

Specifications

OCT Model	BM-400K Ultra	BM-400K Max
OCT optical source	Swept Source	
Center wavelength	1060nm	
OCT B-scan		
Scan speed	400,000 A-scans/sec	
Max. Length (posterior)	30mm	26mm
Max. Length (anterior)	24mm	
Scan depth (posterior)	12mm	9mm
Scan depth (anterior)	12mm	9mm
Refractive adjustment range	-35D to +45D	
Axial optical resolution	≤6μm	
Axial best digital resolution	1.9μm	
Transverse optical resolution	10μm	
Fundus Imaging		
Methodology	Scanning Laser Ophthalmoscopy (SLO)	
SLO wavelength	850nm	
SLO FOV	107.25°	90°
Minimum pupil diameter	2.0mm	
Eye tracking speed	128Hz	
OCT Angiography		
Max. Single scan size (anterior)	24mm×24mm	
Max. Single scan size (posterior)	30mm×25mm	26mm×21mm
Maximum resolution (single scan)	1536×1280	
Max. scan size (montage)	≈44mm×42mm	≈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	☑	



BMizar

400kHz | Full Range SS-OCT/OCTA



BMizar

400kHz Ultra-Wide Field Full-range Swept-Source OCT/OCTA



400kHz Ultra-WideField
Full-range Swept-Source OCT

Self-Innovated
Homemade component parts

Ten Billion Voxels
Ultra- High Resolution

Proprietary Choroid
OCTA Algorithms

7-15 seconds High Speed
Ultra-WideField OCTA Acquisition

All-Slabs and All-Sizes
Quantification Analysis

No additional lens
Animal scan

Multi Platforms Imaging
Joint Diagnosis

400kHz
30x25mm

Ultra-Wide Field OCTA
Self-Innovated High-Speed
Acquisition Card

10 Billion Voxels

Ultra-High Resolution
1536x1280

Proprietary Choroid
OCT Angiography

BMizar

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

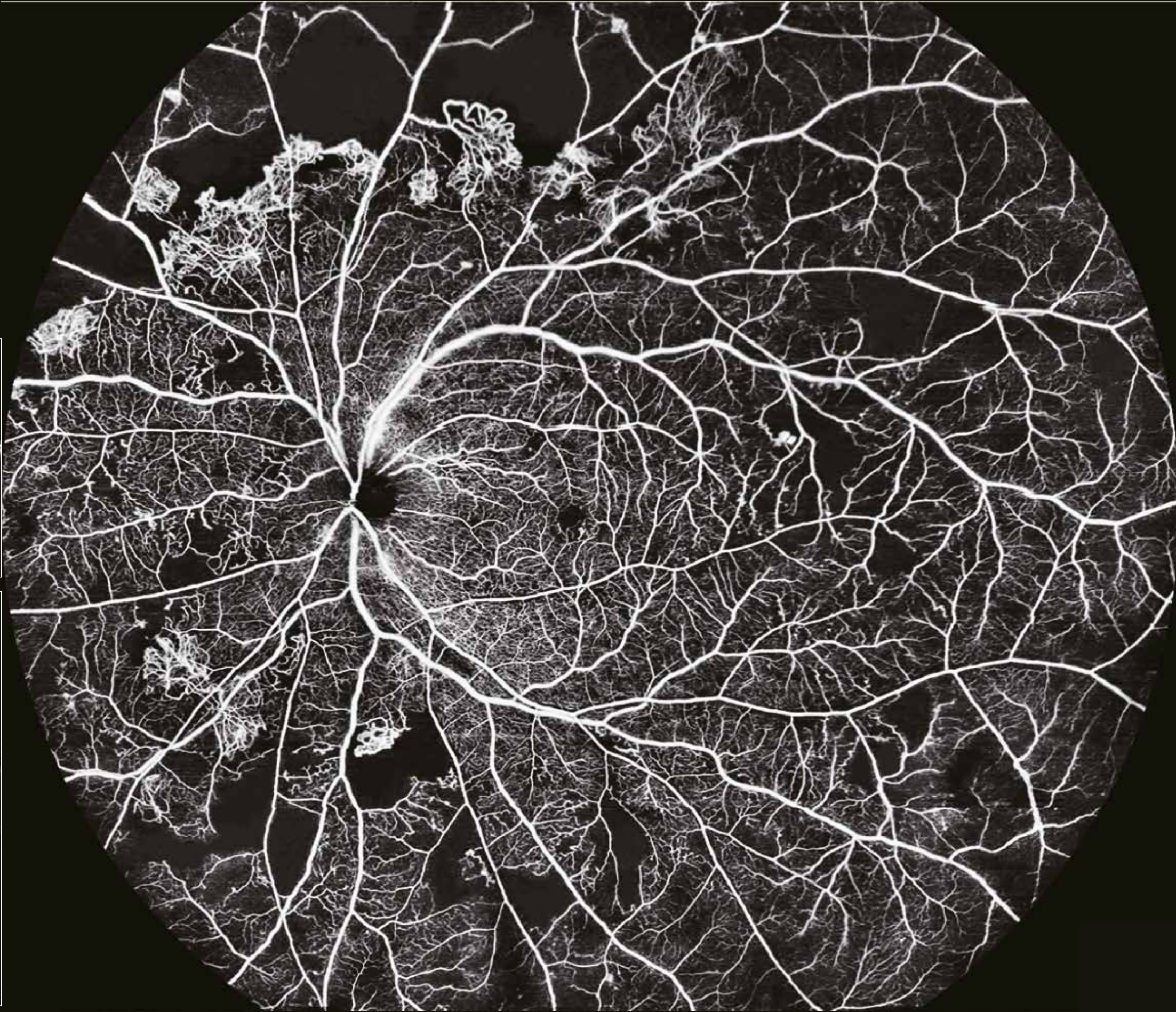
100-400K A-scan/sec
Ultra-wide-field OCTA
6-12mm Depth
16-24mm length

