

Maestro2

Optical Coherence Tomography
True Colour Fundus Camera



**ONE SCAN.
ONE REPORT.
ONE INSTRUMENT.**
The fast, one-touch,
automated OCT and
Fundus Camera.

Now with OCTA*!

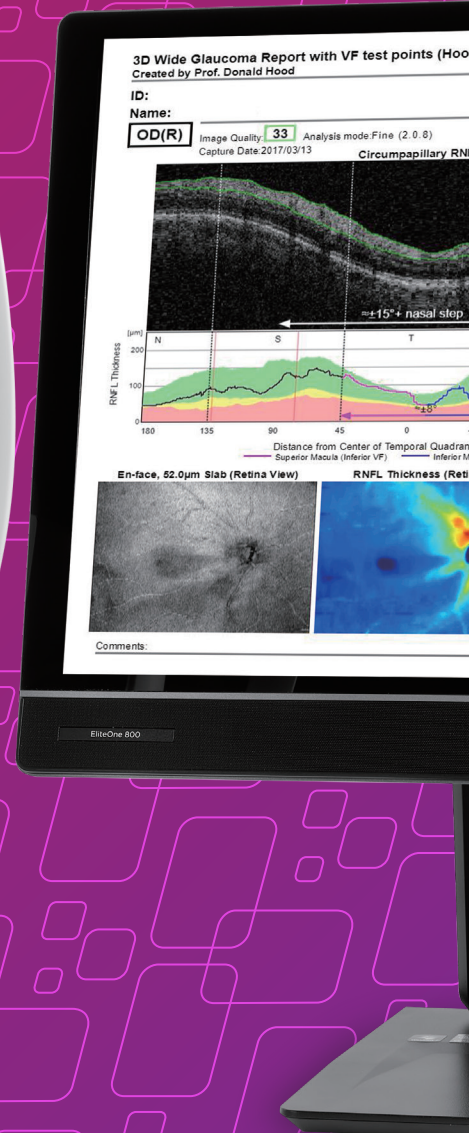
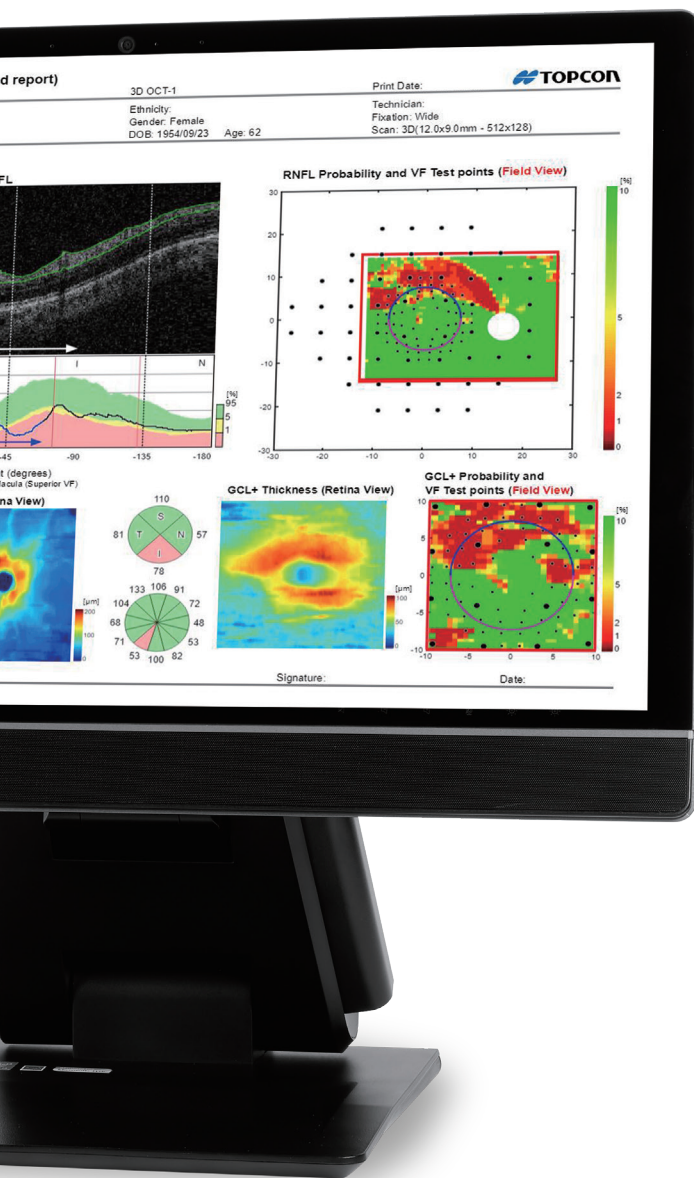


Image more with just one touch of a button. Maestro2 provides OCT scans, true colour* fundus imaging and the Hood Report for Glaucoma.



*True, full colour fundus image simultaneously captured with white light, 24-bit colour.

With Maestro2 and IMAGEnet6 for OCT*1, you have fast, multimodal OCT, fundus imaging and OCT Angiography (OCTA).

A clinical workstation for any busy practice.



*1 IMAGEnet6 for OCT is the standard component software for Maestro2.
*2 Applicable distance is subject to the device's communication performance and the communication environment.



Maestro2 offers RTC
(Remote Tablet Control)
for social distance
protocol.²

Maestro2

Introducing automated OCT, true colour* fundus photography and automated OCT Angiography in one compact instrument. With the touch of a button, OCTA provides you instantaneous vascular structure information - from our world-renowned, multimodal OCT solution.

