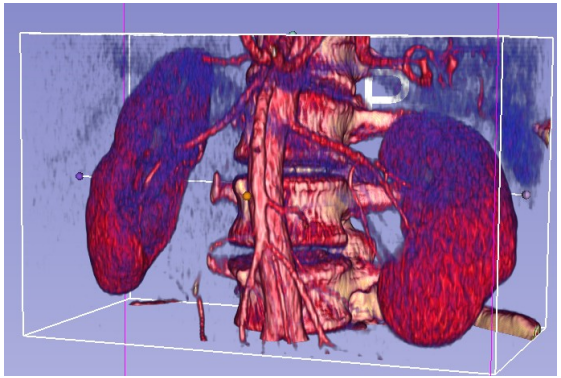
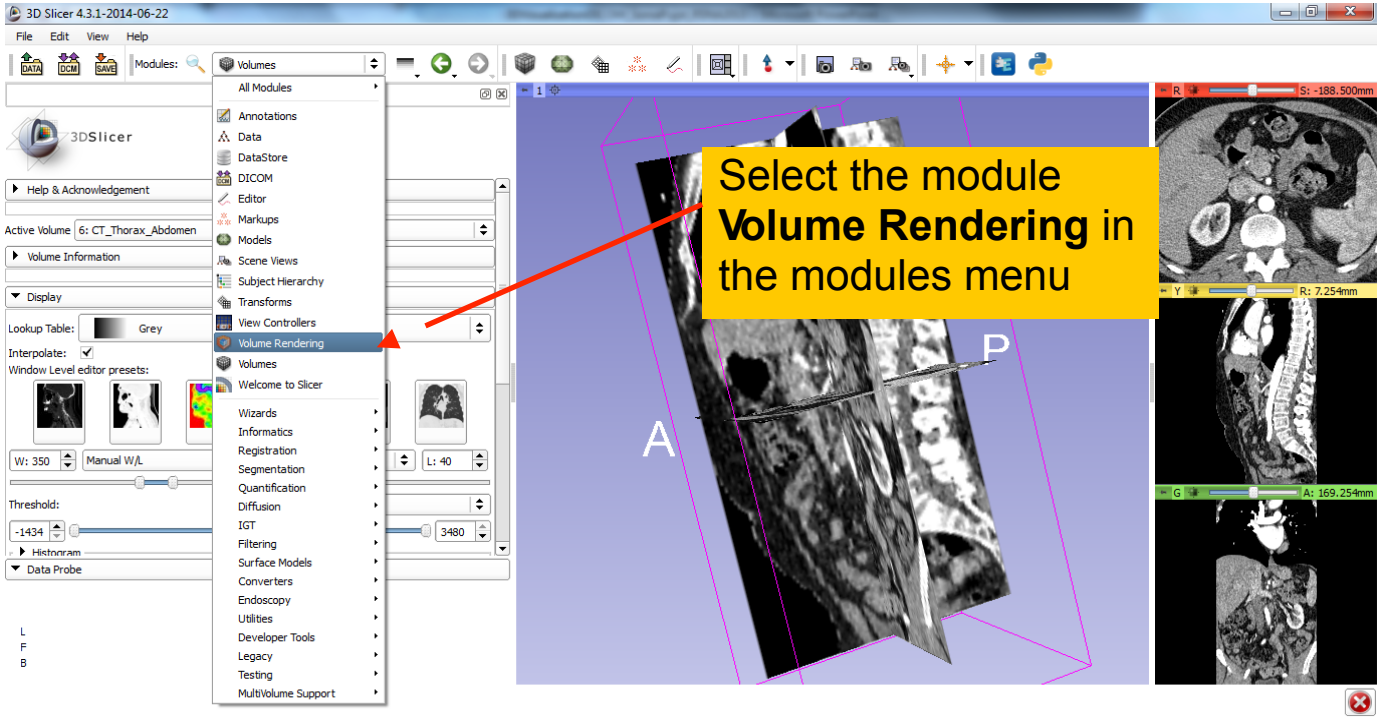
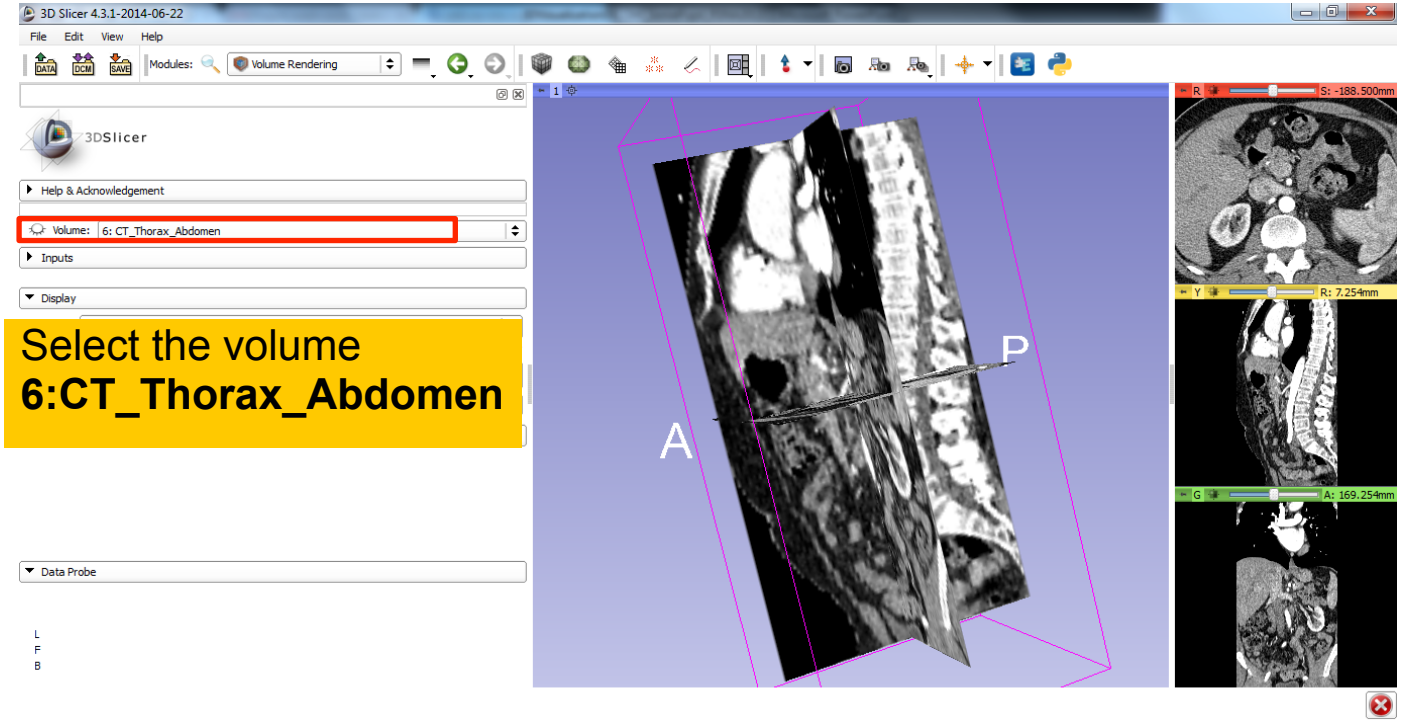


