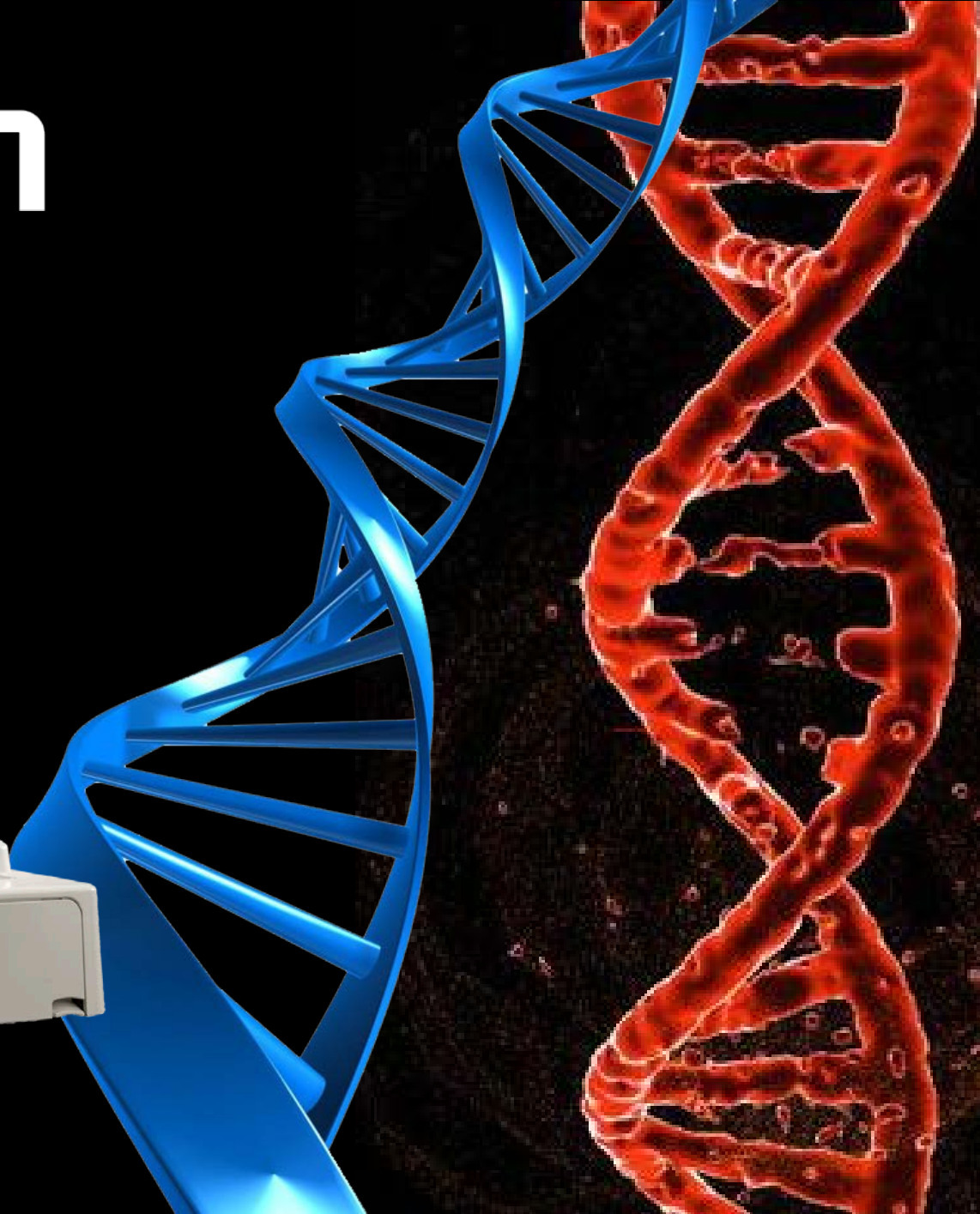
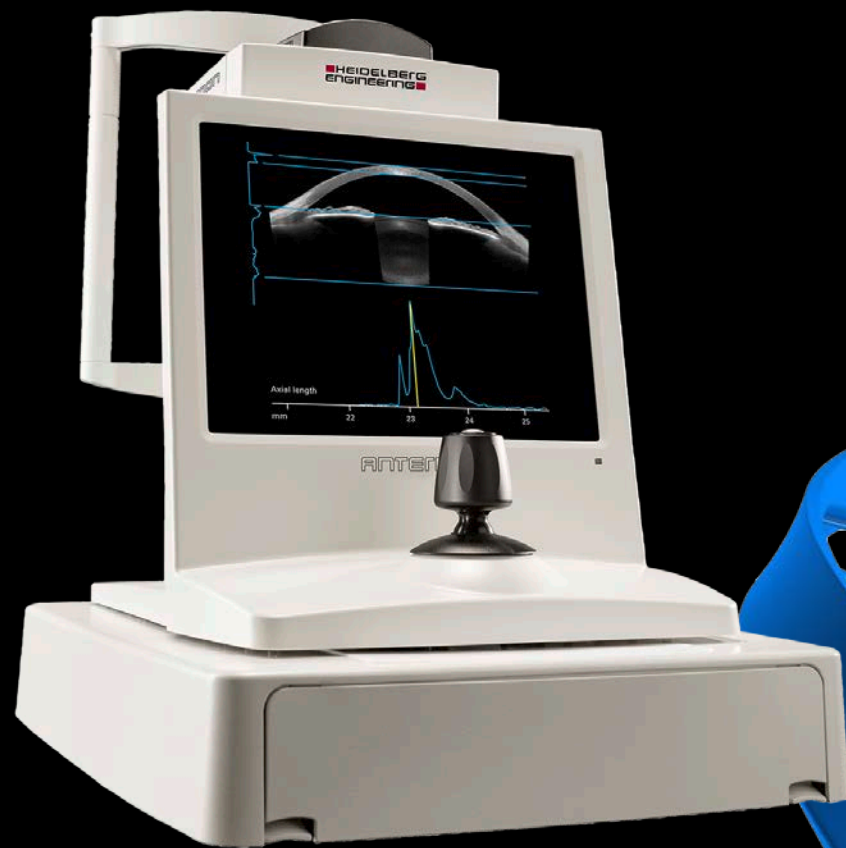


- Niklas Kraft
 - Daniel Preisler
- Preisler Instrument

ANTERION

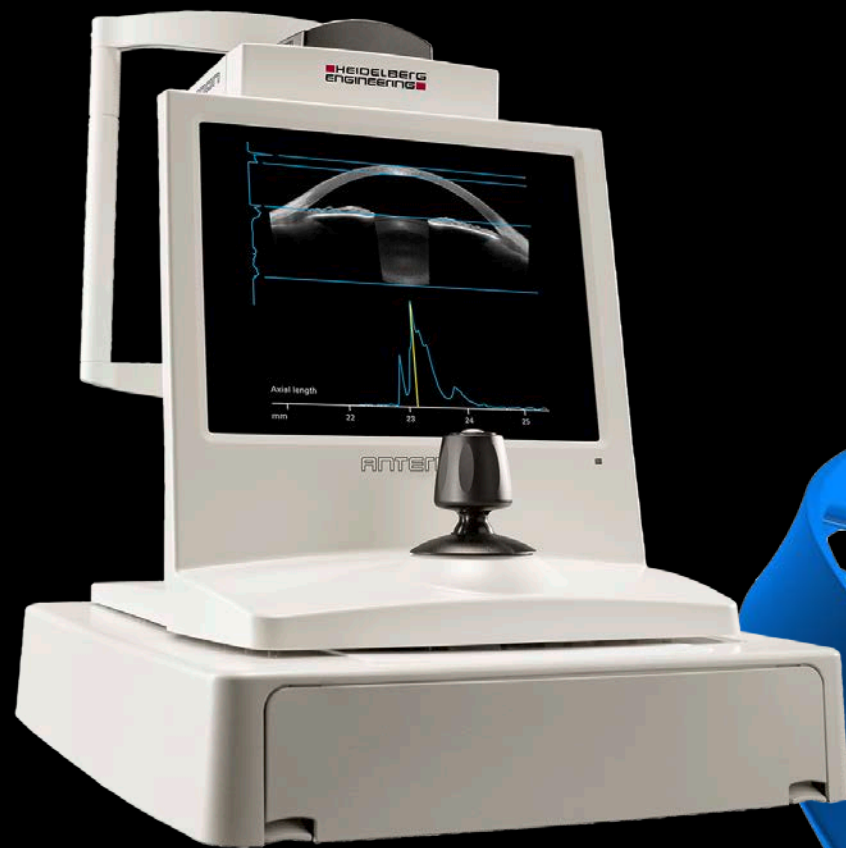


SPECTRALIS®

MULTIMODAL IMAGING PLATFORM OPTIMIZED FOR
THE POSTERIOR SEGMENT

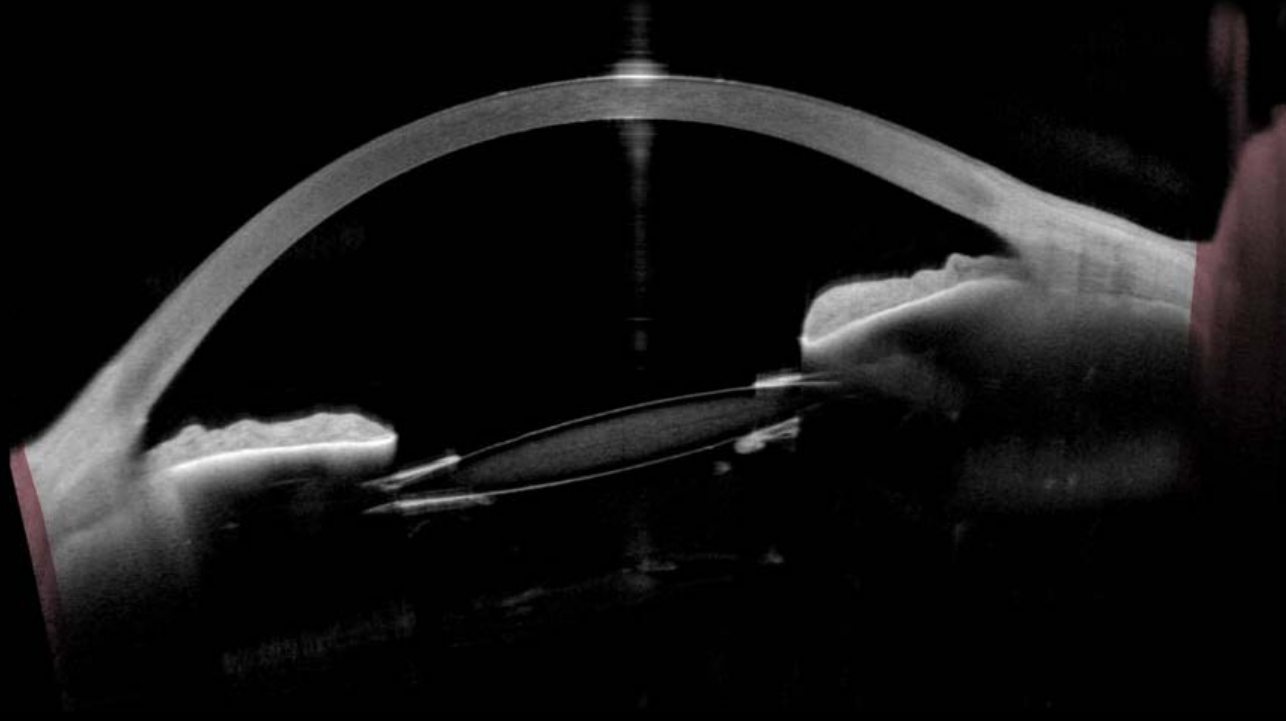


ANTERION



Anterior for Cataract

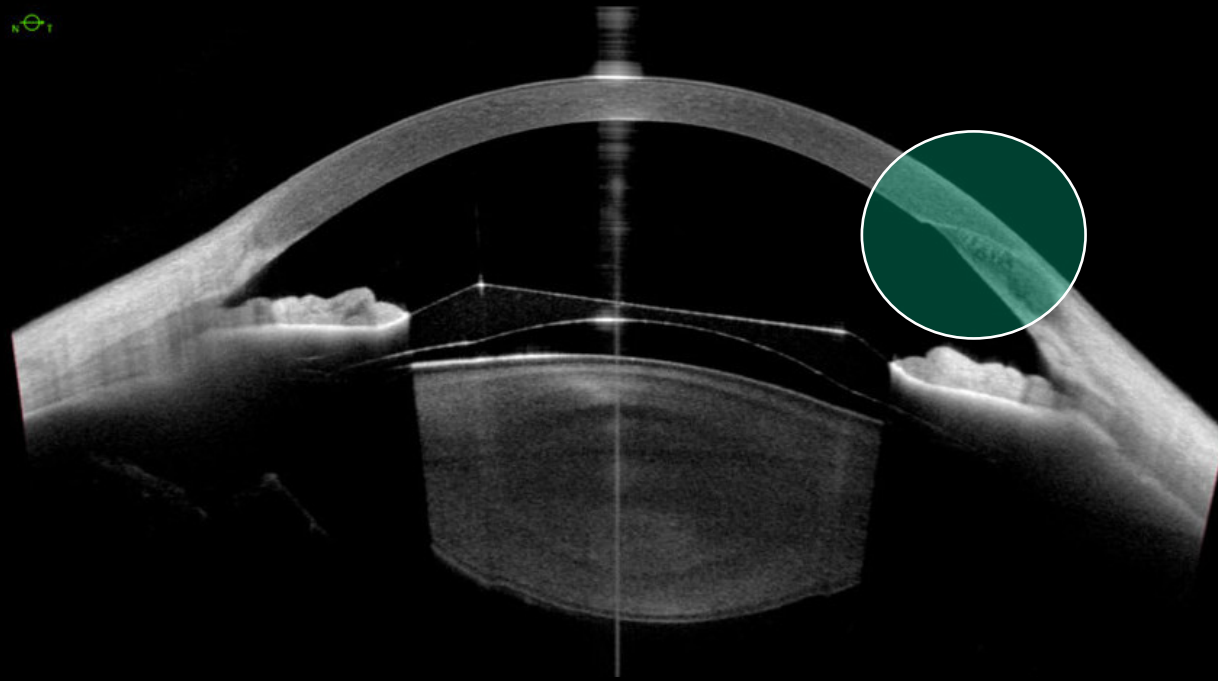
See IOL location



Pseudophakic eye with Posterior Capsulotomy

Anterior for Cataract

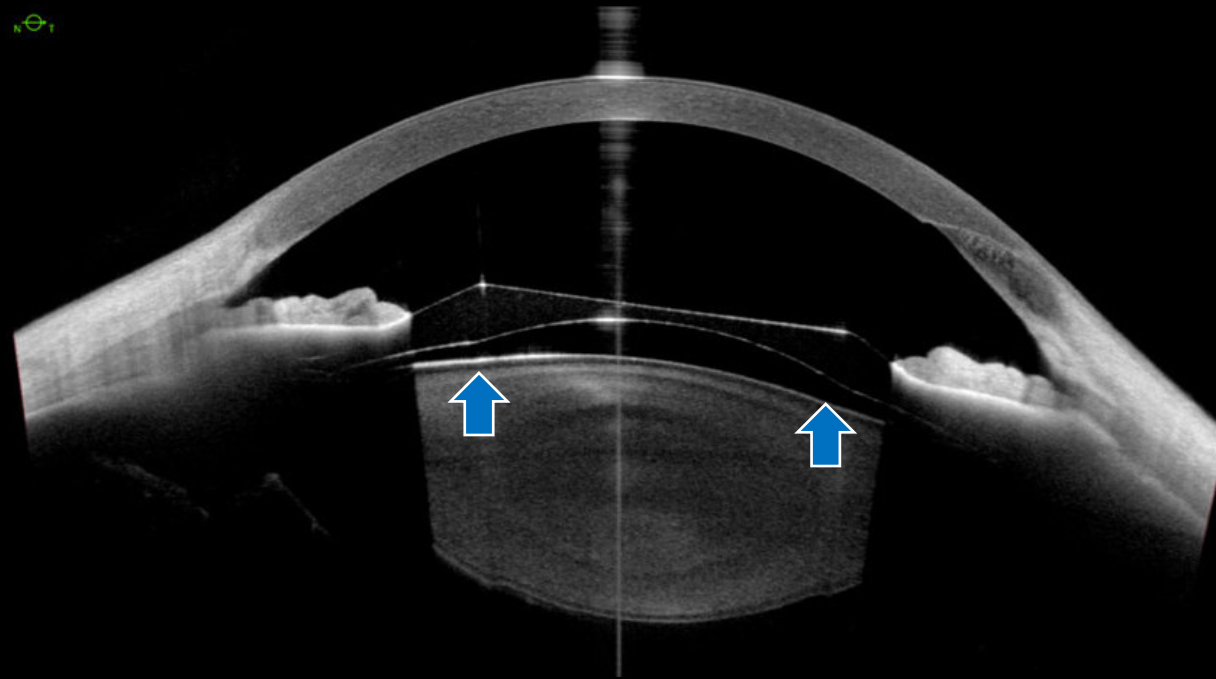
See details of your corneal incision and phakic IOL placement



