




Agfa Impax A Picture Archiving and Communication System (PACS)


Quick Reference Guide

Log into <https://portal.carilionclinic.org/> using your Epic log-in and password.
Double click the red Impax icon. Log in using your Epic log-in and password.

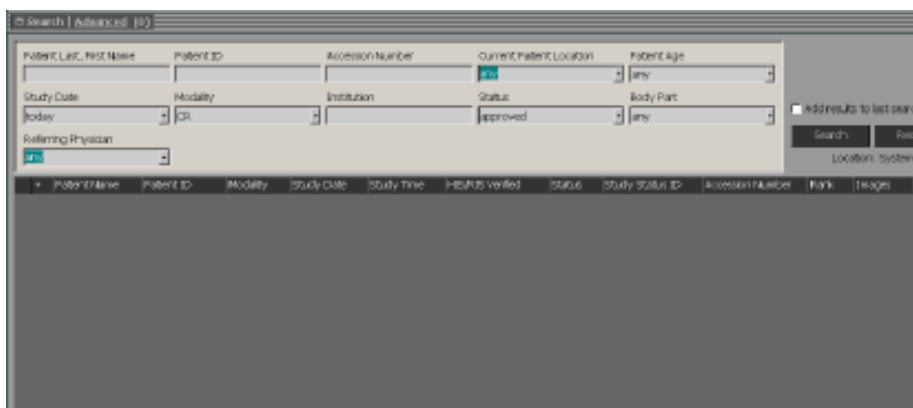
Logging into Impax

1. Click on the Impax Client icon  in the Start Menu
2. Select Carilion for the Domain
3. Type in your User id and press [Tab]



 *Hint: Your Impax Userid and Password are the same as your EPIC account. You may hear it referred to as your Active Directory Account or AD account*

4. Select login or hit enter and your **Worklist** area will display.



Exiting Impax

1. From any area within IMPAX, select the Logout button.



 *Hint: Impax is set to log a user off the system after 20 minutes of inactivity. If a user leaves the workstation for a long period of time, or if the workstation is simply idle for a while, IMPAX shuts down and returns to the Login screen*

Searching For Studies

The first screen that displays once logged in to the system is the **Worklist** area. The **Worklist** Area is used to search for studies and to select them for viewing. Use the **Worklist** area bar to navigate between the current area being viewed and the Worklist


Simple Search

1. From the **List Area**, you can do a simple search for a study by Patient name, Patient ID, Accession Number , Study Date or Modality

2. Click the **Search** button. The desired studies based on the criteria and constraints selected display



	Patient ID	Modality	Study Date	Study Time	HIS/RIS Verified	Status	Study Status ID	Accession Number
	3138218	CR	6/10/2009	2:54 PM	Verified	Approved	READ	33073789
	3138122	CR	6/10/2009	1:15 AM	Verified	Approved	READ	33072523
	3138119	CR	6/10/2009	2:23 AM	Verified	Approved	READ	33072543
	3138119	CR	6/10/2009	9:40 AM	Verified	Approved	READ	33072565
	3138119	CR	6/10/2009	9:37 AM	Verified	Approved	READ	33072720
	3138119	CR	6/10/2009	9:43 AM	Verified	Approved	READ	33072555

 **Hint:** If more than 500 studies are found, only the most recent studies are displayed. Please add more constraints to the search to retrieve fewer desired studies.

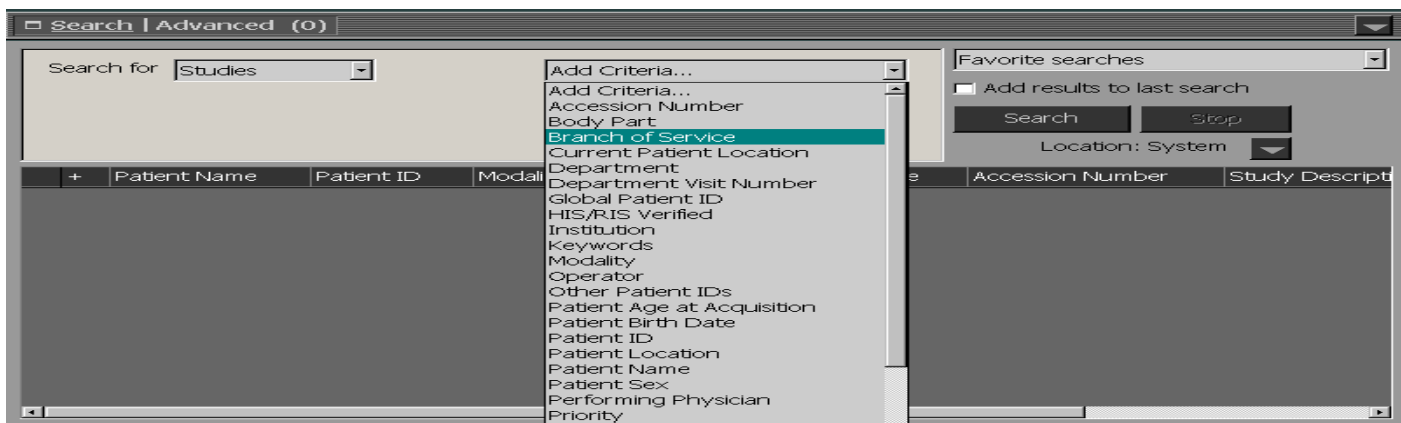
Advanced Search

1. From the **List Area**, select the **Advanced Search** bar. The **Advanced Search** bar expands and the **Search** area displays.