Find More Details with Single Capture

- | 10 Billion maximal voxels
- | 30x25mm ultra-wide-field OCTA
- | 1536x1280 ultra-high resolution
- | Fast acquisition speed (7-15 seconds)



Neovascular membrane (vitreal slab)

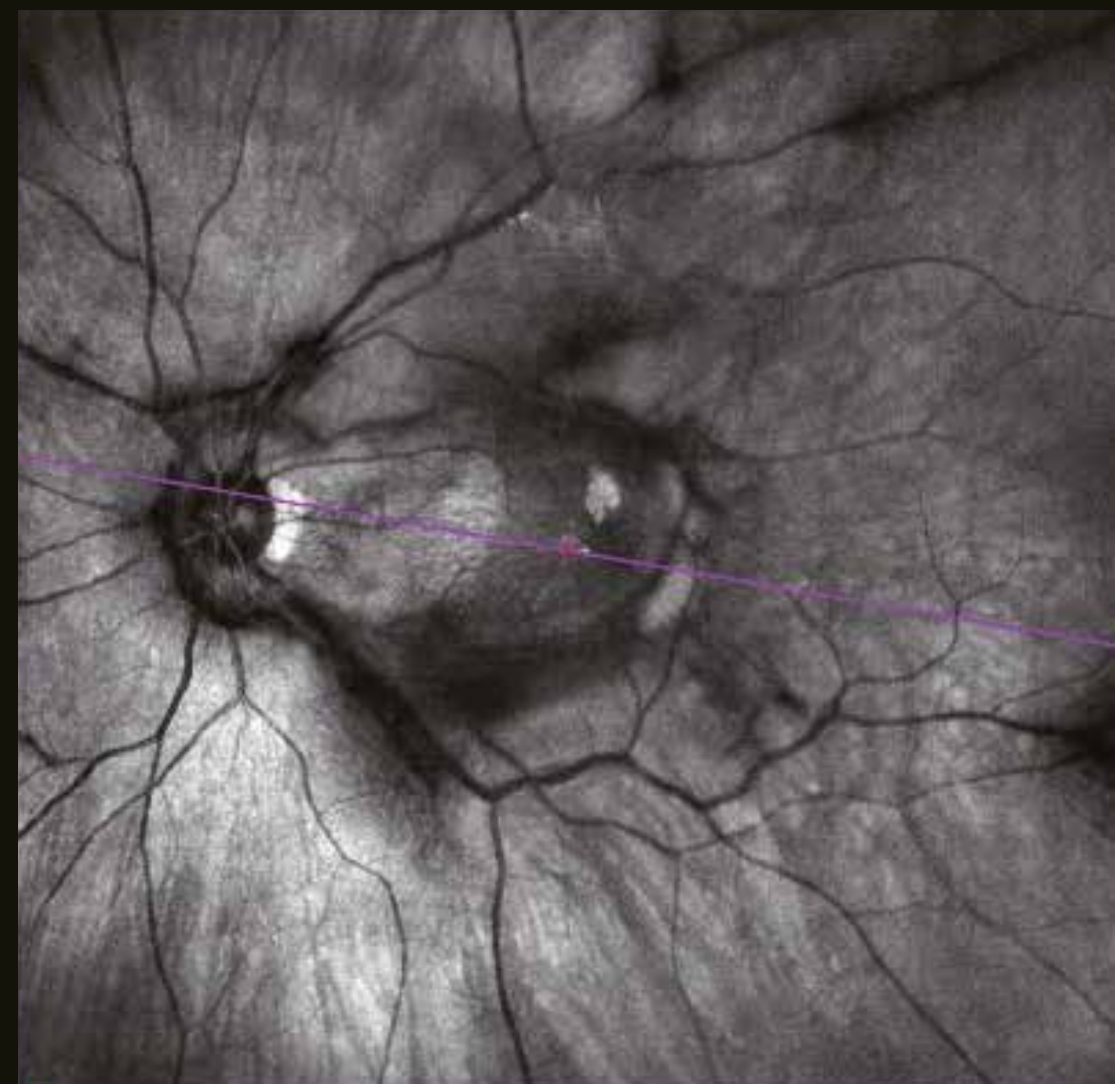


Proliferative diabetic retinopathy (PDR)

