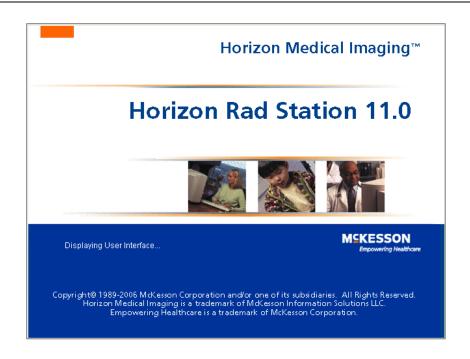
Quick User's Guide for Horizon Rad Station Distributed

Franciscan Health System Information Technology Training Group



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1. Launching PACS (Horizon Rad Station Distributed – HRSD) and logging in

Launch the Microsoft Internet Explorer browser, and type the following web address (URL) in the Address box:

https://pacs.fhshealth.org/hrs

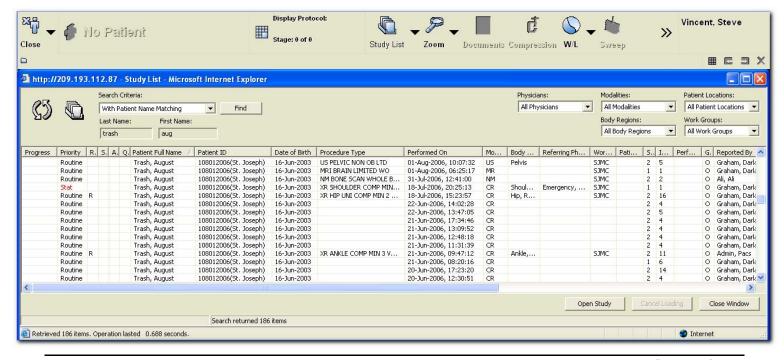


This will take you to the Horizon Rad Station Login page.

Type your FHS network **User name** and **Password** in the **User name** and **Password** boxes, then click the "**Sign In**" button. (Note: your User name and Password for PACS are the same as your FHS network and email login.)

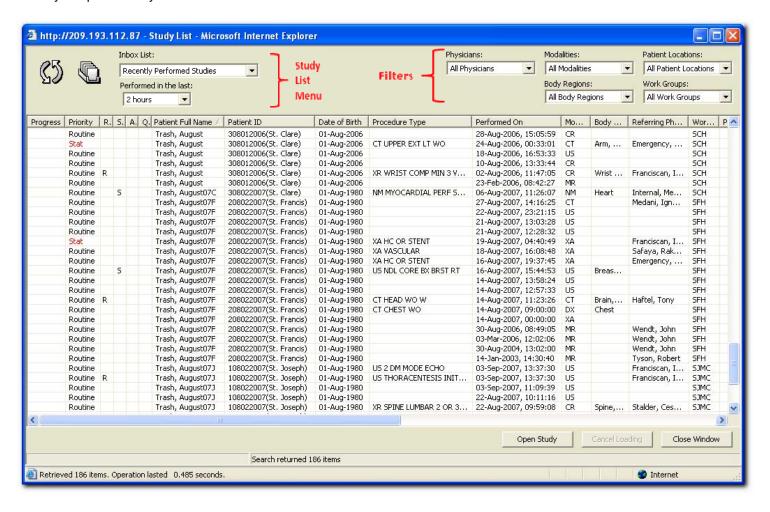


This will open up the PACS Horizon Rad Station Distributed (HRSD) to the Inbox Study List.



2. Introduction to the In-Box (aka Study List or Unreported Studies List) and the Folder Finder

After logging in, the **In-Box** window (also known as the **Study List** or **Unreported Studies List**) will appear listing all the "**Unreported**" studies (studies that have been performed but not yet dictated). The Study List window will probably fill the entire Windows desktop, but, depending on the size and resolution of your monitor, the PACS Main Toolbar may also be displayed above the Study List window. You may resize down the top of the In-Box/Study List window to display the Main Toolbar, but this is probably unnecessary, as the Main Toolbar will be displayed as soon as you open a study.



