



Monaco

# OCT Analysis



## Purpose

This document will provide guidance on utilizing the OCT analysis functionality available within Optos *Advance*<sup>TM</sup> for *Monaco* devices.

This document is specific to the United States market. Not all products, services, or offers are approved or available in every market. Approved labeling and instructions may vary from one country to another. For country specific product information, see the appropriate country website or Instructions for Use (IFU).

NOTE: Full operating instructions and device warning and cautionary messaging are provided in the Instructions for Use. Please review the IFU (G-108707) prior to operating the device. The IFU can be found at [optos.com/IFU](https://optos.com/IFU). Scan the QR Code below for direct access:



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## Segmentation Generation

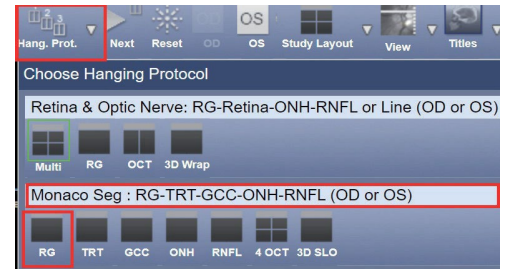
To generate Segmentation reports in Optos *Advance*, capture the Retina Topography and ONH Topography scans. The RNFL scan is automatically extracted from the ONH Topography.

OCT analysis includes the following results:

- Retinal thickness map
- Ganglion Cell Complex thickness map (GCC)
- ONH Cup/Disk metrics and ONH Nerve Fiber thickness map
- RNFL peripapillary NFL thickness profile

## Segmentation View

- 1 | Select the Hanging Protocols icon from the top toolbar.
- 2 | Locate the **Monaco Seg** header within the Hanging Protocols and select **RG** to begin the first stage of the hanging protocol.
- 3 | Select the **Next** button on the toolbar or use your right arrow key on your keyboard to advance to each stage of the Hanging Protocol. You can also manually select each stage from the Hanging Protocol icon to navigate.



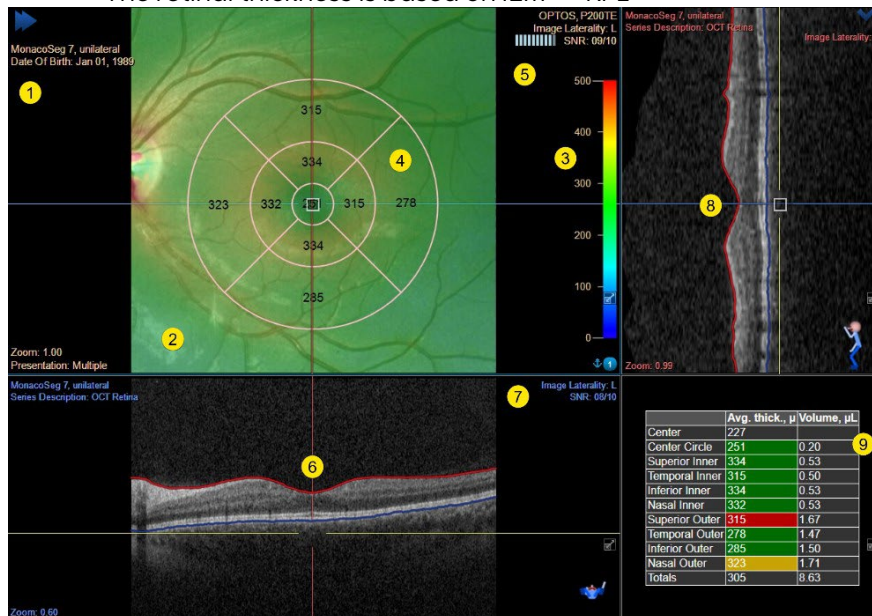
Note: To remove the segmentation lines on the scans, use the shortcut key "L" on your keyboard. If this is not set up, please contact Optos support.