Anterior Chamber Phakic IOL

Anterior for Cataract

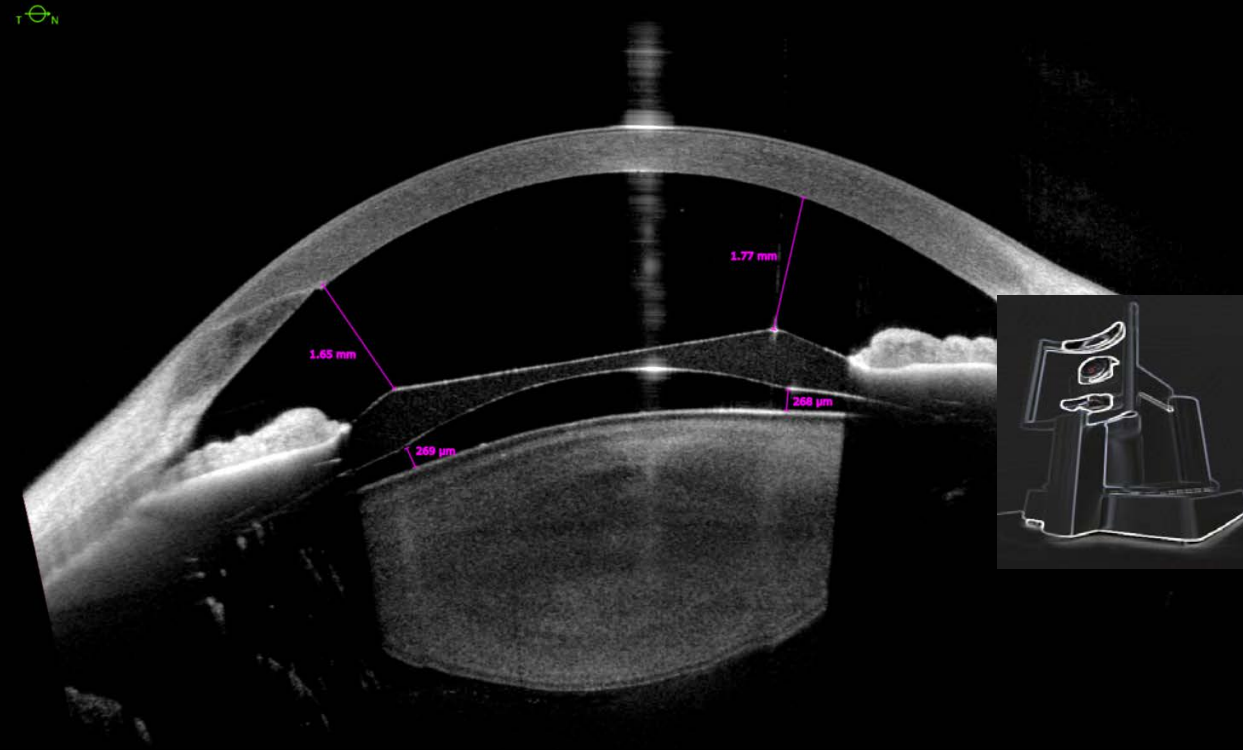
Check distance between IOL and lens



Anterior Chamber Phakic IOL

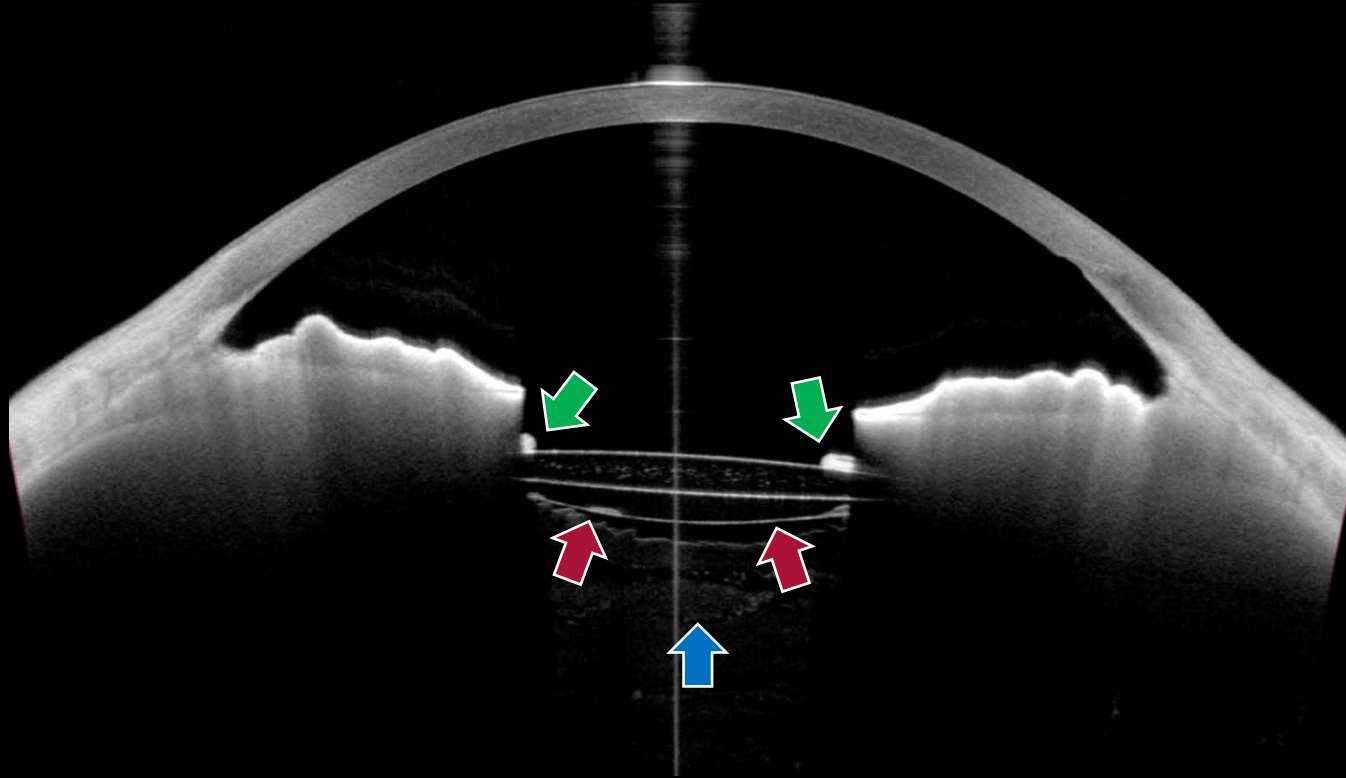
Anterior for Cataract

Measure distances between IOL, cornea and lens



Anterior Chamber Phakic IOL

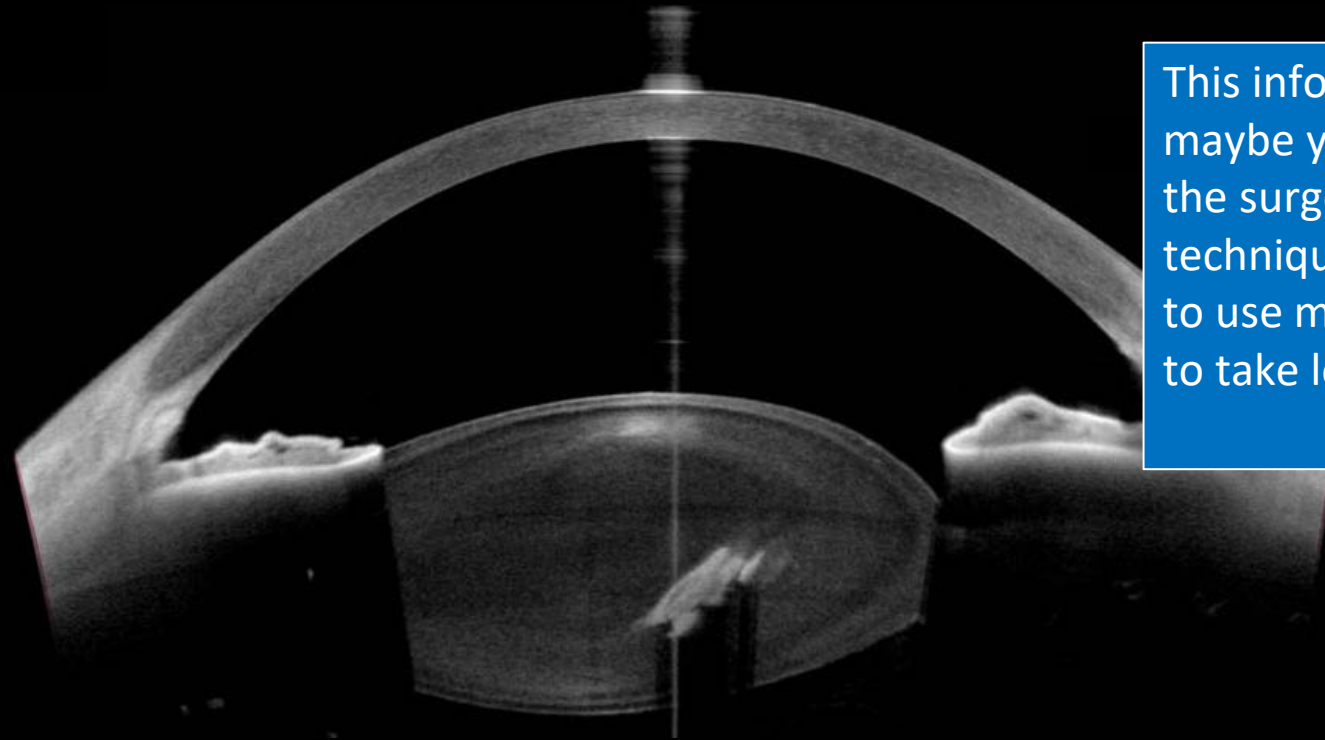
Anterior for Cataract



See both anterior and posterior capsules
Usually the posterior capsule gets attached to the lens some days after surgery
See behind it is the anterior vitreous

Anterior Chamber Phakic IOL

Anterior for Cataract

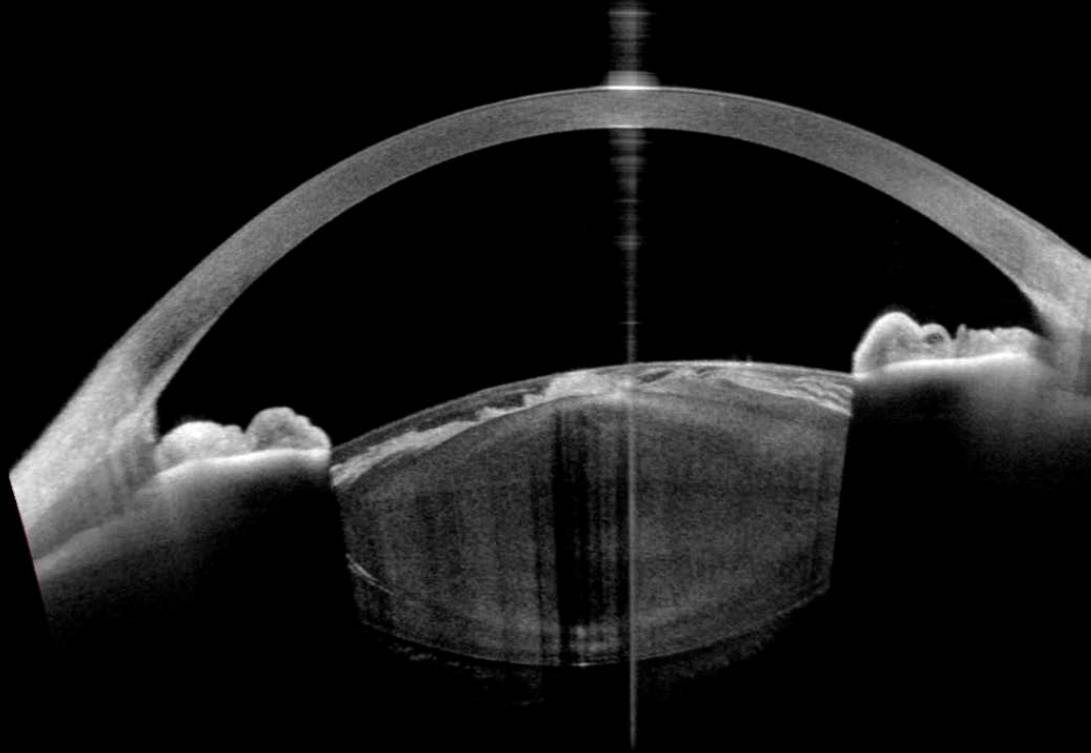


This information is useful – maybe you can better plan the surgery - maybe change technique and be prepared to use more instruments and to take longer than usual