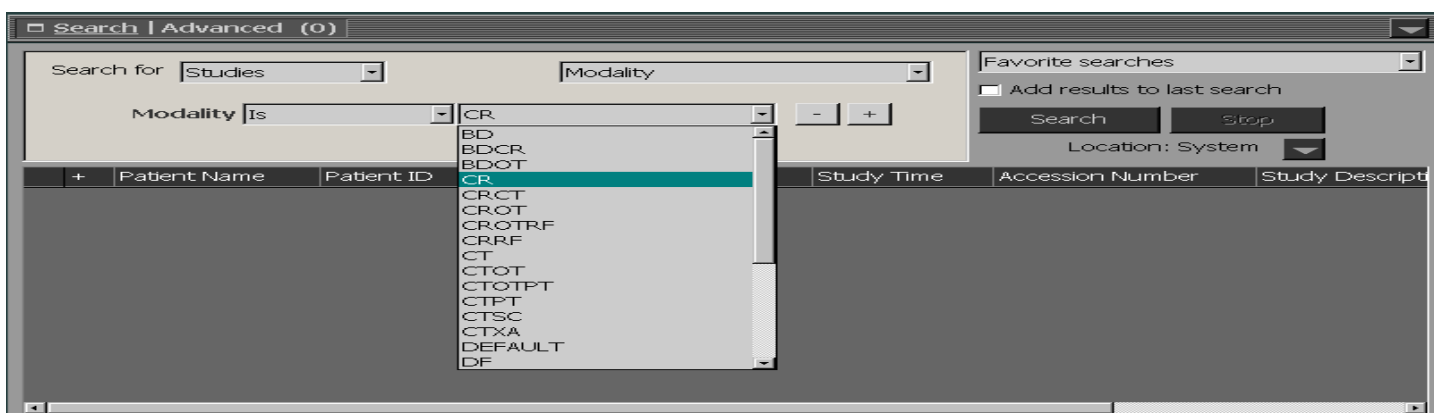
Advanced (0)

Advanced Search (continued)

2. Select a value from the Add Criteria ...drop down list.

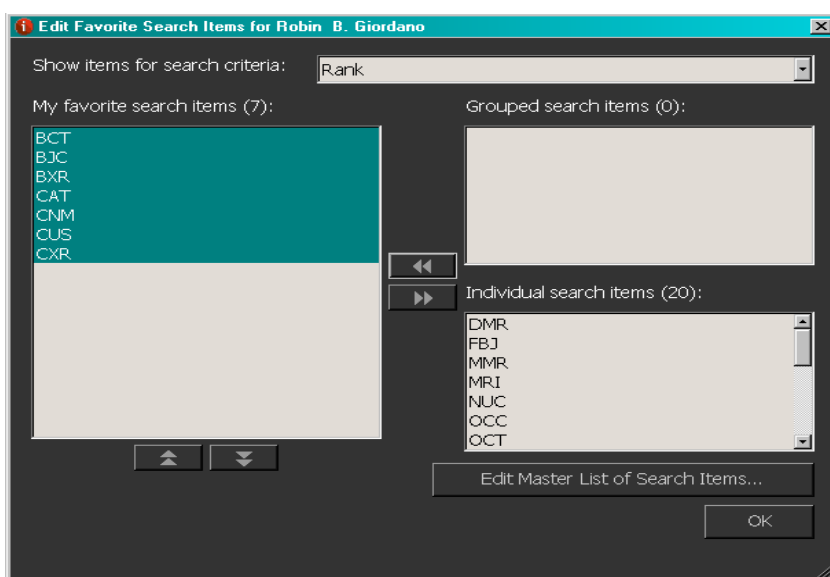


3. From the drop down list that appears, select a constraint to narrow your search results.



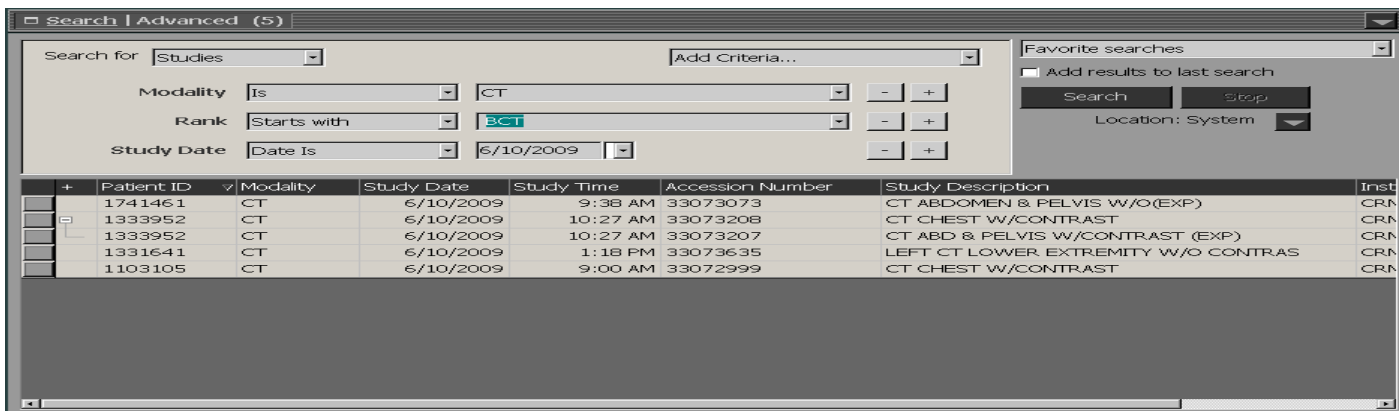
Edit...

Hint: If you see **Edit...** in any drop down list when selecting your search constraints, click on the edit ... and add the list of constraints for your list.



Advanced Search (continued)

5. Click on  to list studies that match the selected criteria

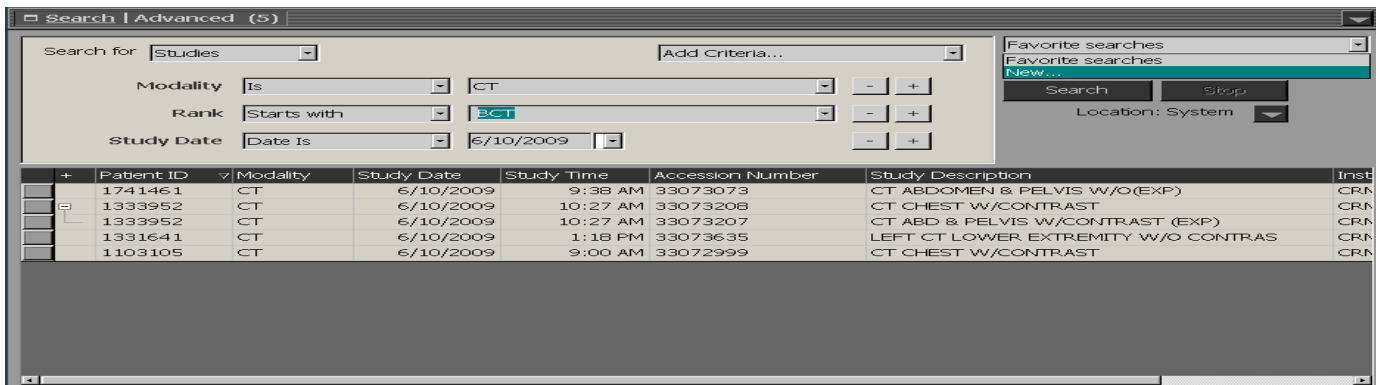


The screenshot shows the 'Search | Advanced (5)' window. The search criteria are: Modality: Is CT; Rank: Starts with BCT; Study Date: Date Is 6/10/2009. The results table is as follows:

+	Patent ID	Modality	Study Date	Study Time	Accession Number	Study Description	Inst
	1741461	CT	6/10/2009	9:38 AM	33073073	CT ABDOMEN & PELVIS W/O(EXP)	CRM
	1333952	CT	6/10/2009	10:27 AM	33073208	CT CHEST W/CONTRAST	CRM
	1333952	CT	6/10/2009	10:27 AM	33073207	CT ABD & PELVIS W/CONTRAST (EXP)	CRM
	1331641	CT	6/10/2009	1:18 PM	33073635	LEFT CT LOWER EXTREMITY W/O CONTRAS	CRM
	1103105	CT	6/10/2009	9:00 AM	33072999	CT CHEST W/CONTRAST	CRM

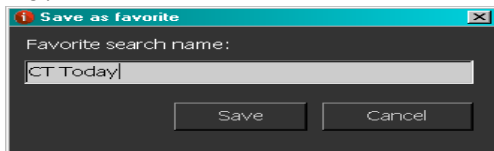
Saving Favorite Searches

1. In **Advanced Search**, with your Search criteria identified, click on  to save list search criteria.




The screenshot shows the 'Search | Advanced (5)' window with the 'Favorite searches' dropdown menu open. The menu options are 'Favorite searches' and 'New...'. The search criteria and results table are the same as in the previous screenshot.

2. Click on  in the **Favorite Search** drop down list
3. Type the name that identifies the search constraints and click on **Save**.



The 'Save as favorite' dialog box has a text input field containing 'CT Today' and 'Save' and 'Cancel' buttons.

4. Favorite Searches are unique to each user and are always accessed through  Search area in the Worklist area of Impax.

 *Hint: For those familiar with the Web 1000, the Favorites replace Wizards from the Web 1000*

Viewing Images

1. Select the desired study from your search results. The selected study highlights.

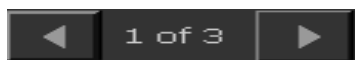
Patient ID	Body Part	Specialty	Modality	Study Date	Study Time	Accession Number	Study Description
1013516	ABDOMEN	ABDOMEN	CR	6/11/2009	3:07 AM	33074371	ABDOMEN AP ONLY (P
1041645	HIPS	PELVIS	CR	6/11/2009	9:23 AM	33074538	LEFT HIP UNILAT CON
1079073	CHEST	CHEST	CR	6/11/2009	12:31 AM	33074341	CHEST 2 VIEWS
1093187	FOOT/ANKLE	LOWER EXT	CR	6/11/2009	3:47 AM	33074453	RIGHT FOOT COMPLE
1094537	CHEST	CHEST	CR	6/11/2009	3:05 AM	33074422	CHEST 1 VIEW
1116309	FOOT/ANKLE	LOWER EXT	CR	6/11/2009	9:39 AM	33074926	RIGHT FOOT COMPLE
1132639	CHEST	CHEST	CR	6/11/2009	3:08 AM	33074418	CHEST 1 VIEW
1142687	SHOULDER	UPPER EXT	CR	6/11/2009	8:41 AM	33074687	RIGHT SHOULDER CC
1184618	CHEST	CHEST	CR	6/11/2009	6:35 AM	33072616	CHEST 2 VIEWS
1186857	CHEST	CHEST	CR	6/11/2009	3:36 AM	33073875	CHEST 1 VIEW
1203837	CHEST	CHEST	CR	6/11/2009	3:32 AM	33074124	CHEST 1 VIEW
1236157	CHEST	CHEST	CR	6/11/2009	3:11 AM	33074521	CHEST ONE VIEW
1263605	SHOULDER	UPPER EXT	CR	6/11/2009	9:35 AM	33074543	RIGHT SHOULDER CC
1274195	CHEST	CHEST	CR	6/11/2009	7:06 AM	33074473	CHEST 1 VIEW
1307959	CHEST	CHEST	CR	6/11/2009	5:19 AM	33074523	CHEST ONE VIEW

2. Right click on the highlighted study. Select **Open Images**, the **Image Area** displays with the image(s).



*Hint: Double-clicking the desired study opens the **Image Area** with the image(s) as well. To Select multiple studies, press and hold the **[Ctrl]** key while selecting the desired studies.*

By Study



If the current patient has multiple studies selected, navigate between them using the **Prior Study List**

By Patient



If multiple were added to the Image area, a user can navigate between them using the Patient List in the lower left hand corner.

Within a Study

The **Page Up** and **Page down** keys on your keyboard will navigate you through studies on Patients with multiple images



By Series

If a study contains multiple series of images, a users can navigate through the series using the Available


Series palette  Choose Show Available Series toll to display the palate. Use arrow Keys to cycle through the multiple series.

Window Level Tool

Window Level may be the default tool, in which case you may not have to activate it.

1. From the **Image Area**, navigate to the **Top Toolbar**



- 2  Select the **Window Level** tool. Using the mouse, click once on the image. Move the mouse up and down and left to right to adjust the window level. Click once on the Image again to set the window/level



Hint:

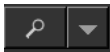
Moving the mouse vertically (up and down) adjusts the brightness of the window/level. Moving the mouse horizontally (right and left) adjusts the contrast of the window/level.



Use the **Window Level** drop-down tool for different types of procedures.

Transforming Images

Impax's Geometry tools allow users to change the orientation of the images. Images can be rotated and flipped vertically and horizontally.

1. From the Top Toolbar, select the Geometry drop-down tool.  Use the selection of tools for different types of orientation.

2. Select the desired geometry tool to change the image orientation.



Rotate 180



Rotate Right



Flip Vertical




Flip Vertical



Flip Horizontal



Smooth Rotation

3. Use the  Geometry reset tool to restore image to its original orientation.
Or
Use current tool a second time to restore the image to its original orientation.

