

When Ectasia is not Ectasia

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Al-Azhar University , Cairo-Egypt 🇪🇬**



Case 1



38 YO Female,
PH of LASIK OU 2 Yrs ago.. by me
On Last Visit was 1 yr ago, UNVA= 6/6 OU



On this time, (7 / 2019)
Panic & depression with Rapid drop of VA,, UNVA
= 1/60 3/60 ,, BC= 2/60 6/60

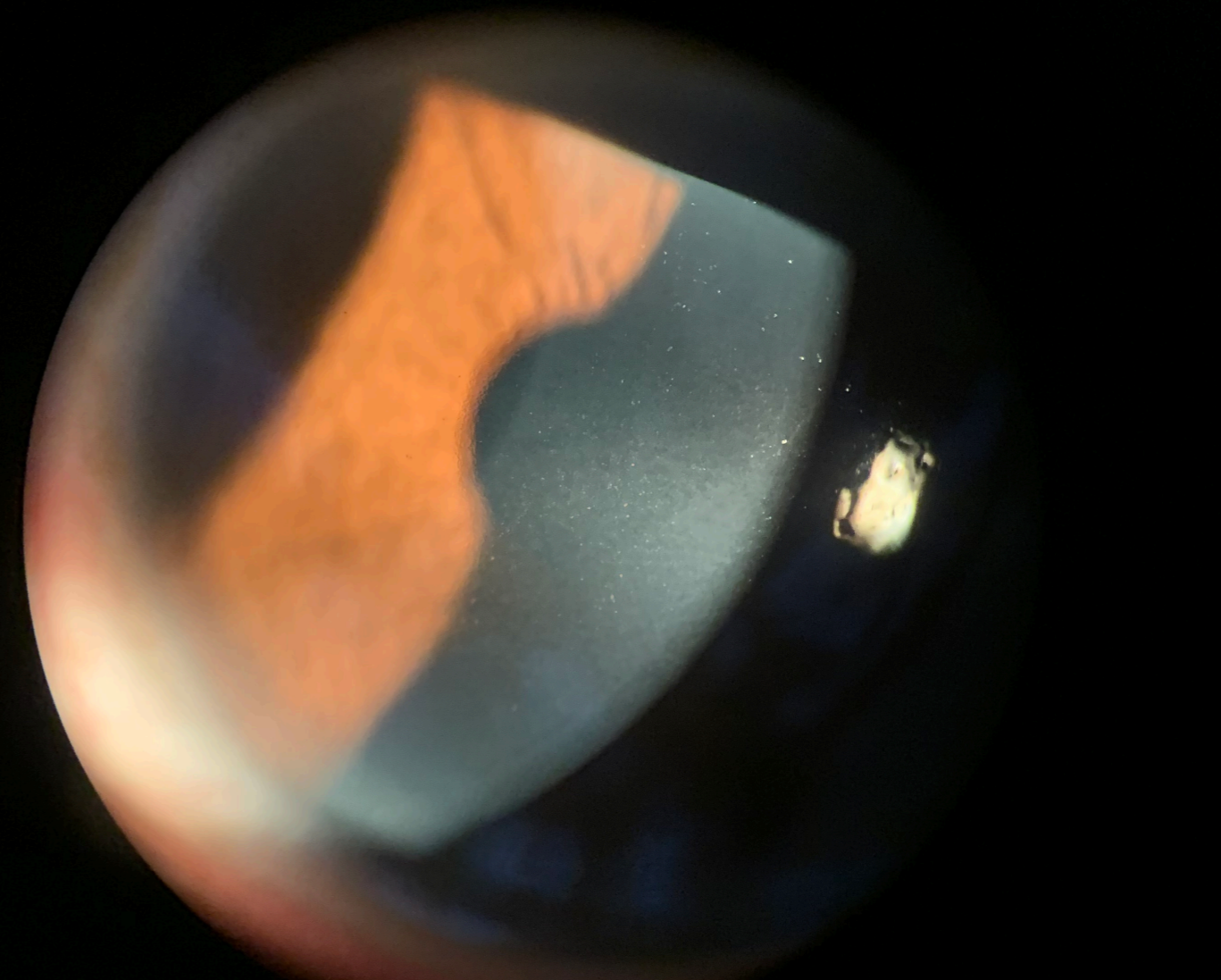
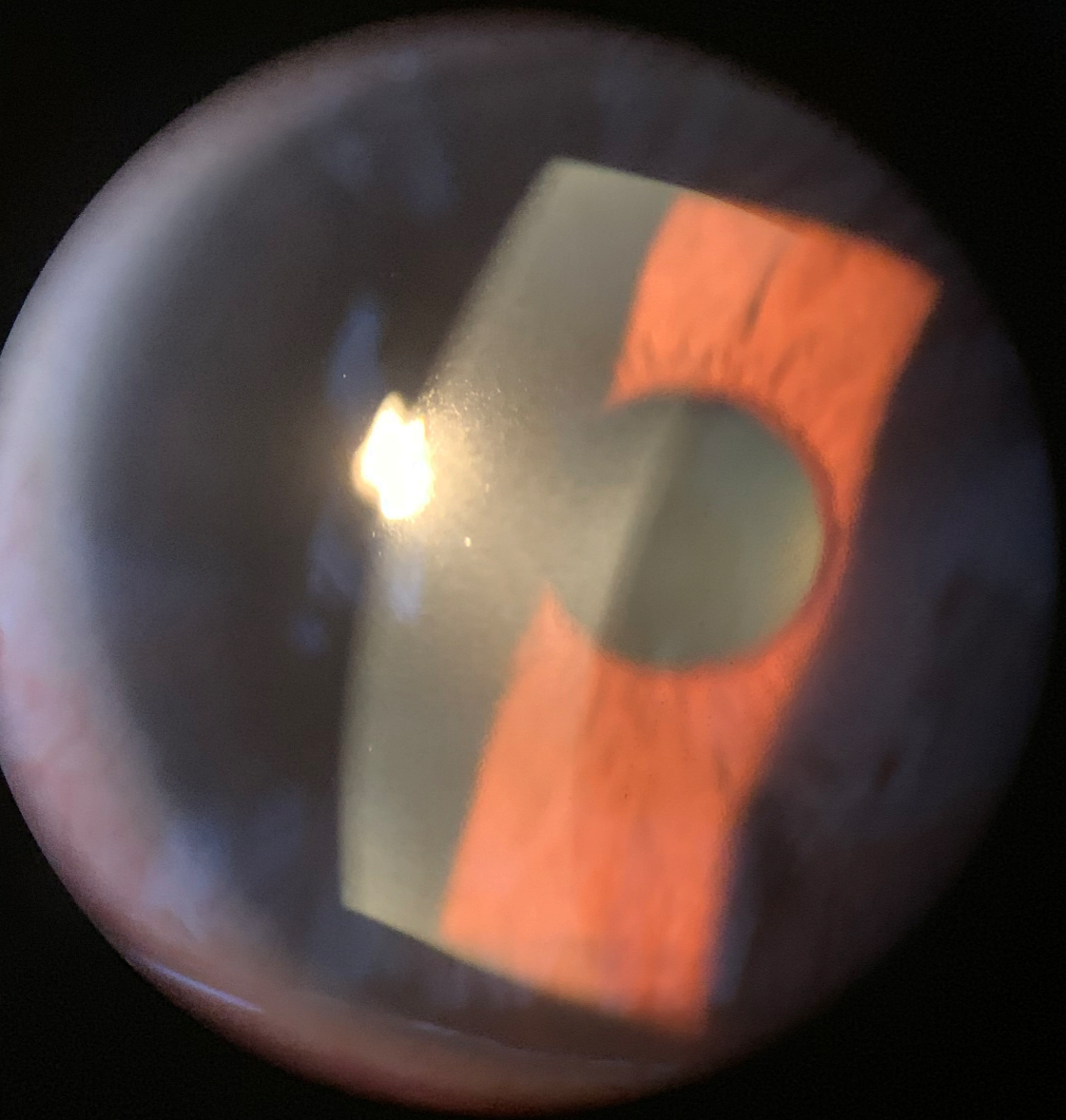


M. RX = -8 / -9 x 130 -4 / -5 x r 150
Normal IOP & Fundi .. very minimal KPS with
almost clear corneas !!!



I was asking.. who switched off the room light ??!!





WAVELIGHT - ALLEGRO OCULYZER 4 Maps Refractive

Last Name: Kamel said
 First Name: Omeria
 ID: 37975
 Date of Birth: 23.01.1980 Eye: Right
 Exam Date: 30.07.2019 Time: 16:30:28
 Exam Info:

Cornea Front

Rt: 6.87 mm K1: 49.1 D
 Rs: 6.83 mm K2: 49.4 D
 Rm: 6.85 mm Km: 49.3 D
 Axis: 17.6° Astig: -0.3 D
 Q-val: -0.93 Rper: 7.88 mm Rmin: 5.93 mm

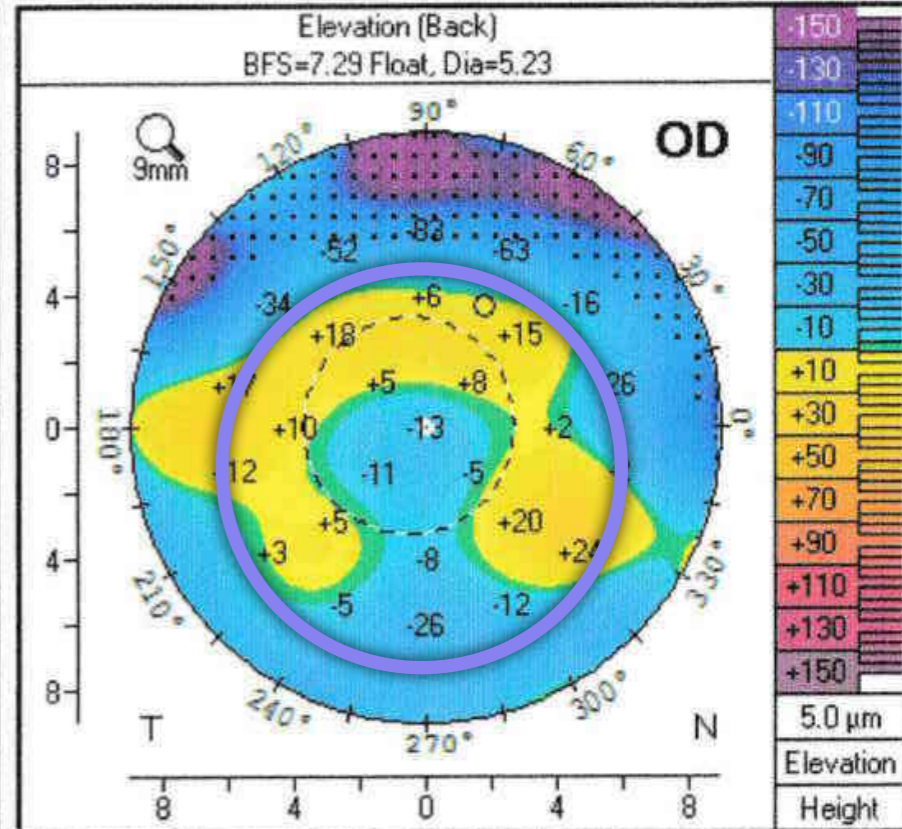
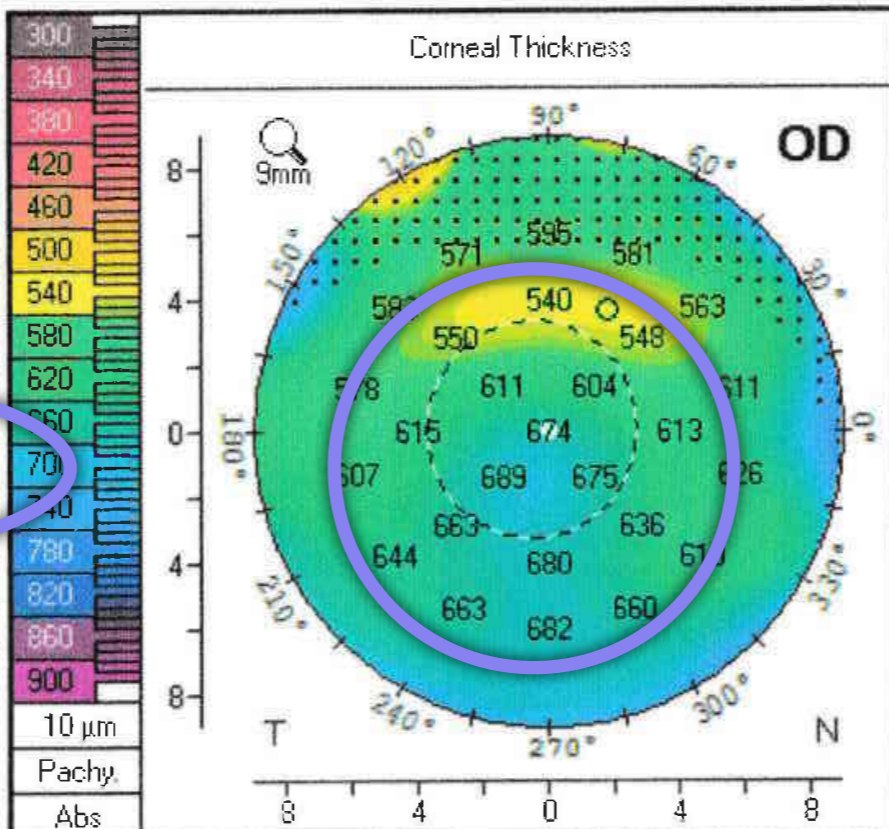
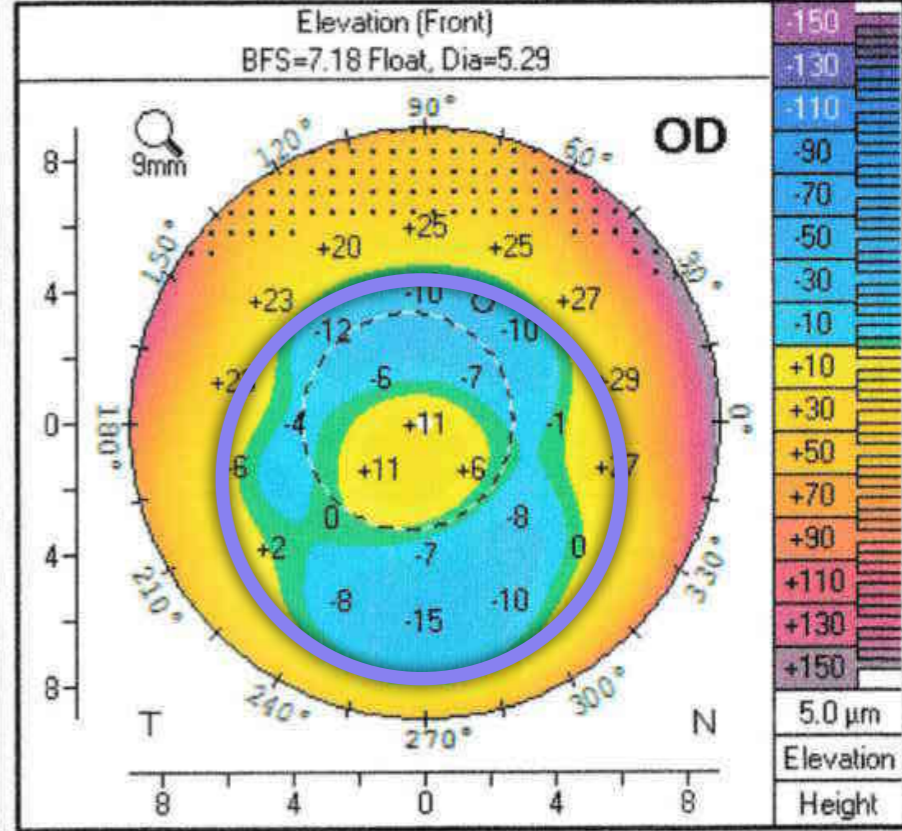
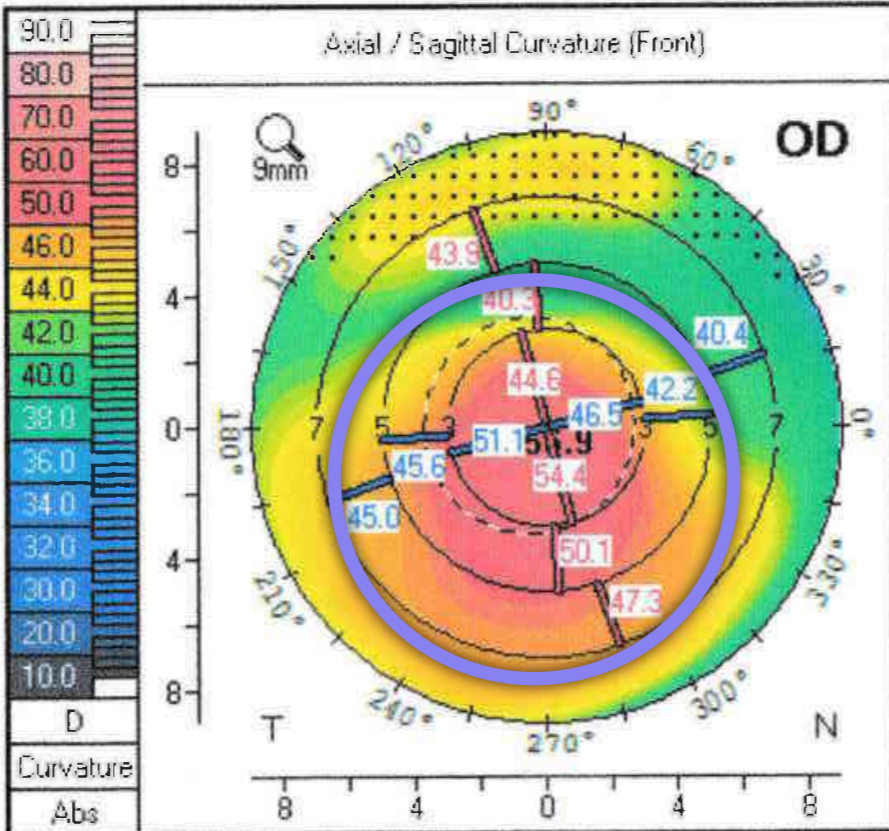
Cornea Back