You may use the Study List Menu to display:

- · Recently Opened Studies
- Recently Performed Studies List
- Recently Reported Studies List, or the
- Unreported Studies List

You may also use the five drop-down Filters on the right side of the window to filter your list by:

- Physician
- Patient Location
- Body Region
- Modality Types, or
- Work Group

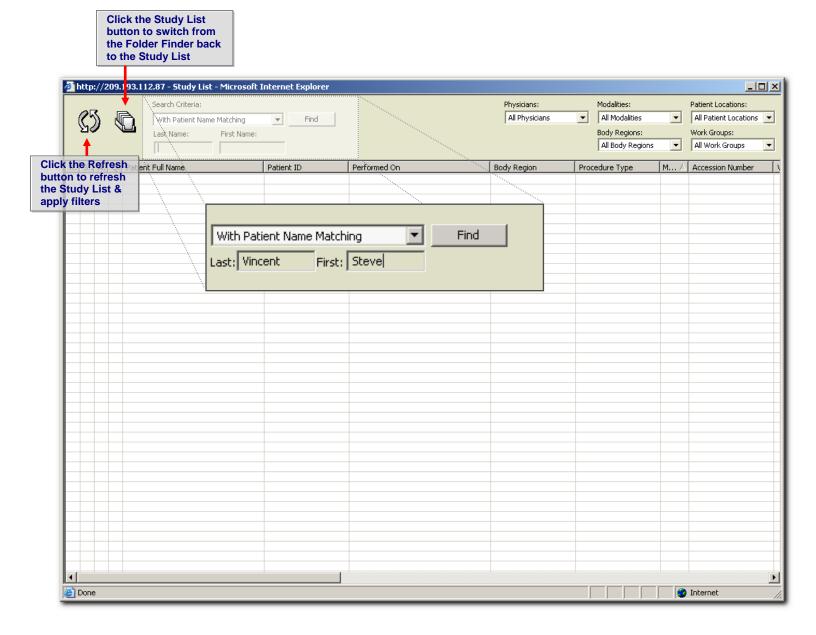
The Folder Finder



If you would like to search for a **specific patient**, click the **Folder Finder** button.

This will replace your In-Box window with an empty study list, and will replace the Study List Menu with a **Find menu**, allowing you to search for a patient by **Patient Name**, **Patient Medical Record Number**, **Accession Number**, etc. The default search criteria is by patient Last and First name.

Type the last name and first name (or the known part of either last or first name), then click the Find button. This will display a list of patients matching the search criteria.



To switch back to the **In-Box** study list, click the **Study List button**.

To refresh the Study List, click the Refresh button.

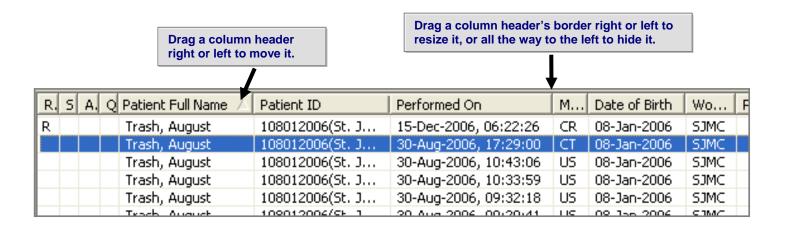
Modifying column display preferences in the In-Box and Folder Finder

You can change your column display preferences in the In-Box and Folder Finder by moving, resizing and/or hiding the columns.

Move a column right or left by clicking and dragging the column header (gray box with the column name) right or left along the header row.

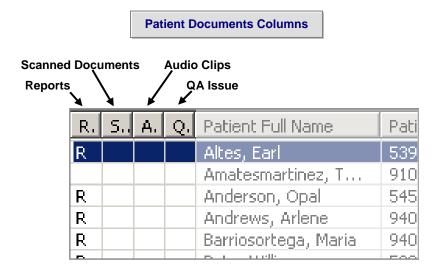
Resize a column's width by clicking and dragging the border between two column headers right (to widen it) or left (to narrow it).

Hide a column by clicking and dragging the right border of a column header to the left until the column disappears.



