



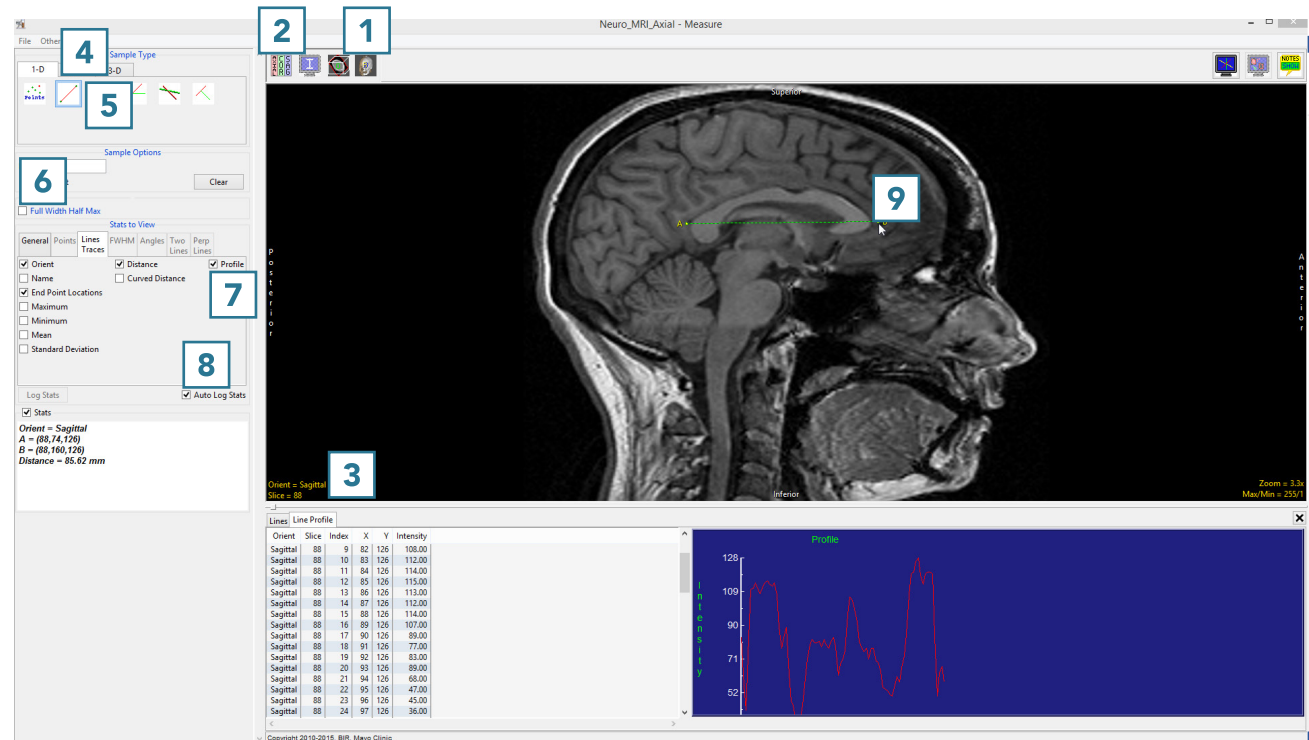
### 3. Generating Line Profiles

The Line tool allows users to sample and plot pixel intensity values for a defined line.

- Select MRI\_3D\_Head and open Measure. **1**
- Switch the display of the Rendering off **1** and toggle the display of all orientations off. **2**
- Use the Orient option to switch to Sagittal. **3**
- Select the 1D Sample Type. **4**  
Choose the Line tool. **5**
- Uncheck Full Width Half Max. **6**
- Check the Profile option **7** and the Auto Log Stats checkbox. **8**
- Define a line on a sagittal slice to measure the posterior to anterior distance of the corpus callosum. **9**

