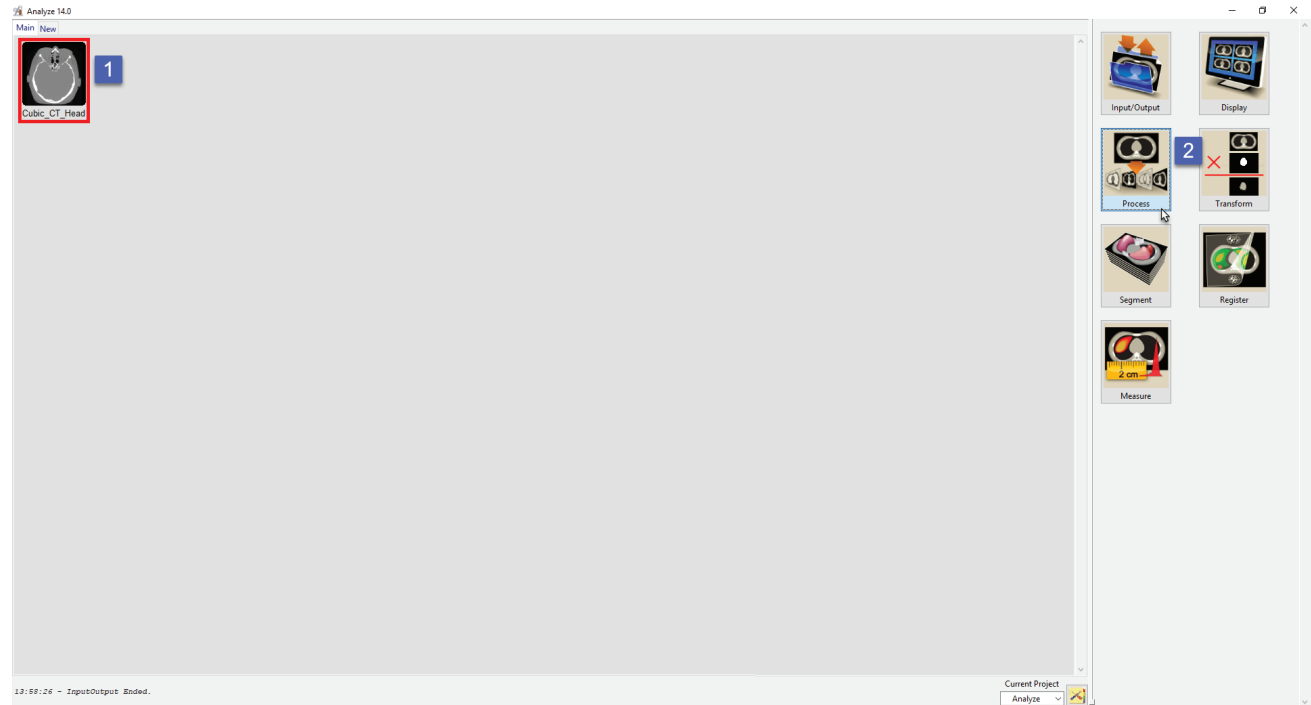


Histogram Preserve

The histogram preserve function provides a utility for feature enhancement with in the input data set. The function works by mapping a broad grayscale range into a narrow range in a statistically optimal manner. For example, this function may be used to map 16384 gray level bins of a 16-bit image into 256 bins of an 8-bit image. The ideal distribution would place 1/256 of the total pixels in each of the 256 bins.

In the exercise we will demonstrate how to use the histogram preserve function to map the histogram of a 16-bit CT cardiac data set to an 8-bit data set and review the resulting



Download the CT_Heart.avw data set to follow along from <http://analyzedirect.com/data>

Load the CT_Heart.avw into Analyze using the Input/Output module.

Select the CT_Heart.avw data set from the workspace [1] and open Process [2].

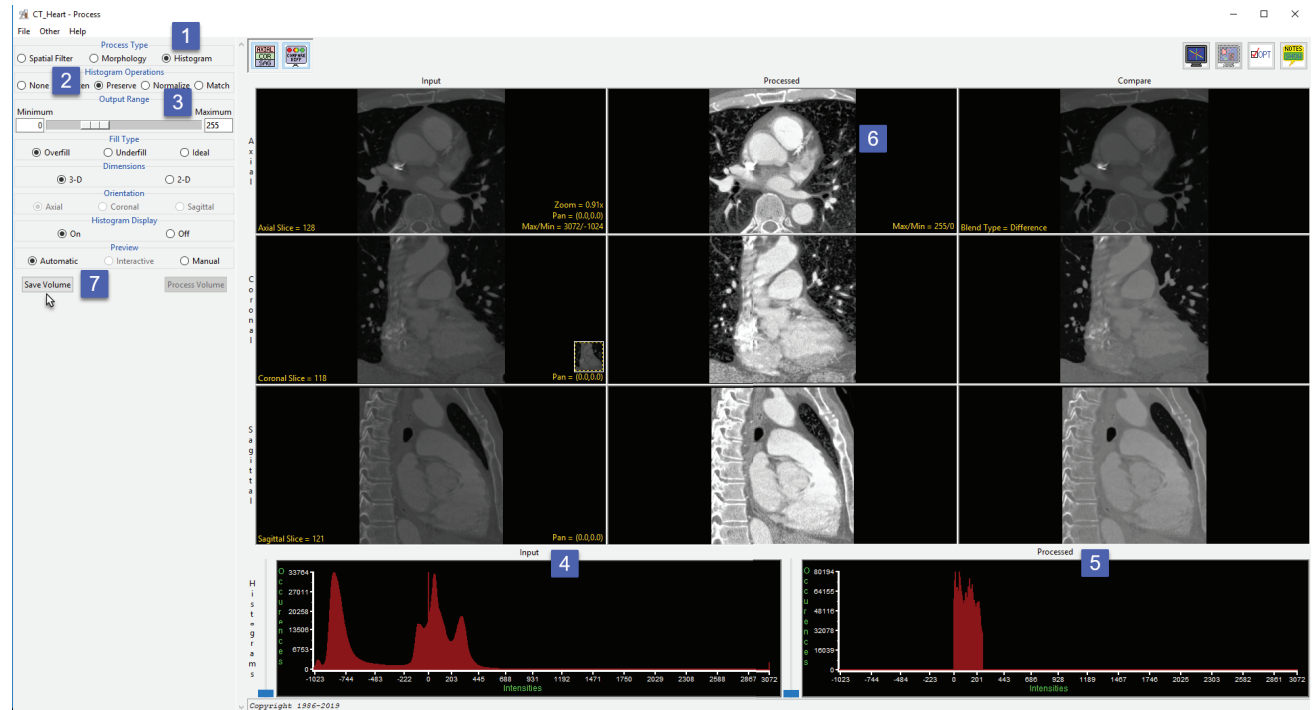
Histogram Preserve (continued)

Select the Process Type Histogram [1].

Set the Histogram Operation to Preserve [2].

Set the Output Range Minimum to 0 and the Maximum to 255 [3].

Note the input histogram [4] and the processed output histogram [5]. The histogram preserve function has mapped the entire range of the signed 16-bit input data set (-1024 to 3072) to the range of an unsigned 8-bit data set (0-255).



Review the enhanced processed data set [6].

Click Save Volume [7] to save the processed image data to the workspace.