Magnifying an image

The Magnify tool lets the user view areas of an image at any magnification.

1. From the **Top Toolbar**, select the **Zoom drop-down** tool.

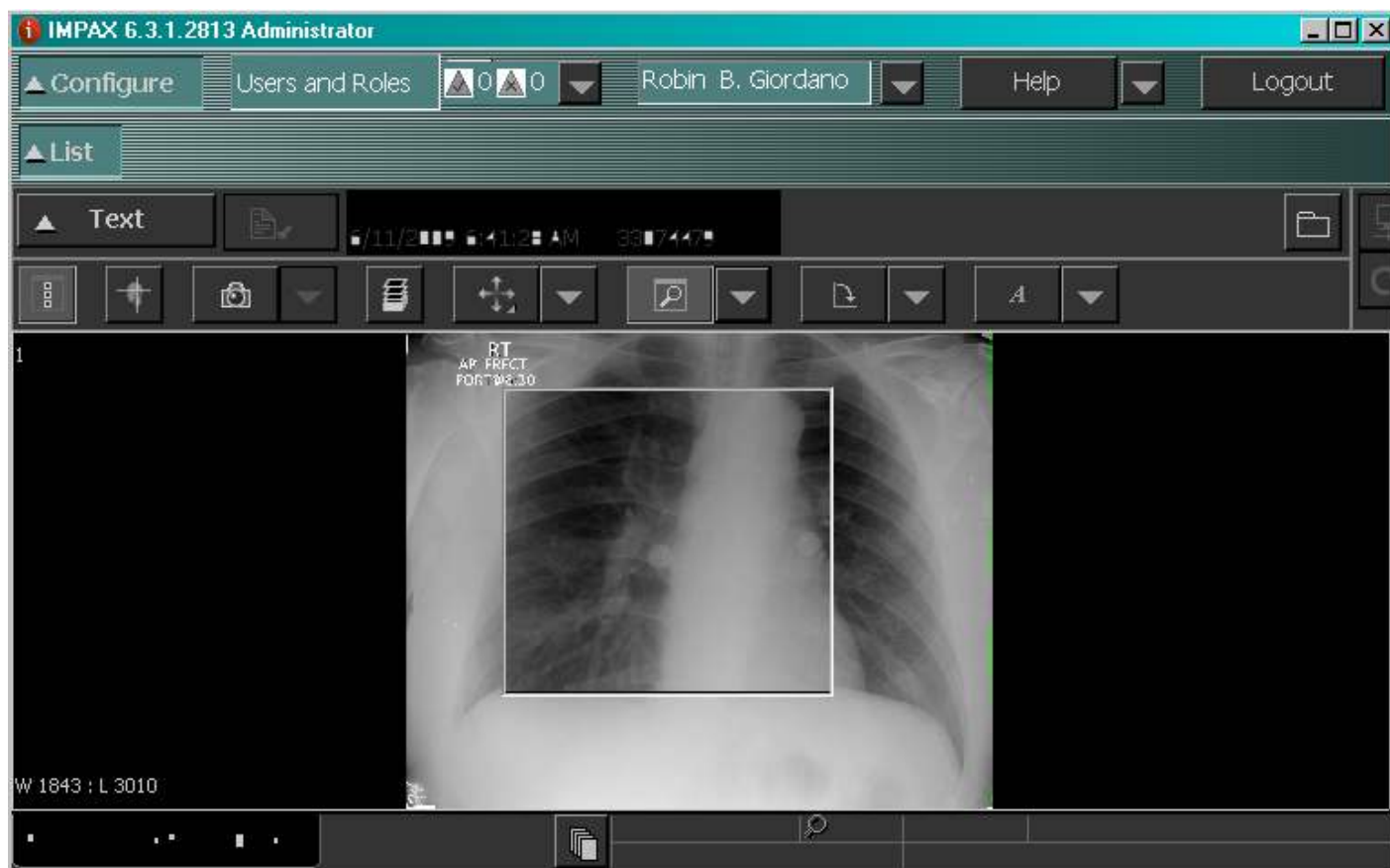


2. Select the **Magnify Glass**  and click once on the image. The **Magnify** window tool displays.

3. To increase or decrease the magnification in the **Magnify Glass** window, use the mouse scroll wheel.

Or

Use the **Page up** or **Page down** keys on the keyboard.




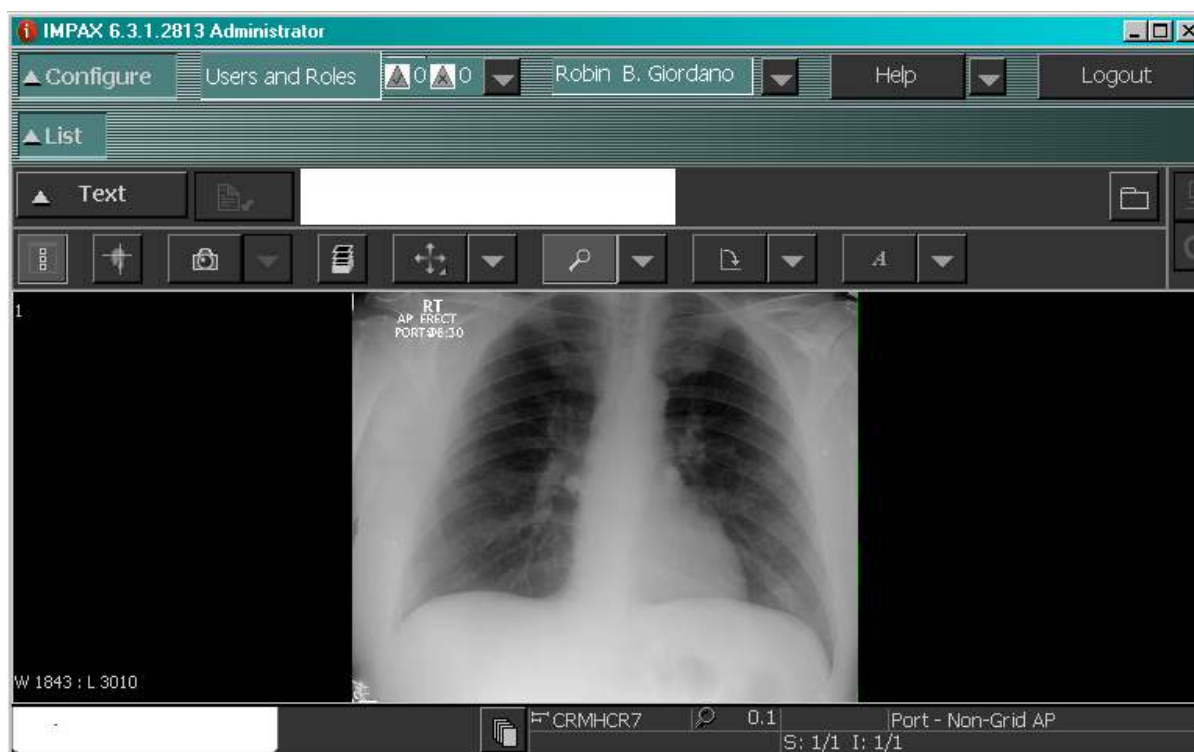
Hint: Right click on the **Magnify Glass** to close it.