Focal Cataract in a Displaced Lens from non-penetrating trauma

Anterior for Cataract

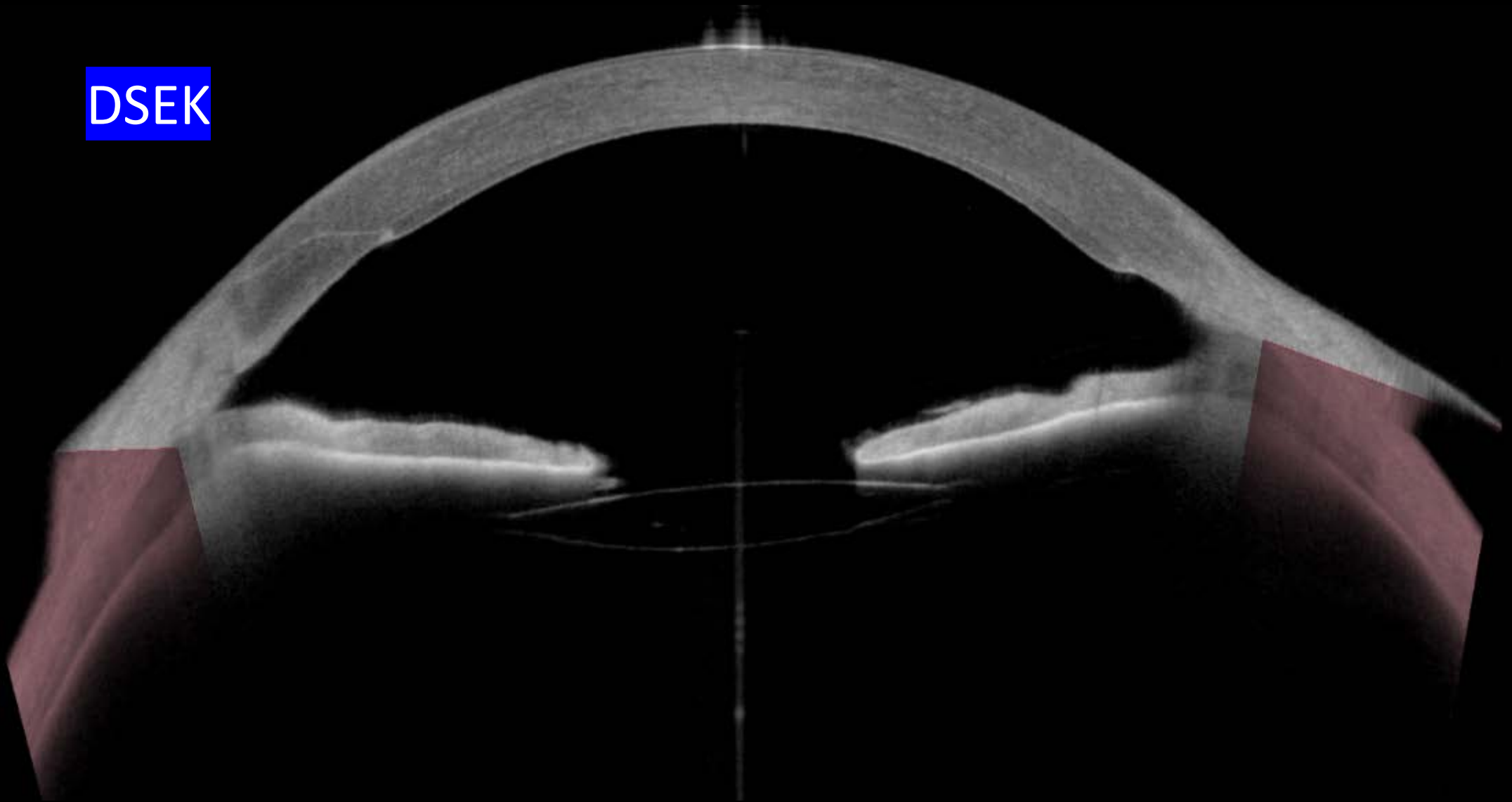
T-N



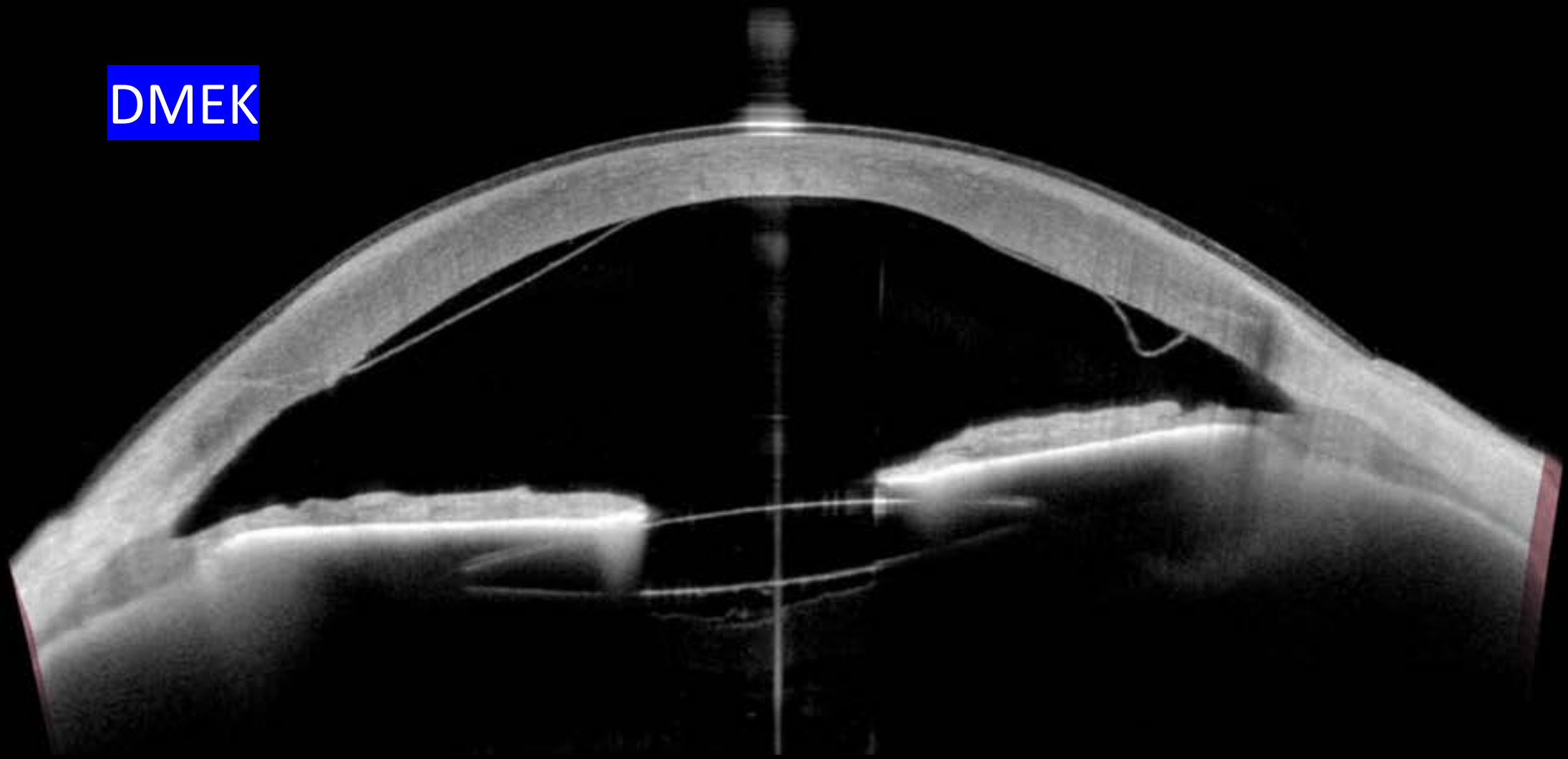
This cataract looked white and dense on the slit lamp exam
But in the OCT image it's possible to see that the density is localized just in the anterior cortex
The nucleus is not dense
This gives us a better understanding of the cataract - so we can better plan the surgery

Anterior Cortical Cataract

DSEK

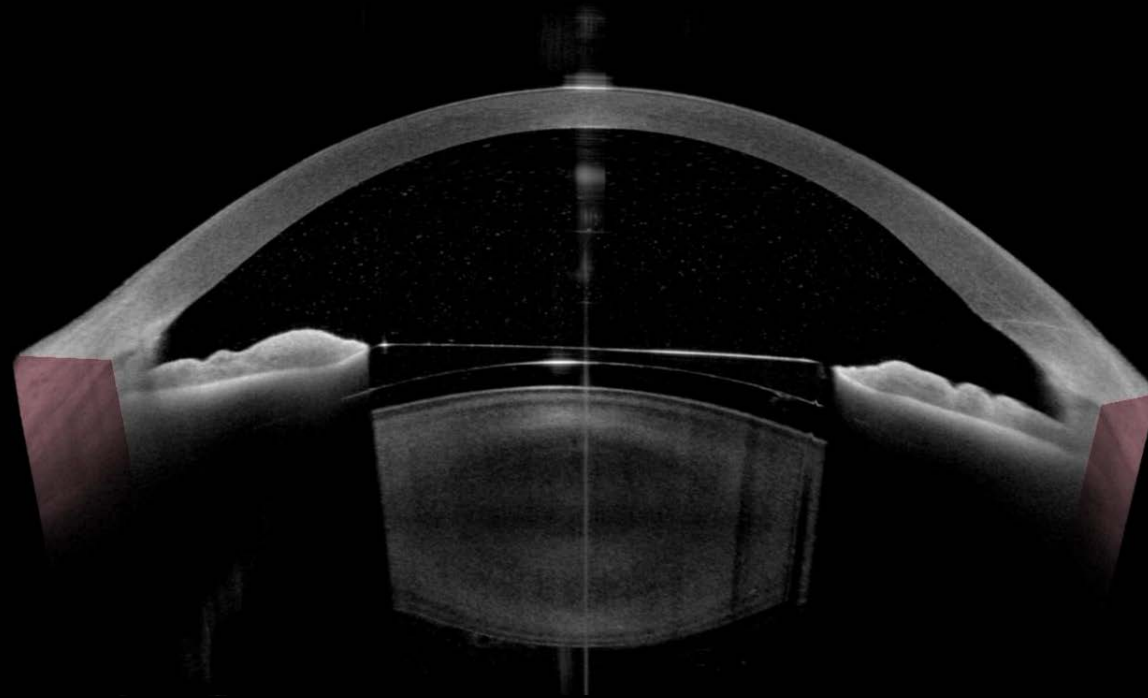


DMEK



Anterior for Cataract

Improve your Results!



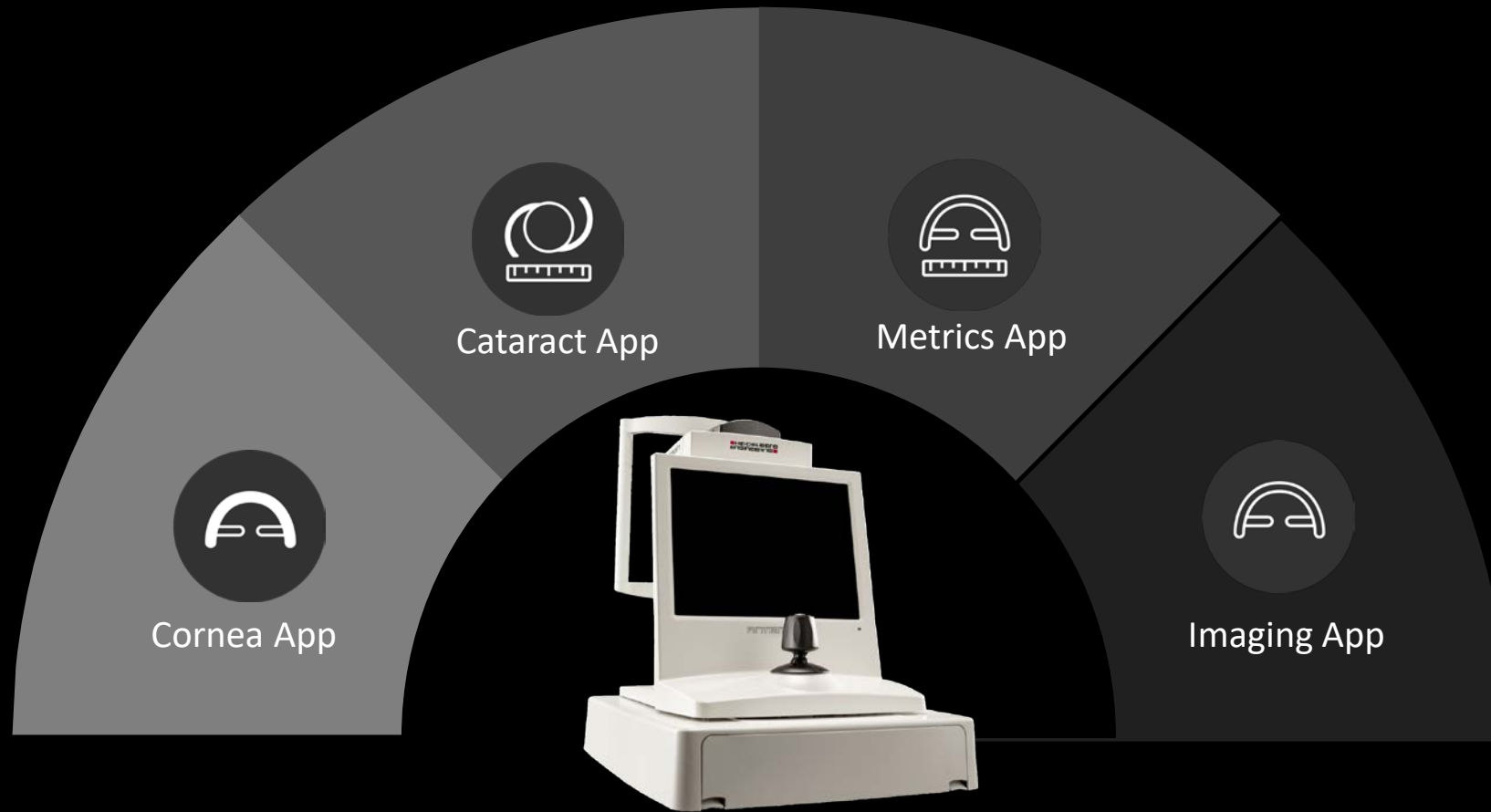
HEIDELBERG
ENGINEERING

30 YEARS
EMPOWERING YOU

Anterion is 4 in 1



Skräddarsy din maskin!



