Specifications

OCT Model: BM-400K	
OCT optical source	Swept Source
Center wavelength	1060nm
OCT B-scan	
Scan speed	400,000 A-scans/sec
Max. Length (posterior)	24mm
Max. Length (anterior)	24mm
Scan depth (posterior)	6mm
Scan depth (anterior)	6mm
Refractive adjustment range	-35D to +45D
Axial optical resolution	≤6μm
Transverse optical resolution	10μm
Fundus Imaging	
Methodology	Scanning Laser Ophthalmoscopy (SLO)
SLO wavelength	850nm
SLO FOV	60° ×60°
Minimum pupil diameter	2.0mm
Eye tracking speed	128Hz
OCT Angiography	
Max. Single scan size (anterior)	18mm×18mm
Max. Single scan size (posterior)	24mm×20mm
Maximum resolution (single scan)	1536×1280
Max. scan size (montage)	42mm×40mm
Software Functions	
Anterior segment (AS) quantification	☑
AS panoramic parameters	☑
Thickness/volumn measurement (retina)	☑
Thickness/volumn measurement (choroid)	☑
Glaucoma analysis (GMA, ONH, etc.)	☑
Blood flow quantification (retina)	☑
Blood flow quantification (choroid)	☑
Blood flow quantification (optic disk)	☑
Blood flow quantification (AS)	☑
Posterior curvature	☑
3D structure	☑
3D vessel	☑

TowardPi Medical Technology Ltd.

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E-mail：info@towardpi.com

TowardPi

BMizar

400KHz | Full Range SS-OCT/OCTA

CE Marking under the EU MDR

TowardPi

BMizar

400KHz Full Range Ultra-Wide Field Swept-Source OCT/OCTA

400KHz
24x20mm
Ultra-Wide Field OCTA
Self-Innovated High-Speed
Acquisition Card

10 Billion Voxels
Ultra-High Resolution
1536x1280

Brand-New Choroid
OCT Angiography

BMizar

The World's First 400KHz
Full Range Ultra-Wide Field Swept-Source OCT

Self-Innovated
Homemade component parts

Ten Billion Voxels
Ultra- High Resolution

New Patent Choroid OCTA Algorithms

7-15 seconds High Speed
Ultra-Wide Field OCTA Acquisition

All-Slabs and All-Sizes
Quantification Analysis

No additional lens
Animal scan

Multi Platforms Imaging
Joint Diagnosis

Development History of OCT Technology

OCT technology is a paradigm of medicine, engineering integration and continuous innovation. Full-range swept-source OCT technology reveals significant advantages in multiple dimensions such as scanning speed, imaging depth, and visualizing field, etc.

1996
Time-Domain OCT (Linear Scan)
<1K A-scan/sec
Single B-scan
2mm Depth

2002
Time-Domain OCT (Resonance Scan)
<10K A-scan/sec
HD Single B-scan
2mm Depth

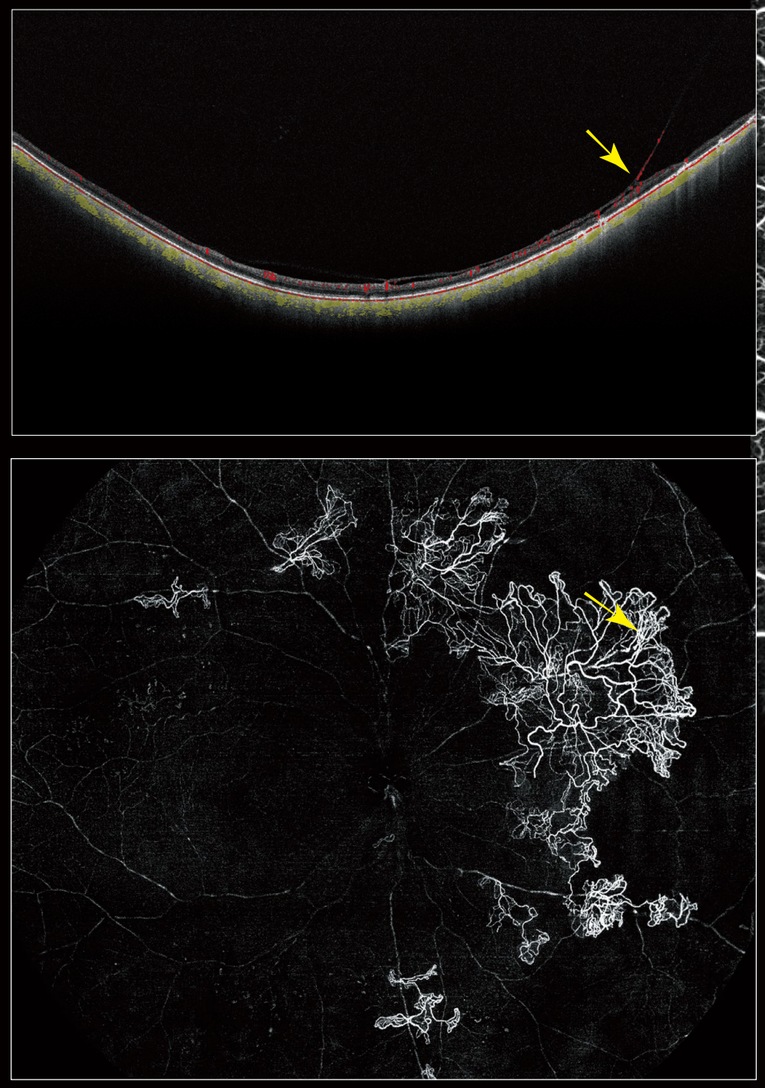
2006
Spectral-Domain OCT (Frequency-Domain OCT)
20-100K A-scan/sec
3D-OCT, OCTA
1.8-3mm Depth

