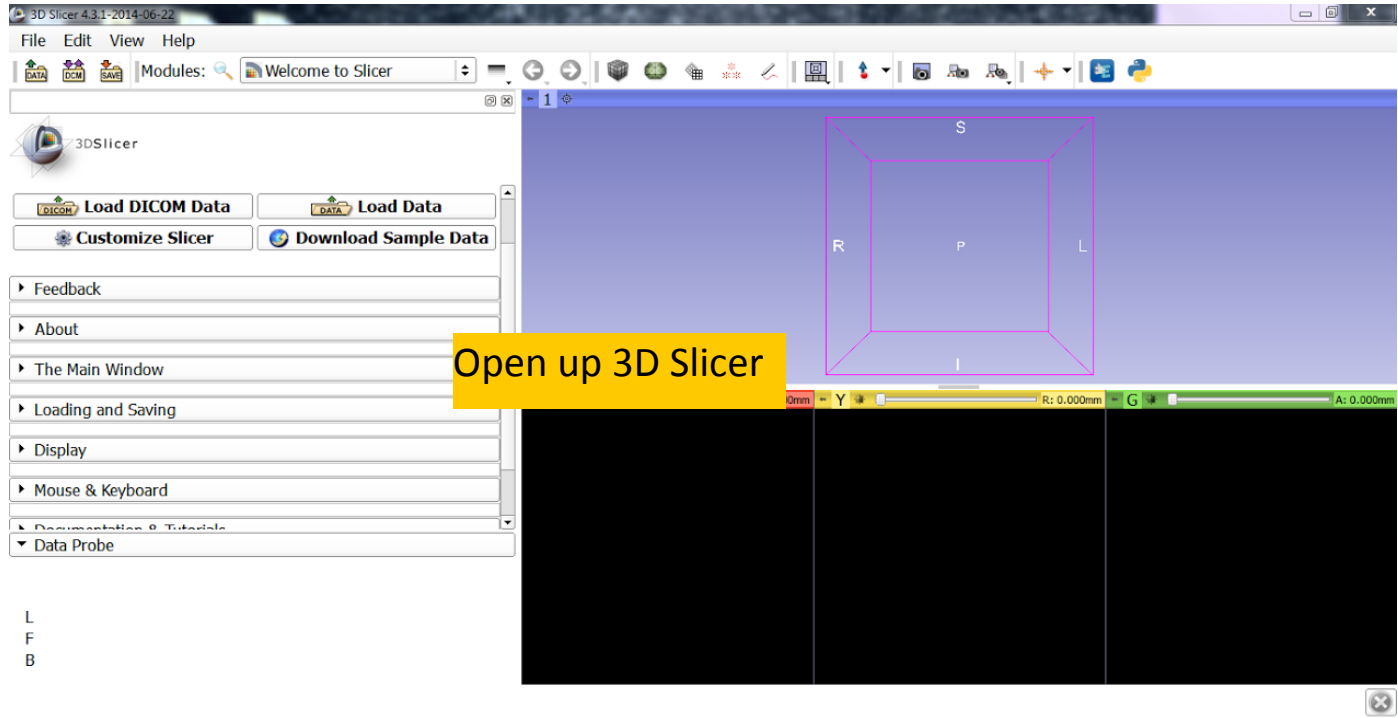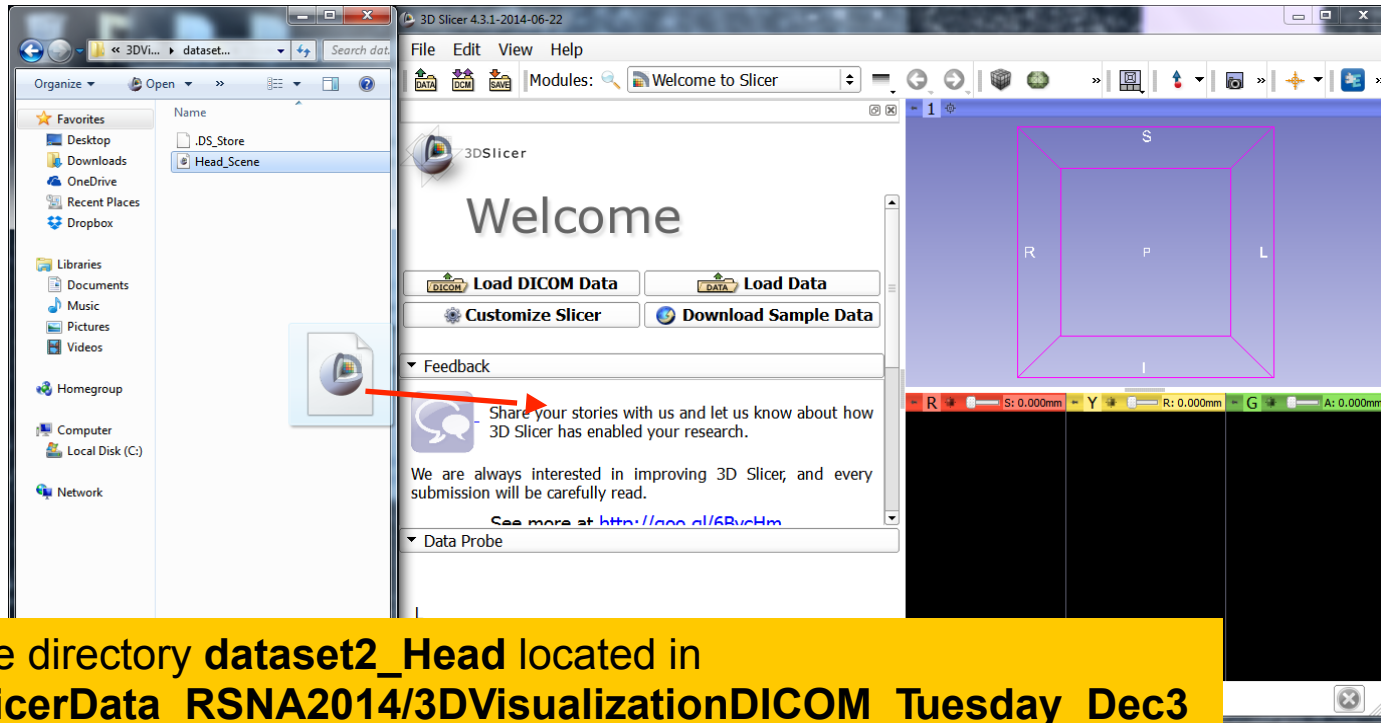# Welcome to Slicer4

Open up 3D Slicer

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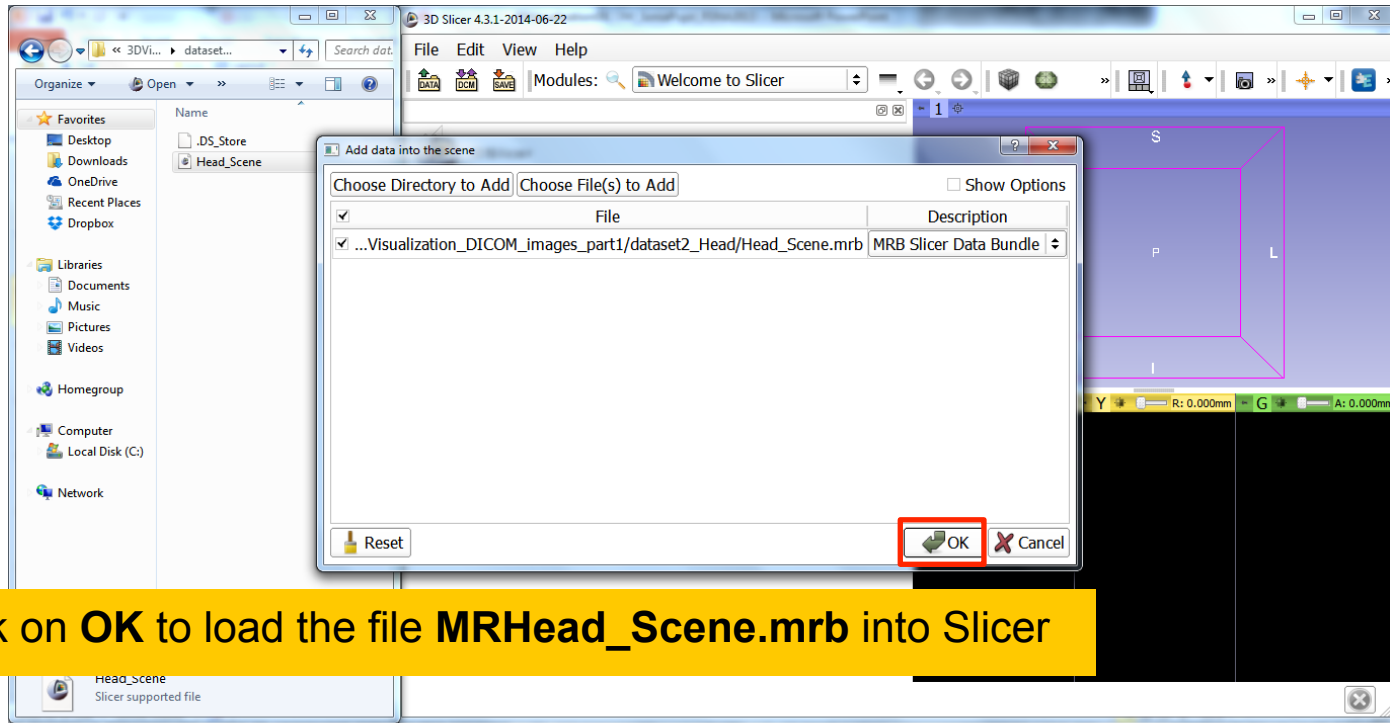# Slicer4 Minute Tutorial: Viewing the Scene