ANTERION

1. Främre kammar OCT – Pris som en biometer
2. Biometer – Tomograf – OCT
3. 4 Appar – Modulär
4. Image App - INGÅR!!!
5. Cataract App – Biometer + Tomograf + kalkyleringar
6. Cornea App
7. Metrics App

ANTERION

Cataract App

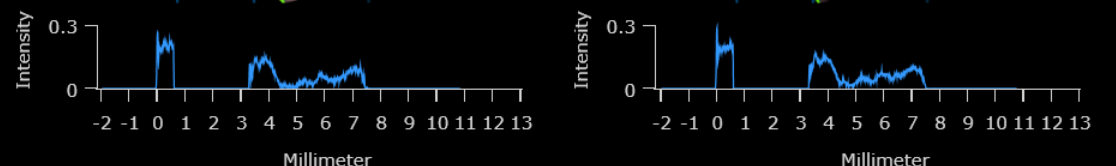
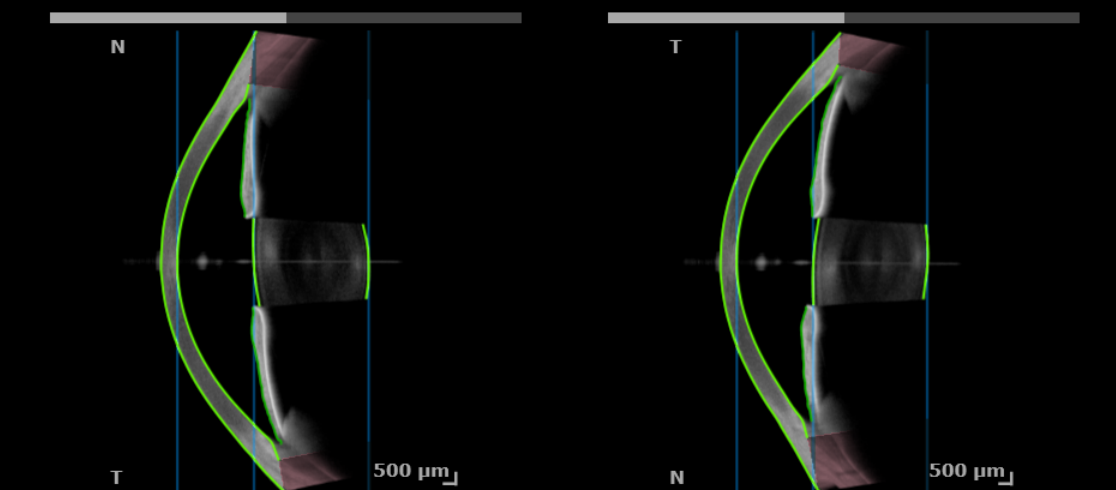
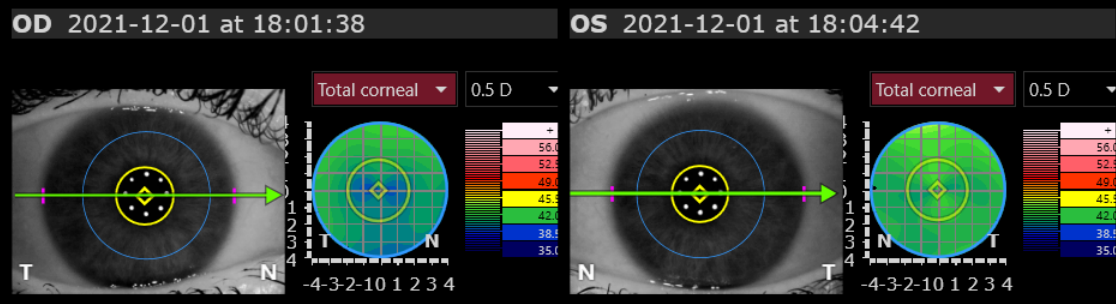
- Tar en titt!....



Select series

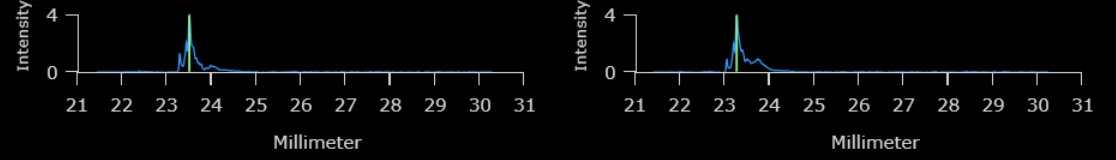
6 6 4 9

OD	OS
2021-12-01 18:01:38	2021-12-01 18:04:42
2020-02-15 15:15:26	2020-02-15 15:16:40
2019-12-05 14:11:52	2019-12-05 14:14:44



Axial length: **23.52 mm** ± 0.002 mm Eye status: No surgery, Phakic, Vitreous only

Axial length: **23.29 mm** ± 0.002 mm Eye status: No surgery, Phakic, Vitreous only



Vertex Thinnest point Pupil diameter Pupil center 3 mm ring Segmentation

More

Basics Premium IOL

	OD	OS	OD - OS Difference
Anterior axial curvature (simulated) nk = 1.3375; 3 mm ring			
SimK _{mean}	40.76 D	42.16 D	-1.40 D
SimK (steep)	41.30 D @ 84°	43.09 D @ 101°	
SimK (flat)	40.23 D @ 174°	41.27 D @ 11°	
Astigmatism (steep)	1.07 D @ 84°	1.82 D @ 101°	-0.75 D
Astigmatism (Steep) nc = 1.376; nah=1.336; 3 mm ring			
Astigm. (total)	0.94 D @ 85°	1.68 D @ 103°	
Astigm. (posterior)	-0.29 D @ 82°	-0.41 D @ 93°	
Δ Ast. (anterior - total)	0.13 D @ -1°	0.14 D @ -2°	
Total corneal wavefront 5 mm zone, pupil-centered			
Z ₄ Spherical aberration	0.15 µm	0.00 µm	0.15 µm
RMS HOA	0.30 µm	0.20 µm	0.10 µm
Pachymetry			
CCT (vertex)	577 µm	579 µm	-2 µm
Anterior segment			
AQD	2.74 mm	2.74 mm	0.00 mm
CCT + AQD	3.32 mm	3.32 mm	0.00 mm
Lens thickness	4.10 mm	4.09 mm	0.01 mm
Pupil & WTW			
Pupil diameter	3.6 mm	3.5 mm	0.1 mm
Pupil center	0.10 mm (@ 197°)	0.04 mm (@ 173°)	
Pupil center x/y	-0.09/-0.03 mm	-0.04/0.00 mm	
WTW	11.86 mm	11.90 mm	
Axial length			
Length	23.52±0.00 mm	23.29±0.00 mm	0.23 mm

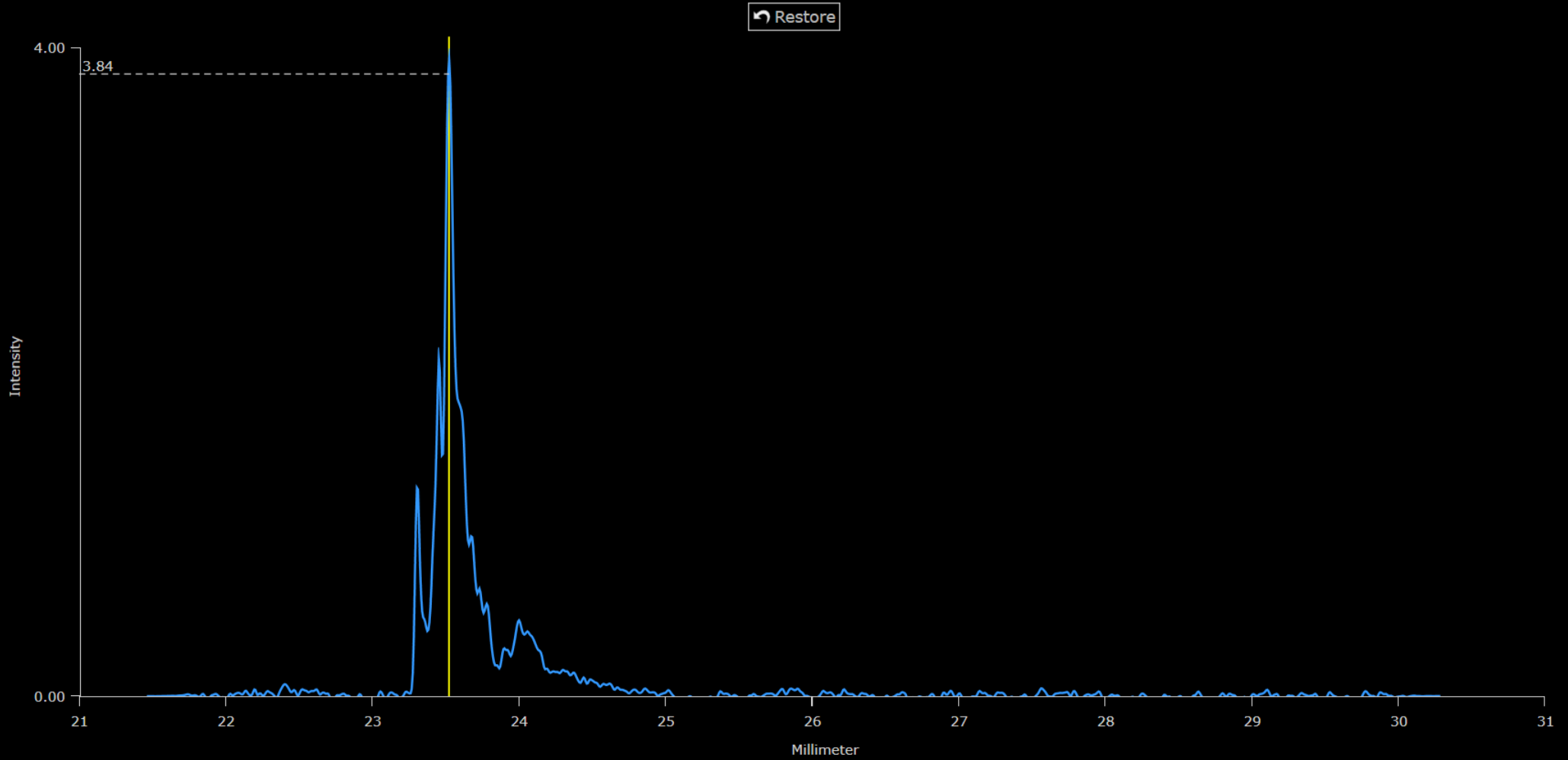
Cornea single

OU

OU

Close

Edit axial length



Save and close

Cancel

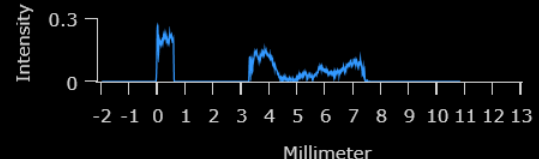
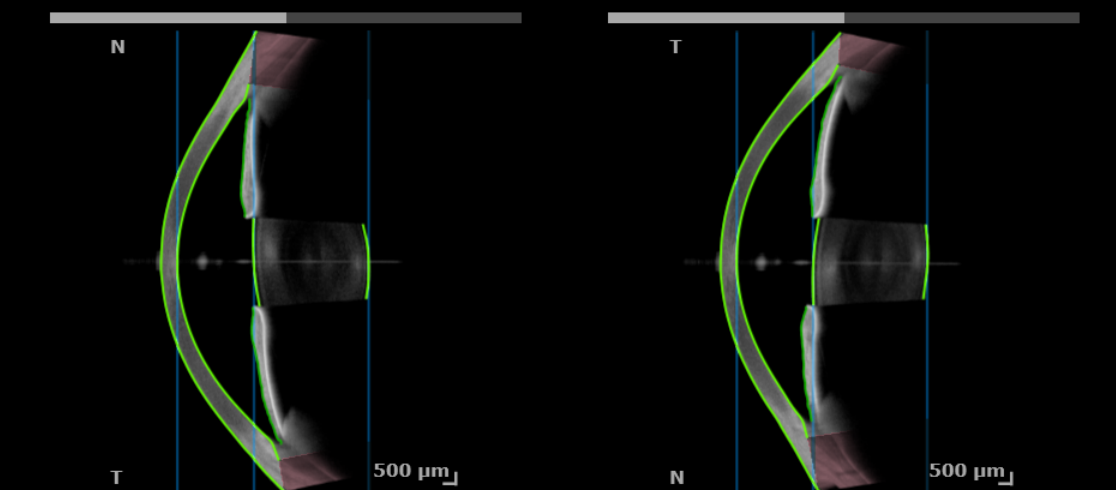
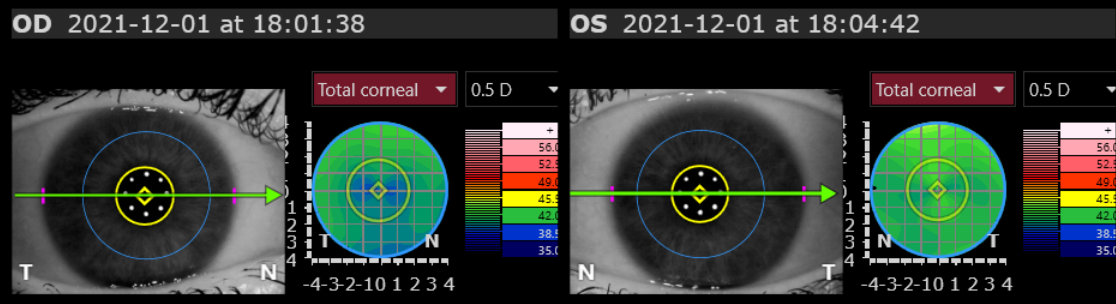
Parameter	Value
Vertex	21
Thinnest point	24
Pupil diameter	25.52 ± 0.00 mm
Pupil center	23.29 ± 0.00 mm
3 mm ring	23.29 ± 0.00 mm
Segmentation	0.23 mm

Legend: Vertex, Thinnest point, Pupil diameter, Pupil center, 3 mm ring, Segmentation

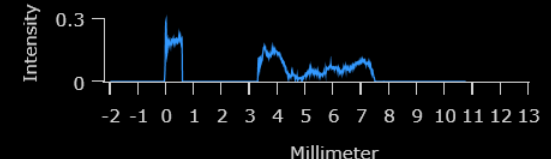
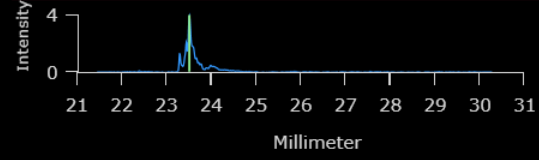
Select series

6 6 4 9

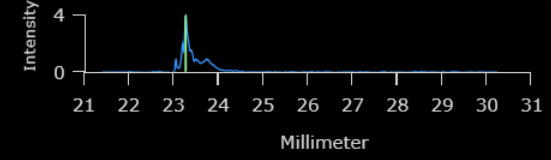
OD	OS
2021-12-01 18:01:38	2021-12-01 18:04:42
2020-02-15 15:15:26	2020-02-15 15:16:40
2019-12-05 14:11:52	2019-12-05 14:14:44



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 Eye status: No surgery, Phakic, Vitreous only



Axial length: **23.29 mm** ± 0.002 mm
 Eye status: No surgery, Phakic, Vitreous only



Vertex
Thinnest point
Pupil diameter
Pupil center
3 mm ring
Segmentation

More

	OD	OS	OD - OS Difference
Anterior axial curvature (simulated) nk = 1.3375; 3 mm ring			
SimK _{mean}	40.76 D	42.16 D	-1.40 D
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Total corneal wavefront 5 mm zone, pupil-centered			
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RMS HOA	0.30 µm	0.20 µm	0.10 µm
Pachymetry			
CCT (vertex)	577 µm	579 µm	-2 µm
Anterior segment			
AQD	2.74 mm	2.74 mm	0.00 mm
CCT + AQD	3.32 mm	3.32 mm	0.00 mm
Lens thickness	4.10 mm	4.09 mm	0.01 mm
Pupil & WTW			
Pupil diameter	3.6 mm	3.5 mm	0.1 mm
Pupil center	0.10 mm (@ 197°)	0.04 mm (@ 173°)	
Pupil center x/y	-0.09/-0.03 mm	-0.04/0.00 mm	
WTW	11.86 mm	11.90 mm	
Axial length			
Length	23.52±0.00 mm	23.29±0.00 mm	0.23 mm