Full-range Ultra-wide-field with High-resolution

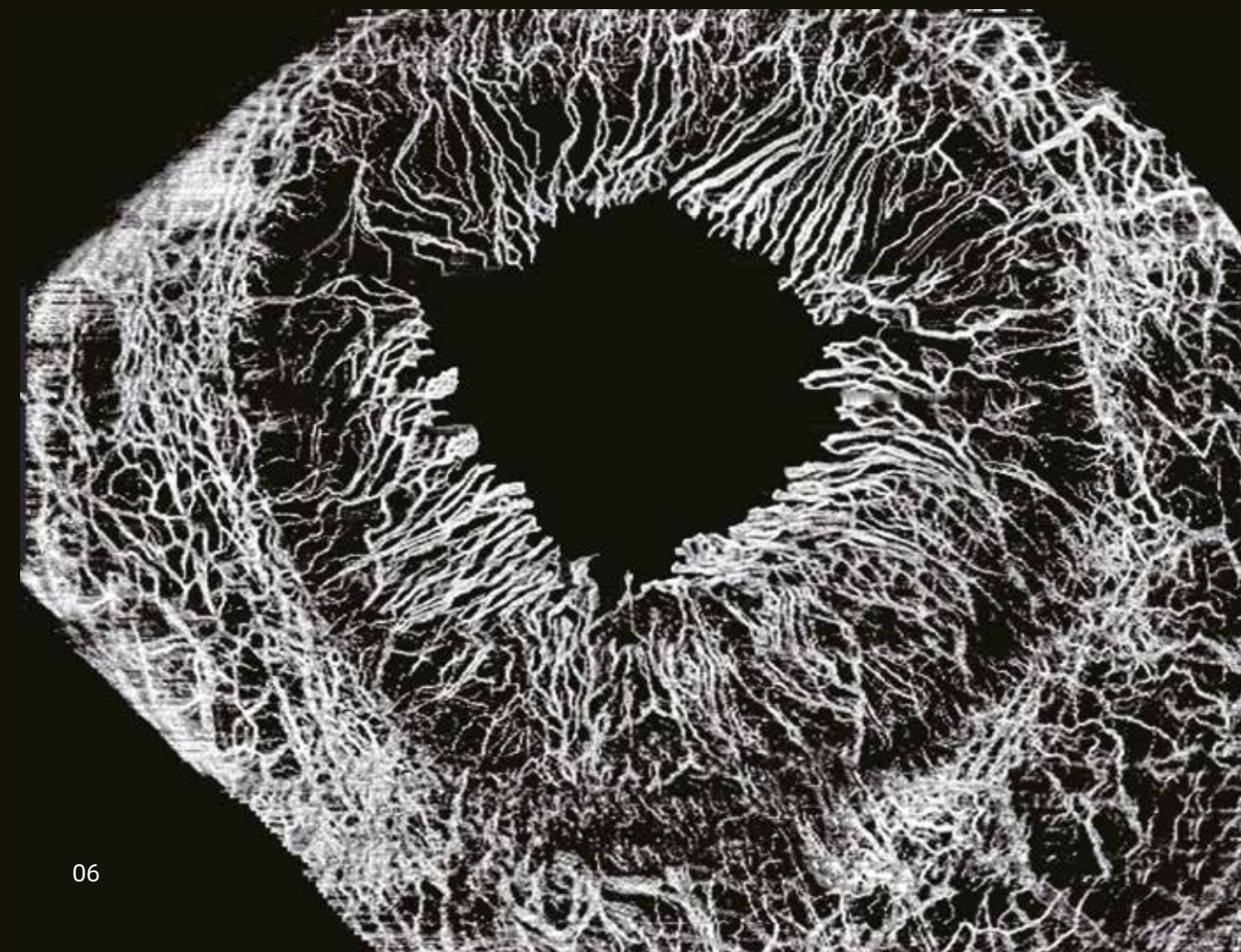


30mm length, 12mm depth | Retinal Detachment

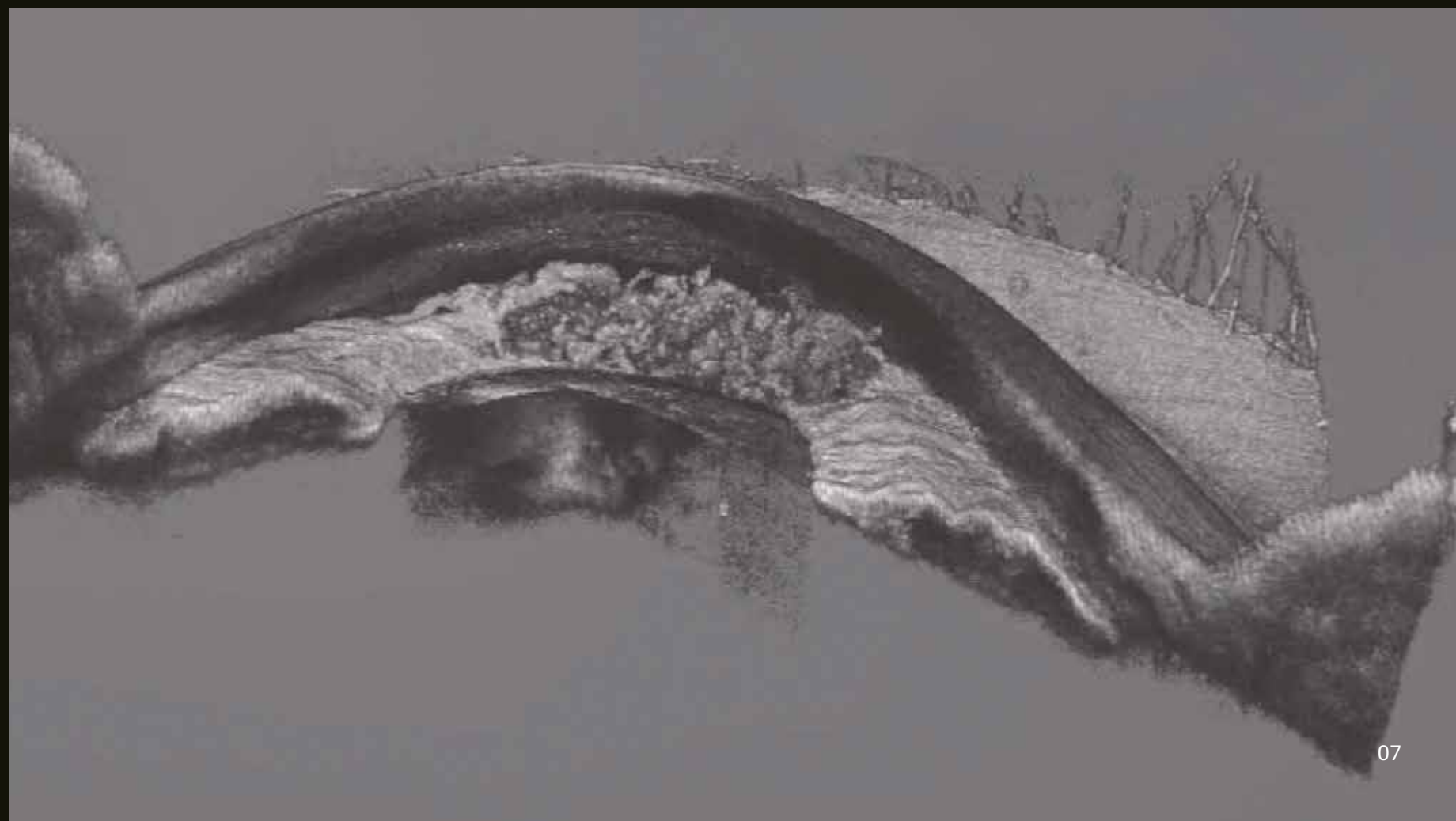


SLO fundus image | Vitreomacular traction (VMT)

