11 Using the Canvas Page

11.1 Introduction to the Canvas Page

The Canvas Page displays patient exams and provides quick access to diagnostic images and series, diagnostic reports and exam notes, patient information, and diagnostic reading workflow. You use the Canvas Page to get contextual, historical information about the patient.

You can reposition an image by selecting its information bar, dragging and dropping it to the desired location. Each exam has its own horizontal scrollbar that you can use to pan through the images and series in that exam. You can use the vertical scrollbar at the right side of the screen to view the selected exams if there are more than can fit on the screen.

WARNING

- *Make sure you label the left and right sides of an image correctly to prevent incorrect patient orientation and the possibility of misdiagnosis.*
- *Make sure you follow industry best practices for correct patient orientation.*
- *Make sure the images were acquired correctly at the modality before using them for diagnosis.*
- *Make sure you validate third party software to ensure that it is using the correct information from the outside source. In addition, proper validation of third party software must be done to ensure that it is using standard DICOM tags. Images that are submitted with a different pixel spacing tag than what IntelliSpace PACS uses (0018,1164) to perform measurements on projection radiography images could lead to incorrect measurement readings, thus leading to misdiagnosis and treatment planning.*

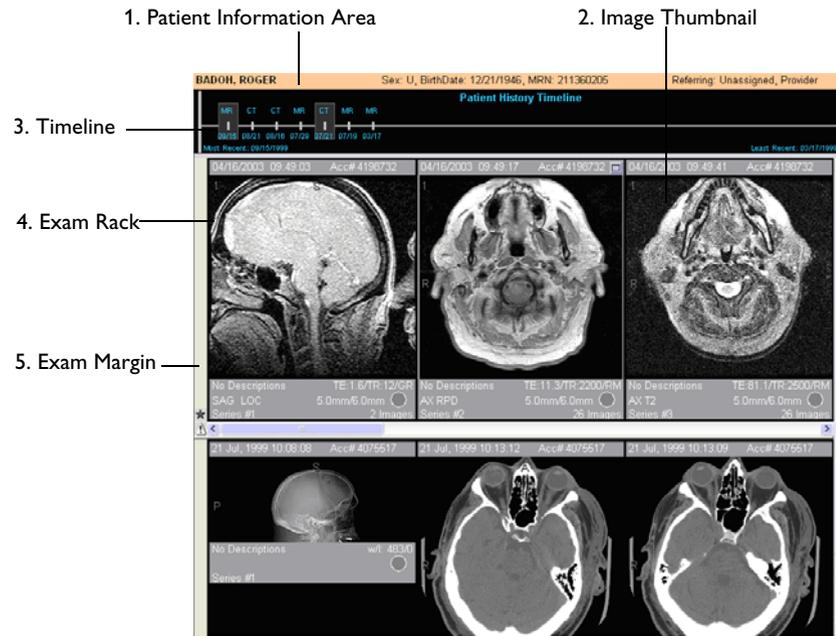The IntelliSpace Enterprise Canvas Page displays the following:

1. Patient Information Area

2. Image Thumbnail

3. Timeline

4. Exam Rack

5. Exam Margin

Figure 11.1   IntelliSpace PACS Enterprise Canvas Page

1. Patient Information Area: Displays general information about the patient whose exams you are viewing, including the patient's name, sex, date of birth, MRN, and referring physician. It also displays a Patient Class entry, which designates the type of patient, typically Inpatient (I), Outpatient (O), Emergency (E), and so forth. This information comes from the HIS/RIS.

2. Image Thumbnail: Displays thumbnail images and/or image series of an exam. Each image or series has an information bar below it. Double-clicking a thumbnail image or series opens an image popup window. Right-clicking a thumbnail image displays a menu with various options. See 'Using Image Popup Windows' (see page 204) and 'Using Thumbnail Images' (see page 202).

3. Patient History Timeline: Displays a chronological listing of all of the patient's exams on the IntelliSpace PACS server. See 'Using the Patient History Timeline' (see page 193).

4. Exam Rack: A horizontal or vertical display of the thumbnail images for the exam.

5. Exam Margin: Displays various icons if they are available for the image. Right-clicking in the Exam Margin displays a menu with various options. See 'Using the Exam Margin' (see page 199).
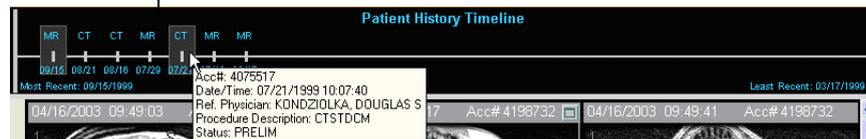
11.2   Using the Patient History Timeline

The **Patient History Timeline** is a fast and intuitive way to view and navigate through a patient's clinical history of diagnostic exams and reports. Exams on the IntelliSpace PACS server are listed chronologically, with the most recent exam dates displayed on the left and the older exam dates displayed on the right.

