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DREAM OCT

The New Generation of Swept Source OCT

Intalight

ALL IN ONE

Exploring the Whole Eye

Deep

SuperDepth™ imaging from cornea to choroid

Rapid

A-scan rate of up to 400,000 Hz

Extensive

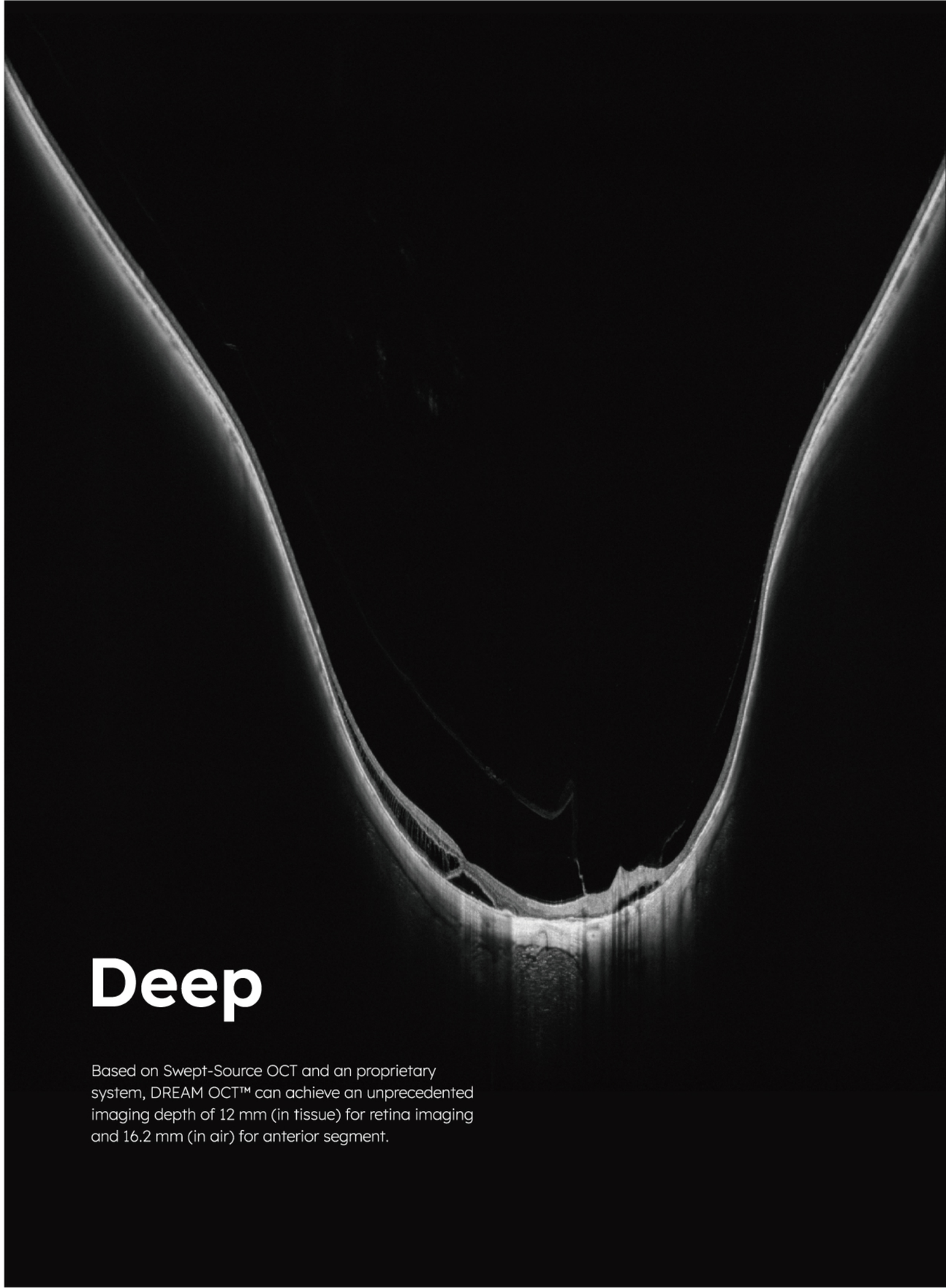
Over 200° ultra-wide field OCTA imaging

Accurate

TrueAngio™ algorithm ensures the reliability of OCTA

Multimodal

Visualized biometry integrated with OCT & OCTA



