



ΚΡΙΤΗΡΙΑ ΕΠΙΛΟΓΗΣ LASIK ΚΑΙ PRK

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Χειρουργός Οφθαλμίατρος
Διευθυντής

PIRAEUS LASER EYE CENTRE



ΑΠΟΛΥΤΕΣ ΑΝΤΕΝΔΕΙΞΕΙΣ

- Καταρράκτης
- Κερατίτιδα από έκθεση
- Νευροτροφική κερατίτιδα
- Κερατόκωνος - Pellucid – Κερατόσφαιρα
- Κερατεκτασία
- Αμιοδαρόνη
- Ισοτρετινοΐνη
- Εγκυμοσύνη - γαλουχία
- Βηματοδότης



ΚΡΙΤΗΡΙΑ ΚΑΤΑΛΛΗΛΟΤΗΤΑΣ

Άνω των 21 ετών*

Σταθερή συνταγή γυαλιών για τουλάχιστον 2 χρόνια

Καλή κατάσταση υγείας

Να μην προγραμματίζουν εγκυμοσύνη τους επόμενους
9 μήνες ή να έχουν περατώσει την γαλουχία
τουλάχιστον για 9 μήνες



ΣΧΕΤΙΚΕΣ ΑΝΤΕΝΔΕΙΞΕΙΣ

- Γλαύκωμα
- Ερπητική κερατίτιδα (PRK)
- Δυστροφίες βασικών μεμβρανών (LASIK)
- Στρωματικές ουλές κερατοειδούς
- Σύνδρομο Sjögren
- Σακχαρώδης διαβήτης
- Ρευματοειδής αρθρίτιδα
- Συστηματικός ερυθηματώδης λύκος
- Επιληψία



ΚΡΙΤΗΡΙΑ ΕΠΙΛΟΓΗΣ

Α.ΙΑΤΡΙΚΑ ΚΡΙΤΗΡΙΑ

- Διαθλαστικά
- Κερατομετρικά
- Τοπογραφικά
- Παχυμετρικά
- Ανατομικά

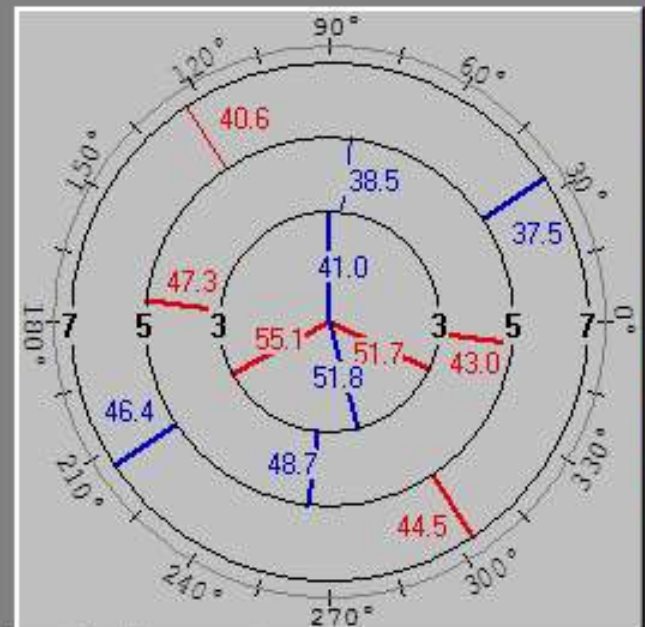
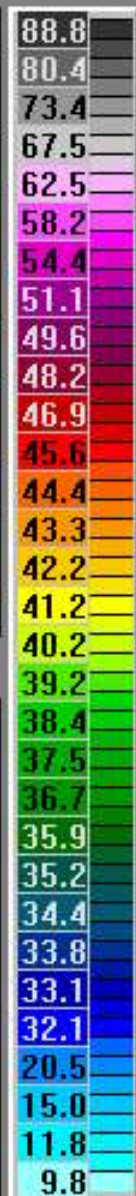
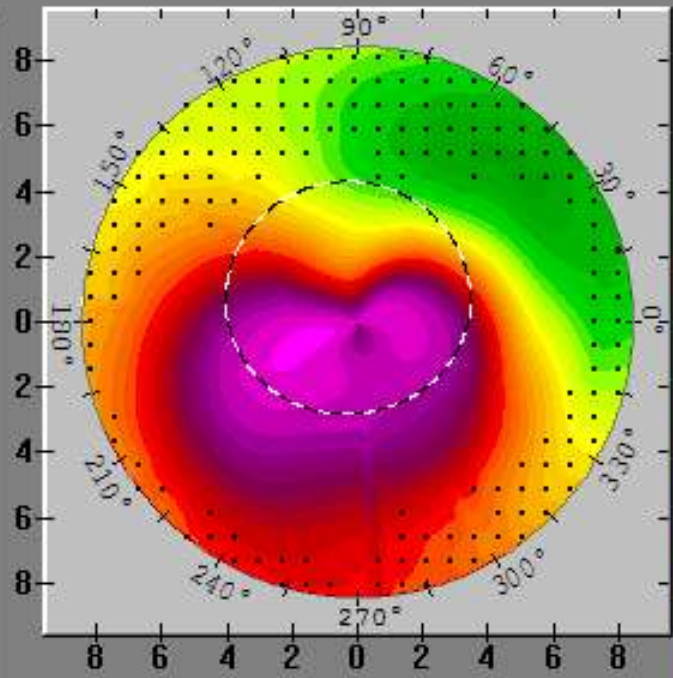
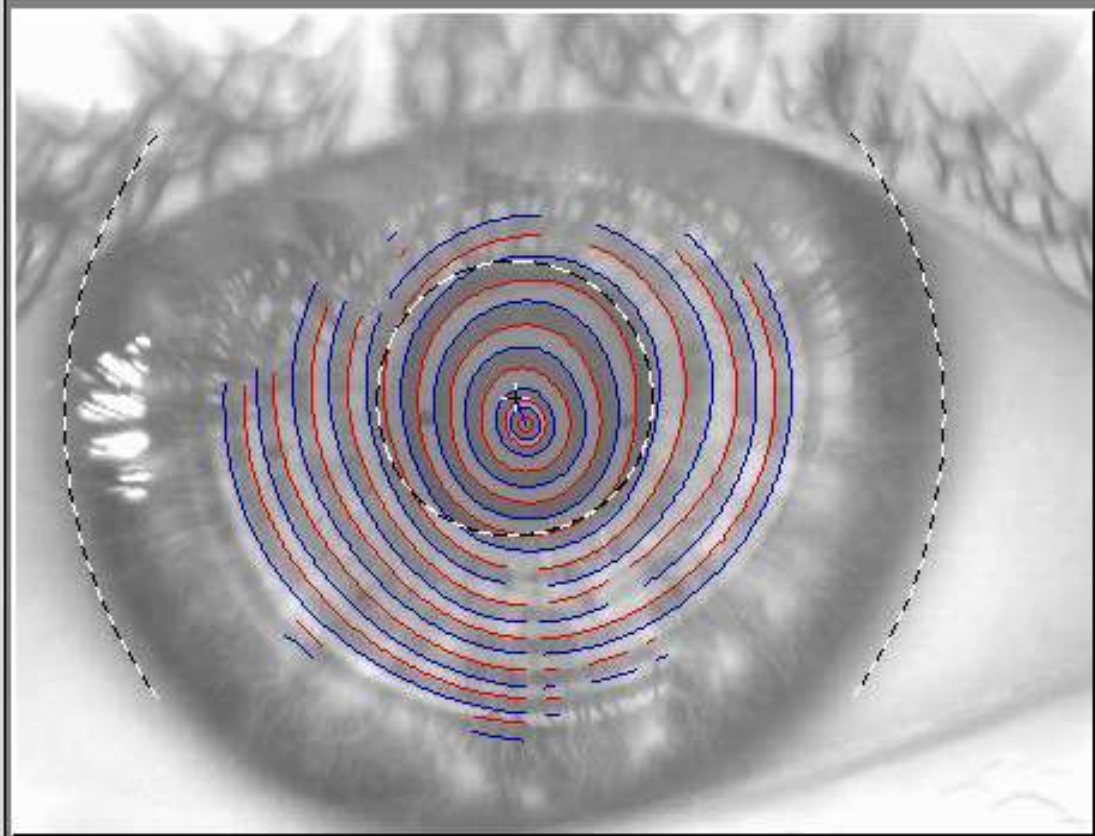
Β.ΚΡΙΤΗΡΙΑ ΑΣΘΕΝΟΥΣ



ΙΑΤΡΙΚΑ ΚΡΙΤΗΡΙΑ

Γιατί;

Name: Exm. dat.: 23.11.05
 Dat. o.B.: 02.02.72 Eye: Right Exm. time: 15:38



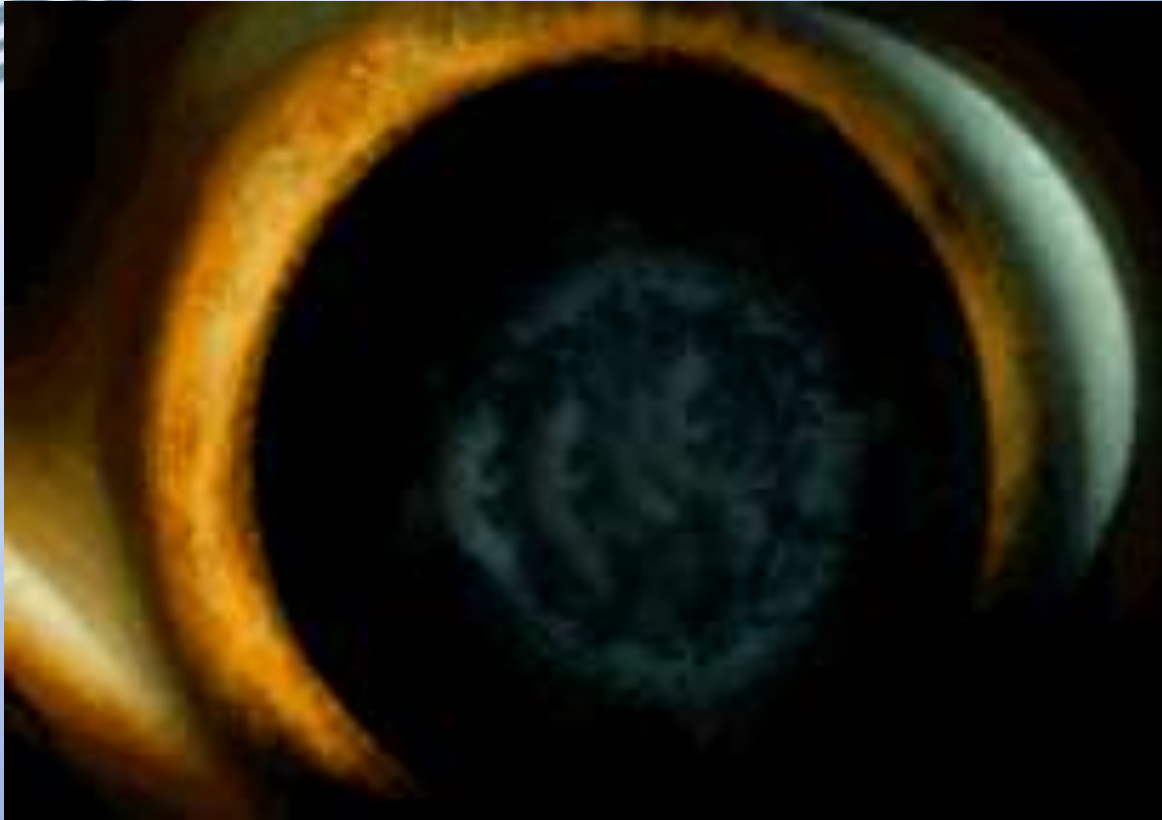
Keratometric data : major meridians perpendicular (d=3mm)

Rh: 50.0D	180.9°	0.9°
Rv: 45.1D		
Ast.: +4.9D		
Axs.: 90.9°		
Ecc.: 1.14	90.9°	270.9°
Øcor: 12.0		

AA:63%

Diopter
 Sagittal
 Absolut

HAZE





ΙΑΤΡΙΚΑ ΚΡΙΤΗΡΙΑ

Βάθος φωταποδόμησης
(Munnerlyn)

$$DA = \frac{OZ^2 \times RC}{3}$$

DA=Βάθος φωταποδόμησης OZ=Οπτική ζώνη
RC=Μεταβολή της διάθλασης (σε D)



ΒΑΘΟΣ ΦΩΤΟΑΠΟΔΟΜΗΣΗΣ

PRK <75 μ m
PRK+MMC <100 μ m

Υπολειπόμενο στρώμα >350 μ m

LASIK <150 μ m*

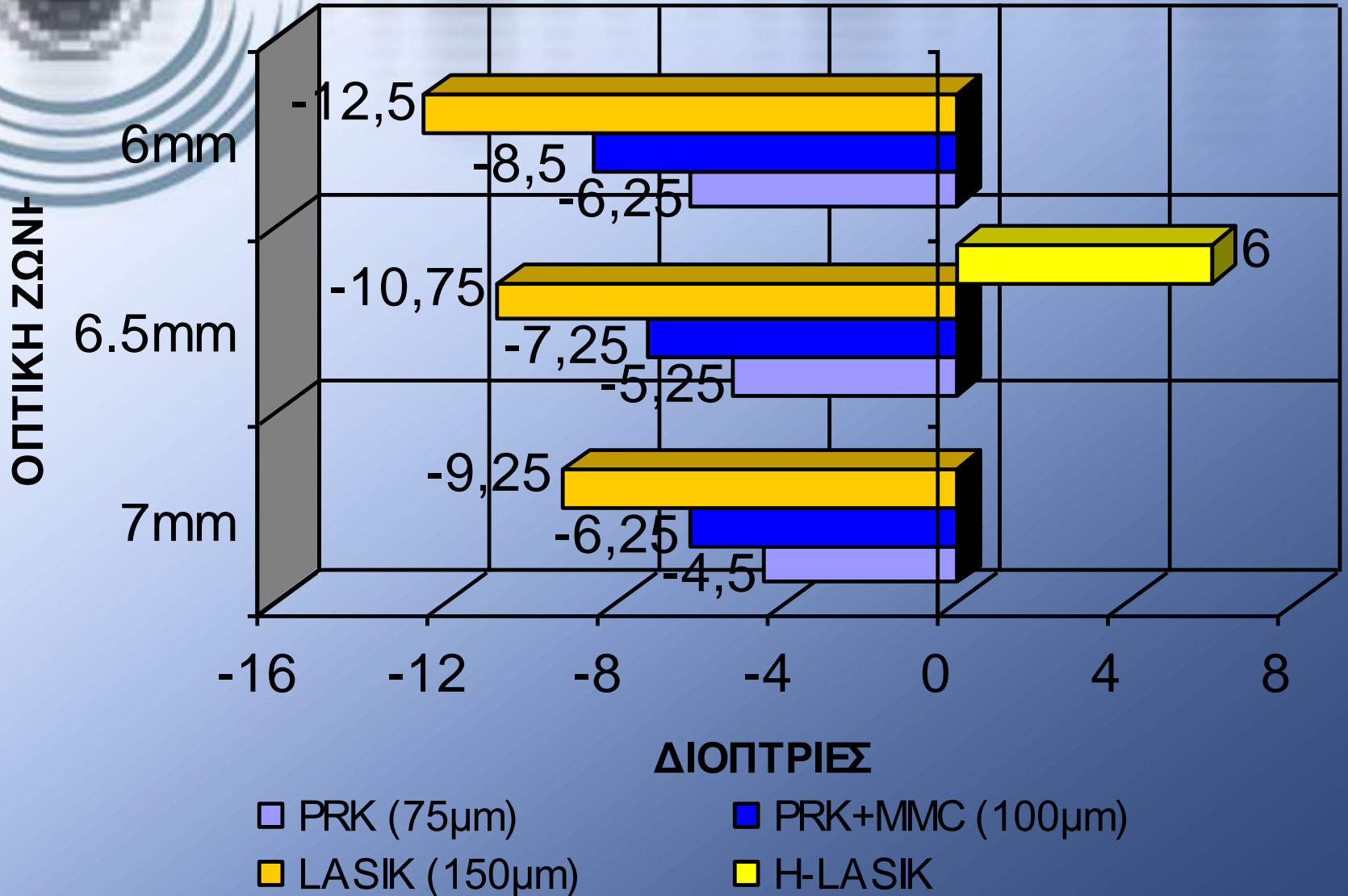
Υπολειπόμενο στρώμα >300 μ m

Flap+Υπολειπόμενο στρώμα >410 μ m

*Βάθος φωτοαποδόμησης <25%

αρχικού πάχους

ΔΙΑΘΛΑΣΤΙΚΑ ΚΡΙΤΗΡΙΑ





ΔΙΑΘΛΑΣΤΙΚΑ ΚΡΙΤΗΡΙΑ

Αστιγματισμός

<3D

LASIK

>3D

Κίνδυνος εκτασίας,
επιπλοκών flap



ΠΑΧΥΜΕΤΡΙΚΑ ΚΡΙΤΗΡΙΑ

Ελάχιστη προεγχειρητική παχυμετρία

LASIK

>500 μ m

PRK

>460 μ m



ΚΕΡΑΤΟΜΕΤΡΙΚΑ ΚΡΙΤΗΡΙΑ

Αρχική κερατομετρία - Μυωπική διόρθωση $>33D$

(Αντιστοιχία με Cornea plana)
Αύξηση σφαιρικής εκτροπής

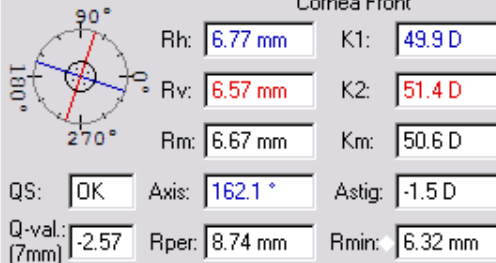
Αρχική κερατομετρία + Υπερμετρωπική διόρθωση $<50D$

