



REVO nx

THE LATEST OCT STANDARDS

AS SIMPLE AS PRESSING *the start button*



OPTOPOL
technology

REVO *Evolution continues*

Optopol engineering team, the designers of the first commercially available Spectral Domain OCT in the world, are proud to present the latest innovation, the world's first B-OCT and T-OCT for standard posterior OCT.

Our supreme experience in Spectral Domain OCT allows us to provide the market with a state of the art instrument which comes with new advanced technologies and remarkable simplicity of operation.

The latest software release sets up new demands for daily OCT routine in a modern ophthalmic practice.

The new modules expand the diagnostic range of OCT by the addition of Posterior and Anterior segment, Corneal topography and Optical biometry with minimum patient fatigue and chair time.

New OCT standard - All functionality In One device.

Once again Revo NX goes beyond the limits of standard OCT. With its new software, our Revo NX enables a full functionality scanning from the retina to the cornea. It brings benefits by combining the potential of several devices. With REVO you can measure, quantify, calculate and track changes from the cornea to the retina over time with just one OCT device.

OCT made simple as never before

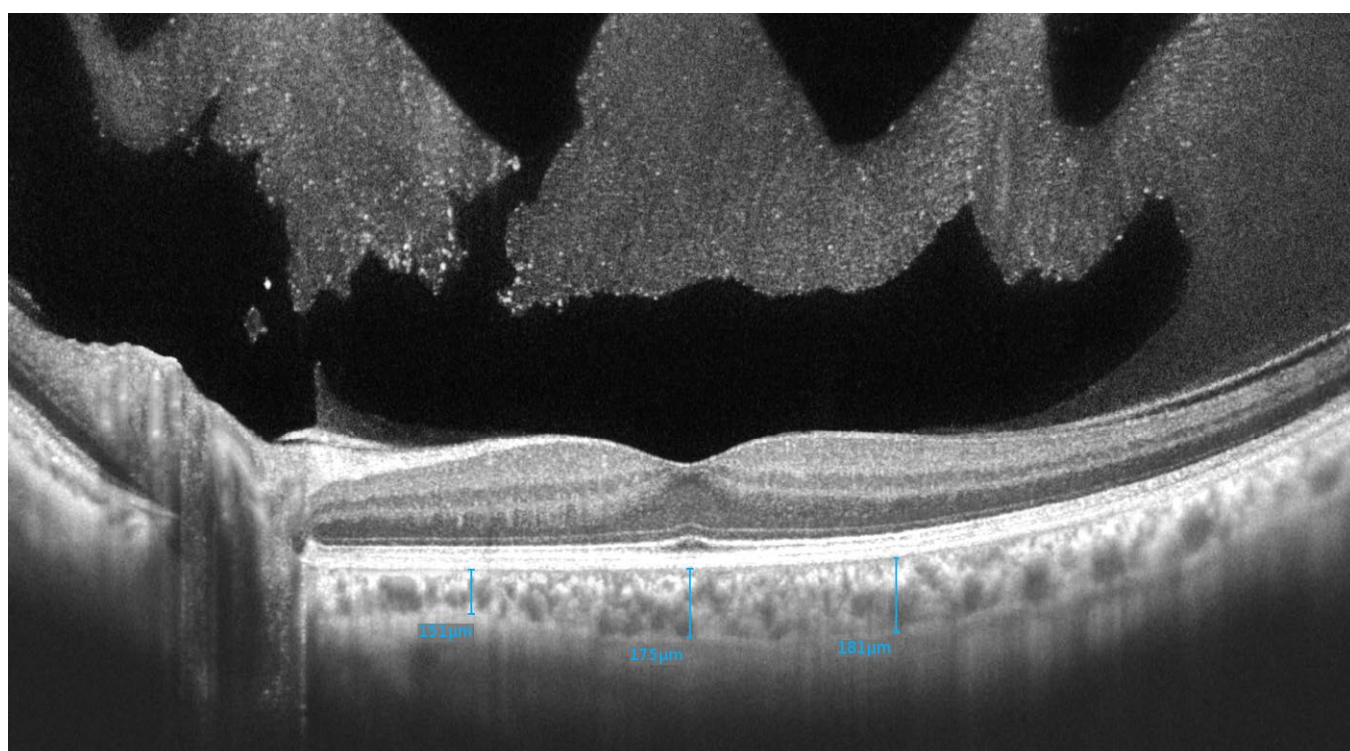
Position the patient and press the START button to acquire examinations of both eyes. The Revo NX, using vocal messages, guides the patient through the process, increasing comfort and reducing patient chair time. Short scanning time means less fatigue for the patient. The ability to create customized scanning protocols of different diagnostic scenarios speeds up the workflow.

A perfect fit for every practice.

With a small system footprint and access for both the operator and the patient needed from only one side, space saving is further enhanced. In addition, the single cable connection allows the installation of REVO NX into the smallest of examination room. Revo's variety of examination and analysis tools enables it to function effortlessly as a screening or advanced diagnostic device.

Enhanced vitreous and choroidal details

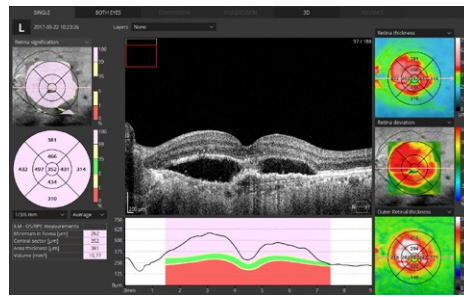
Enhanced visualization of vitreous and choroid helps to verify the condition below and above the patient's retina faster and easier. The Caliper tool allows to quantify Choroidal thickness.



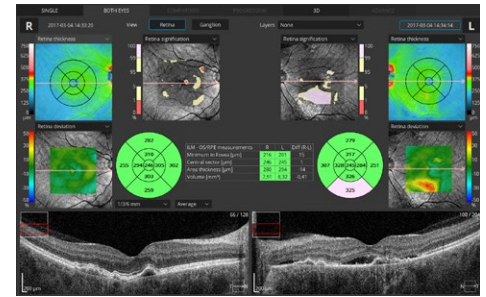
RETINA

A single 3D Retina scan performs both Retina and Glaucoma analyses. The software automatically recognizes 8 retinal layers which assists with a precise diagnosis and the mapping of any changes in the patient's condition. A variety of result analysis and presentation methods allows for the best selection suitable to increase efficiency of work.

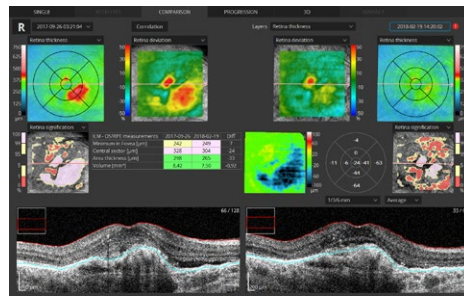
Single



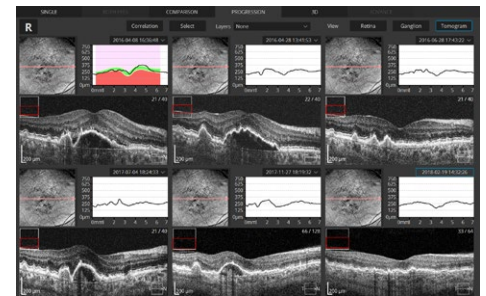
Both



Comparison



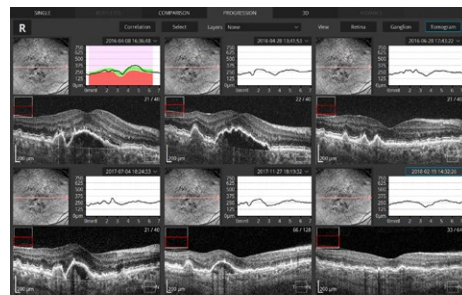
Progression



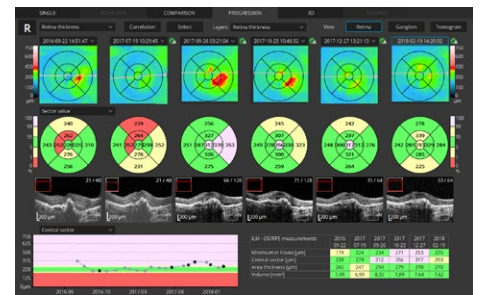
FOLLOW UP

Revo's standard high density scanning capability and blood vessel structure recognition enable a precise alignment of past and current scans. The operator can analyse changes in morphology, quantified progression maps and evaluate the progression trends.