Features:

- OCT and true colour* fundus photography
- Fully automated image capture
- Compact and space saving design
- 3D wide scan with Hood Report for Glaucoma
- Reference database comparison for full retinal thickness (Retina), ganglion cell + inner plexiform layer thickness (GCL+), ganglion cell complex thickness (GCL++), circumpapillary retinal nerve fibre layer thickness (RNFL)
- Automatic 3D layer segmentation
- Anterior segment OCT
- Panoramic fundus imaging
- 3D volume view

User-friendly

A user-friendly OCT. The Maestro2 uses robotic technology and improves practice efficiency whilst providing optimal patient care.

Fully Automated Capture

With a single touch, the Maestro2 automatically performs alignment, focus, optimisation and capture. After image capture, the report can be immediately displayed by clicking on the icon.

Manual/Semi-Automatic Capture

In addition to automated capture, the Maestro2 offers manual/semi-auto options for difficult-to-image patients.



*True, full colour fundus image simultaneously captured with white light, 24-bit colour.

The breath shield is not part of the Maestro2 product configuration. It is available to purchase as an option.

Auto Align. Auto Focus. Auto Capture.



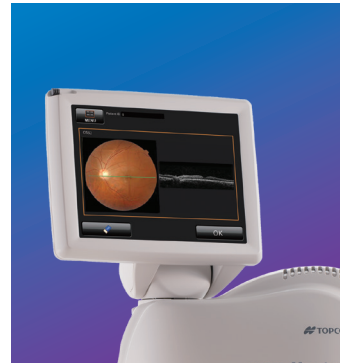
Step 1

Select a scan type.



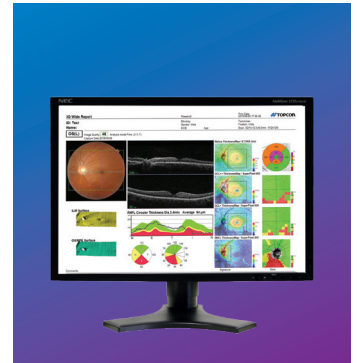
Step 2

Capture.



Step 3

Results are displayed instantly.



Step 4

Report displayed automatically.

Full 360° rotating monitor allows operator distance.



Optional Accessory



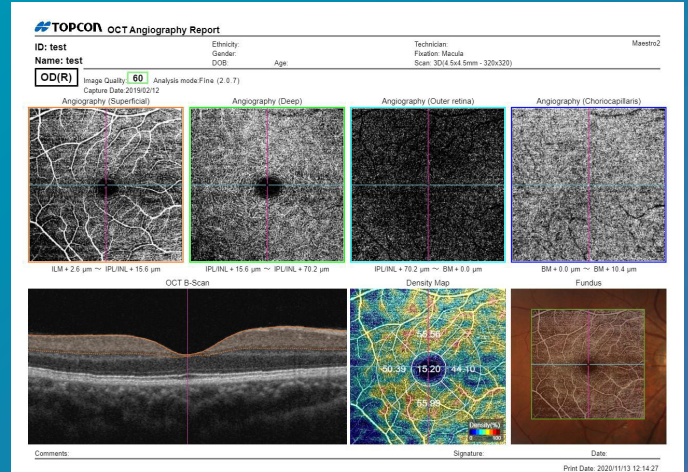
Anterior segment attachment (HA-2)

Maestro2 - Now Featuring OCT Angiography

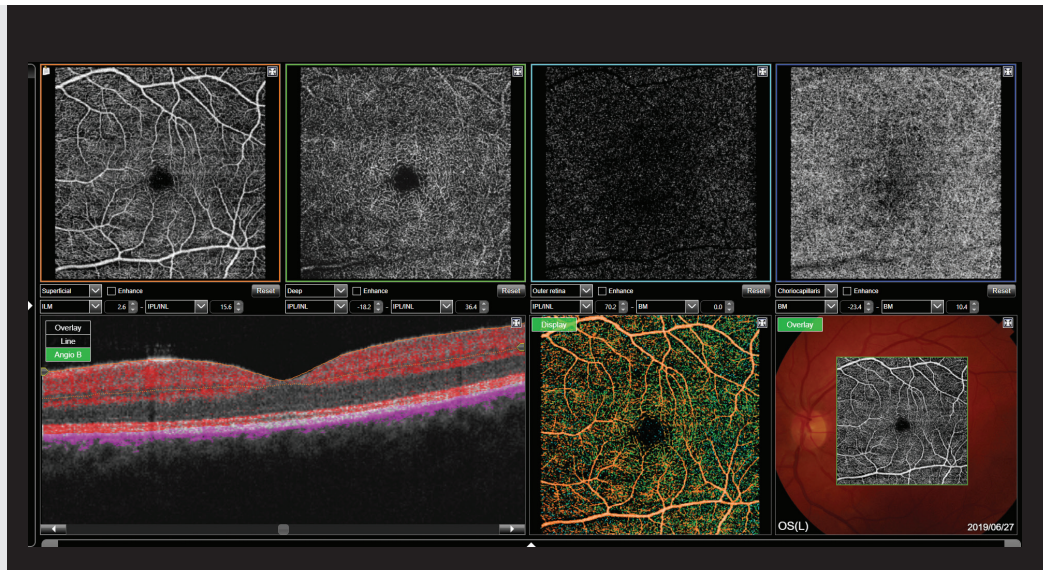
Introducing fully automated OCT Angiography*

At the touch of a button, Maestro2 provides instantaneous vascular flow information without the need for contrast dye injection, together with comprehensive segmentation to enable advanced diagnosis. OCT Angiography includes OCTA Density.^{*1}