2016
Swept Source OCT
100K A-scan/sec
Wide-Field OCTA
2-3mm Depth

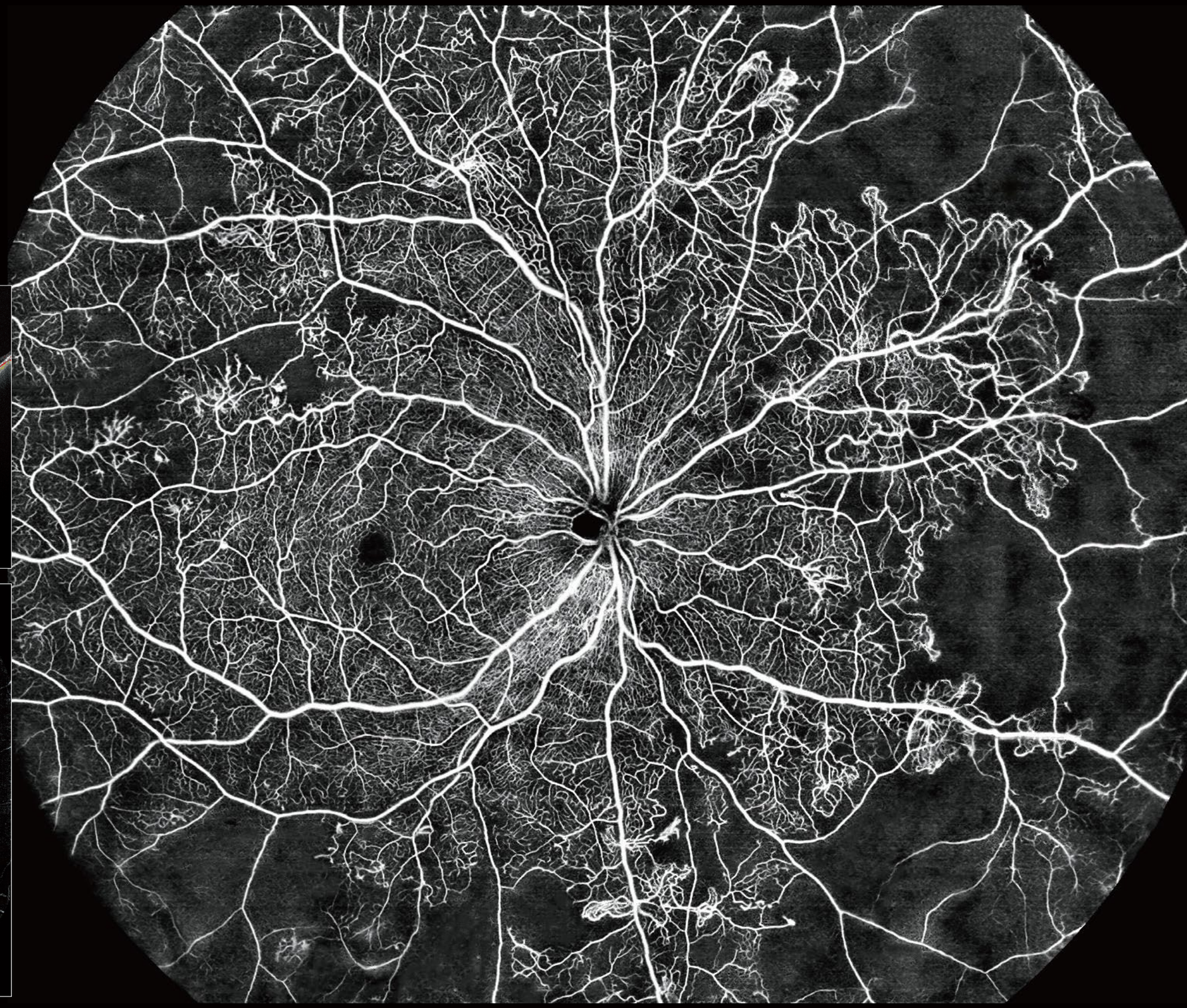
2022
Full Range Swept Source OCT
100-400K A-scan/sec
Ultra-Wide Field OCTA
6-12mm Depth
16-24mm length

Find More Details with Single Capture

- 10 Bilion maximal voxels
- 24X20mm ultra-wide field OCTA
- 1536x1280 ultra-high resolution
- Fast aquisition speed (7-15 seconds)

