



## **IMAGING SYSTEM**

### **VistARad Quick Start Guide**

Version 3.0, Patch 76  
December 2007 – Revision 5

Department of Veterans Affairs  
Health Systems Design & Development  
VistA Imaging

**VistARad Quick Start Guide  
Vista Imaging 3.0 Patch 76  
December 2007**

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## Revision Table

<b>Date</b>	<b>Rev</b>	<b>Notes</b>
Dec 03 2007	5	Remove non-essential p65 content. Reorganize <i>Surveying Exams</i> section. Updates for Patch 76. A. McFarren, J. Christensen.
Feb 21 2007	4	Updates for Patch 65. A. McFarren, J. Christensen.
April 3 2006	3	Updated for release of Patch 18. A. McFarren, J. Christensen.
Jun 20 2005	2	Pre-alpha draft. A. McFarren, J. Christensen.
May 23 2005	1	VEHU draft. A. McFarren, J. Christensen.

# Introduction

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This document is intended for radiologists and clinicians that use the VistARad diagnostic workstation. New users will find information about how to use key VistARad features. Returning users will find a summary of changes in the most recent VistARad patch, and an explanation of how those changes affect existing VistARad features.

It is assumed that:

- Users are familiar with the Windows environment.
- The Patch 76 client is installed on a Windows XP-based diagnostic workstation, and the Patch 76 KIDS is installed on the VistA Host.
- Appropriate test exams are available.

## Terms of Use

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, and on regular monitor testing and calibration to 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.

## 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 CPS (Clinical Product Support) at 1-888-596-4357.

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# Getting Started

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## New Users

To learn how to use VistARad for basic exam interpretation, review the Basic Workflow topics listed below. For information about speeding up and fine-tuning interpretation, review the topic listed under Workflow Refinements.

<b>Basic Workflow</b>	<b>See...</b>	<b>Workflow Refinements</b>	<b>See...</b>
Log in	page <a href="#">2</a>	Use ReadList	page <a href="#">6</a>
Open an exam	page <a href="#">5</a>	Select a hanging protocol	page <a href="#">6</a>
Display patient records	page <a href="#">22</a>	Move, clone, split images	page <a href="#">17</a>
Survey exams	page <a href="#">10</a>	Annotate/measure images	page <a href="#">19</a>
Work with images	page <a href="#">14</a>	Change layout	page <a href="#">17</a>
Close an exam	page <a href="#">23</a>	Mark key images	page <a href="#">21</a>

## Returning Users

This table summarizes changes in Patch 76 that affect VistARad functionality. Places in this document that reference these changes are flagged with a “New in 76” sidebar.

<b>Change</b>	<b>Details</b>	<b>See...</b>
Voxar 3D integration	VistARad and Voxar 3D Workstation can be installed and used concurrently on the same workstation. If a site has implemented Patch 54, images generated in Voxar can be saved to VistA and opened in VistARad.	page <a href="#">26</a>
Expanded keyboard shortcuts	All major functions in VistARad can now be performed using the keyboard only. Certain image manipulations (w/l, scale, sharpen) can be fine-tuned with the keyboard.	page <a href="#">15</a>

For information about minor enhancements and bug fixes, refer to the Patch Description for Patch 76.

# Starting & Exiting VistARad

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## Starting VistARad

- 1 If VistARad has been integrated with a voice dictation system such as Talk or PowerScribe, log into the voice dictation software.
- 2 Double-click the VistARad shortcut on the Windows desktop, or go to the Start menu and select **All Programs | VistA Imaging Programs | VistARad\_Patch76**.



VistARad\_Patch76

- 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.

## How VistARad Windows Behave

The Viewer window is designed to stretch across multiple monitors, and is usually not resized or minimized. Other VistARad windows can be sized, minimized, or ‘tacked’ into place as needed.

### *The Viewer*

The buttons in the upper right corner of the Viewer work as follows:

-  Clicking this button will minimize the Viewer window.
-  This button is disabled.
-  Clicking this button will exit VistARad.

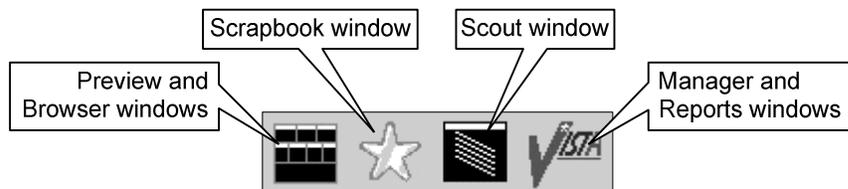
### Other VistARad windows

Except for the Viewer window, other VistARad windows have the following buttons in their upper right corners:

-  (or ) Clicking this button lets you control which windows stay visible while you are working with the Viewer, and which windows that you want 'out of the way' when you are not actively using them.
-  If present, clicking this button will either maximize the window to cover the entire screen or restore the window to its original size. This button is not available in the Preview, Scout, or Reports window.
-  Clicking this button will minimize the window.

### Restoring minimized windows

Minimized windows can be restored using one of the buttons in the Viewer window toolbar.



**NEW IN 76 >** You can also press **<CTRL+W>** or use the Windows taskbar to restore any window.

### Exiting VistARad

- 1 Go to the menu bar in either the Manager or the Viewer and click **File | Exit**.
- 2 If the Close/Update Exams dialog displays, make sure the **Interpret?** field is set as desired for each exam in the dialog, then click **OK**. For details, see page [23](#).

# Locating & Opening Exams

## Using the Manager Window

The Manager window is used to locate and open exams and reports.

The screenshot shows the Manager window interface. At the top, there are tabs for 'Exam List', 'Patient Exams', 'Exam History', 'Unread Exams', 'Custom', and 'All Active Exams'. Below the tabs is a table of unread exams. A callout points to the tabs area. Another callout points to the 'Unread Exams' list. A third callout points to the 'Open/Reserved Exams' section at the bottom of the window.

