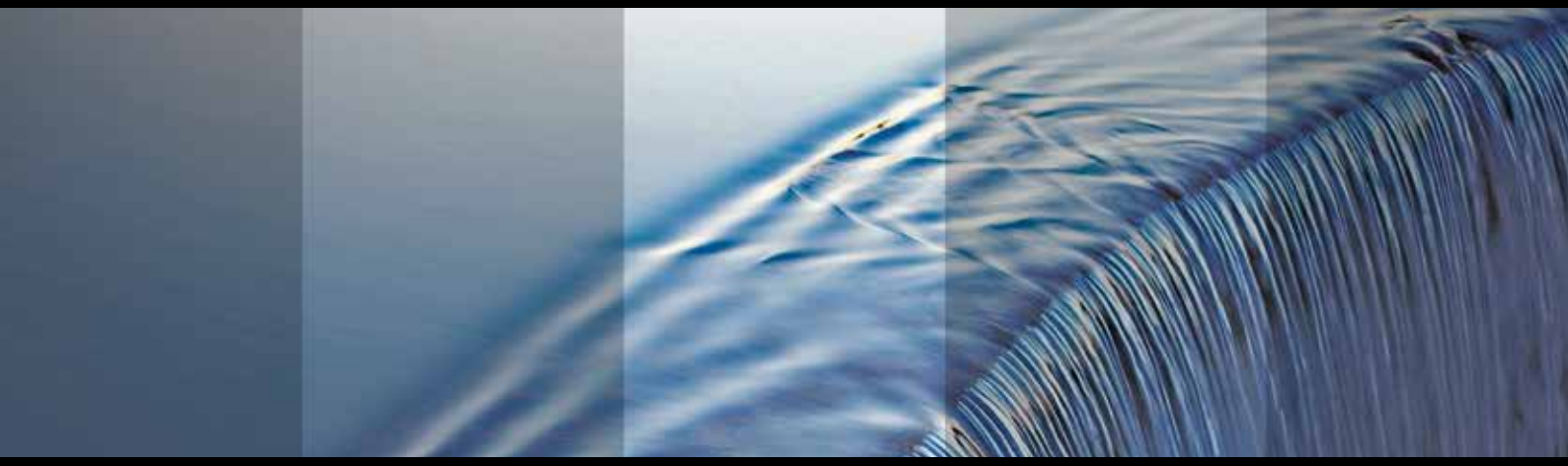
Glaucoma Module
Premium Edition



SPECTRALIS®

HEIDELBERG ENGINEERING

Technology matching pathology

The SPECTRALIS with Glaucoma Module Premium Edition contains the core DNA for high-contrast, high-resolution images that are matched to each eye's unique anatomy. These images are the source of the highly sensitive and specific information you need to reduce uncertainty and increase clinical confidence in the diagnosis and management of your glaucoma patients.

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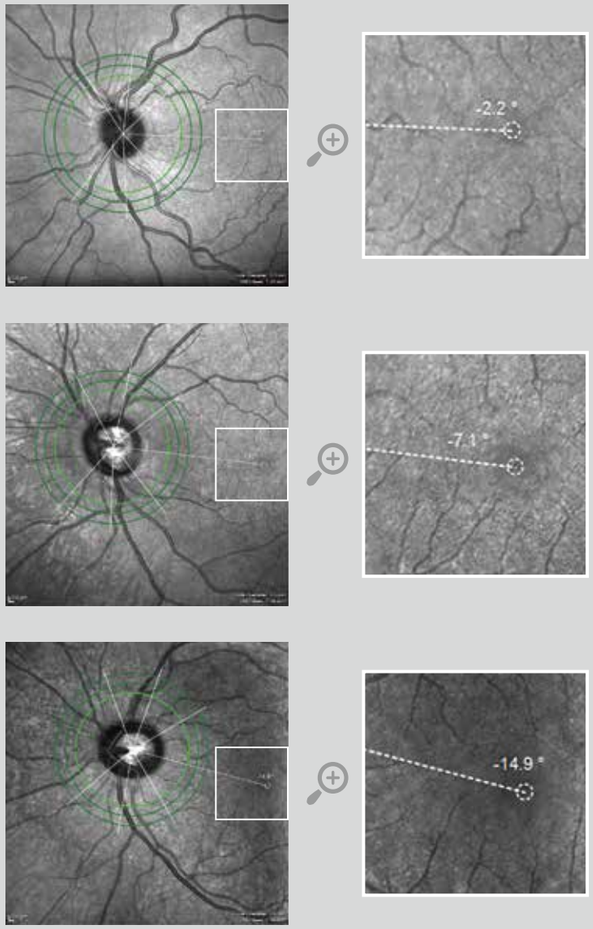
SPECTRALIS®

