

18th International Conference of the
Research Institute of Ophthalmology

RIO 2026

22 -23 JANUARY 2026
ROYAL MAXIM PALACE KEMPINSKI, CAIRO

Customized corneal remodeling with progressive ICRS

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Ophthalmology (RIO)

A. Professor of Ophthalmology

The Speaker Has No Financial Interest



ICRS

- Improve corneal surface regularity
- Decrease Kmax
- Improve UDVA & CDVA
- Stop progression ??

R10 2026

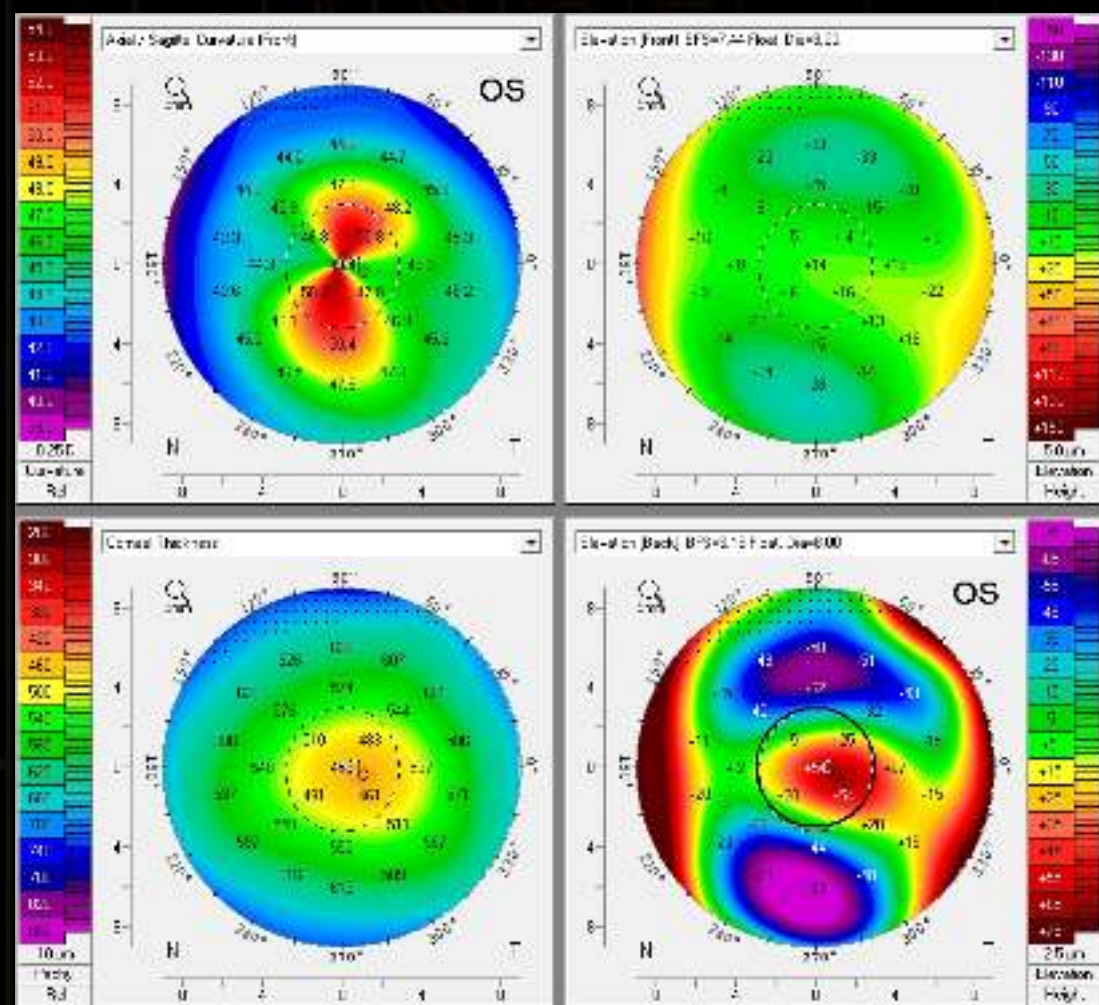
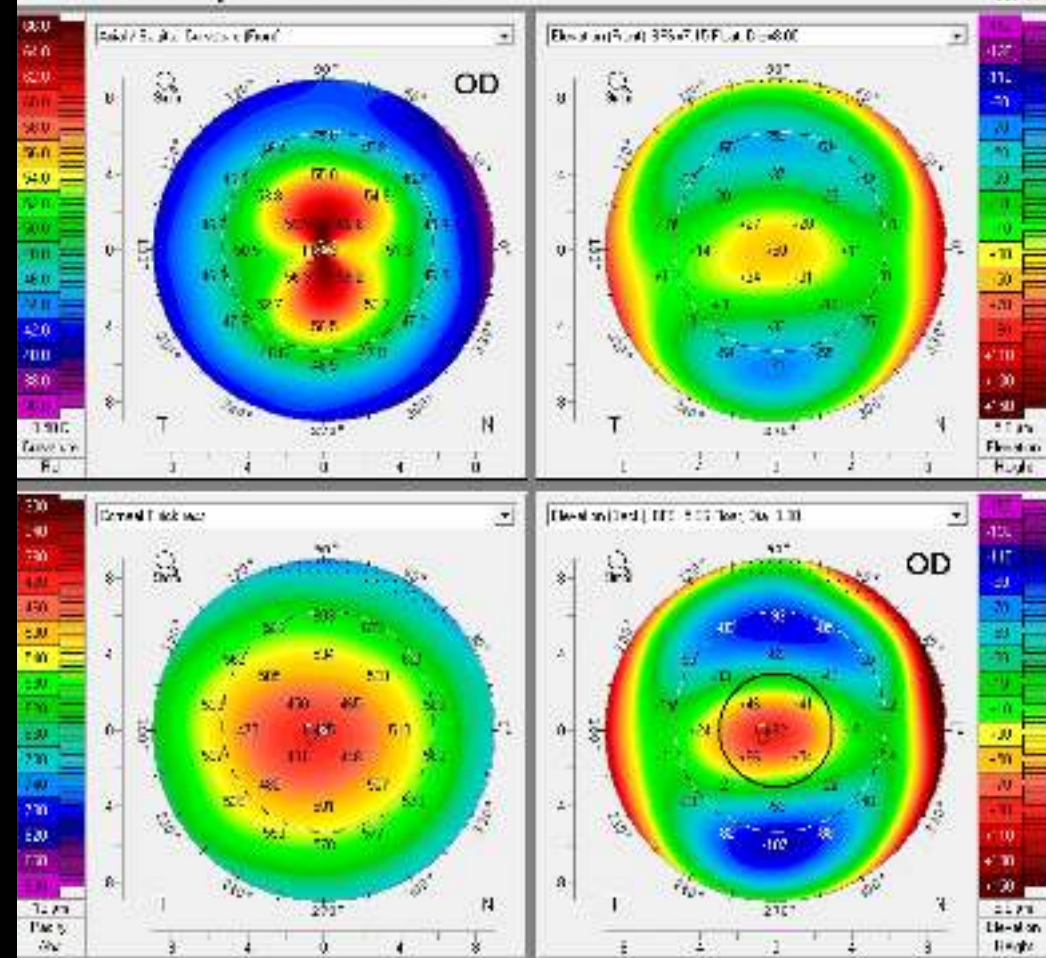
Advantages of ICRS over CAIRS

- Reliable nomograms
- Stronger biomechanical effect
- Immediate & stable reshaping
- No tissue variability
Eliminates donor-related differences seen with allogenic tissue
- Wide availability & easy logistics
Off-the-shelf implants; no eye-bank dependency
- Extensive long-term evidence
- Reversibility and exchangeability

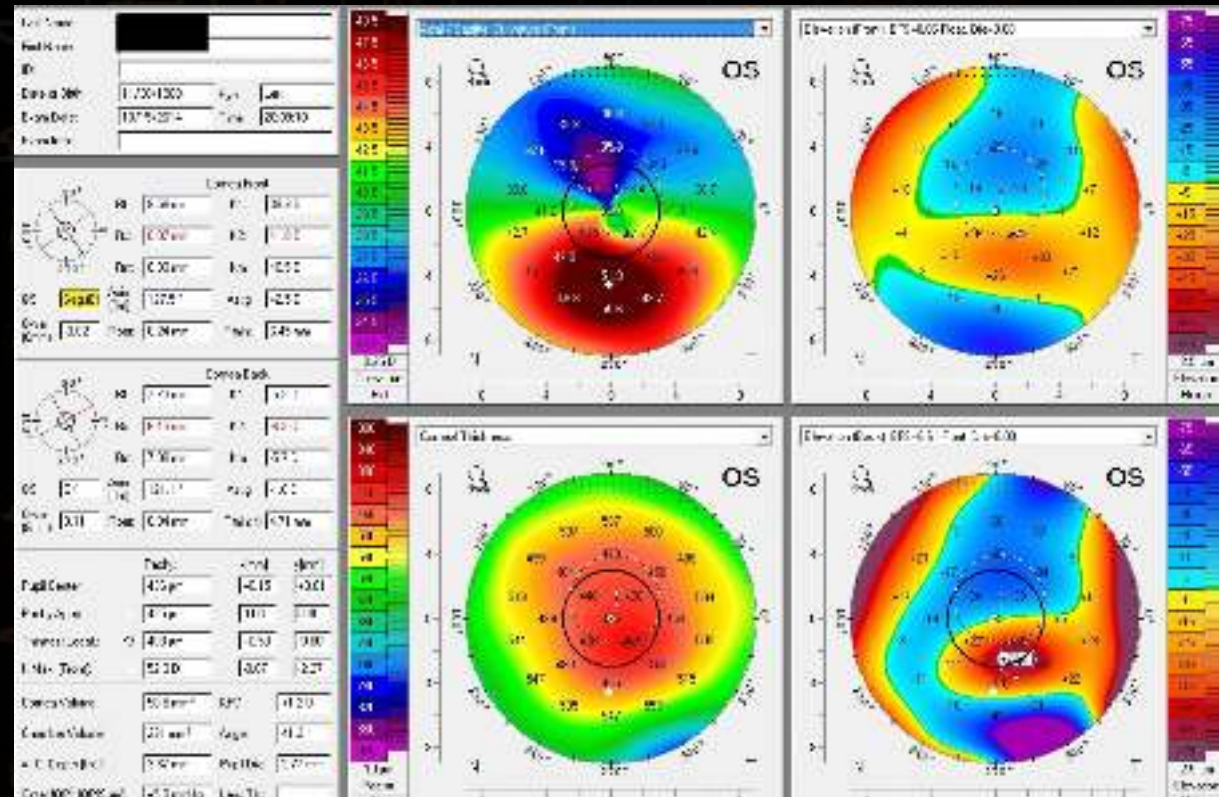
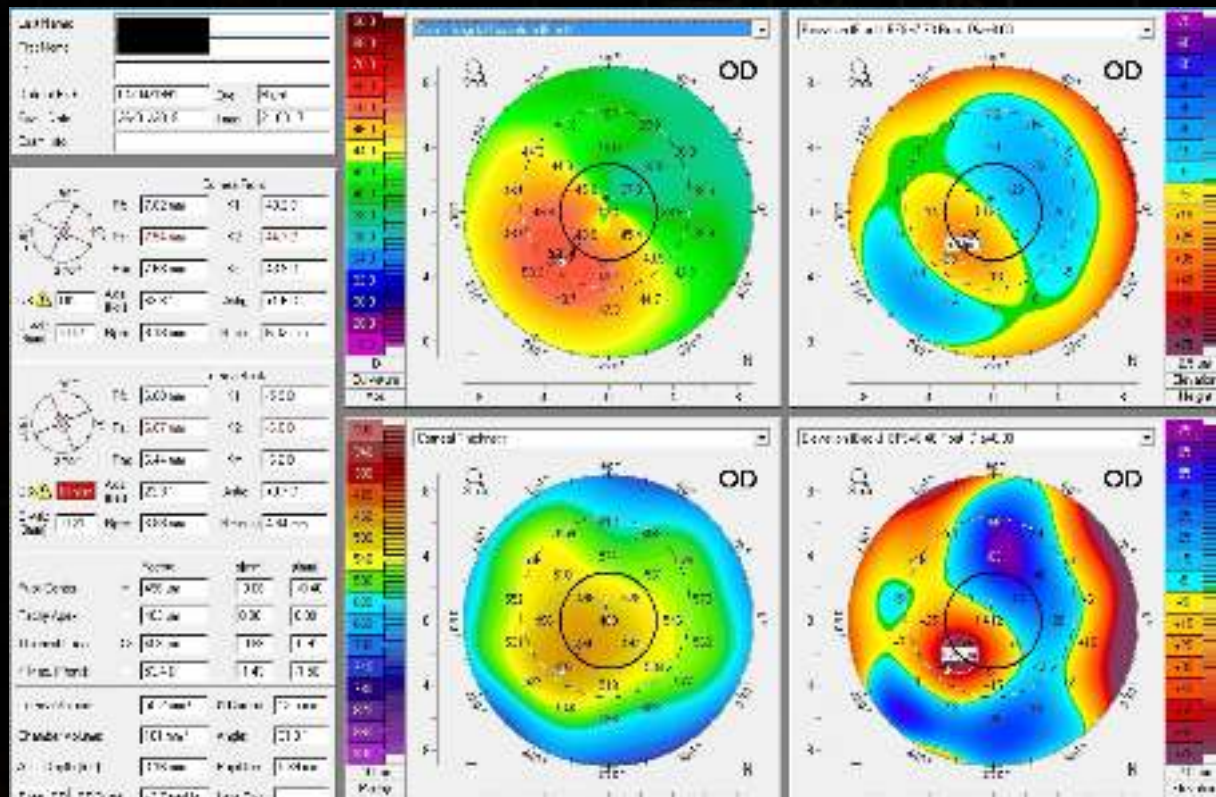
Fernández-Vega/Alfonso classification system

- Nipple: A central and hyperprolate (small, steep) ectasia with the visual and topographic axes typically aligned.
- Bow tie: Characterized by a central regular astigmatism pattern, often resembling a normal astigmatism, but with underlying corneal thinning.
- Croissant: Occurs when the ectasia is paracentral and the comatic and topographic astigmatism axes coincide (aligned).
- Duck: Occurs when the ectasia is paracentral, but the astigmatism and comatic axes do not coincide (are non-coincident or skewed).
- Snowman: Occurs when the ectasia is paracentral and the axes of the astigmatism and coma are perpendicular to each other.

CAM 4 Maps Selectable



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OCULUS - PENTACAM 4 Maps Selectable

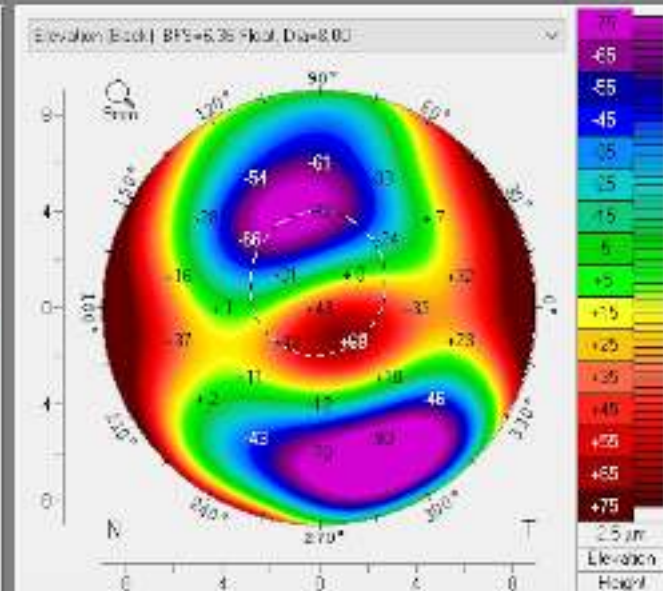
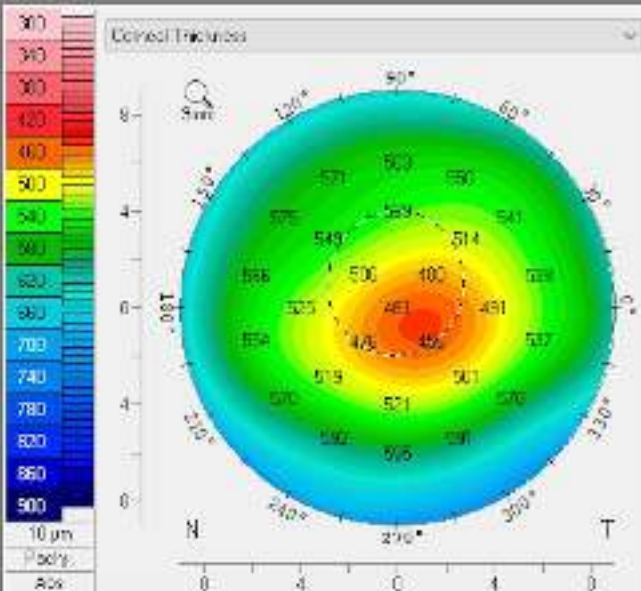
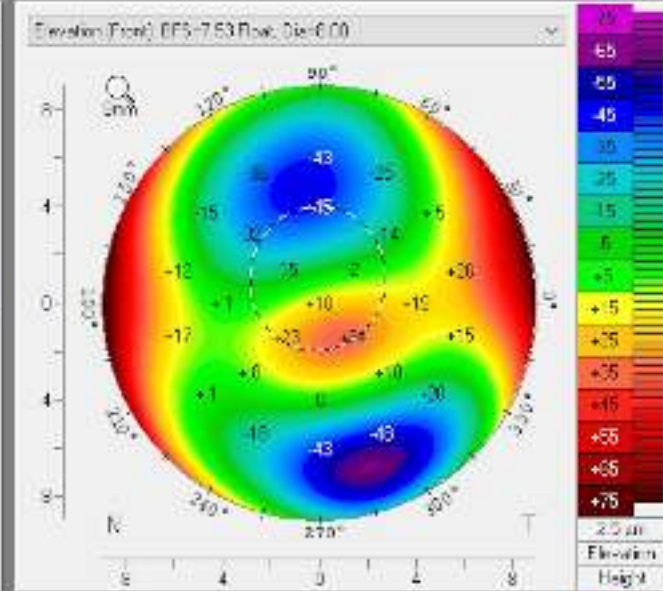
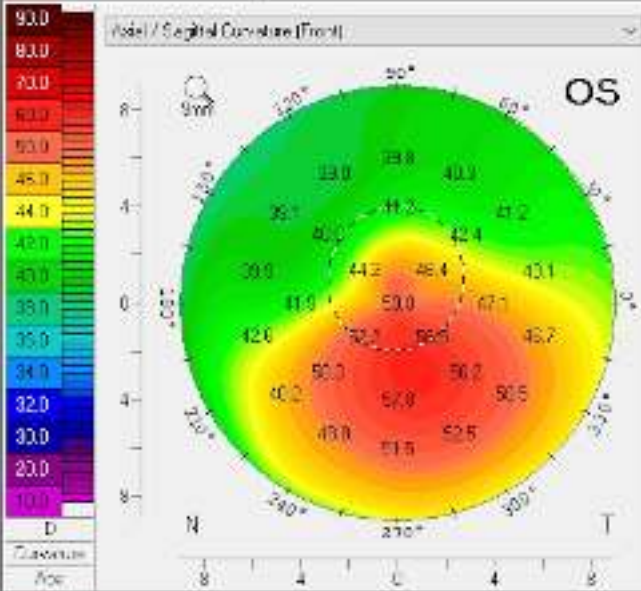
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 ID: [Blank]
 Date of Birth: 30/03/1994 Eye: Left
 Exam Date: 10/11/2020 Time: 7:31:48
 Exam Info: [Blank]

