DRI OCT Triton series

Swept Source Optical Coherence Tomography

TOPCON

YOUR VISION. OUR FOCUS.

See. Discover. Explore.

The diagnostic power of Swept Source OCT
Deep **R**ange **I**maging.

"Swept source adds a new dimension to OCT. The TOPCON DRI Swept Source OCT is easy to use, provides unique clinical information, and has improved my practice. For the first time, we can in-vivo visualize not only the vitreo-retinal interface but also the cortical vitreous which is important at the time when more and more therapies are delivered via intra-vitreal injections. Deeper imaging brings choroidal thickness, helping guide my clinical decisions. Seeing more helps guide my therapy and allows me to treat more effectively. I find Swept Source OCT an essential tool to look for biomarkers of disease regression or progression."

Prof. P. E. Stanga,
Manchester Royal Eye Hospital, Manchester Vision Regeneration (MVR) Lab at NIHR/
Welcome Trust Manchester CRF & University of Manchester

Welcome to the New Frontier in OCT Imaging

The DRI OCT Triton combines the world's first swept source OCT technology with multimodal fundus imaging Multimodal All-in-One fundus imaging tool will bring the next level of diagnostic capability to you and your patients.

Unprecedented image quality

Triton's swept source with its fastest scanning speed and longer 1,050nm wavelength results in stunningly clear, detailed images, even into the deepest layers of the eye with short acquisition time. You will not only see the retina and vitreous, but also the choroid and the sclera like never before.

Remarkable diagnostic capability

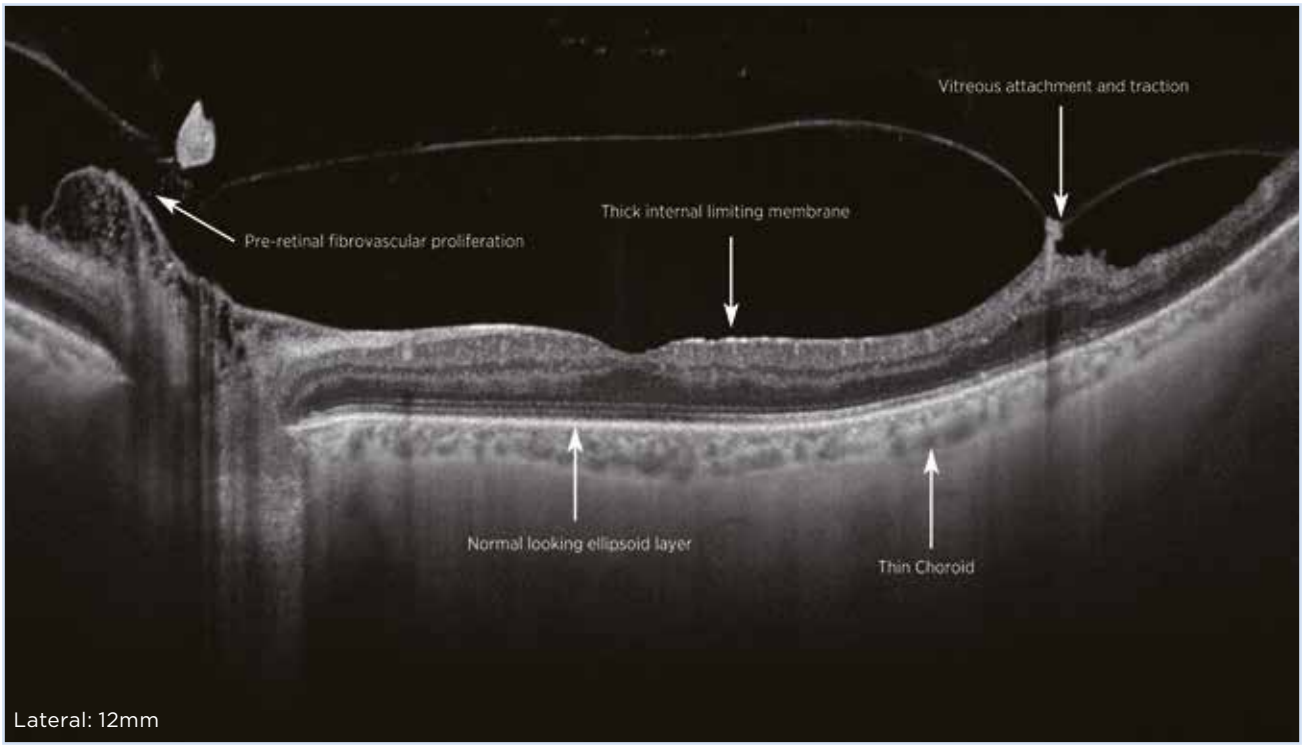
Seeing deeper makes it possible to have a better understanding of many ocular pathologies, and may provide the advantage of early disease detection and monitoring. Combined with unique features such as OCT Angiography and En-face imaging, Triton empowers you to take proactive steps to preserve your patients' eye health.

Greater clinical efficiency

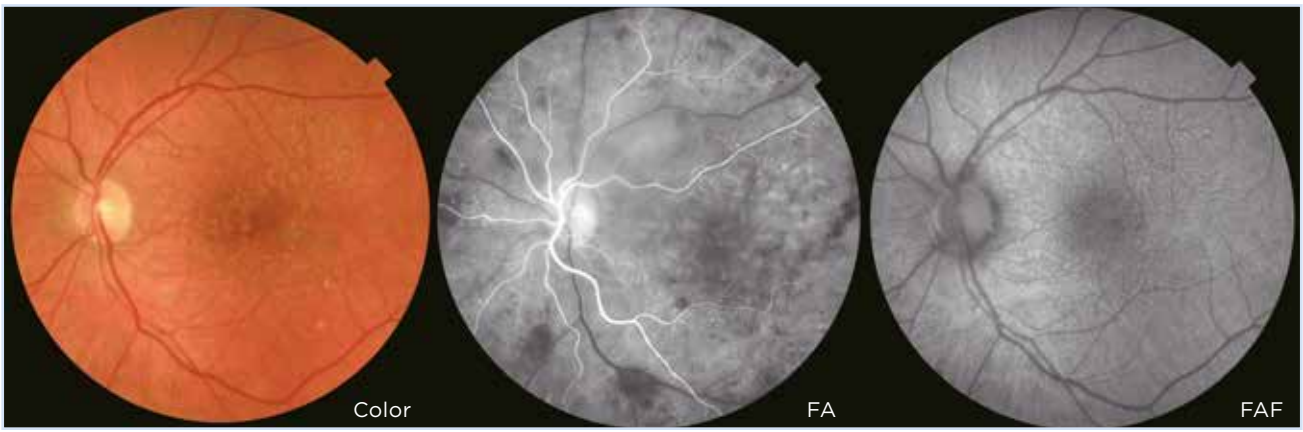
A wealth of automated and intuitive functions, including single-scan captures and the new SMARTTrack™ system, are designed to optimize your practice workflow by simplifying data capture, analysis, and follow-up.

See Deeper. See More.