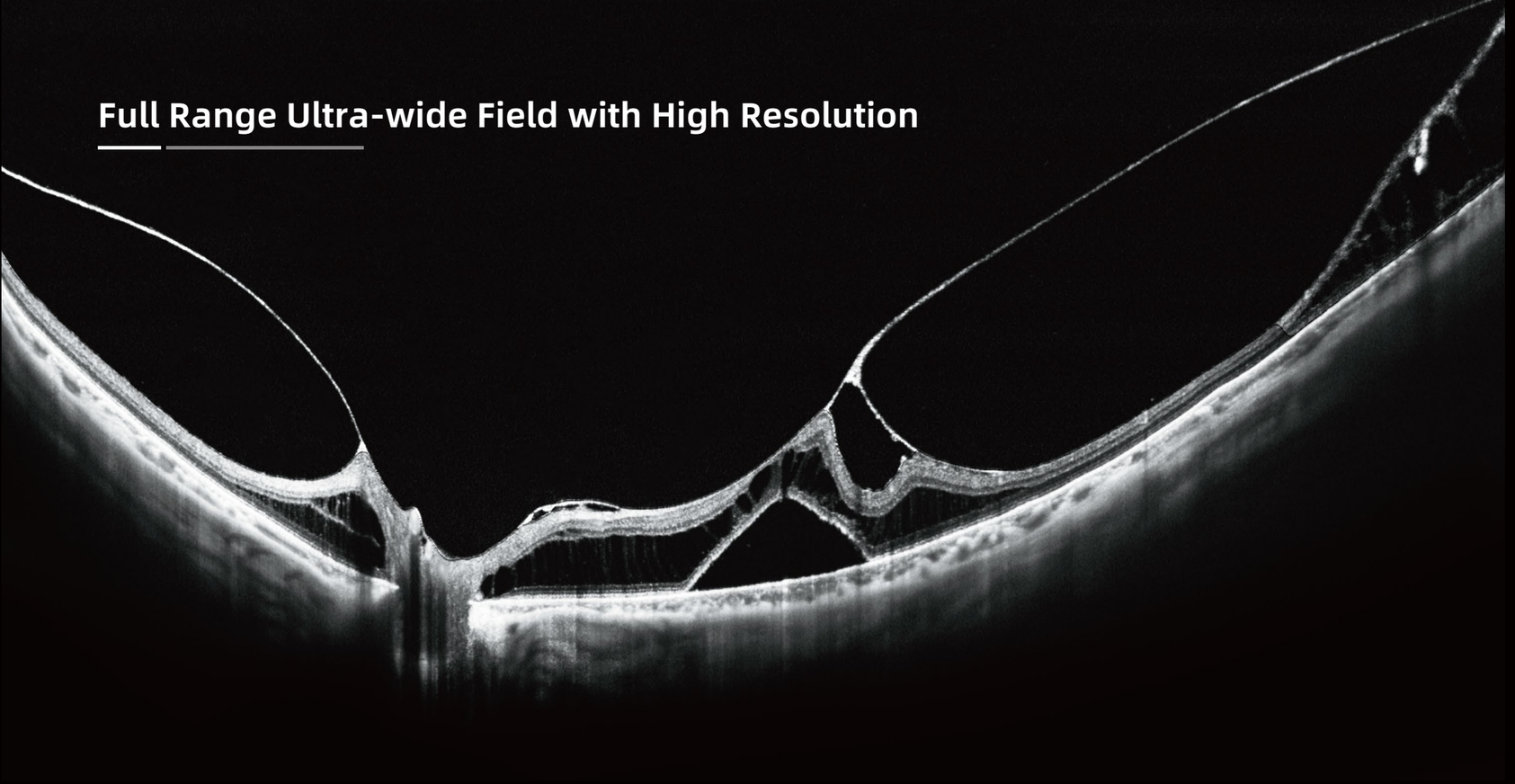


Neovascular membrane (vitreous slab)



Proliferative diabetic retinopathy (PDR)

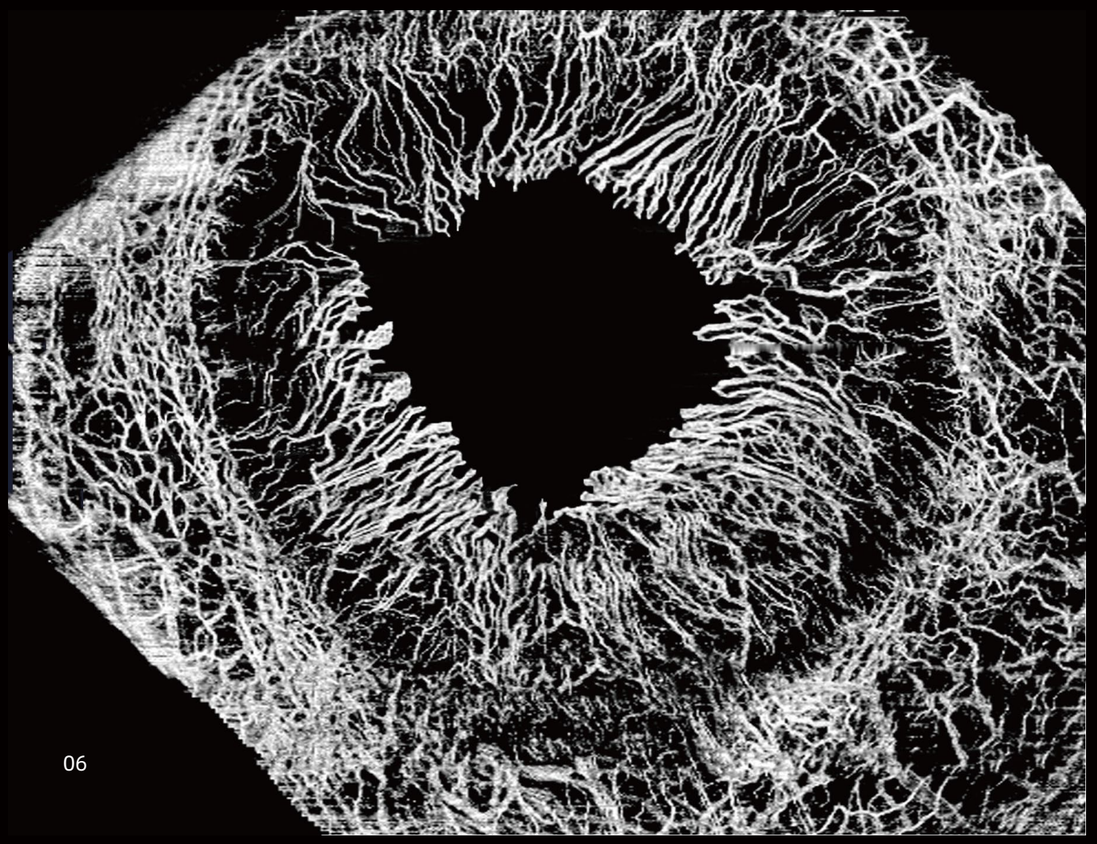
Full Range Ultra-wide Field with High Resolution



