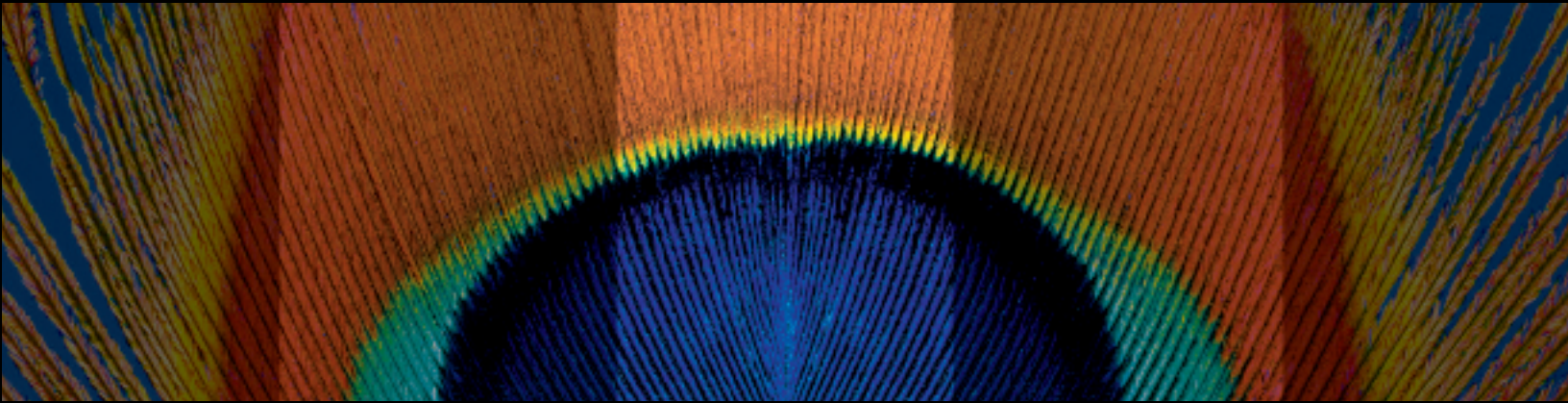


Bringing two views together



SPECTRALIS™

HRA + OCT

**HEIDELBERG
ENGINEERING**

The All-In-One Tool for Retinal Imaging

The Versatility of Six Imaging Modalities

Combining the features of the Heidelberg Retina Angiograph with high speed, ultra high resolution OCT, means that cross sectional images can be simultaneously mapped to any of these modalities: Fluorescein Angiography, Indocyanine Green Angiography, Autofluorescence, Red-Free or Infrared. One device can be used to track the early, middle, or late stages of a disease with patients sitting at a single station.

Fundus autofluorescence is playing an emerging role in detecting and tracking lipofusin concentrations as a potential early indicator of progression of geographic atrophy. Images of early AMD disease can be used alone or mapped cross-sectionally with OCT.

Gold standard Fluorescein Angiography can be used for baseline diagnostic assessment, then followed non-invasively with combined Infrared and OCT imaging. ICG Angiography (alone or simultaneous with FA) allows deep views of the choroidal vasculature and clear images of RAP which has been reported to have important prognostic value.

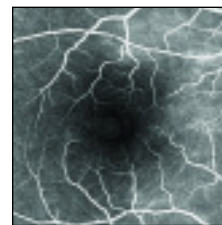
Dual-Wave Imaging

With Dual-Wave Imaging, the reference scan and cross-section are captured simultaneously creating an accurate, reliable reference point for both the location and correction of the cross sectional scan. The reference image can be a Fluorescein Angiogram, an ICG Angiogram, an IR image, a FAF image or a Red Free image.

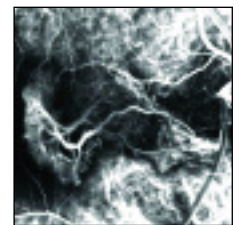
The Need for Speed

Heidelberg Engineering's faster scan speeds and exclusive TruTrack™ Dual-Wave technology enables constant alignment of images. The result is higher reliability of scan positioning minimizing the motion artifacts that plague other technologies.