(Αντιστοιχία με κερατόκωνο)
Πρισματική παραμόρφωση

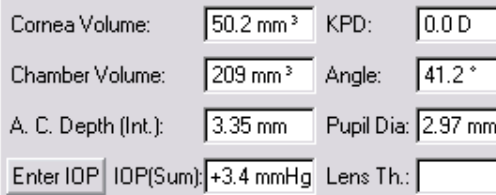
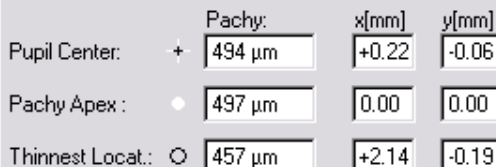
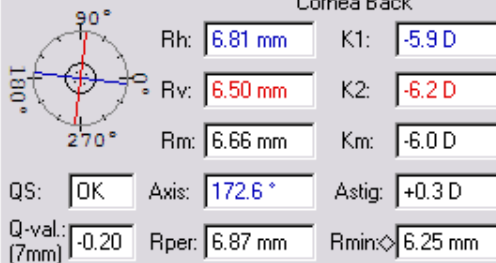
BCVA

↓ ↓ 7/10

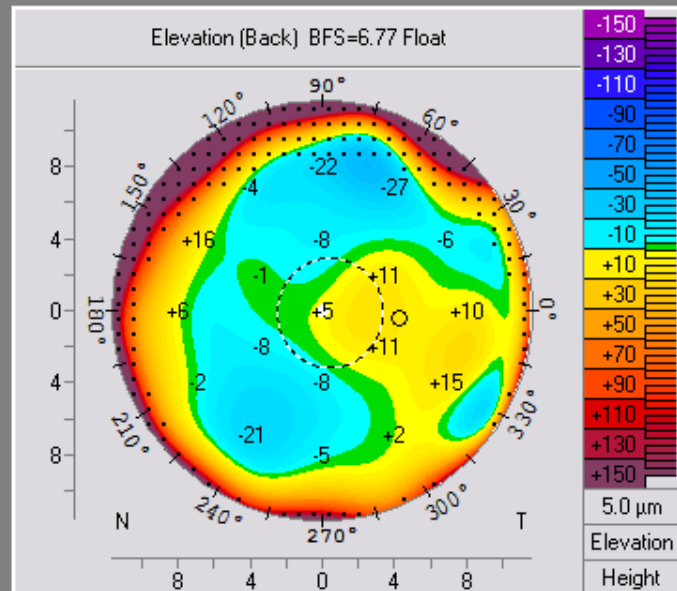
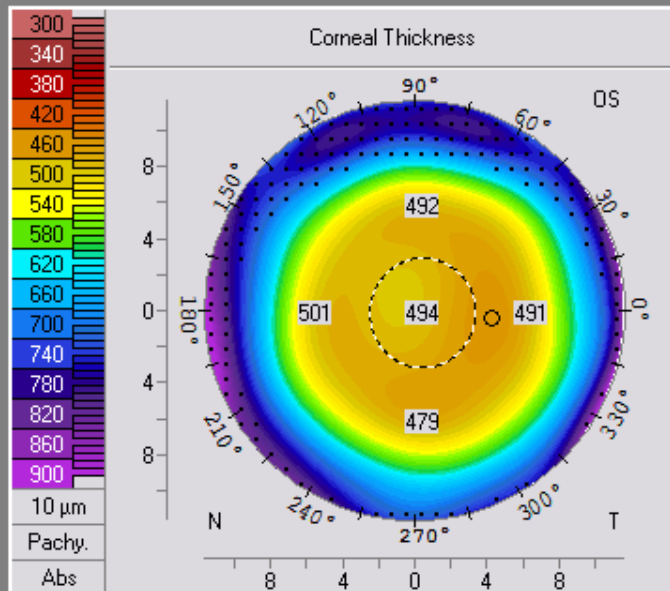
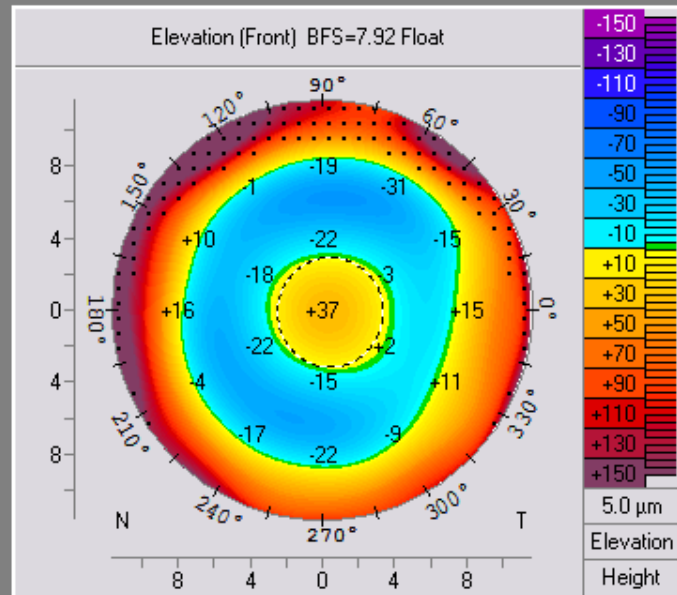
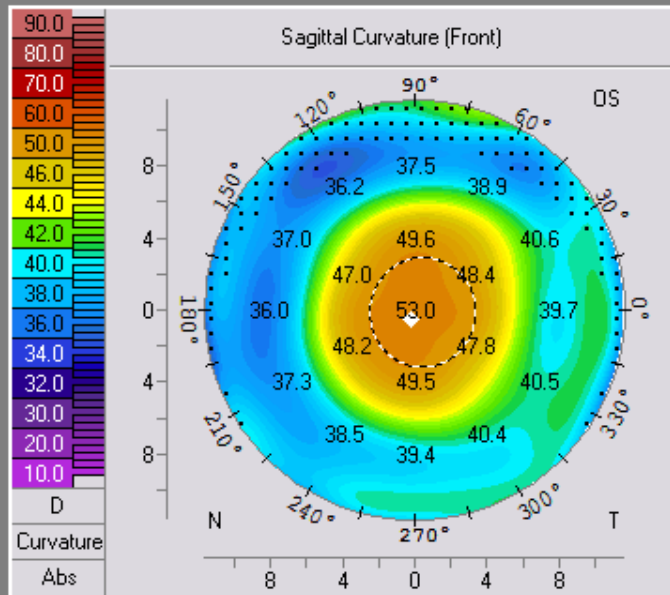
Cornea Front



Cornea Back



Refractive





ΚΕΡΑΤΟΜΕΤΡΙΚΑ ΚΡΙΤΗΡΙΑ

Υψηλή κερατομετρία

PRK

>47D



ΑΝΑΤΟΜΙΚΑ ΚΡΙΤΗΡΙΑ

Προϋπάρχων περιβρογχισμός

PRK

Δυστροφίες κερατοειδούς

PRK

Ερπητική κερατίτιδα

LASIK



ΤΟΠΟΓΡΑΦΙΚΑ ΚΡΙΤΗΡΙΑ (ORBSCAN)

- Υψομετρική διαφορά $>100\mu\text{m}$ στο anterior float (Roush)
- Οπίσθια BFS $>51-55\text{D}$ (Ευκαρπίδης-Potgieter)
- Διαφορά $>3\text{D}$ στα 3mm στον axial map (Smolek- Klyce)
- Λόγος Ευκαρπίδη Πρόσθια BFS/Οπίσθια BFS
 - Φυσιολογικός $<1,21$
 - $1,21 < \text{Υποπτος} < 1,27$
 - Παθολογικός $>1,27$
- Υψομετρική αναρμονικότητα (Μαγουλάς)
- Posterior elevation $>40-50\mu\text{m}$ (Roa-Epstein)
- Irregularity index $>1,5\text{D}$ στα 3mm, $>2\text{D}$ στα 5mm (Lindstrom)
- Παχυμετρική διαφορά λεπτότερο σημείο/περιφέρεια(7mm) $>100\mu\text{m}$ (Potgieter)
- Λεπτότερο σημείο εκτός των 5mm (Jennings)
- Αντιδιαμετρική διαφορά πάχους $>30\mu\text{m}$ (Μαγουλάς-Klyce)
- Οπίσθια μέση καμπυλότητα $>7\text{D}$ (Κυρούδης)



ORBSCAN II

Μειονεκτήματα (-)

Αδυναμία συνδυασμού των υψομετρικών με τα καμπυλομετρικά δεδομένα για την πρόσθια επιφάνεια του κερατοειδή

Υποεκτίμηση του κεντρικού πάχους του κερατοειδή λόγω εξάρτησης από αδιαφάνειες (PRK) και την δημιουργία διαστρωμάτωσης (LASIK)

Υπερεκτίμηση της ανύψωσης της οπίσθιας επιφάνειας του κερατοειδή που οδηγούν σε ψευδή διάγνωση κερατεκτασίας μετά από διαθλαστική χειρουργική

ΑΛΛΑ

και σε λεπτούς κερατοειδείς προεγχειρητικά



ΤΟΠΟΓΡΑΦΙΚΑ ΚΡΙΤΗΡΙΑ (Pentacam)

- Πρόσθια ανύψωση $>12-15\mu\text{m}$
- Οπίσθια ανύψωση $>20\mu\text{m}$
(Σε τορικούς κερατοειδείς εξετάζεται το toric fit)
- Ασυμμετρία bow-tie $>1,5\text{D}$
- Οπίσθια καμπυλότητα $>7\text{D}$
- Pentacam keratoconus screening & indices
- Keratometric power deviation $>1,8\text{D}$
- Παχυμετρία $<500\mu\text{m}$

...ΤΟΤΕ PRK



ΔΥΝΑΤΟΤΗΤΕΣ SCREENING ΓΙΑ ΚΕΡΑΤΟΚΩΝΟ ΜΕ ΤΟ PENTACAM/OCULYZER

Συμβατικοί δείκτες

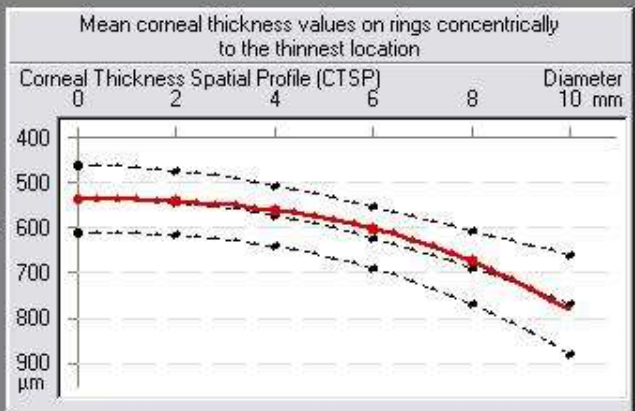
Belin Ambrosio Display (BAD II)

Holladay Report

Last Name:
 First Name:
 ID: **Συμβατικοί δείκτες**
 Date of Birth:
 Exam Date:

Rh: 7.74 mm K1: 43.6 D Axis: 9.1°
 Rv: 7.60 mm K2: 44.4 D Axis: 99.1°
 Rm: 7.67 mm Km: 44.0 D Astig: -0.8 D
 QS: OK ecc: (7mm) 0.61 Rper: 7.98 mm Rmin: 7.48 mm

Pachy: x[mm] y[mm]
 Pupil Center: + 537 μm -0.23 -0.16
 Thinnest Locat.: O 535 μm +0.28 -0.64
 A. C. Depth (Int.): 3.35 mm Pupil Dia: 2.70 mm
 Angle: 43.3° Lens Th.:

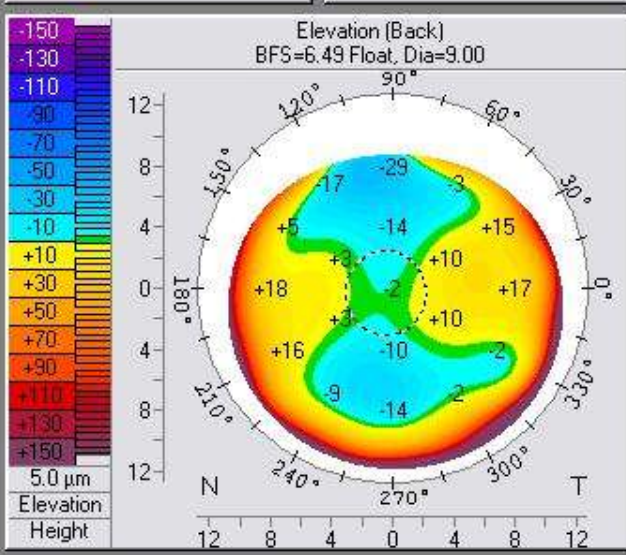
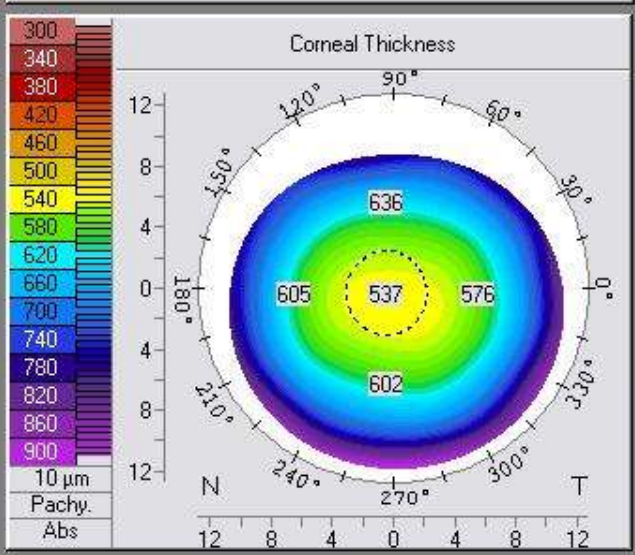
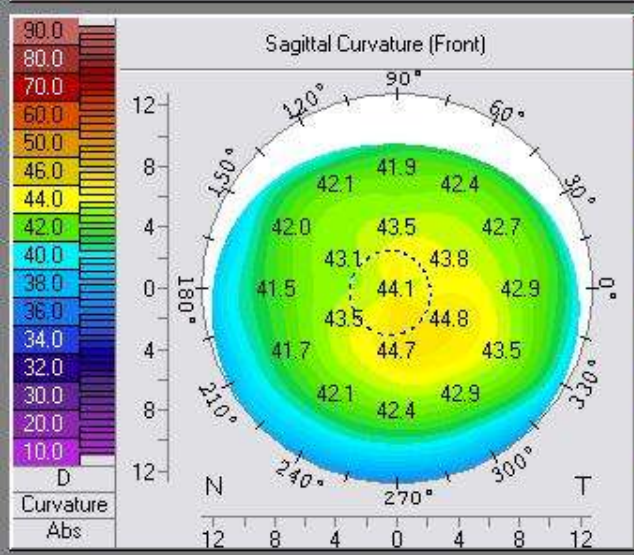
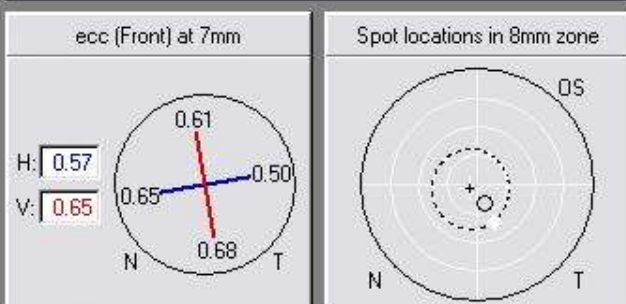


Numeric Ecc. (Front) of Major Meridians

(ecc)	Peripheral mm-Rings (Dia)				
	6mm	7mm	8mm	9mm	10mm
Nas	0.62	0.65	0.65	0.65	0.65
Temp	0.47	0.50	0.52	0.53	0.56
Inf	0.65	0.68	0.71	0.74	0.77
Sup	0.60	0.61	0.64	0.68	0.73
Mean	0.58	0.61	0.63	0.65	0.68

Indices (in 8mm zone)

ISV: 18 IHA: 2.7
 IVA: 0.17 IHD: 0.010
 KI: 1.04 RMin: 7.48
 CKI: 1.01 TKC: -



Last Name:
 First Name:
 ID:
 Date of Birth:
 Exam Date:

Mean corneal thickness values on rings concentrically to the thinnest location

Corneal Thickness	Spatial Profile (CTSP)	Diameter
0	2	4
6	8	10 mm

Numeric Ecc. (Front) of Major Meridians

(ecc)	Peripheral mm-Rings (Dia)				
	6mm	7mm	8mm	9mm	10mm
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 Rv: 7.60 mm K2: 44.4 D Axis: 99.1°
 Rm: 7.67 mm Km: 44.0 D Astig: -0.8 D
 ecc: 0.61 Rper: 7.98 mm Rmin: 7.48 mm

Pachy: x[mm] y[mm]
 Pupil Center: + 537 μm -0.23 -0.16
 Thinnest Locat.: O 535 μm +0.28 -0.64

A. C. Depth (Int.): 3.35 mm Pupil Dia: 2.70 mm
 Angle: 43.3° Lens Th.:

Indices

ISV: (Index of Surface Variance) Value of curvature variation from the mean curvature.