Identifying the Study Indicators in the In-Box and Folder Finder

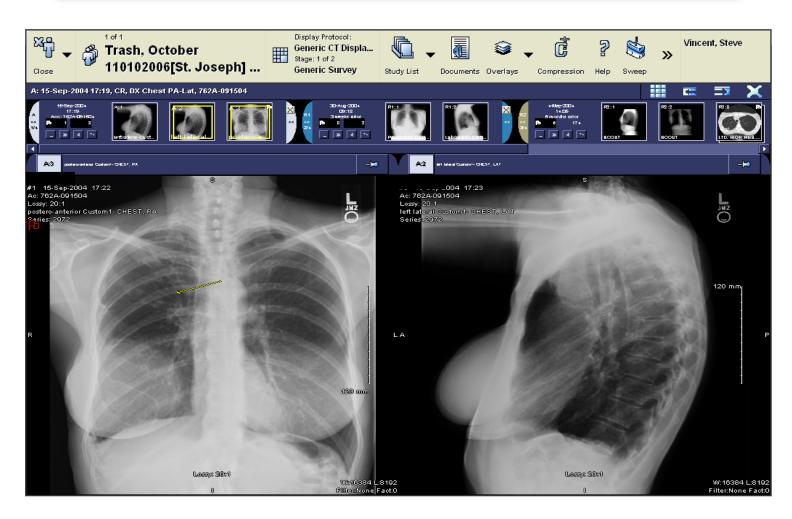
The first four columns in a Study List contain study indicators which show whether the study contains **Reports**, **Scanned documents**, **Audio clips**, or **QA issues**.



3. Opening a study from the In-Box or Folder Finder

Once you have located a patient's study using the Study List Menu, the Filters, or the Folder Finder, you can open the study by **double-clicking its row** in the In-Box or Folder Finder. The study's images will begin loading in a separate window, and the Main Toolbar will appear at the top of the screen (the Study List is still open in a separate window behind the current study's window). The **Study Toolbar** appears below the Main Toolbar, and the **Thumbnails Toolbar** appears below the Study Toolbar.







4. The Main Toolbar



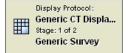
Once a study is opened, the Main Toolbar is displayed at the top of the window. Its components are:



Close Button – Click the button to close the active study. This will display a prompt dialog box. Click the down-arrow for a menu of close options.



Patient Identification Button – Displays information about the patient whose study you are currently viewing. Click the button for a menu of patient study options.



Display Protocol Button – Displays information about the display protocol applied to the study you are currently viewing, including the name of the display protocol and the current display protocol state number and stage name. Clicking the button allows you to manage the current display protocol and/or apply another display protocol to the study.



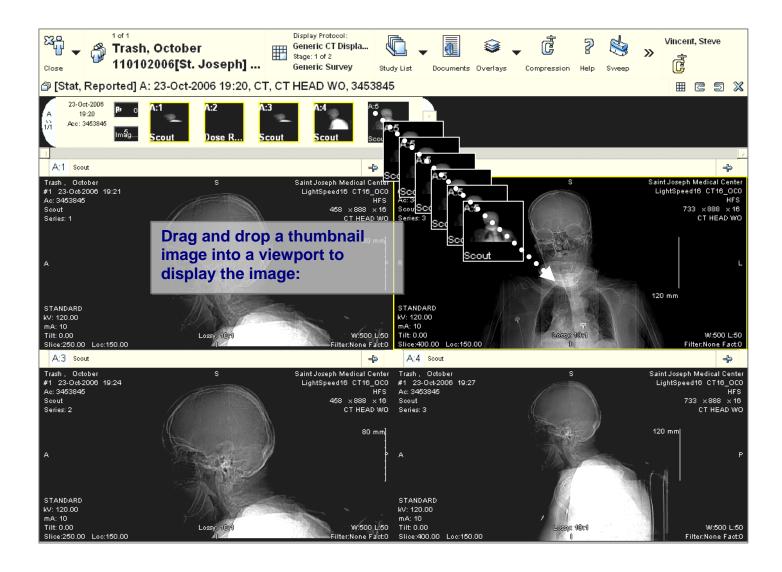
Main Toolbar – Displays command buttons for displaying the Study List, patient reports, Help, Preferences, etc. The double-arrow (chevron) at the right end of the toolbar displays additional hidden buttons. You may customize the toolbar by choosing Preferences.



User Name Button – Displays the name of the user who is currently logged on. Clicking the button displays a "Quit" button. Clicking the button opens a save-changes prompt and closes the application.