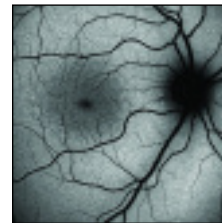
Fluorescein Angiography



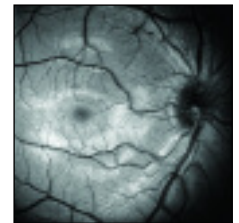
Indocyanine Green Angiography



Autofluorescence



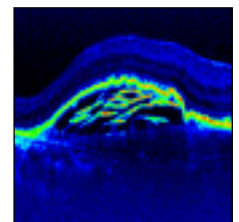
Red-Free



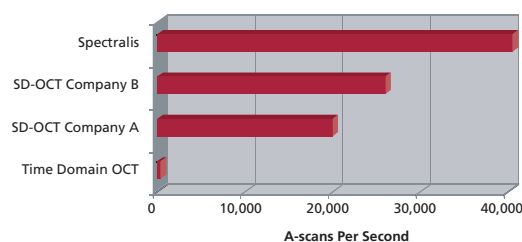
Infrared



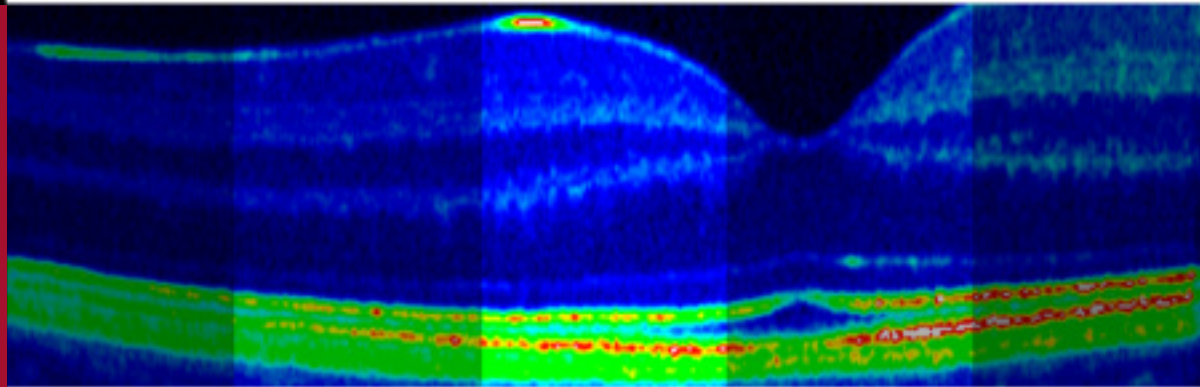
OCT



Scan Rate Comparison



The First Spectral Domain OCT with Simultaneous Fluorescein Angiography



Four Light Sources. Six Modalities. Forty Thousand A-Scans Per Second.

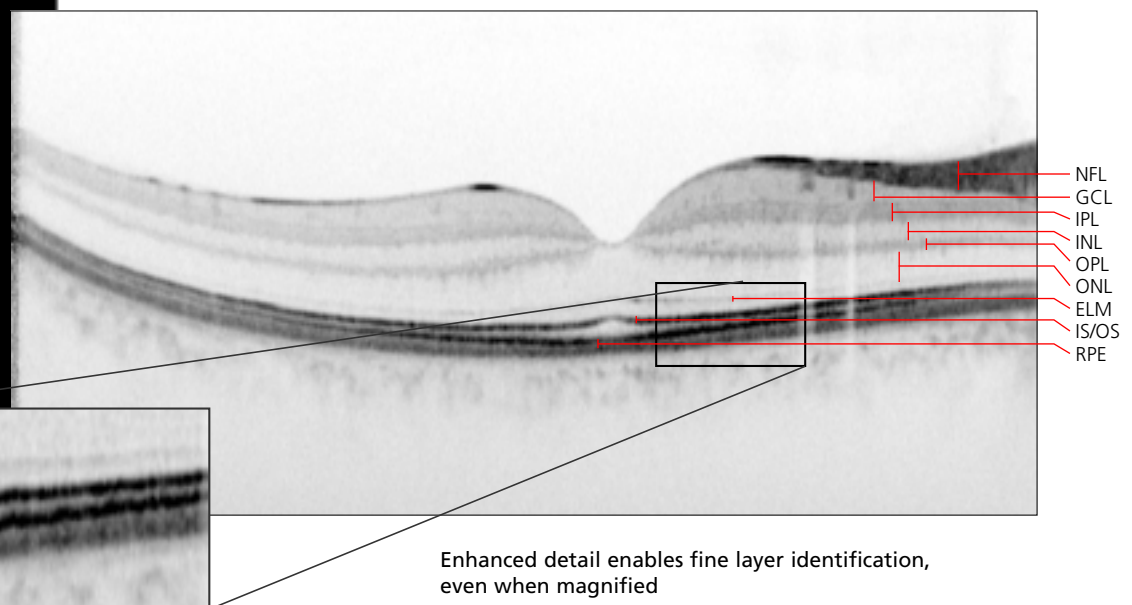
Bold new therapeutics for the retina demand bold new diagnostic tools. Spectralis™ HRA+OCT is the first Spectral Domain OCT and Fluorescein Angiography system combined in one instrument. It is the fastest Spectral Domain OCT (also known as Fourier Domain OCT) in the world, and features Heidelberg Engineering's unique TruTrack™ image alignment technology. The result is a high-speed, high-resolution imaging system that precisely locates, aligns and tracks retinal structures, far beyond the capabilities of single light source devices.

