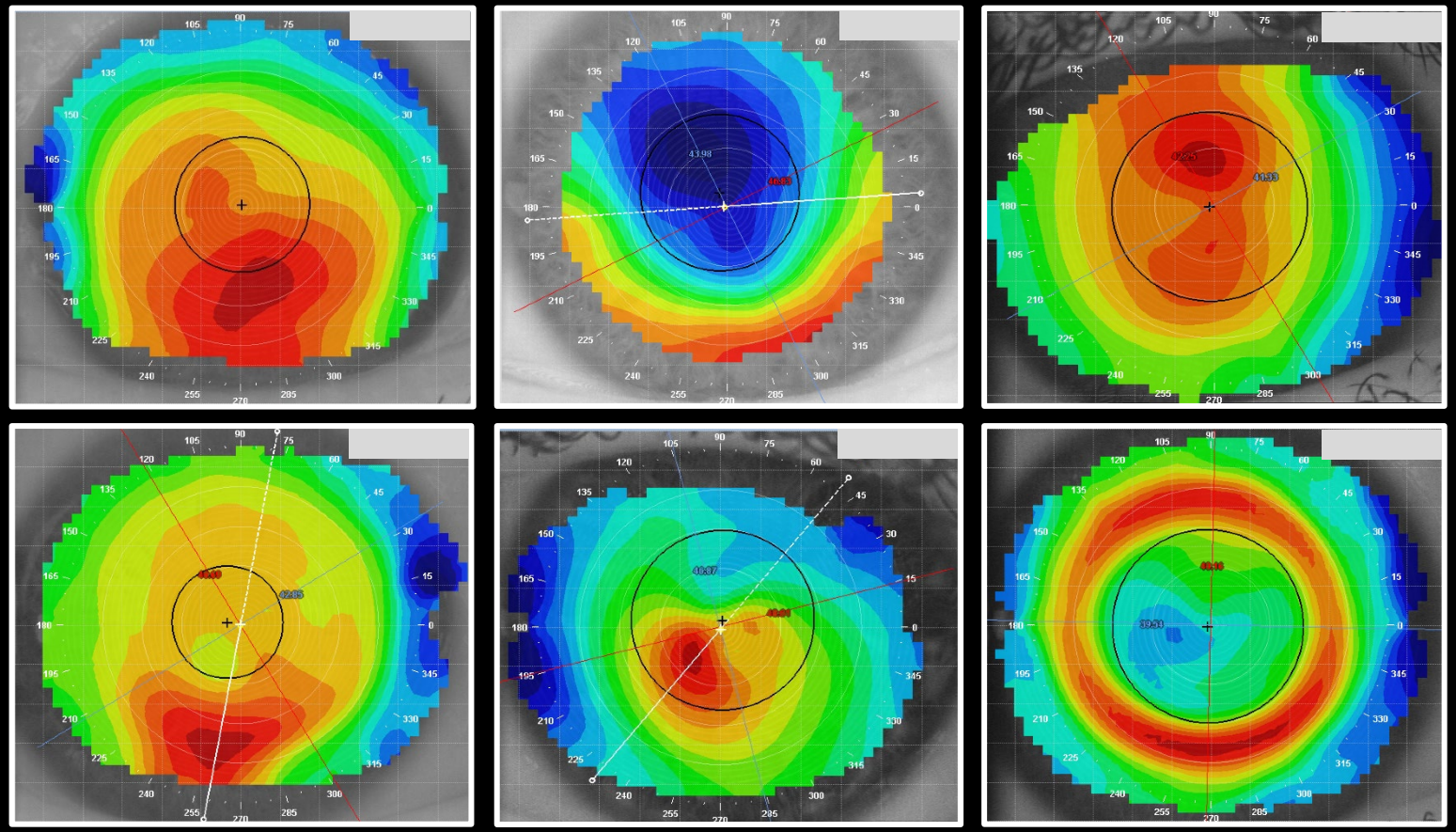
Benefits of Topography



Dr. Stephanie Woo
OD, FAAO, FSLS

Randy Kojima
FAAO, FBCLA, FSLS, FIAO

Financial disclosures

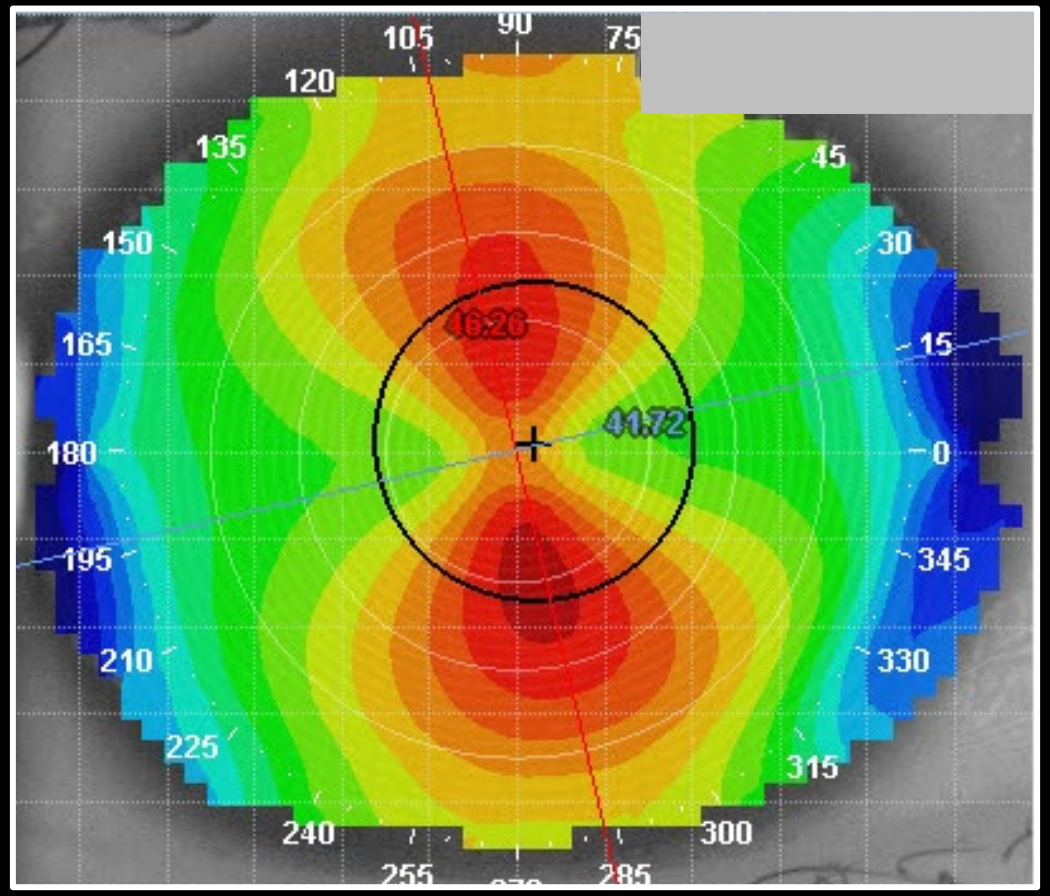
Randy Kojima

- Precision technology – employee
- KATT design group – Consulting
- Medmont instruments – researcher and speaker

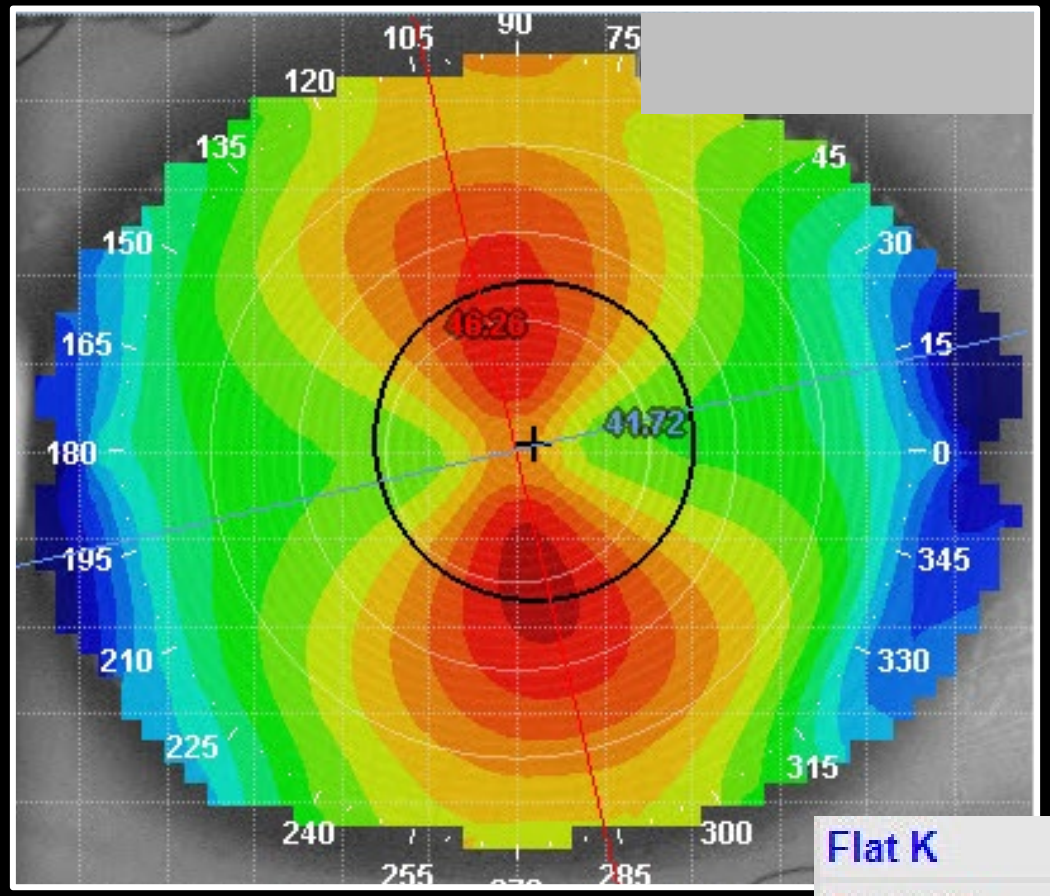
Financial Disclosures for Dr. Woo

- Alcon
- Art Optical
- Bausch and Lomb
- Blanchard Contact Lenses
- Essilor Contacts
- X-cel Contacts
- Specialeyes
- Biotissue
- Katena
- Visionary optics
- Shire
- GPLI
- STAPLE program
- Scleral Lens Education Society
- Contamac
- Synergeyes
- Triad ophthalmics
- Ophthalogix
- ABB
- Ovitz
- Tarsus
- Woo University
- Kala
- Avellino

When you look at a topography what do you see?

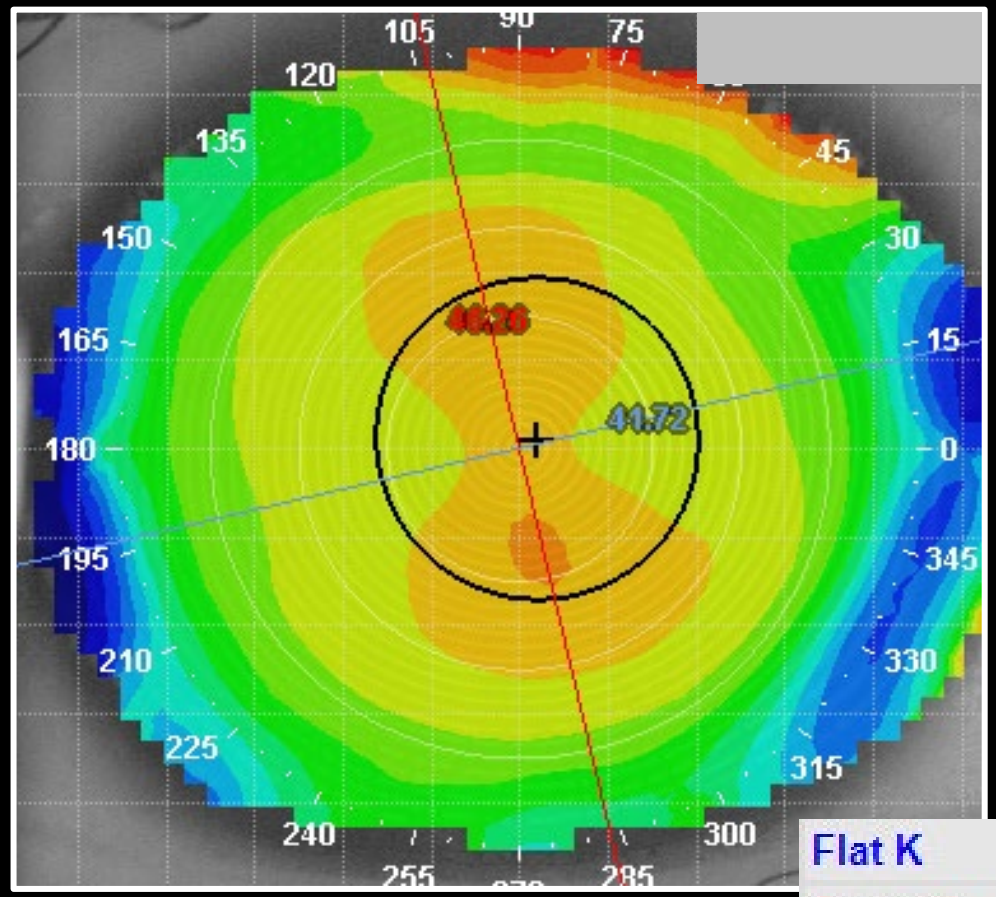


Axial Interpretation
aka: Power, Sagittal



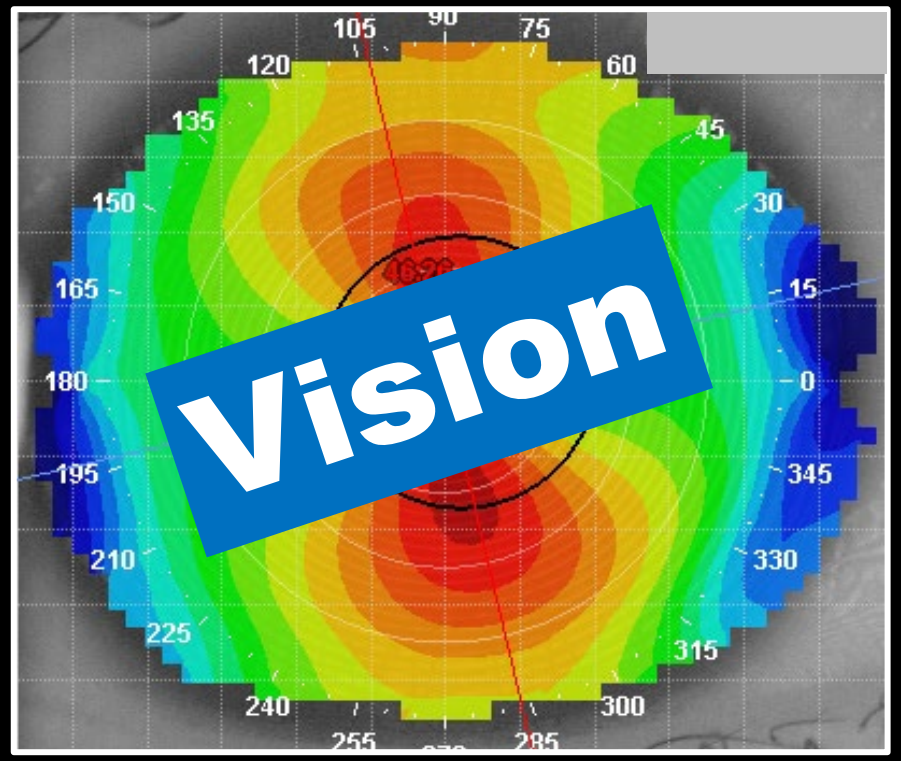
Flat K	41.72 D @ 13 °
Steep K	46.26 D @ 103 °
ΔK	4.54 D

