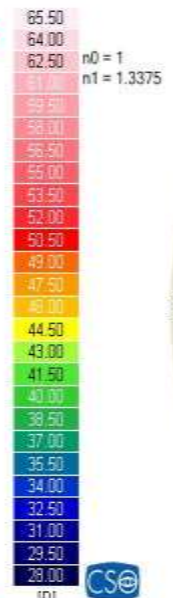
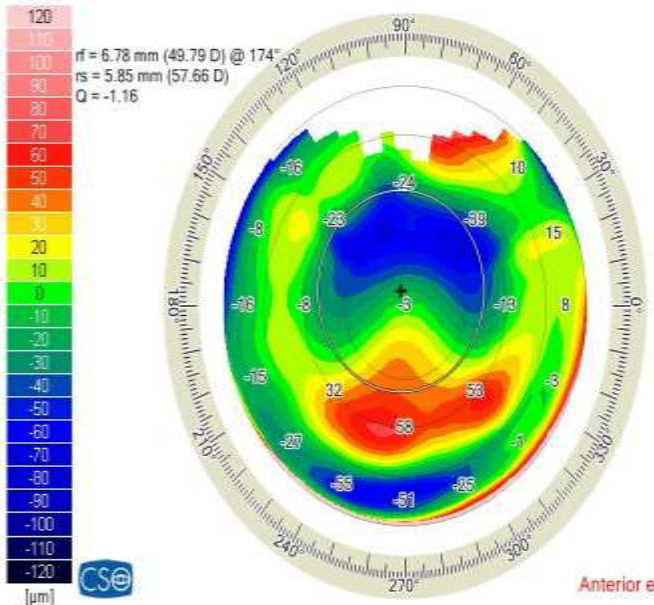


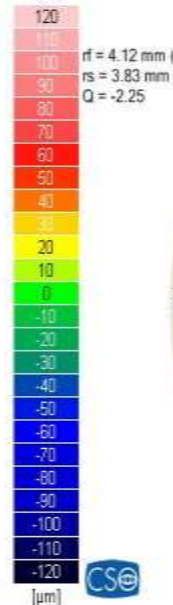
OD



OD



OD



OD

Mohamed Hassan, Kamal - OD

Birthdate: 01/10/1998  
 Identification code: 81521  
 Exam date and time: 31/08/2015 2:13 AM  
 Acquisition date: 31/08/2015 02:14:18 [1-2]

**Acquisition quality**

**Summary Indices**

Horizontal Visible Iris Diameter  
 HVID = 11.69 mm

+ Pupil (Topographic)  
 x = -0.11 mm, y = 0.31 mm  
 Ø = 4.13 mm

⊕ Thinnest location  
 x = -0.12 mm, y = -0.59 mm  
 Thk = 357 µm

⊙ Apex  
 x = 2.03 mm, y = -1.93 mm  
 Thk = 609 µm    Curv = 78.36 D

Anterior chamber  
 CCT + AD ± 0.385 + 3.64 = 4.03 mm  
 Volume = 165 mm³  
 Iridocorneal angle = 47°  
 HACD = 12.22 mm

Corneal volume (Ø = 10 mm)  
 Volume = 53.8 mm³

**K readings (Front)**

Sim-K

n0 = 1, n1 = 1.3375

Sim-K

K1 = 46.66 D @ 162°  
 K2 = 52.78 D @ 72°  
 Avg = 49.53 D  
 Cyl = -6.12 D Ax 162°

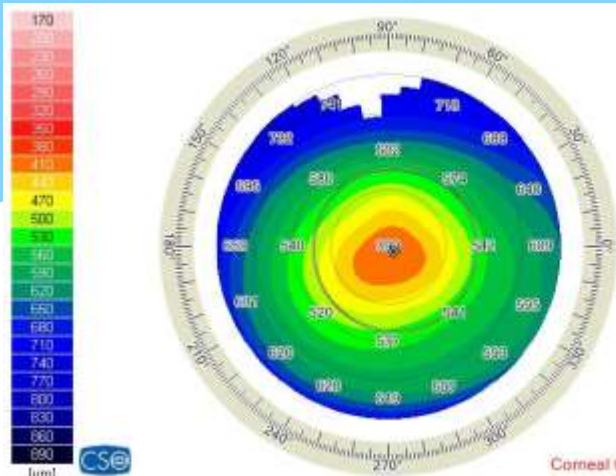
# Rings in advanced cases



# Aim:

- To delay corneal grafting.
- To make the eye refractable.
- To decrease coma aberrations.