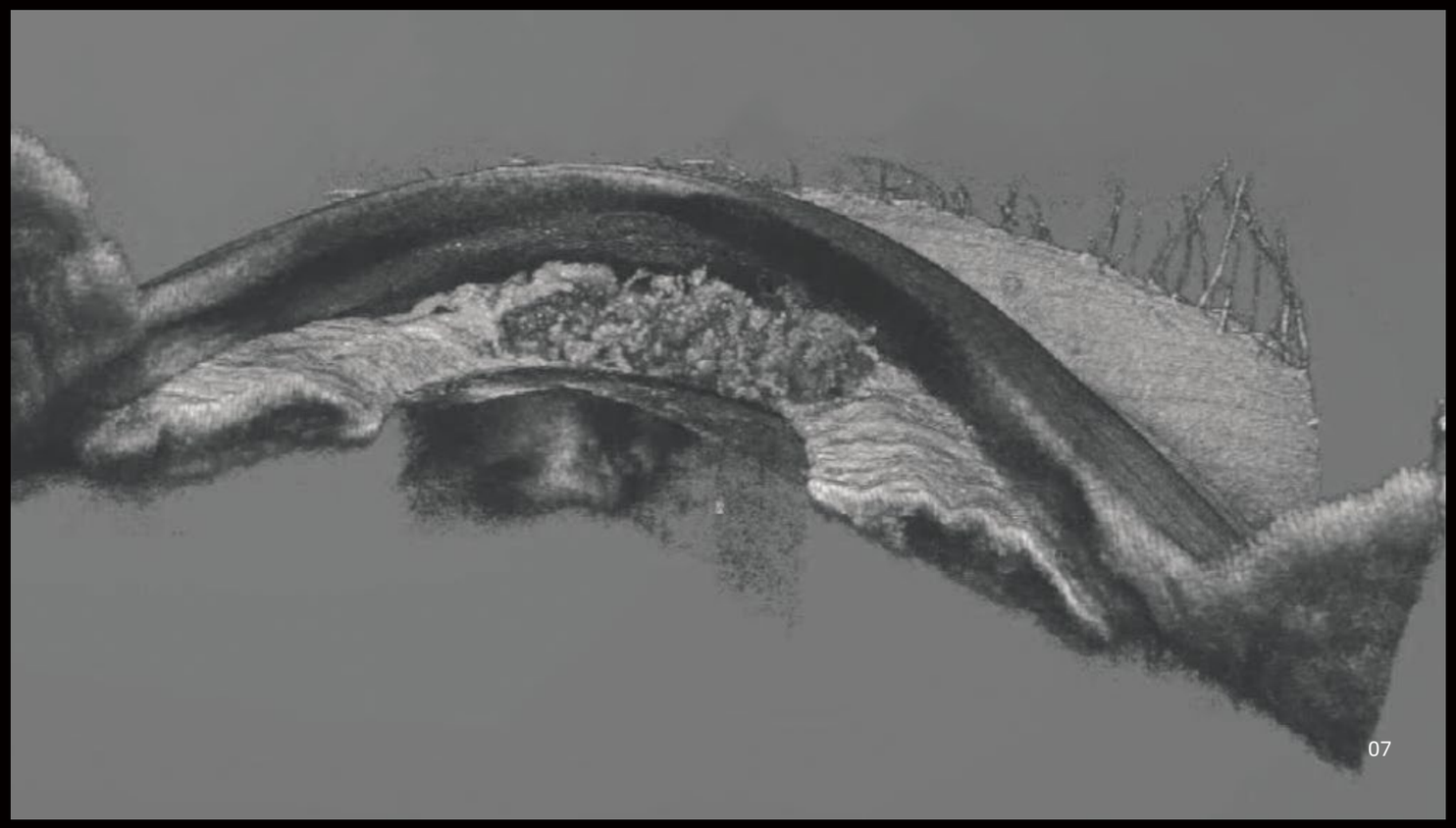
24mm length，6mm scan depth | Vitreomacular traction (VMT)

