



OPTOPOL
technology

REVO FC with AccuTrack Real Time EyeTracking

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REVO FC
OCT | Fundus Camera

New All-in-One OCT standard

What's new?

► Modified hardware

Redesigned fundus photo optics

Redesigned Flash module

Redesigned OCT Anterior Lens

Improved posterior OCT

Improved reliability and servicability

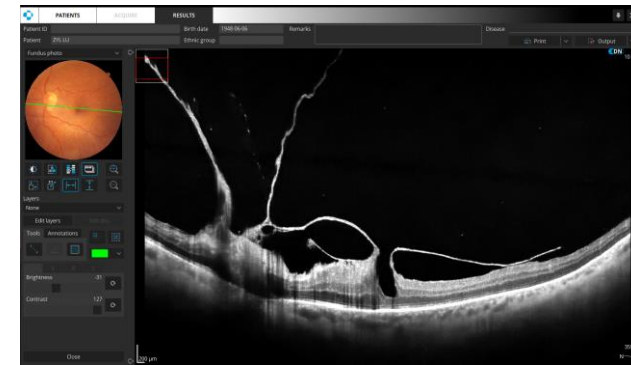
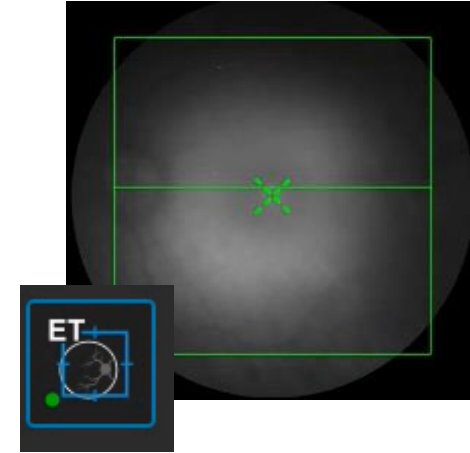
The 830 nm SLED has been replaced with a 850 nm wavelength

► Software version 11

Key functionalities intended ONLY for the redesigned REVO FC

Improvements of current features

Bugs removed



Key functionalities intended **ONLY** for the REVO FC with Tracking

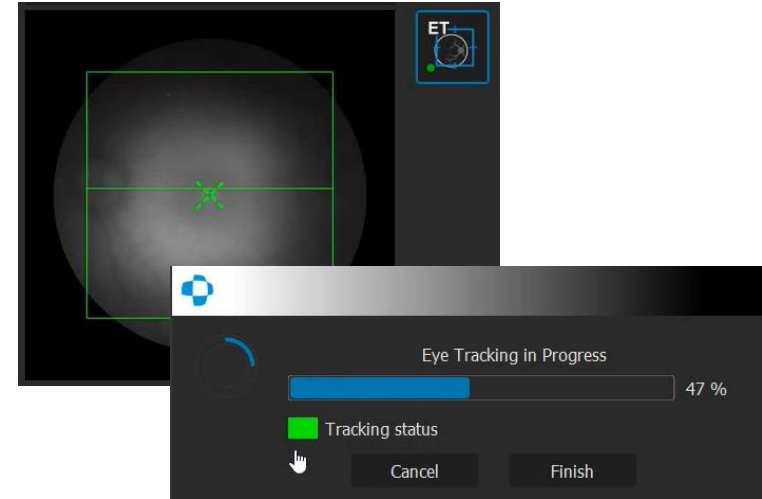
- ▶ **AccuTrack** - Real time **Eye Tracking**
- ▶ **Auto Flash**
- ▶ **Improved acquisition of Fundus photo**
- ▶ **New Intensity levels**
- ▶ **Auto IR**
- ▶ **Fundus photo processing**
- ▶ **Anterior Photo**



▶ AccuTrack - Real Time Hardware Active EyeTracking

Hardware Eye Tracking helps to maintain scan placement when the patient blinks or moves their eyes.

The system refers to fundus IR frame and scanner position.



When examining a patient who is unable to keep their chin on the chinrest, it is possible to disable Tracking (press [Finish]) and continue scanning in the standard mode.

▶ New Flash module

- ▶ Stronger flash illumination
- ▶ Shorter exposure
- ▶ More comfortable for the patient
- ▶ Better fundus illumination
- ▶ Reduced disc oversaturation effect

Auto Flash

- ▶ Reflection from the fundus is used for automatic adjustment of the IR fundus preview image and flash intensity.
- ▶ Auto Flash Flash power and Gain is adjusted on the basis of the backreflected IR signal.
- ▶ Correct automatic flash setting for perfect images regardless of the pupil size and eye pigmentation.
- ▶ No need to re-take images because of wrong flash setting.

