NEW

iTracking™

REVO nx 130

THE LATEST OCT STANDARDS

AS SIMPLE AS PRESSING *the start button*

OPTOPOL technology

REVOlution 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 fi rst 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 provides a full functionality scanning from the retina to the cornea. It brings benef ts 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, guides the patient through the process with vocal messages to increase comfort and reduce 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.

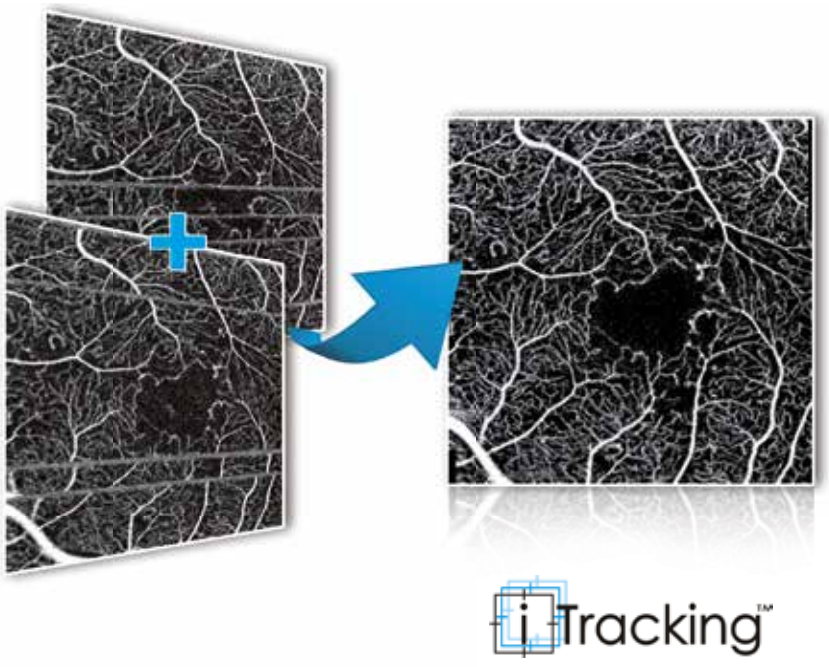
With a small system footprint and access for both the operator and the patient needed from only one side, space saving is further enhanced. And with a single cable connection the REVO NX can easily fit into the smallest of examination rooms. Revo's variety of examination and analysis tools enables it 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. Enhanced scanning mode allows to improve penetration throw choroid or reveal vitreous thine details.

i Tracking™

iTracking™ technology compensates involuntary eye movements and blinks. When OCT scan is used each anatomical region is acquired twice automatically. The system immediately creates an artifactfree MC examination using the Motion Correction Technology™. The elimination of eye movement and blinking artifacts ensures the highest resolution of Angio OCT images without patient inconvenience. Clear OCT A data set makes it easier to interpret the condition of the retina vasculatur.