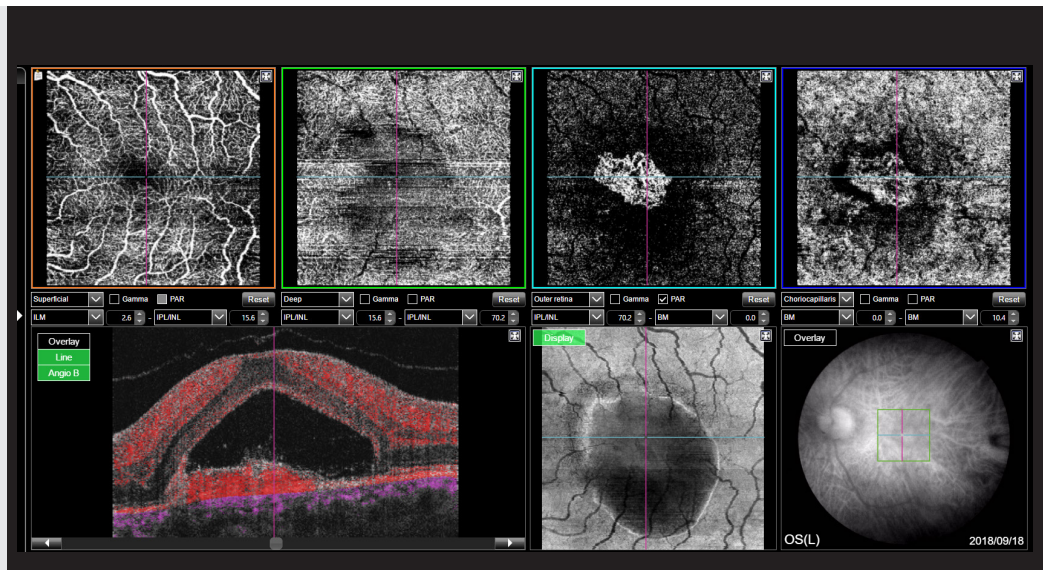
*1 The OCTA Density is defined as the ratio between the high signal area and low signal area and it is displayed in colour and/or number.



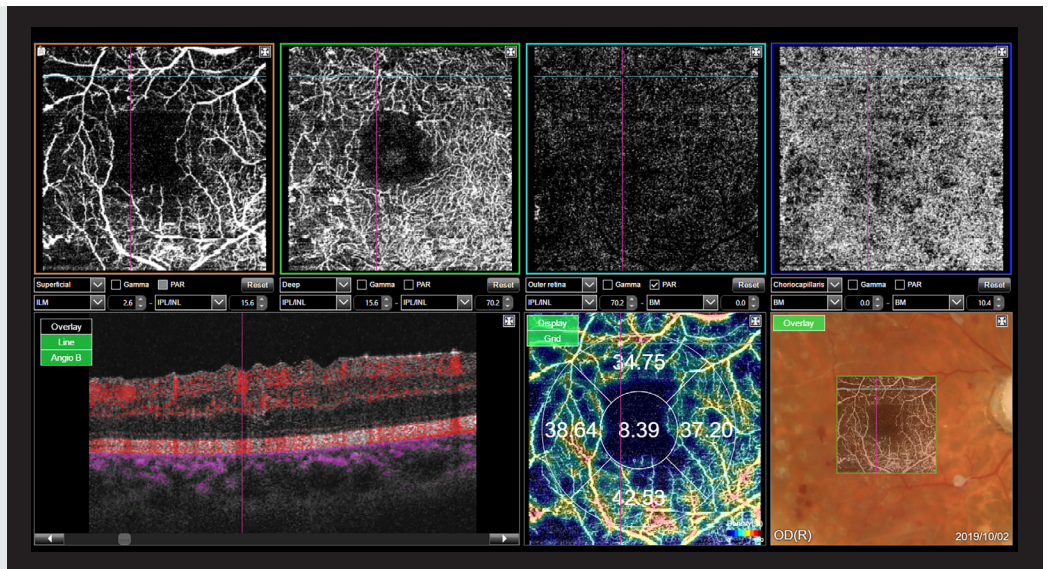
Healthy Eye ¹



Choroidal Neovascularization (CNV)²



Diabetic Retinopathy (DR) PinPoint™ Registration of microaneurysms³



¹ Michael H. Chen, OD

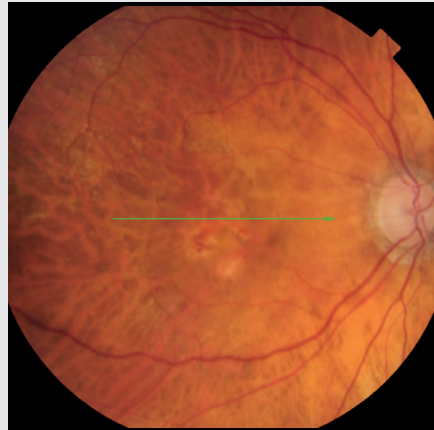
² Prof. Siamak Ansari Shahrezaei, MD PhD (Karl Landsteiner Institute for Retinal Research and Imaging)

³ Miho Nozaki, MD, PhD (Nagoya City University Hospital)

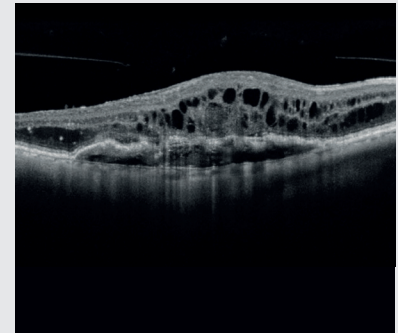
Efficient Diagnostic Workflow

Follow-Up Scans

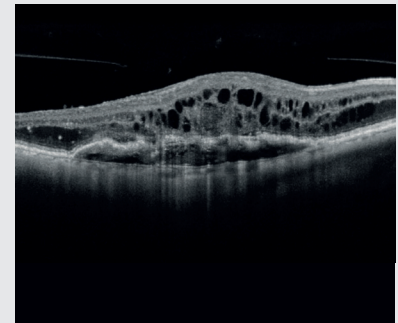
For smaller, more localised areas, tracking based on the reference image allows follow-up scans to be performed.



