



Follow Path

The Follow Path tool is useful for reslicing a data set along the centerline of a vessel or airway. A series of points is chosen along a path in the data set, and the data is resliced perpendicular to the line created by these points. Available options include the following.

Path coordinates: Users can interactively define path coordinates by clicking on and of the orthogonal display images.

- **Load:** Allows users to load a previously defined set of path coordinates.
- **Save:** Allows users to save the current path coordinates.
- **Reset:** Resets the current path coordinates.

Intermediate Point(s): Allows users to enable or disable the automatic intermediate points are created between users defined points:

- **None:** No intermediate points will be created.
- **Linear:** Intermediate points will be created by linear interpolation between user defined points.
- **Spine:** Intermediate points will be created by spline interpolation between user defined points.

Image Width: Allows users to define the width of the generated path images.

Image Height: Allows users to define the height of the generated path images.

Interpolation Type: Allows users to specify the interpolation type to be used when creating the path images. Choose from Nearest Neighbor, Bilinear, Cubic Spline, or Windowed Sinc.

Workspace: The workspace drop down allows users to specify which workspace the path image sequence will be saved to.

File: File allows users to specify the name of the path sequence.

Preview Images: Will display a preview of the path sequence.

Generate Images: Will save the path sequence to the selected workspace with the specified file name.

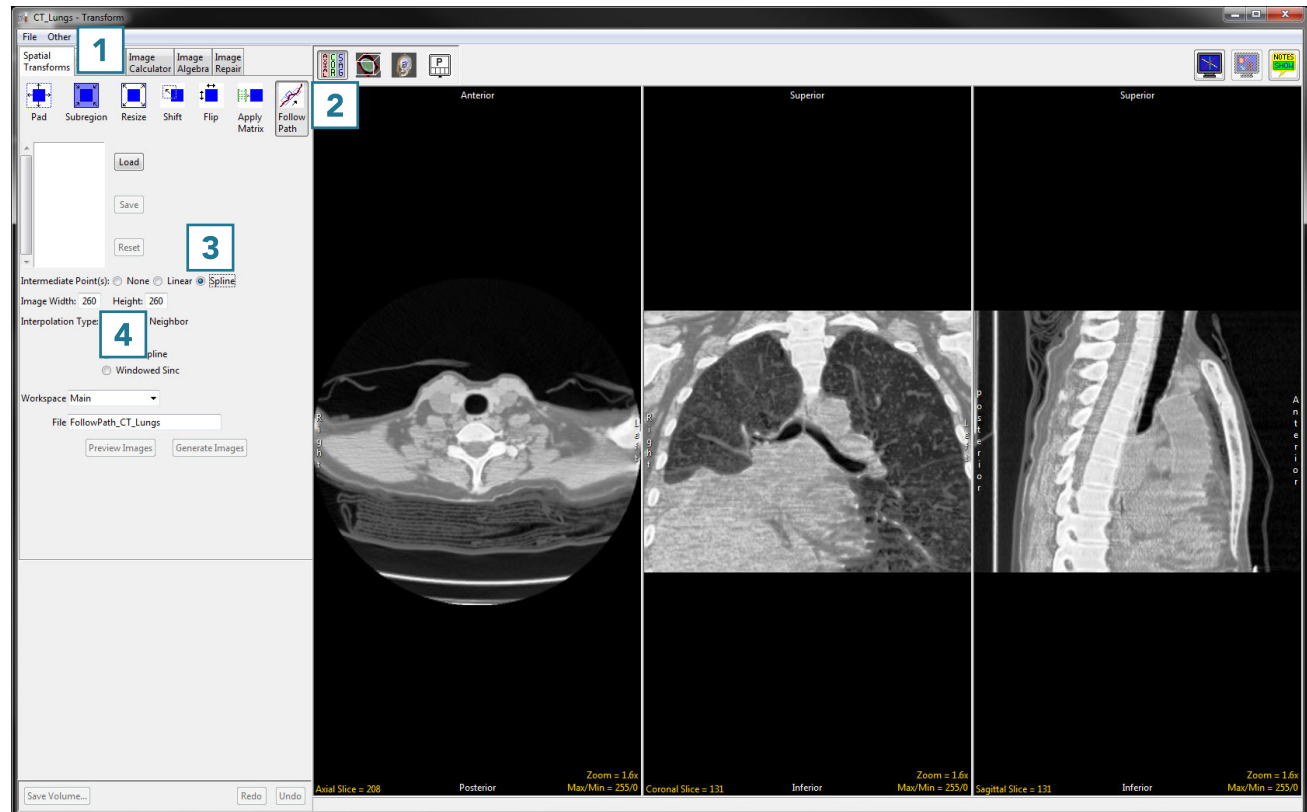
Using the Follow Path Tool

Reslicing Data Along the Trachea

A good example for the use of the Follow Path tools involves reslicing data along the centerline of the trachea, using lung data from CT.