Rt: 8.18 mm K1: -4.9 D
 Rs: 7.94 mm K2: -5.0 D
 Rm: 8.06 mm Km: -5.0 D
 Axis: 134.2° Astig: -0.1 D
 Q-val: 0.43 Rper: 7.02 mm Rmin: 5.65 mm

Pupil Center: + Pachy: 673 μm x(mm): -0.26 y(mm): +0.03
 Pachy Apex: - Pachy: 674 μm x(mm): 0.00 y(mm): 0.00
 Thinnest Locat: O Pachy: 539 μm x(mm): +0.89 y(mm): +1.84
 K Max. (Front): 56.9 D x(mm): +0.19 y(mm): -0.57

Cornea Volume: 58.8 mm³ KPD: -1.9 D
 Chamber Volume: 145 mm³ Angle:
 A. C. Depth (Int.): 2.98 mm Pupil Dia: 3.25 mm
 Enter IOP IOP(Sum): -3.2 mmHg Lens Th.:

Refractive



WAVELIGHT - ALLEGRO OCULYZER 4 Maps Refractive

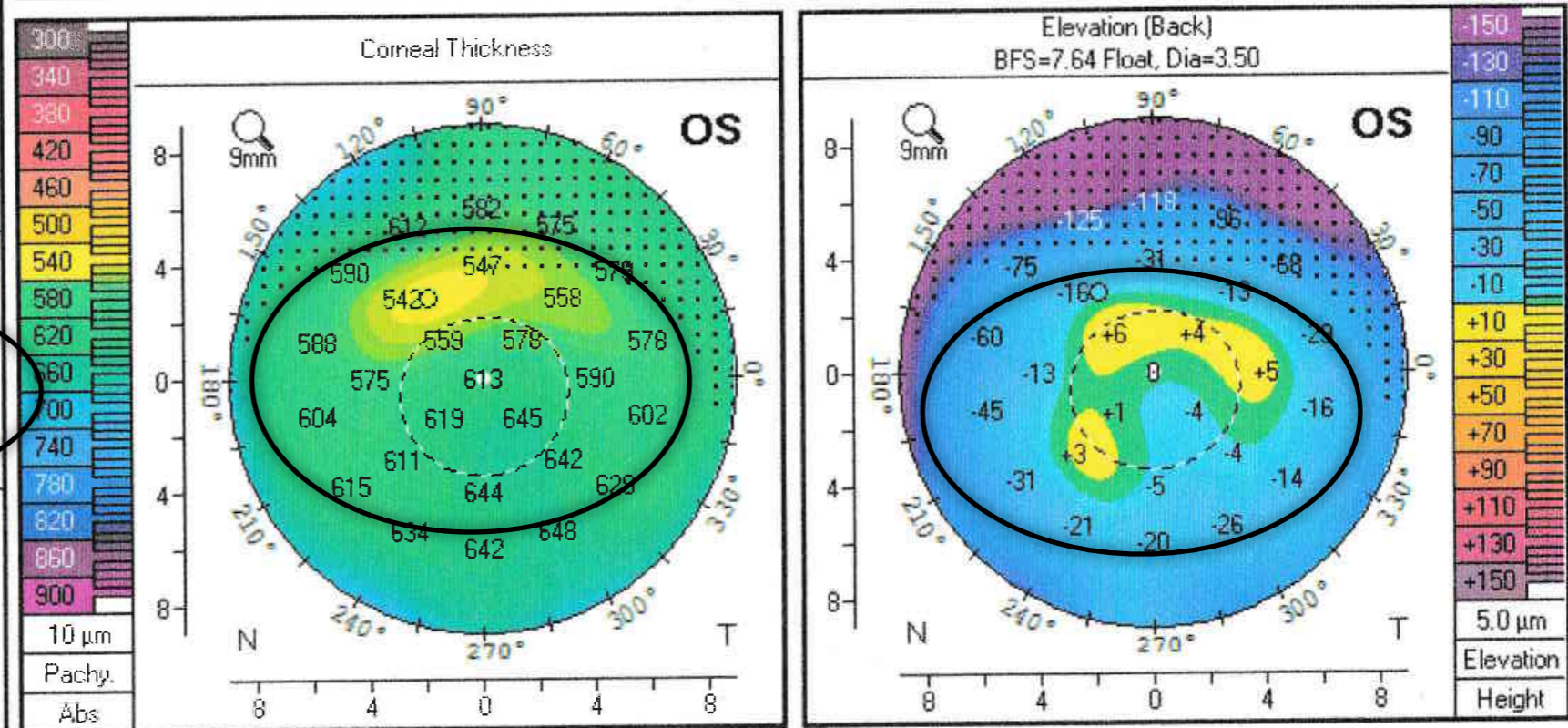
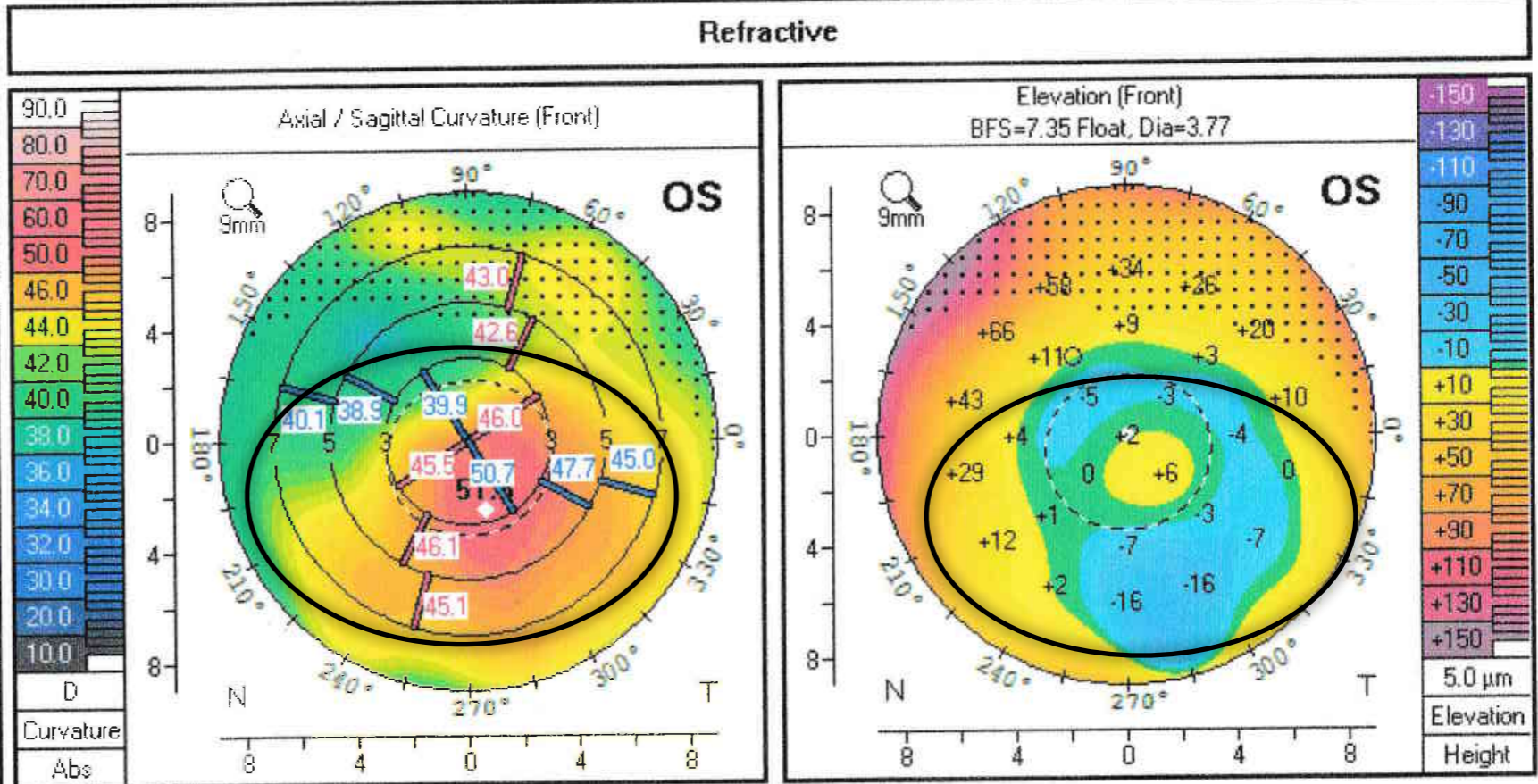
Last Name:	Kamel said		
First Name:	Omeria		
ID:	37975		
Date of Birth:	23.01.1980	Eye:	Left
Exam Date:	30.07.2019	Time:	16:44:15
Exam Info:			

Cornea Front			
Rf:	7.52 mm	K1:	44.9 D
Rs:	7.32 mm	K2:	46.1 D
Rm:	7.42 mm	Km:	45.5 D
Axis (flt.):	115.1°	Astig:	+1.3 D
Q-val: (8mm)	-0.41	Rper:	7.88 mm
		Rmin:	6.58 mm

Cornea Back			
Rf:	7.55 mm	K1:	-5.3 D
Rs:	7.17 mm	K2:	-5.6 D
Rm:	7.36 mm	Km:	-5.4 D
Axis (flt.):	15.3°	Astig:	+0.3 D
Q-val: (8mm)	0.21	Rper:	7.05 mm
		Rmin:	5.77 mm

	Pachy	x[mm]	y[mm]
Pupil Center:	+ 628 μm	+0.03	-0.31
Pachy Apex:	- 613 μm	0.00	0.00
Thinnest Locat.:	○ 538 μm	-0.96	+1.41
K Max. (Front):	51.3 D	+0.32	-1.21

Cornea Volume:	58.5 mm ³	KPD:	+0.2 D
Chamber Volume:	148 mm ³	Angle:	36.2°
A. C. Depth (Int.):	3.10 mm	Pupil Dia:	2.89 mm
Enter IOP IOP(Sum):	-4.8 mmHg	Lens Th.:	



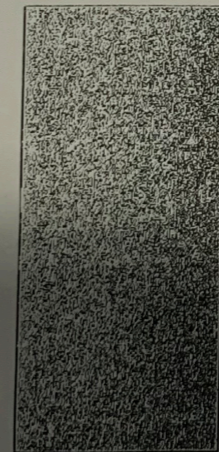
12

Averaging success rate 4/4

648

30/07/2019 16:30:29
 ID 0130 01
 OS(L) *(550um)

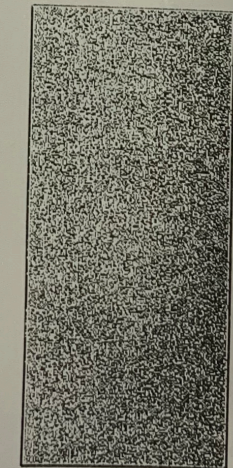
CCT N/A μm
 CD 2697 $\frac{\text{cells}}{\text{mm}^2}$
 CV 80 %
 HEX 0 %
 N 150 cells
 MIN 91 μm^2
 MAX 2315 μm^2
 AVG 371 μm^2
 SD 298 μm^2



TOPCON

30/07/2019 16:34:39
 ID 0131 01
 OD(R) *(460um)

CCT N/A μm
 CD 2578 $\frac{\text{cells}}{\text{mm}^2}$
 CV 142 %
 HEX 1 %
 N 159 cells
 MIN 92 μm^2
 MAX 4381 μm^2
 AVG 388 μm^2
 SD 551 μm^2