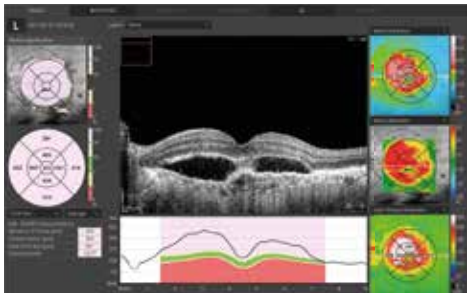


REVO NX 130 offers the latest standards available in OCT technology

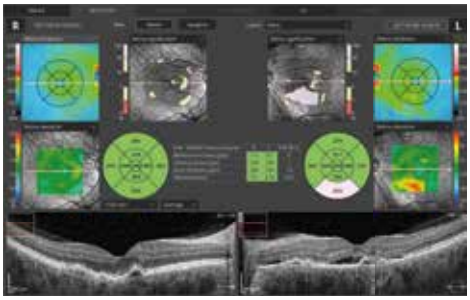
RETINA

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

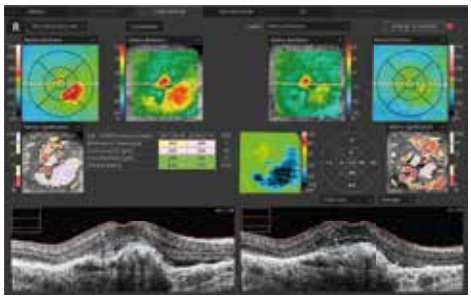
Single



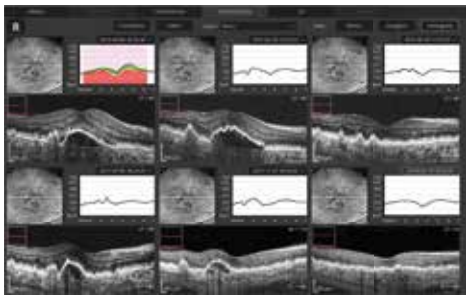
Both



Comparison



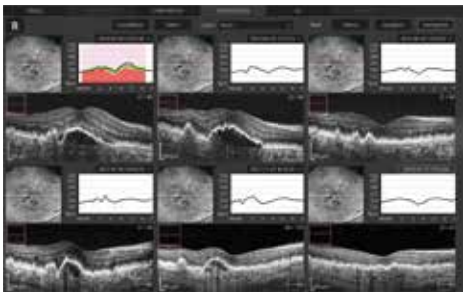
Progresja



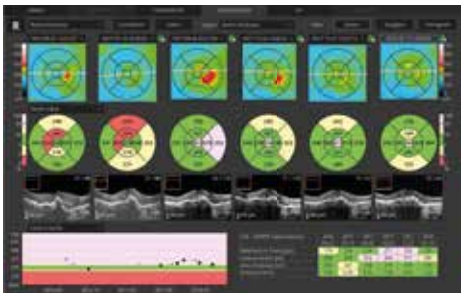
FOLLOW UP

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 Quantif cation

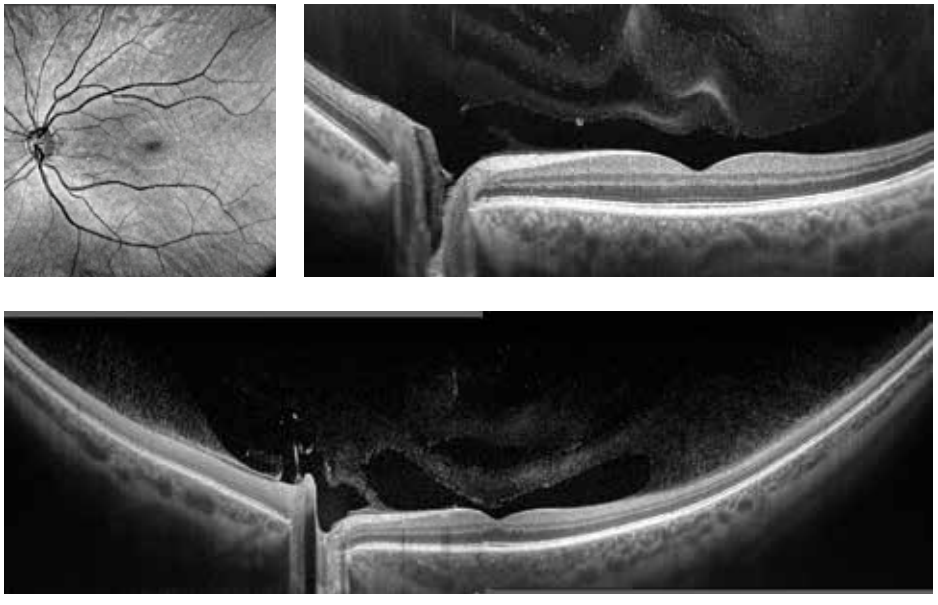


WIDEFIELD SCAN

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.



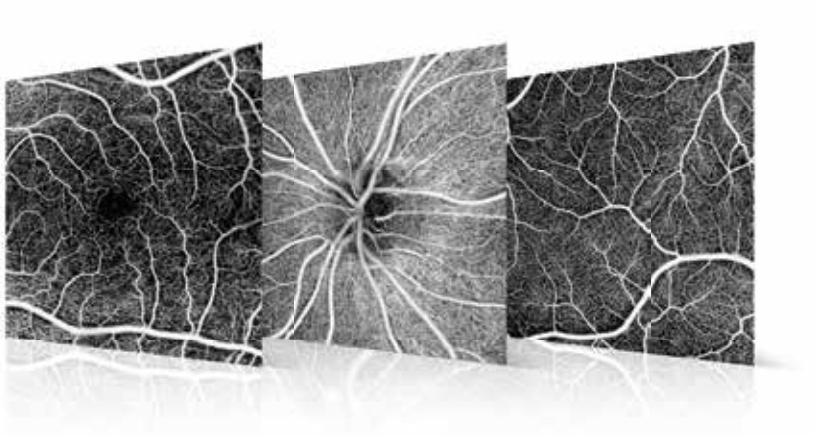
Combined view of two examinations of peripheral scan 12 mm + 12 mm. Done in external software.

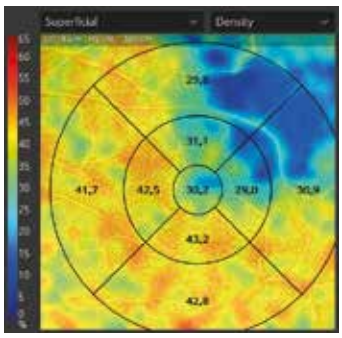
REVOlution continues

ANGIOGRAPHY SOCT[1]

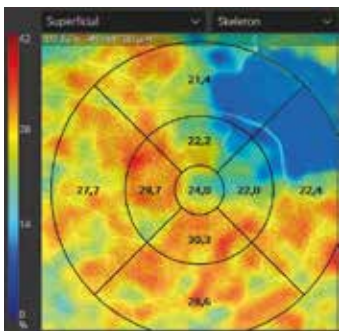
This non-invasive dye free technique allows the visualization of the microvasculature of the retina. Both blood flow and structural visualiza-tion give additional diagnostic information about many retinal diseases. Angiography scan allows assessment of the structural vasculature of the macula, the periphery 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.





Vessel Density Map



Skeleton Density map

QUANTIFICATION

The quantification tool provides a quantification of vasculature in specific sectors and a heat map corresponding to the analysed vasculature. Density display - vessel Area Density - it is defined as the total area of perfused vasculature per unit area in a region of measurement. Skeleton display - Skeleton Area Density – it is defined as the total area of skeletonized vasculature per unit area in a region of measurement. The skeleton density changes the large vessels into a 1 pixel width and makes analysis more sensitive to small vasculature as the large vessels are the size of 1 pixel.

Quantification is available specific layer in Angio OCT exam:

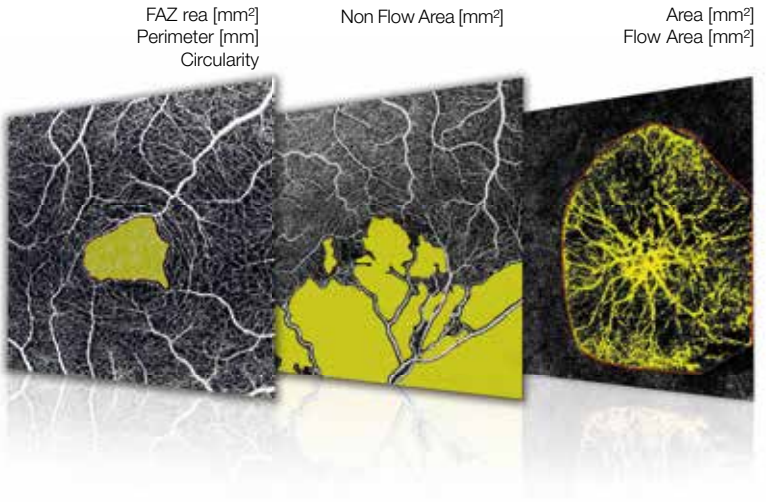
- Retina: Superficial and Deep
- Disc RPC

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.

NFA – Non Flow Area measurement tool allows to quantify the Non Flow Area on the OCT Angio examination. It provides the sum of all marked areas.



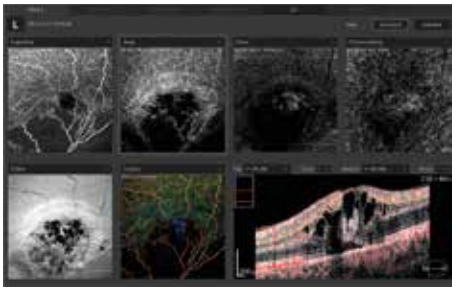
[1] an optional software module to purchase.