Exams loaded in Exam Rack have gray background
Exams with no reports are displayed in green; exams with reports are displayed in blue
Years are separated with dashed vertical lines

Exam info displayed when you hover mouse over exam in Timeline

Figure 11.2   IntelliSpace PACS Enterprise Patient History Timeline

For each exam, there is an icon (small square box) displayed in the timeline that displays, from top to bottom:

- Modality type
- First four characters of the body part (from the dictionary)
- Either a straight line, an "A" or an "X." A straight line indicates that there are images and the exam status is Scheduled, or the conditions for displaying an "A" have not been not met. An "A" indicates that the exam

may exist on a separate archive. An "X" indicates that an exam exists but images are not available. Blue text indicates that a report should be available.

- Date (month/day)

If you click on an exam in the Patient History Timeline that displays an "X" and does not have a Scheduled status, the **iQuery** dialog box displays under the following conditions to initiate a DICOM query from another DICOM device:

- iQuery is configured
- You have the proper privileges to run iQuery
- There is at least one DICOM QRP Source configured.

Otherwise, the exam does not load and no action is performed when you click on the exam in the timeline.

Exams that are present in your institution's archive but are not loaded on the IntelliSpace PACS Server are displayed with an "**A**" under the following conditions:

- The exam date and time is older than 48 hours
- The system preference **Allow DICOM Query to Display in Timeline** is enabled
- iQuery has been configured with at least one DICOM QRP source
- The IntelliSpace PACS user has iQuery access privileges
- The exam has no images and the exam status is neither Scheduled nor Non-Reportable.

Left-clicking on an exam in the Patient History Timeline displays that exam in the Exam Rack. Right-clicking on an exam in the Patient History Timeline displays a menu with the following options, depending on the exam:

- **Open/Close Exam**: See 'Opening or Closing an Exam' (see page 199)
- **Add Exam to Folder**: See 'Adding Exams to Folders' (see page 55)

- **Show Report**: See 'Displaying and Printing the Current Report' (see page 145)
- **View Exam Notes**: See 'Viewing Exam Notes' (see page 133)
- **Export via DICOM**: See 'iExport for DICOM Export' (see page 297)
- **Cache Exam**: See 'Local Exam Caching' (see page 123)

11.2.1   Federation and the Patient History Timeline

When viewing the Patient History Timeline, there are some differences when remote (Federation) exams are displayed.

Figure 11.3   View of the Patient History Timeline with remote exams displayed
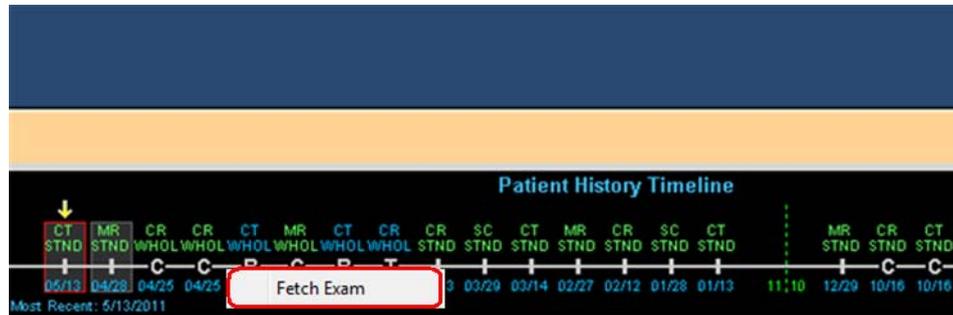
Remote exams are displayed on the timeline with an initial C, R, or T below the exam. These initials specify the state the exam is in as follows:

- **C:** the remote exam is already cached locally
- **R:** a remote exam has been identified in the federation
- **T:** exam is in the process of being transferred from the federation to the local cache

In addition, when the **F** icon in the Control Strip is amber (one or more remote locations missing), an **X** appears in the far right of the Patient History Timeline to indicate that the timeline may be incomplete because one or more remote locations are missing.