Cornea single

OU



OU



Close

OU

Edit segmentation at vertex

- Posterior corneal surface
- Anterior lens surface
- Posterior lens surface

Restore all

Ctrl + mouse wheel: zoom image.



ce



Save and close

Cancel

21 22 23 24 25 26 27 28 29 30 31

21 22 23 24 25 26 27 28 29 30 31

Axial length

Length

23.52±0.00 mm

23.29±0.00 mm

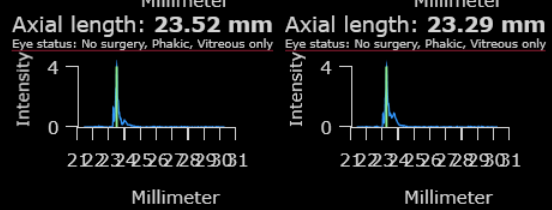
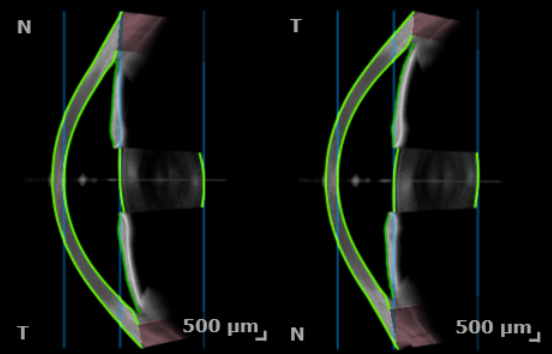
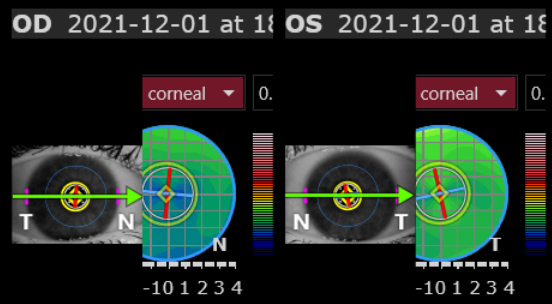
0.23 mm

- Vertex
- Thinnest point
- Pupil diameter
- Pupil center
- 3 mm ring
- Segmentation

Select series

6
6
4
9

OD	OS
2021-12-01 18:01:38	2021-12-01 18:04:42
2020-02-15 15:15:26	2020-02-15 15:16:40
2019-12-05 14:11:52	2019-12-05 14:14:44



Vertex
Thinnest point
Pupil diameter
Pupil center
3 mm ring
Segmentation

More

Basics
Premium IOL

	OD	OS	OD - OS Difference
Anterior axial curvature (simulated)			
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Astigm. (posterior)	-0.29 D @ 82°	-0.41 D @ 93°	
Δ Ast. (anterior - total)	0.13 D @ -1°	0.14 D @ -2°	
Total corneal wavefront			
5 mm zone, pupil-centered			
Z ₄ Spherical aberration	0.15 μm	0.00 μm	0.15 μm
RMS HOA	0.30 μm	0.20 μm	0.10 μm
Pachymetry			
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Pupil center x/y	-0.09/-0.03 mm	-0.04/0.00 mm	
WTW	11.86 mm	11.90 mm	
Axial length			
Length	23.52±0.00 mm	23.29±0.00 mm	0.23 mm

Select series

OD	OS
2021-12-01 18:01:38	2021-12-01 18:04:42
2020-02-15 15:15:26	2020-02-15 15:16:40
2019-12-05 14:11:52	2019-12-05 14:14:44

Basics Premium IOL More

	OD	OS	OD - OS Difference
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Total corneal wavefront			
5 mm zone, pupil-centered ▾			
Z ₄ Spherical aberration	0.15 μm	0.00 μm	0.15 μm
RMS HOA	0.30 μm	0.20 μm	0.10 μm
Pachymetry			
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WTW	11.86 mm	11.90 mm	
Axial length			
Length	23.52±0.00 mm	23.29±0.00 mm	0.23 mm

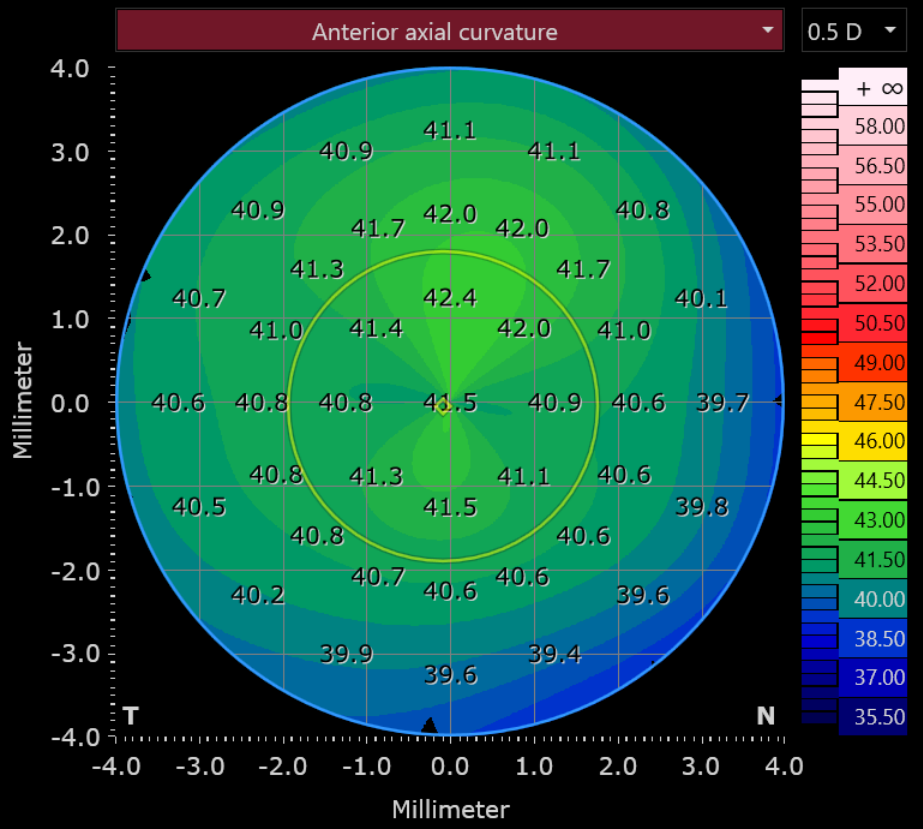
Single OD/OS
 OU
 Follow-up
 Multi
 Ectasia

Report
 Info
 Settings
 Close

Select series

6
 6
 4
 9

OD	OS
2021-12-01 18:03:36	2021-12-01 18:05:26
2020-02-15 15:12:48	2020-02-15 15:13:20
2019-12-05 13:39:27	2019-12-05 13:44:36



- Vertex
- Thinnest point
- K_{max}
- Pupil diameter
- Pupil center
- 3 mm ring
- Zones
- Rings

More

Basics Ectasia Epithelium Segments **Wavefront** Images

OD

Anterior corneal wavefront parameters

ROI diameter = 4 mm ROI center = Vertex

Z ₁ ¹ Vertical tilt	0.33
Z ₁ ¹ Horizontal tilt	0.06
Z ₂ ² Oblique astigm.	0.21
Z ₂ ⁰ Defocus	0.71
Z ₂ ² WTRATR astigm.	-0.60
Z ₃ ³ Oblique trefoil	-0.05
Z ₃ ¹ Vertical coma	0.11
Z ₃ ¹ Horizontal coma	0.01
Z ₃ ³ Horizontal trefoil	-0.04
Z ₄ ⁰ Spherical aberration	0.03
4th order RMS	0.05
5th order RMS	0.01
6th order RMS	0.00
7th order RMS	0.00
RMS LOA	1.01 μm
RMS HOA	0.14 μm

Total corneal wavefront parameters

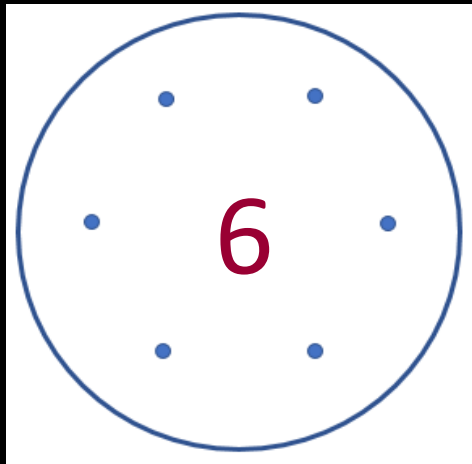
ROI diameter = 4 mm ROI center = Vertex

Z ₁ ¹ Vertical tilt	-0.14
Z ₁ ¹ Horizontal tilt	-0.34
Z ₂ ² Oblique astigm.	0.16
Z ₂ ⁰ Defocus	0.65
Z ₂ ² WTRATR astigm.	-0.48
Z ₃ ³ Oblique trefoil	-0.04
Z ₃ ¹ Vertical coma	0.07
Z ₃ ¹ Horizontal coma	0.02
Z ₃ ³ Horizontal trefoil	-0.04
Z ₄ ⁰ Spherical aberration	0.02
4th order RMS	0.05
5th order RMS	0.00
6th order RMS	0.00
7th order RMS	0.00

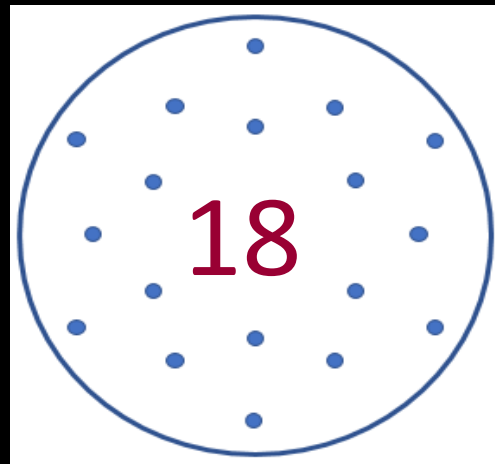
High Resolution Image Quality

High Resolution Image Quality = High Precision Data

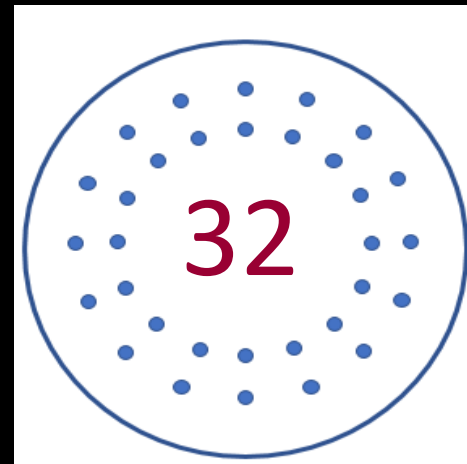
- 3mm Zone - Datapoints



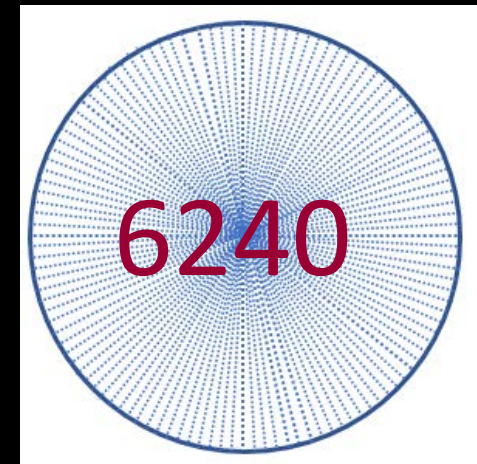
IOL Master 500



IOL Master 700



Lenstar



Anterior

OU

Cornea single OD/OS
OU Cornea OU
Cornea follow-up
Cornea multi

OU Biometry OU
Calculation OU report
Info Settings
Close

Select series

6
6
4
9

OD	OS
2021-12-01 18:01:38	2021-12-01 18:04:42
2020-02-15 15:15:26	2020-02-15 15:16:40
2019-12-05 14:11:52	2019-12-05 14:14:44

OD 2021-12-01 at 18:01:38
 Eye status: No surgery, Phakic, Vitreous only

Target refraction: 0.00 D [- +]

IOL database: head

OS 2021-12-01 at 18:04:42
 Eye status: No surgery, Phakic, Vitreous only

Target refraction: 0.00 D [- +]

IOL database: head

Template: Custom

Haigis	Haigis
Haigis	Rayner RayOne EM
Hoffer® Q	A0: 1.170 A1: 0.400
Holladay 1	
SRK/T	
IOL power SE Residual refraction	
25.00 -0.59	25.00 -0.22
24.50 -0.22	24.50 -0.22
24.50 0.14	24.50 0.14 ✓
24.00 0.50	24.00 0.50
23.50 0.86	23.50 0.86

Template: Custom

Haigis	Haigis
Haigis	Rayner RayOne EM
Rayner RayOne EM	A0: 1.170 A1: 0.400
IOL power SE Residual refraction	
24.50 -0.60	24.50 -0.60
24.00 -0.23	24.00 -0.23
23.50 0.13	23.50 0.13
23.00 0.49	23.00 0.49
22.50 0.84	22.50 0.84

Formula...
 IOL...
 IOL power SE Residual refraction

Formula...
 IOL...
 IOL power SE Residual refraction

More

Basics Premium IOL

	OD	OS	OD - OS Difference
Anterior axial curvature (simulated) nk = 1.3375; 3 mm ring			
SimK _{mean}	40.76 D	42.16 D	-1.40 D
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WTW	11.86 mm	11.90 mm	
Axial length			
Length	23.52±0.00 mm	23.29±0.00 mm	0.23 mm

Open toric/incision calculator

OU

Cornea single OD/OS
OU Cornea OU
Cornea follow-up
Cornea multi

OU Biometry OU
Calculation OU report
Info Settings
Close

Select series

6 6 4 9

OD	OS
2021-12-01 18:01:38	2021-12-01 18:04:42
2020-02-15 15:15:26	2020-02-15 15:16:40
2019-12-05 14:11:52	2019-12-05 14:14:44

OD 2021-12-01 at 18:01:38
 Eye status: No surgery, Phakic, Vitreous only

Target refraction: - +

IOL database:

Template:

Haigis

Rayner RayOne EM

- Johnson and Johnson Vision ZMT
- Johnson and Johnson Vision ZXT
- Johnson and Johnson Vision ZXW
- Rayner RayOne Aspheric
- Rayner RayOne EMV**
- Rayner RayOne Hydrophobic
- Rayner RayOne Hydrophobic BLF
- Rayner RayOne Spheric
- Rayner RayOne Toric
- Rayner RayOne Trifocal
- Rayner RayOne Trifocal Toric
- Rayner Sulcoflex Aspheric

OS 2021-12-01 at 18:04:42
 Eye status: No surgery, Phakic, Vitreous only

Target refraction: - +

IOL database:

Template:

Haigis

Rayner RayOne EM

A0: 1.170 A1: 0.400

IOL power SE	Residual refraction
24.50	-0.60
24.00	-0.23
23.50	0.13
23.00	0.49
22.50	0.84

Formula...