Proliferative diabetic retinopathy



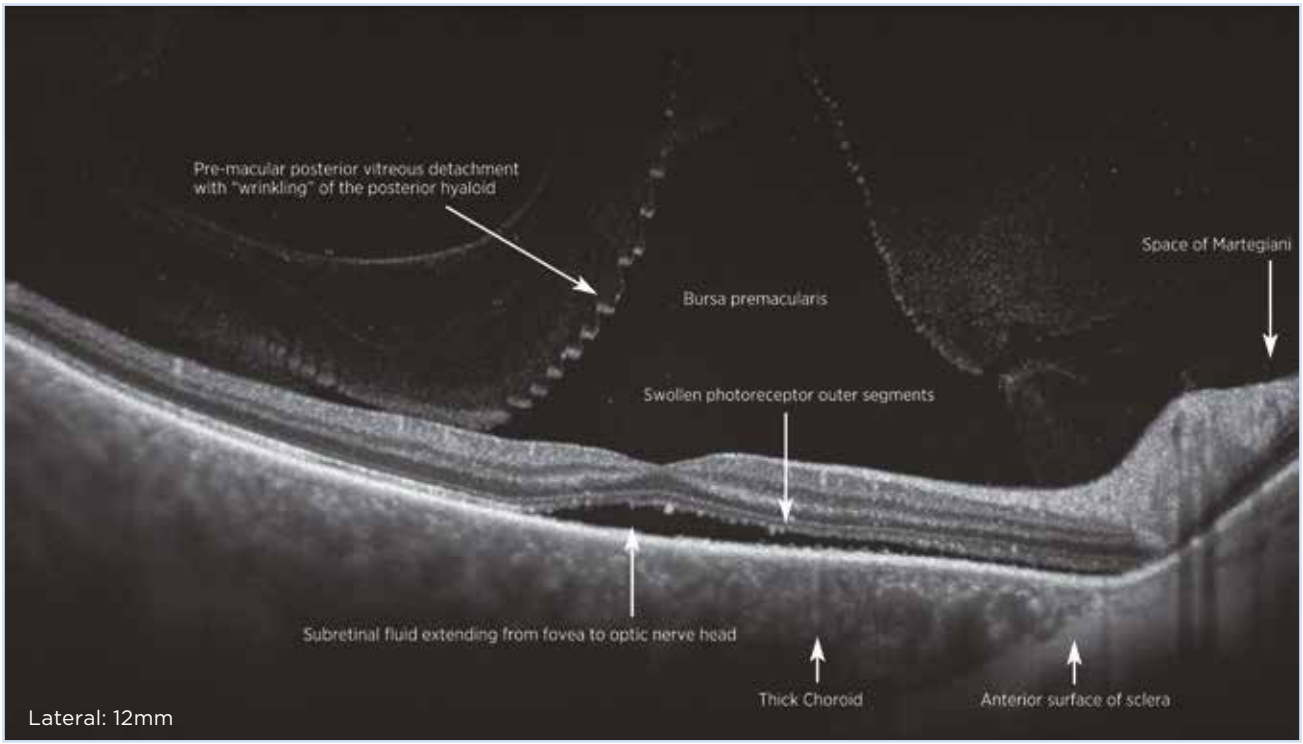
Courtesy: Prof. P. E. Stanga, Manchester Royal Eye Hospital, Manchester Vision Regeneration (MVR) Lab at N IHR/ Welcome Trust Manchester CRF & University of Manchester



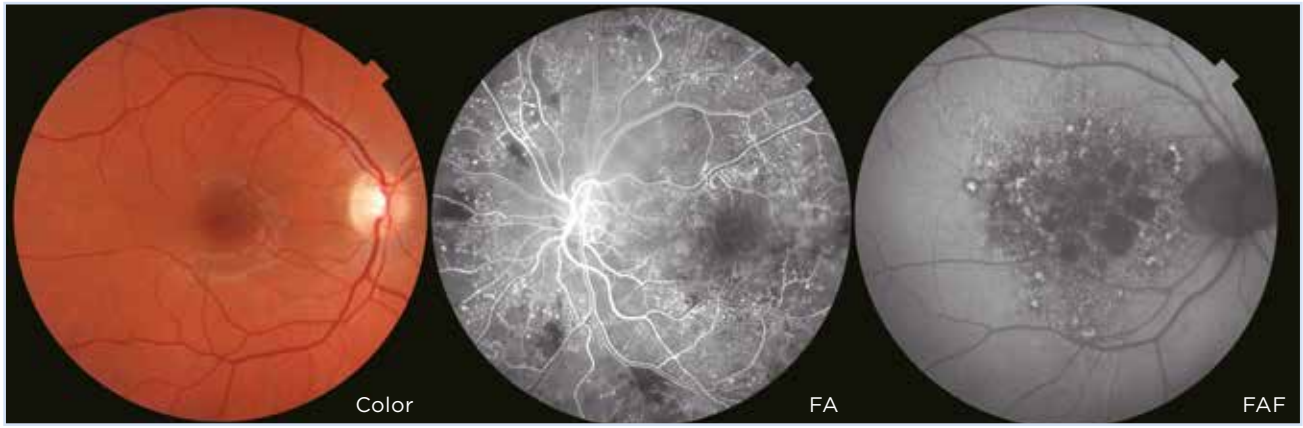
Courtesy: Prof. P. E. Stanga, Manchester Royal Eye Hospital, Manchester Vision Regeneration (MVR) Lab at N IHR/ Welcome Trust Manchester CRF & University of Manchester

* FA photography and FAF photography can be performed using only DRI OCT Triton plus.

Central Serous Chorioretinopathy



Courtesy: Prof. P. E. Stanga, Manchester Royal Eye Hospital, Manchester Vision Regeneration (MVR) Lab at N IHR/ Welcome Trust Manchester CRF & University of Manchester



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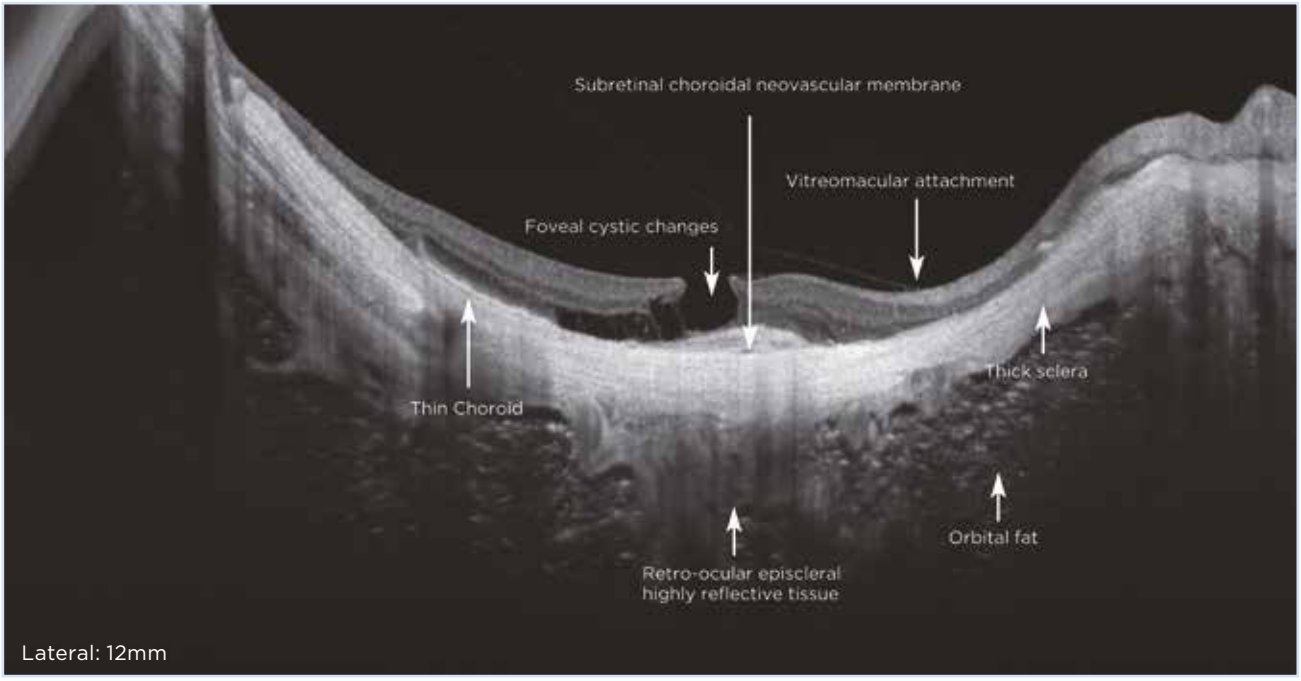
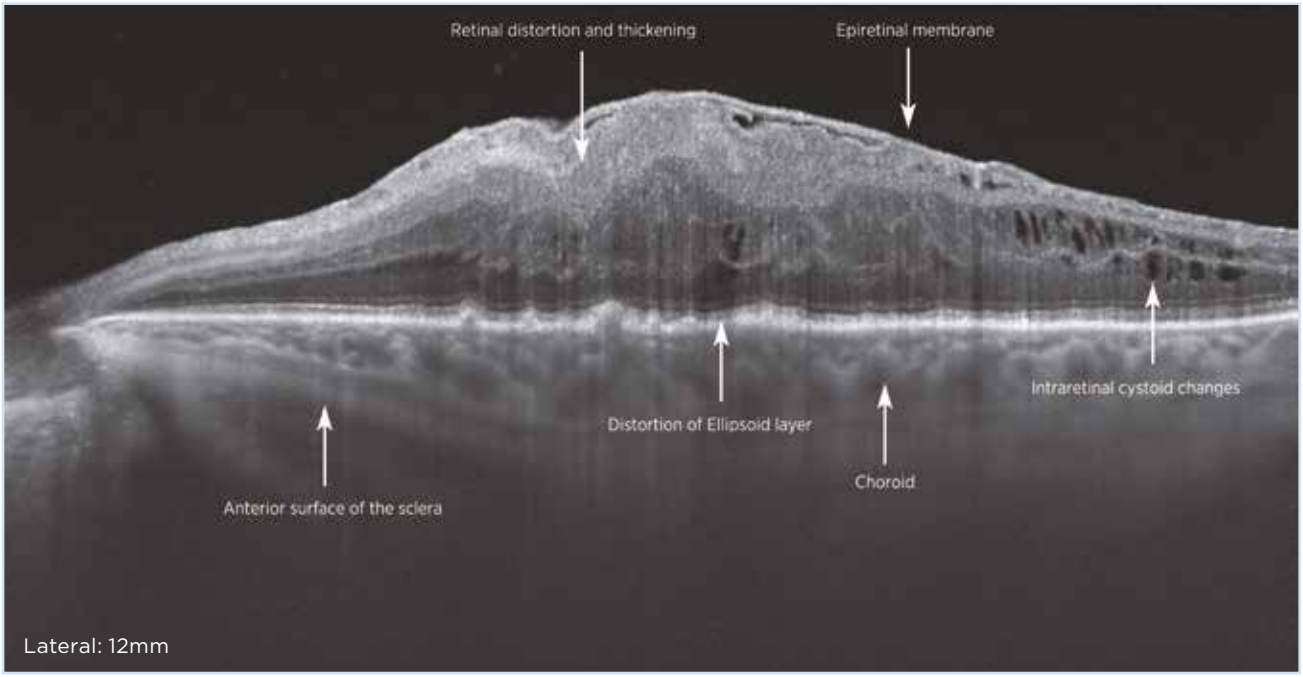
See Deeper. See More.