Deep

Based on Swept-Source OCT and an proprietary system, DREAM OCT™ can achieve an unprecedented imaging depth of 12 mm (in tissue) for retina imaging and 16.2 mm (in air) for anterior segment.

Rapid

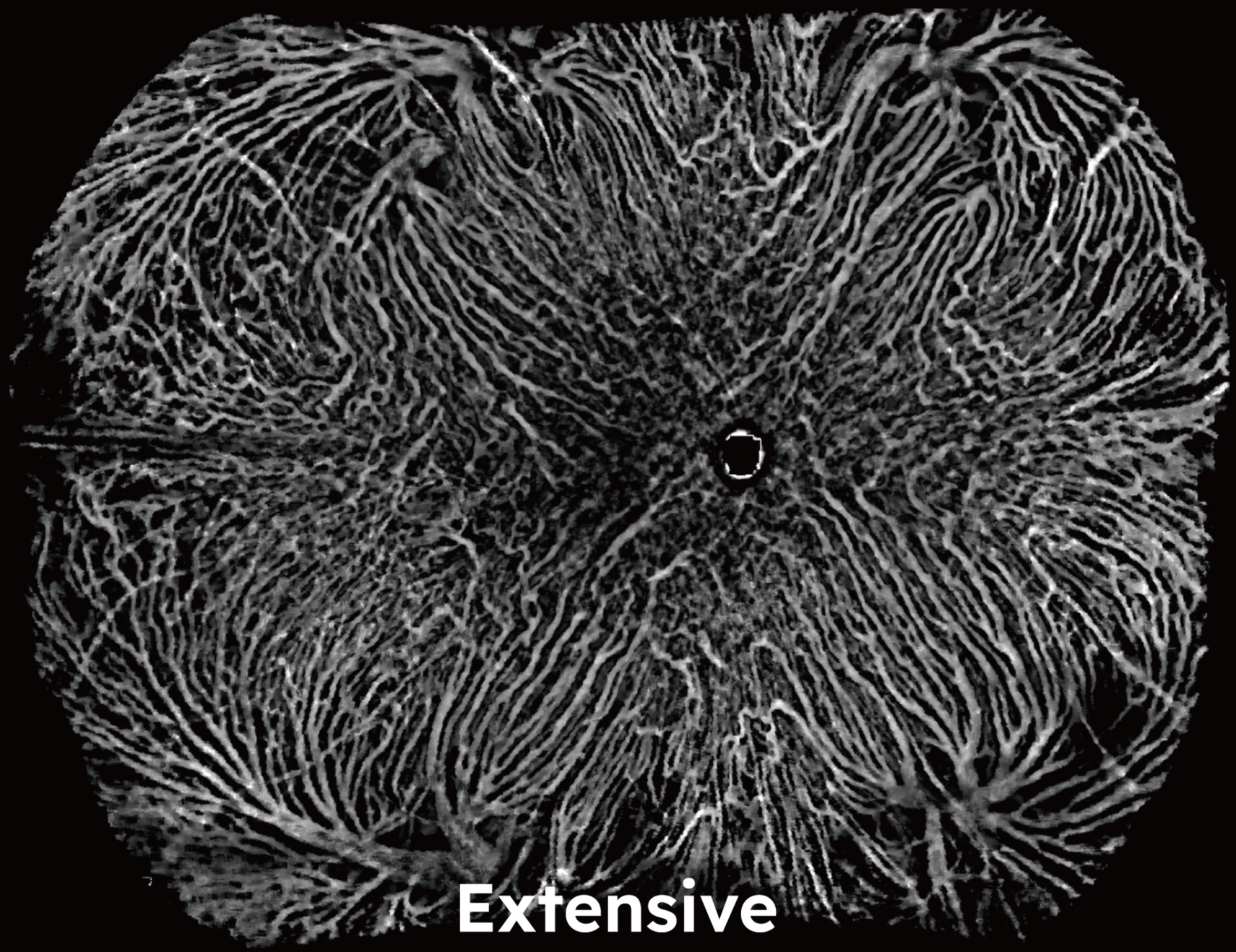
With a scan speed up to 400KHz, DREAM OCT™ is faster than ever before. The high speed is crucial in high resolution OCT Angiography and eliminate the artefact caused by eye motions.