Case #	Lock	Patient Name	ID #	Priority	Procedure	Image Date/Time	Sta...	# Im
092602-123	IP8	IMAGPATIENT1011,1011	I1011	4-Rout	CT ABDOMEN W/CONT	09/26/2002@18:03	EX...	112
112403-176		IMAGPATIENT1201,1201	I1201	4-Rout	CHEST 2 VIEWS PA&LAT	11/24/2003@17:07	EX...	2
112403-175		IMAGPATIENT1201,1201	I1201	4-Rout	CT THORAX W/CONT	11/25/2003@09:43	EX...	66
112403-179		IMAGPATIENT1202,1202	I1202	4-Rout	CHEST 2 VIEWS PA&LAT	11/25/2003@10:30	EX...	2
112403-180		IMAGPATIENT1203,1203	I1203	4-Rout	SHOULDER 2 OR MORE ...	11/25/2003@10:40	EX...	6
112403-181		IMAGPATIENT1203,1203	I1203	4-Rout	MAGNETIC IMAGE,UPPER...	11/25/2003@10:53	EX...	93
112403-183		IMAGPATIENT1204,1204	I1204	4-Rout	ABDOMEN 3 OR MORE VL...	11/25/2003@11:08	EX...	4
112403-182		IMAGPATIENT1204,1204	I1204	4-Rout	CHEST 2 VIEWS PA&LAT	11/25/2003@11:19	EX...	2
112403-184		IMAGPATIENT1204,1204	I1204	4-Rout	CT ABDOMEN W/CONT	11/25/2003@11:27	EX...	113
112403-188		IMAGPATIENT1205,1205	I1205	4-Rout	CT THORAX W/CONT	11/25/2003@11:38	EX...	27

Case #	Lock	Patient	Procedure	Load Status	HP Selected
092602-123	LOCKED	IMAGPATIENT1011,1011	CT ABDOMEN W/CONT	Displayed	CT Thorax_2-hd_SY
011401-91		IMAGPATIENT1011,1011	CT ABDOMEN W&&W/O CONT	Displayed	CT Thorax_2-hd_SY
011401-92		IMAGPATIENT1011,1011	CT ABDOMEN W&&W/O CONT	Displayed	CT Thorax_2-hd_SY

Exam lists, which are used to organize exams into manageable groups, are displayed as a row of tabs near the top of the Manager window. Many sites use customized exam lists to create specific groupings of exams. These lists, if available, can be viewed by clicking the Custom tab.

You can use the settings under **View | Settings | Manager | General** to show or hide exam lists. Some lists, such as the Unread Exams list, cannot be hidden.

## Exam Locks and Exam Reserves

In VistARad, locks and reserves are used to prevent two radiologists from interpreting the same exam.

The screenshot shows the 'Unread Exams' tab selected. The table below shows a list of unread exams. A callout points to the 'Lock' column, highlighting a 'Locked exam'. Another callout points to the 'Priority' column, highlighting a 'Reserved exam'.

Case #	Lock	Patient Name	ID #	Priority
020602-98	IP8	IMAGPATIENT1011,1011	I1011	2-Urg
061390-8	IP8:R	IMAGPATIENT1009,1009	I1009	4-Rout
052098-15		IMAGPATIENT1009,1009	I1009	4-Rout
052198-16		IMAGPATIENT1009,1009	I1009	4-Rout

Unless locks are explicitly disabled, 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 lock is removed, and the exam can be locked and interpreted by a different radiologist.

Exam reserves are a ‘pre-lock’ 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 details about ReadList, see page 6.

## Opening Exams

The following sections explain two of the most frequently-used methods used to open an exam. For additional methods, see the *VistARad User Guide*.

### Opening an Exam I

Use these steps to open an exam and to automatically select a hanging protocol. (Hanging protocols are described on page 24.)

- 1 Display the Manager window by clicking  in the Viewer toolbar.
- 2 In the Manager window, click the **Unread Exams** tab.
  - To open the selected exam in the list, click **Open** or press <ENTER>.
  - To open any exam in the list, select the exam you want to open, then double-click the exam, or click **Open**.
- 3 As the exam opens and images are loaded, additional prompts or windows may display:
  - Usually, the exam’s requisition will display automatically.
  - If more than one matching hanging protocol is found, you will be asked to select which hanging protocol you want to use. For details, see page 25.
  - If VistARad’s voice dictation interface is enabled, the exam’s report will automatically open for dictation. For details, see page 28.
  - If the exam being opened is locked, and if not all image sets are loaded in the Viewer window, the Preview window will display. For details, see page 10.

## Opening an Exam II

Use these steps to open an exam using a manually selected hanging protocol. (Hanging protocols are described on page [24](#).)

- 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 check box 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.
  - Hanging protocols are grouped under each username, and a default collection is available under the 'sysAdmin' group.
  - The viewport arrangement of the selected hanging protocol is shown in the Preview area near the bottom of the dialog.
- 7 Select the hanging protocol or template you want to use, and click **OK**.
- 8 As the exam opens and images are loaded, additional prompts or windows may display:
  - Usually, the exam's requisition will display automatically.
  - If VistARad's voice dictation interface is enabled, the exam's report will automatically open for dictation. For details, see page [28](#).
  - If the exam being opened is locked, and if not all image sets are loaded in the Viewer window, the Preview window will display. For details, see page [10](#).

## Using ReadList

ReadList lets you successively display all unread exams in an exam list. When ReadList is active, you can step from one unread exam to the next in a single step, 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 matches, you will be prompted to select the hanging protocol you want to use. For details, see page 25.
  - 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.

Exams in Viewer (current exam and one prior).

Exams loaded in memory (current exam and three priors). These exams will be displayed as soon as preceding exam is closed.

