

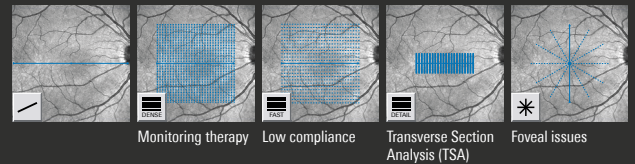
SPECTRALIS® Image Acquisition: Retina

Performing a Baseline Examination

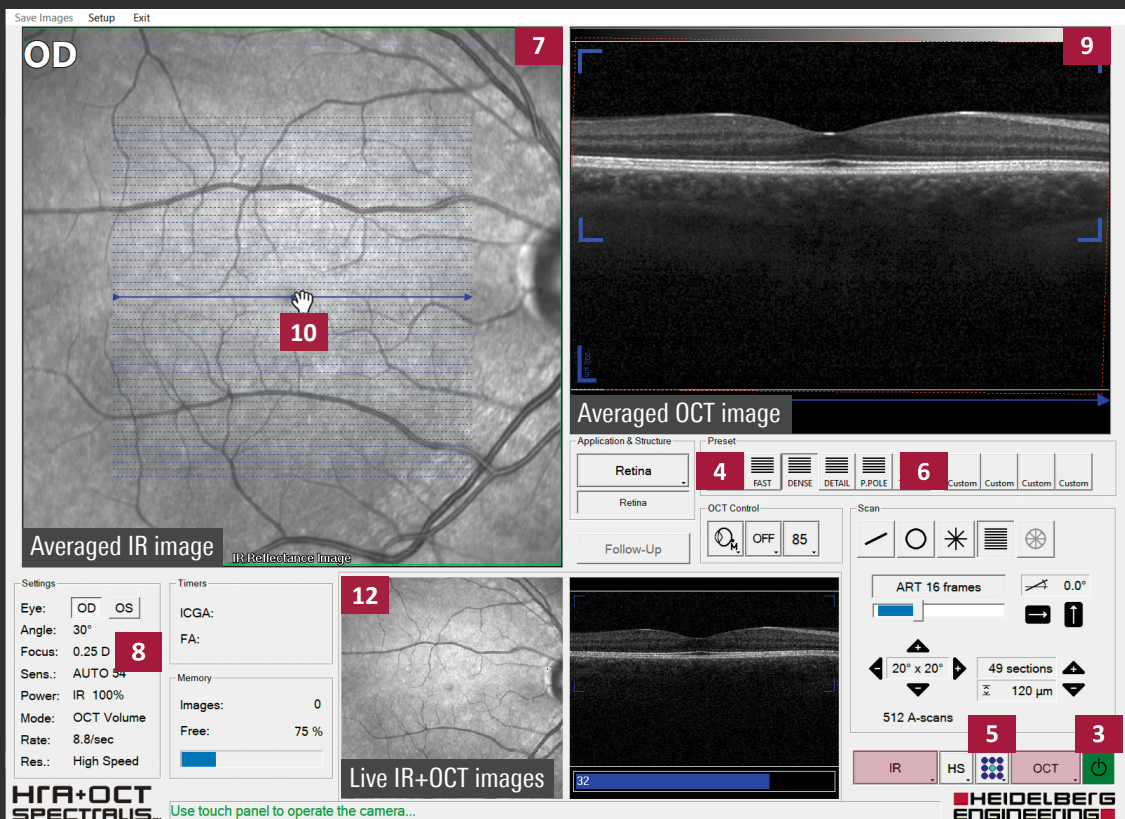


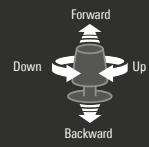
- 1 Adjust the table height and the chin rest to align the patient's eyes with the marks on the head rest column.
- 2 Ask the patient to place their forehead against the forehead rest for the duration of the examination.
- i* The patient may blink regularly, as a stable tear film is important for good image quality. Use artificial tears, if needed.
- 3 Start the acquisition via  and select the **IR+OCT** modality on the touch panel or **IR** and **OCT** modalities in the software.
- 4 Select the desired scan pattern and customize it, if needed.