Cornea Front
 R: 7.33 mm K1: 45.9 D
 R: 6.73 mm K2: 50.1 D
 R: 7.04 mm Km: 47.9 D
 Avg: 6.67 mm AvgK: 47.7 D
 Q-val: -0.88 Rper: 8.02 mm Rmax: 8.52 mm
 Q-val: (30°)

Cornea Back
 R: 6.01 mm K1: 67.0 D
 R: 5.43 mm K2: 74.0 D
 R: 5.72 mm Km: 70.0 D
 Avg: 5.72 mm AvgK: 70.3 D
 Q-val: -0.70 Rper: 6.03 mm Rmax: 6.53 mm
 Q-val: (30°)

Pachy: (mm) / (mm)
 Pupil Center: 4 479 μm 0.04 -0.5°
 Pachy Area: 451 μm 0.00 0.00
 Thinnest Local: 0 451 μm -0.54 0.24
 K Max (Front): 60.1 D -0.34 -1.35

Cornea Volume: 54.3 mm³ PWTW: 12.5 mm
 Chamber Volume: 179 mm³ Angle: 33.1°
 A.C. Depth (mm): 2.94 mm Pup/Dia: 2.50 mm
 Enter IOP: IOP Sum: 16.0 mmHg Low Tn: [Blank]



R10 202

OCULUS PENTACAM 1 Large Color Map

1.30/04

Last Name: [REDACTED]
 First Name: [REDACTED]
 ID: [REDACTED]
 Date of Birth: [REDACTED] Right
 Exam Date: [REDACTED] 12:45:00
 Exam Info: [REDACTED]

Axial / Sagittal Curvature (Front)

Cornea Front

90°
 0.8 T
 270°

Rf: 7.67 mm K1: 44.0 D
 Rs: 7.17 mm K2: 47.1 D
 Rm: 7.42 mm Km: 45.5 D

QS: OK Axis: (flt.) 0.3° Astig: 3.1 D
 Q-val: (8mm) -0.54 Rper: 7.89 mm Rmin: 6.69 mm

Cornea Back

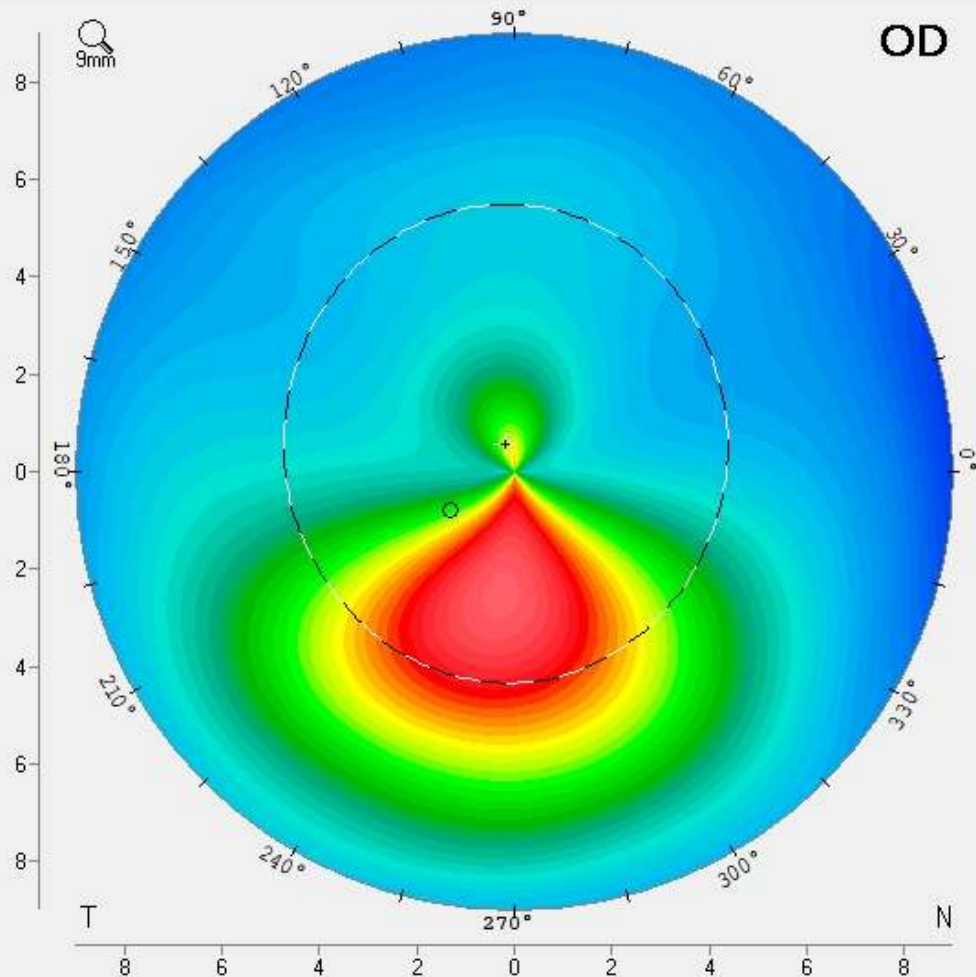
90°
 0.8 T
 270°

Rf: 6.31 mm K1: -6.3 D
 Rs: 5.70 mm K2: -7.0 D
 Rm: 6.01 mm Km: -6.7 D

QS: OK Axis: (flt.) 7.8° Astig: 0.7 D
 Q-val: (8mm) -0.50 Rper: 6.54 mm Rmin: 4.83 mm

	Pachy:	x[mm]	y[mm]
Pupil Center:	+ 469 µm	-0.09	+0.28
Pachy Vertex N.:	465 µm	0.00	0.00
Thinnest Locat.:	456 µm	-0.66	-0.40
K Max. (Front):	50.5 D	-0.13	-1.26

Cornea Volume: 56.4 mm³ HWTW: 11.6 mm
 Chamber Volume: 197 mm³ Angle: 40.6°
 A. C. Depth (Int.): 3.35 mm Pupil Dia: 4.72 mm
 Enter IOP IOP(Sum): +3.4 mmHg Lens Th.: [REDACTED]



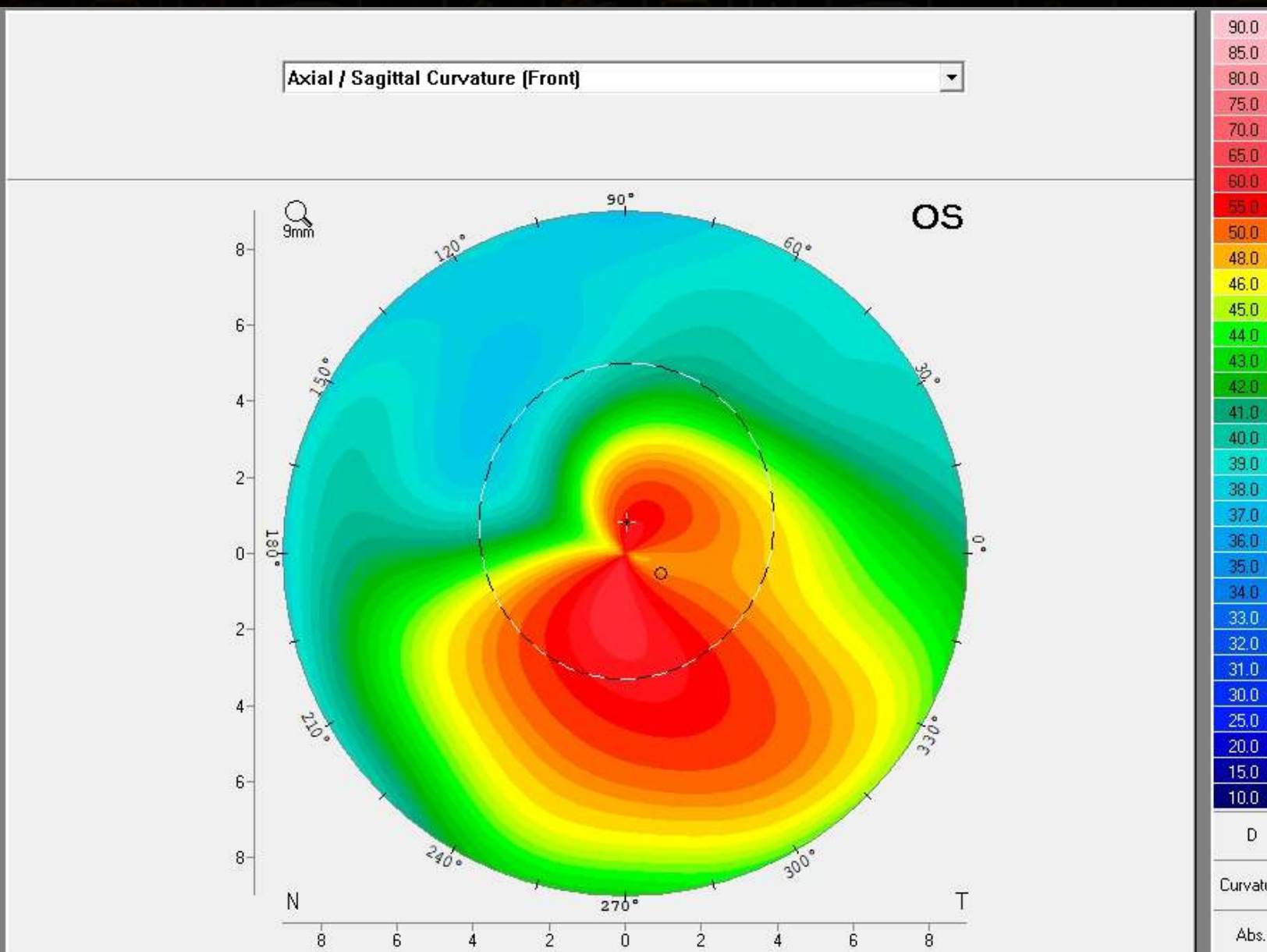
52.5
 52.0
 51.5
 51.0
 50.5
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 49.0
 48.5
 48.0
 47.5
 47.0
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 46.0
 45.5
 45.0
 44.5
 44.0
 43.5
 43.0
 42.5
 42.0
 41.5
 41.0
 40.5
 40.0
 39.5
 39.0
 38.5
 38.0
 37.5

0.25 D

Curvature

Rel.

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Progressive Thickness Rings

R10 2026

SPECS

<i>Brand name</i>	AJL pro+
<i>References</i>	CW (clockwise/ optic zone 5 mm) and CW6 (clockwise/ optic zone 6 mm) CCW (counterclockwise/ optic zone 5 mm) and CCW6 (counterclockwise/optic zone 6 mm)
<i>Definition</i>	Asymmetric intracorneal ring segment (asymmetric ICRS)
<i>Arc</i>	160° and 210°
<i>Thickness</i>	Progressively variable thickness from 0.15 to 0.25 mm and from 0.15 to 0.30 mm
<i>Indications</i>	AJL pro+ requires a thorough study of the optic aberrations and an evaluation of the topographic and pachymetric conditions of the cornea, in addition to a complete visual examination. In general, AJL pro+ implantation may be considered in cases of reduced visual acuity due to: - Keratoconus - Post-LASIK Corneal Ectasia In particular, AJL pro + is indicated for those patients with asymmetric corneal ectasia in which the flat meridian of the keratometry and the coma axis are not coincident.
<i>Description of the product</i>	AJL pro+ has the peculiarity of an asymmetric design: it has a progressive width and thickness for better adaptation to the corneal surface in order to achieve better results in patients with asymmetric corneal ectasia. The base width varies from 0.60 to 0.80 mm in all references, while the thickness presents two progressions, from 0.15 to 0.25 mm and from 0.15 to 0.30 mm, with both clockwise and counterclockwise designs available. AJL pro+ has a 0.20 mm diameter hole at the ends to facilitate manipulation during surgery. Specifically designed to treat "Duck" and "Snowman" patterns.



AJL Nomogram

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ADVANCED SURGICAL PLAN FOR THE TREATMENT OF KERATOCONUS

Online Nomogram

Selected Options

Patient: 121

Eye: OD

Nomogram: AJL-Ring

AJL pro+
ASYMMETRIC

AJL-RING
SYMMETRIC

Keratometry

	Value (D)	x	Axis (degrees)
K1 (Flat)		x	
K2 (Steep)		x	

90°

Coma Aberration

Coma Axis

RMS Coma (6mm)(Abs)

if coma is not available please follow [this link](#).

Pachymetry

Min. thickness in 5/6 mm area

Asphericity

Q Value (30°/8mm)

Calculate



Online Nomogram

Selected Options

Patient: 1233

Doctor: Tarek El-Naggar

Eye: OD

Nomogram: AJL Pro+

AJL pro+
ASYMMETRIC

Print Form

OPTION 1-> AJL Pro+

RINGS

Segment 1 240°/300µm
Ref: D0630210

MANUAL TECHNIQUE

Incision at 55°

Middle point at 295°

Incision depth 80% of
Corneal thickness at the
place of the incision

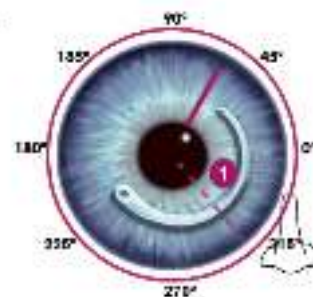
FEMTOSECOND TECHNIQUE

Depth: 350µm

Int. Diameter: 5.5mm

Ext. Diameter: 7.1mm

Incision: 55°



OPTION 2-> AJL Ring 5

RINGS

Segment 1 140°/200µm
Ref: AFR20140

MANUAL TECHNIQUE

Incision at 55°

Middle point at 325°

Incision depth 80% of
Corneal thickness at the
place of the incision

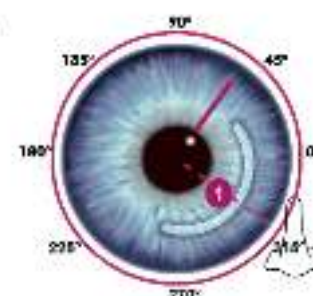
FEMTOSECOND TECHNIQUE

Depth: 350µm

Int. Diameter: 5mm

Ext. Diameter: 5.7mm

Incision: 55°



R10 2026



Online Nomiogram

AJL pro+
ASYMMETRIC

ADVANCED SURGICAL PLAN FOR THE TREATMENT OF KERATOCONUS

PATIENT ID

1233

EYE TO
OPERATE

OD

DATE

2025/10/08

PRODUCT

AJL Pro+

DOCTOR

Tarek El-
Naggar

SEGMENT 1

Reference:

CW630210

Segment:

210°/300µm

FEMTOSECOND PARAMETERS

Depth:

350 µm

Int. Diameter:

5.5 mm

Ext. Diameter:

7.1 mm

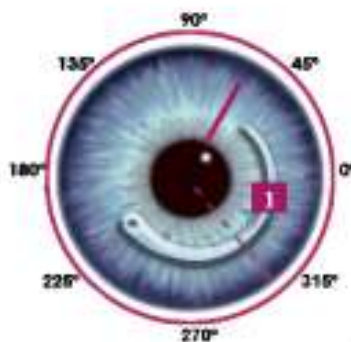
Incision:

55°

Middle:

