



TowardPi

To Greatness, To Future

TowardPi Medical Technology Ltd.

Add: Building 13, Lane 379, Suide Road,
Putuo District, Shanghai, China

Tel: +86-021-60406507

Email: info@towardpi.com

Web: www.towardpi.com



TowardPi

★ **YALK AID** ★

- Full-Range HD •
- Anterior & Posterior SS-OCT

Device is not cleared by the CE/FDA.

TowardPi Medical

Full-Platform Supplier of Ophthalmic Medical Equipment

- ▶ TowardPi Medical was established in October 2017, and its core technology comes from the transformation of Tsinghua University's scientific and technological achievements. The company has a team size of hundreds of people, nearly a hundred talents R&D teams. Currently, there are two R & D centers in Beijing and Shanghai.
- ▶ The company has strong technology accumulation and full independent research and development capabilities in the fields of optics, machinery, electronic circuits, optoelectronics, embedded systems, software algorithms.
- ▶ With abundant process experience and first-class industrial talents in the field of manufacturing, the company owns two major production and manufacturing bases in Beijing and Suzhou.

The development of OCT

The development of OCT leads us to the latest generation of full range swept source OCT technology. Go faster, deeper, wider and sharper!

1996

Technology: Time Domain
Specification: <10K A-scan/s
<2mm depth
Application: B-scan (retina and cornea)

2006

Technology: Spectral Domain
Specification: 20-100K A-scan/s
2-3mm depth
Application: HD B-scan (retina & cornea),
3D & OCTA (retina, small size)

2013

Technology: Swept Source
Specification: 100K A-scan/s
3mm depth
Application: HD B-scan (retina, choroid & cornea),
3D & OCTA (retina, medium size)

2021

Technology: Full Range Swept Source
Specification: 100-400K A-scan/s
6-14mm depth
Application: Full range B-scan (posterior & anterior), 3D & OCTA (retina, choroid & anterior, large size)

Exploring toward the infinite future

TowardPi Swept Source OCT YALKAID

- ▶ 100KHz A-scan
- ▶ Full range anterior & posterior OCT
- ▶ Wide field anterior & posterior OCTA



Model: YG-100K

SS-OCT: **YALKAID**

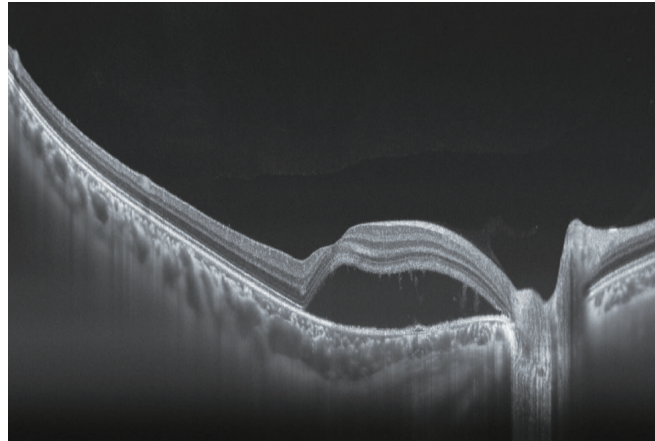


100,000 A-scan/sec SS-OCT

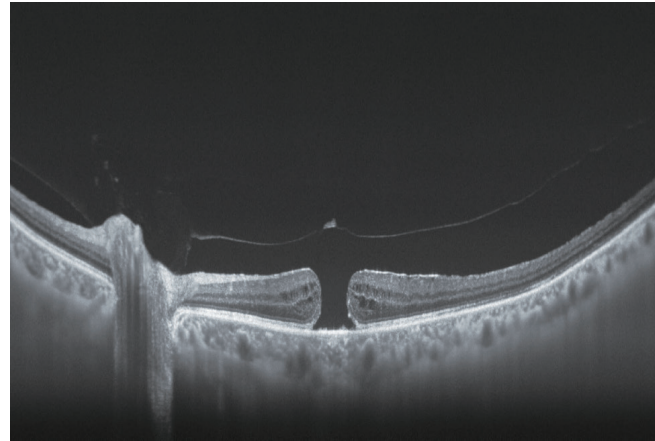
High definition B-scans

Resolution

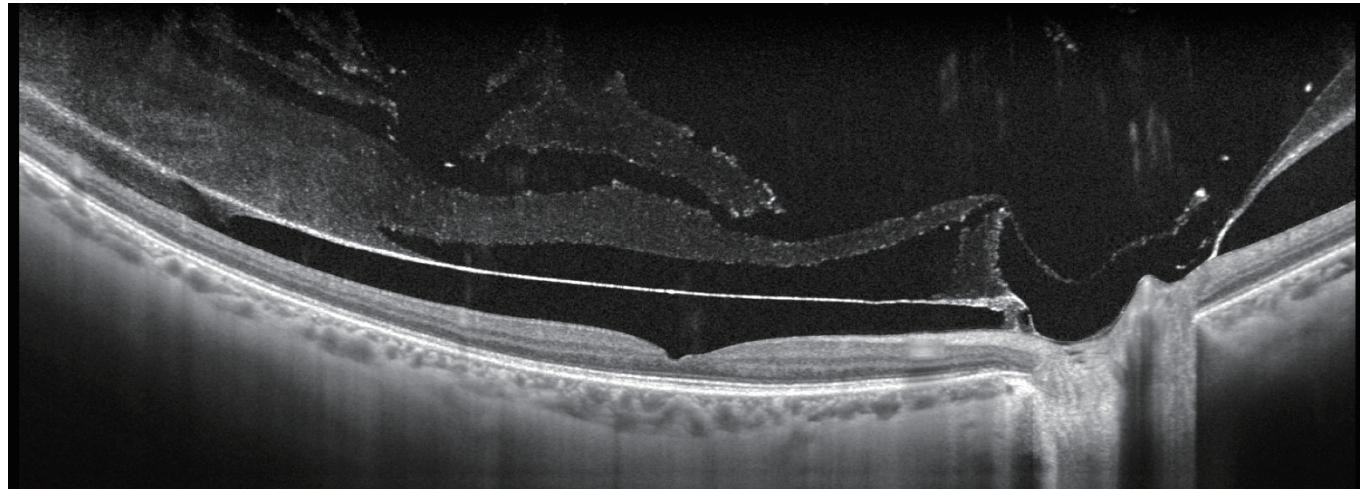
- ▶ Axial: $\leq 6\mu\text{m}$ optical, $1.4\mu\text{m}$ digital
- ▶ Lateral: $10\mu\text{m}$ optical, $1.4\mu\text{m}$ digital