- 5 If needed, select  and change the internal fixation light position. Switch on the external fixation light by deselecting the active fixation light  in the software or pressing **External** on the touch panel.



- 6 To save a scan as preset, click and hold  until the **Save Preset** box is displayed. Enter a name and click **OK**.

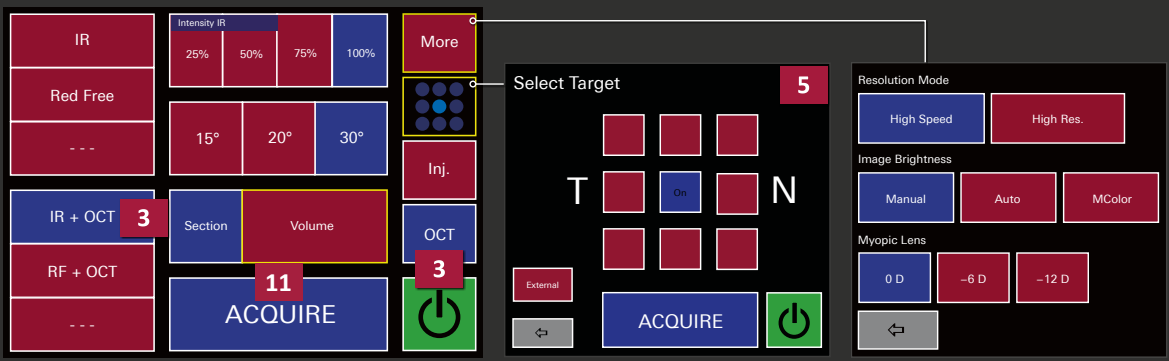




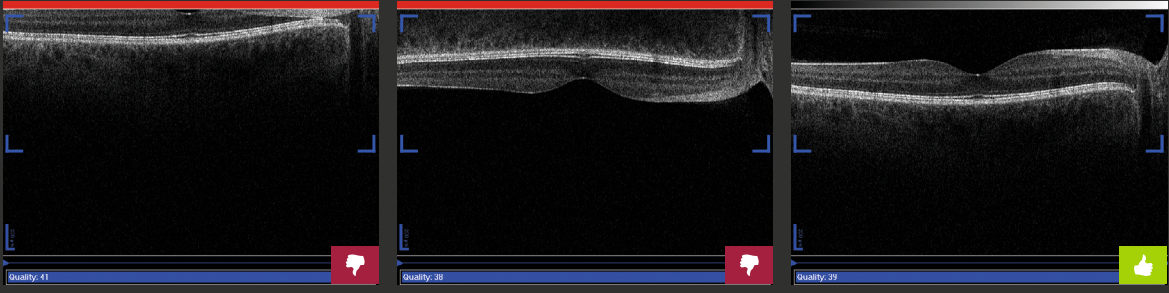
- 7 Start from a position far from the eye and use the joystick to move the retinal reflex to the center of the image by moving the joystick sideways or rotating it. Move the camera towards the patient's eye until the IR image is evenly illuminated.



i For manual image brightness control on touch panel systems, press **More > Image Brightness > Manual**. Then adjust the image brightness by turning the sensitivity knob.

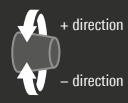


- 8 Align the OCT image so that it is correctly positioned in the **[Sweet Spot]**. If the OCT image is only partially visible or upside down, move the camera slowly back from the patient's eye until it is displayed correctly.



i If you're having difficulty displaying both the IR and OCT images properly at the same time, please refer to the sections **Eye Length Parameters**, **Scan Orientation**, and **Scan Length** for guidance.

- 9 Focus the IR image using the focus knob so that the small parafoveal vessels or the area of interest are sharp. The focus value can be checked in the aquisition window.



i Use contact lenses in case of myopia higher than -14 D.

- 10 To reposition a scan pattern, activate the eye tracking with a long press of the joystick button or by pressing on the touch panel, then drag and drop the scan to the fovea or area of interest.