Progression Morphology



Progression Quantification

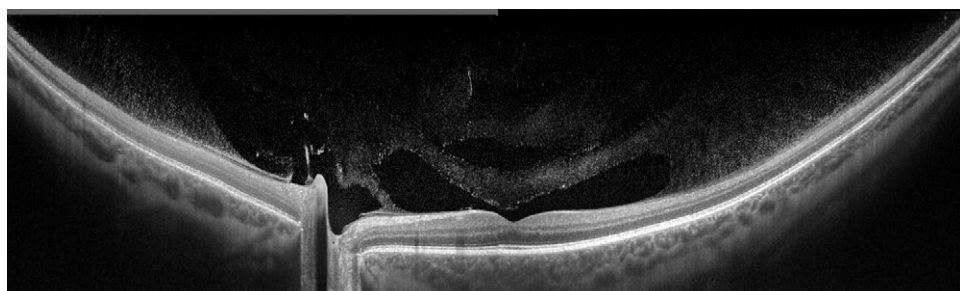
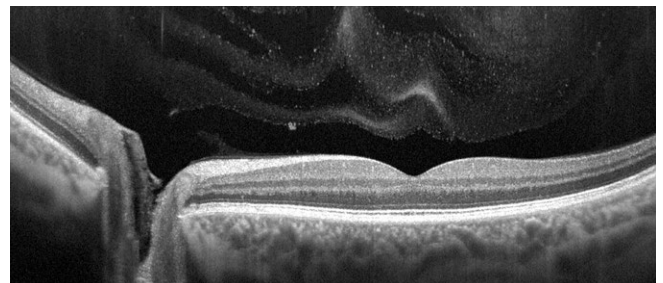
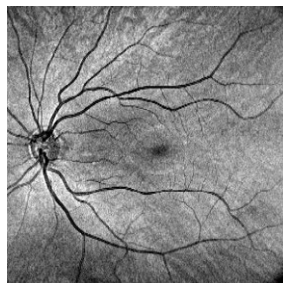


WIDEFIELD SCAN

12x12 mm Widefield Central scan is perfect for fast and precise screening of the patient's retina. Dense scanning in high resolution tomograms guarantees the discovery of most of the early changes.

Peripheral scanning can reveal diseases in the far periphery.

Thanks easy fixation changing supported by Auto Position Correction - APC™ allows for a quick and precise Periphery alignment.



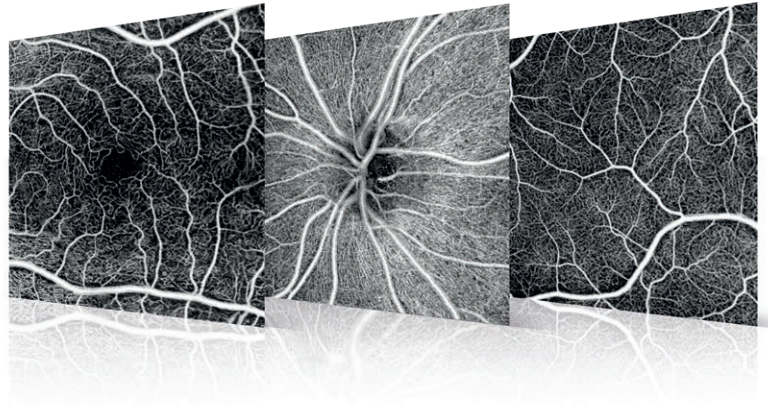
Combined view of two examinations of peripheral scan 12 mm + 12 mm. Done in external software.

REVO *lution continues*

ANGIOGRAPHY SOCT¹

This non-invasive dye free technique allows the visualization of the microvasculature of the retina. Both blood flow and structural visualization give additional diagnostic information about many retinal diseases. Angiography scan allows assessment of the structural vasculature of the macula, the periphery or the optic disc. Extremely short scanning times of 1,6 seconds in standard resolution or 3 seconds in high resolution.

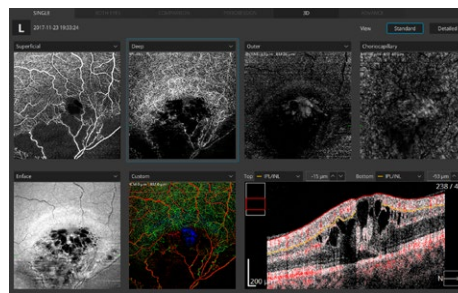
Now Angiography OCT can become a routine in your diagnostic practice.



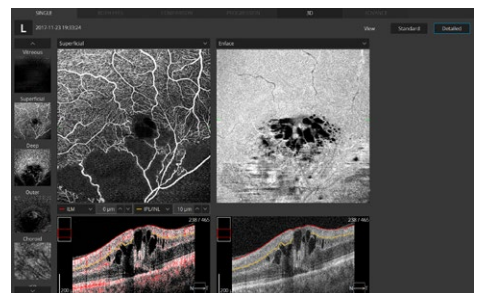
MOST COMPLETE SET OF VIEWS

Software allows to observe, track and compare changes in the microvasculature of the retina in both eyes.

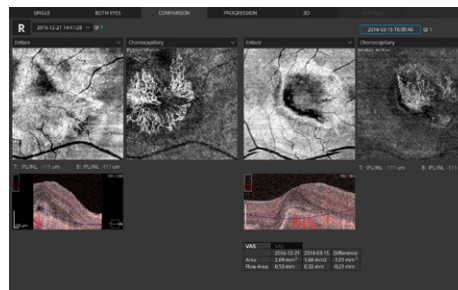
Standard Single View



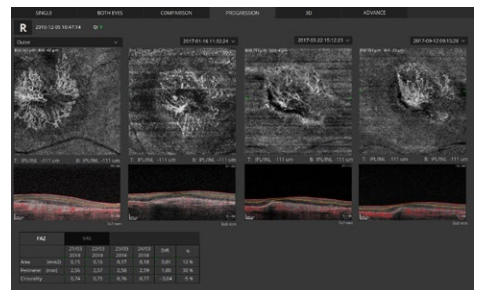
Detailed Single View



Comparison



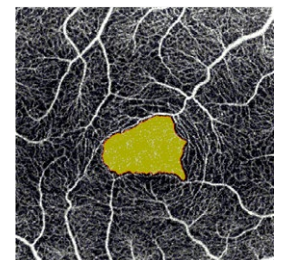
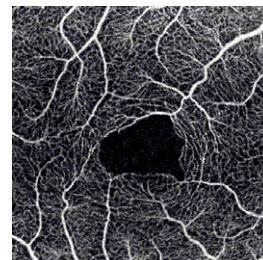
Progression



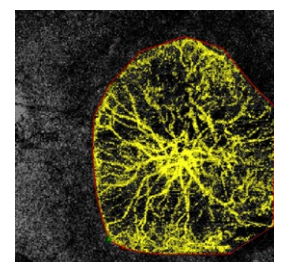
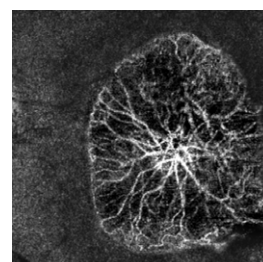
ANGIO-ANALYTICAL TOOLS

FAZ – Foveal Avascular Zone measurements allow to quantify and monitor changes in Superficial and Deep vascular layer. FAZ tool is also available for narrow and wide scans.

