Zoom

Drag up to zoom in on an image; drag down to zoom out. Zooming is applied to all images in the series.

When mammography images are linked, the zoom remains consistent between the viewports and is based on physical distance (not the magnification factor).

Note
To zoom an image at any time, hold CTRL while dragging on the image.

Note
To focus on a specific area, pan the image so the area is centered in the viewport, then zoom in. On mobile devices, use pinch-to-zoom to pan and zoom simultaneously.

Rotate

- **MPR** Drag to rotate an image in any direction. Rotation is applied to all images in the series.
- **3D** Drag to rotate an image with a full three degrees of freedom.
- **Sculpting** Drag to rotate an image in any direction. Rotation is applied to all images in the series.
- **Fusion 3D** Drag to rotate an image with a full three degrees of freedom.

Note
The orientation figure and orientation information is updated when you rotate an image (see **View image orientation**).

1:1 display mode

You can choose to view images using a 1:1 display mode where 1 image pixel equals 1 monitor pixel. This allows you to view all pixels as they were acquired, without any interpolation. You may also want to use the 1:1 display mode for monitor quality control when using synthetic images such as AAPM test patterns.

Before using the 1:1 display mode, you must configure your monitor and browser. You must also enable the 1:1 toolbar icon in your tool preferences.

Configure your environment to use the 1:1 display mode

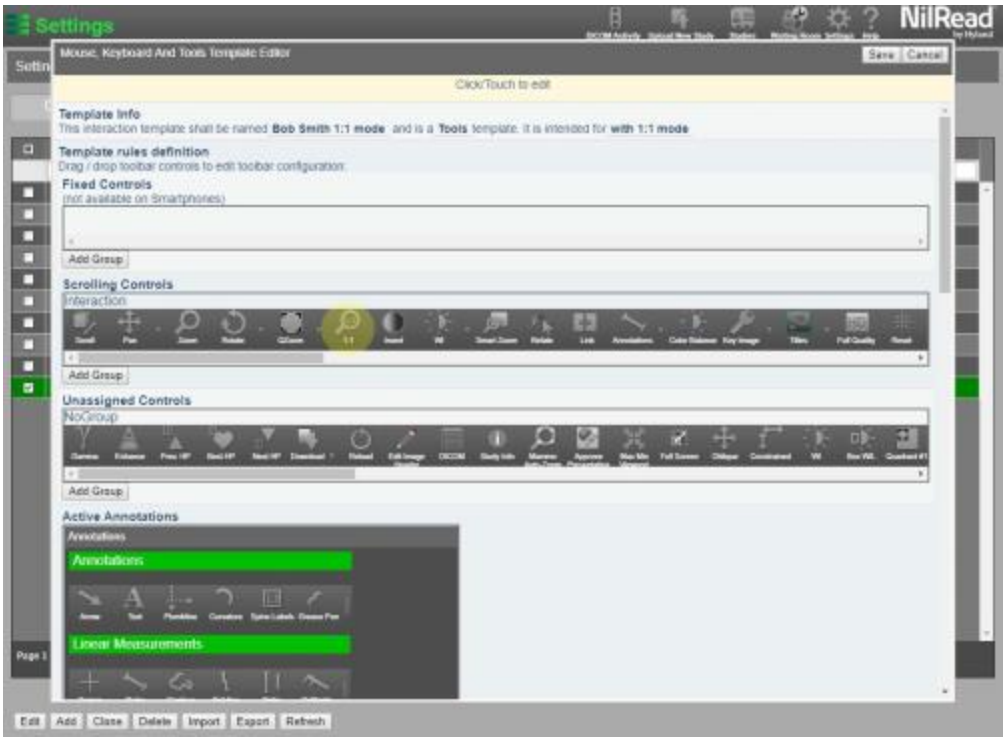
Check the following display settings for your monitor.

1. Use the recommended screen resolution.
2. Use a 100% display scale.
3. Use a 100% text DPI scale.

In your browser settings, set the zoom to 100%.

Enable the 1:1 display mode

Create a **Tools** template that includes the 1:1 tool. For details, see **Change tool preferences**.