3D Interactive exploration of thoraco-abdominal CT data using Volume Rendering

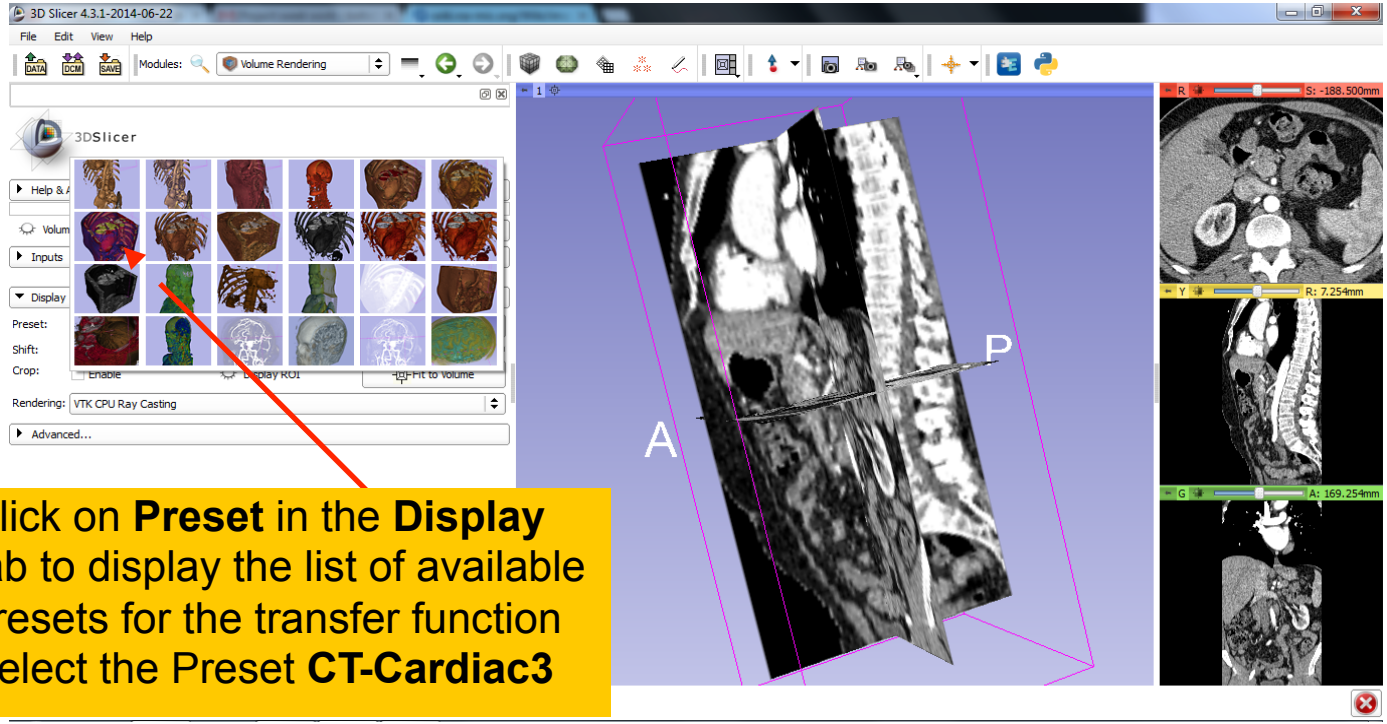
Volume Rendering



Volume Rendering

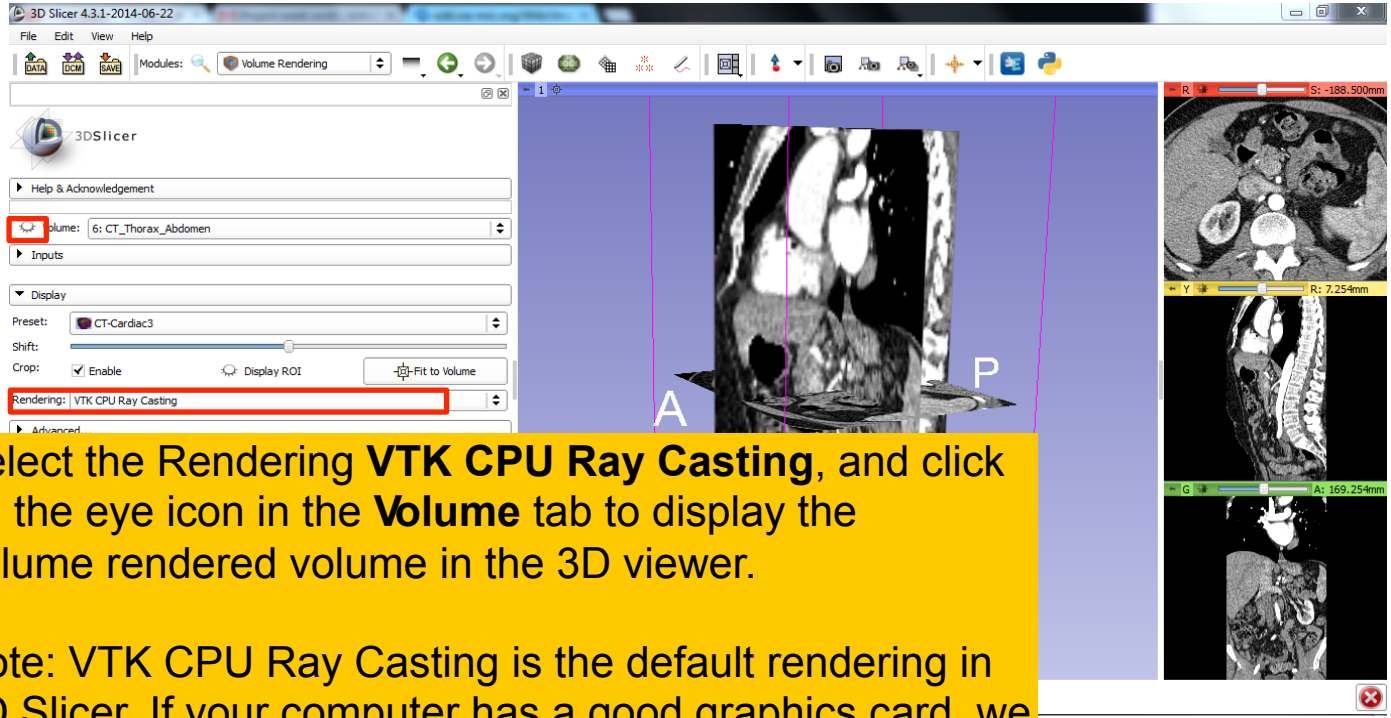


Volume Rendering



Click on **Preset** in the **Display** tab to display the list of available presets for the transfer function
Select the Preset **CT-Cardiac3**

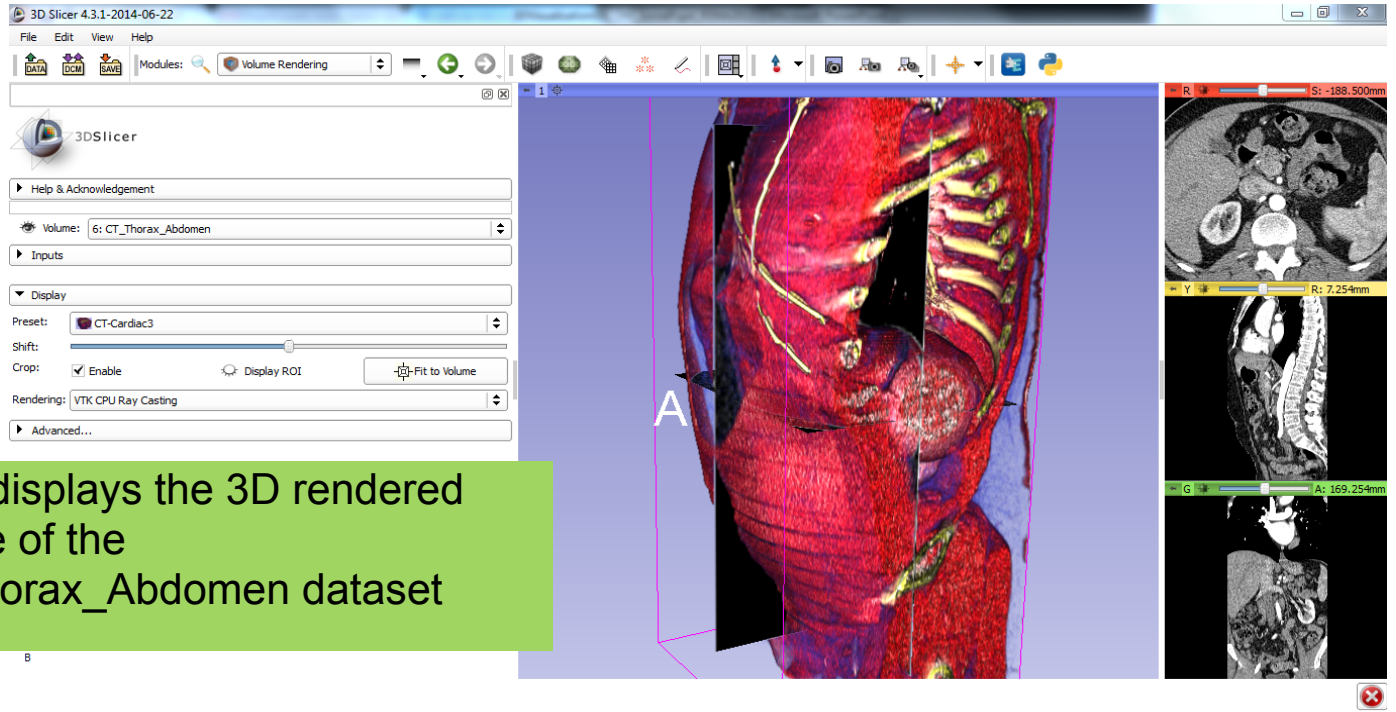
Volume Rendering



Select the Rendering **VTK CPU Ray Casting**, and click on the eye icon in the **Volume** tab to display the Volume rendered volume in the 3D viewer.