Auto Flash – IR fundus preview parameters and the intensity of flash are adjusted automatically using the reflection from the IR fundus preview. This ensures correct automatic flash settings for perfect images regardless of the pupil size and eye pigmentation.

No need to re-take images because of wrong flash settings.

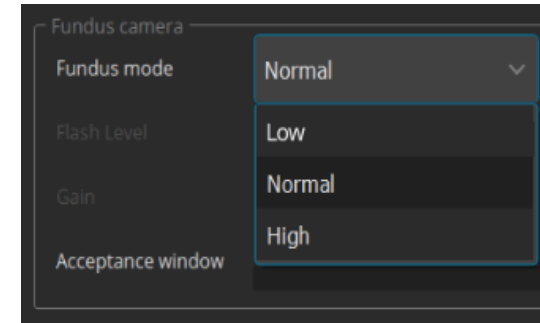
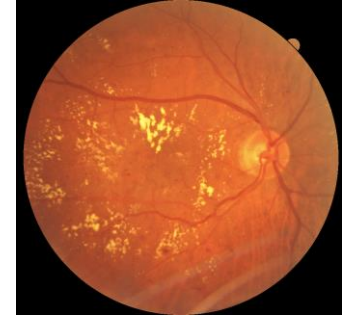
Fundus mode intensity levels:

- **High** – the best quality of fundus image
- **Normal** – standard photography
- **Low** – dedicated for screening, cataract

Each level offers a predefined settings range for Exposure, Flash and Gain parameters. Performance of Auto Flash for each mode is different.

Using Low flash increases patient comfort and reduces miosis for a shorter exam time.

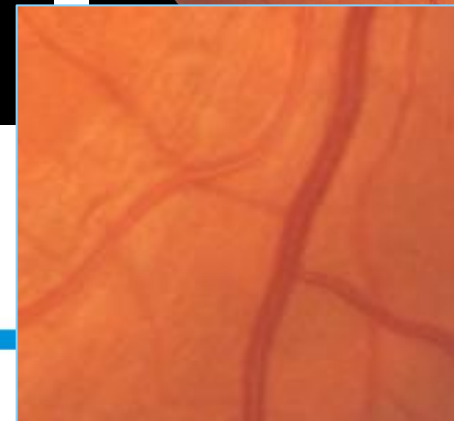
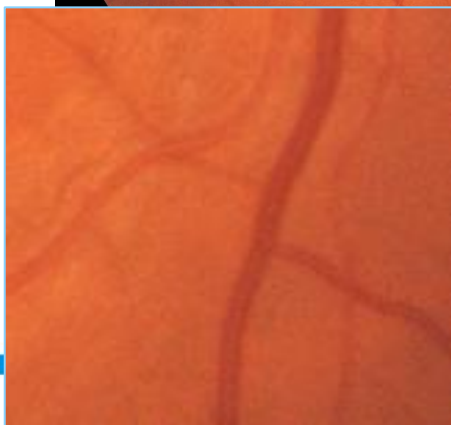
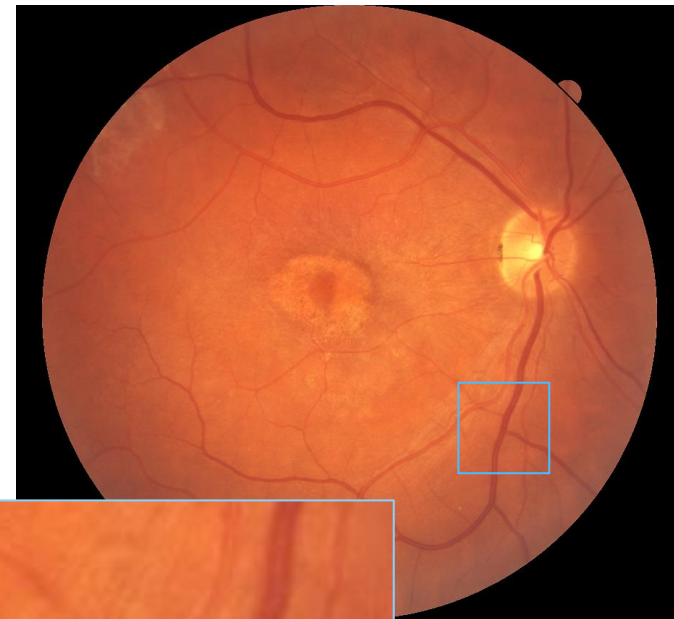
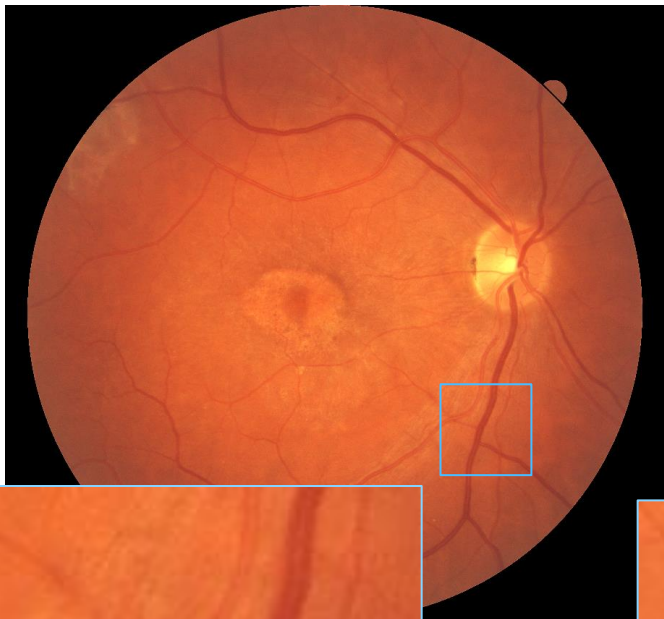
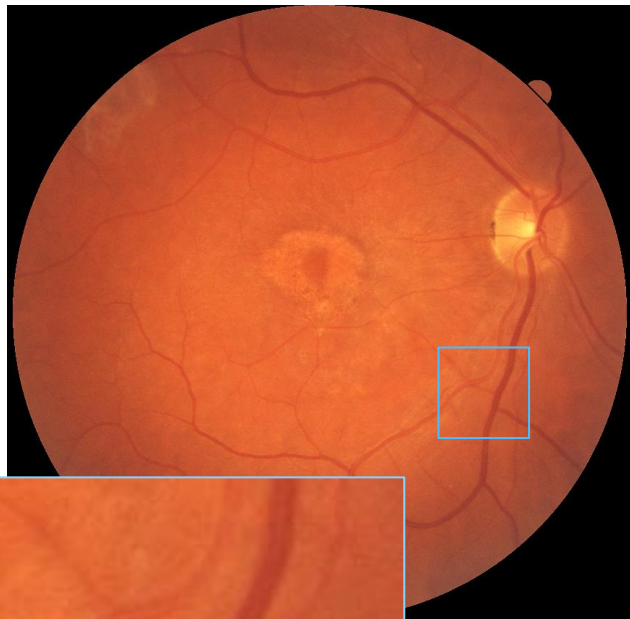
It also allows the user to take photographs of both eyes within 30 seconds* on undilated eyes, usefull for cataract patient. Not optimal for dilated eyes.



