Optos*Advance*™ Image Review Instructions

Purpose

This is a quick start reference document that summarizes interaction with Optos*Advance v24*.

NOTE: Full operating instructions are provided in the **Help** section of Optos*Advance*. Once logged into the software, select the **Help** icon from the toolbar to search or browse guidance topics. To confirm your version of the software, hover over the Optos*Advance* logo.

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Logging into Optos*Advance*

1 | Select the icon on the desktop for Optos*Advance* to take you to the login screen.

Searching for Patient Studies

1 | Navigate to **Patient Search** on the left-hand menu.
2 | Set your **Data Sources** and **Time Range** filters.
3 | Type Patient ID or Patient Last Name to find specific studies.
4 | Select **Query** to display filtered patient studies and choose the study you want to review.
   a. Single click the patient study to open the Image Preview tab. All images contained in the study will display in a thumbnail preview. You may select an image to zoom and pan for a quick review using the mouse functions.
   b. Double click on a patient study to open the full feature image review screen. (See next section.)

A	Data Sources indicates where the images are stored for viewing
B	Time Range filter field
C	Patient ID and Patient Name filter fields
D	Query button
E	Study Views from queried filters
F	Image Preview

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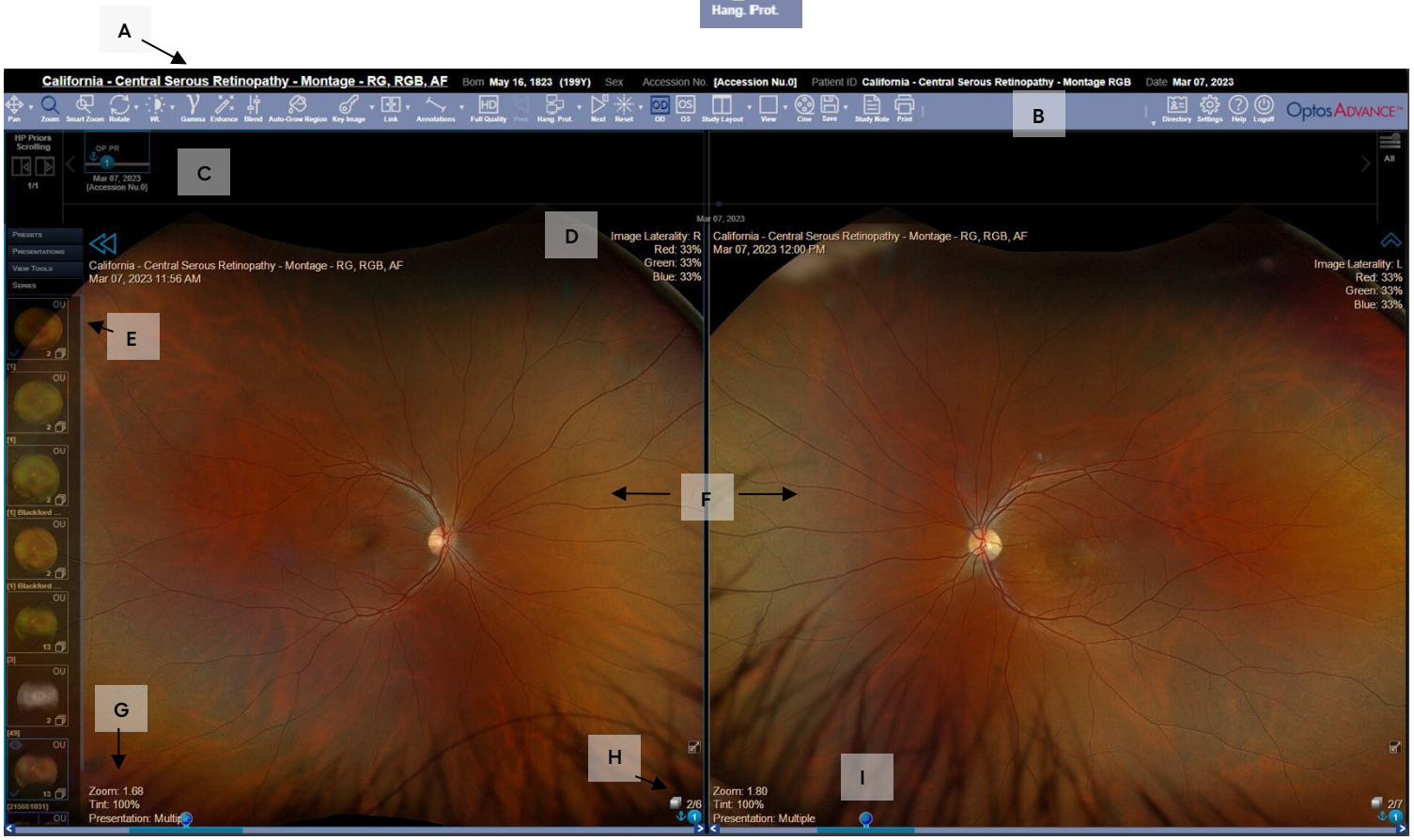
Full Feature Image Review Screen Layout