AS OCTA | Corneal neovascularization

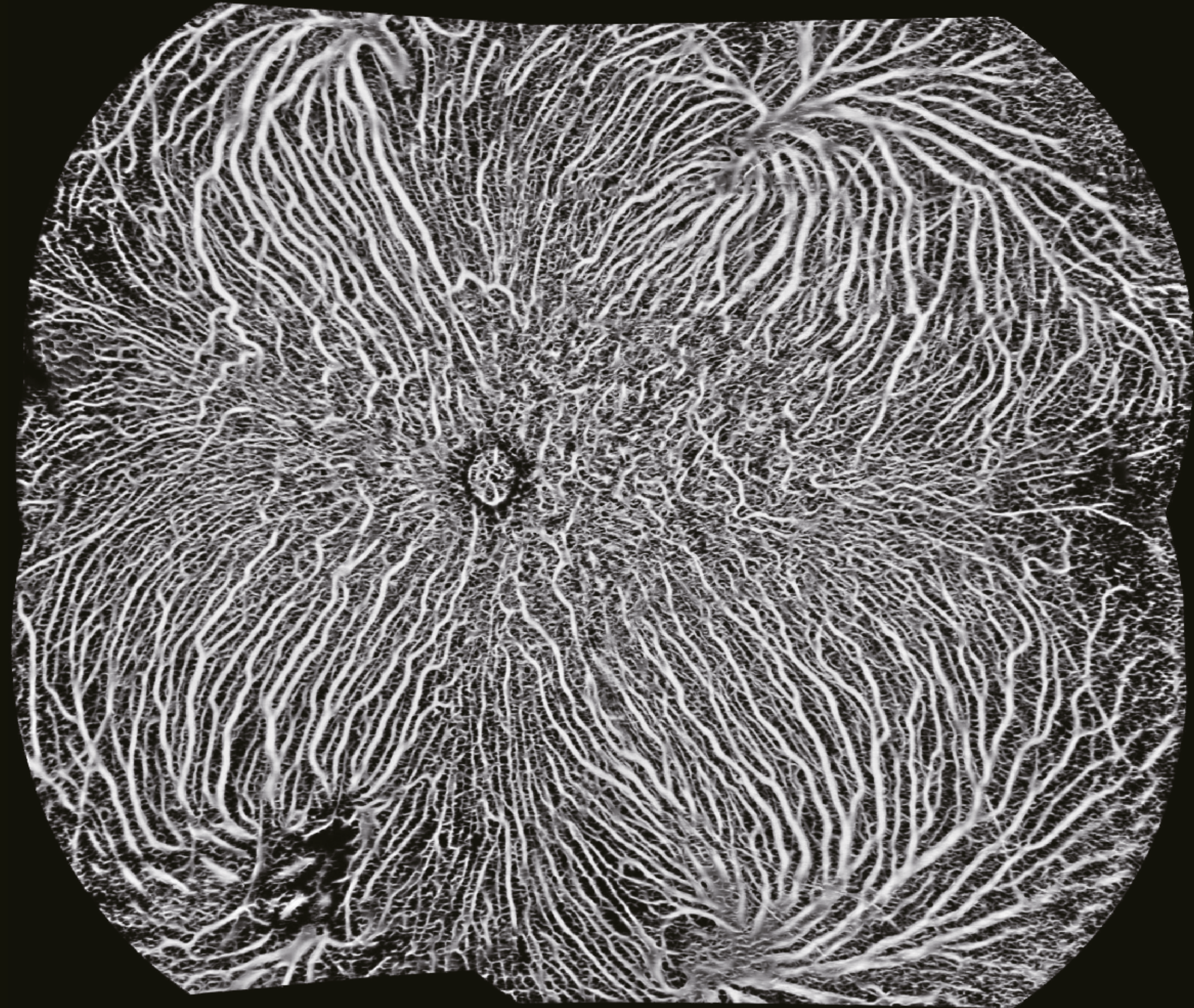


AS 3D reconstruction | Iridoschisis

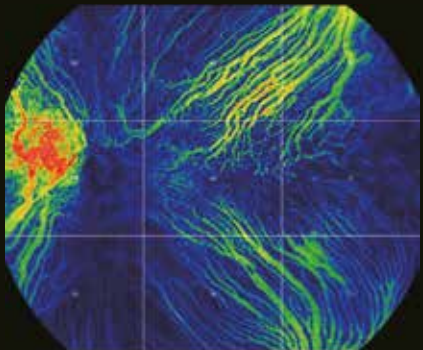


Reveal the Undiscovered

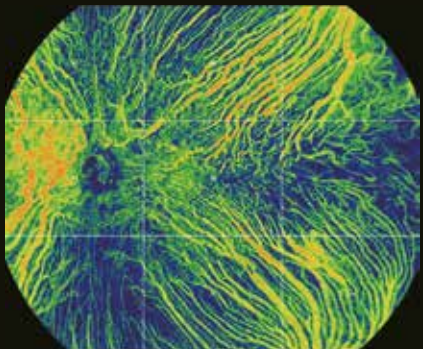
Ultra-wide-field OCTA for Choroid with quantification parameters



