A TOPCON ADVANCED DIAGNOSIS SOLUTION

3D OCT-2000 Series*

Optical Coherence Tomography

PERFORMANCE
YOU CAN COUNT ON

TOPCON

The Ultimate All-in-one Product

Created to be Fast, Easy and Precise

3D OCT-2000 *Series*

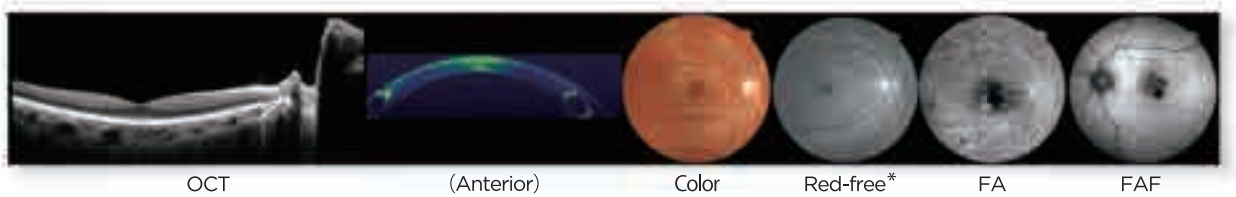
Optical Coherence Tomography

The TOPCON 3D OCT-2000 Series is an optimal choice for all eye care professionals

The 3D OCT-2000 Series of Spectral Domain OCTs with High Resolution Fundus Cameras was designed to meet the needs of a comprehensive fundus imaging device for all eye care professionals from the single doctor practice to a large university hospital.

3D OCT-2000 *FA plus*

» OCT, Color, Red-free, FA, FAF images acquirable



OCT (Anterior) Color Red-free* FA FAF

3D OCT-2000 *FA*

» OCT, Color, Red-free, FA images acquirable

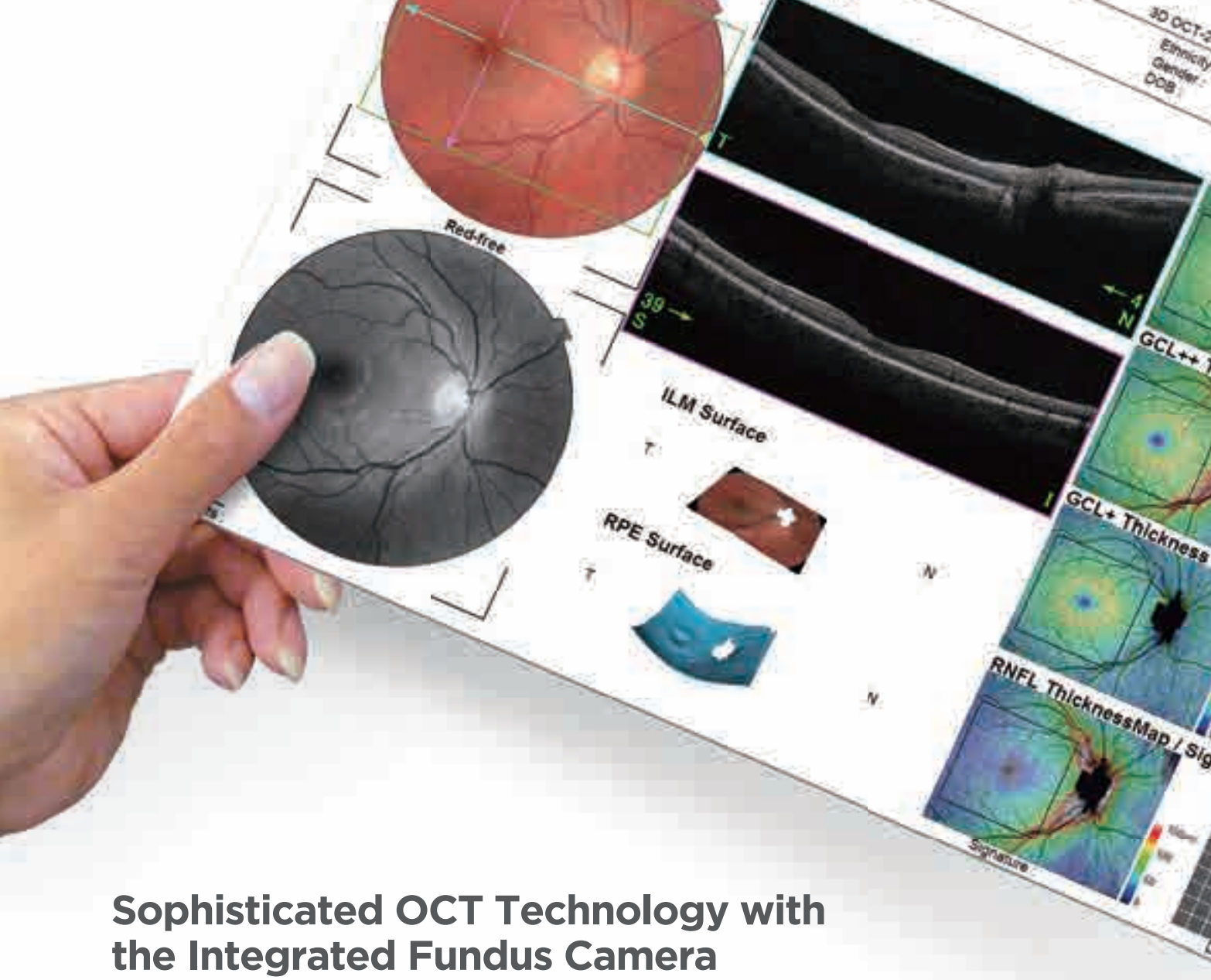
OCT (Anterior) Color Red-free* FA

3D OCT-2000

» OCT, Color, Red-free images acquirable

OCT (Anterior) Color Red-free*

* Display digital Red-free



Sophisticated OCT Technology with the Integrated Fundus Camera

12 mm Wide Scan & 5 Line Cross Scan!