Low

Normal

High

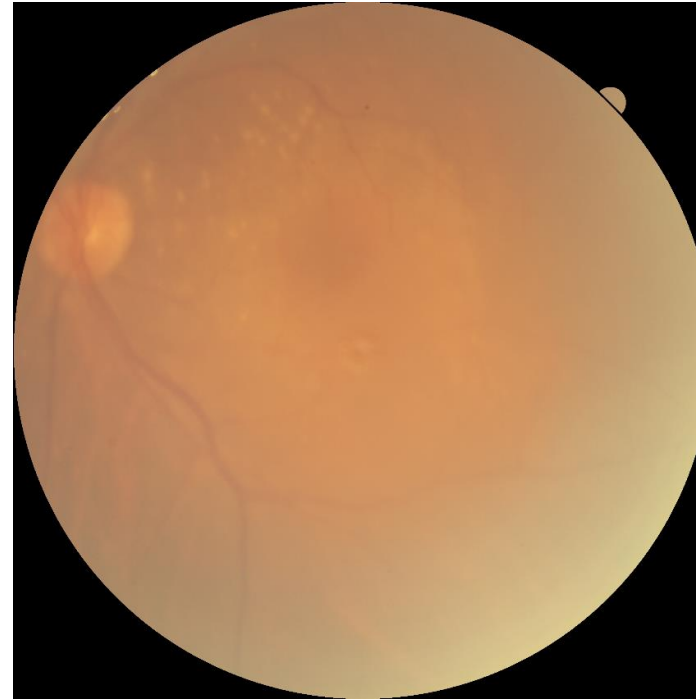


Example of Low and High intensity in a Cataract case.