Anatomic Positioning System (APS)

The APS ensures that adjustments for the variable anatomy of each eye are made before comparing the results to the reference database, and this makes the BMO-MRW, RNFL, posterior pole, and ganglion cell layer analysis more accurate and precise.

Alex Huang, MD, PhD, Glaucoma Specialist,
Doheny Eye Institute, Pasadena, California, USA



Customize each scan to the patient's anatomy

The Anatomic Positioning System (APS) automatically identifies two fixed landmarks – the fovea and the center of Bruch's membrane opening – in order to place glaucoma scans on the correct anatomic location for each individual eye. This unique technology increases the precision and accuracy of the results by ensuring that all glaucoma scans are anatomically aligned with the reference database accounting for the individual configuration of axons in each eye. The personalized anatomic alignment provided by the APS allows for reliable diagnostic images and data that you can have confidence in.

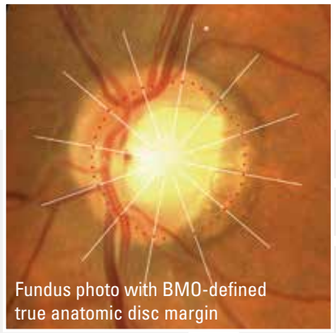
Bruch's Membrane Opening – Minimum Rim Width

Assess the optic nerve head objectively

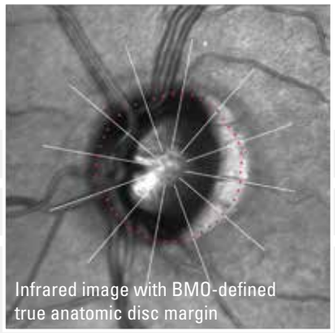
The minimum distance between the internal limiting membrane and Bruch's membrane opening around the optic nerve head – referred to as Bruch's membrane opening - minimum rim width (BMO-MRW) – is identified to provide you with the true anatomic disc margin and geometrically accurate measure of the neuroretinal rim. This BMO-MRW parameter is an objective diagnostic tool for both the detection and management of glaucoma that also helps differentiate glaucoma from other optic neuropathies.

I've been fortunate to try almost every OCT platform, but I believe the SPECTRALIS supplies the highest quality and most reproducible images. It enables us to image all the structures relevant in glaucoma on one platform – RNFL, ganglion cell layer, and neuroretinal rim.

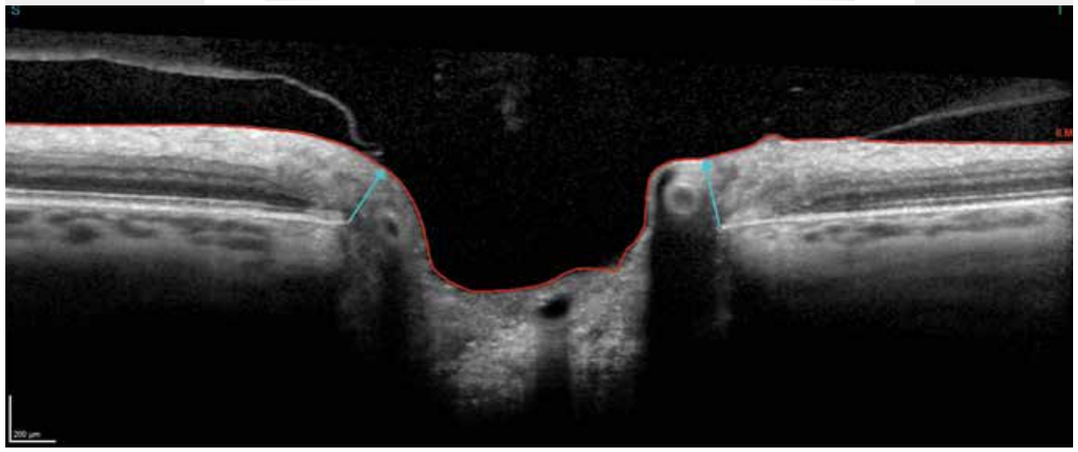
Andrew Tatham, MD, Consultant Ophthalmic Surgeon, Princess Alexandra Eye Pavilion, Edinburgh, UK