Comparison of Scan Speed

SD-OCT

High-end SD-OCT

DREAM OCT™ up to 400,000 A-Scans/s



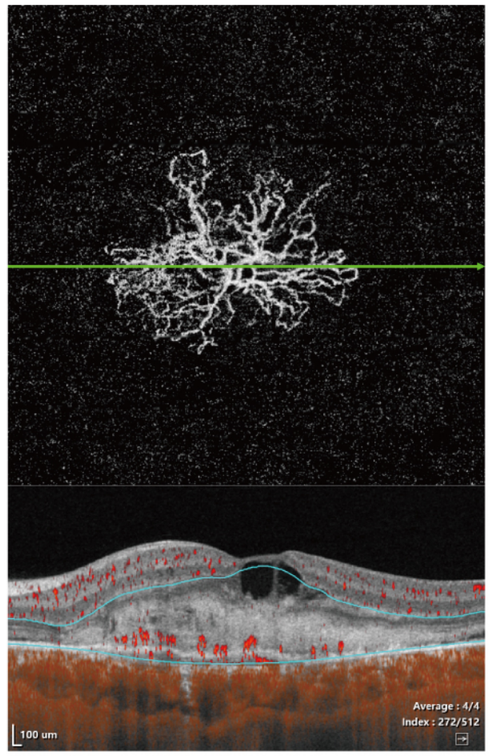
Extensive

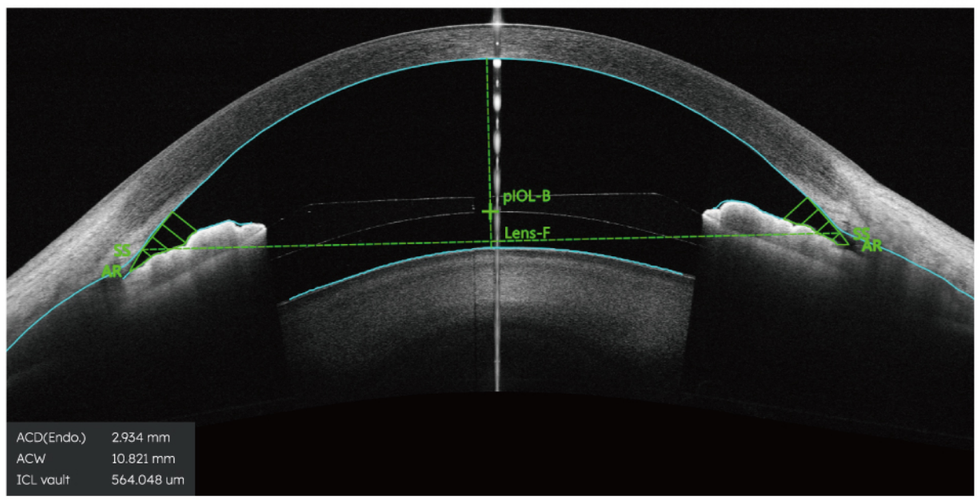
DREAM OCT™ is able to cover an ultrawide field of 26 mm × 21mm (inner angle 130°) on retina with a single scan. An automatic montage can further extend the range to 200°, going beyond the entire posterior hemisphere and uncovering lesions toward the edge of retina.