## Retinal Thickness Analysis

Hanging Protocol: TRT (Total Retinal Thickness)

Tips for reviewing the TRT:

- Scroll through volume scans (7 and 8) using the scroll wheel on your mouse
- The retinal thickness is based on ILM → RPE





1	Title: Patient, Laterality, etc.	6	Horizontal B-Scan
2	SLO with thickness map	7	Individual B-Scan SNR
3	Thickness color gauge	8	Vertical B-Scan (extracted)
4	9-field ETDRS grid (6mm)	9	ETDRS value table
5	Average Volume SNR widget and value	10	Contour map option*

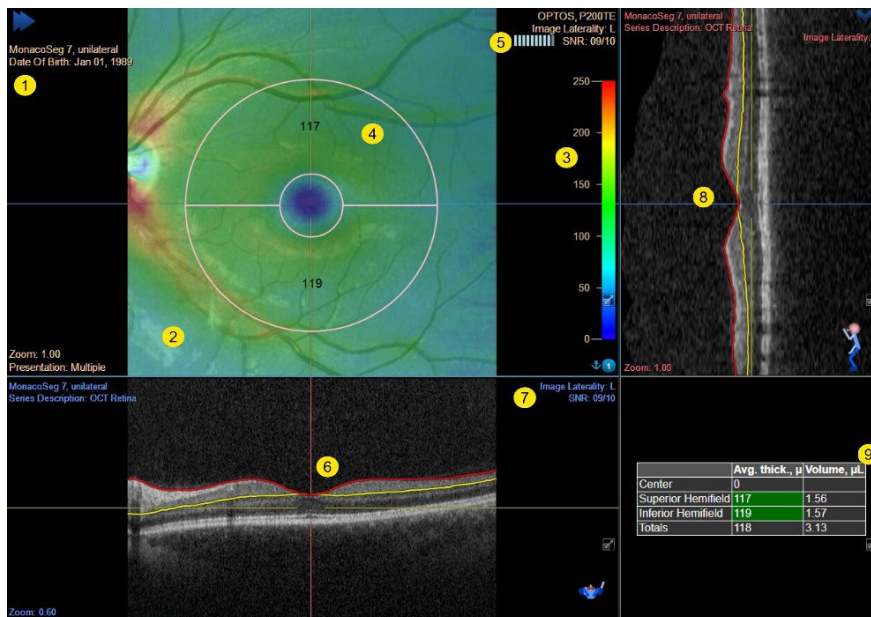
\*The Contour and Edit tools are accessible via the **View Tools** icon.

### Ganglion Cell Complex (GCC) Analysis

Hanging Protocol: GCC

Tips for reviewing the GCC:

- GCC thickness is based on ILM →IPL Boundary (NFL, GCL, IPL)
- If the hemifield grid (4) is not centered on the fovea, hover over its center until you see a square in the box and move this to the new location



1	Title: Patient, Laterality, etc.	6	Horizontal B-Scan
2	SLO with thickness map	7	Individual B-Scan SNR
3	Thickness color gauge	8	Vertical B-Scan (extracted)
4	GCC hemifield grid (6mm)	9	Hemifield value table
5	Average Volume SNR widget and value	10	Contour map option*

\*Note: To view the contour map for the GCC, navigate to **View Tools** to activate