Low mode






High mode



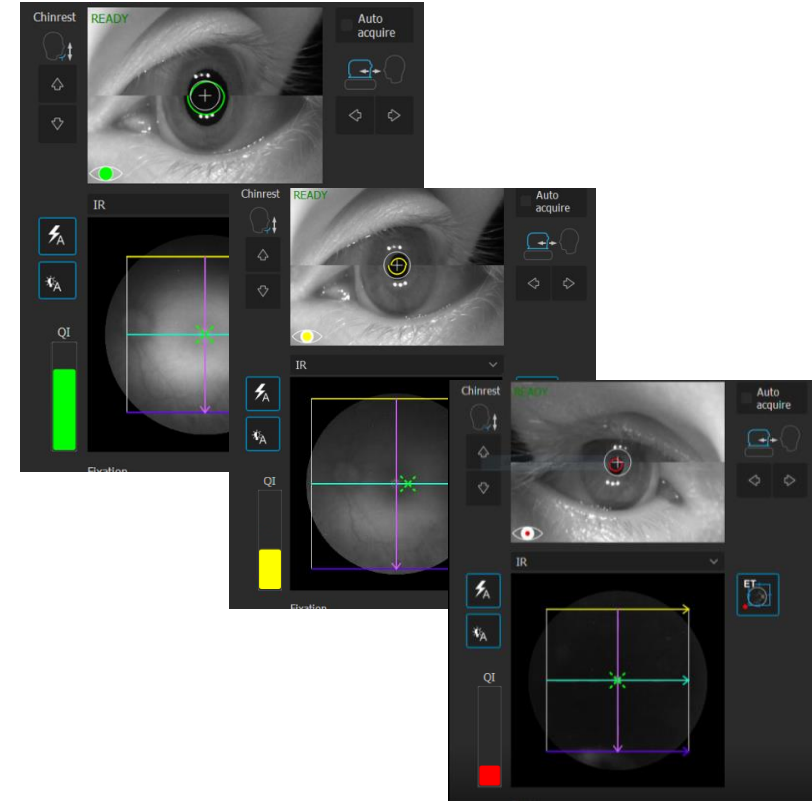
Stronger Flash scatters on the intraocular lens resulting in a blurry image.

► Pupil size indicator

Simplifies the operation and shows if the measured diameter of the pupil is suitable for examination. The pupil size indicator is active while using the following examination protocols: Fundus photography, OCT/Fundus, OCT with Eye Tracking.

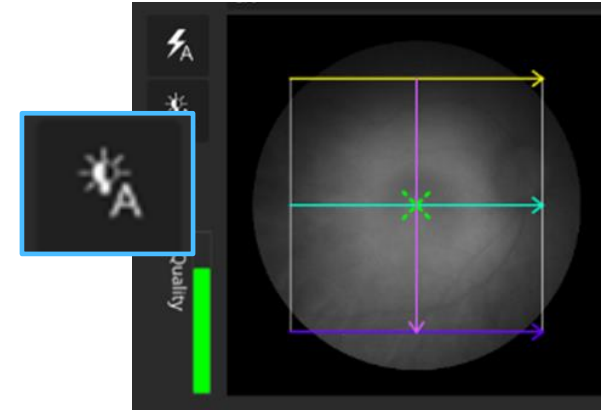
-  The diameter of the pupil is smaller than the minimum required value. Eye Tracking is not available.
-  The diameter of the pupil is borderline. Correct performance of Eye Tracking is not guaranteed.
-  The diameter of the pupil is equal to or bigger than the optimal value.

Note: The system displays a warning if the pupil is too small.

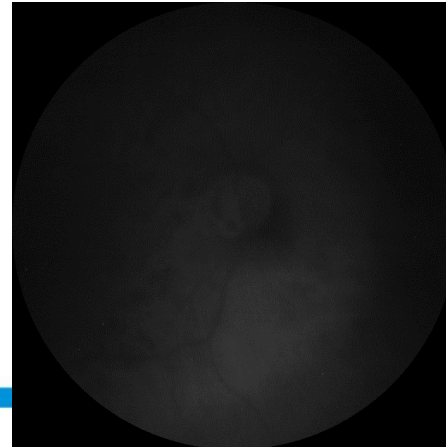


The Auto IR function controls the parameters of the IR preview (IR illumination and camera parameters) in real time and keeps the brightness of the image stable regardless of the pupil size, pigmentation or opacity level of the patient's eye.

Auto IR function is used in the AutoFlash and Eyetracking functionalities.