REVO NX 130 offers the latest standards available in OCT technology

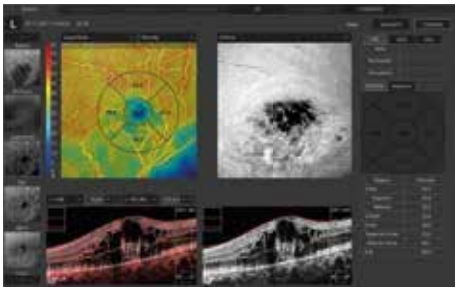
MOST COMPLETE SET OF ANGIO OCT ANALYSIS VIEWS

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

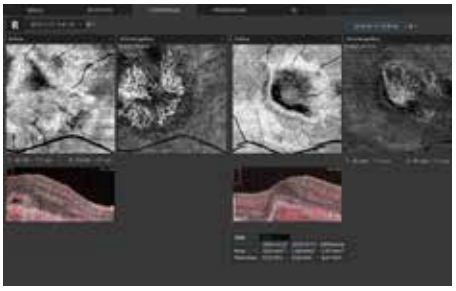
Standard Single View



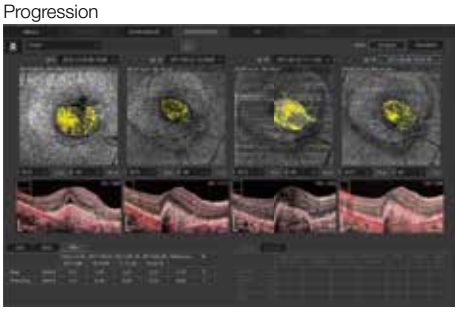
Detailed Single View



Comparison



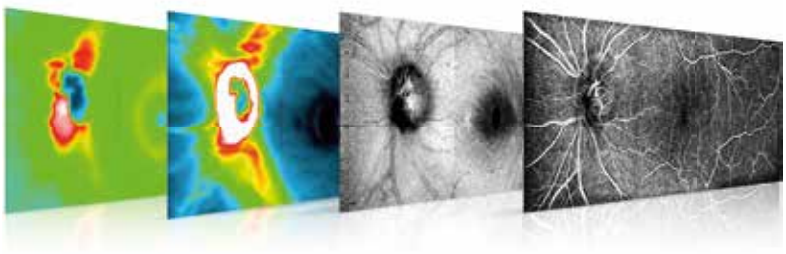
Progression



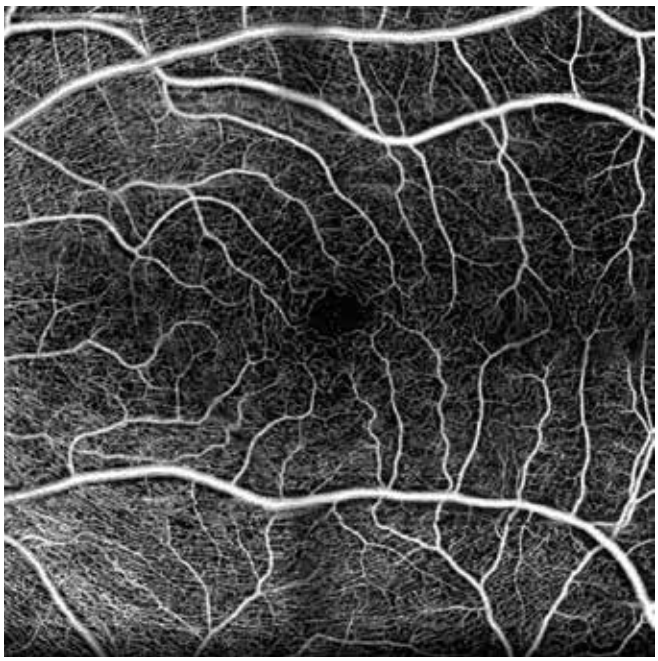
ANGIOGRAPHY MOSAIC[1]

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.

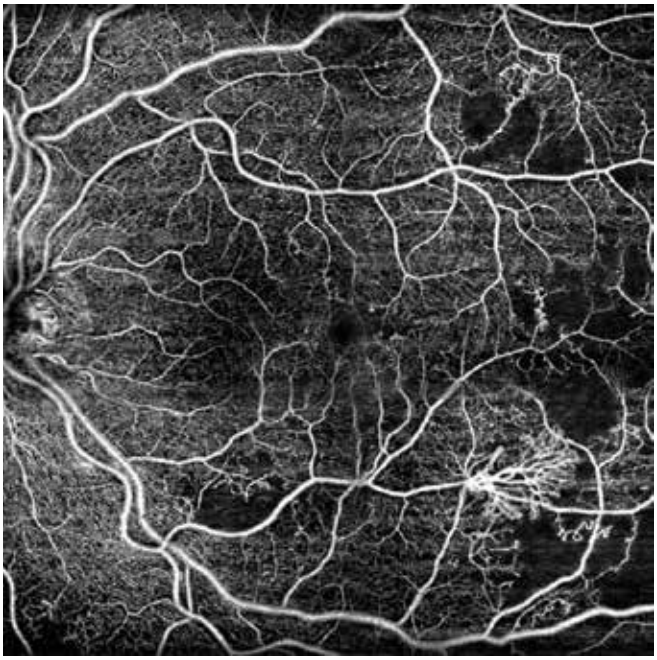
Manual mode allows to scan the desired region.Built-in analytics allow to see vascular layers, enface or thick-ness maps.



Healthy patient, Angio Mosaic mode: 7×7 mm



PDR, Angio Mosaic mode: 10x10 mm



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

[1] an optional software module to purchase.

REVOlution continues

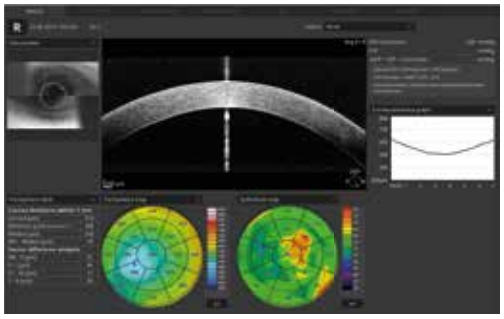
ANTERIOR

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

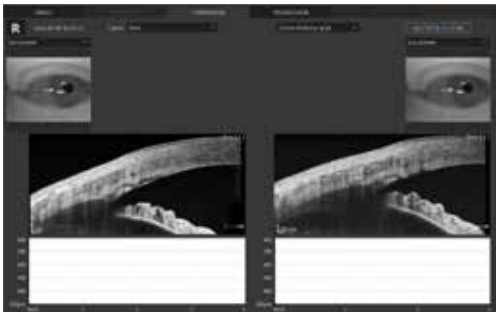
Presentation of the results for both eyes allows quick and precise evaluation of the condition of the patient's anterior segment.