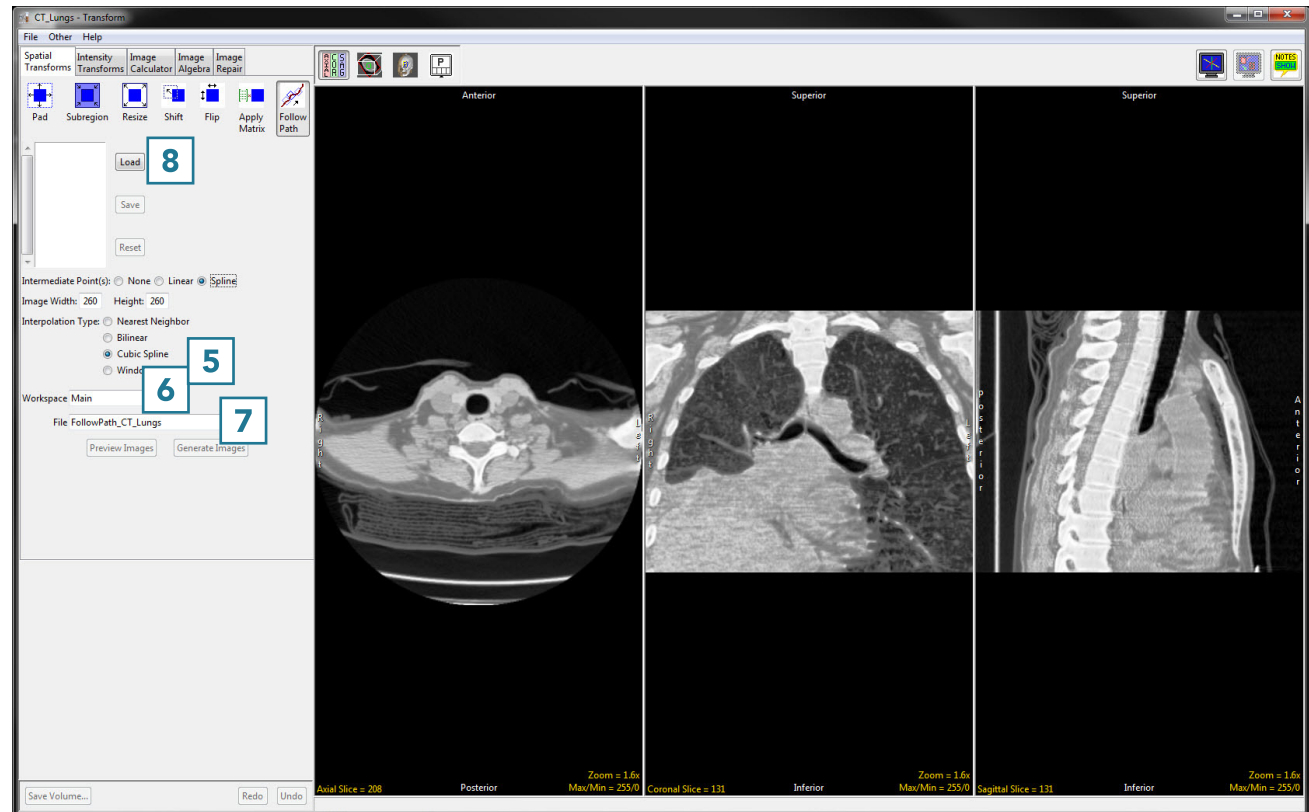
To follow along, download the CT_Lungs data set from analyzedirect.com/data and load into Analyze using Input/Output.

- Select the data set to reslice along a path of points and open Transform. Navigate to Spatial Transforms [1] and select the Follow Path tool [2].
- Choose a method of connecting the points: none, linear, or spline [3]. Spline creates the smoothest transition between slices, so that will be selected here.
- The image width and height [4] determine the dimensions of the output. If you are interested only in measuring the cross-sectional area of the structure on each slice, the image dimensions can be reduced from their original size.



