

See also users' guide from the manufacturers of your camera and OCT device

Mark Superior Rectus muscle with tissue marking dye.



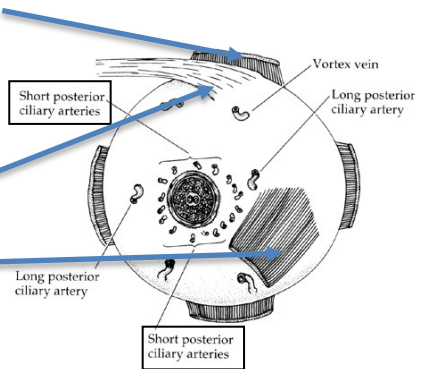
Turn on Laser (blue arrow).



Superior rectus m.

Superior oblique m.

Inferior oblique m.



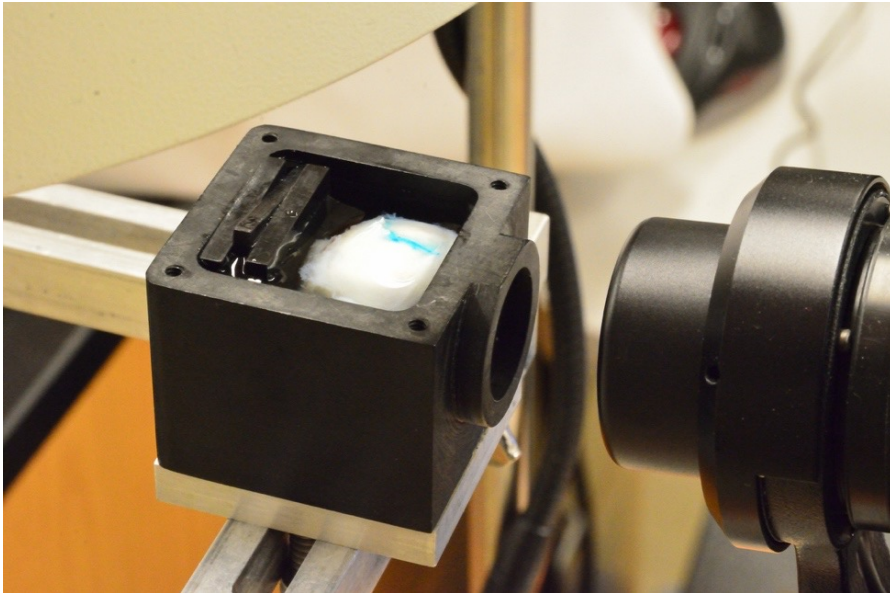
Right eye, viewed from behind

OCT head is oriented in position by moving the entire unit in the 2 axes with respect to the base (green arrow) then raising the height (y) of unit by rotating the joystick cw/ccw (blue arrows). Focusing the image is accomplished by rotating the knob (orange arrow). The black lever is in position R (*).

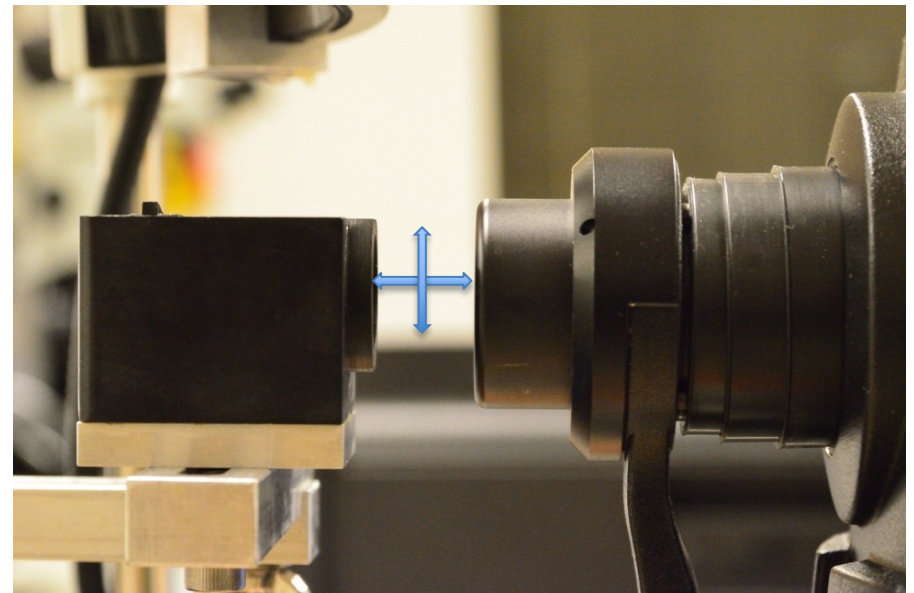
After the head is in position for fundus and OCT images, lock down the unit by securing the thumb screw (purple arrow).



Insert eye in holder, shimmed from the posterior, oriented with tissue mark facing up.



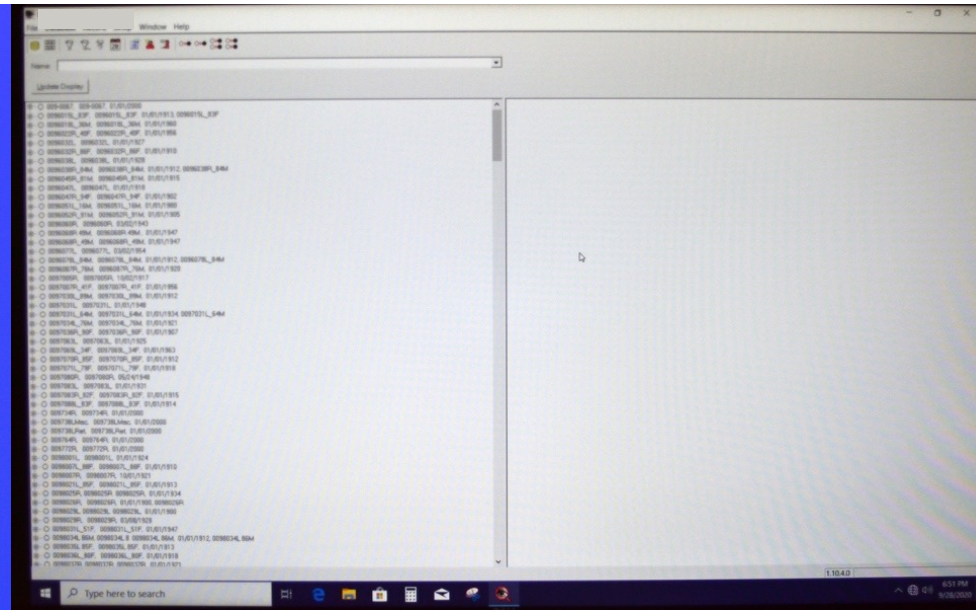
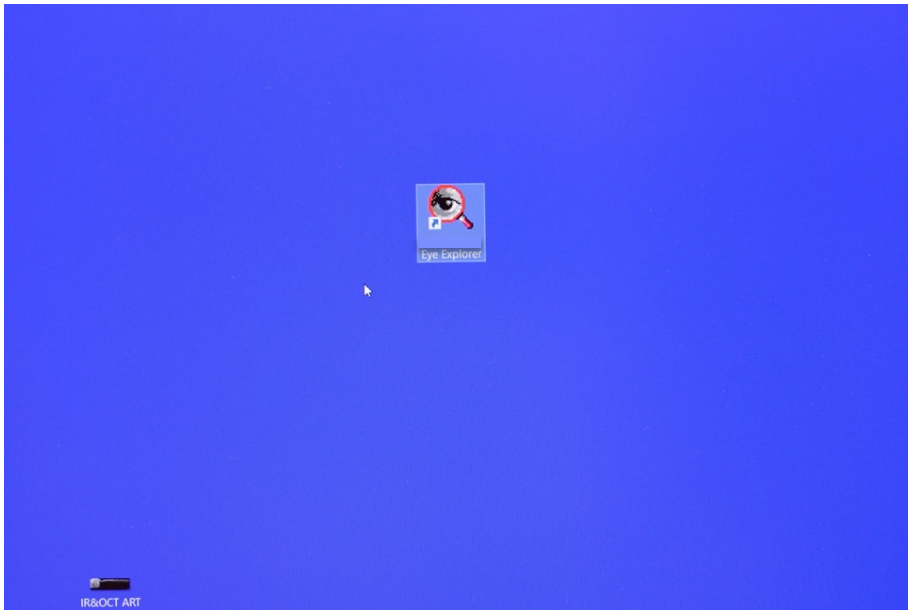
Approximate distance from front of holder is ~25 mm.



For information about the eye holder contact jeffreymessinger@uabmc.edu

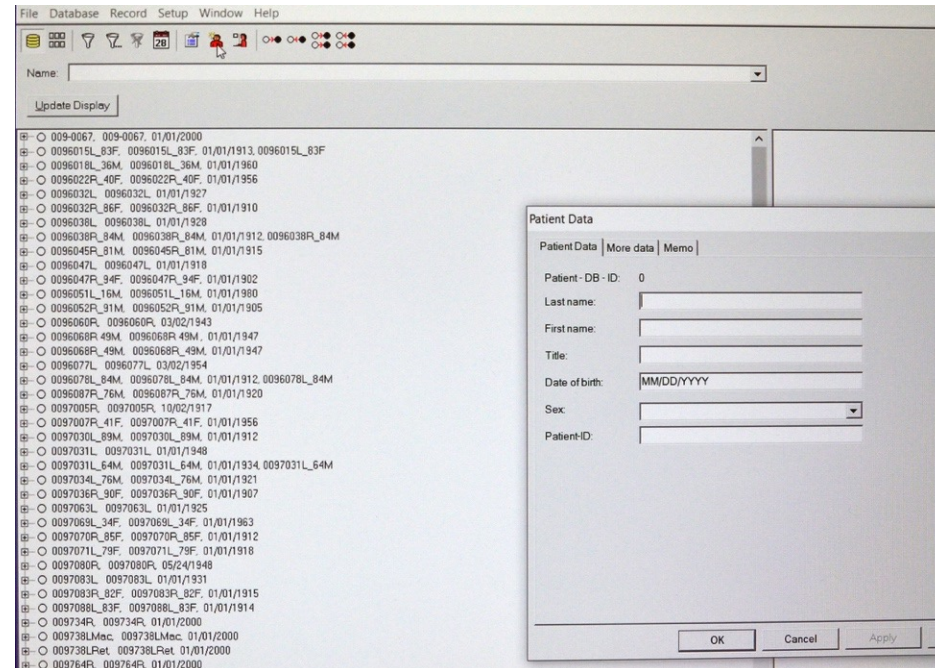
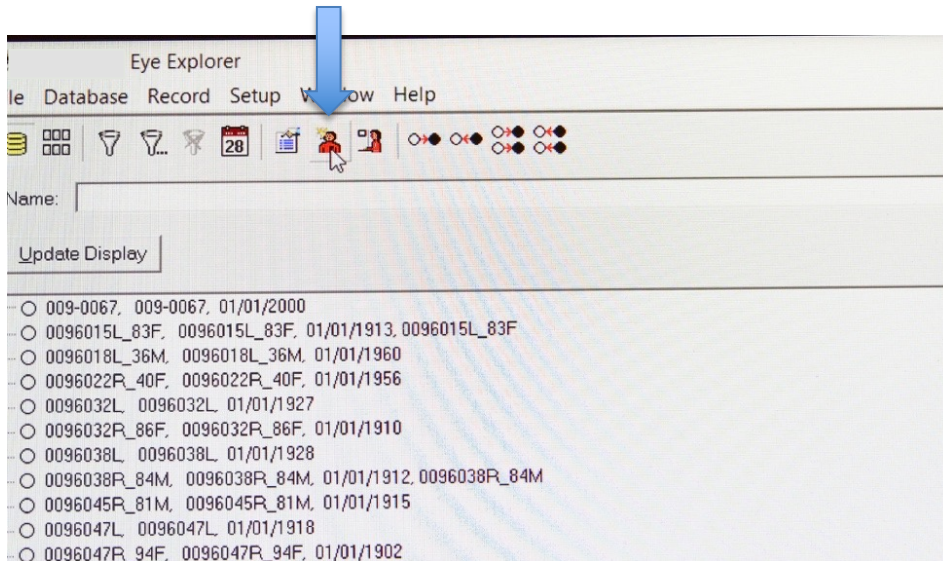
Select ICON Program on desktop.