Epithelium and Pachymetry map are included in the standard package.

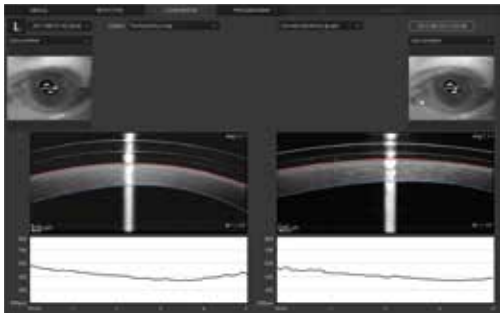
Cornea Single



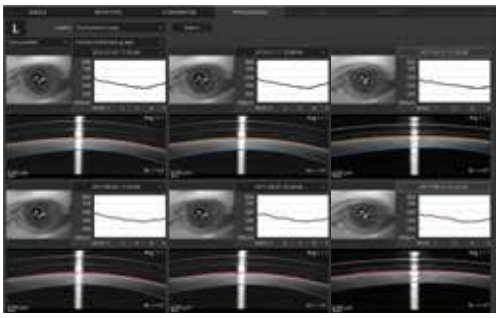
Both



Comparison

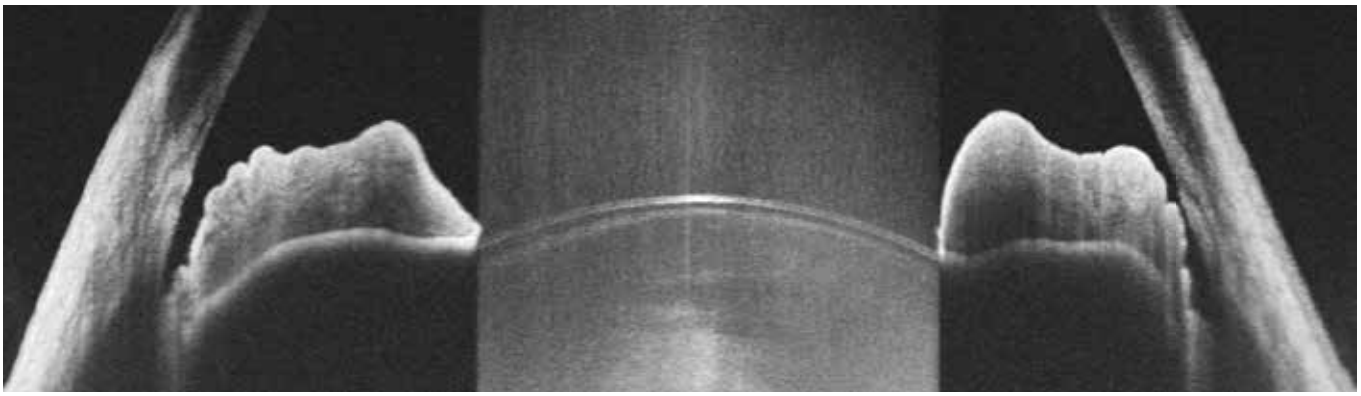


Progression

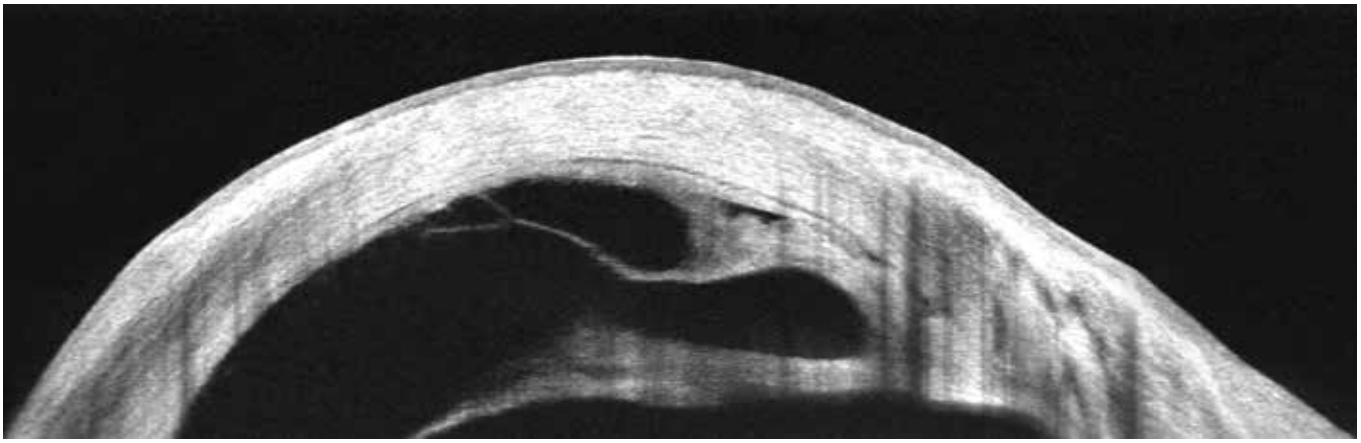


An additional adapter included in the package increases the range of clinical application in Anterior chamber observation.

OCT Gonioscopy*



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



** Images courtesy of Prof. Edward Wylęgała MD, PhD*

TOPOGRAPHY OCT[1]

T-OCT™ is a pioneering way to provide detailed corneal Curvature maps by using posterior dedicated OCT. Anterior, Posterior surfaces and Corneal Thickness allow to provide the True Net Curvature information. With Net power, the precise understading 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 favoured view by s electing a variety of available maps and display options. Fully Automatic module capture with examination time of up to 0.2 sec makes testing quick and easy.