Open the directory **dataset2_Head** located in
C:/3DSlicerData_RSNA2014/3DVisualizationDICOM_Tuesday_Dec3
Drag and drop the file **Head_Scene.mrb** into Slicer

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Slicer4 Minute Tutorial: Viewing the Scene

Click on **OK** to load the file **MRHead_Scene.mrb** into Slicer
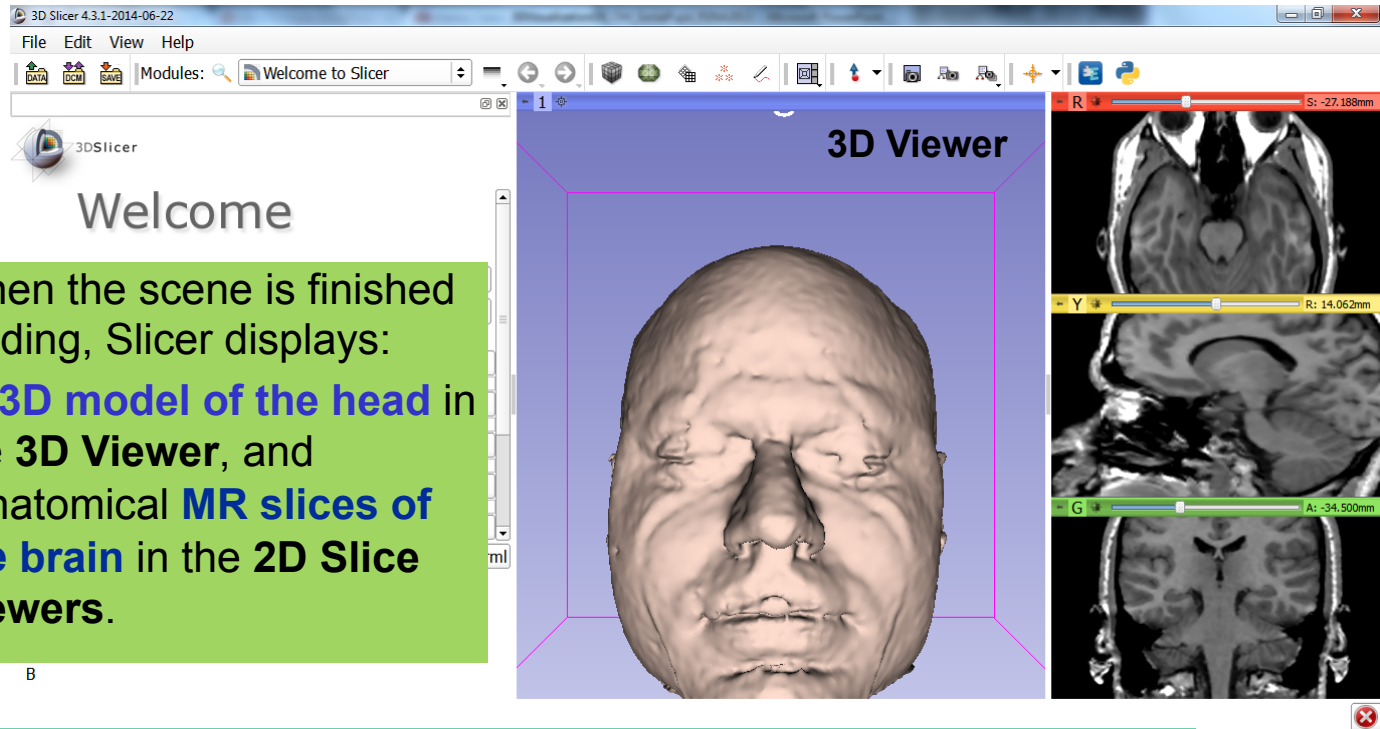
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Slicer4 Minute Tutorial: Viewing the Scene

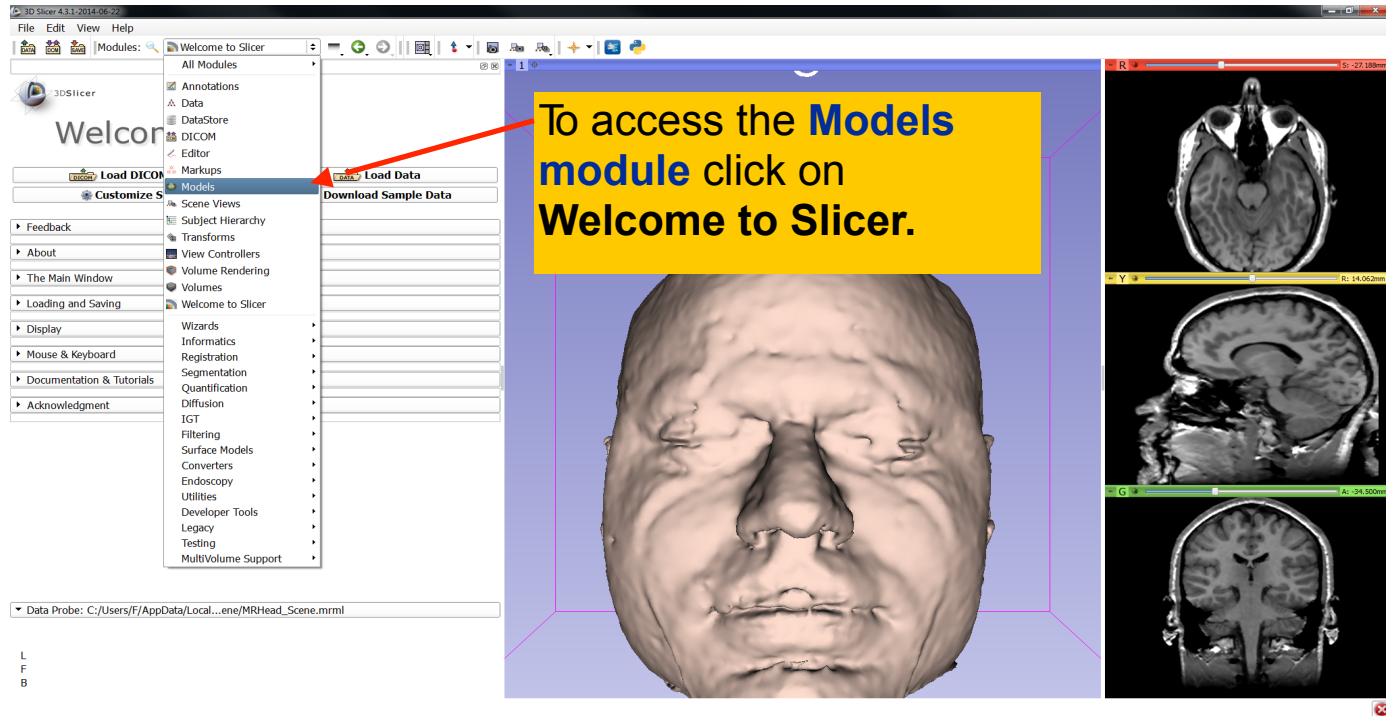When the scene is finished loading, Slicer displays:

- a **3D model of the head** in the **3D Viewer**, and
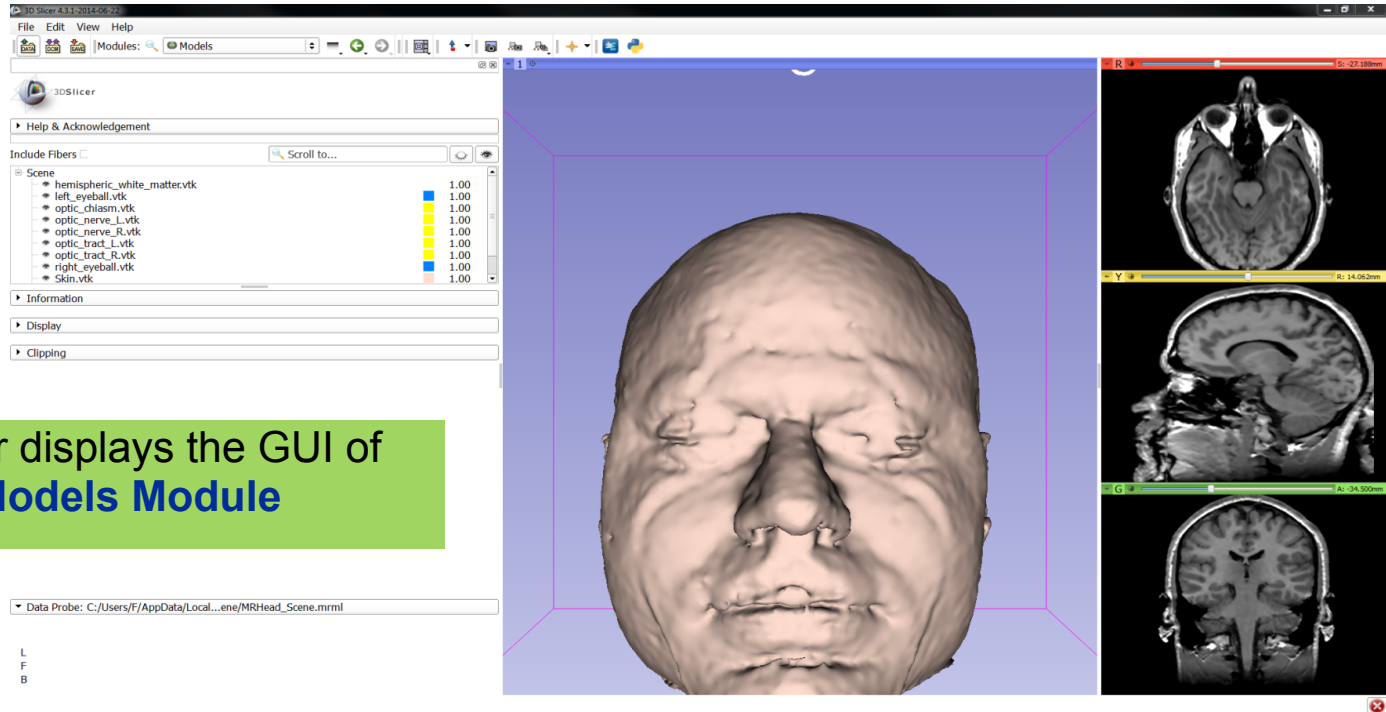- anatomical **MR slices of the brain** in the **2D Slice Viewers**.

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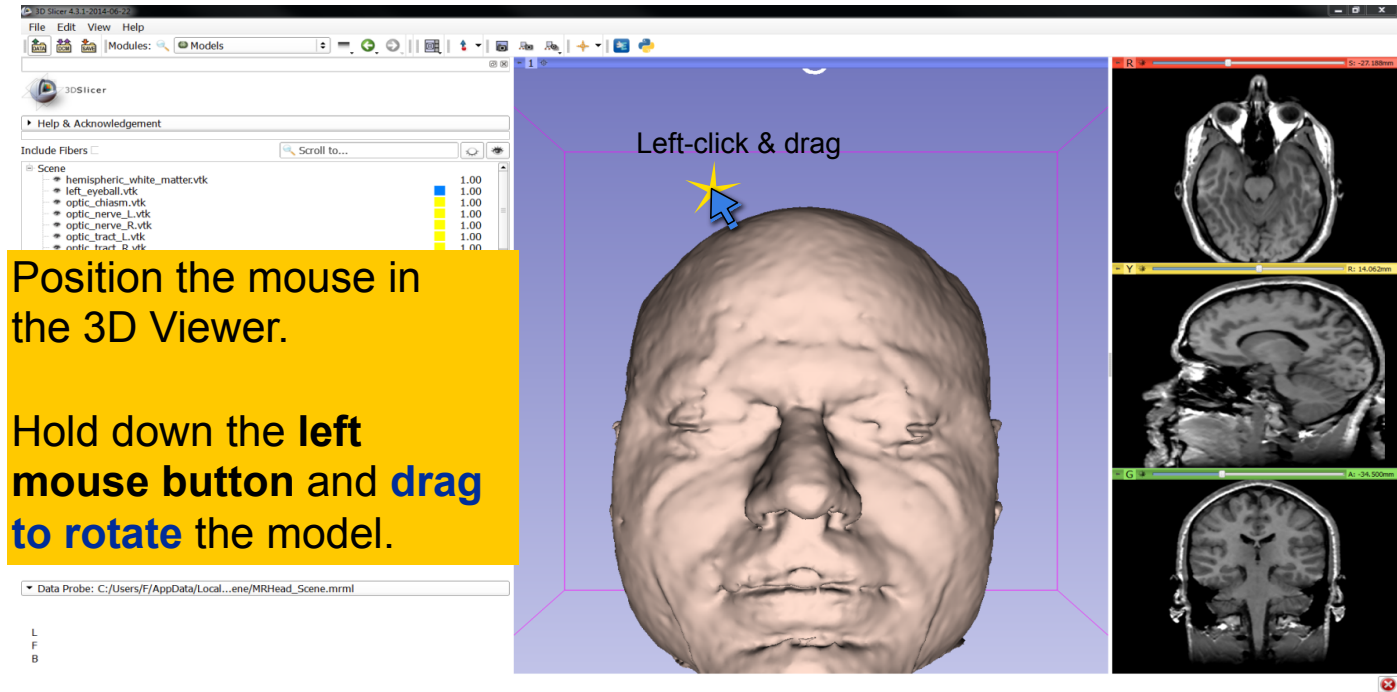# Slicer4 Minute Tutorial: Exploring Slicer's functionality

To access the **Models module** click on **Welcome to Slicer.**

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Slicer4 Minute Tutorial: Switching to the Models Module

Slicer displays the GUI of the **Models Module**

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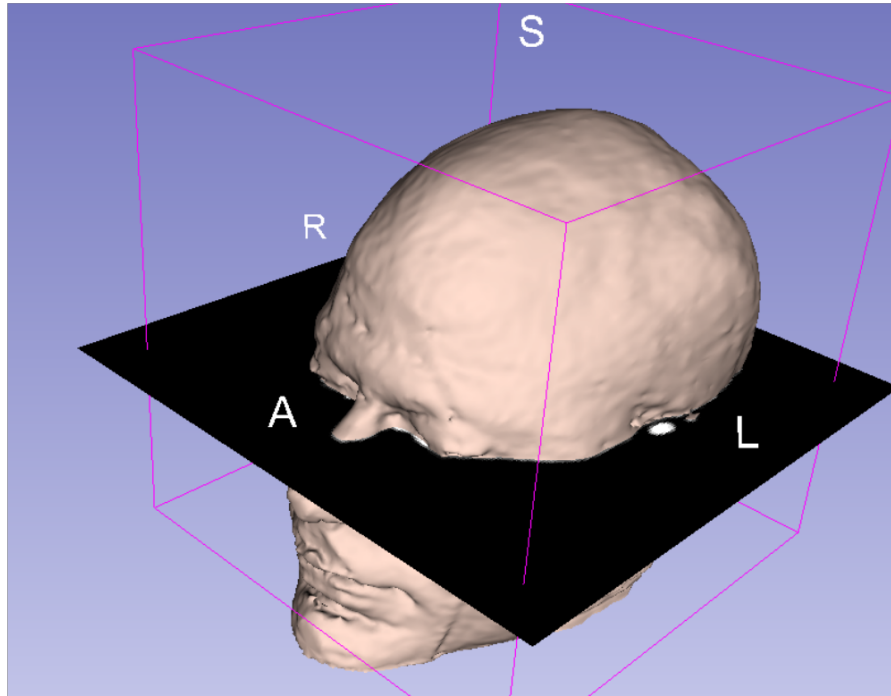# Slicer4 Minute Tutorial: Basic 3D Interaction

Position the mouse in the 3D Viewer.