Pathological myopia



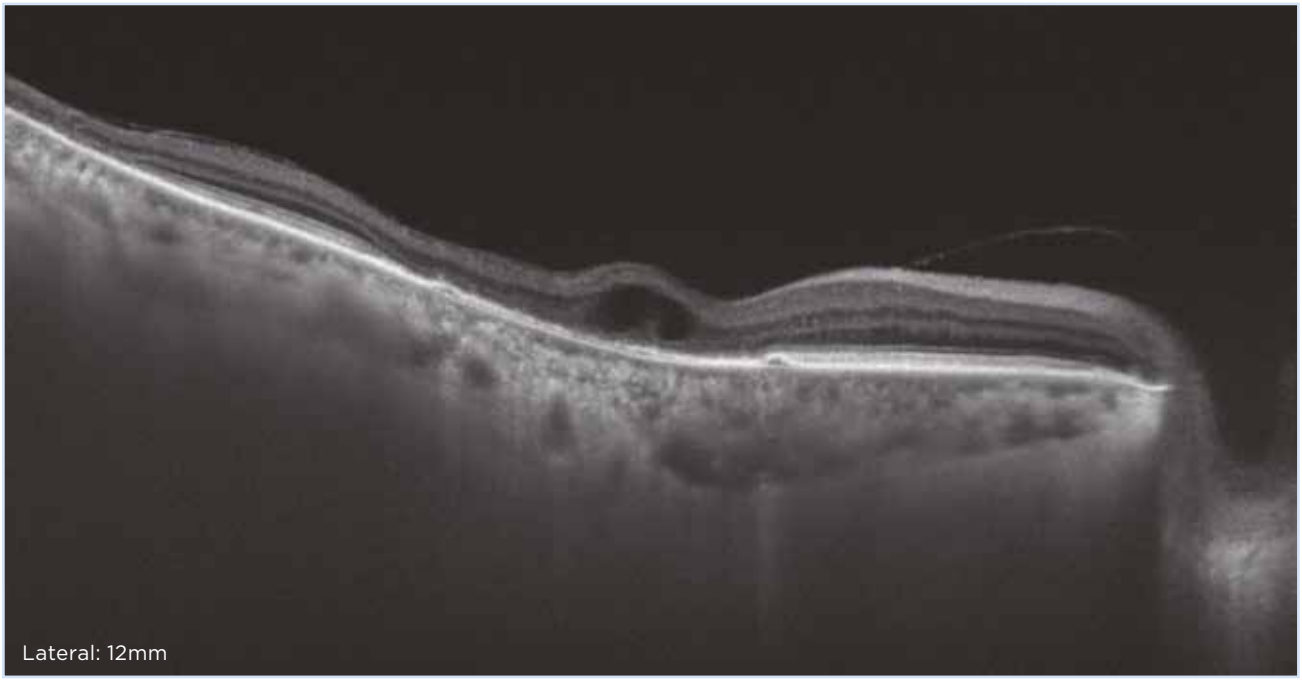
Courtesy: Prof. P. E. Stanga, Manchester Royal Eye Hospital, Manchester Vision Regeneration (MVR) Lab at N IHR/ Welcome Trust Manchester CRF & University of Manchester

Macular pucker

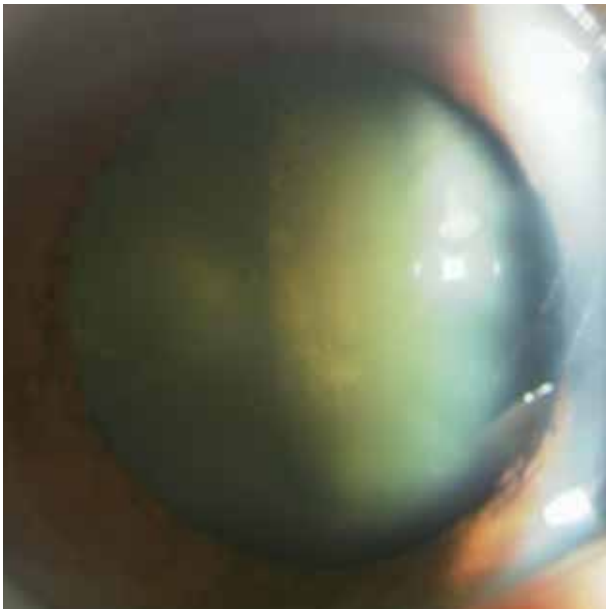


Courtesy: Prof. P. E. Stanga, Manchester Royal Eye Hospital, Manchester Vision Regeneration (MVR) Lab at N IHR/ Welcome Trust Manchester CRF & University of Manchester

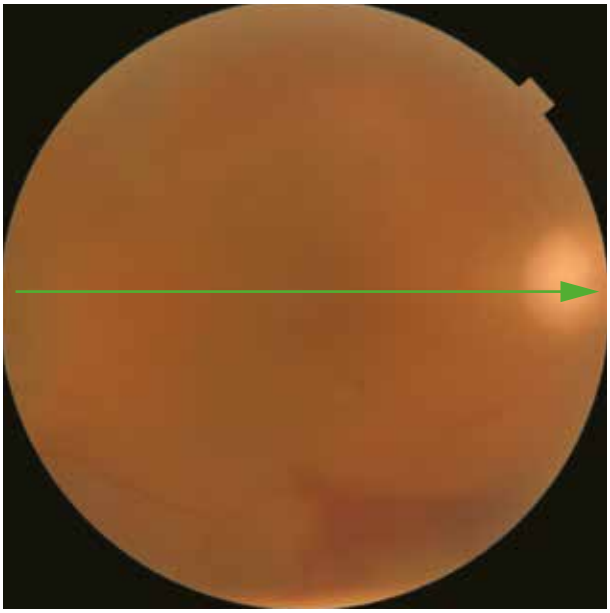
Image through cataract



a)



b)



c)

a),b),c) Courtesy: Kazuya Yamagishi, MD (Hirakata Yamagishi Eye Clinic, Japan)

Discover What Lies Beneath

SS OCT Angio™

TOPCON's SS OCT Angio is the most sophisticated system that combines high-quality OCT angiography with a Swept Source OCT. Built on the clinically proven DRI OCT Triton platform, it is powered by OCTARA, a proprietary image processing algorithm that provides highly sensitive angiographic detection. The exceptional visualization of vascular structures, even in the choroid and deeper retinal layers is realized.*

High-sensitivity Imaging and Deeper Intravascular Flow Visualization

Swept Source technology and OCTARA allow the deeper structures to be visualized with less depth-dependent signal roll-off, and detect even low microvascular flow with high sensitivity. Additionally, the 1μm wavelength makes OCT imaging possible for patients with media opacities.