295°

Ref. Segment 1: CW630210



R10 2026

Example 1

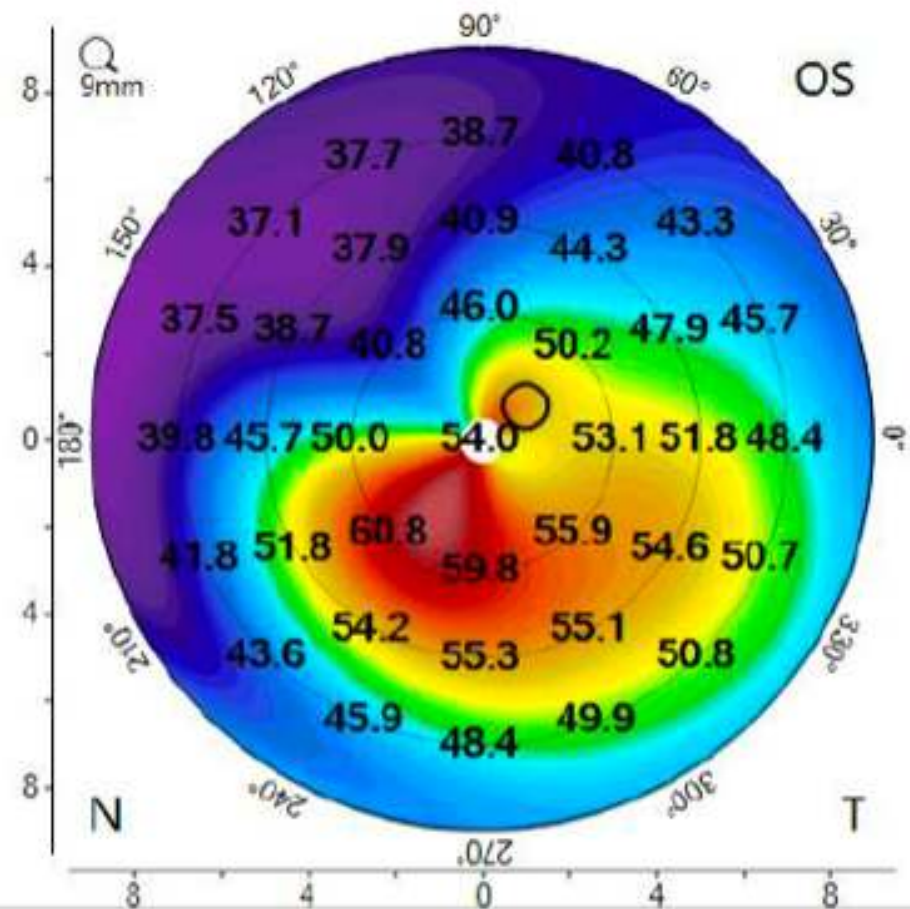
R10 2026

Duck pattern KC

R10 2026

B: 20-08-2025 18:58:45 Left

Sagittal Curvature (F)



Elevation (F) BES=7.16 Float Dia=8.00

R10 2026

AJL PRO+ CW



R10 2026

AJL PRO+ 160 150/300



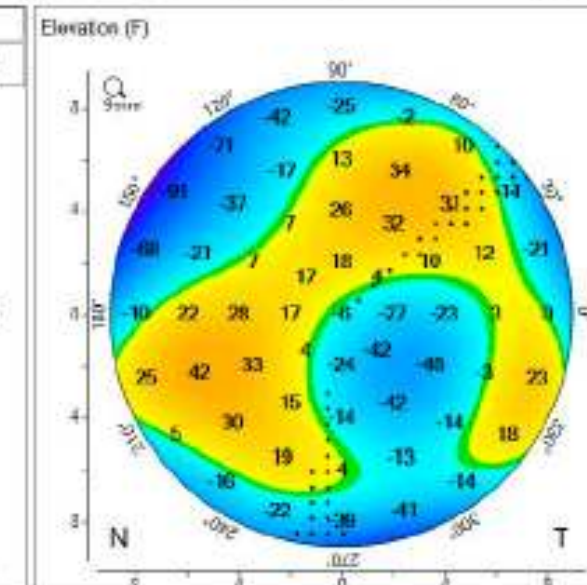
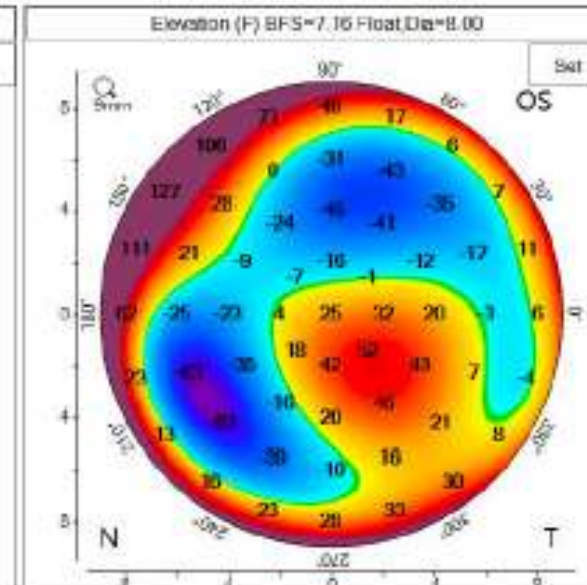
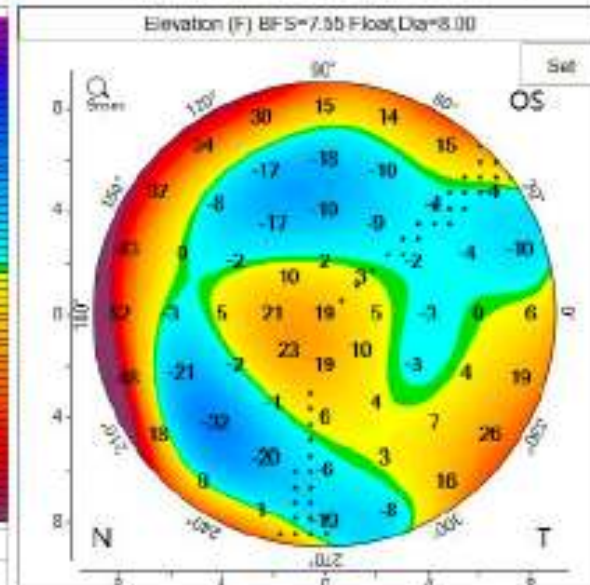
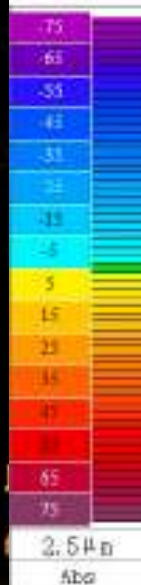
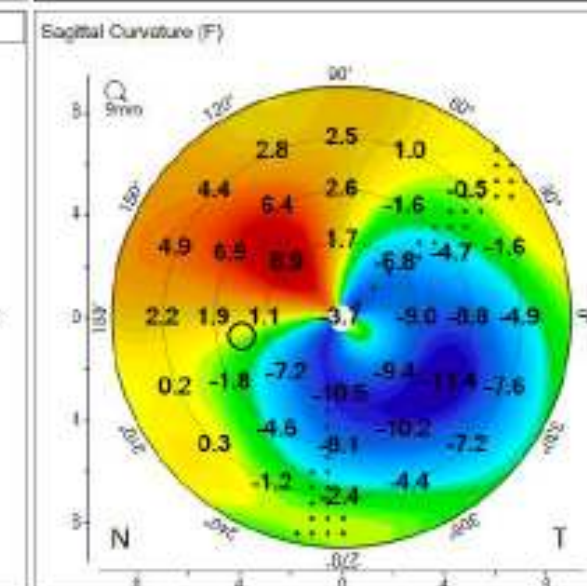
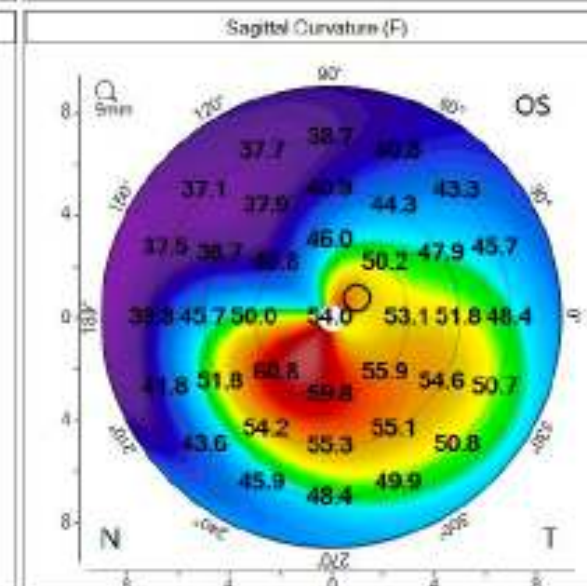
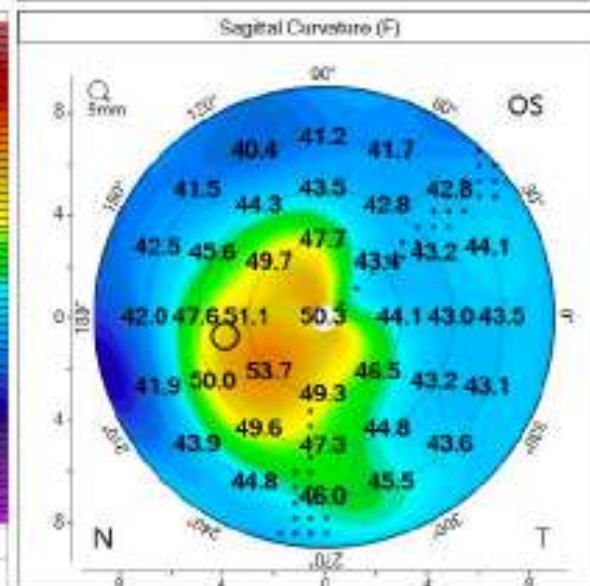
R10 2

Type: Scansys - Comparison - Difference of maps

A: 31-08-2025 19:14:42 Left

B: 20-08-2025 18:58:45 Left

Difference A-B



R10

A: 31-08-2025 19:14:42 Left

Scan Quality:		Eye Move!
Min Dia.(F)=8.6 Min Dia.(B)=5.1		
Cornea (F)-SimK		
K1/Rf	47.33D@7°/7.13mm	
K2/Rs	48.39D@97°/6.97mm	
Km/Rmc	47.86D/7.05mm	
Astig:	-1.06D @ 7°	
Q-val(6mm):	-1.80	
Grade: 3		
Kmax/Rmin: ◆ 53.74D/6.28mm(-1.13, -0.9)		
Cornea(B)		
K1/Rf	-6.62D@159°/6.04mm	
K2/Rs	-9.54D@69°/4.19mm	
Km/Rmc	-7.82D/5.12mm	
Astig:	2.92D @ 159°	
Q-val(6mm):	-2.98	
Grade: 4		
Kmax/Rmin: ◇ -14.03D/2.85-mm(0, 0.02)		
	Pachy	X,Y(mm)
Apex:	● 445μm	0, 0
Thinnest:	○ 146μm	-1.96, -0.35
Pupil C.(Kappa):	✚ 435μm	0.05, 0.34
Cornea C.(Alpha):	■ 436μm	0.11, 0.36
Grade: 4		
Cornea Vol.:	69.23mm³	
Cornea Dia:	12.1mm	
Pupil Photopic Dia:	3.30mm	
Pupil Scotopic Dia:	--mm	
Chamber Vol.:	429.52mm³	
Chamber Angle:	43°	
A.C.Depth(Int):	3.19mm	
KCP:	81.2%	

B: 20-08-2025 18:58:45 Left

Scan Quality: Inadequate area!		
Min Dia.(F)=9.7 Min Dia.(B)=3.8		
Cornea (F)-SimK		
K1/Rf:	47.03D@137°/7.18mm	
K2/Rs:	54.88D@47°/6.15mm	
Km/Rmc:	50.65D/6.66mm	
Astig:	-7.85D @ 137°	
Q-val(6mm):	-3.11	
Grade: 4		
Kmax/Rmin: ◆ 62.50D/5.40mm(-0.5, -0.82)		
Cornea(B)		
K1/Rf:	-8.03D@154°/4.98mm	
K2/Rs:	-9.42D@64°/4.25mm	
Km/Rmc:	-8.67D/4.61mm	
Astig:	1.39D @ 154°	
Q-val(6mm):	-3.69	
Grade: 4		
Kmax/Rmin: ◇ -11.08D/3.61mm(0.16, 0.24)		
Pachy X,Y(mm)		
Apex:	● 356μm	0, 0
Thinnest:	○ 340μm	0.49, 0.4
Pupil C.(Kappa):	✚ 348μm	-0.06, 0.5
Cornea C.(Alpha):	■ 342μm	0.33, 0.27
Grade: 3		
Cornea Vol:	57.49mm³	
Cornea Dia:	12.0mm	
Pupil Photopic Dia:	3.10mm	
Pupil Scotopic Dia:	--mm	
Chamber Vol:	377.92mm³	
Chamber Angle:	41°	
A.C.Depth(Int):	3.35mm	
KCP:	98.1%	

Difference A-B

Scan Quality: --		
Min Dia.(F)=12.7 Min Dia.(B)=10.7		
Cornea (F)-SimK		
K1/Rf:	0.30D@51°/-0.05mm	
K2/Rs:	-6.49D@51°/0.82mm	
Km/Rmc:	-2.79D/0.39mm	
Astig:	6.79D @ 51°	
Q-val(6mm):	1.31	
Grade: 3 		
Kmax/Rmin: ◆ -8.76D/0.88mm(-0.63, -0.08)		
Cornea(B)		
K1/Rf:	1.41D@5°/1.06mm	
K2/Rs:	-0.12D@5°/-0.06mm	
Km/Rmc:	0.85D/0.51mm	
Astig:	1.53D @ 5°	
Q-val(6mm):	0.71	
Grade: 4 		
Kmax/Rmin: ◇ -2.95D/-0.76mm(-0.16, -0.22)		
Pachy X,Y(mm)		
Apex:	● 89.00μm	0.00, 0.00
Thinnest:	○ -194.00μ	-2.45, -0.75
Pupil C.(Kappa):	✚ 87.00μm	0.11, -0.16
Cornea C.(Alpha):	■ 94.00μm	-0.22, 0.09
Grade: 4 		
Cornea Vol:	11.74mm³	
Cornea Dia:	0.10mm	
Pupil Photopic Dia:	0.20mm	
Pupil Scotopic Dia:	--mm	
Chamber Vol:	51.60mm³	
Chamber Angle:	2°	
A.C.Depth(Int):	-0.16mm	
KCP:	-17.0%	

Example 2

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OCULUS - PENTACAM 4 Maps Selectable

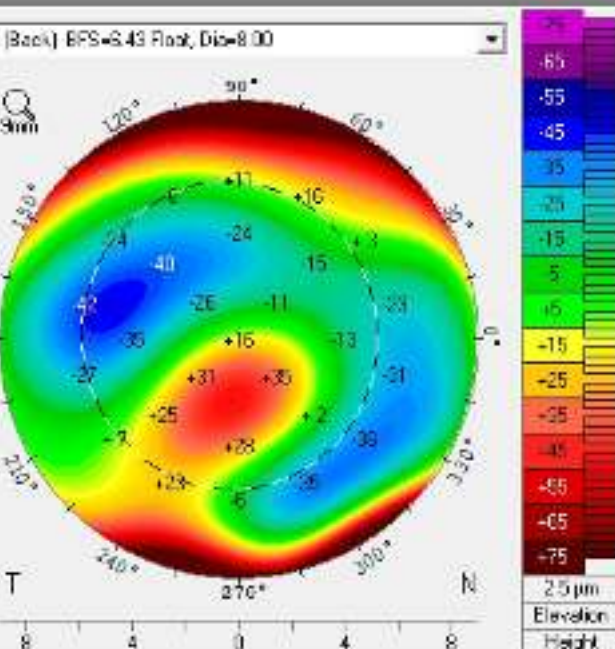
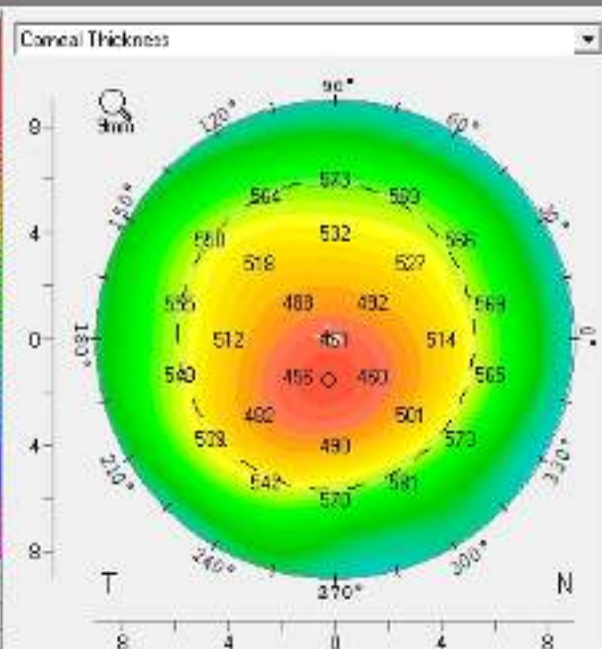
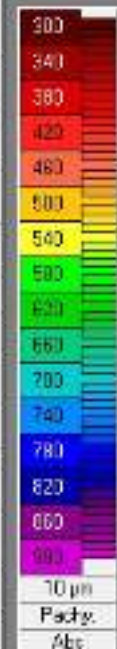
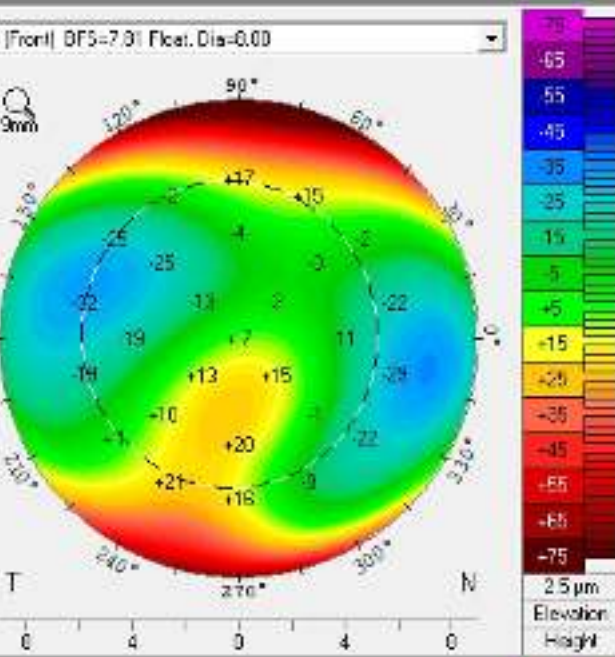
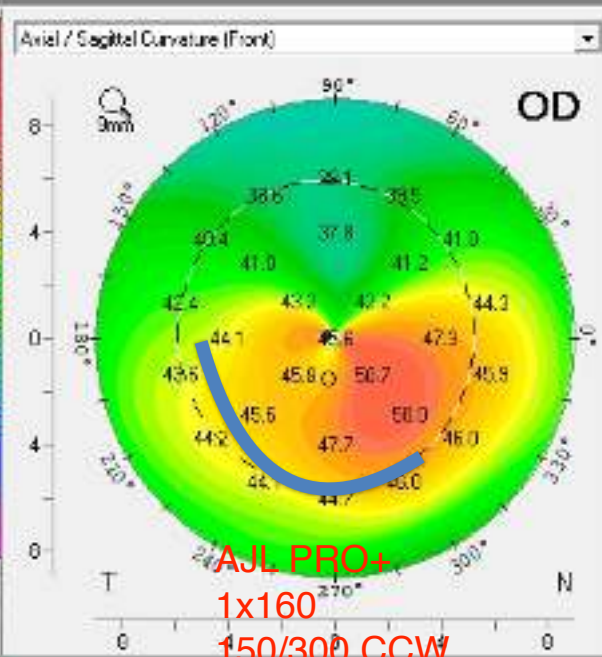
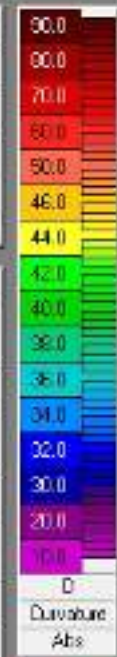
1.25/15

