Rendering Temporomandibular Joints

In the TMJ view tab you can view the temporomandibular joint (TMJ) region with two independent focal troughs allowing you to get cross-sections of each TMJ in one view, along with corresponding coronal and axial views. The TMJ view tab also lets you see the TMJ in 3D volume renderings with automatic segmentation.

**Step 1.** Let’s begin by defining the visual anatomy. Click on the Reorientation toolbar icon and drag the horizontal limit lines to include the TMJ region. Use the arrows to adjust the patient’s orientation, if necessary.

**Notes**

**Step 2.** Place the mouse cursor on the axial view window and scroll through the slices until you reach the condyles widest points.

**Notes**

**Step 3.** Click and drag the endpoints of each focal trough to diagonally bisect the condyles.

**Notes**

**Step 4.** Clicking on and dragging the line forming the shape of the focal trough will move the entire focal trough. Coronal views of the right and left condyles are displayed on either side of the axial view and cross-sectional views appear below. Additional cross-sections can be added by clicking on Change Layout located in the Control Panel.

**Notes**

**Step 5.** In the Control Panel there are tools to enhance the image quality. Brightness and contrast may be changed by dragging their respective sliders. Image filters are available in the Sharpness dropdown. You can also change the width of the slices, the interval between the cross-sectional slices, and the thickness of the cross-sections by combining multiple slices for ray sum visualizations.

**Notes**

**Step 6.** Also in the Control Panel, in the Frontal section, you can adjust the settings of the coronal views from Slice to X-ray, Vol 1 (teeth rendering) and Vol 2 (bone rendering). The Thickness dropdown will let you create a ray sum view. When Vol 1 or Vol 2 are selected you may move the coronal view with the same tools used in the Volume Render view tab – left mouse (LM) click + mouse drag to rotate; spacebar + LM + mouse drag to adjust the tilt; Ctrl key + LM + mouse drag to enlarge; and, Shift key + LM + mouse drag to drag the image. Double mouse clicking on the coronal view (as well as the cross-sectional slices) will enlarge and isolate the image.

**Notes**

**Step 7.** To print, click on Print Out in the Control Panel, capture the Whole View to the Gallery and print it from there.

**Notes**