IOL...

IOL power SE	Residual refraction

More

Basics Premium IOL

	OD	OS	OD - OS Difference
Anterior axial curvature (simulated) nk = 1.3375; 3 mm ring			
SimK _{mean}	40.76 D	42.16 D	-1.40 D
SimK (steep)	41.30 D @ 84°	43.09 D @ 101°	
SimK (flat)	40.23 D @ 174°	41.27 D @ 11°	
Astigmatism (steep)	1.07 D @ 84°	1.82 D @ 101°	-0.75 D
Astigmatism (Steep) nc = 1.376; nah=1.336; 3 mm ring			
Astigm. (total)	0.94 D @ 85°	1.68 D @ 103°	
Astigm. (posterior)	-0.29 D @ 82°	-0.41 D @ 93°	
Δ Ast. (anterior - total)	0.13 D @ -1°	0.14 D @ -2°	
Total corneal wavefront 5 mm zone, pupil-centered			
Z ₄ Spherical aberration	0.15 μm	0.00 μm	0.15 μm
RMS HOA	0.30 μm	0.20 μm	0.10 μm
Pachymetry			
CCT (vertex)	577 μm	579 μm	-2 μm
Anterior segment			
AQD	2.74 mm	2.74 mm	0.00 mm
CCT + AQD	3.32 mm	3.32 mm	0.00 mm
Lens thickness	4.10 mm	4.09 mm	0.01 mm
Pupil & WTW			
Pupil diameter	3.6 mm	3.5 mm	0.1 mm
Pupil center	0.10 mm (@ 197°)	0.04 mm (@ 173°)	
Pupil center x/y	-0.09/-0.03 mm	-0.04/0.00 mm	
WTW	11.86 mm	11.90 mm	
Axial length			
Length	23.52±0.00 mm	23.29±0.00 mm	0.23 mm

Open toric/incision calculator

OU

Cornea single OD/OS
OU Cornea OU
Cornea follow-up
Cornea multi

OU Biometry OU
Calculation OU report
Info Settings
Close

Select series

6 6 4 9

OD	OS
2021-12-01 18:01:38	2021-12-01 18:04:42
2020-02-15 15:15:26	2020-02-15 15:16:40
2019-12-05 14:11:52	2019-12-05 14:14:44

OD 2021-12-01 at 18:01:38
 Eye status: No surgery, Phakic, Vitreous only

Target refraction: 0.00 D [- +]

IOL database: head

OS 2021-12-01 at 18:04:42
 Eye status: No surgery, Phakic, Vitreous only

Target refraction: 0.00 D [- +]

IOL database: head

Template: Custom

Haigis Formula...
 Rayner RayOne EM IOL...
 A0: 1.170 A1: 0.400

IOL power	SE	Residual refraction
25.50	-0.59	
25.00	-0.22	
24.50	0.14	✓
24.00	0.50	
23.50	0.86	

Template: Custom

Haigis Formula...
 Rayner RayOne EM IOL...
 A0: 1.170 A1: 0.400

IOL power	SE	Residual refraction
24.50	-0.60	
24.00	-0.23	
23.50	0.13	✓
23.00	0.49	
22.50	0.84	

Formula... IOL...
 IOL power SE Residual refraction

Formula... IOL...
 IOL power SE Residual refraction

More

Basics Premium IOL

	OD	OS	OD - OS Difference
Anterior axial curvature (simulated) nk = 1.3375; 3 mm ring			
SimK _{mean}	40.76 D	42.16 D	-1.40 D
SimK (steep)	41.30 D @ 84°	43.09 D @ 101°	
SimK (flat)	40.23 D @ 174°	41.27 D @ 11°	
Astigmatism (steep)	1.07 D @ 84°	1.82 D @ 101°	-0.75 D
Astigmatism (Steep) nc = 1.376; nah=1.336; 3 mm ring			
Astigm. (total)	0.94 D @ 85°	1.68 D @ 103°	
Astigm. (posterior)	-0.29 D @ 82°	-0.41 D @ 93°	
Δ Ast. (anterior - total)	0.13 D @ -1°	0.14 D @ -2°	
Total corneal wavefront 5 mm zone, pupil-centered			
Z ₄ Spherical aberration	0.15 μm	0.00 μm	0.15 μm
RMS HOA	0.30 μm	0.20 μm	0.10 μm
Pachymetry			
CCT (vertex)	577 μm	579 μm	-2 μm
Anterior segment			
AQD	2.74 mm	2.74 mm	0.00 mm
CCT + AQD	3.32 mm	3.32 mm	0.00 mm
Lens thickness	4.10 mm	4.09 mm	0.01 mm
Pupil & WTW			
Pupil diameter	3.6 mm	3.5 mm	0.1 mm
Pupil center	0.10 mm (@ 197°)	0.04 mm (@ 173°)	
Pupil center x/y	-0.09/-0.03 mm	-0.04/0.00 mm	
WTW	11.86 mm	11.90 mm	
Axial length			
Length	23.52±0.00 mm	23.29±0.00 mm	0.23 mm

Open toric/incision calculator

Open toric/incision calculator

OU

Cornea single OD/OS OU Cornea OU Cornea follow-up Cornea multi

OU Calculation OU report Info Settings Close

Select series

6 6 4 9

OD	OS
2021-12-01 18:01:38	2021-12-01 18:04:42
2020-02-15 15:15:26	2020-02-15 15:16:40
2019-12-05 14:11:52	2019-12-05 14:14:44

OD 2020-02-15 at 15:15:26
 Eye status: No surgery, Phakic, Vitreous only
 Target refraction: 0.00 D [- +]
 IOL database: head

OS 2020-02-15 at 15:16:40
 Eye status: No surgery, Phakic, Vitreous only
 Target refraction: 0.00 D [- +]
 IOL database: head

Template: Custom

Haigis Formula...
 Rayner RayOne Tor IOL...
 A0: 1.170 A1: 0.400

IOL power SE	Residual refraction
25.00	-0.64
24.50	-0.27
24.00	0.09 ✓
23.50	0.45
23.00	0.81

Template: Custom

Haigis Formula...
 Rayner RayOne Tor IOL...
 A0: 1.170 A1: 0.400

IOL power SE	Residual refraction
25.00	-0.89
24.50	-0.52
24.00	-0.16 ✓
23.50	0.20
23.00	0.56

Spheric availability:
 From -9.50 D to 34.50 D available in 0.50 D steps

Open toric/incision calculator

Open toric/incision calculator

More

Basics Premium IOL

	OD	OS	OD - OS Difference
Anterior axial curvature (simulated) nk = 1.3375; 3 mm ring			
SimK _{mean}	41.27 D	42.14 D	-0.87 D
SimK (steep)	41.72 D @ 82°	43.11 D @ 100°	
SimK (flat)	40.83 D @ 172°	41.21 D @ 10°	
Astigmatism (steep)	0.89 D @ 82°	1.90 D @ 100°	-1.01 D
Astigmatism (Steep) nc = 1.376; nah=1.336; 3 mm ring			
Astigm. (total)	0.73 D @ 83°	1.71 D @ 101°	
Astigm. (posterior)	-0.28 D @ 82°	-0.46 D @ 92°	
Δ Ast. (anterior - total)	0.16 D @ 0°	0.19 D @ -2°	
Total corneal wavefront 5 mm zone, pupil-centered			
Z ₄ Spherical aberration	0.05 μm	0.02 μm	0.03 μm
RMS HOA	0.20 μm	0.26 μm	-0.06 μm
Pachymetry			
CCT (vertex)	572 μm	578 μm	-6 μm
Anterior segment			
AQD	2.80 mm	2.80 mm	0.00 mm
CCT + AQD	3.38 mm	3.38 mm	0.00 mm
Lens thickness	4.08 mm	4.07 mm	0.01 mm
Pupil & WTW			
Pupil diameter	3.4 mm	3.2 mm	0.2 mm
Pupil center	0.16 mm (@ 258°)	0.08 mm (@ 256°)	
Pupil center x/y	-0.03/-0.16 mm	-0.02/-0.08 mm	
WTW	11.86 mm	11.88 mm	
Axial length			
Length	23.51±0.00 mm	23.28±0.00 mm	0.23 mm

OU

Cornea single OD/OS Cornea OU Cornea follow-up Cornea multi

Biometry OU Calculation OU Report Info Settings Close

Select series

6 5 4 9

OD	OS
2021-12-01 18:01:38	2021-12-01 18:04:42
2020-02-15 15:15:26	2020-02-15 15:16:40
2019-12-05 14:11:52	2019-12-05 14:14:44

OD 2020-02-15 at 15:15:26
 Eye status: No surgery, Phakic, Vitreous only

Astigmatism (Steep / Flat): Total corneal power (Steep: 0.73 D @ 83°)

Incision location (°): 180°

Surgically induced astigmatism: 0.0 D

IOL axis (°): 83°

OS 2020-02-15 at 15:16:40
 Eye status: No surgery, Phakic, Vitreous only

Astigmatism (Steep / Flat): Total corneal power (Steep: 1.71 D @ 101°)

Incision location (°): 0°

Surgically induced astigmatism: 0.0 D

IOL axis (°): 101°

IOL overlay opacity: Map overlay opacity: IOL overlay opacity: Map overlay opacity:

Target refraction: 0.00 D Target refraction: 0.00 D

Haigis

Rayner RayOne Toric

A0: 1.170 A1: 0.400 A2: 0.100

IOL power SE	Residual refraction
24.00	0.09

Haigis

Rayner RayOne Toric

A0: 1.170 A1: 0.400 A2: 0.100

IOL power SE	Residual refraction
24.00	-0.16

Toric calculator applies "Haigis"

Toric IOL details			Residual astigmatism	
Cyl. IOL	Cyl. CP	Axis	Cylinder	Axis (Steep)
0.00 D	0.00 D	83°	0.73 D	83°
1.00 D	0.73 D	83°	0.01 D	83°
1.50 D	1.09 D	83°	0.36 D	173°

Toric calculator applies "Haigis"

Toric IOL details			Residual astigmatism	
Cyl. IOL	Cyl. CP	Axis	Cylinder	Axis (Steep)
1.50 D	1.08 D	101°	0.62 D	101°
2.00 D	1.44 D	101°	0.26 D	101°
2.50 D	1.80 D	101°	0.10 D	11°

Rayner RayOne Toric 24.00 D SE, Cyl 1.00 D @ 83° Rayner RayOne Toric 24.00 D SE, Cyl 2.00 D @ 101°

Back to spheric calculator

Back to spheric calculator

More

Basics Premium IOL

	OD	OS	OD - OS Difference
Anterior axial curvature (simulated) nk = 1.3375; 3 mm ring			
SimK _{mean}	41.27 D	42.14 D	-0.87 D
SimK (steep)	41.72 D @ 82°	43.11 D @ 100°	
SimK (flat)	40.83 D @ 172°	41.21 D @ 10°	
Astigmatism (steep)	0.89 D @ 82°	1.90 D @ 100°	-1.01 D
Astigmatism (Steep) nc = 1.376; nah=1.336; 3 mm ring			
Astigm. (total)	0.73 D @ 83°	1.71 D @ 101°	
Astigm. (posterior)	-0.28 D @ 82°	-0.46 D @ 92°	
Δ Ast. (anterior - total)	0.16 D @ 0°	0.19 D @ -2°	
Total corneal wavefront			
5 mm zone, pupil-centered			
Z ₄ ⁰ Spherical aberration	0.05 μm	0.02 μm	0.03 μm
RMS HOA	0.20 μm	0.26 μm	-0.06 μm
Pachymetry			
CCT (vertex)	572 μm	578 μm	-6 μm
Anterior segment			
AQD	2.80 mm	2.80 mm	0.00 mm
CCT + AQD	3.38 mm	3.38 mm	0.00 mm
Lens thickness	4.08 mm	4.07 mm	0.01 mm
Pupil & WTW			
Pupil diameter	3.4 mm	3.2 mm	0.2 mm
Pupil center	0.16 mm (@ 258°)	0.08 mm (@ 256°)	
Pupil center x/y	-0.03/-0.16 mm	-0.02/-0.08 mm	
WTW	11.86 mm	11.88 mm	
Axial length			
Length	23.51±0.00 mm	23.28±0.00 mm	0.23 mm

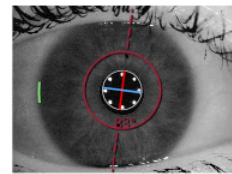
Cataract toric IOL calculation OU report (as on screen)
ANTERION



OU Patient: ANTERION, All Apps (2021: Cornea with ETM) Date of birth: 1990-01-01 Sex: Female
 Patient ID: ANTER0001 Examination date: 2020-02-15

OD 2020-02-15 at 15:15:26
 Eye status: No surgery, Phakic, Vitreous only

Astigmatism (/ Steep / \ Flat): Total corneal power (Steep: 0.73 D @ 83°)
 Incision location (↔): 180°
 Surgically induced astigmatism: 0.0 D
 IOL axis (---): 83°



Target refraction: 0.00 D

Haigis
 Rayner RayOne Toric
 A0: 1.170 A1: 0.400 A2: 0.100

IOL power SE	Residual refraction
24.00	0.09 ✓

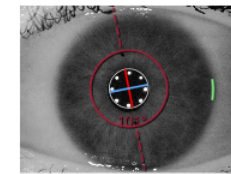
Toric calculator applies "Haigis"

Toric IOL details			Residual astigmatism	
Cyl. IOL	Cyl. CP	Axis	Cylinder	Axis (Steep)
0.00 D	0.00 D	83°	0.73 D	83°
1.00 D	0.73 D	83°	0.01 D	83° ✓
1.50 D	1.09 D	83°	0.36 D	173° ⚠ ⚠

Rayner RayOne Toric 24.00 D SE, Cyl 1.00 D @ 83°

OS 2020-02-15 at 15:16:40
 Eye status: No surgery, Phakic, Vitreous only

Astigmatism (/ Steep / \ Flat): Total corneal power (Steep: 1.71 D @ 101°)
 Incision location (↔): 0°
 Surgically induced astigmatism: 0.0 D
 IOL axis (---): 101°



Target refraction: 0.00 D

Haigis
 Rayner RayOne Toric
 A0: 1.170 A1: 0.400 A2: 0.100

IOL power SE	Residual refraction
24.00	-0.16 ✓

Toric calculator applies "Haigis"

Toric IOL details			Residual astigmatism	
Cyl. IOL	Cyl. CP	Axis	Cylinder	Axis (Steep)
1.50 D	1.08 D	101°	0.62 D	101°
2.00 D	1.44 D	101°	0.26 D	101° ✓
2.50 D	1.80 D	101°	0.10 D	11°

Rayner RayOne Toric 24.00 D SE, Cyl 2.00 D @ 101°

Premium IOL
 OD OS OD - OS Difference
Anterior axial curvature (simulated)
 nk = 1.3375; 3 mm ring

SimK _{mean}	41.27 D	42.14 D	-0.87 D
SimK (steep)	41.72 D @ 82°	43.11 D @ 100°	
SimK (flat)	40.83 D @ 172°	41.21 D @ 10°	
Astigmatism (steep)	0.89 D @ 82°	1.90 D @ 100°	-1.01 D

Astigmatism (Steep)
 nc = 1.376; nah=1.336; 3 mm ring

Astigm. (total)	0.73 D @ 83°	1.71 D @ 101°
Astigm. (posterior)	-0.28 D @ 82°	-0.46 D @ 92°
Δ Ast. (anterior - total)	0.16 D @ 0°	0.19 D @ -2°

Total corneal wavefront
 5 mm zone, pupil-centered

Z ² Spherical aberration	0.05 μm	0.02 μm	0.03 μm
RMS HOA	0.20 μm	0.26 μm	-0.06 μm

Pachymetry

CCT (vertex)	572 μm	578 μm	-6 μm
--------------	--------	--------	-------

Anterior segment

AQD	2.80 mm	2.80 mm	0.00 mm
CCT + AQD	3.38 mm	3.38 mm	0.00 mm
Lens thickness	4.08 mm	4.07 mm	0.01 mm

Pupil & WTW

○ Pupil diameter	3.4 mm	3.2 mm	0.2 mm
◇ Pupil center	0.16 mm (@ 258°)	0.08 mm (@ 256°)	
Pupil center x/y	-0.03/-0.16 mm	-0.02/-0.08 mm	
WTW	11.86 mm	11.88 mm	

Axial length

Length	23.51±0.00 mm	23.28±0.00 mm	0.23 mm
--------	---------------	---------------	---------

Notes: ⚠³ Segmentation(s) manually edited. ⚠⁴ Post-incision astigmatism would be overcorrected by this IOL. ⚠⁵ The residual astigmatism axis differs from the pre-incision astigmatism axis!

