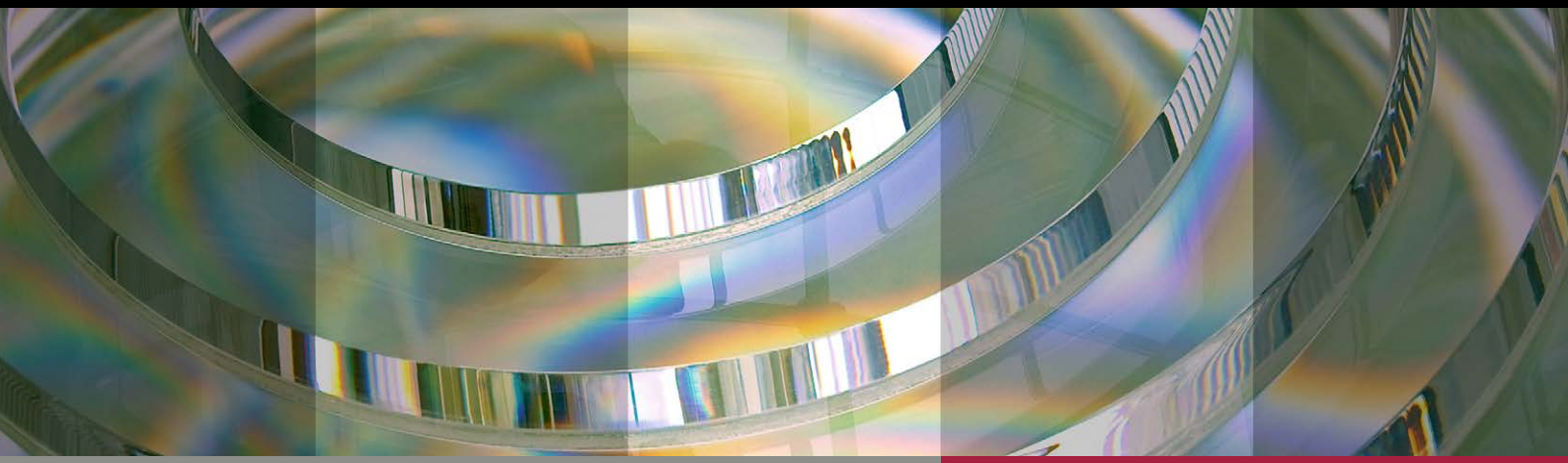
Multimodal Imaging Platform
Optimized for the Anterior Segment



ANTERION®

HEIDELBERG ENGINEERING

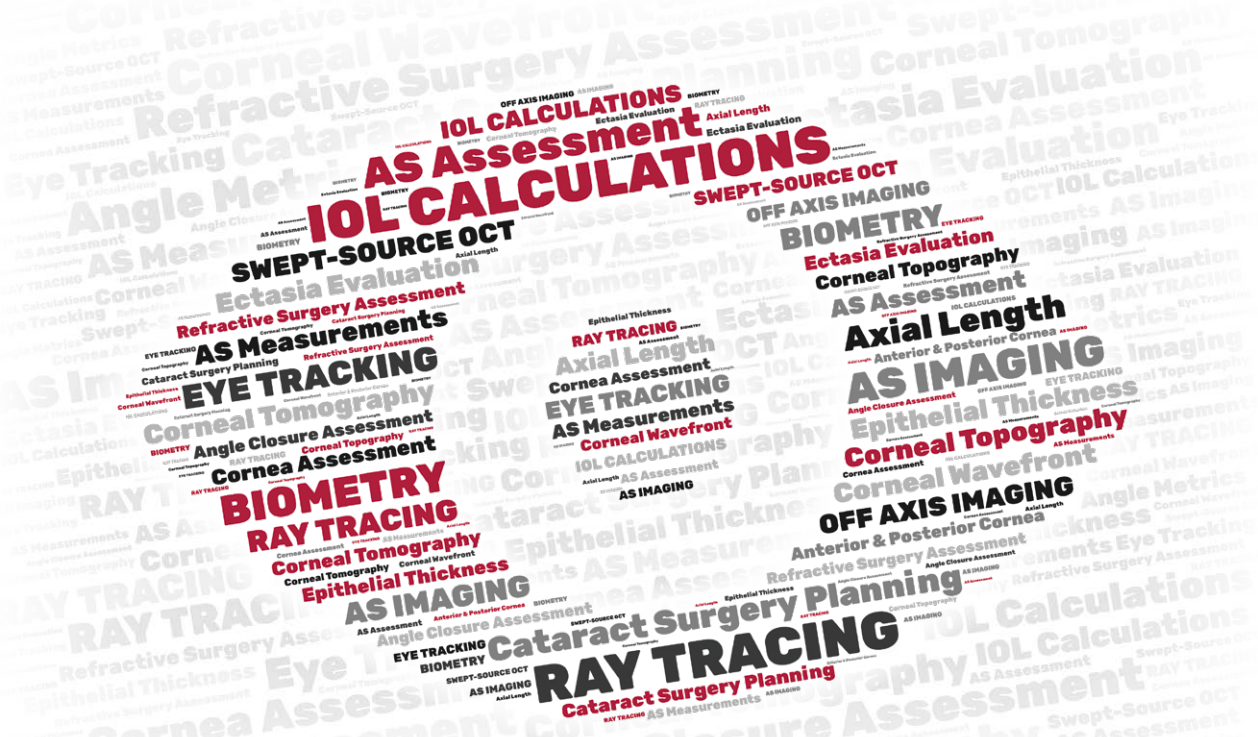
ANTERION®

Empowering you to improve patient care

As a true all-in-one upgradable solution for anterior segment, ANTERION combines biometry, IOL power calculation with corneal topography and tomography, anterior chamber metrics and high-resolution imaging to **help you streamline your day-to-day routine**.

ANTERION uses the technological advantages of long wavelength (1300 nm) **swept-source OCT** and combines it with proprietary innovations that further increase image quality. This makes ANTERION best suited for imaging and measuring structural details in the entire anterior segment.

- **Build diagnostic confidence and optimize your clinical workflow with an all-in-one solution**
- **Capture all biometric data you need for individualized IOL calculations**
- **Visually confirm your measurements and reduce the risk of refractive surprises**
- **Customize cornea analysis to your needs**
- **Detect areas of asymmetry, track surgical outcomes and monitor changes**
- **Evaluate the epithelium and assess ectasia at a glance**
- **Identify risk of ectasia with SCORE**
- **Detect and assess anterior chamber metrics automatically**
- **Visualize angle measurements in 360° and investigate changes to the architecture**



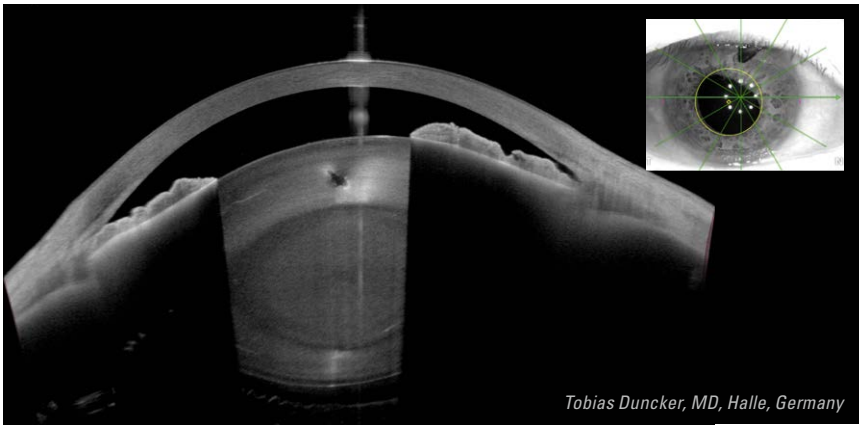
ANTERION®

Build confidence with high-resolution imaging

The measurements generated with ANTERION support clinical decision making and surgical planning in a multitude of clinical disciplines.