Fundus photo with BMO-defined true anatomic disc margin

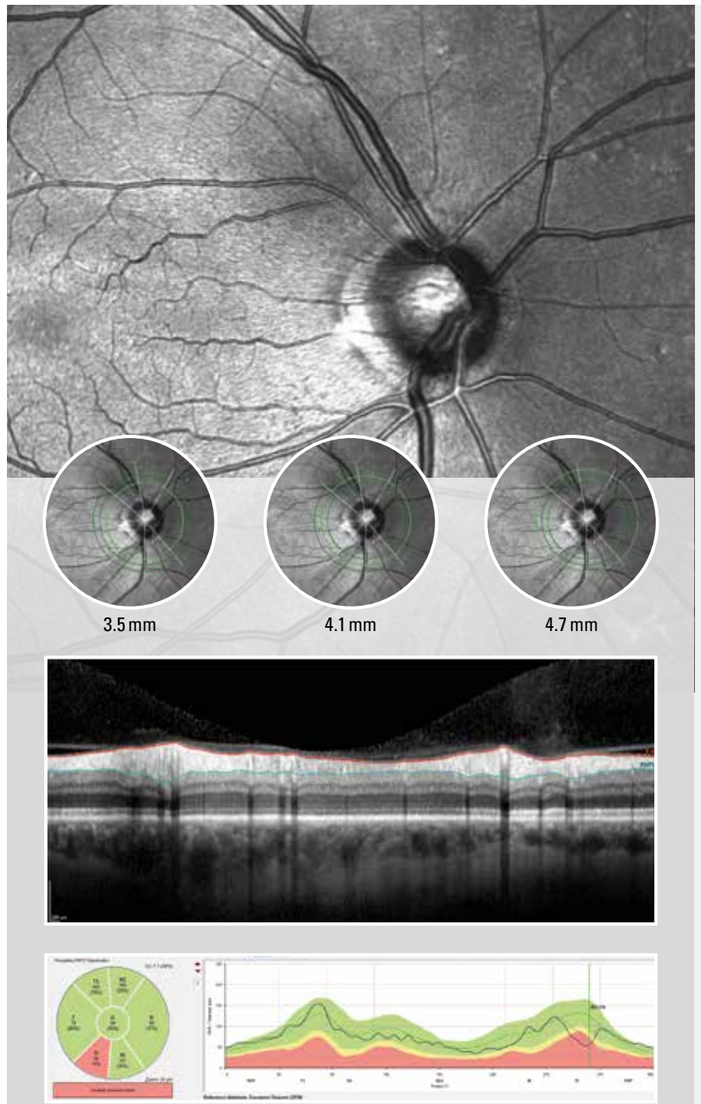


Infrared image with BMO-defined true anatomic disc margin



SPECTRALIS®

Retinal Nerve Fiber Layer



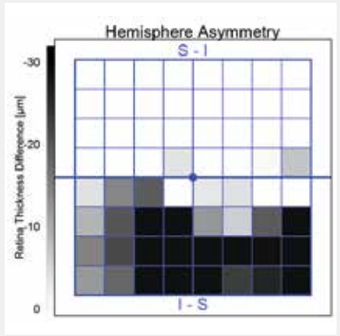
Rely on highly sensitive and specific assessment

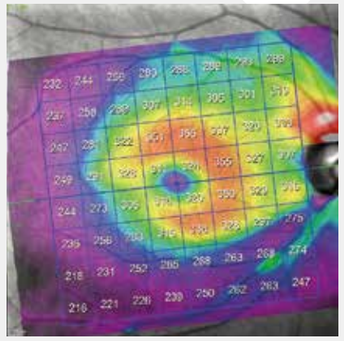
Benefit from three high resolution circumpapillary Retinal Nerve Fiber Layer (cpRNFL) scans of increasing size. The 4.1 mm and 4.7 mm scans can offer reliable diagnostic measurements when the traditional 3.5 mm cpRNFL scan is confounded by pathology. The confocal infrared fundus image, which is captured simultaneously, can help you immediately visualize changes in RNFL reflectance characteristic of glaucoma damage. By entering the corneal curvature of the eye, OCT scan results are scaled correctly relative to the fundus image, allowing for compensation of variations in axial length and corneal power of each eye. This compensation allows for the accurate adjustment of optic nerve head size when comparing the RNFL and BMO-MRW parameters against the reference database.