TOPCON

Averaging success rate 2/4

597

	Right			Left		
	Sph	Cyl	Axis	Sph	Cyl	Axis
D	2.00	1.50	170°	0.25	2.00	120°
R						

التاريخ: ٢٠١٩ / ٧ / ٣٠

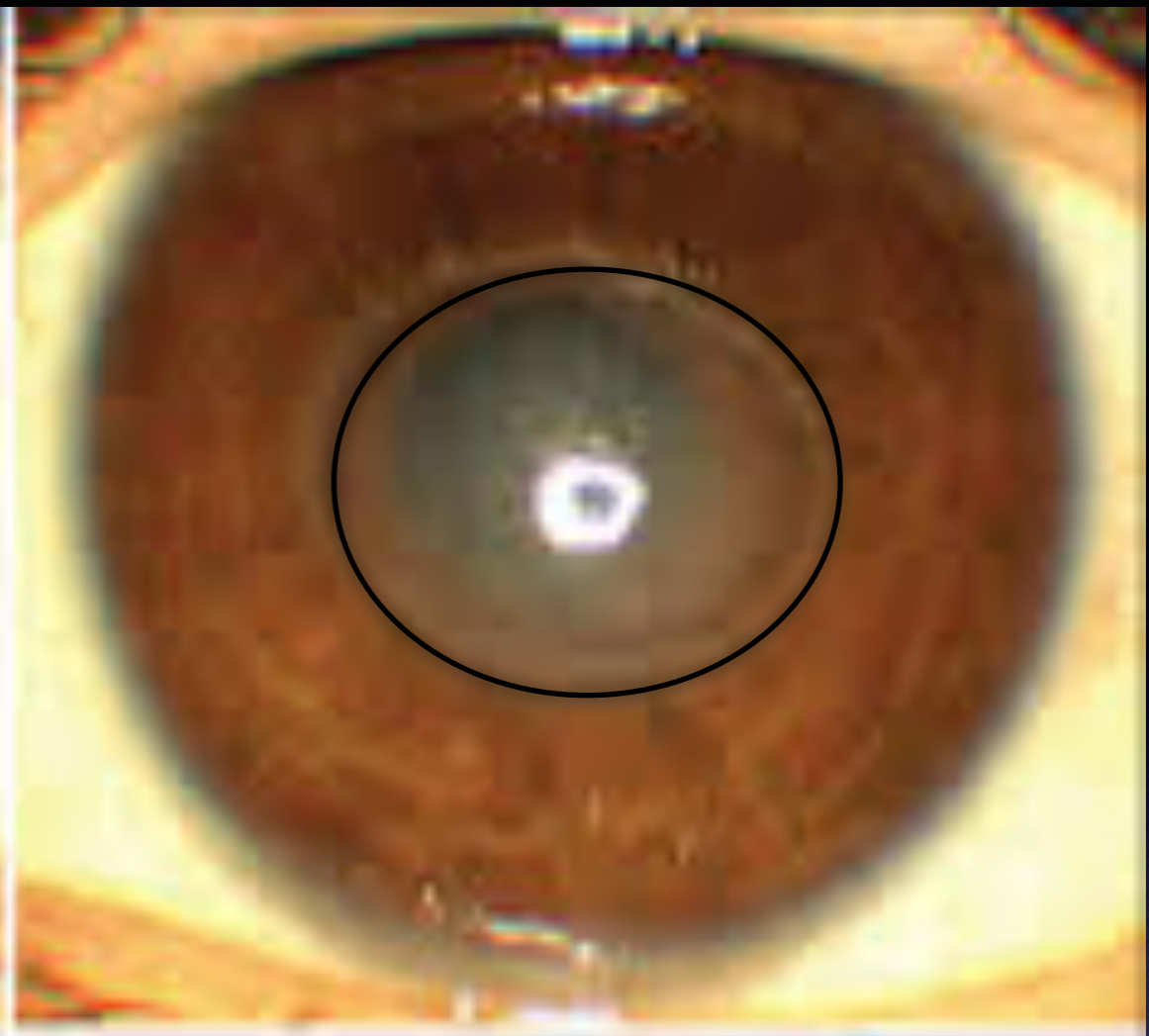
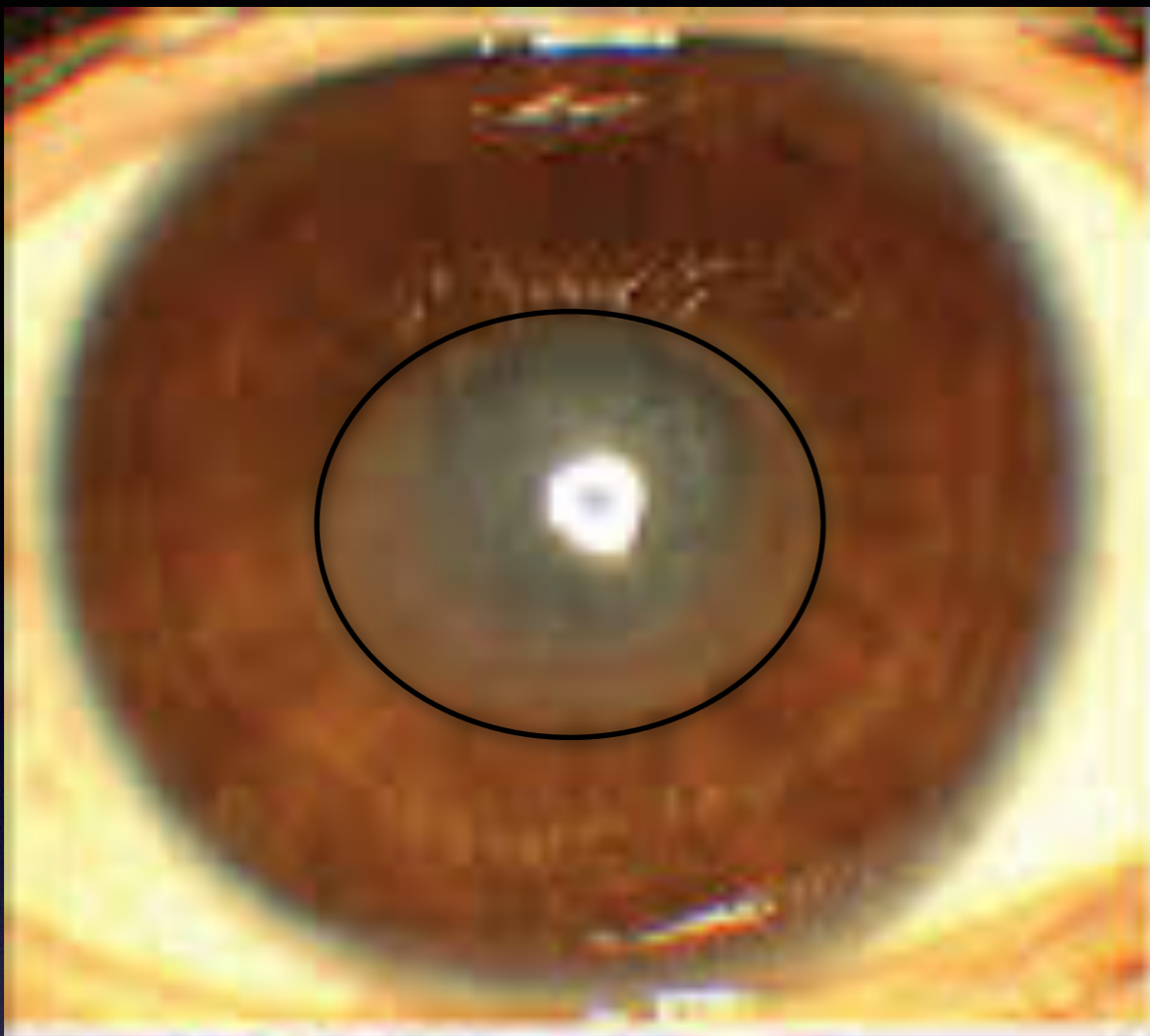
الاسم: أمينة كامل

BC: 5/60
 6/36

Treatment:

- Normal Saline 5%
- Prednisolone
- Lubricant





Changing the mind; viral or Autoimmune !!??

- Oral Acyclovir 400 mg / 8hrs
- Topical Gancyclovir 5 times/day
- Flurometholone ED /12 hrs
- Immuno-modulator

After 10 days: no response

So, turned to aggressive autoimmune therapy

Together with a consultant of autoimmune diseases

- Systemic:

- 1- Injectable Methotrexate

- 2- oral prednisone 100 mg /day (Solupred)

- Topical:

- 1- Hydrocortisone EO 5 times/day

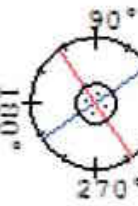
- 2- Brimonidine ED/12 hrs

After 2 weeks: Marvelous improvement


WAVELENGTH - ALLEGRO OCULYZER 4 Maps Refractive

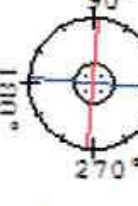
Last Name:
First Name:
ID:
Date of Birth:
Exam Date:
Exam Info:

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



 QS:
 Q-val:
 (8mm)

Cornea Front

 Rf: K1:
 Rs: K2:
 Rm: Km:
 Axis: Astig:
 Q-val: Rper: Rmin:
 (8mm)


 QS:
 Q-val:
 (8mm)

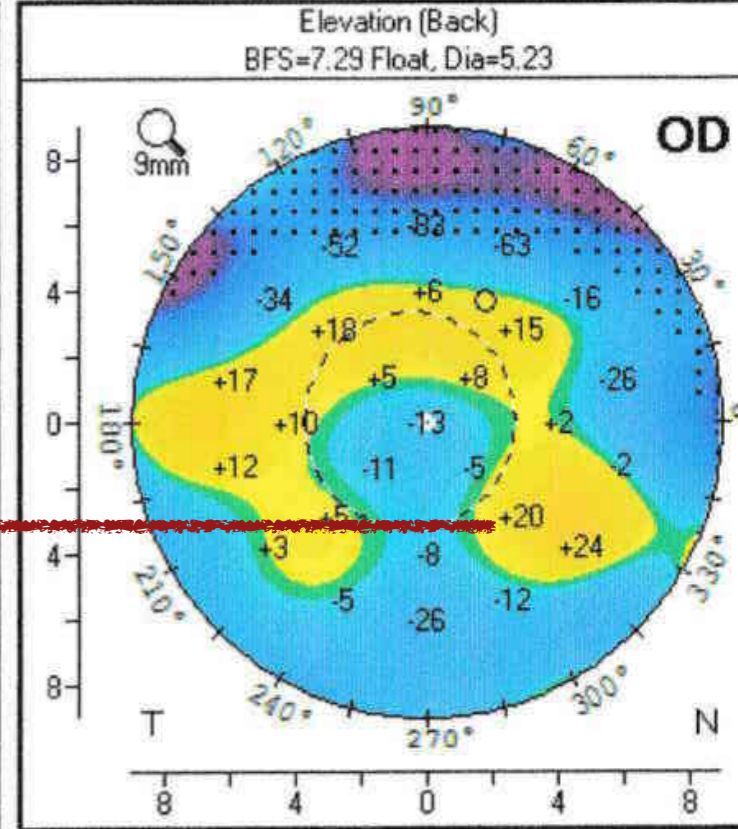
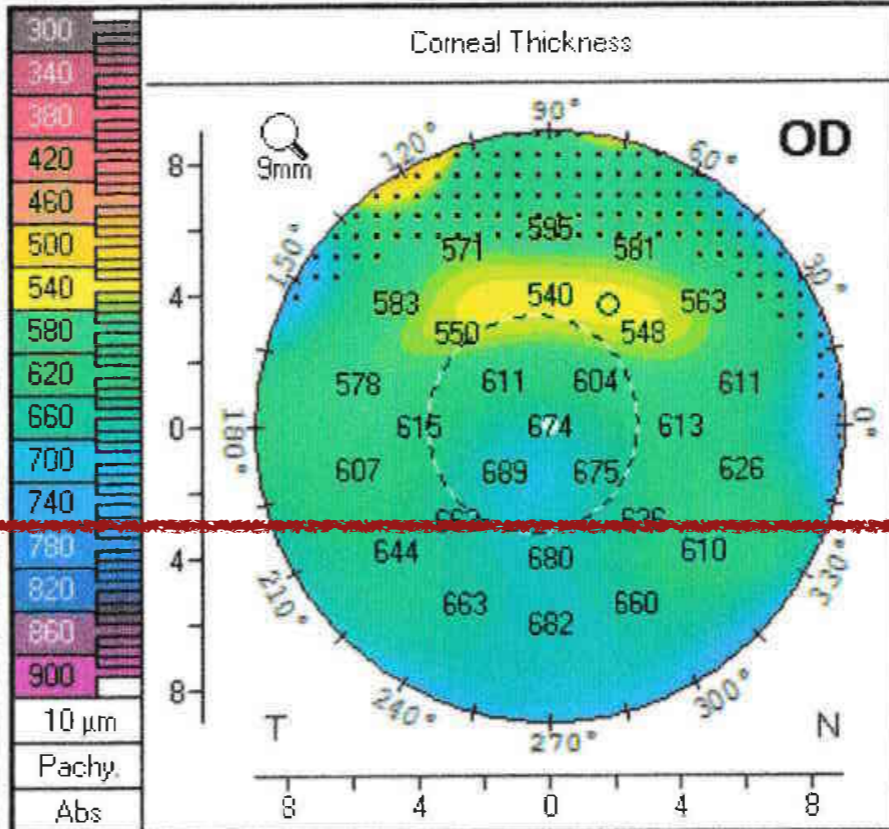
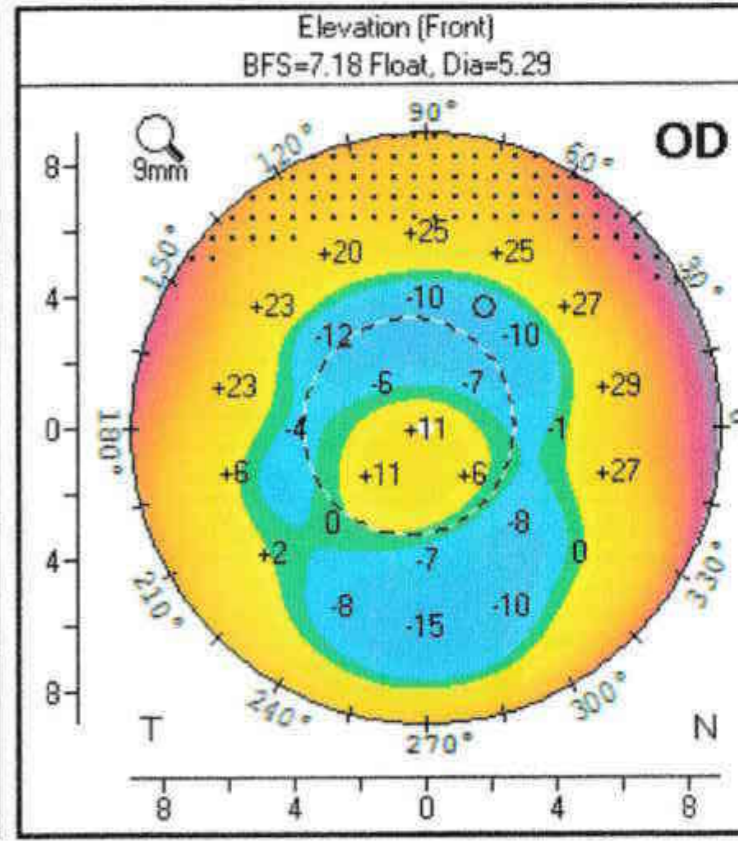
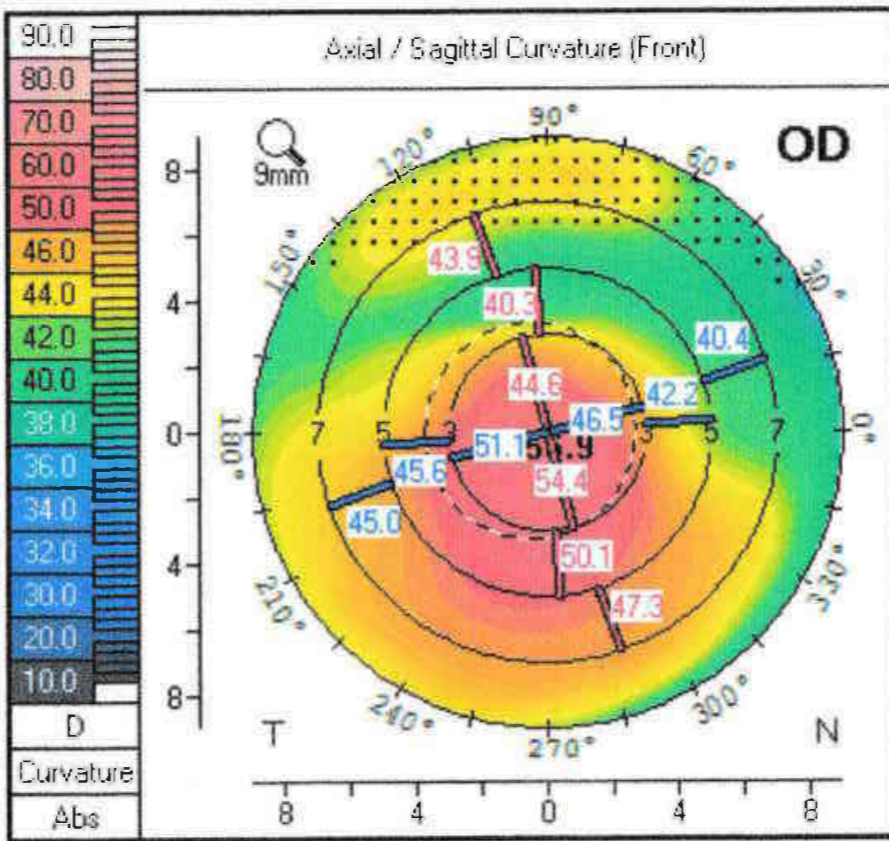
Cornea Back