IVA: (Index of Vertical Asymmetry) Value of curvature symmetry comparison of the upper and lower area.

KI: (Keratoconus Index)
 Increases with severity of keratoconus.

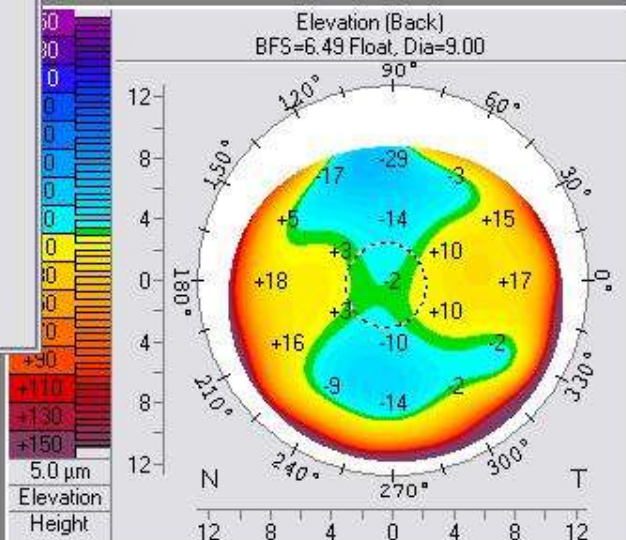
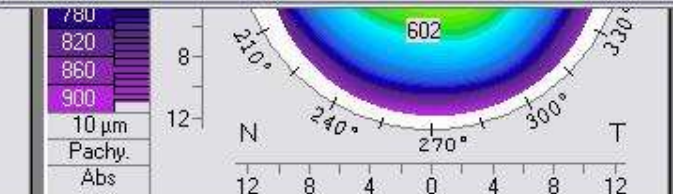
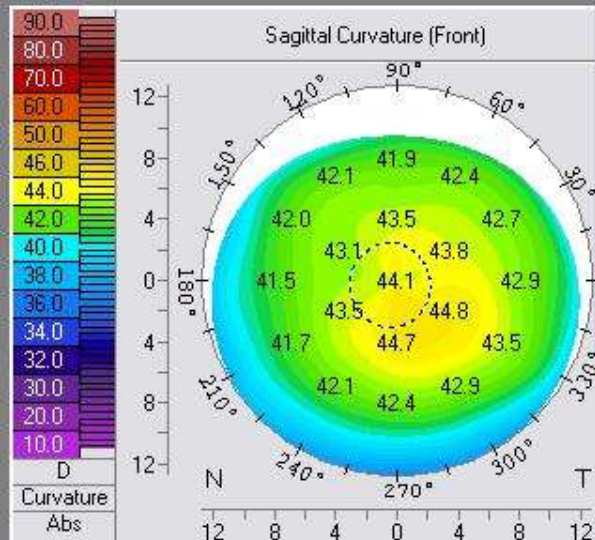
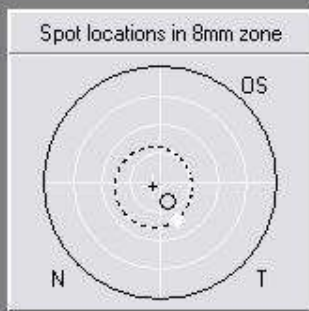
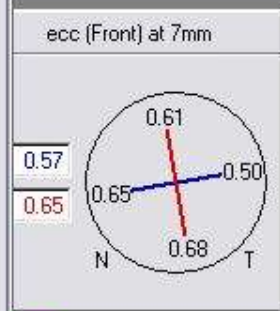
CKI: (Center Keratoconus Index)
 Increases with severity of central keratoconus.

IHA: (Index of Height Asymmetry) Value of height data symmetry comparison of the upper and lower area.

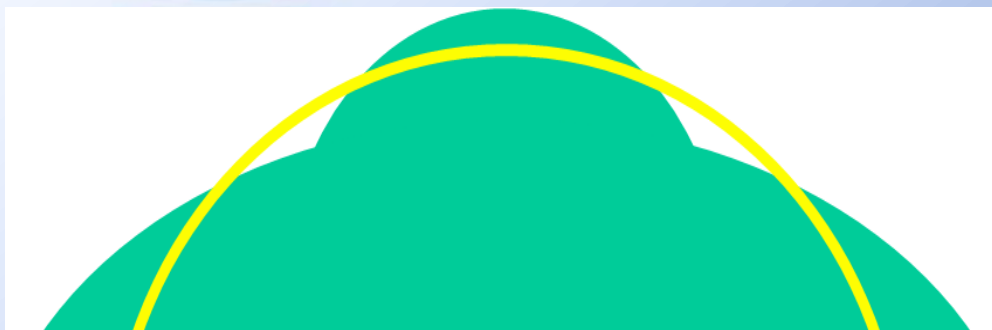
IHD: (Index of Height Decentration) Value of the decentration of height data in vertical direction.

RMin: (Minimum Sagittal Curvature)
 Smallest sagittal curvature in the 8mm-zone.

TKC: (Topographical Keratoconus Classification)
 Keratoconus Classification only based on corneal front shape

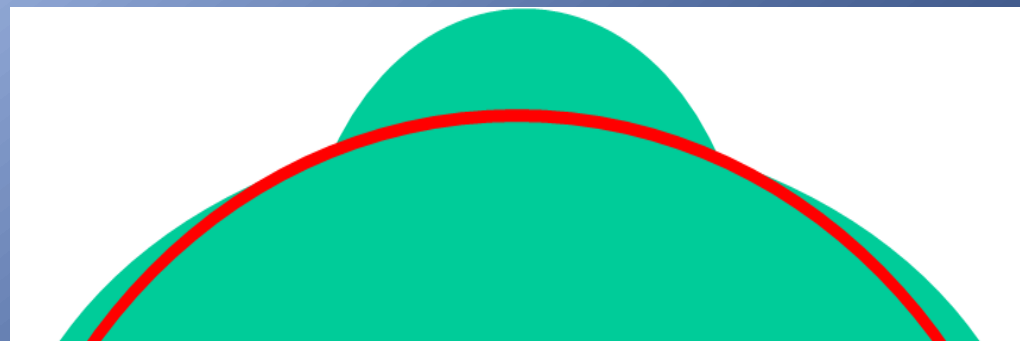


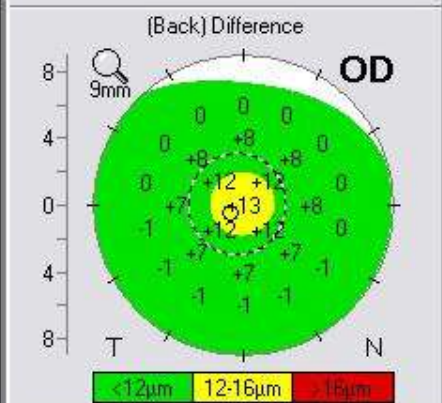
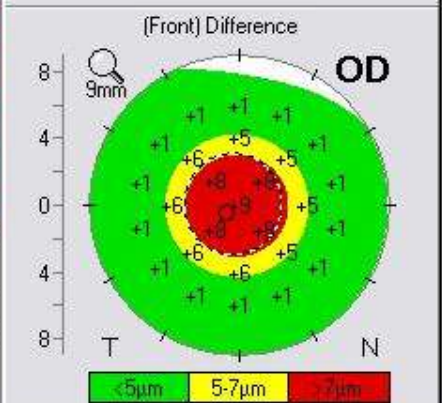
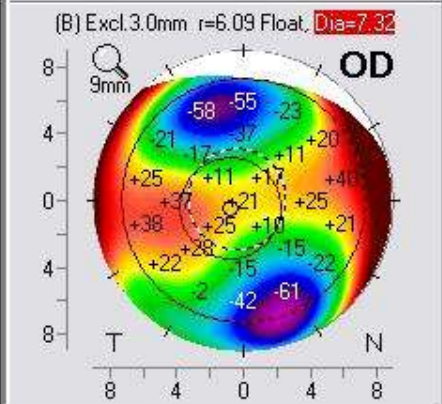
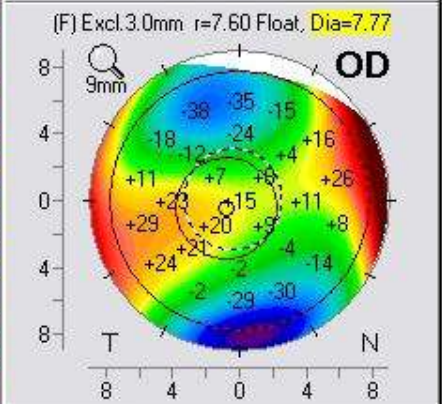
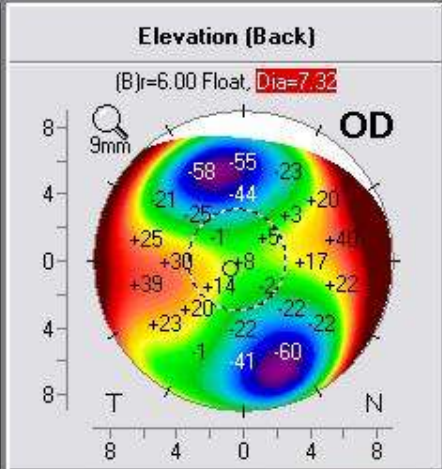
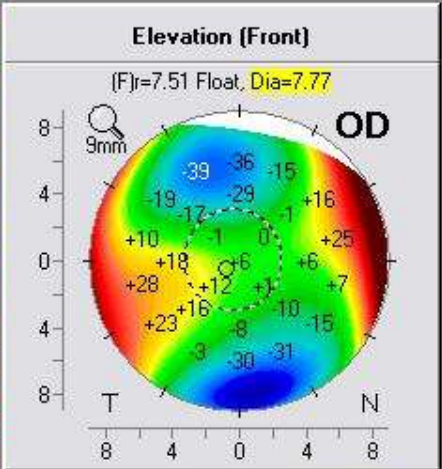
Belin Ambrosio Display (BAD)



Η κανονική σφαίρα αναφοράς
(standard BFS)
διαμορφώνεται από το μέσο όρο
όλων των σημείων της επιφάνειας

Η βελτιωμένη σφαίρα αναφοράς
(enhanced BFS)
εξαιρεί τα στοιχεία σε 4mm
γύρω από το λεπτότερο σημείο
αναδεικνύοντας περισσότερο
την παθολογική ανύψωση





Last Name:
First Name:
ID:
Date of Birth:
Exam Date:
Exam Info:



K1: 43.40
K2: 49.30
Pachy Apex:
Pachy Thin. L:
Dist. Apex-Thi:
Progression In:
Avg: 1.20
Min: 0.81

Deviation Indices

- Df:** Deviation of front elevation difference map
- Db:** Deviation of back elevation difference map
- Dp:** Deviation of average pachymetric progression index
- Dt:** Deviation of minimum thickness
- Dy:** Deviation of thinnest spot displacement (inferior/superior)
- D:** Total Deviation value, calculated from the individual Deviations

All deviation indices are normalised to their standard deviation:
0 represents the average of a normal population
1 shows that the index is enhanced by 1 standard deviation
Negative values show a better than normal index

White marked fields indicate: Normal or below normal value
Yellow marked fields indicate: Suspicious value
Red marked fields indicate: Abnormal value

Df: 4.34 Db: 1.87 Dp: 2.03 Dt: 0.20 Dy: -0.10 **D: 3.18**



Holladay Report

Εφαπτομενική θηλή >48D


Οπίσθια ανύψωση στην εφαρμογή Τορικού Ελλιψοειδούς >15 μ m

Μείωση της σχετικής Παχυμετρίας >3.0%

Last Name:
 First Name:
 ID:
 Date of Birth:
 Exam Date:
 Exam Info:

**ΥΠΟΠΤΟ
 (ασυμμετρία)**

Cornea Front



Rh:	7.78 mm	K1:	43.4 D
Rv:	6.85 mm	K2:	49.3 D
Rm:	7.31 mm	Km:	46.1 D
Axis: (flt.)	16.9°	Astig:	-5.9 D
QS: <input type="checkbox"/> OK			
ecc: (7mm)	0.78	Rper:	7.91 mm
		Rmin:	6.53 mm

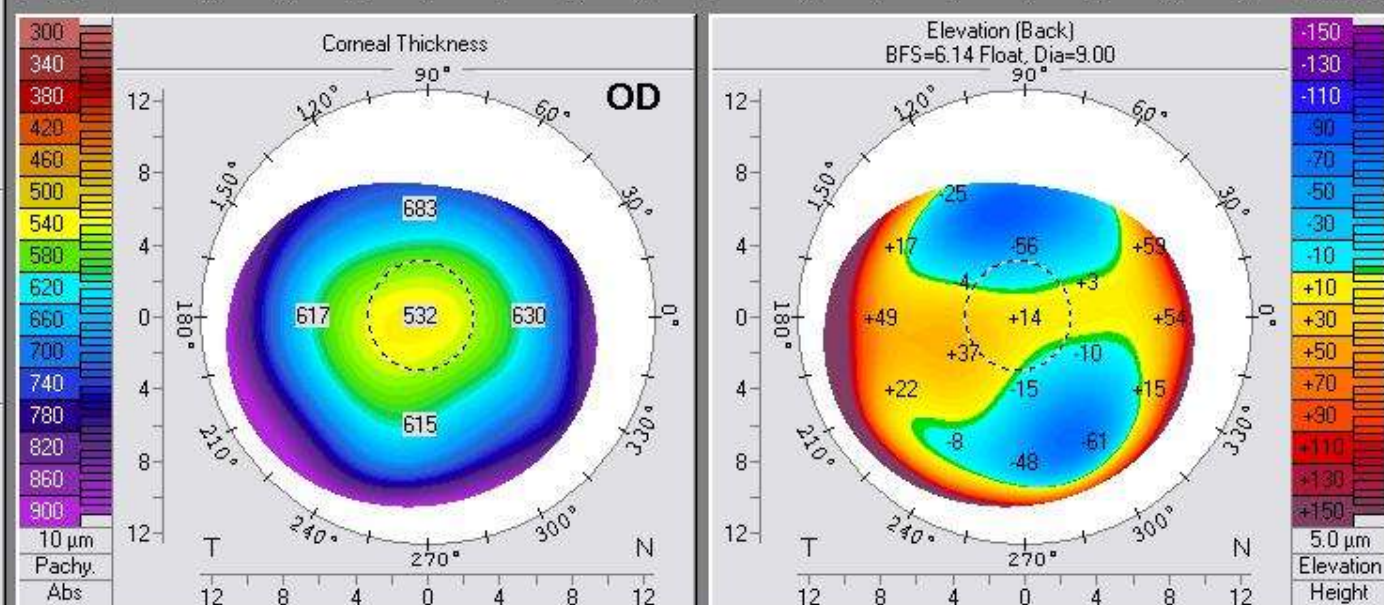
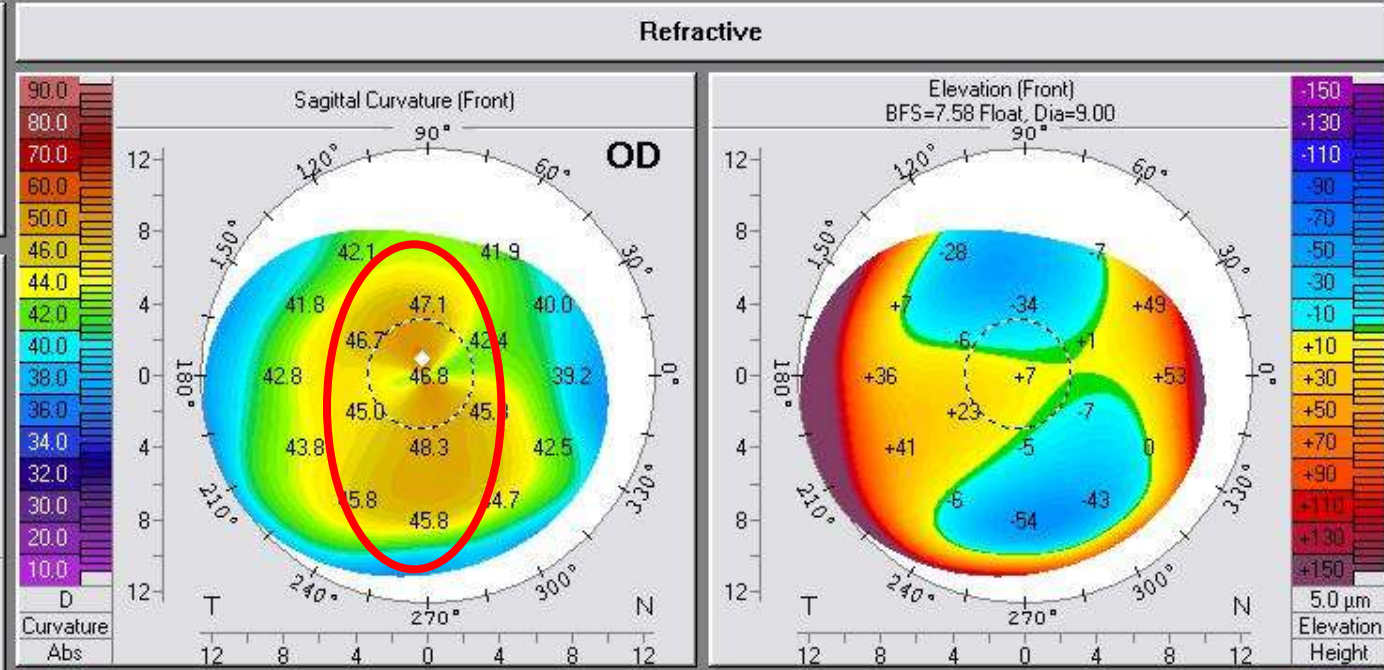
Cornea Back