A patient list will appear on left column.



Select the 'New Patient' Icon.

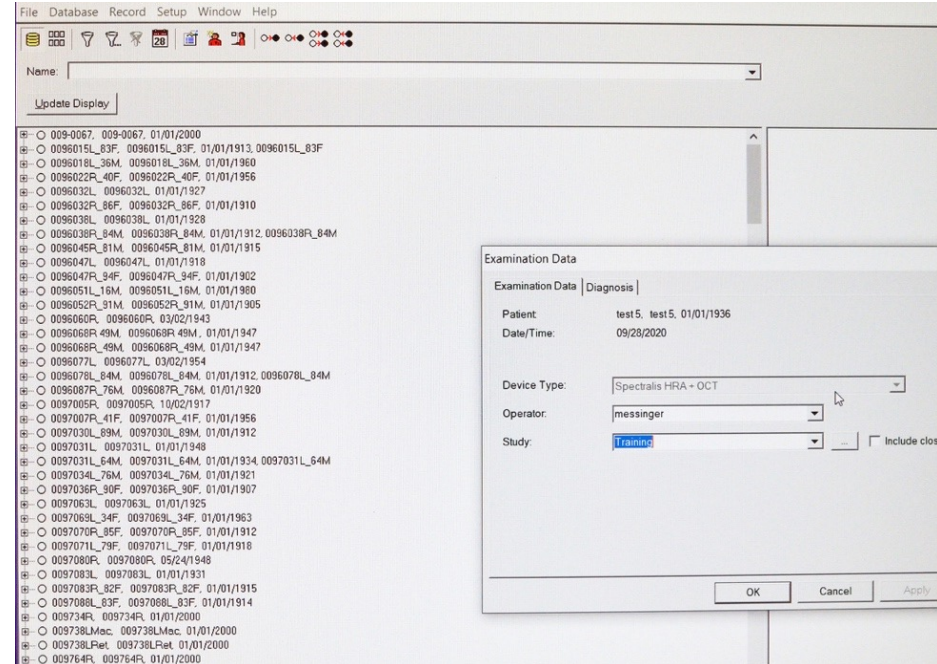
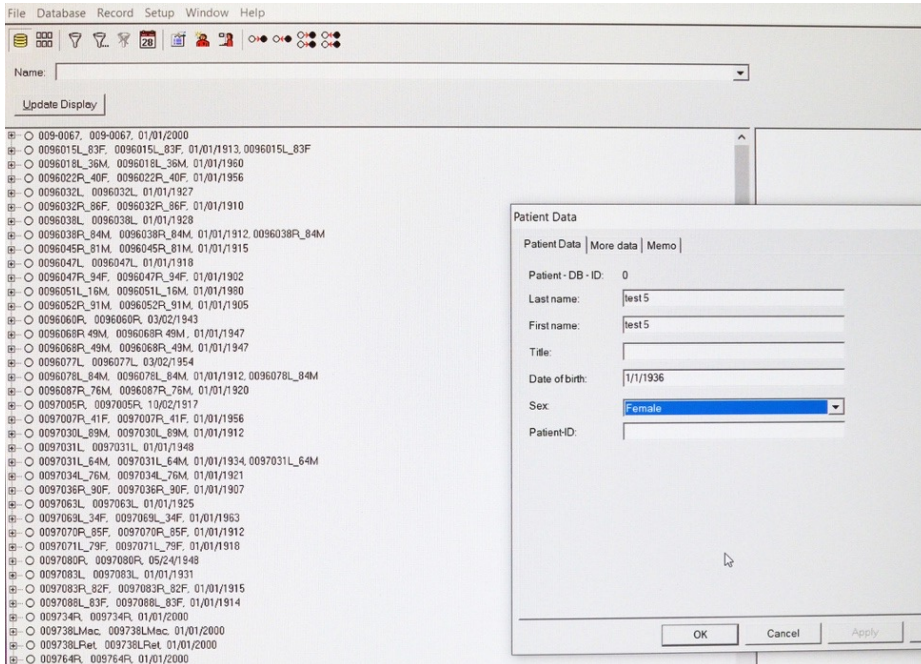
Complete Donor data info as needed. Select OK.



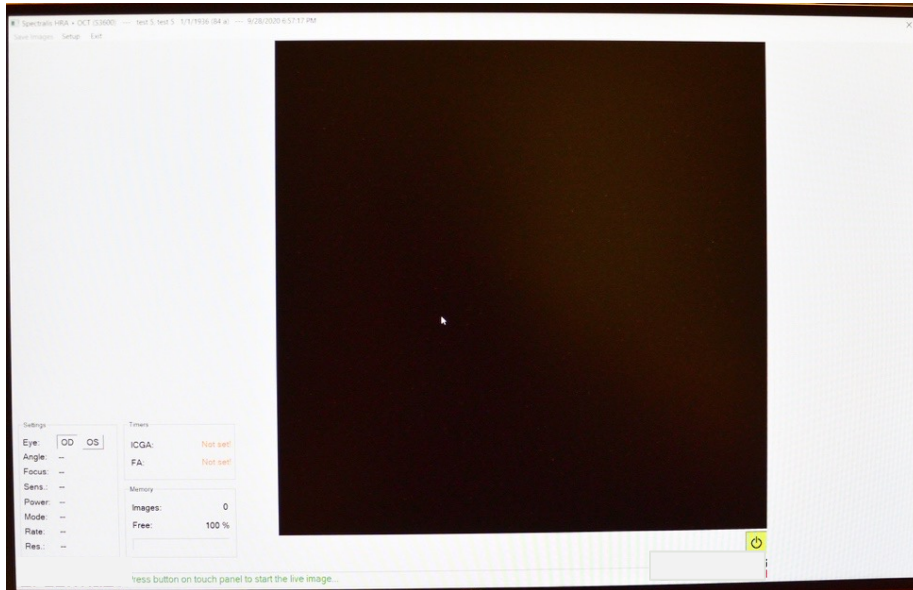
Our numbering system for individual eyes is: YYYYNNNL,R_agesex
For example, 2022027L_79M

Data entry is continued on the following window. Press OK

Select operator and study from drop down menu. This information appears in the meta-data.



The following blank screen will appear.



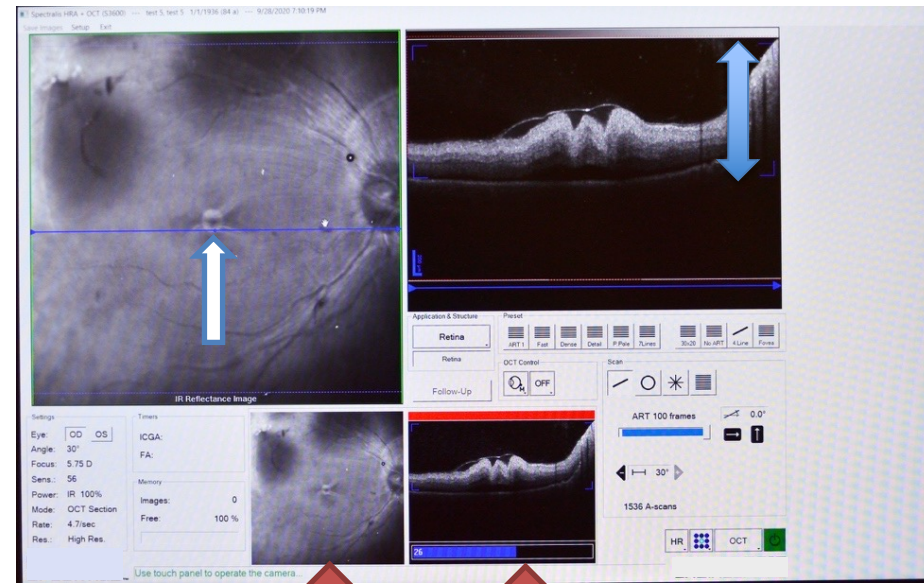
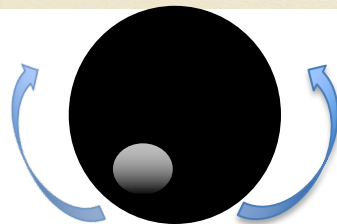
Touch yellow button to start camera.



Press section and press IR +OCT.
 Other default settings are blue.
 Allow laser to acquire fundus image and OCT image. Rotate black round button to adjust intensity and press the same button to average image 9-100 frames (red arrows).

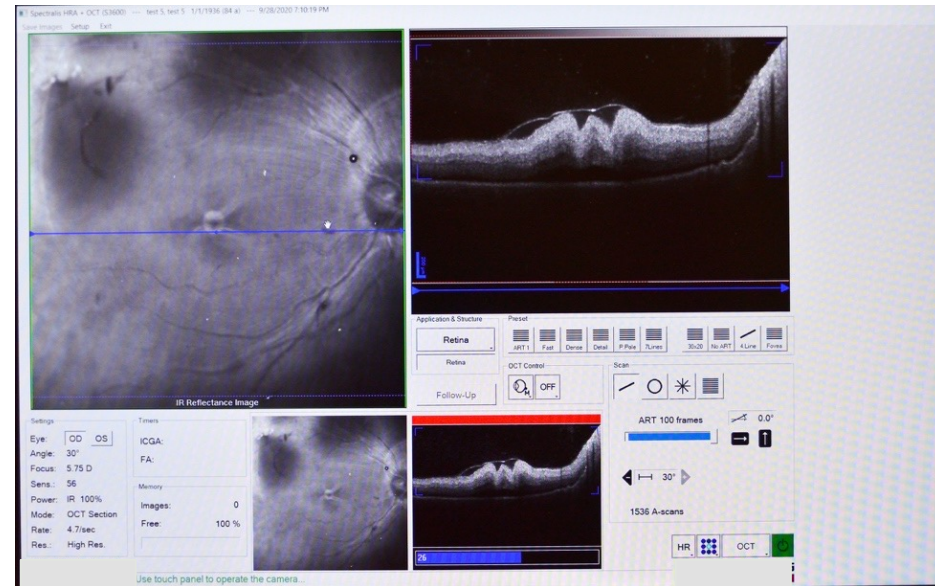
If unit is oriented correctly from slides 4-5, the fundus image should be in focus and the OCT image is in the top 1/3rd of the display (double blue arrow). On the left image, using the cursor to move the blue line and center the fovea (white arrow). Other default buttons are Retina, EDI (extended depth imaging, off), line scan.

Press ACQUIRE.



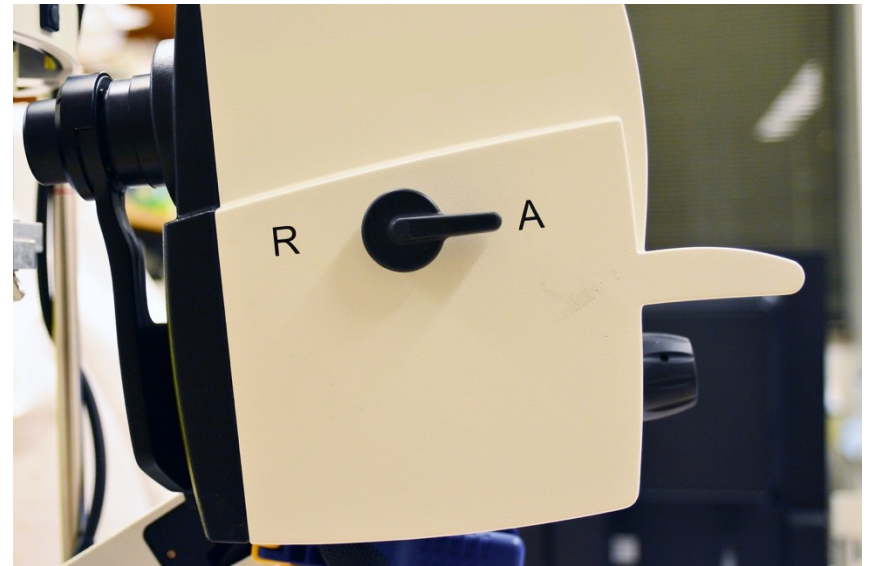
Press RF + OCT for the next acquisition.

Re-check position so image has not moved or degraded. Press black button for averaging. Press ACQUIRE.