Tangential Interpretation
aka: Instantaneous, True



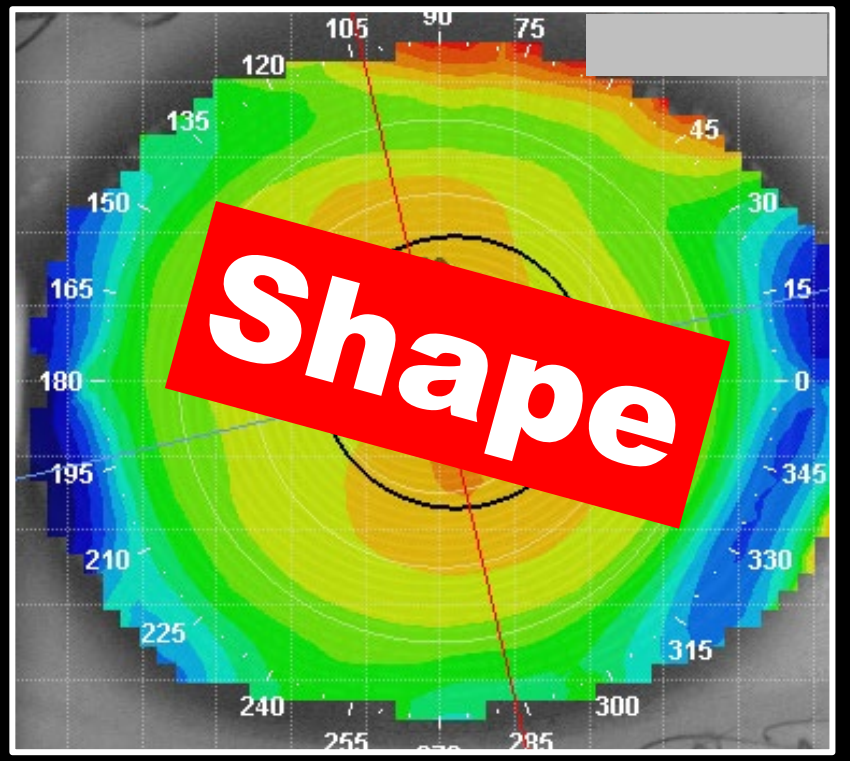
Flat K	41.72 D @ 13 °
Steep K	46.26 D @ 103 °
ΔK	4.54 D

What's the highest point on this cornea?



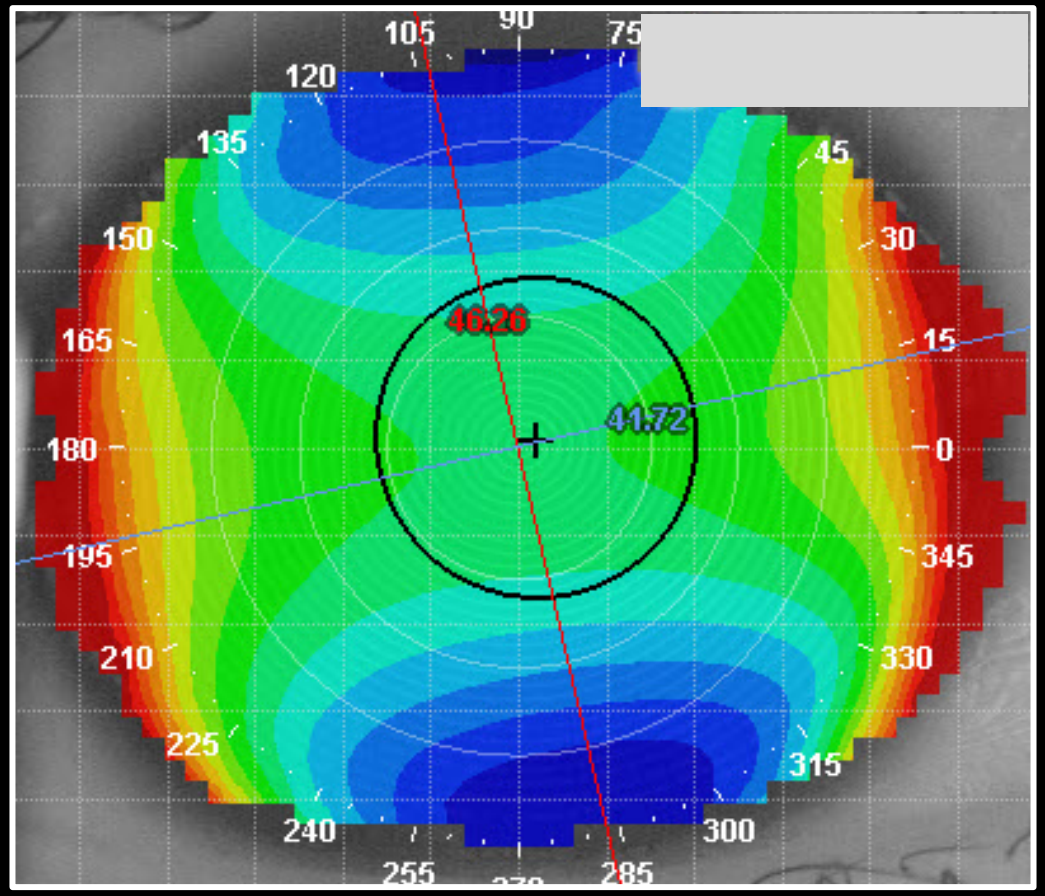
Axial Map

Flat K	41.72 D @ 13 °
Steep K	46.26 D @ 103 °
ΔK	4.54 D

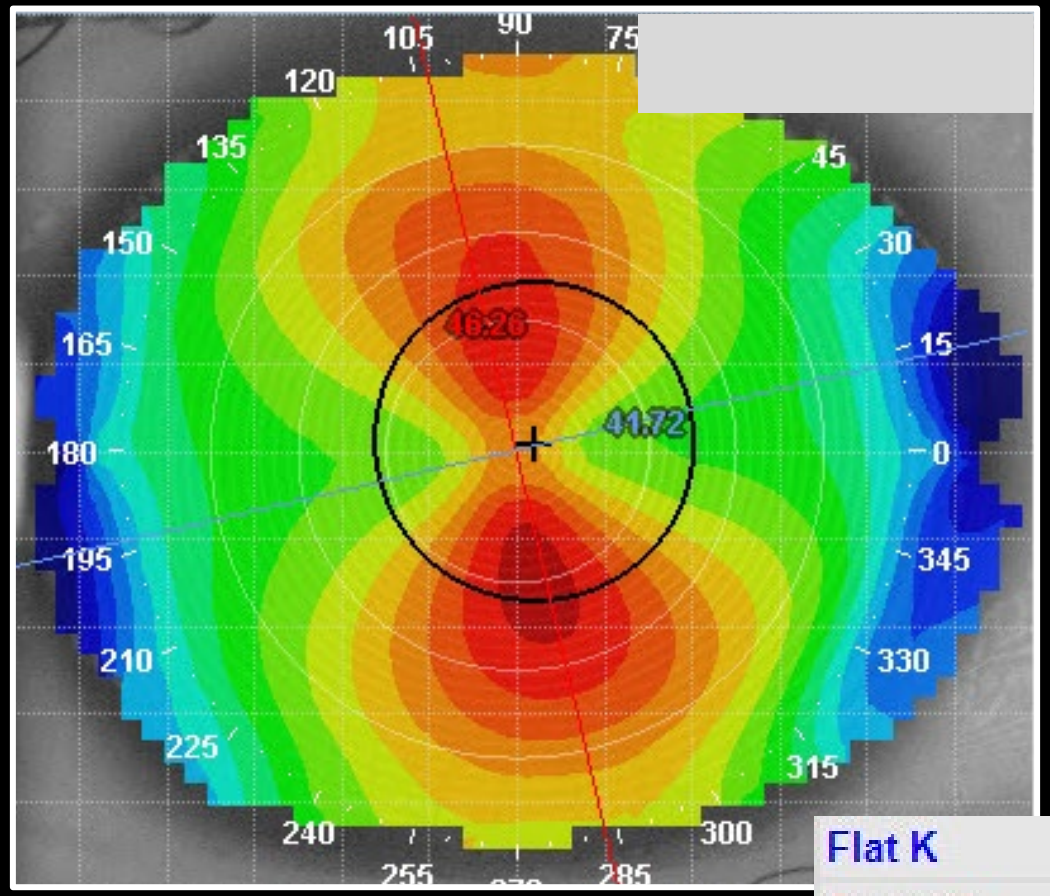


Tangential Map

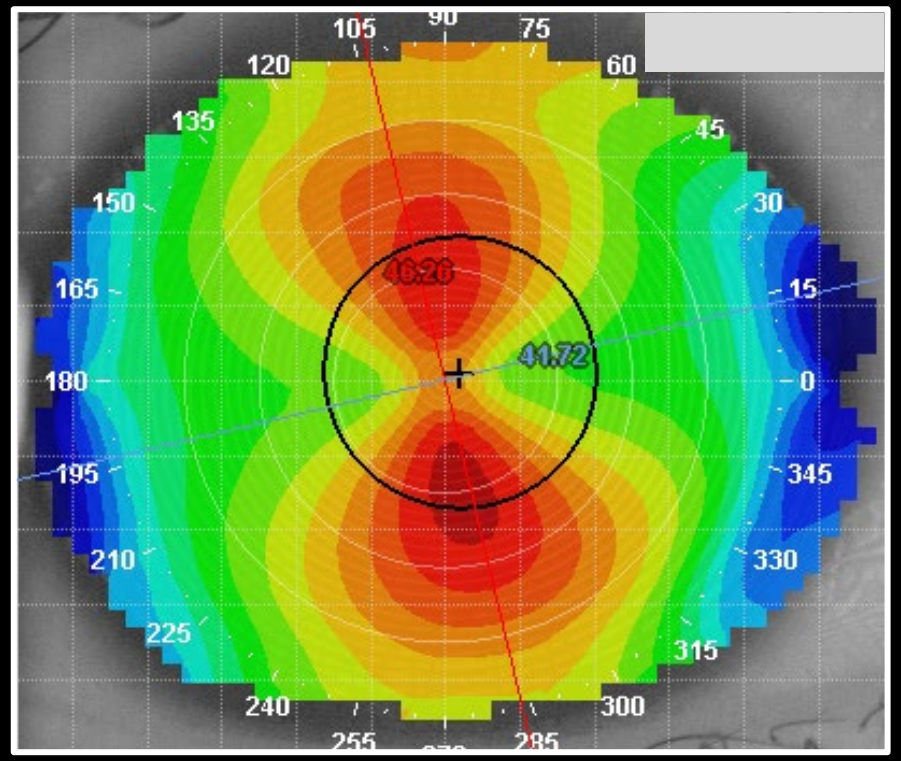
Elevation:
Height



What's the highest point on this cornea?

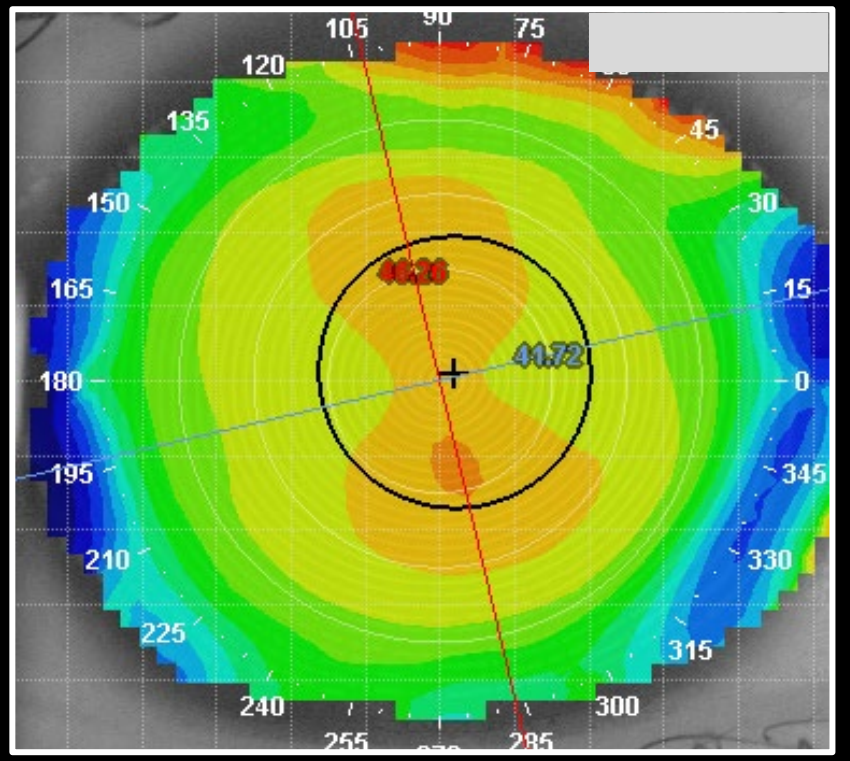


What's the highest point on this cornea?