5. View images in a study

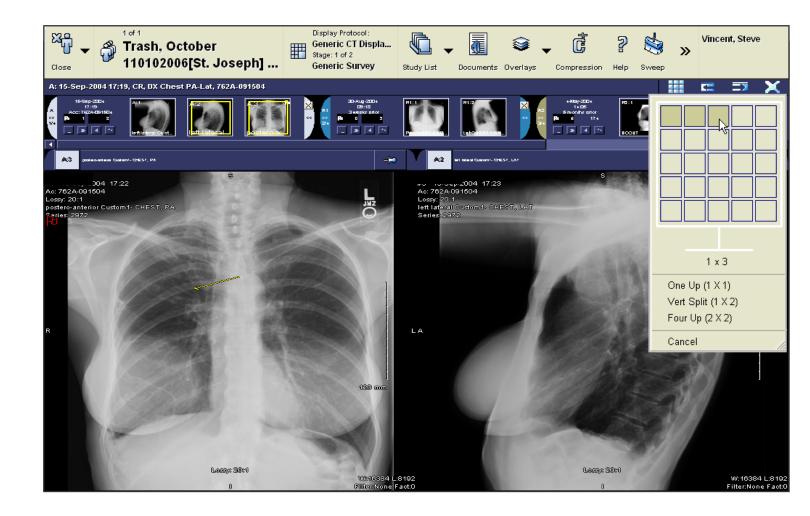
Once a study has loaded, you can view any of the images that are displayed in the Thumbnails Toolbar by **dragging the thumbnail** image and **dropping it on a view port:**



You may also display an image in a viewport by first **clicking on the viewport** itself (note that a yellow border will appear around the selected viewport), then **clicking on the thumbnail** you wish to view on the Thumbnails toolbar. This will place the selected thumbnail image into the selected viewport.

6. Change the display layout of a series on the screen

You can change the number and layout of the view ports displayed on your monitor by clicking on the **View Ports** button and selecting the desired number of view ports.



7. Adjust Window/Level and manage Window/Level presets

You can adjust the **brightness** and **contrast** of an image using the **Window/Level** tools.

Use the mouse to adjust Window/Level settings:

- To adjust the brightness of an image, right-click-and-drag down (increase brightness) or up (decrease brightness) on the image.
- To adjust the contrast of an image, right-click-and-drag <u>left</u> (increase contrast) or <u>right</u> (decrease contrast) on the image.







You can also use the Window/Level menu by **right-clicking** an image and choosing **Window/Level**. The Window/Level submenu contains a number of preset window/level settings, and allows you to save your current window/level settings as a user-defined preset.

To return to the original window/level settings for the image, choose "**Default (Source 1)**" from the menu.

You can also display the Window/Level menu with the **Window/Level (W/L) button** on the Main Toolbar.



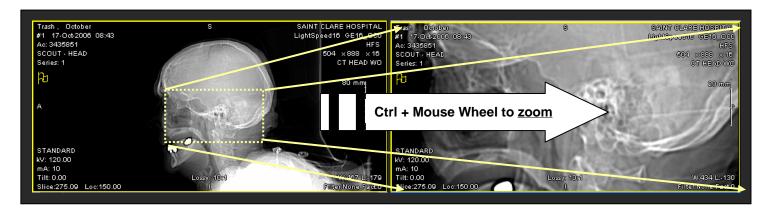
8. Zoom and pan images

You can zoom in on an image by holding the Ctrl key on the keyboard while scrolling with the mouse wheel.

After zooming in on an image, you can pan the image (move it around the view port) by holding the Shift key on the keyboard while dragging the image with the left mouse button.

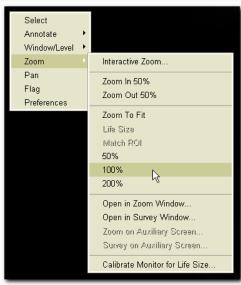
Zoom: Ctrl + Mouse Wheel

Pan: Shift + Drag w/ mouse





To **reset** the image back to its original size and position, **right-click** the image, choose **Zoom** from the menu, and choose **100**% from the submenu.

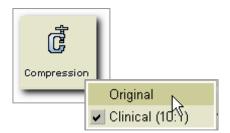


9. Set compression ratio

The images in PACS are digital picture files that have been compressed (have had some of their meaningless data removed, e.g., all-black regions, removed) in order to be able to transmit smaller image files across our network. This compression results in a "lossy" image, meaning that in theory, the quality of the image has been degraded, or has "lost" resolution (again, this is in theory, because in actual practice most users would never detect any quality difference in compressed or uncompressed images whatsoever).

