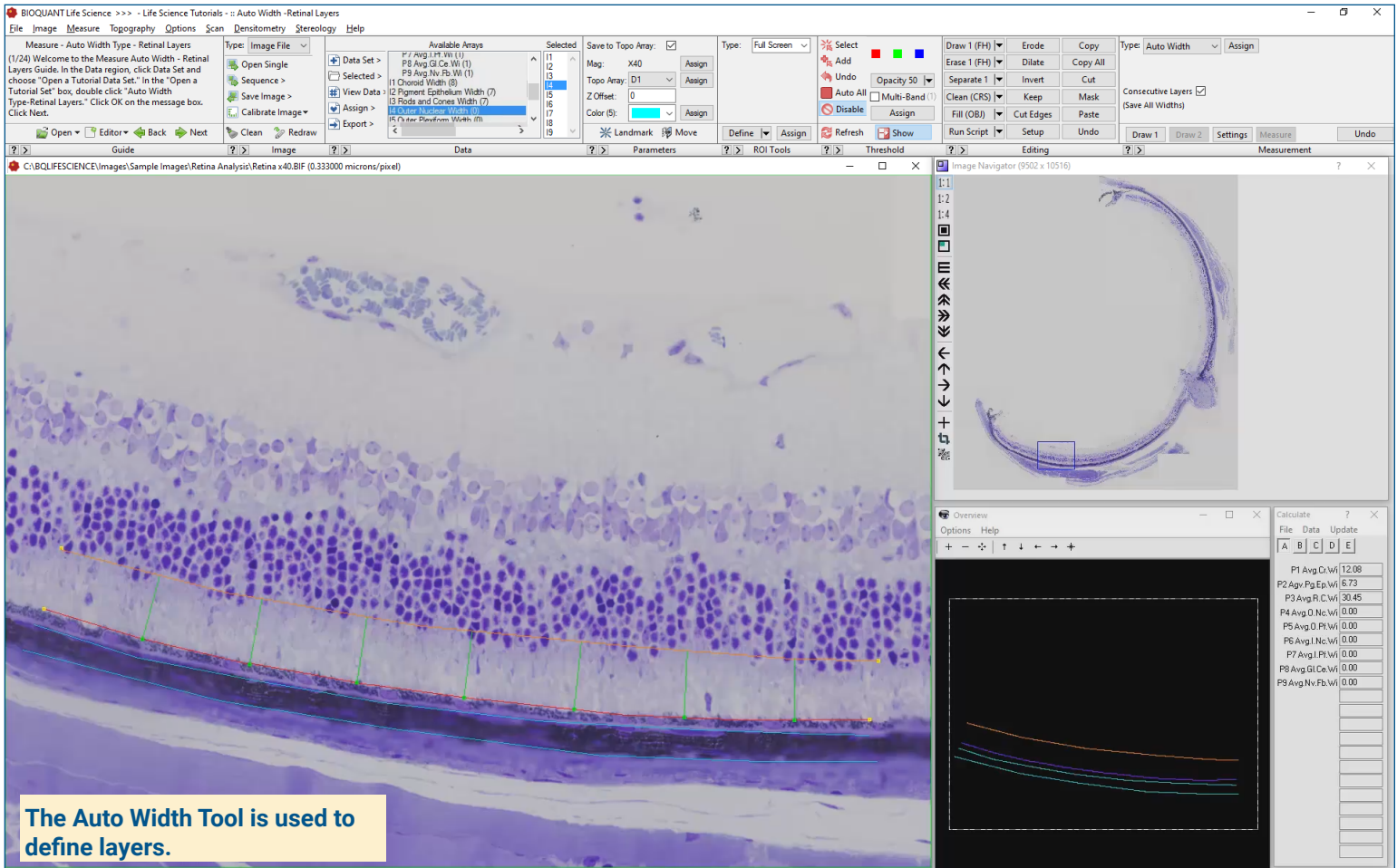


Retinal Layers Protocol



Get Image of the Section

Up to **4 GB Scan** of Section:

- Scans can be generated manually by BIOQUANT Life Science, automatically by BIOQUANT SCAN, or via a third party slide scanner.
- Open the scan and move the pan box to the first field for collecting retinal layer data.

Live Image from Microscope with Camera and tracking device:

- In BIOQUANT, get a live image of the tissue directly in the Image Window.
- Move to the first field for collecting retinal layer data.

Auto Width: Define the First Layer

The Auto Width tool is used to quickly generate width data between consecutive layers.