 Rf: K1:
 Rs: K2:
 Rm: Km:
 Axis: Astig:
 Q-val: Rper: Rmin:
 (8mm)

Pupil Center:
 Pachy Apex:
 Thinnest Loc:
 K Max. (Front):
 Cornea Volume:
 Chamber Volume:
 A. C. Depth (Int.):
 Enter IOP IOP(Sum):

	Pachy:	x[mm]	y[mm]
Pupil Center:	<input type="text" value="673 μm"/>	<input type="text" value="-0.26"/>	<input type="text" value="+0.03"/>
Pachy Apex:	<input type="text" value="674 μm"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>
Thinnest Locat.:	<input type="text" value="539 μm"/>	<input type="text" value="+0.89"/>	<input type="text" value="+1.84"/>
K Max. (Front):	<input type="text" value="56.9 D"/>	<input type="text" value="-0.19"/>	<input type="text" value="0.57"/>
Cornea Volume:	<input type="text" value="58.8 mm³"/>	KPD:	<input type="text" value="-1.9 D"/>
Chamber Volume:	<input type="text" value="145 mm³"/>	Angle:	<input type="text"/>
A. C. Depth (Int.):	<input type="text" value="2.98 mm"/>	Pupil Dia:	<input type="text" value="3.25 mm"/>
Enter IOP IOP(Sum):	<input type="text" value="9.2 mmHg"/>	Lens Th.:	<input type="text"/>

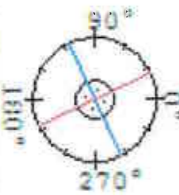
Refractive



WAVELIGHT - ALLEGRO OCULYZER 4 Maps Refractive

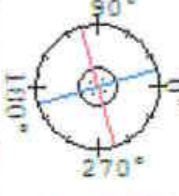
Last Name: Kamel said
 First Name: Omeria
 ID: 37975
 Date of Birth: 23.01.1980 Eye: Left
 Exam Date: 30.07.2019 Time: 16:44:15
 Exam Info:

Cornea Front



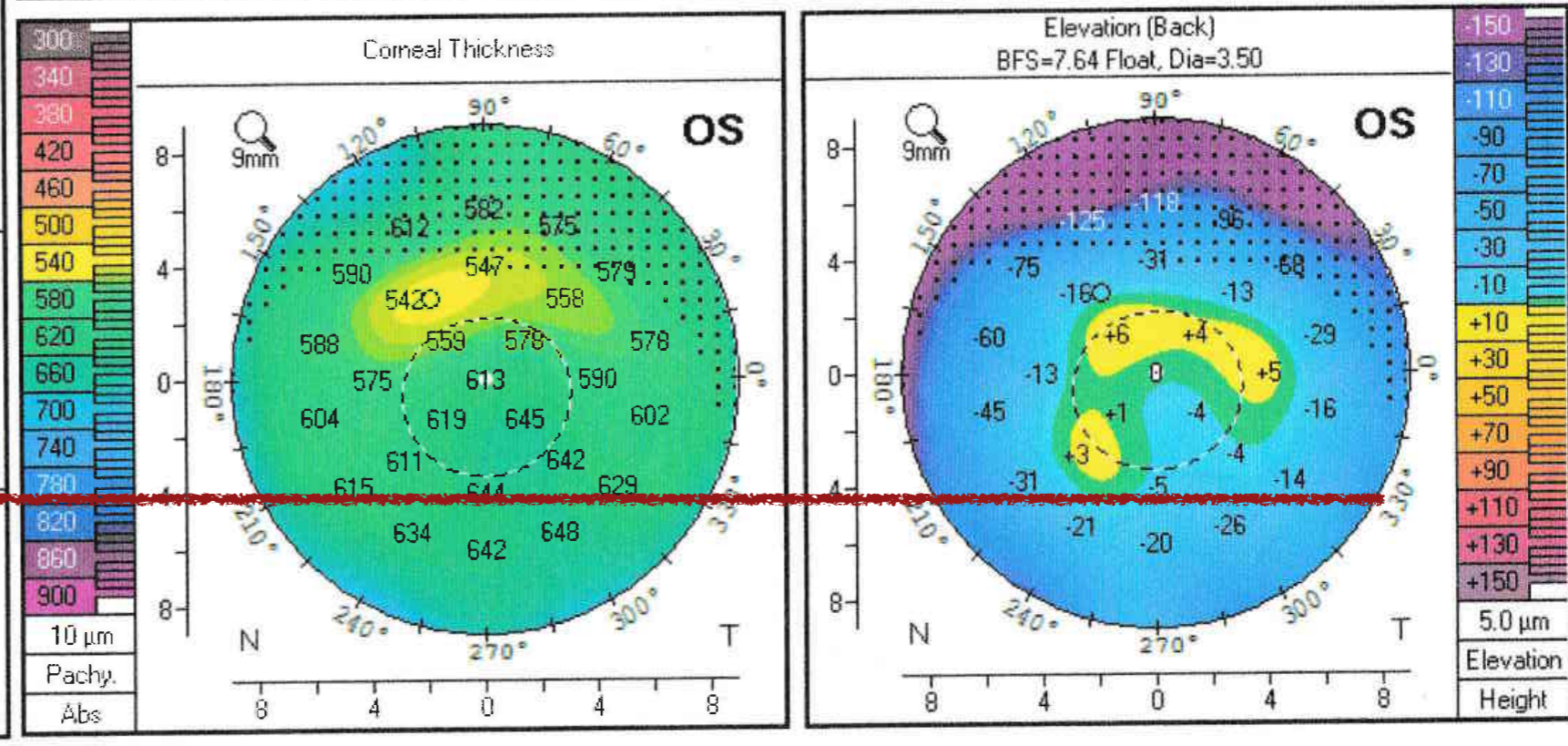
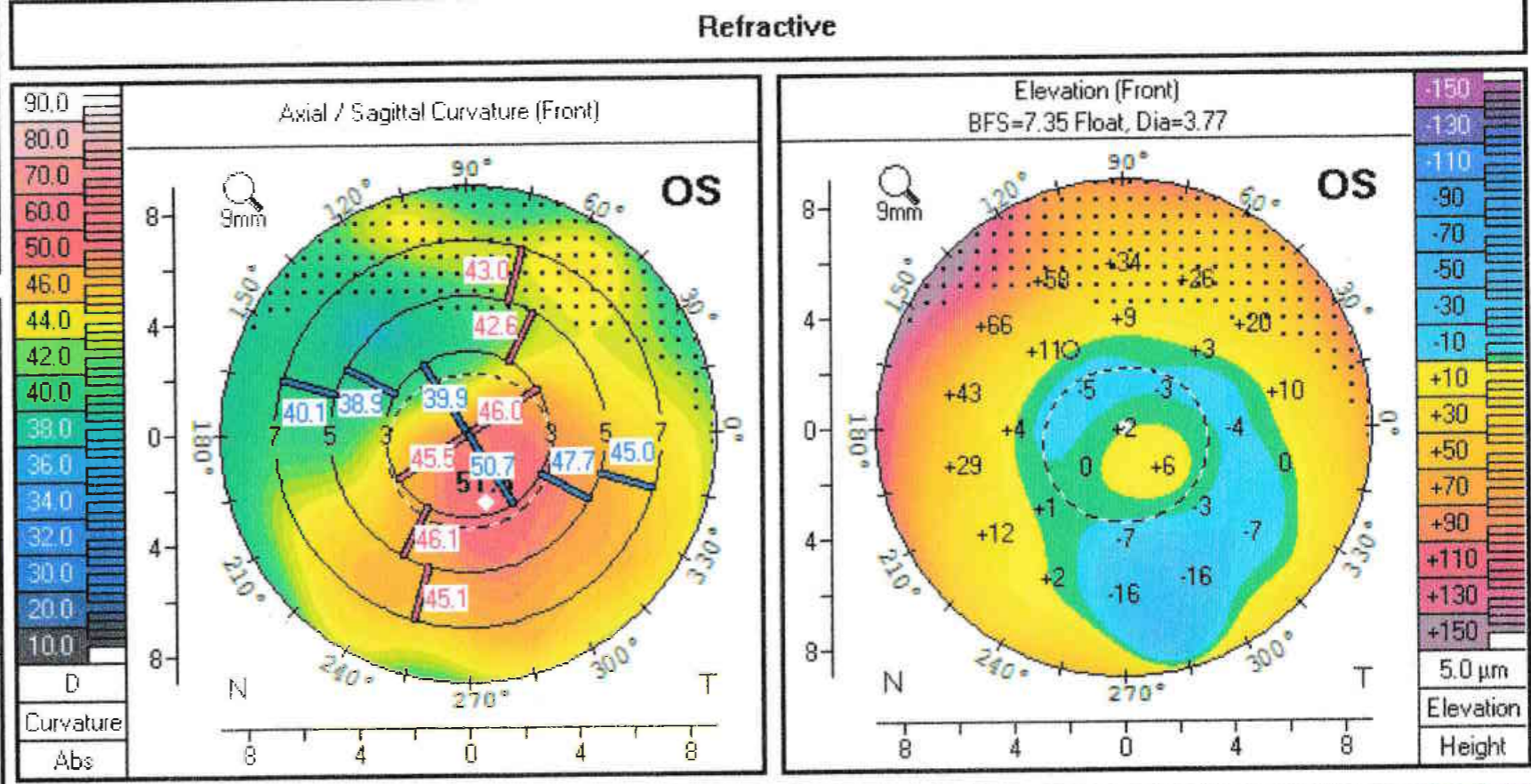
Rf: 7.52 mm K1: 44.9 D
 Rs: 7.32 mm K2: 46.1 D
 Rm: 7.42 mm Km: 45.5 D
 Axis: 115.1° Astig: +1.3 D
 Q-val: -0.41 Rper: 7.86 mm Rmin: 6.58 mm

Cornea Back



Rf: 7.55 mm K1: -5.3 D
 Rs: 7.17 mm K2: -5.6 D
 Rm: 7.36 mm Km: -5.4 D
 Axis: 15.3° Astig: +0.3 D
 Q-val: 0.21 Rper: 7.05 mm Rmin: 5.77 mm

Pupil Center:	+	Pachy: 628 μm	x[mm]: +0.03	y[mm]: -0.31
Pachy Apex:	-	613 μm	0.00	0.00
Thinnest Locat:	○	538 μm	-0.96	+1.41
K Max. (Front):		51.3 D	+0.32	-1.21
Cornea Volume:		58.5 mm ³	KPD: +0.2 D	
Chamber Volume:		148 mm ³	Angle: 36.2°	
A. C. Depth (Int.):		3.10 mm	Pupil Dia: 2.89 mm	
Enter IOP	IOP(Sum):	4.8 mmHg	Lens Th:	





3 weeks more !