To resize the **Magnify Glass** window, place the cursor over any part of the frame. A double-arrow displays. Click and drag the window frame to a desired size.

Zooming in on an Image

The **Zoom** tool is used to magnify the entire image, or to move it around in its current magnification.

1. From the Top toolbar, select the Zoom drop-down tool. 
2. Select the **Magnify glass** tool and click once on the image. The **Magnify** window tool displays.
3. To zoom in or out on the Image, use the mouse scroll wheel.
Or
Use the **Page up** or **Page down** keys on the keyboard.



 **Hint:**  To return to the image's original view, select the **Magnify/Zoom Reset Tool** from the **Zoom** drop-down tool.

Or
Cycle through the **Page Down** key on the keyboard

Select Screen Series

The **Select Screen Menu** allows the user to choose different ways to view patient images, series, and studies. Comparing two studies side by side is a popular screen format used by clinician. The Image windows is split into two viewing areas. Each half of the screen works independently while being compared.

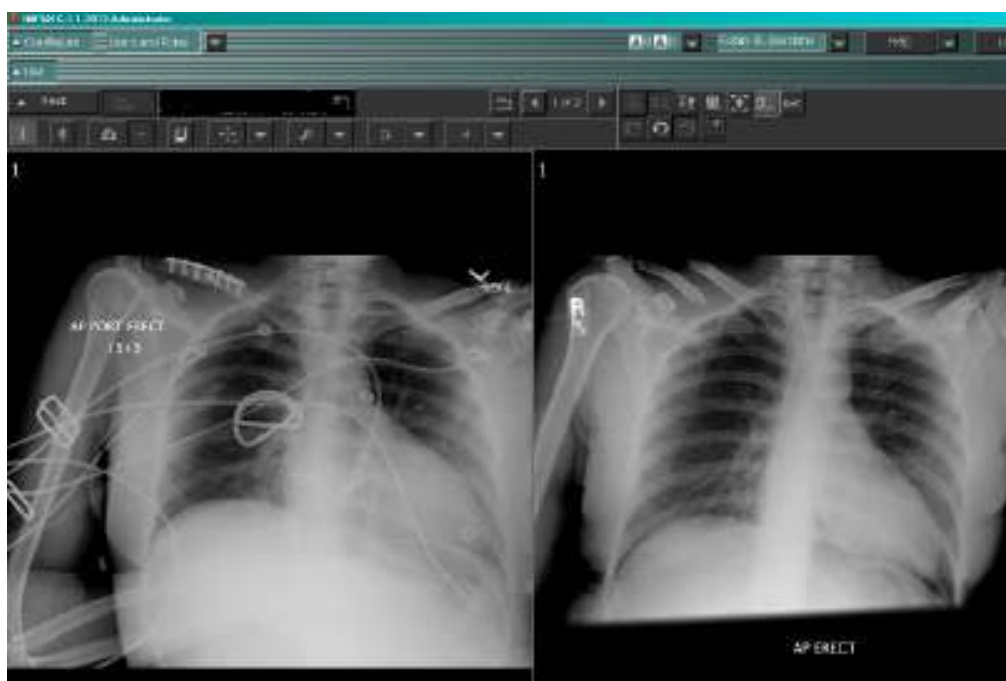
Comparing two Studies

1. From the **List Area**, select the desired studies to compare.

2. From the **Image Area**, choose the **Select Screen Format** menu








3. Select the Study: 1x2 tool, The first two studies display side by side.



4. Perform the same operations to each image as normal.



Hint: To return to the single study view, select the Image: 1x1  tool

Tool	Tool Name	Function
	Image 1x1	Displays a single image at full screen size.
	Study 1x1	Displays an image from two different studies side by side.
	Image 2x2	Displays four images from a series
	Series 1x2	Displays two separate series side by side
	Series 2x2	Displays four series

Comparing Two Studies (continued)


Effect	Explanation
Line Appearance	<p>The effect of every screen format has a style and color of lines representing them.</p> <p>Study—Solid black lines Series—Solid white lines Images— Dotted white lines Monitors— Two separate black boxes</p>

Viewing in Cine Viewer

Cine Viewer enables the system to display images frame by frame in succession automatically. The result is a moving image displayed on the screen.

- From the right half of the Top toolbar,  select the Cine Viewer tool. The Cine viewer Toolbar displays below the image.



- Set the Cine Viewer settings to the preferred frame range, rate, and play mode.
- Select the **Play tool**.  The **Cine viewer** displays the images at the chosen setting in succession.



*Hint : The **Cine Viewer Toolbar** can be placed anywhere in the Image Area. Instead of selecting the*

Embed Bottom button,  click and drag the Toolbar to the desired area.

*To unembed the **Cine viewer toolbar** click on the  unembed tool .*

*Before playing **Cine Mode** the user should set the frame rate, range and play mode in order to see the desired images at the preferred speed.*

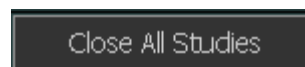
Closing Studies

It is important to close images as you are done viewing them. Impax remembers what Studies are left open in the Image Viewing Area and will open them the next time you login in to Impax. Leaving images open in the viewing area will slow the login process for your next session because images must load in order for you to perform your next search.