Last Name:
 First Name:
 ID:
 Date of Birth:
 Exam Date:
 Exam Info:
 Eye: Right
 Time: 22:13:42



Pupil Center	+	Pachy: 463 µm	x(mm): -0.17	y(mm): -0.07
Pachy Vertex N		467 µm	0.00	0.00
Thinnest Local	○	450 µm	-0.13	-0.76
K Max (Front)		57.0 D	-0.95	-0.95

Cornea Volume	54.3 mm ³	KPD: -1.7 D
Chamber Volume	230 mm ³	Angle: 36.2°
A. C. Depth (Int.)	352 µm	Pupil Dia: 5.67 mm
Enter IOP (IOP(Sum))	48.0 mmHg	Lens Th: 3.42 mm



R10 2

AJL PRO+ CCW



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OCULUS - PENTACAM 4 Maps Selectable

1.22/09

Last Name:

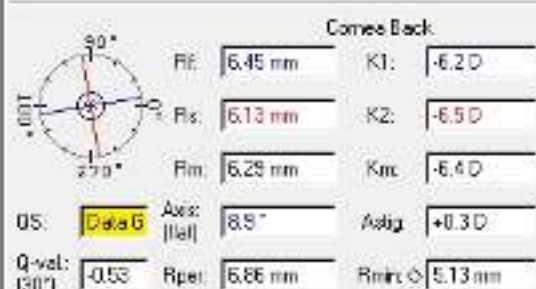
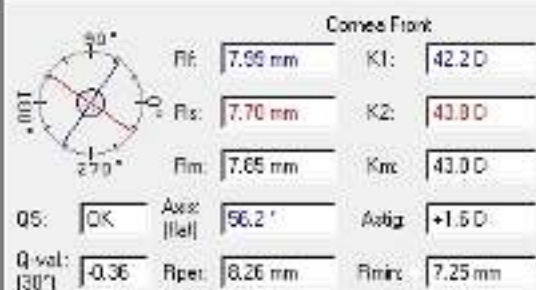
First Name:

ID:

Date of Birth: Sex: Right

Exam Date: Time: 13:09:56

Exam Info:

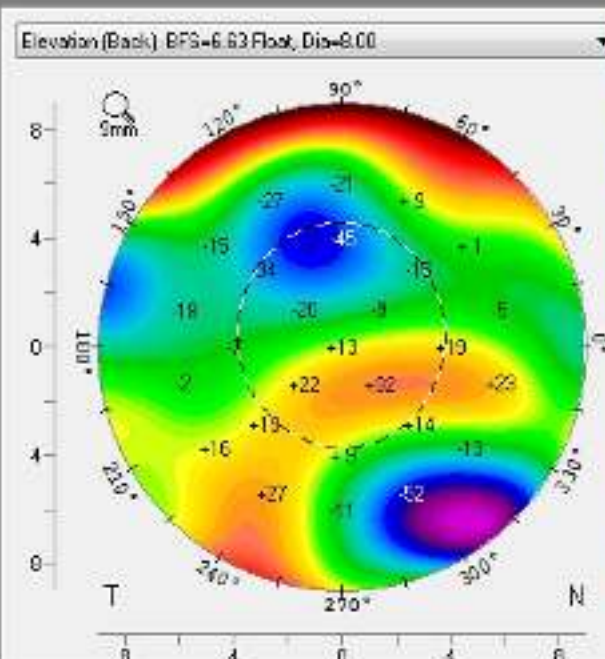
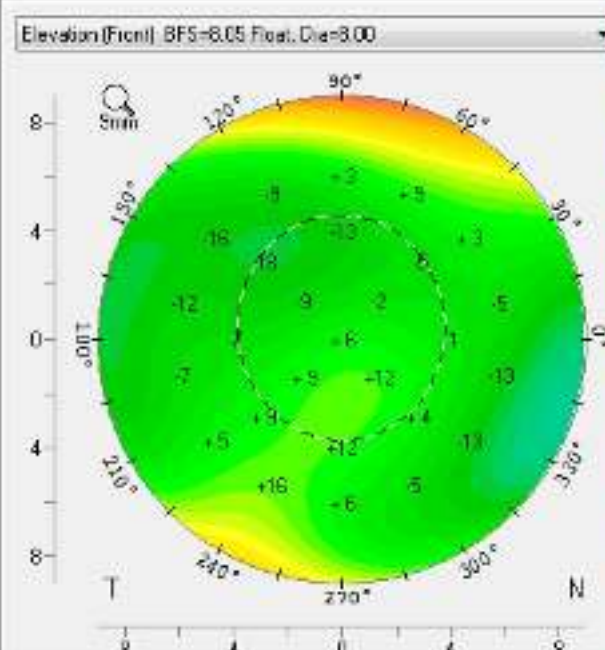
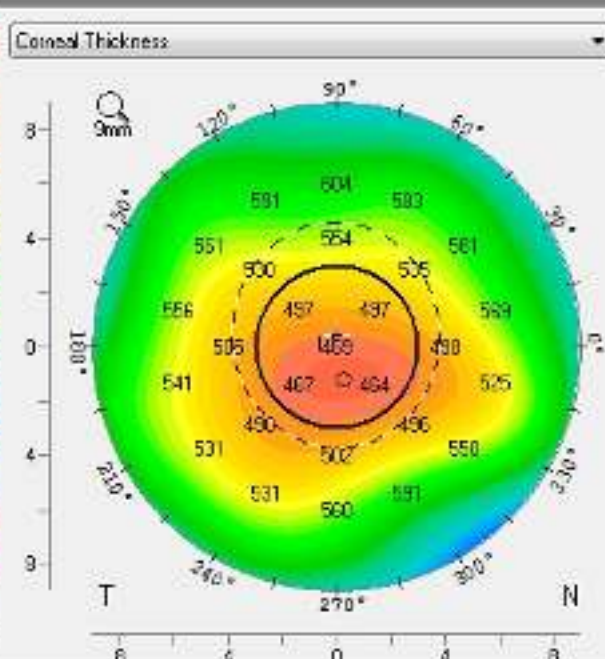
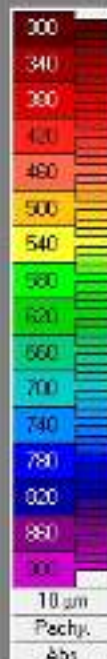
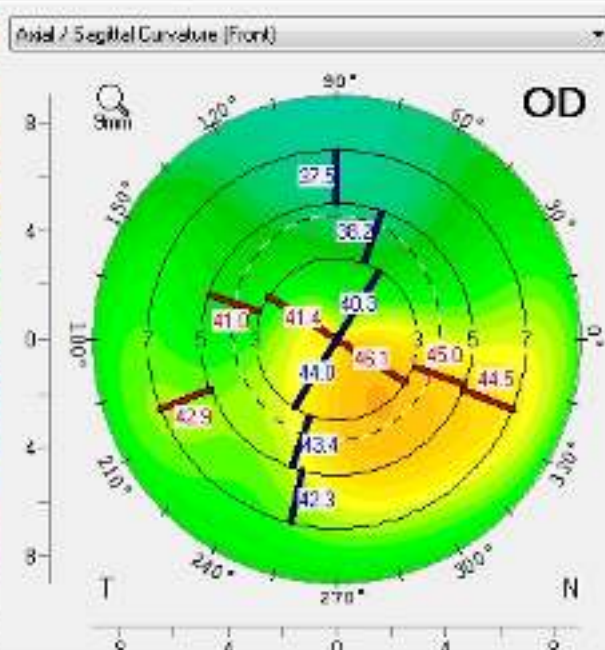
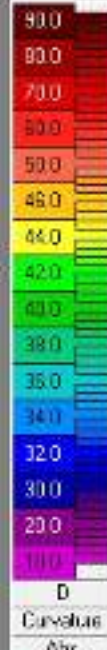


Cornea Volume: 54.4 mm³ HW/TW: 12.0 mm

Chamber Volume: 203 mm³ Angle: 33.5°

A.C. Depth (Int.): 3.53 mm Pupil Dia: 3.98 mm

Enter IOP: IOP(Sund): -3.2 mmHg Lens Th:



R10

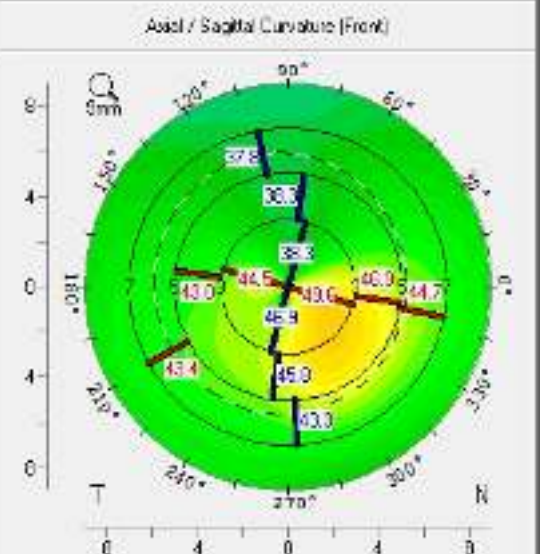
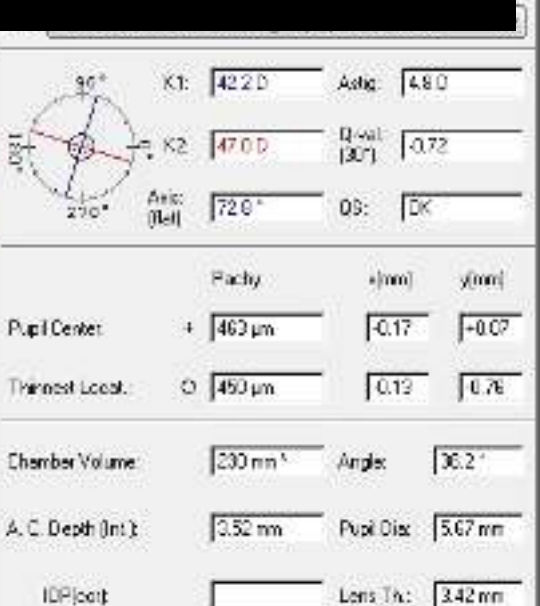
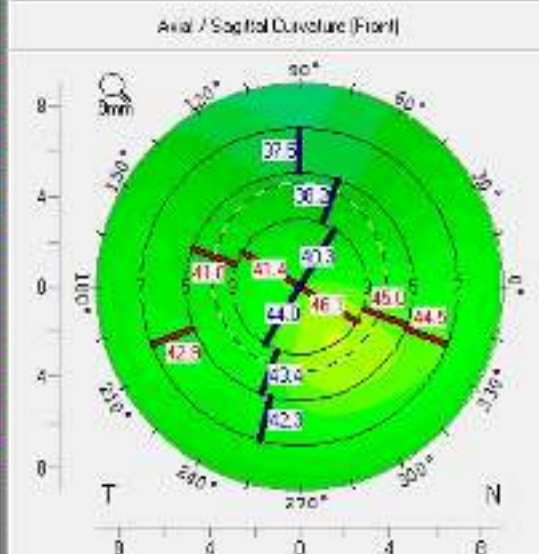
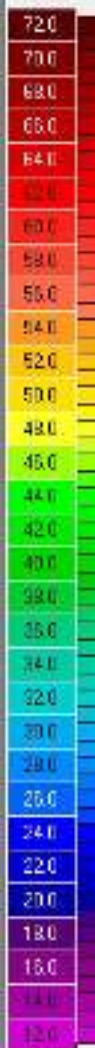
OCULUS - PENTACAM Compare 2 Exams

1/2/08

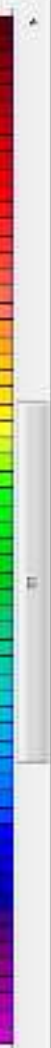
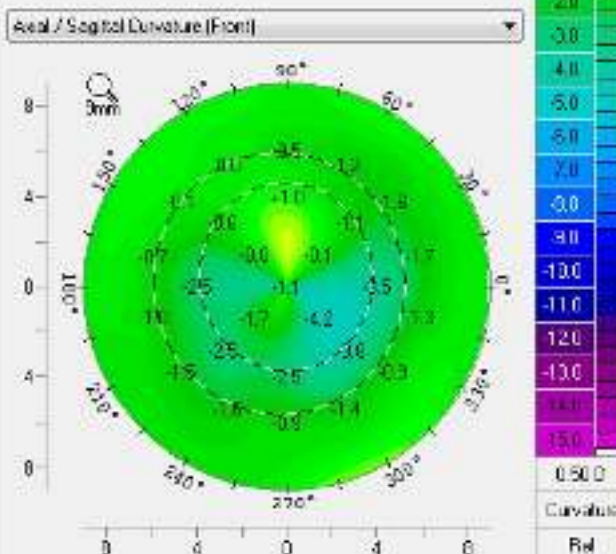
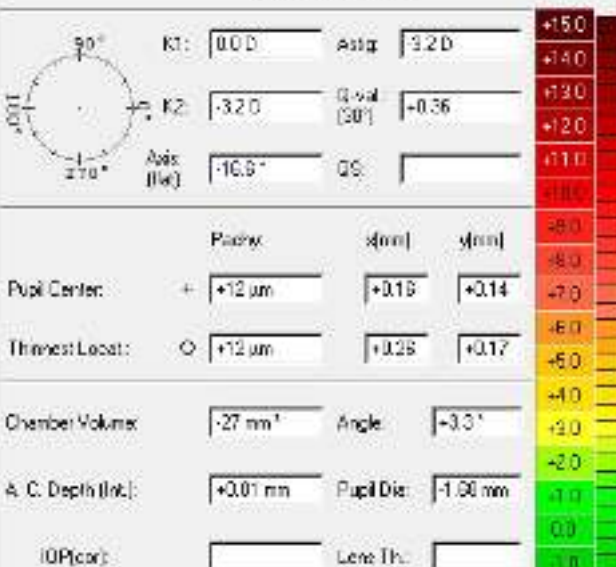
Name: [REDACTED]

