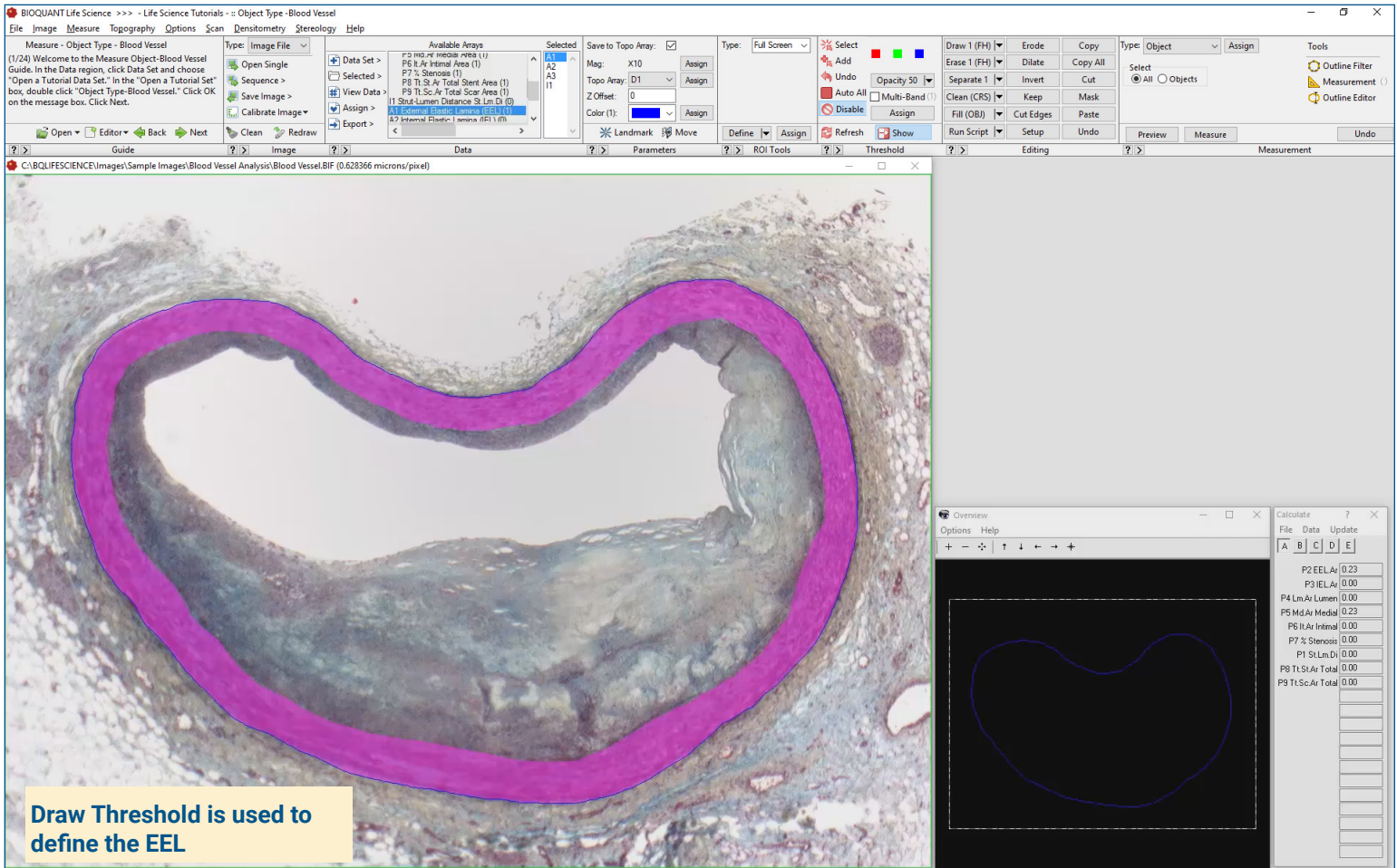


## Blood Vessel Stenosis Protocol



Draw Threshold is used to define the EEL

### 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.
- In BIOQUANT, zoom out so the entire blood vessel fits in one field of view.

**Live Image from Microscope** with Camera and tracking device:

- Use a low objective like 4X or 2X to display a live image of the blood vessel in the BIOQUANT Image window.
- The blood vessel does not need to fit within a single field of view.

### Define EEL

Use the **Editing Tools**, to define the EEL boundaries.

- Adjust the **Draw Threshold** wand width to match the EEL.
- If you make a mistake, use **Erase Threshold** to adjust.

BIOQUANT automatically preview outlines the EEL.

Click **Measure** to measure the defined EEL

### Limit to the IEL

Using the Existing EEL Threshold:

- Click the **Invert Threshold** tool to automatically define the IEL.

BIOQUANT automatically preview outlines the IEL.

Click **Measure** to measure the defined IEL.

## Blood Vessel Stenosis Protocol

The Lumen is defined using thresholding.

File	Data	Update		
A	B	C	D	E
P2 EEL.Ar	0.23			
P3 IEL.Ar	0.17			
P4 Lm.Ar	0.06			
P5 Md.Ar	0.06			
P6 It.Ar	0.11			
P7 % Stenosis	0.67			
P1 St.Lm.Dl	0.00			
P8 Tl.St.Ar	0.00			
P9 Tl.Sc.Ar	0.00			

### Measure the Lumen

The lumen has enough contrast from surrounding tissue to be automatically thresholded and preview outlined.

Click **Measure** to measure the Lumen.

### Measure Stents

If stents are present, use the **Editing Tools** to define them:

- Use **Draw Threshold** to define the stents.
- If you make a mistake, use **Erase Threshold** to adjust.

BIOQUANT automatically preview outlines the stents.

Click **Measure** to measure the defined stents.

### Computed Data

- Stent to Lumen Distance
- External Elastic Lamina Area
- Internal Elastic Lamina Area
- Lumen Area
- Medial Area
- Intimal Area
- % Stenosis

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](http://www.bioquant.com/lifescience)