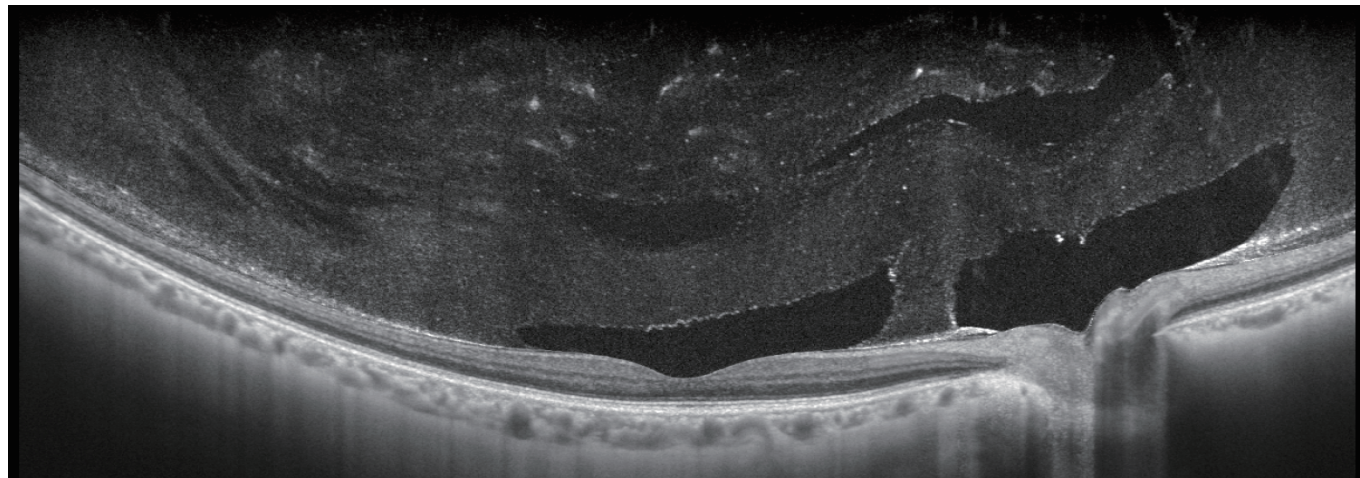
• Central Serous Retinopathy



• Macular Hole



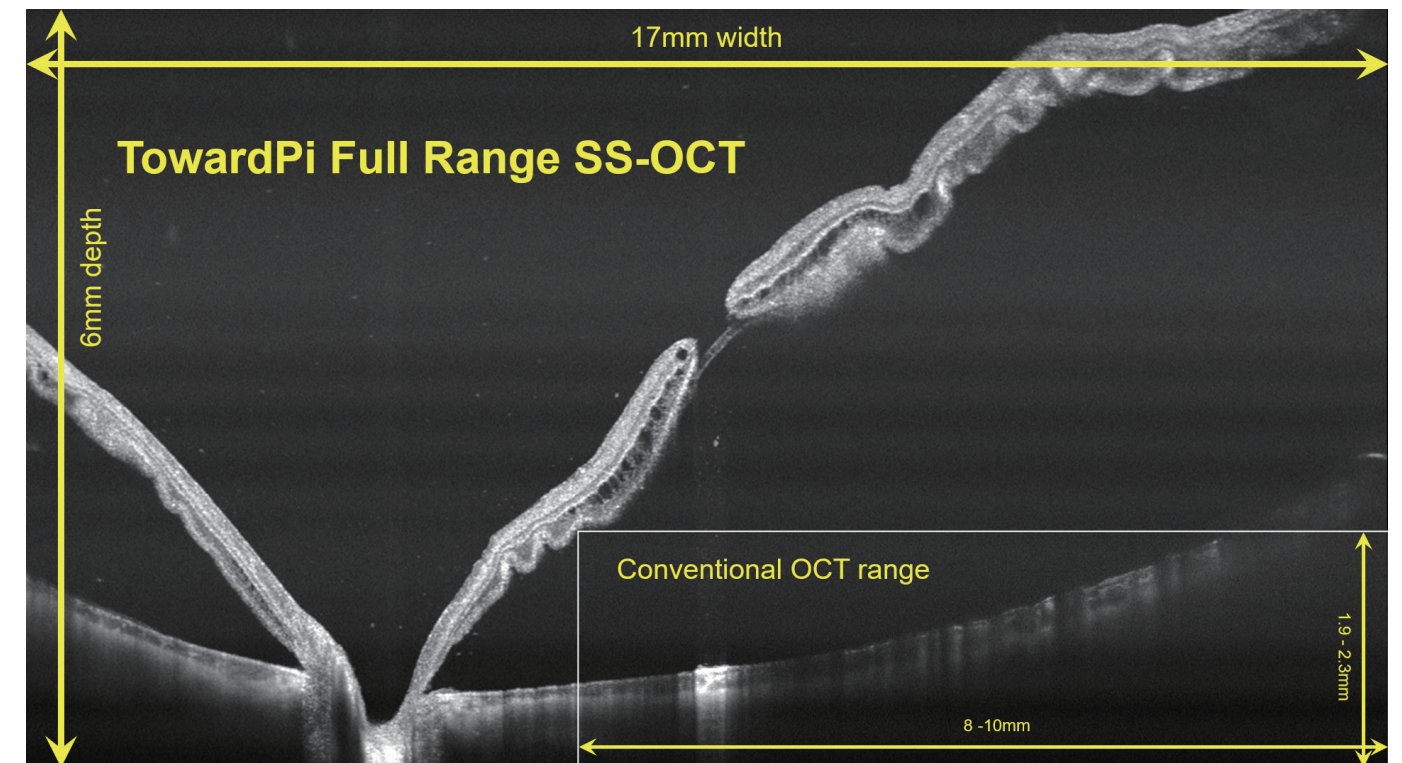
• Posterior Vitreous Detachment



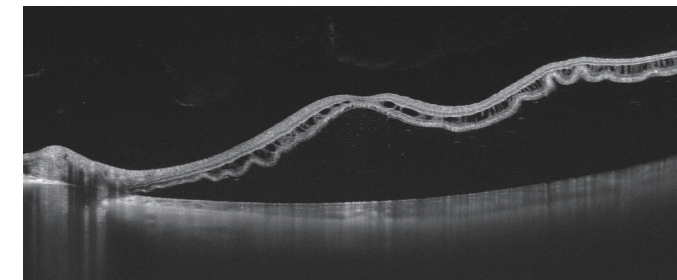
• Posterior Precortical Vitreous Pockets (PPVP)

Retina Scan, 17mm length, 6mm depth

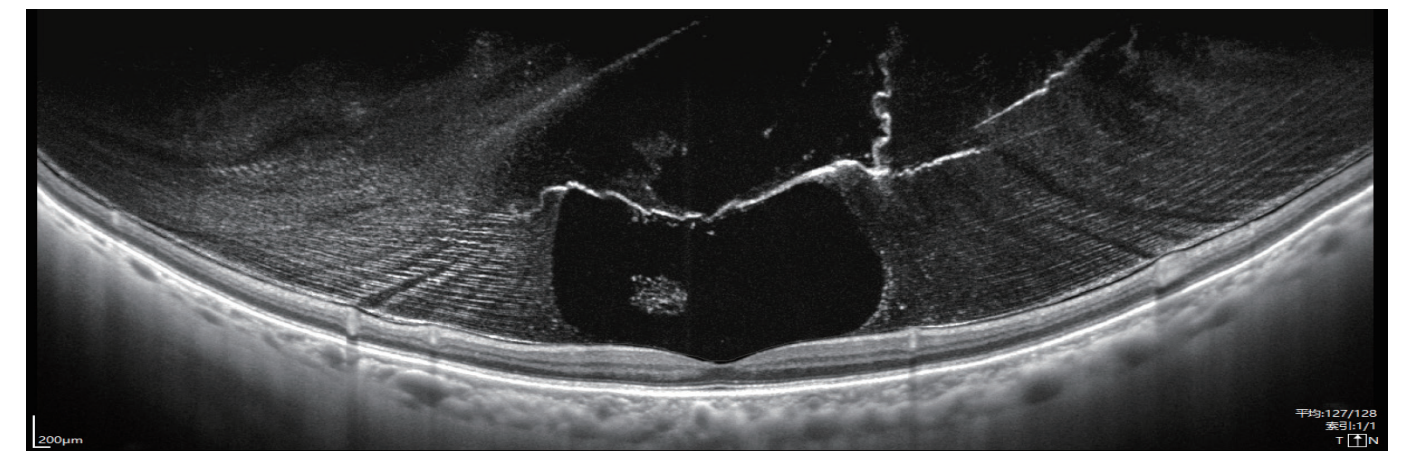
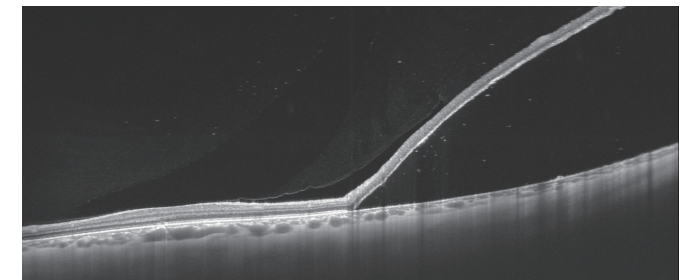
- ▶ Better coherence ensures deeper visual field
- ▶ **6mm scanning depth** makes scan easier with myopia staphyloma or extensive retinal detachment
- ▶ **1060nm wavelength** penetrates better in opacity such as cataract, vitreous hemorrhage, provides full thickness imaging of retina and choroid
- ▶ Wide-field optic design extends the **scanning length up to 17mm**