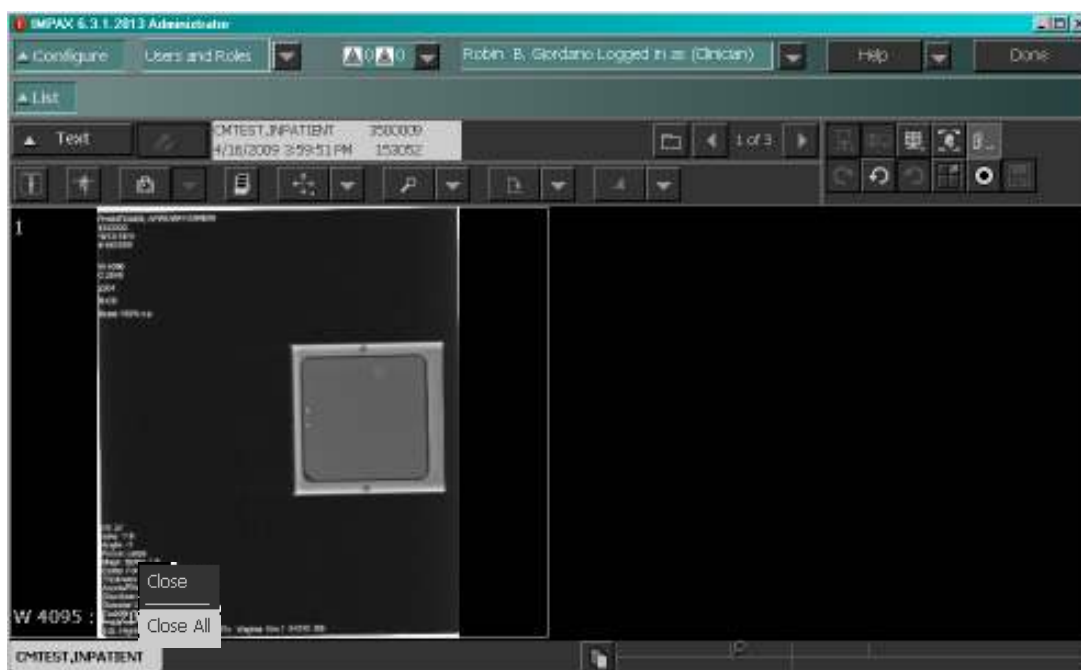
1. From the **Image area**, hover over the **Patient Name** in the lower left corner of the **Image Area** with your *mouse* right click and a pop-up menu will appear.



2. From the **List Area**, Click on the Close All Studies button



3. From the Image Area, Click on the Exit button in the **Top Toolbar**




Hint: *Close will exit the current patient study
Close All will exit all studies loaded in the Image Area.*

Impax Text Area

Viewing Reports

Reports are displayed in the **Report panel** of the **Text Area**. The **Report Panel** will not display any information if there is not a report available.

1. From the **Image Area**, select the **Text** button from the  **Top Toolbar**. The **Report panel** plays in the **Text Area**.
2. Double-click the **Report bar**. The expanded **Report Panel** displays.



The screenshot shows the AGFA Impax 6.3.1.2813 Administrator interface. The top toolbar includes buttons for 'Configure', 'Users and Roles', a user profile for 'Robin B. Gordano', 'Help', and 'Logout'. Below the toolbar, the 'Text' button is selected in the top toolbar. The main interface is divided into two panels. The left panel, titled 'Text', shows a 'Study list' with columns for 'Study Status', 'Study Description', 'Study Date', and 'Study Time'. The right panel, titled 'Study: Approved', displays a report for 'L MRI LOWER EXTREM JOINT W/O CON' with a 'RAD Code: 73721' and 'ORDER #: RMS: 90002 Inv: 90442630'. The report content includes 'CLINICAL: knee pain', 'REPORT: MRI scan of the left knee without contrast dated 4 November 2008', 'History: Left knee pain.', 'Findings: No comparison studies available.', and 'Technique: Sagittal T1 spin-echo'.

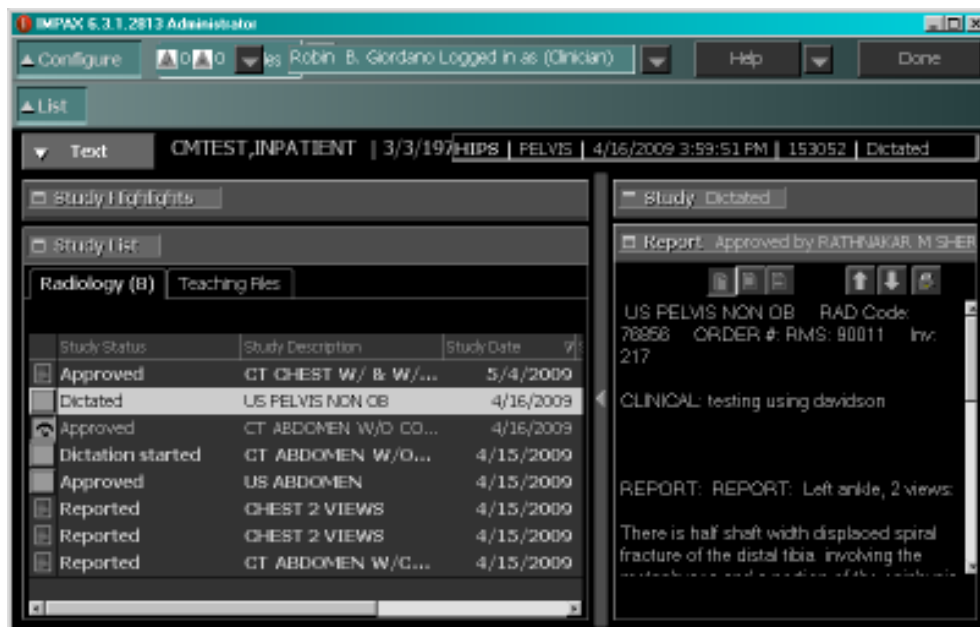


Hint: For **single monitor** users to toggle between **Image Area** and **Text Area** click the  **Text** button in the **Top toolbar**. **Dual monitor** devices will display the **Text Area** on the left monitor by default.

Study List

The Study List in the Text area displays a list of all studies known to IMPAX for the current patient. From the Study List, you can display studies and view study reports.


 Study List




Clicking once on a Study in the **Study List Panel** list will display the Report in the Report Panel

and

Double Clicking on a Study in the **Study List Panel** will display the images in the Image Viewing Area.

