



Optical Coherence Tomography

RS-3000 Advance / Lite



THE ART OF EYE CARE

See it in Advance

See it in high resolution with the AngioScan* image.

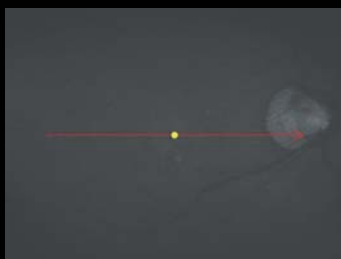


OCT-Angiography of choroidal neovascularization

* AngioScan (OCT-Angiography) is optional software.

Image courtesy of Eric Souied, MD, PhD,
Centre Hospitalier Intercommunal de Creteil

See it with selectable OCT sensitivity.

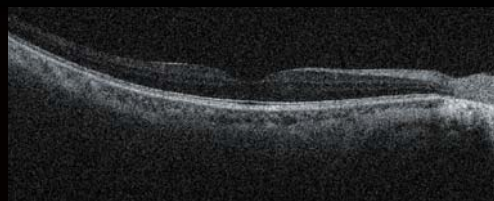


SLO image of dense cataract eye

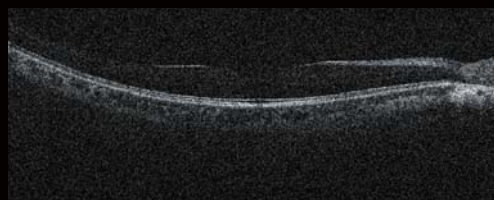
Retinal pathology in a cataractous eye captured with ultra fine, fine and regular sensitivities. Ultra fine sensitivity allows visible B-Scan image even with dense cataract eye.



Ultra fine



Fine



Regular

See it with wide area and high definition OCT.

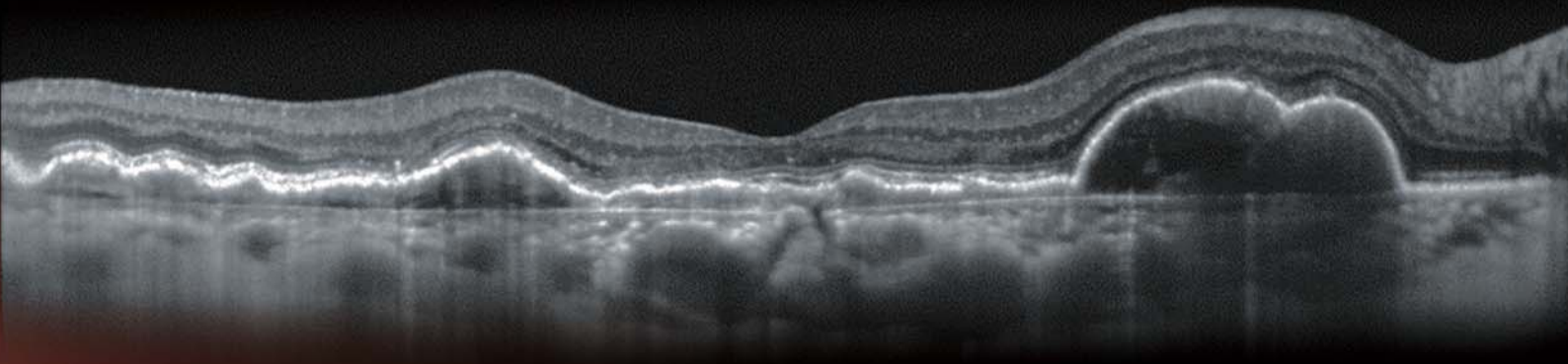
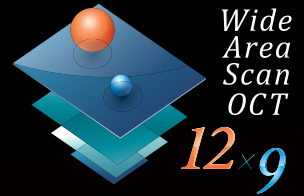
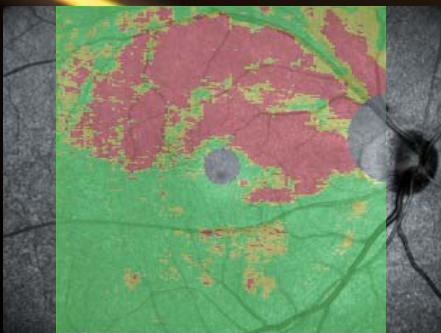
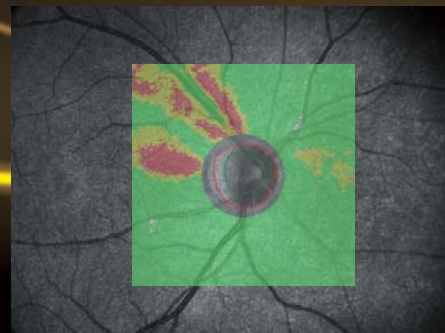


Image courtesy of Chiba University Hospital

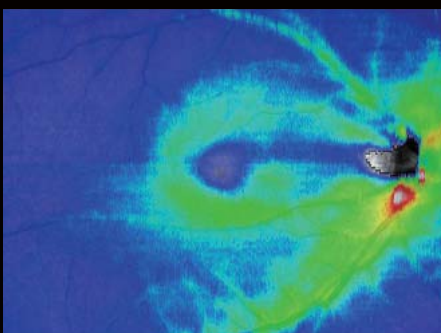
See it with a wide area normative database.