Open/Reserved Exams				
Case #	Lock	Patient	Procedure	Load Stat
112403-222	LOCKED	IMAGPATIENT408,408	CT ABDOMEN W/CONT	Displayec
112403-221		IMAGPATIENT408,408	CT ABDOMEN W/CONT	Displayec
112403-220	RESERVED	IMAGPATIENT1208,1208	CHEST SINGLE VIEW	Loaded
112403-219		IMAGPATIENT1208,1208	CHEST SINGLE VIEW	Loaded
112403-218		IMAGPATIENT1208,1208	CHEST SINGLE VIEW	Loaded
112403-217		IMAGPATIENT1208,1208	CHEST 2 VIEWS PA&&L...	Loaded

**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, do the following:

- 1 If VistARad has been integrated with a voice dictation system, and if you have a report open in that system, save or sign the report.
- 2 In VistARad, press <CTRL + N>, click **Next** in the Manager, or click  in the Viewer toolbar. The Close/Update dialog will open.
- 3 Set the values in the Close/Update dialog as desired. For details, see page [23](#).
- 4 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 list.
  - 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 only visible 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.

## Working with Routed Exams

If your workstation is set up for remote reading, you can use VistARad to interpret copies of exams routed to you from other sites. Working with a routed exam that is temporarily stored on your workstation is much faster than retrieving that exam from the originating site.

When you log into a site to read exams from a remote location, the Manager window displays the **Remote Read Filter** button and the **RC** column to indicate that routed exams may be present.

Select to show only exams routed to you; clear to show all exams.

A value here indicates the exam is routed

Case #	Lock	Patient Name	ID #	Priority	Procedure	Image Date/Time	Status	# Img	Onl	RC	Mod
040600-28		IMAGPATIENT1011...	I1011	4-Rout	CHEST SINGLE VIEW	08/01/2000@10:58	EXAMIN	1	Y		CR
092602-123		IMAGPATIENT1011...	I1011	4-Rout	CT ABDOMEN W/CONT	09/26/2002@18:03	EXAMIN	112	Y		CT
112403-176		IMAGPATIENT1201...	I1201	4-Rout	CHEST 2 VIEWS PA&LAT	11/24/2003@17:07	EXAMIN	2	Y	Route1	CR
112403-176		IMAGPATIENT1201...	I1201	4-Rout	CT THORAX W/CONT	11/25/2003@09:43	EXAMIN	66	Y	Route1	CT
112403-179		IMAGPATIENT1202...	I1202	4-Rout	CHEST 2 VIEWS PA&LAT	11/25/2003@10:30	EXAMIN	2	Y		CR
112403-180		IMAGPATIENT1203...	I1203	4-Rout	SHOULDER 2 OR MORE ...	11/25/2003@10:40	EXAMIN	6	Y		CR
112403-181		IMAGPATIENT1203...	I1203	4-Rout	MAGNETIC IMAGE,UPPE...	11/25/2003@10:53	EXAMIN	93	Y		MR
112403-183		IMAGPATIENT1204...	I1204	4-Rout	ABDOMEN 3 OR MORE ...	11/25/2003@11:08	EXAMIN	4	Y		CR
112403-182		IMAGPATIENT1204...	I1204	4-Rout	CHEST 2 VIEWS PA&LAT	11/25/2003@11:19	EXAMIN	2	Y		CR
112403-184		IMAGPATIENT1204...	I1204	4-Rout	CT ABDOMEN W/CONT	11/25/2003@11:27	EXAMIN	113	Y		CT

The process to open and interpret a routed exam is the same process used for non-routed exams. For information about opening exams, see page 5.

Certain settings control how VistARad manages prior exams and ReadList functions when routed exams are present. To review these settings, click **View | Settings** and select the **Remote/Local Reading** tab.

A VistARad workstation can also be set up to route exams on-demand. For details, see the *VistARad User Guide* or the *Routing User Guide*.

# Surveying Exams

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## How VistARad Displays Exams

Once an exam has been opened using the Manager, images are generally loaded into the Preview and Viewer windows. Images can also be manually loaded into the Browser window.

### The Preview Window

The Preview window uses ‘thumbnail’ images to present a summary view of exams that are currently open. If the Preview window is not visible, it can be displayed by clicking  in the toolbar near the top of the screen.

Each thumbnail image in the Preview window represents an *image set* of one or more related images. The number of images in each image set is displayed in a title bar over the thumbnail.

The Preview window tracks the display state of each image set in an open exam.

- If an  icon is displayed in the thumbnail, the associated image set is loaded and visible in the Viewer or the Browser.
- If an **H** icon is displayed in the thumbnail, the images are loaded into the Viewer window but are hidden. For details, see page [12](#).
- If no icon is displayed in the thumbnail, the associated image set must be loaded manually.

#### *To load an image set manually*

Drag the appropriate thumbnail from the Preview window into an open area (viewport) in the Viewer window. You can also double-click the thumbnail to display the entire exam in the Browser window.

### The Viewer Window

The Viewer window occupies most of the display space on a VistARad workstation, and is the primary workspace for exam interpretation. The Viewer window contains one or more *viewports* where images can be manipulated. Viewports are described on page [11](#).

Depending on how the exam is opened, the Viewer window may not display the entire exam. To determine which images in an exam have been displayed, use the Preview window. For details, see [above](#).

## The Browser Window

The Browser window provides a flexible work area for exams that do not lend themselves to display with a hanging protocol. To load an open exam into the Browser window, go to the Preview window and double-click any thumbnail image from that exam.

The Browser will display automatically when images are loaded into it from the Preview window. It can also be displayed (if loaded) by clicking  (the same button used to open the Preview window).

Like the Viewer, the Browser window contains one or more *viewports* where images can be manipulated. Viewports are described below.