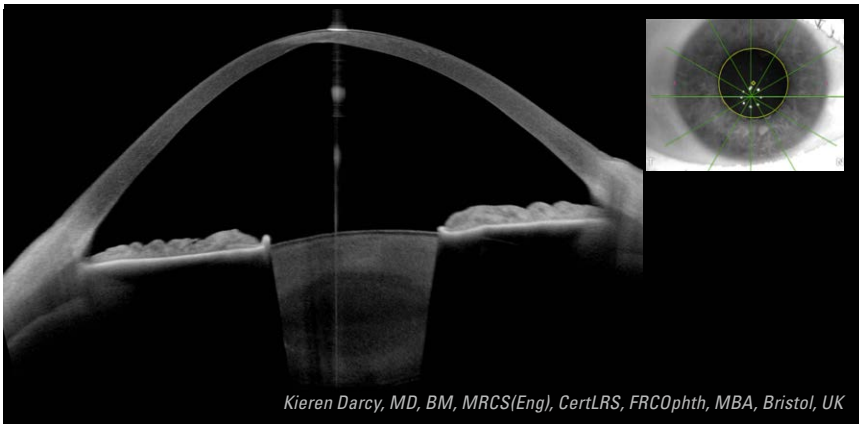
Detect
hidden anomalies, monitor change, and visualize surgical results with stunning OCT images.

Enhance
your surgical outcomes with true measurements and fewer assumptions.



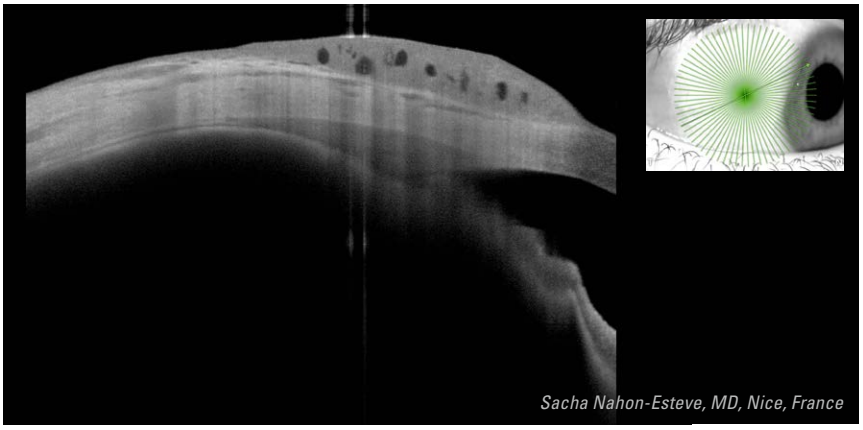
Cataracts

Short eye with narrow anterior chamber angle, thick lens and cataract



Corneal details

Advanced keratoconus with central corneal scar

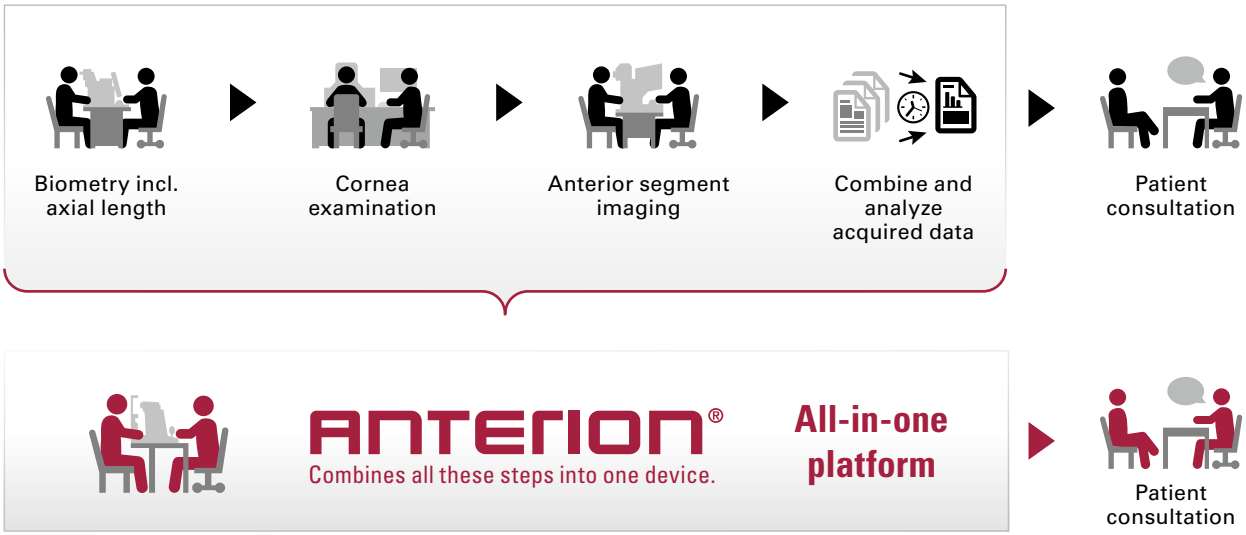


Peripheral structures

Conjunctival nevus, acquired using the integrated external fixation light.

Optimize your clinical workflow

With ANTERION, you can perform the most important anterior segment examinations on a single device. **Work through patient backlogs and delegate workflows,** benefitting from fast acquisition speeds and intuitive device handling. **Save time and space** with a small-footprint platform that combines all examinations needed.