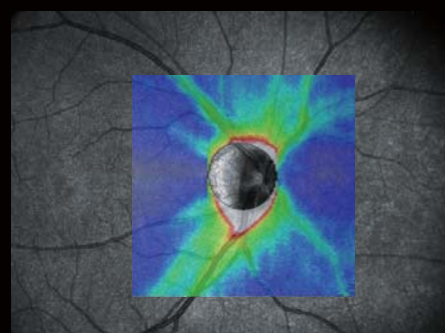
9 x 9 mm Macula NDB



6 x 6 mm Disc NDB



NFL+GCL+IPL thickness map

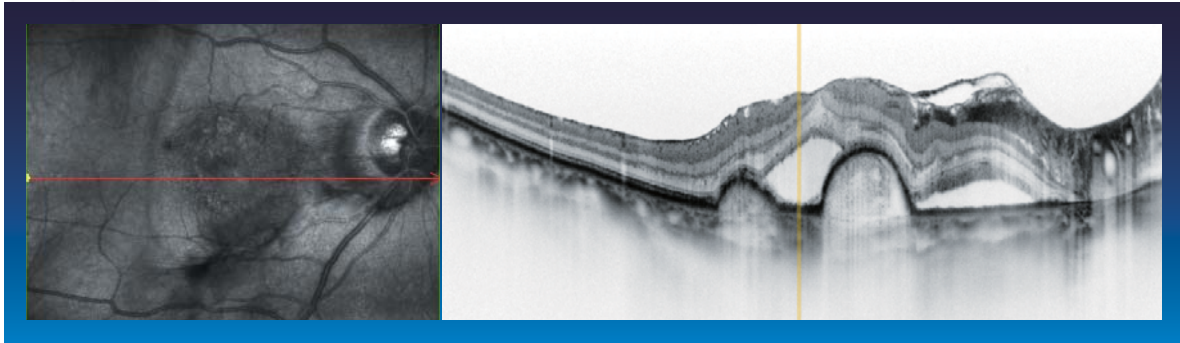


RNFL thickness map

Retina Analysis

AMD (Age-related Macular Degeneration)

- High quality SLO image enables accurate location and positioning of the raster scan.
- The tracing HD function allows image averaging of up to 120 images.
- The tracing HD function combined with ultra fine sensitivity image capture result in high resolution and high contrast images of chorioretinal pathology.



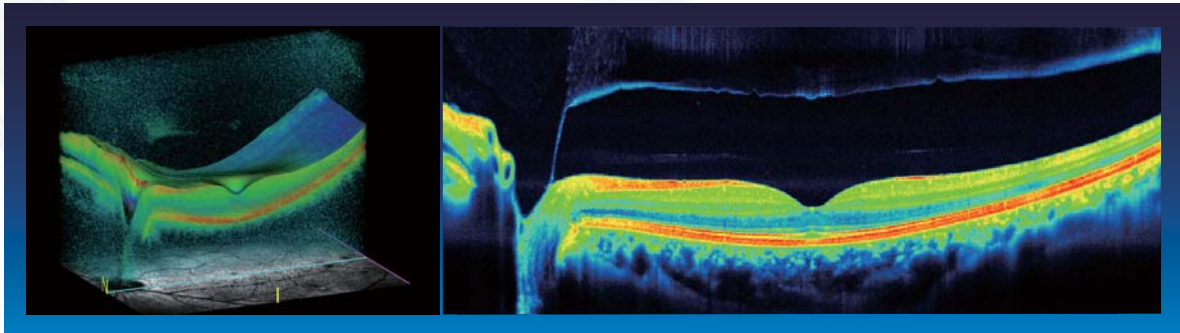
Tracing HD

Ultra fine

Choroidal

PVD (Posterior Vitreous Detachment)

Enhanced image function allows greater resolutions of vitreous retina images by adjusting brightness of weak OCT signals.

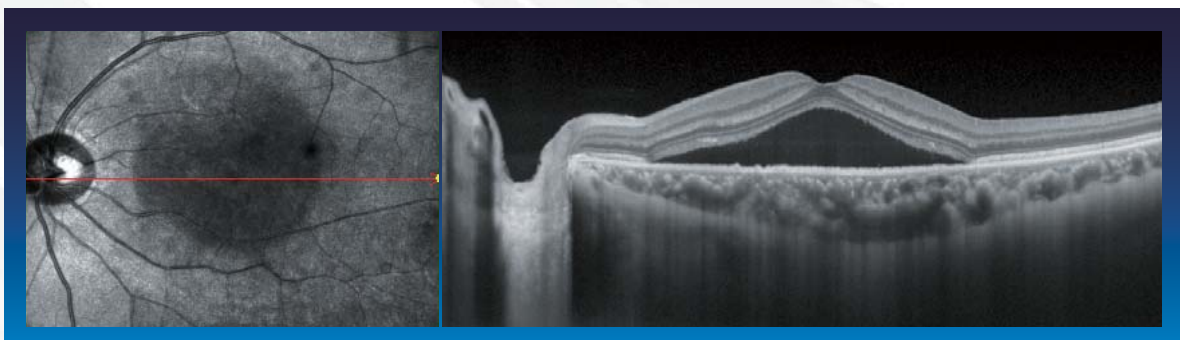


Ultra fine

Retinal

CSC (Central Serous Chorioretinopathy)

Choroidal OCT image (EDI-OCT) provides highly reflective choroidal images even when deeper area with lower brightness. Choroidal thickness can be measured.