Date of Birth: 07/01/1985

Exam



Difference A - B

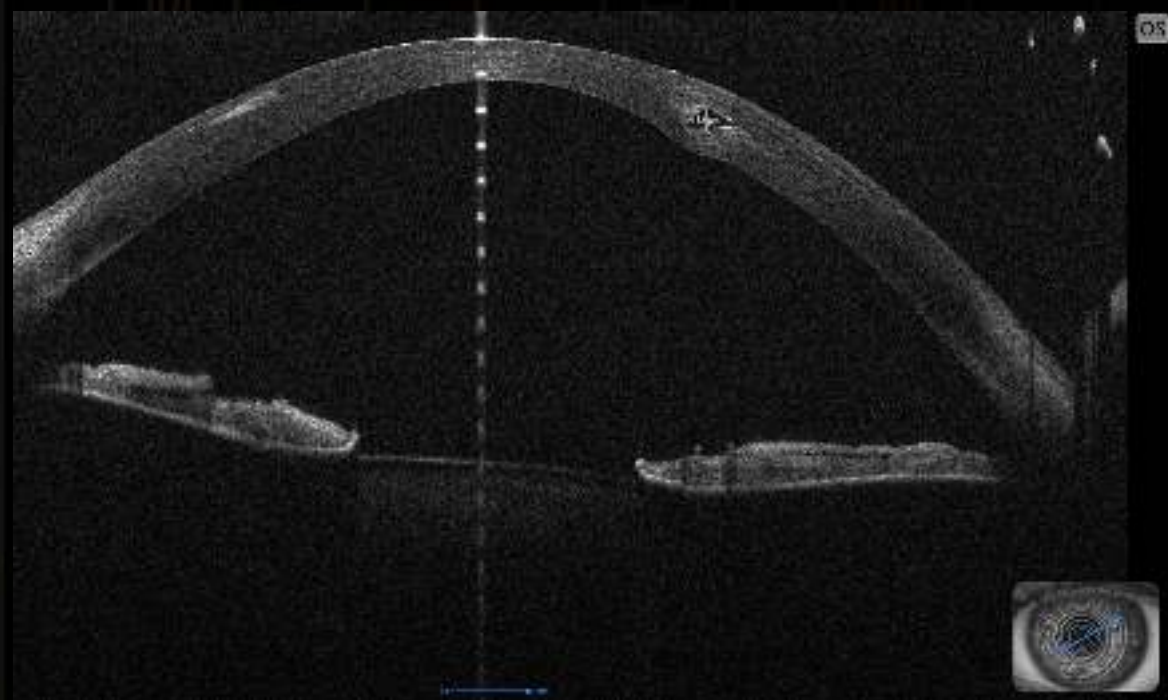
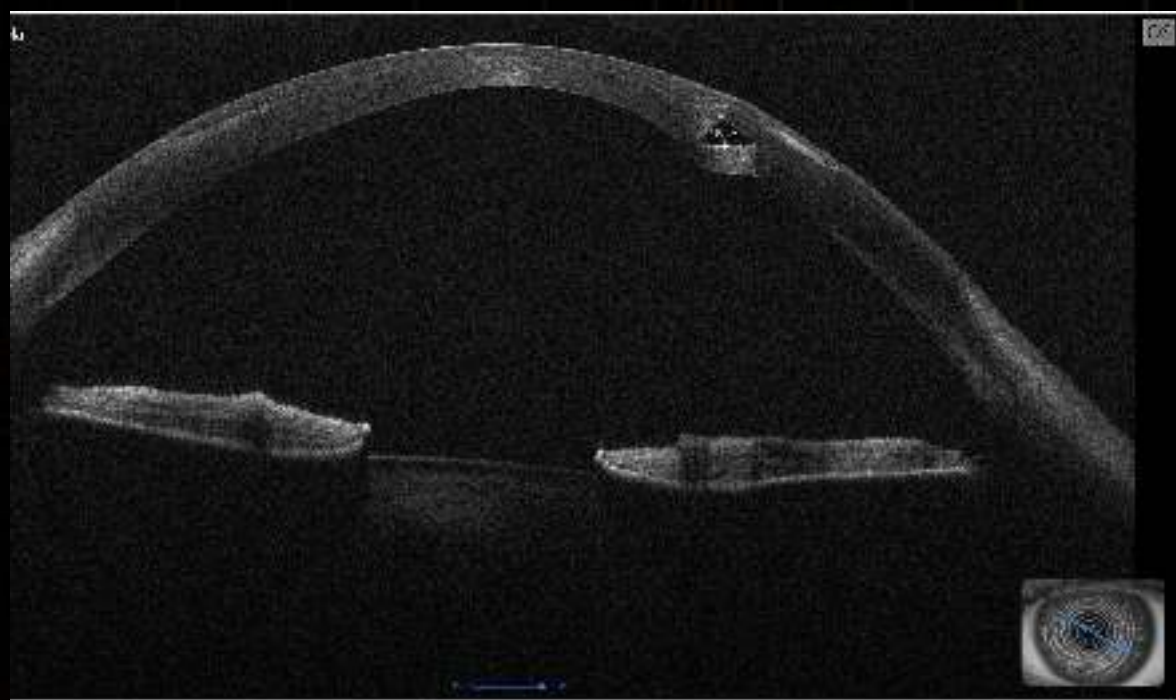


R10 2

Example 3

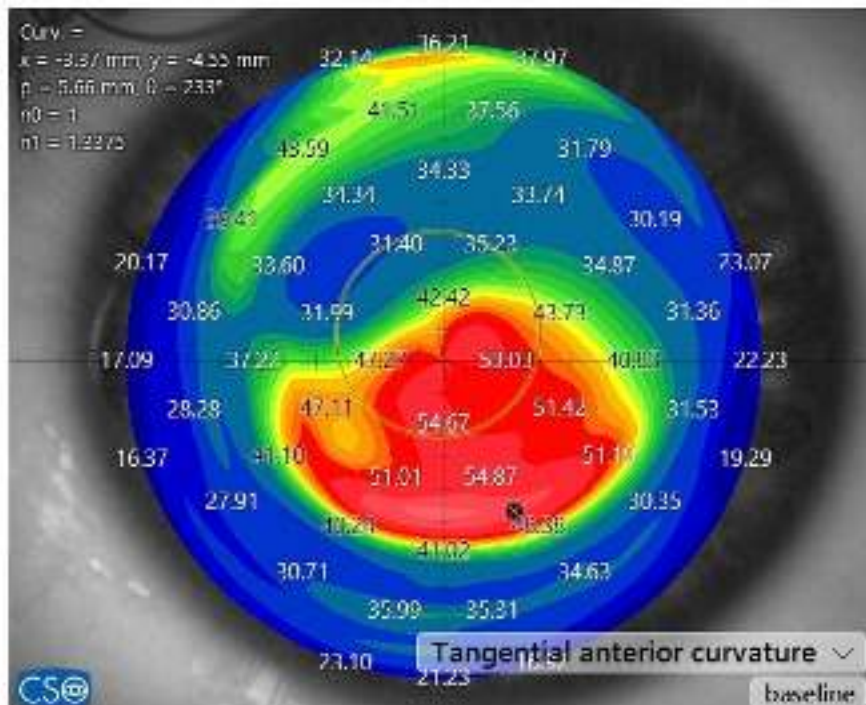
Post LASIK ectasia

R10 2026

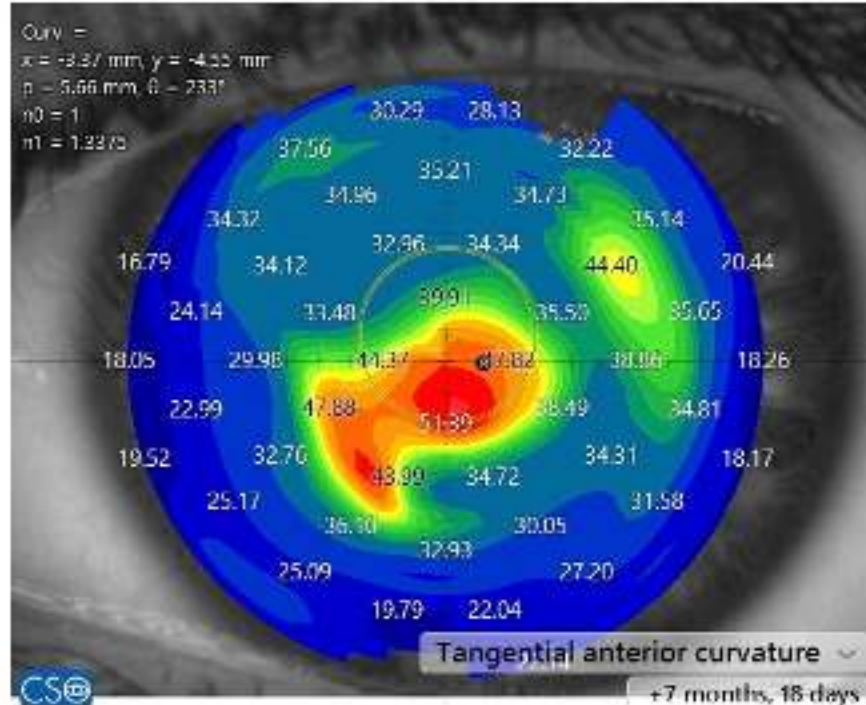


R10 2026

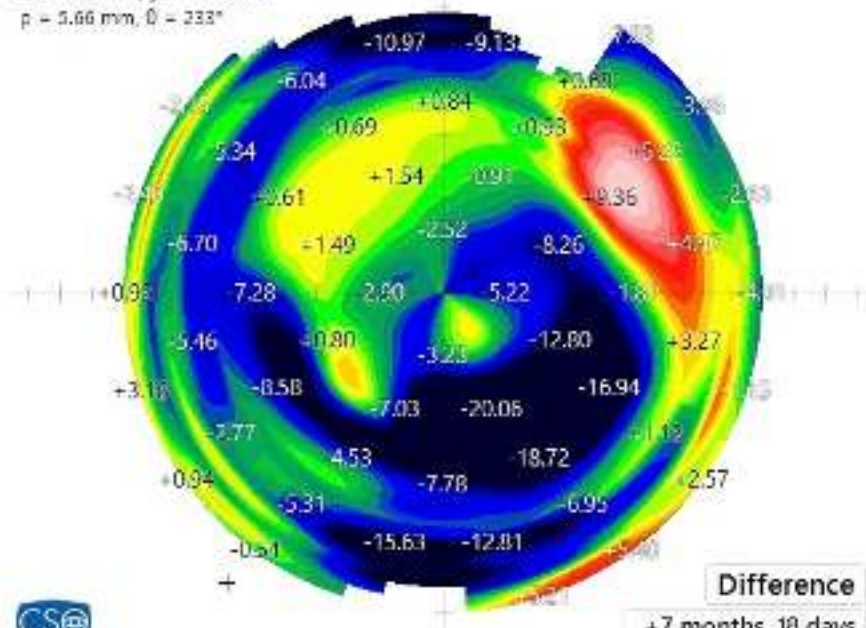
OS



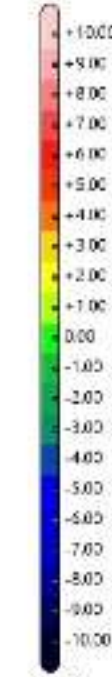
Default



$\Delta \text{Curv} =$
 $x = -3.37 \text{ mm}$, $y = -4.55 \text{ mm}$
 $p = 5.66 \text{ mm}$, $\theta = 233^\circ$



Default



Corneal thickness

 $\Delta \text{CCT} = -1 \mu\text{m}$

K readings (Anterior)

Meridians: $\phi = 3 \text{ mm}$ $\Delta K_{\text{axis}} = -3.06 \text{ D}$ $\Delta \text{Cyl} = +6.03 \text{ D Ax } 180^\circ$

K readings (Posterior)

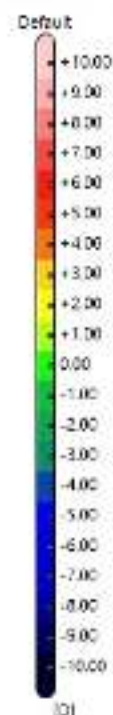
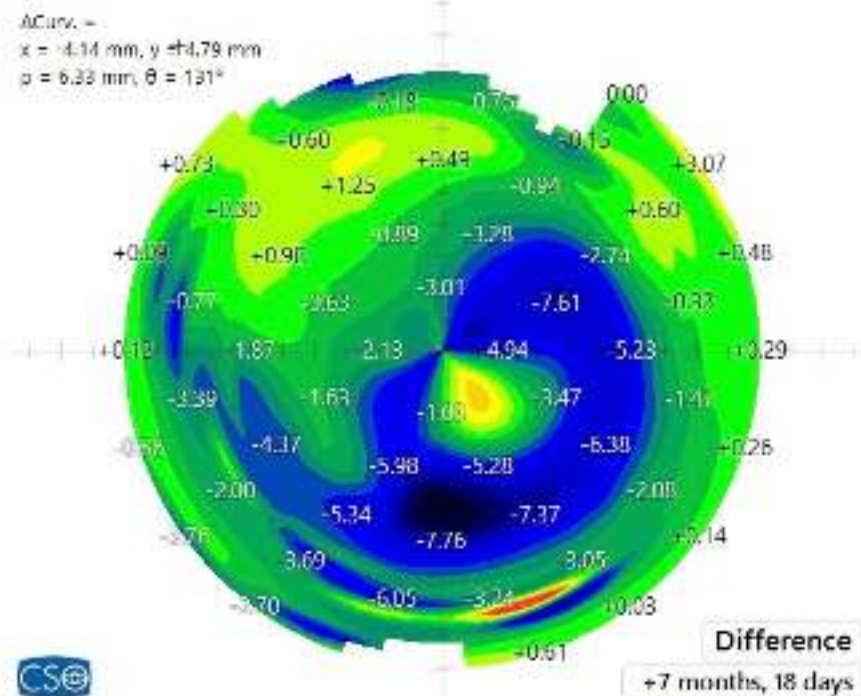
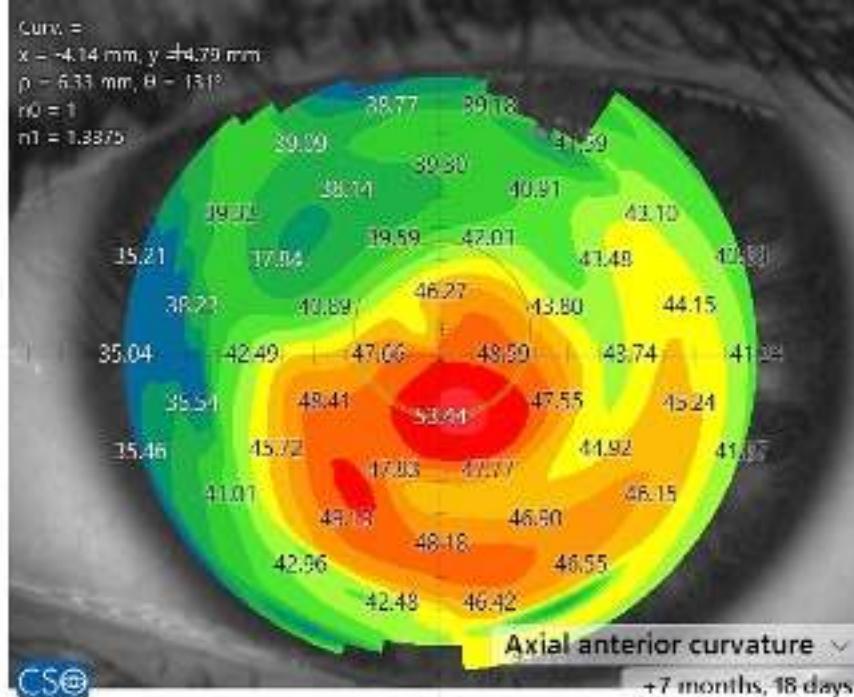
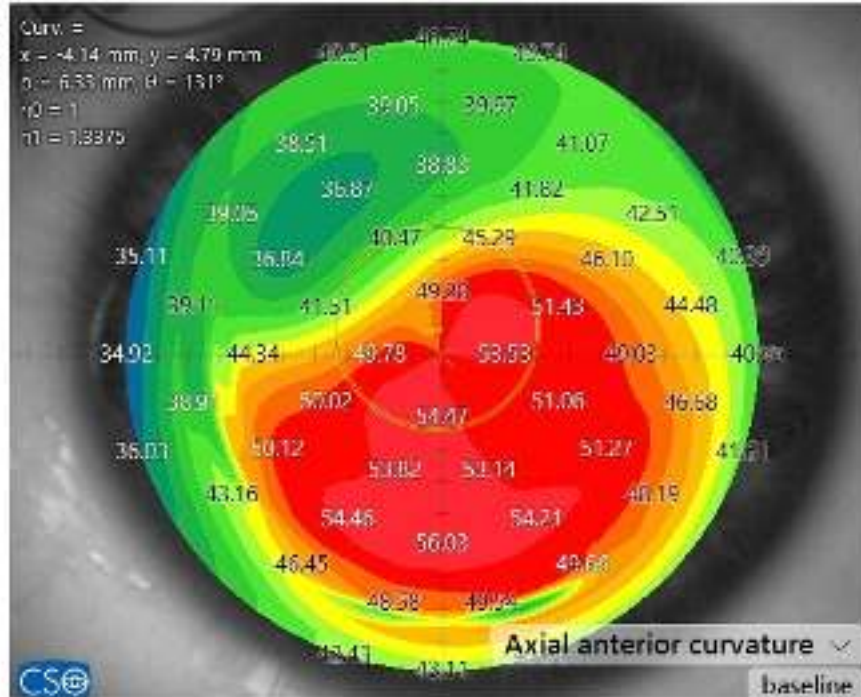
Meridians: $\phi = 3 \text{ mm}$ $\Delta K_{\text{axis}} = 0.01 \text{ D}$ $\Delta \text{Cyl} = +0.93 \text{ D Ax } 25^\circ$

Refractive analysis

 $\phi = 3 \text{ mm}$ $\Delta \text{MPP}_{\text{axis}} = -3.11 \text{ D}$ $\Delta \text{Cyl} = +5.81 \text{ D Ax } 126^\circ$ $\Delta Z_0^2 = 0.03 \mu\text{m}$

R10 2

OS



Corneal thickness

 $\Delta \text{CCT} = -1 \mu\text{m}$

K readings (Anterior)