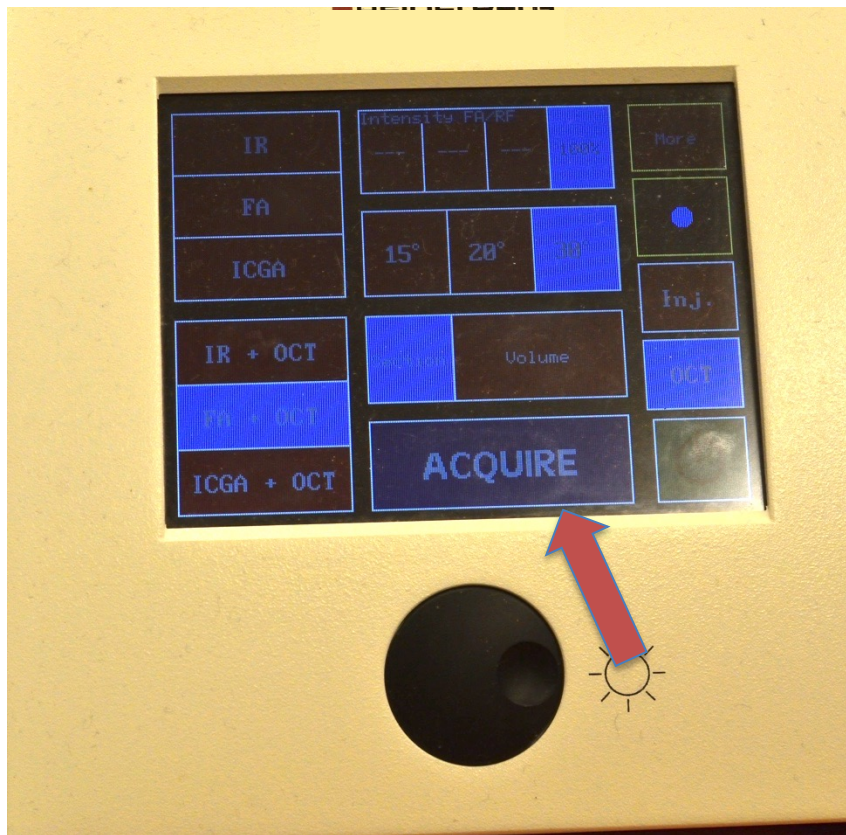


**Switch the internal cube to A
for autofluorescence imaging
488 nm and 787 nm.**

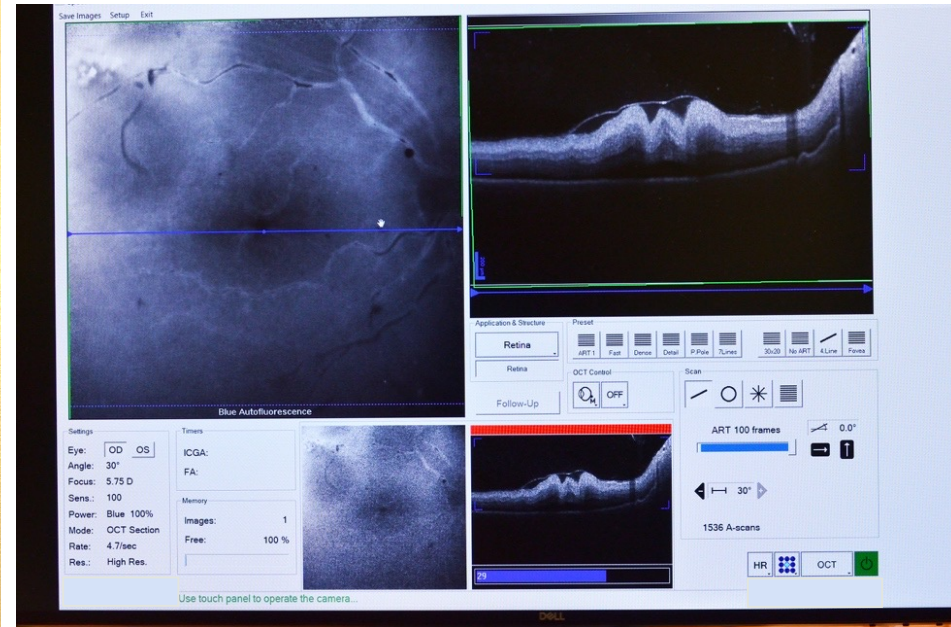
Position after the switch



Display will also change select the autofluorescence mode.

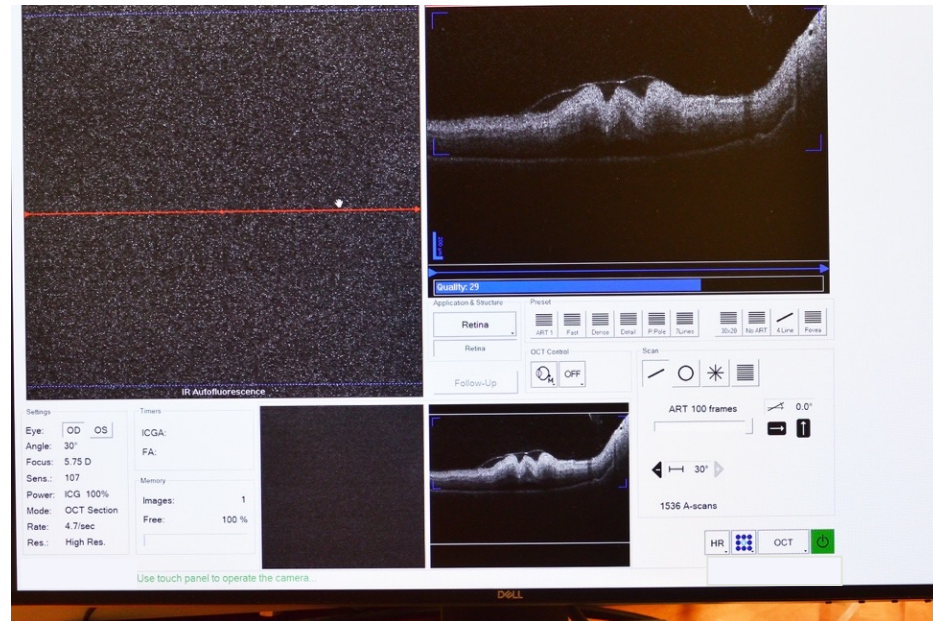


Recheck alignment, press ACQUIRE.



Select ICGA (indocyanine green)

Generally, the fundus image will not appear due to the internal cube attenuating the beam. Recheck position, press ACQUIRE. This modality is excellent for cases of RPE disruption, especially atrophy.



Switch the internal cube back to "R" for IR and Red free imaging for volume acquisition.

Position after the switch

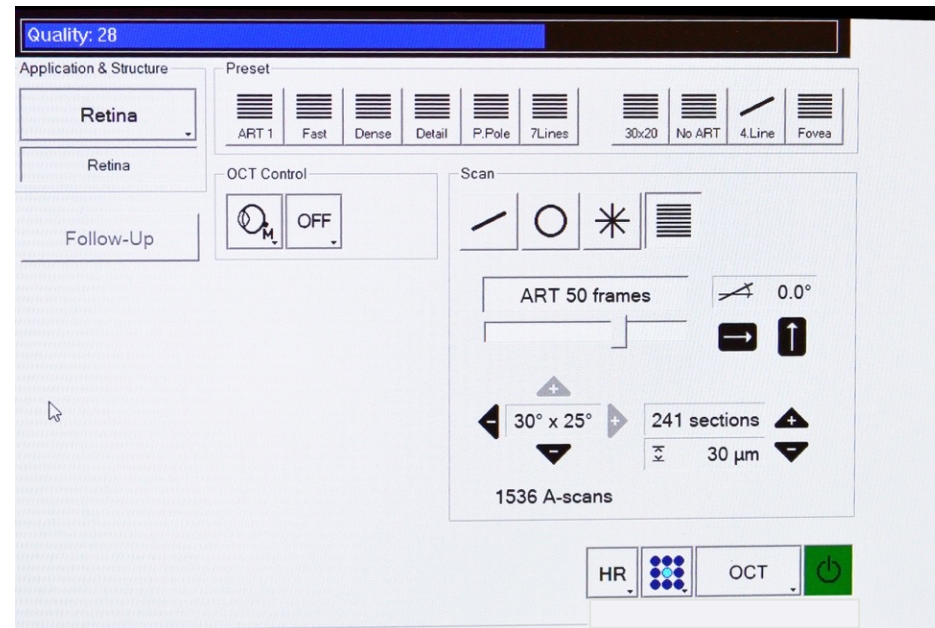


Protocol to acquire an OCT volume

Select IR and the volume setting.

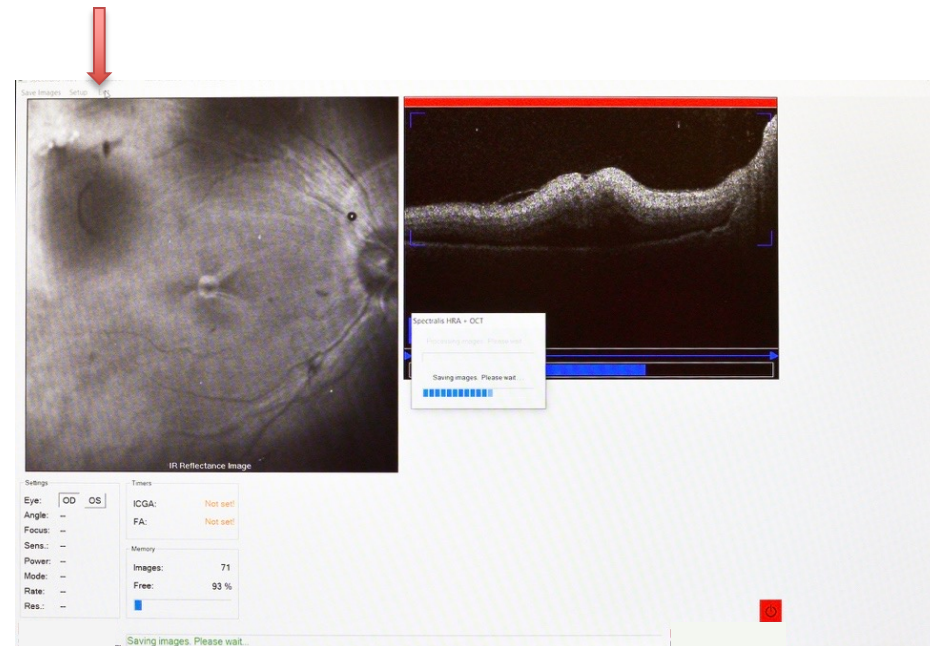
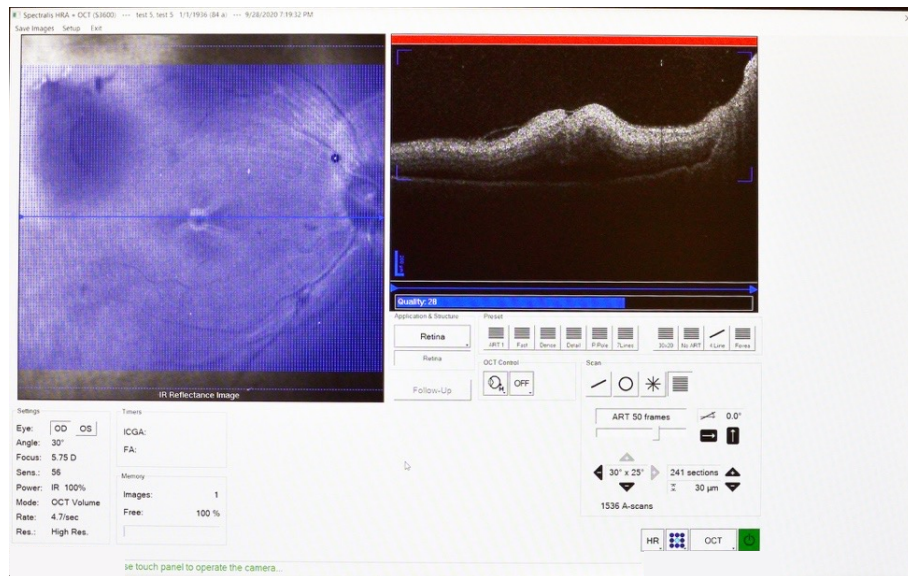


Match all the settings on this page by toggling all the appropriate buttons.



