen | Invert |
| Flip | Rotate |

2 In the viewport containing the image you want to change, click the **Apply To** icon.

- When the **Apply To** icon looks like this: , your change will be applied only to the selected image.

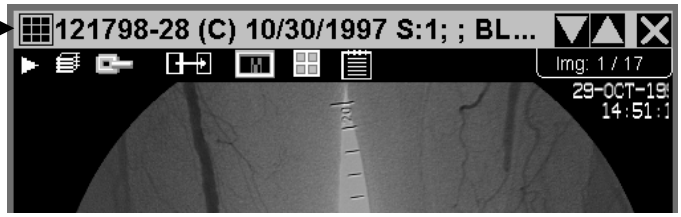
- When the **Apply To** icon looks like this: , your change will be applied to the all images in the viewport.

## Changing Layout

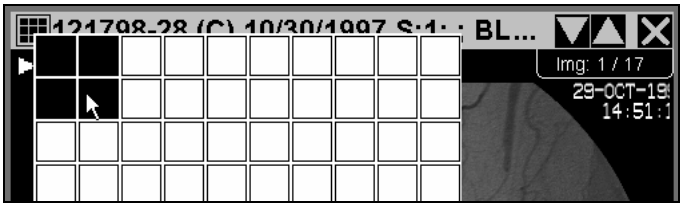
### Changing Layout inside a Viewport

The layout tool can be used to display an image set 1-up (stacked) or in one or more rows and columns (tiled).In the Viewer and Browser windows, the layout tool is available in viewports that contain more than one image.

Layout control




To change the current layout, click the layout tool and drag the mouse to indicate the number of rows and columns you want displayed.




When multiple images are displayed (tiled), images are arranged from left to right, then from top to bottom.

### Changing Layout inside a Window

NEW IN 18 ➤ *Viewer window*

In the Viewer window, the arrangement of viewports is dictated by the current template, and cannot be changed without first clearing all viewports. If you need to alter the arrangement of viewports quickly, load the exam into the Browser window and then use the steps below.

*Other windows*

In the Browser, Scrapbook, and Scout windows, you can use the Layout button in the toolbar as follows:

1. Click  and drag down using the mouse.
2. In the box that displays, highlight the rows and columns you want to set the layout to, then click the left mouse button.

   TIP Click  to switch back and forth between 1-up and the last layout you selected.

## Manipulating Image Sets

Image sets can also be moved, cloned, and split. You can remove any unneeded image sets by clearing the viewport.

### Moving an Image Set (Viewer)

NEW IN 18 ➤ You can move any image set to an empty viewport by clicking the viewport title bar, then dragging the image set to the empty viewport. If there are multiple image sets in the source viewport, only the visible image set is moved.

You can also move an image set to an occupied viewport using the same method, as long as the source and target viewports each contain only one image set.

- Depending on your user preferences, moving an image set to an occupied viewport will either swap the contents of the two viewports, or replace the contents of the target viewport with the contents of the source viewport.
- To set “swap” or “replace” as the default behavior, choose **View | Settings | Viewport** and change the settings in the **Drag and Drop Options** area.

### Moving an Image Set (Browser)

NEW IN 18 ➤ To rearrange images displayed in the Browser, drag the title bar of the image you want to move to a different viewport in the Browser window.

- If the target viewport is occupied, the image being dragged is inserted into the target cell and the pre-existing image is shifted to the left.
- If the target viewport is empty, the image being dragged is moved to the last position in the Browser window (where images wrap from left to right, then top to bottom).

### Cloning an Image Set (Viewer only)

1. Point to the title bar of the image set you want to clone. (The title bar displays the case ID and procedure name.)
2. Using the right mouse button, drag the images to an unoccupied viewport. A popup menu will display when you complete the drag.
3. After you complete the drag, click the **Clone** option from the menu that is displayed.

### Splitting an Image Set (Viewer only)

1. In the image set that you want to split, display the image that will serve as the first image in the new image set.
2. Using the right-mouse button, drag the title bar of the image set you want to split to an unoccupied viewport. A popup menu will display when you complete the drag.
3. After you complete the drag, click the **Split** option from the menu that is displayed.