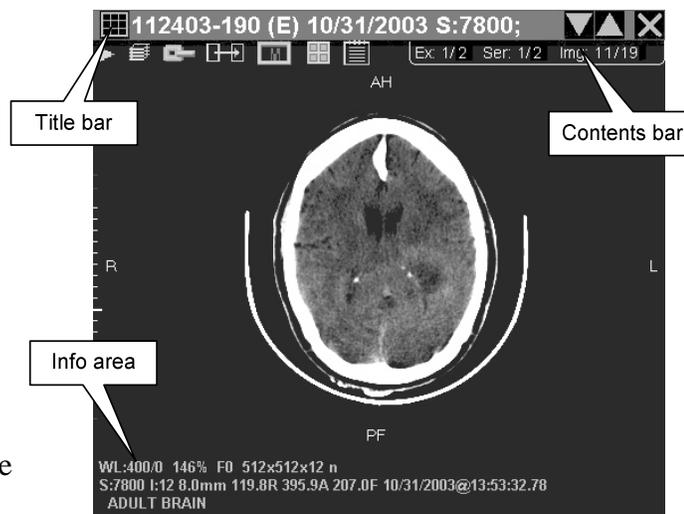
## Images and Viewports

The Viewer, Browser, and other image-oriented windows are made up of one or more *viewports*. A viewport can contain one or more exams, part of an exam (such as a series), or a single image.

The viewport title bar displays the case number, exam status<sup>1</sup>, exam date, and series ID for the images in the viewport.

The viewport contents bar displays the number of images, series or sequences, and exams in the viewport.

The viewport info area displays information about the active image in the viewport.

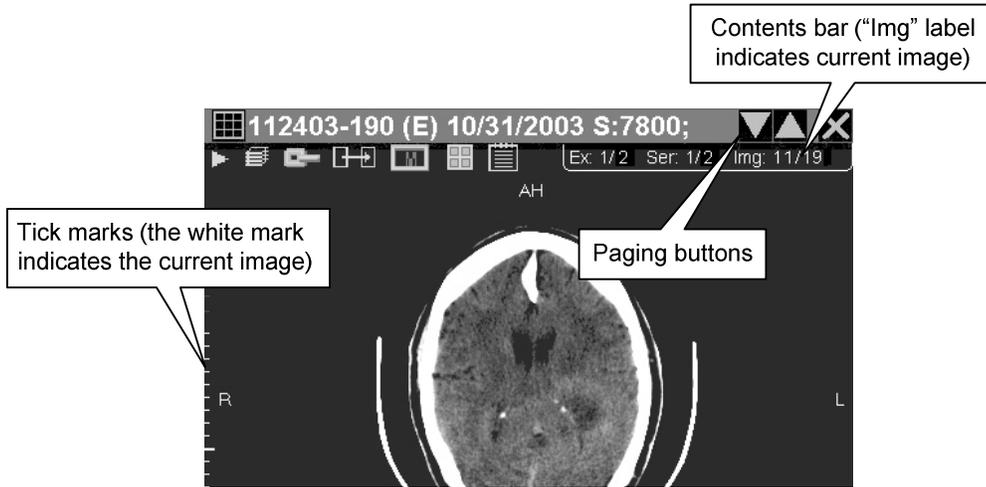


If there are multiple images in a viewport, the active layout dictates if images are displayed 1-up (stacked) or in one or more rows and columns (tiled). In the Viewer and the Browser windows, the layout of each viewport can be changed independently. For details, see page 17.

<sup>1</sup> E = examined, I = interpreted, C = complete.

## Navigating in Viewports

In a viewport, the Contents bar and tick marks indicate if there are multiple images present, and indicate your relative position in the group of images.

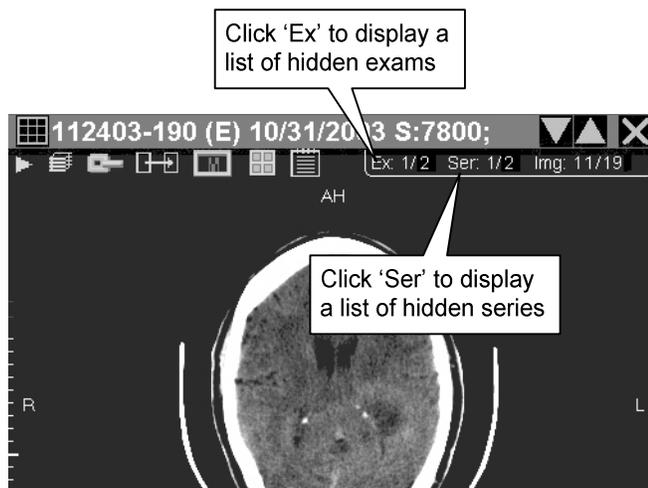


In a viewport that contains multiple images, you can do any of the following to display each image:

- Roll your mouse's scroll wheel up or down while pointing to the viewport to step through images one at a time.
- Drag up and down using the scroll wheel (or middle mouse button) to scroll rapidly.
- Click the paging buttons located near the top of the viewport. A 'page' is based on the current layout (number of visible images) in the viewport.

If a viewport contains multiple exams or multiple series, only one exam/series can be active at once. Other exams or series are considered hidden. The Contents bar indicates if hidden exams or series are present.

To display a hidden exam or series, click on the **Ex** or **Ser** label on the Contents bar. Then click the item you want to display.



## Navigating with Scouts

Scout (localizer) images, if present, are automatically loaded into the Scout Image window when an exam is opened. The Scout Image window can be displayed by clicking  in the toolbar near the top of the screen.

Scout images display slice lines that indicate the first, last, and selected image in the associated series. Clicking anywhere between the first and last slice lines will display the intersecting image in the associated series (if that series is loaded into a viewport).

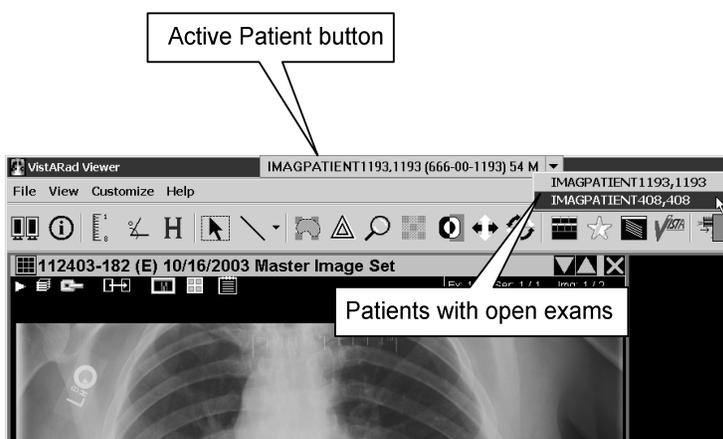
Scout images may also be loaded into a viewport in the Viewer window depending on the hanging protocol being used.