Most studies will open in a 1x2 Study Layout view with OD images displayed in the left viewport and OS images displayed in the right viewport. There may be variations of images displayed if you captured Multimode studies on your device. Different views are available from the Hanging Protocol toolbar menu. (Hang. Prot.)



A	Patient Information
B	Toolbar
C	Timeline
D	Practice Name/Laterality/Laser Blend Percentage
E	Series thumbnail of images captured during the session
F	OD/OS Viewports
G	Image Enhancement Views
H	Number of images available for scrolling review
I	Images Slide Bar for scrolling review (blue lollipop)

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Mouse Functions

Image review in Optos*Advance* is made easier by use of a standard computer mouse. Review the functions below to aid with performing the Zoom, Pan, R/G Blend, Enhance functions, and more.

1	**Zoom**: Hold the left mouse button and push your mouse towards the screen. The images are linked by default, so all viewports are zoomed into the same magnification with the zoom amount displayed in Image Enhancement Views in bottom left of viewport.
2	**Pan:** Hold the right mouse button while moving the mouse. Images are linked by default.
3	**Blend:** Hold the left mouse button while holding down the Shift key. Move the mouse away or towards you to change Laser Blend Percentage to view different retinal layers.
4	**Enhance:** Hold the right mouse button while holding down the Shift key. Move the mouse away from you to sharpen an image. Image Enhancement Views display in bottom left of the viewport. Enhancement is capped at 3.0.
5	**Scroll:** Scroll the mouse wheel to cycle through multiple images taken.
6	**Smart Zoom:** Click the scroll wheel once to activate Smart Zoom overlay on an image.
7	**Gamma:** Press the scroll wheel and move your mouse towards the screen to increase gamma and away from the screen to decrease.
8	**Contrast:** Hold the scroll wheel and your Shift key and move your mouse towards the screen to increase contrast and away to decrease.
9*	To view a single, full-screen viewport, double-click an image. To go back to the original, 1x2 view, double-click the image again.

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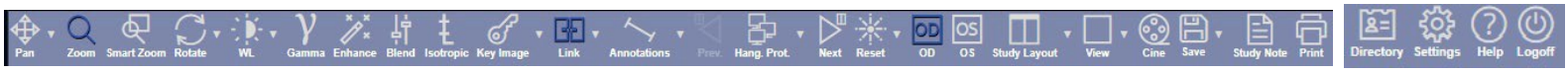
Toolbar

To make navigation easier, we recommend using mouse controls to quickly access the basic features of Optos*Advance*. You can also find the same functionality in the **Toolbar**. To activate a tool from the **Toolbar**, simply click on it with the left mouse button. The selected tools will stay active, and the standard mouse controls will be temporarily disabled. If you'd like to switch back to using the mouse, just click the **Zoom** tool on the **Toolbar**, and your mouse functions will be restored.