Meridians: $\theta = 3 \text{ mm}$ $\Delta K_{avg} = -8.08 \text{ D}$ $\Delta \text{Cyl} = -6.03 \text{ D Ax } 130^\circ$

K readings (Posterior)

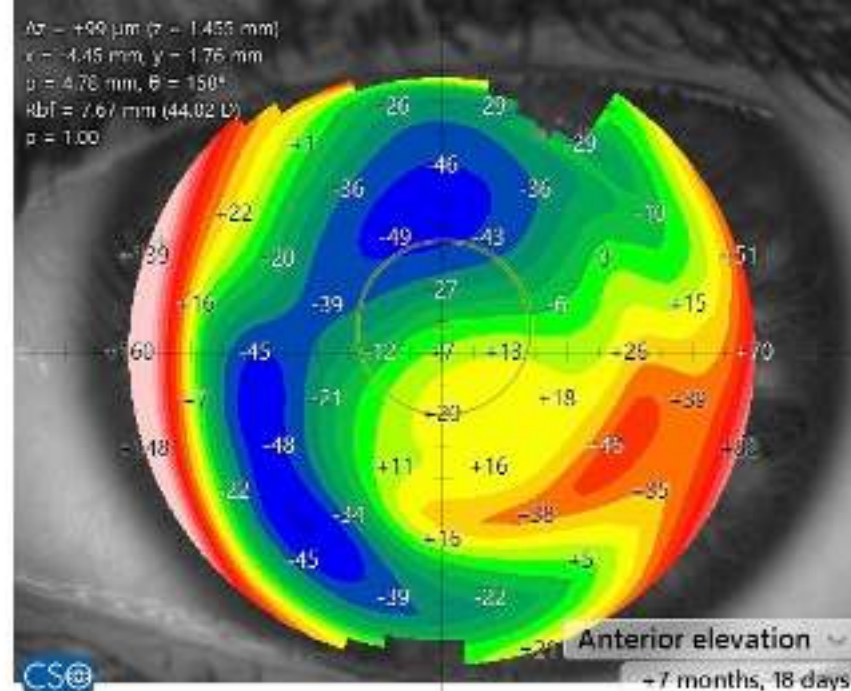
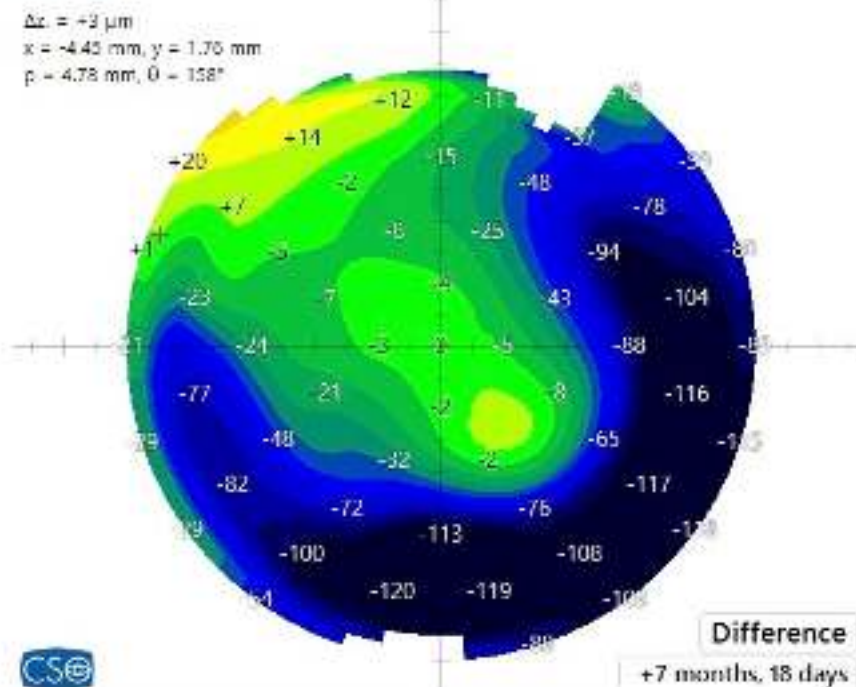
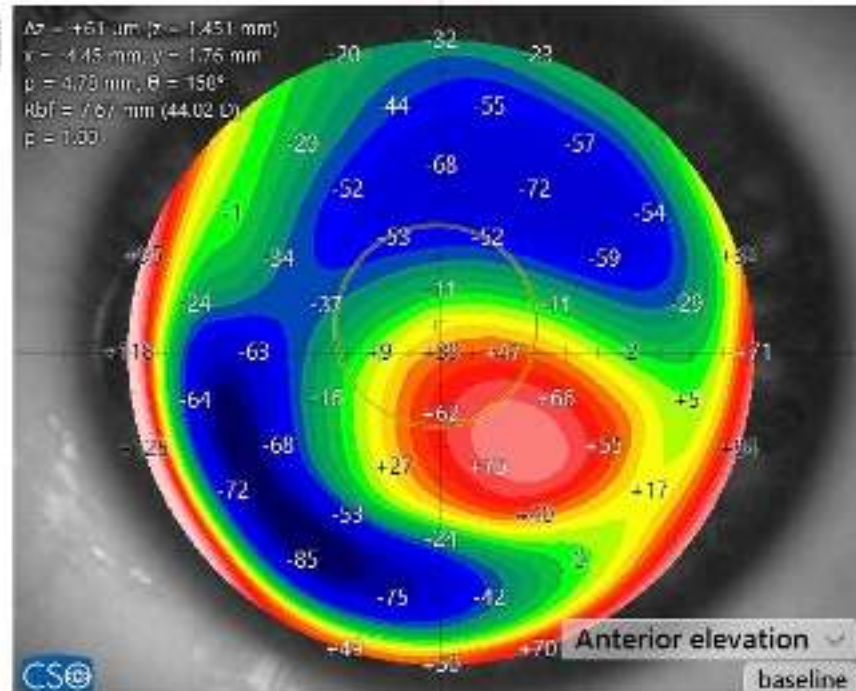
Meridians: $\theta = 3 \text{ mm}$ $\Delta K_{avg} = 0.01 \text{ D}$ $\Delta \text{Cyl} = -0.93 \text{ D Ax } 25^\circ$

Refractive analysis

 $\theta = 3 \text{ mm}$ $\Delta \text{MPP}_{avg} = -3.11 \text{ D}$ $\Delta \text{Cyl} = -3.61 \text{ D Ax } 126^\circ$ $\Delta Z_1 = -0.03 \mu\text{m}$

R10 2

OS



Corneal thickness

ACCT = -1 μm

K readings (Anterior)

Meridians: $\phi = 3 \text{ mm}$ $\Delta K_{avg} = -3.08 \text{ D}$ $\Delta Cyl = +6.03 \text{ D Ax } 130^\circ$

K readings (Posterior)

Meridians: $\phi = 3 \text{ mm}$ $\Delta K_{avg} = 0.01 \text{ D}$ $\Delta Cyl = +0.93 \text{ D Ax } 25^\circ$

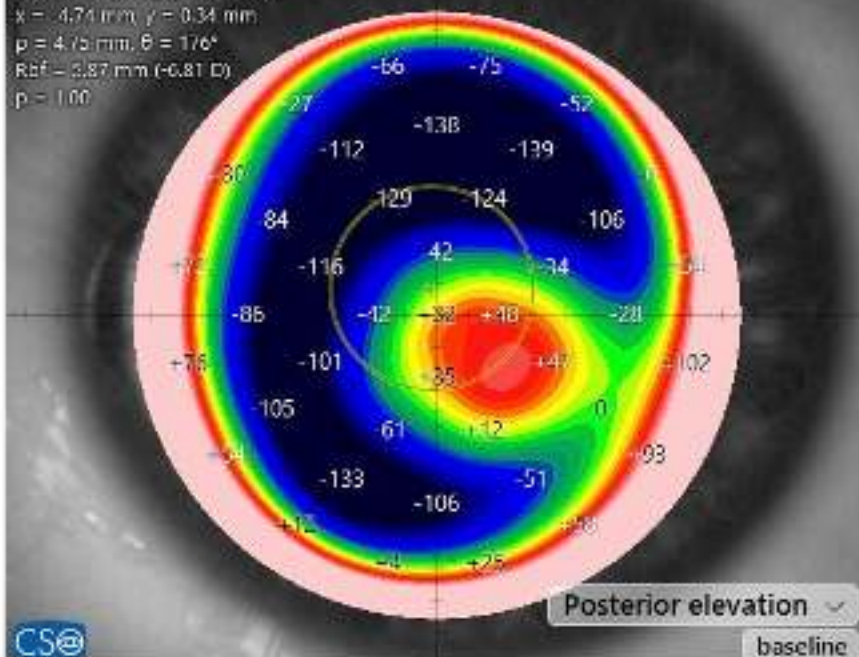
Refractive analysis

 $\phi = 3 \text{ mm}$ $\Delta MPP_{avg} = -3.11 \text{ D}$ $\Delta Cyl = +5.61 \text{ D Ax } 125^\circ$ $\Delta Z_0^2 = -0.03 \mu\text{m}$

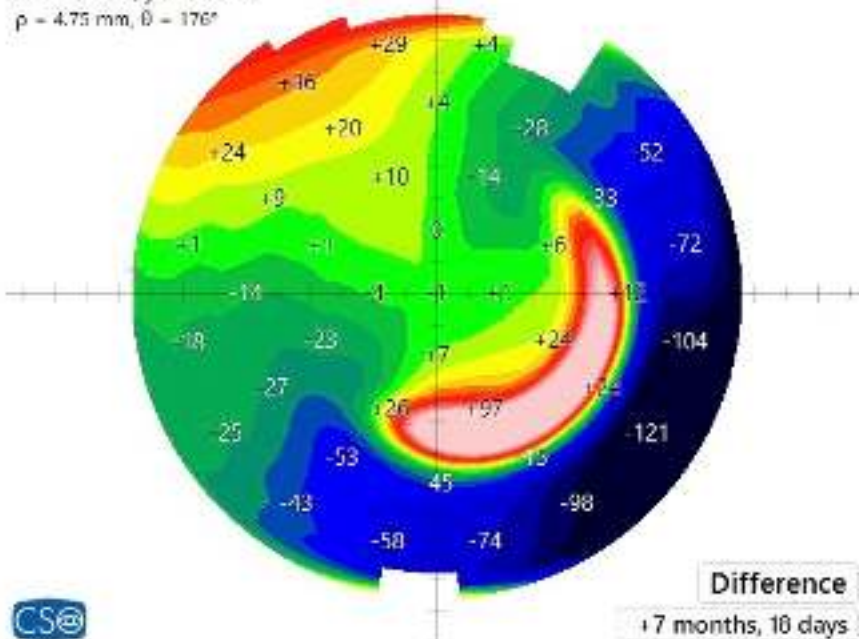
R10 20

OS

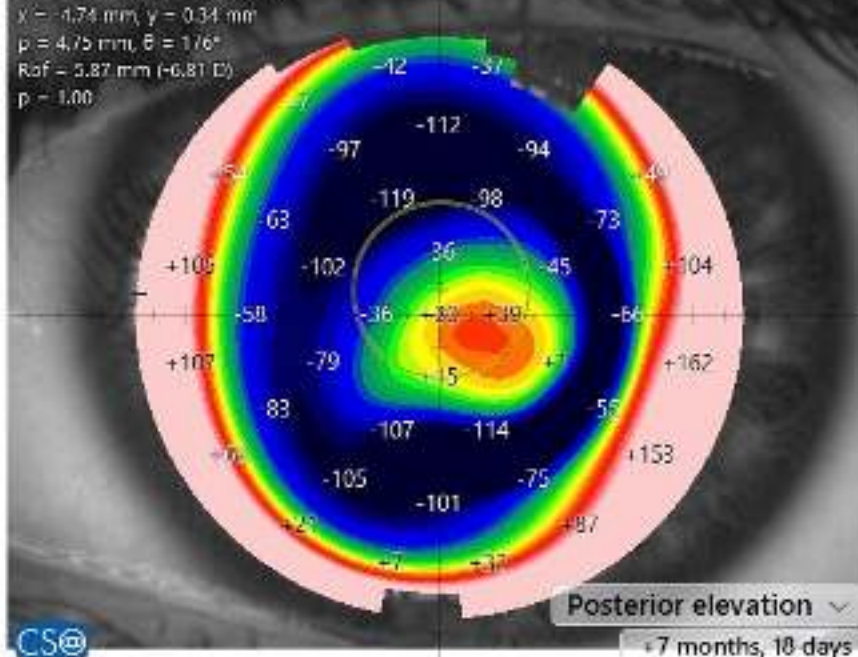
$\Delta z = +388 \mu\text{m}$ ($z = 2.354 \text{ mm}$)
 $x = -4.74 \text{ mm}$, $y = 0.34 \text{ mm}$
 $p = 4.75 \text{ mm}$, $\theta = 176^\circ$
 $R_{bf} = 5.87 \text{ mm}$ (-6.81 D)
 $p = 1.00$



$\Delta z = -7 \mu\text{m}$
 $x = -4.74 \text{ mm}$, $y = 0.34 \text{ mm}$
 $p = 4.75 \text{ mm}$, $\theta = 176^\circ$



$\Delta z = +388 \mu\text{m}$ ($z = 2.347 \text{ mm}$)
 $x = -4.74 \text{ mm}$, $y = 0.34 \text{ mm}$
 $p = 4.75 \text{ mm}$, $\theta = 176^\circ$
 $R_{bf} = 5.87 \text{ mm}$ (-6.81 D)
 $p = 1.00$



Corneal thickness

ACCT = $-1 \mu\text{m}$

K readings (Anterior)

Meridians: $\phi = 2 \text{ mm}$

$\Delta K_{avg} = -3.08 \text{ D}$

$\Delta Cyl = +5.03 \text{ D Ax } 120^\circ$

K readings (Posterior)