Hold down the **left mouse button** and **drag to rotate** the model.

Slicer4 Minute Tutorial: Viewing Slices in the 3D Viewer

Click on the **Slice Visibility** Icon to display the Axial Slice in the 3D Viewer
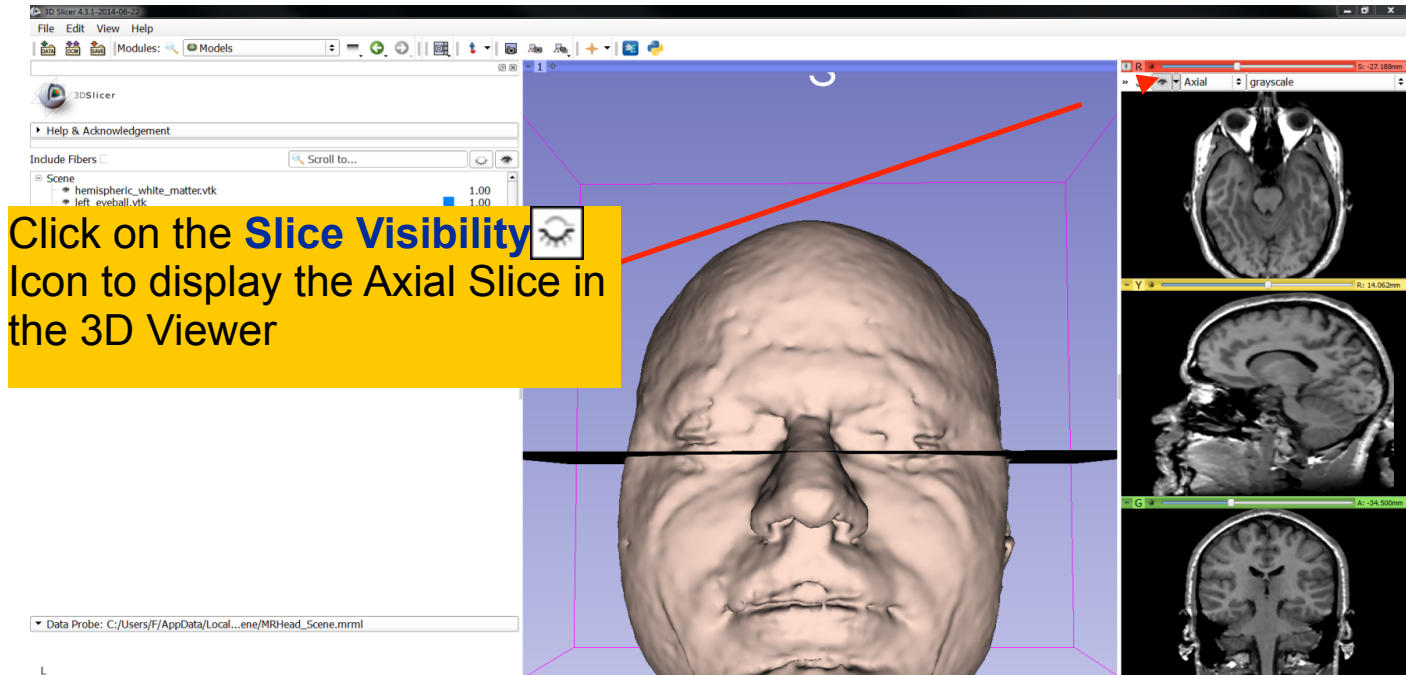
Slicer adds a view of the **Axial slice** in the 3D View.