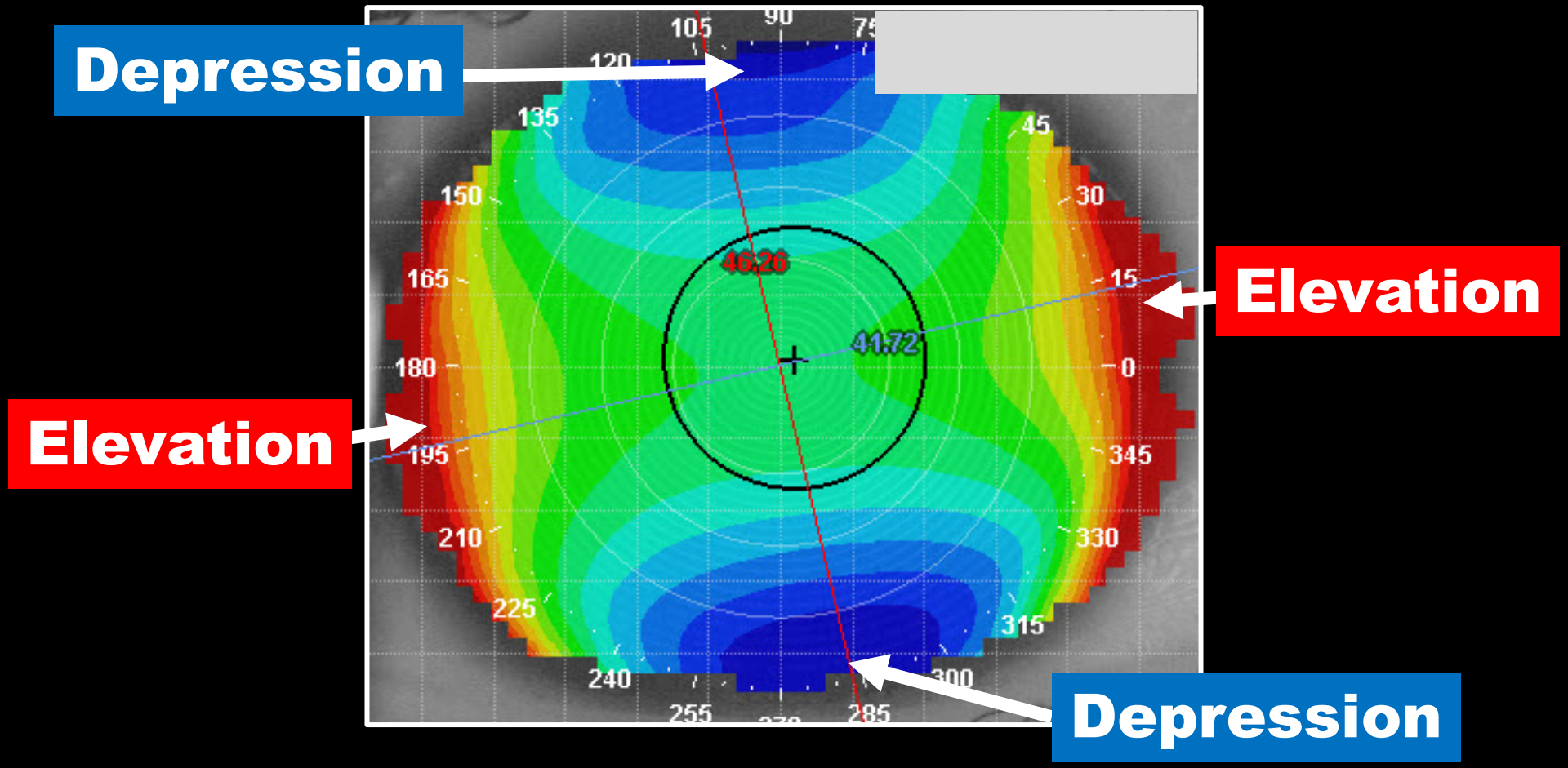
Axial Map

Flat K	41.72 D @ 13 °
Steep K	46.26 D @ 103 °
ΔK	4.54 D

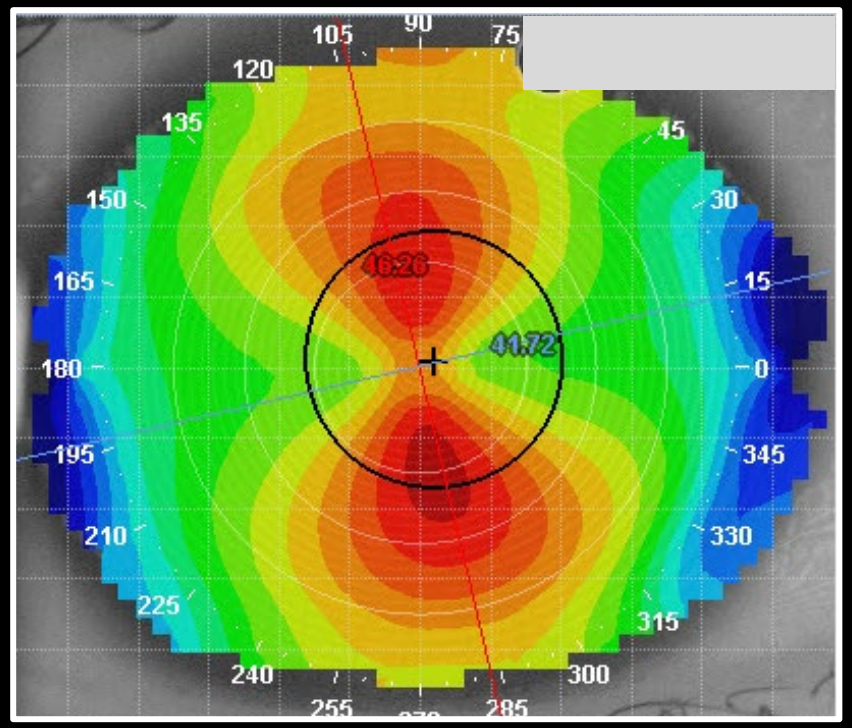


Tangential Map

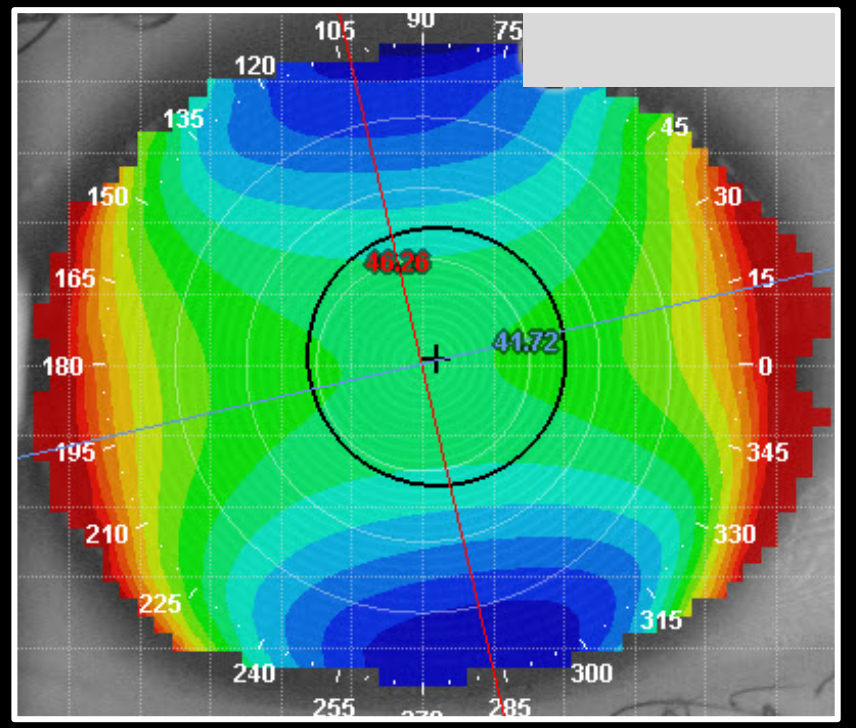
Elevation Map



What's the highest point on this cornea?

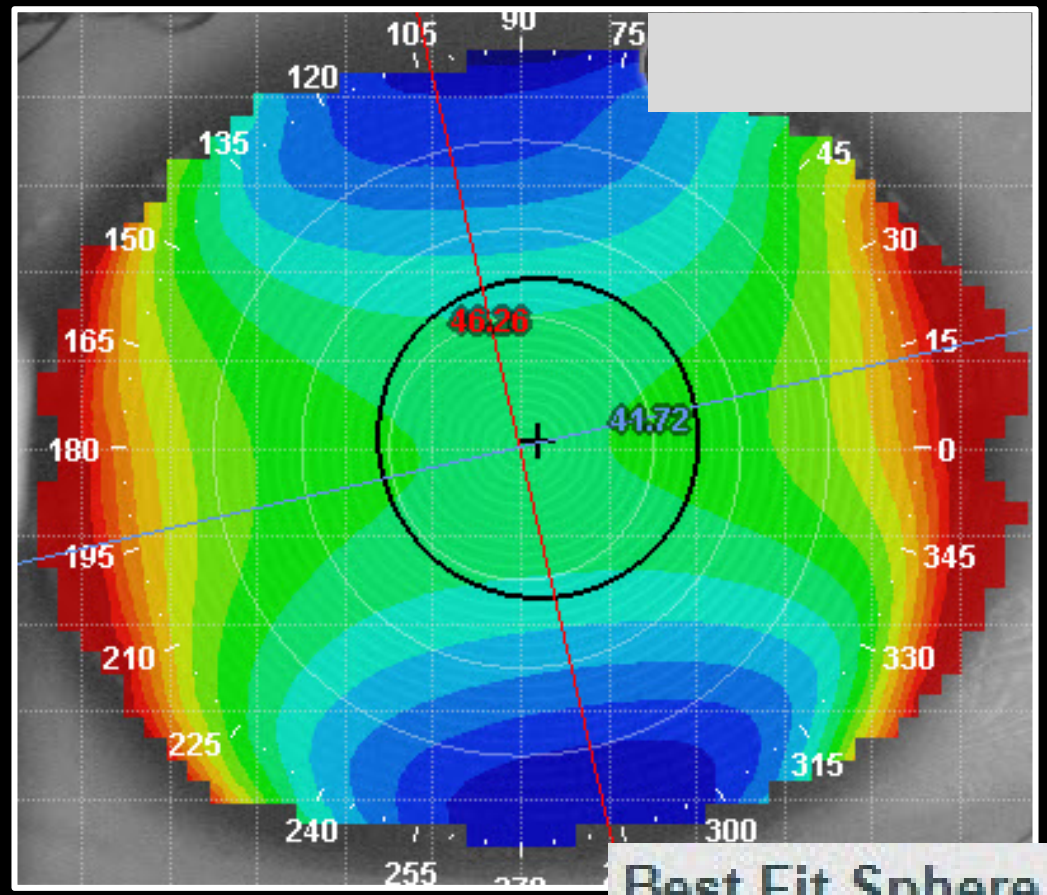


Axial Map



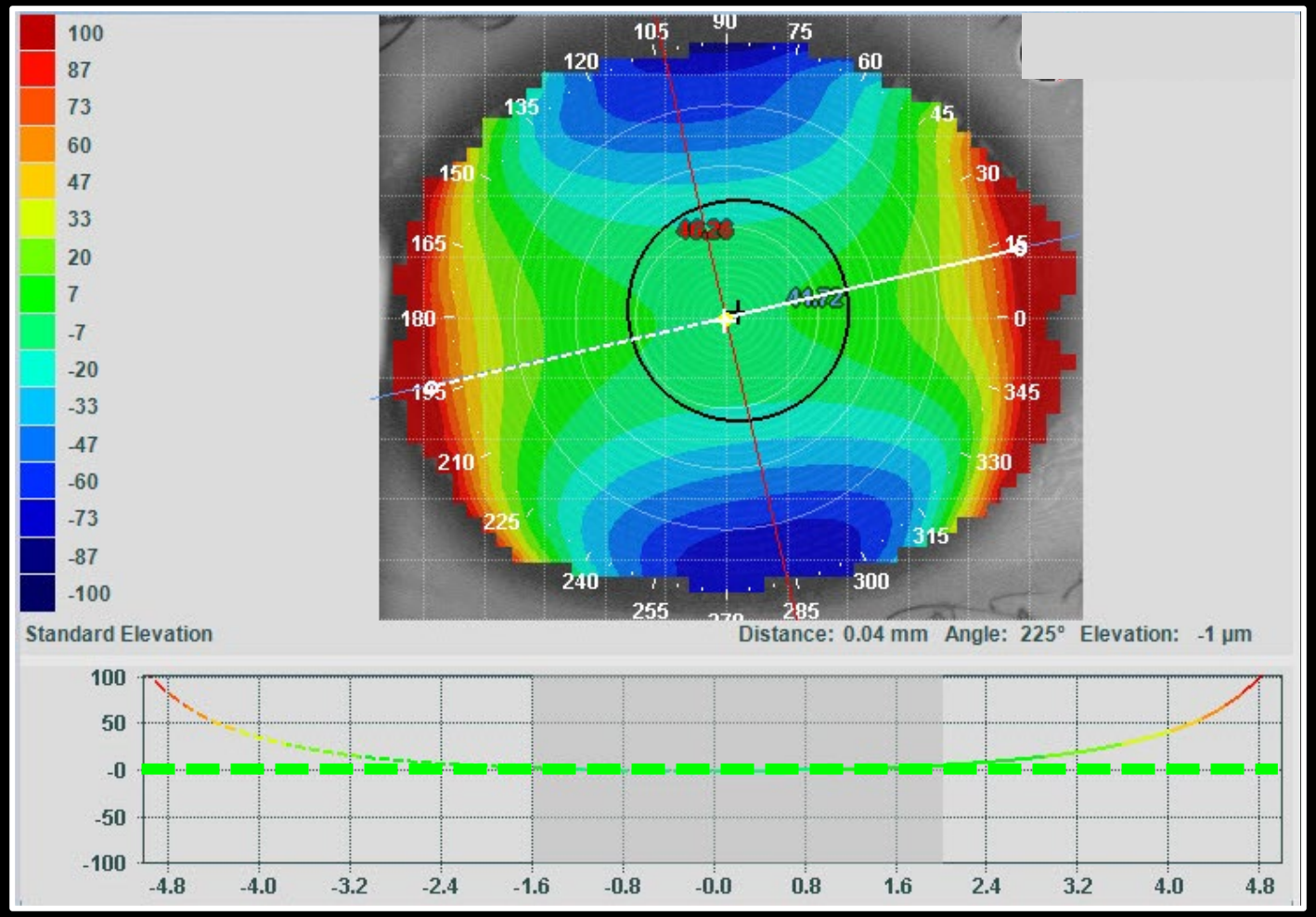
Elevation Map

Elevation:
Reference to the “Best Fit Sphere”