Spectralis provides a full suite of diagnostic tools to match the new broad range of therapeutic alternatives for the retina from AMD to DME.

Fastest Scan Speed— Unsurpassed Resolution

The blazing scan rate of 40,000 A-scans per second allow the Spectralis HRA+OCT to capture incredible image detail making it possible to distinguish such fine detail as the components of the photoreceptor layer and more!

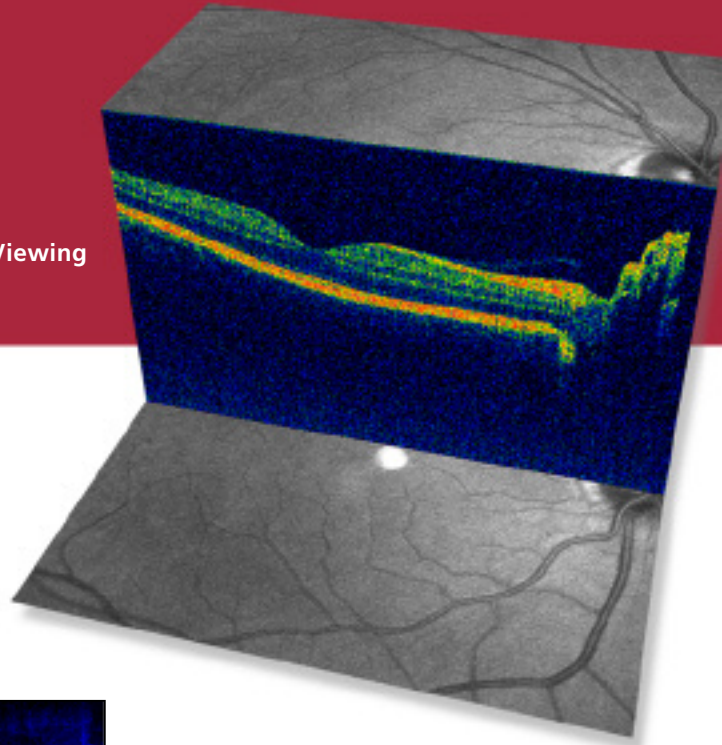
- NFL – Nerve Fiber Layer
- GCL – Ganglion Cell Layer
- IPL – Inner Plexiform Layer
- INL – Inner Nuclear Layer
- OPL – Outer Plexiform Layer
- ONL – Outer Nuclear Layer
- ELM – External Limiting Membrane
- IS/OS – Inner Segment/
Outer Segment Junction
- RPE – Retinal Pigment Epithelium



Enhanced detail enables fine layer identification, even when magnified

OCT Never Looked So Good

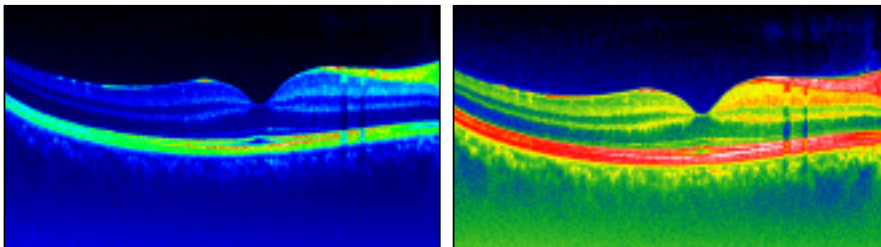
3-D Viewing



Powerful Viewing Options

Spectralis HRA+OCT offers a wide array of viewing options delivering the ideal combination of maximum resolution, enhanced viewing of specific regions of the scan and powerful 3-D modeling capabilities.