WAVELIGHT - ALLEGRO OCULYZER 4 Maps Refractive

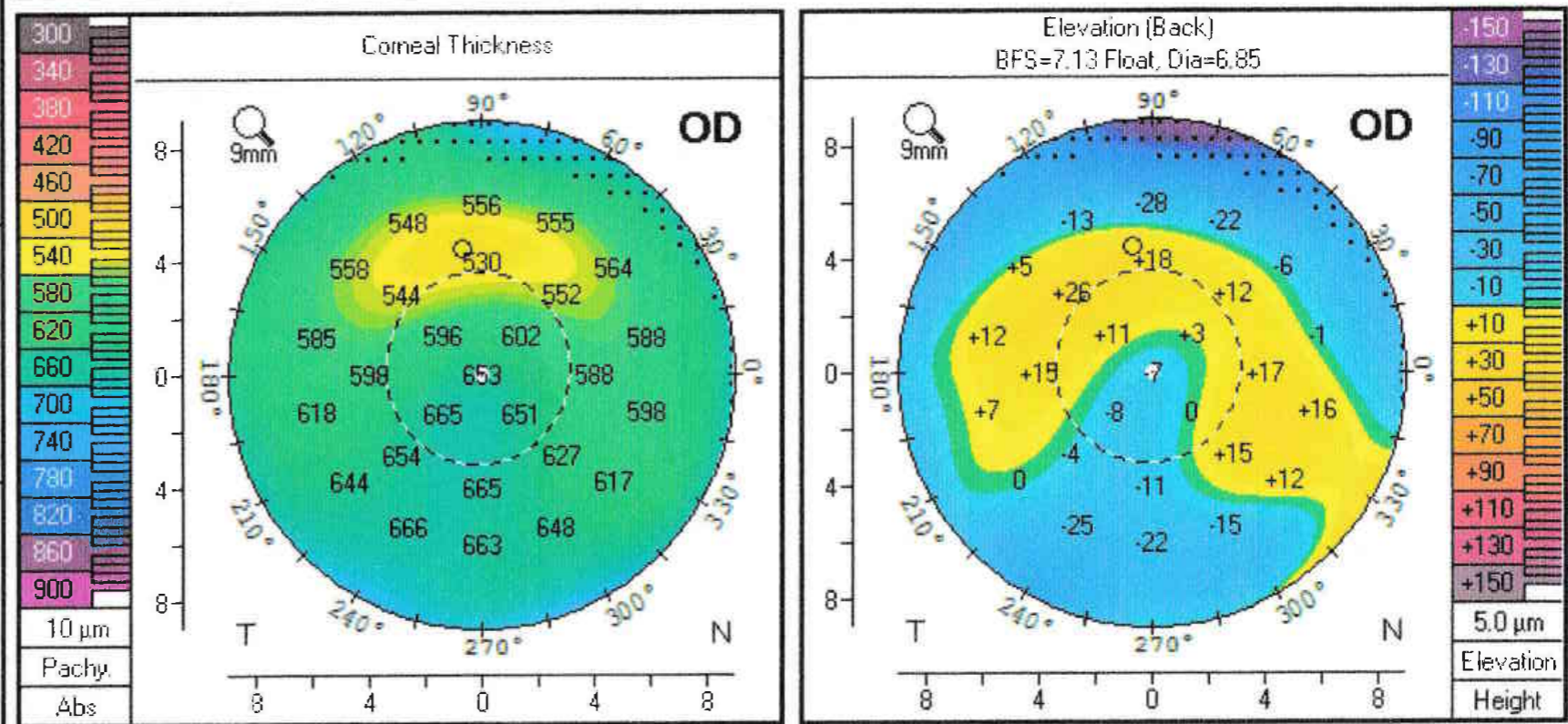
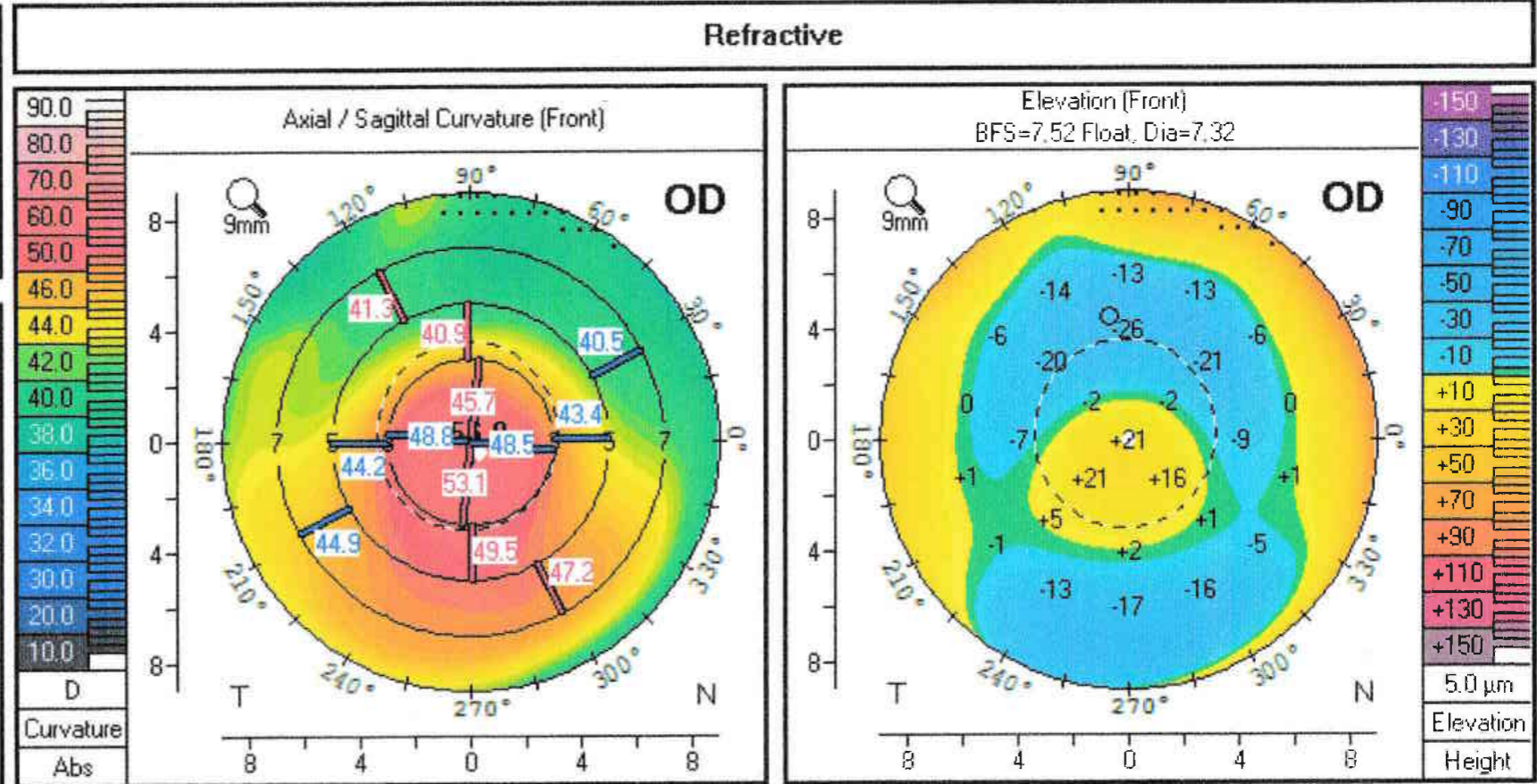
Last Name:	Kamel said		
First Name:	Omeria		
ID:	37975		
Date of Birth:	23.01.1980	Eye:	Right
Exam Date:	22.08.2019	Time:	15:41:36
Exam Info:			

Cornea Front			
Rf:	6.89 mm	K1:	49.0 D
Rs:	6.82 mm	K2:	49.5 D
Rm:	6.86 mm	Km:	49.2 D
Axis: (flt.)	20.5°	Astig:	-0.5 D
Q-val. (8mm)	-1.02	Rper:	7.99 mm
		Rmin:	5.94 mm

Cornea Back			
Rf:	7.94 mm	K1:	-5.0 D
Rs:	7.32 mm	K2:	-5.5 D
Rm:	7.63 mm	Km:	-5.2 D
Axis: (flt.)	152.1°	Astig:	+0.4 D
Q-val. (8mm)	0.47	Rper:	6.93 mm
		Rmin:	6.02 mm

Pupil Center			
Pachy:	647 μm	x[mm]	-0.07
y[mm]	+0.12		
Pachy Apex			
Pachy:	653 μm	x[mm]	0.00
y[mm]	0.00		
Thinnest Locat.:			
Pachy:	527 μm	x[mm]	-0.34
y[mm]	+2.23		
K Max. (Front):			
Pachy:	56.8 D	x[mm]	+0.13
y[mm]	-0.20		

Cornea Volume:	57.4 mm ³	KPD:	-1.5 D
Chamber Volume:	156 mm ³	Angle:	39.5°
A. C. Depth (Int.):	3.01 mm	Pupil Dia:	3.34 mm
Enter IOP IOP(Sum):	-7.7 mmHg	Lens Th.:	



WAVELIGHT - ALLEGRO OCULYZER 4 Maps Refractive

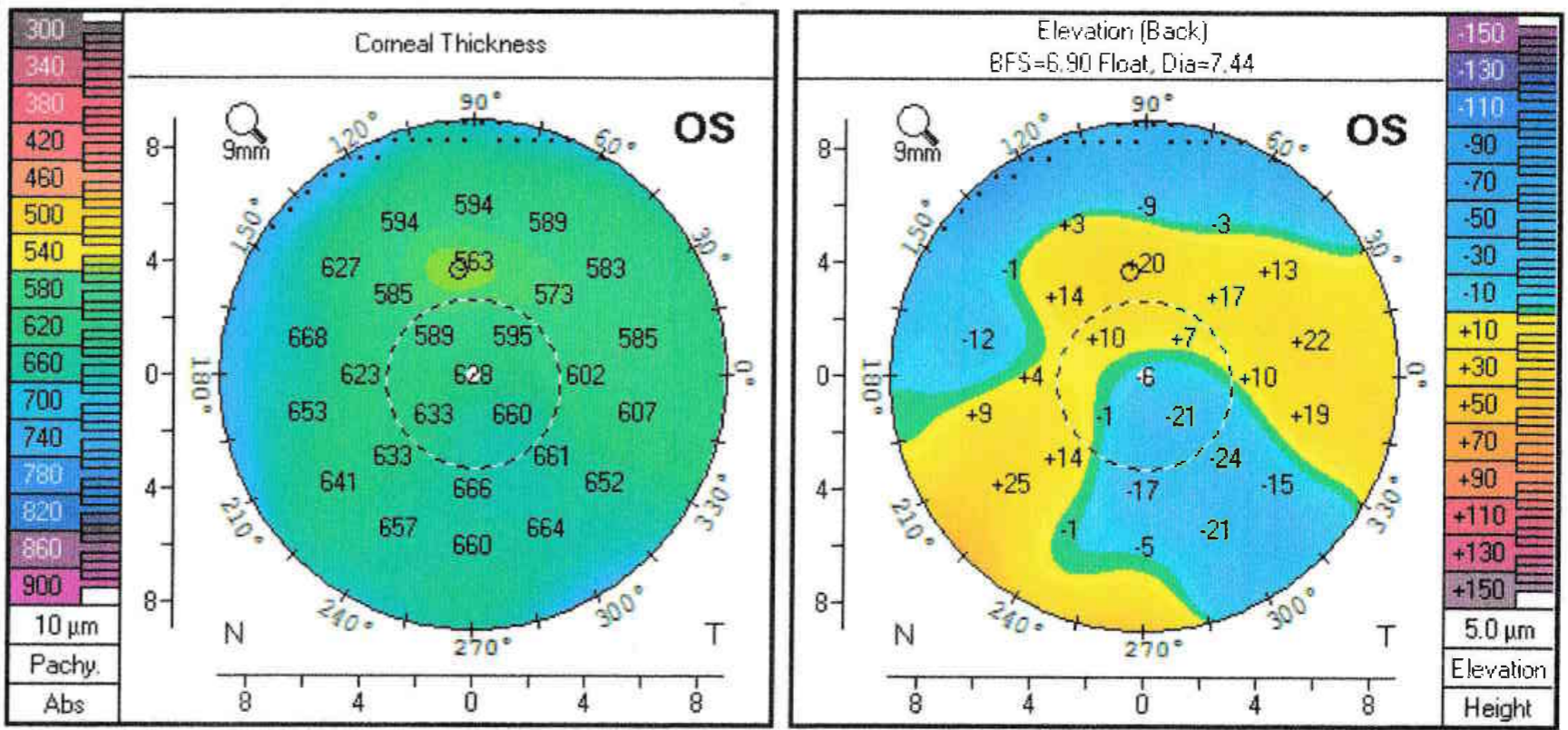
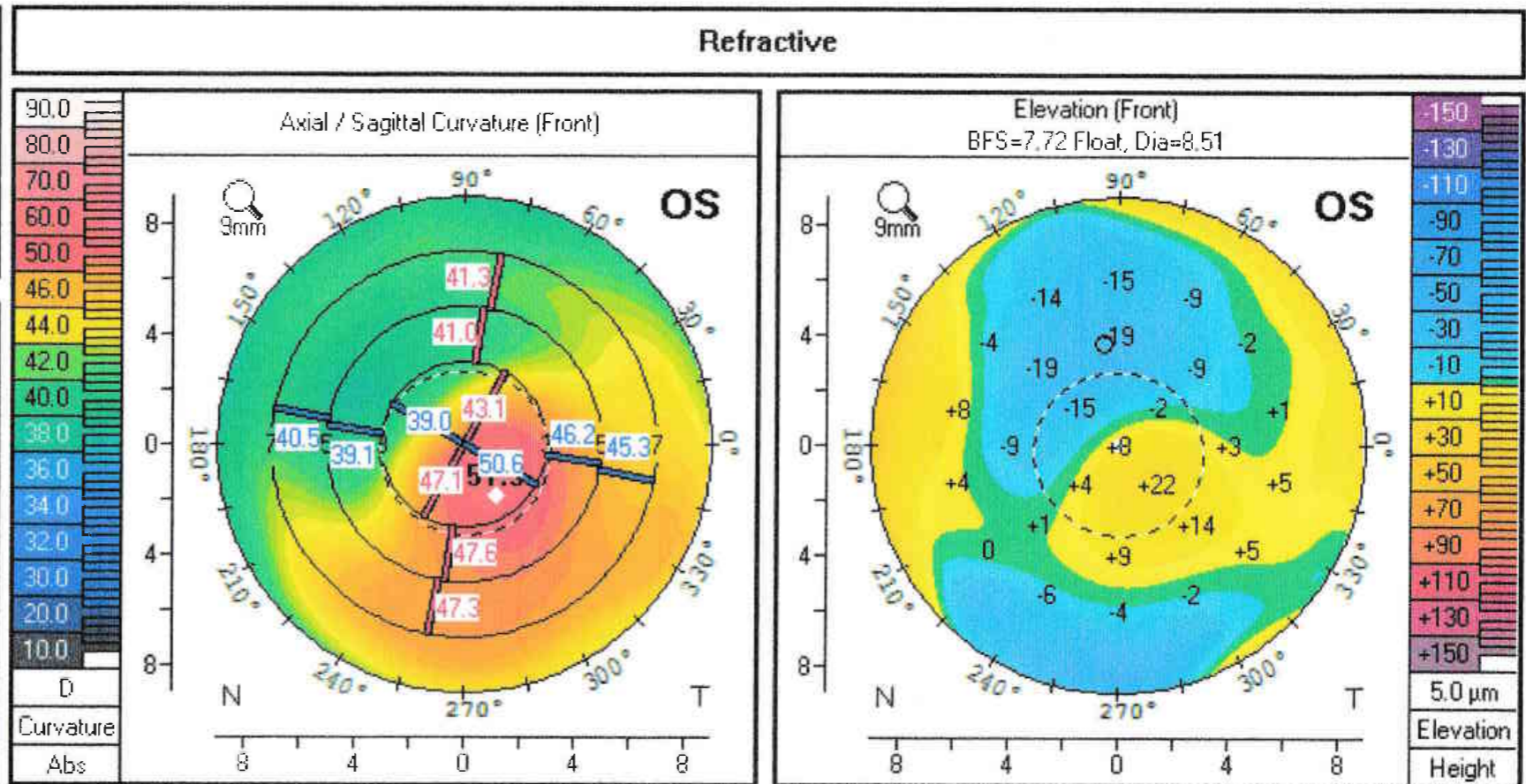
Last Name:	Kamel said		
First Name:	Omenia		
ID:	37975		
Date of Birth:	23.01.1980	Eye:	Left
Exam Date:	22.08.2019	Time:	15:45:06
Exam Info:			

Cornea Front			
Rf:	7.59 mm	K1:	44.5 D
Rs:	7.41 mm	K2:	45.5 D
Rm:	7.50 mm	Km:	45.0 D
Axis: (flt.)	149.9°	Astig:	-1.1 D
Q-val: (8mm)	-0.39	Rper:	7.94 mm
		Rmin:	6.55 mm

Cornea Back			
Rf:	7.47 mm	K1:	-5.4 D
Rs:	6.96 mm	K2:	-5.7 D
Rm:	7.21 mm	Km:	-5.5 D
Axis: (flt.)	37.2°	Astig:	+0.4 D
Q-val: (8mm)	0.27	Rper:	6.86 mm
		Rmin:	6.00 mm

Pupil Center			
Pachy:	635 μm	x[mm]	+0.01
		y[mm]	-0.16
Pachy Apex			
	628 μm	x[mm]	0.00
		y[mm]	0.00
Thinnest Local:			
	561 μm	x[mm]	-0.29
		y[mm]	+1.84
K Max. (Front):			
	51.5 D	x[mm]	+0.58
		y[mm]	-0.92

Cornea Volume:	58.7 mm ³	KPD:	+0.5 D
Chamber Volume:	152 mm ³	Angle:	41.8°
A. C. Depth (Int.):	2.98 mm	Pupil Dia:	3.03 mm
Enter IOP IOP(Sum):	5.9 mmHg	Lens Th.:	