SLO fundus image | Vitreomacular traction (VMT)（same patient with left）

AS OCTA | Corneal neovascularization

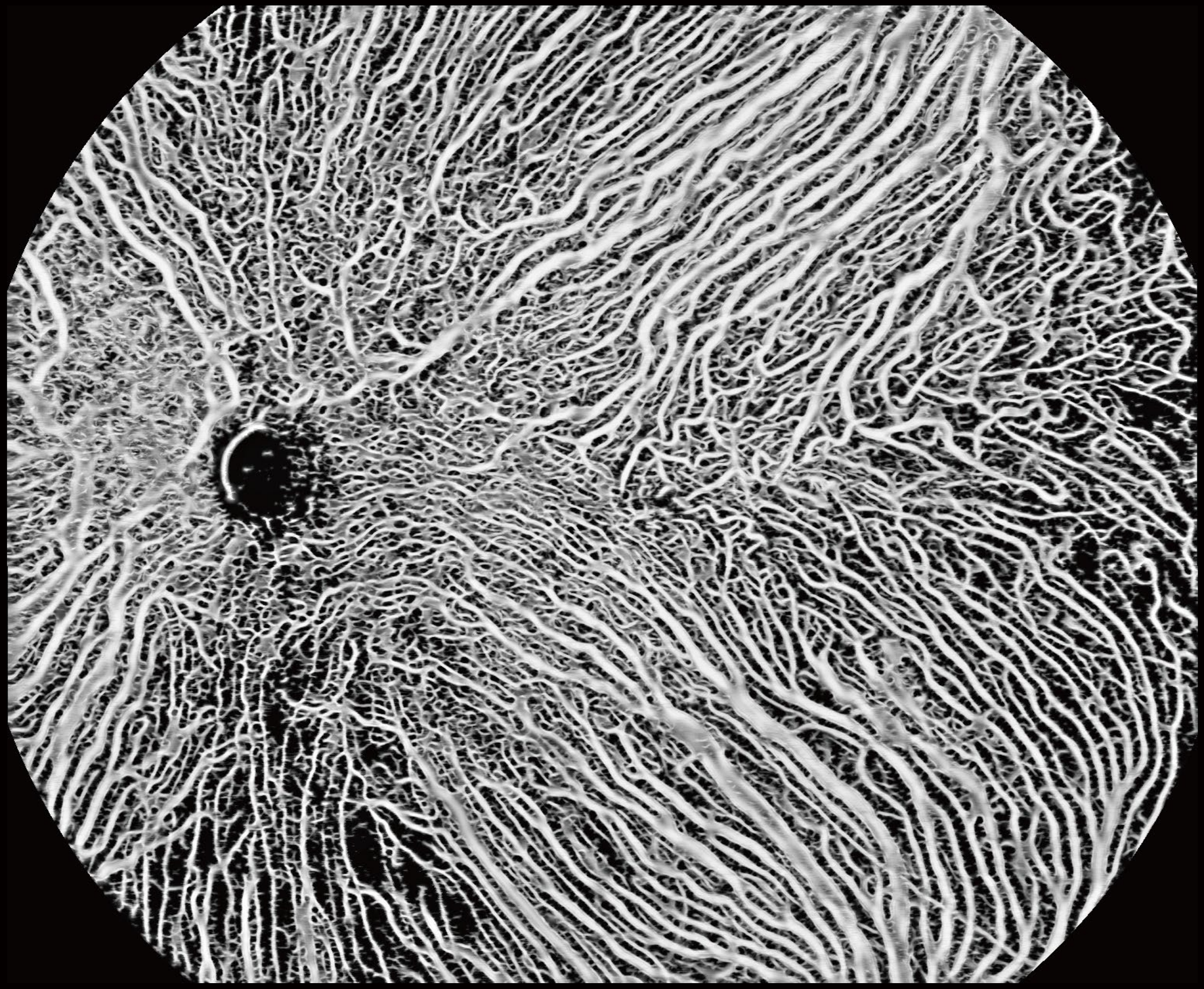


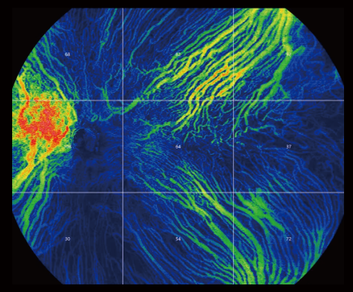
AS 3D reconstruction | Iridoschisis



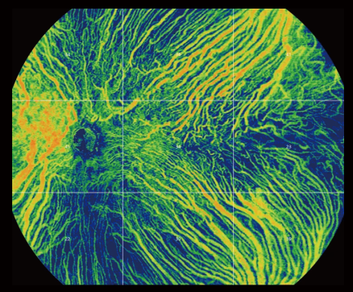
Reveal the Undiscovered

Ultra-wide field OCTA for Choroid with quantification parameters

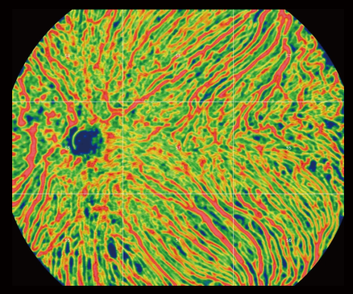




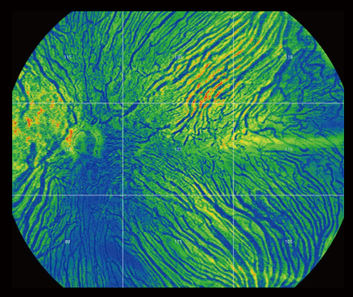
Choroid Vessel Volume ratio (CVV/a)



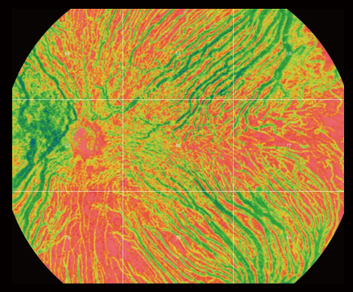
Choroid Vessel Index (3D-CVI)



Choroid Vessel Density（2D）



Choroidal Stroma Volume ratio (CSV/a)

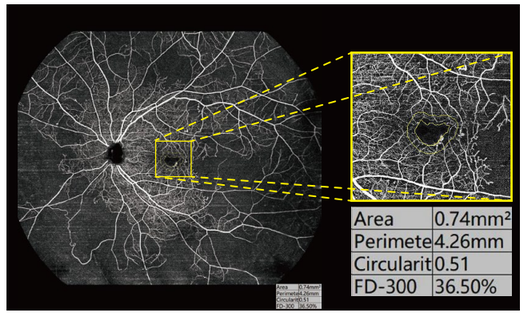


Choroidal Stroma Index (CSI)

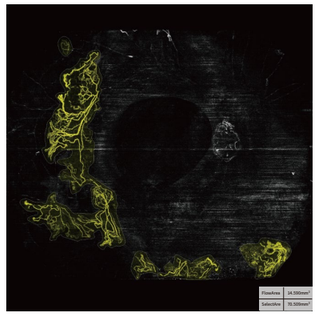
Comprehensive Quantitative Analysis

Retinal blood flow with quantification

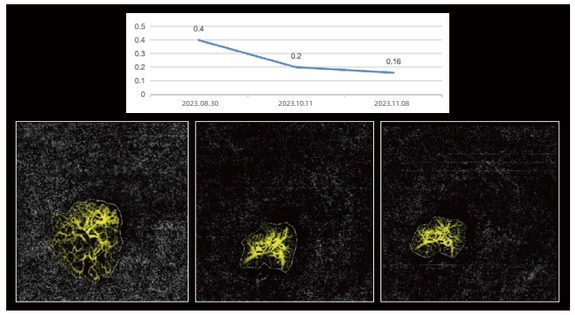
Non-Perfusion Identification



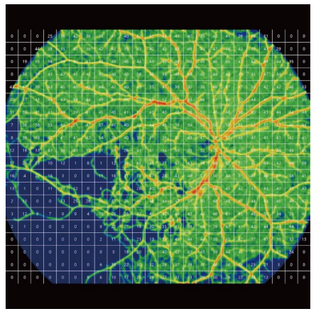
FAZ parameters



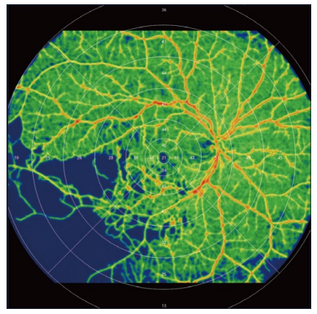
Flow Area-
Vitreous neovascularization



MNV Flow Area Follow-up

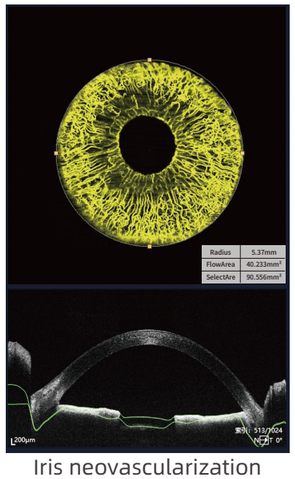


Flow density (Grids)

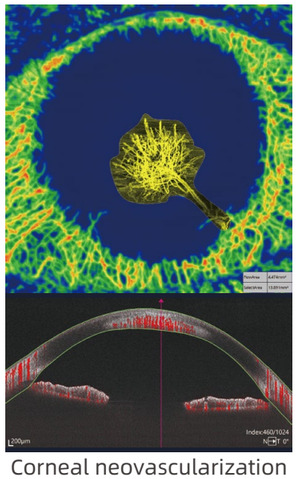


Flow density (ETDRS rings)