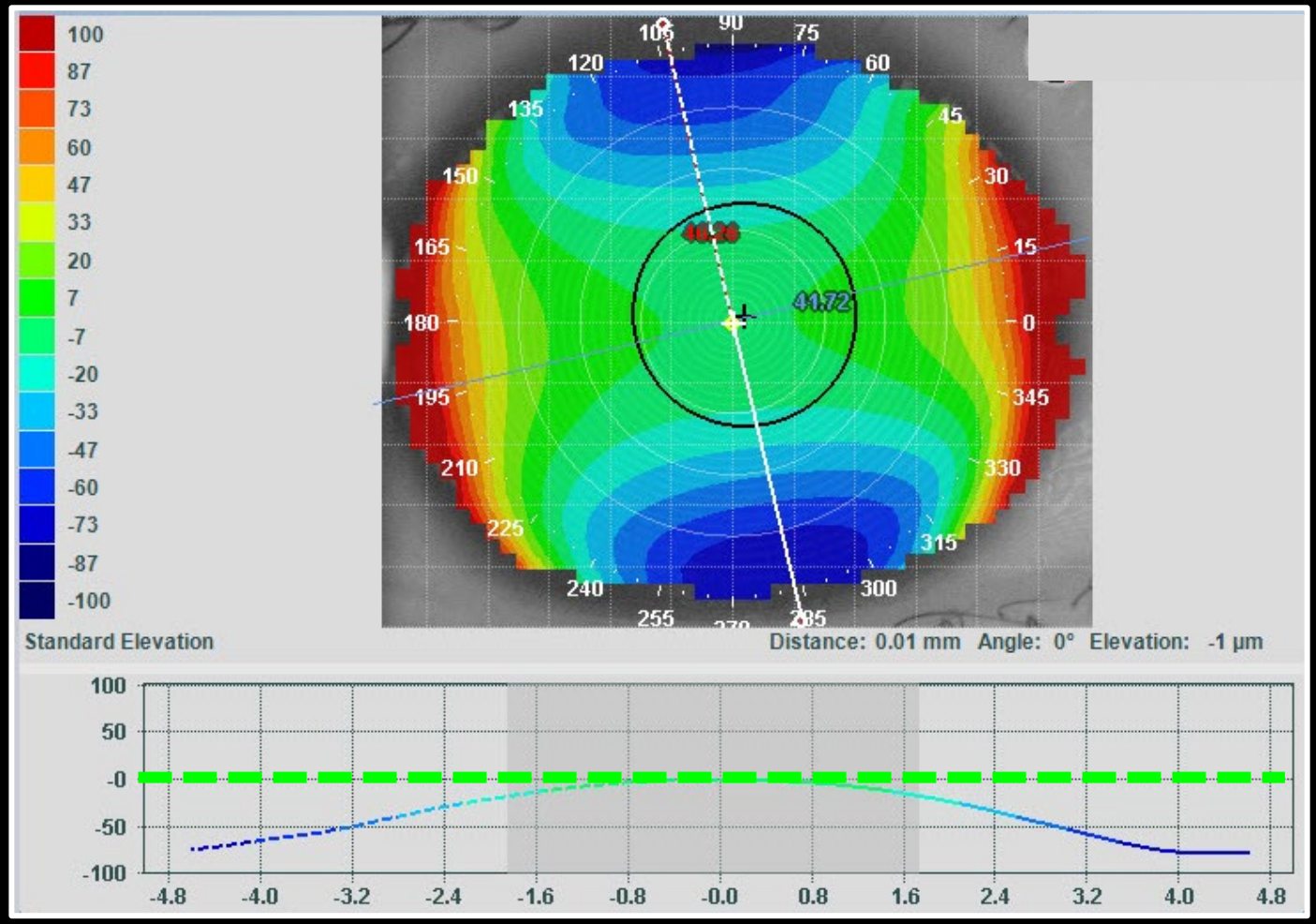


Best Fit Sphere	7.9 mm
Fitting Sphere	7.9 mm

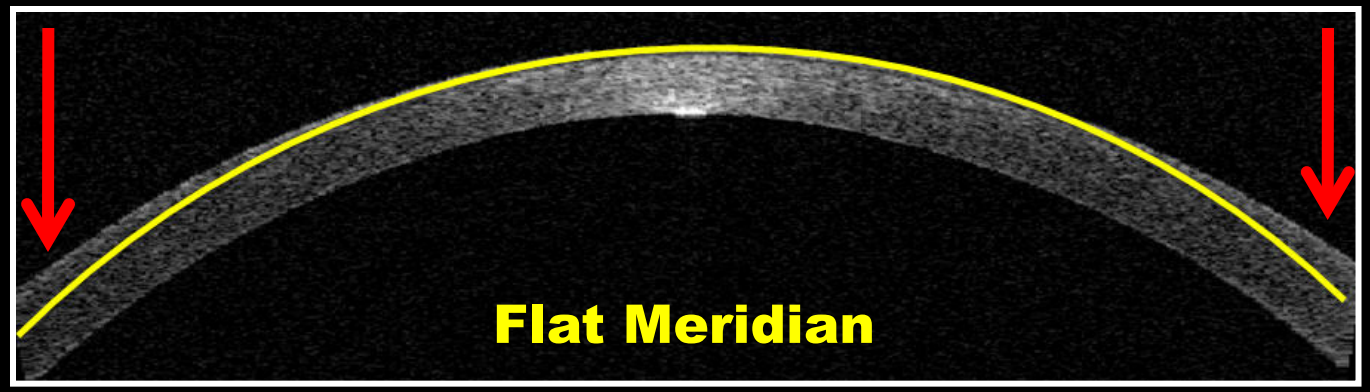
Elevation:
Flat Meridian

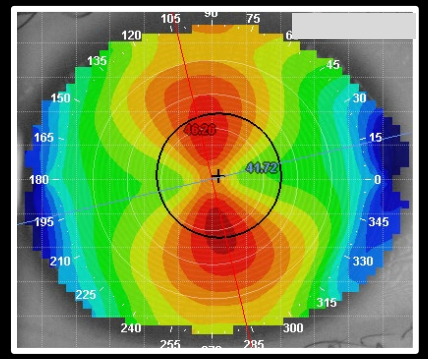


Elevation:
Steep Meridian



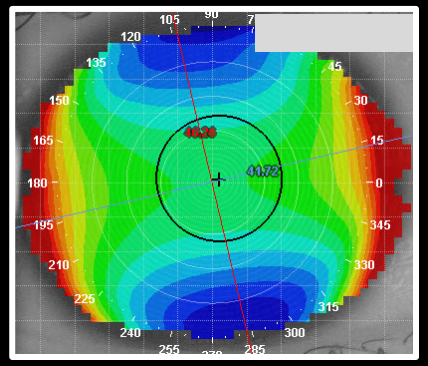
Corneal Elevation Above or Below the Spherical Surface