UN: 6/12 — 6/9

Almost
clear Cornea

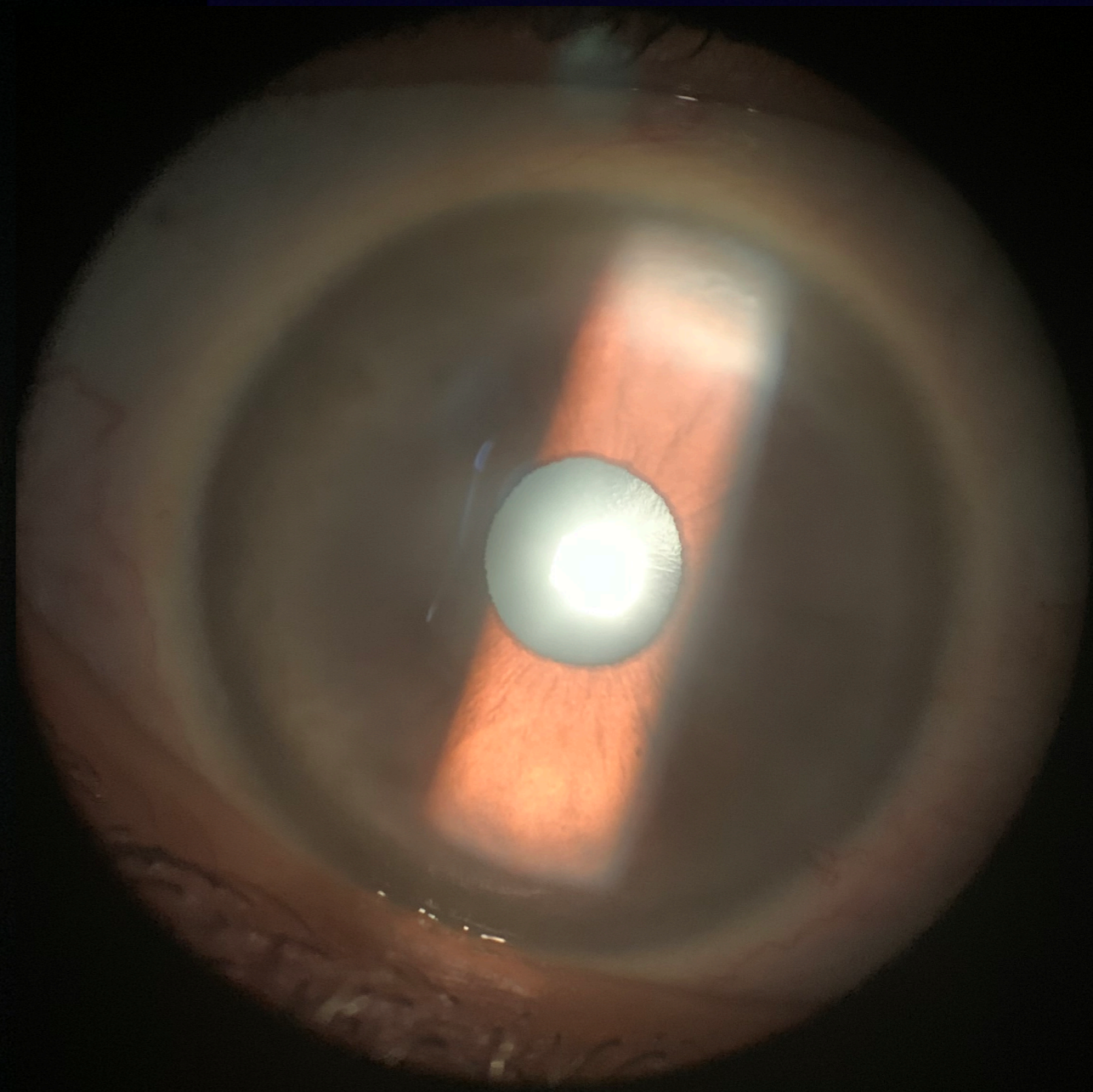
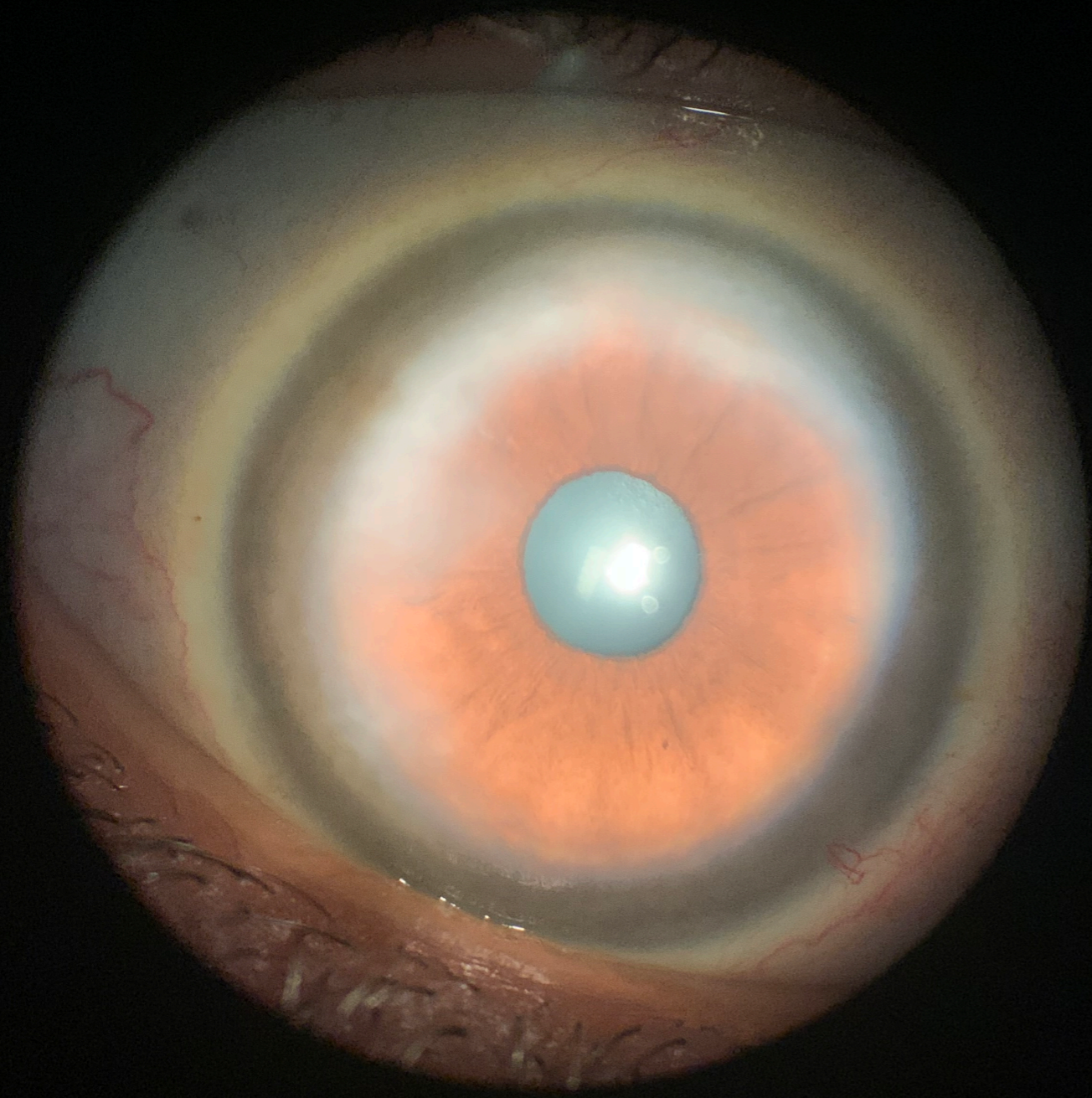
Restored her Vision
And mood wellness

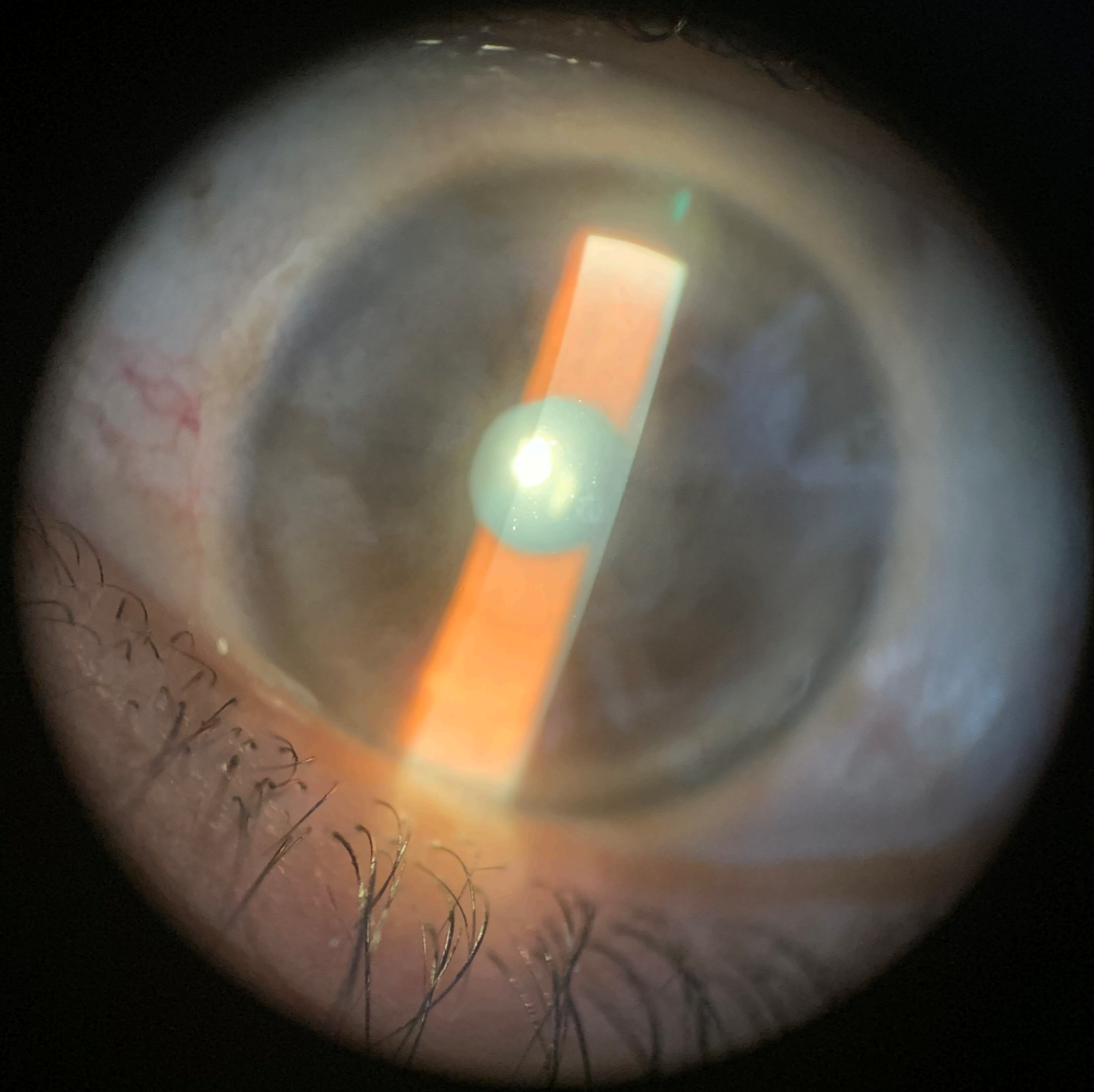
Case 2



Clinical Data

- 26 YO Female touring for RS
- Refraction: RT -1/-8 x 10 LT -1/-6 x 170
- UNVA = +/- 3 /60 OU
- BCVA = RT 6/24 LT 6/18
- IOP (Ta) = 14 13 mmgh
- Cornea : ??
- Clear lenses
- Normal fundi





WAVELIGHT - ALLEGRO OCULYZER 4 Maps Refractive

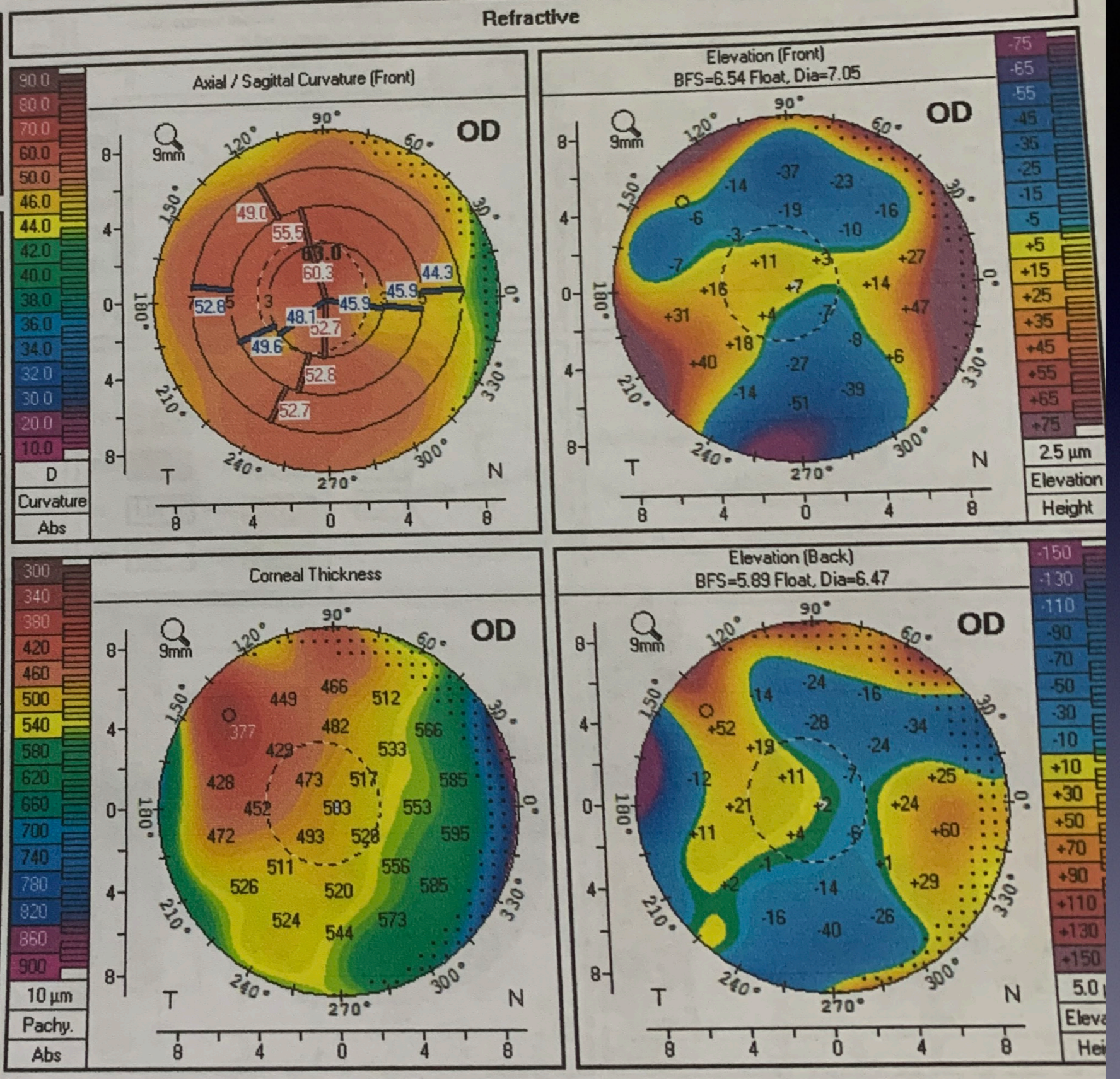
Last Name: Hassan
 First Name: Hanan
 ID: 43532
 Date of Birth: 01.01.1991 Eye: Right
 Exam Date: 14.01.2020 Time: 16:19:44
 Exam Info:

Cornea Front
 Rf: 6.77 mm K1: 49.9 D
 Rs: 6.00 mm K2: 56.2 D
 Rm: 6.38 mm Km: 52.9 D
 Axis: 7.3° Astig: -6.4 D
 Q-val: -0.73 Rper: 6.96 mm Rmin: 5.36 mm

Cornea Back
 Rf: 6.31 mm K1: -6.3 D
 Rs: 5.55 mm K2: -7.2 D
 Rm: 5.93 mm Km: -6.7 D
 Axis: 168.1° Astig: +0.9 D
 Q-val: 0.12 Rper: 5.85 mm Rmin: 4.93 mm