Apply the 1:1 display mode

1. Select **1:1** (toolbar).
2. To remove the 1:1 display mode, select **Reset** (toolbar). The 1:1 display mode will also be removed if the image zoom factor is changed.

Quadrant Zoom

For mammography images, Quadrant Zoom presents a magnified view of the four quadrants.

- To switch quadrants, select  .
- To select a specific quadrant, select the arrow beside  and select a quadrant.
- To exit quadrant zoom, select the arrow beside  and select **Zoom to Fit**.

Invert

Invert grey images. Will be applied to all images in the series.

Window Level

You can adjust the window level based on the entire image or based on a region of interest.

- **Overall window level** Select the **Wl** tool. Drag to adjust the window level. Window level changes are applied to all images in the series. (To change the window level for an image at any time, hold SHIFT while dragging on the image.)
- **Region of interest** Select the **Box WL** tool. Click (or tap) and drag to highlight a region of interest. The window level is adjusted to maximize the contrast of the area you selected.

Note
Use **presets** (side panel) to apply common window levels.

Gamma

Drag up or down to adjust the gamma correction. You can adjust the gamma correction for both color and monochrome images.

The gamma value is shown in the lower-left corner of the image.

Enhance

Drag up to sharpen the image. Drag down to blur the image.

The enhancement level is shown in the lower-left corner of the image. A negative value is shown if the image is blurred (maximum is -3); a positive value is shown if the image is sharpened (maximum is +3).

Smart Zoom

To use the Smart Zoom box:

- Using the handles on the sides of the box, drag the box to an area on an image.
- To resize the box, drag the handles on the corners of the box.
- Select **Reset** to reset the Smart Zoom box to the default settings. You can change the Smart Zoom default settings in your user preferences (see **Change your user preferences**).
- To remove the Smart Zoom box, select the **Smart Zoom** icon in the toolbar.

Zoom In on a Portion of an Image

You can use Smart Zoom to increase the magnification and window level for a selected area.

Place the Smart Zoom box on the area you want to magnify. Select the box, then use the **Zoom** tool to change the magnification within the box. You can also change the **Window Level** within the Smart Zoom box.

Compare Images

You can use Smart Zoom to compare two series. To overlay a series on top of another series, drag a series from the Series panel or the patient timeline into the Smart Zoom box. You can also drag a **preset** into the Smart Zoom box.

You can use the following tools on an overlay series. Select the Smart Zoom box, then select the tool.

Zoom

Change the magnification factor for the overlay series. Note that if you change the magnification factor for the underlay series, the overlay series will also be affected.

Window Level

Change the window level for the overlay series. Note that if you change the window level for the underlay series, the overlay series will also be affected.

Scroll

Change the overlay image by scrolling through the images in the series.

Pan

Pan the overlay series.

Rotate

Rotate the overlay series.

Gamma

Adjust the gamma correction.

Rendering

Change the rendering mode for the overlay series.

Thickness

Change the plane thickness for the overlay series.

Relate

Not available for 2D views. Modify the reference lines. Reference lines are shown on all series on the current screen that are in the same frame of reference. The intersection of the reference lines

represents the corresponding position in all viewports.

Click (or tap) an image where you want to place the intersection of the reference lines. You can also drag the horizontal and vertical lines individually, or drag the intersection to move both lines simultaneously.

Note
Use **Reference** to show or hide the reference lines.

Link

Link or unlink all currently open series. This allows you to scroll through the linked series in a synchronized manner. Changes (such as Rotation and Zoom) applied to one series are also applied to the other series.

When mammography images are linked, the zoom remains consistent between the viewports and is based on physical distance (not the magnification factor).

Annotations and measurements

Use these tools during image analysis to mark and measure features on an image. Use the arrow beside **Annotations** to select a tool.

Note
A draft presentation is automatically saved when you add annotations and measurements to an image (see **Use presentations**).

Note
Measurement units are set in your user preferences (see **Change your user preferences**).

Propagate annotations and measurements

For cross-sectional images, you can propagate an annotation or measurement across all images in the series.

1. Add an annotation or measurement to a cross-sectional image.
2. Right-click (or touch and hold) the annotation or measurement, then select **Propagate**.