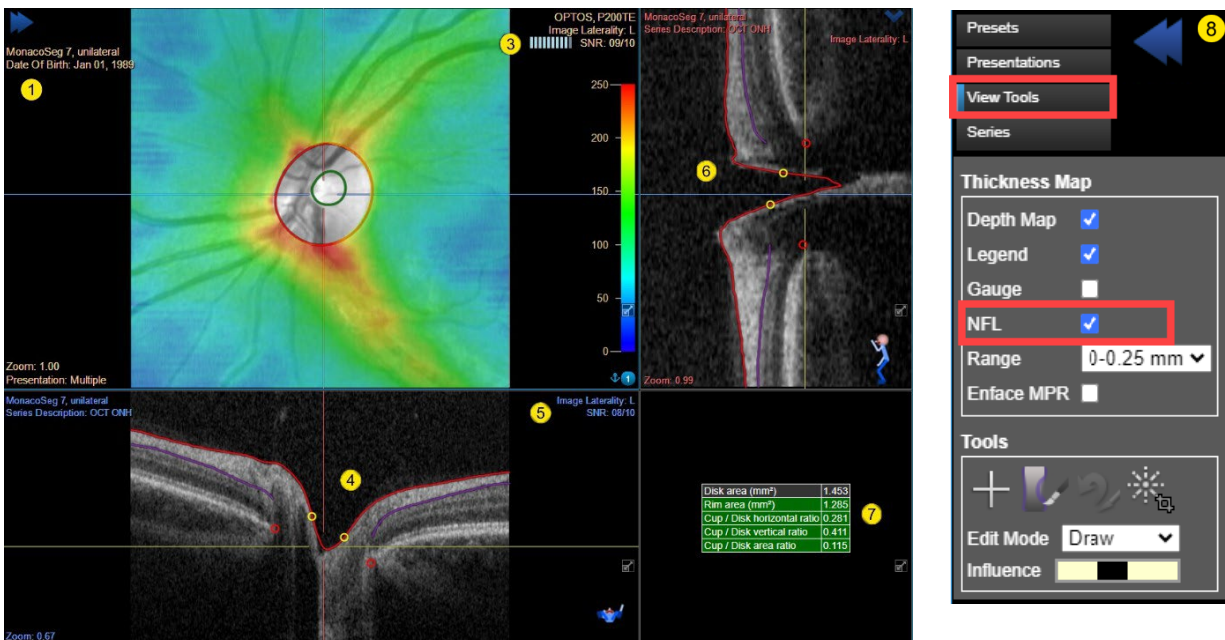
## Optic Nerve Head Analysis

Hanging Protocol: ONH

Tips for reviewing the ONH:

- NFL thickness map options are available within **View Tools**
- ONH analysis is based on Bruch's Membrane Opening (BMO) and a reference place
- The Nerve Fiber thickness map is shown by default (2). You can toggle the NFL thickness map on/off within the View Tools menu option (8)

Note: You can also use shortcut key "N" to toggle on/off the NFL thickness map. If this not set up, please contact Optos support.



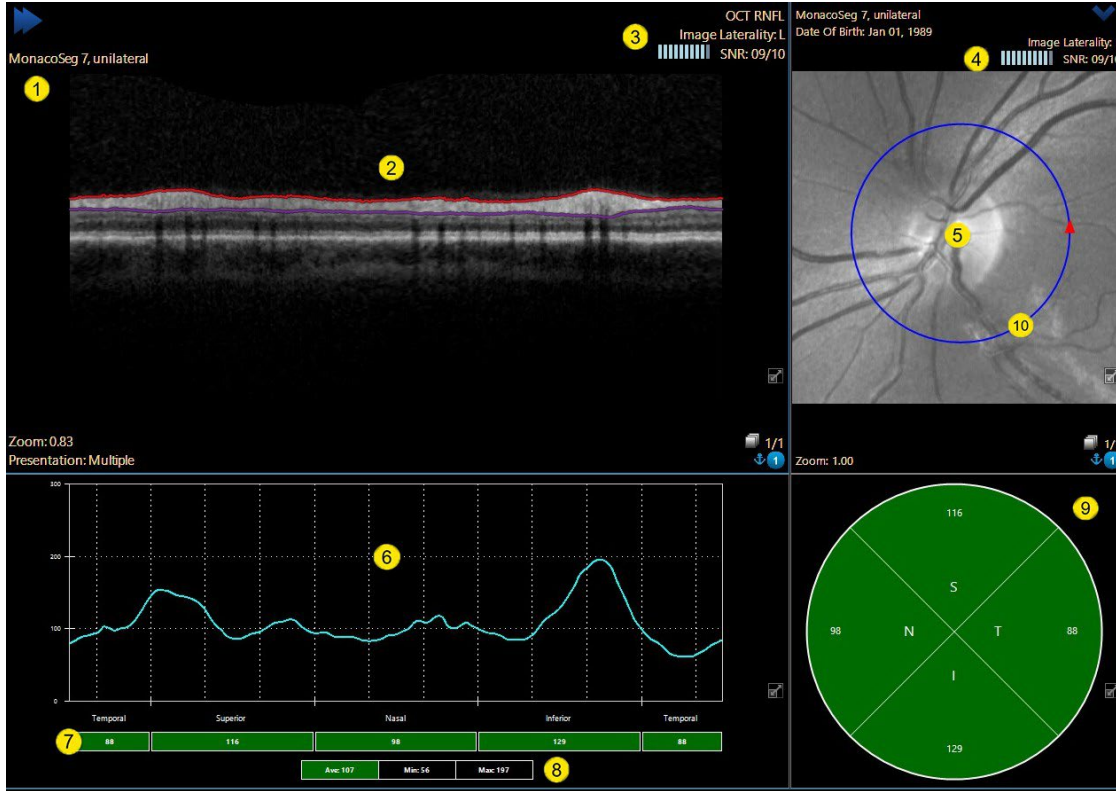
- BMO points (disc) ○
- Reference plane points on ILM (cup) ○
- Editable BMO points and outlines