In the Viewer window, you can generate your own 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**. The scout image will be added to the Scout window.

## Navigating between Patients

Except for the Manager, all VistARad windows are designed to display information for only one patient at a time. When exams for multiple patients are open, only exams related to the active patient are visible.

All image-related windows include the **Active Patient** button in their title bars. The **Active Patient** 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 and use a drop-down list to switch between each patient's exams. Switching to a different patient will update all windows in VistARad.

# Working with Images

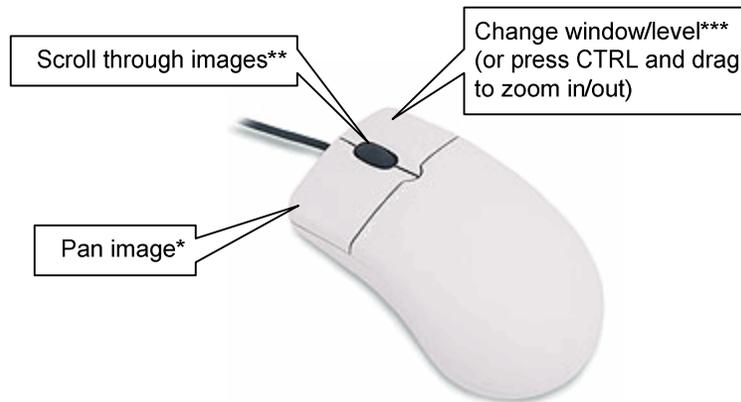
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## Adjusting Images

The most commonly used tools (pan, scale, window/level) are always assigned to specific buttons on your mouse. You can also temporarily assign any of the standard manipulation tools to the left button of your mouse.

### Using Built-In Pan, Scale, and Window/Level

- 1 Point to the image you want to change.
- 2 Click the appropriate mouse button and drag the mouse.



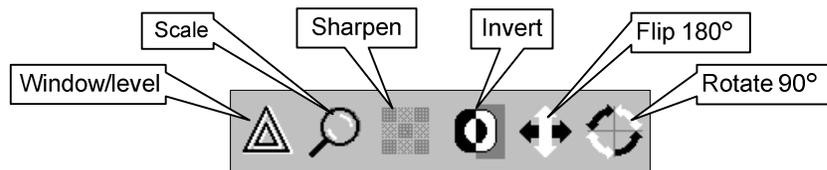
\* Pan is the default operation, and is active when the mouse pointer looks like . See the next section for details.

\*\* Scrolling is used for viewports that contain more than one image. See page 12 for more details.

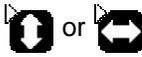
\*\*\* Window/level is the default operation. Settings for the right mouse button can be changed using the options under **View | Settings | Mouse**.

### Using Image Manipulation Tools

- 1 Go to the toolbar at the top of the window and click one of the following tools. You can also right-click an image and use the shortcut menu.



- Point to the image you want to work with. The mouse pointer will change showing the 'active area' where the tool can be used.
- Depending on which tool you have selected, do one of the following:

Tool	Pointer	Point to image, then...
Window/level		Drag up or down to change window; drag left or right to change level.
Zoom in/out		Drag up or left to increase zoom; drag down or right to decrease zoom.
Scale image to 100%		Turn on scale tool, then click in upper left part of image.
Scale image to fit viewport		Turn on scale tool, then click in upper middle part of image.
Scale image to specific size		Turn on scale tool, then click in upper right part of image. Choose a scale option from the menu that displays.
Sharpen		Drag up or left to sharpen; drag down or right to smooth.
Invert		Click to invert.
Flip		Click on top part of image to flip vertically; click on bottom to flip horizontally.
Rotate		Click on left side of image to rotate 90° counterclockwise; click on right side to rotate 90° clockwise.

- The tool will remain active until it is disabled. You can change other images, select a different tool, or disable the tool by right-clicking once.

### Using Arrow Keys for Precise Control

NEW IN 76 >

When you need to make precise window/level, scale, or sharpen adjustments, you can use the arrow keys.

- In the VistARad Settings dialog (**View | Settings**), go to the Mouse/Shortcut tab and make sure the **Enable arrow keys for image adjustments** check box is checked.
- Turn on the window/level, scale, or sharpen tool (assign this tool to the left mouse button as described in the previous section).

- 3 Drag the mouse to make an initial rough adjustments (this step can be skipped for the Sharpen tool).
- 4 Use the arrow keys as follows to make precision adjustments:

Shortcut	Description
→ or ↑	Increase window/level, scale, or sharpness (coarse)
CTRL + → or CTRL + ↑	Increase window/level or scale (fine)
← or ↓	Decrease window/level, scale, or sharpness (coarse)
CTRL + ← or CTRL + ↓	Decrease window/level or scale (fine)

**Tip** For a complete list of keyboard shortcuts and shortcut-related options, see the VistARad Shortcuts document distributed with Patch 76

### ‘Apply To’ Settings

Usually changes to window/level, scale, etc., affect all images in a viewport. You can change this behavior and make changes affect only the selected image.