Note that when an annotation or measurement is applied to a multiframe image while a cine is playing, the annotation or measurement is automatically propagated across all images in the series. If a propagated measurement cannot be calculated for all images in the series, the measurement value will be ***.

Annotations

Arrow

Add a arrow pointing to a feature of the image.

1. Click (or tap) and drag to add an arrow.
2. Add a note, then select **OK**. Select **Cancel** if you do not want to add a note.

To adjust an arrow:

- To move the arrow, drag the arrow to a new position.
- To adjust the arrow length, drag  at either end of the arrow.
- To move the note, hover over the note until  appears, then drag the note to a new position.
- To edit the note, click (or tap) the note. Edit the text, then select **OK**.

Text

Add a note to an image.

1. Click (or tap) where you want to add the note.
2. Add text and select **OK**.

To adjust the note:

- To move the note, hover over the note until  appears, then drag the note to a new position.
- To edit the note, click (or tap) the note. Edit the text, then select **OK**.

Plumbline

Add plumblines to an image. The angle where the lines intersect is shown.

1. To create vertical lines, click (or tap) and drag up or down.
2. To create horizontal lines, click (or tap) and drag left or right.

To adjust a line:

- Drag a line to move it to a new position.

Curvature

Measure the radius between two points.

1. Click (or tap) and drag to draw a line between two points.
2. Move the mouse to define the curve radius, then click (or tap) to set the radius.

To adjust the curve:

- To adjust the curve radius, drag  in the center or on an end of the curve.
- Drag the curve to move it to a new position.

Spine Labels

Label spinal vertebrae in an image.

1. Click (or tap) on the first spinal vertebra, then select a label.
2. Click (or tap) on the remaining vertebrae to apply consecutive labels. When done, right-click **+** beside a label, then select **Complete Labeling**.
3. To display the labels across all views of this body location in the current study, select **Study**. Select **Not Shared** to display the labels on the current viewport only.

4. If sharing labels across views, set the **Display Threshold** to indicate how many neighboring slices the label should be displayed on. Labels are displayed on consecutive slices up to the **Display Threshold** (in mm).

To adjust the labels:

- To change a label, right-click **+** beside the label, then select **Edit**.
- To delete a label, right-click **+** beside the label, then select **Delete**. To delete the last label added to the image, select **Delete Last**. To delete all labels, select **Delete Annotation**.

Grease Pen

Highlight a region of interest using a freeform shape. No measurements are shown.

1. Click (or tap) and drag to create a shape.
2. Drag the shape to move it to a new position.

Linear Measurements

Cursor

Click (or tap) to display a point intensity measurement. The value is shown in measurement units appropriate for the study type. You can also choose to show the cursor position (see **Change your user preferences**).

Ruler

Click (or tap) and drag to create a linear measurement. After the line is drawn, the line length is calculated and displayed. Measurements are not shown on uncalibrated images.

If two lines intersect, the angle between the lines is shown. You can turn off the angle measurement (see **Change your user preferences**).

Contour

Click (or tap) and drag to create a free hand curve and measure its length. Measurements are not shown on uncalibrated images.

Polyline

Use to create a multi-segment line.

- Click (or tap) to create each point in the line. Right-click (or touch and hold) after creating the final point.
- Drag on a point to move the point to a new position.

Ratio

Use to measure the ratio between two lines. Two ratios are shown: from the shorter line to the longer line, and from the longer line to the shorter line.

1. Click (or tap) and drag to draw the first line.
2. Drag to draw the second line. The ratio is shown between the lines.

To adjust the lines:

- Drag at the end of a line to adjust a line's length.
- Drag in the center of a line to adjust the line's position.
- Drag the dashed connecting line to move the entire measurement to a new position.

Calibrate

Enabled for images that need to be calibrated due to missing size attributes in the image (for example, an analog image that has been scanned). The **Calibrate** tool should only be used when a scale or an object of known size is present on the image.

Drag to draw a line between scale marks on the image or to cover a known object, then enter the distance. After this calibration, the measurement tools are available for the image.

Area Measurements

You can define patterns for area measurement tools in your user preferences (see **Change your user preferences**).