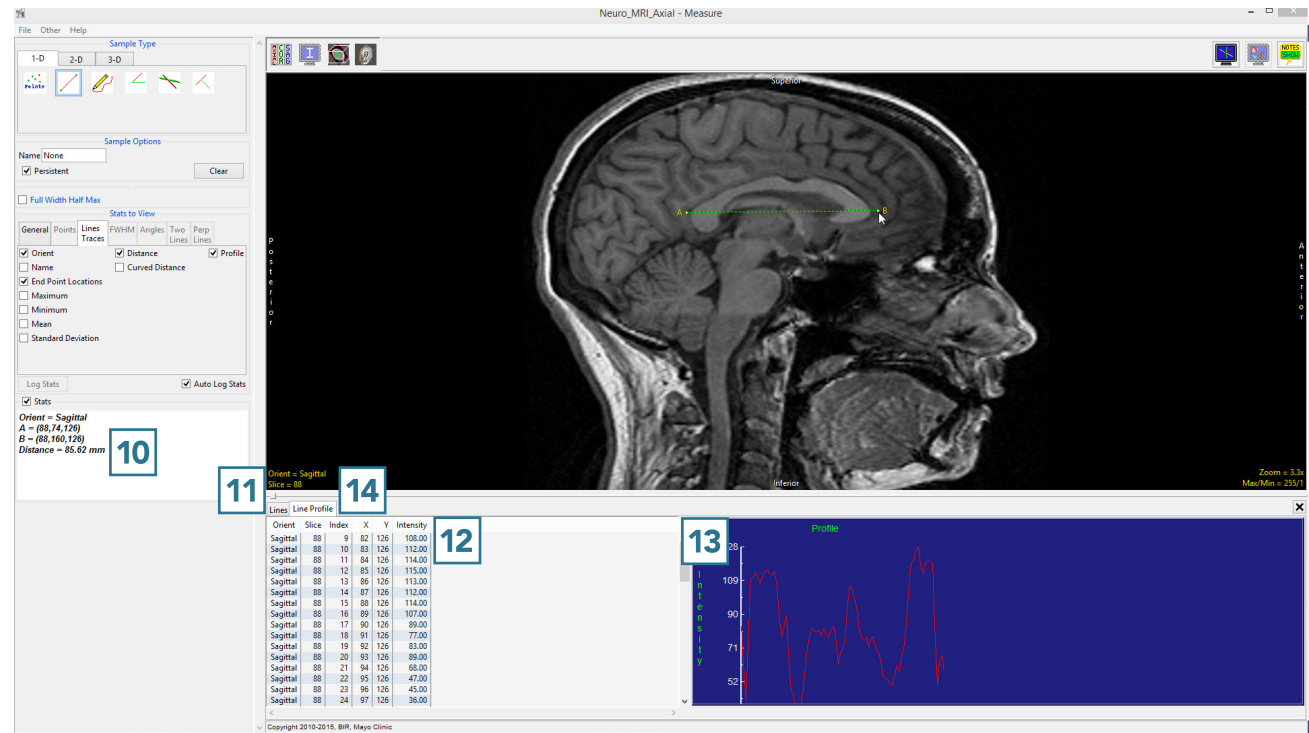


Download the MRI\_3D\_Head data set to follow along  
<http://analyzedirect.com/data/>





- The coordinates for the line endpoints (A and B) and the line distance are reported in the Stats review area **10** and in the Lines tab. **11**
- The intensity profile of the defined line is logged **12** and plotted **13** in the Line Profile tab. **14**





## Using FWHM to Aid with Line Measurements

The Line tool allows for measurement of FWHM (Full-Width, Half-Max) distance on a line that crosses a structure of sufficient contrast to produce edges which cross the half-max value, which represents half the difference between the minimum and maximum intensity values along the line.

- Check the Full Width Half Max checkbox **15** and check the Auto option to have the tool calculate the FWHM Base Value. **16**
- Note that the FWHM is overlaid in red on the line. **17**
- The Stats review area will update reporting the FWHM information. **18**

Note any differences between the linear line distance value and the FWHM distance value. FWHM can help increase accuracy of such measurements.

- FWHM measurements will also be reported in the Lines log. **19**
- Right-click on the log to save as a .CSV file.