VFA – Vascular Flow Area allows to examine the pathologically affected area and precisely measure the area covered by vascularization. User can easily measure area on predefined or own selected vascular layer.



Area [mm²]: 0,48



Area [mm²]: 13,45
Flow area [mm²]: 2,85

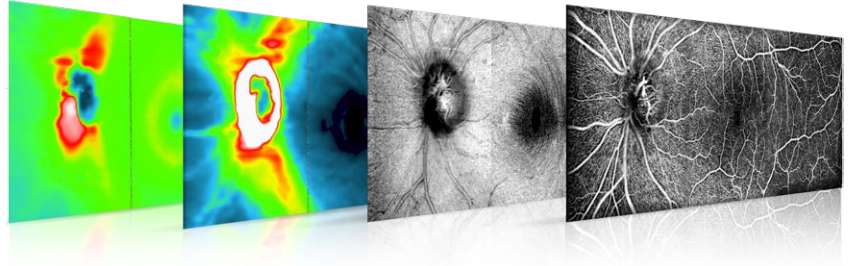
¹ an optional software module to purchase.

ANGIOGRAPHY MOSAIC¹

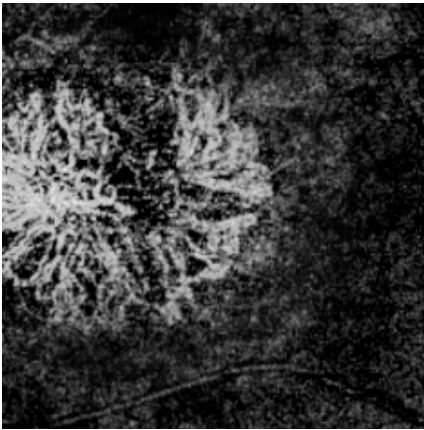
The Angiography mosaic delivers high-detail images over a large field of the retina. Available modes allow to see predefined region of the retina in a convenient way.



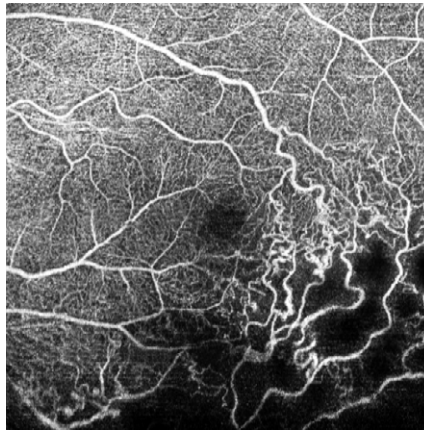
Manual mode allows to scan the desired region. Built-in analytics allow to see vascular layers, enface or thick-ness maps.



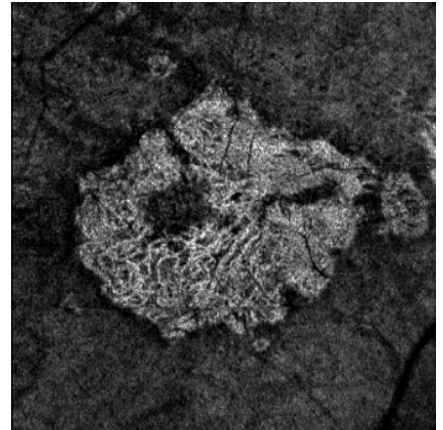
CNV



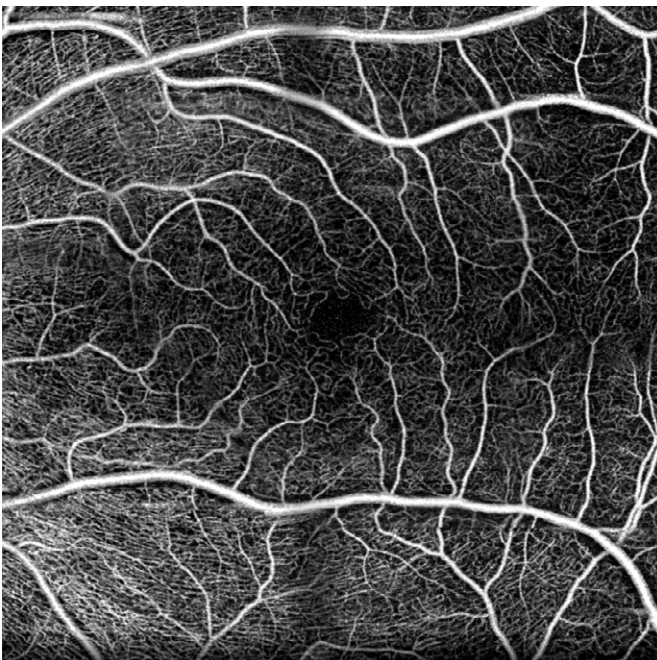
BRVO



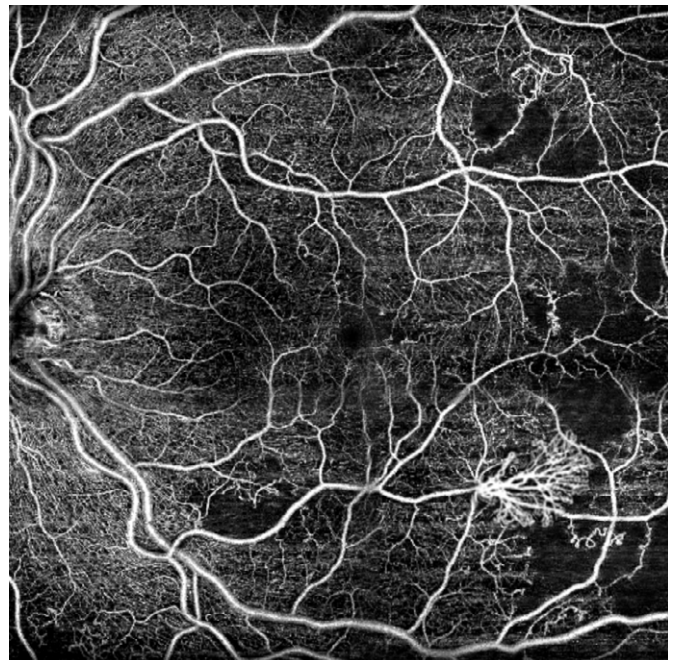
GA



Healthy patient, Angio Mosaic mode: 7x7 mm



PDR, Angio Mosaic mode: 10x10 mm



*Images courtesy of Bartosz L. Sikorski MD, PhD

¹ an optional software module to purchase.

REVO *lution continues*

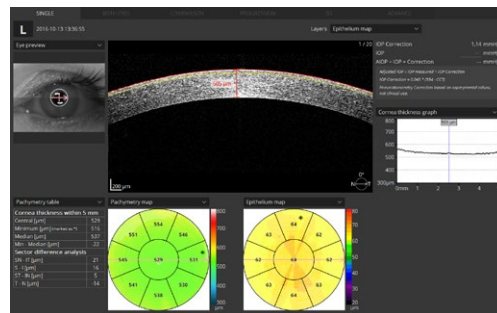
ANTERIOR

For a standard anterior examination, an additional lens or attachment is not required. This allows the examiner to quickly complete the scanning procedure.

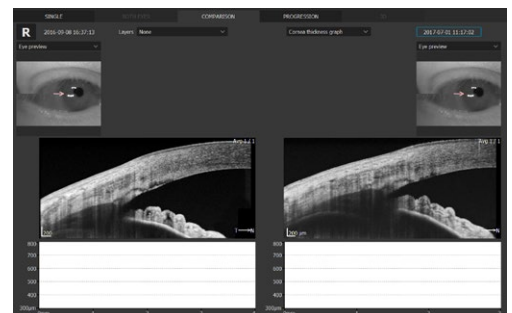
Presentation of the results for both eyes allows quick and precise evaluation of the condition of the patient's anterior segment.

Epithelium and Pachymetry map are included in the standard package.

