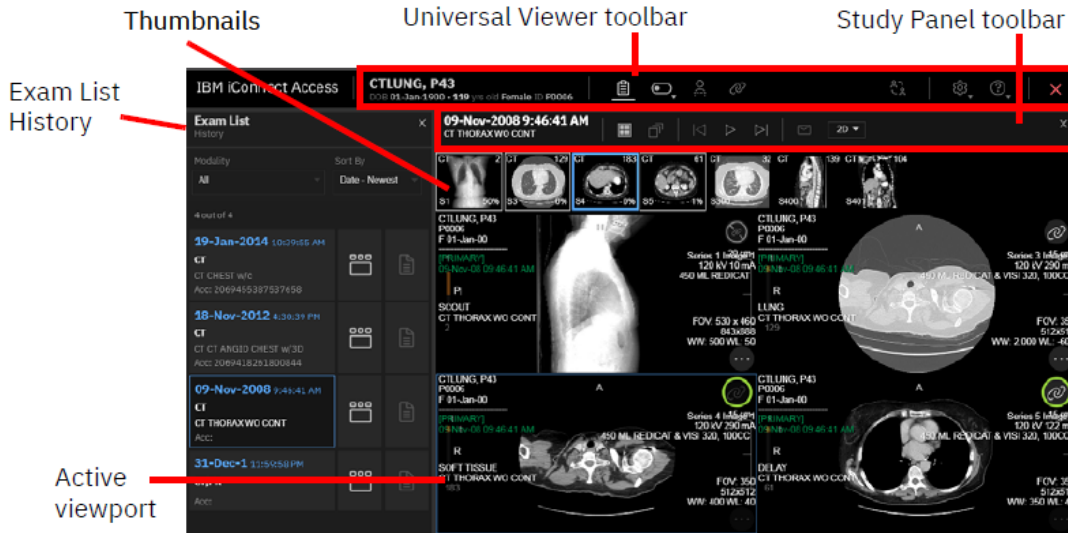


# iConnect Access Help Guide








## Universal Study Viewer

The Universal study viewer window consists of the following components:



## Universal Viewer Toolbar

The Universal viewer toolbar contains the following items:

- The patient's name, date of birth (DOB), and ID.
- Patient History  – open or close the Exam List History panel.
- Show/Hide  – expand to toggle the following options on or off:
  - Image text
  - DICOM 6000 overlays
  - Thumbnails
  - Stack slider
  - 3D controls (if enabled) (includes MPR crosshairs and 3D rotation controls)
- Localizer Lines  – toggle localizer lines on or off.
- Linked Scrolling  – enable scrolling of multiple series in several viewports at the same time.
- Collaboration  – display a list of users currently viewing the same study and initiate a diagnostic quality collaboration session.
- Help  – expand to open the IBM iConnect Access Help or the About dialog.
- Exit  – close the Universal viewer.

## Comparing Related Studies

The Exam List History enables you to compare the original study with one or more additional studies. When opening a related study in the Universal viewer, each study is displayed in separate panel with its own thumbnails and demographic information. Up to five viewer panels can be open at one time in the Universal viewer. Each can be closed individually, including the primary study (the one that was originally selected from the study list).


### To select and load another study

From the Exam List History, click a study. The application loads the study images into a new viewer panel.

## Viewing Thumbnail Previews

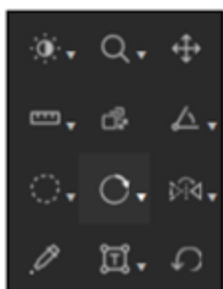
The Exam History list allows you to view a thumbnail preview window of a related study series. From the thumbnail preview window, you can load different series from the same study, or another study for the same patient, into the Universal viewer.

### To view thumbnail previews

- 1 Load a study in the Universal viewer.
- 2 From the Exam List History, click **Thumbnail Previews**  for a related study. The thumbnail preview window opens displaying the thumbnails.
- 3 To open a thumbnail preview, do one of the following:
  - Select a viewport from an open study panel and double-click the thumbnail.
  - Drag and drop the thumbnail into the desired viewport of an open study panel.
- 4 Click **Thumbnail Previews** to close the preview window.




## Toolbox

The Toolbox contains tools that you can use to investigate and manipulate images in the image viewer. To access the toolbox, right-click on a viewport containing an image or series.





**NOTE:** Do not drag the mouse outside of the browser when interacting with the viewport (in other words, when you release the mouse button, make sure the mouse cursor stays within the boundaries of the browser).


## Window Options

	Window Level. Enables you to manually adjust the window width and level. Width can be wide (many grays, less contrast) or narrow (fewer grays, more contrast). Level can be high (dark) or low (bright).
	Auto Width Level. Applies optimum window width and level values based on a histogram analysis of the active image.
	Invert. Calibrates the image grayscale to provide a negative image display. Click the button again to return to the original setting.  For MG images, this feature only inverts the breast tissue; the background remains black.

## Zoom








	Interactive Zoom. Zooms the selected image. In the viewport, click and hold the left mouse button, and move the cursor up/down to zoom in/out on the click point.  <b>CAUTION:</b> If you click outside of the anatomical area in the image, the image will be re-centered around the selected point and the anatomical data may become located outside the viewer.
	Magnifier. Magnifies an area of an image. You can move the magnification window to different locations within the viewport.  Hold the left mouse button to display and move the magnifier window to magnify areas of interest. Release to dismiss the window.  You can use mouse wheel while holding the left mouse button to change the magnification factor between 2x, 3x, and 4x.