Rich Analysis Functions Plus High Resolution Images

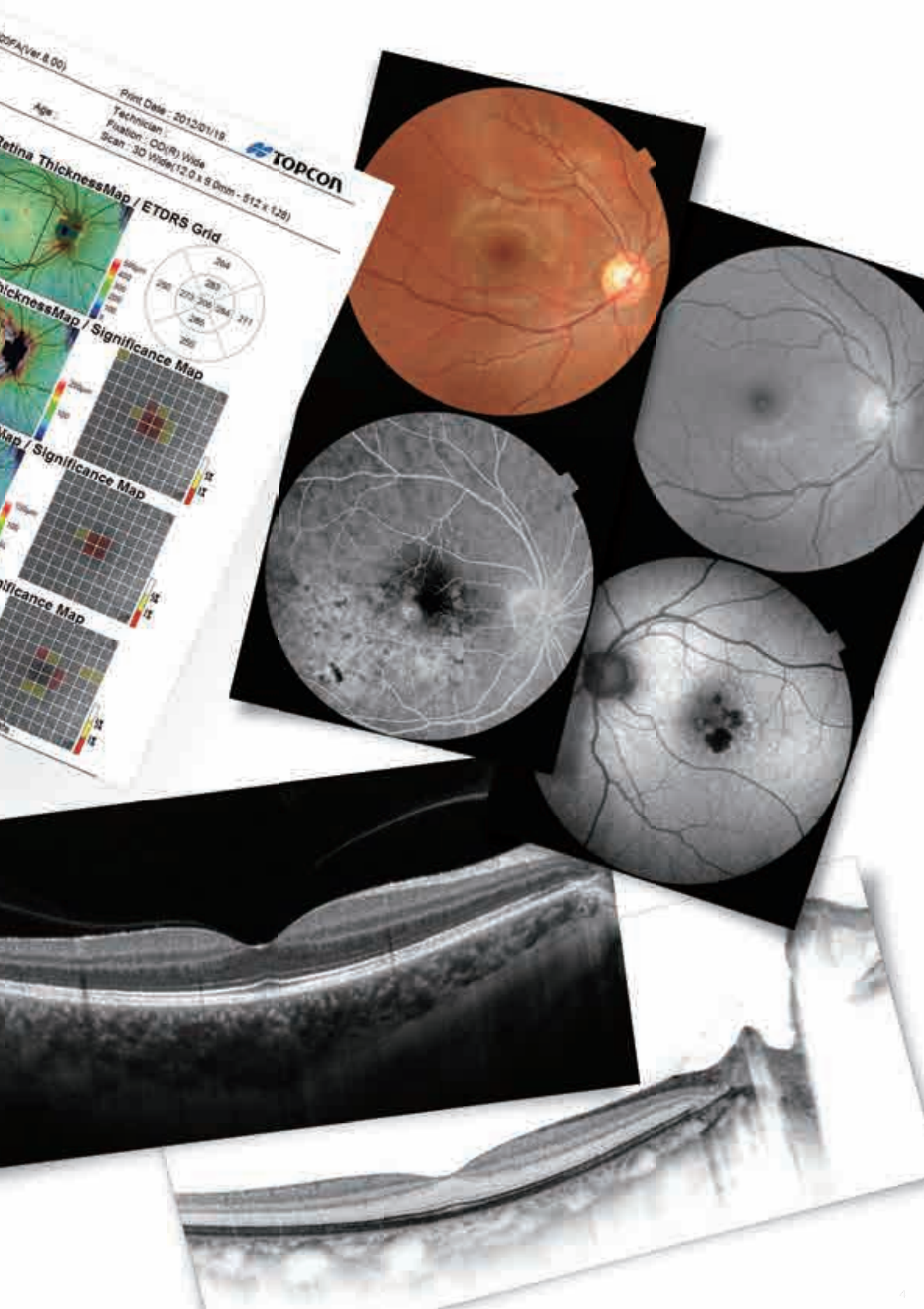
50,000 A-scans/sec – Greater Details in Shorter Time

The enhanced 50,000 A-scans/sec allows for faster tomography acquisition and minimizes artifacts generated by eye movement, producing clear cross-sectional retinal images. Now there are even more imaging variations by the TOPCON 3D OCT-2000 with the new 12×9mm wide scan enabling the user to capture a wider range of the image from optic disc to macula with a single shot. Additionally the 5 Line Cross Scan can be a perfect solution for a detailed screening and a quick follow-up. Moreover, Topcon's " Enhanced Choroidal Mode* " visualizes further internal structures, allowing much superior visualization of the interface between choroid and sclera. Data analysis is now selectable from 2 formats – Fine or Basic, and can be performed fast or in detail according to your purposes. Experience sophisticated examination with the new evolved TOPCON 3D OCT-2000 Series.

Stunning Retinal Images with the Integrated High Resolution Retinal Camera

Combining OCT and a Color Fundus Camera in one unit, the TOPCON 3D OCT-2000 line-up is perfected now with FA and FAF photography functions. Furthermore digital Red-free images can be displayed easily at one touch. Owing to flexibly changeable ISO sensitivity, reduced flash level with still crystal-clear fundus observation is available. This would result in reduced patient fatigue and miosis. If the OCT image is only required, simply select "Color Photography OFF".

* Choroidal Mode + Overlapping


Print Date : 2012/01/19
Technician :
Fixation : OD(R) Wide
Scan : 3D Wide(12.0 x 9.0mm - 512 x 128)
TOPCON
Retina ThicknessMap / ETDRS Grid
ThicknessMap / Significance Map
Map / Significance Map
nificance Map

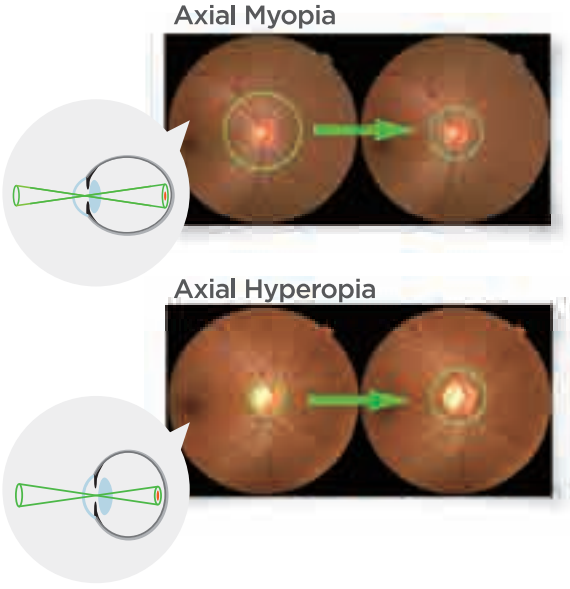
4 Easy Steps for Operation Flow

1 Register / Select Patient

After Registering / Selecting a Patient, Click on Button

When registering a patient, it is possible to input eye refractive data. Based on the inputted refractive information, the software adjusts the circle diameter for the circle scan and corrects 3D papillary diameter, area and volume, while also calculating magnification compensation, which enables accurate scan performance.

Ex.) Circle Scan Diameter Correction



2 Select scanning pattern

Intuitive Color Touch Panel

The color touch panel allows for easy selection of a scan pattern icon. Scan icons are easily customized from the selection of over 500 different scan patterns, making it possible to create an individual combination of commonly used icons.

3 Capture

Color Fundus / OCT / FA FAF Photography

Auto functions enables anyone to take high quality images with minimal training.

» **Color Fundus / FAF Photography:**

Auto Focus / Auto Shoot

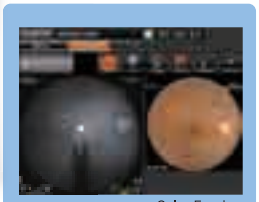
» **OCT Photography:**

Auto Focus / Auto Z & Z Lock / Auto Polarization
(Once the retinal position is detected, optimize the output sensitivity of the image and the OCT image will be displayed more clearly.)