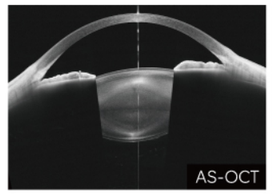
Accurate

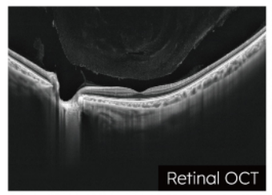
DREAM OCT™ is capable of detecting tiny nascent vascular pathologies while maintaining a low false positive rate. The proprietary algorithm of TrueAngio™ enables a high detection sensitivity of subtle flow signals. 3D Projection Artefact Removal and AI-based Deep Layer™ algorithms further help to reduce artefacts to reveal true lesions.

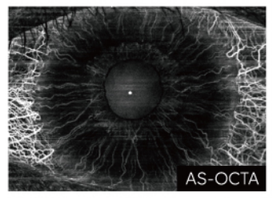
In Anterior Segment imaging and biometric measurement, the raw images undergo sophisticated corrections to account for optical distortion and light refraction. It ensures an accurate and precise quantification of biometric parameters which are crucial for clinical decisions.

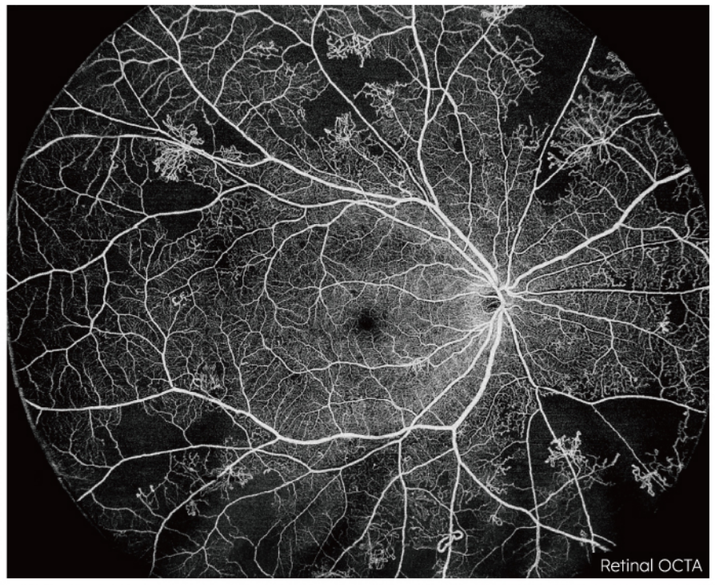












Multimodal

Powered by a state-of-the-art Swept-Source OCT engine, the DREAM OCT™ integrates a full set of imaging modalities including Retinal OCT, Retinal OCTA, AS-OCT, AS-OCTA and visualized biometry for the most challenging clinical and research applications. The combination of different modalities does not have to compromise each modality's individual performance. Instead, they work together to collaboratively achieve functions that were impossible before, such as accurate measurement of retina curvature and full eye imaging that reconstructs geometrically accurate 3D representation of eyes.

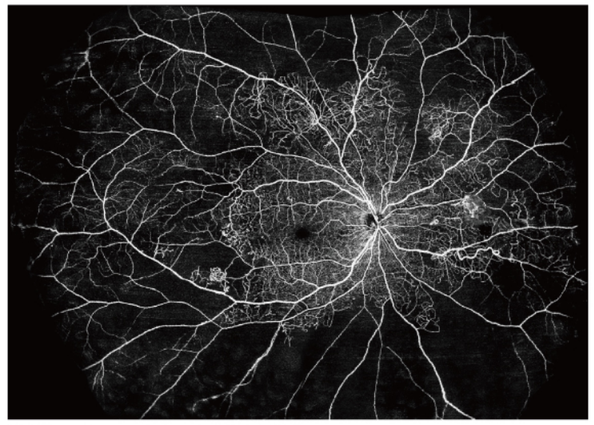
ONE-STOP DREAM SOLUTION

Retina & Vitreous

The powerful DREAM Swept-Source engine and the “TrueAngio™” algorithm enhance the excellent performance of DREAM OCT™ in the retina & vitreous field. The ultra-widefield high-resolution imaging, the higher detection sensitivity, and the various quantitative analysis, could provide infinite possibilities for both clinical diagnosis and research work.