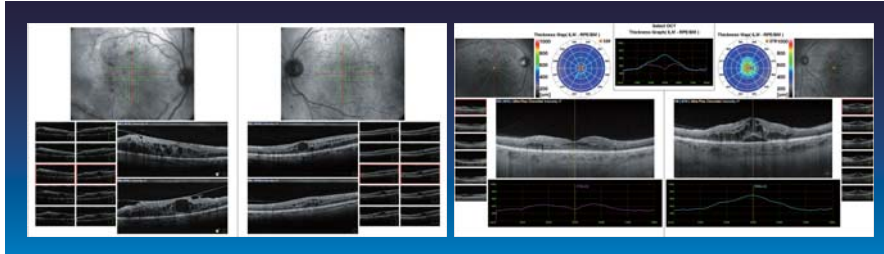
Tracing HD

Ultra fine

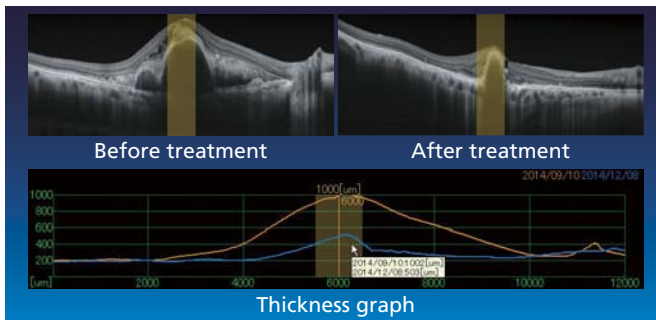
Choroidal

Macula Multi and Macula Radial

- Macula multi and macula radial scan patterns enable multiple raster scans simultaneously, decreasing rescans.
- The tracing HD function centers the scan on the fovea or on the region of interest.



Tracing HD

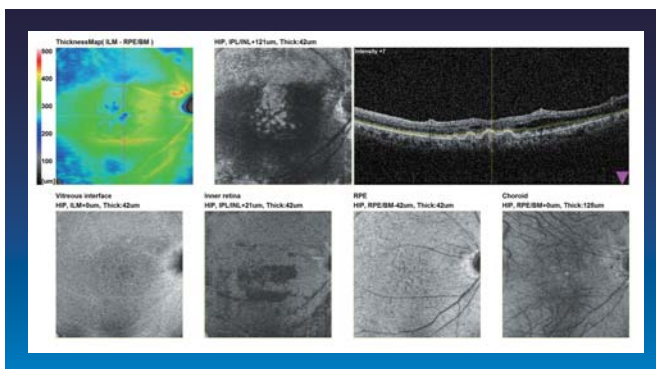


Tracing HD Ultra fine Choroidal

Macula Comparison

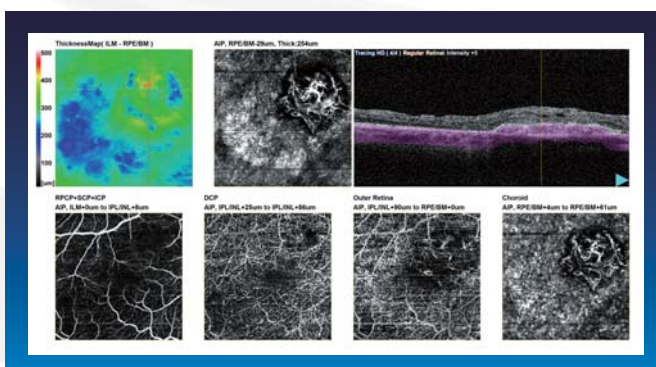
- Users can select two images for comparison.
- Chronological change in retinal thickness can be analyzed with a graph indicating its trend by designating the area on the thickness graph based on user preference.

Images courtesy of Hokkaido University Hospital



En face OCT

- En face view presents frontal sections of the retinal layers.
- Combined assessment of the B-Scan and En face images defines the shape and the extension of lesions.



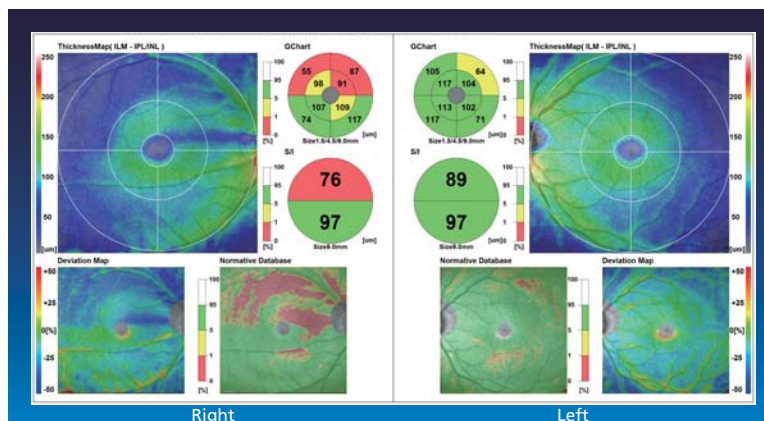
AngioScan

- AngioScan images illustrate retinal microvasculature using a non-invasive method.
- OCT-Angiography allows segmentation of layers of interest in exquisite detail for greater in-depth evaluation.

Glaucoma Analysis

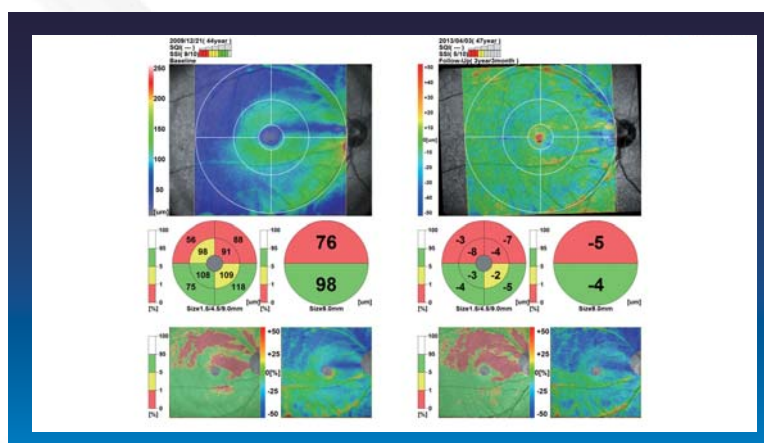
Macula Map

Wide area 9 x 9 mm normative database allows analysis of [NFL+GCL+IPL] thinning from optic disc to macula in a single report.