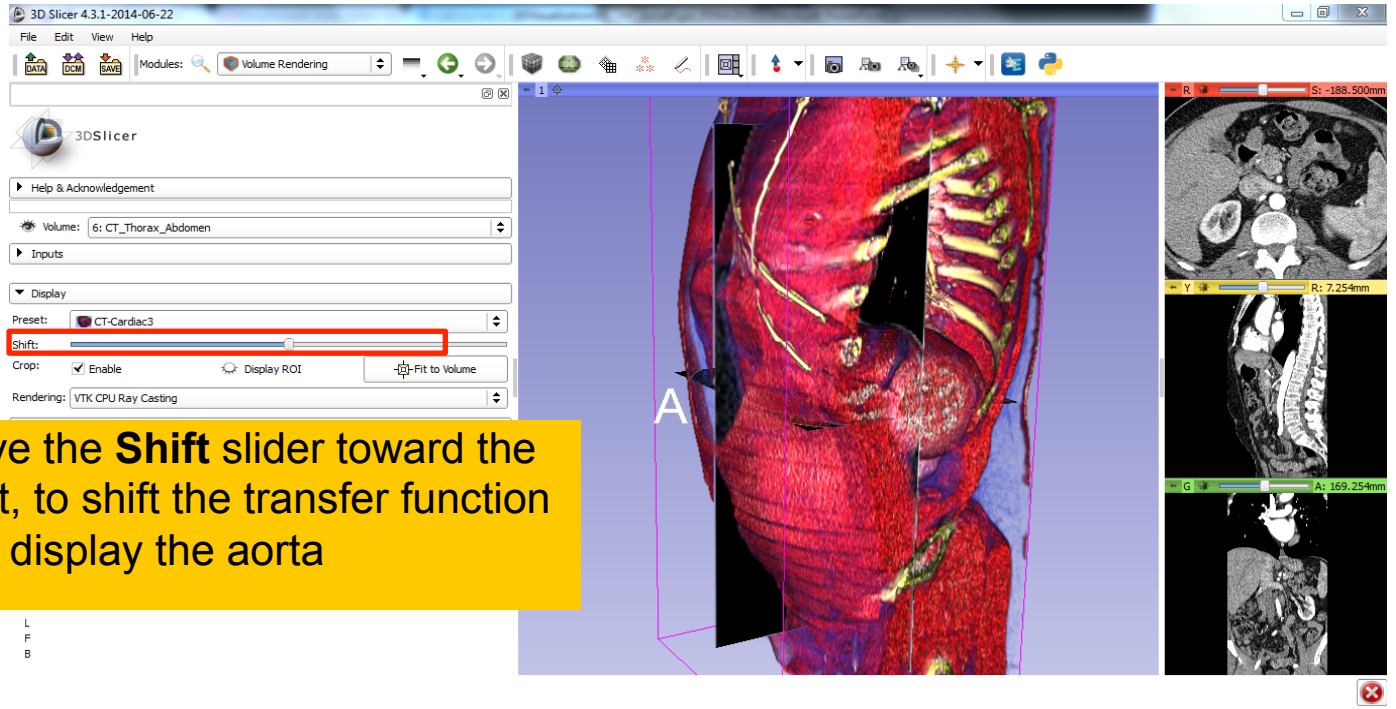
Note: VTK CPU Ray Casting is the default rendering in 3D Slicer. If your computer has a good graphics card, we recommend the **VTK GPU Ray Casting**

Volume Rendering



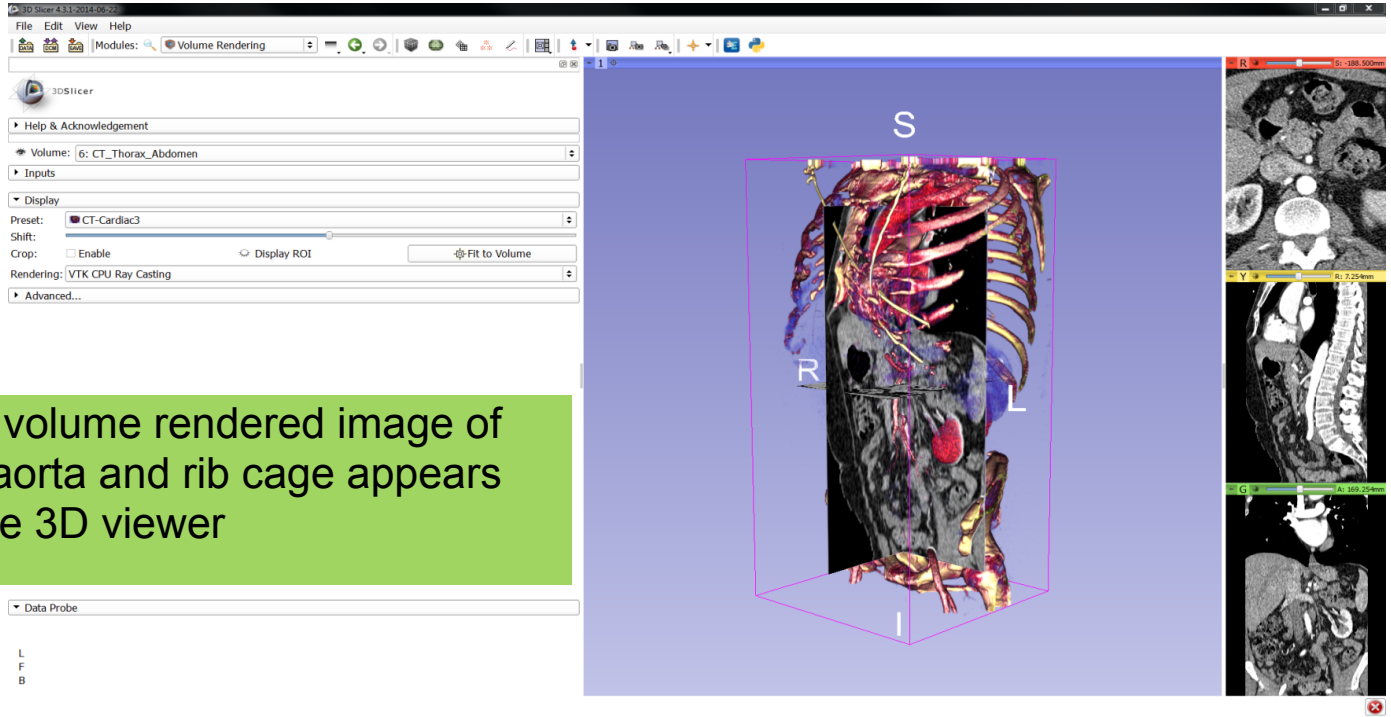
Slicer displays the 3D rendered volume of the CT_Thorax_Abdomen dataset