11 | LINE SCAN

With active eye tracking, wait until the ART Mean has reached 100 frames. Acquire the image with a short press of the joystick button or by pressing **Acquire** on the touch panel.

 | VOLUME OR RADIAL SCAN

Acquire a volume or radial scan with a short press of the joystick button or by pressing **Acquire** on the touch panel. The image acquisition stops automatically when all OCT images have been acquired.

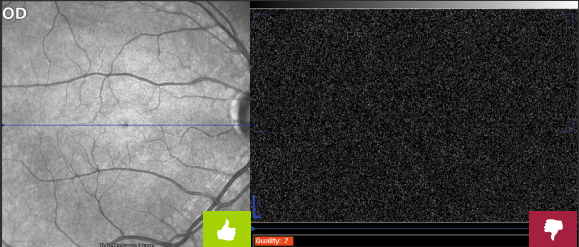
12 During acquisition, check the lower small live images for an even illumination of the IR image and a proper orientation of the OCT image. Keep your hands on the device and readjust the camera if needed.

13 Press **Esc** on the keyboard to exit.

Eye Length Parameters

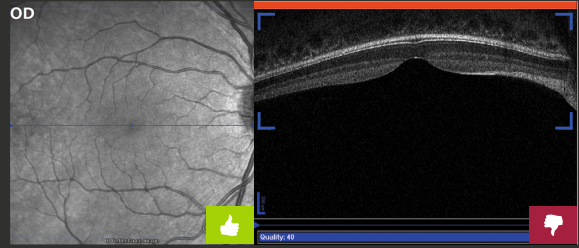
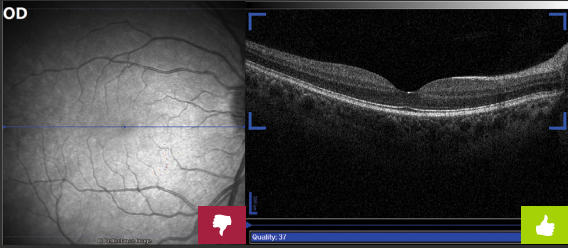
 | EYES WITH AXIAL MYOPIA

If the OCT image is still not visible or it is positioned too low in the acquisition window while the IR image is evenly illuminated, select  or .



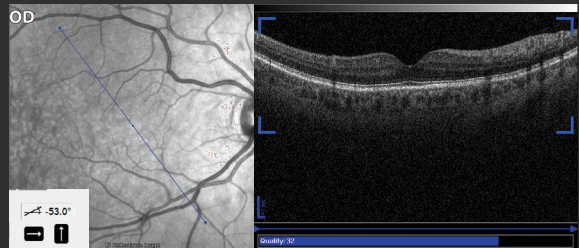
 | EYES WITH AXIAL HYPEROPIA

If the OCT image is already in the Sweet Spot while the IR image still has dark edges or if the OCT image is upside down while the IR image is evenly illuminated, select .



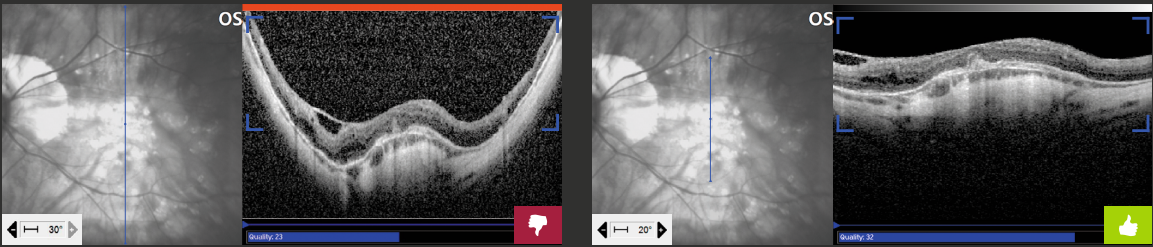
Scan Orientation

If the OCT image is tilted, first try moving the joystick in the direction of the tilt. If this causes the IR image to no longer be evenly illuminated, rotate the scan. Adjust the scan orientation by 90° via the arrow buttons or by rotating the arrowhead.