Tracking is used to capture exactly the same area at each visit and is available for single line, radial or 5 line cross scans.



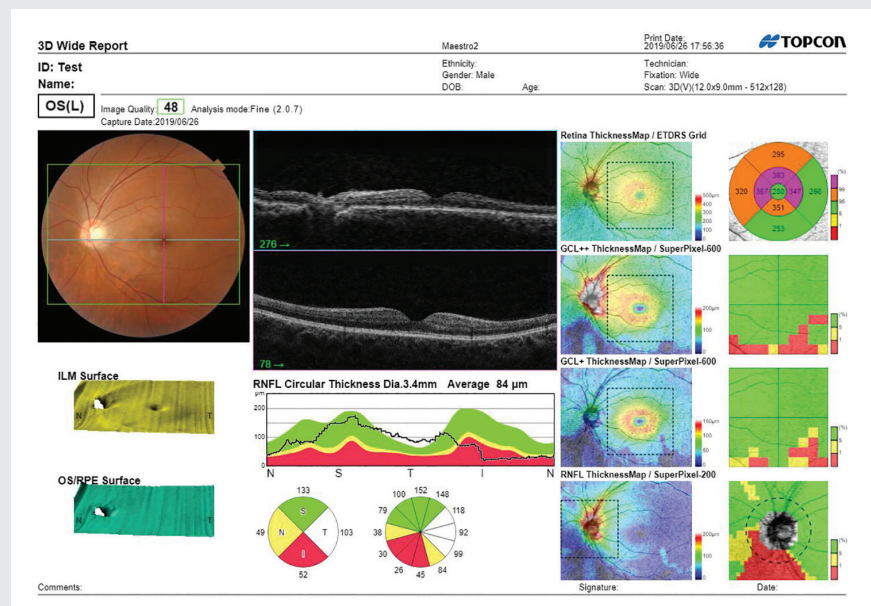
Baseline visit



Follow-up visit

Widefield OCT Scan

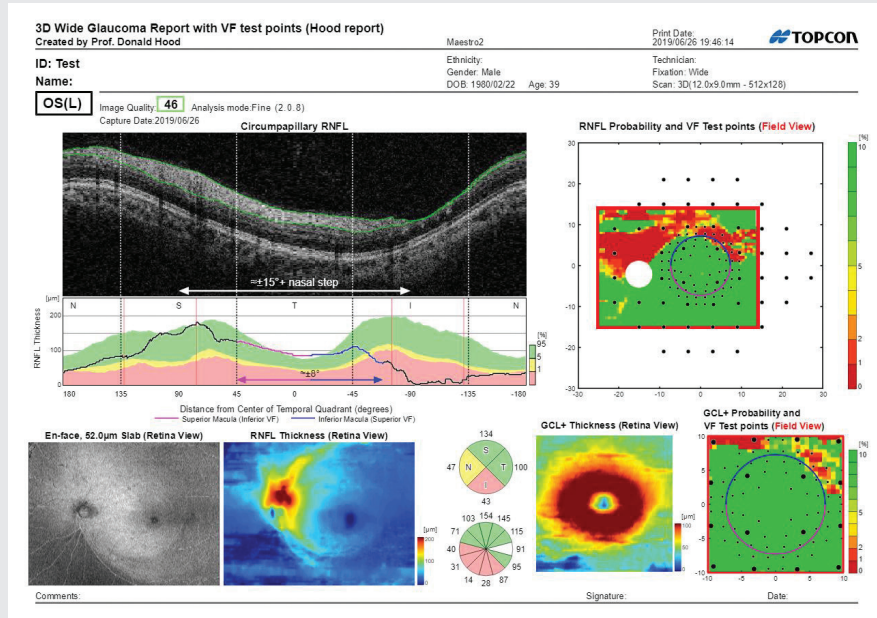
The Maestro2 can capture a 12 mm x 9 mm widefield OCT scan, encompassing both the macula and optic disc. Ideal for an annual eye exam, the scan reduces patient testing time. It provides thickness and reference data for the retina, RNFL and ganglion cell layers together with a Glaucoma report which includes disc topography.



GCL+: The thickness of GCL and IPL
 GCL++: The thickness of GCL, IPL and RNFL

Hood Report for Glaucoma with Probability Maps with 3D Wide 12 x 9 mm Scan

Retinal Thickness/RNFL/GCL and probability maps, all in one report. The New Hood Glaucoma Report is now available. This innovative report streamlines the decision-making process through the correlation of structure (GCL/RNFL) with function (overlay of visual field test locations).*