• Extensive Retinal Detachment



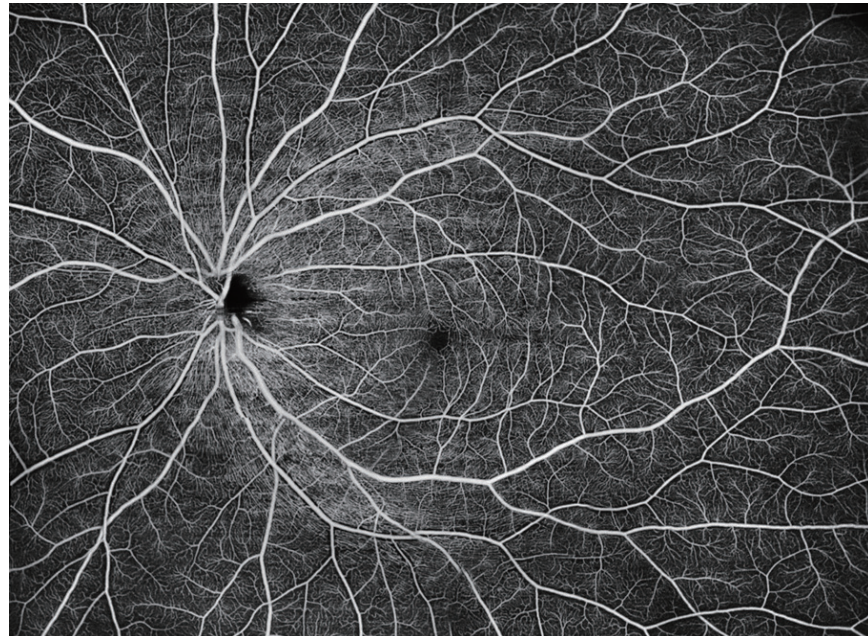
• Retinal Detachment



• Posterior Precortical Vitreous Pockets (PPVP)

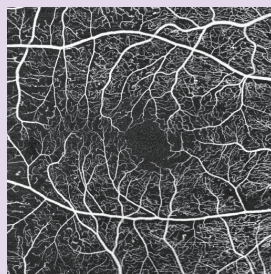
OCT Angiography

- Fast, non-invasive, high resolution OCT Angiography (OCTA)
- Optional upgrade on YAILKAID OCT system

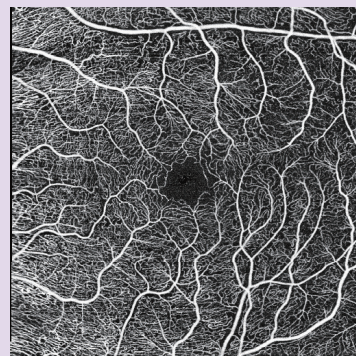


• Larger field montage from multiple scans

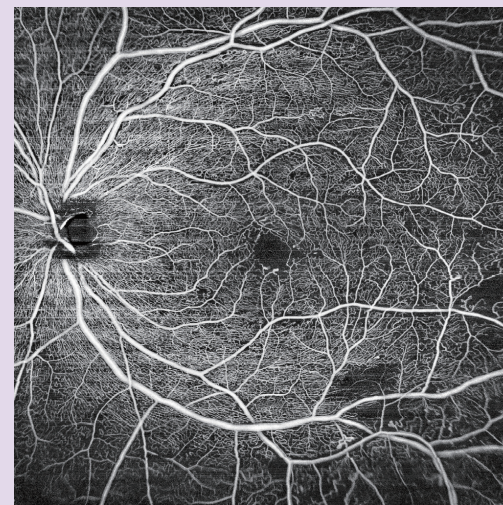
Full functional OCTA features



• 3×3mm OCTA

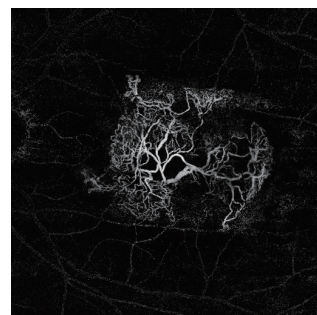


• 6×6mm OCTA

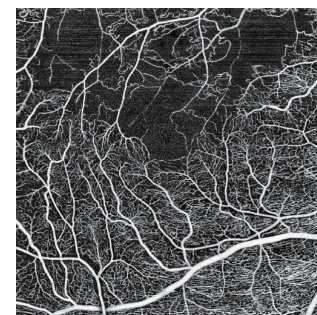
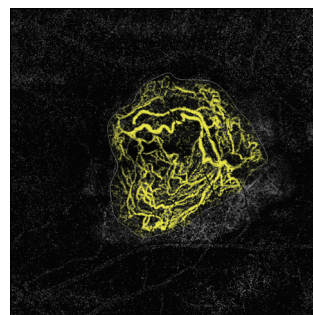