Scan Length

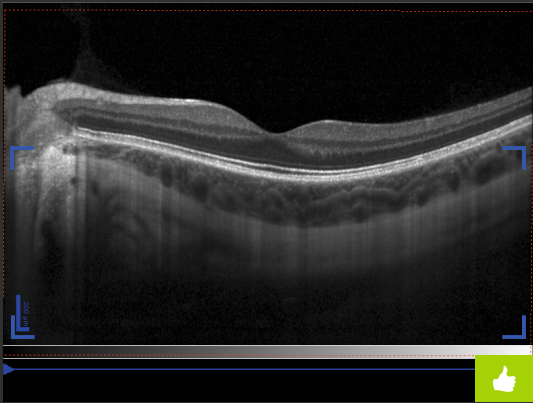
If the retina is too curved due to high myopia so that the OCT image can no longer be properly positioned within the Sweet Spot, shorten the scan length.



Enhanced Imaging Options

EDI | ENHANCED DEPTH IMAGING

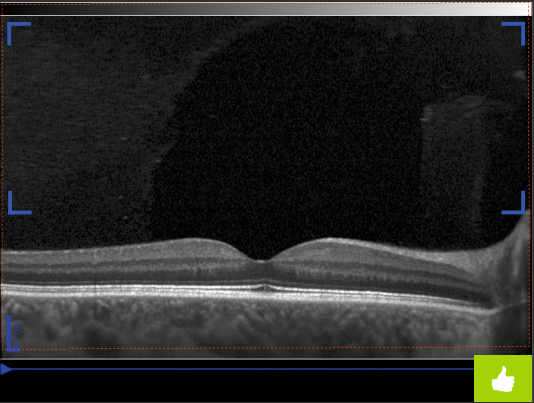
For choroidal imaging, click **OFF** and select **EDI**. Position the choroid in the Sweet Spot. Check the focus and adjust it, if necessary.



EDI with active eye tracking (ART 100)

EVI | ENHANCED VITREOUS IMAGING

For vitreous imaging, click **OFF** and select **EVI**. Position the vitreous in the Sweet Spot. Check the focus and adjust it, if necessary.



EVI with active eye tracking (ART 100)

Scan Speed

To shift the scan speed, click **85** and select **20** to further improve scan quality at a longer acquisition time. Select **125** to scan faster without clinically relevant loss in image quality. The Q value should remain above 25, otherwise further reduce the scan speed.

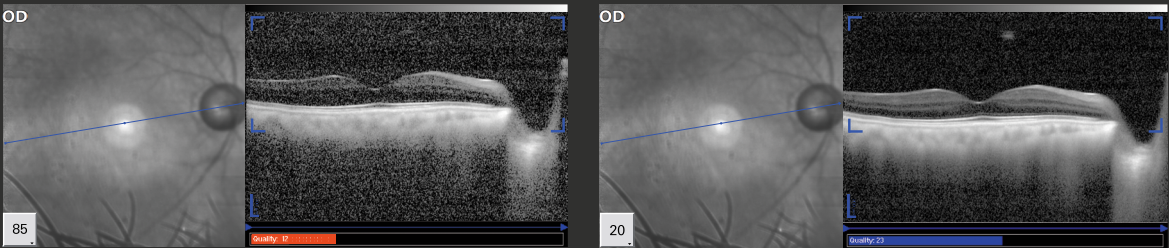
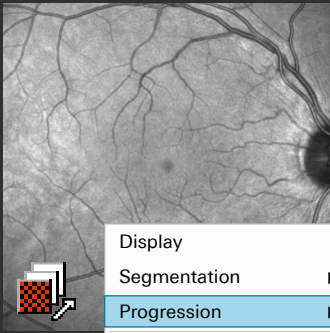


Image quality is overall reduced due to an oil tamponade after retinal detachment. Case kindly provided by Rosa Dolz-Marco, MD, Oftalvist Clinic, Valencia.

Performing a Follow-Up Examination



To start a progression series, the reference image must be defined **before** acquiring the follow-up image. Right-click the desired image thumbnail, select **Progression** and **Set Reference**. appears. Within the retina progression series, the reference automatically shifts to the previous examination.

i The reference can be manually set to any follow-up examination within a progression series. The hint **Not compared to last visit!** may then appear in the viewing module of 6 of 6 **Not compared to last visit!**

Remove reference — Removes reference as long as no follow-up examination has been performed, e.g., in case of poor acquisition quality.