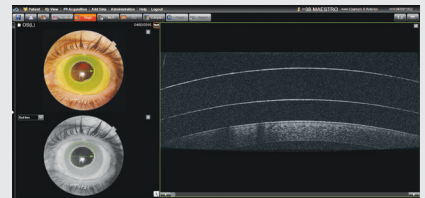
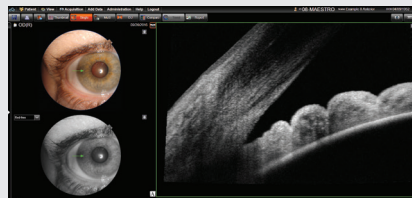
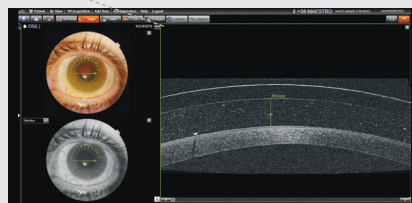
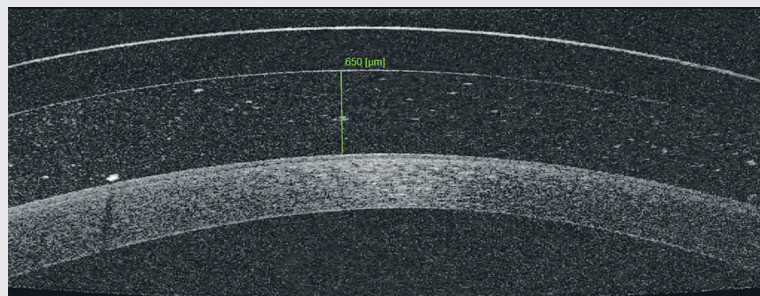


*Donald C. Hood PhD, Translational Vision Science & Technology No.6 Vol.3 2014: Evaluation of a One-Page Report to Aid in Detecting Glaucomatous Damage.

Anterior Segment Caliper/ Angle Analysis*

Maestro2 has added the advantage of Anterior Segment OCT scanning capability, without the need for an additional attachment lens. By simply adding the anterior headrest support, the Maestro2 is able to capture cornea and anterior chamber scans, together with the ability to measure corneal thickness, contact lens clearance and anterior segment angle using the integrated caliper tools.

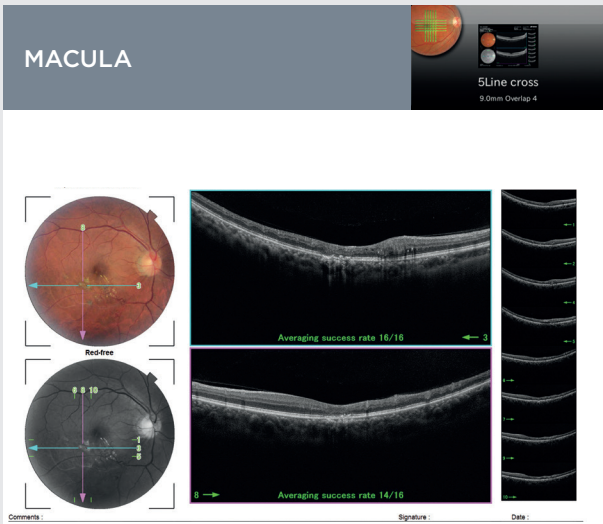
*Anterior scanning software is optional.



Extensive Set of Reports: Guidance for Diagnosis

Extensive Set Of Reports

Maestro2 provides rich analysis functions for the macular and disc regions and optic nerve. Comprehensive, predefined reports can be auto exported, quickly printed or sent to your image management system or EHR in common file formats.



MACULA
5Line cross
9.0mm Overlap 4

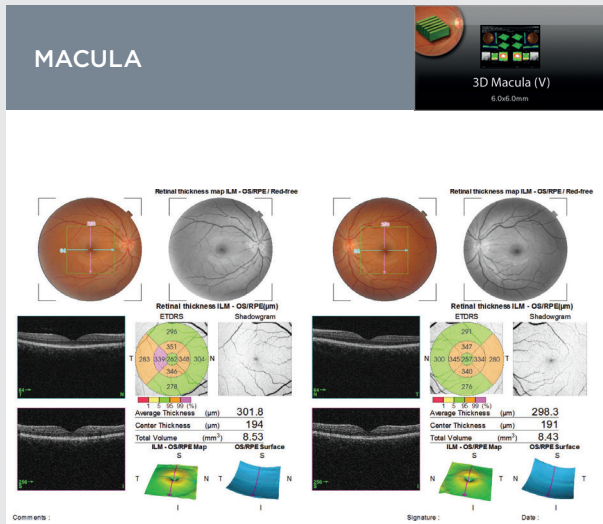
Ret-free

Averaging success rate 16/16

Averaging success rate 14/16

Comments: Signature: Date:

5 Line Cross Report
5 line cross scan (6 mm, 9 mm) both horizontal and vertical in an instant.



MACULA
3D Macula (V)
6.0x6.0mm

Retinal thickness map ILM - OSRPE / Red-free
ETDRS

Retinal thickness ILM - OSRPE(µm) Shadowgram

Average Thickness (µm) 301.8
Center Thickness (µm) 194
Total Volume (mm³) 8.53
ILM - OSRPE Map S

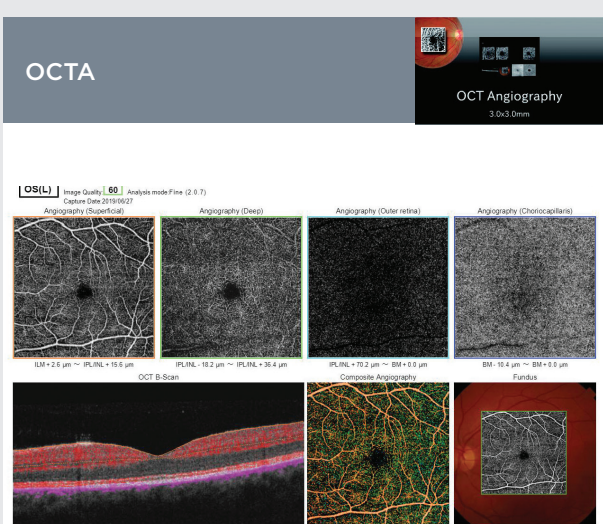
Retinal thickness ILM - OSRPE / Red-free
ETDRS

Retinal thickness ILM - OSRPE(µm) Shadowgram

Average Thickness (µm) 298.3
Center Thickness (µm) 191
Total Volume (mm³) 8.43
ILM - OSRPE Map S

Comments: Signature: Date:

3D Macula OU Report
3D Macula report available for single or both eyes if OU comparison is preferred. Analysis over 6 x 6 mm scan area including retinal thickness and reference data.