Volume Rendering



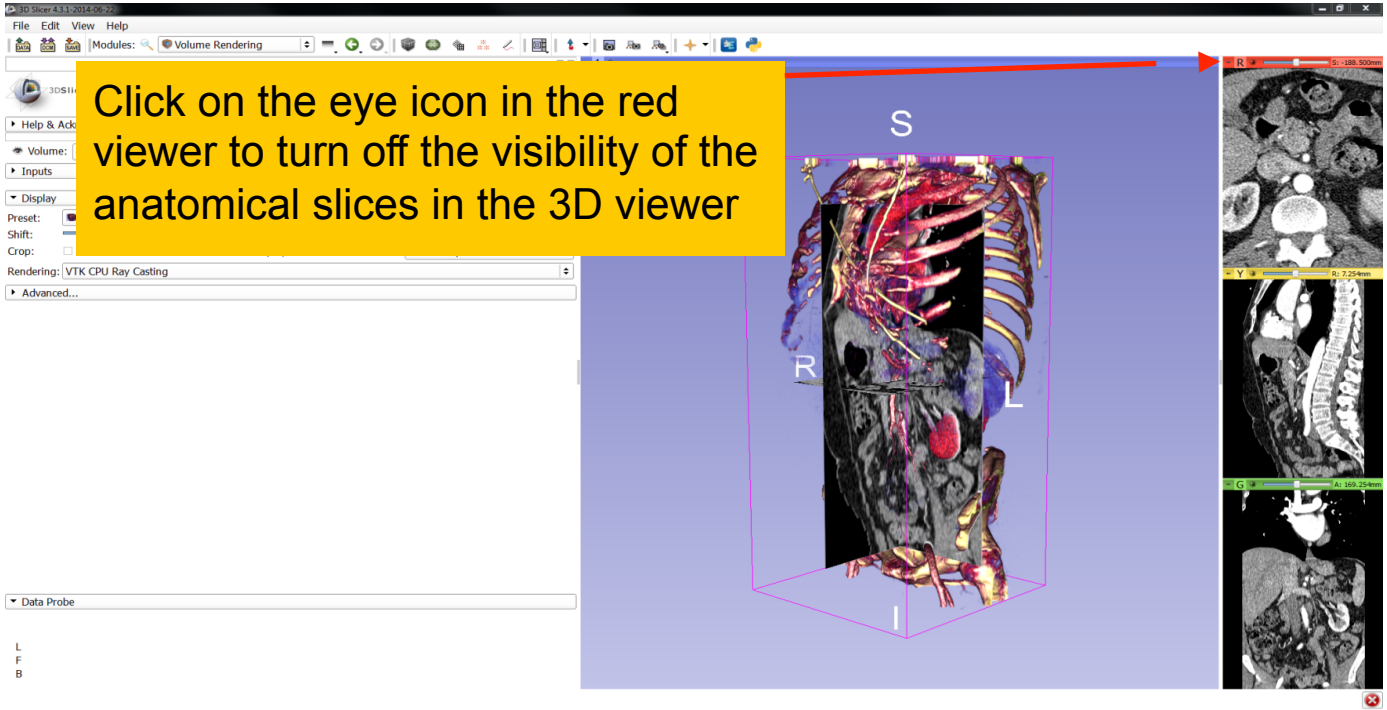
Move the **Shift** slider toward the right, to shift the transfer function and display the aorta