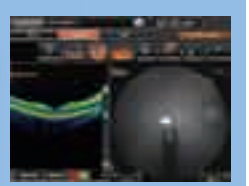
» **FA Photography:**

Touch button simultaneously along with the dye injection. The timer starts to count. The capturing mode can be easily switched to Color Fundus or OCT during FA photography without stopping the timer.

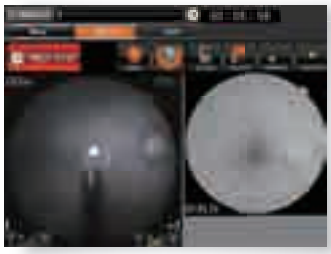
FA photography Starts



Color Fundus



OCT



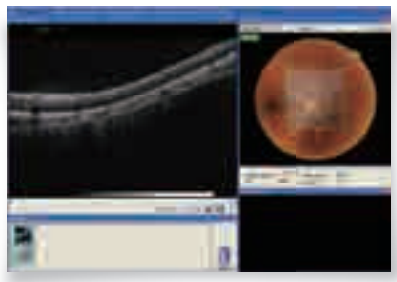
FA photography Stops

4 Automatic export to PC

View & Analysis

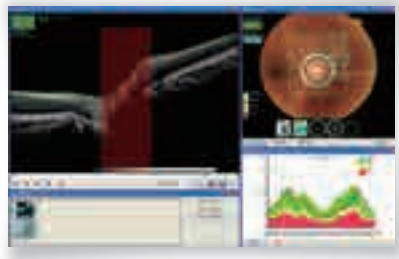
An instant comparison of the enface OCT projection image and the color fundus image is available.

Ex. 3D Disc



Photography Window

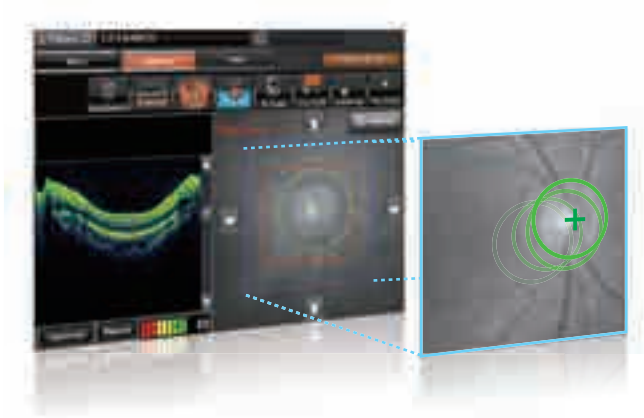
Click and analysis can be implemented.



Analysis Window

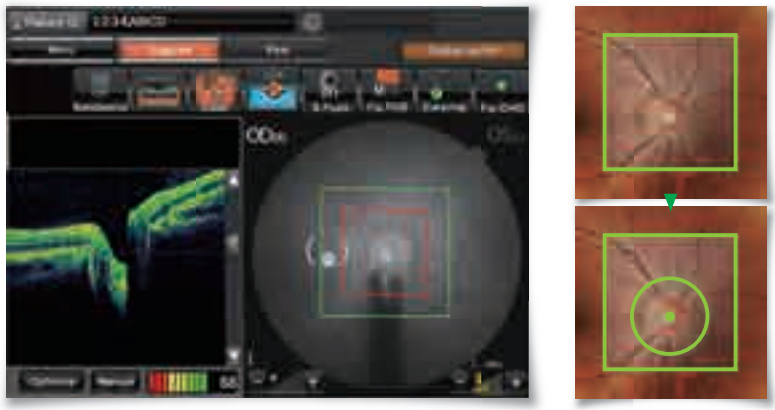
Export Report

During Capture After Capture PC 3D OCT-2000



Auto Disc Search Function

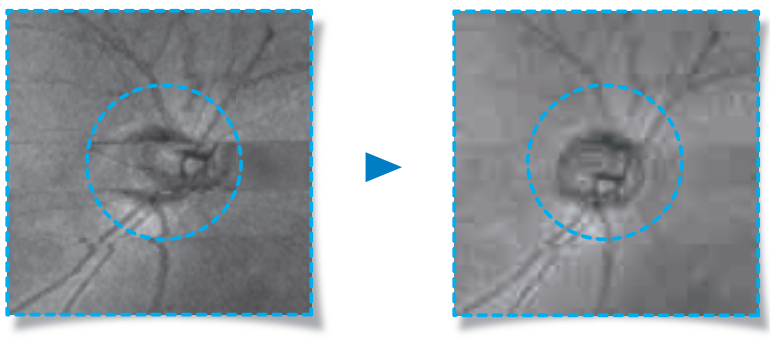
It automatically detects the disc center referring to the IR image. Tracking the disc center position, it contributes to better accuracy and scan positioning when circle scanning.



Auto Disc Center Detection

After 3D Scanning, the disc center is automatically detected.

» Measurable scan range
- 6×6mm 512×128
- 4.5×4.5mm 256×256



Before After

Motion Correction / Compensation / Rescanning Function

Motion Correction

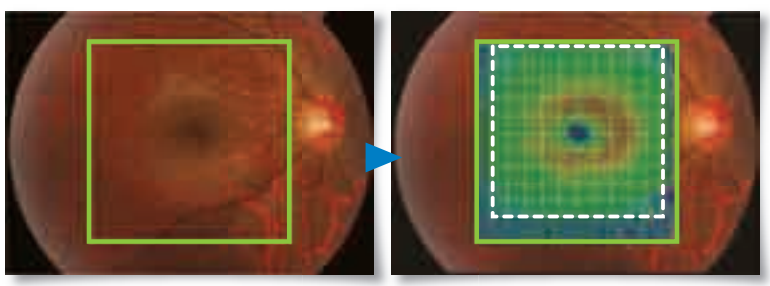
Corrects the Z direction movement.

Compensation Function

Tracks the ocular and then compensates the X direction movement.

Rescanning Function

Due to Y direction movement, the scanning area may be missed. In such a case, the rescanning function automatically activates.

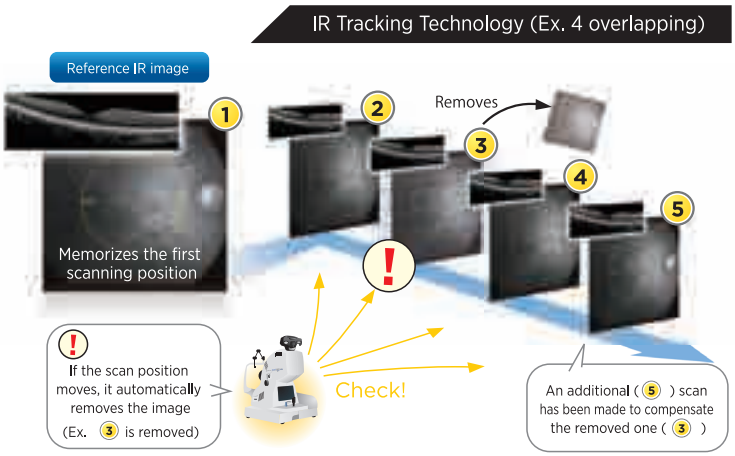


Auto Fovea Center Detection

The 3D OCT-2000 Series can also automatically center the fovea to ensure accurate reporting and analyzing.