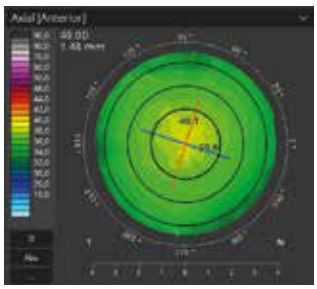
Topography module provides:

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

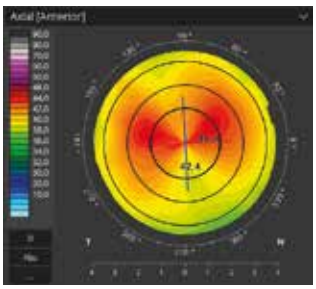
KERATOCONUS SCREENING

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

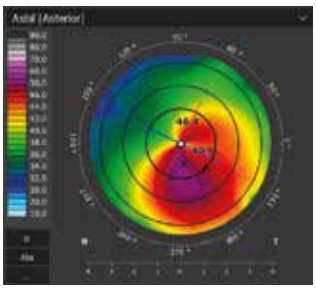
Normal



ATR Astigmatysm



Keratoconus



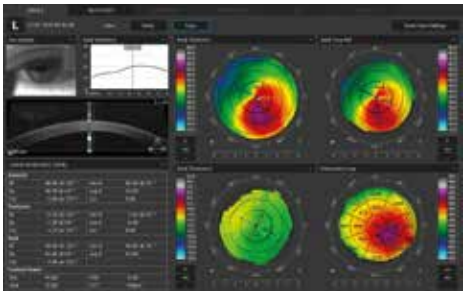
COMPARE THE EXAMS

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

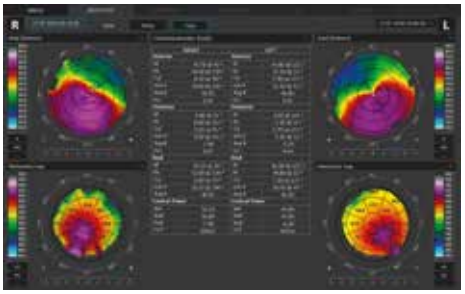
The follow-up feature in to the T-OCT™ module, allows fully compare the changes in the corneal topography over time for:

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

Single

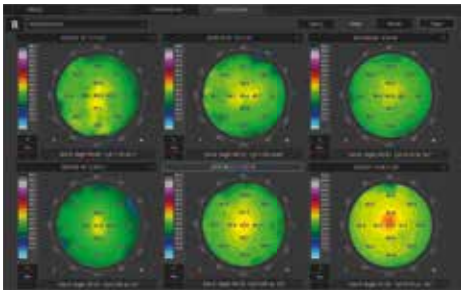


Both



Comparison

Progression



[1] an optional software module to purchase.

REVOlution continues

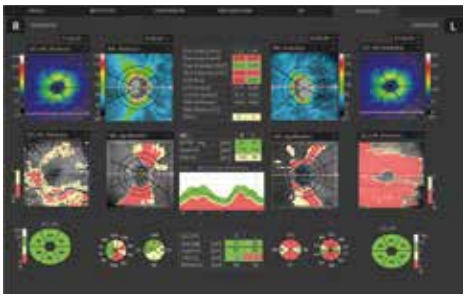
GLAUCOMA

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.

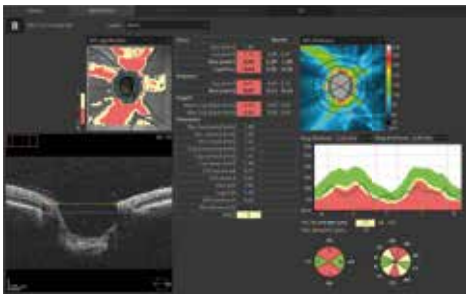
With the golden standard 14 optic nerve parameters and a new Rim to Disc and Rim Absence the description of ONH condition is quick and precise.

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 for both eyes.

Advance Retina & ONH

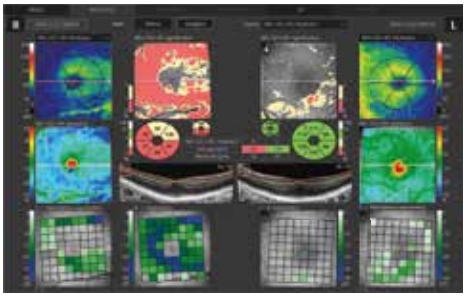


ONH Single

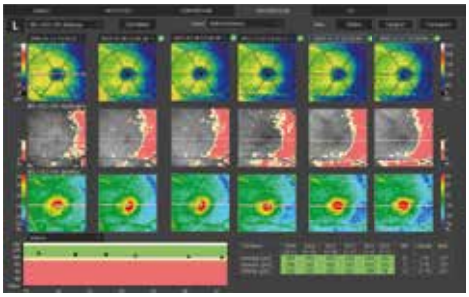


Asymmetry Analysis of Ganglion layers between hemi-spheres and between eyes allows easier identification and detection of glaucoma in early stages and in non-typical patients.

Ganglion Both



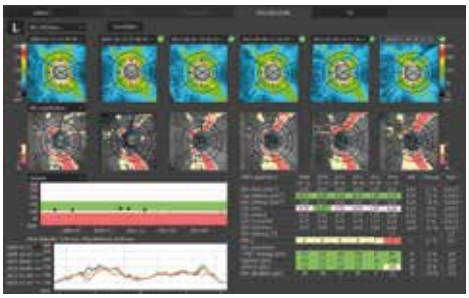
Ganglion Progression



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

ONH Both

ONH Progression

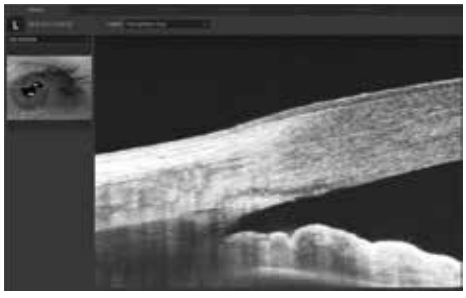


COMPLET YOUR GLAUCOMA REPORT

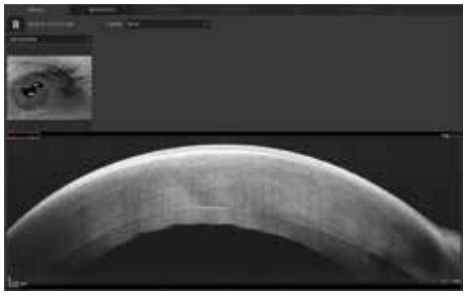
To eliminate common problem with the understanding of the patient's IOP pachymetry module provides IOP Correction value. With the implemented Adjusted IOP formula you can quickly and precisely understand the measured IOP value.

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.