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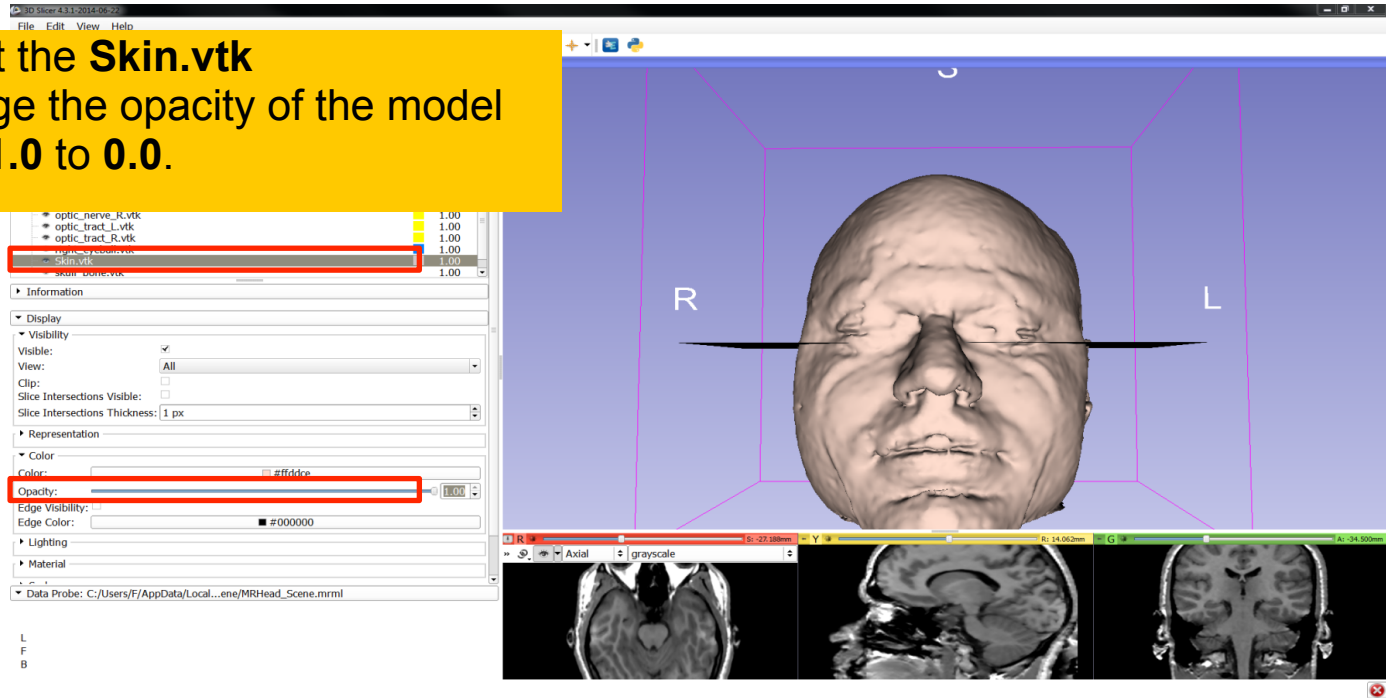# Slicer4 Minute Tutorial: Viewing Slices in the 3D Viewer
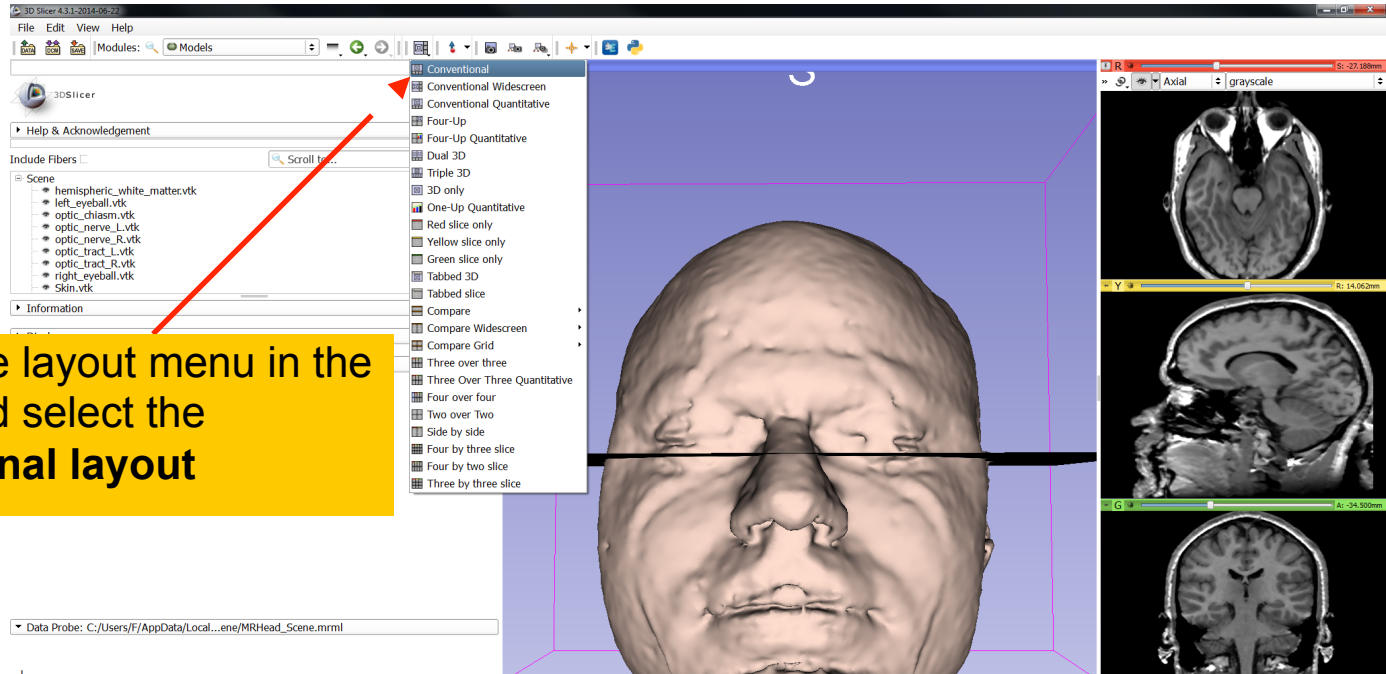
Click on the layout menu in the toolbar, and select the **Conventional layout**
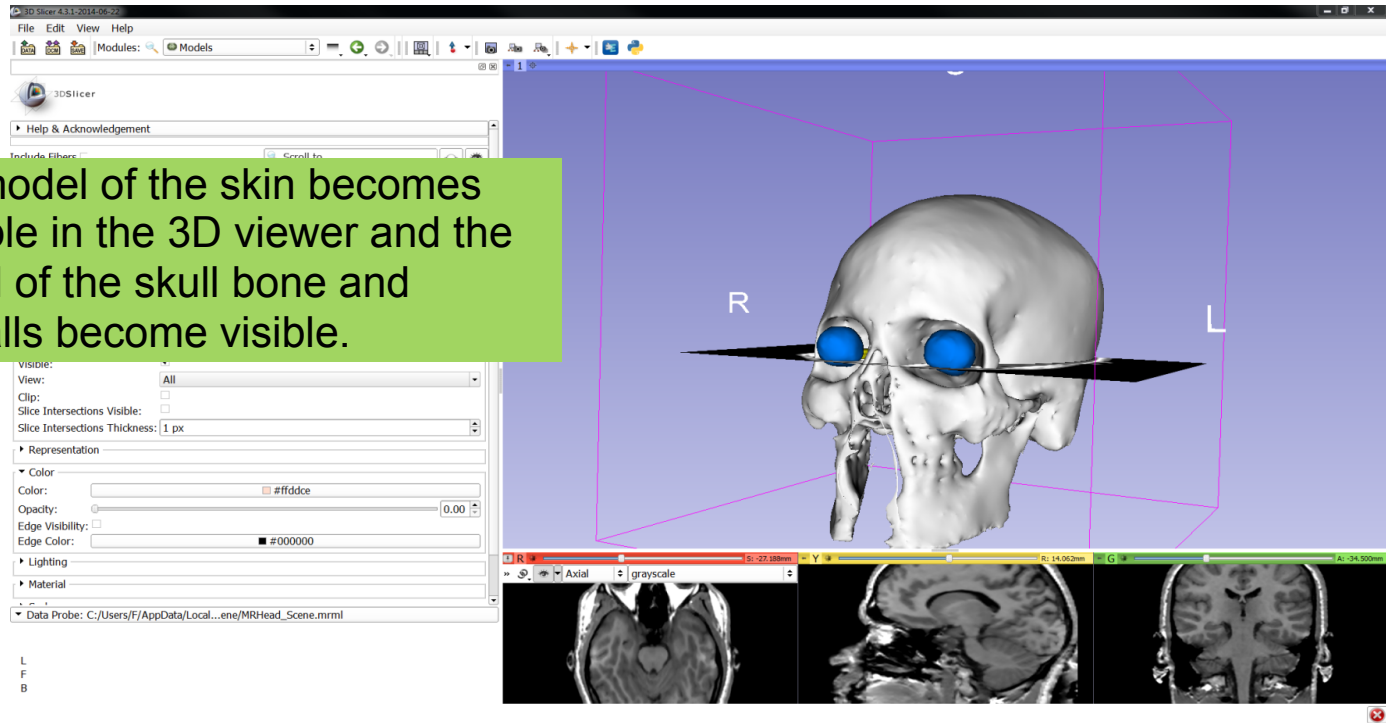
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Slicer4 Minute Tutorial: 3D Visualization

Select the **Skin.vtk**
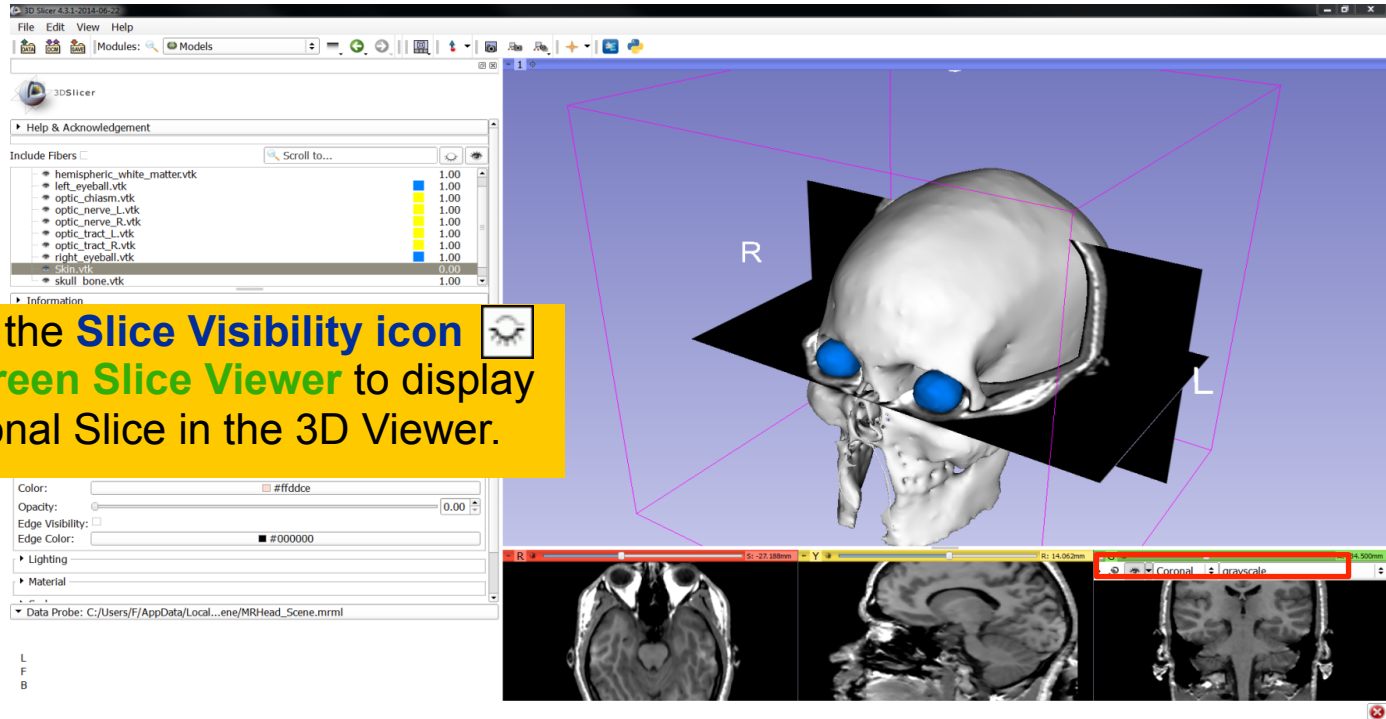Change the opacity of the model from **1.0** to **0.0**.