• 12×12mm OCTA

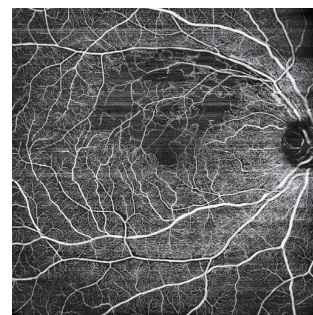
■ Diabetic Retinopathy



• Choroidal Neovascularization

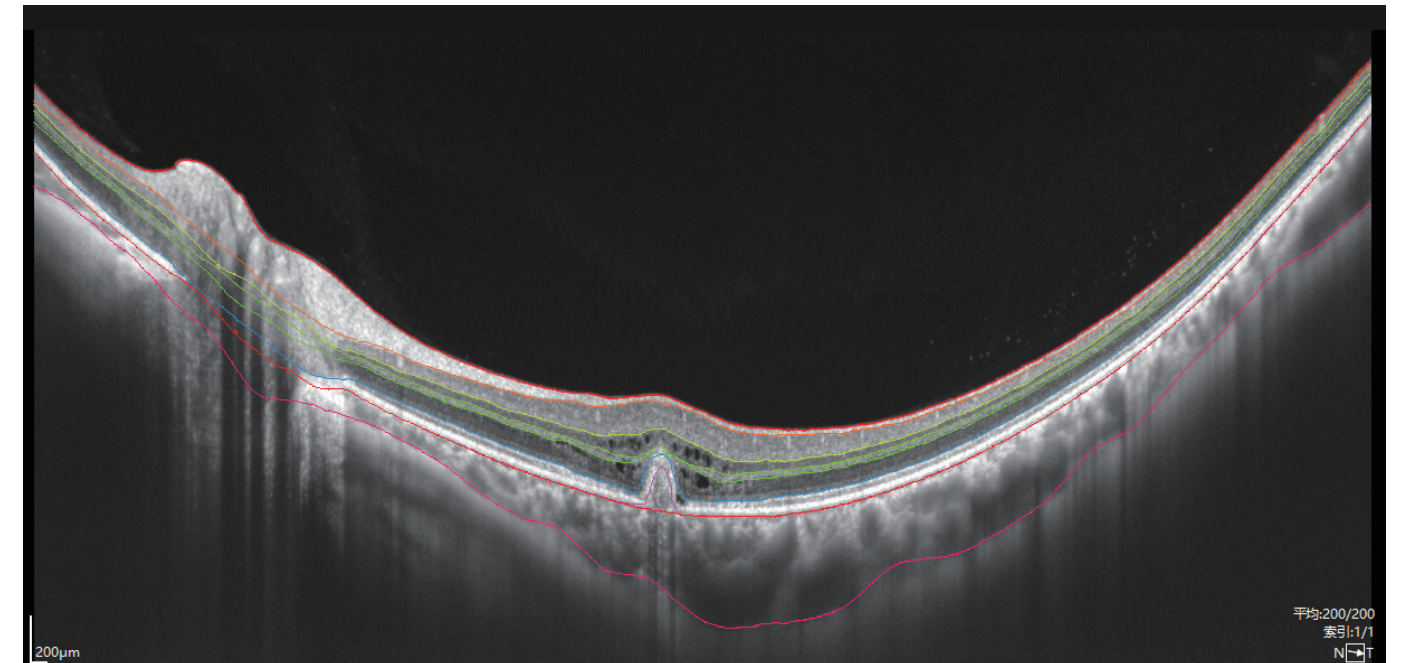


• Branch Retinal Vein Occlusion

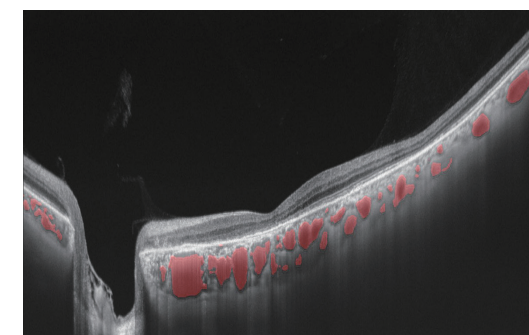


Posterior Analysis tools

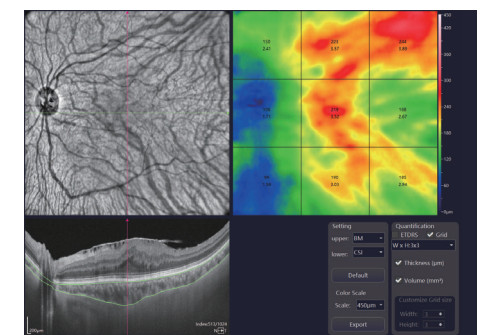
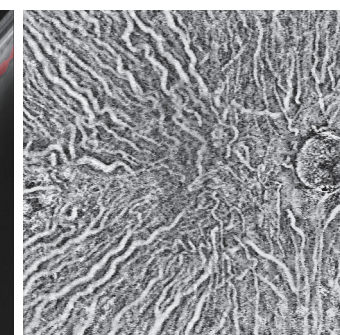
- Comprehensive analysis software provides automatic segmentation with flow projection artifact removal. The algorithm detects anatomic boundaries of retina and choroid, evaluates thicknesses individually.



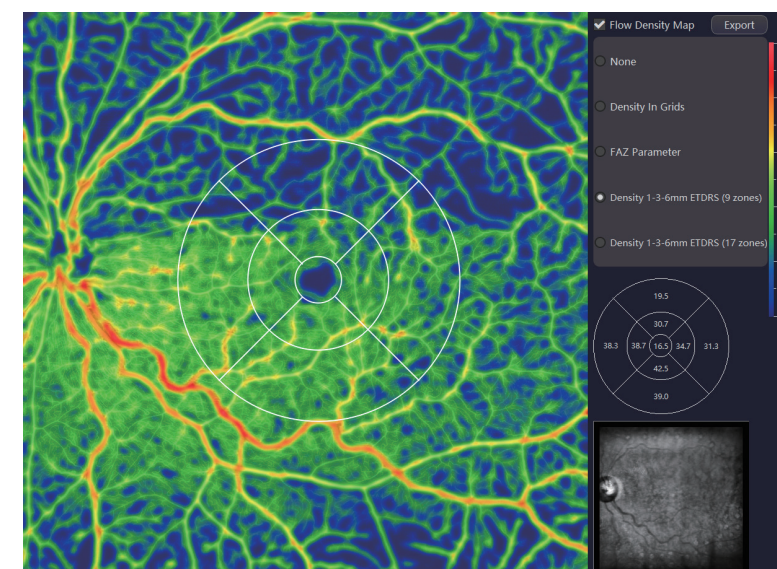
- Automatic segmentation



- Choroid vessels



- Choroid Thickness Map

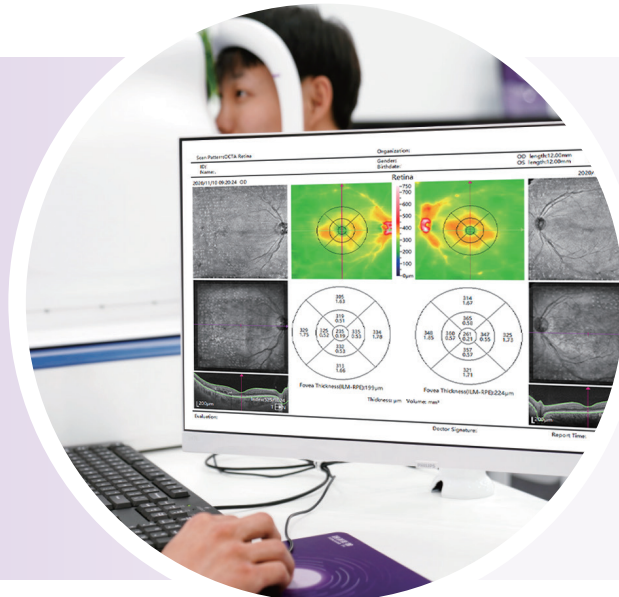


- Blood flow quantification

Multi-section flow density, CNV flow area, FAZ indexes, etc.