ROI-Free

Create a border around a region of interest using a freehand shape. Statistics for the area are shown as appropriate for the study type (for example: average intensity, standard deviation, area and main diameters).

- Click (or tap) and drag to create a border around the region of interest.

To adjust the measurement:

- Drag a  to move the measurement to a new position.
- To increase the measurement area, click (or tap) anywhere on the border (do not select ). Draw a line outside the border that connects to another point on the border. This area is added to the measurement.
- To decrease the measurement area, click (or tap) anywhere on the border (do not select ). Draw a line inside the border that connects to another point on the border. This area is removed from the measurement.

> **Note**
> To increase or decrease the measurement area, the ROI-Free tool must be selected.

ROI-Ellipse

Create a border around a region of interest using an elliptical shape. Statistics for the area are shown as appropriate for the study type (for example: average intensity, standard deviation, area and main diameters).

- Click (or tap) and drag to draw an ellipse.

To adjust the measurement:

- Drag the center  to move the measurement to a new position.
- Drag an outer  to adjust the length of the corresponding axis of the ellipse.

Circle

Create a circular border around a region of interest. Statistics for the area are shown as appropriate for the study type (for example: average intensity, standard deviation, area and main diameters).

- Click (or tap) and drag to draw a circle.

To adjust the measurement:

- Drag an outer to adjust the measurement size.
- Drag the center to move the measurement to a new position. You can also drag anywhere on the circumference of the circle (except on an outer).

Polygon

Create a border around a region of interest using a polygon shape. Statistics for the area are shown as appropriate for the study type (for example: average intensity, standard deviation, area and main diameters).

1. Click (or tap) to create each point in the line.
2. Right-click (or touch and hold) after creating the final point.

To adjust the measurement:

- Drag a to adjust the measurement size.
- Drag the measurement to move it to a new position.

Square and Rectangle

Create a square or rectangle around a region of interest. Statistics for the area are shown as appropriate for the study type (for example: average intensity, standard deviation, area and main diameters).

1. Click (or tap) to create the first corner of the square or rectangle.
2. Click (or tap) to create the opposite corner.

To adjust the measurement:

- Drag a to adjust the measurement size.
- Drag the measurement border to move it to a new position.
- Drag a circle to rotate the measurement.

ROI - Threshold

Available for PET images. Highlight areas above a certain threshold within a region of interest.

To apply a threshold:

1. Click (or tap) and drag to create a border around a region of interest.
2. Enter a threshold, then select **OK**. Any areas within the region of interest that are above the threshold are circled.

> **Note**
> The default threshold is 2.5 SUV. To change the default threshold, see **Change your user preferences**.

3. To apply the ROI threshold measurement to all images in the series, right-click (or touch and hold) the measurement, then select **Propagate**.

To adjust the measurement:

- Drag a to move the measurement to a new position.
- To increase the measurement area, click (or tap) anywhere on the border (do not select). Draw a line outside the border that connects to another point on the border. This area is added to the measurement.
- To decrease the measurement area, click (or tap) anywhere on the border (do not select). Draw a line inside the border that connects to another point on the border. This area is removed from the measurement.

Area Ratio

Available for OP images. Measure the area ratio between two regions.

1. Click (or tap) and drag to create a border around the first region.
2. Click (or tap) and drag to create a border around the second region. The area of the two regions are shown. The ratio of the smallest area to the largest area is also shown.

To adjust the measurement:

- Drag to move the measurement to a new position.
- To increase the measurement area, click (or tap) anywhere on the border (do not select). Draw a line outside the border that connects to another point on the border. This area is added to the measurement.
- To decrease the measurement area, click (or tap) anywhere on the border (do not select). Draw a line inside the border that connects to another point on the border. This area is removed from the measurement.

Note
To increase or decrease the measurement area, the Area Ratio tool must be selected.

Angle Measurements

Angle

Click (or tap) and drag to create the first side of the angle (the start of this side will be the vertex). Click (or tap) where you want to place the bottom of the second side of the angle. The two sides are automatically connected. The angle between the two sides is shown.

Cobb Angle

Click (or tap) and drag to create the first side of the Cobb angle, then drag to create the second side. The two sides are automatically connected. The angle between the two sides is shown.

Cobb Multi-Angle