The model of the skin becomes invisible in the 3D viewer and the model of the skull bone and eyeballs become visible.

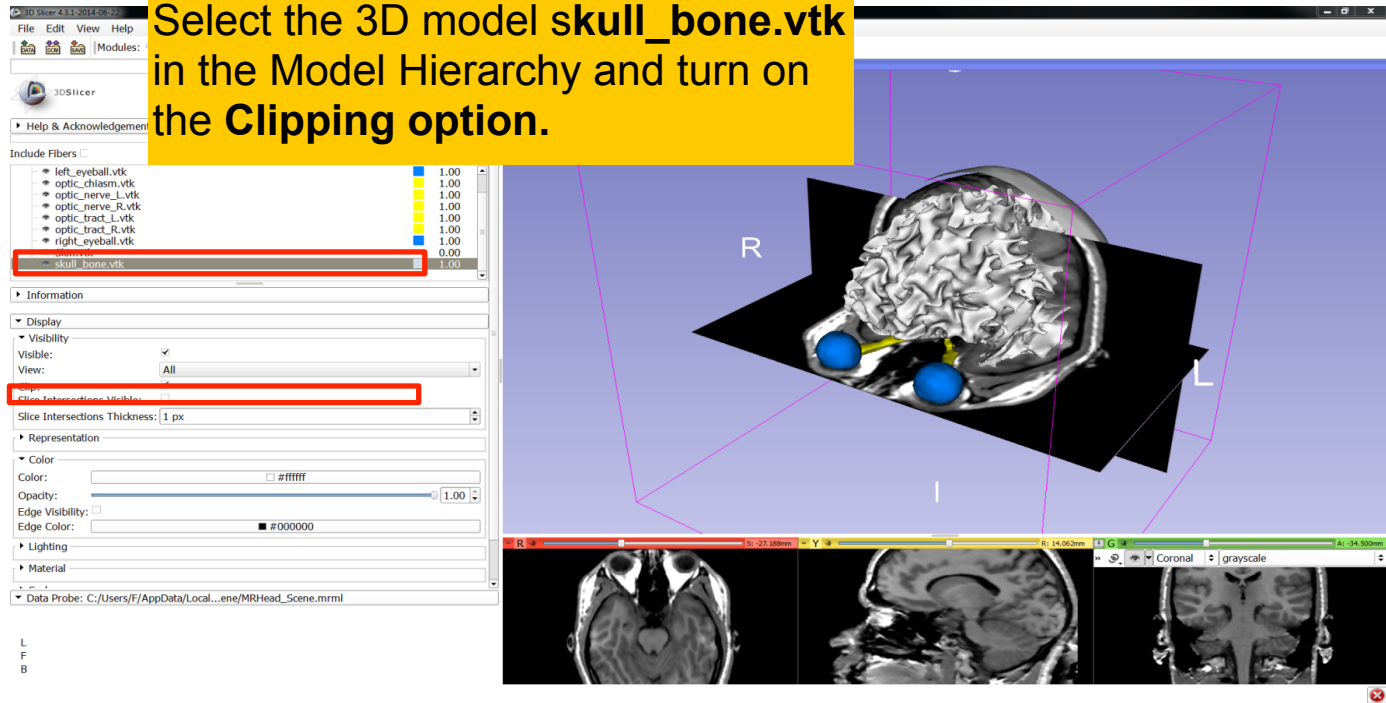# Slicer4 Minute Tutorial: 3D Visualization

Click on the **Slice Visibility icon** in the **Green Slice Viewer** to display the Coronal Slice in the 3D Viewer.
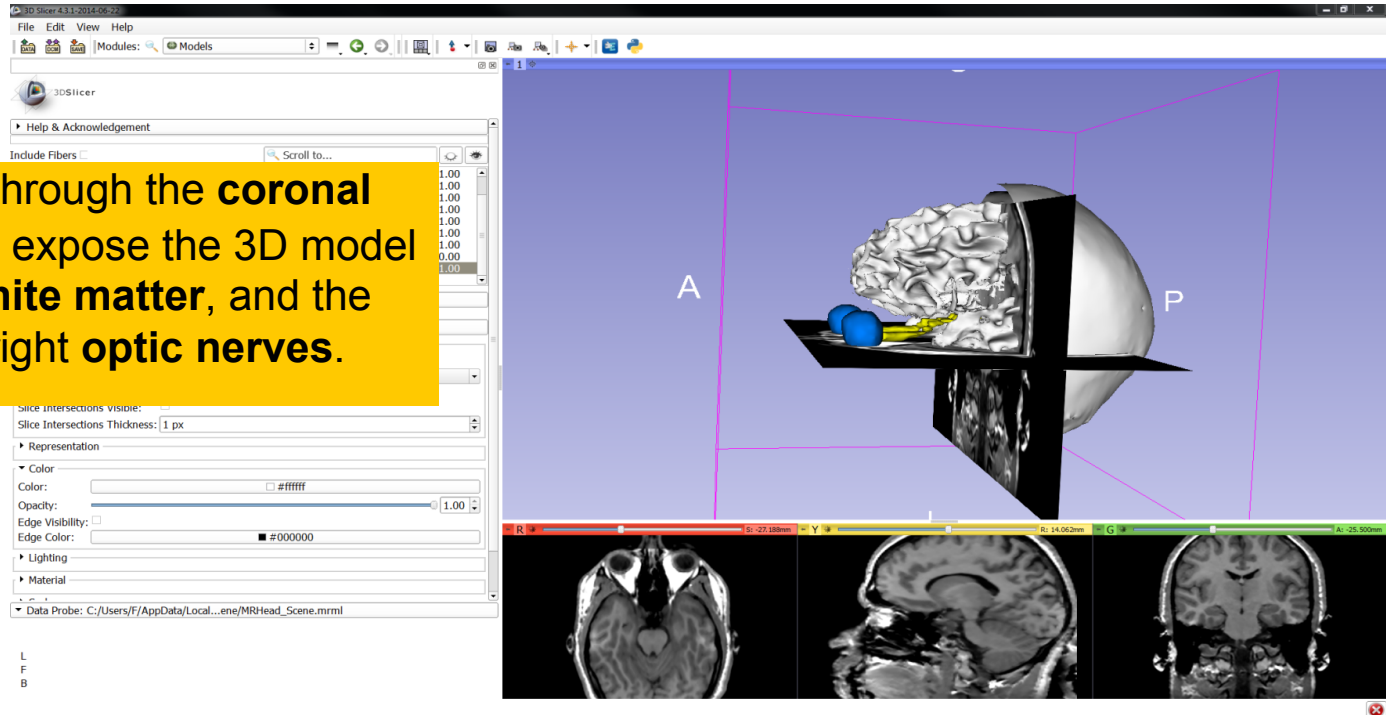
Slicer4 Minute Tutorial: 3D Visualization