### Removing an Image Set

NEW IN 18 ➤ To remove images from a viewport, click the ☒ button in the upper right corner of the viewport. Note that even when all viewports are empty, an exam is still considered open by VistARad –image sets are still available in the Preview window, and can be re-loaded into viewports.

## Image Presets

Presets let you apply pre-defined window/level, sharpen, and invert settings in a single step. Presets can be defined by each user, and site-wide presets can be defined that are accessible by all users.

### Using Presets

To apply a preset, right-click in an occupied viewport, point to **Image Presets**, then choose an option.

NEW IN 18 ➤

- Presets are filtered by modality type; if you have CR images displayed, only CR-related presets are available.
- Shortcut keys, if defined, can be used to apply presets as well.

### Creating Presets

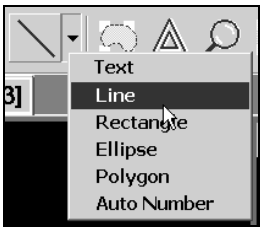
1. In the Viewer main menu, click **Customize | Presets**.
2. In the Image Presets dialog, click **New**.
3. In the bottom of the dialog, specify the following:
   - Name
   - Level (only available for users that can define group-level presets)
   - Shortcut key
   - Modality to associate with the preset
   - Window/level
   - Sharpen
   - Invert
4. To save the preset, click **Update**.

## Annotations & Measurements

You can add annotations and measurements to images displayed in the Viewer, Browser, or Scrapbook windows.

### Annotating Images

1. Display the image you want to annotate.
2. In the Viewer toolbar, the Annotation button is initially displayed as . After it is used, it will reflect whatever annotation tool was last selected.
   - To select the current annotation tool, click the button.
   - To select a different annotation tool, click the arrow next to the Annotation button, then select an option from the list that is displayed.



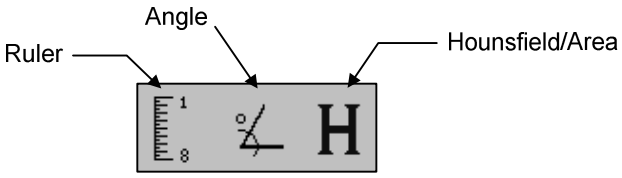

3. Annotate the image. Steps for each tool are noted below:

| Tool | Pointer | Steps |
|---|---|---|
| Auto Number | varies | After selecting the tool, the Autonumber dialog will display. Click the button that corresponds to the numbering style and starting point you want to use. Then click and drag on the image to define a small area that indicates where the number is placed. |
| Ellipse | | Click, then drag. Complete the drag when the shape is the desired size. |
| Label (text) | | Drag to create the text box, then enter the text. |
| Line | | Click, then drag. Complete the drag when the line is the desired length. |
| Rectangle | | Click, then drag. Complete the drag when the shape is the desired size. |

4. The tool you selected will remain active. You can add additional annotations, select a different tool, or disable the tool by right-clicking once.
5. To hide or delete an annotation, right-click the annotation, then click the appropriate shortcut menu option.

### Measuring Image Features

1. Display the image that contains the feature you want to measure.
2. In the Viewer toolbar, click one of the measurement buttons.




3. Measure the image feature. Steps for each tool are noted below:

| Measure | Pointer | Steps |
|---|---|---|
| Angle | | Drag the mouse to draw two lines that correspond to the angle. (The two lines do not have to meet.) |
| Hounsfield/Area | | Click, then drag. Complete the drag when the area is the desired size. |

4. The tool you selected will remain active. You can add additional measurements, select a different tool, or disable the tool by right-clicking once.
5. To hide or delete a measurement, right-click the annotation, then click the appropriate shortcut menu option.

### How Annotations are Saved

NEW IN 18 ➤ If the exam is locked, annotations added to images in the Viewer or the Scrapbook are saved automatically when the exam is closed. If the exam is not locked, annotations are discarded when the exam is closed.

Note Annotations added to images in the Browser window are not saved. However, annotated images can be dragged from the Browser to the Viewer window.

Note In the Viewer, if one or more cloned images are present, only one of the cloned images can be annotated. If you try to annotate multiple instances of a cloned image, you will be prompted to add the image to the Scrapbook window.

# Key Images & the Scrapbook

## Key Images

### About Key Images

NEW IN 18 ➤ A *key image* is an image that the interpreting radiologist has marked as being of particular interest. Key images, if present, are automatically loaded into the Scrapbook window when an exam is opened.