Ex/Include — Excludes (or includes) the examination from the progression series. Excluded examinations are marked with or .

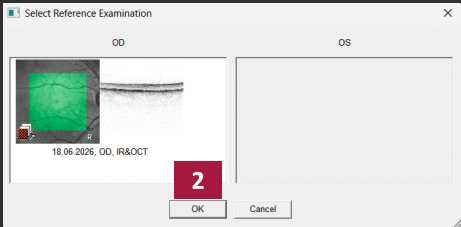
Close/Open — Closes (or opens) the progression series when the eye condition has changed significantly. Closed series are marked with . With the next visit, a new baseline examination has to be acquired and a new progression series has to be started.

BASELINE				
FOLLOW-UP				
	Not defined as reference	Defined as reference	Excluded examination	Closed progression series

1 Start the image acquisition and select **Follow-Up**.

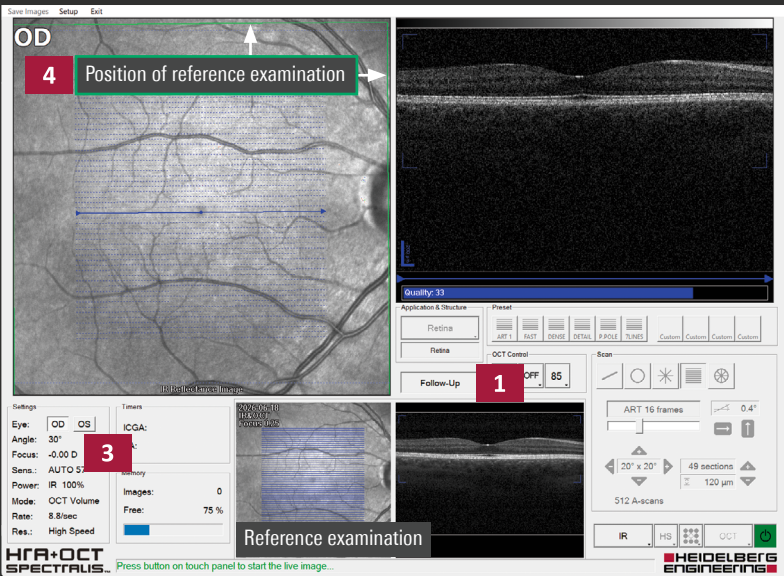
2 Select the desired reference examination and click **OK**.

3 Check the focus value and if any error message is displayed in the acquisition window. Readjust the focus, if necessary.