Glaucoma Comparison

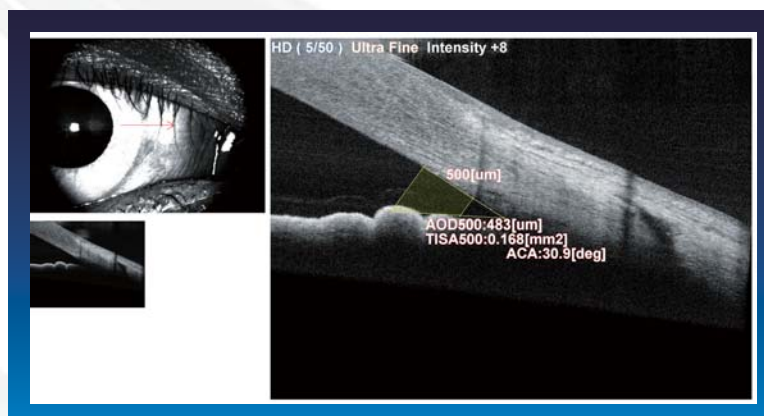
- User can select two images for comparison.
- The Torsion Eye Tracer (TET) ensures accurate image capture by correcting ocular cyclotorsion and fundus tilt.
- TET ensures high image reproducibility during image capture for follow-up examinations, enhancing the accuracy of comparative analysis.



Anterior Chamber Angle

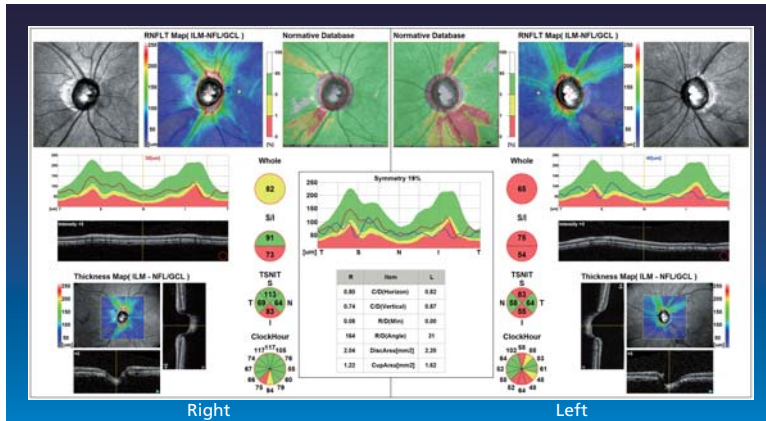
- The optional anterior segment module captures images of the anterior segment for refractive and lens implant cases.
- ACA, AOD500 (AOD750), and TISA500 (TISA750) can be measured.

Further details are available in the "Anterior Segment Analysis" section below.



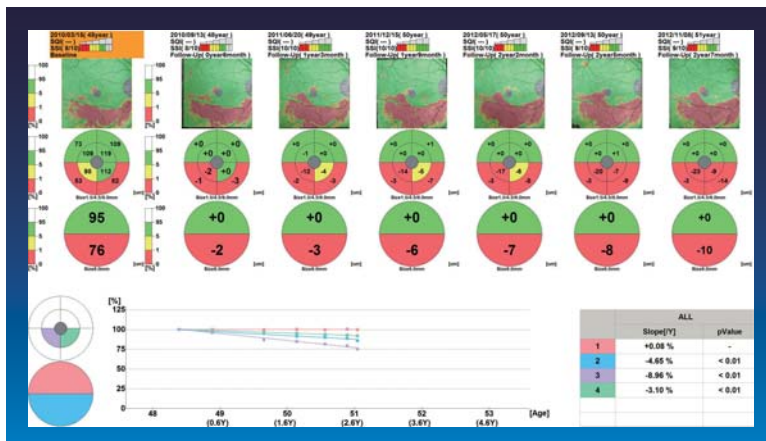
Disc Map

- ONH (optic nerve head) and RNFL (retinal nerve fiber layer) thickness can be examined.
- Optic shape editor function allows greater accuracy of C/D ratio analysis by editing optic cup and disc segmentation in detail.



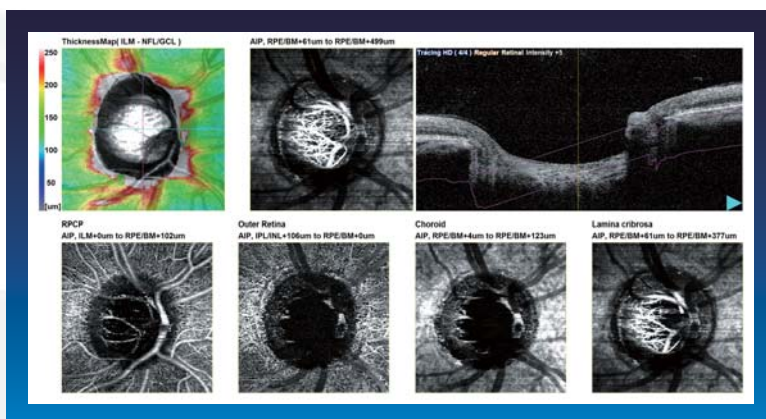
Glaucoma Progression

- Data from 50 different visits can be analyzed.
- The chronological change is presented for retinal thickness with various maps, charts, and graphs for trend analysis.
- Trend analysis allows long-term follow-up examination. It is available for user designated scan patterns.