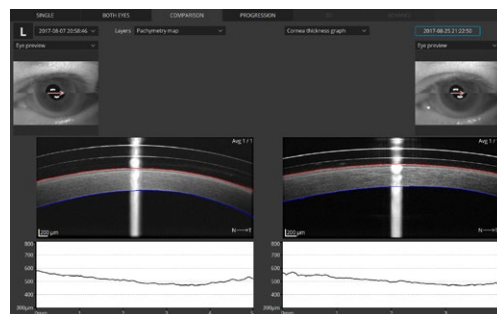
Cornea Single



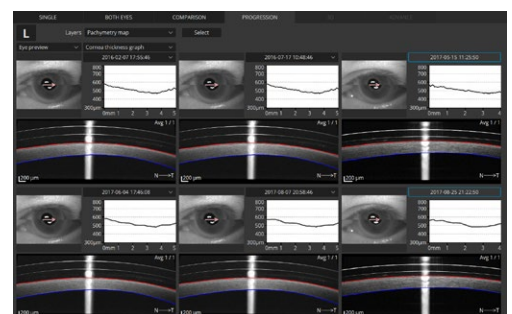
Angle Both



Comparison

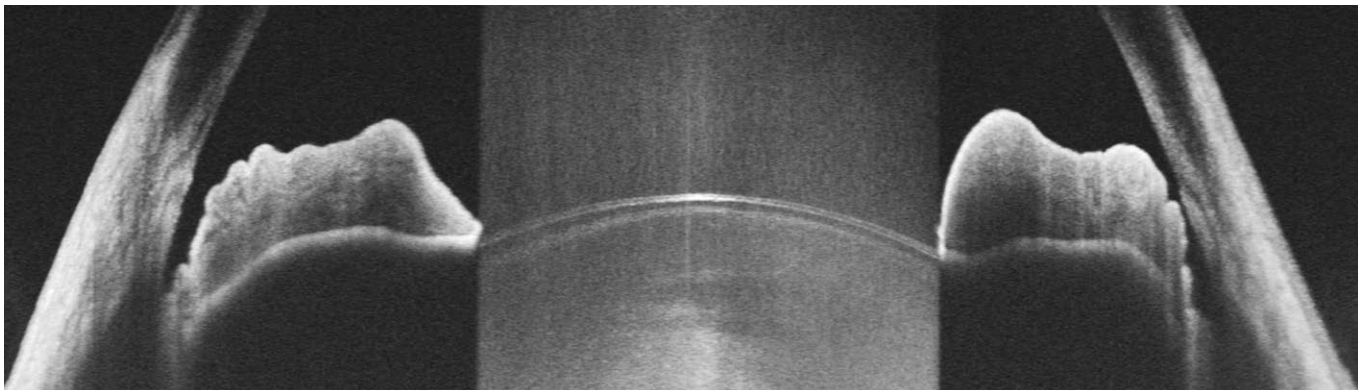


Progression

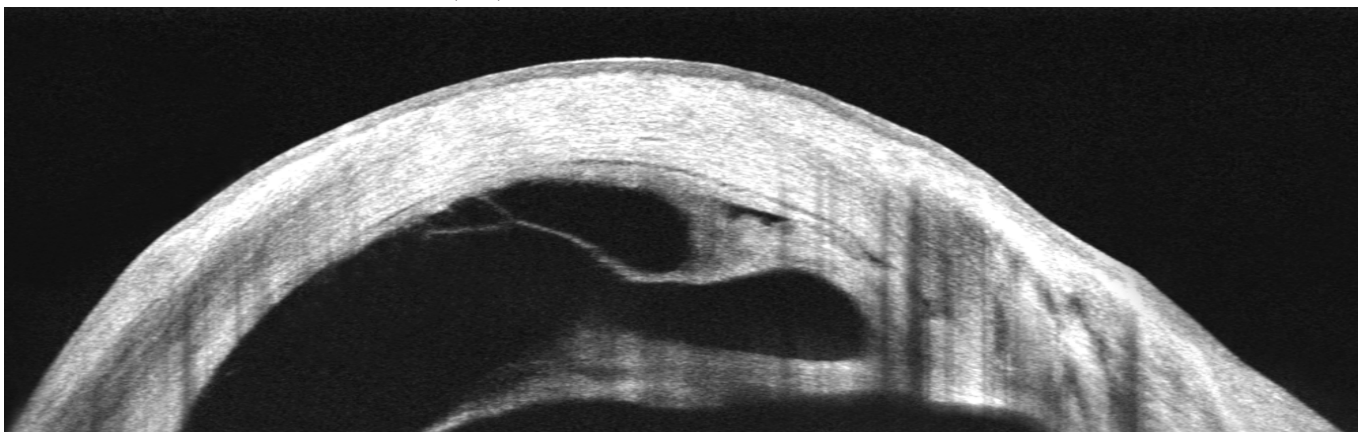


An additional adapter included in the package increases the range of clinical application in Anterior chamber observation.

Angle to Angle scan, narrow angles



Wide cornea scan, Descemet's membrane detachment (DMD) and iridocorneal adhesions



TOPOGRAPHY OCT¹

T-OCT™ is a pioneering way to provide detailed corneal Curvature maps by using posterior dedicated OCT. Anterior, Posterior surface and Corneal Thickness allow to provide the True Net Curvature information. With Net power, the precise understanding of the patient’s corneal condition comes easily and is free of errors associated with modelling of posterior surface of the cornea. SOCT T-OCT module provides Axial maps, Tangential maps, Total Power map, Height maps, Epithelium and Corneal thickness maps.

Corneal topography module clearly shows the changes in the cornea on the difference map view. Customize your

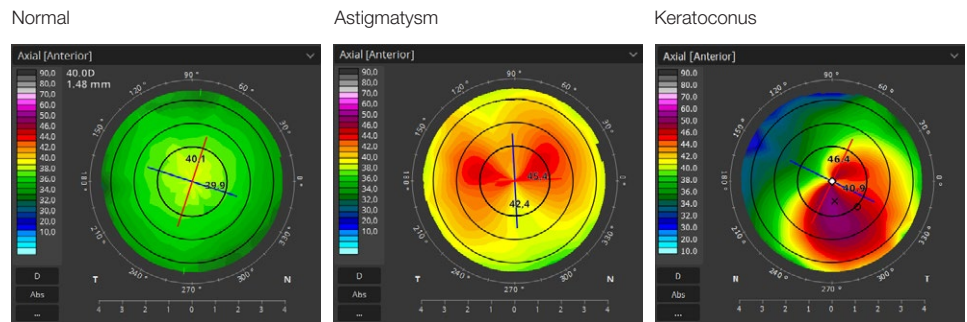
favoured view by selecting a variety of available maps and display options. Fully Automatic module capture with examination time of up to 0.3 sec makes testing quick and easy.

Topography module provides:

- Full featured Corneal mapping of Anterior, Posterior and Real
- Precise Astigmatism Display Option (SimK: Anterior, Posterior, Real, Meridian and Emi-Meridian ϕ 3, 5, 7 mm zones)

KERATOCONUS SCREENING

Easily detect and classified keratoconus with Keratoconus classifier. Classification based on KPI, SAI, DSI, OSI and CSI. In the early stages of keratoconus the results can be complemented by Epithelium and Pachymetry maps.