You can remove the compression of these images so that the image you are viewing is the original image, without the "lossy" degradation.

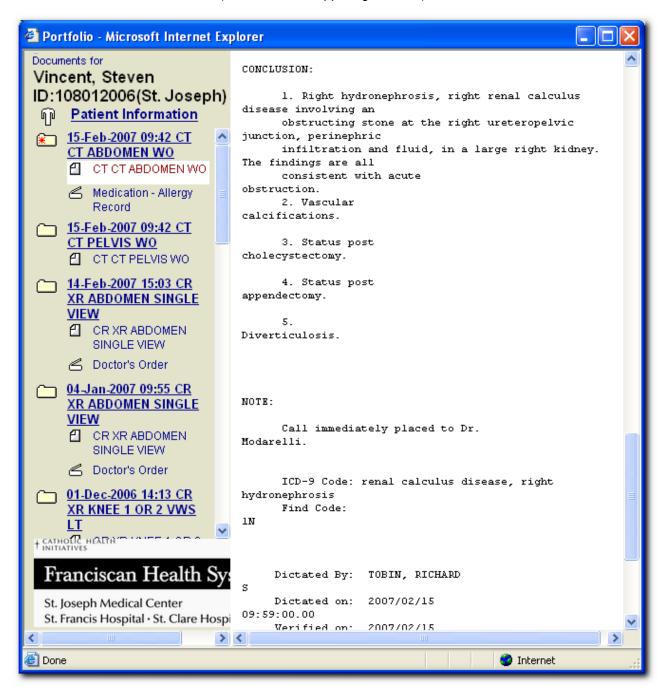
To remove compression, click the **Compression** button on the Main Toolbar, and choose "**Original**" from the small menu that appears. The original image will reload without compression. Note that the text "Lossy 10:1" will disappear from the bottom of the image view port. You will probably not see any difference between the compressed and uncompressed images.



10. Access patient documents (i.e., reports, scanned documents)

To view reports and scanned documents in a study, click the **Documents** button on the Main Toolbar. This will open the **Portfolio** window containing all of the documents folders for the current patient in a panel on the left side of the window. **Click on a folder** to select and display the list of documents for a particular study. (Note: the anchor study, or currently displayed active study, will have a red asterisk in the folder icon.) **Click on the report you wish to view**, and its contents will be displayed in the right panel of the window.

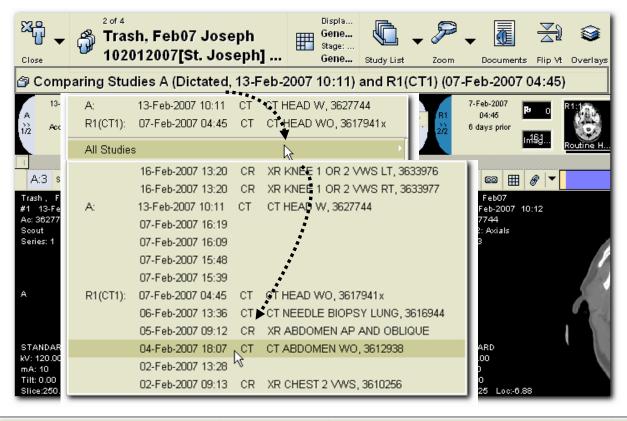
Click the Portfolio window's **Close** button (the in the upper right corner) to close the window.

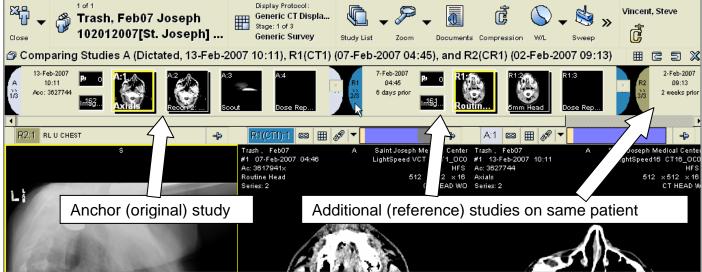


11. Open reference studies (additional studies for the same patient)

The **original** study opened for a patient is called the **Anchor study**. Additional studies opened for the same patient are called **Reference studies**.