**N.B:** Keratoplasty is still an option



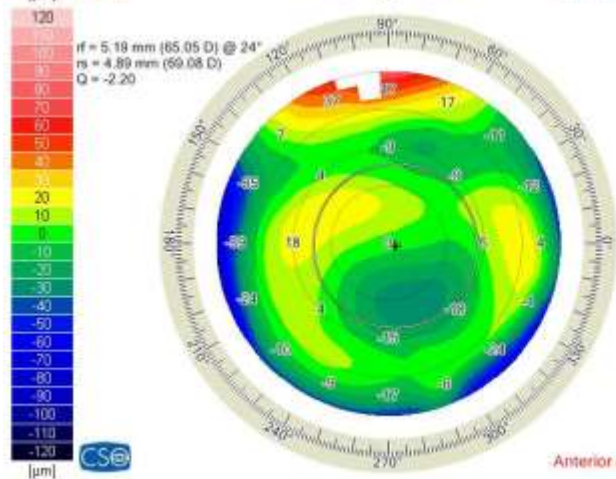
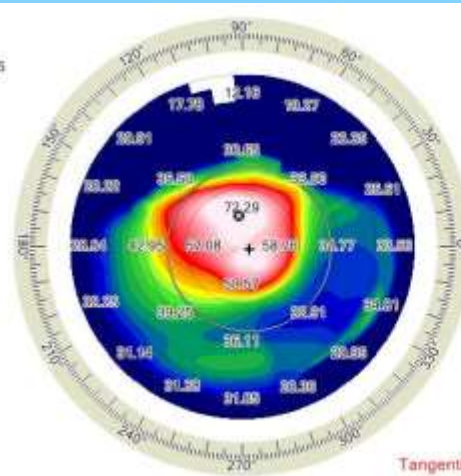
Corneal thickness

OD



Tangential anterior

OD



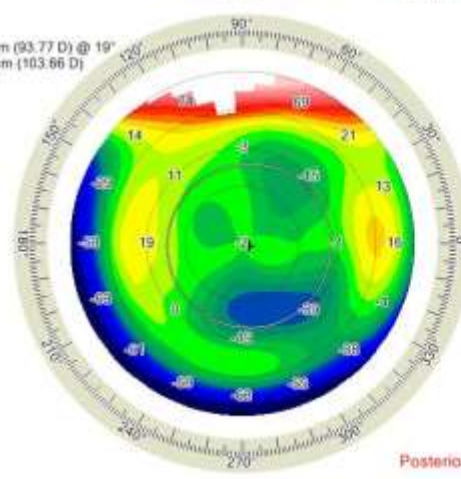
Anterior elevation

OD



Posterior elevation

OD



**Mohammed, Sayed Ahmed - OD**  
 Birthdate: 08/12/1993  
 Identification code: 815134  
 Exam date and time: 08/08/2015 5:03 AM  
 Acquisition date: 08/08/2015 05:05:53 [1-2]