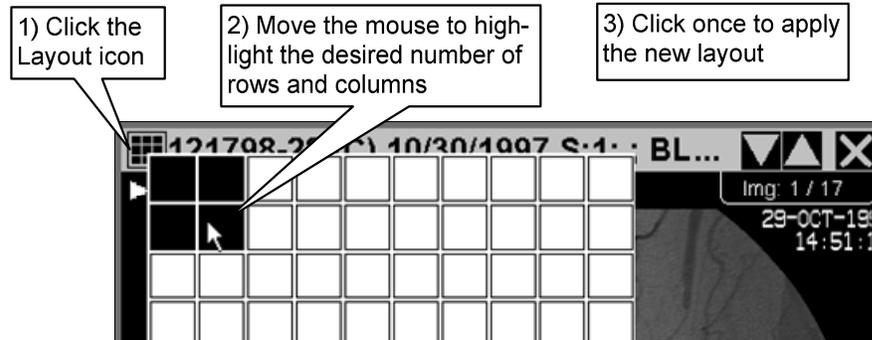
- 1 Click the tool for the property you want to change Apply To settings for:



- 2 In the viewport containing the image you want to change, click the **Apply To** icon.
  - When the **Apply To** icon looks like:  your change will be applied only to the selected image.
  - When the **Apply To** icon looks like:  your change will be applied to the all images in the viewport.
  - You can set the default ‘Apply To’ behavior using the options under **View | Settings | Viewport**. (Note that Apply To settings defined in a hanging protocol will override the settings in this tab.)

## Changing Layout in a Viewport

In a viewport, images can be arranged 1-up (stacked) or in multiple rows and columns (tiled). In the Viewer and Browser windows only, you can change viewport layout as follows:



### Using Full-Screen View

In the Viewer window only, you can double-click an image to expand it to fit the size of the current monitor. While full-screen view is active, you can change the current image (window/level, flip/rotate, etc.), scroll to other images, or use the cine feature.

**NEW IN 76** > If viewport navigation shortcut keys are enabled, you can also press <F> to turn full-screen view on or off. See page 15 for steps to enable shortcut keys.

## Changing Layout in a Window

In the Browser, Scrapbook, and Scout windows, you can change window layout as follows:

- 1 Click  and drag down using the mouse.
- 2 In the box that displays, move the mouse to highlight the rows and columns you want to set the layout to.
- 3 When the desired number of rows and columns are highlighted, click the left mouse button.

**Tip** Click  to switch back and forth between 1-up and the last selected layout.

**Note** In the Viewer window, the arrangement of viewports is dictated by the current hanging protocol and template.

## Manipulating Image Sets

An image set (the active group of images in a viewport) can be moved, or cloned. You can also clear a viewport without closing the associated exam.

### Moving an Image Set

In the Viewer window, you can move any image set to a different viewport by dragging the title bar of one viewport into a different viewport.

- If the target viewport in the Viewer is empty, the images being moved are shifted to the target viewport.
- If the target viewport in the Viewer contains a single image set, your user settings determine if the contents of the two viewports are swapped, or if the images being moved replace the images in the target viewport.<sup>1</sup>
- If the target viewport in the Viewer contains multiple image sets, you cannot move more images into that viewport.

In the Browser window, you can move image sets from one viewport to another by dragging the title bar of the viewport you want to move.

- If the target viewport in the Browser 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).
- If the target viewport in the Browser is occupied, the image being dragged is inserted into the target cell and the pre-existing image set is shifted to the left.

### Cloning an Image Set

In the Viewer window only, you can copy the images in one viewport into another (empty) viewport. The resulting ‘clone’ can be manipulated independently of the source images.

- 1 Point to the title bar at the top of the image set you want to clone.
- 2 Using the right mouse button, drag the images to an empty viewport. A popup menu will display when you complete the drag.
- 3 Click the **Clone** option from the menu that is displayed.

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<sup>1</sup> To set “swap” or “replace” as the default behavior, choose **View | Settings | Viewport** and change the settings in the **Drag and Drop Options** area.

## Removing an Image Set

To remove images from a viewport, click  in the upper right corner of the viewport. Note that even when all viewports are emptied using this method, the exam is still considered open by VistARad.

Images can be re-loaded into viewports using the Preview window.

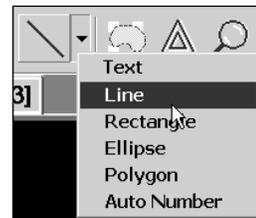
## Annotations & Measurements

You can add annotations and measurements to images displayed in the Viewer, Browser, or Scrapbook windows. If the exam is locked, annotations and measurements are saved automatically when the exam is closed. Once the exam has been interpreted, annotations and measurements added to the exam cannot be changed (they can be temporarily hidden if desired). If the exam is not locked, annotations are discarded when the exam is closed.

### Annotating Images

- 1 Display the image you want to annotate.
- 2 Locate the Annotation button in the toolbar. This button initially looks like , but after it is used, it will reflect whatever 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:

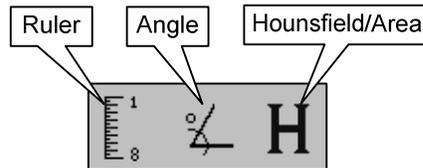
Tool	Steps	Pointer
Auto Number	In the Auto number dialog that displays, click the buttons that correspond to the numbering style and starting point you want to use. Then click and drag on the image to define a small area that indicates where each number will be placed.	varies
Ellipse	Click, then drag. Complete the drag when the shape is the desired size.	
Label (text)	Drag to create the text box, then enter the text.	

Tool	Steps	Pointer
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.	

- The tool will remain active until it is disabled. You can add additional annotations, select a different tool, or right-click once to disable the tool.

### Measuring Image Features

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



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

Measure	Pointer	Point to image, then...
Length		Click to set the start point of the line, drag the mouse, and release the mouse button when the line is the desired length.
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. Release the mouse button when the area is the desired size.

- The tool will remain active until it is disabled. You can add additional measurements, select a different tool, or right-click once to disable the tool.

### Hiding or Deleting Annotations and Measurements

To hide or delete an annotation or measurement, right-click the annotation or measurement, then click the appropriate shortcut menu option.

# Key Images & the Scrapbook

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A *key image* is an image that a radiologist has marked as being pertinent to an exam's interpretation. A key image includes any annotations and display settings (such as window/level) made to the image by the interpreting radiologist.