Auto IR - OFF



Auto IR - ON



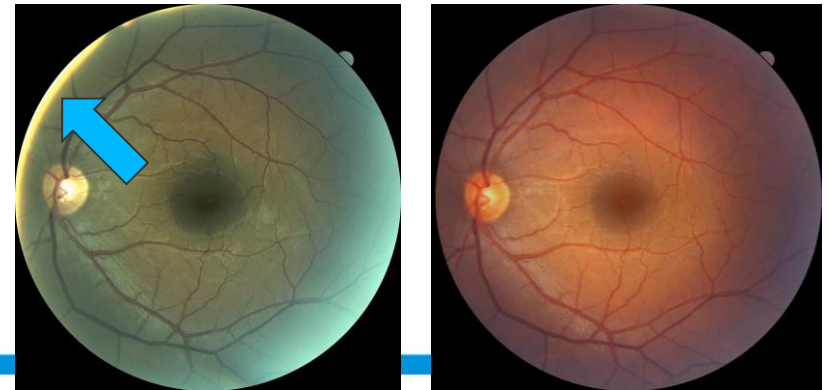
► **New comprehensive sequence of Auto Fundus photo acquisition**

- Pupil detection and auto alignment
- Pupil size classifier
- Auto alignment
- Auto Focus
- **Auto Exposure**
- **Position correction based on IR Fundus preview**
- Auto shot



Comparison of the AutoAcquire function in ver. 10 and 11 presenting the effect of IR fundus auto correction

Case 1



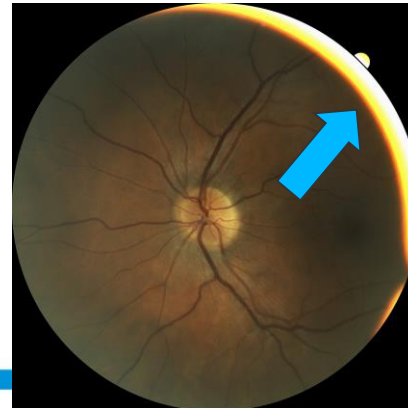
► **New comprehensive sequence of Auto OCT + photo acquisition**

- Pupil detection and auto pupil alignment
- Pupil size classifier (small, borderline, optimal)
- Auto C-gate
- Auto Focus
- Tomogram alignment
- Auto OCT acquisition
- **Auto Exposure**
- **Correction of the Fundus IR position**
- Auto shot



Comparison of the AutoAcquire function in ver. 10 and 11 presenting the effect of IR fundus auto correction

Case 2



► **Color balance is implemented**

- To achieve improved color balance we have modified the hardware, calibration procedure, image processing and the HDR function.
- The quality of Fundus photographs now corresponds to that of reference devices.
- Starting with ver. 11 the standard can be changed after taking the examination. The color balance settings are accessible in Setup\Result\Review\Color balance

Standard Color balance

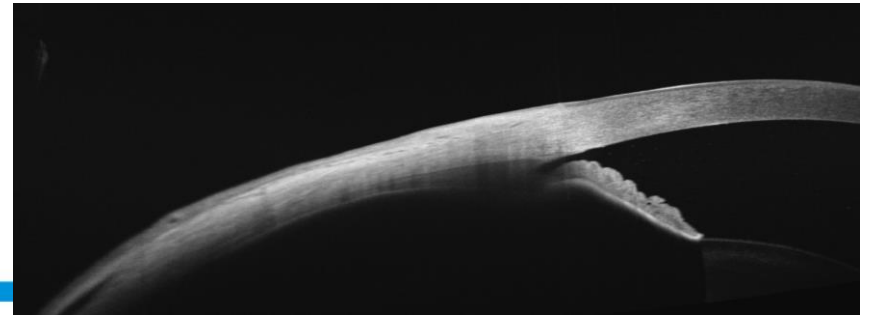
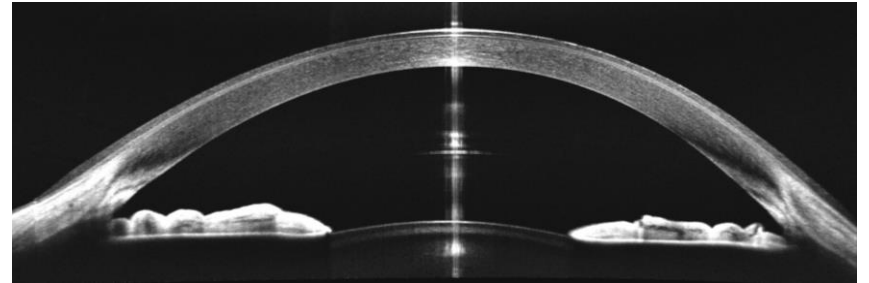
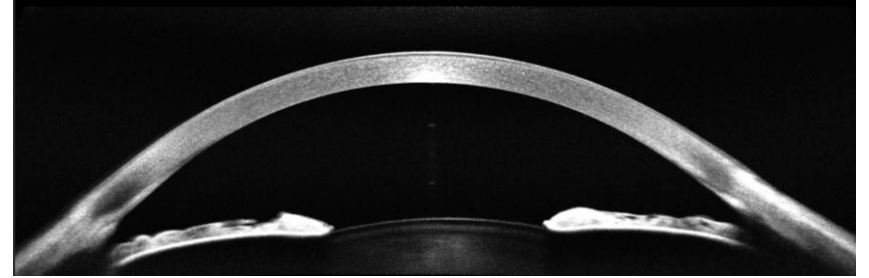