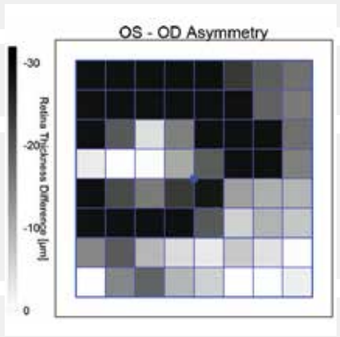
Posterior Pole Asymmetry Analysis

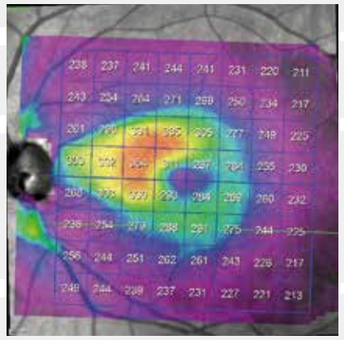
Recognize characteristic patterns

Retinal thickness maps of the macula reveal characteristic patterns of tissue damage typical in glaucoma. Asymmetry is a hallmark of glaucoma and other optic neuropathies. The retinal thickness asymmetry analysis quantifies differences in thickness between the inferior and superior macula, as well as between the left and right eyes, to help identify potential glaucomatous damage.





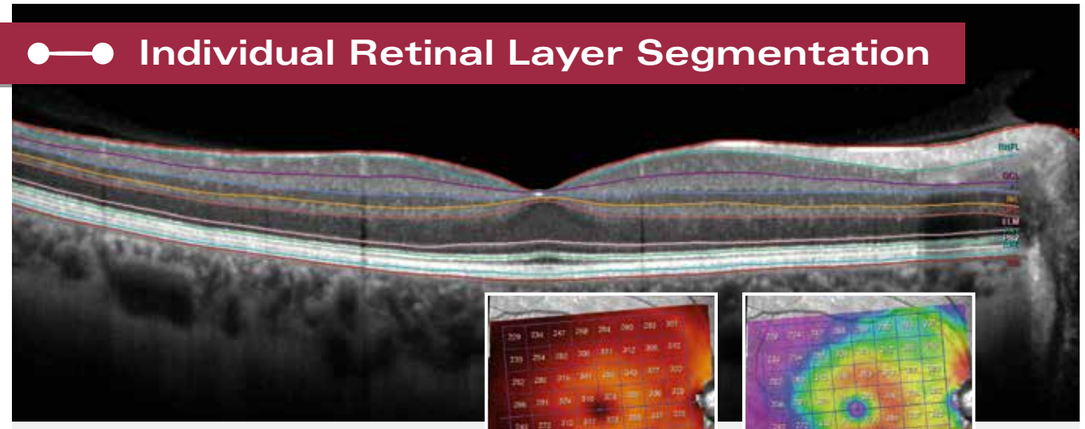


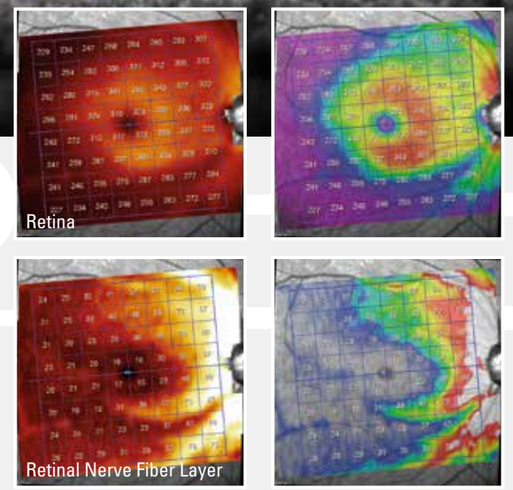


I especially like the SPECTRALIS because it is a multimodality imaging platform, and each modality offers a different piece of the glaucoma puzzle. I love having all the information there on the screen in front of me, checking the segmentation and being able to zoom in on images to really interrogate them if necessary.