The image quality you expect

Imaging App

- Anterior chamber and angle imaging
- Corneal and scleral imaging
- Visualization of the lens and both surfaces
- Customizable scan patterns
- Peripheral imaging

+

The expandable design you need (optional)

Cataract App

- Axial length
- Lens thickness
- Aqueous depth
- Central corneal thickness
- Anterior axial curvature
- Total corneal power
- Total corneal wavefront
- Spheric and toric IOL calculator
- IOL power prediction
- Import options for IOL databases
- OKULIX ray tracing

Cornea App

- Corneal topography
- Corneal tomography
- Pachymetry
- Total corneal power
- Corneal wavefront analysis
- Corneal differential maps
- Progression analysis
- Ectasia View with SCORE analyzer
- Epithelial Thickness Module

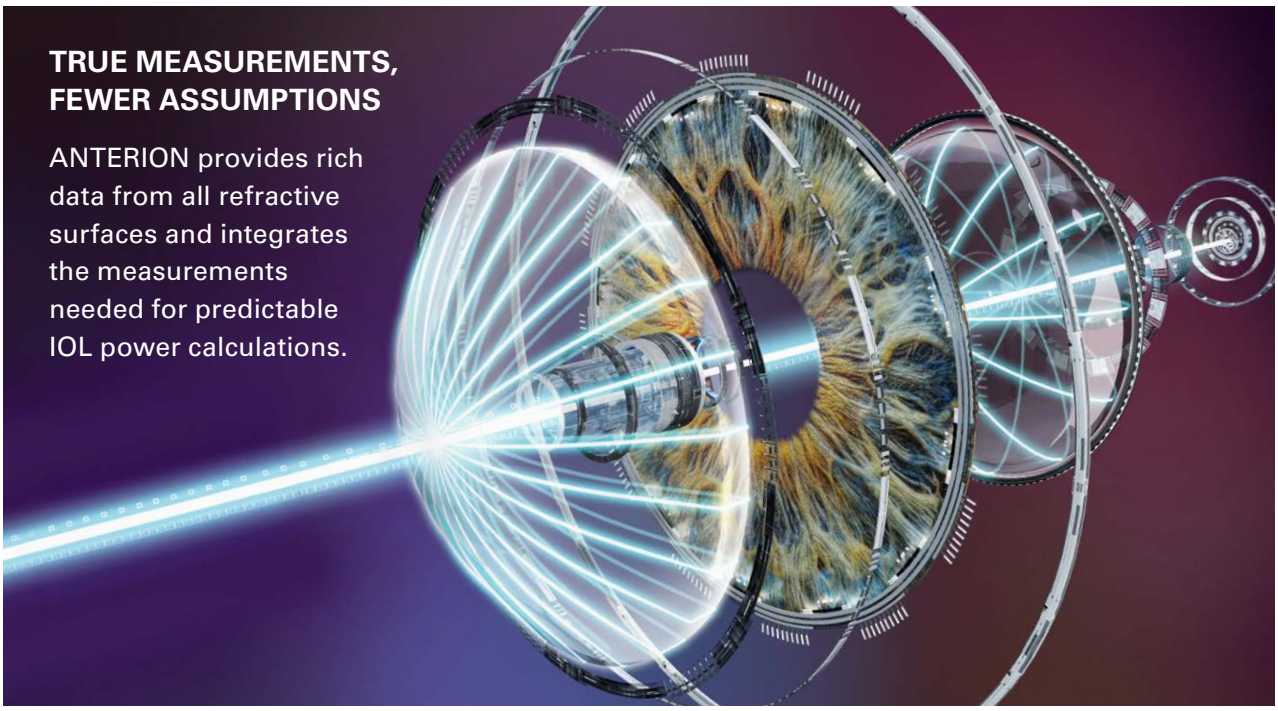
Metrics App

- Anterior chamber angle assessment
- 360° graphs of angle parameters
- Anterior chamber volume
- Lens vault
- Lens thickness
- Free-hand measurements
- Automatic scleral spur detection

ANTERION®
for CATARACT

Capture all biometric data you need

As the definitive **toolbox for cataract surgery planning**, ANTERION acquires precise biometric distance measurements, as well as the full power of the cornea (~16.000 data points), all with optimized OCT technology. This helps you to improve your clinical outcomes, even in the most challenging cases.



Parameter	Measurement Range
Central Corneal Thickness	300 – 1700 µm
Anterior Chamber Depth	1.50 – 4.80 mm
Lens Thickness	2.40 – 6.50 mm
Axial Length	14.00 – 32.00 mm
SimK Mean Anterior (3 mm)	6.00 – 110.00 D
K Mean Posterior (3 mm)	-14.80 – -0.70 D
Astigmatism Anterior	0.00 – 15.50 D
Astigmatism Posterior	-2.10 – 0.00 D
White-To-White	9.40 – 15.30 mm
Pupil Diameter	0.20 – 14.10 mm

ANTERION®
for CATARACT

Visually confirm your measurements

Viewing the OCT images that generate the measurements, will help you to confirm your measurements, resulting in fewer assumptions. Truly see what you measure and measure what you see. Visualize surgical results in detail and and compare pre- and post-operative metrics.

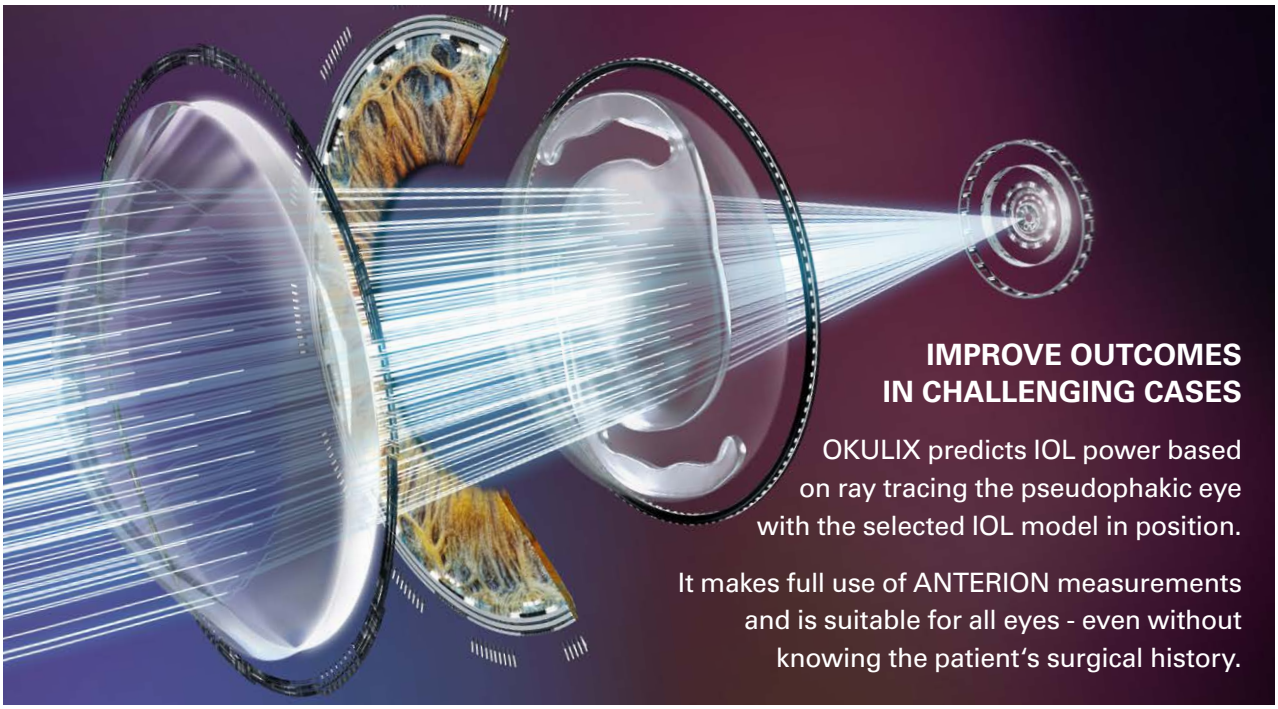
ANTERION offers both spheric and toric IOL calculation and provides the data to calculate the most suitable IOL for your patient, without transferring data or changing devices.