Meridians: $\phi = 2 \text{ mm}$

$\Delta K_{avg} = 0.01 \text{ D}$

$\Delta Cyl = +0.93 \text{ D Ax } 25^\circ$

Refractive analysis

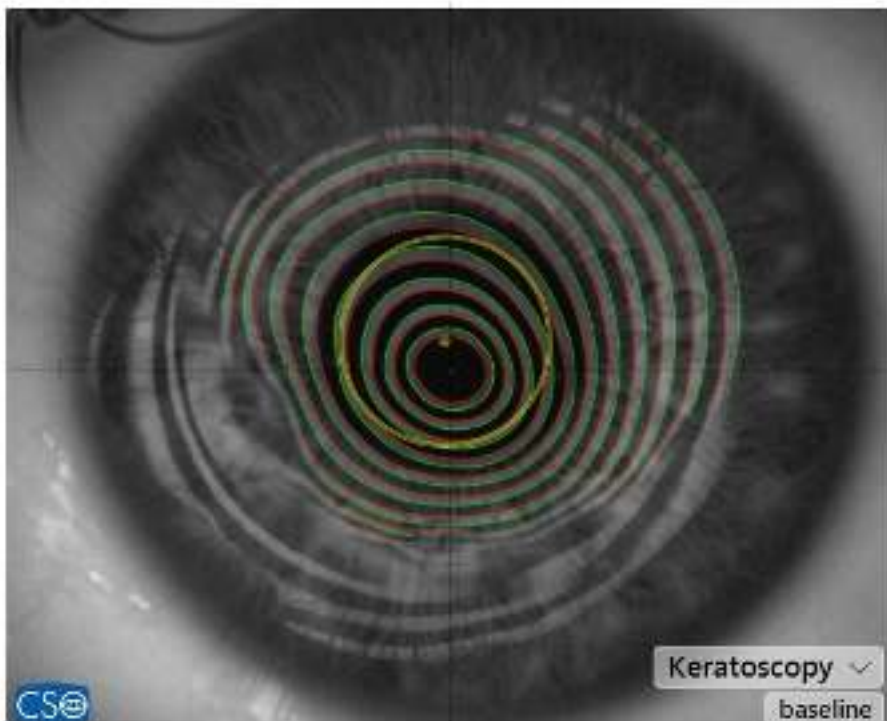
$\phi = 3 \text{ mm}$

$\Delta MPP_{avg} = -3.11 \text{ D}$

$\Delta Cyl = +5.61 \text{ D Ax } 126^\circ$

$\Delta z_0 = -0.03 \mu\text{m}$

OS



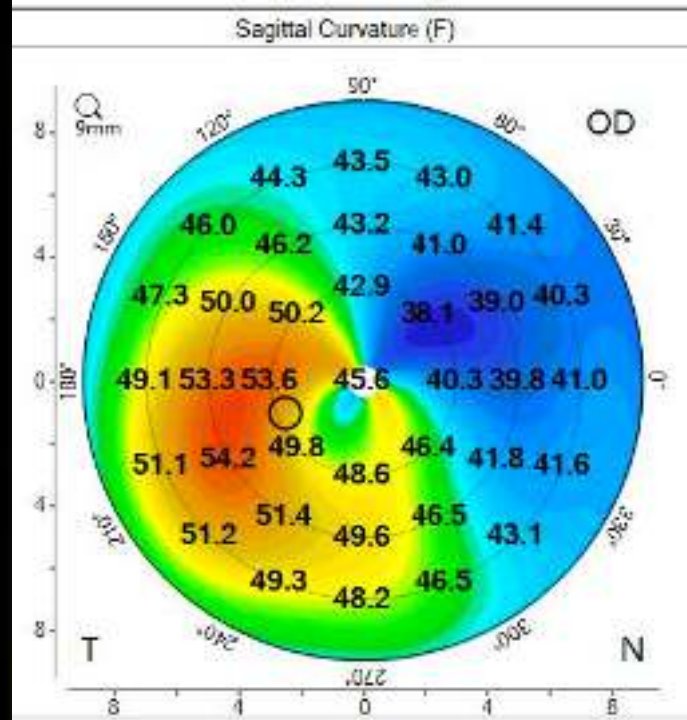
R10 2026

Example 4

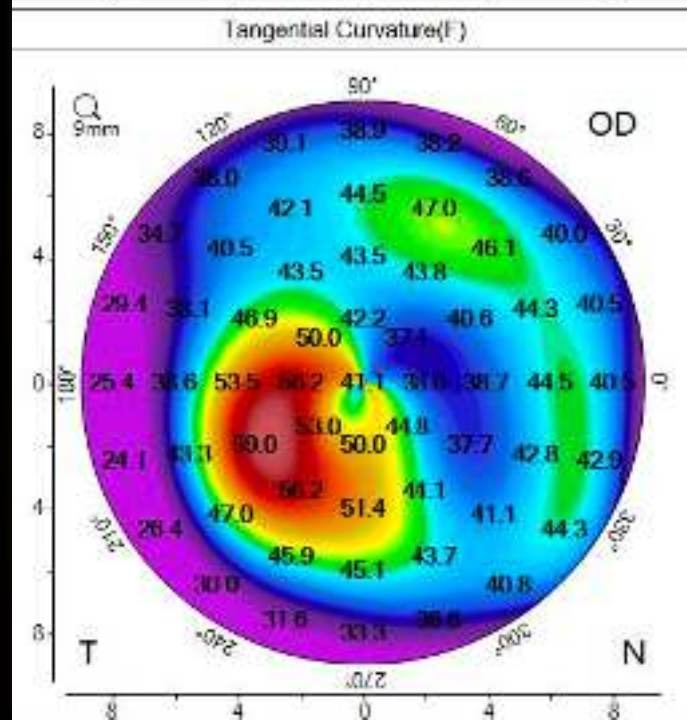
6mm inverted insertion

R10 2026

R10 2026

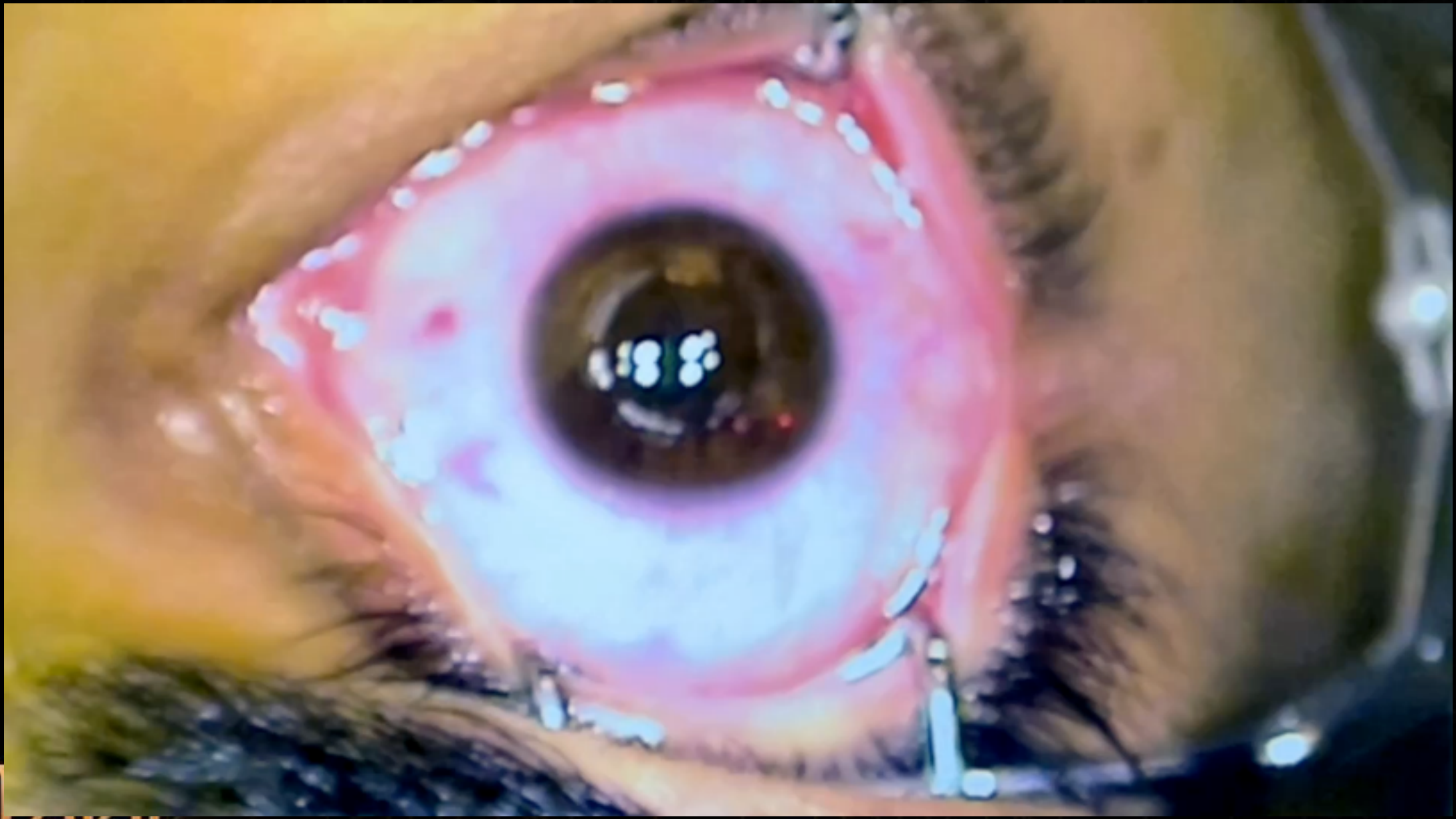


Pupil Photopic Dia: 4.35mm



Inverted pattern

Inverted CW6

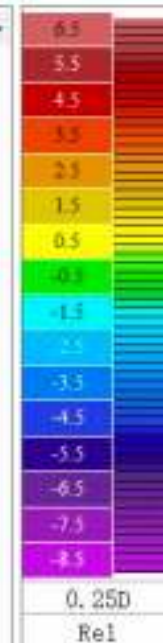
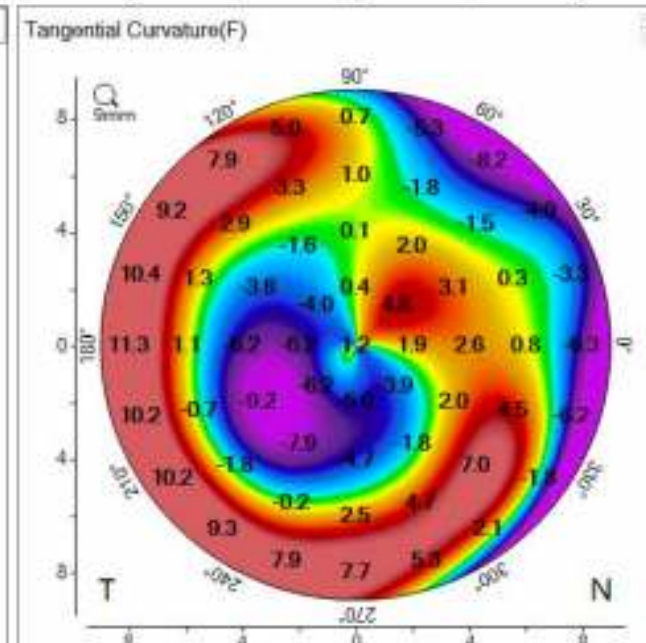
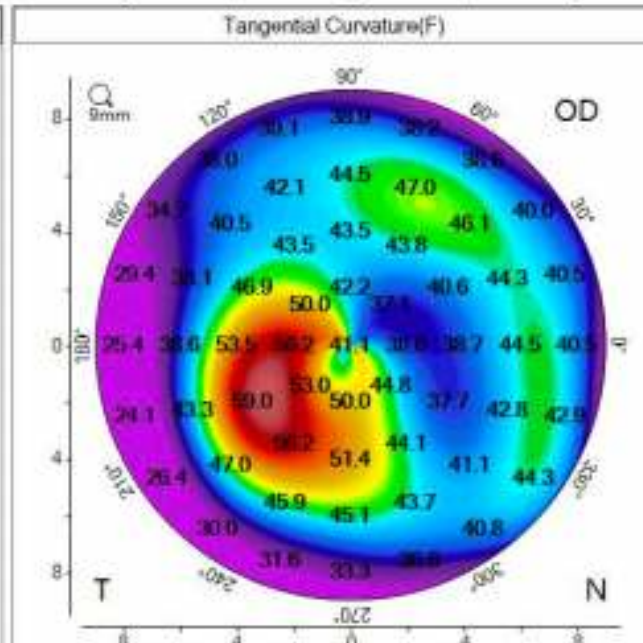
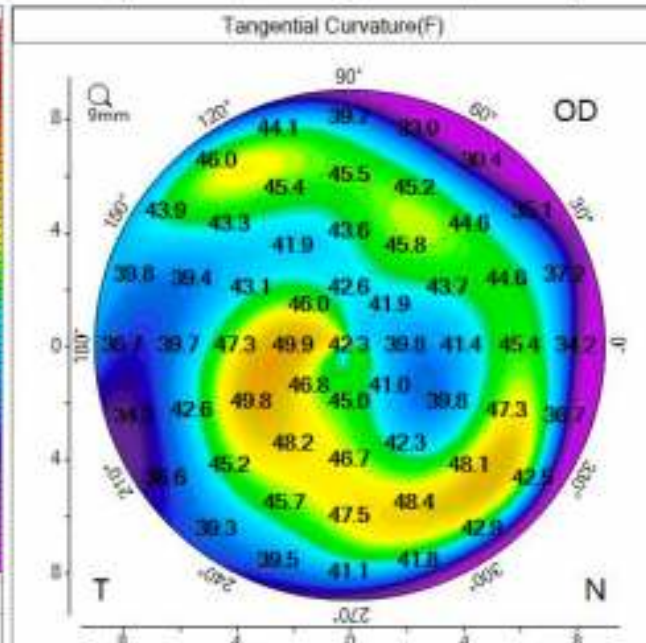
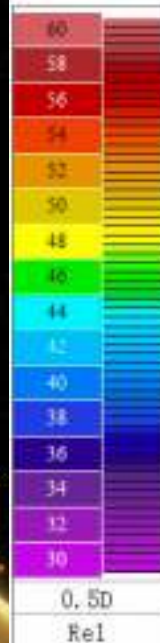
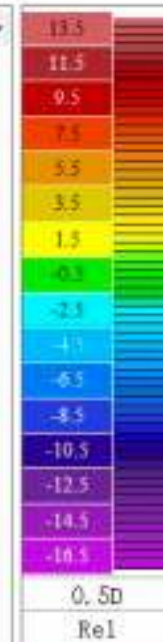
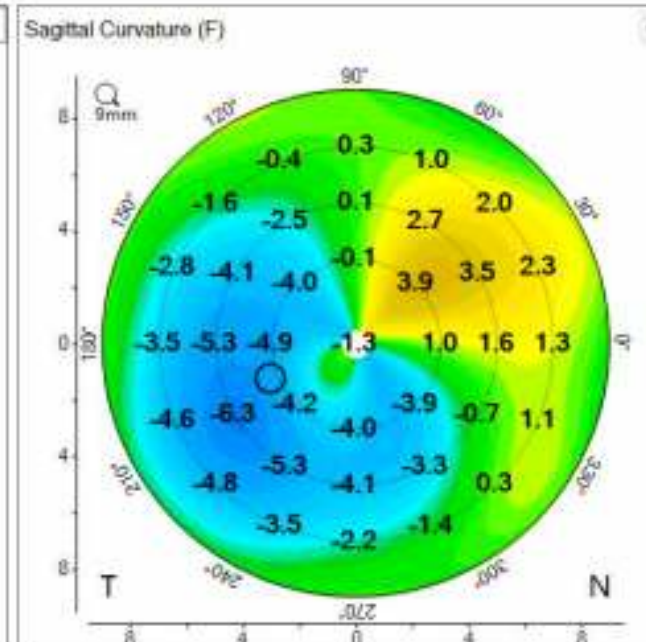
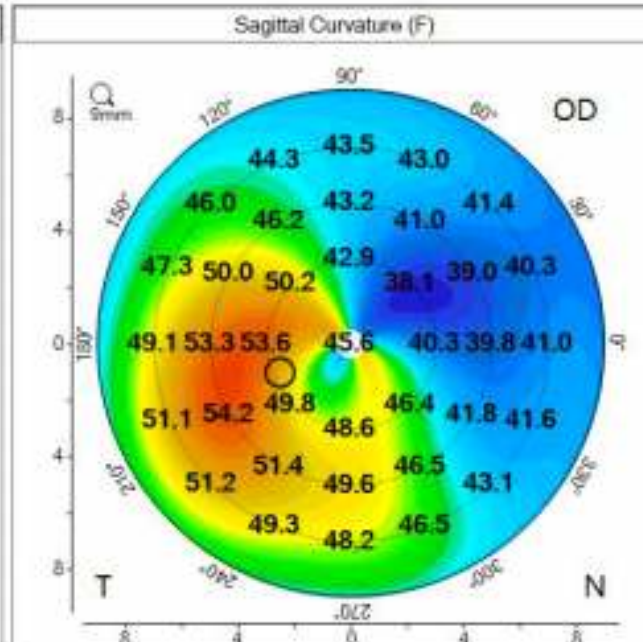
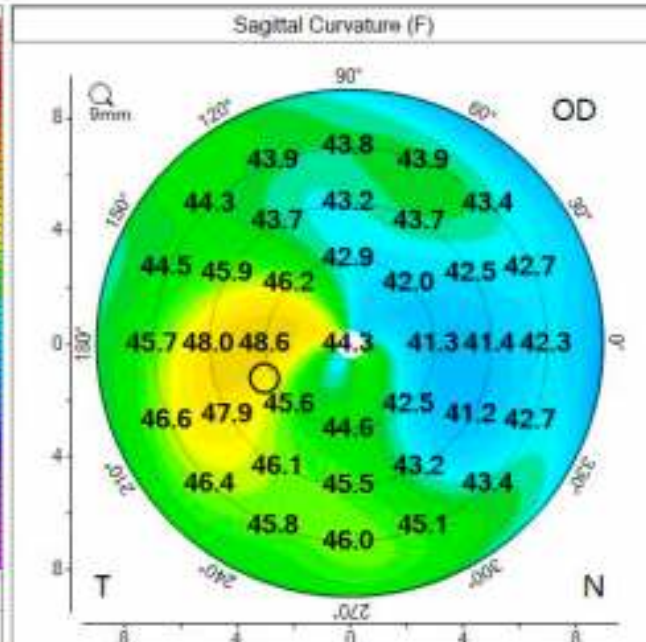
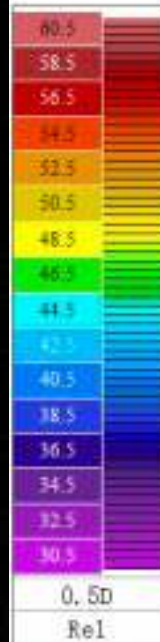


RIO 2020

A: 12-12-2025 19:59:31 Right

B: 16-11-2025 19:45:21 Right

Difference A-B



Cornea (F)-SimK

K1/Rf: 43.66D@83°/7.73mm
 K2/Rs: 44.65D@173°/7.56mm
 Km/Rm: 44.15D/7.64mm
 Astig: -0.99D @ 83°

Q-val(6mm): -1.00 Grade: 2 

Kmax/Rmin: ◆ 48.71D/6.93mm(-1.7 , 0.03)

Cornea(B)

K1/Rf: -5.31D@25°/7.53mm
 K2/Rs: -6.05D@115°/6.61mm
 Km/Rm: -5.66D/7.07mm
 Astig: 0.74D @ 25°

Q-val(6mm): -0.28 Grade: 4 

Kmax/Rmin: ◇ -9.13D/4.38mm(-2.47 , -0.22)

	Pachy	X,Y(mm)
Apex:	● 577μm	0 , 0
Thinnest:	○ 505μm	-1.53 , -0.6
Pupil C.(Kappa):	✚ 573μm	-0.22 , 0.17
Cornea C.(Alpha):	■ 568μm	-0.26 , 0.06

Grade: 0 

Cornea Vol.: 64.54mm³

Cornea Dia: 11.8mm

Pupil Photopic Dia: 3.93mm

Pupil Scotopic Dia: --mm

Chamber Vol.: 235.77mm³

Chamber Angle: 43°

A.C.Depth(Int.): 3.29mm

KCP: 84.9%

Cornea (F)-SimK

K1/Rf: 43.19D@44°/7.81mm
 K2/Rs: 48.20D@134°/7.00mm
 Km/Rm: 45.56D/7.41mm
 Astig: -5.01D @ 44°

Q-val(6mm): -1.29 Grade: 3 

Kmax/Rmin: ◆ 54.40D/6.20mm(-2.16 , -0.66)

Cornea(B)

K1/Rf: -5.23D@29°/7.65mm
 K2/Rs: -6.95D@119°/5.75mm
 Km/Rm: -5.97D/6.70mm
 Astig: 1.72D @ 29°

Q-val(6mm): -1.91 Grade: 4 

Kmax/Rmin: ◇ -8.92D/4.48mm(-1.79 , -0.76)