Volume Rendering

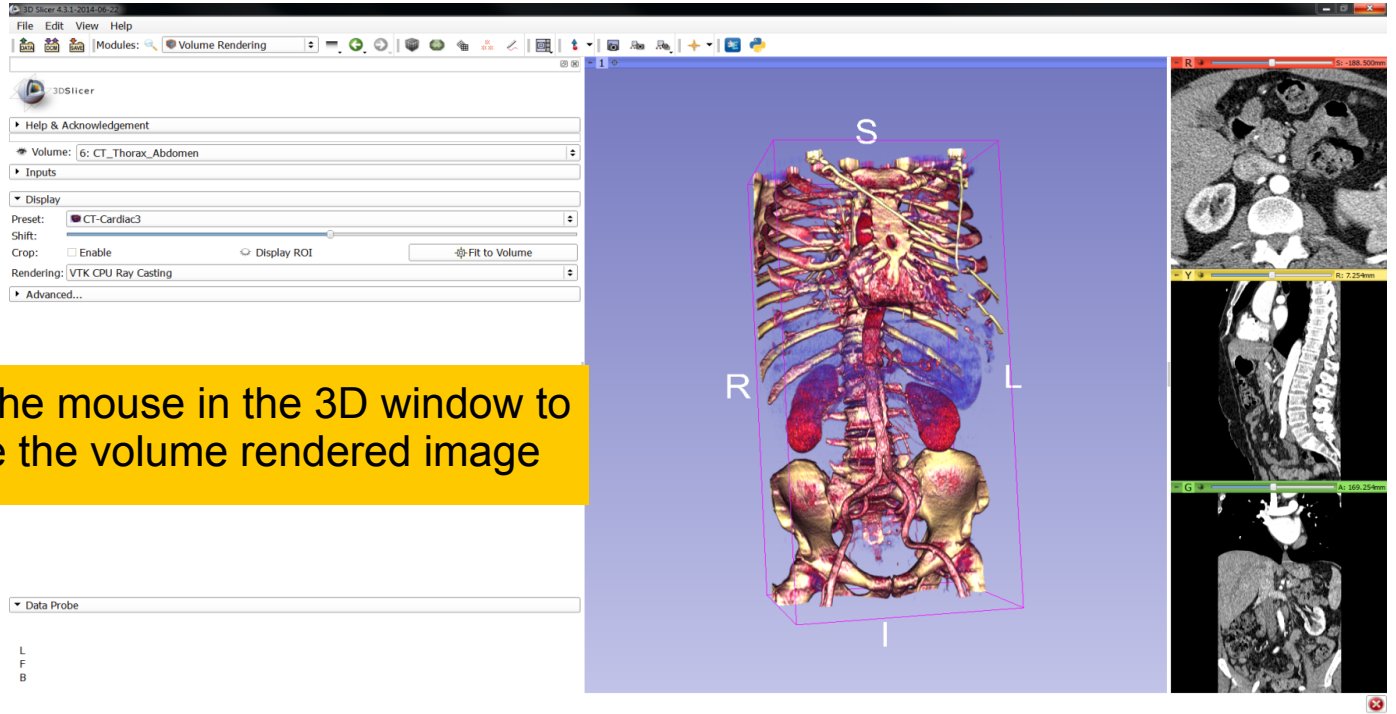


The volume rendered image of the aorta and rib cage appears in the 3D viewer

Volume Rendering

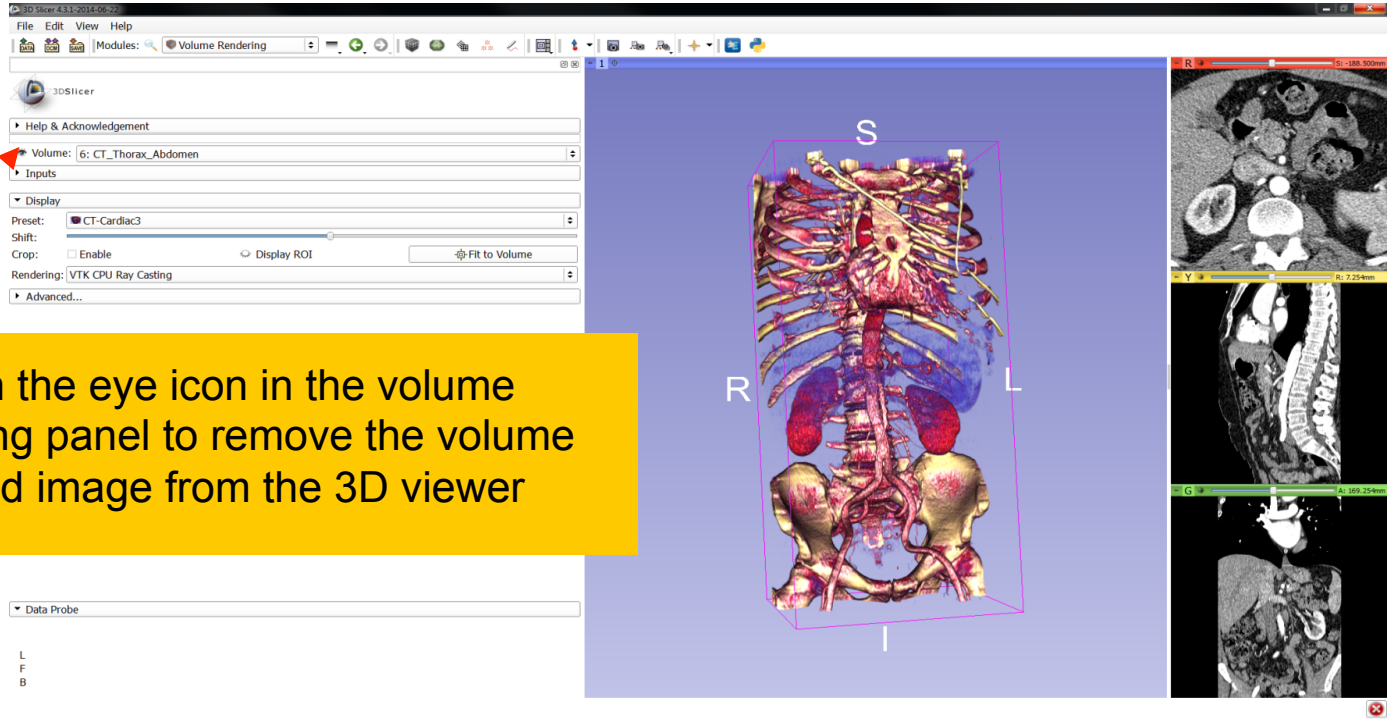


Volume Rendering



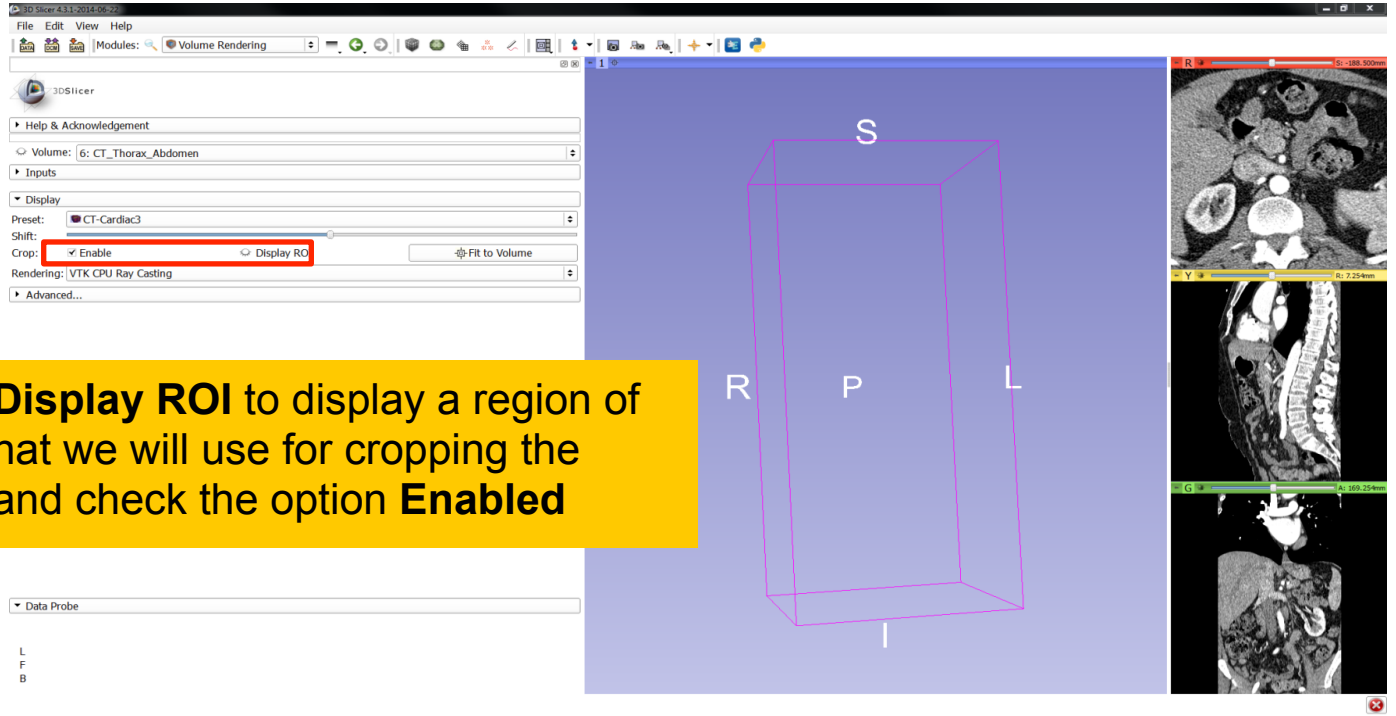
Use the mouse in the 3D window to rotate the volume rendered image

Volume Rendering



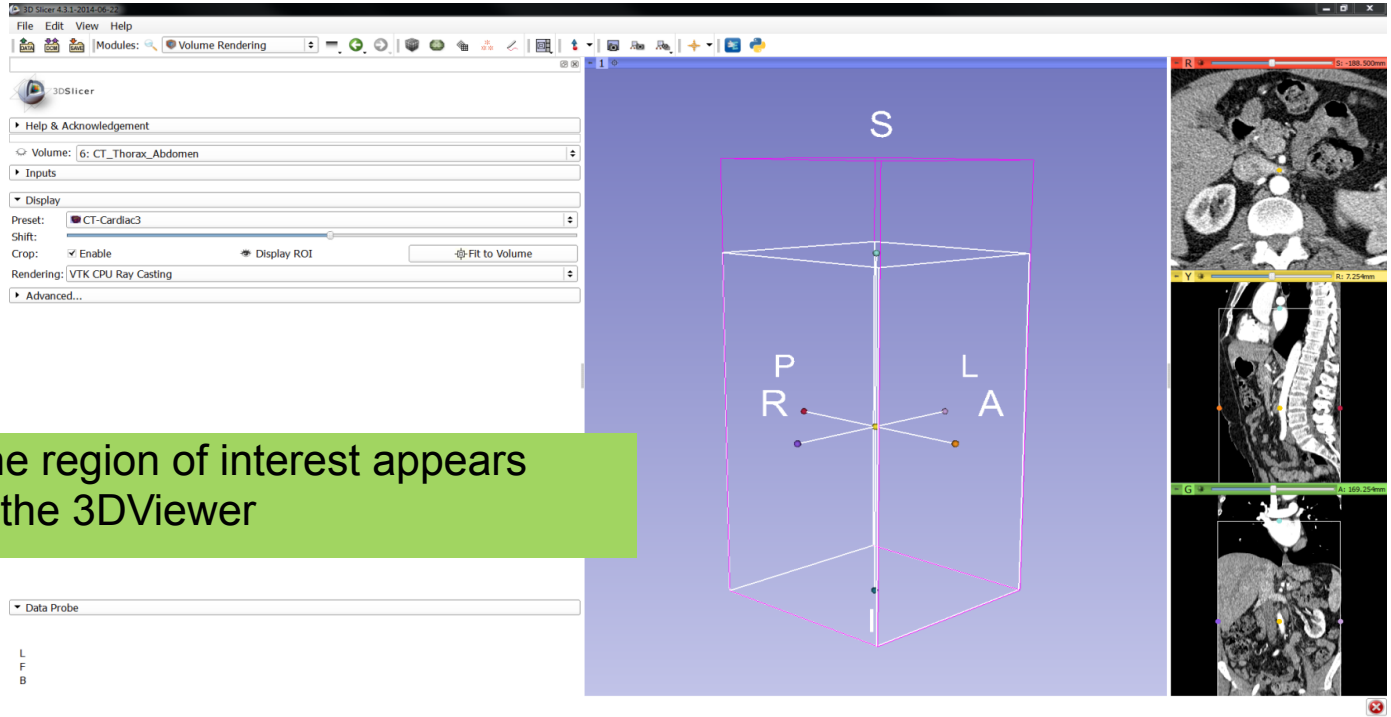
Click on the eye icon in the volume rendering panel to remove the volume rendered image from the 3D viewer