Creation date: 2022-11-09 Operator (report): head Signature:

OD

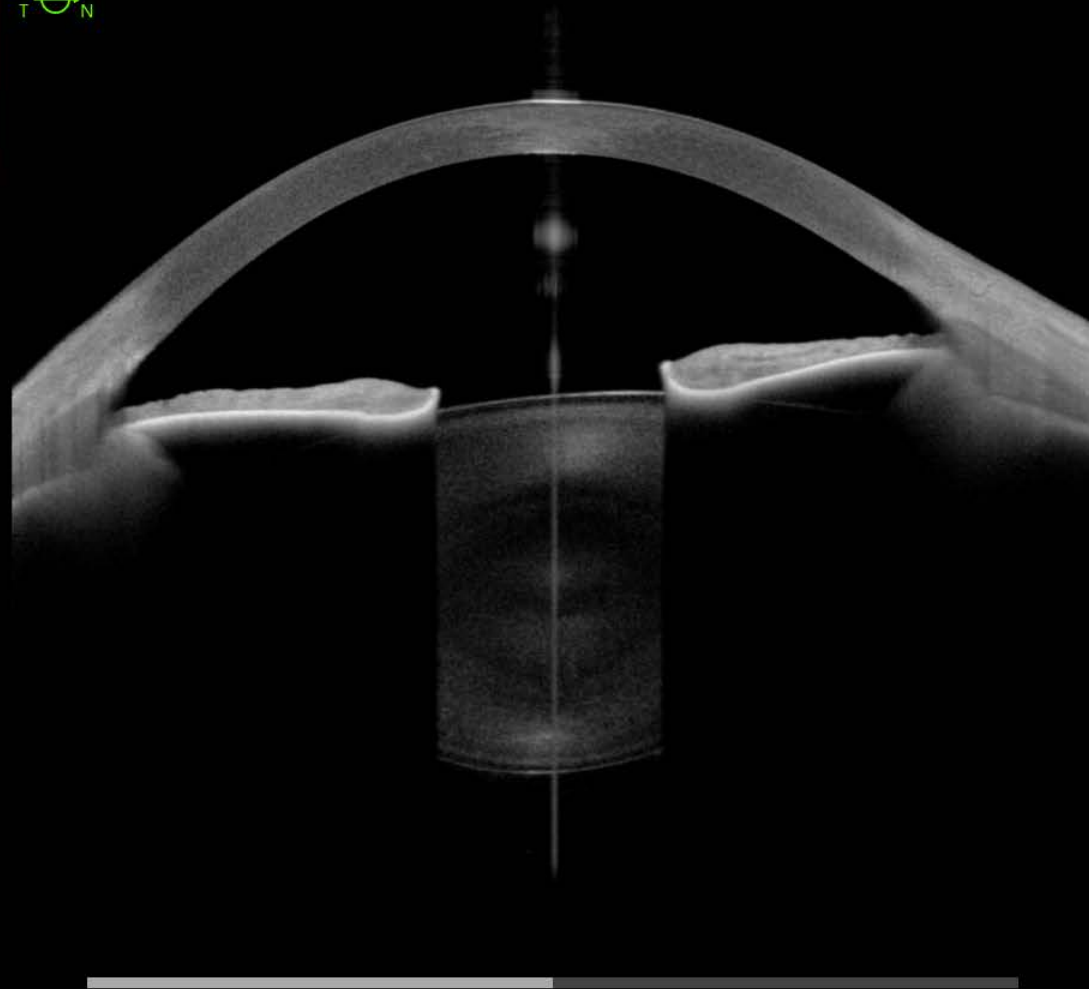
Single OD/OS Multi



Select series

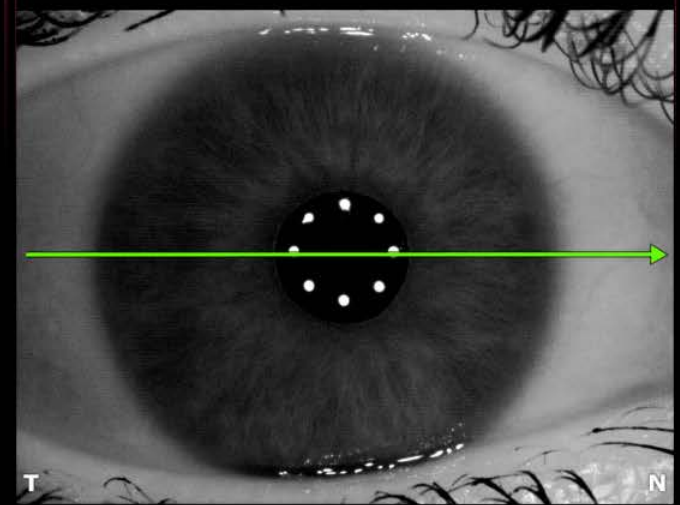


OD	OS
2021-12-01 18:07:10	2021-12-01 18:06:51
2019-12-05 14:33:15	2019-12-05 14:59:48
2019-12-05 14:30:19	2019-12-05 14:38:25
2019-12-05 14:28:00	
2019-12-05 14:26:02	
2019-12-05 14:23:09	



More

Always show main camera image



OCT overlay

Scan pattern details

No. of B-scans	1
Scans used for averaging	8
Scan pattern	Line
B-scan angle	0°
B-scan length	16.50 mm
Scan resolution level	768
Scan resolution (in air)	21.51 μm

A-scan Measure distance

Warnings: Refraction correction not applied. No measurements in μm possible.

OS

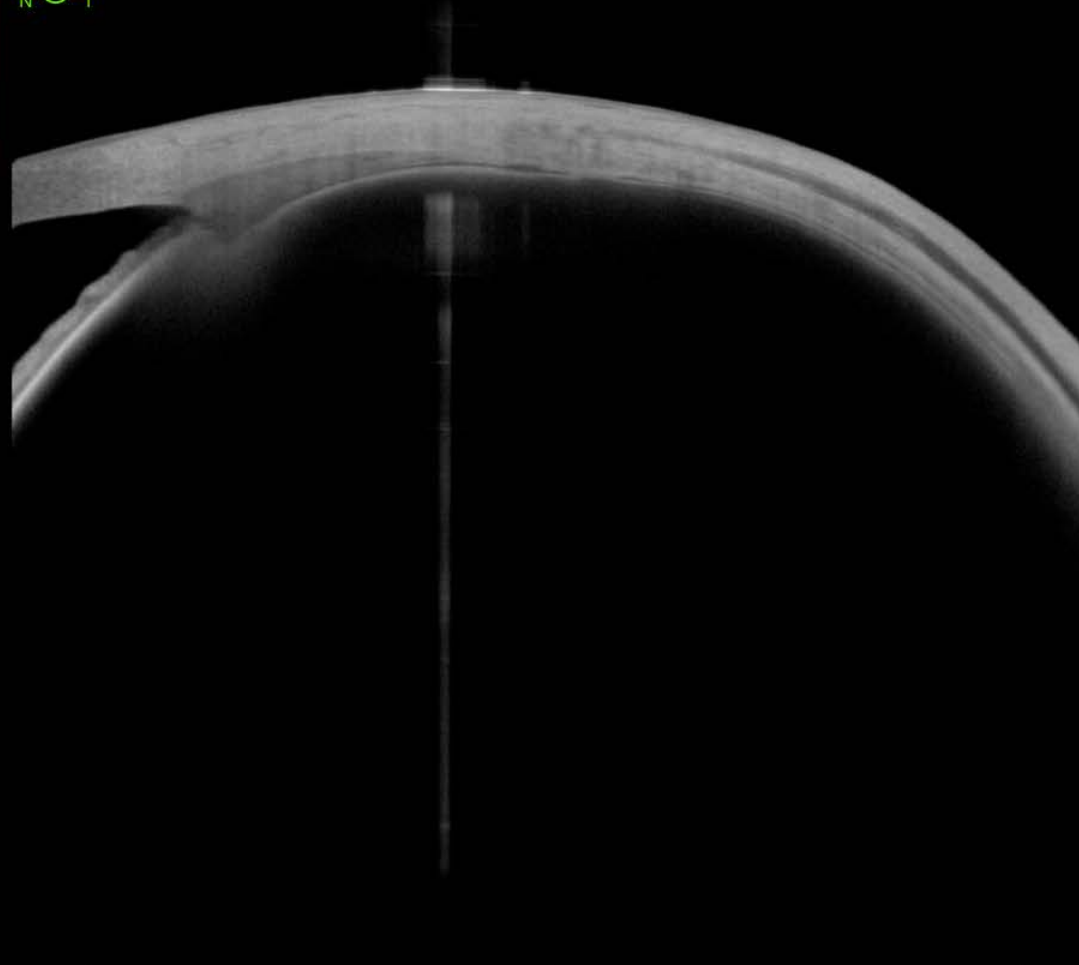
Single OD/OS Multi



Select series

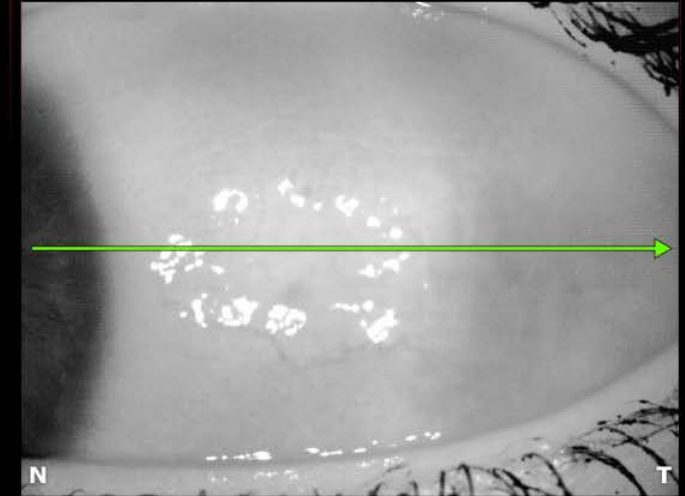


OD	OS
2021-12-01 18:07:10	2021-12-01 18:06:51
2019-12-05 14:33:15	2019-12-05 14:59:48
2019-12-05 14:30:19	2019-12-05 14:38:25
2019-12-05 14:28:00	
2019-12-05 14:26:02	
2019-12-05 14:23:09	



More

Always show main camera image



OCT overlay

Scan pattern details

No. of B-scans	1
Scans used for averaging	8
Scan pattern	Line
B-scan angle	0°
B-scan length	16.50 mm
Scan resolution level	1024
Scan resolution (in air)	16.13 μm

A-scan Measure distance

Single OD/OS Multi



Select series



OD

Metrics

OS

2021-12-01 18:02:30

2021-12-01 18:05:55

2019-12-05 14:19:47

2019-12-05 14:21:34



B-scan 4 / 6



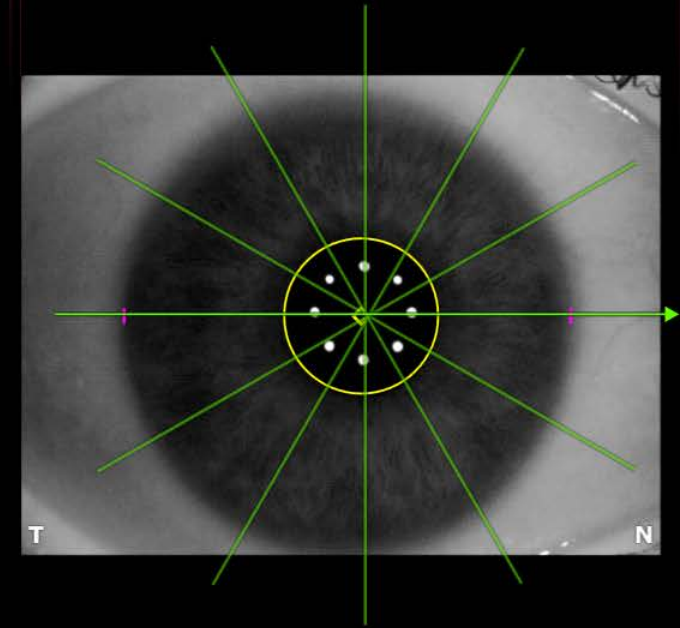
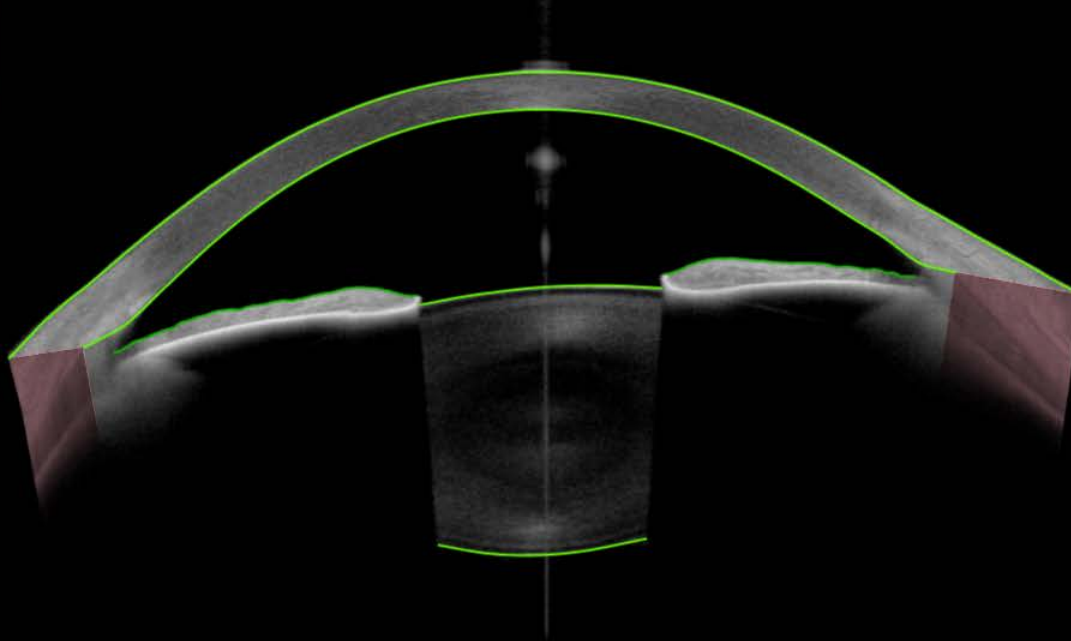
More

Basics

360°

Camera image

Always show main camera image

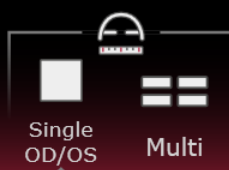


500 µm

Vertex A-scan Segmentation Edit Scleral spurs Edit ACA recess points Edit Measure distance

- OCT overlay
- Pupil diameter
- Pupil center
- WTW

Warnings: Scleral spur(s) manually edited.