Near infrared reflectance fundus view is now covered in blue B-scan lines. Recheck that OCT B-scan position is in the upper third of the right window. Press **ACQUIRE** on the Control Module. The scan takes 5 minutes. Blue lines will delimit the distances in μm , shown in previous view.

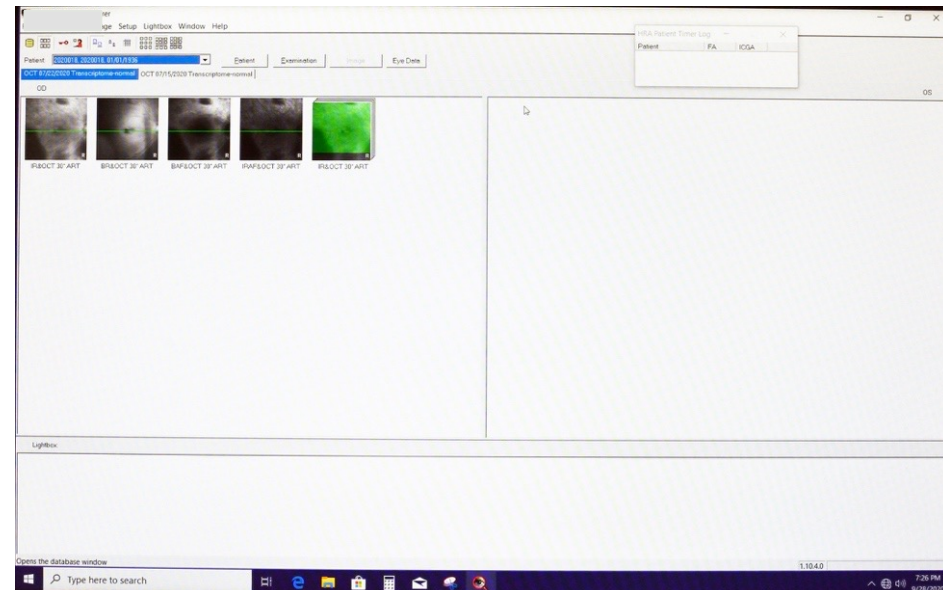
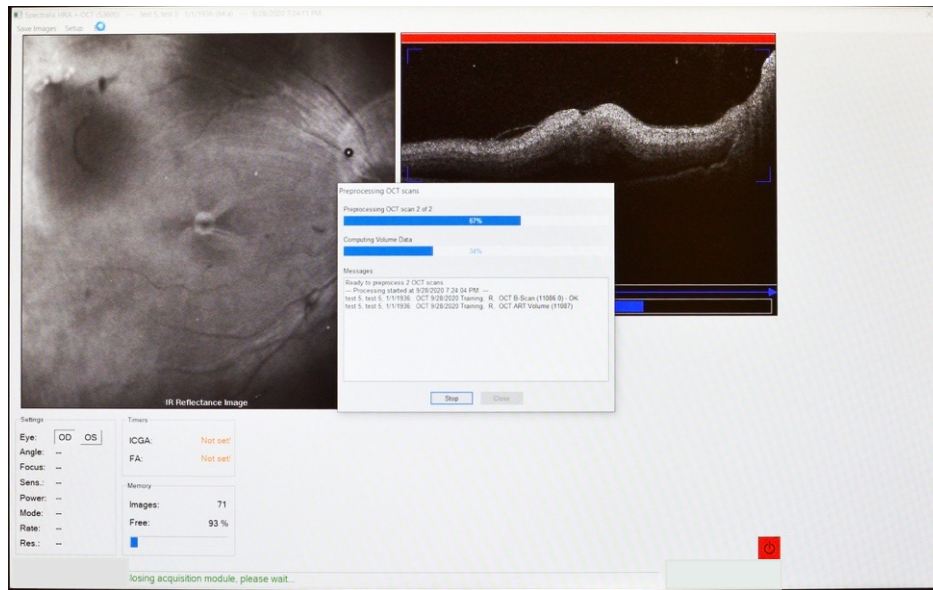
Scan will start from bottom and proceed upward. Note red line progression. When completed, select **EXIT** Images will be saved (red arrow).



This eye shows postmortem retinal detachment, a common artifact.

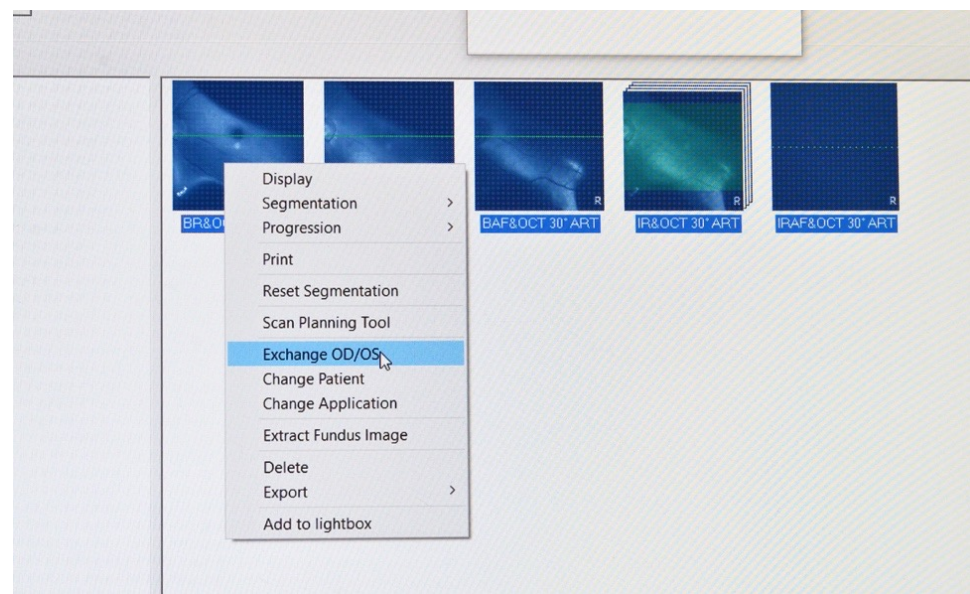
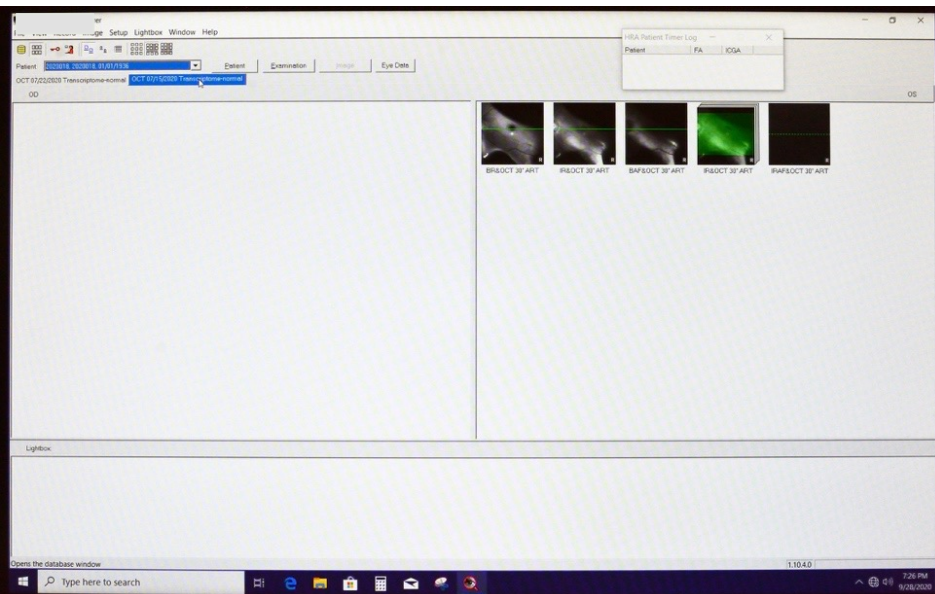
Allow computer to preprocess all images acquired.

Processed images will appear on this screen.



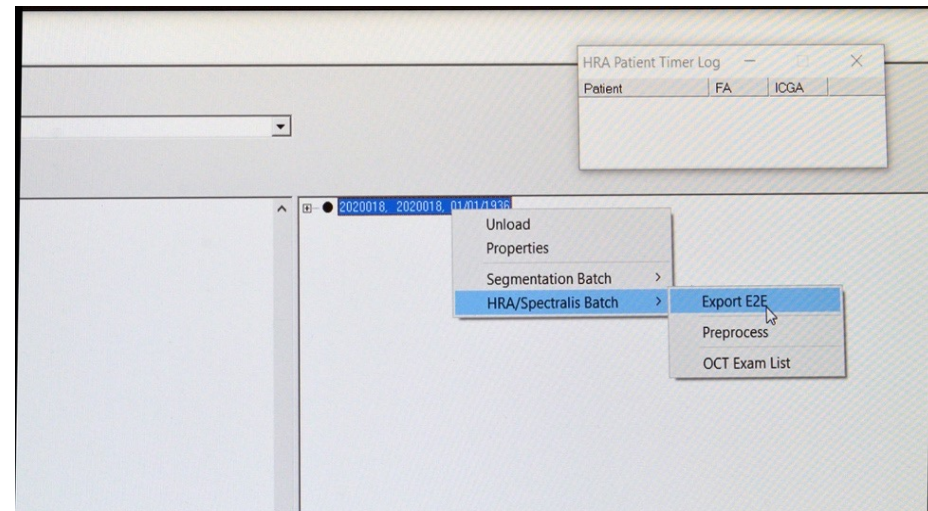
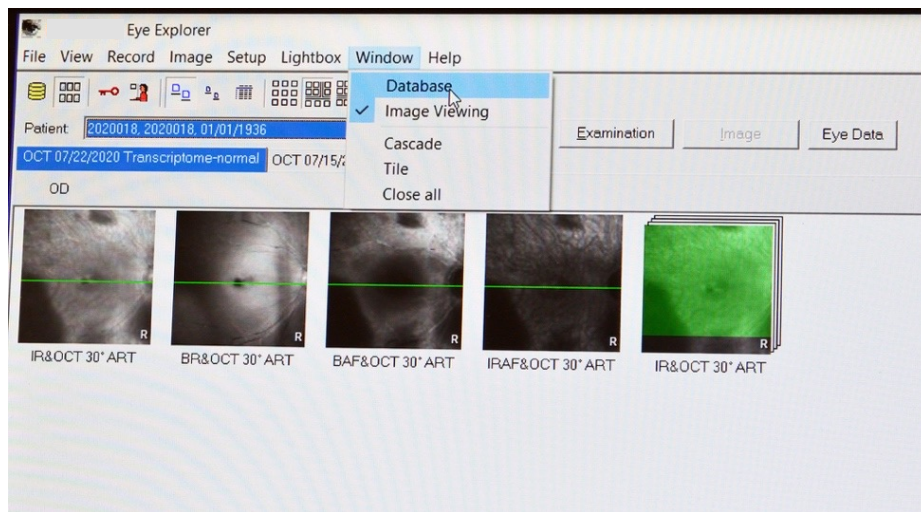
It is recommended to not change the position of the mounting bracket between imaging fellow eyes. If left eye is imaged first, the results will show in the OD Eye column ----->.

Right-Click, select all the images, then select 'Exchange OS/OD'. The images will shift to the OS column.