Individualize IOL calculations

A very comprehensive corneal analysis and details on astigmatism make the difference in challenging eyes and support premium IOL calculation. The IOL calculators include established IOL formulas as well as an export to the OKULIX ray tracing application.

Select the calculation method that best fits your clinical needs – in standard and challenging cases:

Barrett Suite: Universal II, Toric, True-K, True-K Toric	Haigis	Holladay 1
OKULIX ray tracing	SRK/T	Hoffer® Q



Reduce the risk of refractive surprises

Include the detailed topographic and tomographic data of the ANTERION Cornea App in your cataract surgery planning to further reduce the risk of refractive surprises.

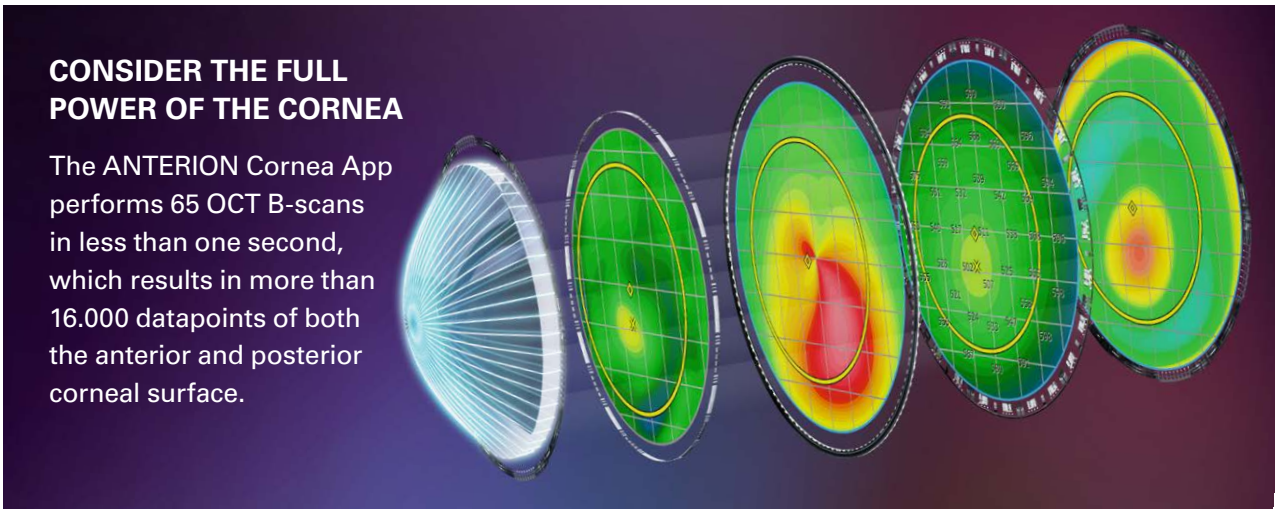
With all measurements conveniently accessible on the same platform, you can quickly identify the potential sources that could lead to a post-operative refractive surprise.

ANTERION®
for CORNEA

Customize cornea analysis to your needs

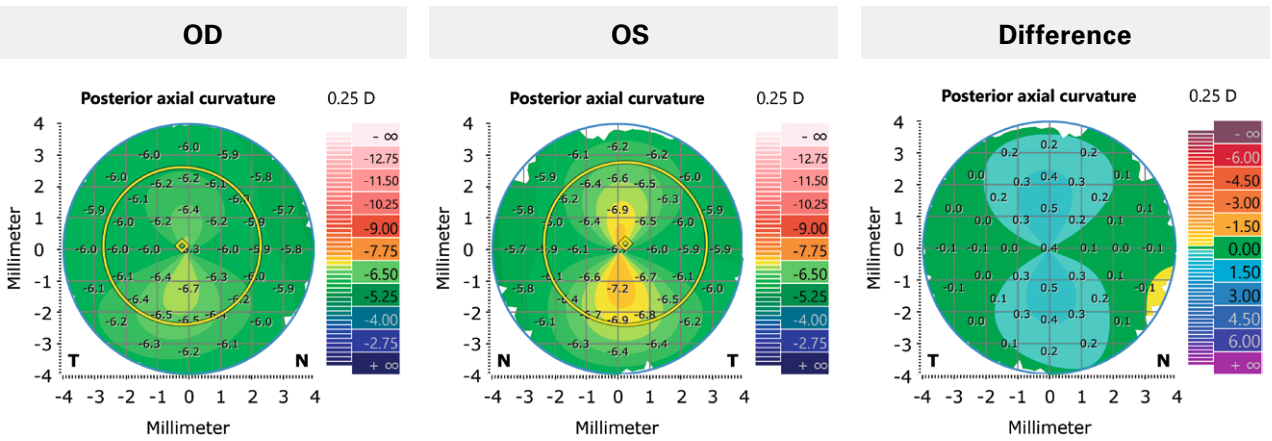
ANTERION sets itself apart by providing a comprehensive set of corneal measurements for the evaluation of the corneal geometry of your patients, derived from tomography.

All data is acquired with swept-source OCT to provide precise measurements and high repeatability without sacrificing acquisition speed and patient comfort. Visualize all relevant information at a glance using customizable templates, presets and reports.



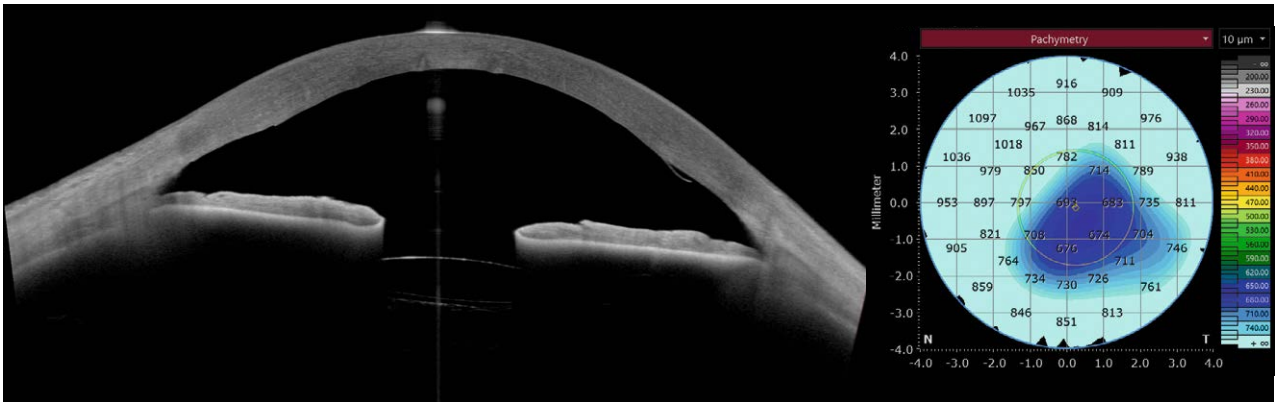
Detect areas of asymmetry

Compare topographic and tomographic data of your patient's left and right eye with **OU View**. Differential maps for any selected corneal parameter help you to easily detect areas of asymmetry.