A key image includes any annotations and display property changes (window/level, sharpen, etc.) made to the image by the interpreting radiologist. Key images cannot be changed after an exam has been interpreted.

Images can be marked and manipulated in the Scrapbook at any time, regardless of the lock state or status of the exam. However, marked images are saved as key images only when the exam is locked in your name. Otherwise, marked images are discarded when the exam is closed.

When information for a key image is saved, the source image is not altered.

### Marking Images

1. Open an exam. If you want marked images to be saved as key images, you must have the exam locked in your name.
2. Display the image to be marked.
3. Click the M icon.

   Note To prevent interference with images displayed in the Viewer window, the Scrapbook window does not open automatically when an image is marked. To display the Scrapbook window, click ☆.

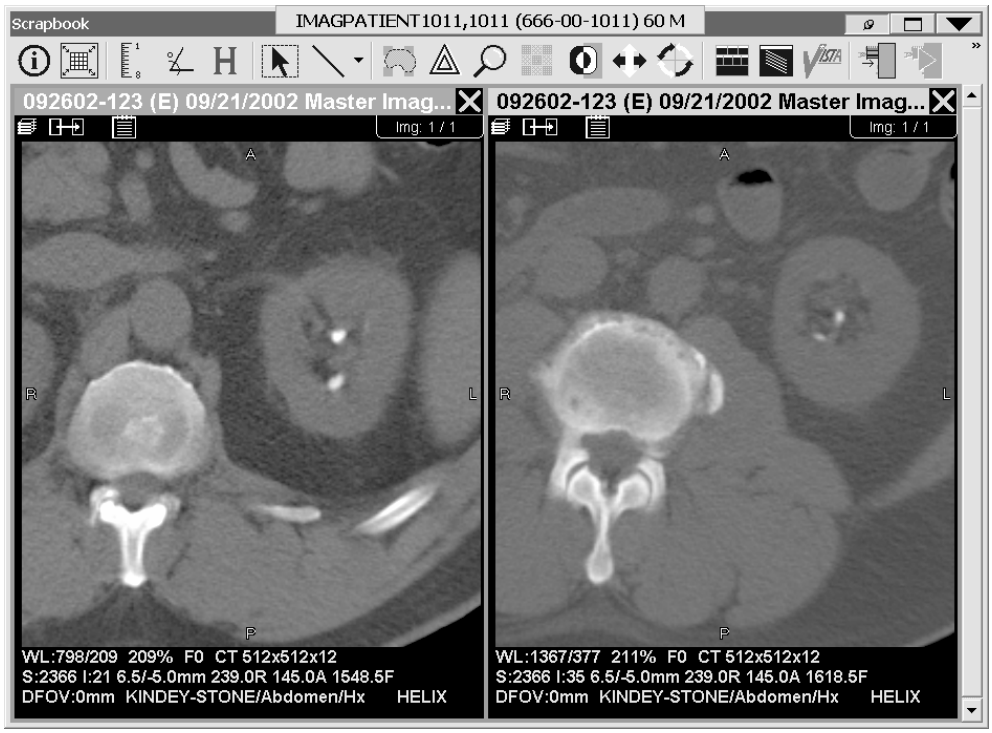
### Unmarking Images

Unmarking an image deletes the key image from the Scrapbook. To unmark an image:

- Locate the marked image in the Scrapbook and click ☒.
- Locate the marked image in the Viewer and click ☑.

## Working in the Scrapbook

NEW IN 18 ➤ The Scrapbook window contains any image marked in the current display session. If any key images were saved previously, they are displayed in the Scrapbook as well.




If the Scrapbook is not displayed, it can be shown by clicking .

The Scrapbook window in many ways functions as a single viewport that is always in ‘tiled view.’ Images in the Scrapbook window can be manipulated and annotated as desired. However, because the Scrapbook displays single images (not stacks) functions specific to image sets (cine, split, etc.) are not available.

Changes to images in the Scrapbook are retained if they are made while the exam is locked. Otherwise, changes are discarded.

# Working with Online Records

VistARad lets you access online records in the VistA system, including requisitions, reports for completed exams, patient profiles, and health summary reports.