* The function is available in Glaucoma Analysis – Macula

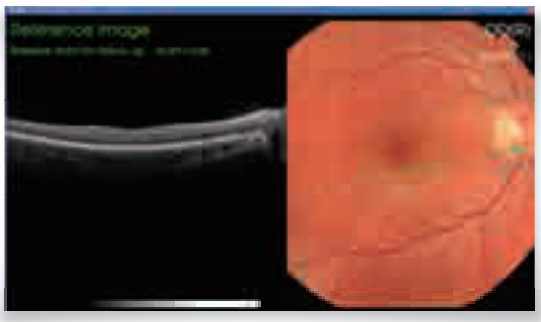
3D OCT-2000 Has Been Designed to Provide Highly Accurate Data



IR Tracking

IR tracking utilizes the IR image during capture to overlap exactly the same place on the retina. If the scanned area moves, the rescanning function automatically begins referring to the first scanned image.

* The number of re-scans can be preset in the range of 0 to 4.



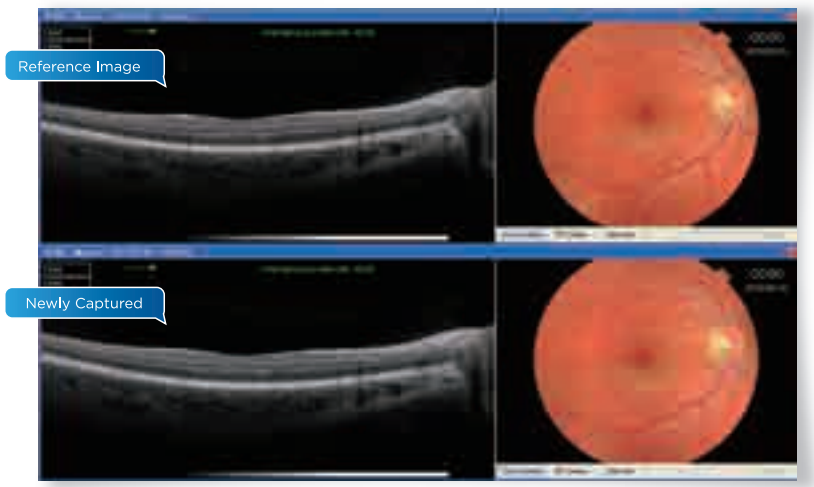
1 Reference Image Displayed

2 Lock ON Before Capture

Follow-up Function

The new Follow-up Function defines the scanning location based on the previously captured/selected image and turns Lock ON before the next capture, which enables the user to scan the same position under the same conditions.

* The follow-up function is available with Line / 5 Line Cross / Radial Scans.
* It is possible to specify the scanning location manually.

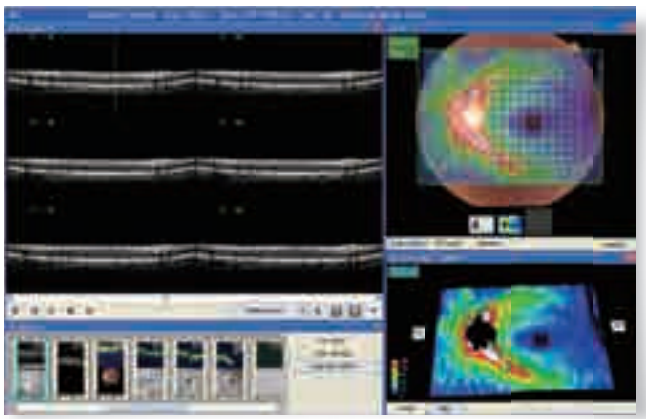


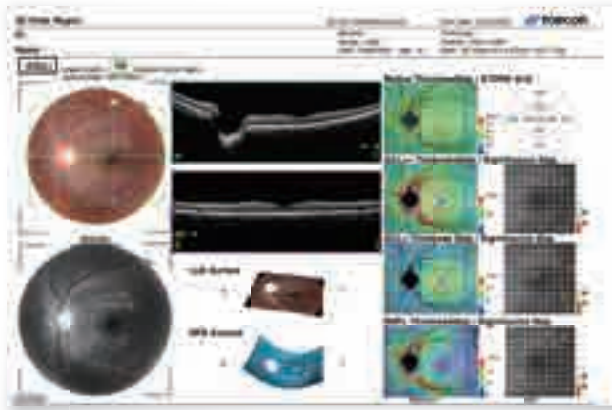
3 Immeditate Comparison

GLAUCOMA & MACULA

» 12×9 mm 3D wide Scan

The capability to capture a wider image from macula to optic disc strongly contributes to better effectiveness of the examination and reduction of patient's fatigue. Macula Analysis as well as Thickness and Significance maps of NFL, GCL+IPL, NFL+GCL+IPL are useful in detecting various macular diseases and glaucoma.

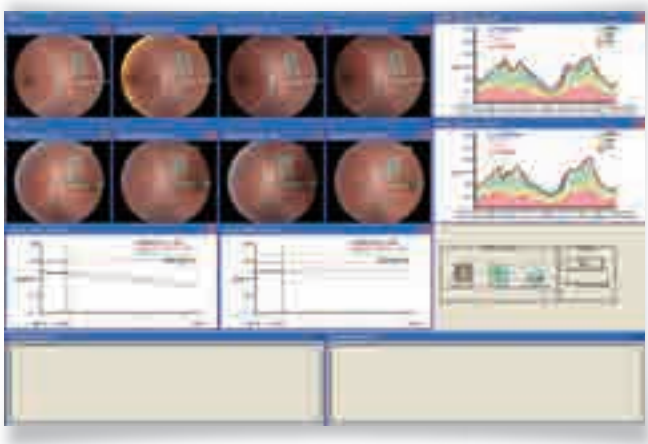


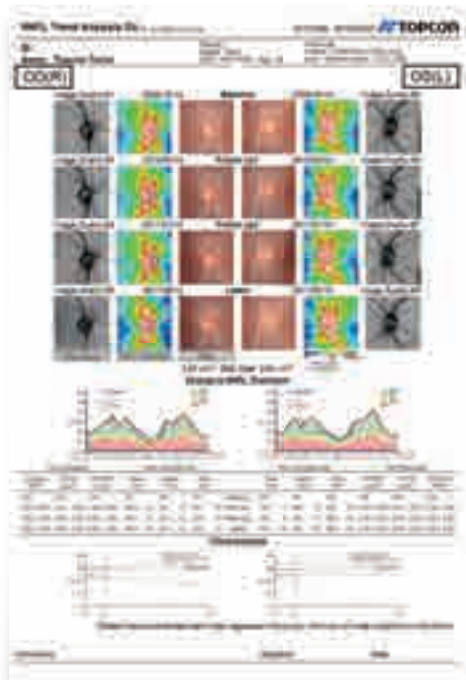


GLAUCOMA

» RNFL Trend Analysis

A maximum of 8 images of both eyes can be displayed on one screen, taking the earliest capture date as a baseline. In addition, checking "register" assures analyzing the same scanned position under the same scanning conditions every time. Color Fundus/ RNFL thickness map/ OCT images/ Cup and Disc ratio can be generated and compared to the normative database.