Volume Rendering



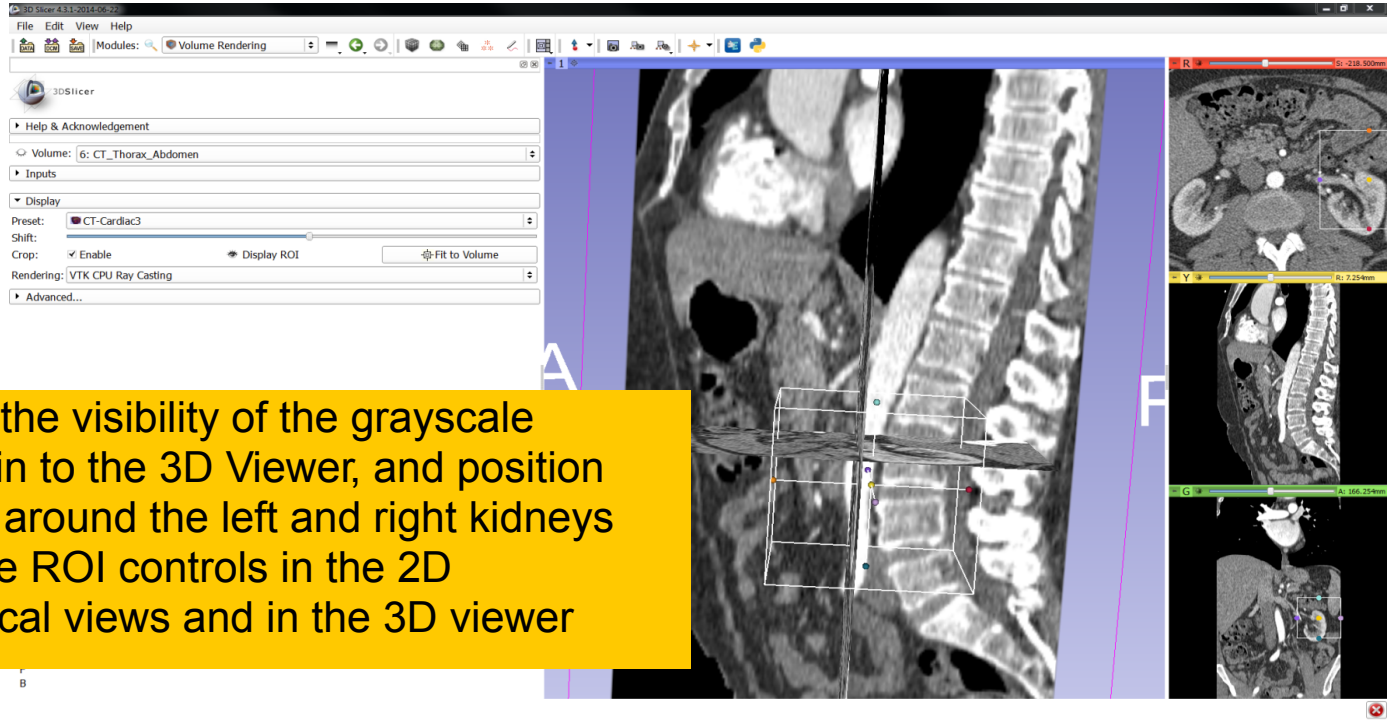
Click on **Display ROI** to display a region of interest that we will use for cropping the dataset, and check the option **Enabled**

Volume Rendering



The region of interest appears in the 3DViewer

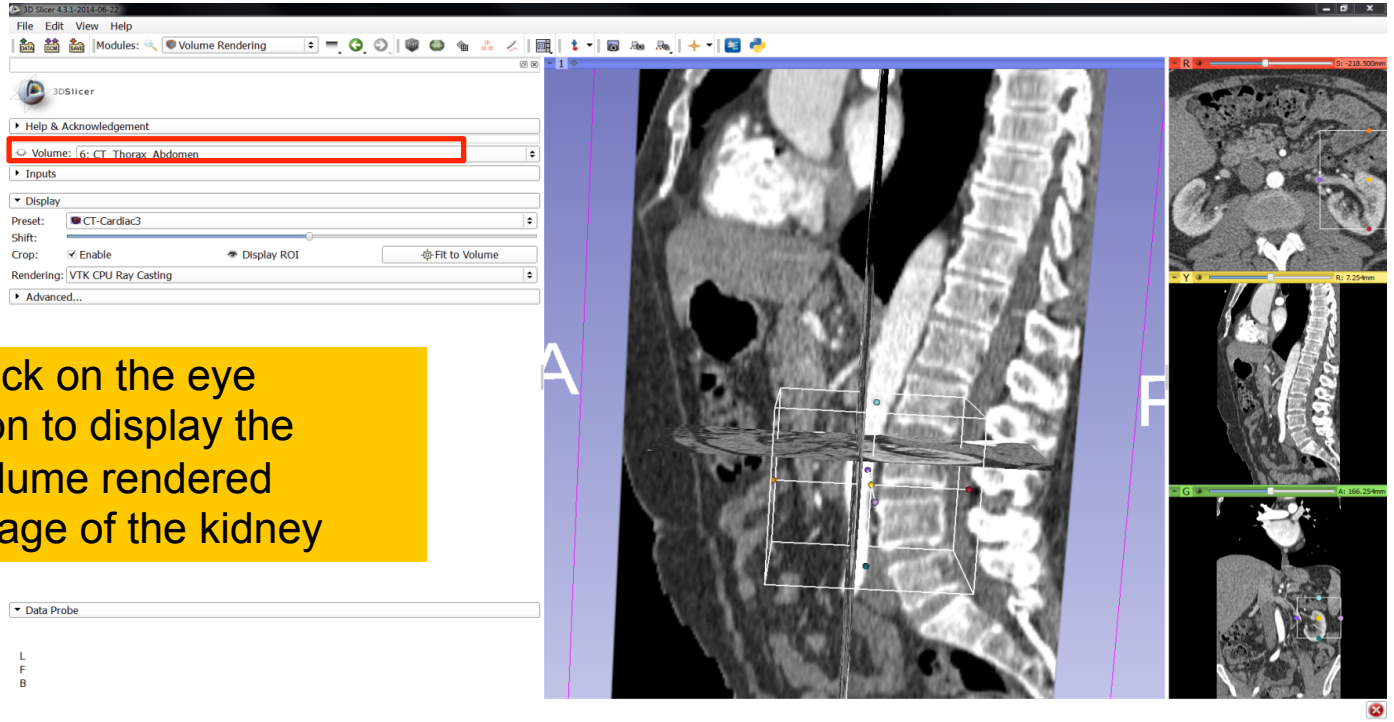
Volume Rendering



Turn on the visibility of the grayscale images in to the 3D Viewer, and position the ROI around the left and right kidneys using the ROI controls in the 2D anatomical views and in the 3D viewer