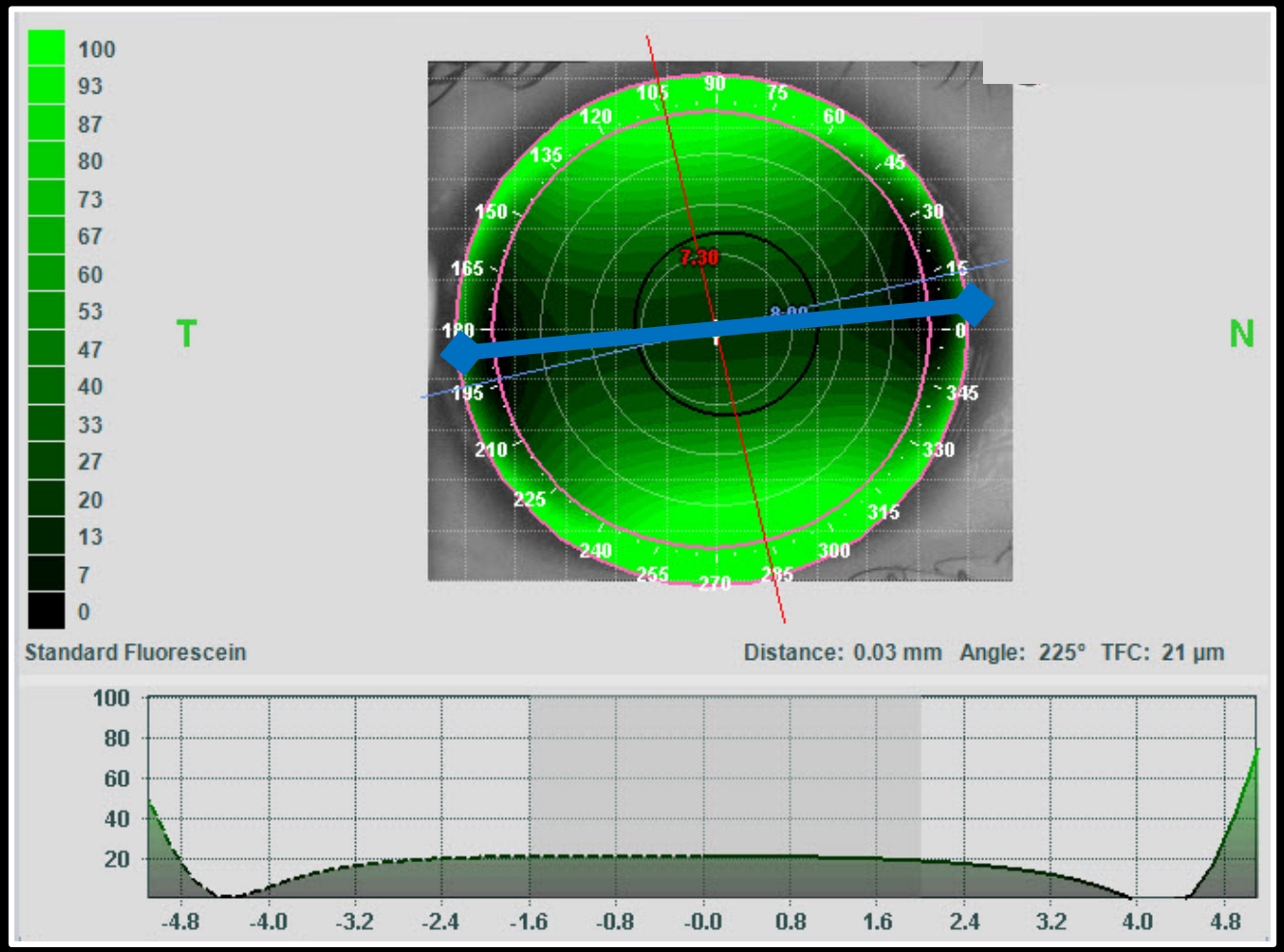


Axial

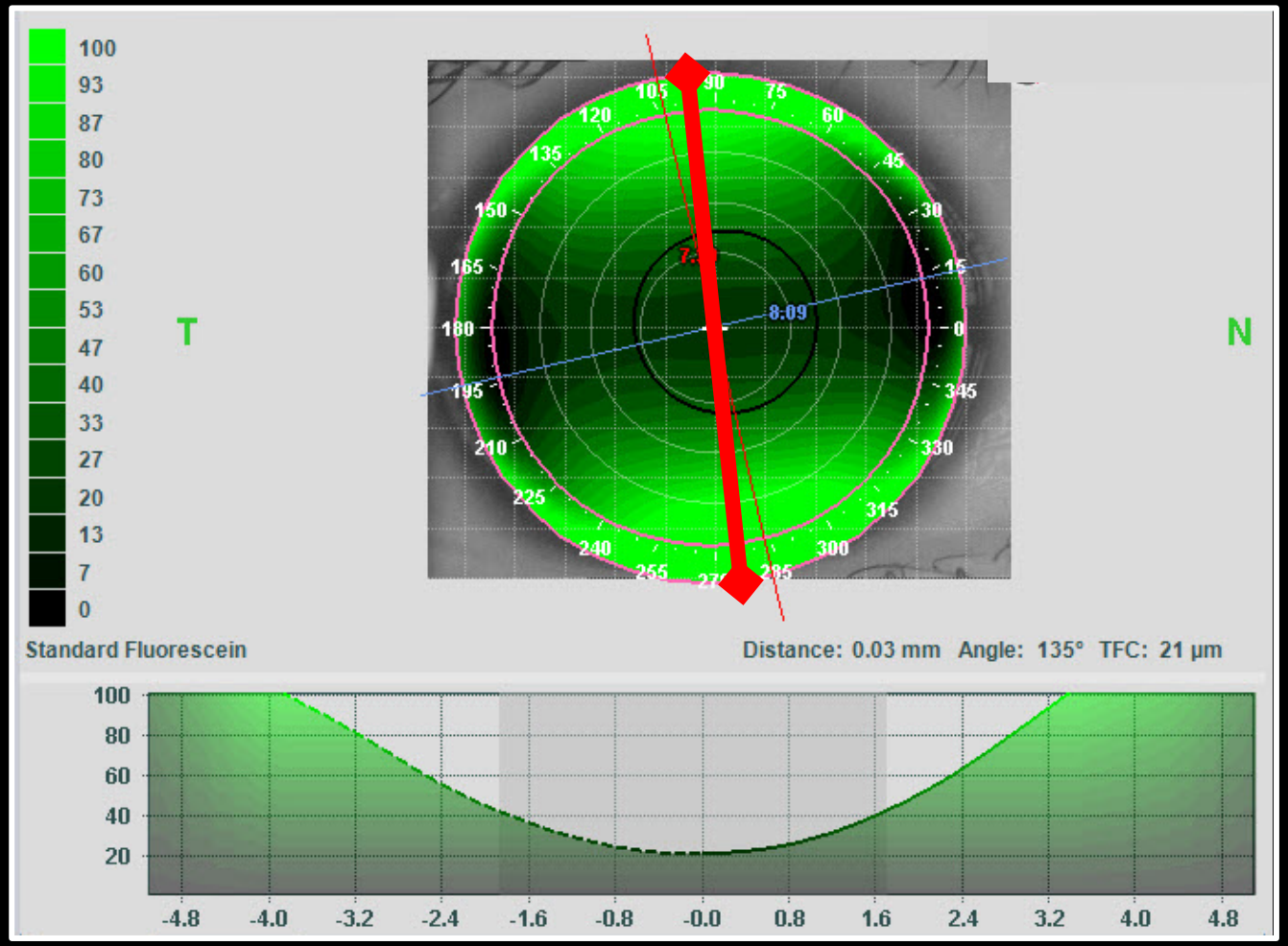
Elevation



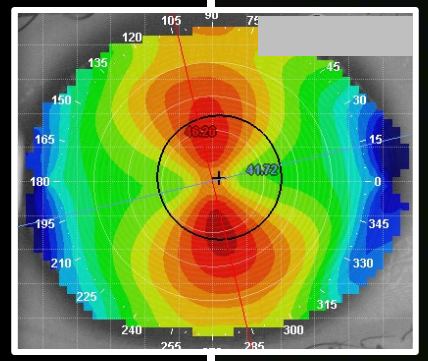
Contact Lens Software:
Flat Meridian



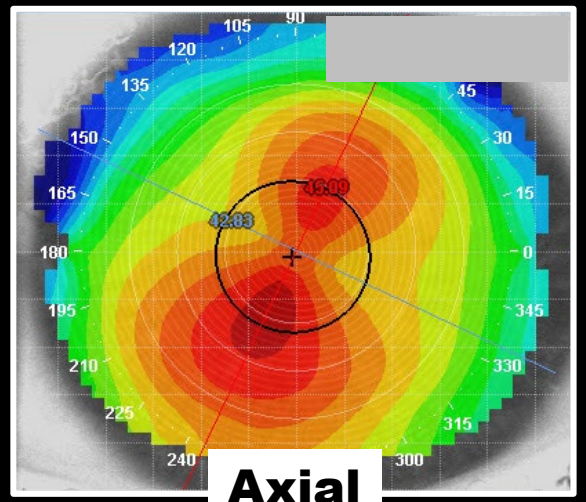
Contact Lens Software:
Steep Meridian

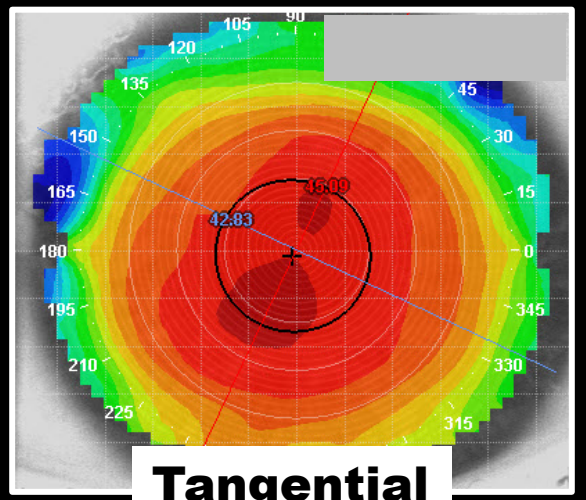


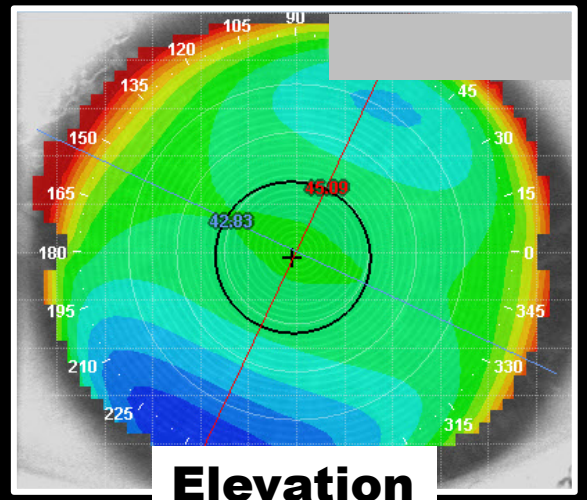
9.5mm Diameter Sphere

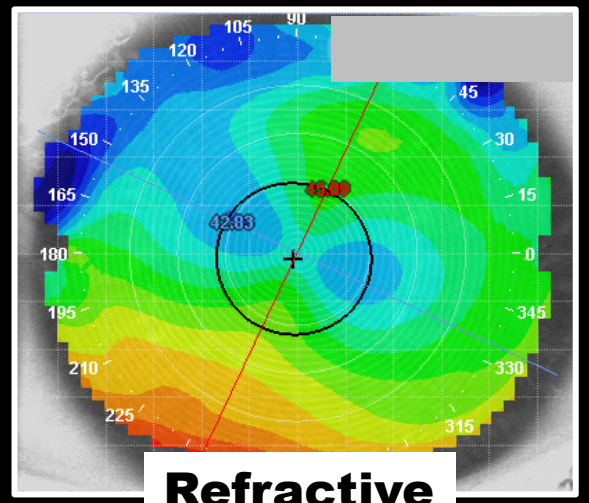


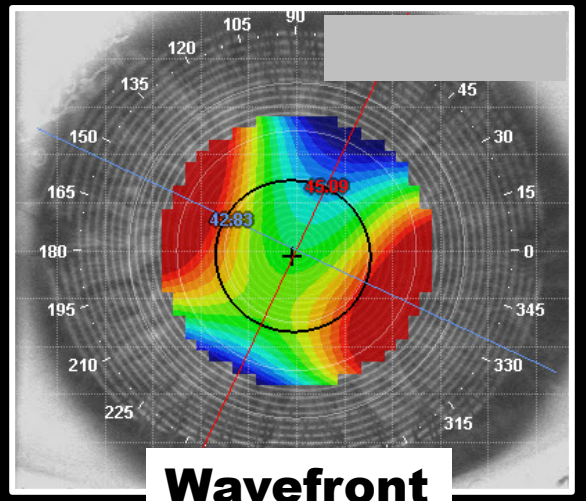
What analysis option do you use and when?

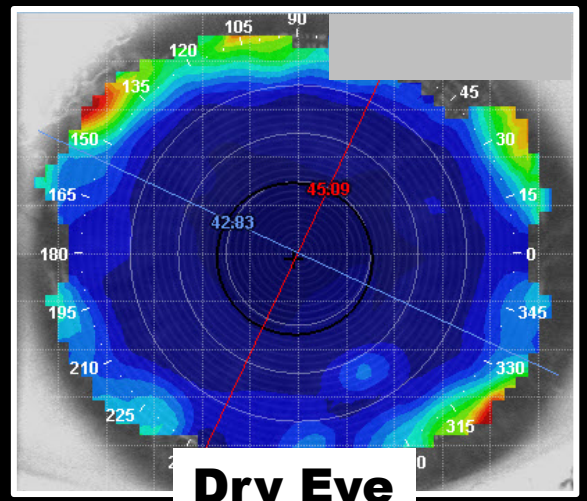






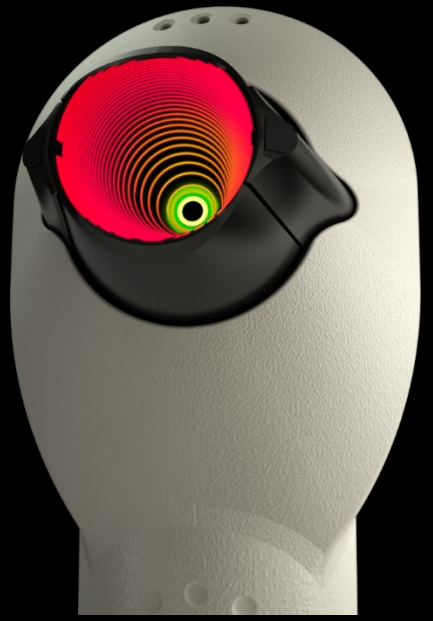


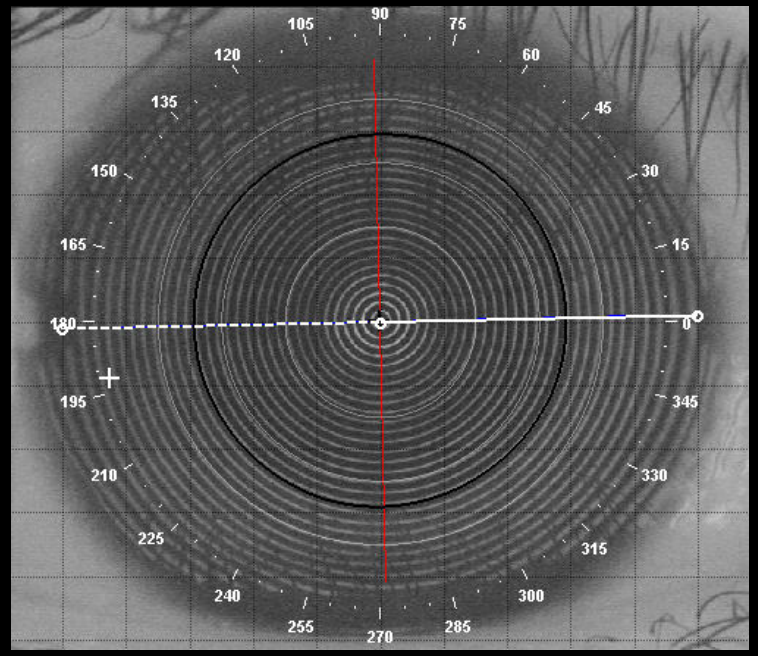




Reflection Systems

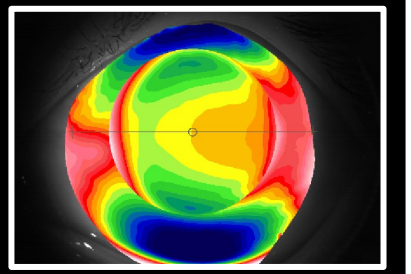
- Pros
  - Contact lens oriented
  - Dry eye analysis
- Cons
  - Poor tear film
  - Ocular surface issues



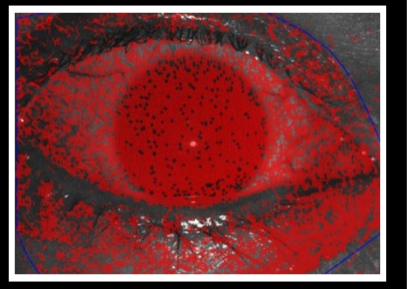


Profilometry Topography

- Pros
  - Provides corneal and scleral topography
  - Scleral astigmatism/ asymmetry

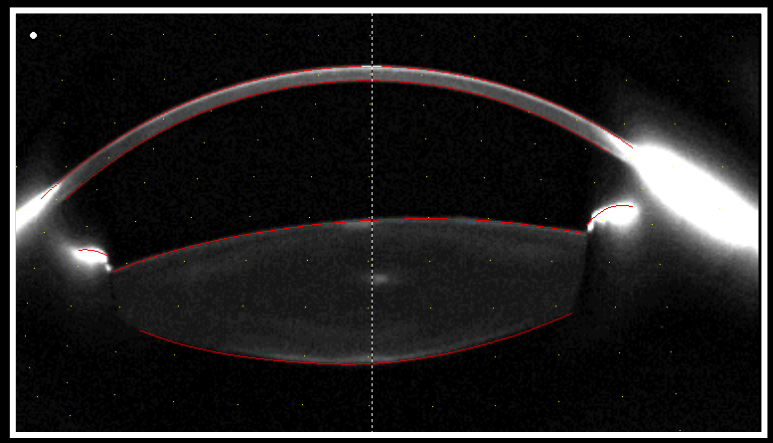


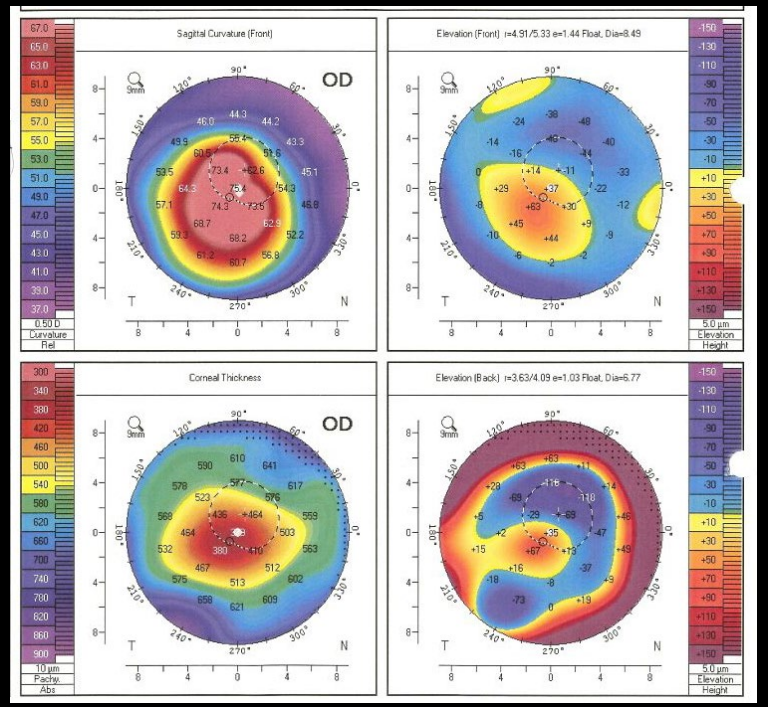
- Cons
  - Fluorescein
  - Analysis



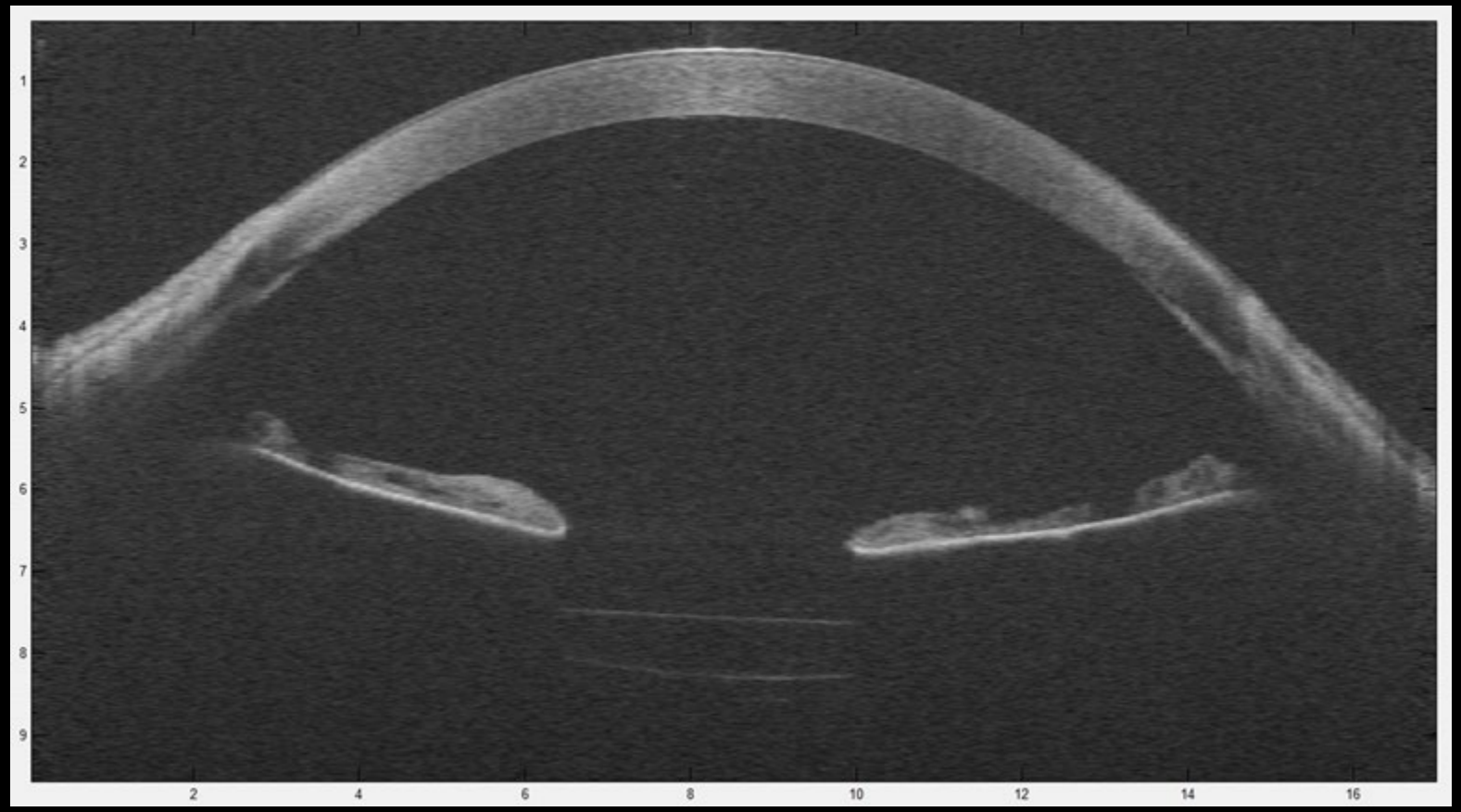
Scheimpflug Systems

- **Pros**
  - **Anterior and Posterior cornea**
  - **Disease analysis**
- **Cons**
  - **Expense**
  - **Limited contact lens application**