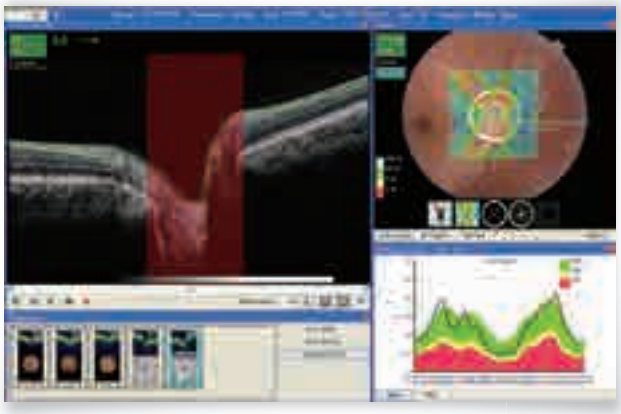


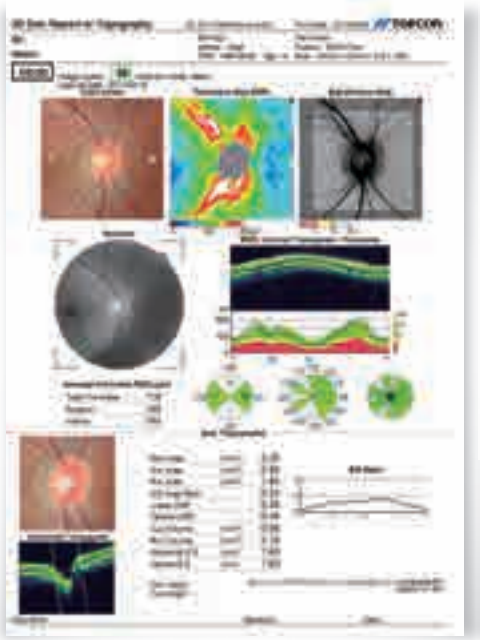
Fully Comprehensive Analyzed Data

-Easy-to-read & easy-to-understand report templates-

» 3D Disc Report

The below image is an example of a standard glaucoma analysis. The reference plane distance can be customized as 120 μm, 60 μm or 90 μm or any other value in the range of -90～+210 μm.





» Disc Margin

Based on the edges of the RPE of each B-scan, the software automatically determines the disc margin.

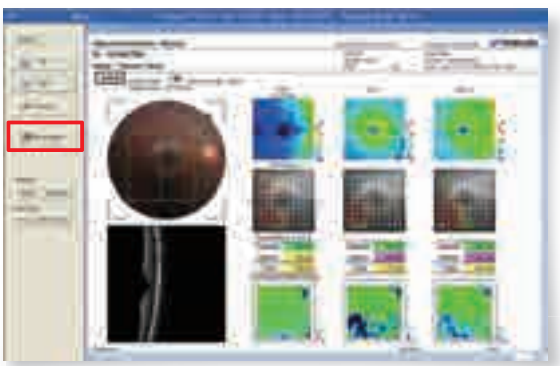
» Cup Margin

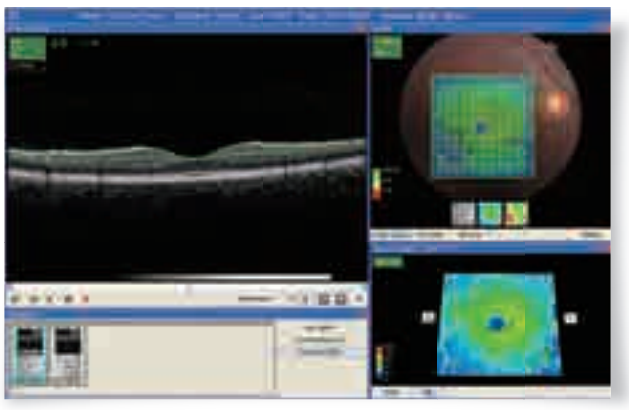
The software automatically detects the edges of the RPE and using a horizontal line between the RPE edges as a reference point, creates a line 120 μm above it. The Cup Margin will be determined at the cross points of the reference plane and the ILM.

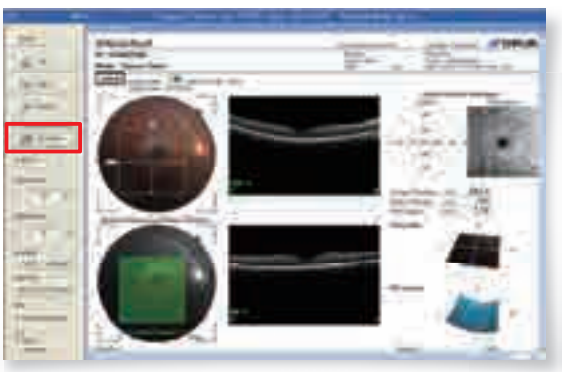
* It is possible to customize the reference plane distance as 120 μm, 60 μm or 90 μm or any other value in the range of -90～+210 μm.

» Glaucoma Analysis – Macula

7×7mm Thickness Map, Significance Map over the Red-free image with a comparison of normative database, Average Data of Superior, Inferior, Total thickness with normative database, and an Asymmetry map which produces a differential value of the superior and inferior thickness can all be shown on one report. By clicking [ ] 3D Macula Analysis Report is displayed. Not only this Glaucoma Analysis (Macula) function is useful for glaucoma but for macular disease diagnosis.