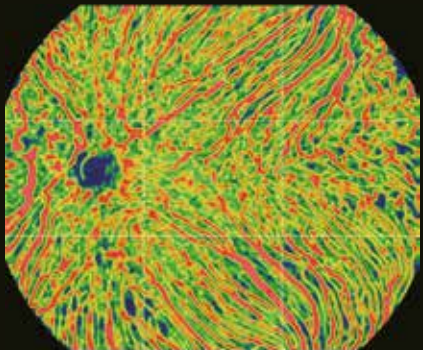
Montage of 4 30x25 Choroid



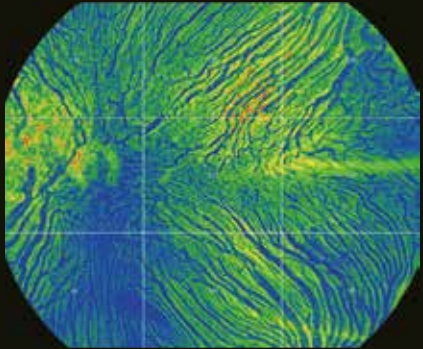
Choroid Vessel Volume ratio (CVV/a)



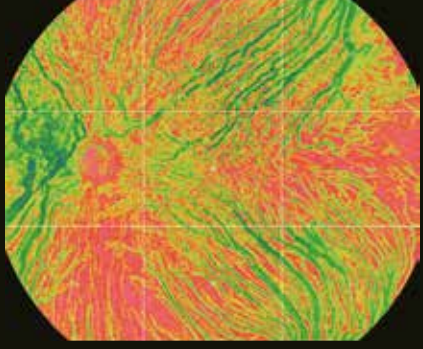
Choroid Vessel Index (3D-CVI)



Choroid Vessel Density (2D)



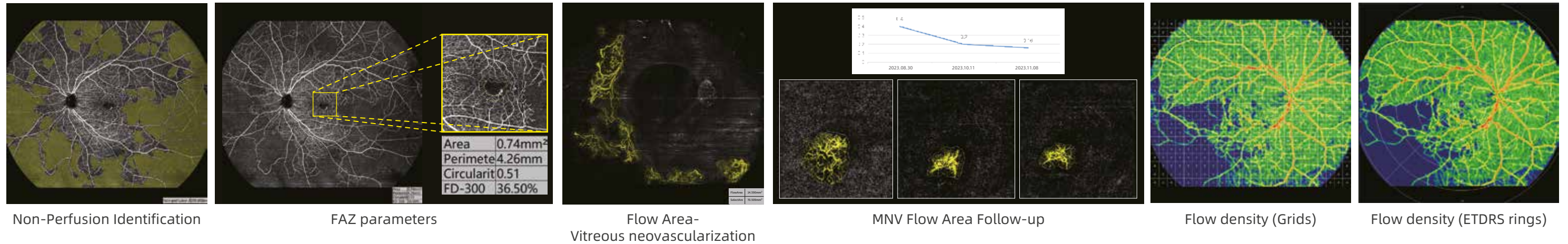
Choroidal Stroma Volume ratio (CSV/a)



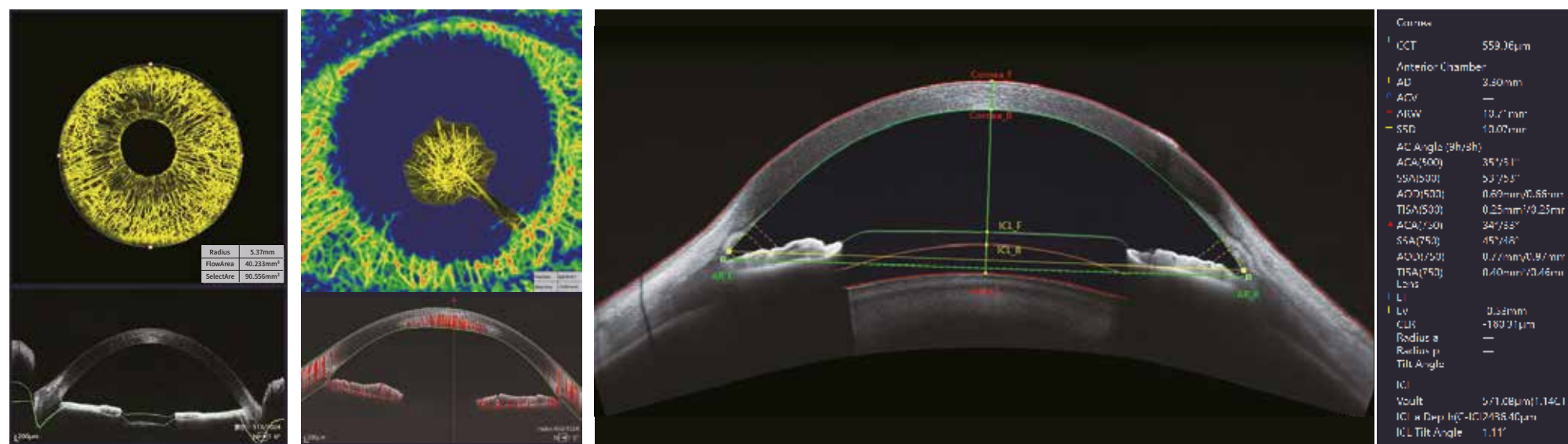
Choroidal Stroma Index (CSI)