**Acquisition quality**

**Summary Indices**

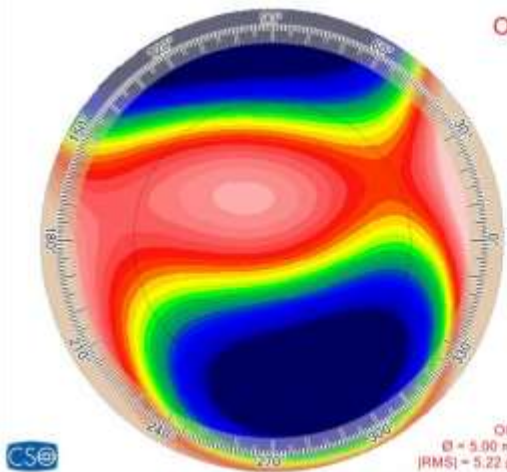
Horizontal Visible Iris Diameter  
 HVID = 12.51 mm  
 + Pupil (Topographic)  
 x = 0.16 mm, y = -0.06 mm  
 Ø = 4.29 mm  
 ♦ Thinnest location  
 x = 0.14 mm, y = -0.14 mm  
 Thk = 395 µm  
 ◊ Apex  
 x = -0.08 mm, y = 0.80 mm  
 Thk = 444 µm Carrv = 73.07 D  
 Anterior chamber  
 CCT - AD = 0.399 + 4.19 = 4.59 mm  
 Volume = 231 mm³  
 Indocorneal angle = 54°  
 HACD = 12.60 mm  
 Corneal volume (Ø = 10 mm)  
 Volume = 58.0 mm³

**K readings (Front)**

Sim-K

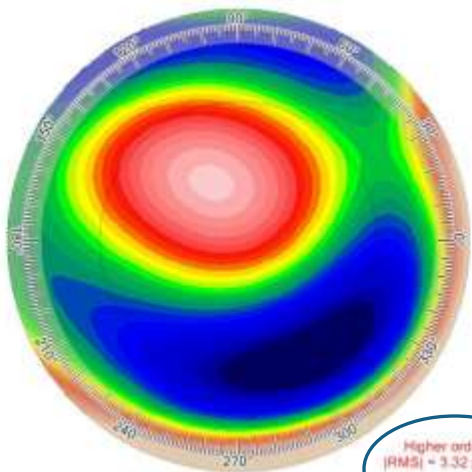
n0 = 1, n1 = 1.3375  
 Sim-K  
 K1 = 57.17 D @ 19°  
 K2 = 62.13 D @ 109°  
 Avg = 59.55 D  
 Cyl = -4.96 D Ax 19°

Anterior  
 D = 7 mm • Ø = 8 mm • Ø = 3 mm •



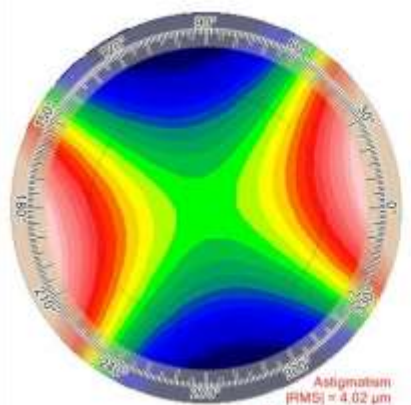
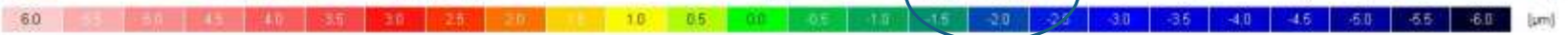
OD