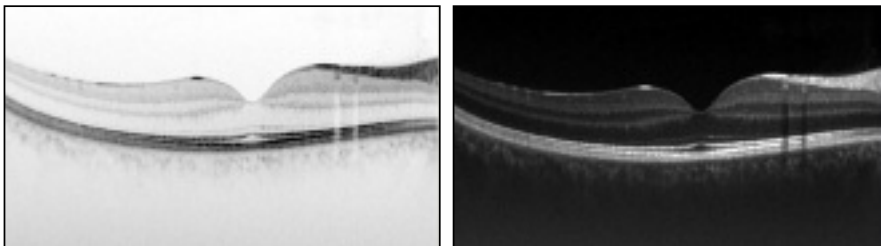
Color Modes



Images can be displayed in multiple viewing options including both RED (enhanced viewing of intra-retinal layers) and BLUE (enhanced detail around the RPE) scale color modes.

3-D Viewing Powerful 3-D modeling capabilities create detailed three-dimensional views.

Gray Scale Modes

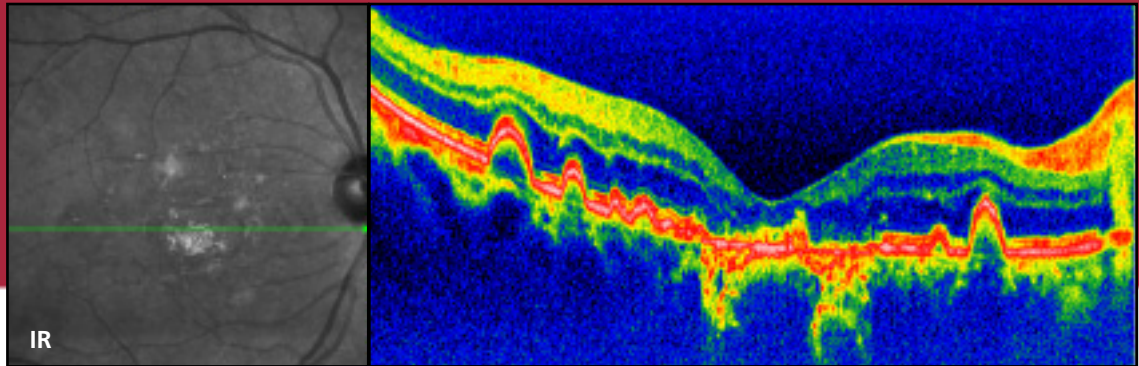


The Gray Scale presentations (both positive and negative) offer greater detail for the experienced user.