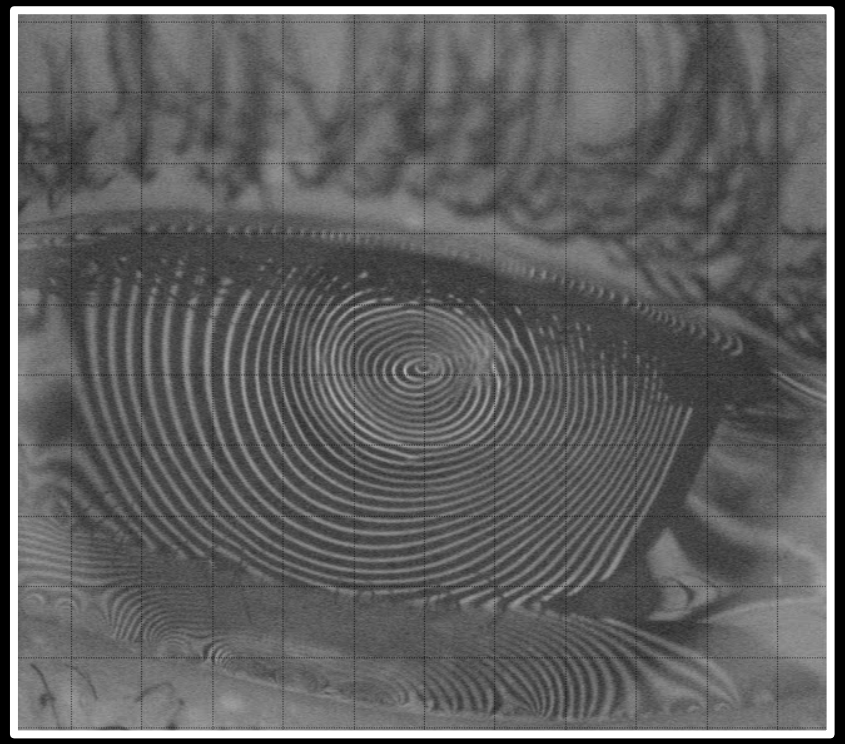




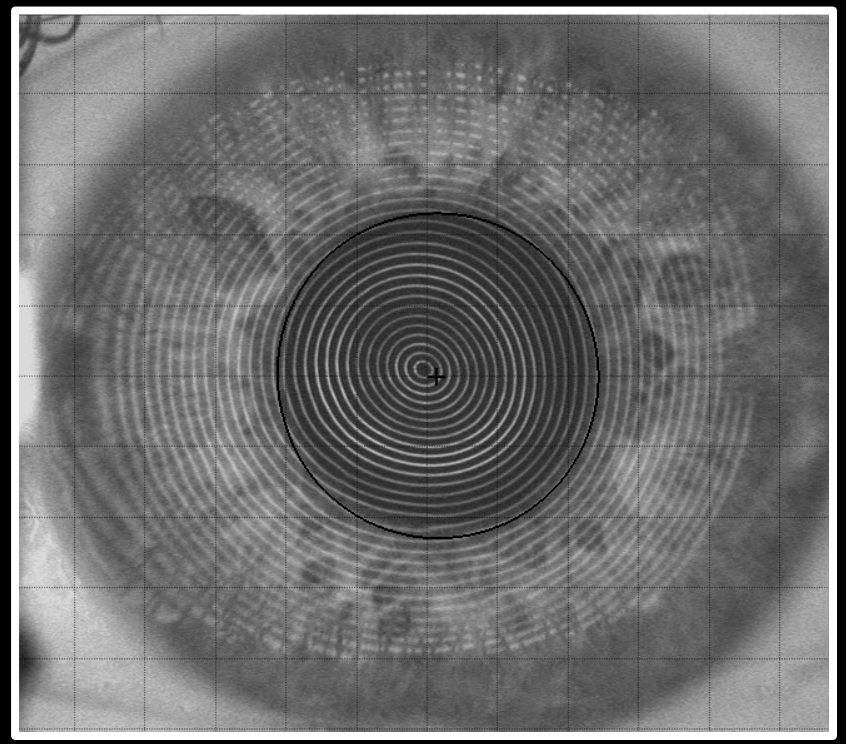
Ocular Coherence Tomography



Optimizing Capture

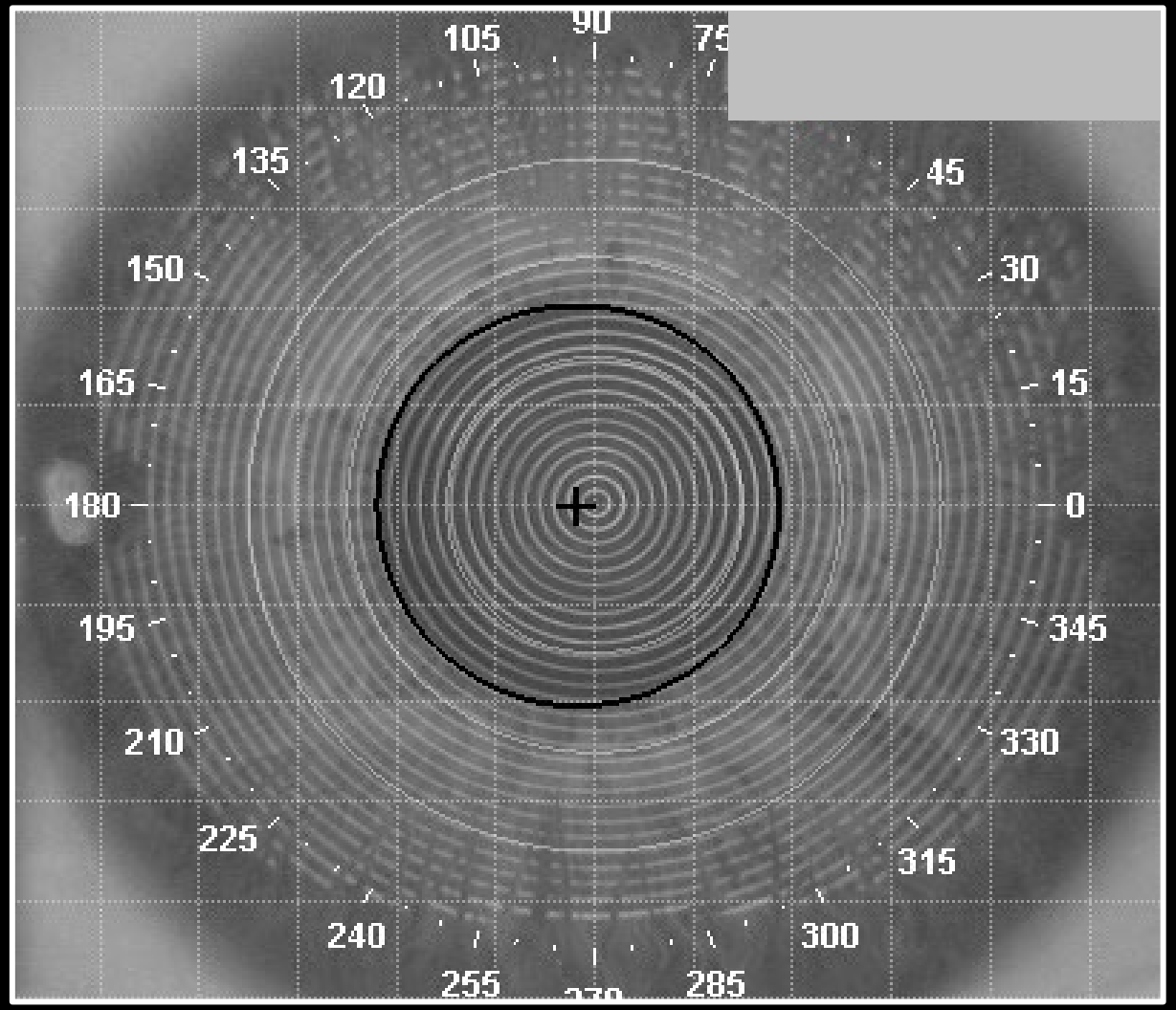


Poor Capture

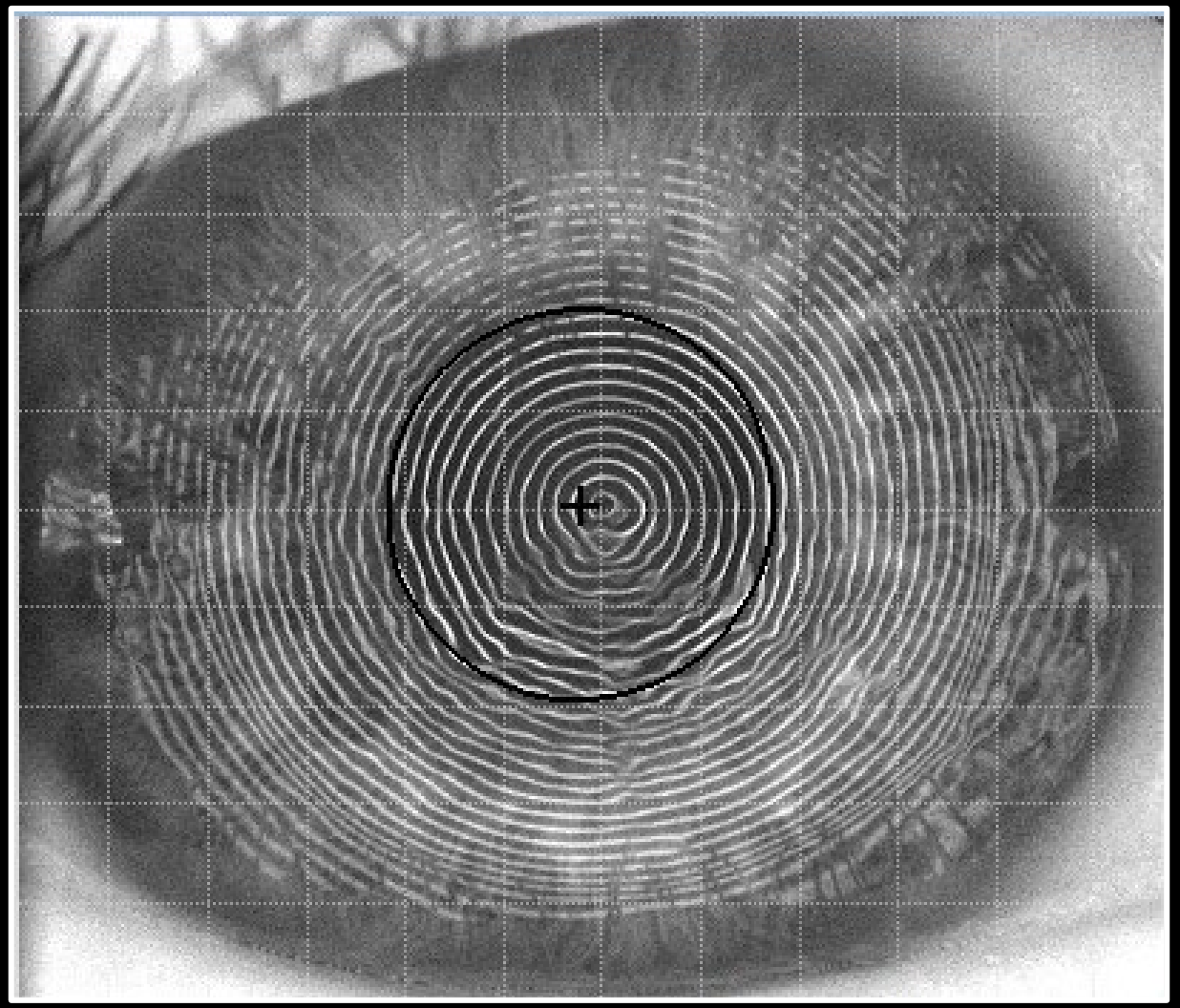


Ideal Capture

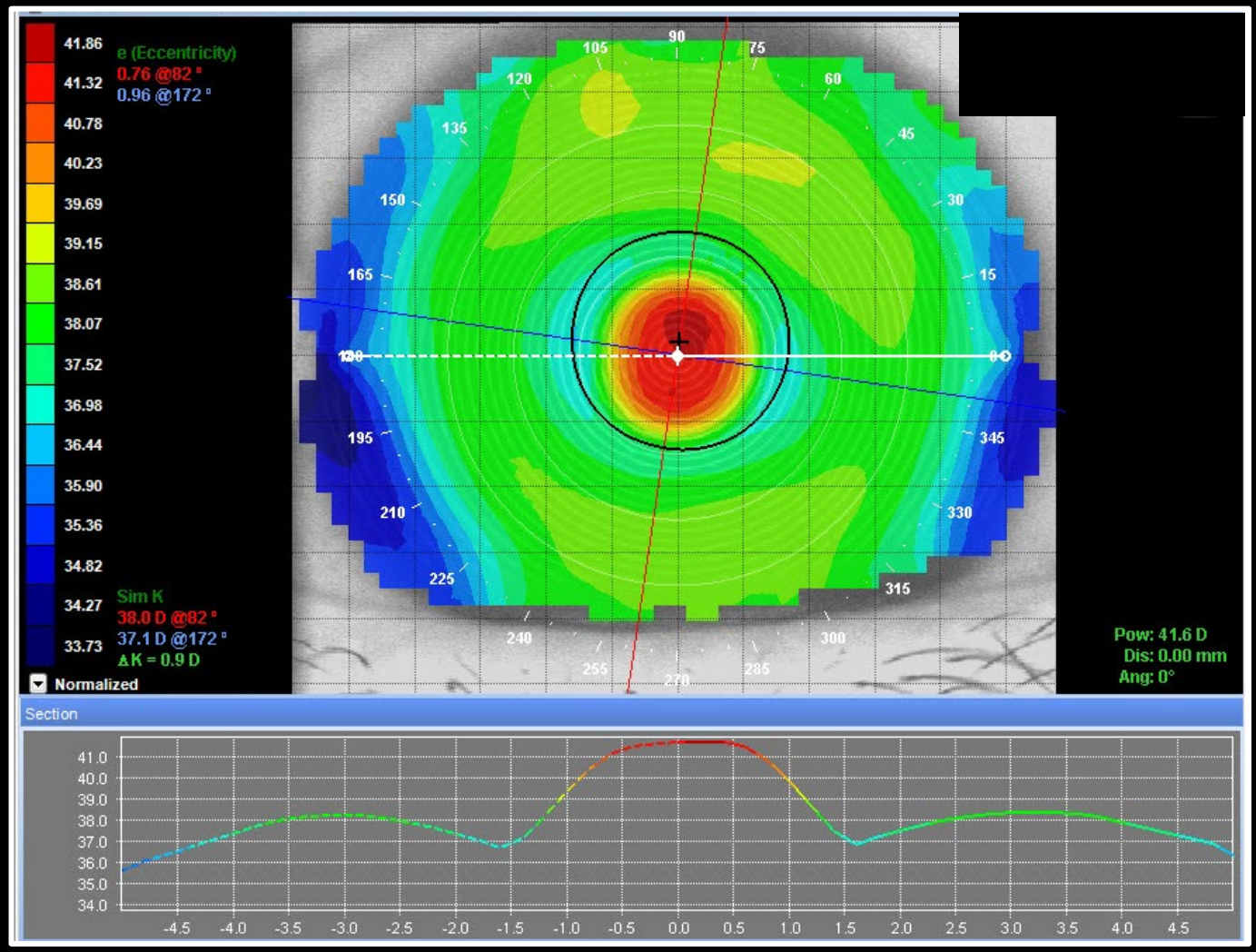
Ensure quality ring reflection



Ensure quality ring reflection