Neutral Color balance



► Improved Anterior segment optics

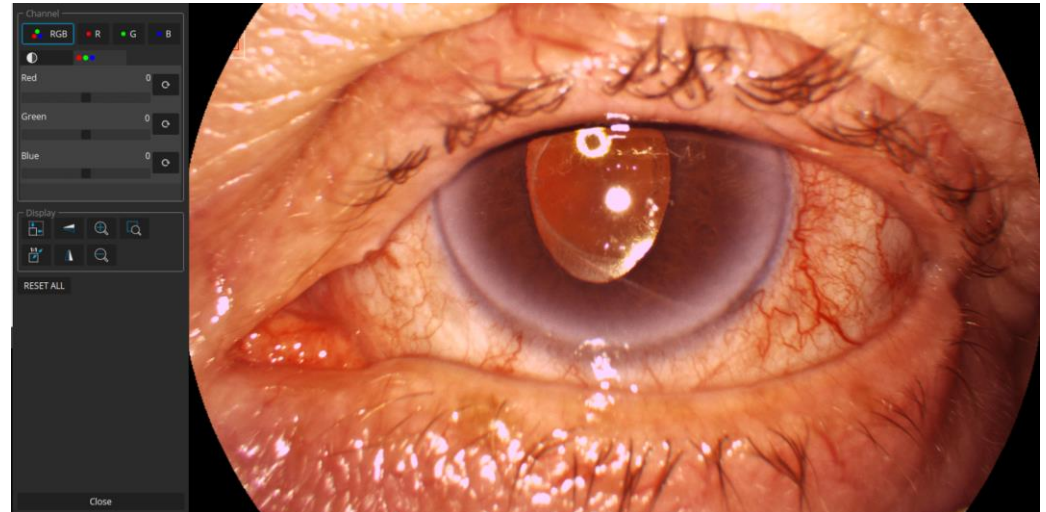
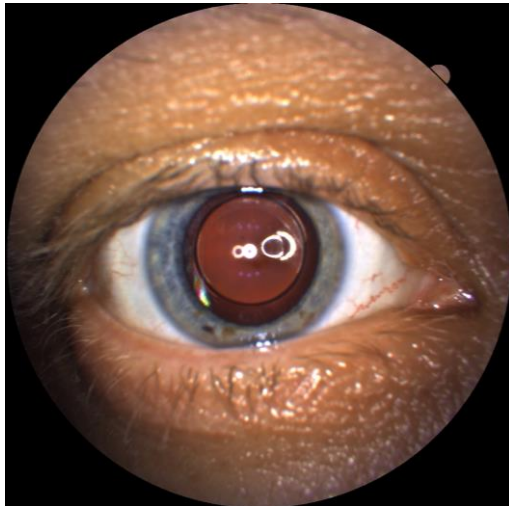
- Scan width up to 18 mm
- Increased quality of tomogram edges
- Increased sensitivity in a long tomogram scan depth
- Topography module is available
- Angle to Angle scan has been improved
 - Changing scanning position is available
 - Sharper details on the edges
 - Better saturation of tomograms