Select the 3D model s**kull_bone.vtk** in the Model Hierarchy and turn on the **Clipping option.**
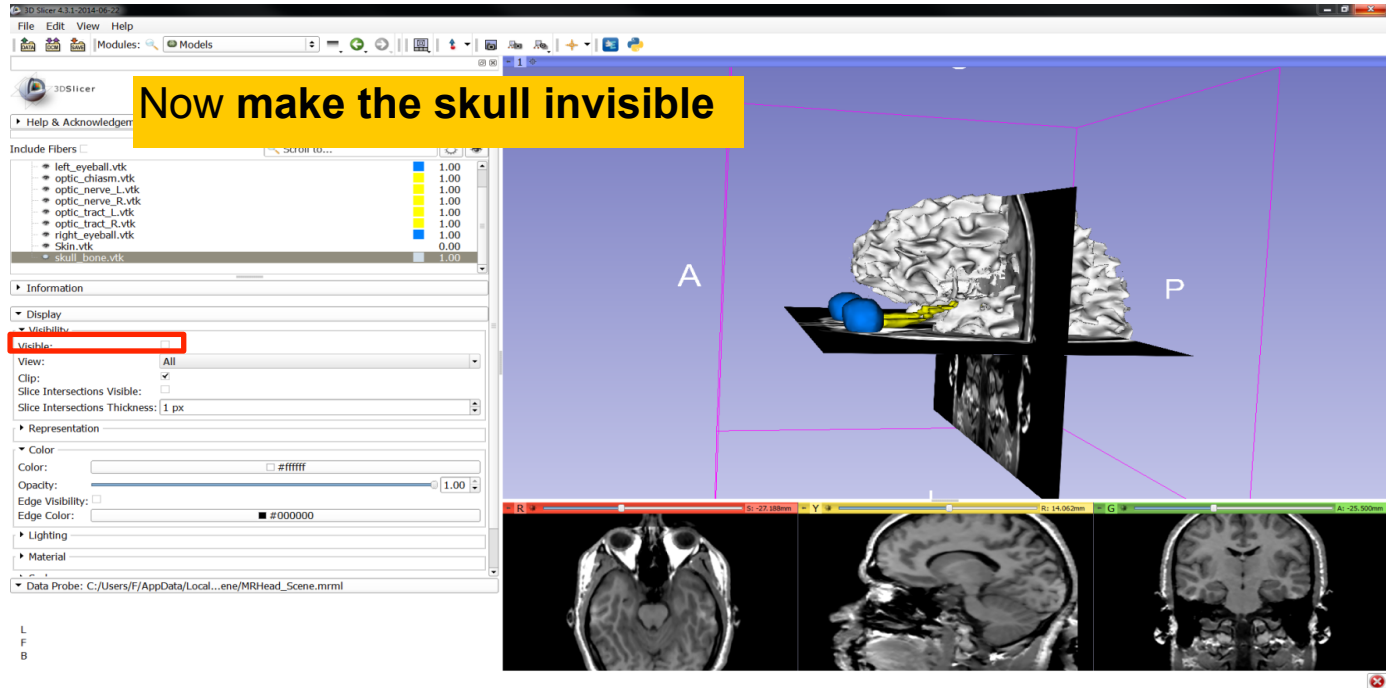
Slicer4 Minute Tutorial: 3D Visualization

Browse through the **coronal slices** to expose the 3D model of the **white matter**, and the left and right **optic nerves**.
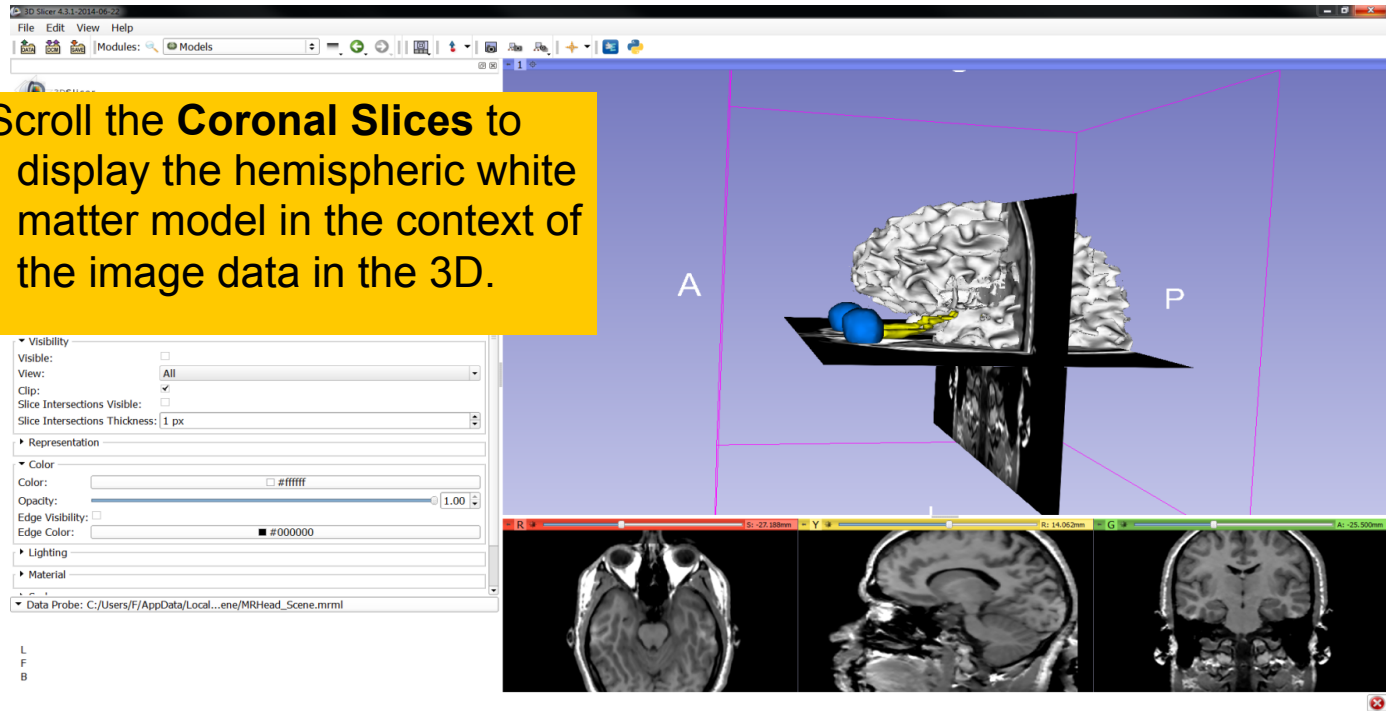
Slicer4 Minute Tutorial: 3D Visualization
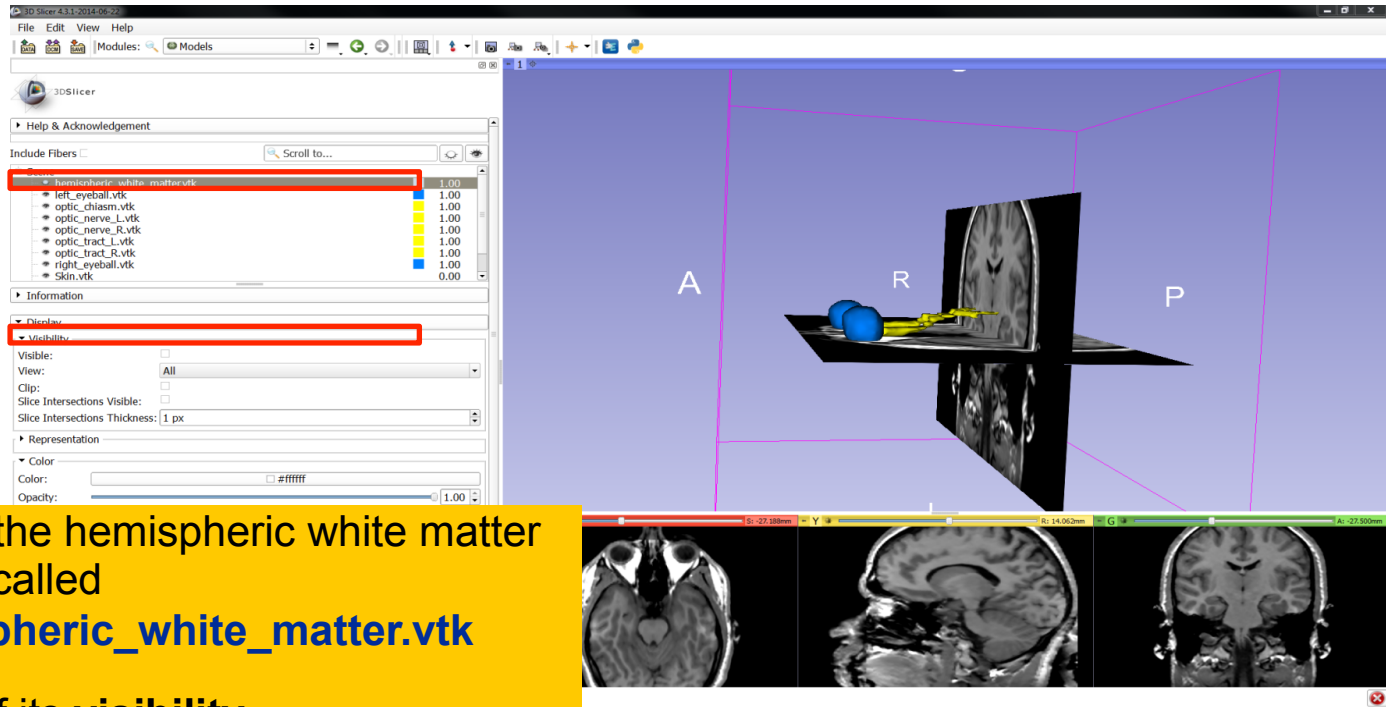

Now **make the skull invisible**

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Slicer4 Minute Tutorial: **3D Visualization**

Scroll the **Coronal Slices** to display the hemispheric white matter model in the context of the image data in the 3D.