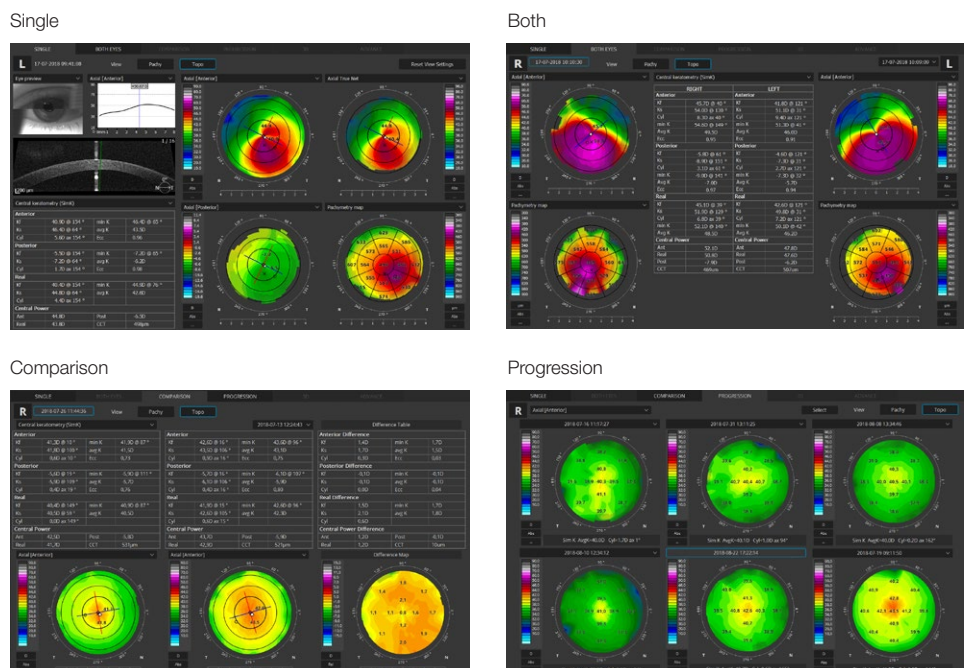


COMPARE THE EXAMS

Comprehensive software features a range of selectable views: Single, Both. See details on standard Single view and easily see corneal asymmetry on the Both view.

The follow-up feature in to the T-OCT™ module, allows fully compare the changes in the corneal topography over time for:

- LASIK undergone patients
- Keratoconus patients
- The contact lens wearers



¹ an optional software module to purchase..

REVO *lution continues*

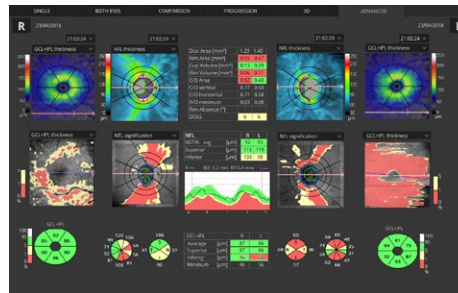
GLAUCOMA

Comprehensive glaucoma analytical tools for quantification of the Nerve Fiber Layer, Ganglion layer and Optic Head with DDLS allow for the precise diagnosis and monitoring of glaucoma over time.

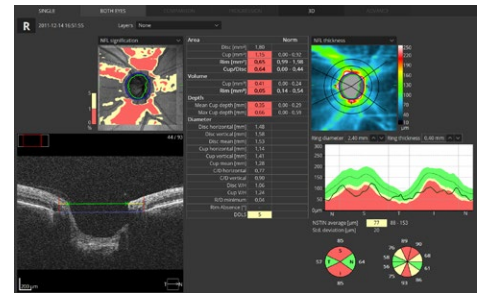
With the golden standard 14 optic nerve parameters and a new Rim to Disc and Rim Absence the description of ONH condition is quick and precise.

Advanced view which provides combined information from Retina and Disc scan to integrate details of the Ganglion cells, RNFL, ONH in a wide field perspective for comprehensive analysis.

Advance Retina & ONH

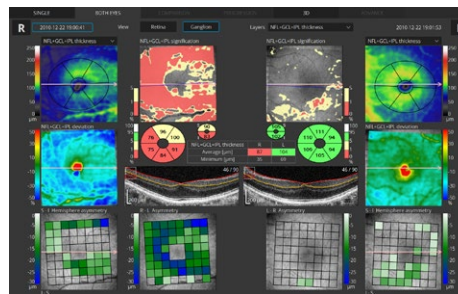


ONH Single

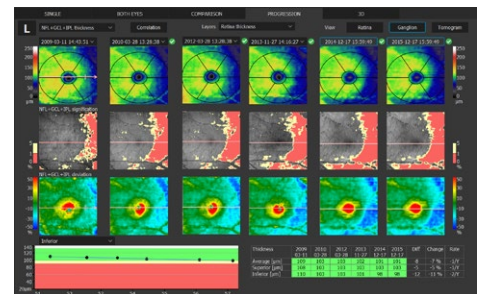


Asymmetry Analysis of Ganglion layers between hemi-spheres and between eyes allows easier identification and detection of glaucoma in early stages and in non-typical patients.

Ganglion Both

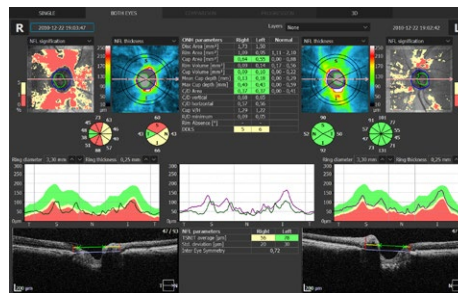


Ganglion Progression

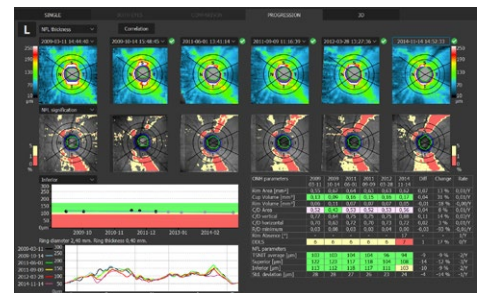


Implemented the DDLS - Disc Damage Likelihood Scale which use 3 separate classification for small, average and large discs. It supports the practitioner in a quick and precise evaluation of the patient's glaucomatous disc damages.

ONH Both



ONH Progression

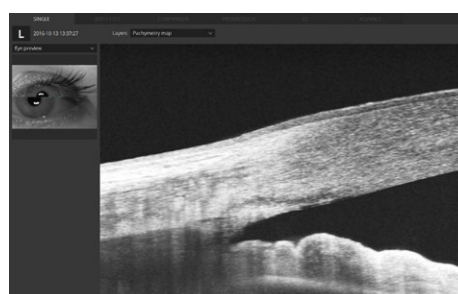


COMPLET YOUR GLAUCOMA REPORT

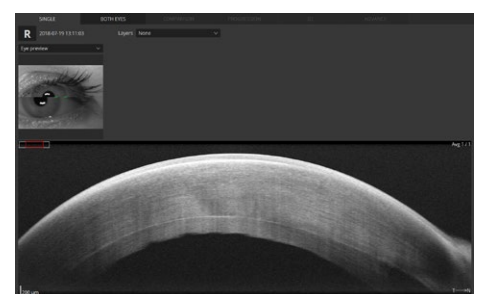
To eliminate common problem with the understanding of the patient's IOP pachymetry module provides IOP Correction value. With the implemented Adjusted IOP formula you can quickly and precisely understand the measured IOP value.

As the Pachymetry and Anterior Chamber Angle Verification require no additional attachments, the predefined Glaucoma protocol, which consists of Retina, Disc and Anterior scans, can be done automatically to reduce patient chair time.

Closing angle



Anterior single view



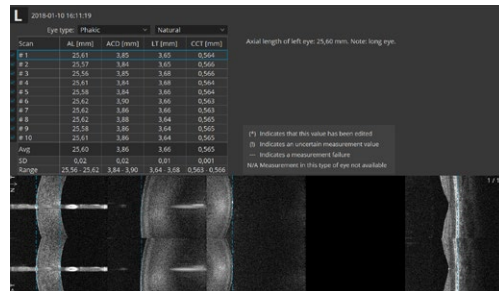
* Images courtesy of Prof. Edward Wylegala MD, PhD

BIOMETRY OCT¹

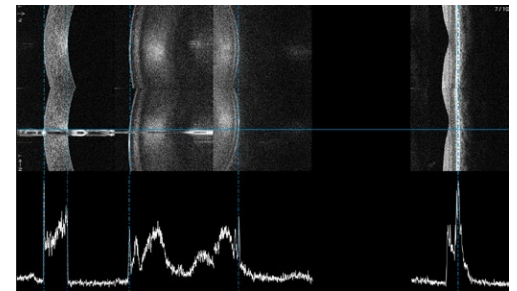
B-OCT® Innovative method of using the posterior OCT device to measure ocular structure along eye axis.