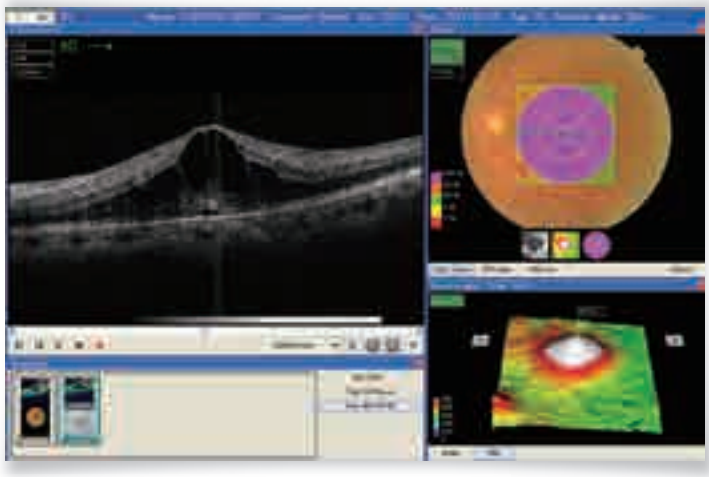
Fully Comprehensive Analyzed Data

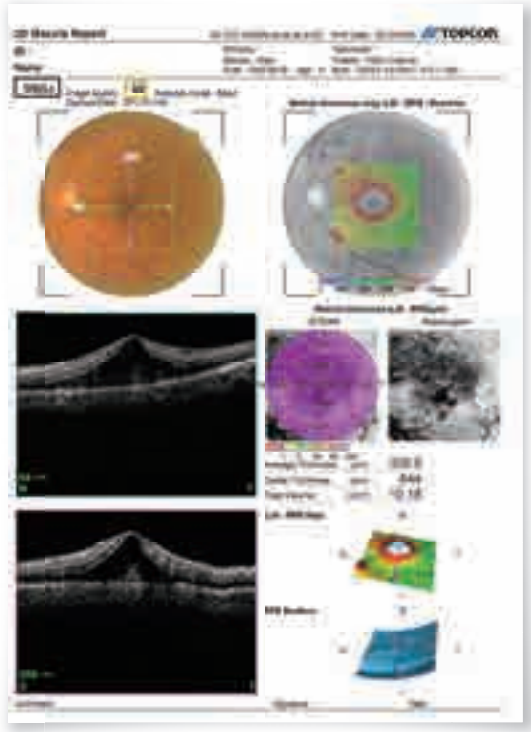
-Easy-to-read & easy-to-understand report templates-

MACULA

» 3D Macula Report

Comparison to the rich Normative database, Thickness map display, and 3D detail evaluation is available with this 3D analysis.

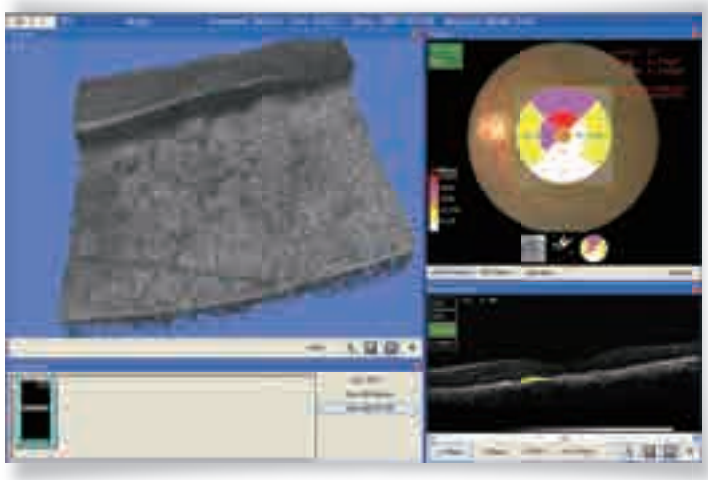


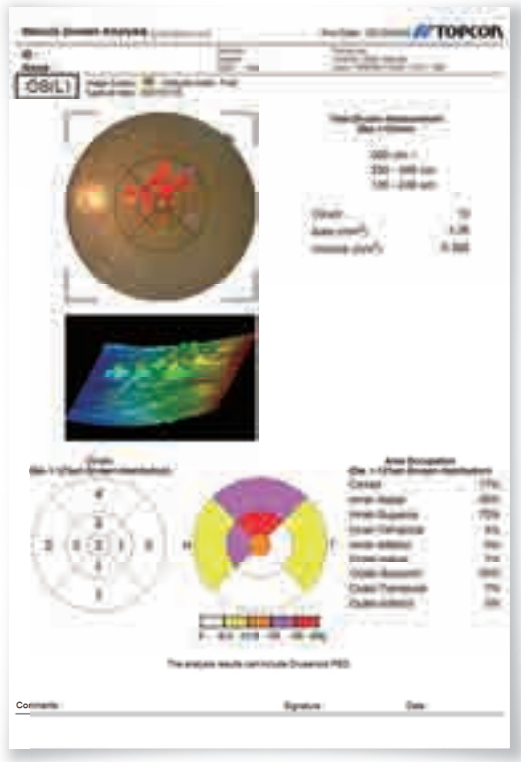


» Macula Drusen Analysis

Drusen counts are described on the color fundus image and report, and are color-coded according to the Drusen area in each ETDRS grid.

* Drusen Analysis is available only at 3D 6×6mm 512×128 Fine Analysis
* Drusen defined here counts a suspicious drusen of ϕ125 μm or larger



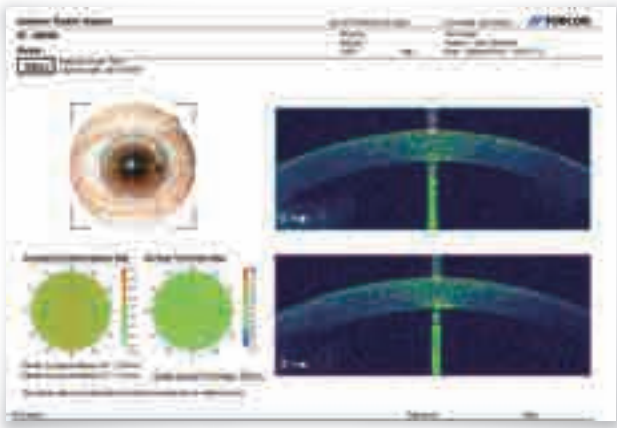


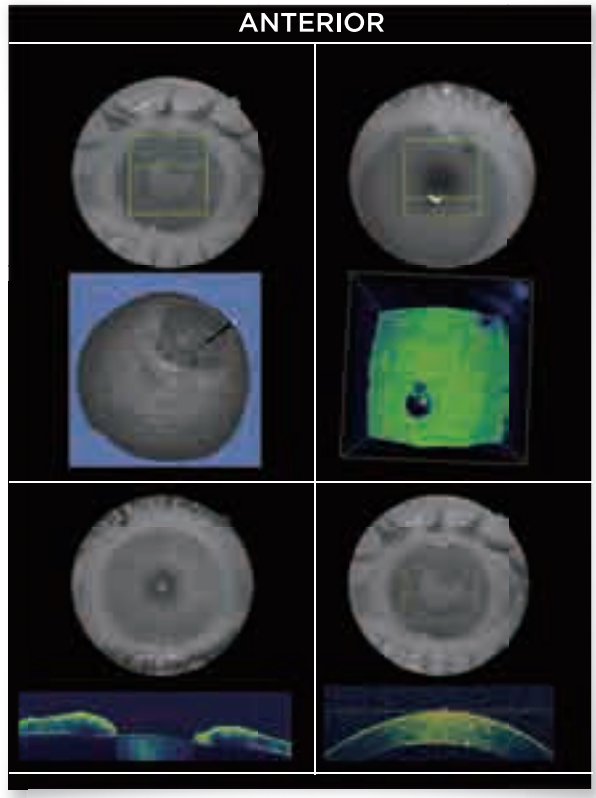
ANTERIOR

» Anterior Segment Analysis

Corneal thickness map, Corneal thickness distribution diagram, Curvature radius distribution diagram, Curvature radius and Peripheral corneal thickness analysis, Manual angle measurement are all available.

*In order to capture anterior segment photography, it is necessary to use the headrest attachment.