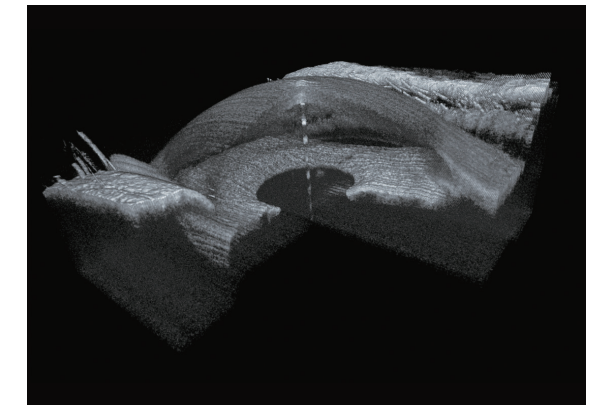
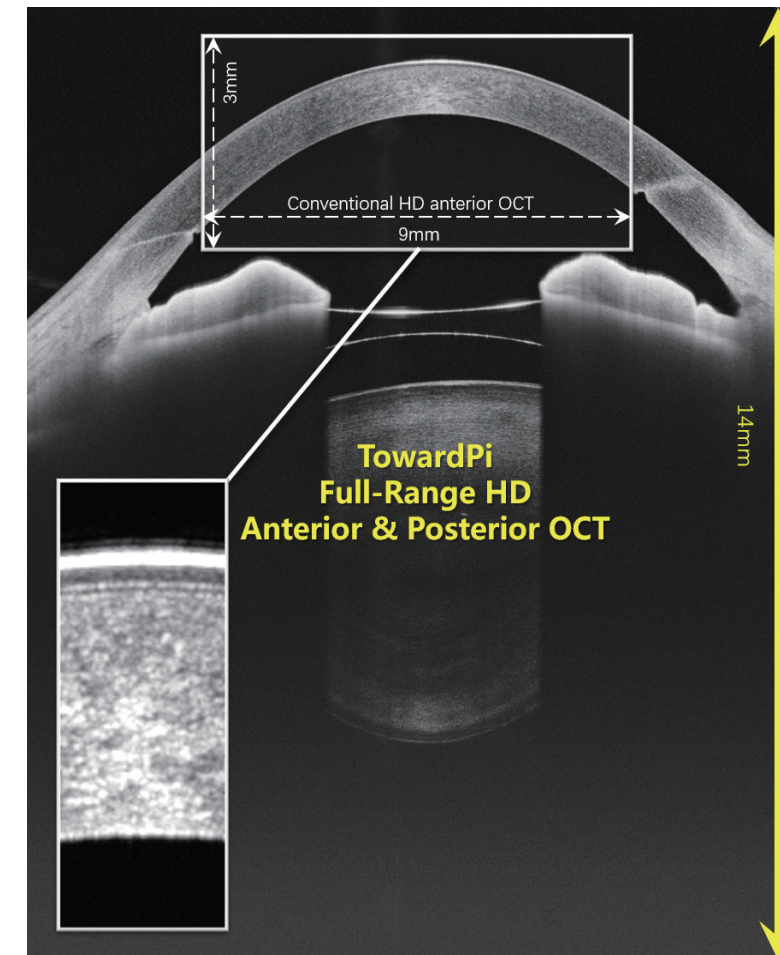
Comprehensive reports

- B-scan report
- 3D tomography
- Thickness report
- Volume report
- Blood flow report
- Quantification report
- OU report
- Follow-up report