OCT Biometry provides a complete set of Biometry parameters: Axial Length AL, Central Cornea Thickness CCT, Anterior Chamber Depth ACD, Lens Thickness LT.

Single view



Result review

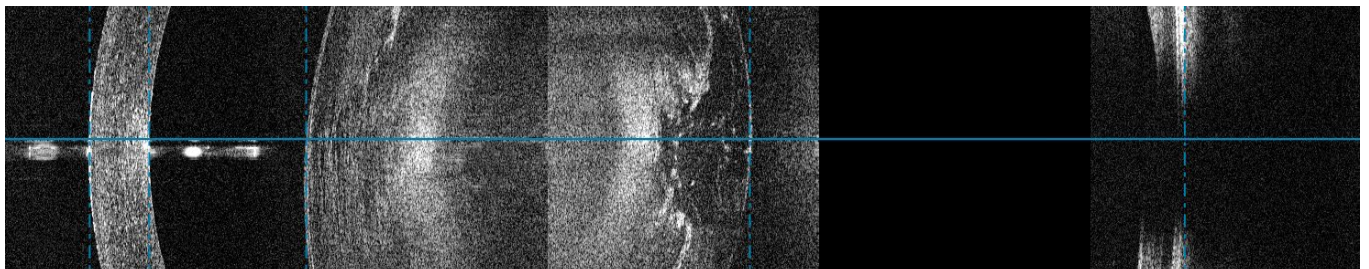


VERIFY YOUR MEASUREMENT VISUALLY

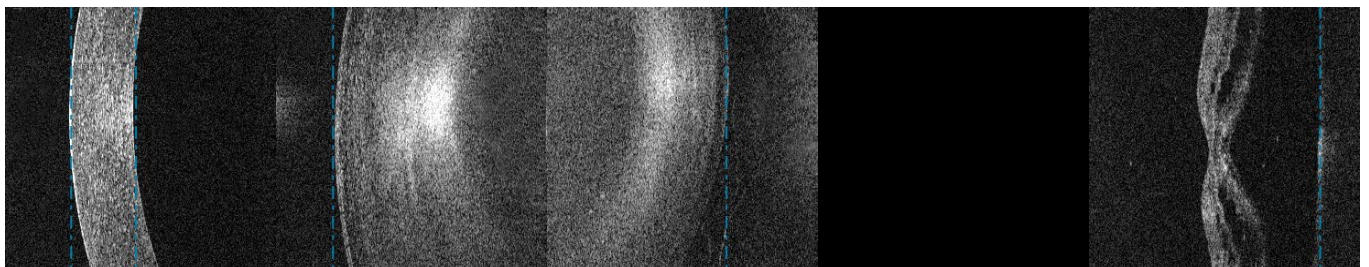
All measurement callipers are shown on all boundaries of OCT image provided by REVO. Now, you can visually verify, identify and if need be, make corrections as to which structure of the eye has been measured. With a simple cursor shift it possible to precisely set boundaries for every difficult patient with 5µm axial resolution.

From now on you can eliminate the common uncertainty as to how the optical biometer classifies the boundaries in non-typical patients.

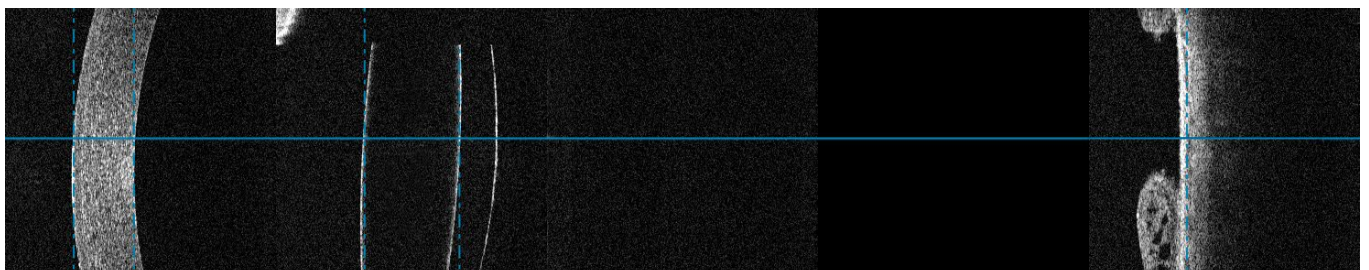
Dense cataract and high myopia



Retinal detachment



PPV and Macular Hole



**Images courtesy of Bartosz L. Sikorski MD, PhD*

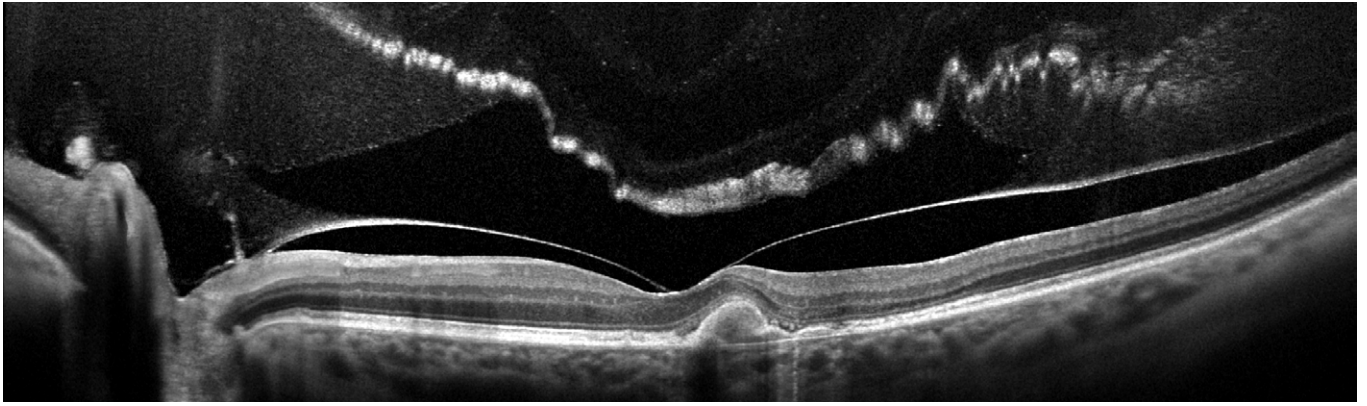
DICOM, EMR, NETWORK ITEGRATION

A proficient networking solution increases productivity and enhances the patient experience. It allows you to view and manage multiple examinations from review stations in your practice. It effortlessly facilitates patient education by allowing you to interactively show examination results to patients. Every practice will have different requirements which we can cater for by tailoring a bespoke service. DICOM connectivity allows the connection of the REVO into large hospital medical systems. It is possible to send worklists (MWL) and reports (C-storage) or the whole examination to viewing stations. CMDL interface enables the integration of the REVO into practice management systems. There is no additional charge for the networking and DICOM functionality.