## Pan

	Pan. Repositions the image within the viewport.
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## Measurement Tools







**NOTE:** The application does not allow measurement tools on an ultrasound study that contains multiple measurement regions or when there is a single measurement region in which the measurement is other than distance.

	<p>Line Measurement. The application displays the distance between the starting point and ending point in millimeters when the image is calibrated. When not calibrated, it displays in pixels (px). Click two points on the image to create a line. After the line is drawn, you can select and move the line and each of its endpoints.</p>
	<p>Calibration. Click two points on the image to create a line. The application displays the distance and an input field where you can enter the newly calibrated distance, in millimeters. After the line is drawn, you can select and move the line and each of its endpoints.</p>
	<p>Transischial Line. Used to measure leg length discrepancies for pre-operative planning of orthopedic surgeries. Click two points on the image to create a reference line. Click two more points on either side of the reference line to measure the distance between those points and the reference line. The application displays the distance between the two points and the reference line and calculates the discrepancy between the two distances.</p>
	<p>Angle. Click three points on the image. The application displays the angle's measurement.</p> <p>You can also modify any existing angle measurements. Click and hold an endpoint, drag to the desired location, and release.</p>
	<p>Cobb Angle. Click two points on the image to create a line. Click two more points to create the second line. The application extrapolates the point where the two lines intersect and displays the Cobb Angle.</p> <p>You can also modify any existing Cobb angle measurements. Click and hold an endpoint, drag to the desired location, and release.</p>
	<p>Plumb Lines; Horizontal and Vertical. Select the desired plumb line orientation—vertical or horizontal—and click anywhere on an image to draw a plumb line across the entire image intersecting at the location of the mouse cursor.</p>
	<p>Joint Line. Measure angles for metatarsal osteotomies with the assistance of a line perpendicular to the base of the angle. Click two points on the image to create a reference line. Click a third point on the image to complete an angle. The application displays the angle measurement at the intersection. Adjustments can be made to joint lines after they have been created.</p>


Measurements made in the Universal viewer can be modified as follows:

- Click and drag a handle of a measurement to move the handle's location. Calculated values, such as distance measurements, are updated dynamically.
- Click and drag a measurement or text box to move it.
- Right-click a measurement to delete it.



## Text and Annotations

	<p>Add Text. Click the image where you want the text to appear. The application places a text insertion point on the image. Type the text you want to place on the image. Click outside of the text box or press Enter to complete the function.</p>
	<p>Free Draw. Click and hold the left mouse button to begin drawing nonlinear annotations on an image by moving the cursor. Release the left mouse button to end the annotation.</p>
	<p>Annotation Rectangle. Click and drag the mouse cursor to draw a rectangle over the desired region. When you release the mouse button, the application displays the region of interest (ROI) measurements. *</p>
	<p>Annotation Ellipse. Click and drag the mouse cursor to draw an ellipse over the desired region. When you release the mouse button, the application displays the ROI measurements. *</p>
	<p>Annotation ROI. Click and drag the mouse cursor to draw a freehand ROI. When you release the mouse button, the application completes the ROI with a straight line between the start and end points. The application displays the ROI measurements. *</p>
	<p>Delete All Annotations. When selected, deletes all annotations in the image viewer.</p>




## Pixel Value

	<p>Pixel Value. Identifies the pixel coordinates and the pixel value of a pixel when you click on an image and hold the button. The pixel value is expressed as an RGB value for color images or a grayscale value (representing brightness) for monochrome images.</p> <p>For CT images, the pixel measurements are identified by the abbreviation "HU" if the pixel values are stored in Hounsfield units. An abbreviation of "US" indicates an unspecified unit of measure.</p>
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## Series Scrolling

	<p>Scroll Tool. Enables you to scroll through the images in a series within a viewport by moving the mouse cursor up or down while the left mouse button is pressed.</p>
	<p>3D Cursor. When applied, all displayed MRI, CT, and PET series that share the same DICOM frame of reference as the active viewport align at the nearest slice to the current spatial location selected with the 3D Cursor.</p> <p>Click anywhere on image to place a 3D Cursor marker and align series accordingly.</p> <p>The 3D Cursor may select a scout image of the same plane as the reference image in a stack that is of a different plane, if the scout image is before the other images that might be otherwise chosen, e.g. when scout image is the first image in the stack.</p> <p><b>WARNING:</b> If a good match within configured tolerance cannot be found in any of the other viewports, the marker will not be displayed in those viewports and those viewports will not scroll.</p> <p><b>Note:</b> The 3D Cursor is only available in the Universal viewer.</p> <p><b>Note:</b> The 3D Cursor cannot be used while Cine running.</p>

## Image Orientation

	<p>Flip Horizontal. Flips the image on the horizontal axis.</p>
	<p>Flip Vertical. Flips the image on the vertical axis.</p>
	<p>Rotates the image clockwise or counter-clockwise in 90 degree increments.</p>

## Reset

	<p>Resets your presentation to the initial state.</p>
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