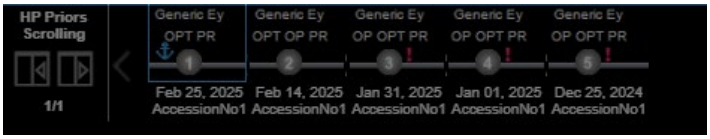


Pan	Moves the image up, down, left, or right.
Zoom	Zooms image in and out.
Smart Zoom	Enables Smart Zoom function to overlay images of different modalities or dates of service.
Rotate	Rotates an image or OCT orientation.
Gamma	Adjusts the brightness of an image using a non-linear curve.
Enhance	Allows you to adjust the clarity of an image.
Blend	Allows you to blend through the image to see the choroid or sensory retina views.
Auto Grow Region	Measures continuous areas of like matching color.
Key Image	A feature available to mark your favorite images. The keyed images are placed into a new series on the left-hand side thumbnail menu.
Link	Links together the Zoom and Pan functions on your viewports. Toggle off and on.
Annotations	Presents a set of tools to measure and notate on the images.
Prev.	If the Prev. button is available, click on it to display the previous stage of Hanging Protocols. Depending on the configuration and device, it will show you *color rg*, *color rgb*, *green af*, *blue af*, OCT, reports, or a comparison of today and prior images. See also Hang. Prot. on toolbar for menu of stages.
Hang. Prot.	Hanging Protocols are set stages of viewing images captured. They are device specific. Selecting Hang. Prot. will display a menu of viewing options to choose from. Clicking the Next and Prev. button on the toolbar will allow you to move through each stage individually or you may choose a stage from here. Stages marked by an asterisk indicates Prior image side-by-side view is available.
Next	If the next button is available, click on it to go to the next stage of Hanging Protocols. Depending on the configuration and device, it will show you *color rg*, *color rgb*, *green af*, *blue af*, *fa, icg* OCT, reports, or a comparison of today and prior images. See also Hang. Prot. on toolbar for menu of stages.
Reset	Returns image to original form. Helpful to quickly remove manipulations or annotations.
Study Layout	Used to customize the image viewing area by allowing you to add additional viewports on the screen. You can drag a different image set or date into each viewport allowing you to view multiple modalities simultaneously.

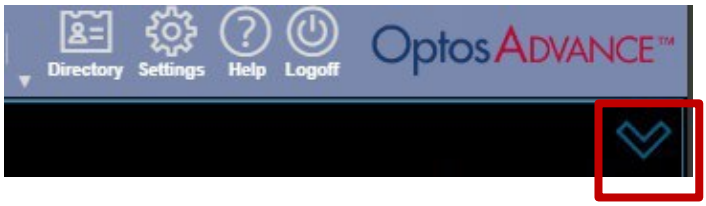
View	Changes how many images display in a Study Layout viewport. Other **opto**map Views or OCT Views available here. See Views and 3D Wrap section.
Titles	Allows you to hide/unhide the image titles.
Save	Allows you to bookmark or export images in jpg format. Select Save, then Export. You can choose which images to save and which titles to include: None, All, Minimal, or Light.
Settings	Used to create new users. Only an Admin User can add other users to the system. Go to **Settings** and under **User Management,** select **Accounts**. At the bottom on the screen click on Add. Add required fields and click **Save**.
Help	Opens a help menu in a new window in your browser. The help page has a table of contents on the left side. You may also search for information related to a key word. To close the help tab, simply select the "x" on the browser window when done.
Directory	When finished reviewing the patient's images, select the Directory icon to go back to the **Patient Search Screen.**
Logoff	When you have finished using the review software you can exit by clicking the log off button. Do not "x" out of the browser window until after you have logged out of the application.

Prior Dates of Service

1 | If the patient has prior imaging sessions, these will display in a timeline underneath the Toolbar.



2 | If your timeline is hidden, select the **blue arrow** at the top right of the viewport underneath the toolbar.