Alex Huang, MD, PhD, Glaucoma Specialist,
Doheny Eye Institute, Pasadena, California, USA

Individual Retinal Layer Segmentation

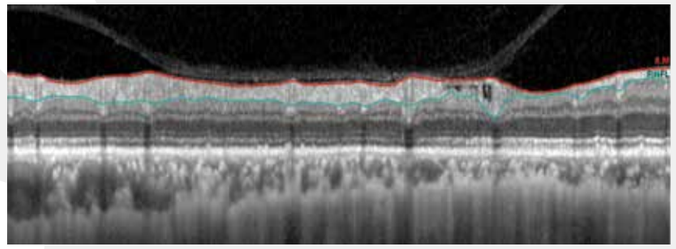




Identify each stage of the disease

SPECTRALIS segments the ganglion cell layer independent of the inner plexiform and retinal nerve fiber layers so that you can confidently identify loss from each anatomic component of the retinal ganglion cells (axons, somas, and dendrites) at each stage of the disease. SPECTRALIS provides direct visualization of the segmentation and the ability to make adjustments when metrics may be confounded by pathological factors such as epiretinal membranes or blood vessels.

Choose the glow scale or traditional color scale for enhanced visualization of subtle changes.

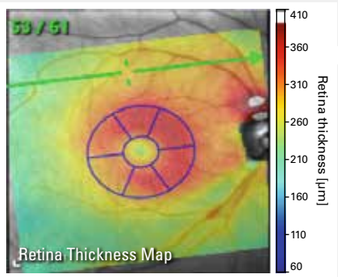


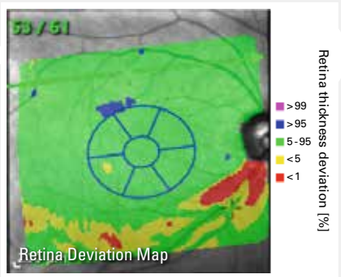
A partial posterior vitreous detachment confounds the RNFL thickness.
Image credit: Brian Samuels, MD, PhD, and Christopher Girkin, MD, MSPH.

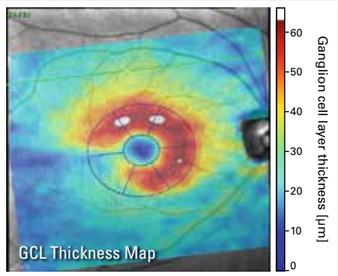
Deviation Maps

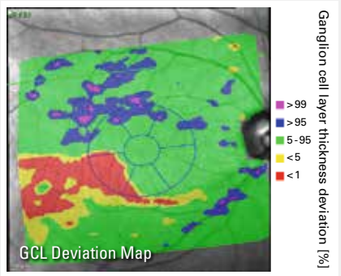
The discrimination power of deviation maps lets you visualize structural loss at a glance. Comparison of thickness measurements with the reference database (RDB) enhances the diagnostic value of thickness maps. The resultant deviation maps highlight the probability of thickness measurements that are not “Within Normal Limits”, revealing regions and associated patterns within specific retinal layers that have statistically significant thinner or thicker values.

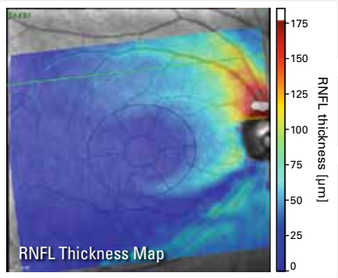
The thickness map color scales for each layer (retina, RNFL, GCL and inner plexiform layer) have been optimized based on the range of values from the RDB to offer the most visually accurate representation of their anatomy. The Anatomic Positioning System (APS) ensures accurate anatomic alignment of the 6-sector grid with the RDB, according to the individual anatomy of each eye. APS also considers the distance between the fovea and the center of Bruch’s membrane opening. These adjustments improve the accuracy and reliability of the deviations.