* Depends on patient's condition

Rapid Scanning, Real Time Eye Tracking

At 100,000 A scans per second coupled with invisible scanning lines and the SMARTtrack eye tracking system, the Triton quickly completes the OCT Angiography scan and provides a clear image of the retinal microvascular flow network.

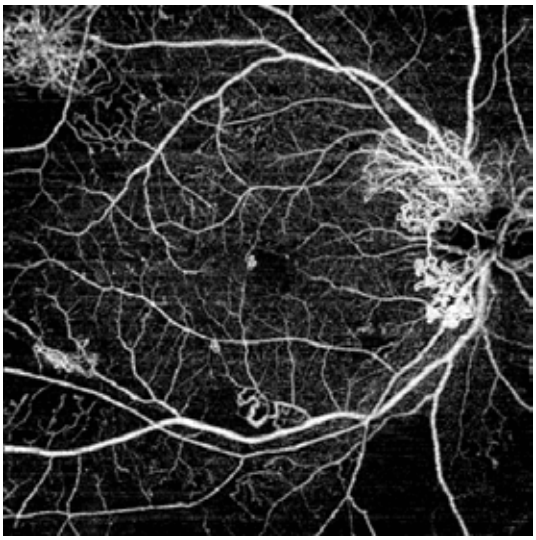
* OCT Angiography scanning line may be faintly visible during capture to some people under certain conditions

Enhanced Diagnostic Efficiency & Workflow Integration

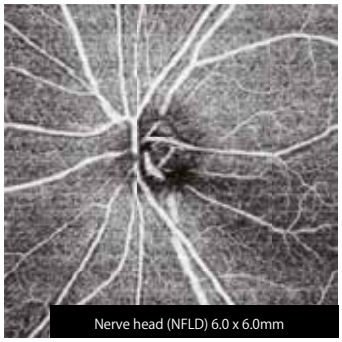
Multimodal platform provides easy, yet comprehensive comparison of microvascular impairment with FA, FAF, OCT and color fundus images in a single device.*

*DRI OCT Triton plus

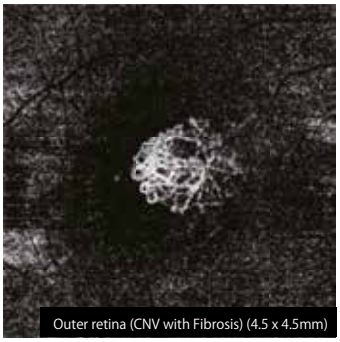
12 x 12 mm　512 pixels



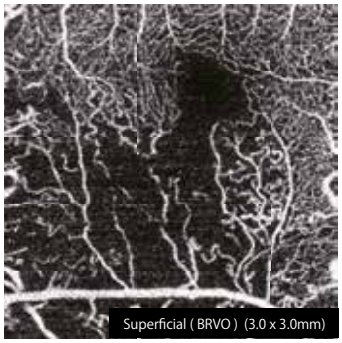
Courtesy: Akihiro Ishibazawa, MD, Asahikawa Medical University
Graduate School of Medical Sciences, Hokkaido, Japan

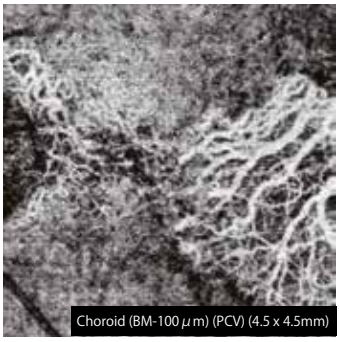


Courtesy: Kazuya Yamagishi, MD.,
Hirakata Yamagishi Eye Clinic, Japan



Courtesy: Dr.Carl Glittenberg, Karl Landsteiner Institute
for Retinal Research and Imaging

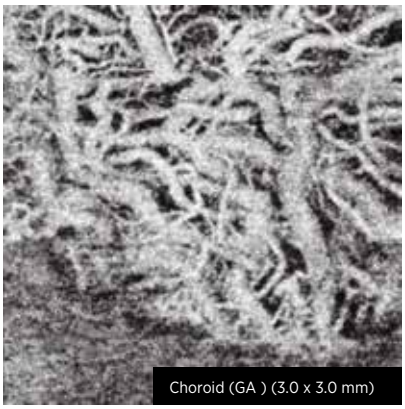




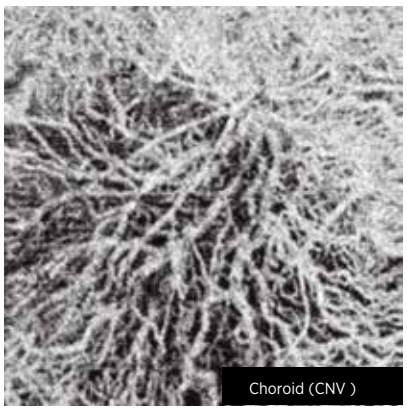
Courtesy: Dr.Carl Glittenberg, Karl Landsteiner Institute
for Retinal Research and Imaging

The OCTARA™ Difference

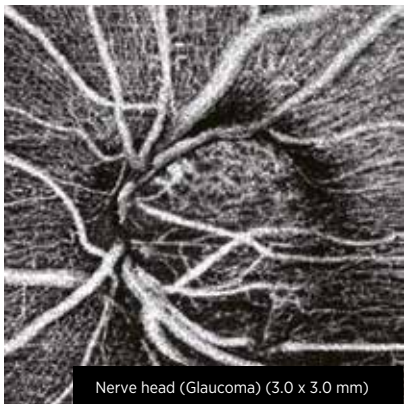
OCTARA is the image processing technology which extracts the signal changes derived from vascular flow using multiple OCT B scans acquired at the same position. It demonstrates high sensitivity for the detection of low blood flow in microvasculature. It is anticipated that OCTARA will be useful for detecting microaneurysms or capillary abnormalities.*



Courtesy: SriniVas R. Sadda, M.D., Doheny Eye Institute, UCLA



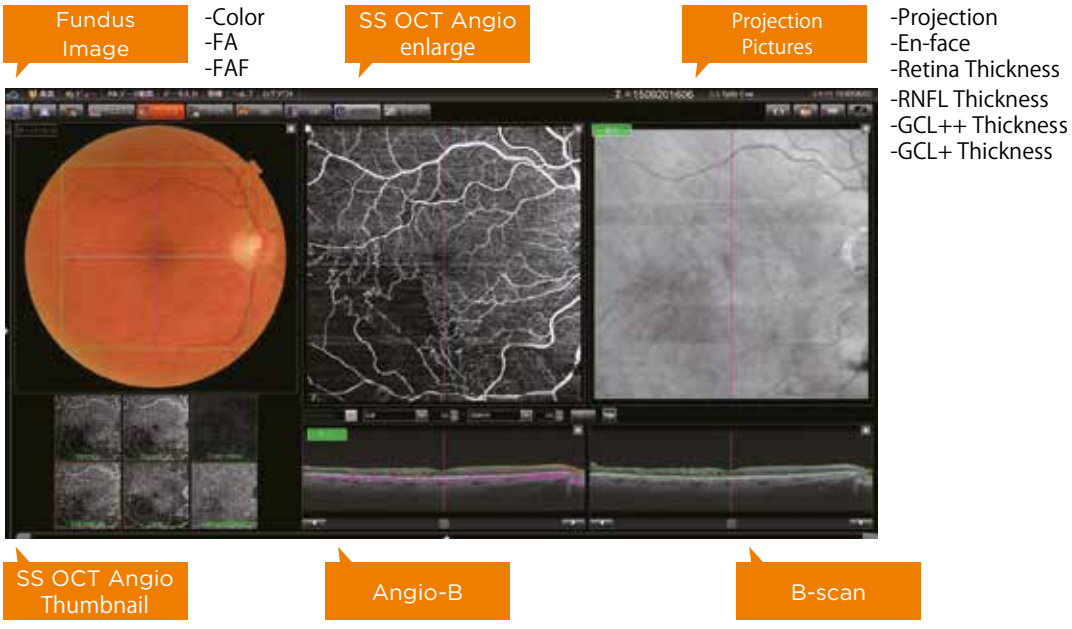
Courtesy: SriniVas R. Sadda, M.D., Doheny Eye Institute, UCLA



Multimodal Viewing

Angiography images, high-quality B scans and fundus photography can all be viewed on an single screen using IMAGEnet 6, so the area of interest can be assessed using multiple image modalities. Selected layers can easily be customized to enhance the clarity of specific pathological features.