 **Hint:** The text Area panels can be sized. All Text Area panels have a minimize and maximize button Located to the left of each Panel Description . Click and dragging on the Panel title bar allows the user to re-size the Panel Window

Maximize: 

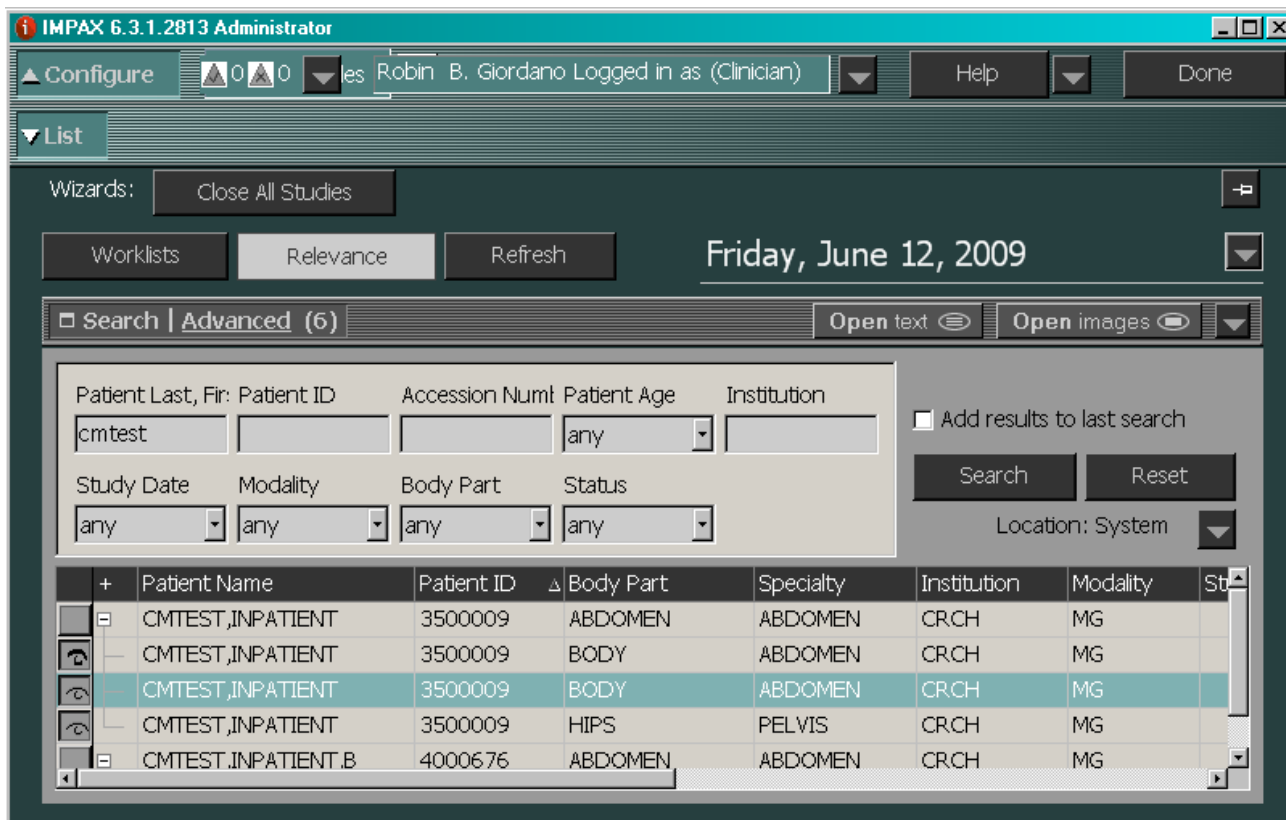
Minimize: 

Impax Screen overview

The List Area allows the user to:

- ◆ Search for patient studies using a combination of criteria and constraints
- ◆ Configure Favorites

The List Area contains the following:

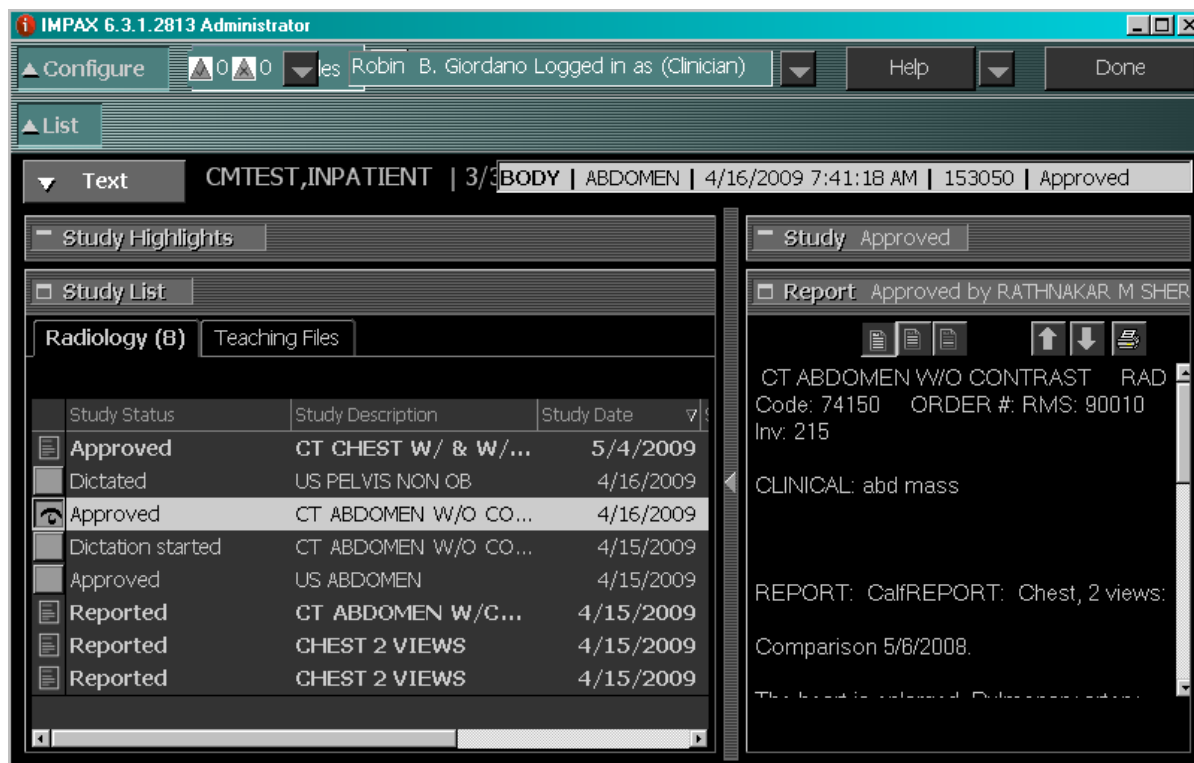


Panel	Explanation
Search Bar	Allows users to search for patient studies, using criteria and constraints.
Worklists Button	Launches the Worklist Library which allows users to create and manage worklists.
Relevance Button	Allows users to automatically apply prior relevant patients studies to the current study.
Refresh Button	Manually Refresh worklists
Expanded Worklist	Displays patient studies based on the worklist criteria
At-a-Glance Area	Displays messages and news item from the PACS Administrator

Text Area Overview

The Text Area allows the user to:

- ◆ View Study, order, and report information.
- ◆ View the patients previous reports and studies.

















Panels	Explanation
Study Highlights	Displays the most relevant study information
Order Panel	Displays information about the order related to the study. Demographic information of the ordering physician is also available.
Study Summary	Indicates whether the information being viewed matches the study displayed in the Images area
Report Panel	Displays available reports
Study Panel	Displays patient demographic information and allows users to read and add study comments.

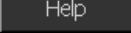
Image Area overview

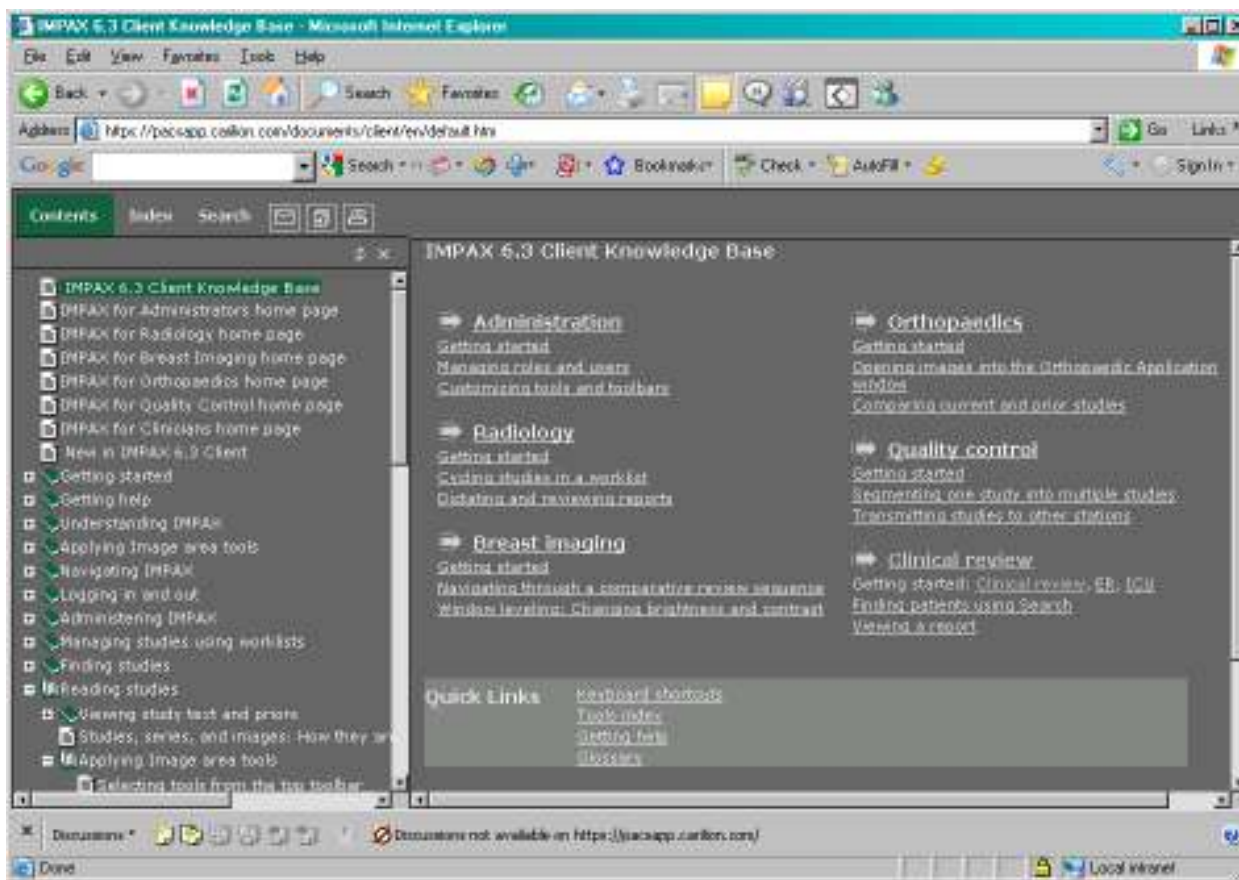
- ◆ View Images in many formats
- ◆ Manipulate Images



Tool	Tool Name	Function
	Available Series	Navigate through studies with one than one series
	Cursor Mode	Displays the exact location of slice positions and provides a 3D context for images in MR studies
	Snapshot	Allows user to save current image, including window levels and formatting, to a scheduled workload.
	Window Level menu	Displays the available window
	Zoom Menu	Displays the available zoom and magnification tools.
	Geometry Menu	Displays the available rotation tools.
	Markup Annotation	Display the available markup and annotation tools.
	Select Screen Format	Display the available screen format views for images, series, and studies.
	Demographics Toggle	Displays of hides patient demographics
	Help	Displays Help
	Undo	Reverses most recent change
	Redo	Reverses most recent undo
	Cine	Displays images frame by frame in succession
	Display Mark up toggle	Displays or hides all markups.

Online Help Overview

Select the **Help** Button  from the Top of any screen area. The **Knowledge Base Home Screen** Displays.



Contents To search for the desired search criteria, search using the **Contents** search in the left frame

Or

Index Select the **Index** button to search for desired text.

Or

Search Select the **Search** button to search the table of contents for the desired topic.

For Impax questions or problems call the Technology Service Center: 540.224.1599