OCTA
OCT Angiography
3.0x3.0mm

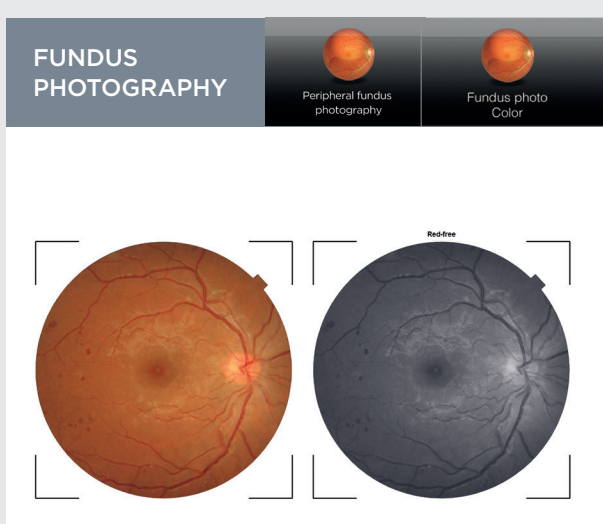
OS(L) Image Quality 60 Analysis mode Fine (2.0/7)
Capture Date 2019/05/27
Angiography (Superficial) Angiography (Deep) Angiography (Outer retina) Angiography (Choriocapillaris)

ILM = 2.6 µm ~ IPL/INL = 15.6 µm
IPL/INL = 19.2 µm ~ IPL/INL = 36.4 µm
IPL/INL = 75.2 µm ~ BM = 0.0 µm
BM = 15.4 µm ~ BM = 5.0 µm

OCT B-Scan Composite Angiography Fundus

Comments: Signature: Date:

OCT Angiography Report
Various OCTA scan protocols are available; 3 x 3 mm, 4.5 x 4.5 mm and 6 x 6 mm.



FUNDUS PHOTOGRAPHY
Peripheral fundus photography Fundus photo Color

Red-free

Comments: Signature: Date:

Colour Fundus Photography/Peripheral Fundus Photography
Non-mydratic colour fundus photography and peripheral fundus photography are standard with the Maestro2.

Additional Glaucoma Related Reports

The Hood Report is often the report of choice following capture of a 3D wide scan but a choice of reports are available.

GLAUCOMA

3D Wide
12.0x9.0mm

OS(L) Image Quality: 48 Analysis mode: Fine (2.0.7)
Capture Date: 2017/05/05

GCL+ Macula 6Sector Grid

GCL+ Macula 6Sector Grid

RNFL ThicknessMap

SuperPixel-200 (Disc-RNFL-Macula-GCL+)

RNFL Circular Tomogram | Thickness

Average thickness RNFL(µm)

Total Thickness	84
Superior	133
Inferior	52

Disc Topography

Rim Area (mm²)	1.25
Disc Area (mm²)	1.94
Linear CDR	0.65
Vertical CDR	0.51
Cup Volume (mm³)	0.11

Disc parameters are determined at the reference plane height of 320 microns from the IOP plane in this version.

Comments: _____ Signature: _____ Date: _____

3D Wide Report (12mmx9mm)

This scan provides an image of the macula and optic nerve head in one report, providing thickness and reference data for GCL+, GCL++ and RNFL.

GLAUCOMA

3D Disc
6.0x6.0mm

OD(R) Image Quality: 41 Analysis mode: Fine (2.0.7)
Capture Date: 2017/05/05

SuperPixel-200

SuperPixel-200

RNFL Circular Thickness Data Area (OD) - (OSL)

RNFL Symmetry: 74%

Average thickness RNFL (µm)

Total Thickness	95
Superior	128
Inferior	107

Disc Topography

Rim Area (mm²)	1.00
Disc Area (mm²)	2.41
Linear CDR	0.77
Vertical CDR	0.82
Cup Volume (mm³)	0.31

OS(L) Image Quality: 40 Analysis mode: Fine (2.0.7)
Capture Date: 2017/05/05

SuperPixel-200

SuperPixel-200

Comments: _____ Signature: _____ Date: _____

3D Disc Report OU

Combines disc topography, fundus photography and RNFL thickness measurements. The reference database for RNFL and disc parameters is also incorporated.

GLAUCOMA

3D Macula (V)
6.0x6.0mm

OS(L) Image Quality: 62 Analysis mode: Fine (2.0.7)
Capture Date: 2017/05/05

RNFL Thickness

GCL+

GCL++

SuperPixel-200

Average (µm ± 1σ)

Superior	27 µm
Inferior	44 µm
Total	39 µm

Asymmetry/Relative Thinning

Comments: _____ Signature: _____ Date: _____

Glaucoma Analysis Report - Macula

Based on the 3D Macula Vertical scan, this report provides RNFL, GCL+ and GCL++ thickness maps, comparison with reference data and symmetry analysis.