To open additional studies for the same patient (Reference studies), **click the Study Information Bar**, choose **All Studies** from the displayed menu, then choose (click on) the additional study you wish to open. All the studies displayed in this menu are for the currently active (currently displayed) patient.





12. Opening multiple patient studies

You can open studies for different patients, and have them all available to view in PACS HRS, switching easily between patients by clicking the Patient Identification button.

To open up an additional patient, switch back to the Folder Finder by clicking either the **Study List button** and clicking "**Find Studies**" (this will open a blank Folder Finder window for you to search by Patient Name, etc.),



or...

by clicking the **Study List window's button** at the bottom of the desktop screen, on the Windows **Taskbar** (the button may be labeled "**Study List**", or "**http://123.456.789**...", etc.). Switching windows by clicking the Taskbar button will open the Study List to your previous search/filter.



In the Study List (Folder Finder), search for your next patient in the same way detailed above on page 3, and open the patient's study by double-clicking the row for that patient study.

When you have multiple patients open, there will be a designation at the top of the **Patient Identification Button** that says "1 of 2" or "1 of 3" or "3 of 4", etc., depending on how many patients you have opened, and which patient study you have active on the screen. For example, "3 of 4" would mean that you have **four** patients open, and you are viewing patient **three**.



Switch between patients by clicking the Patient Identification Button, and choosing one of the patients from the drop-down menu. The patients will be listed at the top of the menu, with a checkbox next to the active patient (the study currently showing in the study window).



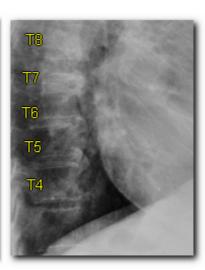
13. Annotation tools

Text, drawings, and drawings with measurements can be placed on images using the Annotation tools. Annotations can be either **persistent** or **temporary**. Persistent annotations cannot be applied and saved in the Horizon Rad Station (HRS); only temporary annotations. The annotations will be deleted when the study is closed.

To apply annotations to an image, right-click the image, choose Annotate from the menu, and click to select the specific annotation tool you wish to use.







Tool	Functionality		
Distance	Draw a line and measure the distance between the endpoints.	Spine Labeling	Add vertebrae and disk labels. This tool is used in one of the following ways: Label the sagittal or coronal view of a MR spine study when scrolling through axial images Label the axial images if the sagittal or coronal view are not available or being viewed simultaneously
Simple Angle	Draw and measure an angle in degrees.	Ellipse	Place ellipses on an image.
Cobb Angle	Draw and measure a Cobb angle. This tool is used to measure spinal scoliosis.	Cover	Mask an image, by covering an area of the image with a rectangle.
Elliptical ROI	Define an Elliptical Region of Interest (ROI), and measure its pixel intensity parameters, area, and perimeter. Elliptical ROI is exclusively used in CT studies.	Calibrate	Define the measurement scale.
Point Analysis	Measure the pixel intensity of a point. This tool is exclusively used in CT studies.	Eraser	Delete an annotation.
Arrow	Place arrows on an image.	Delete All	Delete all annotations from a single image, selected images, or all images in the series.
Text	Place comments on an image.		

14. Closing studies

There are numerous methods for closing studies, depending on how many patients you have open, and how many studies you have open for each patient.

To close the **current patient and all of the patient's studies**, click the "X" button at the right end of the Study Information Bar. This closes the active anchor study and all of its related studies.



You can also click the **Close button** in the upper-left corner of the Study window. You may get prompted to save changes made to the study.



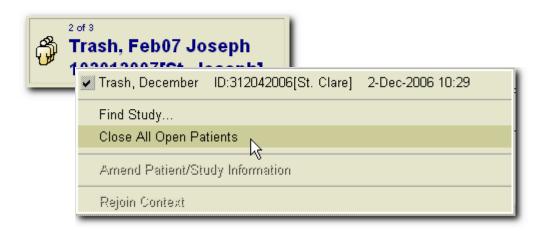


To close **one of the reference studies** (additional studies) that were opened, click the small "X" button at the right end of the "clamshell" group on the Thumbnails Toolbar. This will leave that patient's other studies, including the anchor study, open.

To close all open studies without saving any changes (the quickest way to close studies so you may exit PACS), click the Sweep button on the Main Toolbar.