Rh:	6.35 mm	K1:	-6.3 D
Rv:	5.29 mm	K2:	-7.6 D
Rm:	5.82 mm	Km:	-6.9 D
Axis: (flt.)	15.7°	Astig:	+1.3 D
QS: <input type="checkbox"/> OK			
ecc: (7mm)	0.60	Rper:	6.48 mm
		Rmin:	5.00 mm

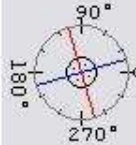
Pupil Center:	+ 532 μm	x[mm]	-0.20	y[mm]	+0.04
Pachy Apex:	532 μm		0.00		0.00
Thinnest Locat.:	531 μm		-0.42		-0.21
K Max. (Front):	51.7 D		-0.14		+0.49

Cornea Volume:	63.0 mm ³	KPD:	+1.6 D
Chamber Volume:	143 mm ³	Angle:	36.6°
A. C. Depth (Int.):	3.08 mm	Pupil Dia:	2.98 mm
Enter IOP	IOP(Sum): -0.3 mmHg	Lens Th.:	



Last Name:
 First Name: **Holladay report**
 ID: **+ve**
 Date of Birth:
 Exam Date:
 Exam Info:

Cornea Front



Rh:	7.78 mm	K1:	43.4 D
Rv:	6.85 mm	K2:	49.3 D
Rm:	7.31 mm	Km:	46.1 D
Axis: (flt.)	16.9°	Astig:	-5.9 D
Qs:	OK	Rper:	7.91 mm
ecc: (7mm)	0.78	Rmin:	6.53 mm

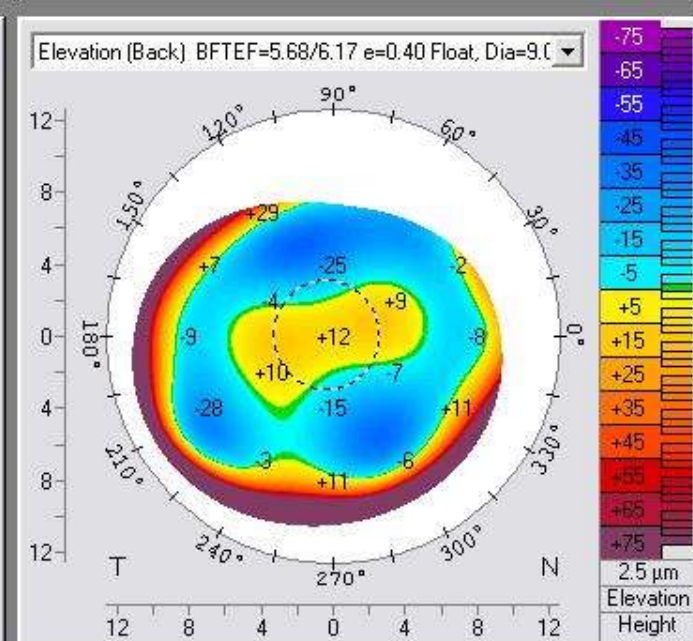
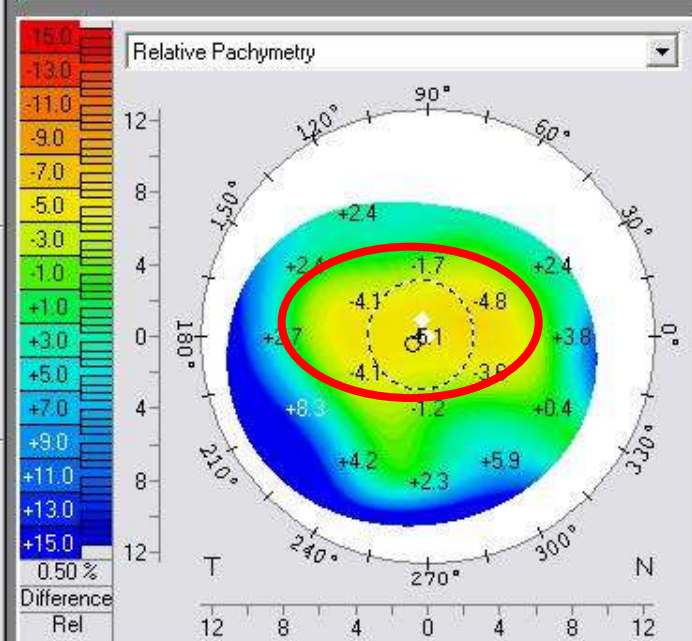
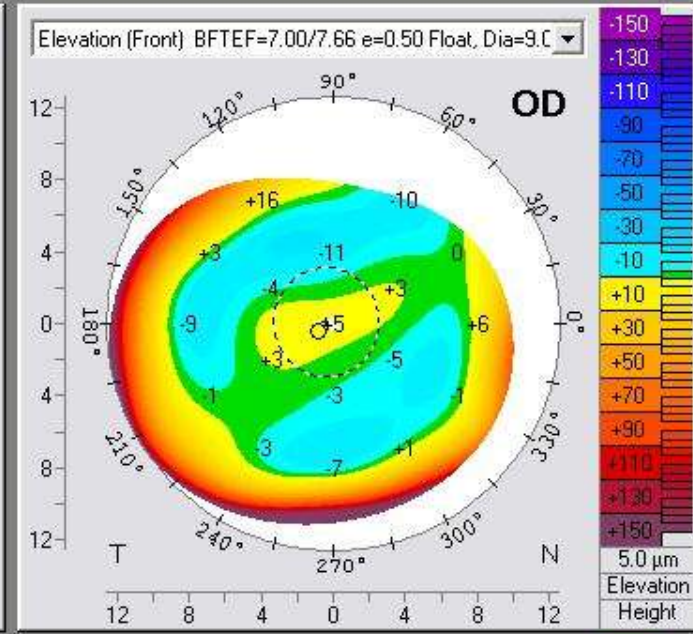
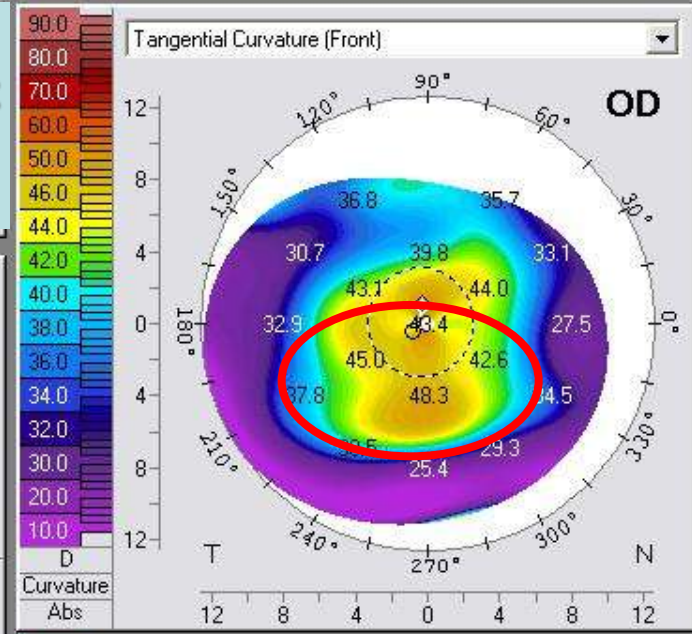
Cornea Back

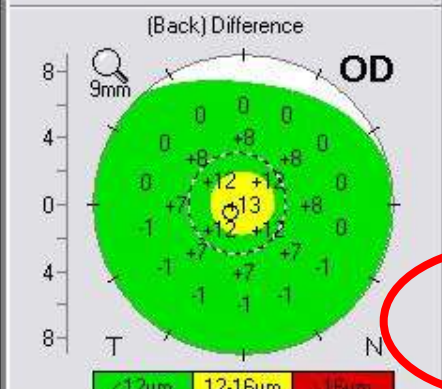
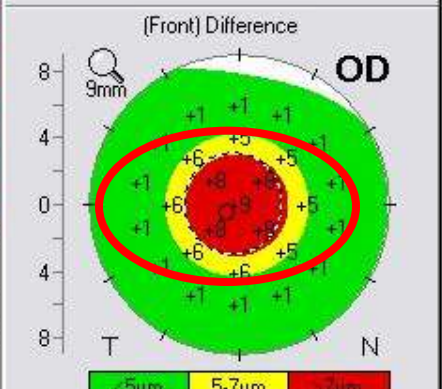
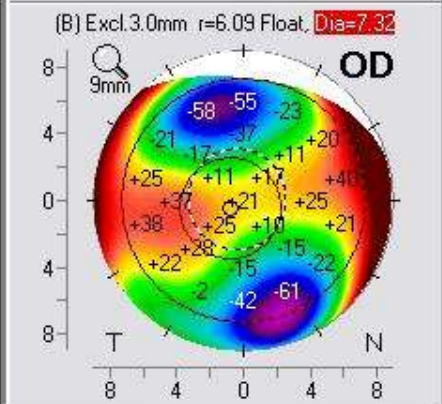
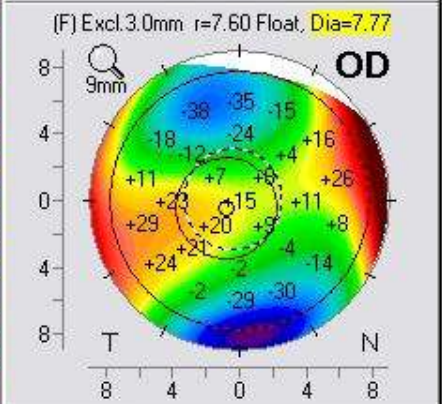
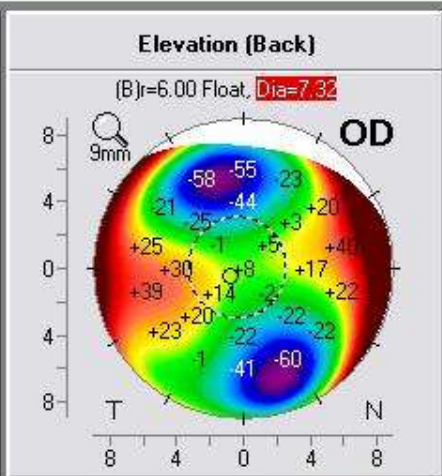
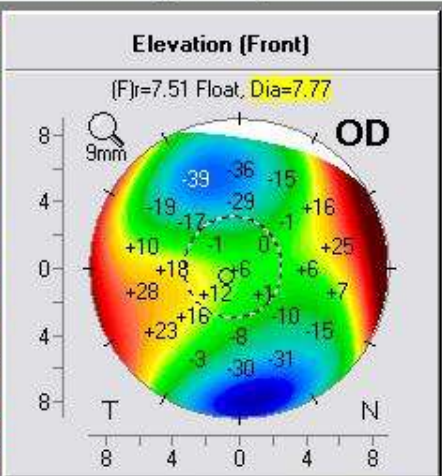
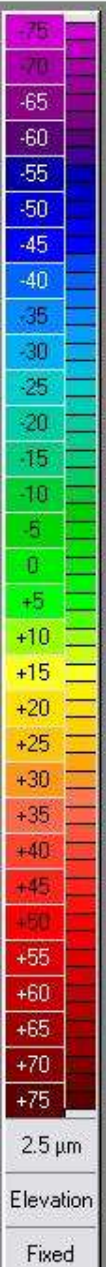


Rh:	6.35 mm	K1:	-6.3 D
Rv:	5.29 mm	K2:	-7.6 D
Rm:	5.82 mm	Km:	-6.9 D
Axis: (flt.)	15.7°	Astig:	+1.3 D
Qs:	OK	Rper:	6.48 mm
ecc: (7mm)	0.60	Rmin:	5.00 mm

Pupil Center:	+ 532 μm	x[mm]	-0.20	y[mm]	+0.04
Pachy Apex:	532 μm		0.00		0.00
Thinnest Locat.:	531 μm		-0.42		-0.21
K Max. (Front):	51.7 D		-0.14		+0.49

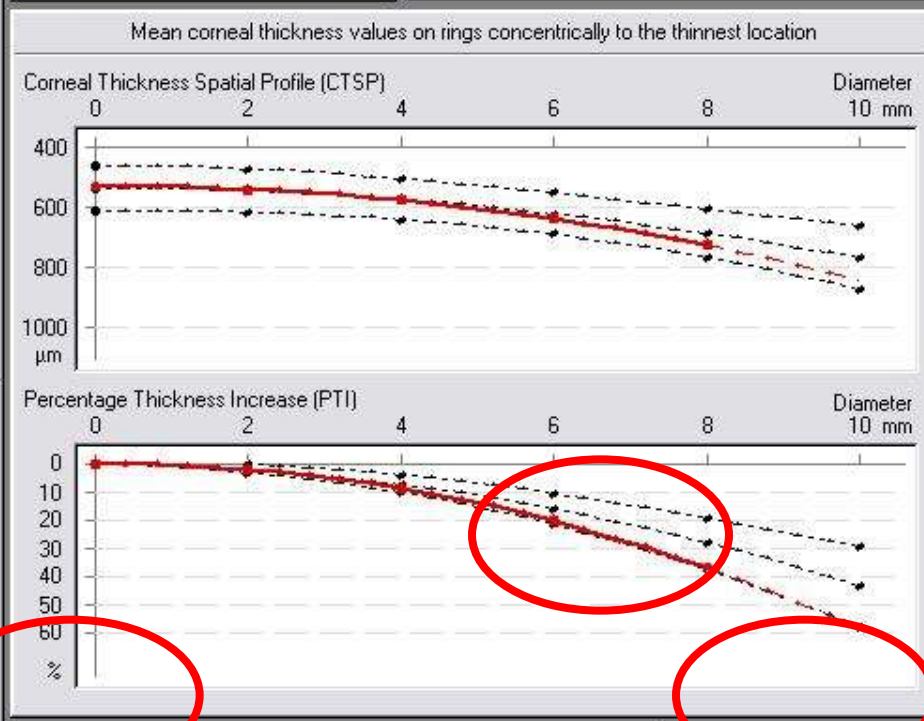
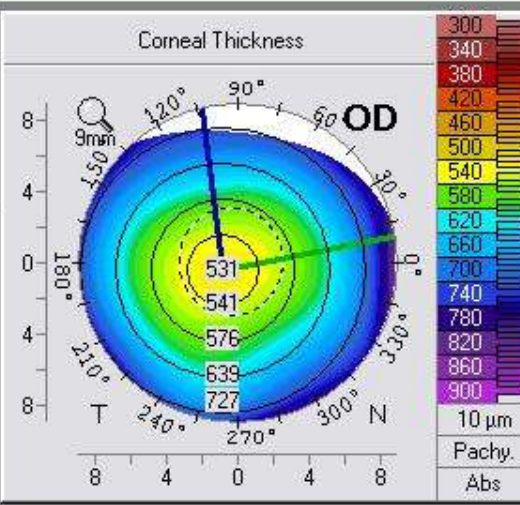
Cornea Volume:	63.0 mm ³	KPD:	+1.6 D
Chamber Volume:	143 mm ³	Angle:	36.6°
A. C. Depth (Int.):	3.08 mm	Pupil Dia:	2.98 mm
Enter IOP	IOP(Sum): -0.3 mmHg	Lens Th.:	