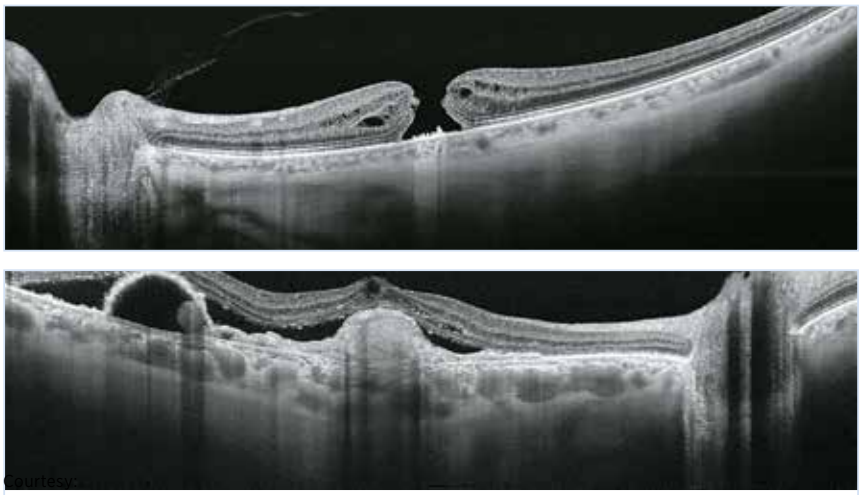
*IMAGEnet 6 software is optional



Superior and Stable Swept Source OCT Imaging.

Optimized wavelength for retinal imaging: 1,050nm

The longer wavelength light provides better tissue penetration, allowing visualization into the deepest layers of the eyes – even through cataracts, hemorrhages, and blood vessels.

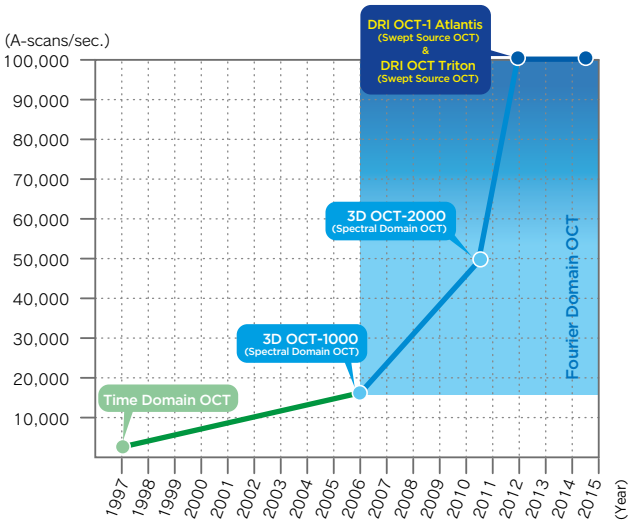


Courtesy:
Professor Jose Maria Ruiz Moreno, University of Albacete, Spain.

Swept Source OCT technology; the world's fastest scanning speed*

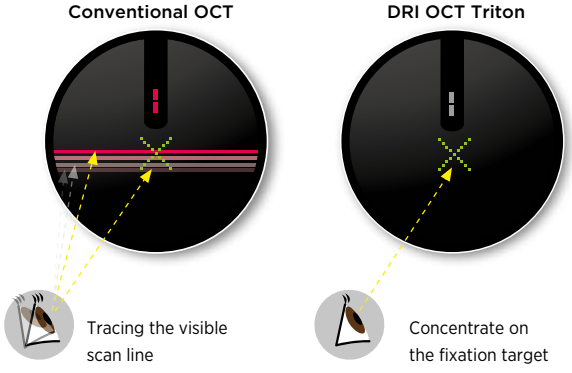
Swept source technology provides the world's fastest 100,000 A-scan/ sec, in the current conventional Spectral Domain OCT. The faster scanning speed enables capturing a clear B-scan by acquiring more A-scans within a given image acquisition time. It helps to reduce error of the involuntary eye movement.

*According to the TOPCON survey May 2015



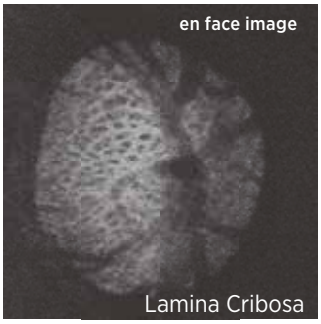
Invisible scan lines

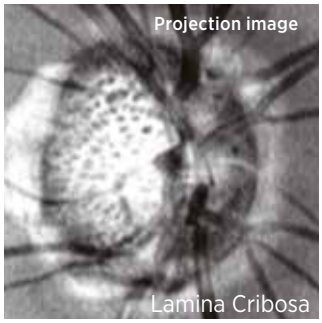
The invisible 1,050nm wavelength light helps patient to concentrate on the fixation target during the measurement, reducing involuntary eye movement. It supports more efficient workflow in a practice by reducing re-scan.



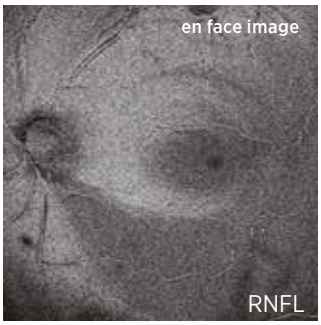
en face OCT imaging

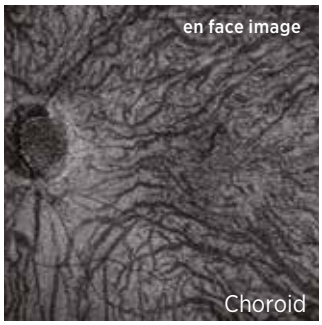
en face imaging allows for independent dissection of the vitreoretinal interface, retina, retinal pigment epithelium (RPE), and choroid by flatterning B-scan image. Pathology throughout the posterior pole can be studied and correlated with a patient's symptoms, their abnormality, and its progression.





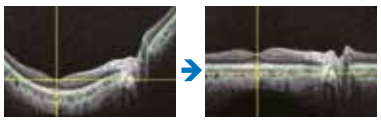
Courtesy: Prof. T. Nakazawa, Tohoku University, Japan





Courtesy: Prof. T. Nakazawa, Tohoku University, Japan

Flattening

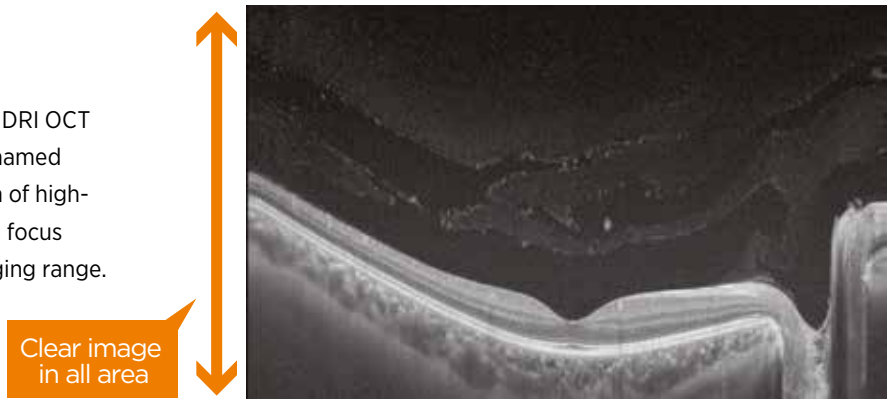


Original Image Flattened image

To visualize vitreous

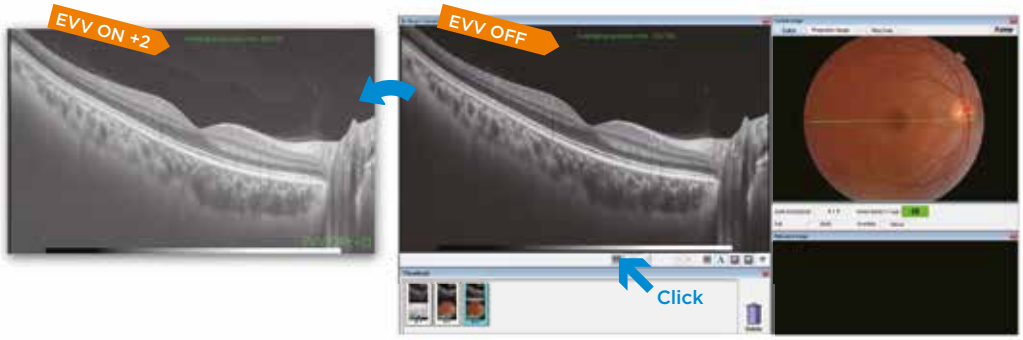
Dynamic Focus™

To enhance weak signal in vitreous part, DRI OCT Triton's advanced capturing technique, named "Dynamic focus", enables the acquisition of high-quality and uniform image quality with a focus uniformly focused across the entire imaging range.