Tip If the Reports window is open by not visible, it can be displayed (along with the Manager) by clicking .

## Displaying Records in the Manager

To display a record in the Manager, select an exam. Then right-click the exam and choose an option, or click one of the report-related buttons located under the exam lists in the Manager window.

Note The Health Summary button is multifunctional. For details, see *Working with Health Summaries* below.

Note Requisitions can be displayed automatically when an exam is opened. To set up automatic requisition display, click **View** | **Settings** | **Manager** | **General**, then select the **Auto-open requisition** checkbox.

## Displaying Records in the Viewer

NEW IN 18 ➤ In the Viewer, requisitions and reports can also be displayed for an open exam. To display a requisition or report:

- In an occupied viewport, click the icon. The requisition will display if the exam is unread. The report will display if the exam has been interpreted.
- You can also click, then drag down on the icon to display a shortcut menu that allows you to select either the requisition or the report.

The icon is also present in the Browser and Scrapbook windows.

## Working with Health Summaries

NEW IN 18 ➤ The **Health Summary** button in the Manager window can be used in different ways:

- If the button includes an asterisk: * Health Summary clicking it will open the report you have designated as the default health summary report. To open the Health Summary window instead of the default health summary report, click the arrow just to the right of the **Health Summary** button.
- If the button looks like this: Health Summary clicking it will open the Health Summary window. A health summary can be displayed by selecting it and clicking **View**. If there are no health summaries displayed, see below.

#### Defining a Preferred List of Health Summaries

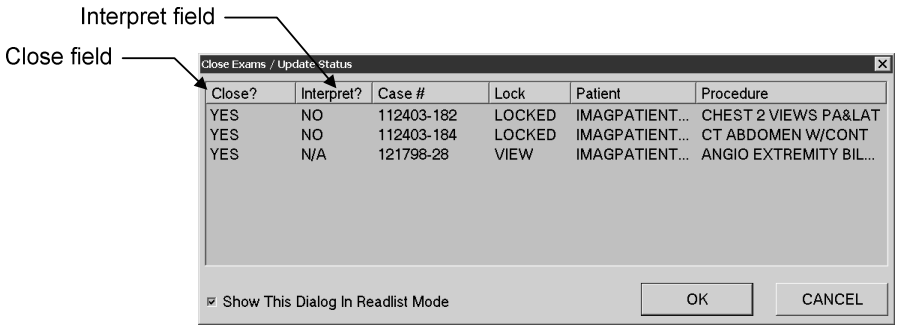
The top part of the Health Summary window will display only the types of health summary reports you have selected as preferred reports. To create a list of preferred reports:

1. Open the Health Summary window.
2. Click **Show Preferences**.
3. In the list at the bottom of the window, select a health summary to add to your preferred list, then click **Add**.
4. To set a report as a default report, select a report in the top list, then click **Set Default**.

# Closing Exams

To close an exam:

1. Open the Close Exams / Update Status dialog by doing one of the following:
   - Pressing **<CTRL+Q>.**
   - Clicking the button in the Viewer, Browser, or Scrapbook window toolbar.
   - Clicking **Close Exams** in the Manager window.
2. The Close Exams / Update Status dialog displays a row for each open exam.
   - The first two fields in each can be clicked to change their values from **Yes** or **No**. If N/A is displayed in either field, the value cannot be changed.
   - The initial value in the Interpret Exam field can be specified as a user preference.




3. After setting the **Close?** and **Interpret?** values as desired, click **OK** to close one or more exams.

# Hanging Protocols & Templates

NEW IN 18 ➤ This section provides an overview of hanging protocols and templates, and the settings that affect how they are applied. For step-by-step instructions on creating new templates and hanging protocols, refer to the *Template & Hanging Protocol Quick Start Guide*.

## Template Fundamentals

A template is a named definition of a specific arrangement of viewports in the VistARad Viewer window. Templates are used as the basis of hanging protocols.

Templates are used automatically when a hanging protocol is applied to an exam being opened. Users can also open an exam using a template only. For more information, see page 6.

## Hanging Protocol Fundamentals

A hanging protocol automates tasks related to displaying exams. When a hanging protocol is applied, it can:

- Locate priors.
- Load images from current and prior exams into viewports.
- Apply pre-defined image display settings in each viewport.