1	Title: Patient, Laterality, etc.	5	Individual B-Scan SNR
2	SLO with thickness map and cup/disc outlines	6	Vertical B-Scan (extracted)
3	Average Volume SNR widget and value	7	ONH cup and disc metrics
4	Horizontal B-Scan	8	Tools Menu; toggle NFL Thickness Map



### Retinal Nerve Fiber Layer Analysis

Hanging Protocol: RNFL



Circle is a T-S-N-I-T sequence

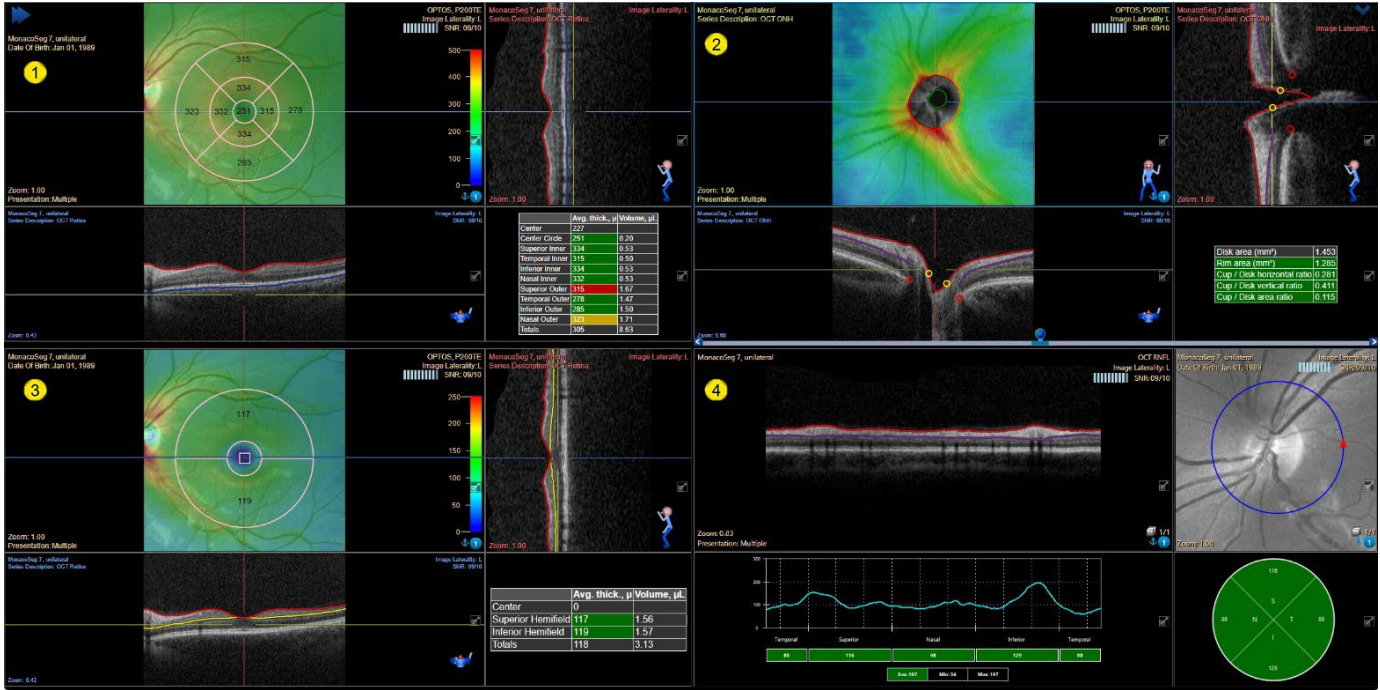
1	Title: Patient, Laterality, etc.	6	RNFL thickness line graph
2	RNFL scan with segmentation	7	4-sector graph values
3	Individual B-Scan SNR	8	Average, Minimum, Maximum thickness
4	Average Volume SNR widget and value	9	Quadrant wheel
5	SLO position overlay	10	Auto ONH center detection