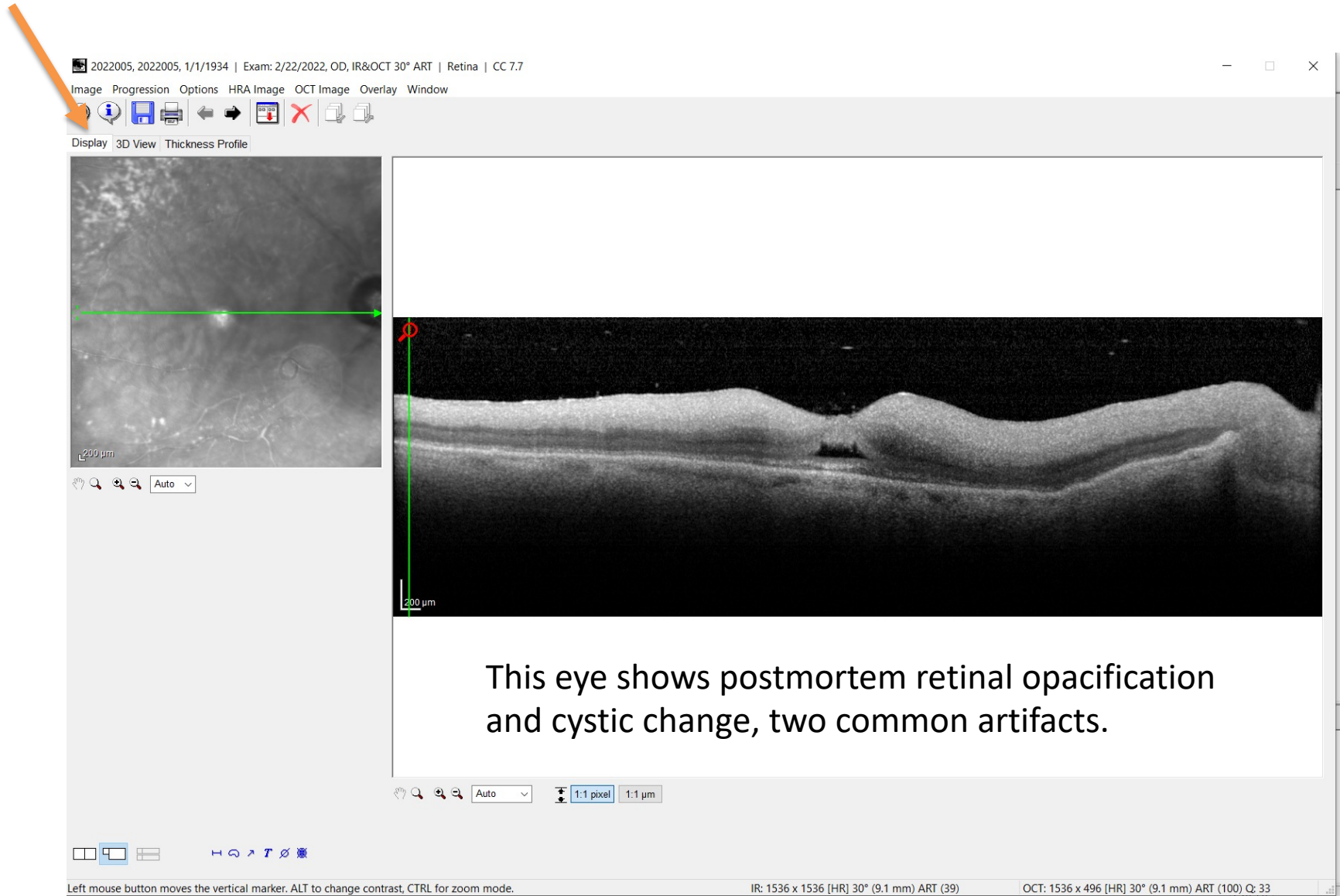


Select>Window>Database

Screen defaults to panel 6 with the addition of patient imaged in the right column. Right-Click on patient to the dropdown menu, choose bottom selection, and export .E2E file.



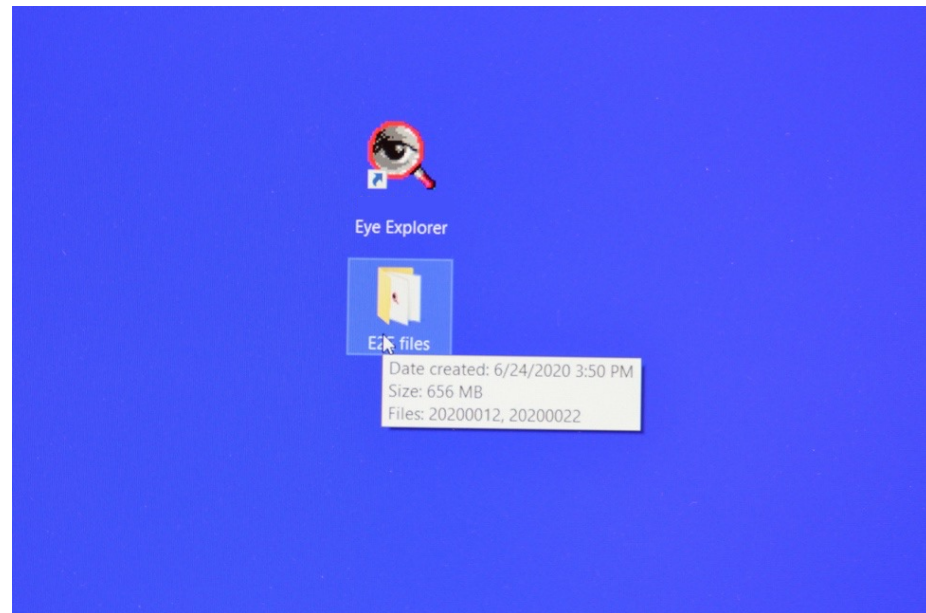
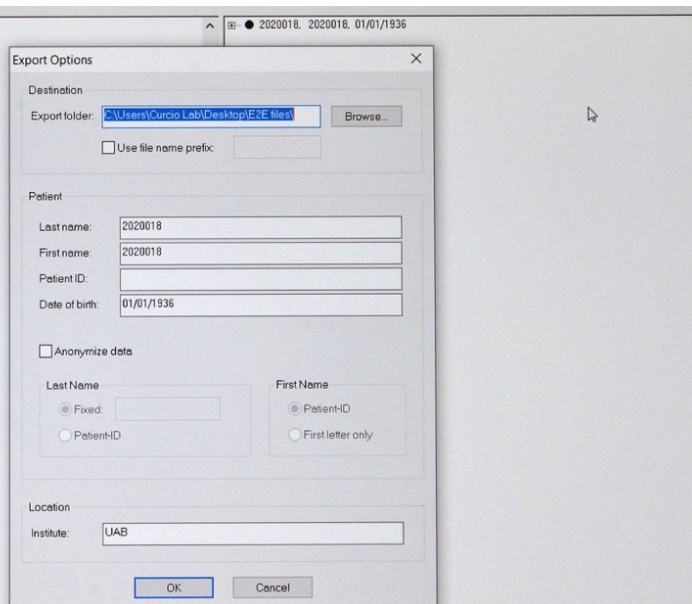
Double click on one of the icons to reveal the following formats DISPLAY MODE



Left mouse button moves the vertical marker. ALT to change contrast, CTRL for zoom mode.

Browse to choose a pre-determined folder created on the desktop for file transfers. Select OK

Folder contains .E2E files to be copied on external hard drive and archived.



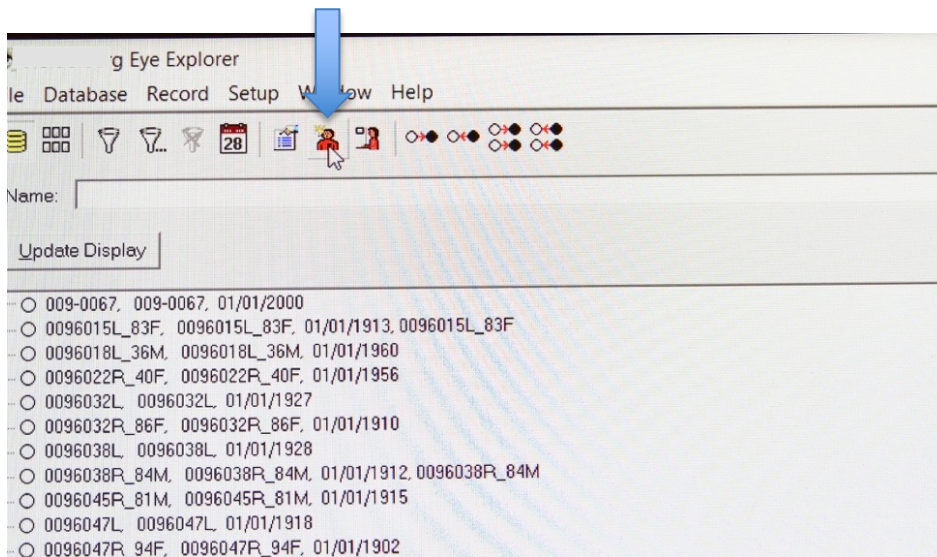
Part 2 Imaging with a scanning laser ophthalmoscope

488 nm quantitative autofluorescence, 786 nm autofluorescence, Multicolor (Mcolor)

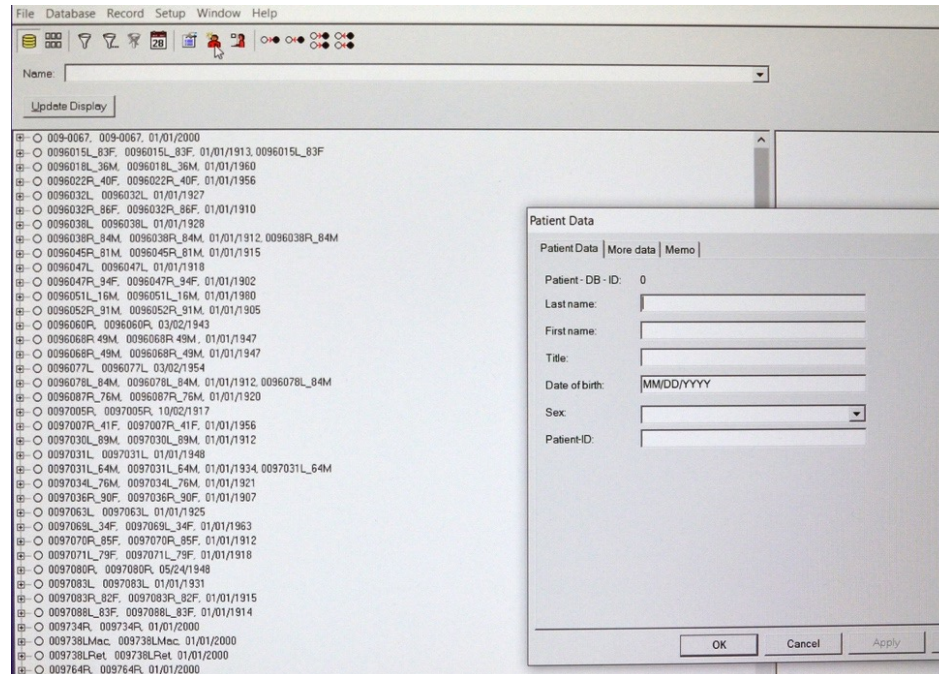
**Turn on computer and
laser for OCT.**



Select New Patient Icon



Complete patient data as needed



Keep eye data sheet the same press OK

File Database Record Setup Window Help

Name: _____

Update Display

009-0067, 009-0067, 01/01/2000
 0096015L_83F, 0096015L_83F, 01/01/1913, 0096015L_83F
 0096018L_36M, 0096018L_36M, 01/01/1960
 0096022F_40F, 0096022F_40F, 01/01/1956
 0096032L, 0096032L, 01/01/1927
 0096032F_86F, 0096032F_86F, 01/01/1910
 0096038L, 0096038L, 01/01/1928
 0096038R_84M, 0096038R_84M, 01/01/1912, 0096038R_84M
 0096045R_91M, 0096045R_91M, 01/01/1915
 0096047L, 0096047L, 01/01/1918
 0096047R_94F, 0096047R_94F, 01/01/1902
 0096051L_16M, 0096051L_16M, 01/01/1960
 0096052R_91M, 0096052R_91M, 01/01/1905
 0096060R, 0096060R, 03/02/1943
 0096068R_49M, 0096068R_49M, 01/01/1947
 0096068R_49M, 0096068R_49M, 01/01/1947
 0096077L, 0096077L, 03/02/1954
 0096078L_84M, 0096078L_84M, 01/01/1912, 0096078L_84M
 0096087R_76M, 0096087R_76M, 01/01/1920
 0097005F, 0097005F, 10/02/1917
 0097007R_41F, 0097007R_41F, 01/01/1956
 0097030L_89M, 0097030L_89M, 01/01/1912
 0097031L, 0097031L, 01/01/1948
 0097031L_64M, 0097031L_64M, 01/01/1934, 0097031L_64M
 0097034L_76M, 0097034L_76M, 01/01/1921
 0097036R_90F, 0097036R_90F, 01/01/1907
 0097063L, 0097063L, 01/01/1925
 0097069L_34F, 0097069L_34F, 01/01/1963
 0097070R_85F, 0097070R_85F, 01/01/1912
 0097071L_79F, 0097071L_79F, 01/01/1918
 0097080R, 0097080R, 05/24/1948
 0097083L, 0097083L, 01/01/1931
 0097083R_82F, 0097083R_82F, 01/01/1915
 0097088L_83F, 0097088L_83F, 01/01/1914
 009734R, 009734R, 01/01/2000
 009738LMac, 009738LMac, 01/01/2000
 009738LRet, 009738LRet, 01/01/2000
 009764R, 009764R, 01/01/2000