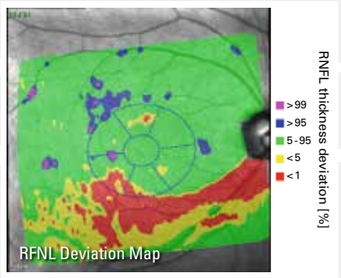


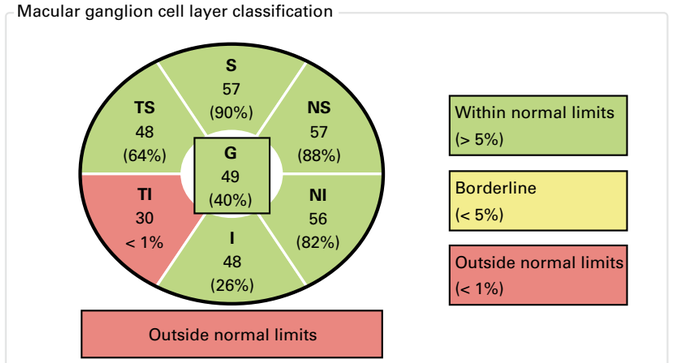




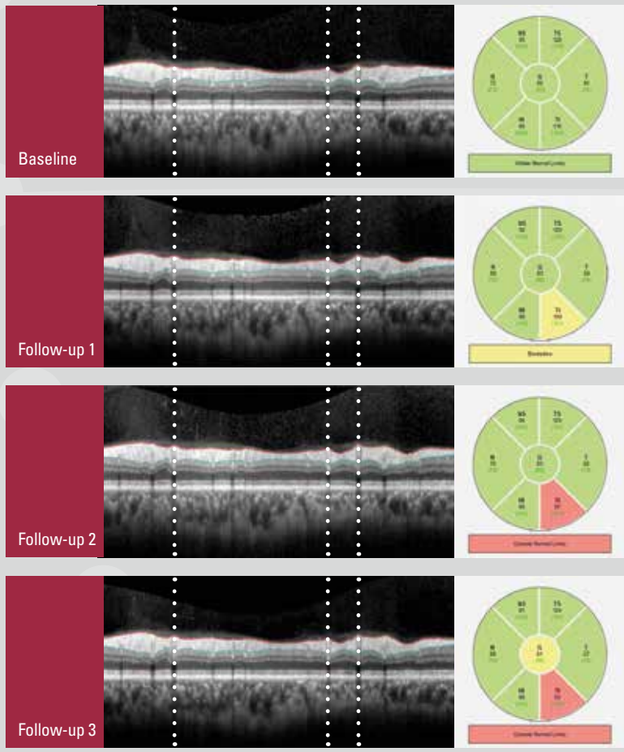


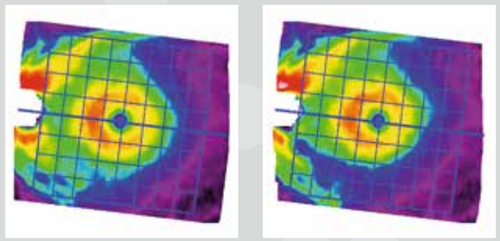






AutoRescan





Baseline

Follow-up 3

The SPECTRALIS is a very important tool for following-up glaucoma as the measurements are so precise. TruTrack Active Eye Tracking is an absolutely essential feature for high quality and accurate follow-up OCT measurements. Without this feature we would be less confident about our diagnosis.

Prof. Dr. med. Christian Mardin, Senior Consultant Ophthalmologist, Friedrich-Alexander University, Erlangen-Nuremberg, Germany

Detect real change as small as 1 micron

When you need evidence of progression to confirm a glaucoma diagnosis, SPECTRALIS is in a class of its own. Unique TruTrack Active Eye Tracking enables retinal recognition technology (AutoRescan), which automatically repositions each OCT scan at follow-ups in the same anatomic location with incredible accuracy and precision, enabling you to see changes as small as 1 micron for confident measurement of disease progression.

Complementary Reports

View multiple diagnostic parameters at a glance

HEIDELBERG EYE EXPLORER (HEYEX) provides a comprehensive reports package that complements the images and gives you a host of formats to match your individual preferences.