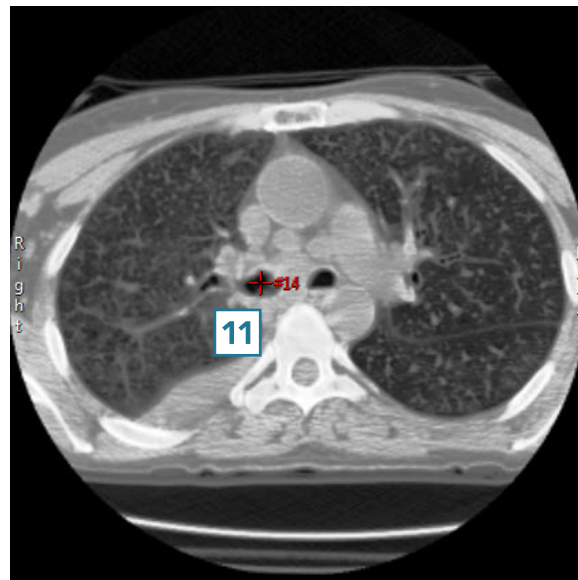
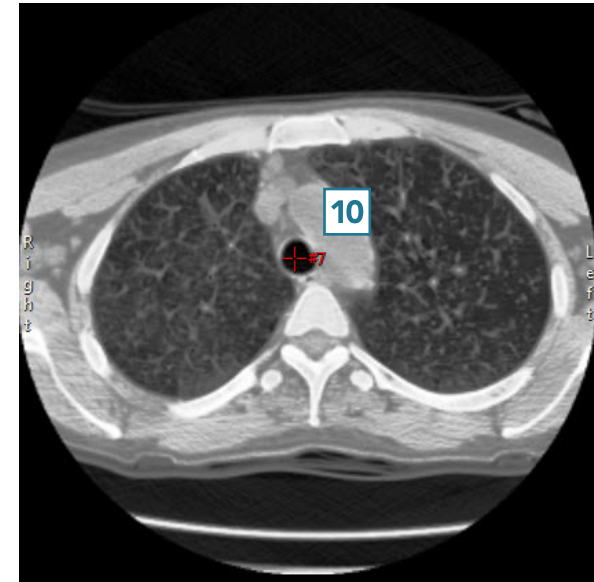
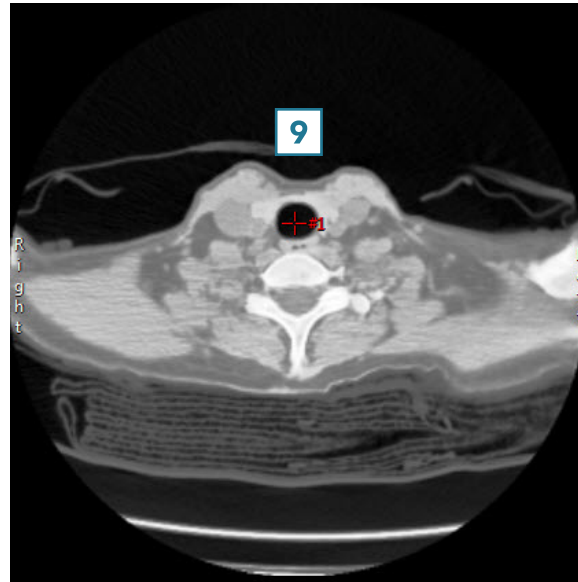
Using the Follow Path Tool (continued)

- The interpolation type [5] can be set to nearest neighbor, bilinear, cubic spline or windowed sinc. For more information on interpolation types, see the table shown earlier in the Resize section.
- Choose a workspace [6] and output file name [7] for the resliced data set.
- Now it is time to choose the points. A previously saved set of points can be imported using the Load button [8]. Points can also be chosen by selecting them directly on the data set. Points can be chosen in any orthogonal image but must be chosen in order along a path.



Using the Follow Path Tool (continued)

- Click in the trachea to set the first point [9].
- Scroll through the slices and continue to set points along the path [10] until reaching the last point of the desired path [11].



Using the Follow Path Tool (continued)

- Click Generate Images [12] to create the resliced data set and save it to the specified workspace.
- Close Transform.