AngioScan

- AngioScan image allows assessment of the structural vasculature of the optic disc.
- OCT-Angiography scanning of the optic disc is available for 3 x 3 mm up to 9 x 9 mm.



AngioScan

OCT-Angiography

This non-invasive method does not require contrast dye injection for examination of the layer-by-layer microvasculature within the retina and choroid. Radial peripapillary capillary plexus, superficial capillary plexus, internal capillary plexus and deep capillary plexus can be analyzed. Images of the superficial capillary, deep capillary, outer retina and choroid can be displayed for clinical evaluation.

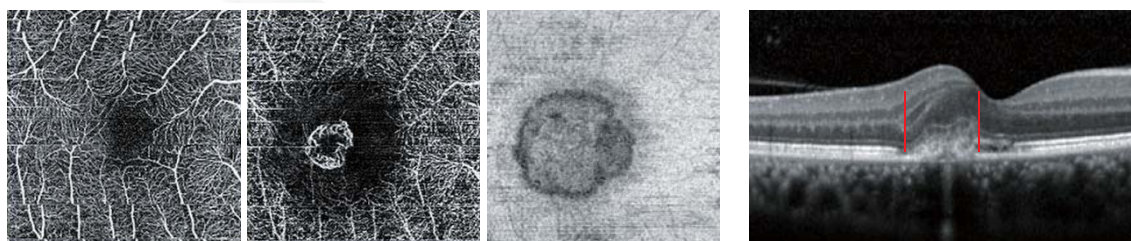
RPCP: Radial peripapillary capillary plexus

SCP: Superficial capillary plexus

ICP: Internal capillary plexus

DCP: Deep capillary plexus

Neovascular maculopathy



Superficial capillary

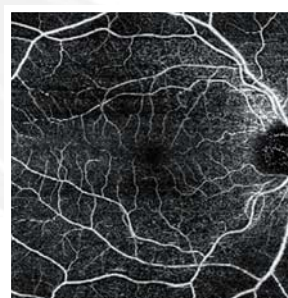
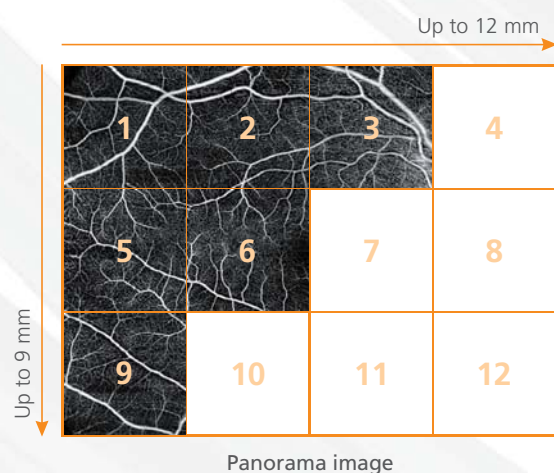
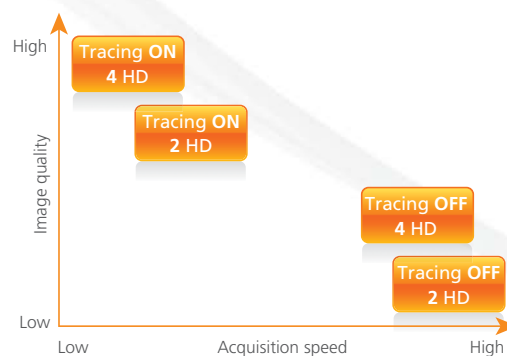
Deep capillary

En face

Images courtesy of Mie University Hospital

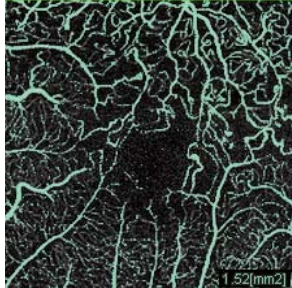
Flexible Functions

- The tracing HD function tracks eye movements to maintain the same scan location on the SLO image for accurate image capture.
- Based on the clinical requirement, the tracing function can be set for high definition and high contrast imaging. Images can also be captured within seconds without the tracing function.
- Two- or four- scan per line (2HD, 4HD) can be selected. Four-scan per line provides high quality images combined with the tracing HD function.
- Up to 12 x 9 mm panorama image can be composed.
- Scan size can range from 3 mm to maximum of 9 mm.