Reference : Dr. Frederique Matonti

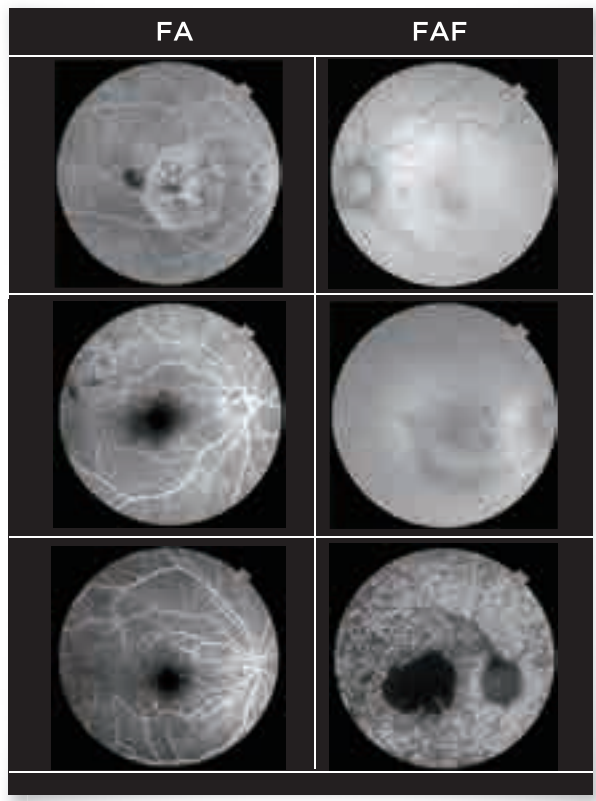
FA • FAF

» Import Function

FA, FAF, ICG, Red-free images can be imported easily. The examiner should mark at least 3 spots on a vessel of Color fundus image and the import fundus images, click on the “registration” and the simultaneous observation of OCT and imported images become available.

Case: Central retinal vein occlusion (CRVO)