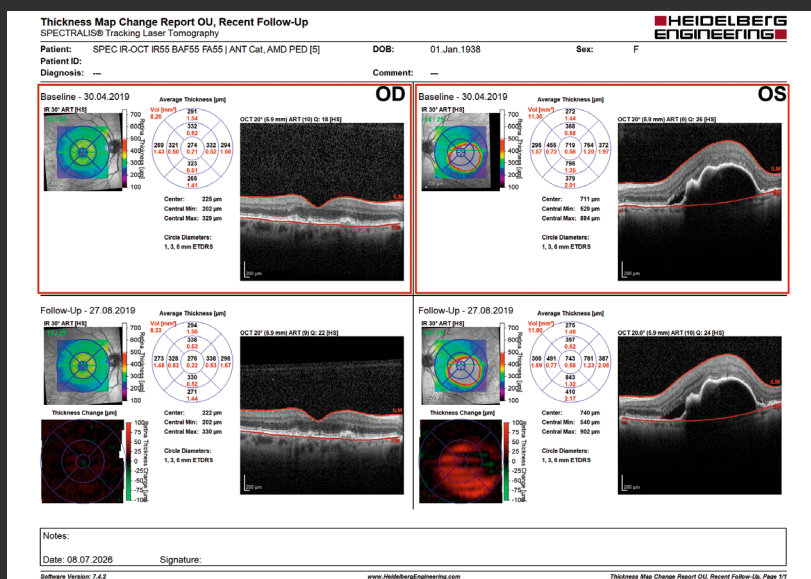
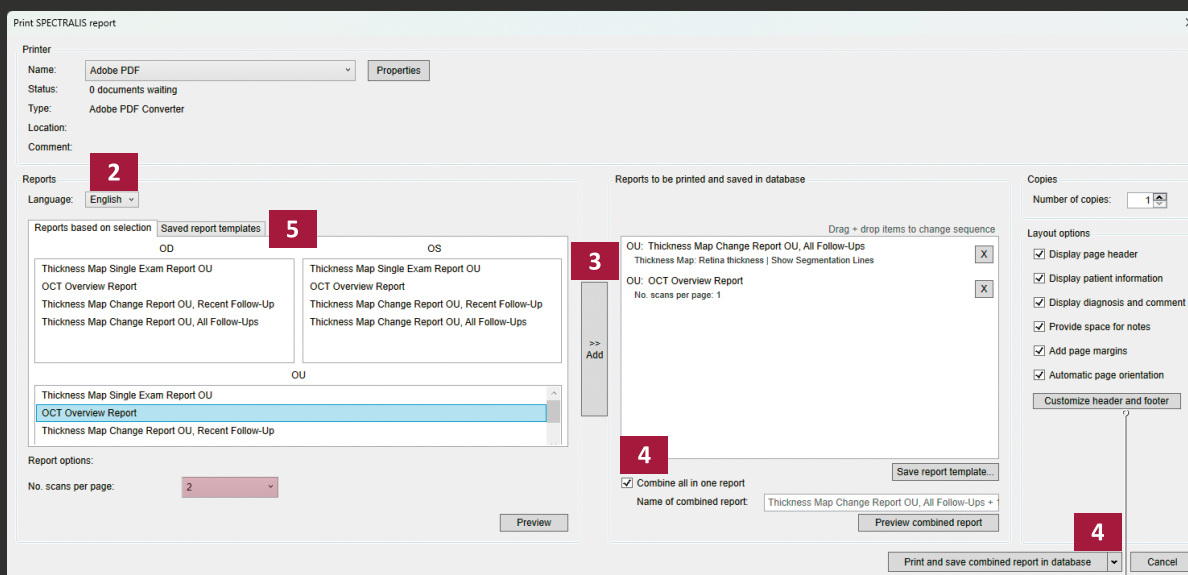
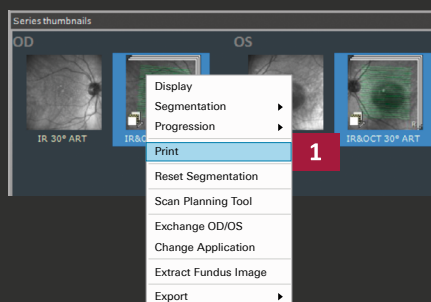
i If the focus value differs by more than ± 1 D from the focus value of the reference examination, it will be displayed red and the message **Focus mismatch to baseline image, please check focus!** will be displayed.

4 Perform the acquisition as usual. The location of the reference scan is marked with a green box. Ensure that the patient's fixation is the same so that the live image is aligned correctly to the reference position.

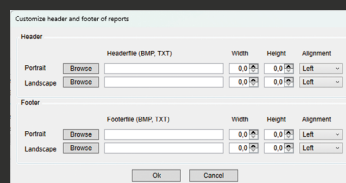


Generating Reports

- 1 Select all scans to be included in the report (**Ctrl** + right-click) and click **Print**.
- 2 Select language, if necessary.
- 3 Select the report or template of the selected eye or both eyes to be printed. If needed, select further report options, and click **>> Add**. Click **X** to remove a report from the combination.
- 4 If needed, change the report order per drag and drop and select the **Combine all in one report** check box to print or preview all reports in a row. Then click **Print and save combined report in database** to print and save all reports in HEYEX.
- 5 Click **Save report template...** to access this combination in the **Saved report templates** tab.



i You can use the **Customize header and footer** button to import your own logo (BMP) or address (TXT) into the header or footer.



i For comprehensive information on all reports, refer to the SPECTRALIS Product Family User Manual.

Case kindly provided by Prof. Christian Mardin, Universitätsaugenklinik Erlangen.