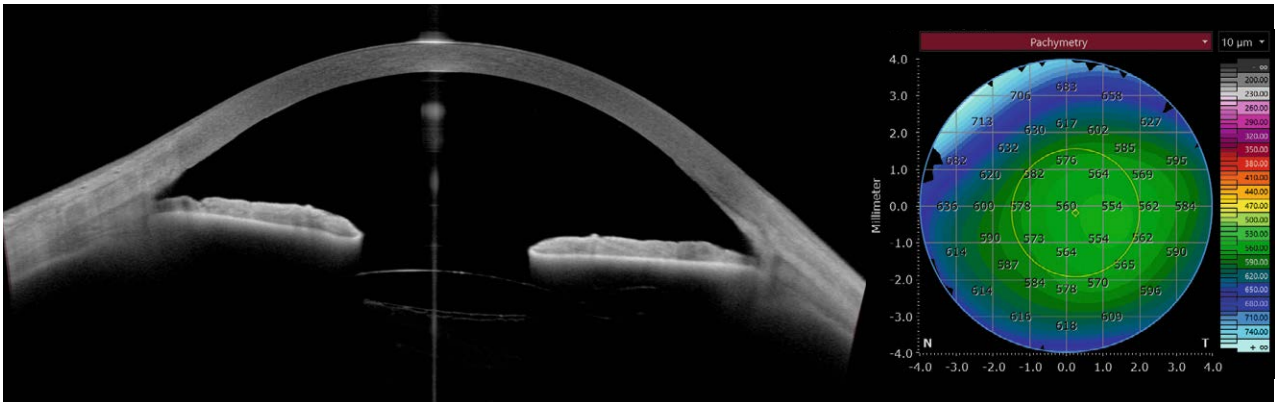


Track surgical outcomes and monitor change

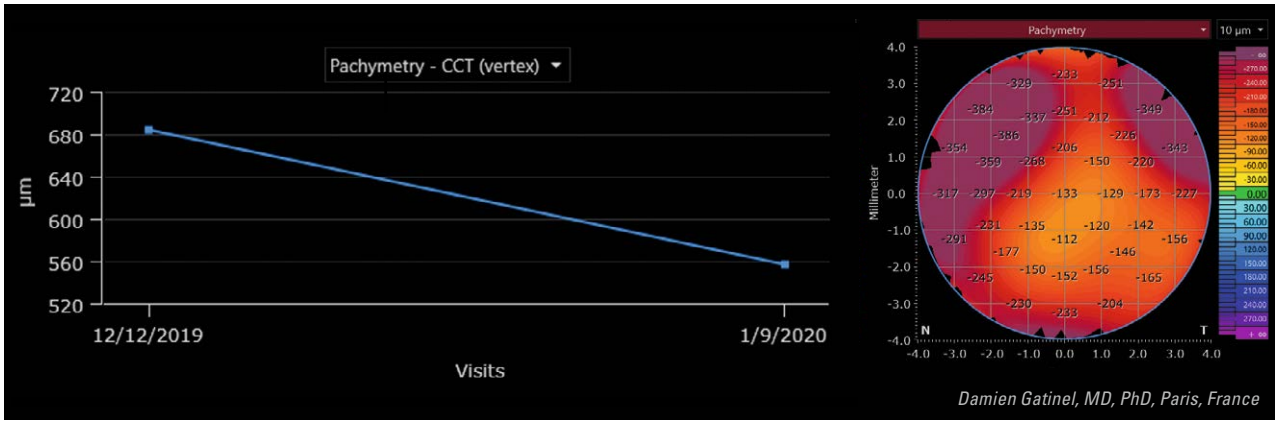
Comprehensive tomographic data and high-resolution OCT images make it possible for you to evaluate surgical procedures in detail in the **Follow-Up View**. This also helps you to monitor corneal disease states – from first to any follow-up visit.



Eye after DMEK surgery, showing a thick and edematous cornea.



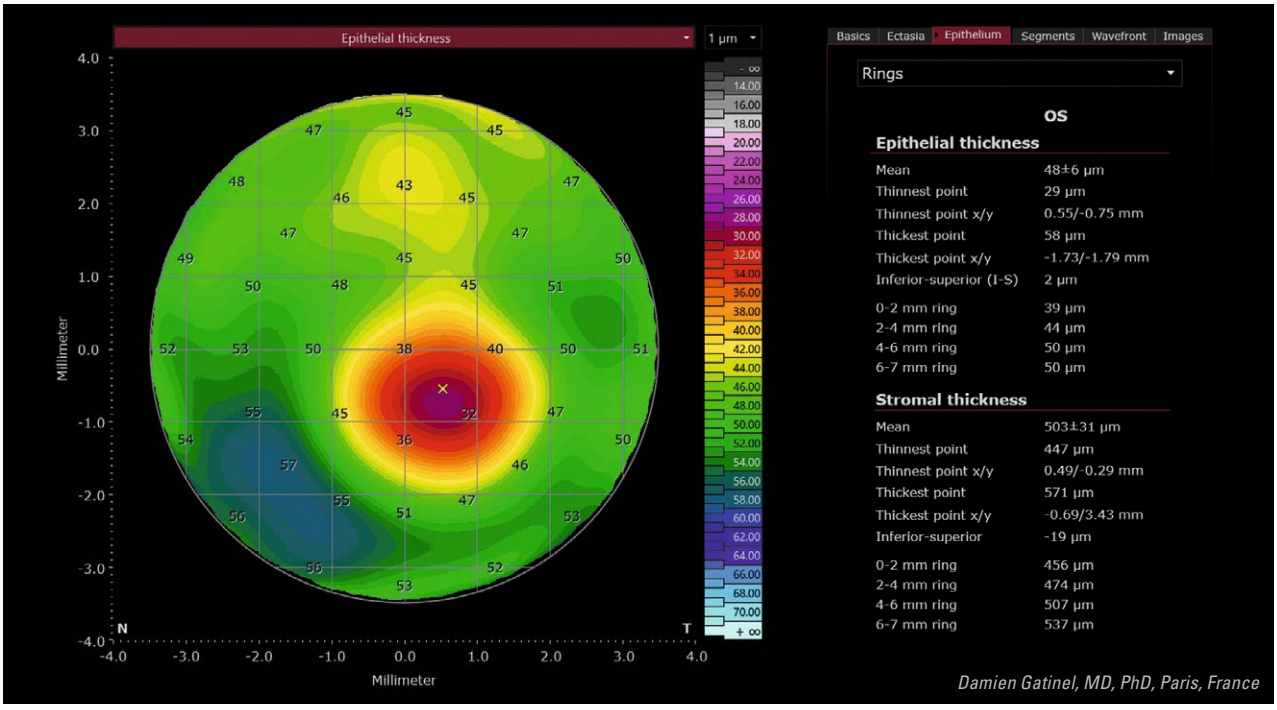
Eye after one month of surgery, showing recovered cornea.