Import Image

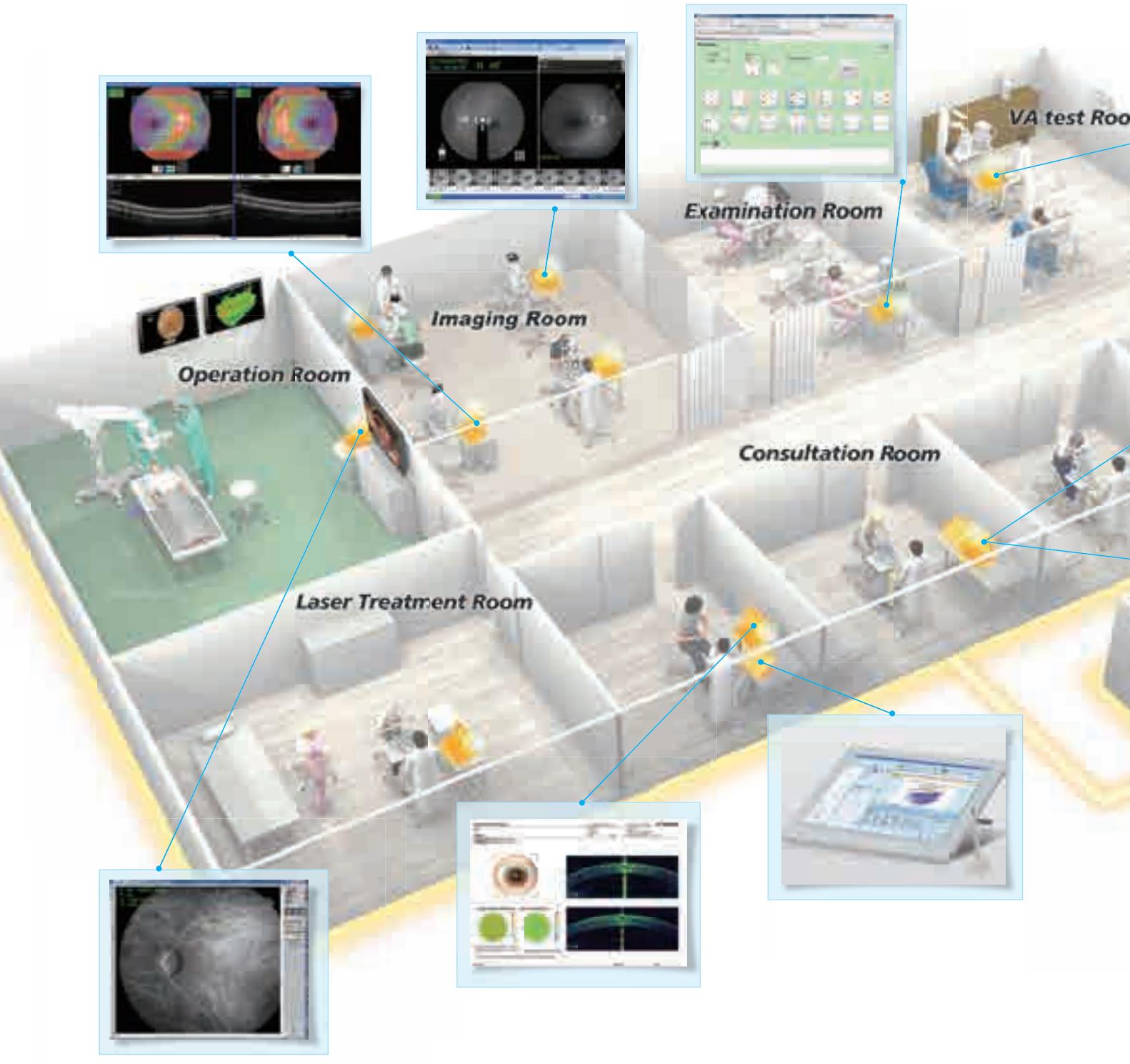


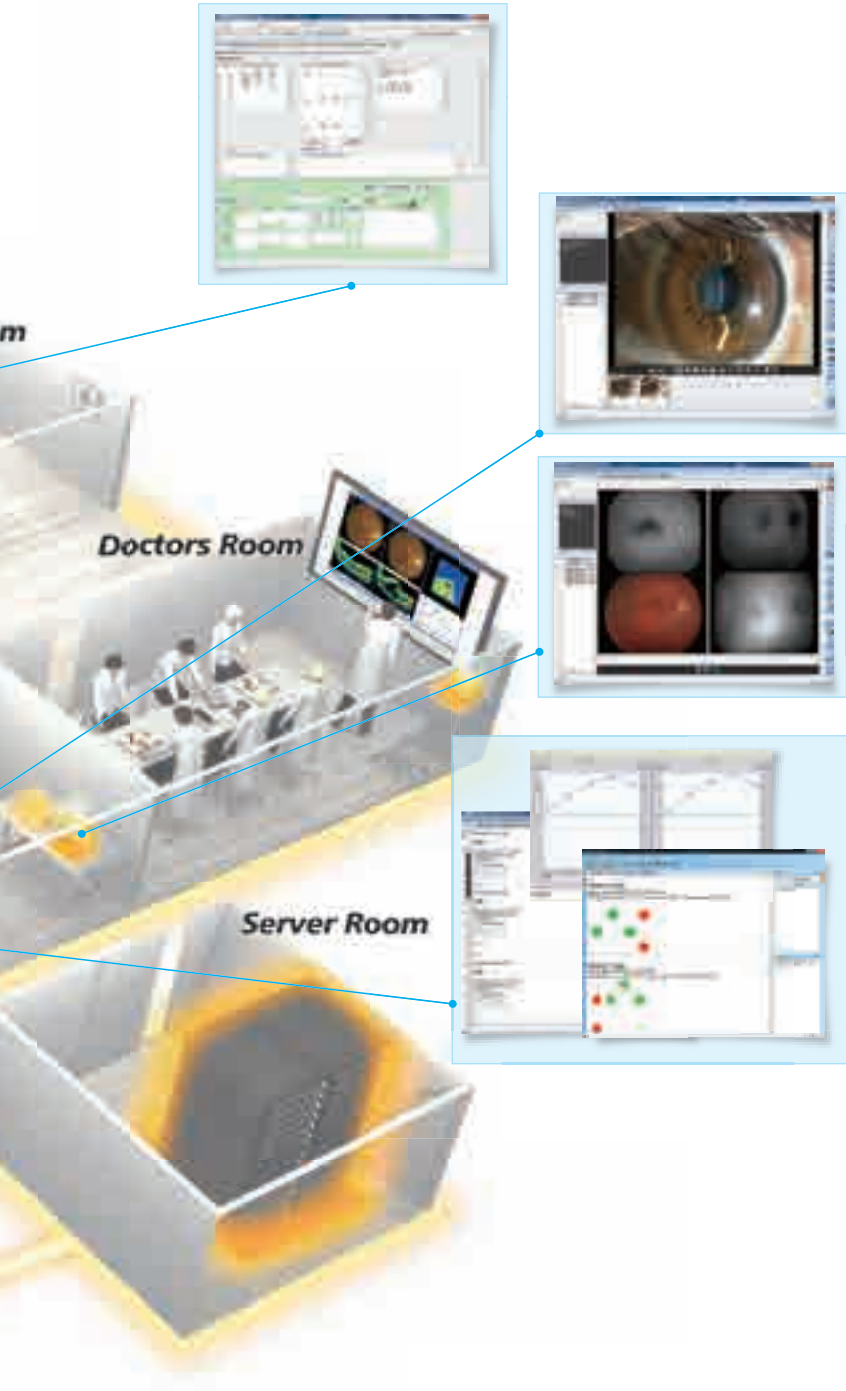
The FA and FAF images were photographed by 3D OCT-2000 FA and 3D OCT-2000 FA Plus model.

3D OCT-2000 in a Hospital Network

IMAGEnet™ Digital Imaging System

The Topcon 3D OCT-2000 and its viewing software plays a powerful role in the management of the patient's data. The unique software enables all patient imaging and data to be collected, saved and reviewed remotely through one unified network, IMAGEnet™. OCT images can be viewed and analyzed through the network at any location; medical meetings, surgical simulation in the operating room and in a patient consultation room. Furthermore, an integrated IMAGEnet™ system allows all clinical images taken throughout the ophthalmology department to be stored in one patient file, thereby facilitating comprehensive diagnosis.





3D OCT-2000
OPTICAL COHERENCE TOMOGRAPHY

Specifications

Observation & Photography of Fundus Image

Scan Mode	Color, FA*, FAF**(Spaide Filters), Red-free***
Observation	Near IR
Picture Angle	45° Equivalent 30° (Digital Zoom)
Diopter Scale Range ****	-13D to +12D (in fundus photography)
Operating Distance	40.7mm (in fundus photography) 63.7mm (in anterior segment photography)*****
Photographable Diameter of Pupil	45°: ϕ 4.0mm or more Small pupil diameter: ϕ 3.3mm or more

Observation & Photography of Fundus Image / Anterior Segment Tomogram

Scanning Range	(On Fundus)	[Lateral] within 3~12mm [Vertical] within 3~9mm
	(On Cornea)	[Lateral] within 3~6mm [Vertical] within 3~6mm
Scan Patterns (Recommended) ******	Macula / Disc: 3D Wide	512×128 (128 horizontal scan lines comprised of 512 A-scans), 12×9mm
	Macula: 5 Line Cross	1,024×10 (10 scan lines comprised of 1024 A-scans), 9mm
	Macula: 3D Scan	512×128 (128 horizontal scan lines comprised of 512 A-scans), 6×6mm
	Macula: Radial Scan	1024×6 or 12 (6 or 12 radial scan lines comprised of 1024 A-scans), 6mm
	Macula: 7 Line Raster	1024×7 (1024 A-scans per B-scan×7) , 6mm
	Disc: 3D Scan	512×128 (128 horizontal scan lines comprised of 512 A-scans), 6×6mm
	Disc: Circle Scan	1024 A-scans, ϕ 3.4mm
	Anterior: Radial Scan (For Cornea)	1024×12 (12 radial scan lines comprised of 1024 A-scans), 6mm
	Anterior: Line Scan(For Angle Chamber)	1024 (line scan line comprised of 1024 A-scans), 3mm
Scan Speed		50,000 A-scans per second
Scan Depth		2.3mm
In-depth Resolution		Below 6μm
Photographable Diameter of Pupil		ϕ 2.5mm or more

Observation & Photography of Fundus Image / Fundus Tomogram

Retinal Layers Identified	Macula: ILM, IS/OS, RPE, BM Glaucoma: ILM, NFL, IPL
OCT Reference Focus	Vitreous and Choroid
Fixation	Adjustable internal matrix LCD and external fixation device (Matrix LCD :The display position can be changed and adjusted. The presenting method can be changed.)

Light Source / Power Source / Power Supply

Light Source	Super luminescence diode(SLD) Wavelength:840nm Half Bandwidth:50nm Output on cornea ≤ 0.65 mW
Power Source	Voltage: 100/110/120/220/230/240V Frequency: 50-60Hz
Power Supply	200VA (Max 400VA)

Dimensions / Weight

Dimensions	545mm(W)×535mm(D)×600 ~ 630mm(H)
Weight	35kg(3D OCT-2000) 36kg(3D OCT-2000 FA) 37kg(3D OCT-2000 FA plus)

* Only for FA and FA plus models
** Only for FA plus model
***Display digital Red-free
**** Without the diopter compensation
***** With anterior segment attachment
******More variable scan patterns available with a combination of different pixel and scan range.

Courtesy: Yasuyuki Suzuki MD., Department of Ophthalmology, Tokai University Hachioji Hospital
Takeya Kohno MD., Department of Ophthalmology, Osaka City University Hospital

※ Not available for sale in the United States.
*Subject to change in design and/or specifications without advanced notice.

IMPORTANT In order to obtain the best results with this instrument, please be sure to review all user instructions prior to operation.

CE 0123

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