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Slicer4 Minute Tutorial: 3D Visualization

Select the hemispheric white matter model called
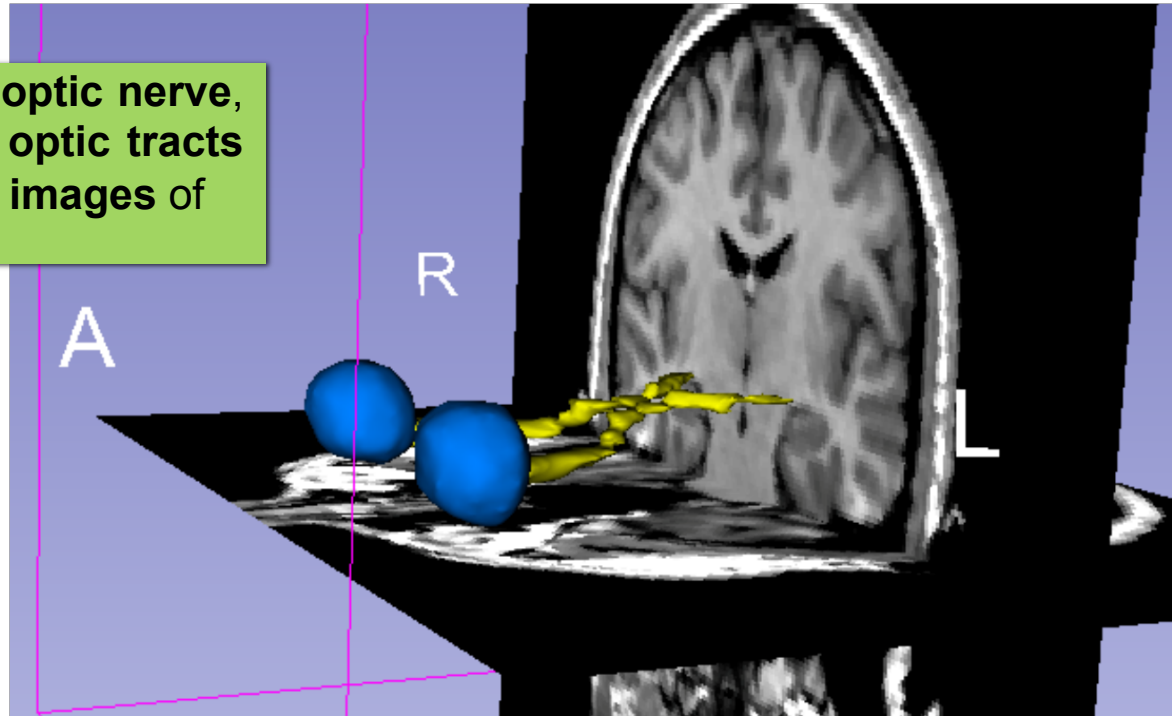**hemispheric_white_matter.vtk**

Turn off its **visibility**.

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Slicer4 Minute Tutorial: 3D Visualization

Slicer displays the **optic nerve**, **optic chiasm** and **optic tracts** overlaid on the **MR images** of the brain.
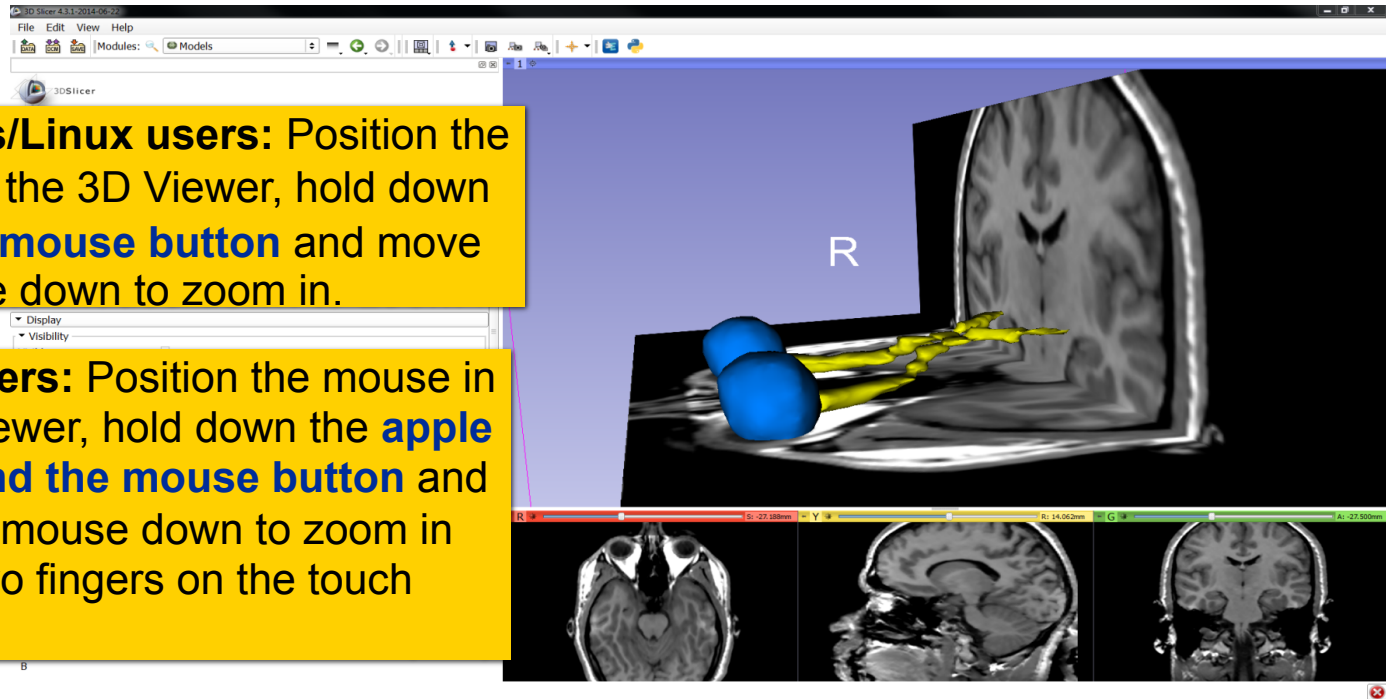
Slicer4 Minute Tutorial: 3D Visualization: Zoom the view

Windows/Linux users: Position the mouse in the 3D Viewer, hold down the **right mouse button** and move the mouse down to zoom in.

Mac users: Position the mouse in the 3D Viewer, hold down the **apple button and the mouse button** and move the mouse down to zoom in (or use two fingers on the touch pad).

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Close the existing scene and all its data

Select **File->Close Scene**
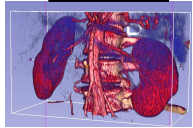This removes any dataset previously loaded into slicer.
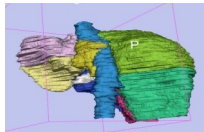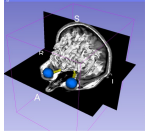
Click on **Exit** to exit Slicer

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Overview

Part I: Introduction to the 3DSlicer software

Part II: 3D Data Loading and visualization of DICOM images
 - Volume Rendering of thoraco-abdominal CT data
 - Surface Rendering of MR head data

Part III: 3D interactive exploration of the anatomy
 - Exploration of the Segments of the liver
 - Exploration of the Segments of the lung