Eye Data

	OD	OS
C-Curve [mm]:	7.7	7.7
Refraction [dpt]:	0	0
Cylinder [dpt]:	0	0
Axis [deg]:	0	0
Pupil size [mm]:	0	0
IOP [mmHg]:	0	0
VFieldMean:	0	0
VFieldVar:	0	0
Corrective Lens:	None	None

CAUTION: Measurements and classification results will only be accurate if the C-Cur entered correctly and the patient wears no corrective lenses during the examination

OK Cancel

C-Curve stays the same, press continue

File Database Record Setup Window Help

Name: _____

Update Display

009-0067, 009-0067, 01/01/2000
 0096015L_83F, 0096015L_83F, 01/01/1913, 0096015L_83F
 0096018L_36M, 0096018L_36M, 01/01/1960
 0096022F_40F, 0096022F_40F, 01/01/1956
 0096032L, 0096032L, 01/01/1927
 0096032F_86F, 0096032F_86F, 01/01/1910
 0096038L, 0096038L, 01/01/1928
 0096038R_84M, 0096038R_84M, 01/01/1912, 0096038R_84M
 0096045R_91M, 0096045R_91M, 01/01/1915
 0096047L, 0096047L, 01/01/1918
 0096047R_94F, 0096047R_94F, 01/01/1902
 0096051L_16M, 0096051L_16M, 01/01/1960
 0096052R_91M, 0096052R_91M, 01/01/1905
 0096060R, 0096060R, 03/02/1943
 0096068R_49M, 0096068R_49M, 01/01/1947
 0096068R_49M, 0096068R_49M, 01/01/1947
 0096077L, 0096077L, 03/02/1954
 0096078L_84M, 0096078L_84M, 01/01/1912, 0096078L_84M
 0096087R_76M, 0096087R_76M, 01/01/1920
 0097005F, 0097005F, 10/02/1917
 0097007R_41F, 0097007R_41F, 01/01/1956
 0097030L_89M, 0097030L_89M, 01/01/1912
 0097031L, 0097031L, 01/01/1948
 0097031L_64M, 0097031L_64M, 01/01/1934, 0097031L_64M
 0097034L_76M, 0097034L_76M, 01/01/1921
 0097036R_90F, 0097036R_90F, 01/01/1907
 0097063L, 0097063L, 01/01/1925
 0097069L_34F, 0097069L_34F, 01/01/1963
 0097070R_85F, 0097070R_85F, 01/01/1912
 0097071L_79F, 0097071L_79F, 01/01/1918
 0097080R, 0097080R, 05/24/1948
 0097083L, 0097083L, 01/01/1931
 0097083R_82F, 0097083R_82F, 01/01/1915
 0097088L_83F, 0097088L_83F, 01/01/1914
 009734R, 009734R, 01/01/2000
 009738LMac, 009738LMac, 01/01/2000
 009738LRet, 009738LRet, 01/01/2000
 009764R, 009764R, 01/01/2000

Eye Data

	OD	OS
C-Curve [mm]:	7.7	7.7
Refraction [dpt]:	0	0
Cylinder [dpt]:	0	0
Axis [deg]:	0	0
Pupil size [mm]:	0	0
IOP [mmHg]:	0	0
VFieldMean:	0	0
VFieldVar:	0	0
Corrective Lens:	None	None

CAUTION: Measurements and classification results will only be accurate if the C-Cur entered correctly and the patient wears no corrective lenses during the examination

OK Cancel

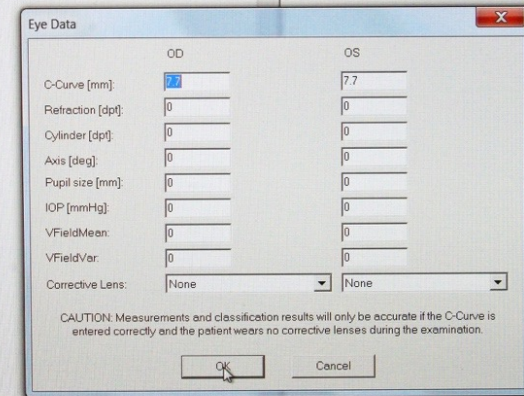
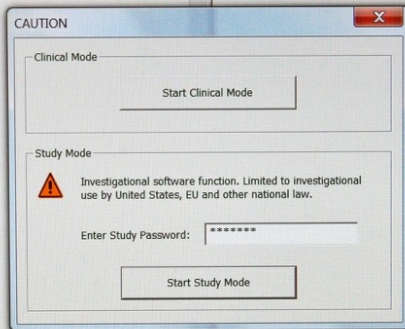
Eye Data

Please verify that both C-Curve values are correct. Measurements will only be accurate if the C-Curve values are correct.

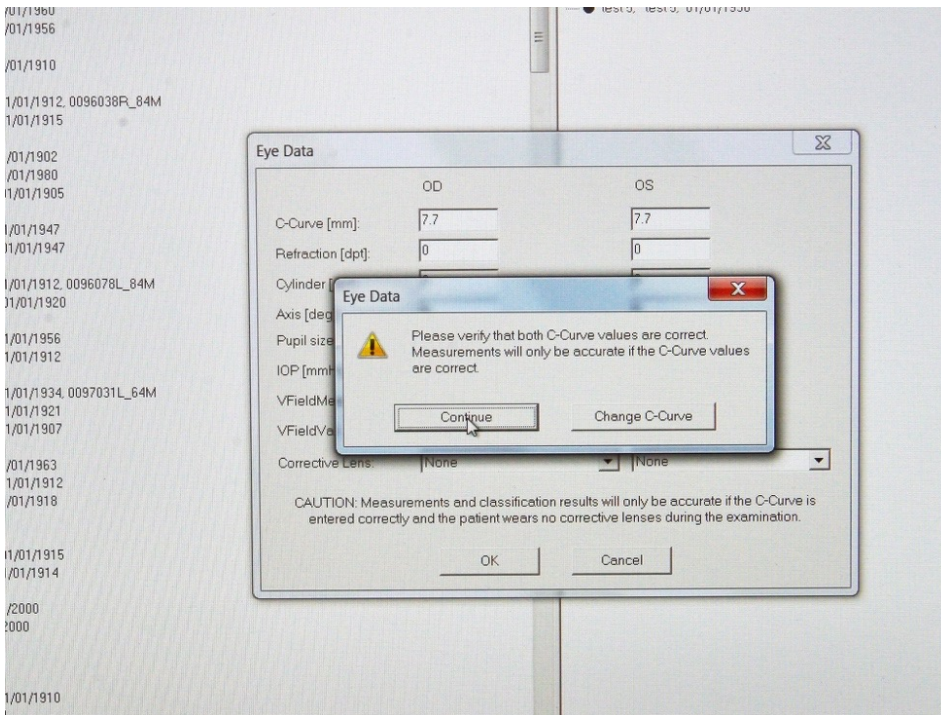
Continue Change C-Curve

Select study mode and enter the password (if needed).

Keep the C-curve @7.7 mm.
Press OK.



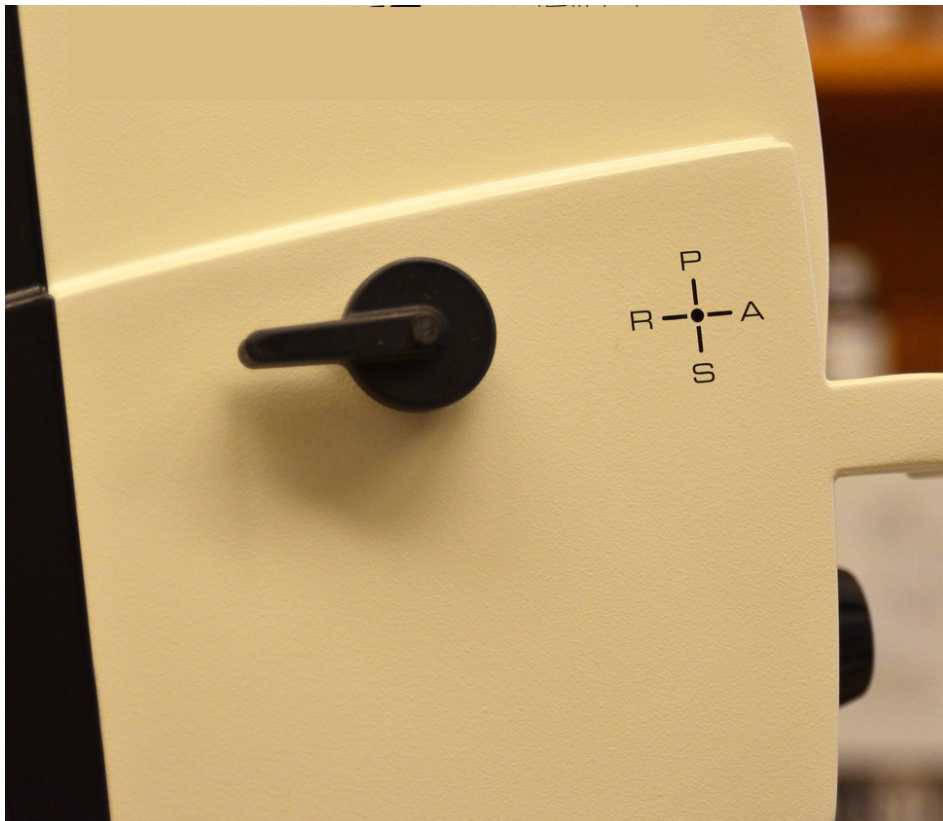
Select continue to verify the C-curve



Select yellow indicator to start camera.



Select to the R position to align and orient globe



Select the IR mode to focus and orient the sample first before imaging in the Multi-color and 786 nm modes.



Camera head is oriented in position by moving the entire unit in the 2 axes with respect to the base (green arrow) then raising the height (y) of unit (blue arrows). Focusing the image is accomplished by rotating the knob (orange arrow). The black lever is in position R (*). After fundus and OCT images are in position, lock down the unit by turning the thumb screw (purple arrow).