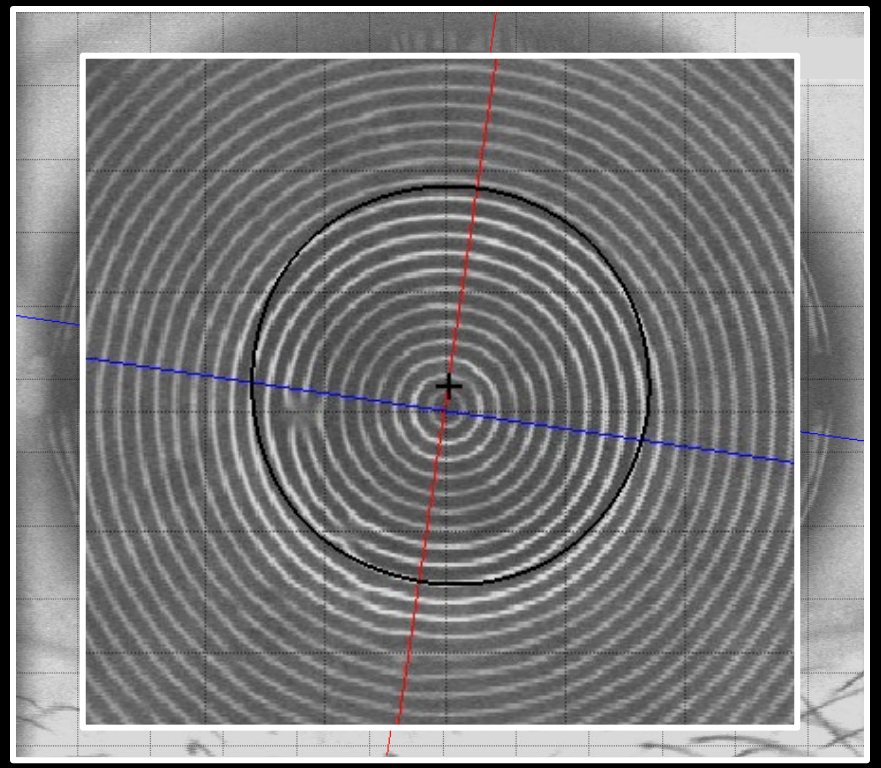


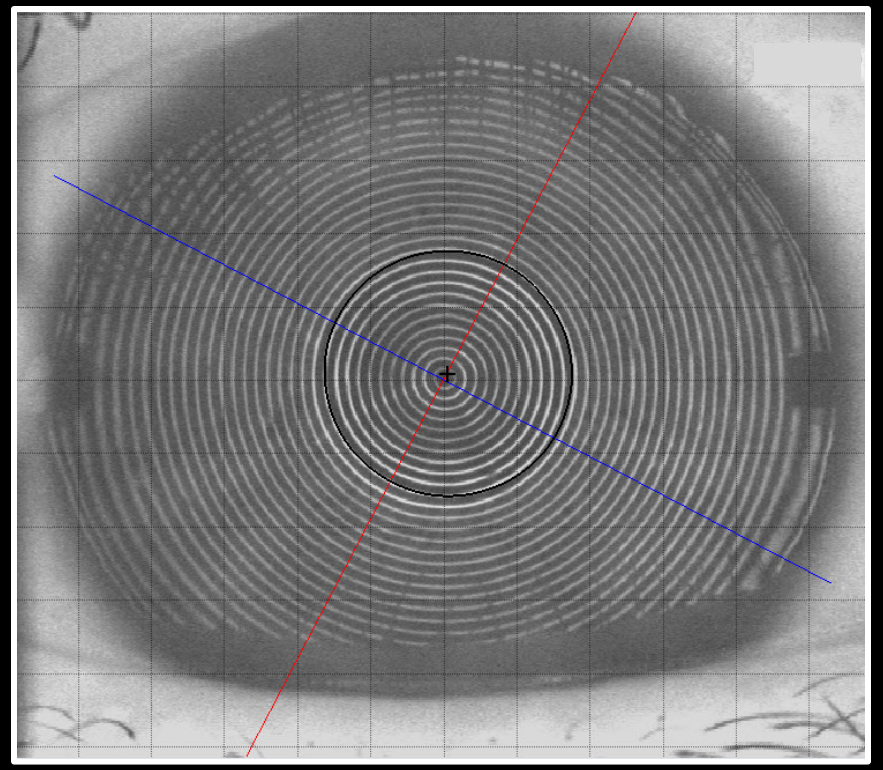
Baseline Map

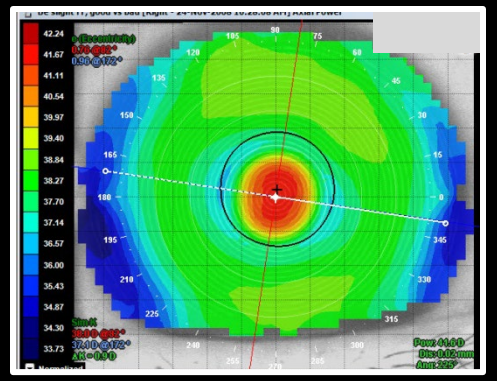


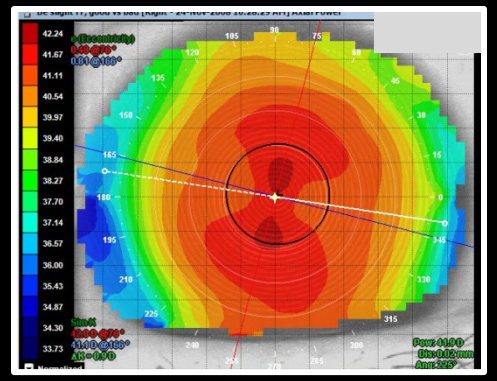
Rx: -1.00 -0.25 x 165

Look at the Placido

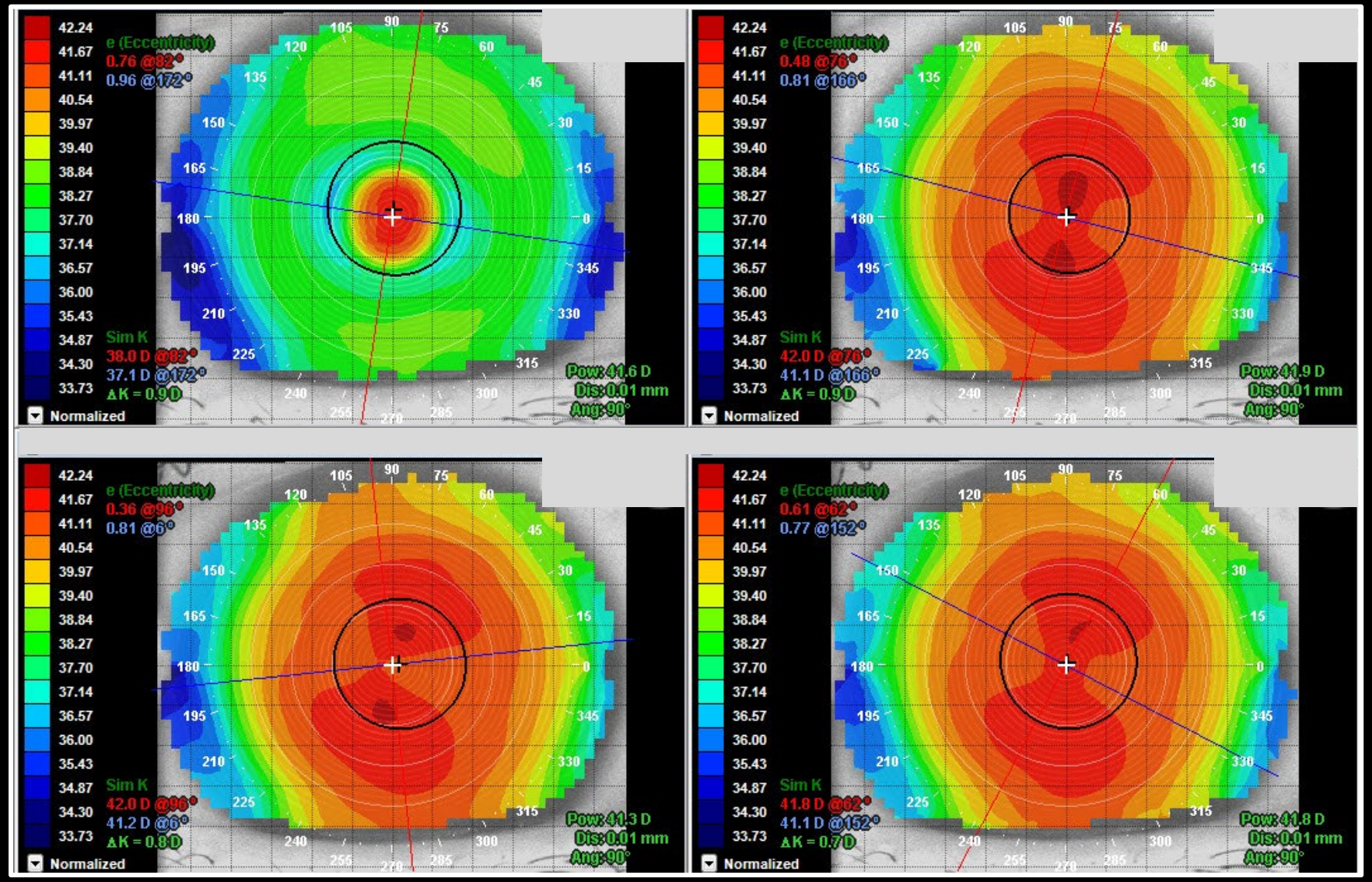






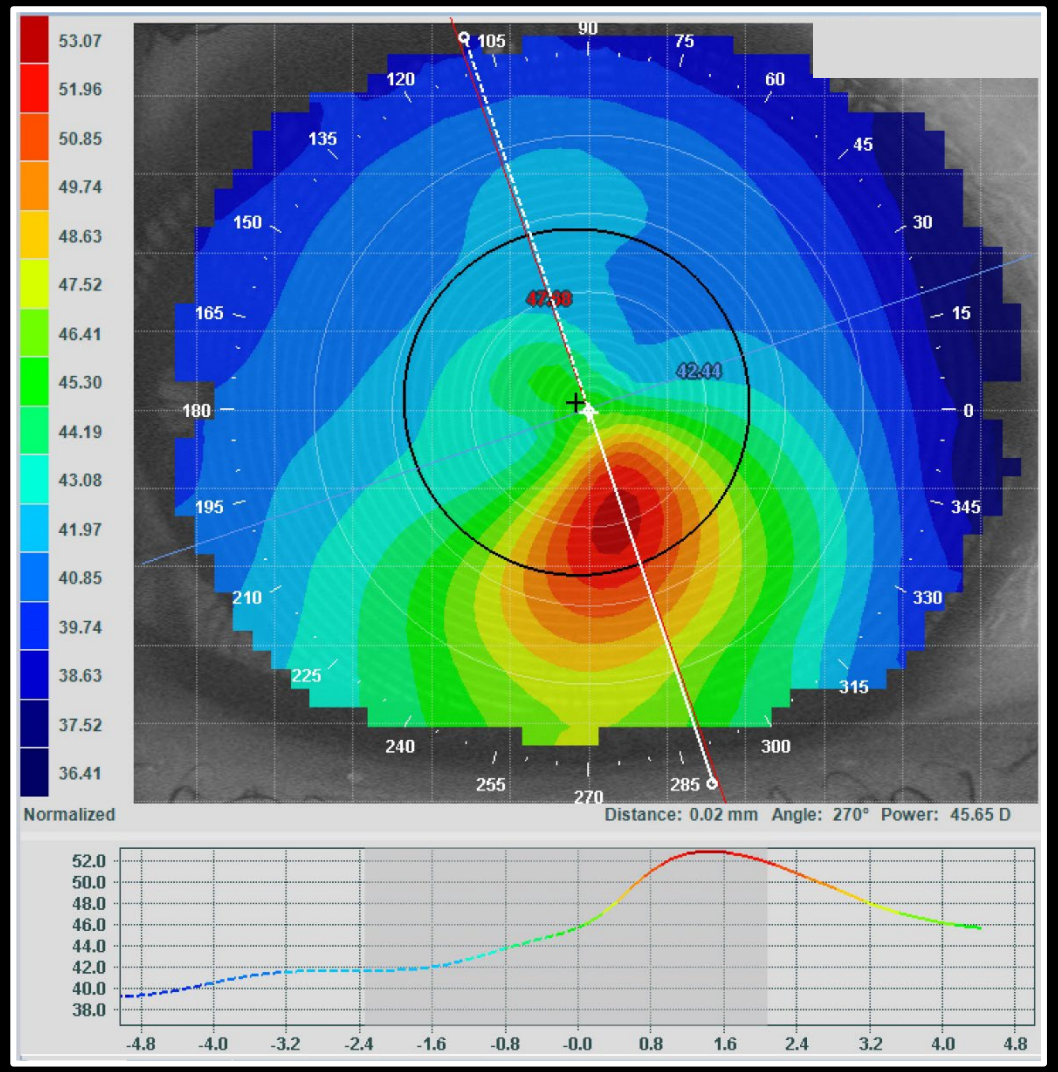


Multiple Maps



What's the highest point on this eye?