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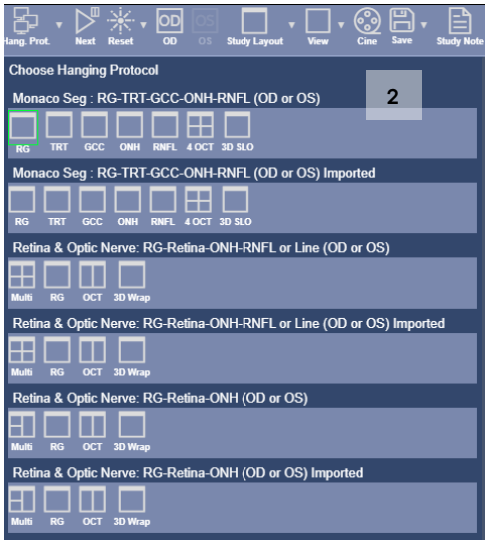
Hanging Protocol Toolbar Menu and Use

Hanging Protocols are customized views and stages for quickly reviewing the images captured during a session. The study will open with the most logical view; however, you can choose from any of the other customized views in the menu. To see the views available, select the **Hang. Prot** toolbar icon to display the menu of options. Available viewing options and image modality stages in each view are displayed. A green box will indicate which view and stage your viewports are displaying. Each active available view is shown in blue and lists the stages of modalities underneath it. (Image 1)

- To navigate to a different view, select the view and/or stage from this menu. The viewports will display those images.
- Alternatively, once your chosen view is selected, you can click the **Next** and **Previous** arrow buttons on the Toolbar to move through the modality stages as indicated from that view option.
- The Hanging Protocol menu options are essential for accessing OCT views and reports. Various viewing stages are available to support clinical applications. For further details on OCT, please refer to the OptosAdvance OCT Analysis document. (Image 2)



- Prior side-by-side images and OCT are indicated by an asterisk in the Hang. Prot. menu modality stages. This option will display the image study you opened from the Directory, and the prior sessions images next to each other in the viewports. (Image 3)

Additional Views and 3D Wrap

optomap Views

The **View** drop-down menu on the **Toolbar** allows for you to change the current view of a selected **opto**map image. Below is a description of each view:

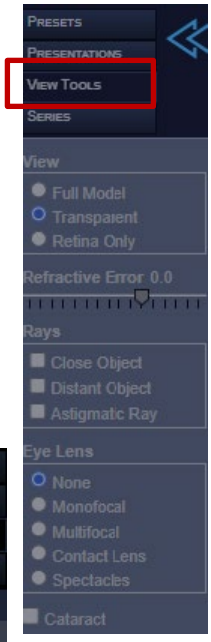
1 | **Three Split** will show your current image as well as the red and green channels.
2 | **Red** will show the choroidal view of the current image.
3 | **Green** will show the sensory retina view of the current image.
4 | **3D Wrap** is a useful patient education tool and is activated by clicking the 3D Wrap icon. It is also found in the Hanging Protocols menu views as the final stage.

3D Wrap

1 | 3D Wrap will open in an automatic Cine play. To stop the animation, press the space bar on your keyboard.
2 | Use your left and right mouse buttons to manipulate the zoom and rotation of the 3D Wrap.

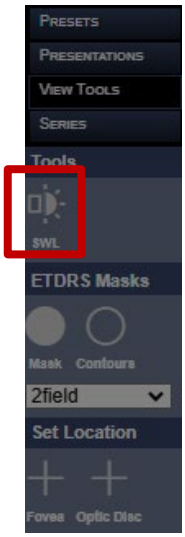
When viewing an image in 3D click the **View Tools** menu option located on the left side panel to access different views and conditions that can be applied to the image.

1 | Click on **View Tools** on the left side menu to open the tools included with 3D Wrap.
2 | Different views and conditions can be applied to the image:
- View
- Refractive Error
- Rays
- Eye Lens
- Cataract



SWL

1 | To simulate a white light image, select **View Tools** from the left-hand menu and then **SWL**..