Last Name:
 First Name:
 ID:
 Date of Birth:
 Exam Date:
 Exam Info:

K1:	43.4D	Axis	16.9°
K2:	49.3D	ecc. (7mm)	0.78
Pachy Apex:			532µm
Pachy Thin. Locat.:			531µm
Dist. Apex-Thin.Loc.:	IT		0.47mm
Progression Index:			
Avg:	1.20	QS:	OK
Min:	0.81	Max:	1.55



Df:	4.34	Db:	1.87	Dp:	2.03	Dt:	0.20	Dy:	-0.10	Dz:	3.18
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Refractive

Cornea Front

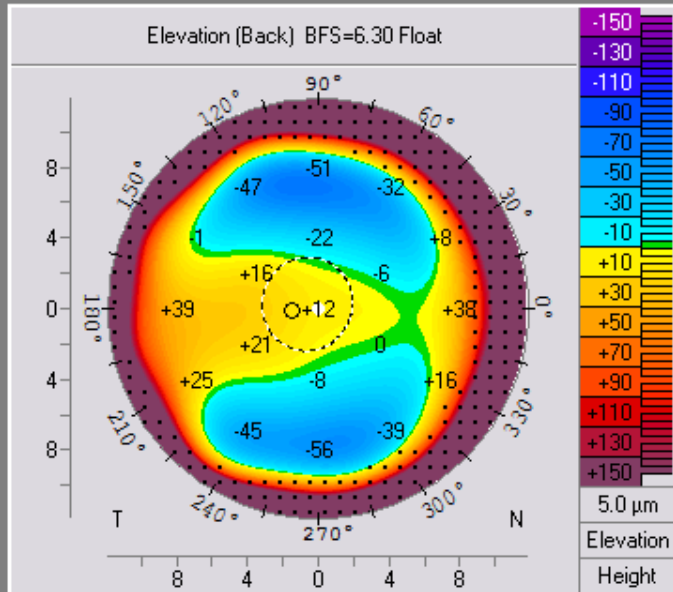
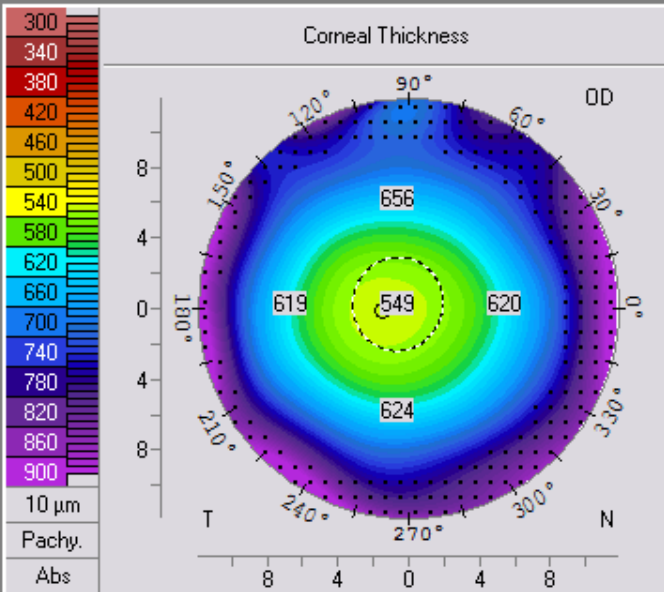
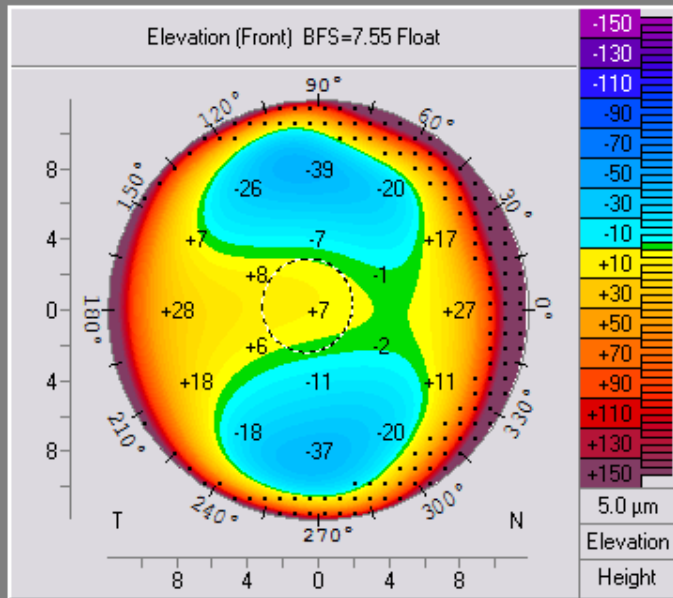
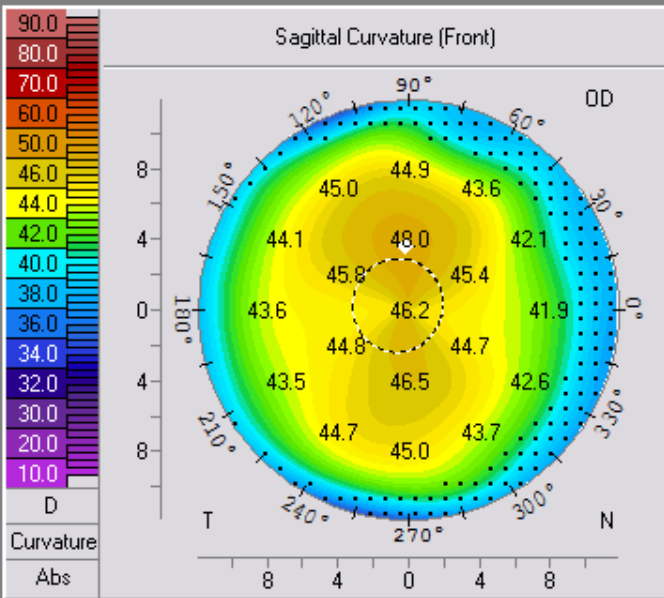
Rh: K1:
 Rv: K2:
 Rm: Km:
 QS: Axis: Astig:
 Q-val: Rper: Rmin:
 (7mm)

Cornea Back

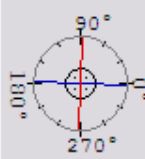
Rh: K1:
 Rv: K2:
 Rm: Km:
 QS: Axis: Astig:
 Q-val: Rper: Rmin:
 (7mm)

Pupil Center: +
 x[mm] y[mm]
 Pachy Apex: •
 Thinnest Locat.: ○

Cornea Volume: KPD:
 Chamber Volume: Angle:
 A. C. Depth (Int.): Pupil Dia:
 Enter IOP IOP(Sum): Lens Th.:

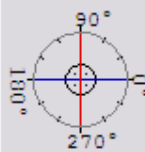


ΥΨΗΛΗ ΟΠΙΣΘΙΑ ΚΑΜΠΥΛΟΤΗΤΑ



Cornea Front

Rh: 7.55 mm K1: 44.7 D
 Rv: 7.13 mm K2: 47.3 D
 Rm: 7.34 mm Km: 46.0 D
 QS: OK Axis: 178.6° Astig: -2.6 D
 Q-val: -0.38 Rper: 7.74 mm Rmin: 7.03 mm



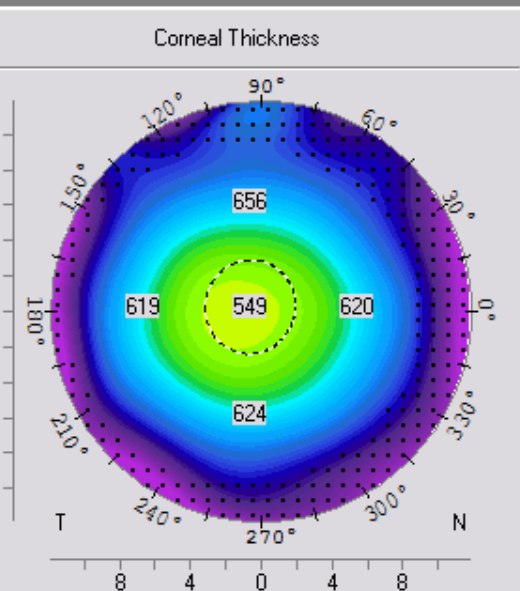
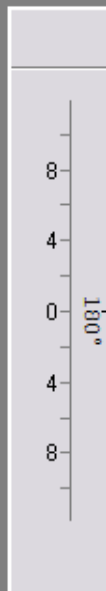
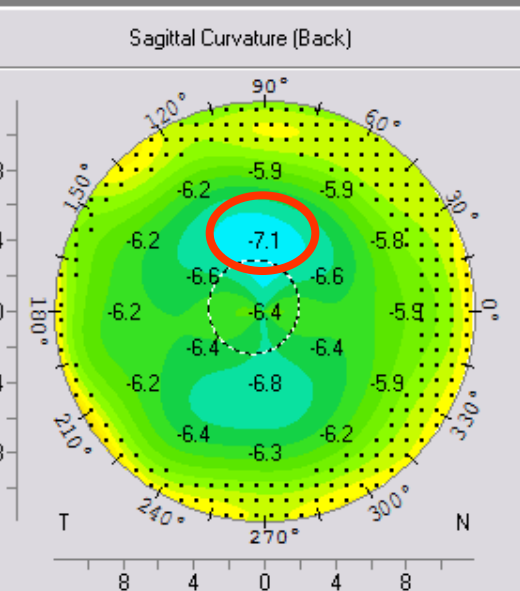
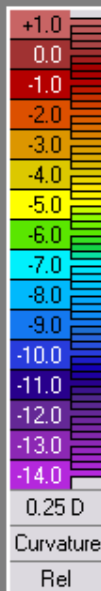
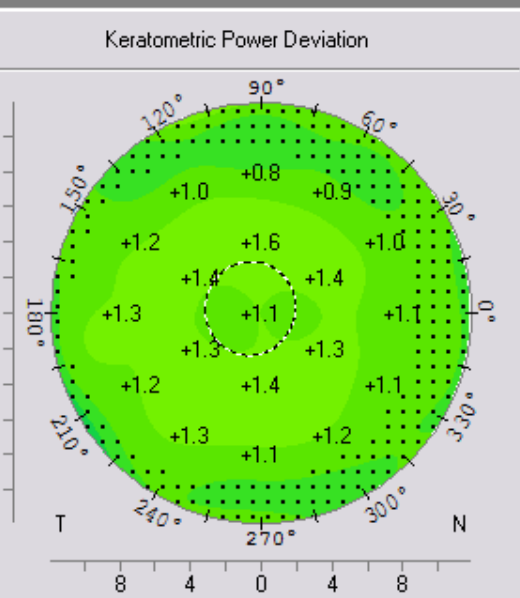
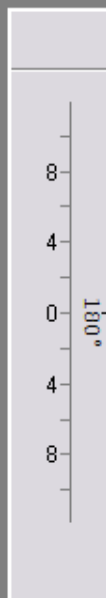
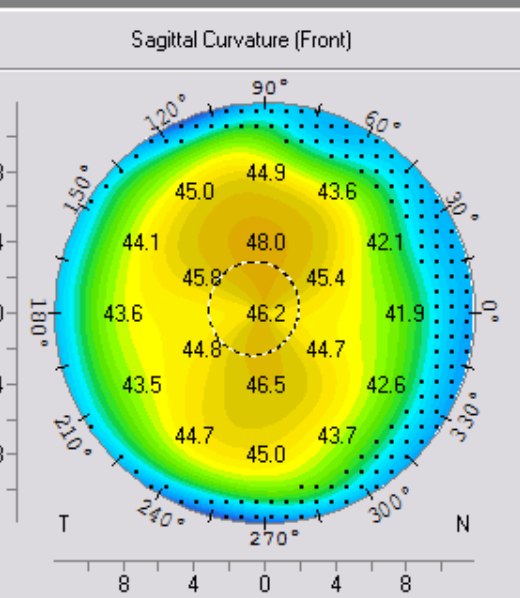
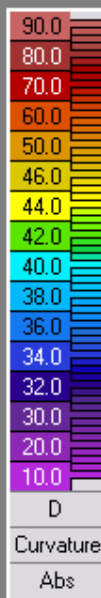
Cornea Back

Rh: 6.39 mm K1: -6.3 D
 Rv: 5.84 mm K2: -6.8 D
 Rm: 6.12 mm Km: -6.5 D
 QS: OK Axis: 179.9° Astig: +0.6 D
 Q-val: -0.36 Rper: 6.58 mm Rmin: 5.64 mm

Pupil Center: + Pachy: 549 μm x[mm]: -0.32 y[mm]: +0.13
 Pachy Apex: • 550 μm 0.00 0.00
 Thinnest Locat.: ○ 548 μm -0.73 -0.07

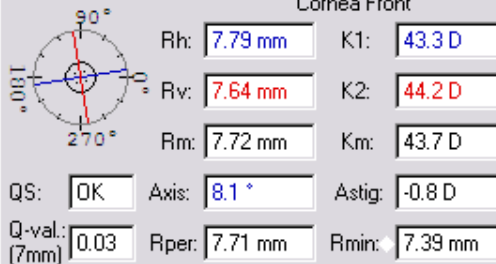
Cornea Volume: 61.2 mm³ KPD: +1.1 D
 Chamber Volume: 198 mm³ Angle: 45.7°
 A. C. Depth (Int.): 2.93 mm Pupil Dia: 2.55 mm
 Enter IOP IOP(Sum): -0.4 mmHg Lens Th.:

Topometric

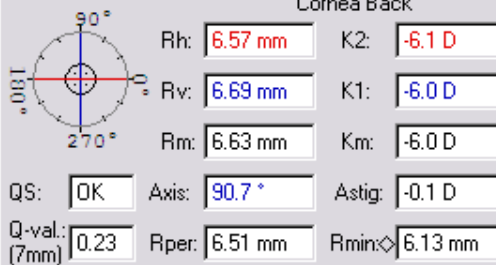


ΥΨΗΛΗ ΟΠΙΣΘΙΑ ΑΝΥΨΩΣΗ ΚΡΟΤΑΦΙΚΑ

Cornea Front



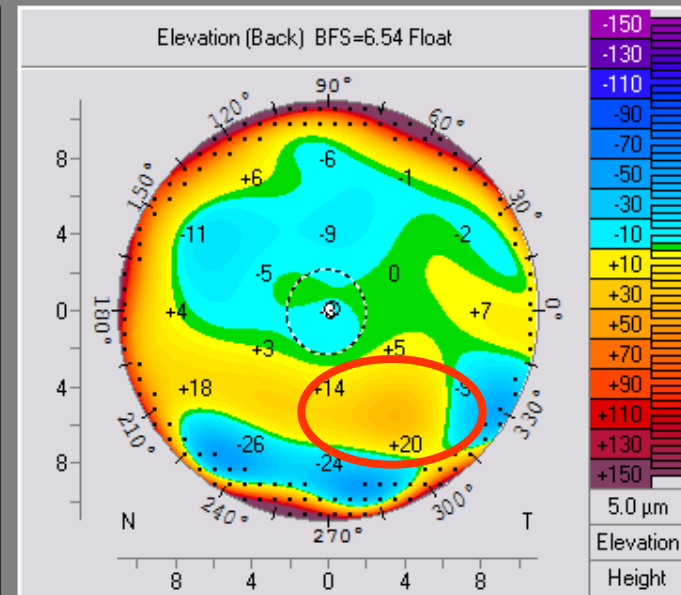
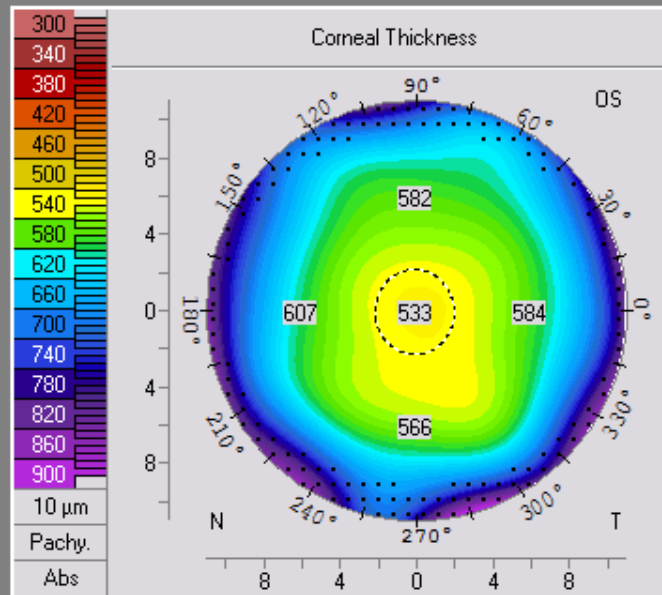
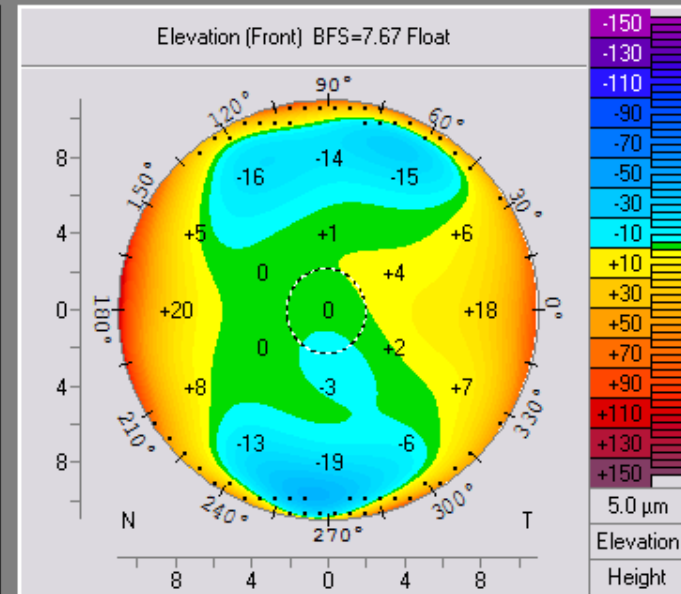
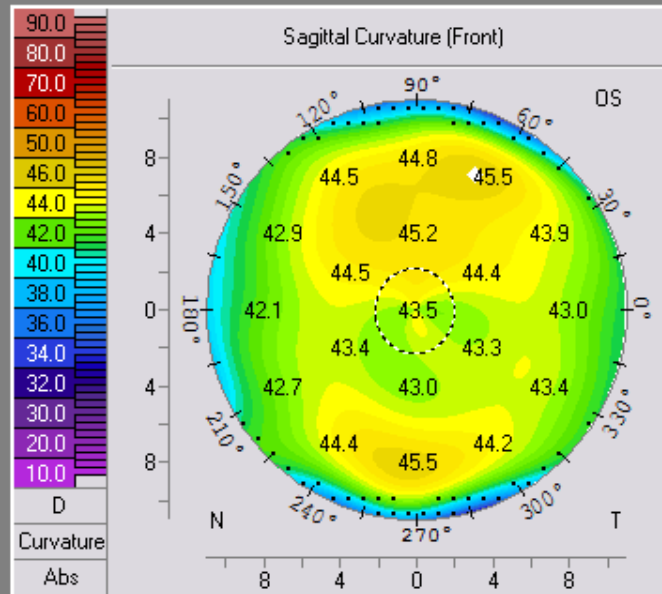
Cornea Back



Pupil Center:	Pachy:	x[mm]	y[mm]
+	533 μm	-0.06	-0.04
Pachy Apex:	532 μm	0.00	0.00
Thinnest Locat.:	532 μm	+0.12	+0.06

Cornea Volume:	56.2 mm ³	KPD:	+1.1 D
Chamber Volume:	155 mm ³	Angle:	36.0°
A. C. Depth (Int.):	2.74 mm	Pupil Dia:	2.14 mm
Enter IOP	IOP(Sum): +0.9 mmHg	Lens Th.:	

Refractive



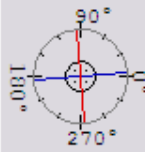
ΥΨΗΛΗ ΟΠΙΣΘΙΑ ΑΝΥΨΩΣΗ

Cornea Front



Rh: 7.96 mm K1: 42.4 D
 Rv: 7.74 mm K2: 43.6 D
 Rm: 7.85 mm Km: 43.0 D
 QS: DK Axis: 7.1° Astig: -1.2 D
 Q-val: (7mm) -0.26 Rper: 8.11 mm Rmin: 7.48 mm

Cornea Back



Rh: 6.80 mm K1: -5.9 D
 Rv: 6.23 mm K2: -6.4 D
 Rm: 6.51 mm Km: -6.1 D
 QS: DK Axis: 5.0° Astig: +0.5 D
 Q-val: (7mm) -0.73 Rper: 7.20 mm Rmin: 6.10 mm

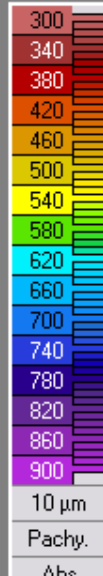
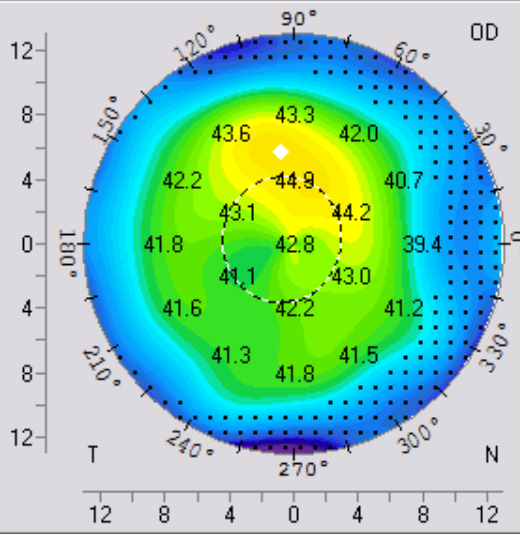
Pupil Center: + Pachy: 522 μm x[mm] -0.38 y[mm] +0.13
 Pachy Apex: • 526 μm 0.00 0.00
 Thinnest Locat.: ○ 517 μm -0.94 -0.15

Cornea Volume: 54.5 mm³ KPD: +1.2 D
 Chamber Volume: 169 mm³ Angle: 34.4°
 A. C. Depth (Int.): 2.99 mm Pupil Dia: 3.76 mm
 Enter IOP IOP(Sum): +1.3 mmHg Lens Th: []

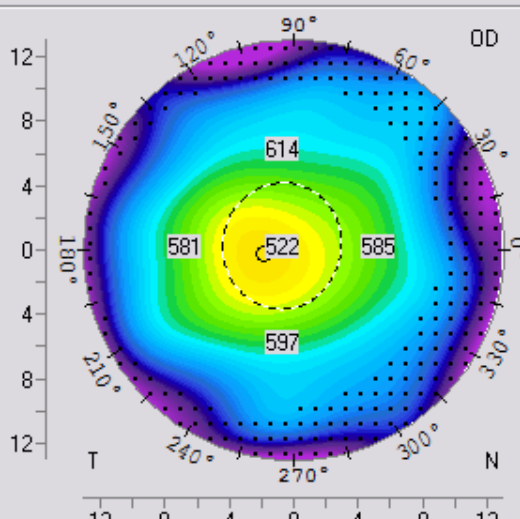
Refractive



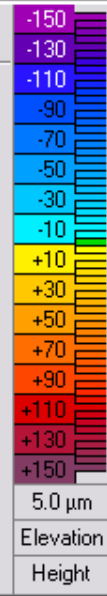
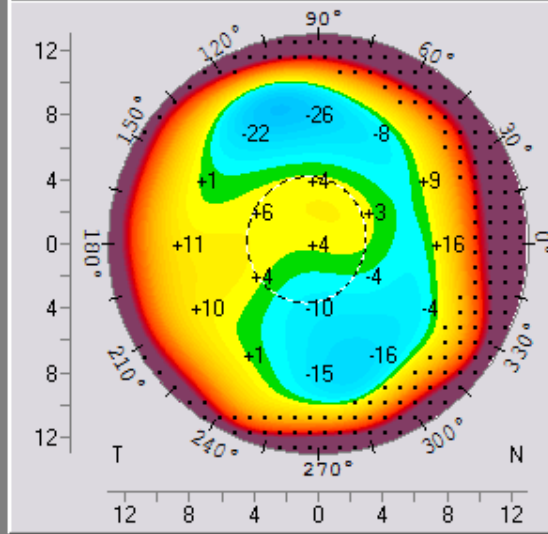
Sagittal Curvature (Front)



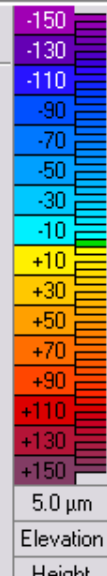
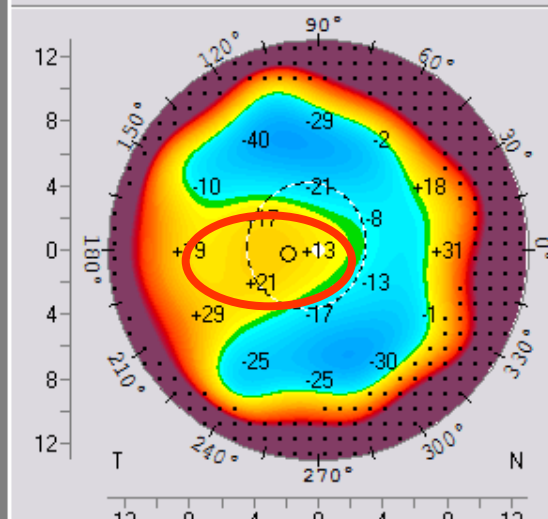
Corneal Thickness



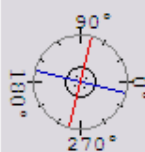
Elevation (Front) BFS=7.96 Float



Elevation (Back) BFS=6.89 Float



ΥΨΗΛΟΣ ΑΣΤΙΓΜΑΤΙΣΜΟΣ

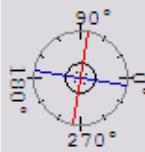


Cornea Front

Rh: 7.61 mm K1: 44.3 D
 Rv: 7.08 mm K2: 47.6 D
 Rm: 7.35 mm Km: 45.8 D
 Astig: -3.3 D

Cornea Back

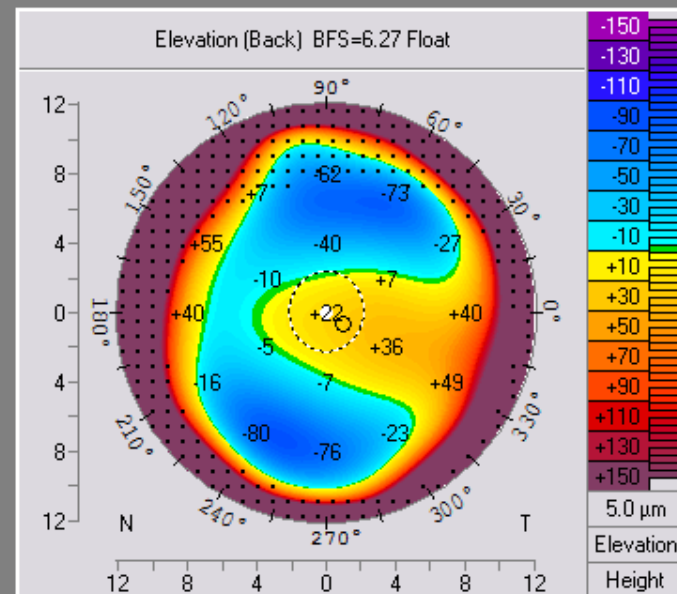
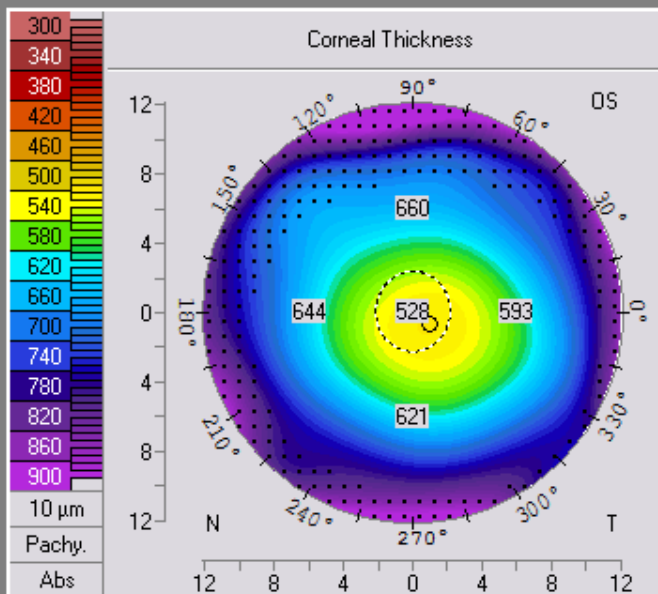
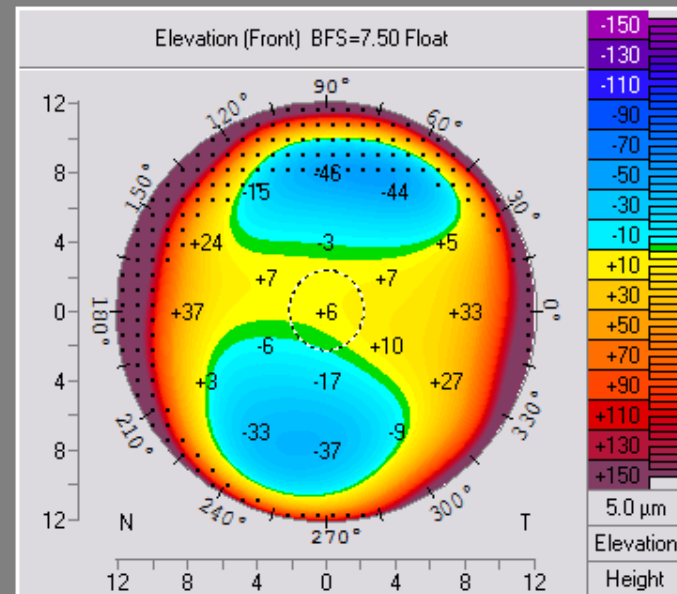
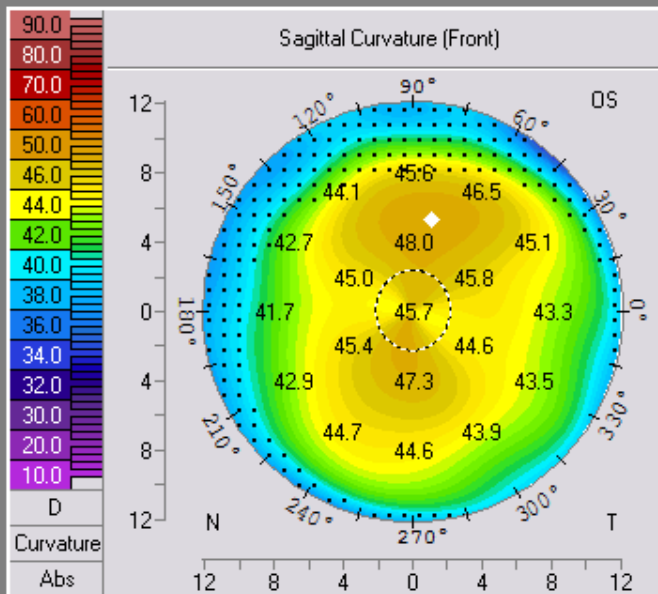
Rh: 6.19 mm K1: -6.5 D
 Rv: 5.51 mm K2: -7.3 D
 Rm: 5.85 mm Km: -6.8 D
 Astig: +0.8 D



Pupil Center: + Pachy: 528 μm x[mm]: 0.00 y[mm]: +0.04
 Pachy Apex: • 528 μm 0.00 0.00
 Thinnest Locat.: ○ 524 μm +0.47 -0.34


Cornea Volume: 60.7 mm³ KPD: +1.6 D
 Chamber Volume: 180 mm³ Angle: 37.9°
 A. C. Depth (Int.): 3.09 mm Pupil Dia: 2.23 mm
 Enter IOP IOP(Sum): +1.2 mmHg Lens Th: []

Refractive



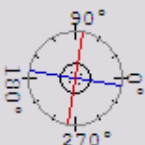
ΥΨΗΛΗ ΠΡΟΣΘΙΑ & ΟΠΙΣΘΙΑ ΑΝΥΨΩΣΗ (TORIC FIT)

Cornea Front



Rh:	7.61 mm	K1:	44.3 D
Rv:	7.08 mm	K2:	47.6 D
Rm:	7.35 mm	Km:	45.9 D
QS:	OK	Axis:	167.0°
Q-val.:	-0.36	Rper:	7.68 mm
		Rmin:	6.97 mm