EVV (Enhanced Vitreous Visualization™)

Improved vitreous visualization with DRI OCT Triton helps assess the nature of vitreoretinal interface abnormalities. Contrast can be quickly adjusted to the needs of the physician, depending on the area of greatest interest.



Discover from Anterior to Choroid

Anterior segment imaging

Triton has optional anterior imaging capabilities to enhance anterior segment data collection. The anterior segment attachment ensures sharp images, even in the periphery and the anterior chamber.

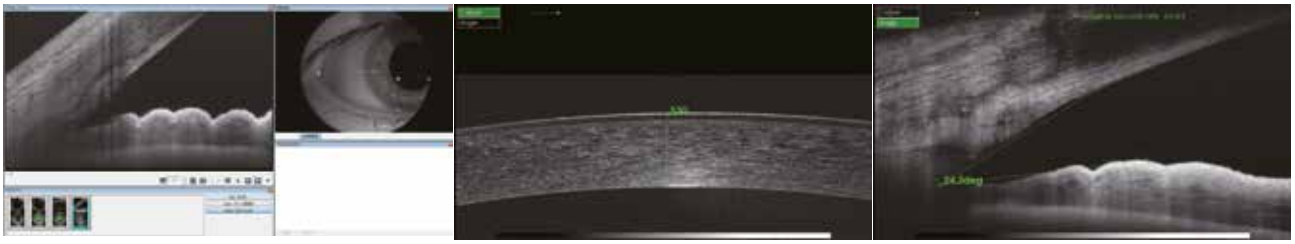
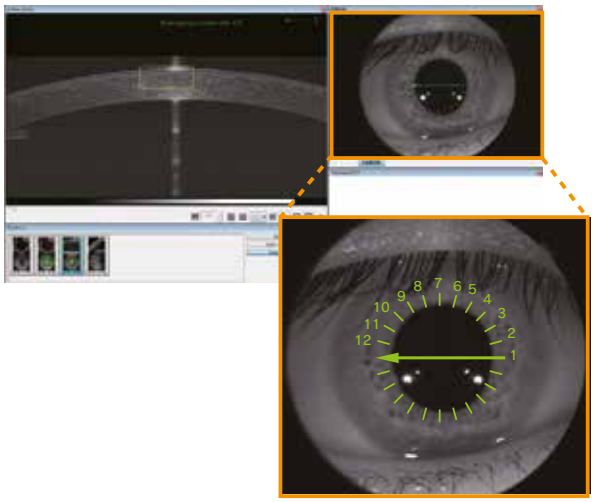


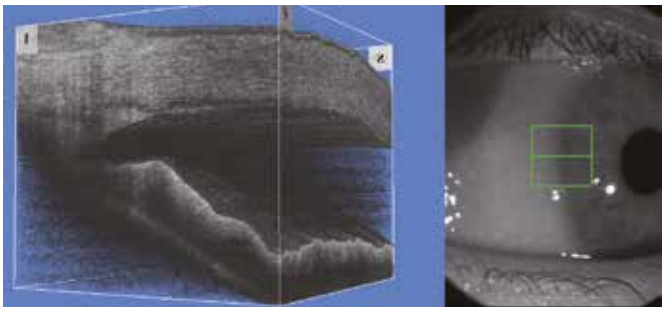
Image samples

OCT image B-scan length 16mm

Anterior segment in Radial scan

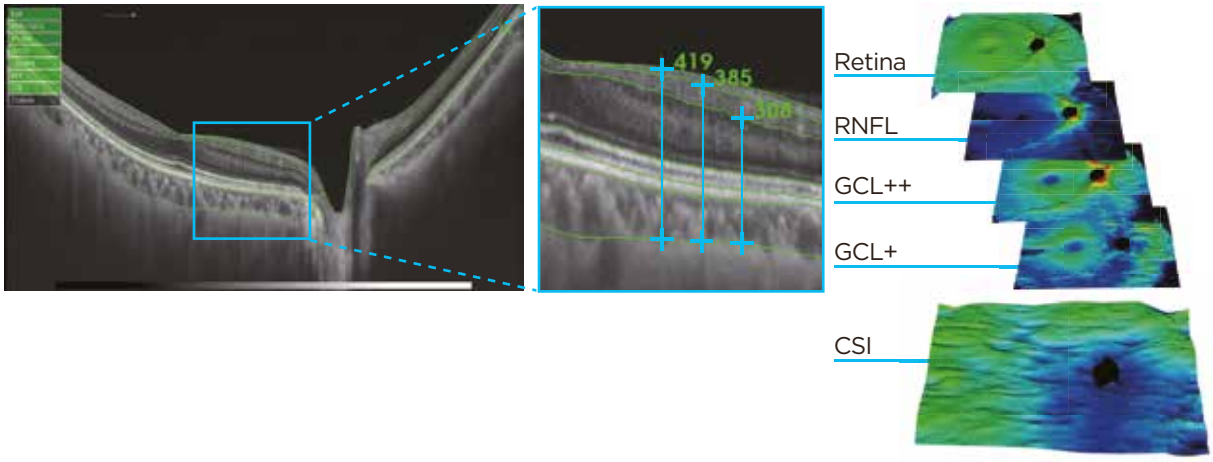


Anterior segment in 3D scan



7 boundaries segmentation/5 layers thickness map/caliper function

Retinal tissue layers are automatically segmented by the Topcon Advanced Boundary Software (TABS™), enabling to quantify the internal thickness for change analysis.



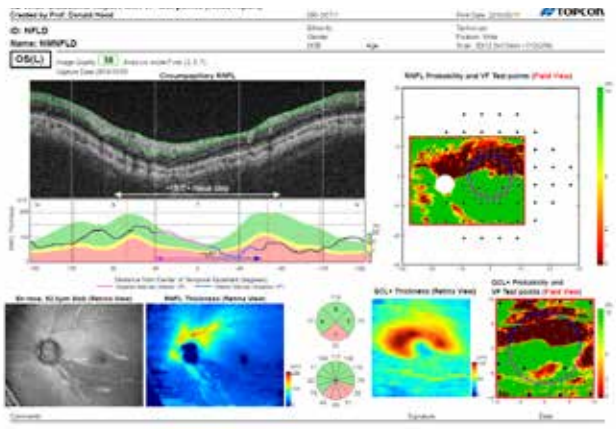
Accurate choroidal thickness maps

The choroid reveals valuable information about the health of the eye. High-speed choroidal thickness maps are crucial for early disease recognition and monitoring of inflammatory abnormalities. For example, a thin choroid can be an indication of myopic or choroidal atrophy. A thick choroid may indicate the presence of choroiditis, Central Serous Chorioretinopathy (CSCR) or hyperopia.

Retina	between **the ILM-OS/RPE boundaries**
RNFL	between **the ILM-RNFL/GCL boundaries**
GCL+	between **the RNFL/GCL-IPL/INL boundaries**
GCL++	between **the ILM-IPL/INL boundaries**
CSI	between **the BM-CSI boundaries or ILM-CSI boundaries**

Hood Report (for Glaucoma)*

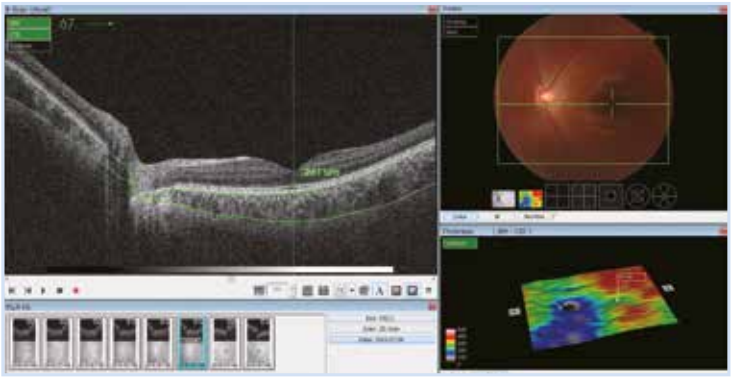
*Available with IMAGEnet 6.