If an exam is present local (either cached locally or in a local PACS), the modality and body part displays on the timeline as green, while remote exams that are either still remote or are in the process of transferring display as blue on the timeline.

If you right-click a remote exam (displaying the **R** marker) on the Patient History Timeline, Fetch Exams displays.

Click **Fetch Exams** and the transfer process for the remote exam begins, displaying the **T** marker in the timeline, as the exam is being transferred. Once the exam has transferred and has been cached locally (displays the **C** marker in the timeline), you can click the exam and open it in the Canvas Page.

In addition, a new icon displays in the exam margin to show that the remote exam is cached, and the exam information text and background color is changed (dark blue and gray, respectively.
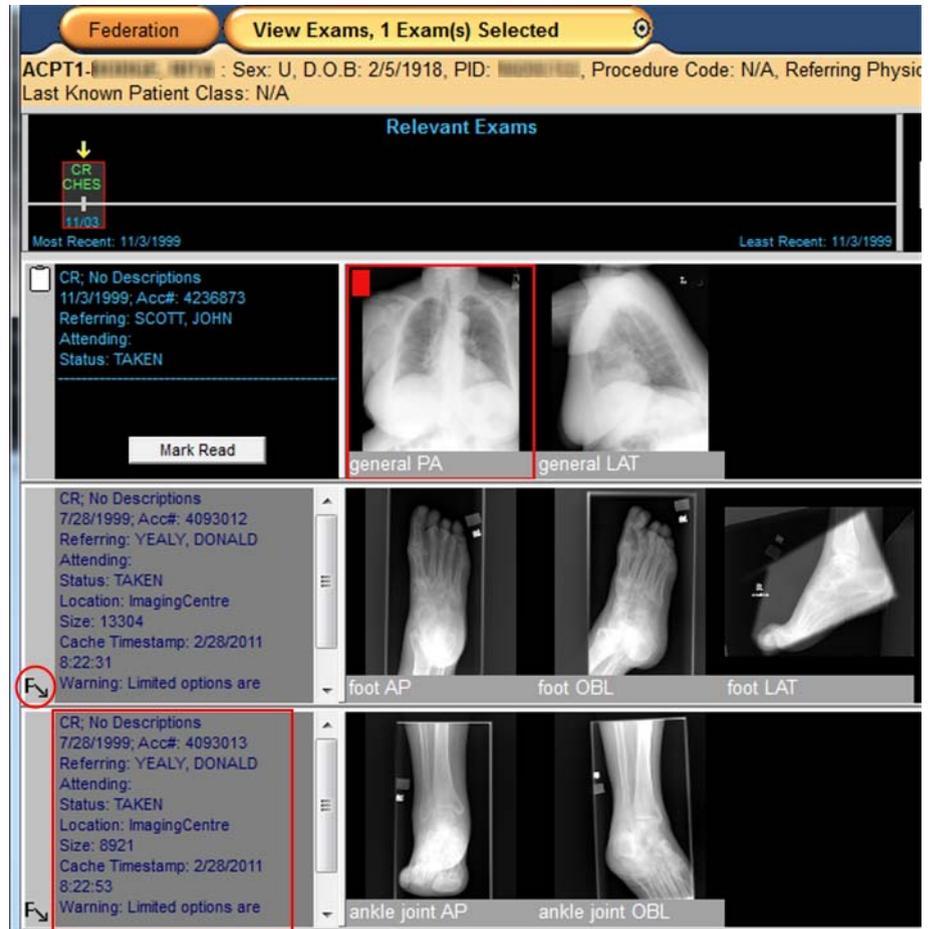

Figure 11.4   View of Exam Margin showing remote exam icon (circled) and the changed exam information text and background

Besides the different colors of the text and background, there are other changes for cached exams:

- The exam information summary displays the name of the remote location, the size of the exam (in KB), the timestamp of the cached exam, and a warning "Limited options are available for remote exams."

- You have limited access to the HL7 information displayed in the exam information summary.

- Cached exams can only be opened as a prior and not opened as a main exam, which means they cannot be marked read.

- You cannot view the Clinical Information dialog for cached exams, so you cannot view the Exam notes for a cached exam.

- Diagnostic reports for remote/cached exams show only the text of the report, and not the other tabs normally displayed in the Clinical Information dialog.

- You cannot create a conference presentation state for the main exam while the cached exam is open.