	Pachy:	x[mm]	y[mm]
Pupil Center:	+ 493 μm	-0.36	+0.10
Pachy Apex:	503 μm	0.00	0.00
Thinnest Locat:	○ 363 μm	-2.71	+2.32
K Max. (Front):	63.0 D	-0.06	+0.90

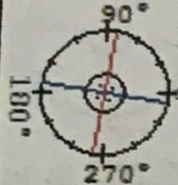
Cornea Volume: 54.4 mm³ KPD: +0.7 D
 Chamber Volume: 121 mm³ Angle: 36.4°
 A. C. Depth (Int.): 2.90 mm Pupil Dia: 2.92 mm
 Enter IOP IOP(Sum): +3.0 mmHg Lens Th.:



WAVELIGHT - ALLEGRO OCULYZER 4 Maps Refractive

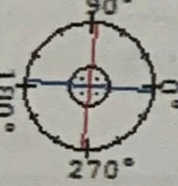
Last Name: Hassan
 First Name: Hanan
 ID: 43532
 Date of Birth: 01.01.1991 Eye: Left
 Exam Date: 14.01.2020 Time: 16:14:46
 Exam Info:

Cornea Front



Rf: 7.14 mm K1: 47.2 D
 Rs: 6.18 mm K2: 54.7 D
 Rm: 6.66 mm Km: 50.7 D
 Axis: 170.9° Astig: -7.4 D
 Q-val: -0.50 Rper: 7.07 mm Rmin: 5.46 mm

Cornea Back

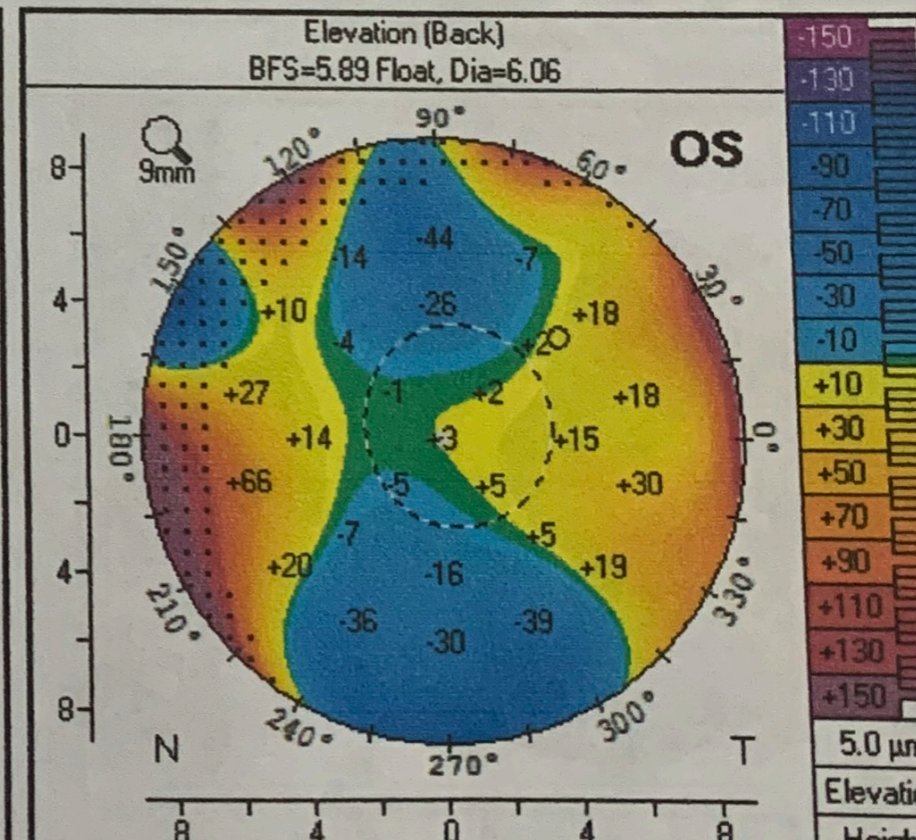
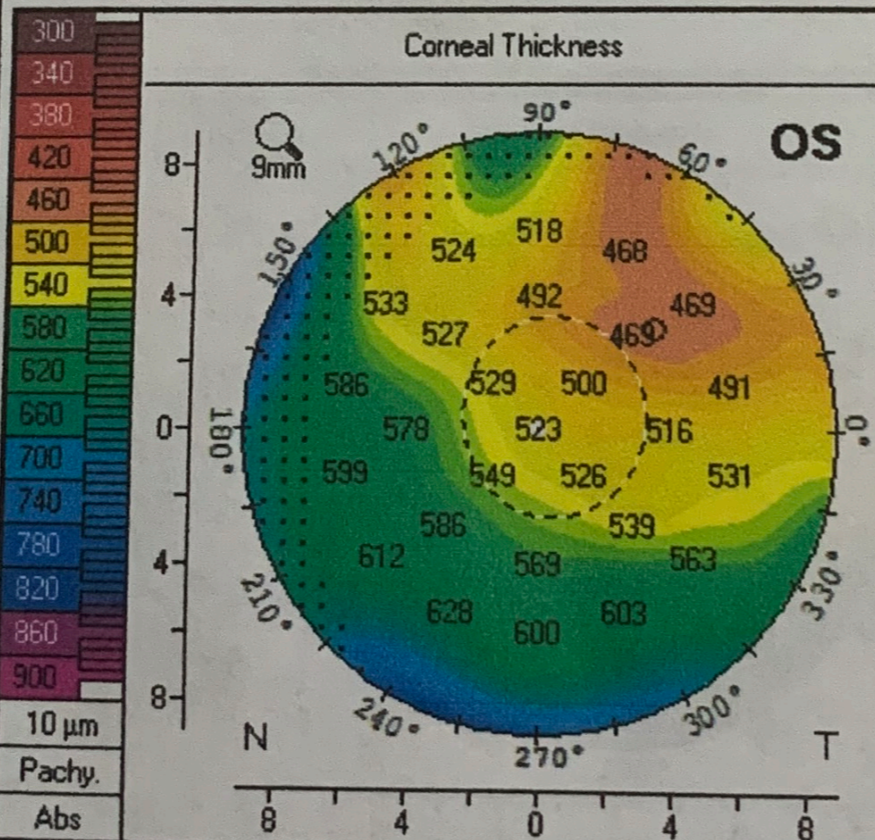
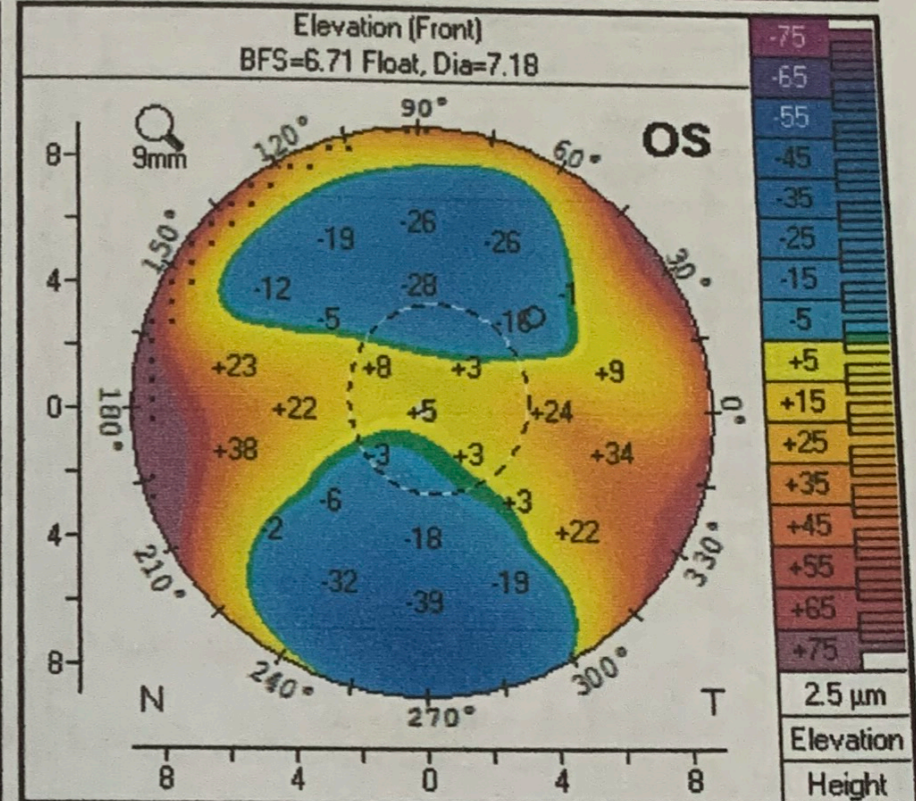
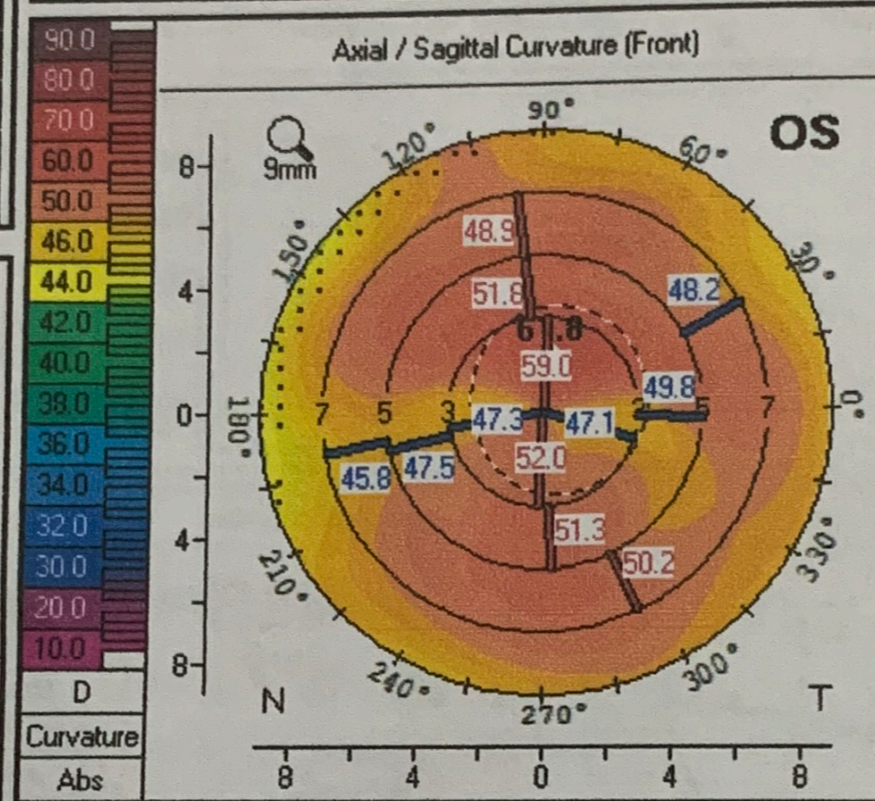


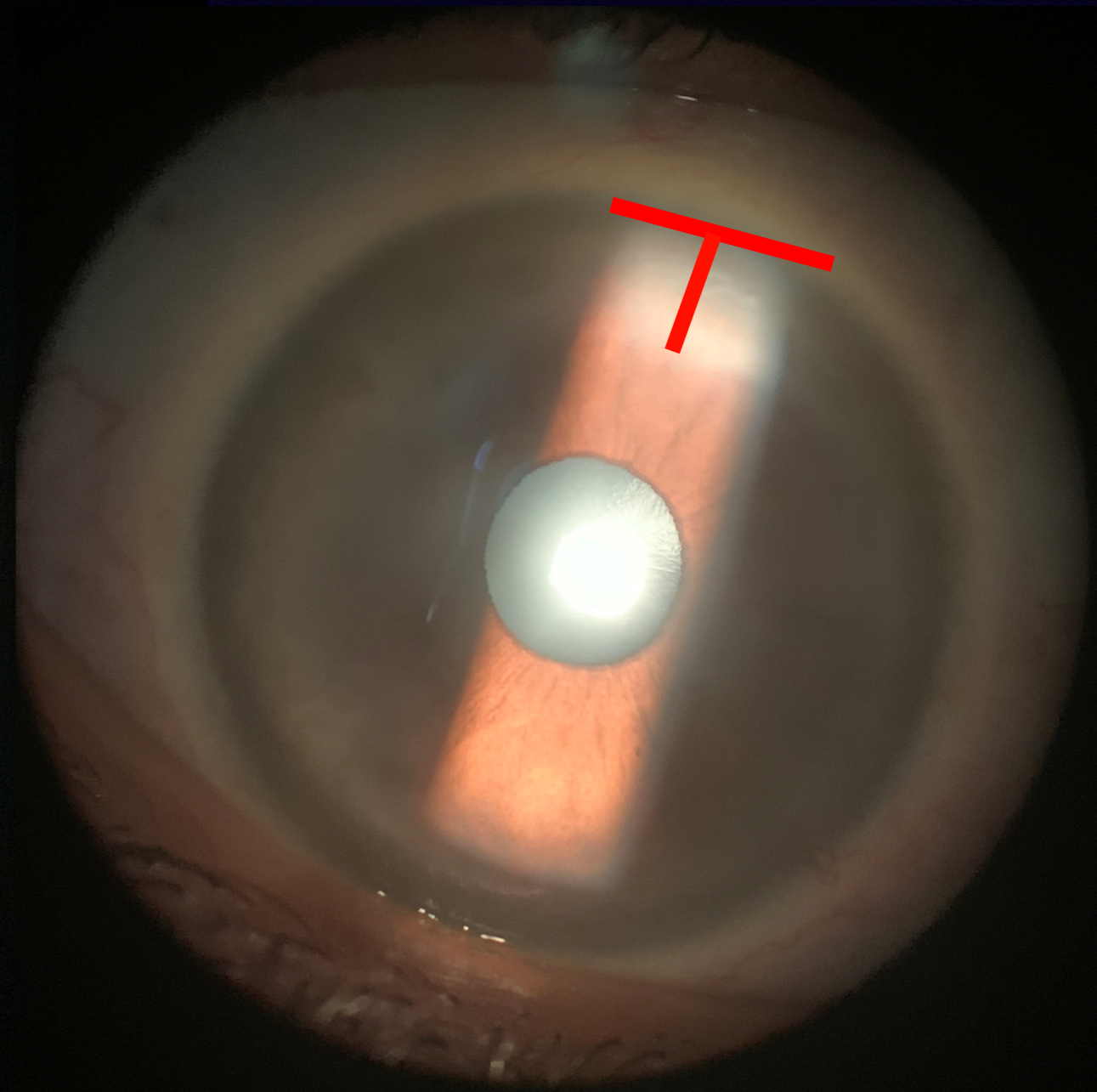
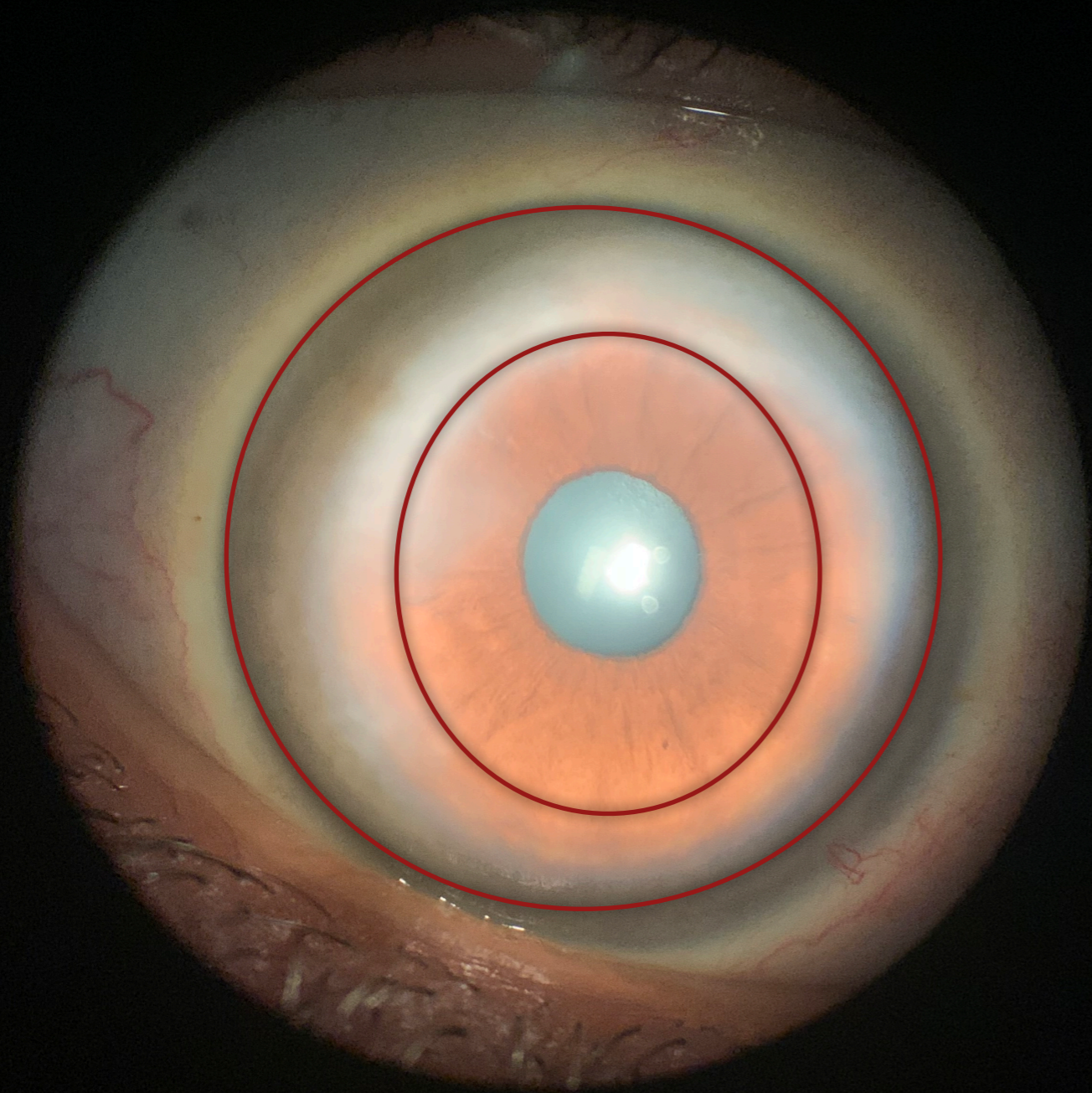
Rf: 6.11 mm K1: -6.6 D
 Rs: 5.53 mm K2: -7.2 D
 Rm: 5.82 mm Km: -6.9 D
 Axis: 175.6° Astig: +0.7 D
 Q-val: -0.34 Rper: 6.14 mm Rmin: 5.37 mm