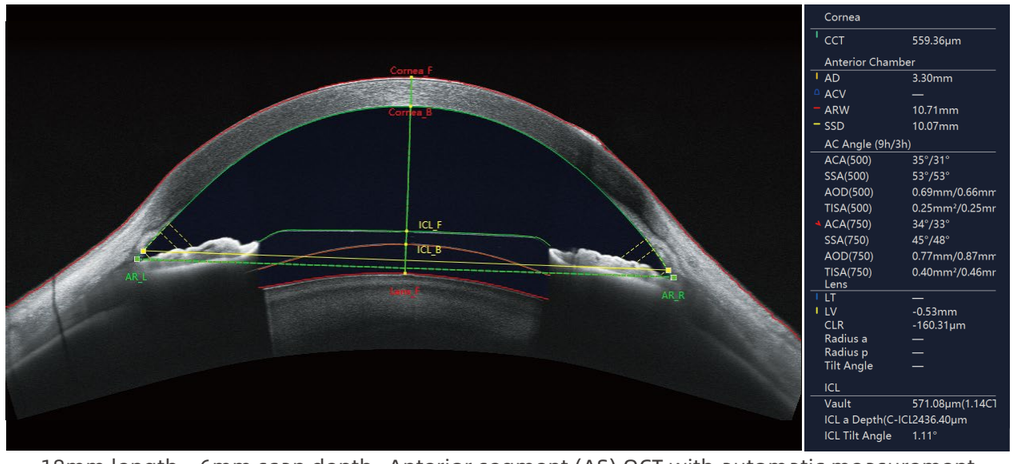
AS OCTA with quantization and parameters



Iris neovascularization quantification

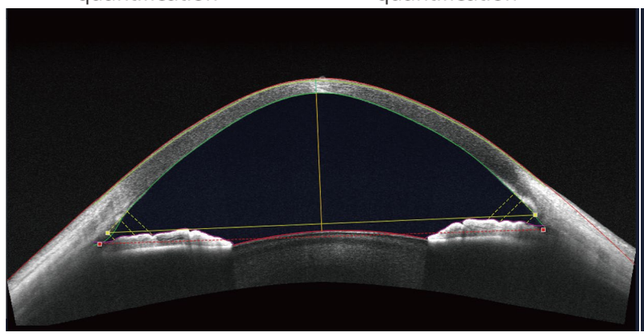


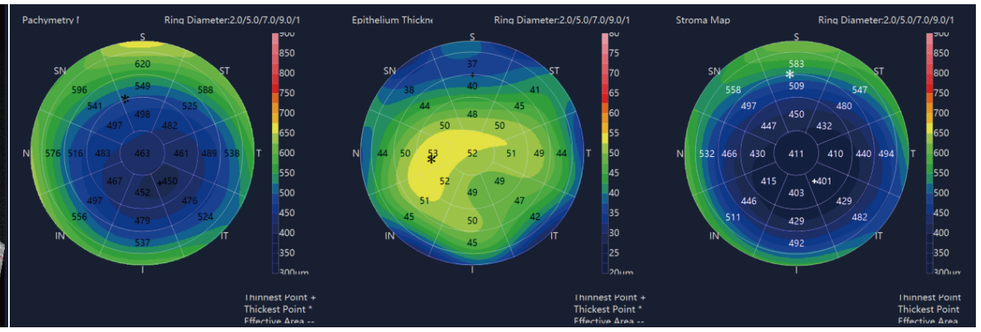
Corneal neovascularization quantification



18mm length，6mm scan depth- Anterior segment (AS) OCT with automatic measurement

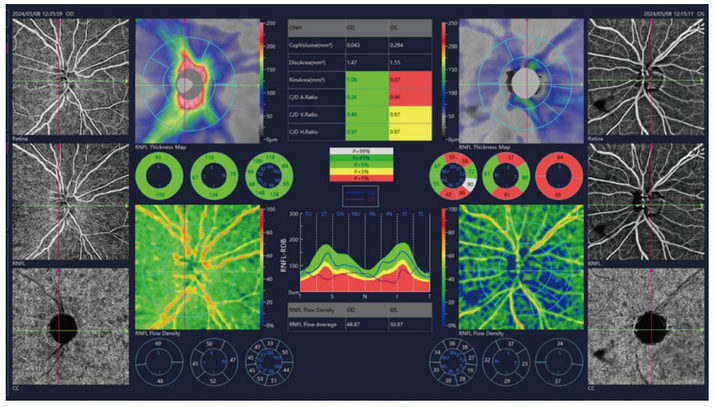
Cornea	
CCT	559.36μm
Anterior Chamber	
AD	3.30mm
ACV	—
ARW	10.71mm
SSD	10.07mm
AC Angle (9h/3h)	
ACA(500)	35°/31°
SSA(500)	53°/53°
AOD(500)	0.69mm/0.66mm
TISA(500)	0.25mm²/0.25mm
ACA(750)	34°/33°
SSA(750)	45°/48°
AOD(750)	0.77mm/0.87mm
TISA(750)	0.40mm²/0.46mm
Lens	
LT	—
LV	-0.53mm
CLR	-160.31μm
Radius a	—
Radius p	—
Tilt Angle	—
ICL	
Vault	571.08μm(1.14CI
ICL a Depth(C-ICL	2436.40μm
ICL Tilt Angle	1.11°



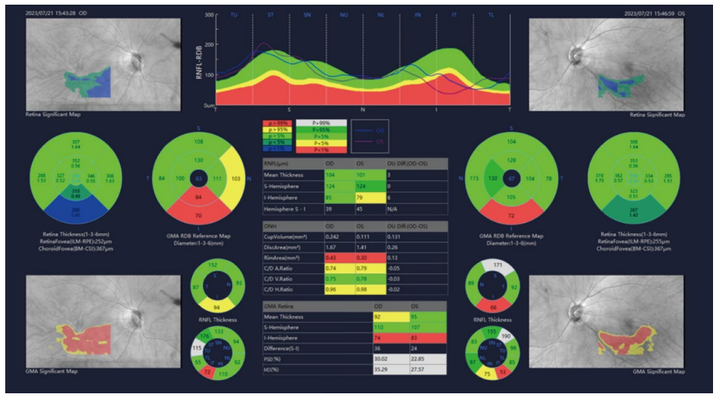


Corneal pachymetry, epithelium thickness, stroma thickness, etc.