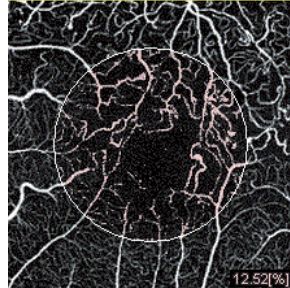


Wide area scan 9 x 9 mm

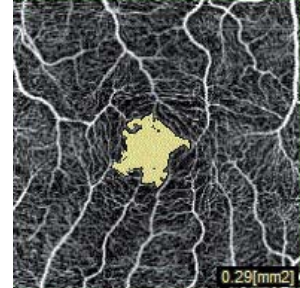
Analytics



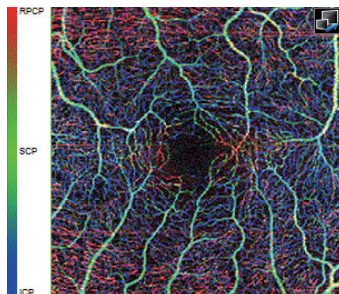
Vessel flow area



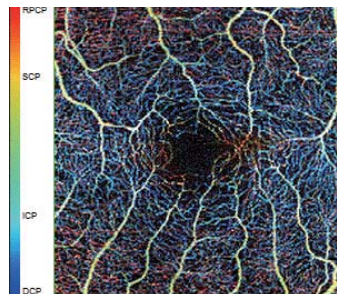
Density of vessel flow area



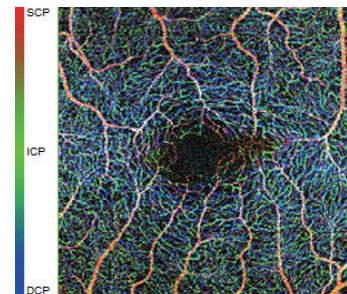
FAZ (Foveal Avascular Zone)



Depth Color (RPCP+SCP+ICP)



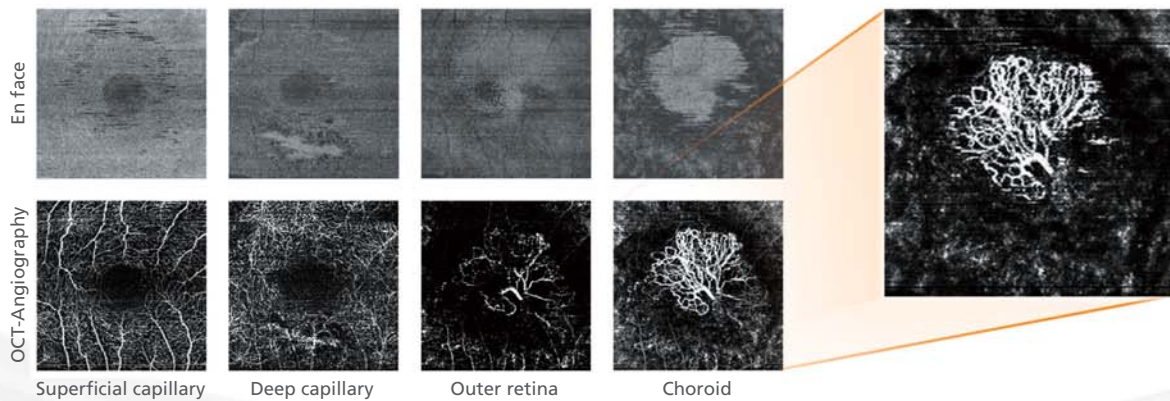
Depth Color (RPCP+SCP+ICP+DCP)



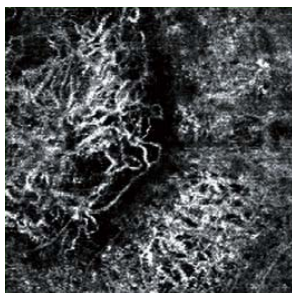
Depth Color (SCP+ICP+DCP)

Clinical Case

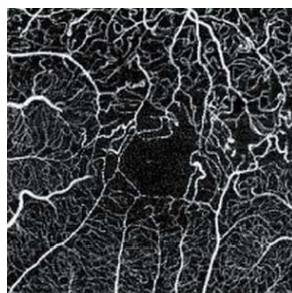
1. En face / OCT-Angiography, CNV



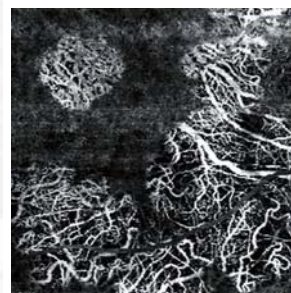
2. CNV



3. BRVO



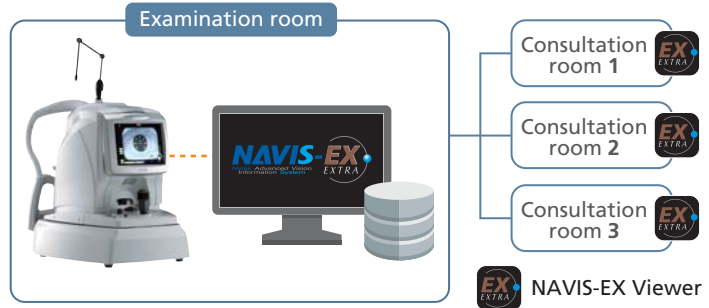
4. GA



NAVIS-EX

NAVIS-EX is an image filing software, which networks the RS-3000 Advance / Lite and other NIDEK diagnostic devices. This functionality enhances the capability of the diagnostic device with additional features and increases clinical efficiency.