Comprehensive Quantitative Analysis

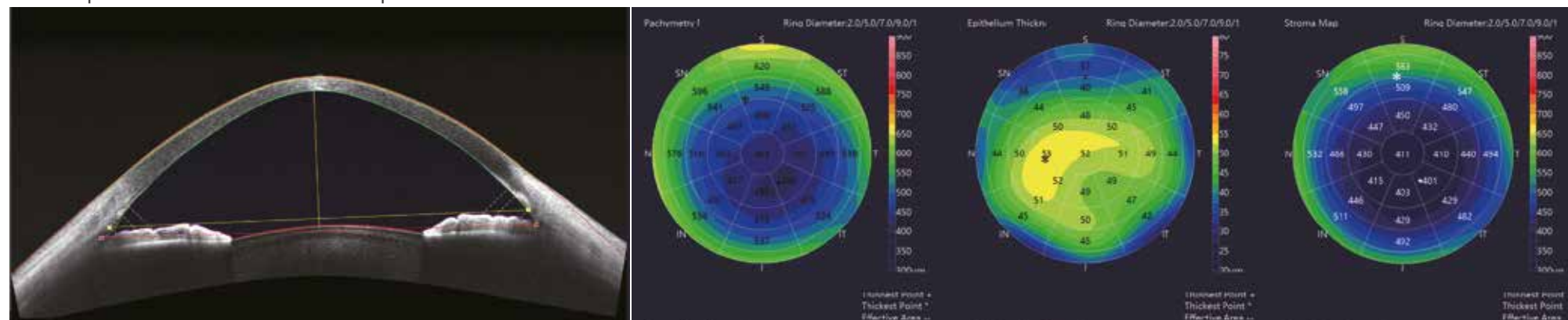
Retinal blood flow with quantification



AS OCTA with quantization and parameters

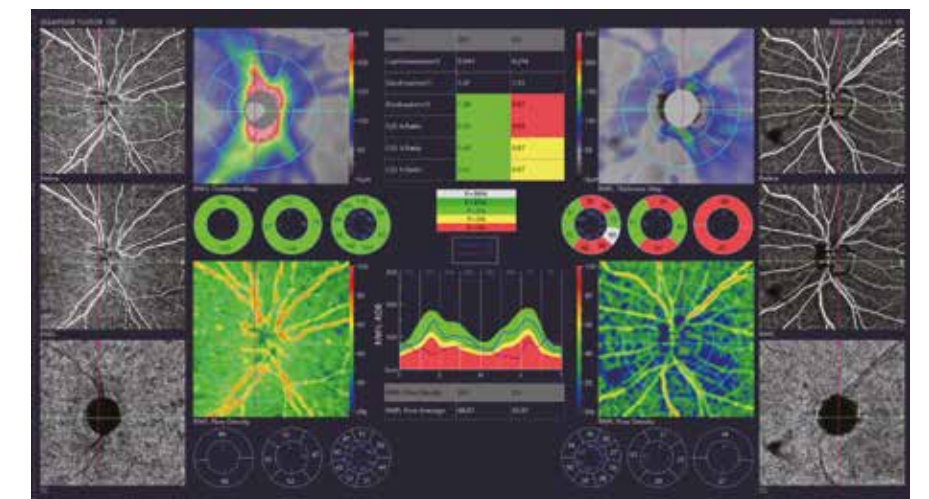


18mm length, 6mm scan depth- Anterior segment (AS) OCT with automatic measurement

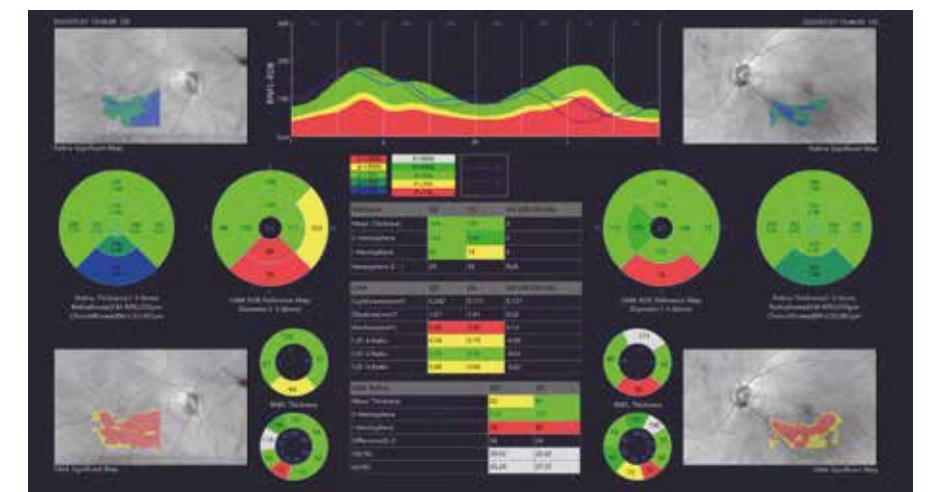


Corneal pachymetry, epithelium thickness, stroma thickness, etc.

Comprehensive glaucoma analysis



ONH analysis (structure & flow)



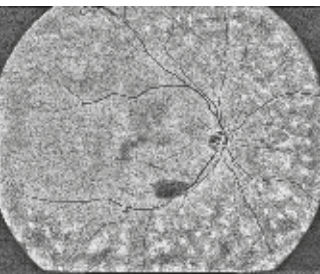
iHealth analysis (OU report)

Innovation.

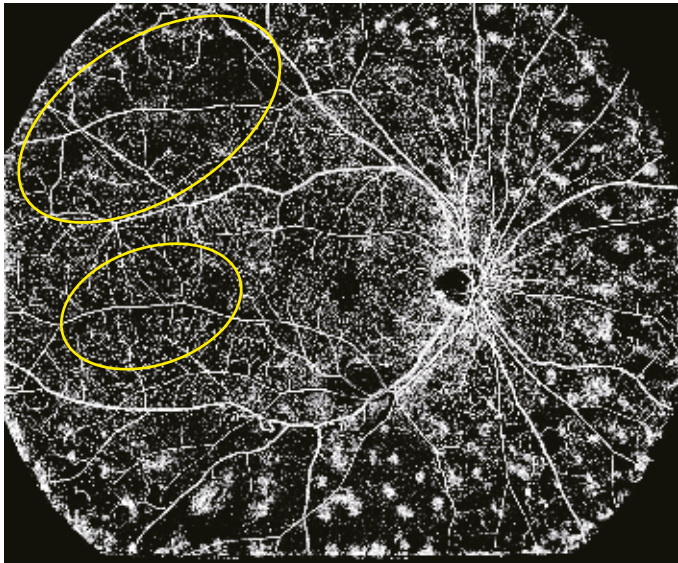
iSpot

Precision and convenient OCTA-guided photocoagulation.