	Pachy:	x[mm]	y[mm]
Pupil Center:	+ 516 μm	+0.25	+0.18
Pachy Apex:	523 μm	0.00	0.00
Thinnest Locat.:	○ 466 μm	+1.75	+1.49
K Max. (Front):	61.8 D	+0.13	+0.97

Cornea Volume:	55.3 mm ³	KPD:	+1.2 D
Chamber Volume:	138 mm ³	Angle:	40.7°
A. C. Depth (Int.):	3.01 mm	Pupil Dia:	2.89 mm
Enter IOP IOP(Sum):	+1.6 mmHg	Lens Th.:	

Refractive





What is the diagnosis ?? Is it KC ???!

Then, what to do ???!

My diagnosis is TMD VS advancing Peripheral corneal Degeneration!!

Management thoughts Could be:
Customized ablation procedures;
Topo-guided or WF-guided ??
Others ???



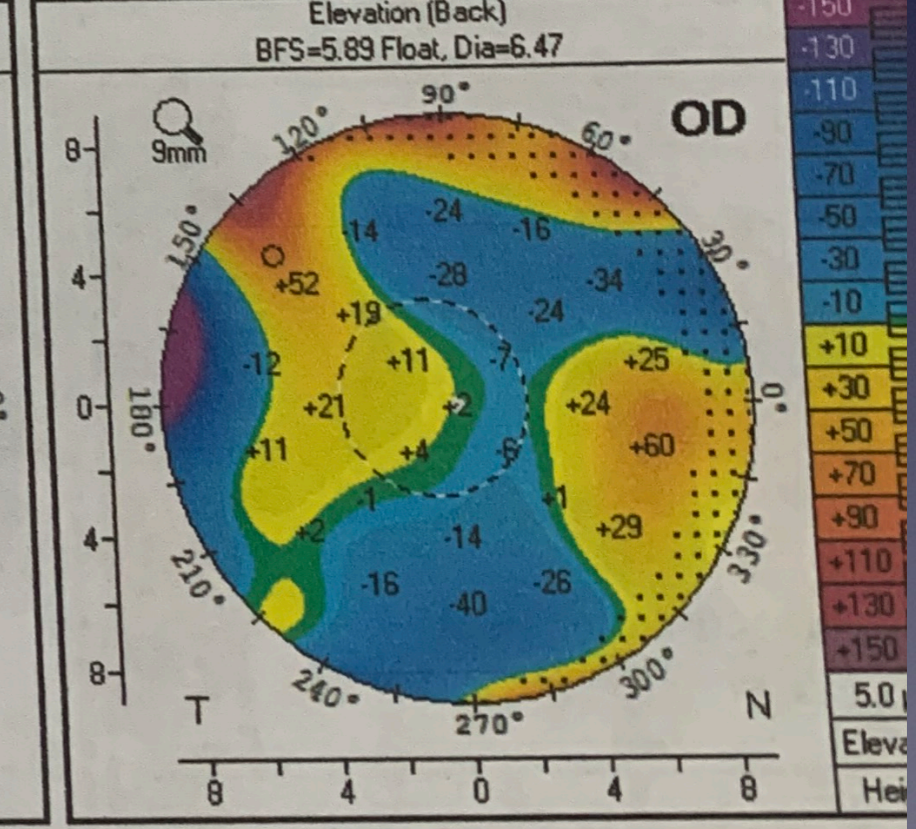
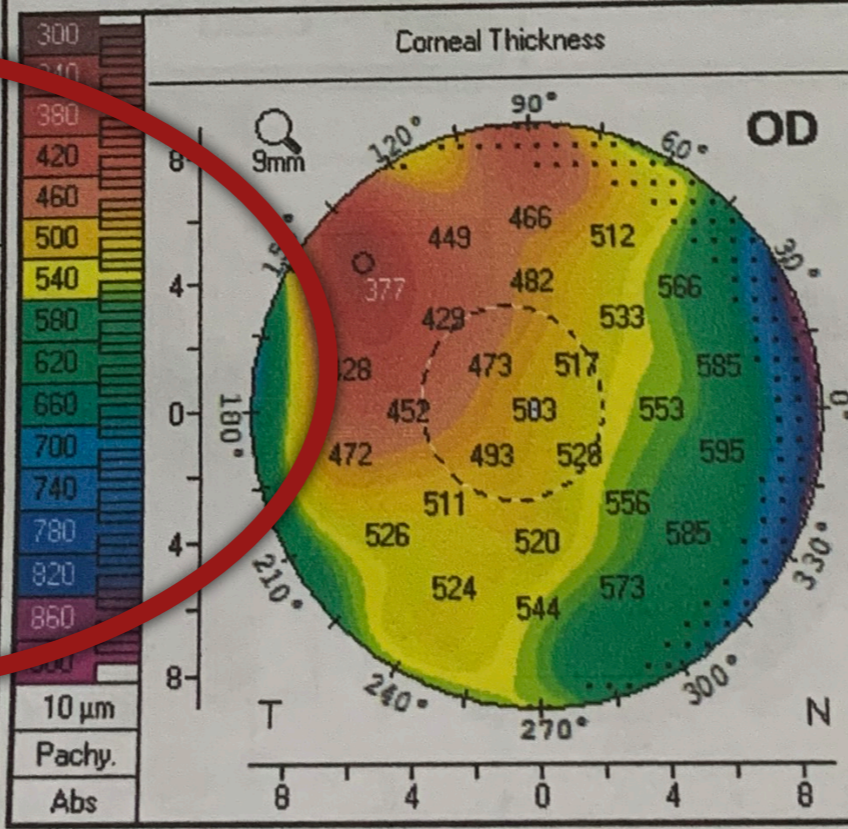
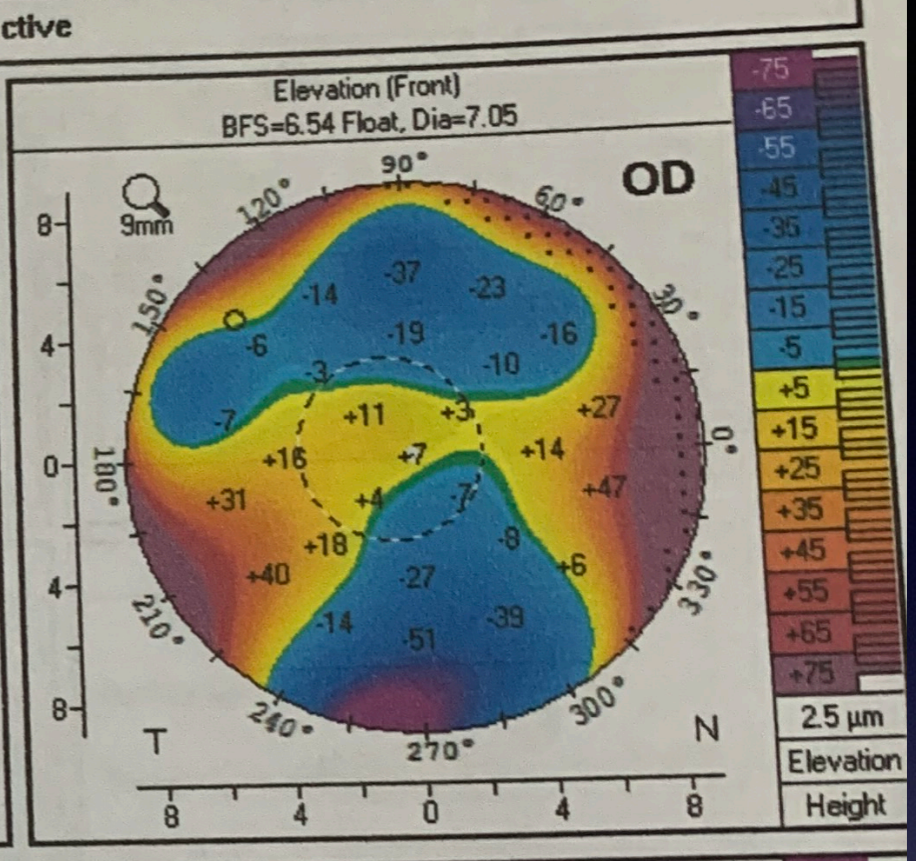
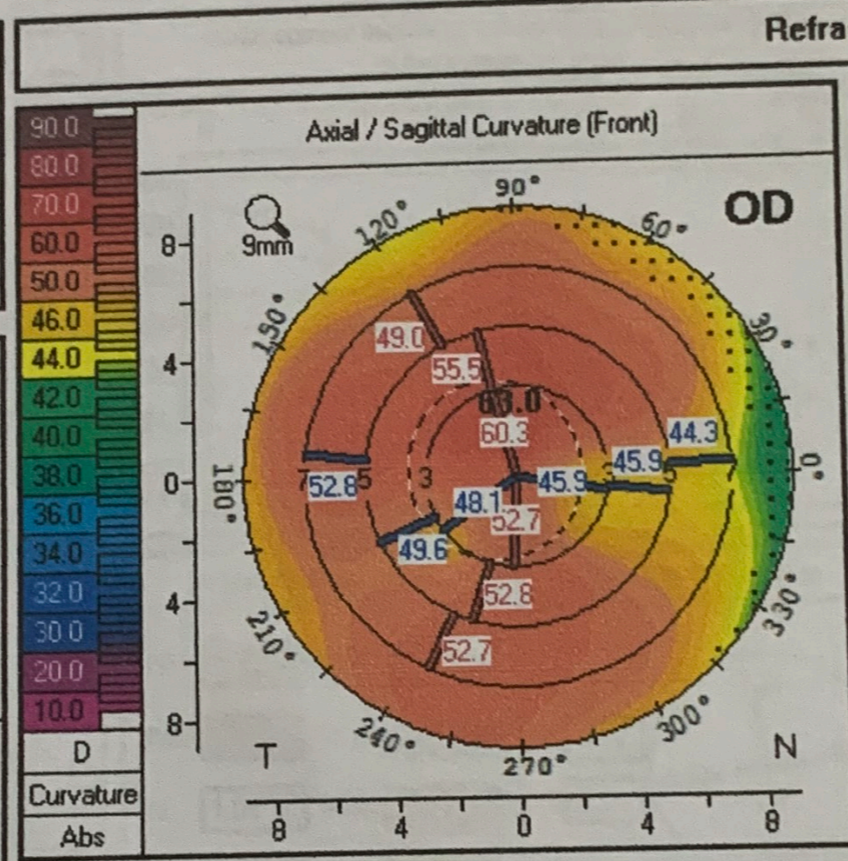
WAVELIGHT - ALLEGRO OCULYZER 4 Maps Refractive

Last Name: Hassan
 First Name: Hanan
 ID: 43532
 Date of Birth: 01.01.1991 Eye: Right
 Exam Date: 14.01.2020 Time: 16:19:44
 Exam Info:

Cornea Front
 Rf: 6.77 mm K1: 49.9 D
 Rs: 6.00 mm K2: 56.2 D
 Rm: 6.38 mm Km: 52.9 D
 Axis: 7.3° Astig: -6.4 D
 Q-val: -0.73 Rper: 6.96 mm Rmin: 5.36 mm

Cornea Back
 Rf: 6.31 mm K1: -6.3 D
 Rs: 5.55 mm K2: -7.2 D
 Axis: 168.1° Astig: +0.9 D
 Q-val: 0.12 Rper: 5.85 mm Rmin: 4.93 mm

Pupil Center: + Pachy: 493 μm x[mm]: -0.36 y[mm]: +0.10
 Pachy Apex: 503 μm 0.00 0.00
 Thinnest Locat: O 363 μm -2.71 +2.32
 K Max. (Front): 63.0 D -0.06 +0.90
 Cornea Volume: 54.4 mm³ KPD: +0.7 D
 Chamber Volume: 121 mm³ Angle: 36.4°
 A. C. Depth (Int.): 2.90 mm Pupil Dia: 2.92 mm
 Enter IOP IOP(Sum): +3.0 mmHg Lens Th.:





- I had done Custom-LASIK (TG)
With Flap thickness 110
Ref= -1 sph , -5.5 cyl OU
Successful surgery
With very good outcome
UN is 2 lines more Preop BC.
After 3 yrs of F/U, she is still stable & happy 😊



Thank you for attention