Comprehensive glaucoma analysis



ONH analysis (structure & flow)



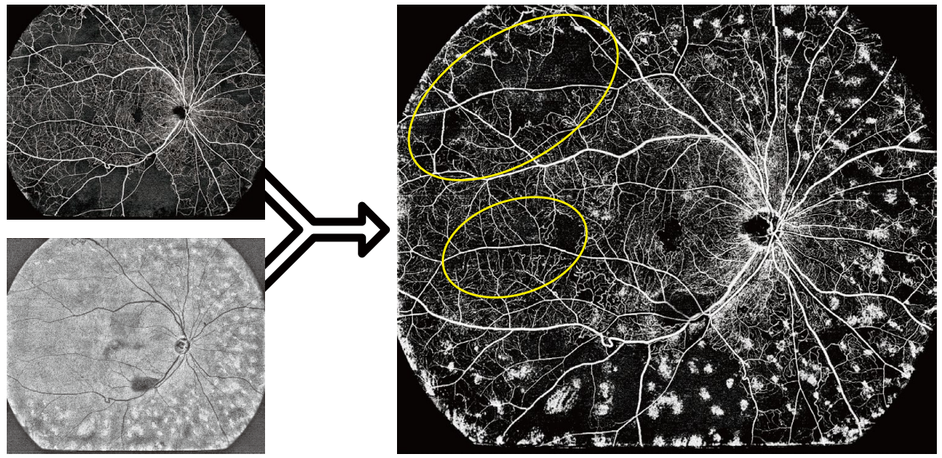
iHealth analysis (OU report)

Innovation.

iSpot

Precision and convenient OCTA-guided photocoagulation.

Superficial retina OCTA image detects NPA

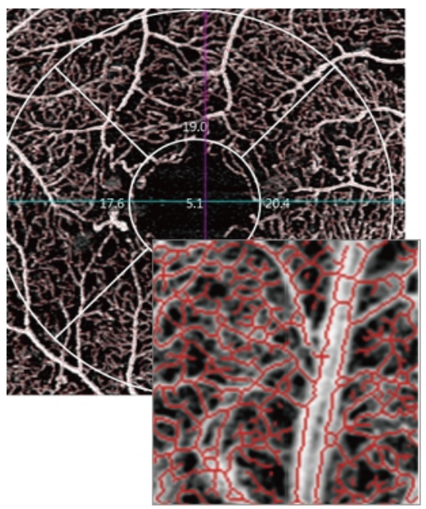


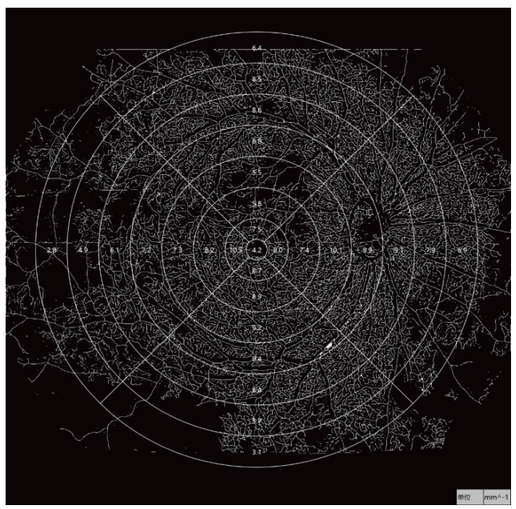
En face image of outer retina shows laser spots

Non-perfusion areas with insufficient laser are clearly identified

Vessel Skeleton Density（VSD）

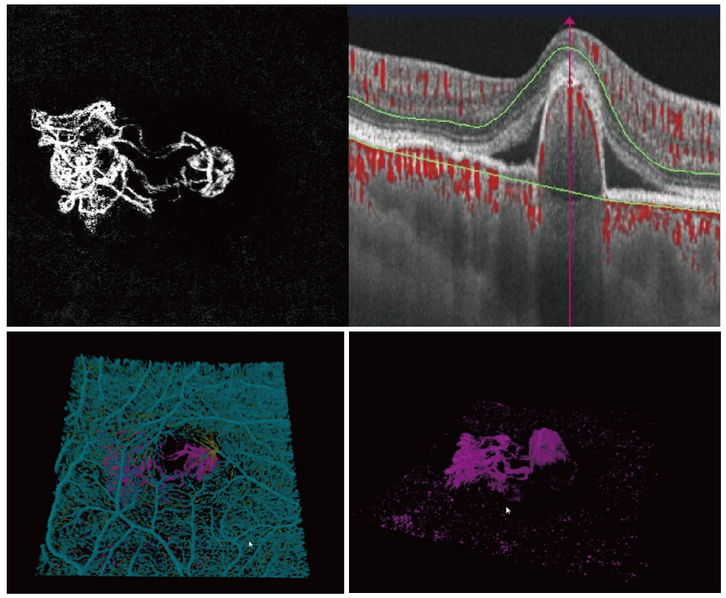
The ratio of the linear length in the region to the area of the region(mm^{-1}) after the vessels are skeletalized. More sensitive to changes in the vessels number and less affected by vessel diameter.





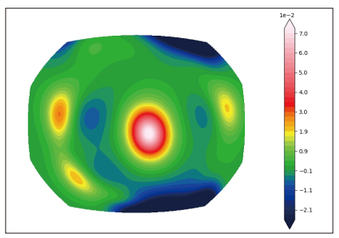
3D OCTA

Visulization vessels in 3D reconstruction for customized layers.

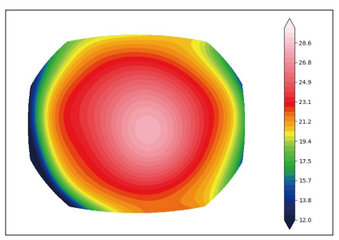


Retinal Morphology Trio

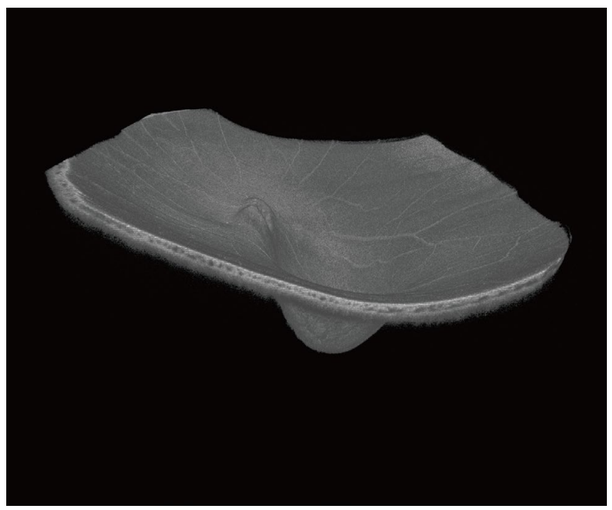
Restore the true shape of retina with built-in advanced algorithm based on 3D structure.