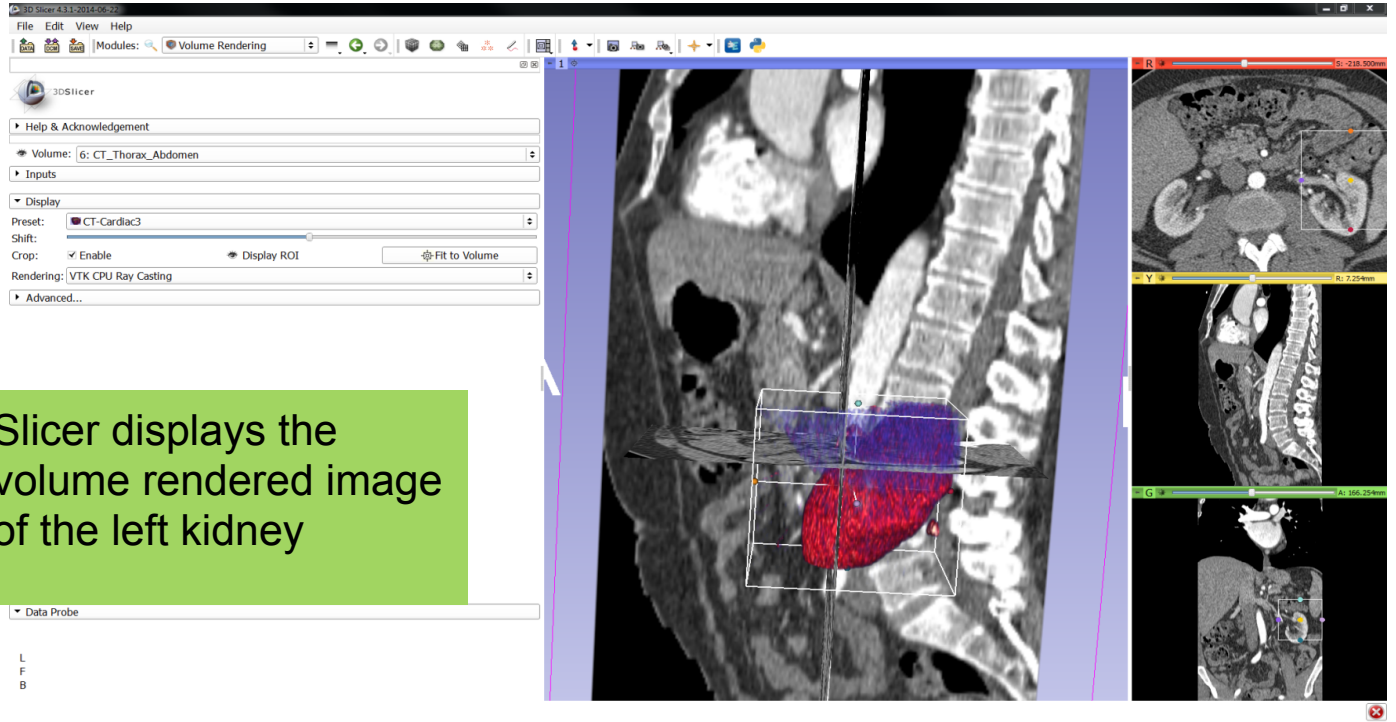
Slide 50

Volume Rendering



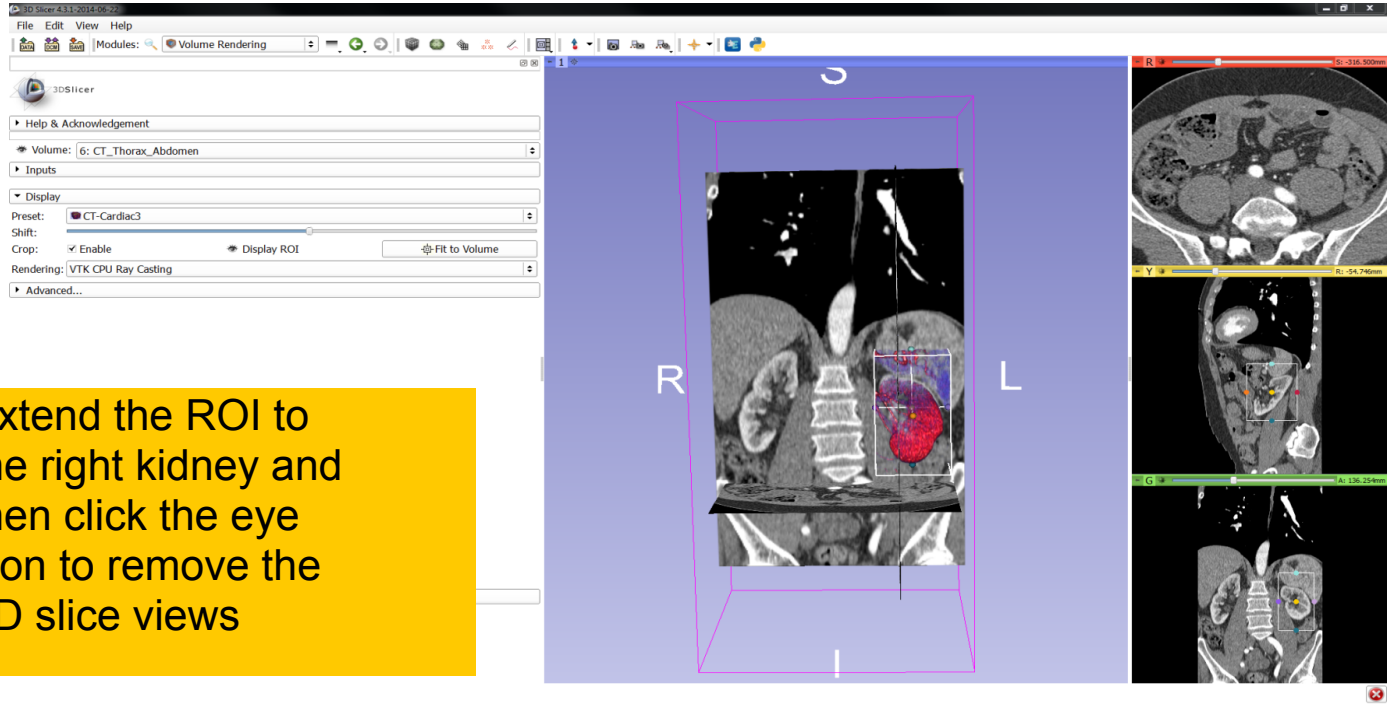
Click on the eye icon to display the volume rendered image of the kidney

Volume Rendering



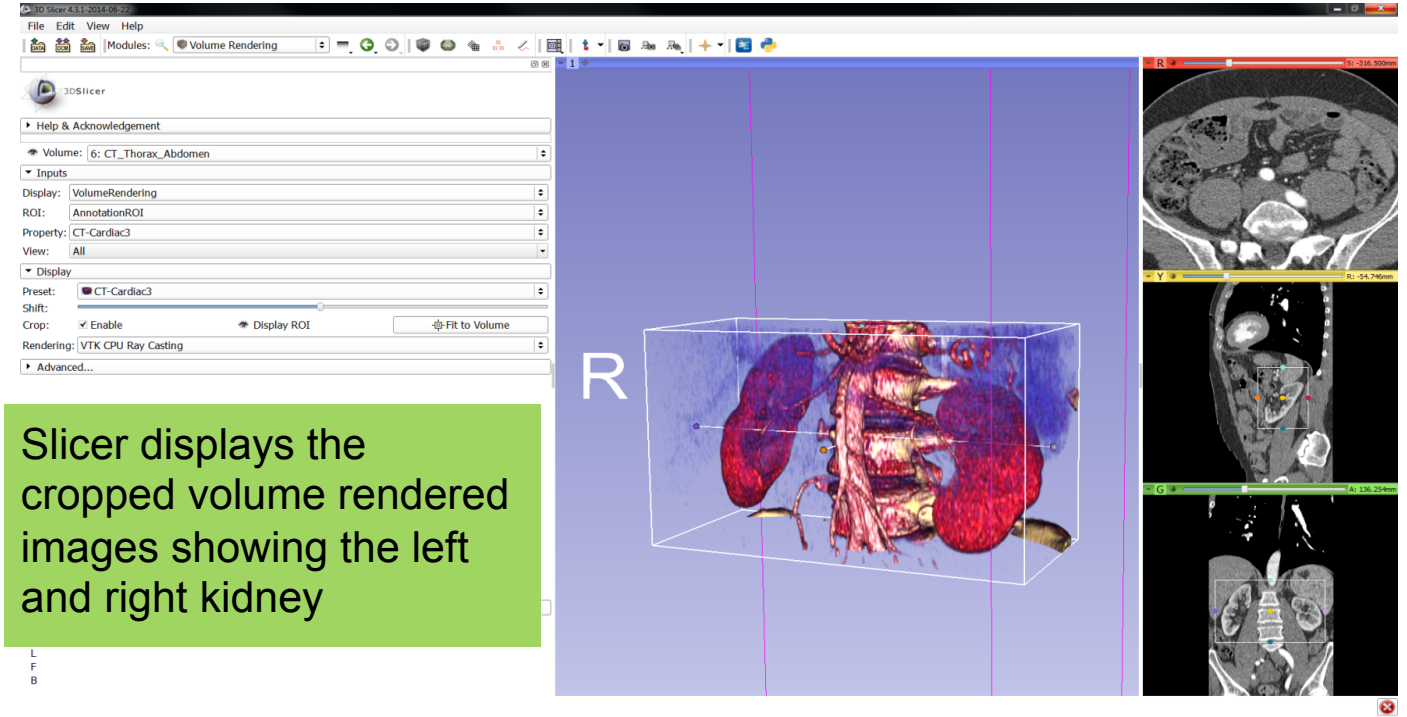
Slicer displays the volume rendered image of the left kidney