- Right-click options for a cached exam are limited. You can load an existing presentation state, but you cannot

    - create/edit/save a new presentation state

    - assign a new SUID

    - export DICOM

11.3 Accessing Exams that are not on the IntelliSpace PACS Server

- Double-click an exam with an "**A**" in the timeline. IntelliSpace PACS queries the available archives to retrieve the exam in question. An empty exam rack loads in the Canvas Page while the exam is being retrieved. The **Modality**, **Accession Number**, **Referring Physician**, and **Status** are displayed, as well as an estimate of how much time remains before the exam is retrieved and a display of the images being requested. Click **Cancel** to stop the archive retrieval.

11.4   Opening or Closing an Exam

You can have up to 30 exams open at a time. If IntelliSpace PACS cannot open an exam because of low memory usage, a message is displayed indicating that the exam cannot be opened. Also, if an exam in a prior Exam Rack cannot open because of low memory, a memory error is displayed on the Exam Rack with a **Retry/Close** button. This allows you to either close the Exam Rack or try opening the prior again after closing some other exams to free some memory.

- Either left-click on an exam in the timeline, or right-click on an exam in the timeline and select **Open Exam** from the menu. If an exam is already loaded into the Exam Rack and you want to unload it, right-click on the exam in the timeline and from the menu, select **Close Exam**.

N O T E   *If an exam cannot open because of low memory and no other exams are open, an unexpected low memory error is displayed. It is highly recommended that after you click OK to close the message, you should restart the IntelliSpace PACS client. The results of future actions will be unpredictable and crashes may occur if the client is not restarted.*

11.5   Ordering of Images in the Exam Rack

Note how the following conditions affect how images are ordered in the Exam Rack:

- When an exam is opened from the worklist and there is a presentation state that will be loaded, the order of the images on the Exam Rack is based on the order defined by the presentation state.

11.6   Using the Exam Margin

The Exam Margin displays icons relevant to the exam, such as a **Report** icon if there is a diagnostic report for the exam. In addition, an icon now displays in the Exam Margin when new images have been added to a study loaded onto that Exam Rack. Hovering over the icon displays the tooltip "New images or other DICOM was received for this exam and has been loaded."

Icons in the Exam Margin indicate the following:

Icon	Description
	A diagnostic report is available
	An exam note is available
	A critical exam note is available
	Not all images for this exam may be available.
	New images have arrived
	This study has been cached from a remote site
	A presentation state has been loaded
	Add a comment for an anonymous exam (similar to an exam note). This icon displays only if the anonymized exam is opened from an anonymized personal folder.
	Indicates that the GSPS has loaded successfully.
	Indicates that the GSPS has not loaded successfully.
	Indicates that the studies contain a SOP instance that cannot be displayed. See the *IntelliSpace PACS DICOM Conformance Statement* for information on the SOP classes that are for storage only (no display) and those that are for storage and display.

Right-clicking in the Exam Margin displays a menu with the following options:

- **Presentation States**: See 'Using Presentation States' (see page 210)
- **Recover Deleted Image(s)**: See 'Recovering Deleted Images' (see page 325)
- **Minimizing Images**: See 'Minimizing Images' (see page 247)
- **Add Exam to Folder**: See 'Adding Exams to Folders' (see page 55)
- **Exam Information**: See 'Displaying Exam Information' (see page 202)
- **Export via DICOM**: See 'iExport for DICOM Export' (see page 297)
- **Horizontal/Vertical Rack**: See 'Configuring Horizontal or Vertical Racks' (see page 201)
- **Exam View**: See 'Philips IntelliSpace Clinical Applications' (see page 275)

11.7   Resizing an Exam Rack Height

There are two heights available for Exam Racks: small and normal.

1. Place the cursor on the bottom border of the Exam Rack you want to resize. The normal pointer changes to a resize pointer.

2. Click and drag the pointer to change the height of the Exam Rack. When you double the height of a normal Exam Rack, IntelliSpace PACS automatically changes the size of the images and series in that Exam Rack. You can also resize normal-sized Exam Racks by right-clicking in the Exam Margin and selecting **Minimize Images**.

11.8   Configuring Horizontal or Vertical Racks

You set whether Exam Racks are initially displayed horizontally or vertically in the User preferences. See 'Setting General Preferences' (see page 332).

- Right-click in the Exam Margin and from the menu, select **Horizontal Rack** or **Vertical Rack**.

11.9   Displaying Exam Information

1. Right-click in the Exam Margin and from the menu, select **Exam Information**. The **Exam Information** dialog box displays and displays HIS/RIS and DICOM metadata about the selected exam.