Using the **Auto Width** tool:

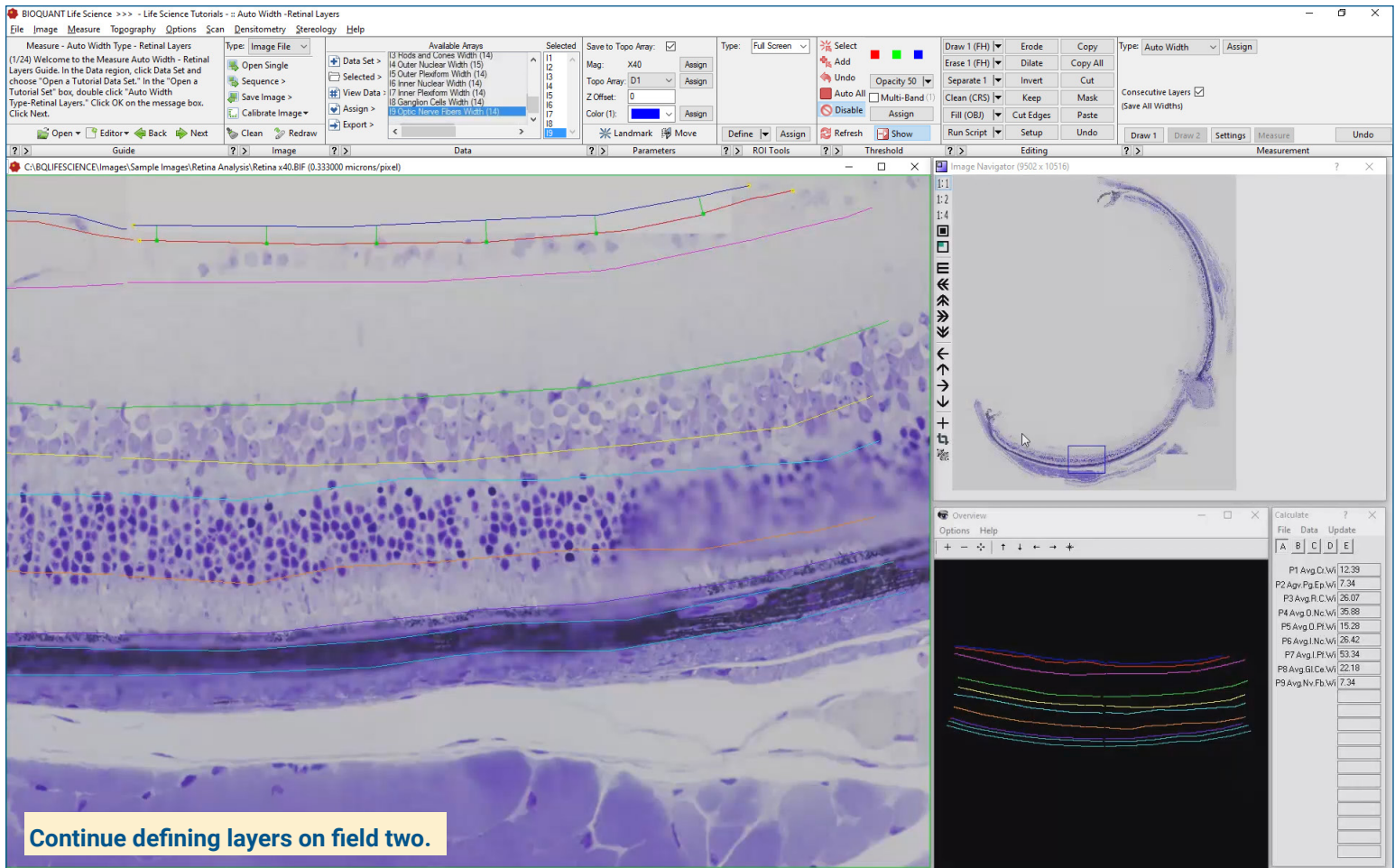
- Click **Draw 1**
- Click along the layer to define the bottom of the first layer
- Click **Draw 2**
- Click along the layer to define the top of the first layer
- Perpendicular width is defined automatically at regularly spaced intervals along the surface.
- Click **Measure** to collect the first layer thickness.

Auto Width: Additional Layers

Continue using the **Auto Width** tool:

- Click **Draw 2**
- Click along the layer to define the top of the next layer.
- Perpendicular width is defined automatically at regularly spaced intervals along the surface.
- Click **Measure** to collect the next layer thickness.
- Repeat for each layer in field one.

Retinal Layers Protocol



Move to the Next Field

Digital Scan in Large Image Navigator:

- Move the Pan box to the next, slightly overlapping field to be measured.

Live Image with Microscope:

- Move the stage to the next, slightly overlapping field to be measured.

Repeat Protocol for the New Field

Measurement tracings from previous field redraw on the current field.

For each layer, connect up with the previous tracings and draw to the edge of the field of view.

BIOQUANT keeps track of individual widths, showing you the running average in the Calculations box.

Repeat the protocol for all fields in the retina.

Data Calculations

Choroid Width

Pigment Epithelium Width

Rod /Cone Width

Outer Nuclear Width

Outer Plexiform Width

Inner Nuclear Width

Inner Plexiform Width

Ganglion Cell Width

This is a sample protocol. It is easily modified for different animals, tissues, embedding methods, and stains. All parameters can be renamed. New calculations can be added. Both live imaging and scans are supported. Measure at the magnification that is best for your histology. Find out more: www.bioquant.com/lifescience