- Analysis and report
- Normative database
- Long axial length normative database (optional software)
- DICOM connectivity

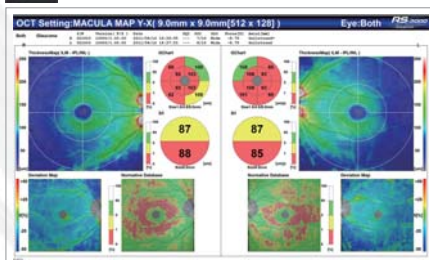


Long Axial Length Normative Database

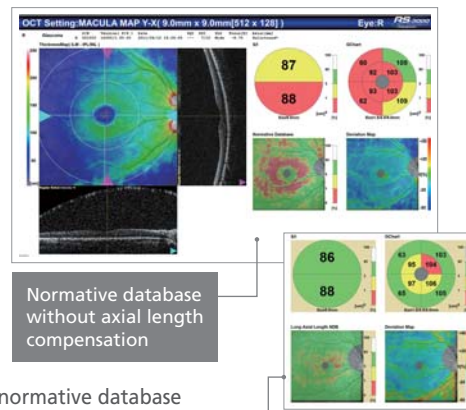
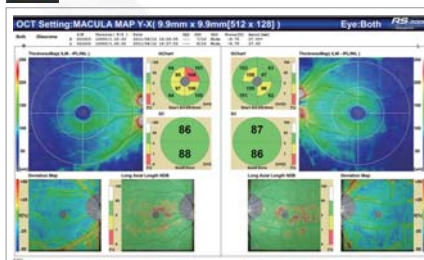
The long axial length normative database is optional software for use with the RS series designed to assist clinicians in diagnosing macular diseases and glaucoma. This normative database was developed based on data from normal eyes (free of ocular pathology) with long axial length. Data were collected from Asian cases by measuring the macular area in 3-D to obtain retinal thickness values, such as full retinal and [NFL+GCL+IPL] thickness, which is important for the diagnosis of macular diseases and glaucoma.

Sample analysis of a patient with long axial length

N Normative database



L Long axial length normative database

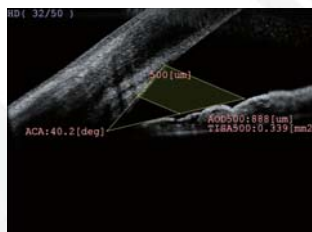


Normative database without axial length compensation

Long axial length normative database with axial length compensation

Anterior Segment Analysis

The optional anterior segment module enables observation and analyses of the anterior segment.

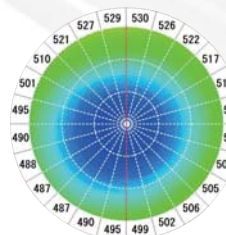


Angle measurement



Cornea measurement

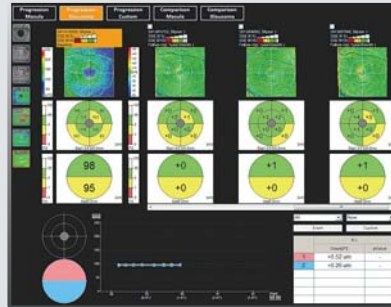
- ACA
Angle between posterior corneal surface and iris surface
- AOD500 (AOD750)
Distance between iris and a point 500 μm (or 750 μm) away from scleral spur on posterior corneal surface
- TISA500 (TISA750)
Area circumscribed with AOD500 (or AOD750) line, posterior corneal surface, line drawn from scleral spur in parallel with AOD line, and iris surface
- Corneal thickness
Corneal thickness of apex and user's preferred sites
- Corneal thickness map
Map indicating corneal thickness measured in radial directions



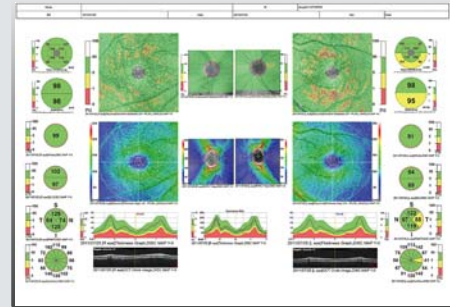
Anterior segment adaptor

The OCT for general screening

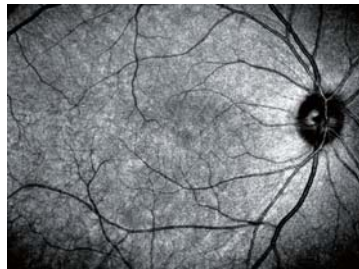
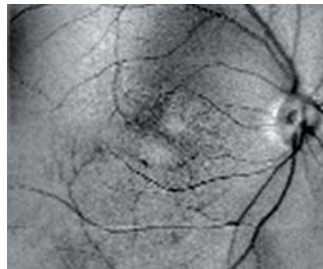
Providing the high resolution OCT images and clinically useful analyses, the RS-3000 Lite achieves the optimum balance between cost and performance with its fundus surface imaging system. The RS-3000 Lite has been developed for screening in general eye clinics.



Multifunctional follow-up



Customized report

Model	RS-3000 Advance	RS-3000 Lite
Fundus surface imaging	 SLO (12 fps frame rate) 40° x 30° angle of view	 OCT phase fundus (1.8 fps frame rate) 36° x 30° angle of view
Scan speed	Up to 53,000 A-scans / s	←
OCT sensitivity	Regular, Fine, Ultra fine	Regular, Fine
Normative database area	9 x 9 mm (macula), 6 x 6 mm (disc)	←
Scan pattern (retina)	Macula line (scan angle changeable by 1°) Macula cross Macula map (with cross scan / without cross scan) Macula multi (X-Y: 5 x 5) Macula radial (6 lines / 12 lines) Disc circle Disc map Disc radial (6 lines / 12 lines)	Macula line (scan angle changeable by 15°) Macula map (with cross scan / without cross scan) Macula multi (X-Y: 5 x 5) Disc map
Scan pattern (cornea) with optional anterior segment module	Cornea line Cornea cross Cornea radial (6 lines / 12 lines) ACA line	Cornea radial (6 lines / 12 lines) ACA line
Image averaging	Up to 120 images	Up to 50 images
Choroidal mode	Available	Not available
Torsion eye tracer	Available	Not available
Follow-up tracing	Available	Not available
Follow-up analysis	Available	←
Tracing HD	Available	Not available
HD checker	Available	Not Available
Flexible cross scan	Available	Not Available
Select and rescan mode	Available	Not Available
Auto shot (for follow-up image capture)	Available	Not available
Internal fixation target	Cross shape (laser)	Circle shape (LED)
PC monitor	21"	17"