2. Review the information and click **OK**. You return to the Canvas Page.

11.10   Using Thumbnail Images

Thumbnail images are the small images displayed in the Exam Rack. You can double-click a thumbnail image to display it in an image popup window. You can also right-click a thumbnail image and select **Create Popup** from the menu. See 'Using Image Popup Windows' (see page 204).

Right-clicking on a thumbnail image displays a menu with the following options, depending on the modality and whether the series is single-image or multi-sliced.

• **Interaction**: Allows you to select an enhanced cursor for zoom, pan, scroll, or brightness, if you have enabled this in the General user preferences. See 'Setting General Preferences' (see page 332) and 'Enhanced Mouse Scheme' (see page 395)

• **Window Width and Level (WW/WL)**: See 'Setting the Window Width/Level' (see page 225)

• **Image Processing**: See 'Image Processing' (see page 230)

• **Scout Line Mode** (for CT, MR, PT): See 'Using the Scout Tool' (see page 237)

• **Localizer Mode** (for CT, MR, PT): See 'Using the Localizer Tool' (see page 238)

• **Create Popup**: Displays the image in a separate window.

• **Key Image**: See 'Using Key Images' (see page 215)

• **Measurements**: See 'Using the Measurement Palette' (see page 255)

• **Annotations**: 'Annotating Images' (see page 269)

- **Delete All Measurements and Annotations**: 'Using the Measurement Palette' (see page 255)

- **VOI LUT** (for CR, DX, and MG): See 'Value of Interest LUT (VOI LUT)' (see page 228)

- **Clone**: See 'Using Clone Windows' (see page 207)

- **Remove Clone**: See 'Removing Clones' (see page 207)

- **Zoom Presets**: Allows you to select a preset zoom factor of **Fit to Window**, **100% (Original Size)**, **200%**, **300%**, or **400%**.

- **Export**: Allows you to select **Export via DICOM**, **Export Image via DICOM**, or **Anonymous Export via DICOM**. See 'iExport for DICOM Export' (see page 297)

- **Clone Window with Preset**: See 'Using Clone Windows' (see page 207)

- **Play Cine Loop** (for multi-sliced series): Allows you to scroll through the slices in a series either one-by-one (Cine mode) or rapidly (Fast Cine). For a frame-by-frame review, slowly scroll the mouse-wheel. For rapid review, double-click the mouse-wheel and drag the mouse forward or backward. For **Coarse Fast Cine** mode in **Standard** mouse mode, click the middle mouse button while dragging the mouse up or down past the point in which you placed your cursor. In **Enhanced** mouse mode, left-click while dragging the mouse down past the point in which you placed your cursor.

- **New Link**: See 'Linking Image Series' (see page 218)

- **Link All Axials/Sagittals/Coronals/Obliques** (for multi-sliced series): 'Linking Image Series' (see page 218)

- **Join Link** (if link type exists): Joins series to the existing link.

- **Leave Link** (if series is linked): Removes the series from the link.

- **Link Selected Images**: Links selected windows that are of the same type.

- **Unlink All**: See 'Unlinking Images' (see page 220)

- **Activate/Deactivate Link**: See 'Activating and Deactivating Links' (see page 220)

- **Save**: Saves the image.

⚠️ **WARNING**   *Use caution when saving an image to the clipboard and copying it to another application. The image may contain confidential patient information.*

- **Paper**: See 'Printing to Paper' (see page 296)
- **Flip/Rotate/Sort/Split**: See 'Flipping an Image' (see page 247)
- **Delete**: See 'Deleting Studies and Images' (see page 323)
- **Assign New Unique Study UID**: See 'Manually Assigning New Unique Study Instance UIDs' (see page 318)
- **Detach Study from Exam** (for exams having two or more studies): See 'Detaching Individual Studies from Exams' (see page 207)

11.11   Using Image Popup Windows

Image popup windows provide additional image manipulation functionality not available for thumbnail images. You can arrange these windows by dragging them to the desired location on the Canvas Page and resizing them.

You can display an image popup window by doing one of the following:

- Double-clicking a thumbnail image
- Right-clicking an image and selecting **Create Popup** from the menu.