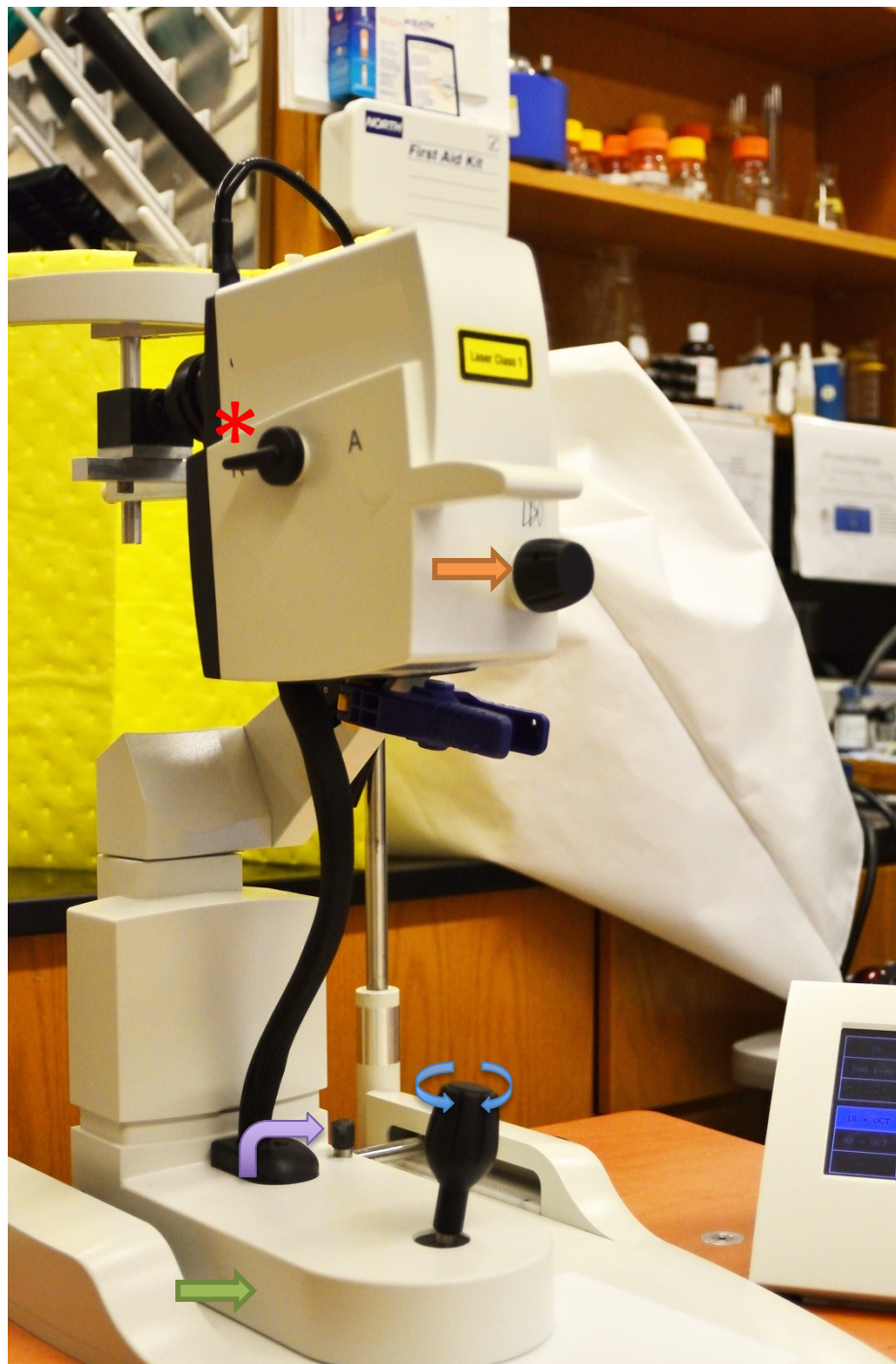
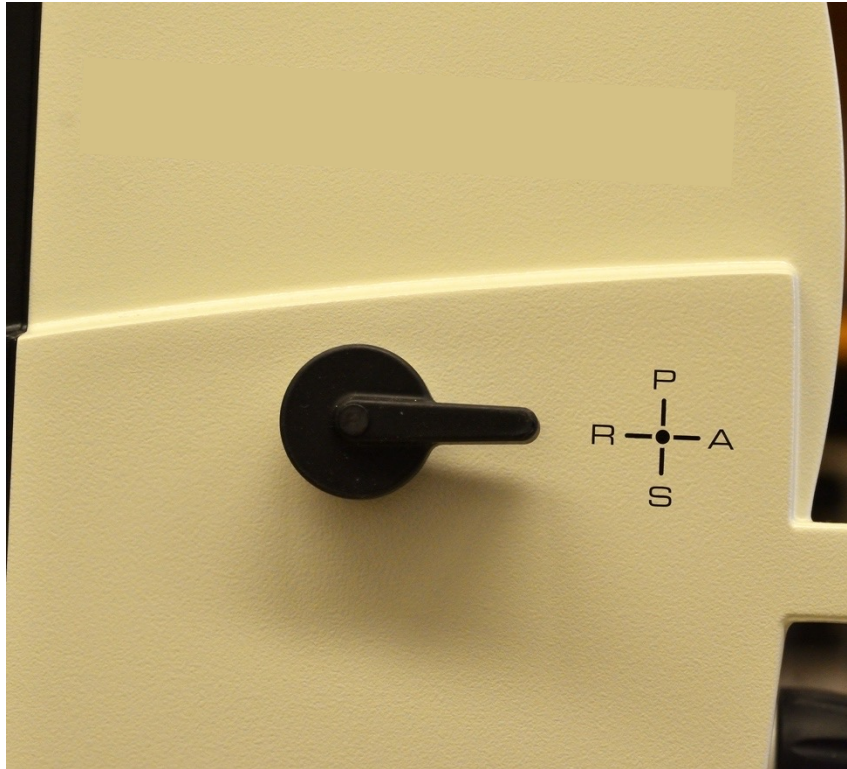


Image will appear as shown below.



Move selector knob from R to A



Select ICGA (fluoresces to 787 nm excitation) in blue, 100% intensity, 30° field of view, single phase imaging.

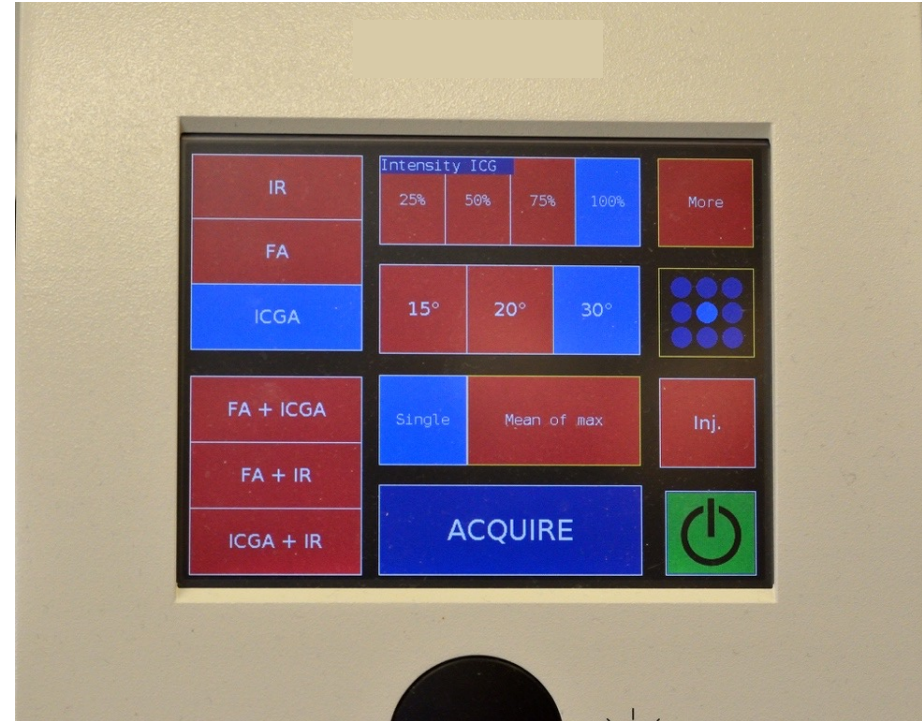
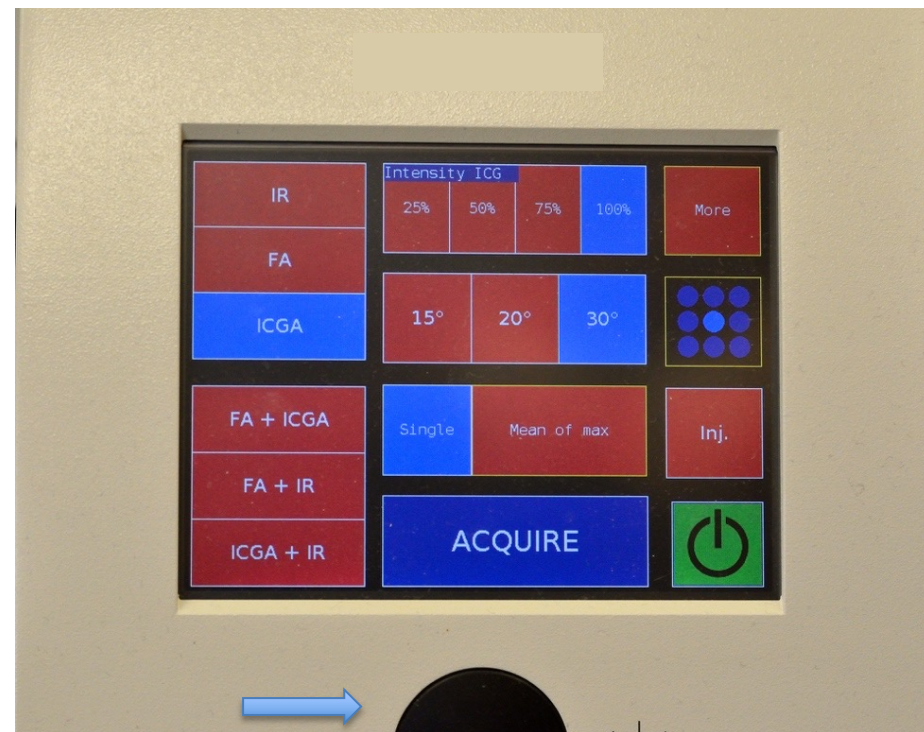


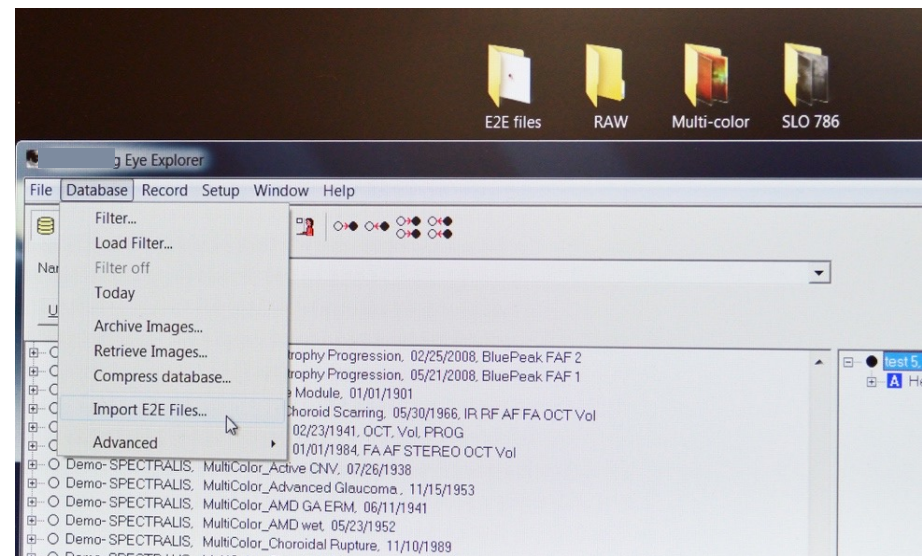
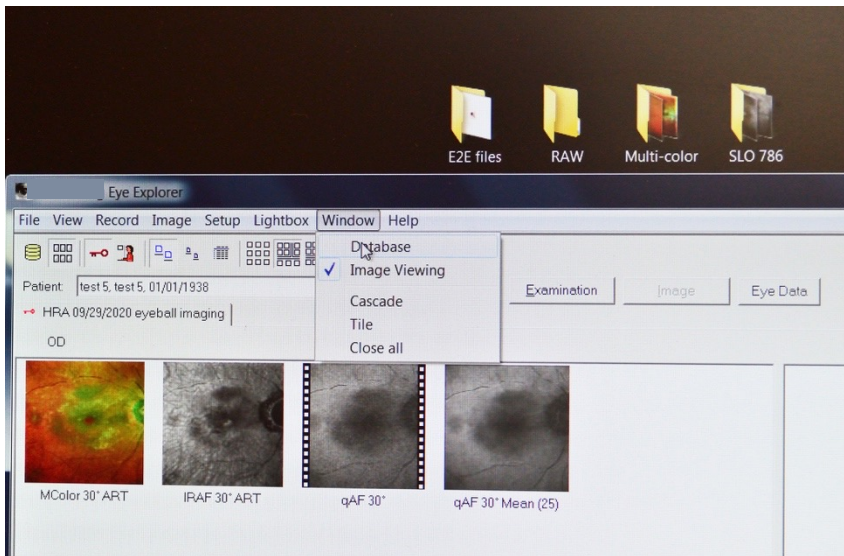
Image will appear as below.

Press black disc for averaging
then select ACQUIRE.