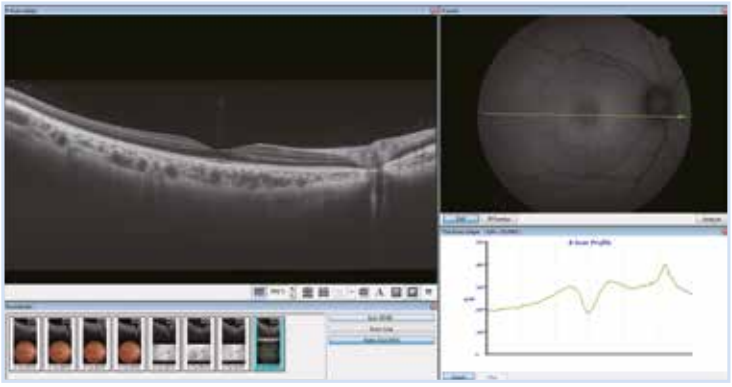
DRI Meets Multimodal Fundus Imaging: See the Whole Picture.

Swept Source OCT incorporates multimodal fundus imaging

DRI OCT Triton can acquire the OCT and fundus image in a single capture. Pinpoint Registration™ identifies the location of B-scan on the fundus image. Clear comparison between the B-scan and fundus image can support clinical efficiency during diagnosis.



OCT + Color fundus

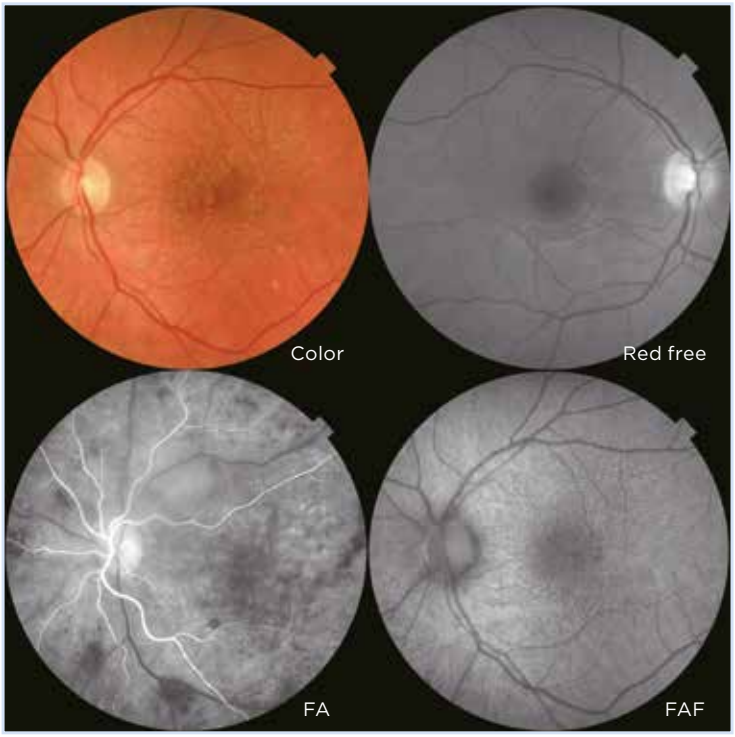


OCT + FAF

High-quality fundus images

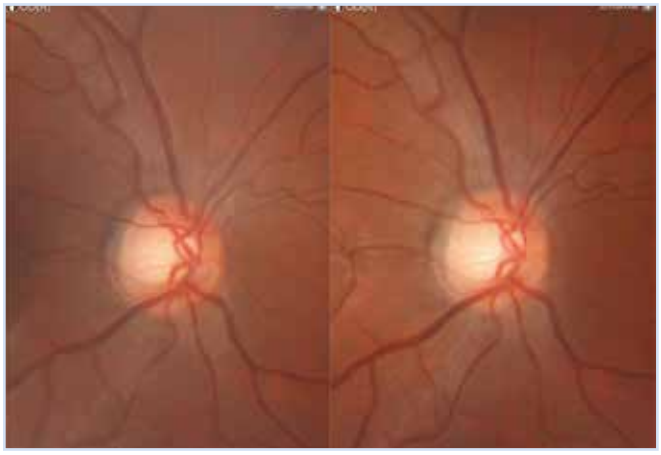
The DRI OCT Triton offers a color, non-mydriatic fundus image. Fundus Angiography (FA) and Fundus Autofluorescence (FAF) are available to meet your needs. The all in one device supports efficient workflow in practice.*

*DRI OCT Triton plus :
OCT /Anterior OCT (Option)/ OCT Angiography (Option) /Color / Red-Free / FA / FAF
DRI OCT Triton :
OCT /Anterior OCT (Option)/ OCT Angiography (Option) / Color / Red-Free



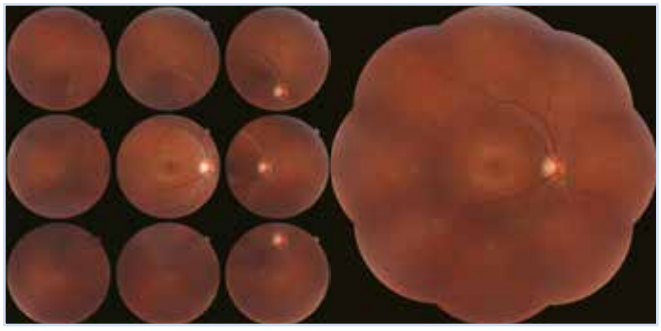
Stereo photography

Three dimentional visualization of color fundus image can be achieved by acquiring the images in stereo photography mode.
Triton's monitor guidance provides quick and easy operation with auto alignment function for a stereo pair.



Panoramic wide field photography

In addition to macula and disc image, DRI OCT Triton allows to acquire wide coverage of the retina. With these images, a panoramic graphic can be created on the optional software.



Smarter Tracking. Smarter Workflow.

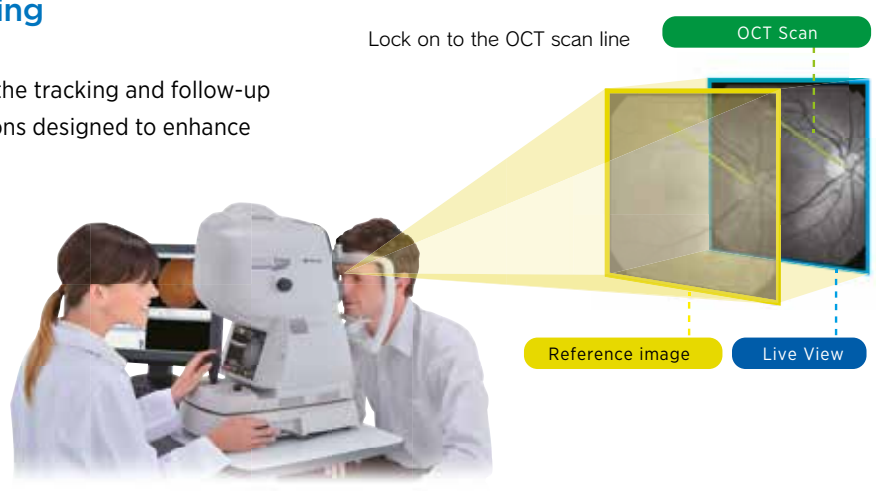
SMARTTrack™ makes tracking ingeniously simple

The new SMARTTrack™ tool enhances the tracking and follow-up ability of Triton with a variety of functions designed to enhance its user-friendliness:

» Fundus-Guided Acquisition (FGA)