OPD  
 Ø = 5.00 mm  
 [RMS] = 5.22 μm

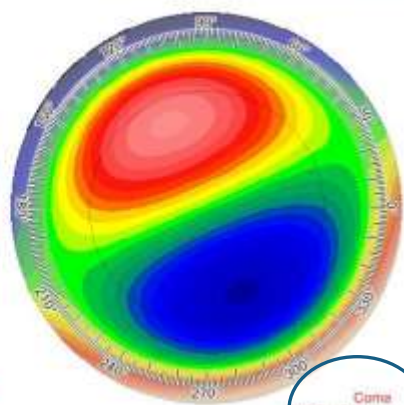


Higher orders  
 [RMS] = 3.32 μm

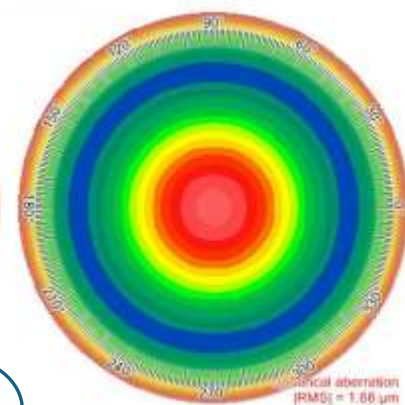
Z <sup>2</sup> Astigmatism	4.02 μm @ 11°	
Z <sup>2</sup> Trifoil	0.64 μm @ 22°	
Z <sup>2</sup> Coma	2.75 μm @ 294°	
Z <sup>2</sup> Quadrifoil	0.17 μm @ 11°	
Z <sup>2</sup> Astigmatism II	0.27 μm @ 87°	
Z <sup>2</sup> Spherical ab.	1.66 μm	
Z <sup>2</sup> Pentafol	0.20 μm @ 17°	
Z <sup>2</sup> Trifoil II	0.18 μm @ 84°	
Z <sup>2</sup> Coma II	0.25 μm @ 51°	
Z <sup>2</sup> Esafol	0.14 μm @ 33°	
Z <sup>2</sup> Quadrifoil II	0.12 μm @ 11°	
Z <sup>2</sup> Astigmatism III	0.09 μm @ 114°	
Z <sup>2</sup> Spherical ab. II	0.10 μm	
Z <sup>2</sup> Eptafol	0.05 μm @ 30°	
Z <sup>2</sup> Pentafol II	0.02 μm @ 68°	
Z <sup>2</sup> Trifoil III	0.05 μm @ 71°	
Z <sup>2</sup> Coma III	0.15 μm @ 125°	



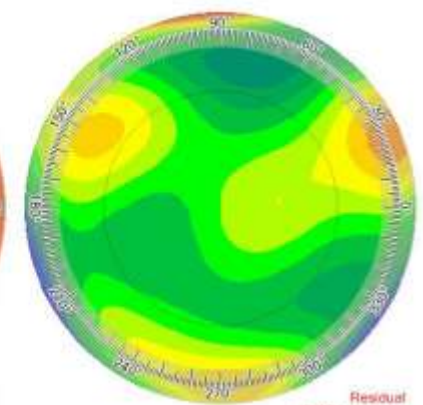
Astigmatism  
 [RMS] = 4.02 μm  
 Cyl = -6.31 D Ax 11°



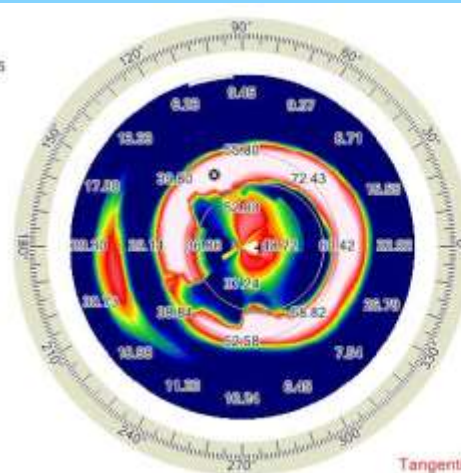
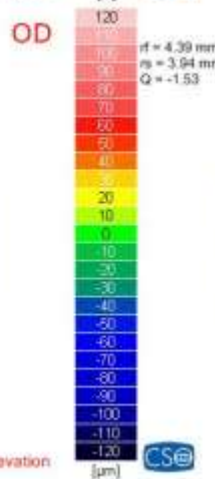
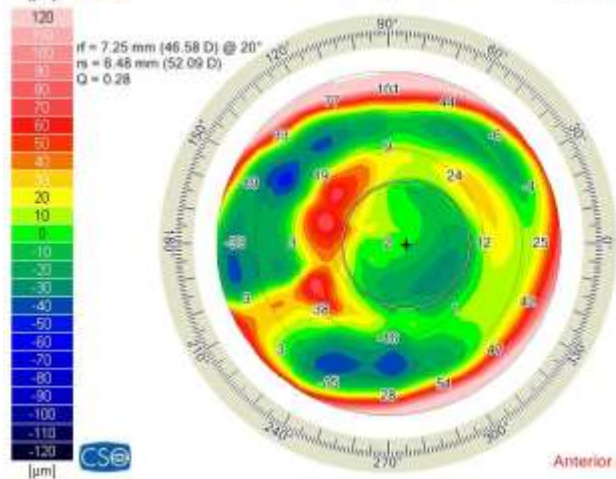
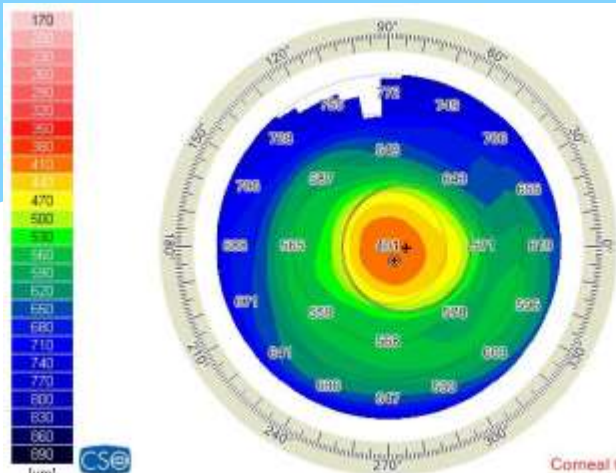
Coma  
 [RMS] = 2.75 μm