You can minimize popup windows by double-clicking on the window's top margin. To re-enlarge the window, double-click the image margin.
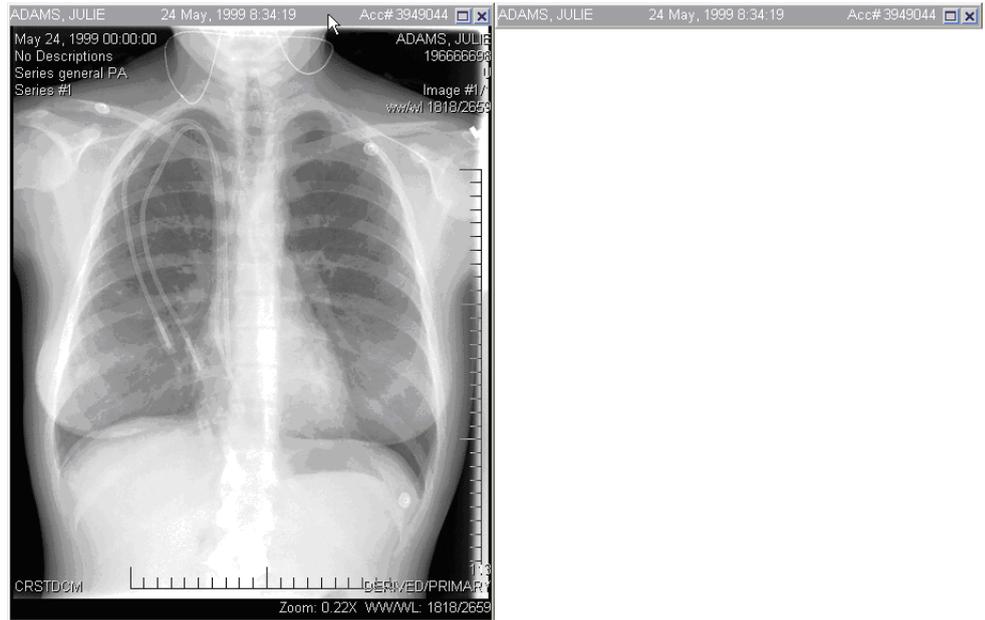
Philips Healthcare Informatics, Inc.

Figure 11.5 Window Shades

Right-clicking in an image popup window displays a menu with the following options, depending on the modality and whether the series is single-image or multi-sliced:

- **Interaction**: Allows you to select an enhanced cursor for zoom, pan, scroll, or brightness, if you have enabled this in the General user preferences. See 'Setting General Preferences' (see page 332) and 'Enhanced Mouse Scheme' (see page 395)

- **Window Width/Level (WW/WL)**: See 'Setting the Window Width/Level' (see page 225).

- **Measurements**: See 'Using the Measurement Palette' (see page 255)

- **Annotations**: See 'Annotating Images' (see page 269)

- **Delete All Measurements and Annotations** (if there are annotations): See 'Clearing Measurements and Annotations' (see page 256)

- **Image Processing**: See 'Image Processing' (see page 230)

- **Scout Line Mode** (for CT, MR, and PT): See 'Using the Scout Tool' (see page 237)

- **Localizer Mode** (for CT, MR, and PT): See 'Using the Localizer Tool' (see page 238)

- **Multi-Image Mode** (for stack images): Allows you to split a series window so that multiple slices can be displayed in a single image window.

- **Key Image**: See 'Using Key Images' (see page 215)

- **Play Cine Loop** (for multi-sliced series): Allows you to scroll through the slices in a series either one-by-one (Cine mode) or rapidly (Fast Cine). For a frame-by-frame review, slowly scroll the mouse-wheel. For rapid review, double-click the mouse-wheel and drag the mouse forward or backward. For **Coarse Fast Cine** mode in **Standard** mouse mode, click the middle mouse button while dragging the mouse up or down past the point in which you placed your cursor. In **Enhanced** mouse mode, left-click while dragging the mouse down past the point in which you placed your cursor.

- **New Link**: See 'Linking Image Series' (see page 218)

- **Link All Axials/Sagittals/Coronals/Obliques** (for multi-sliced series): 'Linking Image Series' (see page 218)

- **Clone**: See 'Using Clone Windows' (see page 207)

- **Clone Window with Preset**: 'Using Clone Windows' (see page 207)

- **Save**: Saves the image.

- **To Paper Printer**: See 'Printing to Paper' (see page 296)

- **Flip/Rotate/Sort/Split**: See 'Flipping an Image' (see page 247)

- **Zoom Presets**: Allows you to select a preset zoom factor of **Fit to Window**, **100% (Original Size)**, **200%**, **300%**, or **400%**.

- **Magnifying Glass**: See 'Using the Magnifying Glass Tool' (see page 242)