Ultra-Widefield OCT Angiography

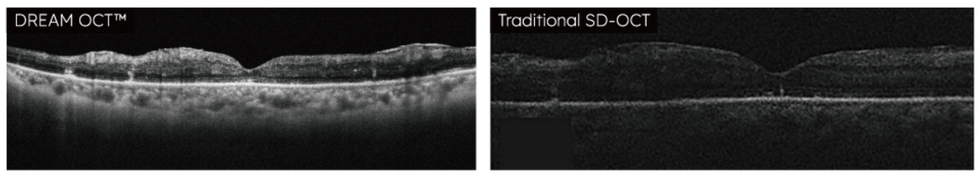
The ultra-widefield OCTA covering a range of 26 mm × 21 mm (130°) with one single scan, and the montage of over 200° field of view, could provide much more diagnostic information for diseases with extensive lesions in a non-invasive and more efficient way, compared with the fluorescence angiography.



200° montage of ultra-widefield OCTA

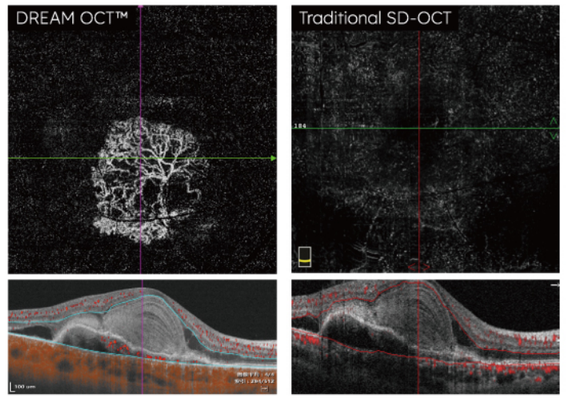
Higher Success Rate of Retinal OCT Scanning for Patients with Ocular Media Opacity

Using the brand-new Swept-Source OCT technology, the DREAM OCT™ could penetrate the ocular media opacity much more easily, and provide much clearer OCT images of the fundus, so that we can easily predict the prognosis of the surgery before we make a decision.



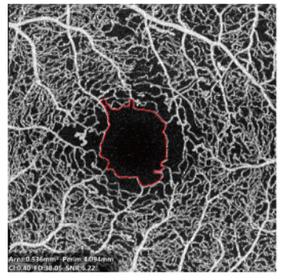
Higher Detection Sensitivity

Based on the strong penetrating power of the Swept-Source laser, and the optimized “TrueAngio™” algorithm, as well as the unique “Deep Layer” AI segmentation solution, the DREAM OCT™ could show much higher detection sensitivity for nascent tiny pathologies and complicated lesions, greatly reducing misdiagnosis.

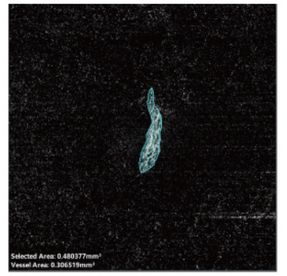


The comparison of OCTA images for a same patient on a same day. The DREAM OCT™ could penetrate through the organized hemorrhage and show the details of the lesion clearly and completely, while the traditional SD-OCT could not show any abnormal flow signal at all.