## Retina, GCC, ONH, and RNFL Reports

Hanging Protocol: 4 OCT

In this stage of the Hanging Protocol, you will be shown 4 OCT analyses on one screen per eye, provided both the Retinal Topography and ONH Topography scans were obtained. These reports include:



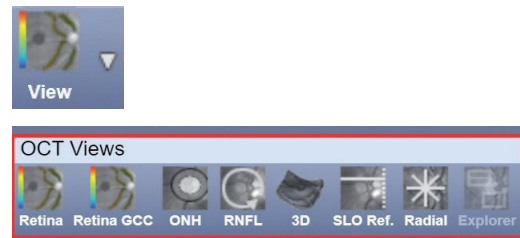
1	Retinal thickness	3	GCC
2	ONH	4	RNFL

Note: This display can be imported into your EMR.

## OCT Views

If the Hanging Protocols for Segmentation are not available, you can manually select an OCT view from within the software.

- 1 | Select **View** from the toolbar.
- 2 | Locate the OCT Views header and select the applicable OCT view:
  - a. Retina
  - b. Retina GCC
  - c. ONH
  - d. RNFL



3D View, Radial View, and Explorer View are covered in subsections below.



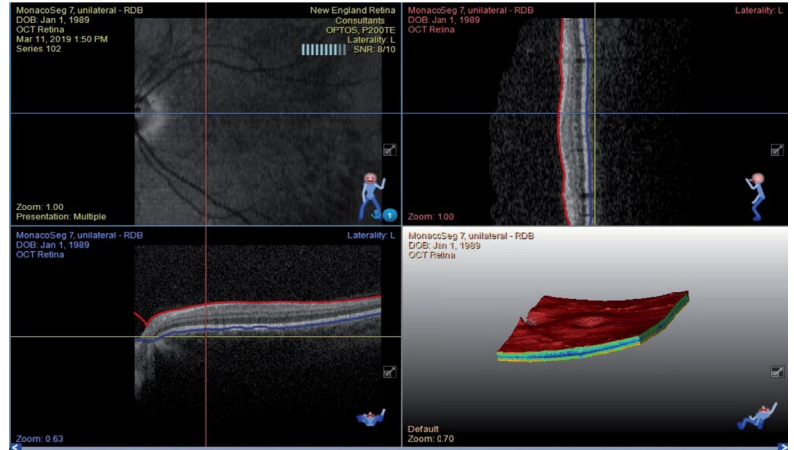
## 3D Views

The 3D View is intended for use with Retina Topography and ONH Topography.

Select an OCT and go to **Views**, then select 3D.