	Pachy	X,Y(mm)
Apex:	● 547μm	0 , 0
Thinnest:	○ 508μm	-1.27 , -0.5
Pupil C.(Kappa):	✚ 548μm	-0.1 , 0.21
Cornea C.(Alpha):	■ 542μm	-0.18 , 0.06

Grade: 0 

Cornea Vol.: 63.03mm³

Cornea Dia: 11.8mm

Pupil Photopic Dia: 4.35mm

Pupil Scotopic Dia: --mm

Chamber Vol.: 213.77mm³

Chamber Angle: 44°

A.C.Depth(Int.): 3.47mm

KCP: 99.0%

Cornea (F)-SimK

K1/Rf: 0.47D@39°/-0.08mm
 K2/Rs: -3.55D@39°/0.56mm
 Km/Rm: -1.41D/0.23mm
 Astig: 4.02D @ 39°

Q-val(6mm): 0.29 Grade: 2 

Kmax/Rmin: ◆ -5.69D/0.73mm(0.46 , 0.69)

Cornea(B)

K1/Rf: -0.08D@-4°/-0.12mm
 K2/Rs: 0.90D@-4°/0.86mm
 Km/Rm: 0.31D/0.37mm
 Astig: -0.98D @ -4°

Q-val(6mm): 1.63 Grade: 4 

Kmax/Rmin: ◇ -0.21D/-0.10mm(-0.68 , 0.54)

	Pachy	X,Y(mm)
Apex:	● 30.00μm	0.00 , 0.00
Thinnest:	○ -3.00μm	-0.26 , -0.10
Pupil C.(Kappa):	✚ 25.00μm	-0.12 , -0.04
Cornea C.(Alpha):	■ 26.00μm	-0.08 , 0.00

Grade: 0 

Cornea Vol.: 1.51mm³

Cornea Dia: 0.00mm

Pupil Photopic Dia: -0.42mm

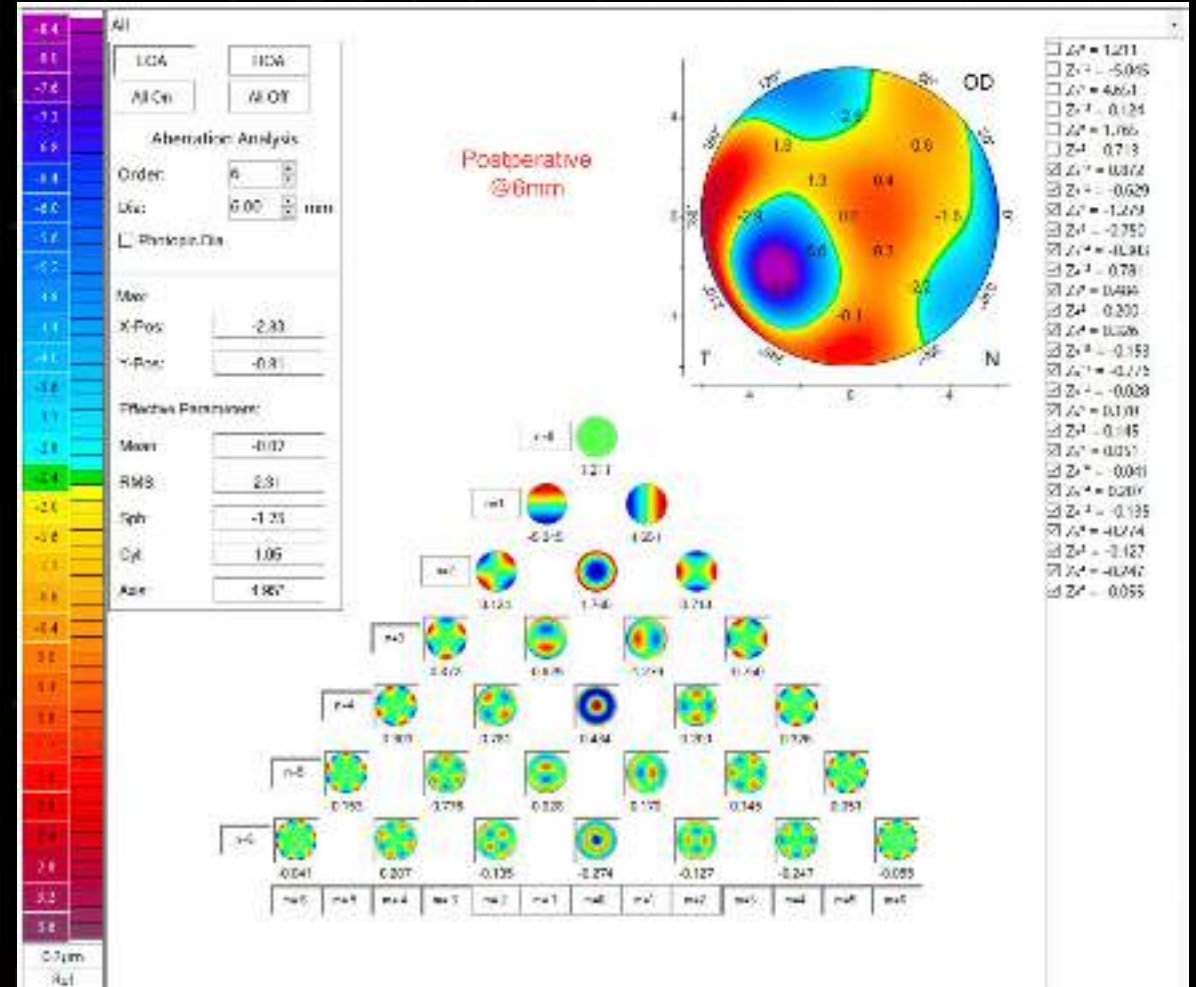
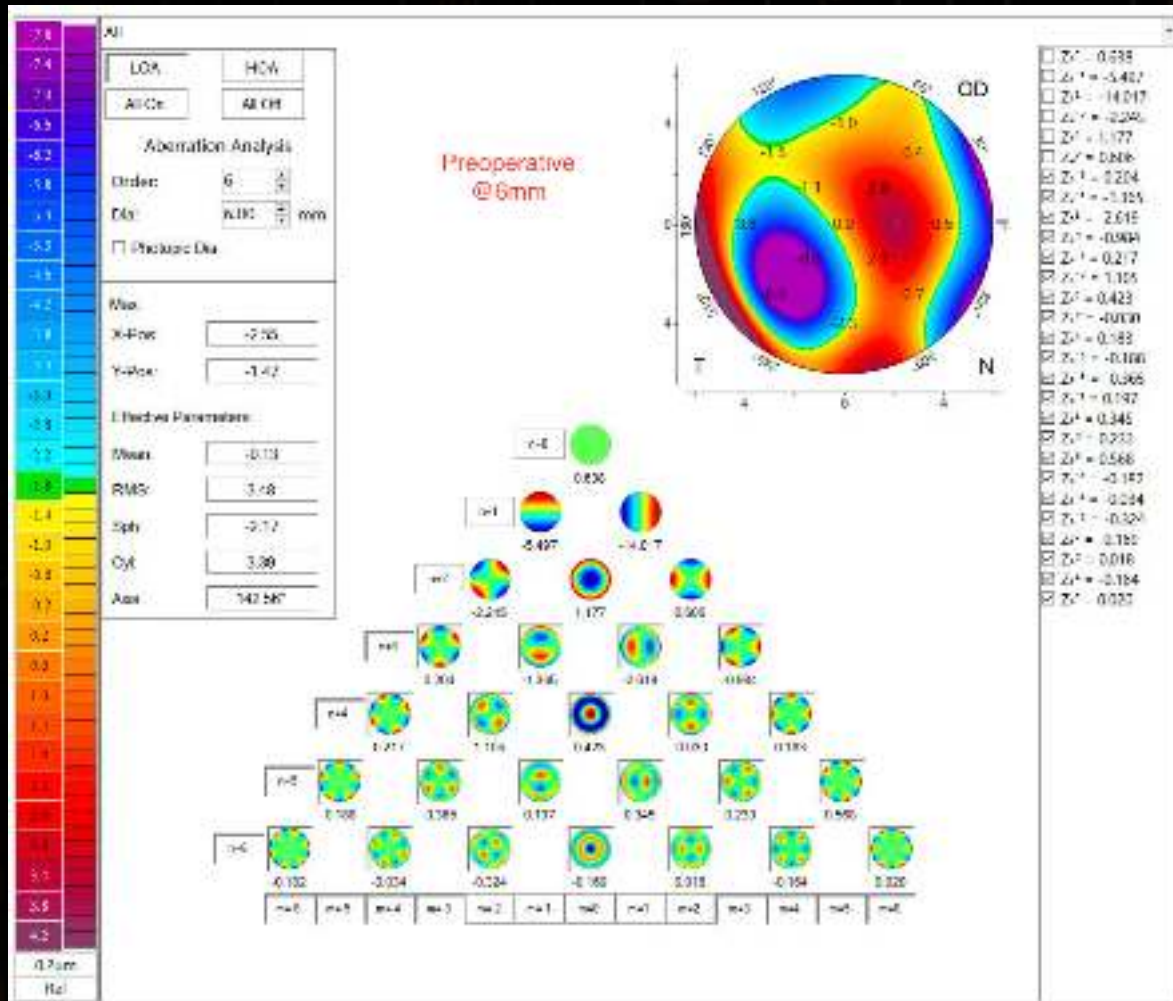
Pupil Scotopic Dia: --mm

Chamber Vol.: 22.00mm³

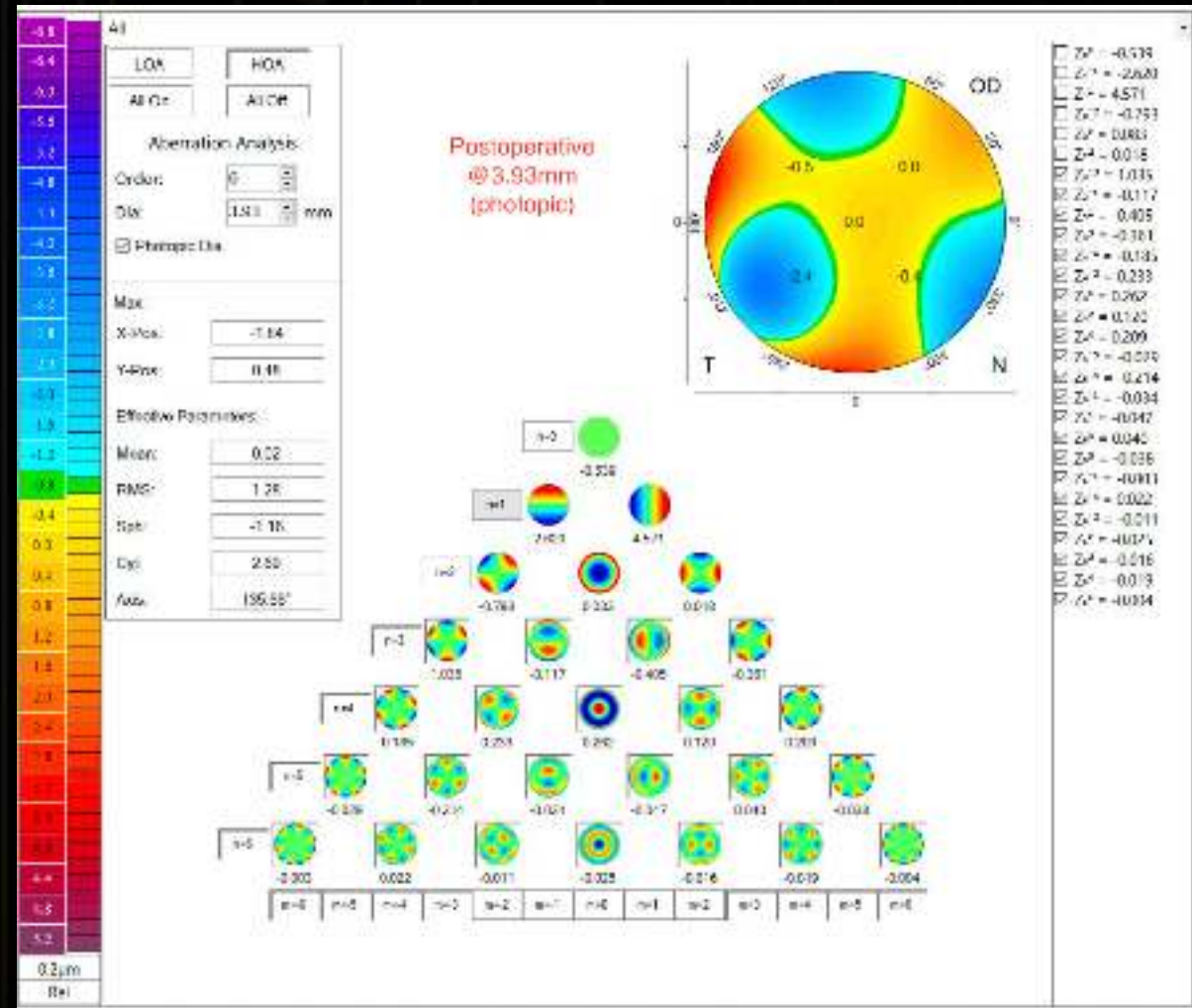
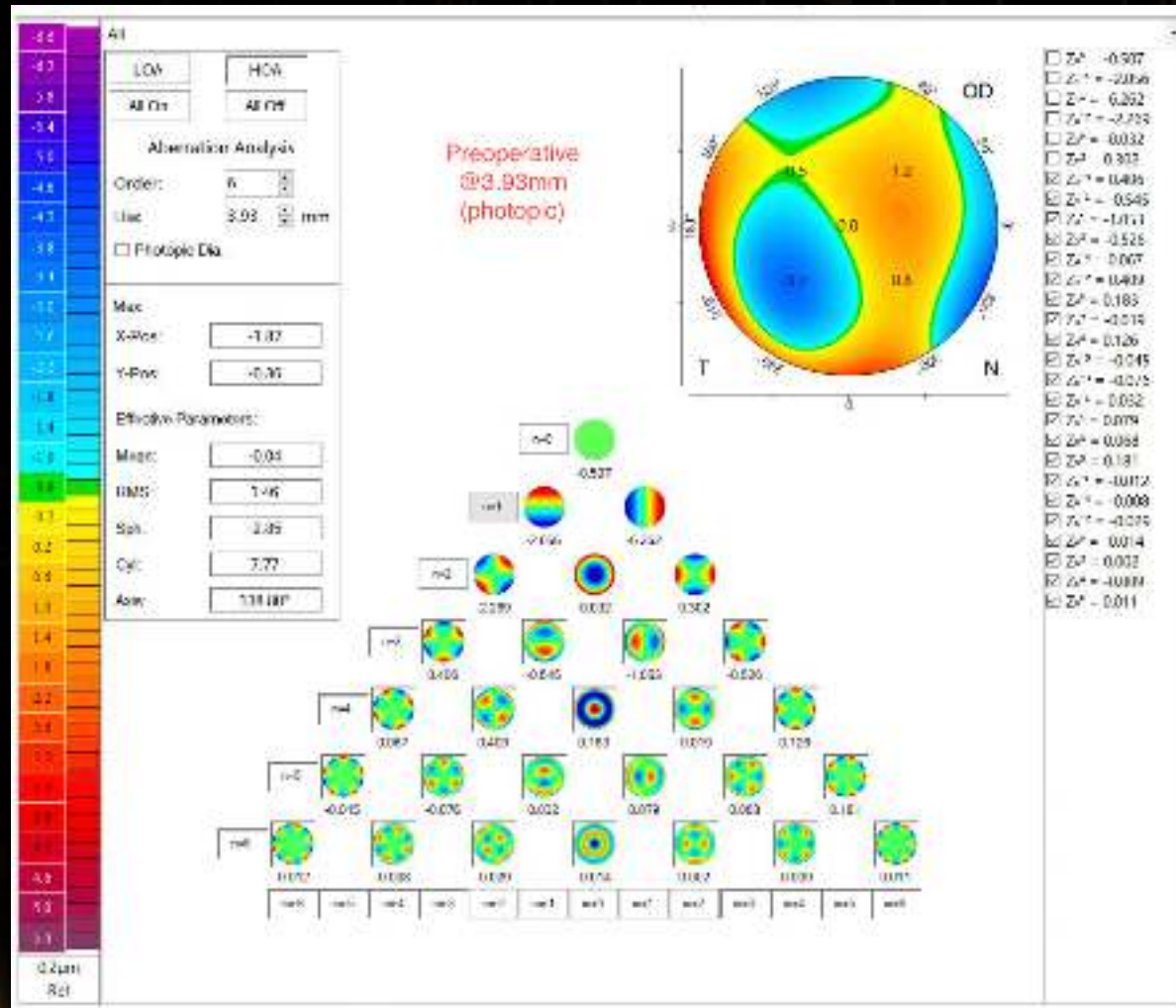
Chamber Angle: -1°

A.C.Depth(Int.): -0.18mm

KCP: -14.0%



R10 2026



R10 2026

AJL PRO+ 210 150/250

R10 2026

AJL PRO+ 210 150/250



R10 202

Limitation of Nomogram Accuracy

- Depth of Implantation
- Tunnel Diameter and Width
- Initial Corneal Biomechanics
- CXL Effect

Take home message

- Progressive ICRS: A True Game Changer
- Understanding the Cone:
 - Careful analysis of cone shape, position, and irregularity is crucial for optimal outcomes.
- Nomogram Knowledge:
Studying and selecting the appropriate nomogram ensures accurate planning and effective visual rehabilitation.
- Reversibility and Adjustability
ICRS implantation is reversible and adjustable, allowing segment removal or exchange to optimize visual and topographic outcomes.

Thank you

RIO 2026