Volume Rendering



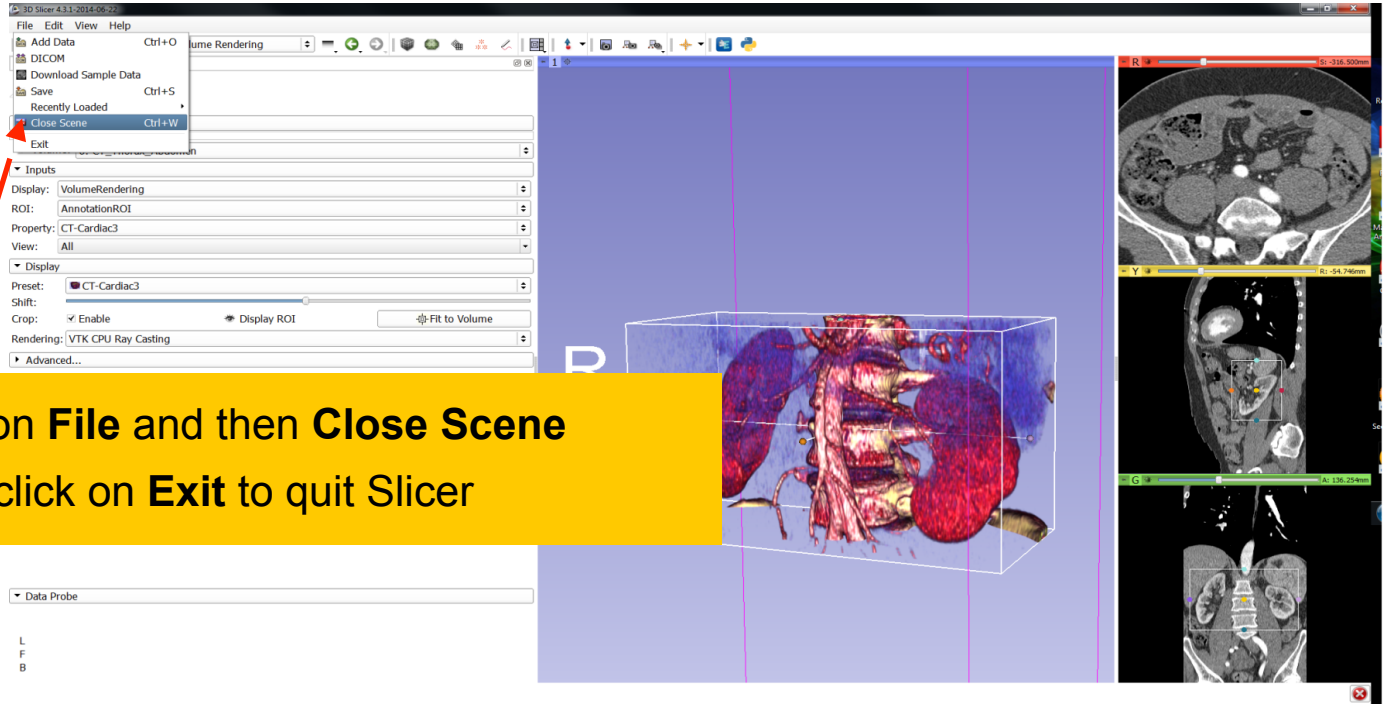
Extend the ROI to the right kidney and then click the eye icon to remove the 2D slice views

Volume Rendering



Slicer displays the cropped volume rendered images showing the left and right kidney

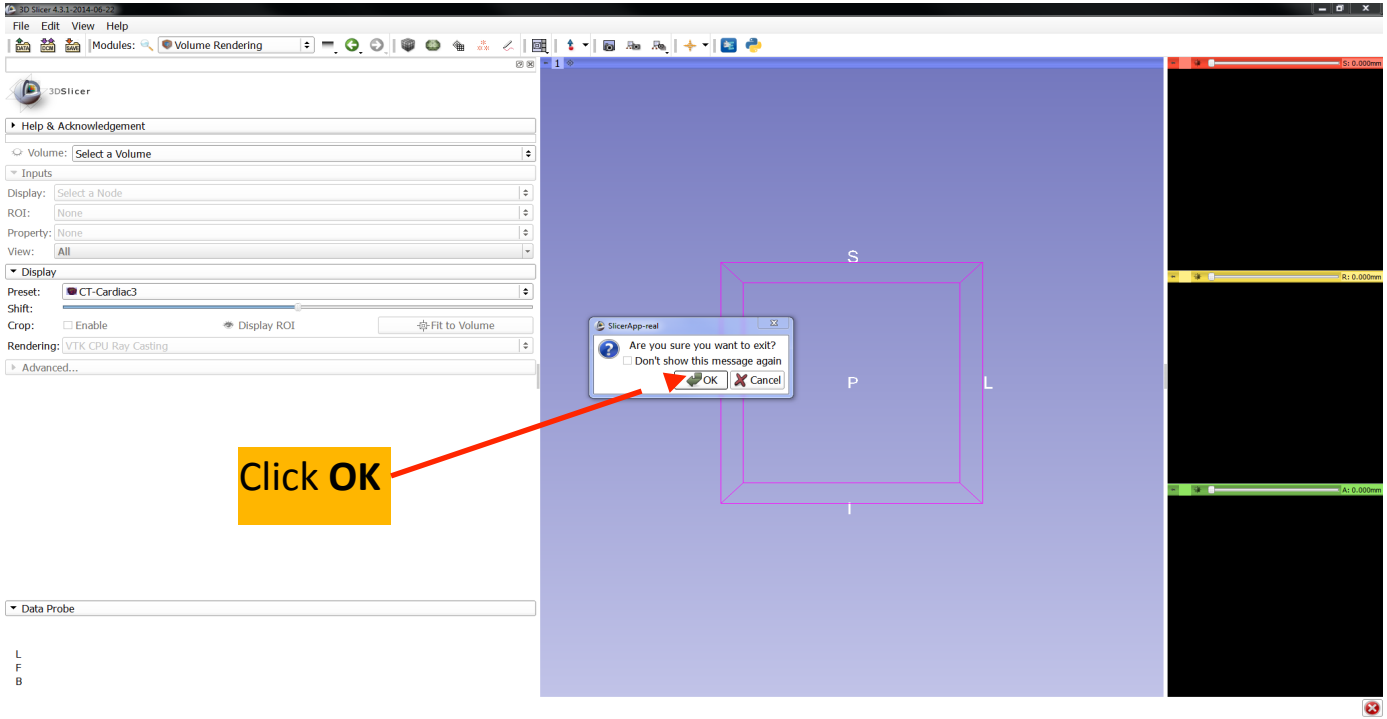
Volume Rendering

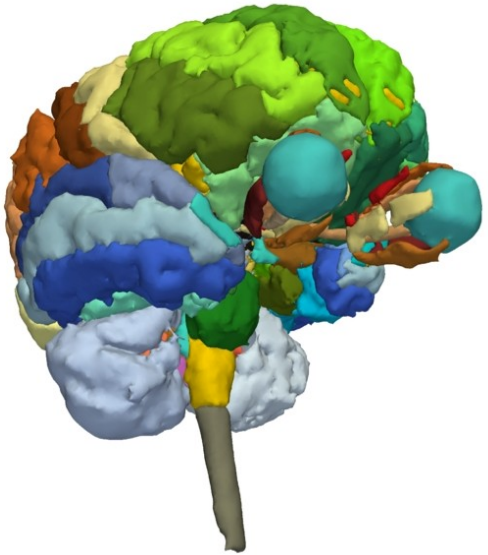


Click on **File** and then **Close Scene**

Then click on **Exit** to quit Slicer

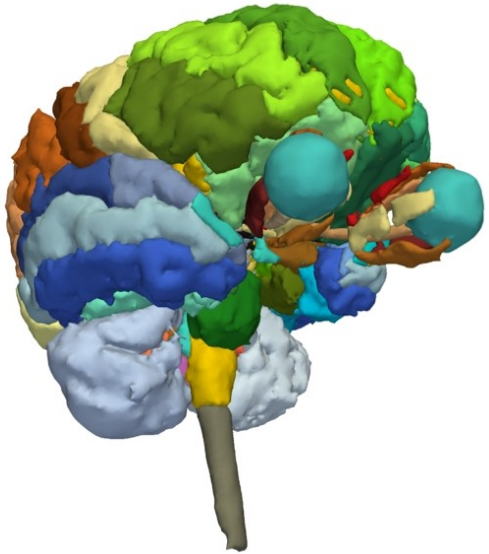
Volume Rendering





3D visualization of surface models of the brain

3D Data Loading and Visualization



- This tutorial is a short introduction to the advanced **3D visualization capabilities Slicer**
- The Slicer4 Minute dataset is composed of an MR scan of the brain and 3D surface reconstructions of anatomical structures.
- The data are part of the **SPL Multi-modality MRI-based atlas of the brain** by Halle et al. The atlas is available at:

  http://www.spl.harvard.edu/publications/item/view/2037