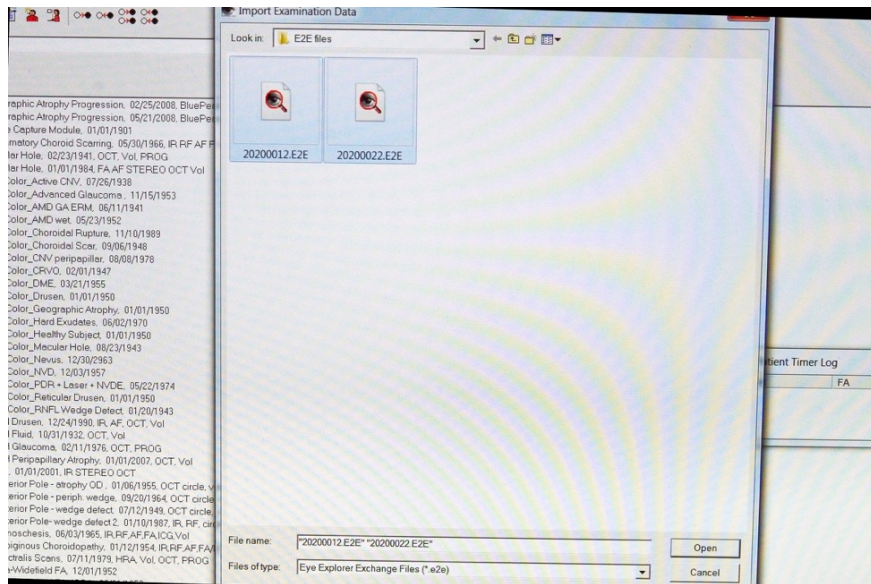


Choose Window > Database

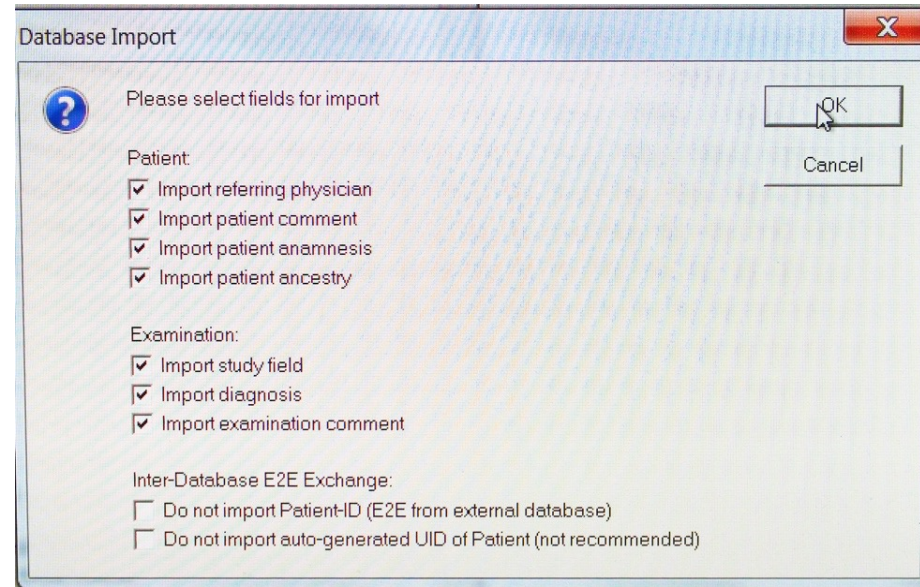
Select import .E2E files from HRA stored on external hard drive uploaded to desktop.



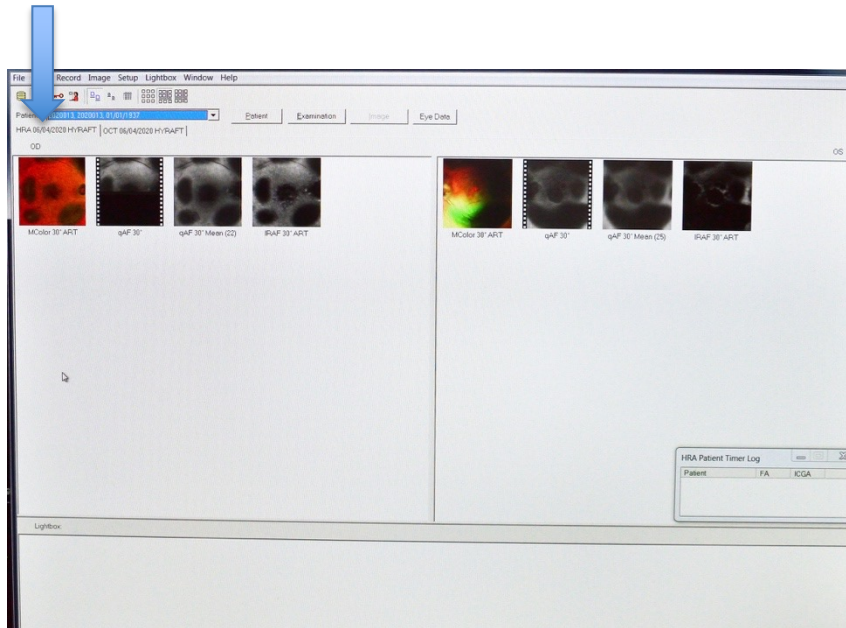
Select open



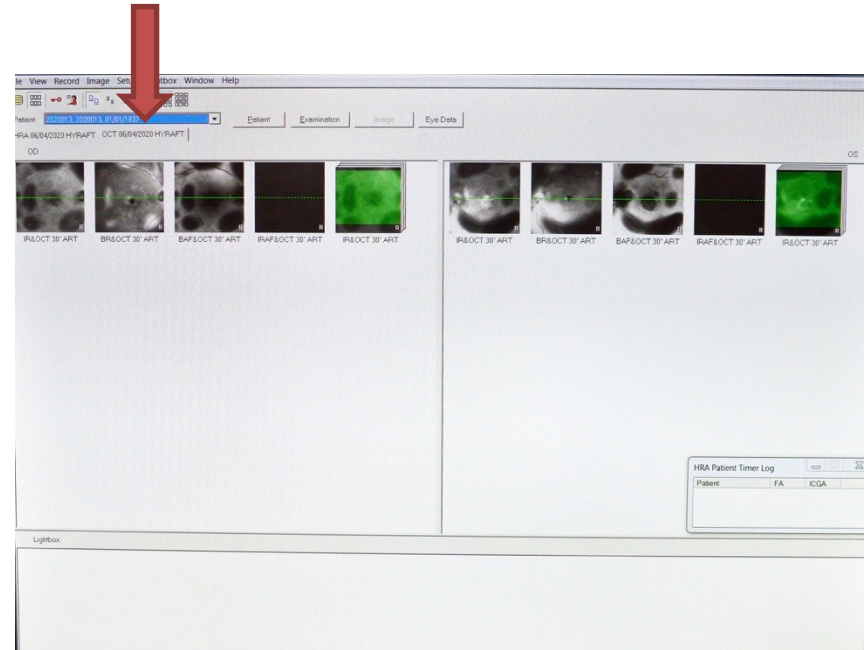
Check marks are the default, then select OK.



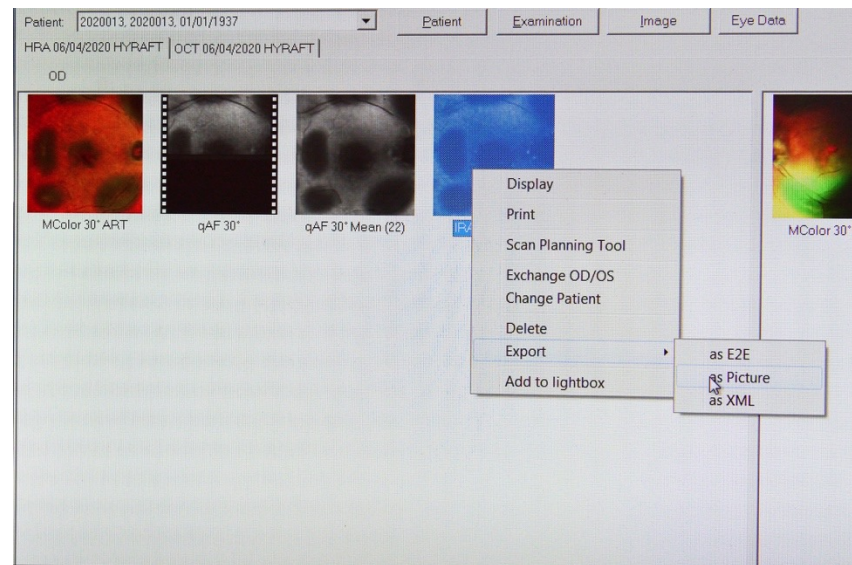
The patient now has 2 tabs, one showing the images acquired from the HRA (blue arrow).



And the other tab shows the images acquired from the HRA+OCT (red arrow).

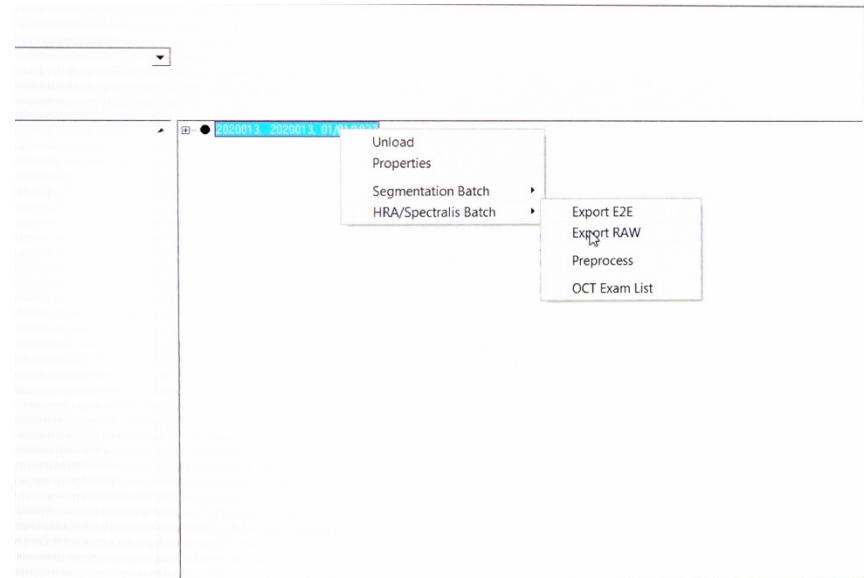
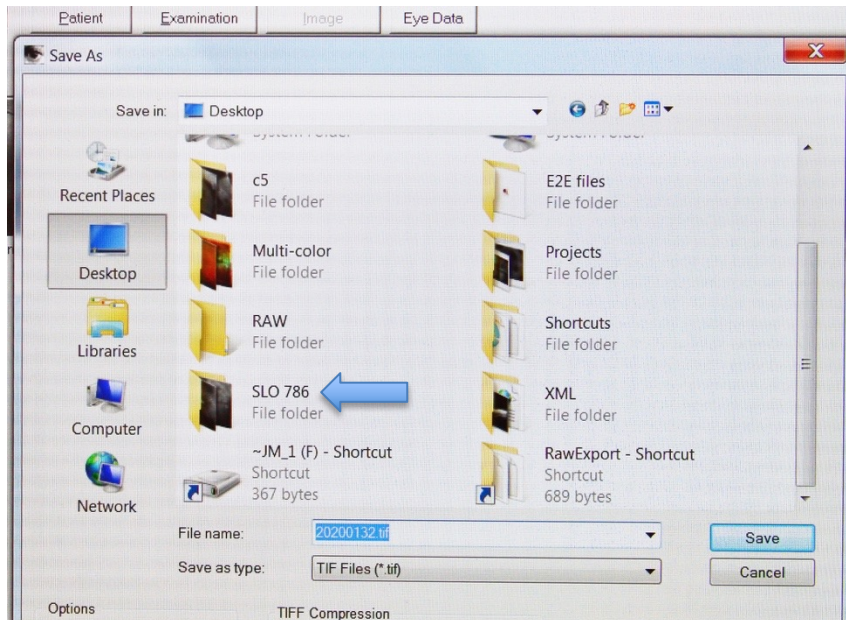


Right-Click 786 (ICGA) image and export picture to a file labeled SLO 786 on the desktop.



Example of saving to SLO 786

Select patient, Right-Click to export images as RAW to a folder on the desktop.



Images from HRA

Copy and paste from RAWEXPORT to a folder labeled RAW to be transferred to archive computer, for review.