Hanging protocols are typically selected automatically when an exam is opened. Hanging protocols are matched to exams based on CPT (procedure) code, modality type, or both. A user can also select a hanging protocol manually before opening an exam.

### Basic Hanging Protocol Settings

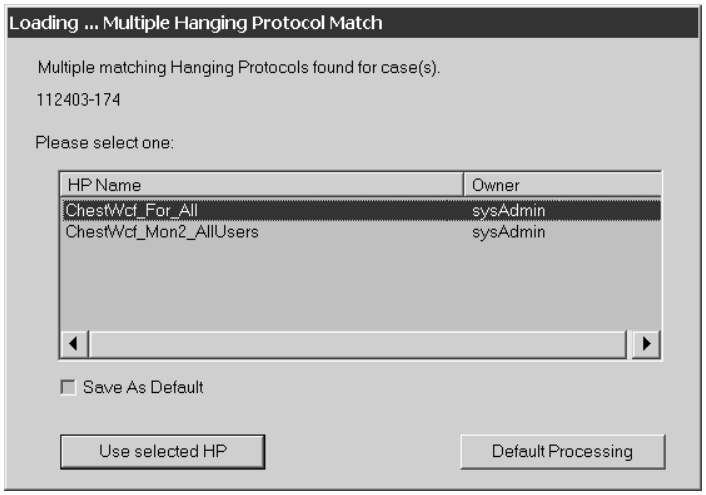
The settings under **View | Settings | Hanging Protocol** govern general hanging protocol behaviors. You can:

- Enable or disable automatic display of priors and related exams for unread or completed exams. If these options are disabled, any prior or related exam search logic in a hanging protocol definition is ignored.
- Elect to be notified if there is a more recent unread exam for a patient than the one you select for display. The determination of what qualifies as a “more recent unread exam” can be based on exact or similar CPT (procedure) matching.

#### Handling Multiple Matches

If more than one matching hanging protocol is found for an exam being opened, a dialog listing each of the matching hanging protocols is displayed.

You can choose one of the listed hanging protocols, or you can elect to use default processing (see below).




You can also use the Save As Default checkbox to make the selected hanging protocol the only hanging protocol used for the current type of exam. (This prevents the multiple match from happening in the future.)

### *Default Processing*

Default processing is used if there are no matching hanging protocols for an exam being opened, or if you explicitly select the Default Processing option in the Loading...Multiple Hanging Protocol Match dialog.

When default processing is used, one of VistARad's default (SYS_INT) hanging protocols is used to load exams into the Preview window and to provide viewports in the Viewer window (no images are loaded into viewports however).

You can use the Preview window to manually load images into viewports. For information about using the Preview window, see page 9.

For more information about hanging protocol selection logic and hanging protocols in general, refer to the *VistARad Template and Hanging Protocol Quick Start Guide*.

# Integrating Voice Dictation Software

NEW IN 18 ➤ When properly configured, VistARad will send a message to a running voice dictation system that identifies the exam being read.

## Requirements

1. A licensed copy of one of the following packages, installed on the same workstation as VistARad (see notes ) or on a separate workstation that can be accessed over your site's network:
   - Agfa TalkStation versions 2.1 and 2.2*
   - Dictaphone PowerScribe versions 3.0A and 4.6.†
2. A port number specified in the dictation software to be used to listen for messages from VistARad.

## Setting up a Voice Dictation Connection in VistARad

To set up the voice dictation interface in VistARad:

2. Log into VistARad and click **View | Settings | Manager | Dictation**.
3. Select the **Enable Dictation Interface** checkbox.
4. In the **Options** area, select the software that you are using.
5. If the dictation software is installed on the same workstation as VistARad
   - Enter the port number in the **Connection Parameters** area.
   - Make sure the **IP Address** box is empty.
6. If the dictation software is installed on a different workstation:
   - Enter the port number in the **Connection Parameters** area.
   - Enter the IP address (or machine name) in the **IP Address** box.

---

* TalkStation must be run on a separate workstation. When TalkStation is run on the same workstation as VistARad, TalkStation will not allow dictation to occur while the VistARad window is active.

† PowerScribe 4.6 has been successfully tested running on the same workstation as VistARad. It not yet determined if the same can be done for PowerScribe 3.0A.