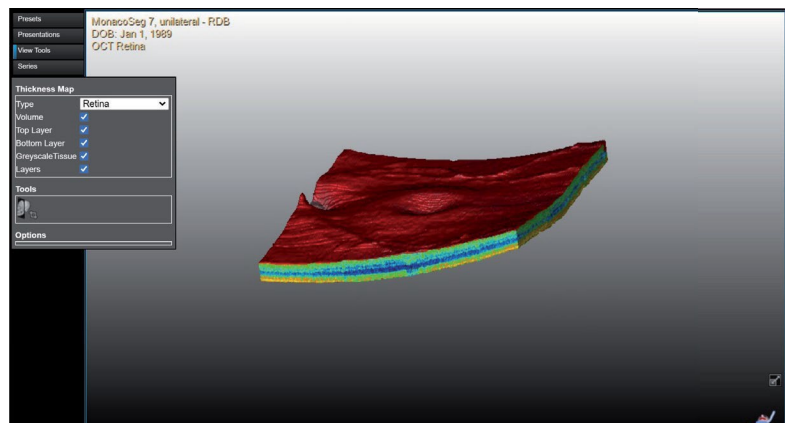
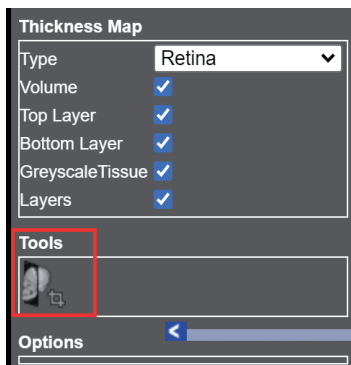
In this view are the following viewports:

- A enface/coronal view in the main (top-left) Multi-Plane Reformat (MPR) viewport
- Cross-sectional OCT images shown in the additional MPR viewports (bottom-left and top-right)
  - These represent different orientations, such as axial and sagittal.
- A 3D image is shown in the bottom-right. In the 3D viewport, the tissue above the top layer and below the bottom layer has been removed for easier view of the layer depths.



To utilize the Plane Clipper tool, follow the steps below:

- 1 | Select **View Tools** from the left-hand menu.
- 2 | Beneath the Tools header, select the Plane clipper icon.
- 3 | To use the tool, click (or tap) the 3D image and then drag to push the plane in and out.





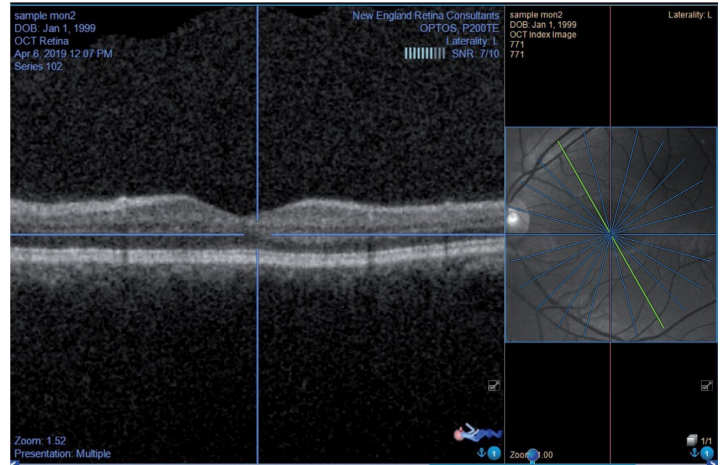
## Radial Views

The Radial View allows you to scroll through fixed-angle cross sections that are extracted from a volume scan. The outline of the original raster volume scan is shown on the enface by a blue rectangular in the right viewport.

Select an OCT and go to **Views**, then select **Radial**.

You can move the center point and scroll through the interpolated 'spokes'.

To update the number of spokes (6, 12, 24, 36, or 48), select **View Tools** from the left-hand menu and update as necessary.