Narrowing angle



Anterior single view



** Images courtesy of Prof. Edward Wylęgała MD, PhD*

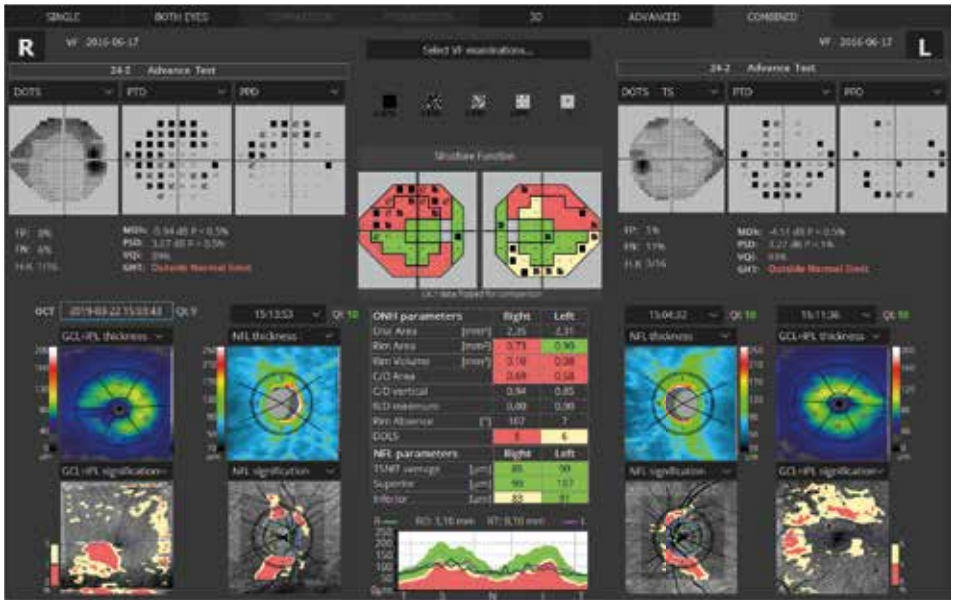
COMPREHENSIVE GLAUCOMA SOLUTION

STRUCTURE & FUNCTION - Combined OCT and VF results analysis

Invaluable combination of information about the functional quality of vision with comprehensive data on retinal Ganglion Cells, RNFL and Optic Nerve Head for both eyes on a single report page. The S&F report contains the following:

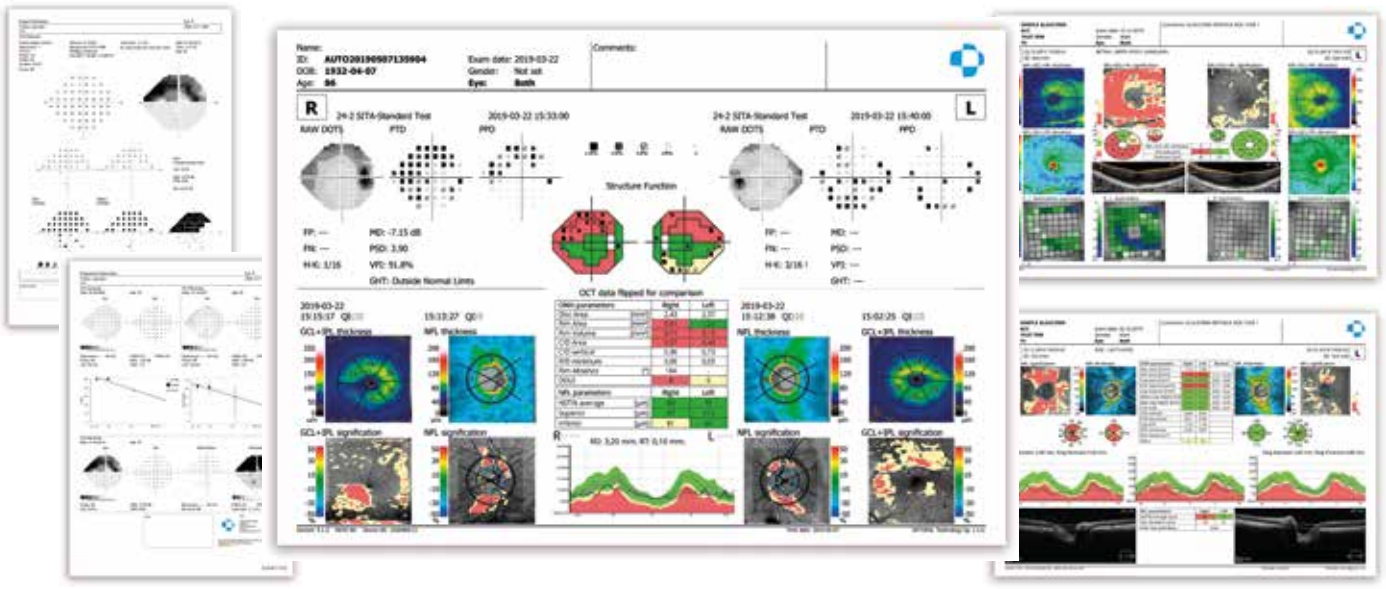
- VF sensitivity results (24-2/30-2 or 10-2)
- Total and Pattern Deviation probability graphs for VF results
- Reliability and Global indices for VF results
- Combined map of Structure & Function
- Ganglion cell analysis (GCL+IPL or NFL+GCL+IPL)
- ONH and NFL analysis including charts and comparison tables
- NFL Asymmetry Plot
  The S&F report compares in a natural way the anatomical relationship between VF and RNFL/Ganglion maps.

Structure & Function



SINGLE PAGE REPORT

S+F provides quick and comprehensive single page report for glaucoma management.



* required connection with PTS software version 3.4 or higher

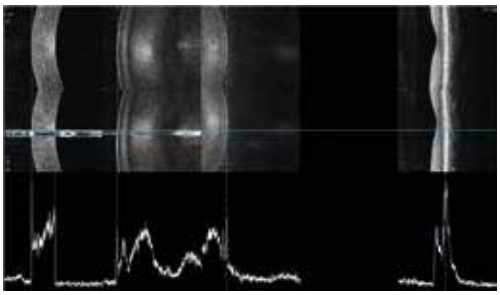
BIOMETRY OCT[1]