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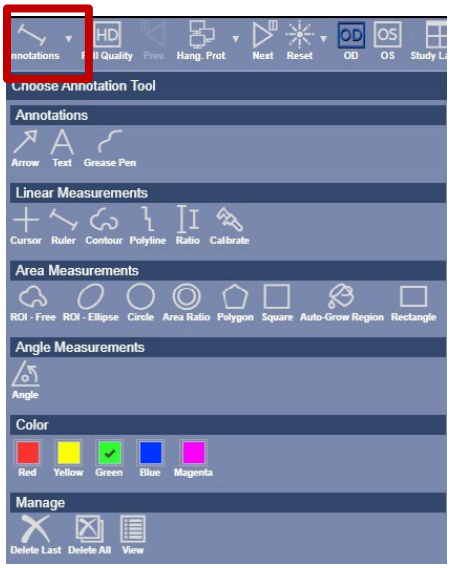
Annotations

To access the OptosAdvance annotation and measurement tools, click the **Annotations** icon on the **Toolbar**. Then, click the arrow next to the icon to explore all your options. In the sections below, we'll take a closer look at the most popular annotation features.

Cup to Disc Ratio



1 | Zoom in on the optic nerve head.

2 | Select the **Ratio** tool from the **Annotations** icon options.

3 | Place your cursor at the top of the cup, click and drag down to the bottom of the cup and release.

4 | Place your cursor at the top of the disc, click and drag down to the bottom of the disc and release. The ratio displays beside the annotations.

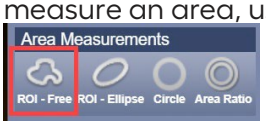
Linear Measurement

1 | Select the **Ruler** tool from the **Annotations** icon options.

2 | Place your cursor where you want your measurement to begin, click with your left mouse button, drag, and release for a measurement in mm.

Area Measurement

1 | To measure an area, use the **ROI-Free** from the **Annotations** icon options.



2 | Using the left mouse button, draw an outline around the area of interest. An area measurement displays beside your annotation.

Auto-Grow Region/Area Assist

1 | Select the **Auto-Grow Region** icon. Place your cursor where you want your measurement to begin, hold the left mouse button, drag to select chosen area, and release for an area measurement.

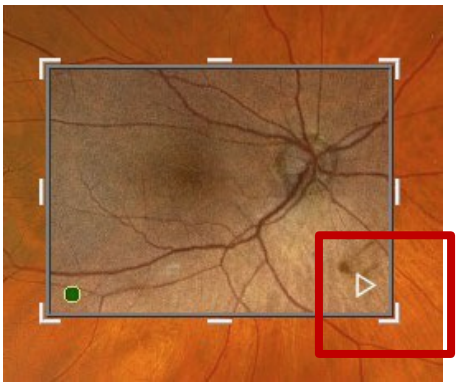
Smart Zoom

Smart Zoom enables you to overlay images of different modalities, or different study dates, for comparison.

1 | To use the **SmartZoom**, click the middle scroll wheel while the cursor is over an image or select the **Smart Zoom** icon on the **Toolbar**. An overlay window will be applied onto the center of the image.
- Resize the Smart Zoom box by dragging its corners to make the box larger or smaller.
- Drag the sides of the box to move to any area on the image, including, to another viewport if desired.

2 | Different images of the same eye or different series of the same eye (ex. *af*, *fa* or *icg*) may be brought into the overlay by pressing the left mouse button, dragging it into the **SmartZoom** window, and releasing the left mouse button to drop the image in.
- The green dot at the bottom left of the overlay indicates that the vessels have registered correctly. If the dot is red, the images may not align correctly. This may be due to image quality issues, or the software was not able to register the optic nerve and vessels from advanced pathology present in images.

3 | To blend through the overlayed image, hold down the scroll button and move the mouse towards you and away from you to change the transparency of the image in the **SmartZoom** window. Alternatively, select the Play arrow in the bottom left corner of the **SmartZoom** window to auto-play the overlay.