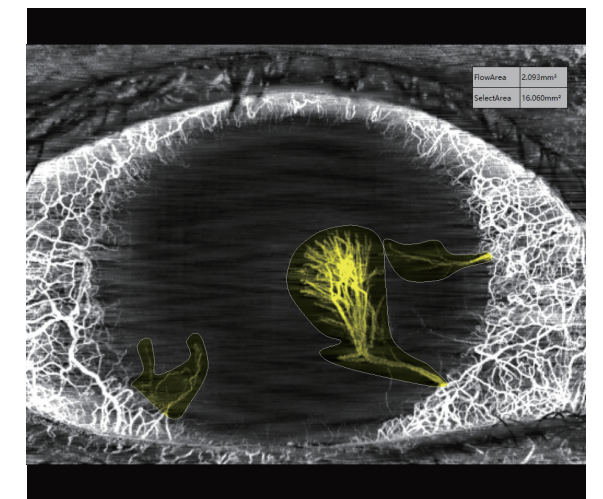


Full Range Anterior OCT

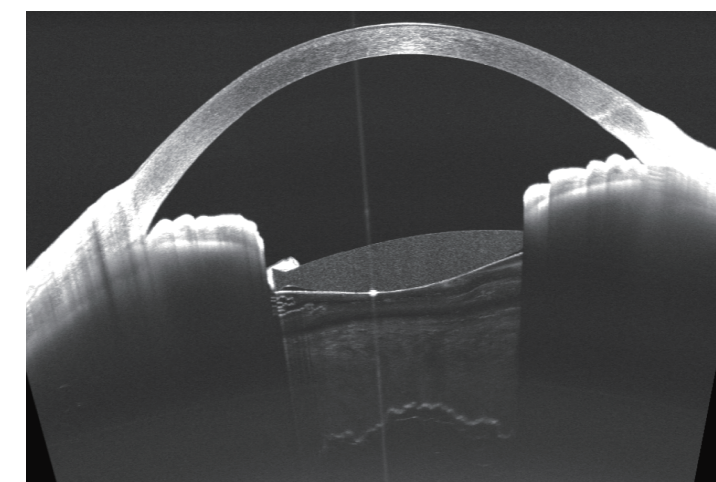
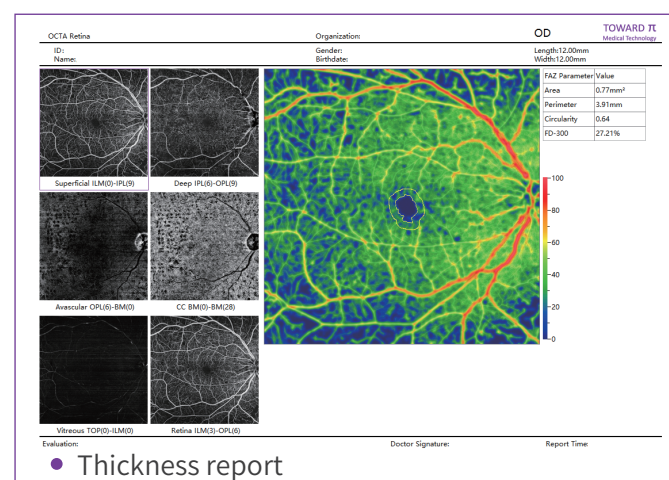
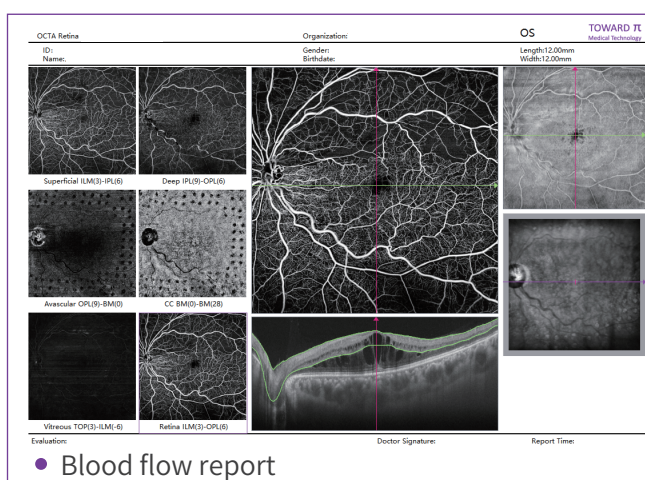
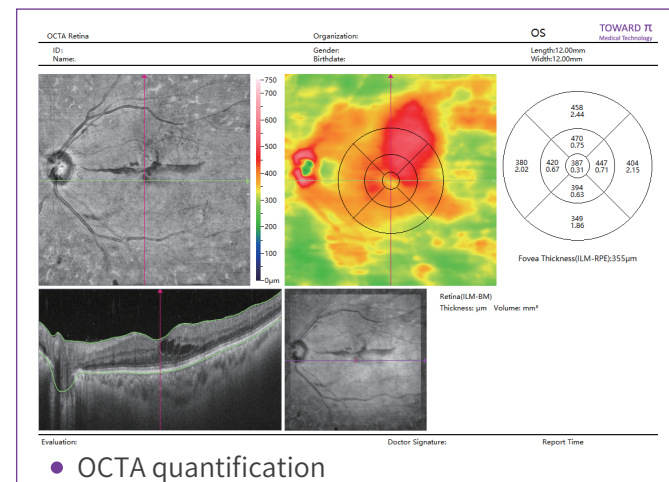
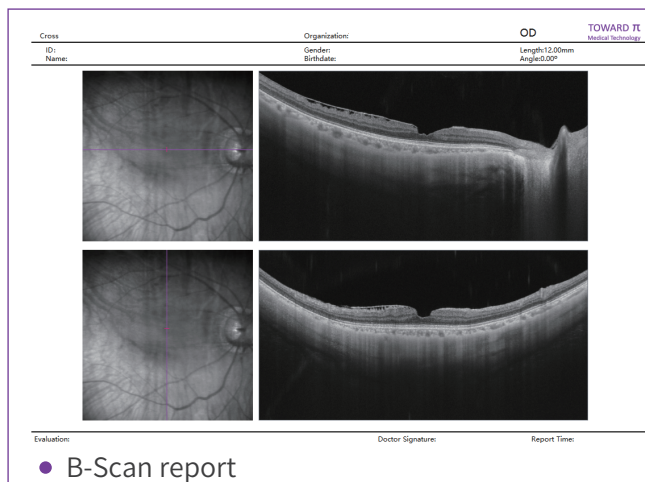
- Up to 24mm length, 14mm depth for anterior