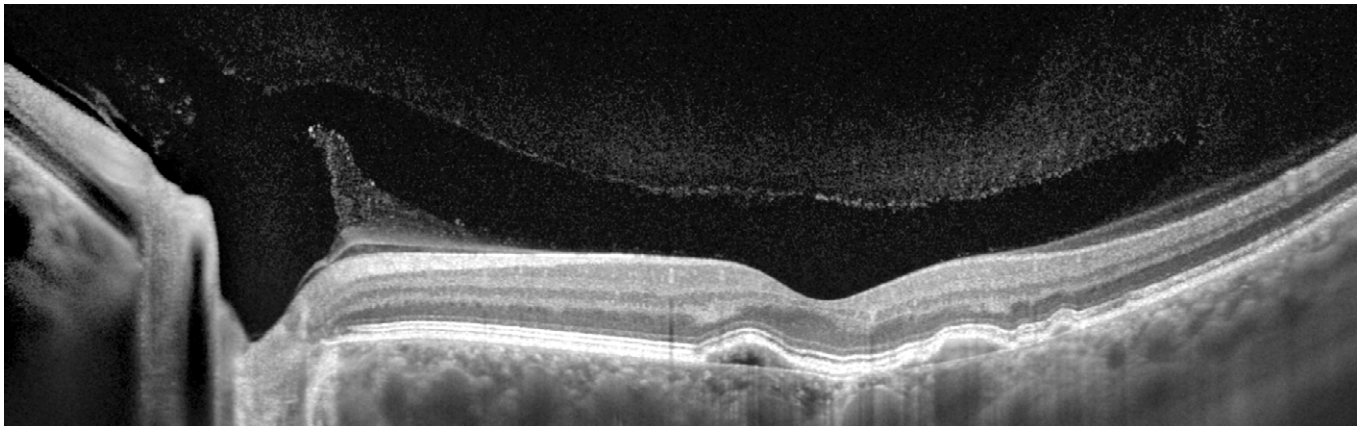
¹ an optional software to purchase

CLINICAL IMAGES

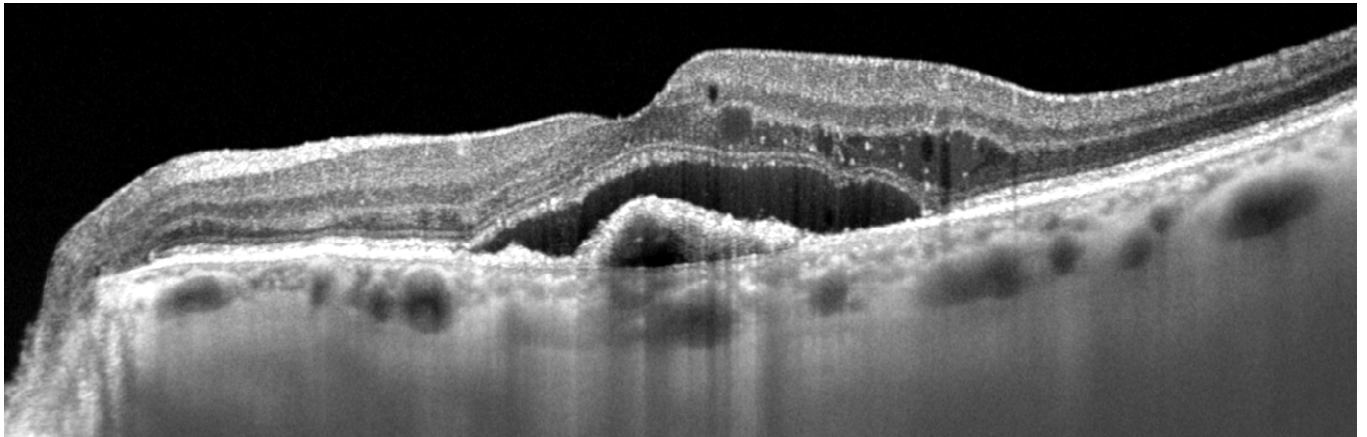
Central 12 mm scan



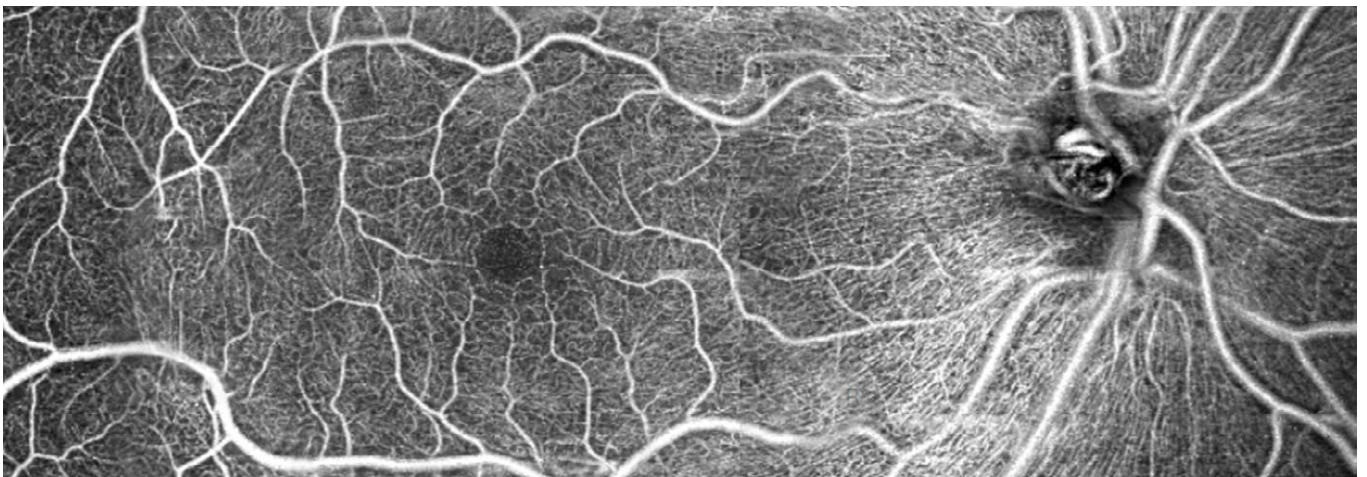
Central 12 mm scan



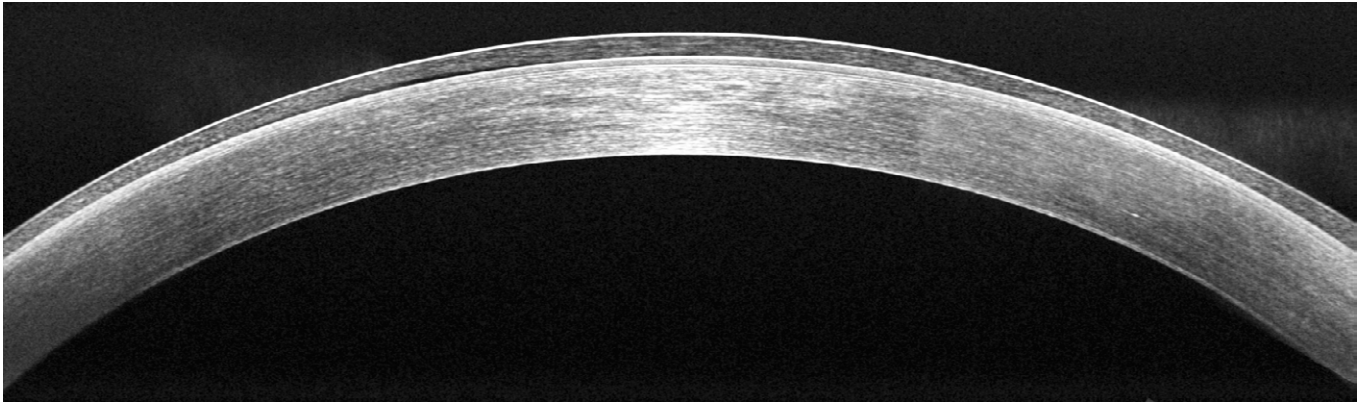
Choroidal observation



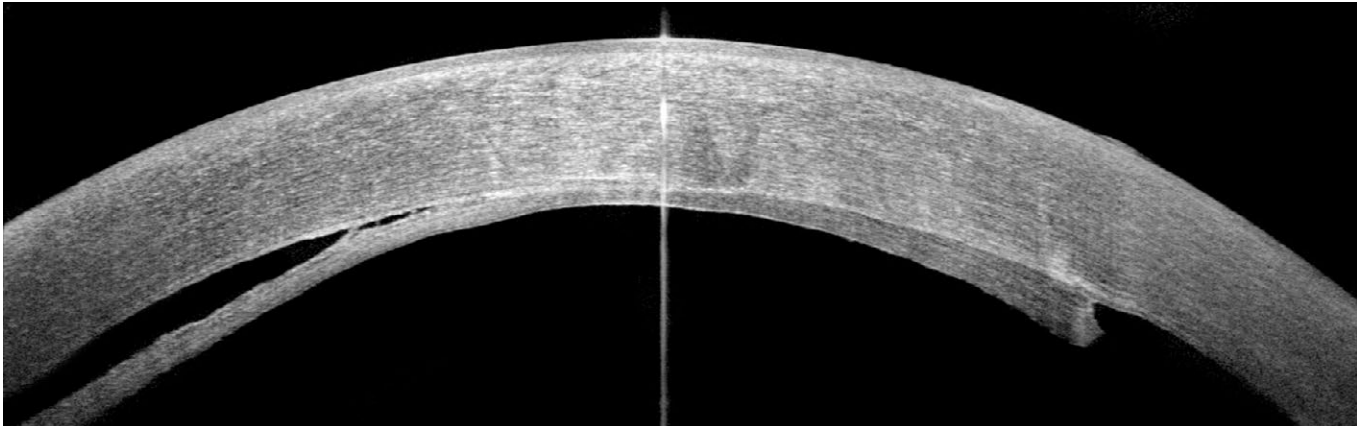
Sample of angio Manual mode



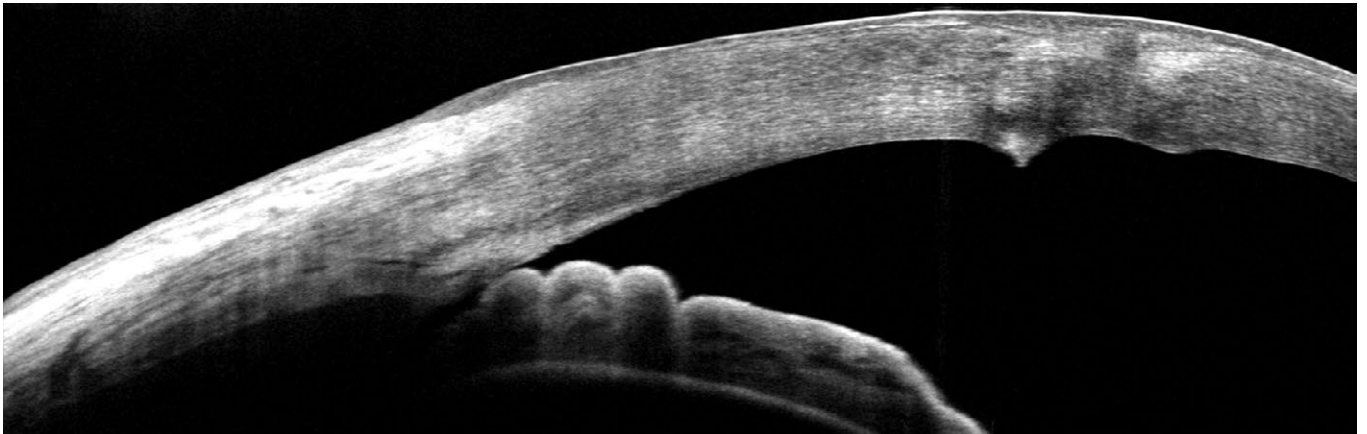
Cornea scan, Fuchs' Endothelial Corneal Dystrophy



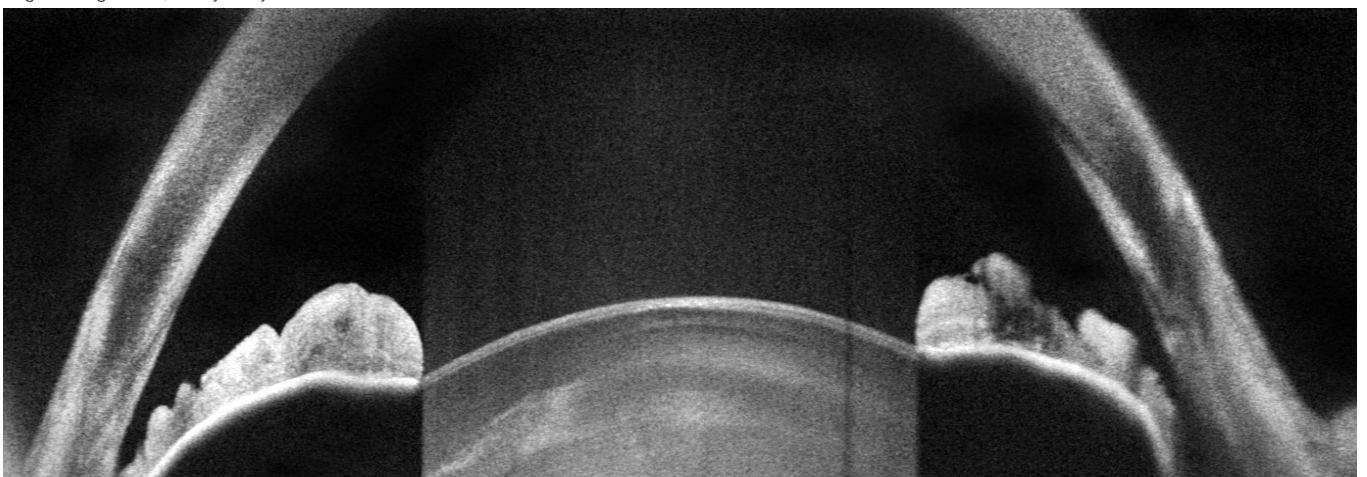
Cornea scan, Posterior graft (DSAEK) detachment



Anterior scan, Cornea Guttata with corneal scarring



Angle to Angle scan, Ciliary Body visible



Technology	Spectral Domain OCT
Light source	SLED, wavelength 830 nm
Bandwidth	50 nm half bandwidth
Scanning speed	110 000 measurements per second
Axial resolution	5 µm in tissue 2.6 µm digital
Transverse resolution	12 µm, typical 18 µm
Overall scan depth	2.4 mm
Minimum pupil size	3 mm
Focus adjustment range	-25 D to +25 D
Scan range	Posterior 5–12 mm, Angio 3–9 mm, Anterior 3–16 mm
Scan types	3D, Angio ¹ , Radial (HD), B-scan (HD), Raster (HD), Cross (HD)
Fundus image	Live Fundus Reconstruction
Alignment method	Fully automatic, Automatic, Manual