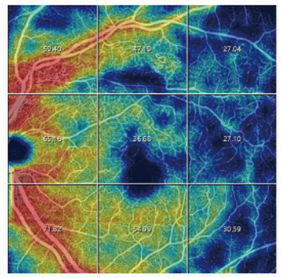
Various and Accurate Quantitative Analysis



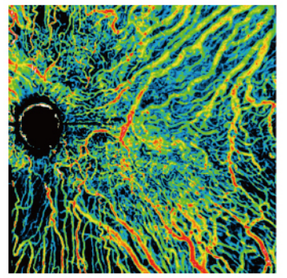
FAZ measurements



Flow area



Vessel density



CVV & CVI

The DREAM high-resolution OCTA ensures the accuracy of flow quantitative analysis. The software provides automatic measurements for FAZ, vessel density, flow area, etc.Moreover, with the help of AI identification, it can also provide the choroidal vessel volume (CVV) and the choroidal vessel index (CVI), which could be very helpful for your research work on choroid.

All kinds of quantitative analysis could be precisely corrected based on the biometric data acquired by the DREAM OCT™, in order to ensure the academic rigor of the research work.

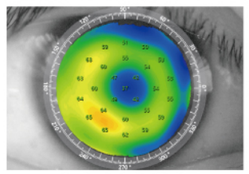
ONE-STOP DREAM SOLUTION

Anterior Segment

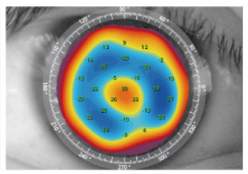
The DREAM OCT™ could acquire the corneal curvatures for both anterior and posterior surfaces, the topography of corneal epithelium, the axial length, AS-OCT images and associated measurements on only one device, providing accurate and reliable data for refractive surgeries, contact lens treatment, and ICL implantation.

Screening before Refractive Surgeries

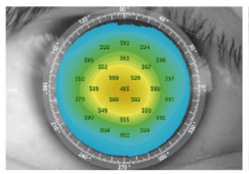
The DREAM OCT™ could provide not only the corneal thickness topography, the corneal curvature diagram, the corneal height diagram for both anterior and posterior surfaces, but also the corneal epithelial thickness topography. So that we could do comprehensive screening for corneal condition, which is very important for the assessment before refractive surgeries.



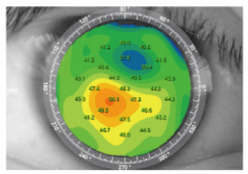
Corneal epithelial thickness topography



Corneal height diagram of posterior surface



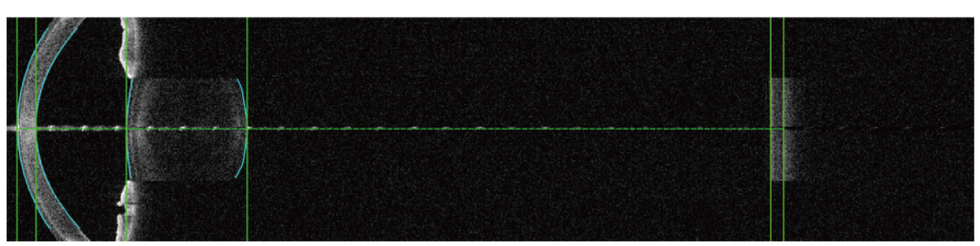
Corneal thickness topography



Corneal curvature diagram

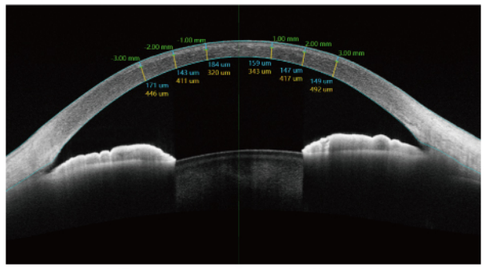
Higher Success Rate of Axial Length Measurements for Patients with Ocular Media Opacity

The DREAM OCT™ could penetrate severe opacity of lens much more easily, and measure the axial length precisely based on the visualized OCT imaging from anterior segment to posterior segment along the visual axis, providing reliable data for IOL calculation before surgery.