Superficial retina OCTA image detects NPA



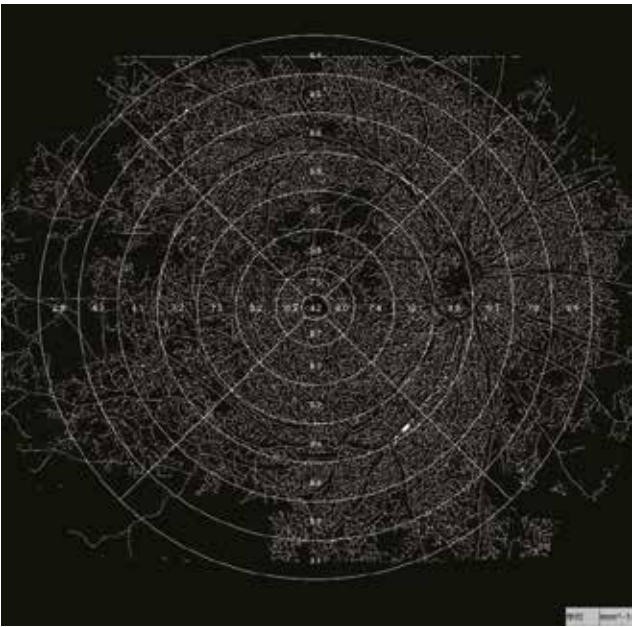
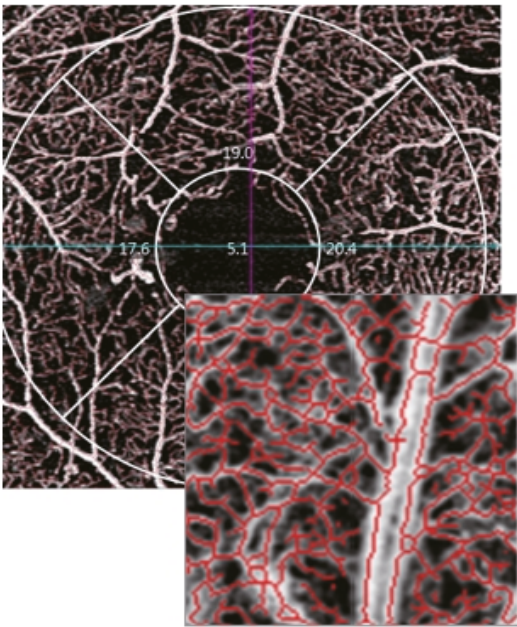
En face image of outer retina shows laser spots



Non-perfusion areas with insufficient laser are clearly identified

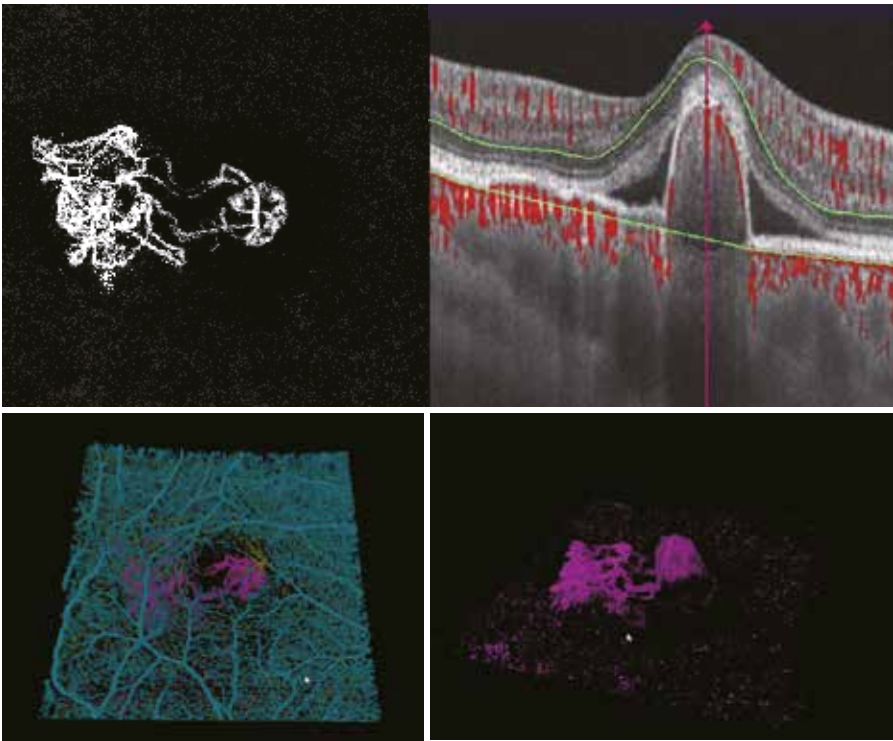
Vessel Skeleton Density (VSD)

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.



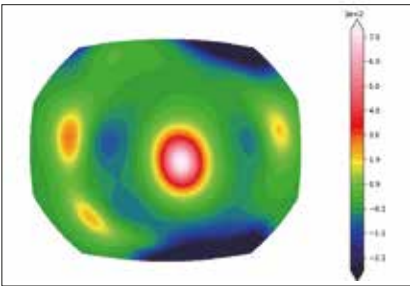
3D OCTA

visualization vessels in 3D reconstruction for customized layers.