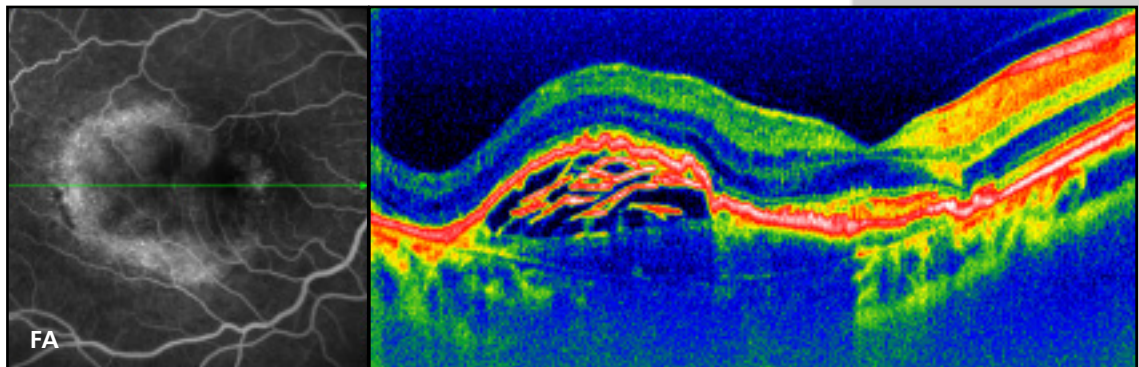
Clinical Images

Simultaneous HRA and SD-OCT

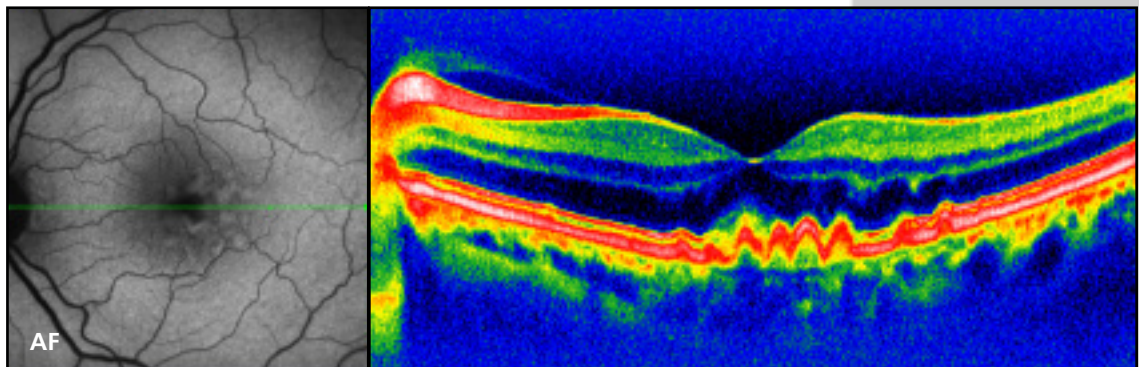
Geographic Atrophy and Drusen (AMD)



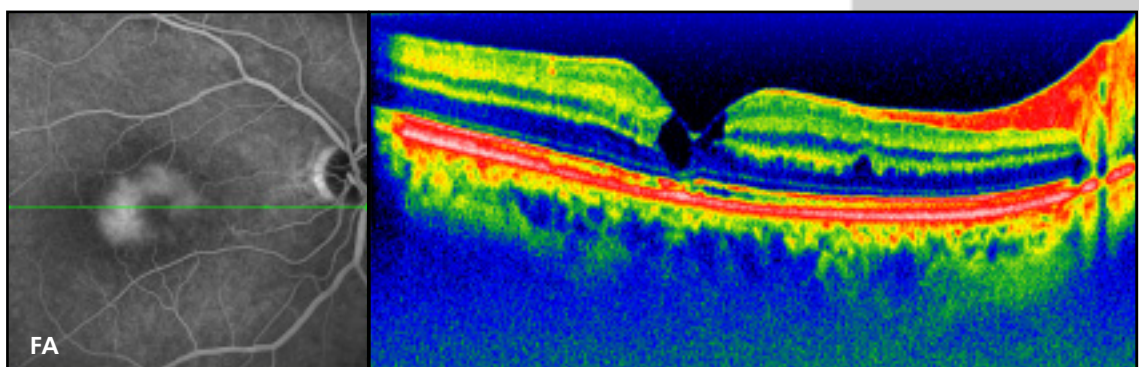
Occult CNV with PED



Dry AMD



Idiopathic Macular Telangiectasia



Specifications

Light Sources	488 nm OPS laser 760 nm laser diode 785 nm laser diode 870 nm SLD
Imaging Modes	OCT FA ICGA Autofluorescence Red-Free Infrared
Imaging Options	Single Frame Multi-frame movie Stereo Mean Composite Automatic Real Time
Scan Speed	40,000 A-scans/second
Axial Resolution (in tissue)	7 microns
Transverse Resolution (in tissue)	14 microns
Pupil Diameter	≥ 3 mm
Viewing Options	Color Scales: Red, Blue Gray Scales: Positive, Negative 2-D, 3-D modeling

Applicable US Reimbursement Codes:
92135, 92235, 92240, 92250, 92287

For more information on the Spectralis HRA+OCT, call 800 931-2230 or visit www.HeidelbergEngineering.com



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