Curvature map



Contour map



True 3D shape

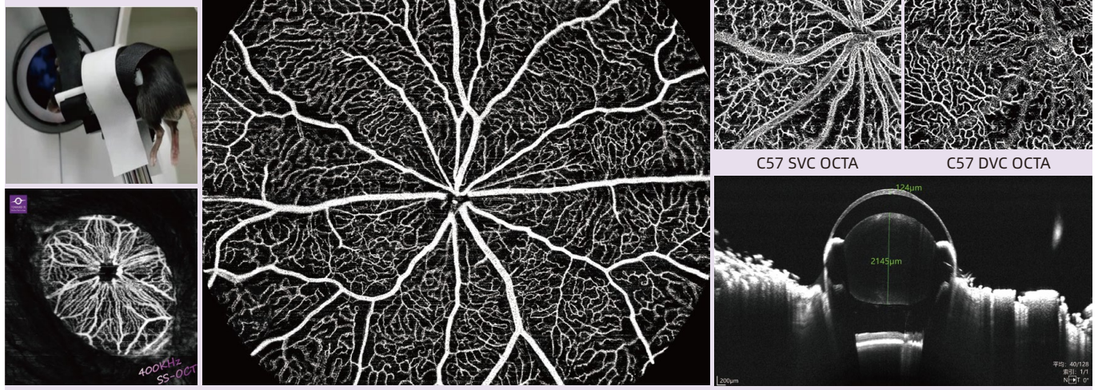
Exploration.

Animal Study

No extra lens needed — Aquisition time **less than 12s** — with comprehensive **quantifications**

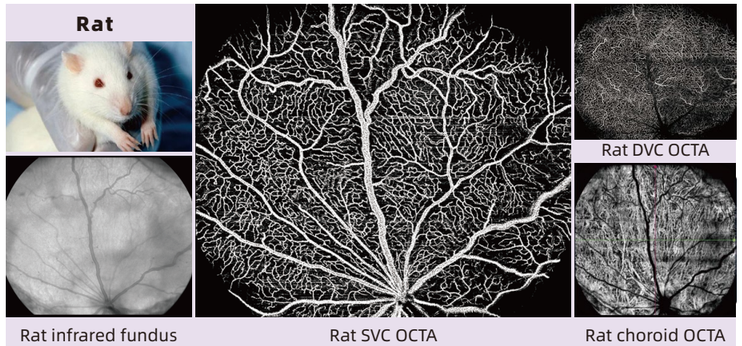
Non-contact, non-invasive to animal — with **automatic** retinal segmentation — with custom measurement and **data export**

C57mouse



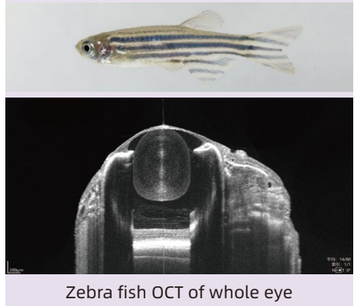
C57 iris OCTA — C57 retina OCTA — C57 SVC OCTA — C57 DVC OCTA — C57 OCT of whole eye

Rat



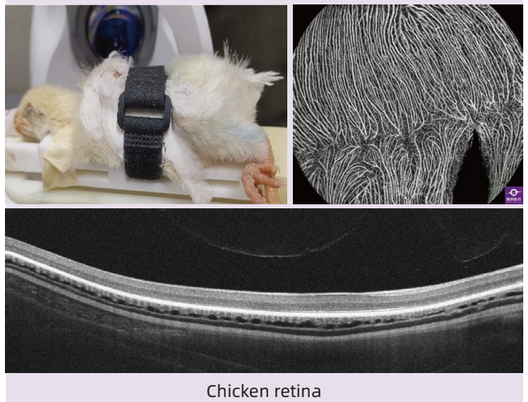
Rat infrared fundus — Rat SVC OCTA — Rat DVC OCTA — Rat choroid OCTA

Zebra fish



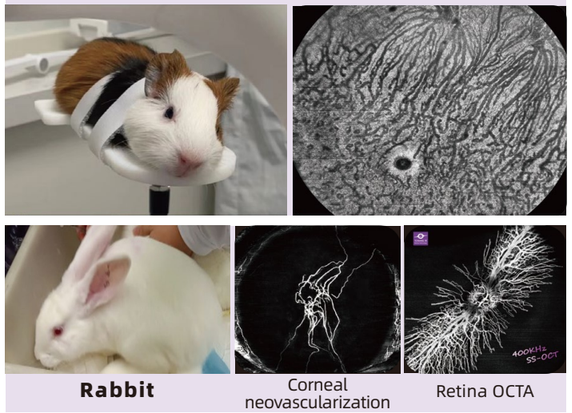
Zebra fish OCT of whole eye

Chicken — Choroid OCTA



Chicken retina

Cavy — Choroid OCTA



Rabbit — Corneal neovascularization — Retina OCTA

Multi-Platforms Imaging Management

Multi-Platforms Imaging: OCT, OCTA, color fundus (CF), fundus fluorescein angiography (FFA), indocyanine green (ICG)), fundus autofluorescence (FAF), optical coherence biometer (OCB), surgical microscope, and other imaging platforms' combinations.

Big Data Fusion: Accurate image matching, precise quantification, support electronic medical record (EMR) systems and medical image formats (DICOM etc.).

Joint Accurate Diagnosis: Improve the sensitivity and specificity of diagnosis, evaluate eye diseases more comprehensively and precisely, improve efficiency and accuracy, and provide patients with better diagnosis and treatment experience.