If an open exam contains key images, they are automatically loaded into the Scrapbook window. If the Scrapbook is not visible, it can be shown by clicking  in the toolbar near the top of the screen.

## Marking Images

Marking an image creates an independent copy of the that image in the Scrapbook window.

- 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  icon.
- 4 Continue marking images, or, if you want to work with the image immediately, click  to display the Scrapbook window.

## Working with Images in the Scrapbook

Images in the Scrapbook window can be manipulated and annotated as desired.

- If the exam in question is locked, changes to images in the Scrapbook are saved when the exam is closed, and when the exam's status is updated, images in the Scrapbook become key images.
- If the exam is not locked, changes to the contents Scrapbook are discarded when the exam is closed.

## Unmarking Images

To unmark an image and remove it from the Scrapbook, locate the marked image in the Scrapbook and click , or locate the marked image in the Viewer and click .

- If the exam in question is locked in your name, the key image is also permanently deleted (the source image is not affected).
- If the exam is not locked, the key image is retained and will be displayed in the Scrapbook the next time the exam is opened.

# Reviewing Online Records

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VistARad is typically configured to open requisitions automatically when an exam is opened. You can open other records such as reports or health summaries as well.

## Displaying Records

To display a requisition or report for an open exam, click  in an occupied viewport. The requisition will display if the exam is unread. The report will display if the exam has been completed. You can also click, then drag down on the  icon to select either the requisition or the report.

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.

## Working with Health Summaries

The **Health Summary** button is used to access health summary reports.

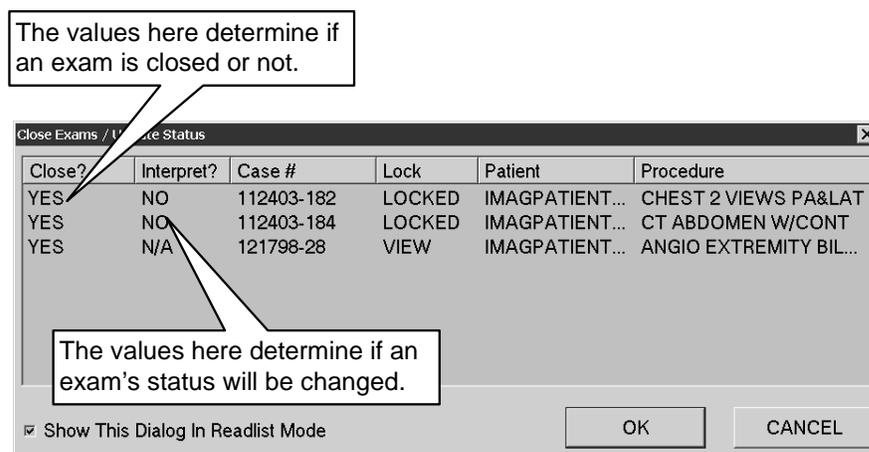
- If the button includes an asterisk: , clicking the button will open the report you have designated as the default health summary report. Clicking the arrow on the right side of the button will open the Health Summary window.
- If the button looks like this: , there is no default health summary defined, and clicking the button will open the Health Summary window.

The Health Summary window lists any health summary reports that have been selected as preferred reports by the current user.

- To display one of these reports, select the name of the report and click **View**.
- To view a list of all available health summary reports, click **Show Preferences**.
- To edit the user-specific list of preferred reports, click **Show Preferences**, then use the **Add** and **Remove** buttons.
- To select a default report, click Show Preferences, select a report, then click **Set Default**. After this is done, clicking the **Health Summary** button in the Manager will immediately open that report.

## Closing Exams

- 1 If VistARad has been integrated with a voice dictation system, and if you have a report open in that system, save or sign the report.
- 2 In VistARad, do one of the following to open the Close Exams / Update Status dialog:
  - Press <CTRL+Q>.
  - Click the  button in the Viewer, Browser, or Scrapbook window.
  - Click **Close Exams** in the Manager window.
- 3 If the exam being closed is locked, and if that exam contains images that have not been viewed,<sup>1</sup> a warning message will display.
  - Click **Continue** to close the exam without displaying all images.
  - Click **Cancel Exam Close** to go back to reviewing images.
- 4 For each exam listed in the dialog, note the values in the **Close?** and **Interpret?** columns.



- 5 For each exam, click the Yes/No values to set them as desired. (Values of N/A cannot be changed.)
- 6 Click **OK** to close one or more exams. When an exam is closed, all images are removed from all windows in VistARad. If **Interpret?** was set to **YES** for a listed exam, that exam's status is updated to indicate that it has been read.

<sup>1</sup> An image set is considered "viewed" if it has been loaded into a viewport and has been "on top" (non-hidden) at some point in the current exam display session.

# Hanging Protocols & Templates

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This section provides an overview of hanging protocols and templates, and the settings that affect how they are applied.

## Template & Hanging Protocol Basics

A template is a specific arrangement of viewports in the VistARad Viewer window. Templates are selected automatically when a hanging protocol is applied to an exam being opened. For more information about using templates, refer to the *VistARad User Guide*.

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 code (procedure), modality type, or both.

You can also select a hanging protocol manually before opening an exam. For details, see page 6.

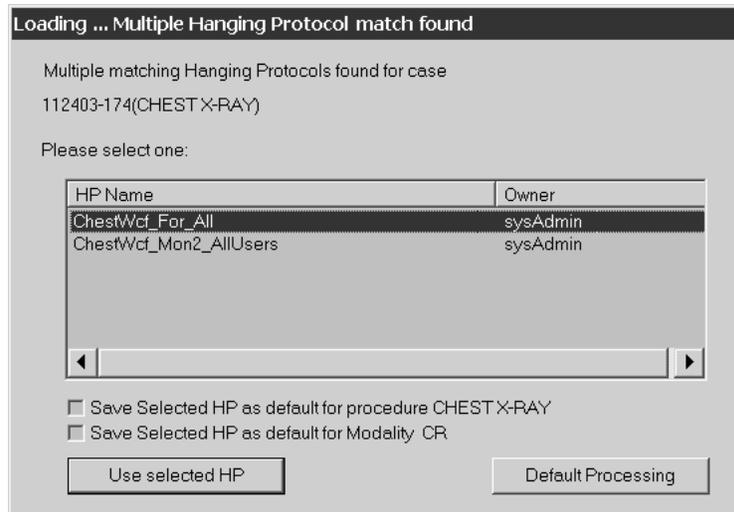
## Basic Hanging Protocol Settings

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

- Allow or prevent automatic display of priors and related exams for unread exams. There is a similar setting for completed exams.
- Have VistARad notify you if there is a more recent unread exam for a patient than the one you select for display. 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 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 use default processing (see below).