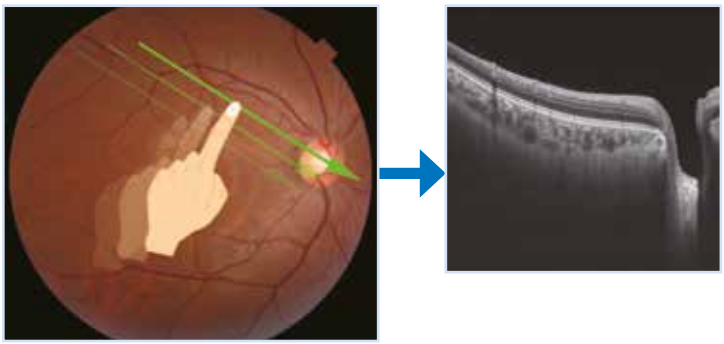
» Follow-up Function

» Tracking photography



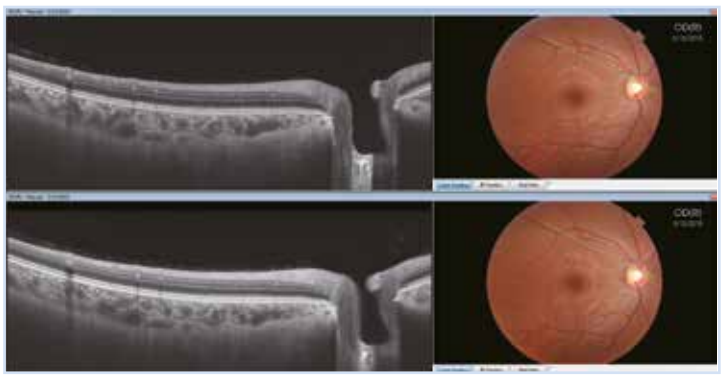
Fundus Guided Acquisition (FGA)

OCT scan location can be easily set by selecting the scan area on the fundus image, making fundus abnormalities viewable with no additional operator steps required. With FGA, the operator can choose to take or import a fundus image, select the scan location, and automatically acquire a B-scan.



Follow-up function

This function allows you to retrieve and reanalyze the same location at follow-up, for comparison of past and current images. All an operator needs to do is simply select the past data, and Triton automatically captures the same area. Comparison of the same area supports diagnostic accuracy.



Motion Correction / Compensation / Rescanning Function

Motion Correction

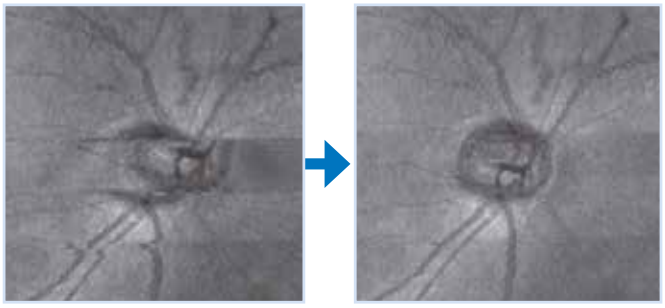
Corrects the Z direction movement

Compensation Function

Tracks the eye and then compensates for the X direction movement.

Rescanning Function

The scanning area may be missed due to Y direction eye movement. In such a case, the rescanning function automatically activates. It automatically rescans the missing scan area.



Before compensation | After compensation

Alignment navigation

When an operator wishes to acquire an image, Triton's monitor guides the operator to reduce potential errors and make operation simple

» Auto focus and auto shoot, in color/FAF mode

» Auto focus, auto-Z and Z-lock function, in OCT mode

too close | OK | too far

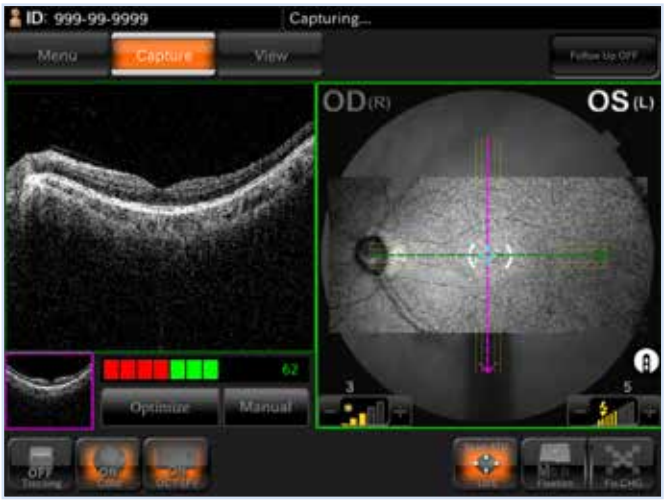
The small pupil solution

Live Fundus View

The fast scanning speed allows the Triton to create a live en face fundus image, an ideal tool for precisely locating the scan position. Therefore the disc, retinal vessels and scanning position are easy to see, even in patients with small pupils.

OCT capture mode without retinal photography

Triton can also capture a 3D scan, with or without color fundus photography, to avoid a miotic response and better meet the needs of patients with small pupils.



Transform Your Ophthalmic data & Image Management

IMAGEnet 6
OPHTHALMIC DATA SYSTEM

IMAGEnet 6 : Comprehensive Ophthalmic Data Filing System

Laser Treatment Room

Universally Connected

IMAGEnet 6 uses a web-based application, your patient data can be accessed from any PC or tablet in your practice or hospital network.

With accessibility from any devices which you pick up at that time, more convenience and more flexibility will support your efficient work flow

Comprehensive Data Management

Now you can review all data captured by any TOPCON device with one software application.*1 All the data you need can be shown on one screen to support a deeper understanding of your patient's condition

Remarkably Easy

The data you need is just a click away. IMAGEnet 6 was developed to give you a simple and efficient way to review data with informative one-page Graphical User Interface(GUI) and fast response time.*2 Web-based application requires no installation to each device for easy maintenance. It allows you to spend more time on what matters- your patients.

*1 Capture software is required.
*2 Compared to current OCT software.

Line-up

	SS-OCT	Color	Digital Red-free	FA	FAF	Anterior OCT	OCT Angiography
Triton	✓	✓	✓	—	—	Option	Option
Triton plus	✓	✓	✓	✓	✓	Option	Option

DRI OCT Triton
3D OPTICAL COHERENCE TOMOGRAPHY

Specifications

Observation & Photography of Fundus Image	
Photography Type	Color, FA*, FAF*, Red-free**
Picture Angle	45° Equivalent 30° (Digital Zoom)
Operating Distance	34.8mm
Photographable Diameter of Pupil	Normal:ϕ4.0mm or more
	Small pupil diameter: ϕ3.3mm or more
Observation & Photography of Fundus Tomogram	
Scanning Range (on fundus)	Horizontal Within 3 to 12mm Vertical Within 3 to 12mm
Scan Pattern	3D scan Linear scan (Line-scan/Cross-scan/Radial-scan)
Scan Speed	100,000 A-Scans per second
Lateral Resolution	20μm
In-depth Resolution	Digital: 2.6μm Optical function: 8μm
Photographable Diameter of Pupil	ϕ2.5mm or more
Observation & Photography of Fundus Image / Fundus Tomogram	
Fixation target	Internal fixation target : Dot matrix type organic EL The display position can be changed and adjusted. The displaying method can be changed. Peripheral fixation target : This is displayed according to the internal fixation target displayed position. External fixation target
Observation & photography of anterior segment* **	
Photography type	IR
Operating distance	17mm
Observation & photography of anterior segment tomogram* **	
Operating distance	17mm
Scan range (on cornea)	Horizontal Within 3 to 16mm Vertical Within 3 to 16mm
Scan pattern	3D scan Linear scan (Line-scan/Radial-scan)
Scan speed	100,000 A-Scans per second
Fixation target	Internal fixation target External fixation target
Electric Rating	
Power Source	Voltage: 100-240V Frequency: 50-60Hz
Power input	250VA
Dimensions / Weight	
Dimensions	320-359 mm(W) X 523-554 mm(D) X 560-590 mm(H)
Weight	21.8kg (DRI OCT Triton) 23.8kg(DRI OCT Triton plus)

* FA photography and FAF photography can be performed in only DRI OCT Triton plus.
** In this digital red-free photography, the color image is processed and is displayed as a pseudo red-free photographed image.
*** Observation & photography of anterior segment can be performed only when the anterior segment attachment kit is used.

Manufacturer

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CLASS 1 LASER PRODUCT (IEC60825-1:2001) PRODUIT LASER DE CLASSE 1 (CEI60825-1:2001)

CLASS 1 LASER PRODUCT (IEC60825-1:2007) PRODUIT LASER DE CLASSE 1 (CEI60825-1:2007)

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

Not available for sale in all countries. Please check with your local distributor for availability in your country.

DRI OCT Triton
2021.3 E312 Rev4