Spherical aberration  
 [RMS] = 1.66 μm  
 LSA = -14.27 D



Residual  
 [RMS] = 0.95 μm



**Mohammed, Sayed Ahmed - OD**

Birthdate: 08/12/1993  
 Identification code: 815134  
 Exam date and time: 10/10/2015 4:09 AM  
 Acquisition date: 10/10/2015 04:10:35 [1-3]

**Acquisition quality**

Scheimpflug images

Coverage: 99%  
 Not edited: 100%

Keratometry

Centration: 91%  
 Coverage: 38%

**Summary indices**

Horizontal Visible Iris Diameter  
 HVID = 12.51 mm

+ Pupil (Topographic)  
 $x = 0.46 \text{ mm, } y = -0.03 \text{ mm}$   
 $D = 3.34 \text{ mm}$

⊕ Thinnest location  
 $x = 0.16 \text{ mm, } y = -0.37 \text{ mm}$   
 Thk = 397 μm

⊙ Apex  
 $x = -0.72 \text{ mm, } y = 1.87 \text{ mm}$   
 Thk = 594 μm    Curv = 79.73 D

Anterior chamber  
 CCT = AD = 0.401 + 4.13 = 4.53 mm  
 Volume = 230 mm<sup>3</sup>  
 Iridocorneal angle = 55°  
 HACD = 12.68 mm  
 Corneal volume (Ø = 10 mm)  
 Volume = 58.9 mm<sup>3</sup>

**Kreadings (Front)**

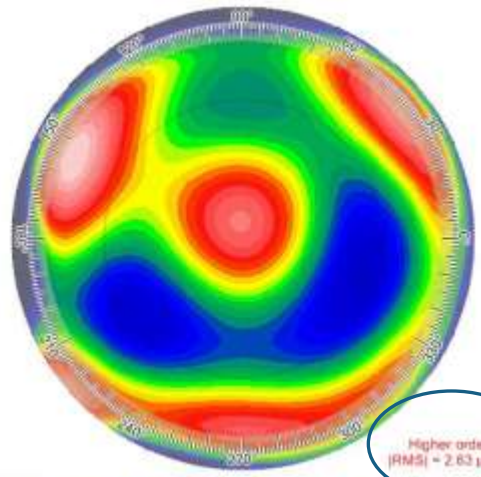
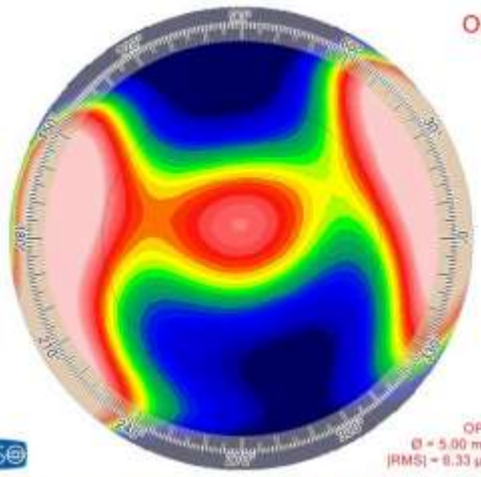
Sim-K