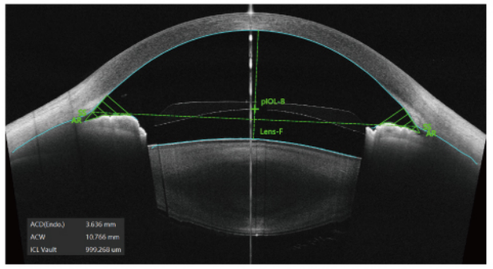


AI Guided Automatic Measurements for AS-OCT

Using AI technology, the software could automatically identify many structures such as the scleral spur, and measure the anterior chamber depth, ICL vault, corneal flap thickness, etc., in order to assess the effect of refractive surgeries objectively.



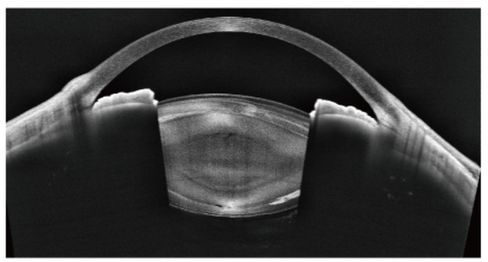
Corneal flap thickness measurements after LASIK



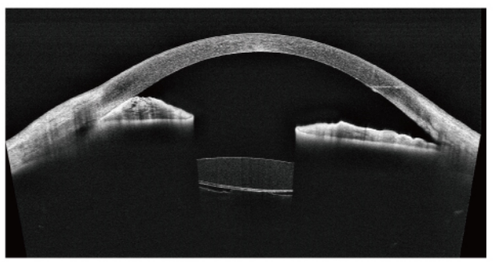
ACD and vault measurements after ICL implantation

Super Depth of AS-OCT Imaging Helps Make Surgical Plans and Assess the Results

The DREAM OCT™ could achieve a deepest imaging depth of 16.2mm (in air) for the high-resolution AS-OCT images, which can clearly show the corneal incision, the anterior chamber angles, the lens posterior capsule, and the anterior vitreous with only one B-scan, providing a visualized monitoring tool for perioperative management, surgical planning and effect assessment.



Pre-surgical examination: AS-OCT shows higher reflective signals of the lens cortex.



Post-surgical follow-up: AS-OCT shows the corneal incision, closed ACA, and close attachment between the IOL and the posterior capsule.

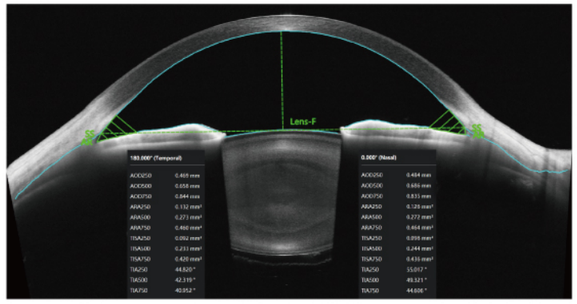
ONE-STOP DREAM SOLUTION

ACA & ONH

The various kinds of quantitative analysis provided by the DREAM OCT™, such as measurements for ACA, RNFL, GCC, as well as the ONH vessel density, could be very helpful for screening and monitoring. Meanwhile, the AS-OCTA could be a convenient and intuitive tool for clinical assessment.

Automatic Measurements for 360° Anterior Chamber Angle

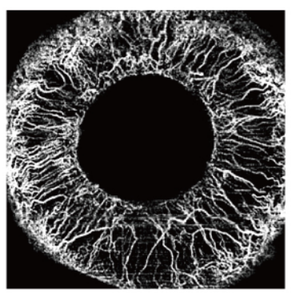
Based on AI identification for some anatomical structures such as scleral spur, the DREAM OCT™ could provide automatic measurements for anterior chamber angle, including AOD, ARA, TISA, TIA, etc., to achieve a non-contact rapid assessment.