▶ Anterior segment photography mode

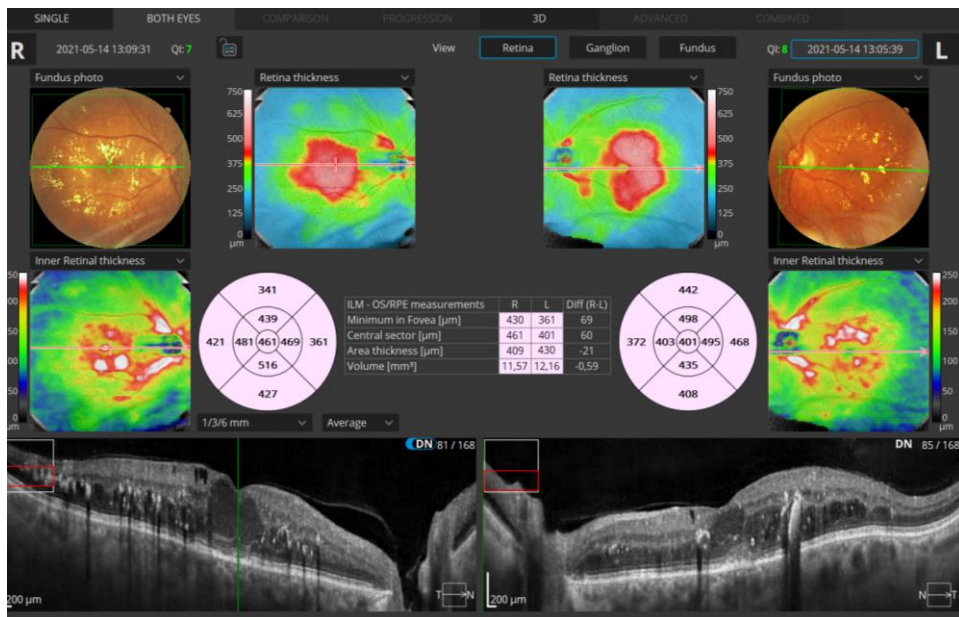


Additional Anterior Photo scan program for easy anterior photography.
Color photography of the cornea, eyelid, pupil and sclera

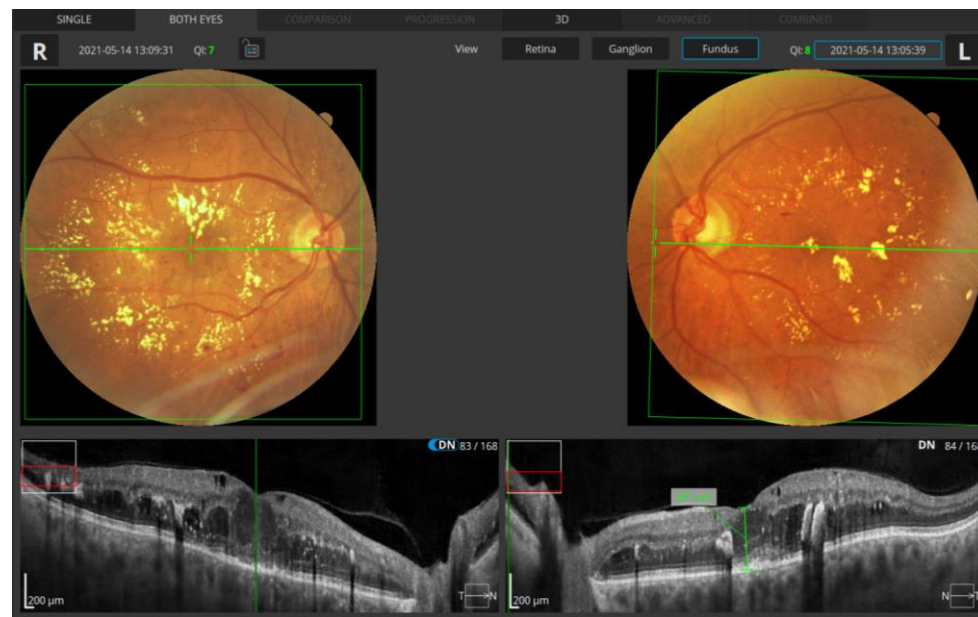


Improved presentation of results

| Both | - [Retina view]