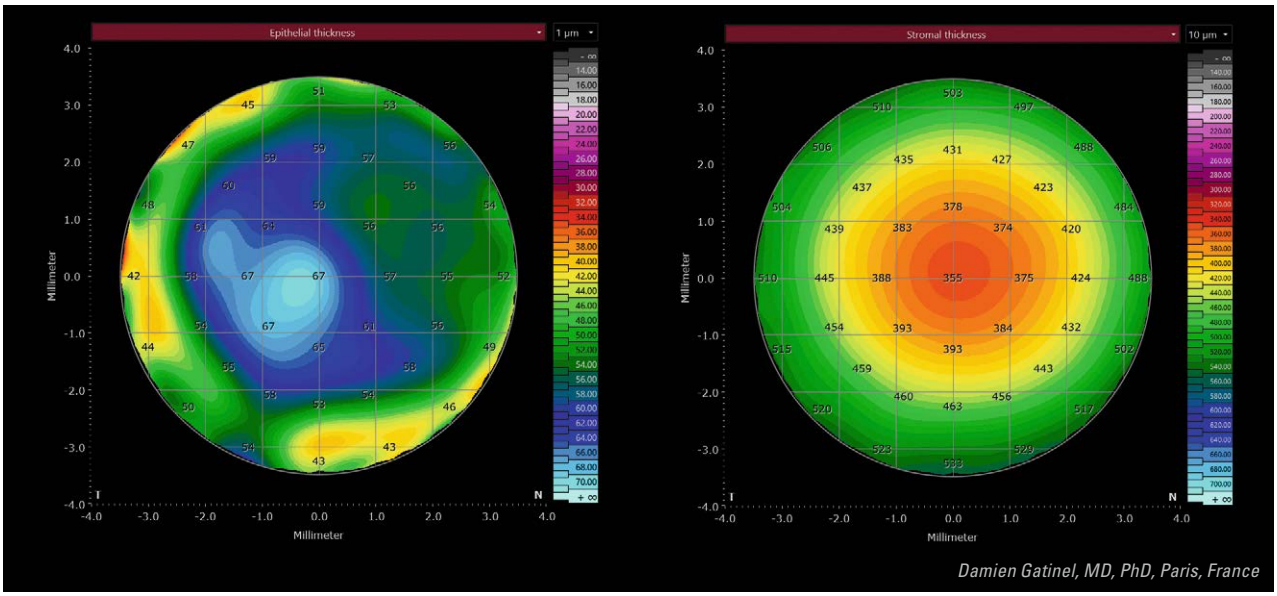
Trend analysis: The graph shows the change of CCT over time.

Evaluate the epithelium

The ANTERION **Epithelial Thickness Module** brings together all the information you need to thoroughly assess epithelial and stromal thickness of your patients' eyes. The parameters and maps for epithelial thickness offer you support for refractive surgery planning, ocular surface evaluation, screening for corneal ectasia, and other diagnostic areas.



Map and parameters for the epithelial thickness of an eye with keratoconus.



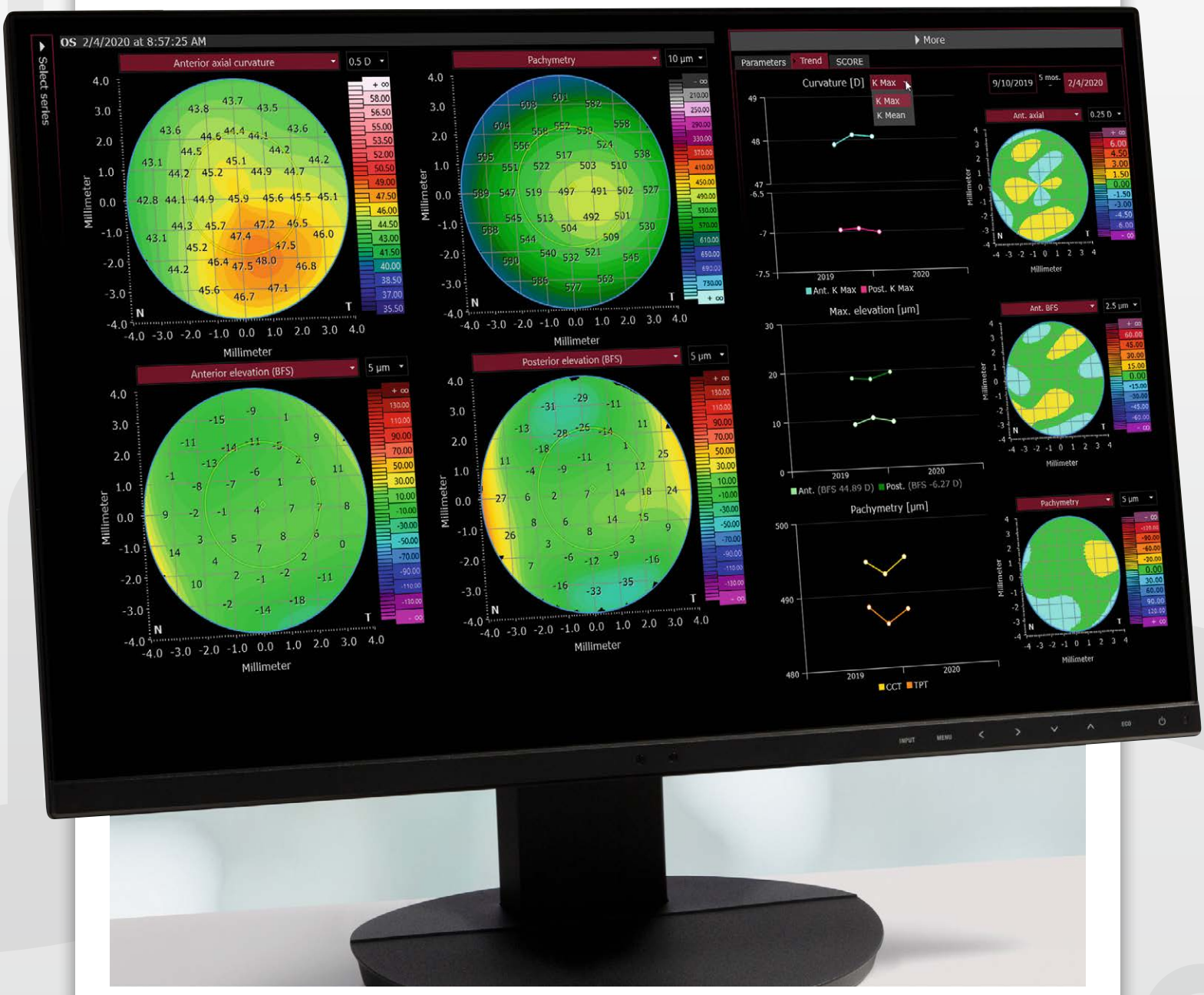
Maps for epithelial and stromal thickness of an eye after refractive surgery.

ANTERION®
for CORNEA

Assess ectasia at a glance

ANTERION provides a comprehensive toolset to help detect and analyze ectatic changes in the cornea with the **Ectasia View**.