Automatic measurements for anterior chamber angle

High-resolution AS-OCTA

With the help of “Deep Layer” AI segmentation, the DREAM OCT™ could easily clarify the vessels around the limbus, and show new vessels on the iris very clearly. In addition, the DREAM Swept-Source engine could penetrate through the dense pigment on iris much more easily, visualizing the iris flow much more clearly than ever before.

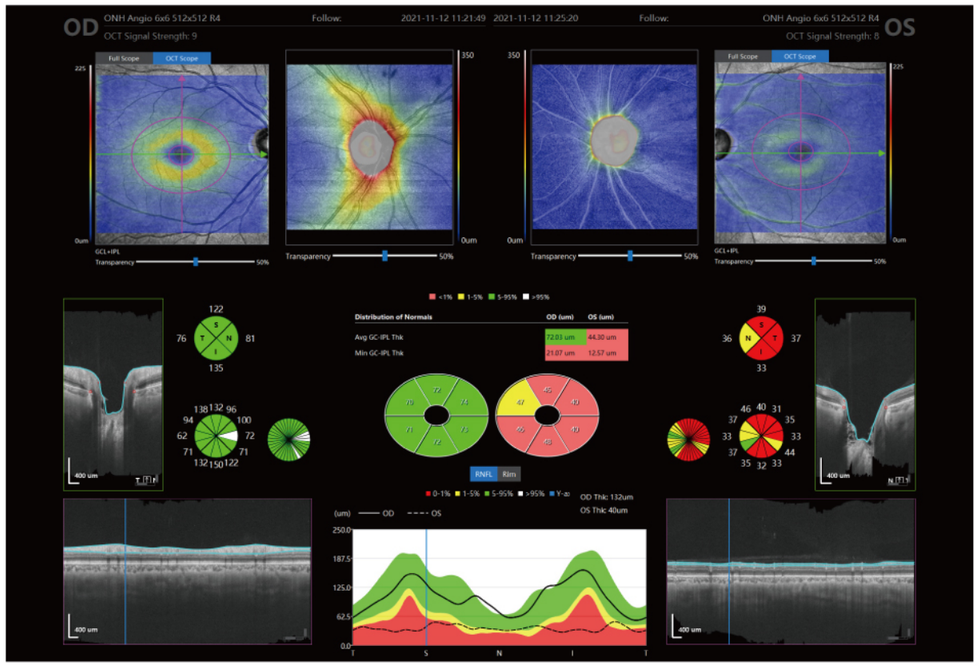


New vessels on the iris

AS-OCTA of normal iris

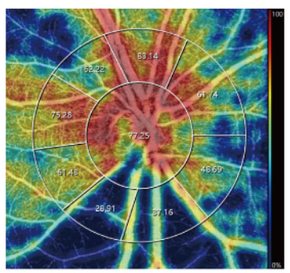
RNFL & GCC Analysis

With the help of “Deep Layer” AI segmentation, the DREAM OCT™ could precisely identify the retinal nerve fiber layer (RNFL) and the ganglion cell complex (GCC), in order to achieve more accurate thickness measurements. The RNFL & GCC analysis plays a very important role in clinical screening and monitoring.

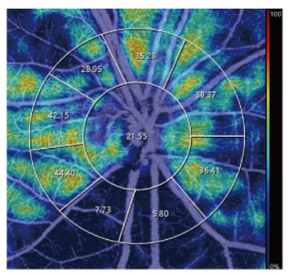


RNFL & GCC Analysis (OU report) shows the thickness of both RNFL and GCC of the left eye is out of normal limits.

ONH Vessel Density Analysis



Vessel density analysis for superficial vascular complex



Vessel density analysis for small vessels of superficial vascular complex

Based on OCT angiography of ONH, the DREAM OCT™ could measure vessel density only for small vessels. As the large vessels have been excluded, this kind of analysis could show the injure on radial peripapillary capillary plexus (RPCP) much more objectively, providing more accurate data for early diagnosis and research work.