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

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

Single view

Result review

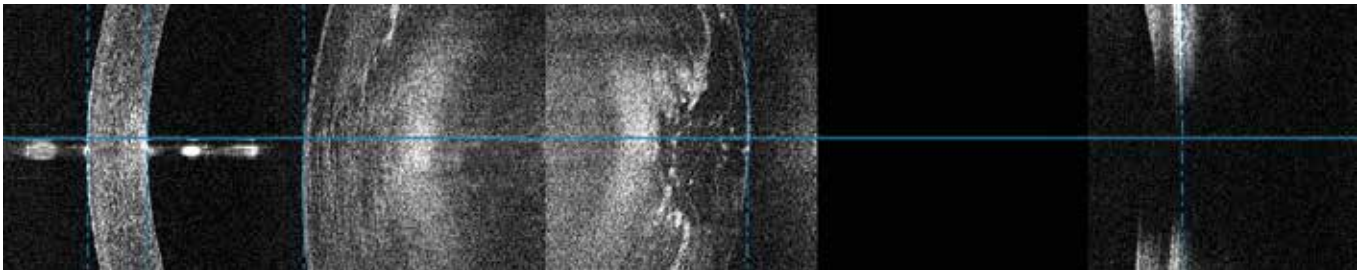


VERIFY YOUR MEASURMENT VISUALLY

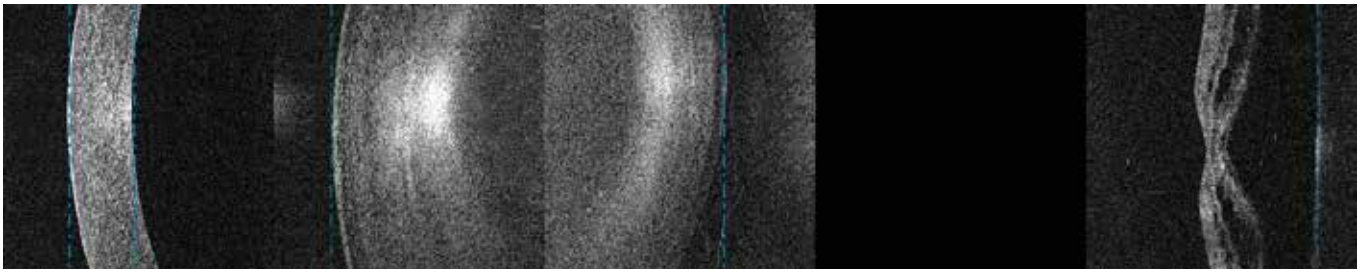
All measurement callipers are shown on all boundaries of OCT image provided by REVO. Now, you can visually verify, identify and if need be, make corrections as to which structure of the eye has been measured. With a simple cursor shift it possible to precisely set boundaries for every diff cult patient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

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

Dense cataract and high myopia



Retinal detachment



PPV and Macular Hole

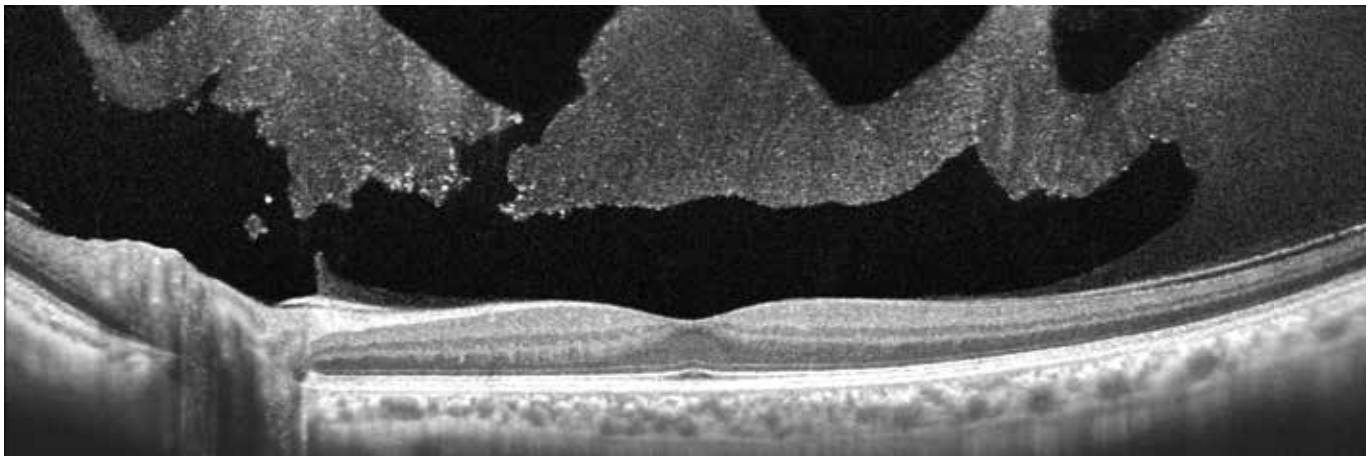
**Images courtesy of Bartosz L. Sikorski MD, PhD*

DICOM, EMR, NETWORK ITEGRATION

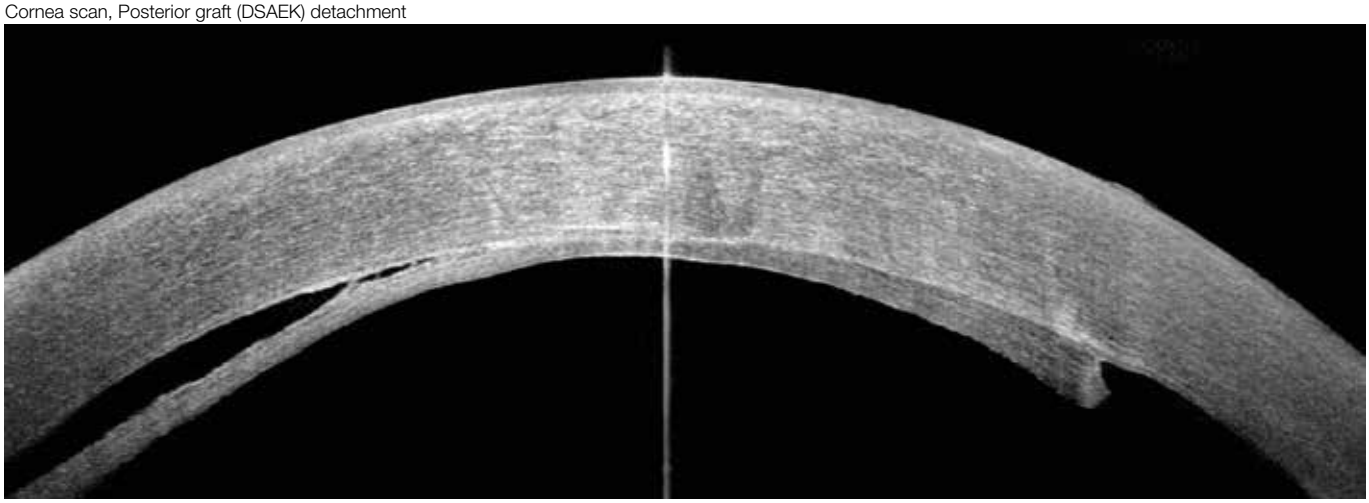
A prof cient networking solution increases productivity and enhances the patient experience. It allows you to view and manage multiple examinations from review stations in your practice. It effortlessly facilitates patient education by allowing you to interactively show examination results to patients. 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 medi--cal 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

Central 12 mm scan, Enhance Mode to provide vitreous and choroid details.