Enhance your diagnostic workflow by evaluating the most important maps and parameters in one view or by customizing the template to fit your needs. Then combine all relevant information, including data from both eyes across multiple patient visits. Finally, track the details of progression with visualization tools such as trend graphs and differential maps.



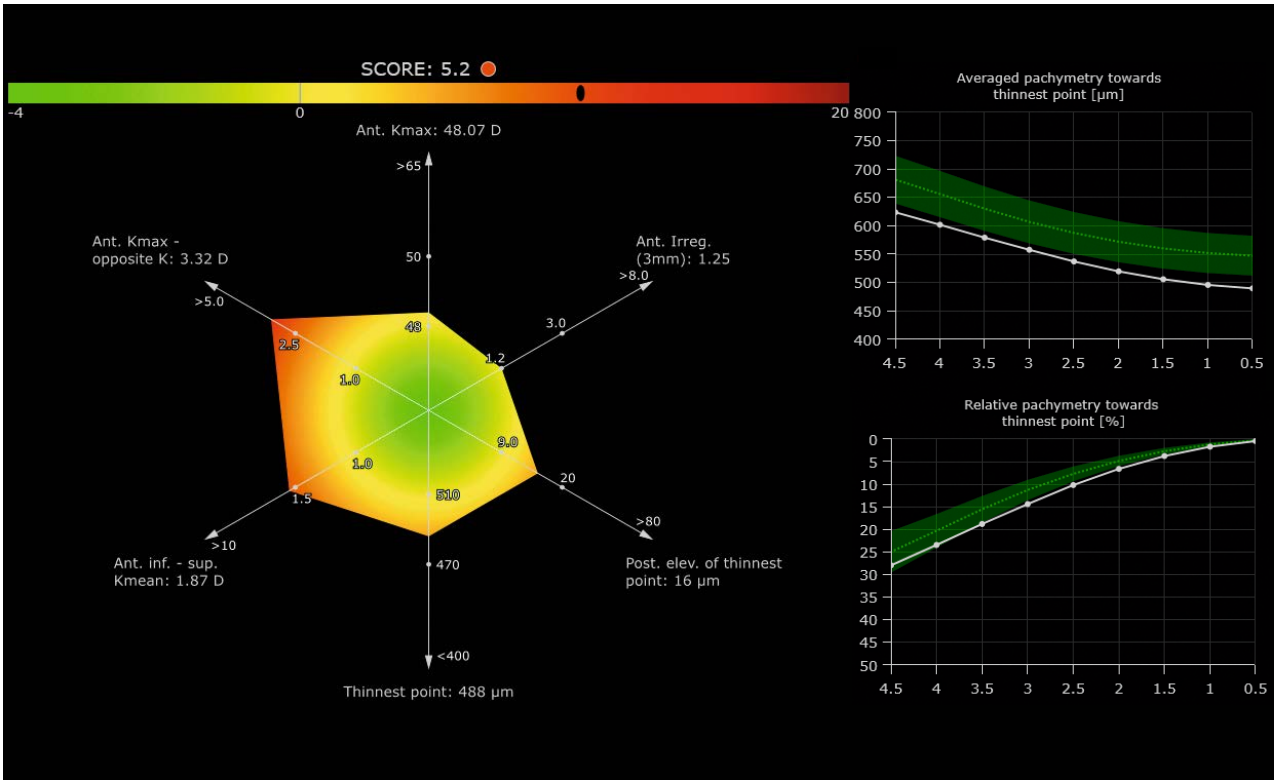
Identify risk of ectasia with SCORE*

The SCORE (Screening Corneal Objective Risk of Ectasia) Analyzer is a unique visualization and analysis tool that assists in the evaluation of keratoconus and other ectatic diseases.

Combine
multiple corneal indices that describe the magnitude of corneal steepening, thinning and asymmetry.

Classify
corneas according to the degree of similarity with those that are likely to progress to ectasia.

Consider
the risk of potential ectatic changes in the cornea.



**Powered by Dr. Gatinel and Dr. Saad for AInsight*

"The incorporation of the SCORE Analyzer into the ANTERION platform will provide modern methods for screening for keratoconus and other ectatic diseases."

Damien Gatinel, PhD, MD, Paris, France

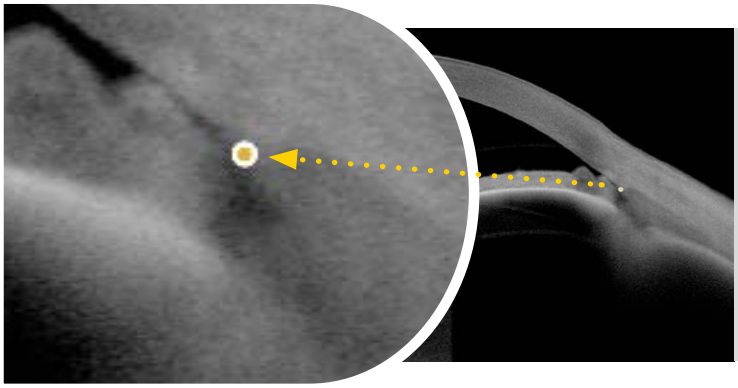
ANTERION®
for AC METRICS

Detect and assess metrics automatically

ANTERION utilizes the full power of swept-source OCT to assist you in visualizing the entire **anterior chamber** and to quantitively asses all relevant parameters.