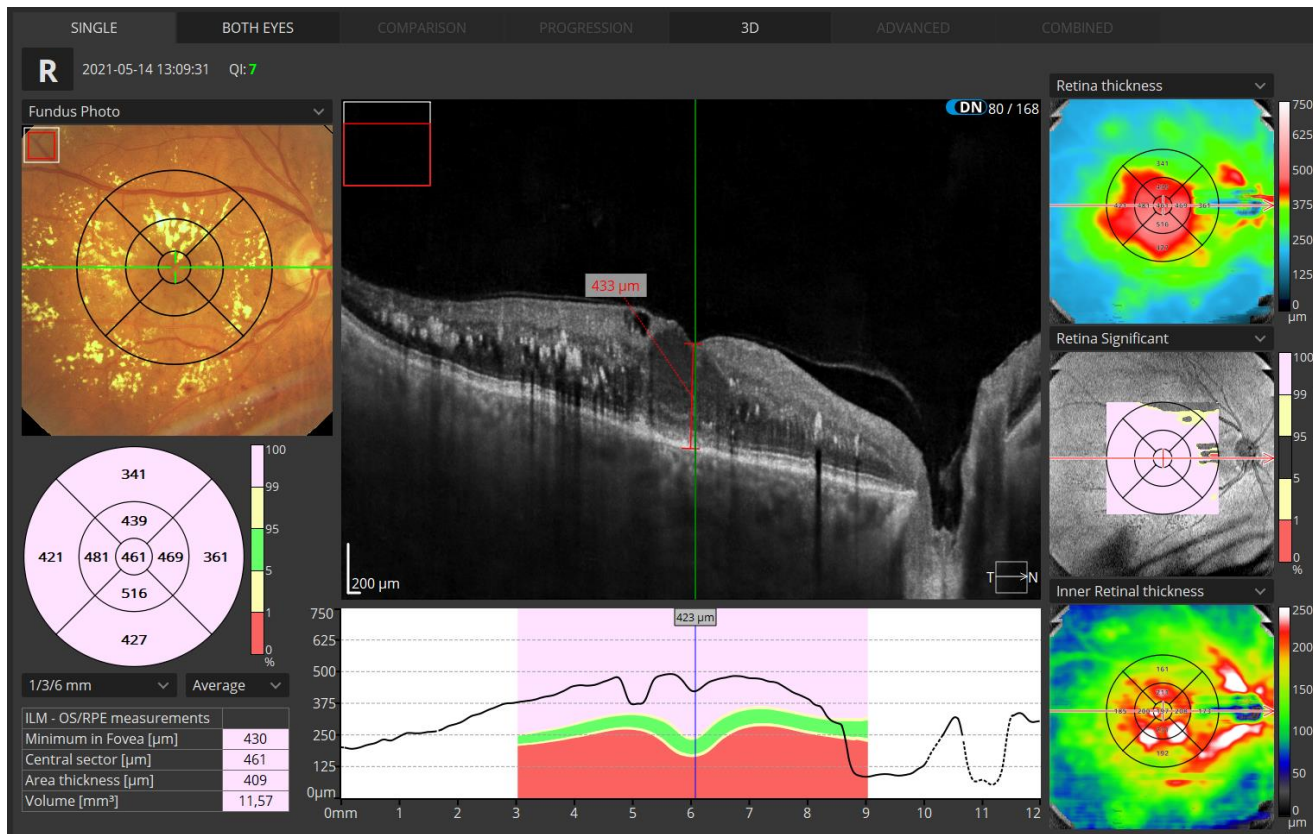
| Both | - [Fundus view]



Clinical case – AMD and ME



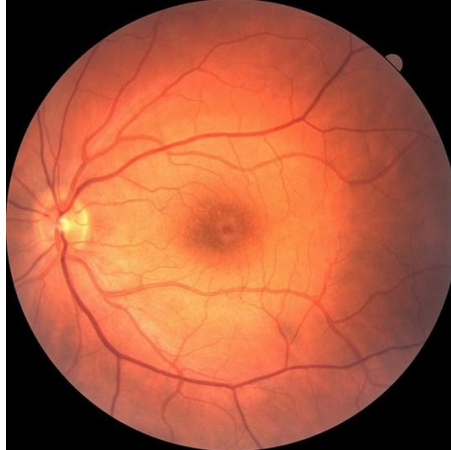
Clinical case – AMD and ME



Fundus photo verification

▶ **Case 1**

9.7.0 REVO FC



11.0.1 REVO FC with tracking



Canon CR-2



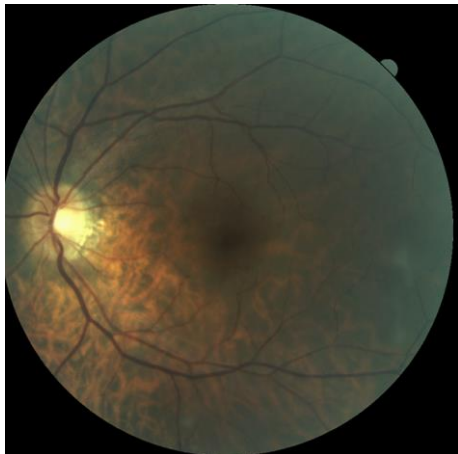
Topcon Maestro



Fundus photo verification

▶ **Case 2**

9.7.0 REVO FC



11.0.1 REVO FC with tracking



Canon CR-2



Topcon Maestro



▶ **Case 3**

REVO FC with tracking



TOPCON TRC-NW8



▶ **Case 4**

REVO FC with tracking



TOPCON Meastro



▶ **Case 5**

REVO FC with tracking



TOPCON Meastro



▶ **Case 6**

REVO FC with tracking



TOPCON Meastro



Thank you for your attention!