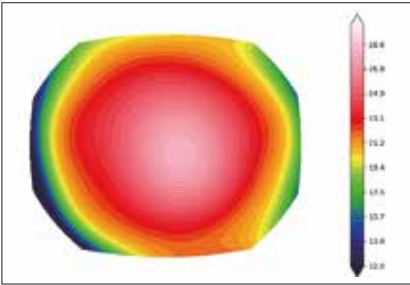


Retinal Morphology Trio

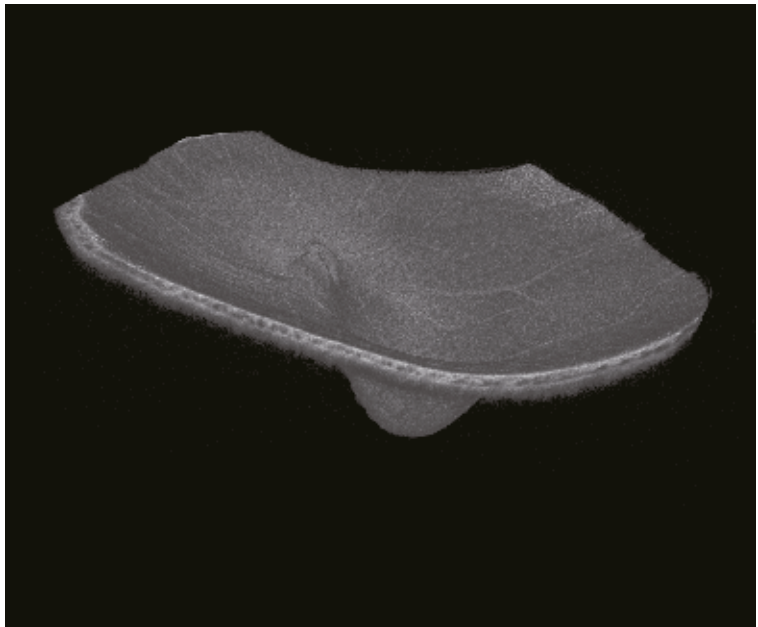
Restore the true shape of retina with built-in advanced algorithm based on 3D structure.



Curvature map



Contour map



True 3D shape

Exploration.

Animal Study

No extra lens needed

Fast acquisition

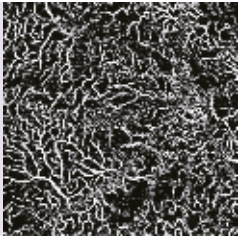
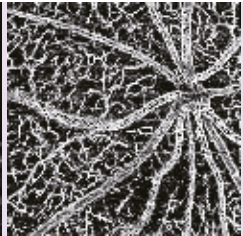
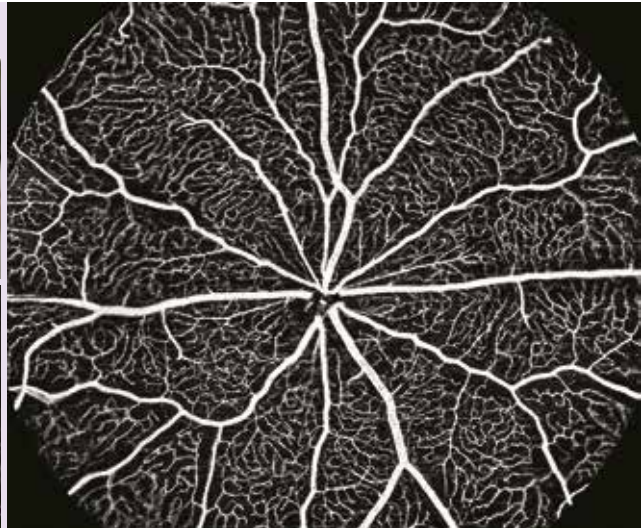
with comprehensive quantifications

Non-contact, non-invasive to animal

with automatic retinal segmentation

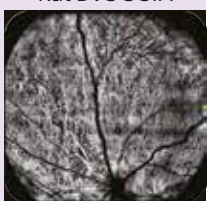
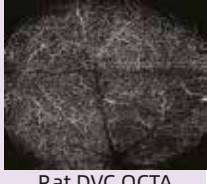
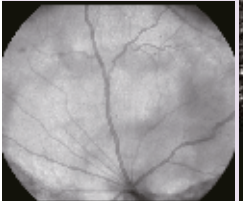
with custom measurement and data export

C57mouse



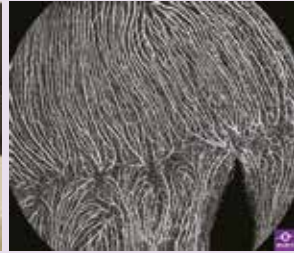
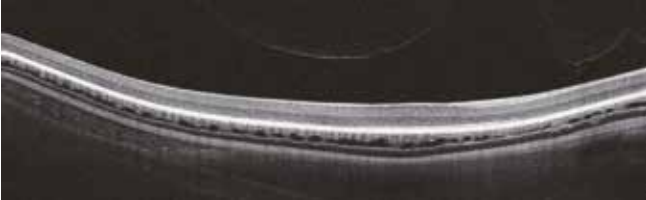
C57 iris OCTC57 retina OCTC57 SVC OCTAC57 DVC OCTAC57 OCT of whole eye

Rat



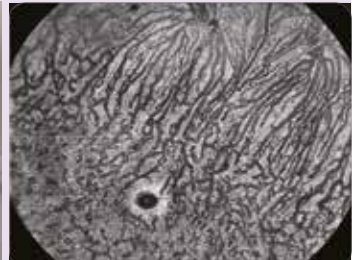
Rat infrared fundusRat SVC OCTARat DVC OCTARat choroid OCTAZebra fish OCT of whole eye

Chicken



Chicken retinaChicken choroid OCTA

Cavy



Cavy choroid OCTA

Rabbit



RabbitCorneal neovascularizationRetina OCTA

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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.

The diagram illustrates the PiView System architecture. At the center is a large circular hub labeled "PiView System". Surrounding this hub are several circular nodes representing different imaging modalities: FFA (Fundus Fluorescein Angiography), ICG (Indocyanine Green), CF (Color Fundus), OCB (Optical Coherence Biometer), OCT (Optical Coherence Tomography), and OCTA (Optical Coherence Tomography Angiography). These nodes are interconnected by a network of lines. Surrounding the central hub are several circular icons representing different imaging platforms: YAlkaid, Zursa, BMizar, Zalieth, Baryon, and FOcean. These platforms are connected to the central hub and the imaging modalities. The diagram also shows connections to EMR (Electronic Medical Record) systems and other medical data sources.

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