4 | Prior imaging sessions can be dragged into the **Smart Zoom** overlay window for comparison. Once a prior visit is dragged in from the Timeline, the series thumbnails on the left sidebar will show the prior visit images. Drag and drop the desired image modality into **SmartZoom** window.

5 | Multiple **SmartZoom** windows can be added to an image by right clicking your mouse inside of the **SmartZoom** window and selecting **New**. The additional **SmartZoom** window can be moved or resized in the same way as the first **SmartZoom** window

6 | To turn off **SmartZoom**, simply tap the middle scroll wheel outside the **SmartZoom** window or click on the **SmartZoom** icon on the **Toolbar**.

OCT Review

NOTE: A separate detailed document of OCT Analysis and Advanced Analysis image review for *MonacoPro* is available on the Optos Support Portal (https://www.optos.com/support-portal). The remaining information for OCT Review is correct for *Silverstone* and/or *MonacoPro* OCT views. When viewing an OCT, you will be presented with an OCT B-Scan, and an **opto**map *color rg* image with the corresponding reference line.

Hover your mouse over the OCT and use the **Scroll Wheel** to scroll through the different sections of the captured OCT if a volume scan was captured. The bottom right corner of the OCT scan will indicate how many scans are available to scroll through. The reference line on the image will also move to the corresponding area.

There are various **Views** available when reviewing OCT scans, **opto**map images, and OCT reports. These views vary depending on what you capture during an image session. The different views are controlled by the Hanging Protocol menu drop down. You may select any available view to customize your review preferences. (See Hanging Protocol Toolbar Menu and Use section

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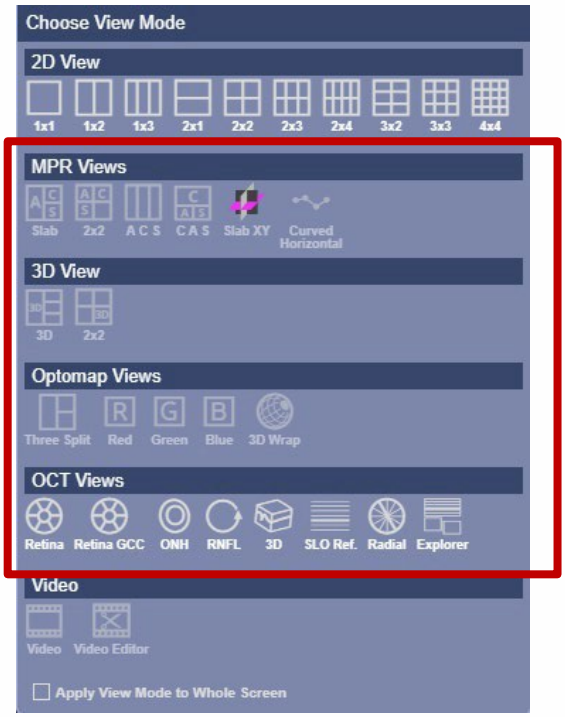

MPR Views are available for the Retina and ONH OCT. When the Enface MPR option is selected, an MPR image with a coronal view of the OCT slice stack is shown in the main (top-left) viewport. If the reference lines in either of the cross-sectional viewports are modified, the MPR image in the main viewport will be updated accordingly.

The **cSLO Reference** view displays an OCT image stack in the left viewport and a corresponding cSLO image in the right viewport.

In the **3D View**, the tissue above the top layer and below the bottom layer is removed, allowing you to view the depths between the layers more easily.

Radial view is available on volume scans only. It is auto extracted.

Explorer View allows you to quickly see and select available OCT scans that were taken on the same day on the same eye. (See Hanging Protocol menu also for Explorer Views)

Reports are found in the Hanging Protocol menu.

Other views may be available depending on your region.

Training Document and Videos

Training Videos and additional help documents are available on our websites **Support Portal**. You may be prompted to register for a new account or log in to an existing account for some information.

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