You can also use one of the **Save...** check boxes in the dialog to make the selected hanging protocol the only hanging protocol used for the current type of exam or modality. (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 Multiple Hanging Protocol Match dialog.

When default processing is used for an exam:

- Images are loaded in the Preview window and a viewport arrangement (template) is selected in the Viewer.
- No images are loaded into viewports. You can use the Preview window to manually load images into viewports. For details, see page 9.

For details about hanging protocol selection logic and hanging protocols in general, refer to the *VistARad User Guide*.

# VistARad and Voxar 3D

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NEW IN 76 >

Voxar 3D Workstation is a third-party application used to display volumetric images. Voxar and VistARad can be installed and used on the same workstation. When both applications are properly configured, part or all of an exam in VistARad can be opened in Voxar in a single step.

**Note** It is assumed that the VistARad/Voxar interface has been properly configured, and that the proper version of Voxar is present on the VistARad workstation. For details about configuration, refer to the Patch 76 Patch description.

With the proper configuration and security keys, users can also save an image capture to the VistA system (Patch 54 required).

## Loading Images from VistARad into Voxar

- 1 In VistARad, open an exam and display the images of interest.
- 2 Right-click the images you want to load into Voxar, and:
  - Choose **View 3D** to load the image set into Voxar.
  - Choose **View 3D all series** to load the exam into Voxar.
- 3 The Voxar software will start automatically and the images will load into the Voxar Reading Manager window.
- 4 Manipulate the images as desired in Voxar.

**Tip** Depending on which security keys you have, you may be able to export, print, or copy images from the Voxar application. See the Patch 76 description and Voxar user documentation for details.

**Note** The **Finish and Archive** button will appear to be enabled even when it is not functional. This button only functions if the ability to save images to VistA has been configured. See the Patch 76 description for details.

- 5 When you are finished, click **Discard and Finish** in the Voxar Reading Manager.

## Saving a Voxar Capture to VistA as a New Series

**Note** This feature is only available if Patch 54 is installed and if both VistARad and the DICOM Gateway are properly configured.

**Note** This feature is only enabled for users that hold the MAGJ STORE 3D IMAGES security key.

Before using the following steps, contact your Imaging Coordinator to verify that this feature is available.

- 1 Load images into Voxar from VistARad, and generate the views you want to save.
- 2 When you have created the desired view in Voxar, click **Capture** (located in the lower right corner), then click the view to be captured.
- 3 In the Voxar Reading Manager window, click the Report tab. Then click the thumbnail representing the image you want to save.
- 4 Click **Finish and Archive**. The Voxar windows will close.
- 5 Close and reopen the exam in VistARad. The new image will be available as a separate series.
- 6 After the captured image has been processed by the DICOM Gateway, it will be added to the exam as a single-image series. To view the new series, close and re-open the applicable exam in VistARad.

# VistARad and Voice Dictation

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## About the VistARad Dictation Interface

The VistARad dictation interface lets VistARad communicate with Talk or PowerScribe voice dictation software. Voice dictation software may be installed on the same workstation as VistARad, or on a separate workstation.

If the dictation interface is enabled and properly set up, opening and locking an exam for interpretation in VistARad will trigger the opening of the exam's report in the dictation software. You can begin dictating a report without having to manually select it ahead of time.



When the VistARad dictation interface is being used, it is the user's responsibility to verify that the proper login is being used to access reports, that the report opened for dictation is the appropriate report, and that report is handled appropriately once dictation is complete.

For information on setting up the VistARad dictation interface, see chapter 3 in the *Clinical Imaging Installation Guide*.

## Opening Exams and Reports for Dictation

### Before you Begin

- 1 Log into your voice dictation software (this may be on the same workstation as VistARad, or on a separate workstation).
- 2 Log into VistARad.

If you start the dictation software after logging into VistARad, you will need to start the dictation interface manually. To do this, click **Dictation | Establish Dictation Connection** in the Manager main menu.

### Opening an Exam and Report for Dictation

- 1 While the dictation interface is active, use the Manager to open an unread exam or to start ReadList.

**Note** If another report is already open, be sure to save or sign that report before opening additional exams for interpretation.

- 2 As the exam is being opened, the Dictation dialog will display. In the **Dictate?** column, click the YES/NO value to set it as desired.

- Choose YES if you want VistARad to send the case ID to the dictation software (which in turn triggers the display of the associated report).
- Choose NO if you want to open the exam without opening the associated report.

**Warning** Do not set **Dictate?** to YES for multiple exams unless your Imaging Coordinator has verified that the dictation software can handle multiple case IDs.

- 3 Click **OK**. The dictation software will open the report for the exam.

**Note** When you go to close an exam that is locked and has a report open for dictation, the value for **Interpret?** in the Close/Update dialog will default to YES. This is based on a user preference in the Manger | General tab in the VistARad settings dialog (**View | Settings**).

### **Opening a Report (only) for Dictation**

To open a report in your dictation software via VistARad's dictation interface, right click any exam in an exam list, then click **Dictate**. Note that:

- This will not open or lock the exam. The exam itself can be opened by selecting it and clicking **Open**.
- You will not be asked to confirm the operation (the Dictation dialog will not display).
- This can be used for any exam, regardless of the exam's status.