RS-3000 Advance / Lite Specifications

Model	RS-3000 Advance	RS-3000 Lite
OCT scanning		
Principle	Spectral domain OCT	←
Optical resolution	Z: 7 μm, X-Y: 20 μm	←
Scan range	X: 3 to 12 mm Y: 3 to 9 mm Z: 2.1 mm	X: 3 to 9 mm Y: 3 to 9 mm Z: 2.1 mm
Digital resolution	Z: 4 μm, X-Y: 3 μm	←
OCT light source	SLD, 880 nm	←
Scan speed	Up to 53,000 A-scans / s	←
Internal fixation lamp	637 nm	660 nm
External fixation lamp	630 / 565 nm	←
Auto alignment	Z direction	←
Minimum pupil diameter	ø2.5 mm	←
Focus adjustment range	-15 to +10 D (VD=12 mm)	←
Working distance	35.5 mm	←
Software analysis	Segmentation of 6+1 retinal layers Macular thickness map RNFL thickness map [NFL+GCL+IPL] analysis Optic nerve analysis Follow-up analysis	←
Fundus surface imaging		
Principle	Confocal scanning laser ophthalmoscope (SLO light source: 785 nm)	OCT phase fundus
Angle of view	40° x 30° (zoom: 20° x 15°)	36° x 30°
PC networking	Available	←
Display	Tilttable 8.4-inch color LCD	←
Power supply	AC 100, 120, 230 V 50 / 60 Hz	←
Power consumption	300 VA	←
Maximum power output (transformer)	1,000 VA	←
Dimensions / Mass	380 (W) x 524 (D) x 499 to 531 (H) mm / 34 kg 15.0 (W) x 20.6 (D) x 19.6 to 20.9 (H)" / 75 lbs.	380 (W) x 524 (D) x 499 to 531 (H) mm / 33 kg 15.0 (W) x 20.6 (D) x 19.6 to 20.9 (H)" / 73 lbs.
Optional accessories	Anterior segment module, motorized optical table, PC rack, long axial length normative database, OCT-Angiography	Anterior segment module, motorized optical table, PC rack, long axial length normative database

Anterior segment module (optional)

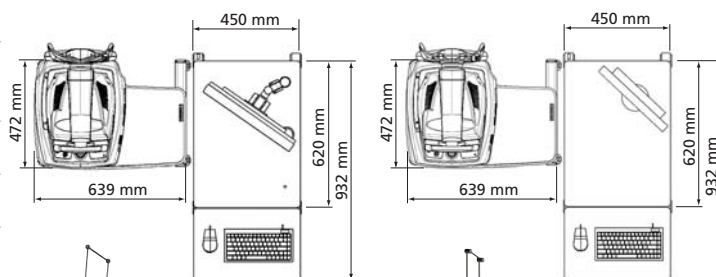
Software analysis	Corneal thickness measurement Corneal thickness map Angle measurement
-------------------	---

Motorized optical table (optional)

Dimensions / Mass	639 (W) x 472 (D) x 600 to 850 (H) mm / 28 kg 25.2 (W) x 18.6 (D) x 23.6 to 33.5 (H)" / 62 lbs.
Power supply	AC 100 V (available from the transformer) 50 / 60 Hz
Power consumption	150 W

PC rack (optional)

Dimensions / Mass	620 (W) x 450 (D) x 700 (H) mm / 29 kg 24.4 (W) x 17.7 (D) x 27.6 (H)" / 64 lbs.
-------------------	---



Product / Model name: Optical Coherence Tomography RS-3000 Advance

Optical Coherence Tomography RS-3000 Lite

Listed features in this brochure are intended for non-US practitioners.

Specifications may vary depending on circumstances in each country.

Specifications and design are subject to change without notice.



HEAD OFFICE
(International Div.)
34-14 Maehama, Hiroishi
Gamagori, Aichi 443-0038,
JAPAN
TEL: +81-533-67-8895
URL: <http://www.nidek.com>
[Manufacturer]

TOKYO OFFICE
(International Div.)
3F Sumitomo Fudosan Hongo
Bldg., 3-22-5 Hongo, Bunkyo-ku,
Tokyo 113-0033, JAPAN
TEL: +81-3-5844-2641
URL: <http://www.nidek.com>

NIDEK INC.
47651 Westinghouse Drive,
Fremont, CA 94539, U.S.A.
TEL: +1-510-226-5700
+1-800-223-9044
(US only)
URL: <http://usa.nidek.com>

NIDEK S.A.
Europarc,
13 rue Auguste Perret,
94042 Créteil, FRANCE
TEL: +33-1-49 80 97 97
URL: <http://www.nidek.fr>

NIDEK TECHNOLOGIES S.R.L.
Via dell'Artigianato,
6/A, 35020 Albignasego (Padova),
ITALY
TEL: +39 049 8629200/8626399
URL: <http://www.nidektechnologies.it>

NIDEK (SHANGHAI) CO., LTD.
#915, China Venturetech Plaza,
819 Nanjing West Rd, Jing An
District, Shanghai 200041,
CHINA
TEL: +86 021-5212-7942
URL: <http://www.nidek-china.cn>

NIDEK SINGAPORE PTE. LTD.
51 Changi Business Park
Central 2, #06-14, The
Signature 486066,
SINGAPORE
TEL: +65 6588 0389