GLAUCOMA

3D Disc
6.0x6.0mm

OD(R) Baseline (B) Follow-up-1 (F) Follow-up-2 (F) Latest (L)

OS(L) Baseline (B) Follow-up-1 (F) Follow-up-2 (F) Latest (L)

Fundus Image

RNFL Thickness Map

RNFL SuperPixel-200

RNFL Thickness(µm)

Superior	111	108	107	105
Inferior	114	117	115	104
Average	94	94	92	87

Disc Topography

Cup Area	0.11	0.14	0.13	0.16
Cup Vol	0.01	0.01	0.01	0.01
C/D Area	0.05	0.06	0.07	0.08
IPV	120	120	120	120

Comments: _____ Signature: _____ Date: _____

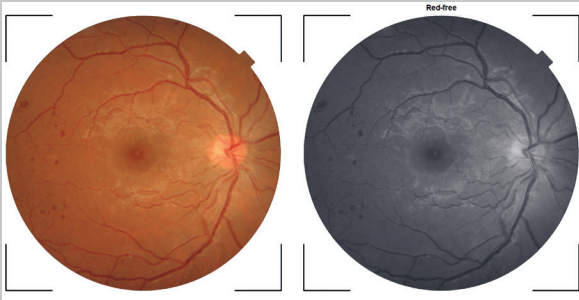
3D Disc Trend Analysis Report OU

Baseline and subsequent visits can be examined and analysed over time. Trends are provided for disc parameters in addition to RNFL thickness, along with a reference database comparison.

High Resolution OCT, Non-Mydriatic, and True Colour Fundus Images

True Colour Fundus Photography*

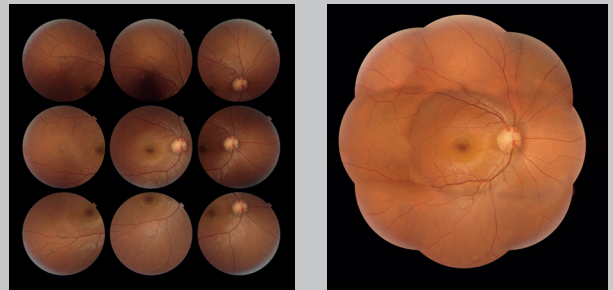
Maestro2 has an integrated true colour fundus camera. With one touch, you can simultaneously acquire a true colour fundus image with your OCT or OCTA scan. This allows PinPoint™ Registration and multimodal observation of the pathology. Small pupil function is also available, as well as fundus only capture.



*Image courtesy: Michael H. Chen, O.D.

Peripheral Fundus Photography

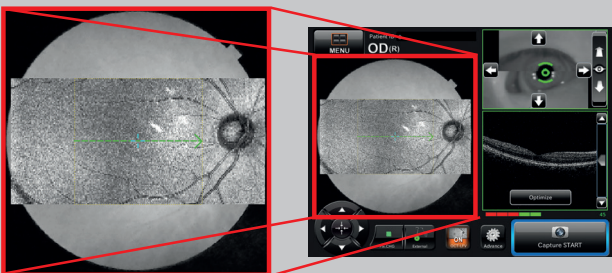
Maestro2 allows the operator to automatically select 9 standard fields or manually manipulate the patient's fixation to create a mosaic image with the AutoMosaic software.



*Image courtesy: Michael H. Chen, O.D.

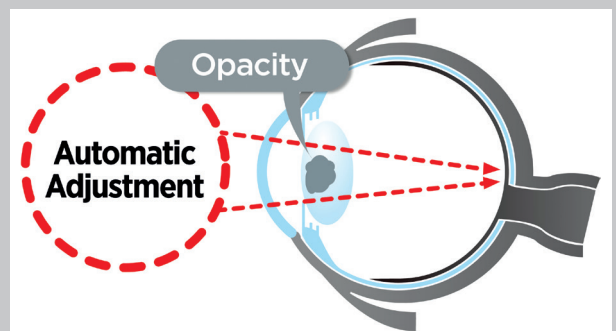
Live Fundus View™

OCT-LFV is a live projection image of the retina. The live fundus image makes the disc, retinal vessels and scanning position easy to see.



Cataract Mode

Cataract mode automatically adjusts the scanning position to minimise the impact of any opacity such as cataract.



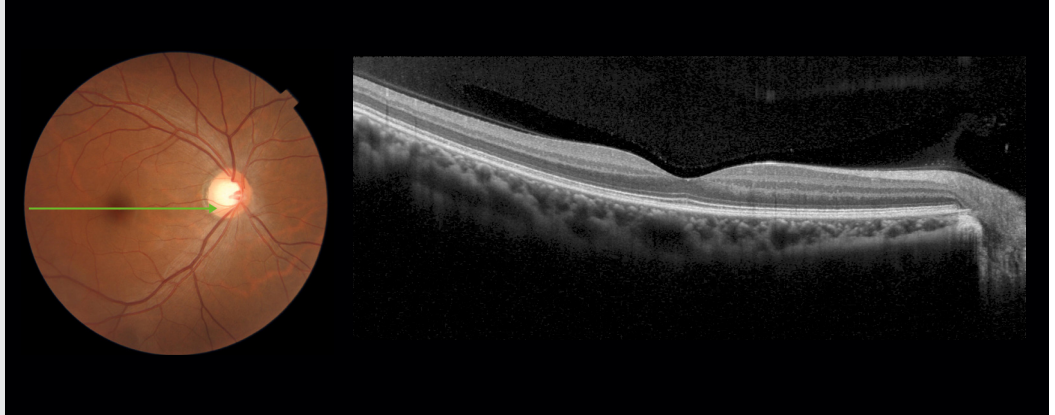
*True, full colour fundus image simultaneously captured with white light, 24-bit colour.

High Resolution OCT and Colour Fundus Photography

A high-resolution B-scan facilitates the evaluation of pathology by visualising layers of the retina in fine detail. OCT B-scans, complemented by true colour fundus photos, are vital for confident diagnosis.