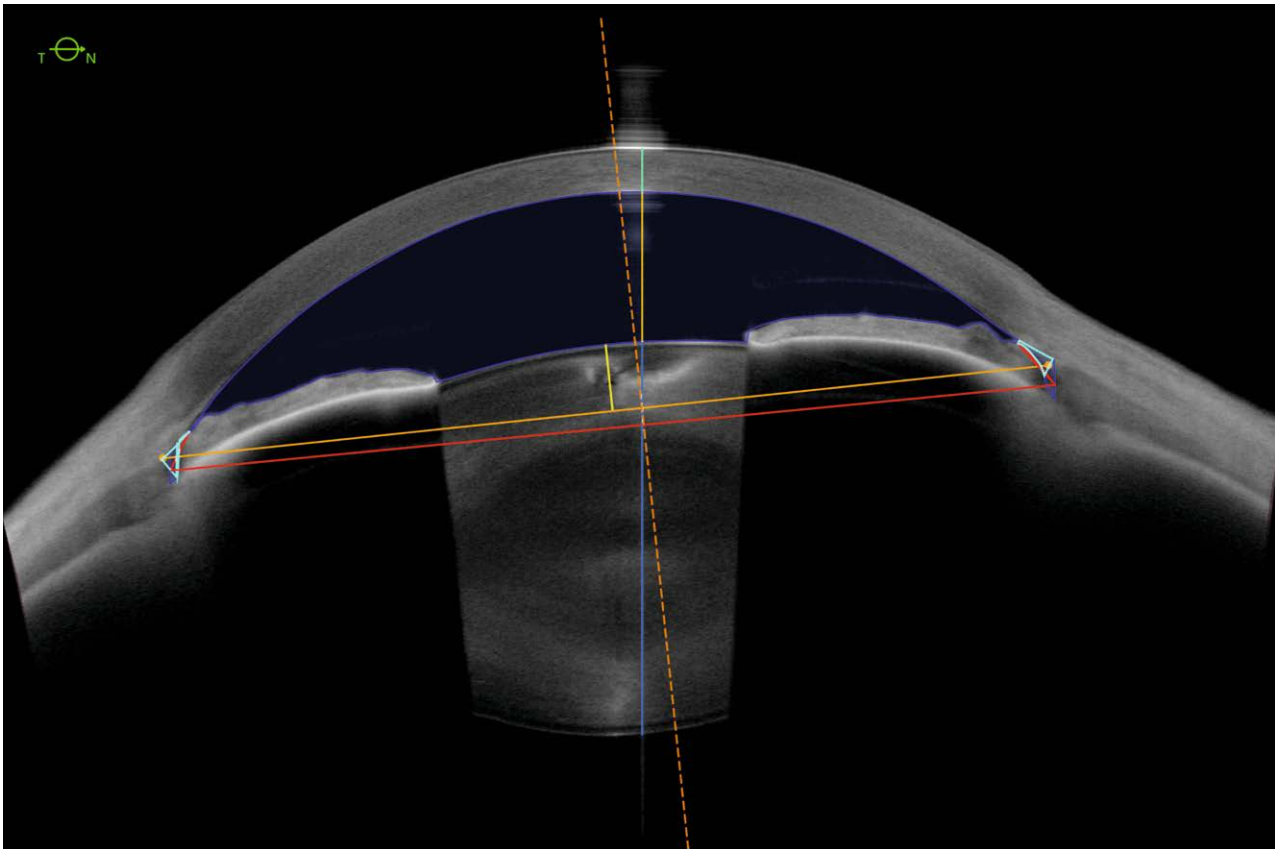
Quantify changes in the anterior chamber with predefined measurements – including anterior chamber volume, lens thickness and vault, and angle metrics.

Measure any region of interest directly on the image with refraction-corrected free-hand measurements.



AUTOMATIC SCLERAL SPUR DETECTION

ANTERION automatically detects the scleral spur,an important anatomical landmark in the anterior segment, enabling the automatic calculation of most biometric parameters.



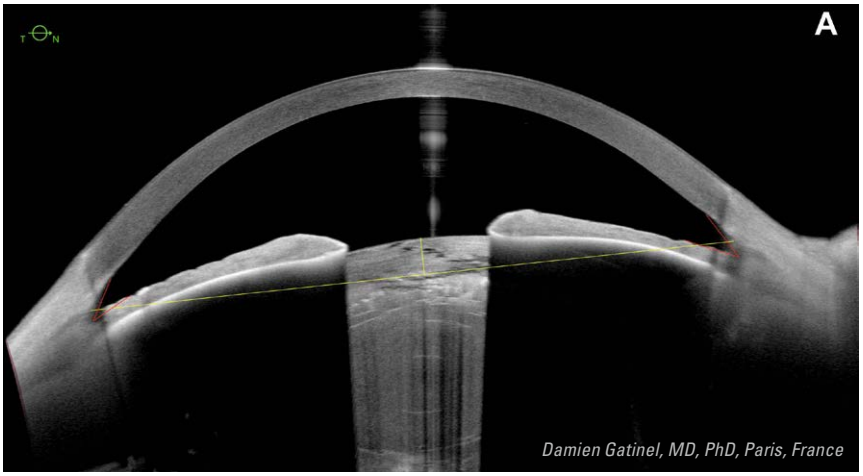
ANTERION®
for AC METRICS

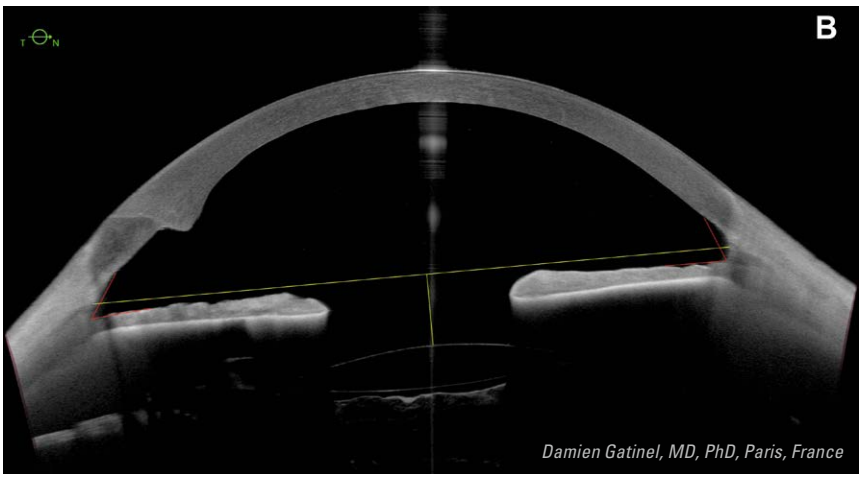
Visualize angle measurements in 360°

The ANTERION Metrics App is a valuable tool for non-contact assessment of iridocorneal angles. The precise measurements along with the visualization can serve as a complementary tool to gonioscopy and can support you in the assessment of angle closure disease. Navigate through six exceptionally clear OCT images or visualize all relevant angle parameters in a 360° graph.

Investigate changes to the architecture

Assess the effects of surgical interventions on the anterior segment by comparing pre- and post-op measurements. The detailed anterior chamber information can assist you in the planning and evaluation of cataract surgery, anterior and posterior chamber phakic lens implantation, glaucoma surgery and other surgical procedures.

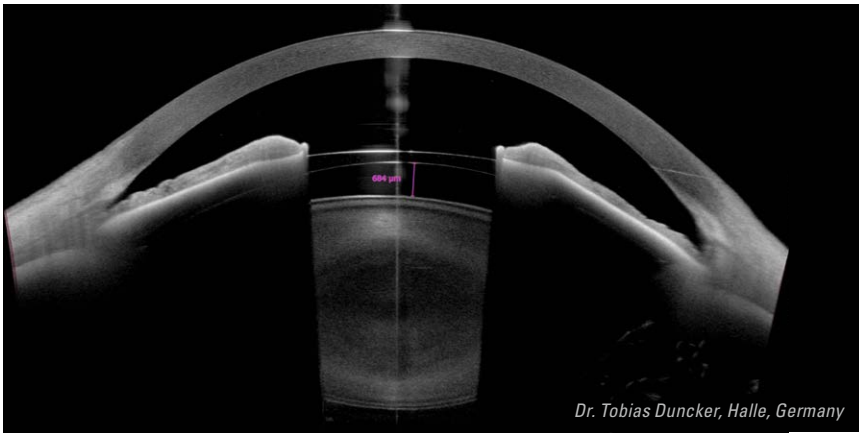




Evaluate surgical outcomes

Same eye before (A) and after (B) cataract surgery including measurements of lens vault and anterior chamber angles.

Visualization of dense lens, IOL, and lens capsule.



Customizable measurements

Eye with implantable collamer lens (ICL), including **manual measurement** for lens vault.

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