Cornea Back

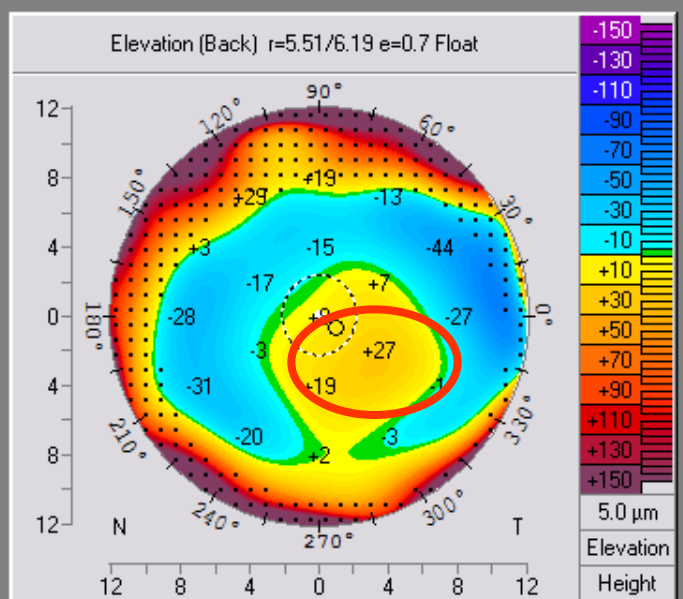
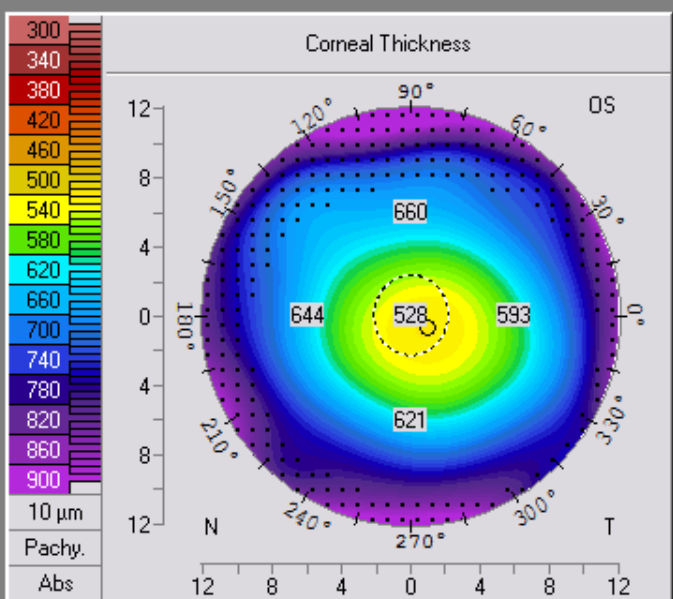
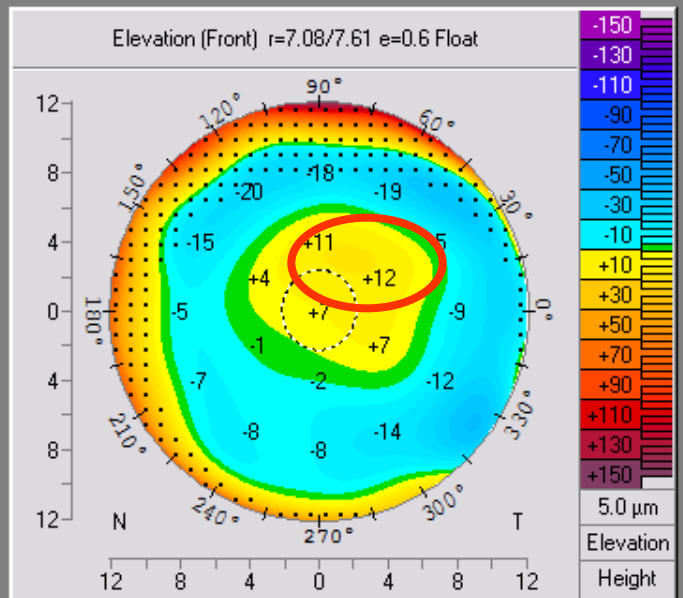
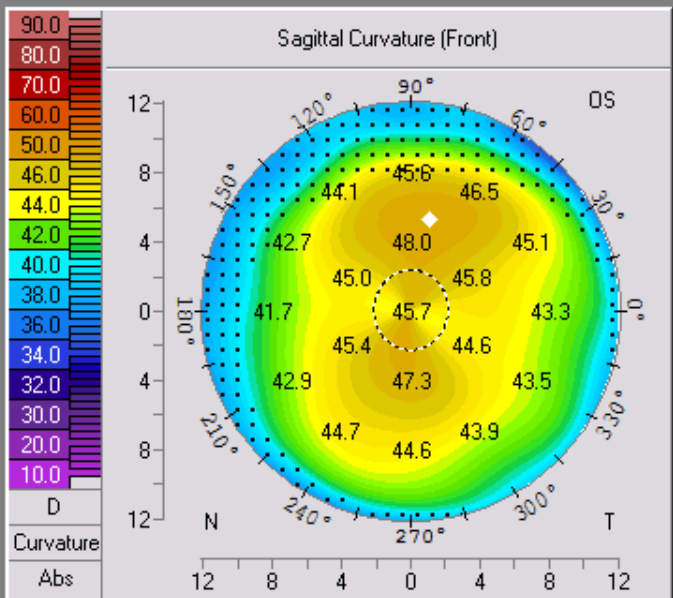


Rh:	6.19 mm	K1:	-6.5 D
Rv:	5.51 mm	K2:	-7.3 D
Rm:	5.85 mm	Km:	-6.8 D
QS:	OK	Axis:	171.7°
Q-val.:	-0.65	Rper:	6.57 mm
		Rmin:	5.40 mm

Pupil Center:	+	Pachy:	528 μm	x[mm]	0.00	y[mm]	+0.04
Pachy Apex:	•		528 μm	0.00	0.00		
Thinnest Locat.:	○		524 μm	+0.47	-0.34		

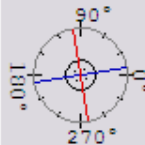
Cornea Volume:	60.7 mm ³	KPD:	+1.6 D
Chamber Volume:	180 mm ³	Angle:	37.9°
A. C. Depth (Int.):	3.09 mm	Pupil Dia:	2.23 mm
Enter IOP	IOP(Sum): +1.2 mmHg	Lens Th.:	

Refractive



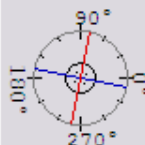
ΑΣΥΜΜΕΤΡΙΑ ΚΛΕΨΥΔΡΑΣ

Cornea Front



Rh: 7.59 mm K1: 44.5 D
 Rv: 7.42 mm K2: 45.5 D
 Rm: 7.50 mm Km: 45.0 D
 QS: OK Axis: 8.6° Astig: -1.0 D
 Q-val: -0.23 Rper: 7.72 mm Rmin: 7.29 mm

Cornea Back

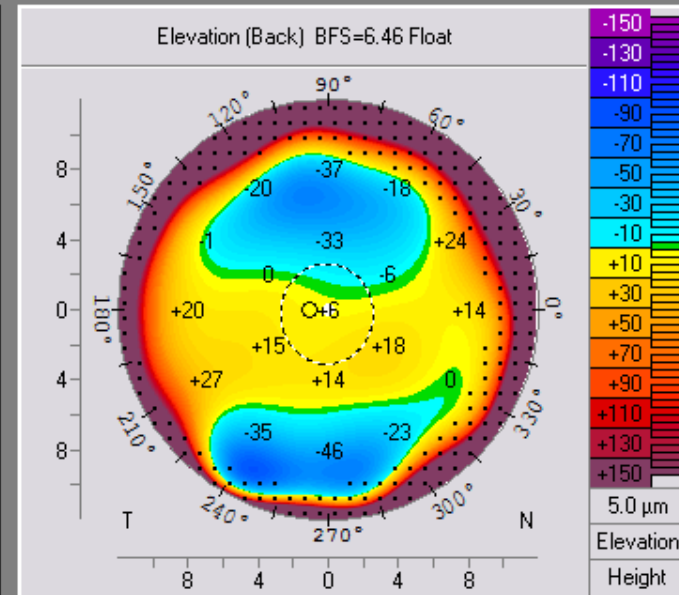
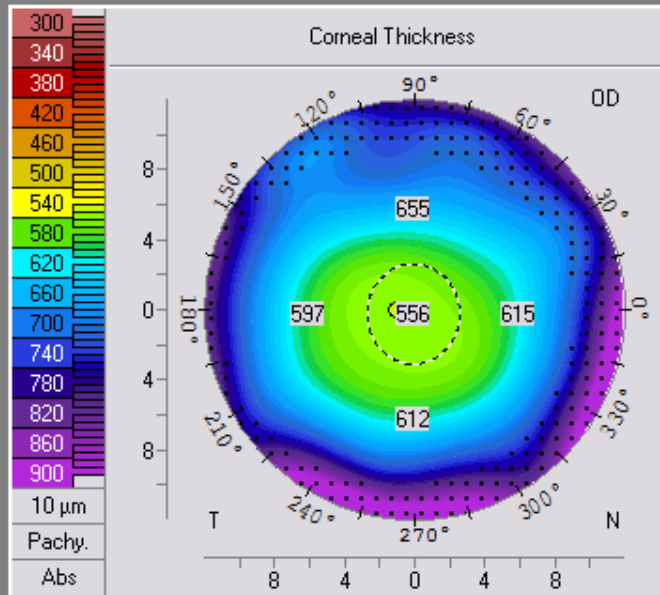
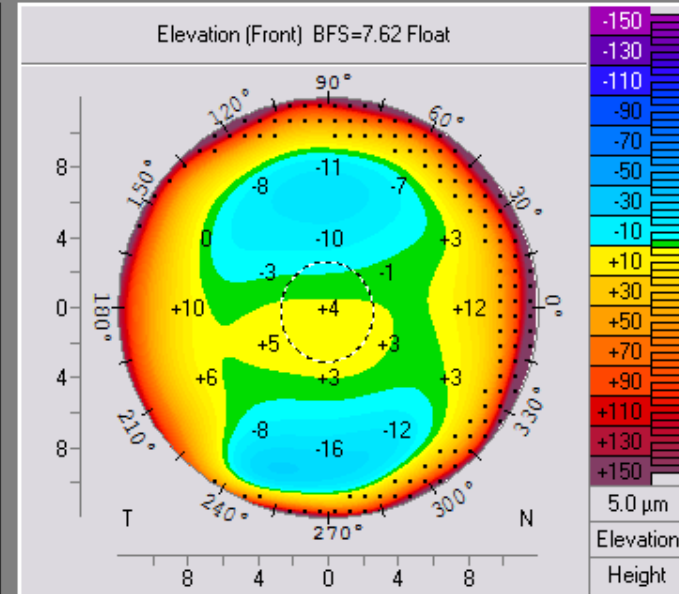
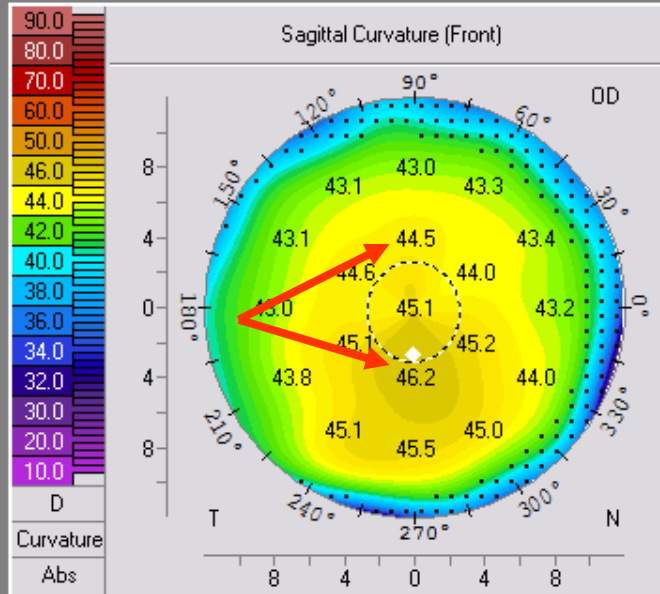


Rh: 6.57 mm K1: -6.1 D
 Rv: 6.17 mm K2: -6.5 D
 Rm: 6.37 mm Km: -6.3 D
 QS: OK Axis: 168.6° Astig: +0.4 D
 Q-val: -0.14 Rper: 6.62 mm Rmin: 5.94 mm

Pupil Center: + Pachy: 556 μm x[mm]: -0.04 y[mm]: -0.12
 Pachy Apex: • 556 μm 0.00 0.00
 Thinnest Locat.: ○ 555 μm -0.53 0.00

Cornea Volume: 59.5 mm³ KPD: +1.0 D
 Chamber Volume: 160 mm³ Angle: 34.8°
 A. C. Depth (Int.): 2.86 mm Pupil Dia: 2.74 mm
 Enter IOP IOP(Sum): 0.8 mmHg Lens Th: []

Refractive



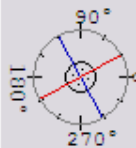
ΑΣΥΜΜΕΤΡΙΑ ΚΛΕΨΥΔΡΑΣ & ΥΨΗΛΗ ΟΠΙΣΘΙΑ ΑΝΥΨΩΣΗ

Cornea Front



Rh: 8.27 mm K1: 40.8 D
 Rv: 8.08 mm K2: 41.8 D
 Rm: 8.17 mm Km: 41.3 D
 QS: OK Axis: 156.9° Astig: -0.9 D
 Q-val: 0.07 Rper: 8.13 mm Rmin: 7.49 mm

Cornea Back

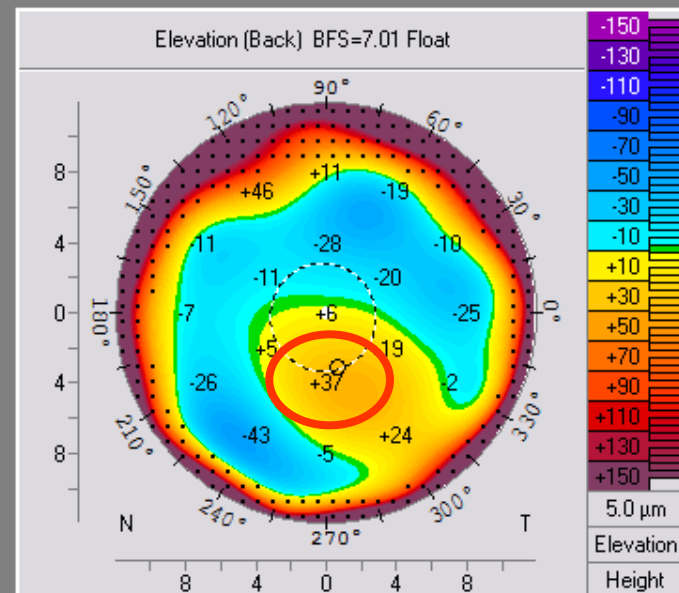
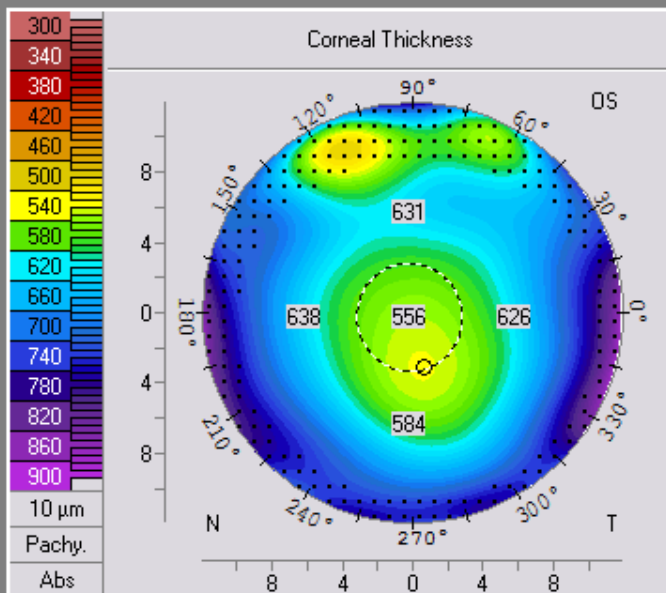
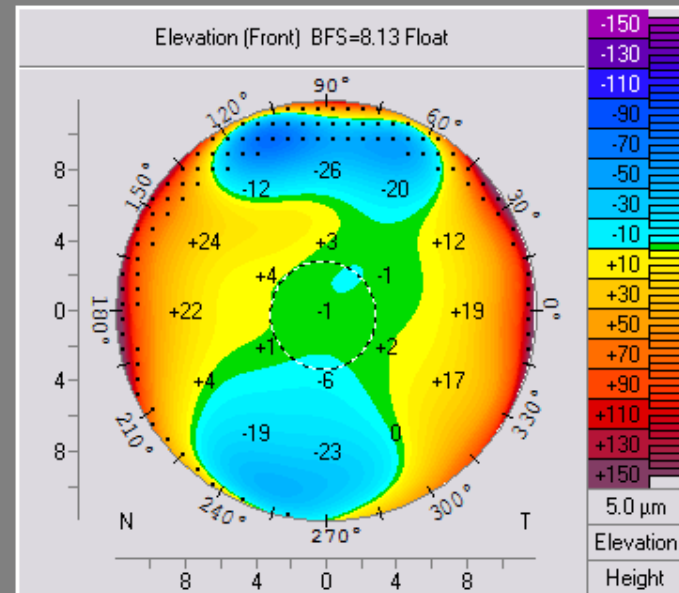
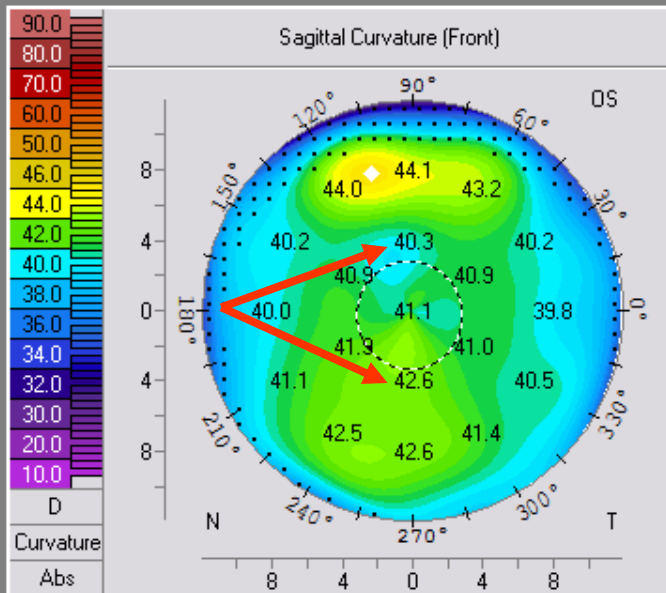