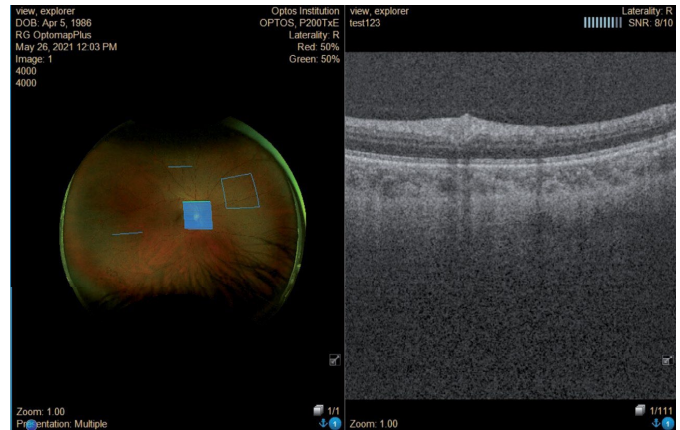
Note: If the Radial View is not available for the scan type, it will be grayed out.

## Explorer Views

Explorer View allows you to quickly see and select available OCT scans taken on the same day.

Select an OCT and go to **Views**, then select **Explorer**.

All available OCT scans will be highlighted on the **optomap** image. Select the scan you want to view from the **optomap**, and the right viewport will change to the corresponding OCT.



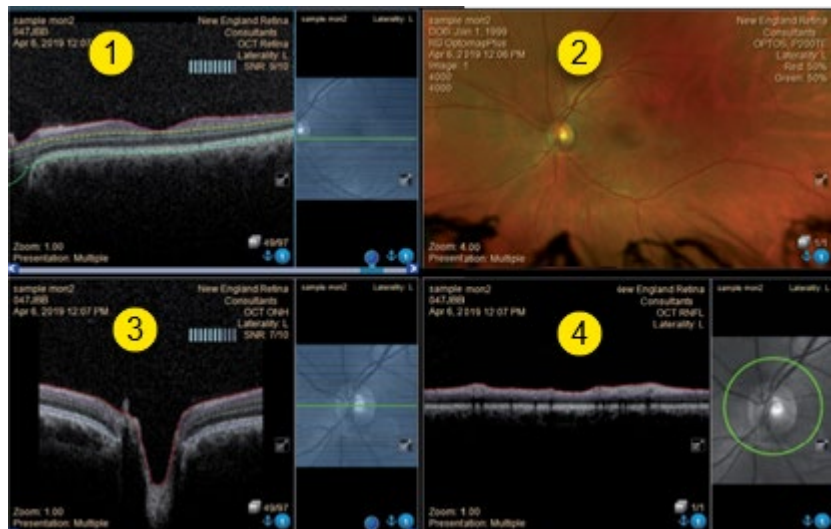
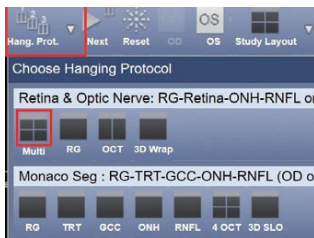




## Standard B-Scan Views

To view a non-segmented series, change the Hanging Protocol to a non-segmented view.

- 1 | Select **Hanging Protocol** on the toolbar
- 2 | Select a scan without analysis:
  - Retina: 'SLO Ref' view and layer annotation
  - **optomap**
  - ONH: 'SLO Ref' view and layer annotation
  - RNFL: 'SLO Ref' view and layer annotation



\* To remove dotted lines on scans, select Titles from the toolbar and deselect Annotations



## Comparing OCT Scans from Multiple Visits

If scans were taken at previous visits, you can compare changes over time within Optos*Advance*. The Hanging Protocols will automatically show you the current capture and the most recent prior study. If you want to see additional prior scans, follow the steps below:

- 1 | Select **Study Layout** and change the layout view to 1x3.



- 2 | Click and drag any of the prior dates from the Timeline at the top of the screen into the desired viewport.



- 3 | Select an alternate series (e.g. autofluorescence) from the left-hand Series menu, if desired.

For additional information on comparing prior images, review the document titled **Optos*Advance* Comparing Prior Images**.