Retina analysis	Retina thickness, Inner Retinal thickness, Outer Retinal thickness RNFL+GCL+IPL thickness, GCL+IPL thickness, RNFL thickness, RPE deformation, IS/OS thickness
Angiography OCT ¹	Superficial Plexus, Deep Plexus, Outer Retina, Choriocapillaries, Depth Coded, Custom, Enface, Thickness; FAZ, VAS, NFA tools
Angiography mosaic	Acquisition method: Auto, Manual Predefined auto modes: 7×7mm, 10×6 mm, 10×10 mm, 12×5 mm, Manual
Glaucoma analysis	RNFL, ONH morphology, DDLS, OU and Hemisphere asymmetry, Ganglion analysis as RNFL+GCL+IP and GCL+IPL
Biometry OCT ¹	AL, CCT, ACD, LT
Corneal Topography Map ¹	Axial [Anterior, Posterior], Refractive Power [Kerato, Anterior, Posterior, Total], Net Map, Axial True Net, Equivalent Keratometer, Elevation [Anterior, Posterior], Height
Anterior	Pachymetry, LASIK Flap assesment, AIOP, Angle Assessment, AOD 500/750, TISA 500/750
Anterior Wide Scan	Angle to Angle view (Adapter required)
Connectivity	DICOM Storage SCU, DICOM MWL SCU, CMDL, Networking
Dimensions (W×D×H)	382×549×462 mm
Weight	23 kg
Fixation target	OLED display (the target shape and position can be changed), external fixation arm
Power supply	100–240 V, 50/60 Hz
Power consumption	115–140 VA

¹ optional software module

www.optopol.com

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