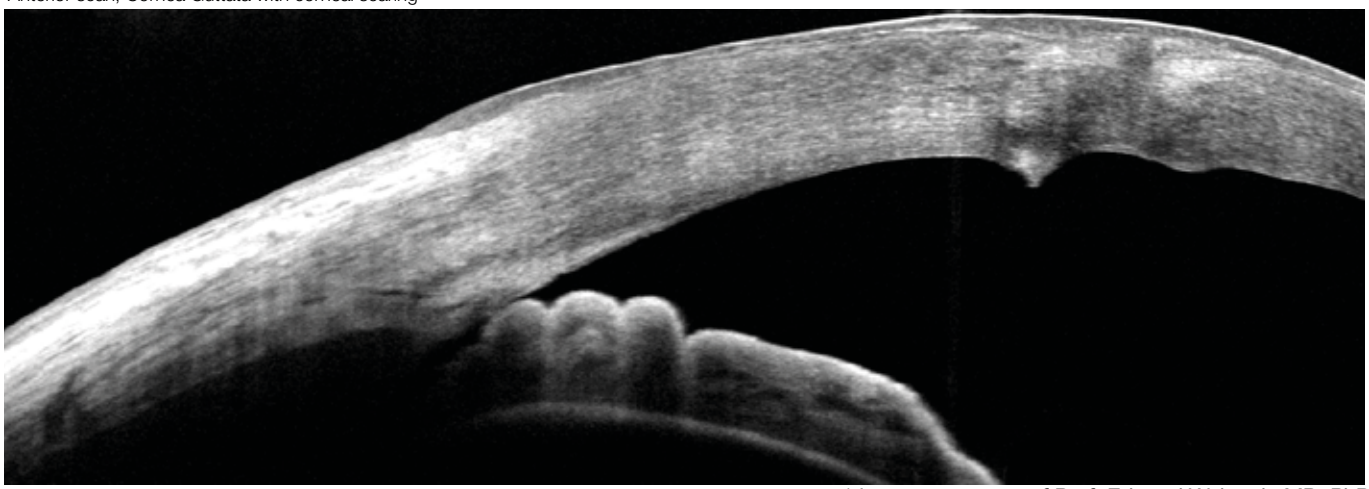


Cornea scan, Posterior graft (DSAEK) detachment



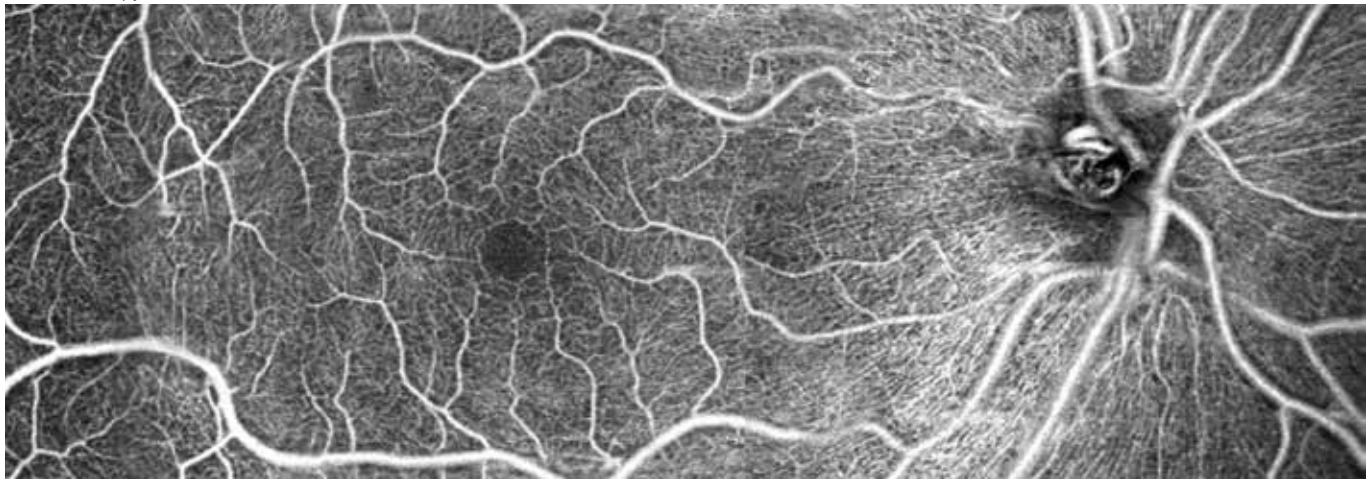
** Images courtesy of Prof. Edward Wylegała MD, PhD*

Anterior scan, Cornea Guttata with corneal scaring



** Images courtesy of Prof. Edward Wylegała MD, PhD*

OCT Gonioscopy



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

REVO nx 130

TECHNICAL SPECIFICATION

Technology:	Spectral Domain OCT
Light source:	SLED, wavelength 830 nm
Bandwidth:	50 nm half bandwidth
Scanning speed:	130 000 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 mm to 12 mm, Angio 3 mm to 9 mm, Anterior 3 mm to 16 mm
Scan types:	3D, Angio[1], Radial (HD), B-scan (HD), Raster (HD), Cross (HD), TOPO, AL, ACD
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]:	Superf cial Plexus, Deep Plexus, Outer Retina, Choriocapilaries, Depth Coded, Custom, Enface, Thickness; FAZ, VAS, NFA tools, Quantification: Vessel Area Density, Skeleton
Angiography mosaic:	Acquistion method: Auto, Manual Predef ned 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, Structure + Function[2]
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), Wide Cornea
Connectivity:	DICOM Storage SCU, DICOM MWL SCU, CMDL, Networking
Fixation target :	OLED display (the target shape and position can be changed), external f xation arm
Dimensions (W×D×H):	382 mm × 549 mm × 462 mm
Weight:	23 kg
Power supply :	100 V to 240 V, 50/60 Hz
Power consumption:	115 VA to 140 VA

[1] optional software module
[2] via connection with PTS software version 3.4 or higher

CE 0197

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