Select series



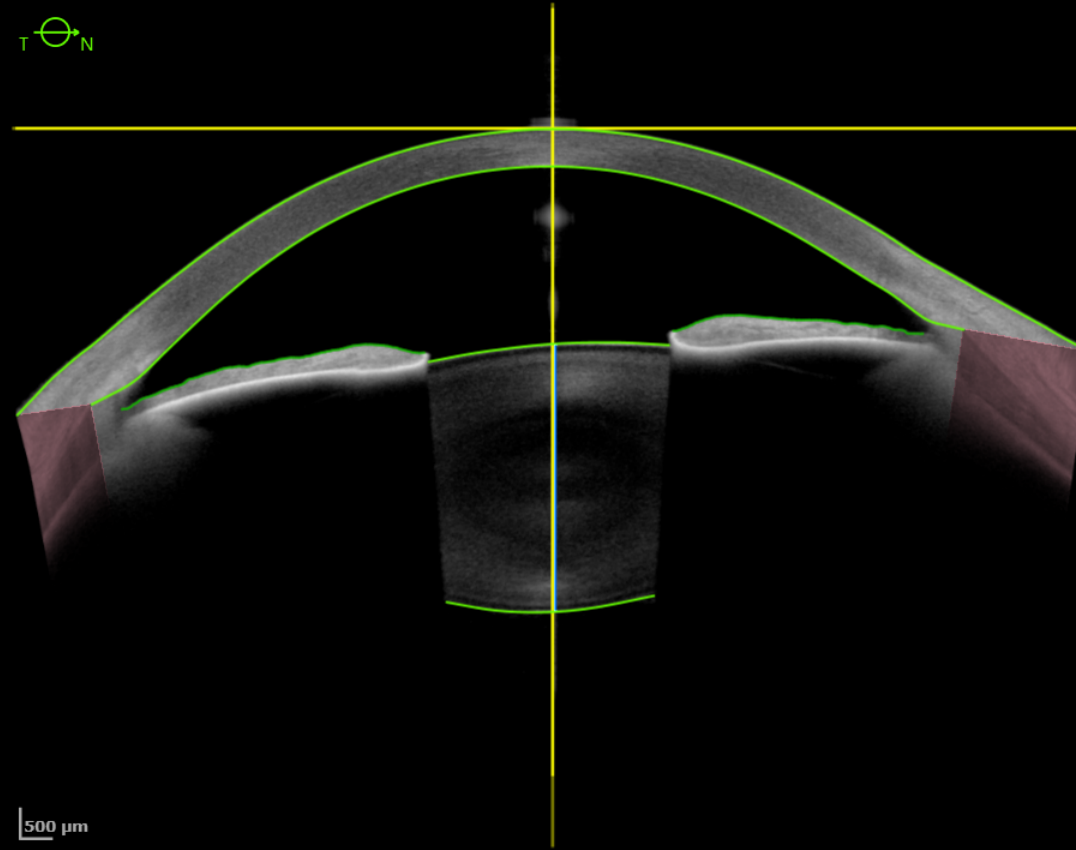
OD

OS

	2021-12-01 18:02:30
	2019-12-05 14:19:47

	2021-12-01 18:05:55
	2019-12-05 14:21:34

B-scan 4 / 6



500 µm

More

Basics 360° Camera image

OD

Cornea

CCT	575 µm
Anterior chamber	
AQD	2.72 mm
CCT + AQD	3.30 mm
Anterior chamber volume	n/a
ACA distance*	n/a
Spur-to-spur distance*	n/a
Vertex - Scleral spur angle*	n/a

Anterior chamber angle (180° / 0°)

ACA 500*	/
SSA 500*	/
AOD 500*	/
TISA 500*	/
ACA 750*	/
SSA 750*	/
AOD 750*	/
TISA 750*	/

Lens

Lens thickness	4.11 mm
Lens vault*	n/a

Pupil & WTW

Pupil diameter	4.2 mm
Pupil center	0.14 mm (@ 195°)
Pupil center x/y	-0.14/-0.04 mm
WTW	11.88 mm

* Values from current B-scan

Vertex
 A-scan
 Segmentation [Edit](#)
 Scleral spurs [Edit](#)
 ACA recess points [Edit](#)
[Measure distance](#)

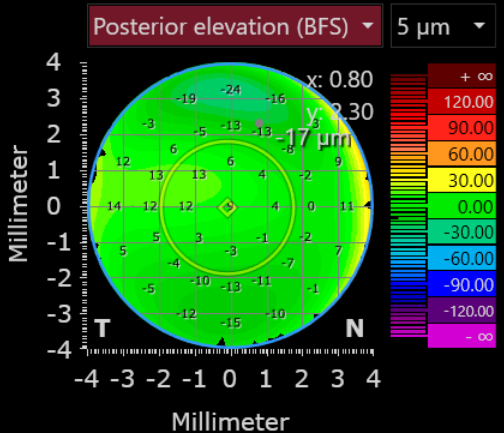
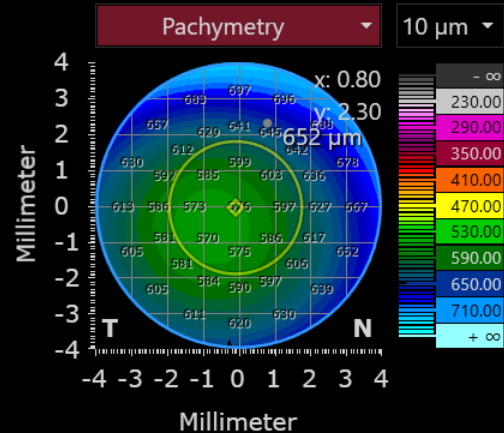
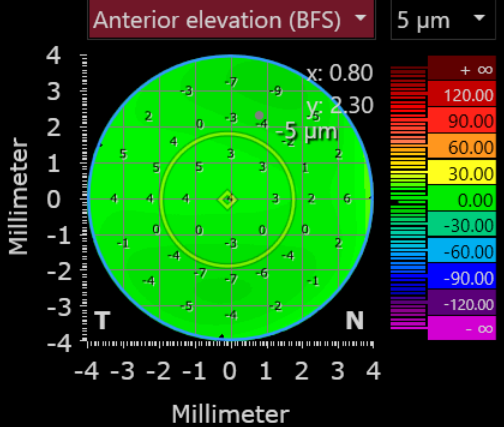
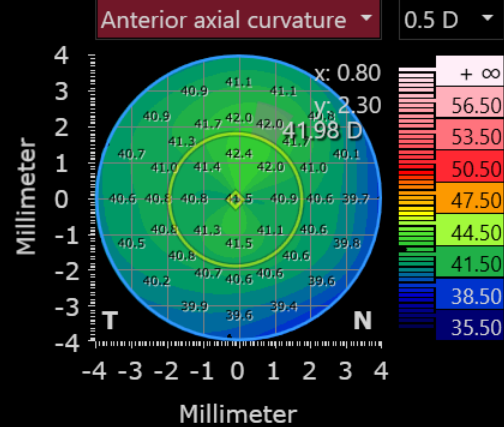
Warnings: Scleral spur(s) manually edited.

Select all measurement overlays (500)

Select series

OD	OS
2021-12-01 18:03:36	2021-12-01 18:05:26
2020-02-15 15:12:48	2020-02-15 15:13:20
2019-12-05 13:39:27	2019-12-05 13:44:36

Template: Cornea refractive I



- Vertex
- Thinnest point
- K_{max}
- Pupil diameter
- Pupil center
- 3 mm ring
- Zones
- Rings

More

Segments	Wavefront	Images
Basics	Ectasia	Epithelium
OD		
Anterior axial curvature (simulated)		
nk = 1.3375; 3 mm ring		
SimK _{mean}	41.38 D	
SimK (steep)	41.97 D @ 80°	
SimK (flat)	40.81 D @ 170°	
Astigmatism (steep)	1.16 D @ 80°	
nk = 1.3375; 8 mm zone		
BFS	40.66 D	
K _{max}	42.63 D	
K _{max} x/y	0.16/0.85 mm	
p-value	0.62	
Posterior axial curvature		
nc = 1.376, nah = 1.336; 3 mm ring		
K _{mean}	-5.89 D	
K (steep)	-6.04 D @ 81°	
K (flat)	-5.75 D @ 171°	
Astigmatism (steep)	-0.29 D @ 81°	
P/A ratio	0.83	
nc = 1.376, nah = 1.336; 8 mm zone		
BFS	-5.71 D	
K _{max}	-6.30 D	
K _{max} x/y	0.02/1.56 mm	
p-value	0.57	
P/A ratio	0.84	
Total corneal power (ray traced)		
nc = 1.376, nah = 1.336; 3 mm ring		
TCP _{mean}	40.80 D	
TCP (steep)	41.31 D @ 80°	
TCP (flat)	40.29 D @ 170°	
Astigmatism (steep)	1.02 D @ 80°	

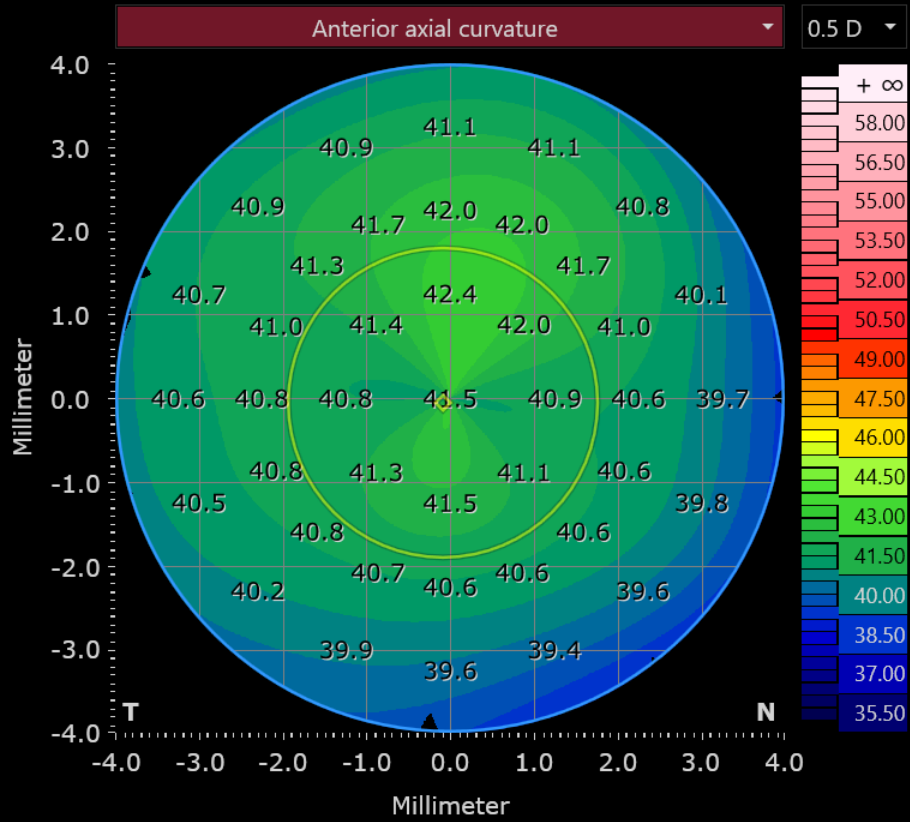
Single OD/OS
 Both eyes
 Follow-up
 Multi
 Ectasia

Report
 Info
 Settings
 Close

Select series

6
 6
 4
 9

OD	OS
2021-12-01 18:03:36	2021-12-01 18:05:26
2020-02-15 15:12:48	2020-02-15 15:13:20
2019-12-05 13:39:27	2019-12-05 13:44:36



- Vertex
- Thinnest point
- K_{max}
- Pupil diameter
- Pupil center
- 3 mm ring
- Zones
- Rings

More

Basics Ectasia Epithelium Segments **Wavefront** Images

OD

Anterior corneal wavefront parameters

ROI diameter = 4 mm ROI center = Vertex

Z ₁ ⁻¹ Vertical tilt	0.33
Z ₁ ¹ Horizontal tilt	0.06
Z ₂ ⁻² Oblique astigm.	0.21
Z ₂ ⁰ Defocus	0.71
Z ₂ ² WTRATR astigm.	-0.60
Z ₃ ⁻³ Oblique trefoil	-0.05
Z ₃ ¹ Vertical coma	0.11
Z ₃ ¹ Horizontal coma	0.01
Z ₃ ³ Horizontal trefoil	-0.04
Z ₄ ⁰ Spherical aberration	0.03
4th order RMS	0.05
5th order RMS	0.01
6th order RMS	0.00
7th order RMS	0.00

5 μm -5 -3 0 3 5

RMS LOA 1.01 μm

RMS HOA 0.14 μm

Total corneal wavefront parameters

ROI diameter = 4 mm ROI center = Vertex

Z ₁ ⁻¹ Vertical tilt	-0.14
Z ₁ ¹ Horizontal tilt	-0.34
Z ₂ ⁻² Oblique astigm.	0.16
Z ₂ ⁰ Defocus	0.65
Z ₂ ² WTRATR astigm.	-0.48
Z ₃ ⁻³ Oblique trefoil	-0.04
Z ₃ ⁻¹ Vertical coma	0.07
Z ₃ ¹ Horizontal coma	0.02
Z ₃ ³ Horizontal trefoil	-0.04
Z ₄ ⁰ Spherical aberration	0.02
4th order RMS	0.05
5th order RMS	0.00
6th order RMS	0.00
7th order RMS	0.00

Kampanjpris året ut!

Kontakta oss för pris
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