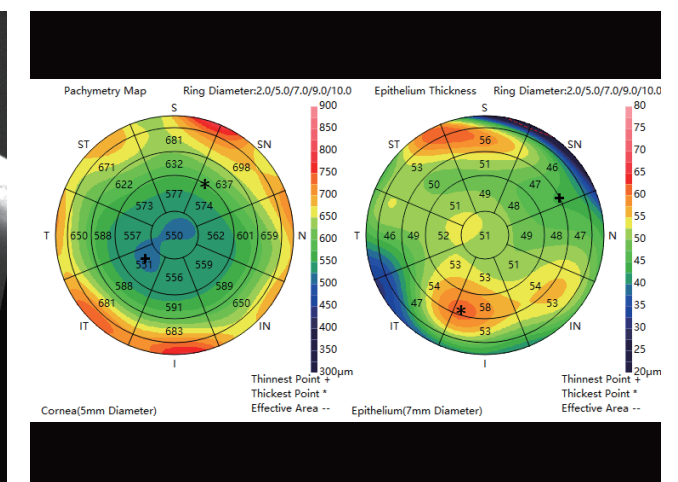
- 3D rendering



- Anterior OCTA with quantification



- IOL & anterior hyaloid

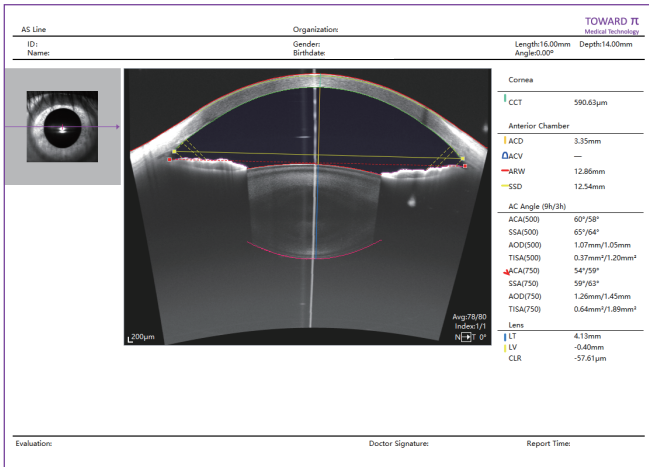


Glaucoma analysis

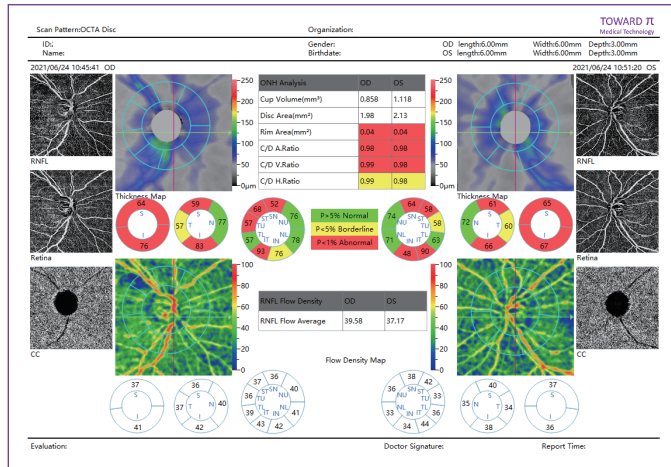
Comprehensive glaucoma reports include:

- ▶ Anterior parameters
- ▶ Optic nerve head analysis
- ▶ Ganglion map analysis
- ▶ Blood flow analysis

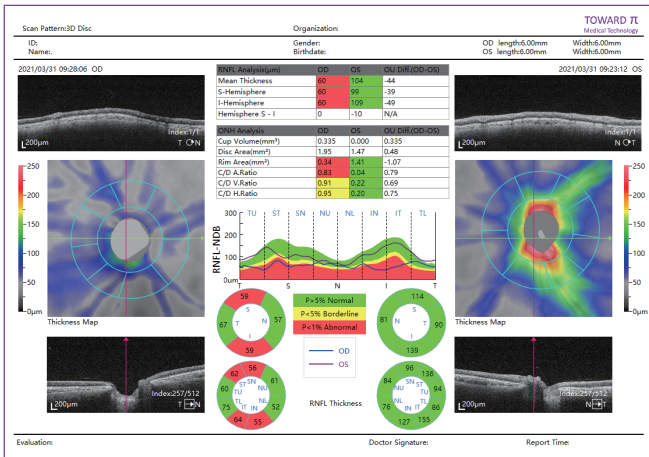
- ▶ Anterior parameters
- ▶ Optic nerve head analysis
- ▶ Ganglion map analysis
- ▶ Blood flow analysis



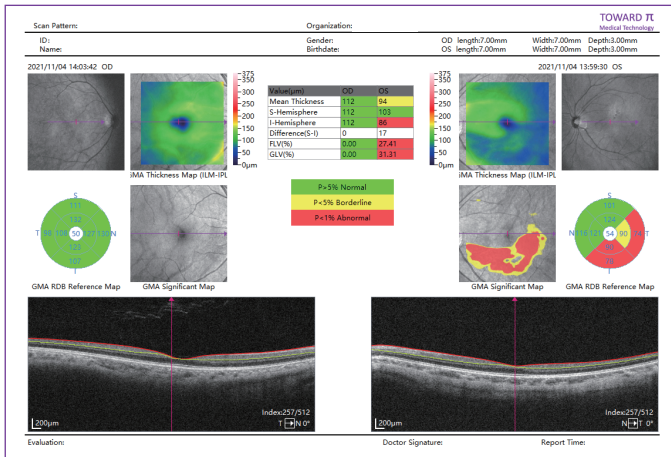
- Anterior parameters



- Blood flow analysis



- Optic nerve head analysis



- Ganglion map analysis

► Specification (YG-100K)

► **Structural OCT**

Light source		Swept Source
Wavelength		1060nm (±5%)
Scanning speed		100,000 A-scan/second
Scan length(anterior)		24mm
Scan length(posterior)		17mm
Scan depth(anterior)		14mm
Scan depth(posterior)		6mm
Axial	optical resolution	≤6μm
	digital resolution	1.4μm
Lateral	optical resolution	10μm
	digital resolution	1.4μm
Dioptric range		-20D ~ +15D
Pupil size		≥ 2.0mm

➤ **Fundus Image**

Module	LSO
Wavelength	840nm
Field of view	40°
Tracking speed	100Hz

➤ OCTA

Anterior	up to 16x16 mm
Posterior	up to 12x12 mm
Montage	up to 28x24 mm
Resolution	up to 768X768

➤ **Network upgrade**

DICOM
Review software