$n_0 = 1, n_1 = 1.3375$

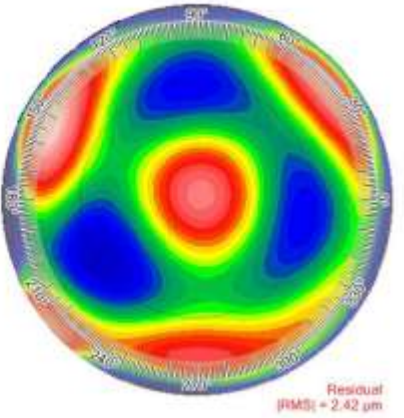
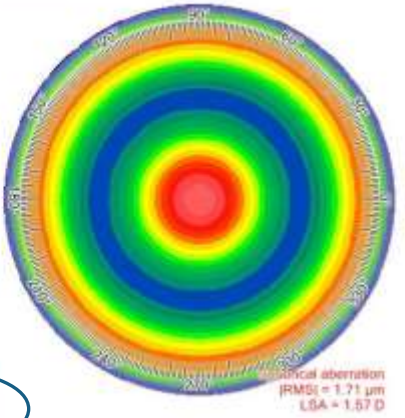
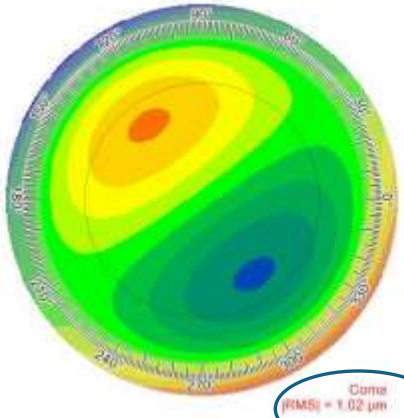
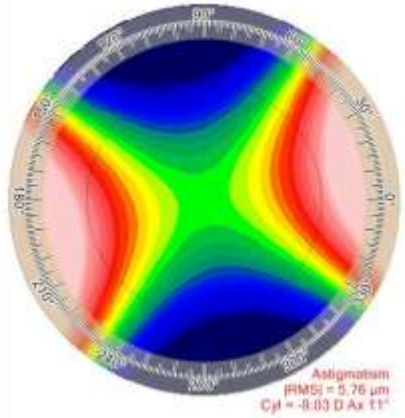
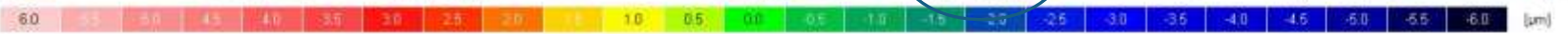
Sim-K

K1 = 42.81 D @ 33°  
 K2 = 46.58 D @ 123°  
 Avg = 44.61 D  
 Cyl = -3.77 D Ax 33°

Antenna  
 • Ø = 7 mm • Ø = 8 mm • Ø = 5 mm • Ø = 3 mm



Z <sup>2</sup> Astigmatism	5.76 μm @ 11°	
Z <sup>2</sup> Trifoli	0.94 μm @ 32°	
Z <sup>2</sup> Coma	1.02 μm @ 306°	
Z <sup>2</sup> Quadrifoli	0.78 μm @ 47°	
Z <sup>2</sup> Astigmatism II	0.46 μm @ 37°	
Z <sup>1</sup> Spherical ab.	-0.18 μm	
Z <sup>4</sup> Pentafoli	0.37 μm @ 7°	
Z <sup>2</sup> Trifoli II	0.82 μm @ 96°	
Z <sup>2</sup> Coma II	0.13 μm @ 35°	
Z <sup>2</sup> Esafoli	0.34 μm @ 39°	
Z <sup>2</sup> Quadrifoli II	0.35 μm @ 32°	
Z <sup>2</sup> Astigmatism III	0.13 μm @ 69°	
Z <sup>1</sup> Spherical ab. II	-1.70 μm	
Z <sup>1</sup> Eptafoli	0.22 μm @ 8°	
Z <sup>2</sup> Pentafoli II	0.23 μm @ 48°	
Z <sup>2</sup> Trifoli III	0.09 μm @ 47°	
Z <sup>2</sup> Coma III	0.15 μm @ 233°	



*Thank you*