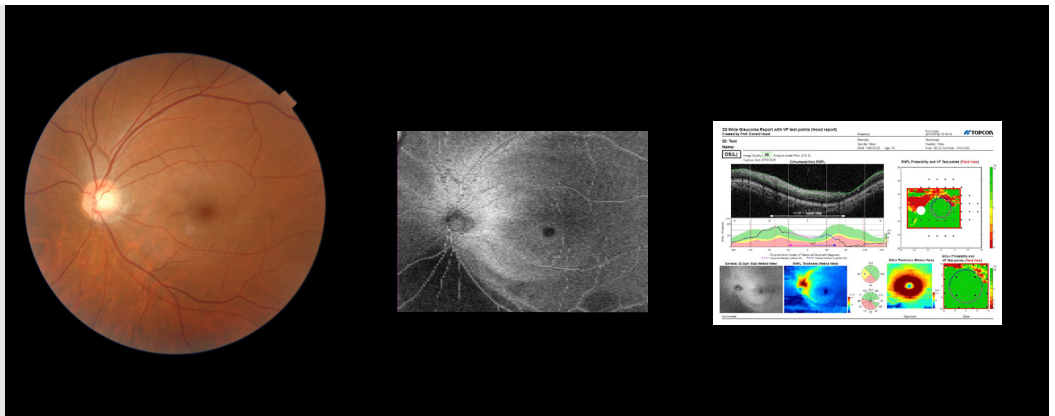
Healthy Eye*

*Image courtesy:
Michael H. Chen, O.D.



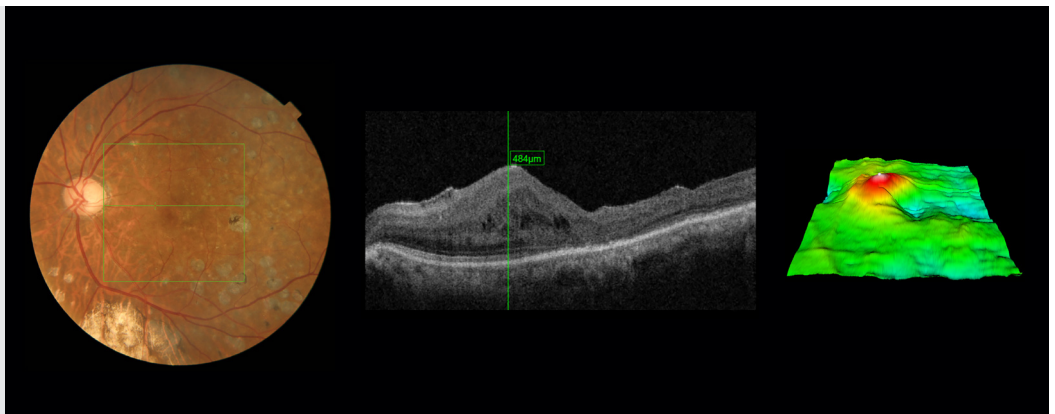
Glaucoma*

*Image courtesy:
Michael H. Chen, O.D.



Diabetic Retinopathy (DR)*

*Image courtesy:
Miho Nozaki, MD, PhD (Nagoya City
University Hospital)



Specifications

Item	Specifications
Observation & photography of the fundus	
Type of photography	Colour, Red-free ^(Note 1) & IR ^(Note 3)
Picture angle for photography	45° ± 5% or less 30° or equivalent (digital zoom)
Operating distance	34.8 ± 0.1mm (when taking a picture of fundus)
Photographable diameter of pupil	Normal pupil diameter: ø4.0mm or more Small pupil diameter: ø3.3mm or more
Fundus image resolution (on fundus)	Center : 60 lines/mm or more Middle (r/2) : 40 lines/mm or more Middle (r) : 25 lines/mm or more IR photography : Center: 5 lines/mm or more ^(Note 3)
Observation & photographing of the fundus tomogram	
Scan range (on fundus)	Horizontal direction 3 - 12mm ± 5% or less Vertical direction 3 - 9mm ± 5% or less
Scan pattern	3D scan (horizontal/vertical) Linear scan (Line-scan/Cross-scan/Radial-scan)
Scan speed	50,000 A-Scans per second
Lateral resolution	20µm or less
In-depth resolution	6µm or less Pixel spacing: 2.6µm ± 2%
Photographable diameter of pupil	ø2.5mm or more
Observation & photographing of the fundus image/fundus tomogram	
Fixation target	Internal fixation target: Dot matrix type organic EL display. 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 & photographing of anterior segment	
Type of photography	Colour & IR ^(Note 3)
Operating distance	62.6 ± 0.1mm (when taking a picture of anterior segment) ^(Note 2)
Observation & photographing of the anterior segment tomogram	
Operating distance	62.6 ± 0.1mm (when taking a picture of anterior segment) ^(Note 2)
Scan range (on cornea) ^(Note 2)	Horizontal direction 3 - 6mm ± 5% or less Vertical direction 3 - 6mm ± 5% or less
Scan pattern	Linear scan (Line-scan/Radial-scan)
Scan speed	50,000 A-Scans per second
Fixation target	External fixation target

(Note 1) Digital Red-free photography that processes a colour image and displays it in pseudo-red-free condition.

(Note 2) When the attachment for anterior segment is included in the system configuration.

(Note 3) This is used only for recording the position where a tomogram is captured.

IMPORTANT

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

3D Optical Coherence Tomography | 3D OCT-1 (Type: Maestro2)



TOPCON CORPORATION

Topcon Healthcare E289 Rev_9



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