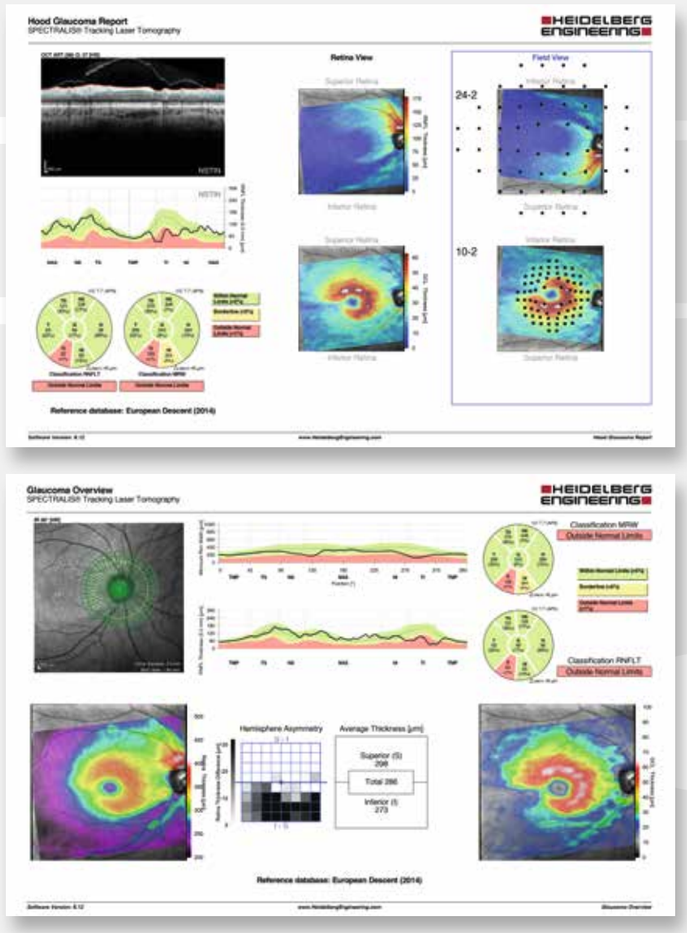


Image credit: Donald Hood, PhD, and Robert Ritch, MD.

GMPE Hood Glaucoma Report

Combine and organize the most pertinent OCT data from the ONH, RNFL and macula, personalized to each eye's anatomic landmarks, and relate this information to visual fields in a clinically effective manner. Confirm your results by carefully reviewing the OCT image.

Glaucoma Overview Report

View the results for minimum rim width, retinal nerve fiber layer thickness, retinal thickness and ganglion cell layer thickness all on one page.

Optional Modules for Enhanced Glaucoma Diagnostics

Discover the power and flexibility of multimodal imaging with SPECTRALIS.

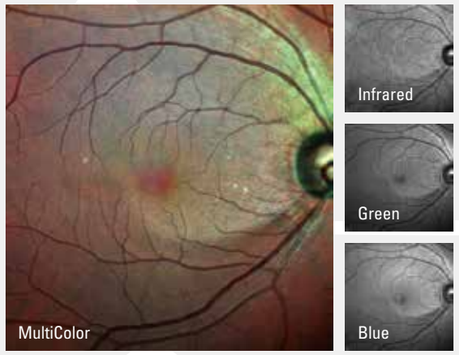
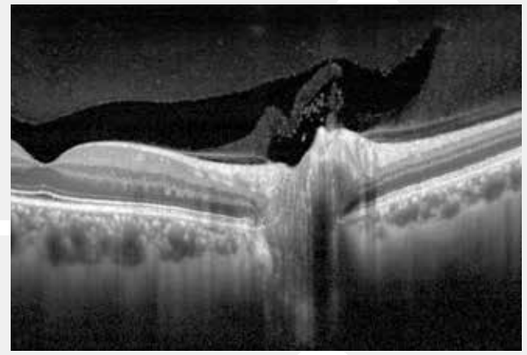


Image credit: Donald Hood, PhD, and Robert Ritch, MD.

MultiColor Module

The interface between retina and glaucoma

Acquire images using three simultaneous laser wavelengths for enhanced visualization of RNFL defects typically not visible on traditional color fundus photography.



OCT2 Module

Transform workflow

More than double the A-scan rate in comparison to the standard SPECTRALIS power supply, with the benefit of enhanced image quality from vitreous to choroid and shorter examination times for improved clinic workflow and efficiency.

Anterior Segment Module

Visualize both angles

Acquire high-resolution images of the anterior chamber angle as well as corneal and scleral structures. Capture both angles simultaneously for precise visualization of angle geometry.

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