Rh: 6.70 mm K2: -6.0 D
 Rv: 7.12 mm K1: -5.6 D
 Rm: 6.91 mm Km: -5.8 D
 QS: OK Axis: 119.8° Astig: -0.3 D
 Q-val: -0.44 Rper: 7.22 mm Rmin: 6.35 mm

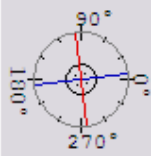
Pupil Center: + Pachy: 556 μm x[mm]: -0.09 y[mm]: -0.13
 Pachy Apex: • 557 μm 0.00 0.00
 Thinnest Locat.: ○ 543 μm +0.33 -1.53

Cornea Volume: 56.7 mm³ KPD: +1.1 D
 Chamber Volume: 209 mm³ Angle: 43.0°
 A. C. Depth (Int.): 3.25 mm Pupil Dia: 3.03 mm
 Enter IOP IOP(Sum): 0.9 mmHg Lens Th:

Refractive

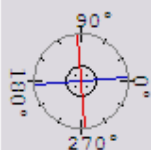


ΥΨΗΛΟΣ ΑΣΤΙΓΜΑΤΙΣΜΟΣ (WTR)



Cornea Front

Rh: 8.33 mm K1: 40.5 D
 Rv: 7.30 mm K2: 46.3 D
 Rm: 7.81 mm Km: 43.2 D
 Astig: -5.7 D
 Axis: 7.0°
 Q-val: -0.45 Rper: 8.20 mm Rmin: 7.16 mm



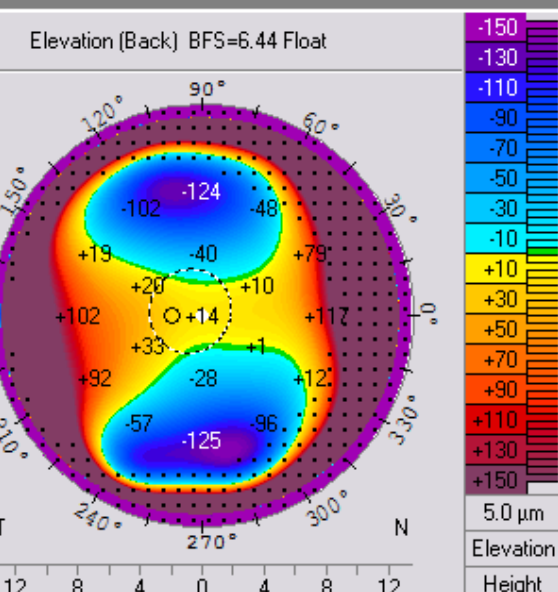
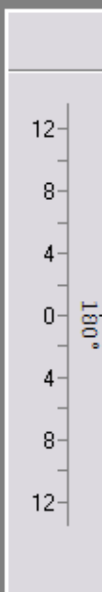
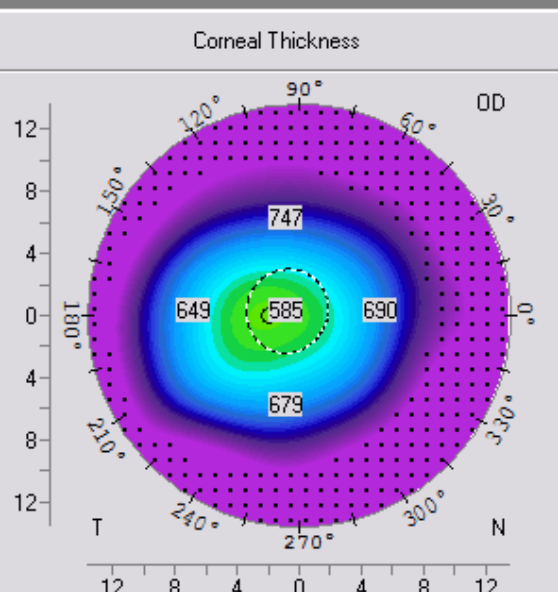
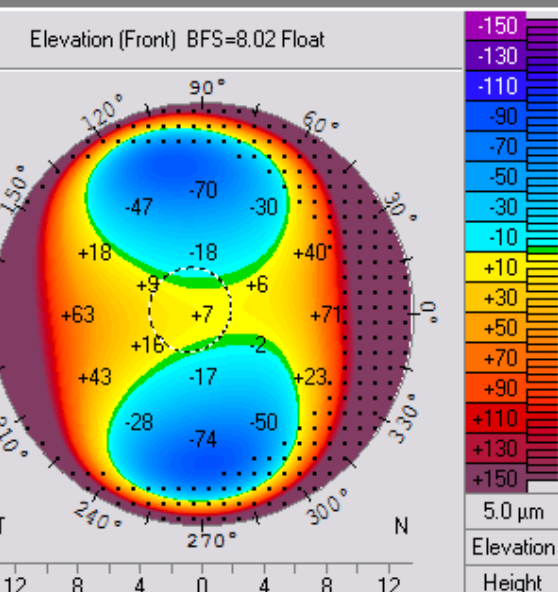
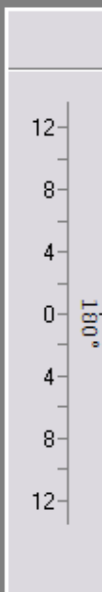
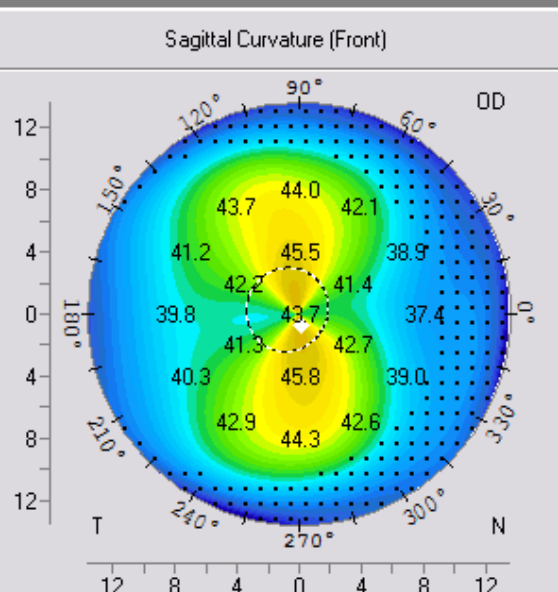
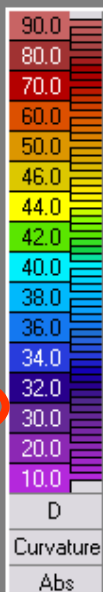
Cornea Back

Rh: 6.82 mm K1: -5.9 D
 Rv: 5.61 mm K2: -7.1 D
 Rm: 6.21 mm Km: -6.4 D
 Astig: +1.3 D
 Axis: 4.5°
 Q-val: -0.44 Rper: 6.61 mm Rmin: 5.42 mm

Pachy: 585 μm x(mm) -0.40 y(mm) +0.15
 Pachy Apex: 589 μm 0.00 0.00
 Thinnest Locat.: 582 μm -0.98 0.00

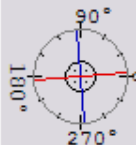
Cornea Volume: 67.1 mm³ KPD: +1.5 D
 Chamber Volume: 168 mm³ Angle: 38.1°
 A. C. Depth (Int.): 2.95 mm Pupil Dia: 2.59 mm
 Enter IOP IOP(Sum): -3.1 mmHg Lens Th: []

Refractive



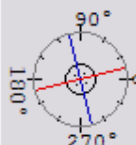
ΥΨΗΛΟΣ ΑΣΤΙΓΜΑΤΙΣΜΟΣ (ATR)

Cornea Front



Rh: 7.50 mm K2: 45.0 D
 Rv: 8.38 mm K1: 40.3 D
 Rm: 7.94 mm Km: 42.5 D
 QS: OK Axis: 95.5° Astig: +4.7 D
 Q-val.: -0.22 Rper: 8.08 mm Rmin: 7.46 mm

Cornea Back

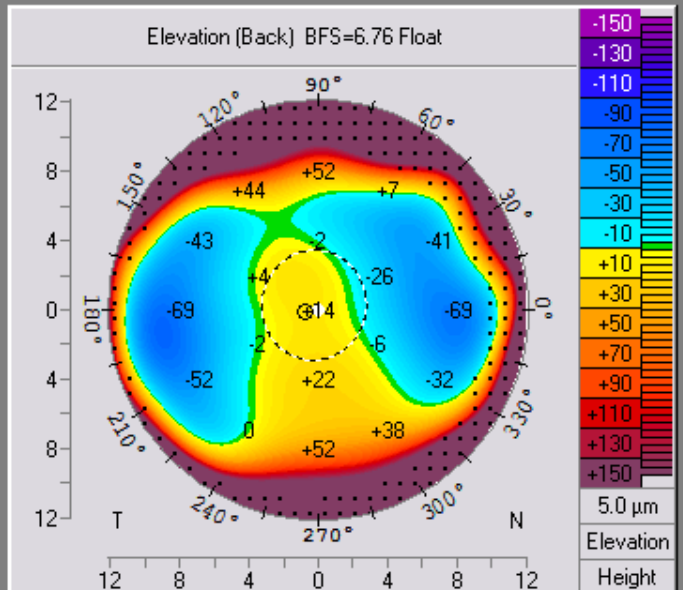
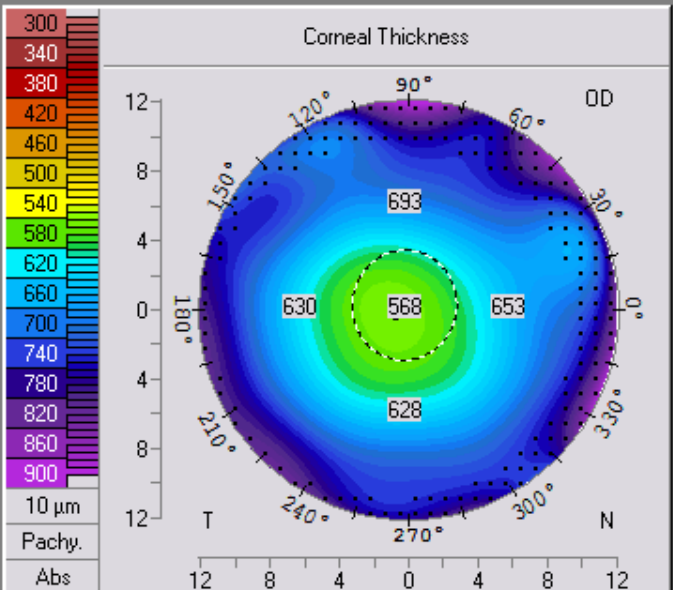
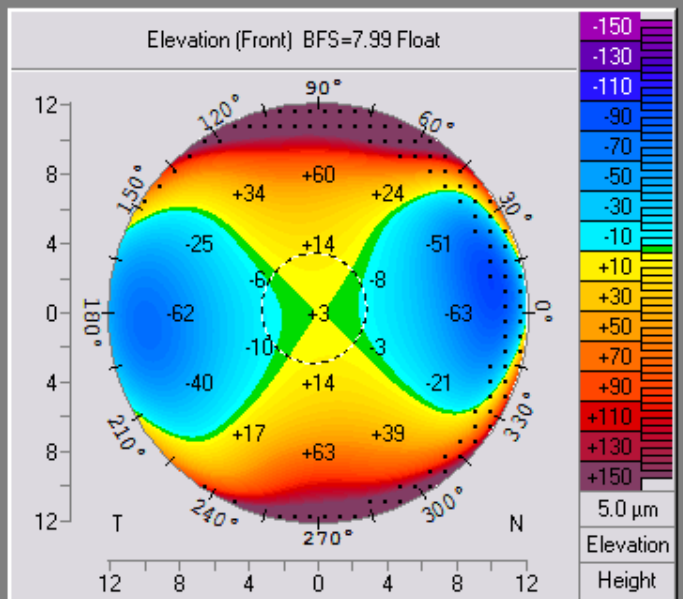
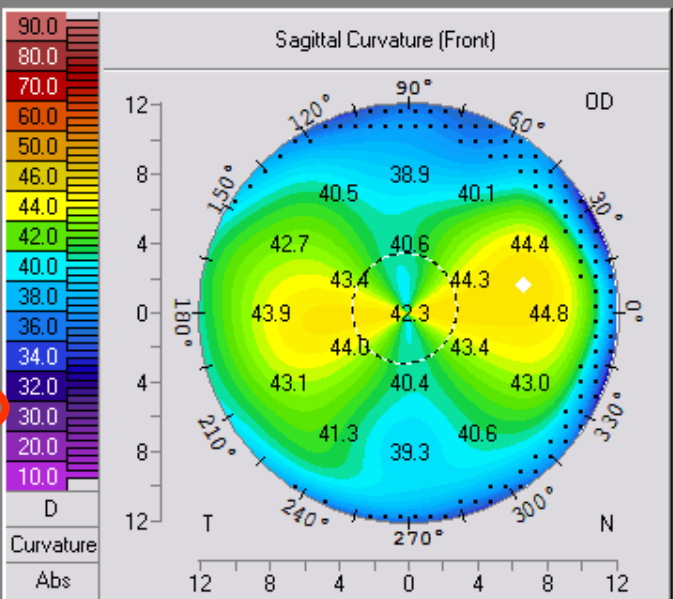


Rh: 6.15 mm K2: -6.5 D
 Rv: 6.75 mm K1: -5.9 D
 Rm: 6.45 mm Km: -6.2 D
 QS: OK Axis: 104.9° Astig: -0.6 D
 Q-val.: -0.66 Rper: 7.06 mm Rmin: 6.03 mm

Pupil Center: + Pachy: 568 μm x[mm]: -0.13 y[mm]: +0.13
 Pachy Apex: • 569 μm 0.00 0.00
 Thinnest Locat.: ○ 567 μm -0.41 -0.07

Cornea Volume: 60.1 mm³ KPD: +1.3 D
 Chamber Volume: 172 mm³ Angle: 31.7°
 A. C. Depth (Int.): 2.69 mm Pupil Dia: 3.09 mm
 Enter IOP IOP(Sum): -1.7 mmHg Lens Th: []

Refractive





PRK

Απλούστατη τεχνικά

Πόνος

Αργή αποκατάσταση όρασης

Ελάχιστος χρόνος μετεγχειρητικής προσοχής

Μακρόχρονη φαρμακευτική θεραπεία



LASIK

Επιπλέον χειρουργικό βήμα

Γρήγορη αποκατάσταση της όρασης

Ελάχιστη ενόχληση

Μεγάλος χρόνος μετεγχειρητικής προσοχής

Σύντομη φαρμακευτική αγωγή