You can also "sweep" all studies closed by **clicking on the Patient Identification button** and choosing "**Close All Open Patients**" from the menu. This is the same as clicking the Sweep button on the Mail Toolbar.



15. Quitting / Exiting the PACS HRS application

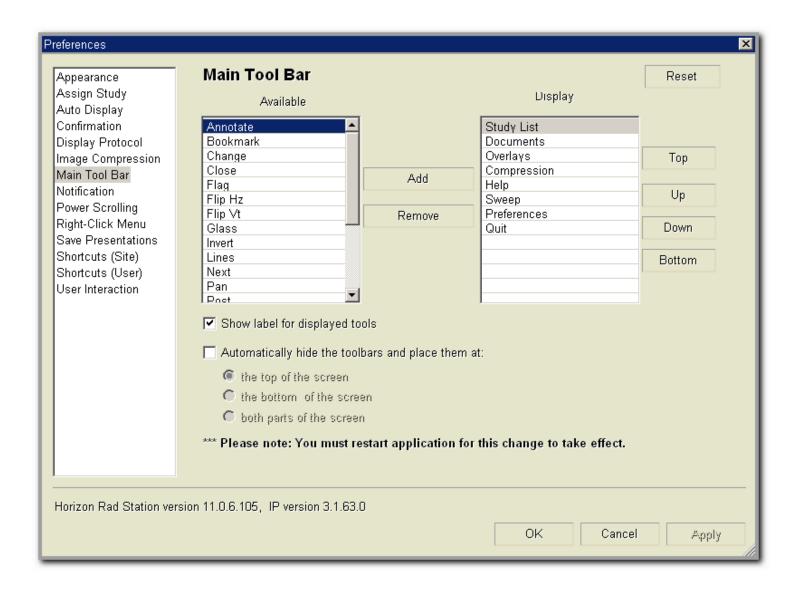
To close PACS and exit the application, **click your user name button** in the upper right corner of the Main Toolbar, and click the "**Quit**" button that is displayed. You may be prompted to save changes. You will also be prompted, "*Do you really want to close Horizon Rad Station?*" To close the application, click "Yes". To return to HRS without closing, click "No". (You can click the checkbox next to "Do not ask me again" if you don't wish to see this prompt in the future.)





6. Set user preferences

You can set or change user preferences in the **Preferences dialog box** by clicking the **Preferences** button on the Main Toolbar. (If the Preferences button is not displayed on the Main Toolbar, click the double-arrow/chevron at the right end of the toolbar to display the hidden buttons.)

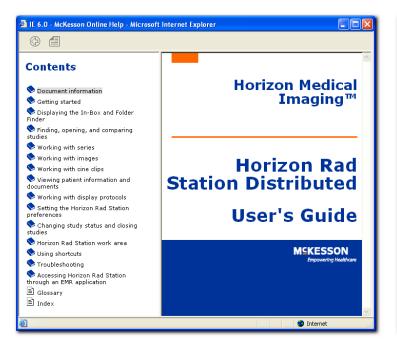


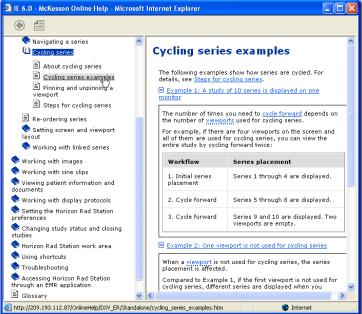
17. Using the online Help in PACS



To search the PACS Help program, **click the <u>Help</u> button** on the Main Toolbar. If the Help button is not visible on the Main Toolbar, then click the **double-arrow** (chevron) at the right end of the toolbar, and choose "**Help**" from the drop-down menu of hidden commands. This will display the PACS Help program in a separate window titled "*Horizon Rad Station Distributed – User's Guide*".

Click on the topics that are displayed in the left panel of the Help window under "Contents". The information for that topic will be displayed in the right panel of the window. Note the Glossary and Index at the bottom of the list of Contents.





To **print** a topic, click the **print** button at the top of the Help window.



Close the Help window when you are finished by clicking its close button (the "X" in the upper right corner).



The PACS Help Line is (253) 426-6271, menu option 2 (internally, 127-6271, menu option 2).