Axial Map



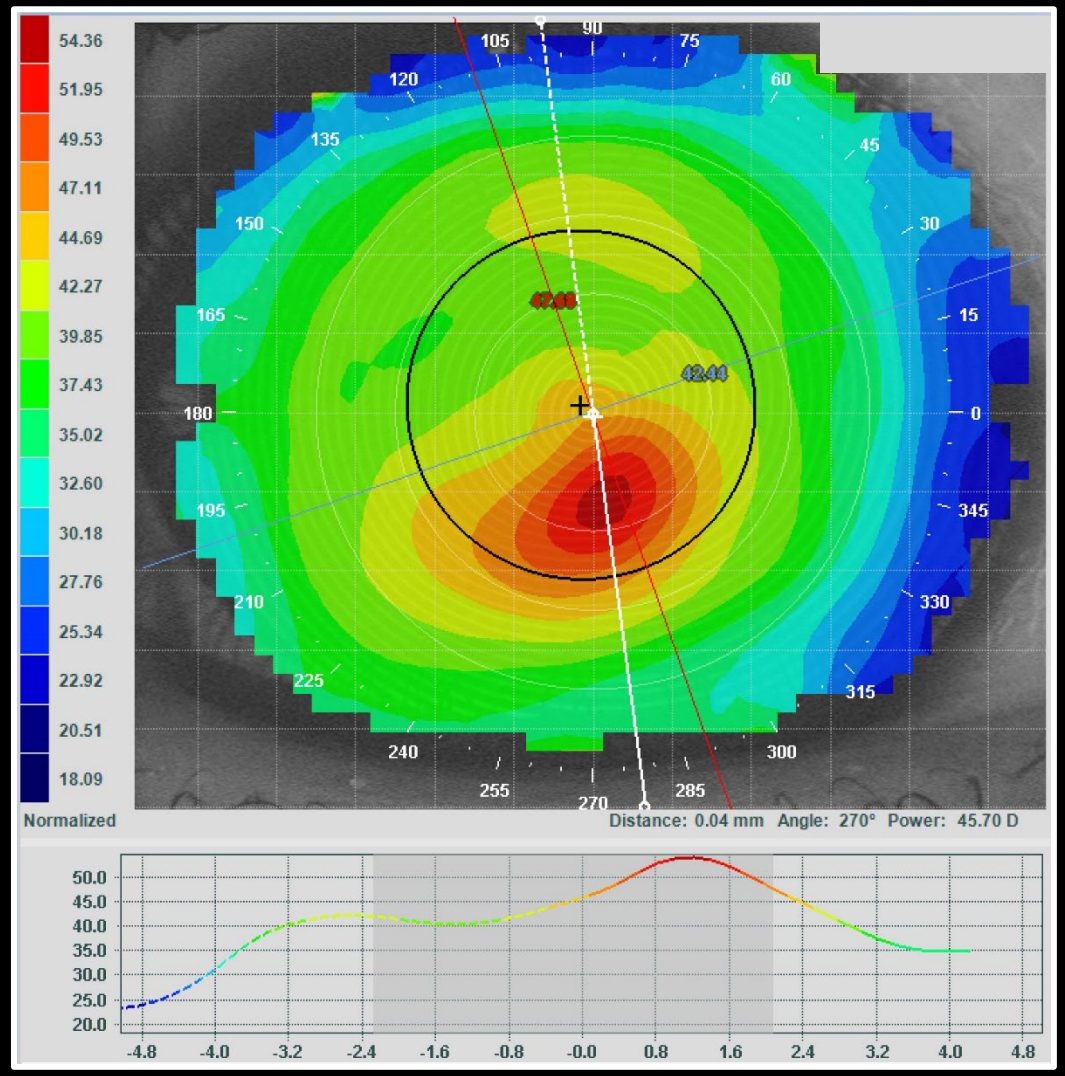
42.44 D @ 19 °

47.68 D @ 109 °

5.24 D

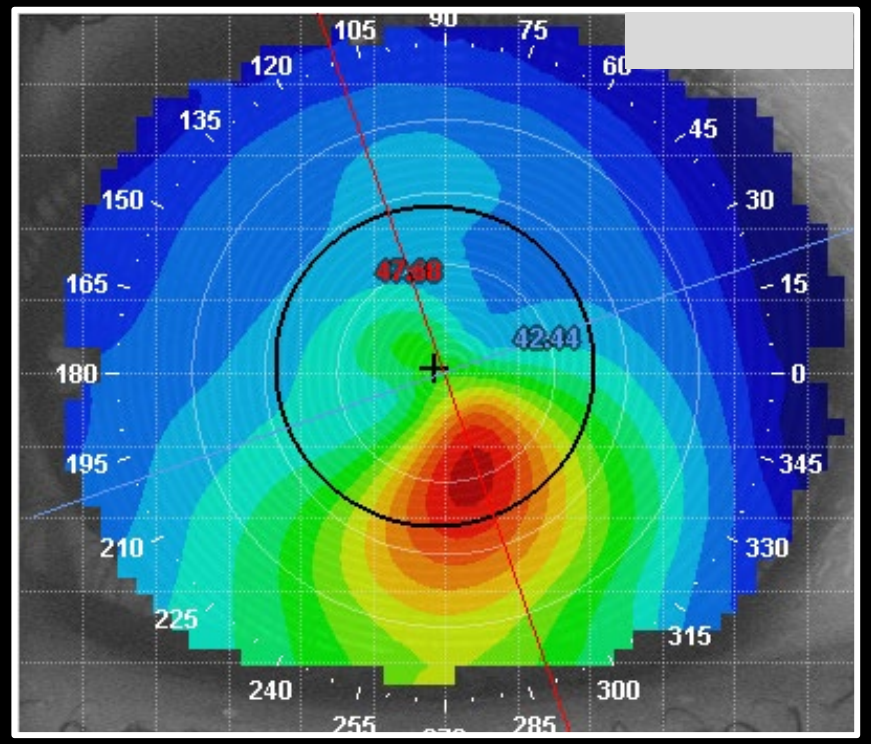
What would we say now...
What is the highest point?

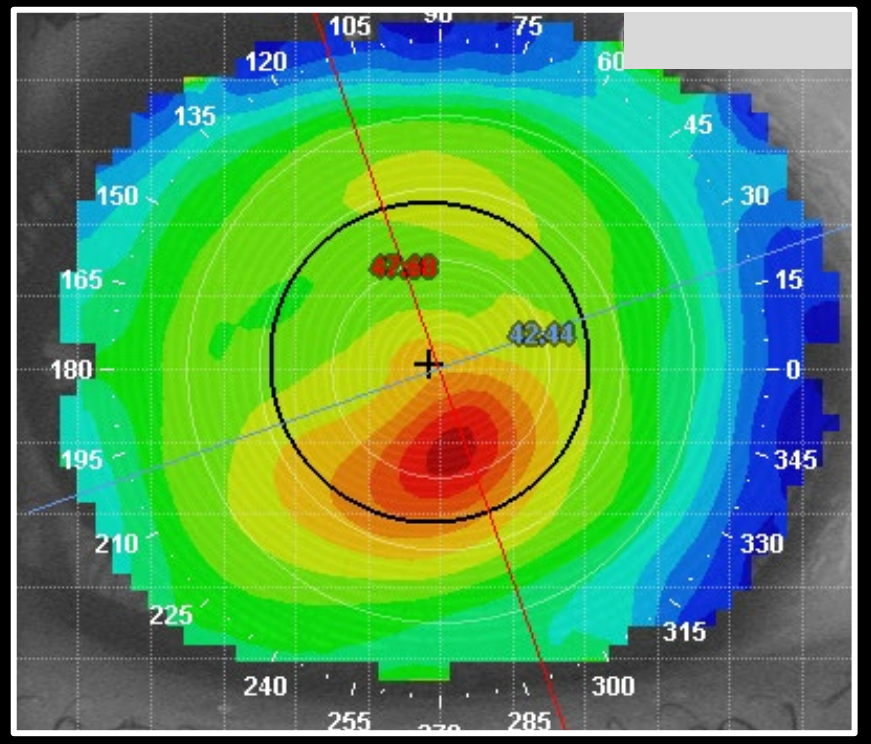
Tangential Map



42.44 D @ 19 °
47.68 D @ 109 °
5.24 D

In Keratoconus it must be the red...right?



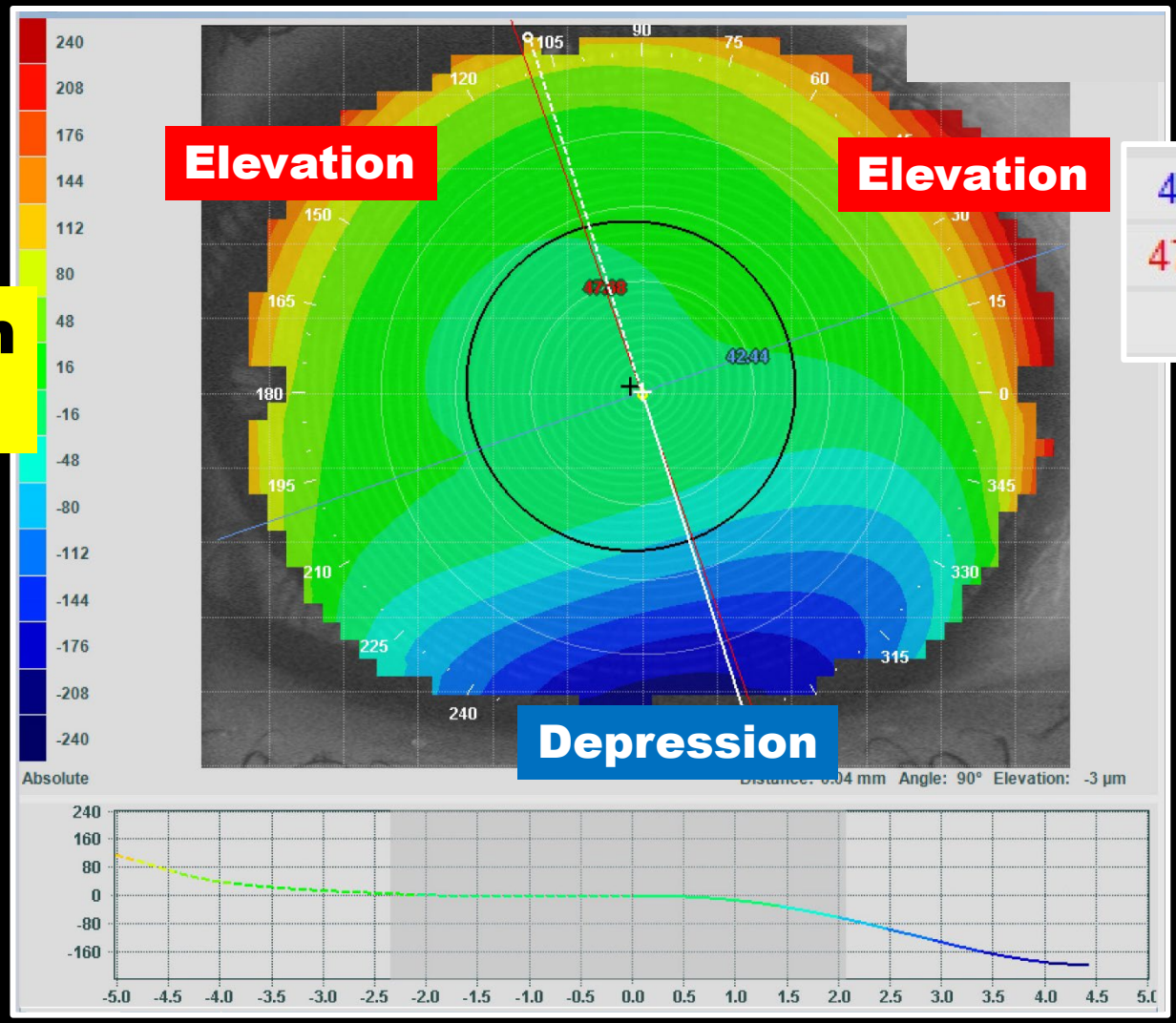


Axial Map

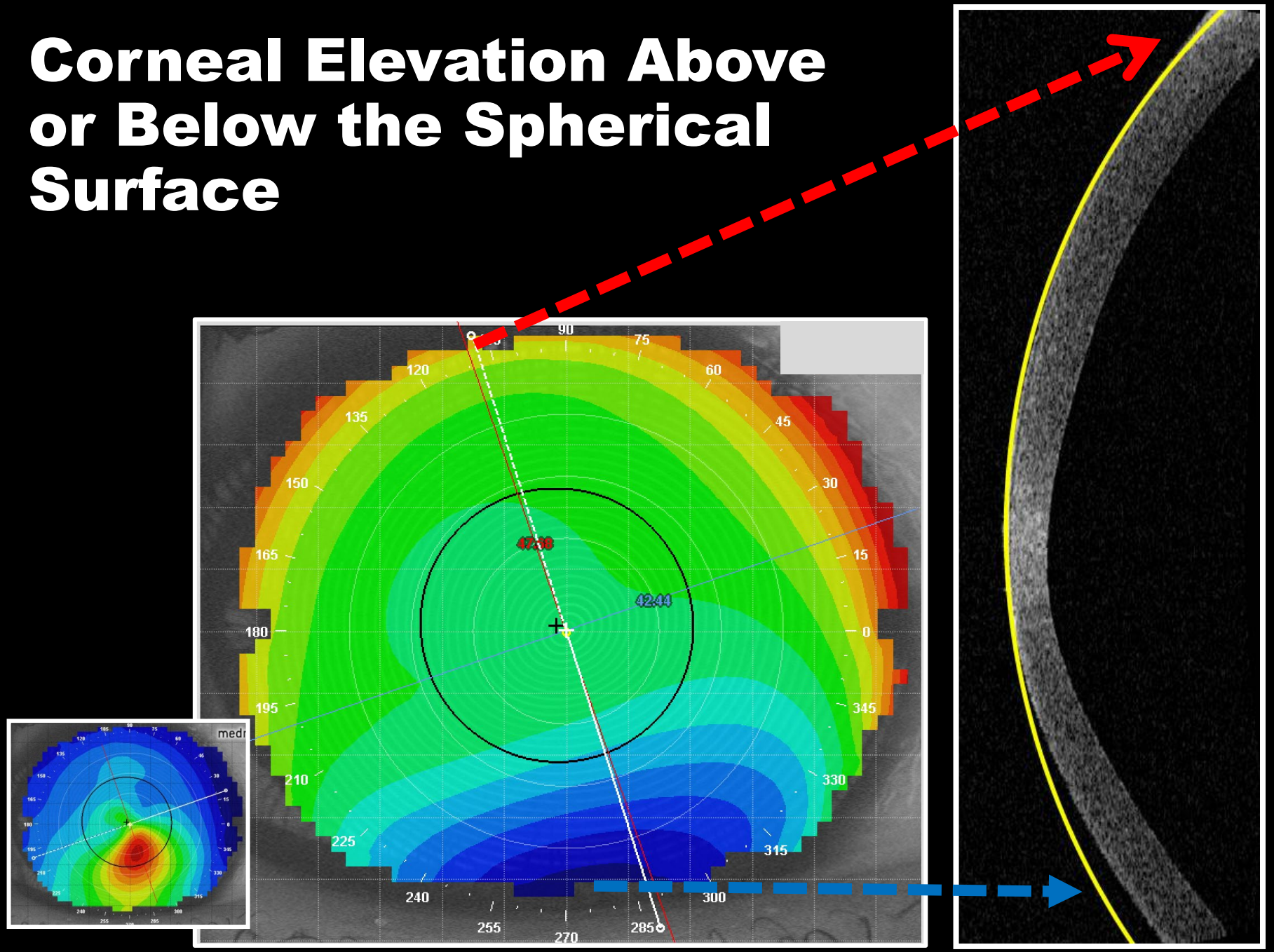
42.44 D @ 19 °
47.68 D @ 109 °
5.24 D

Tangential Map

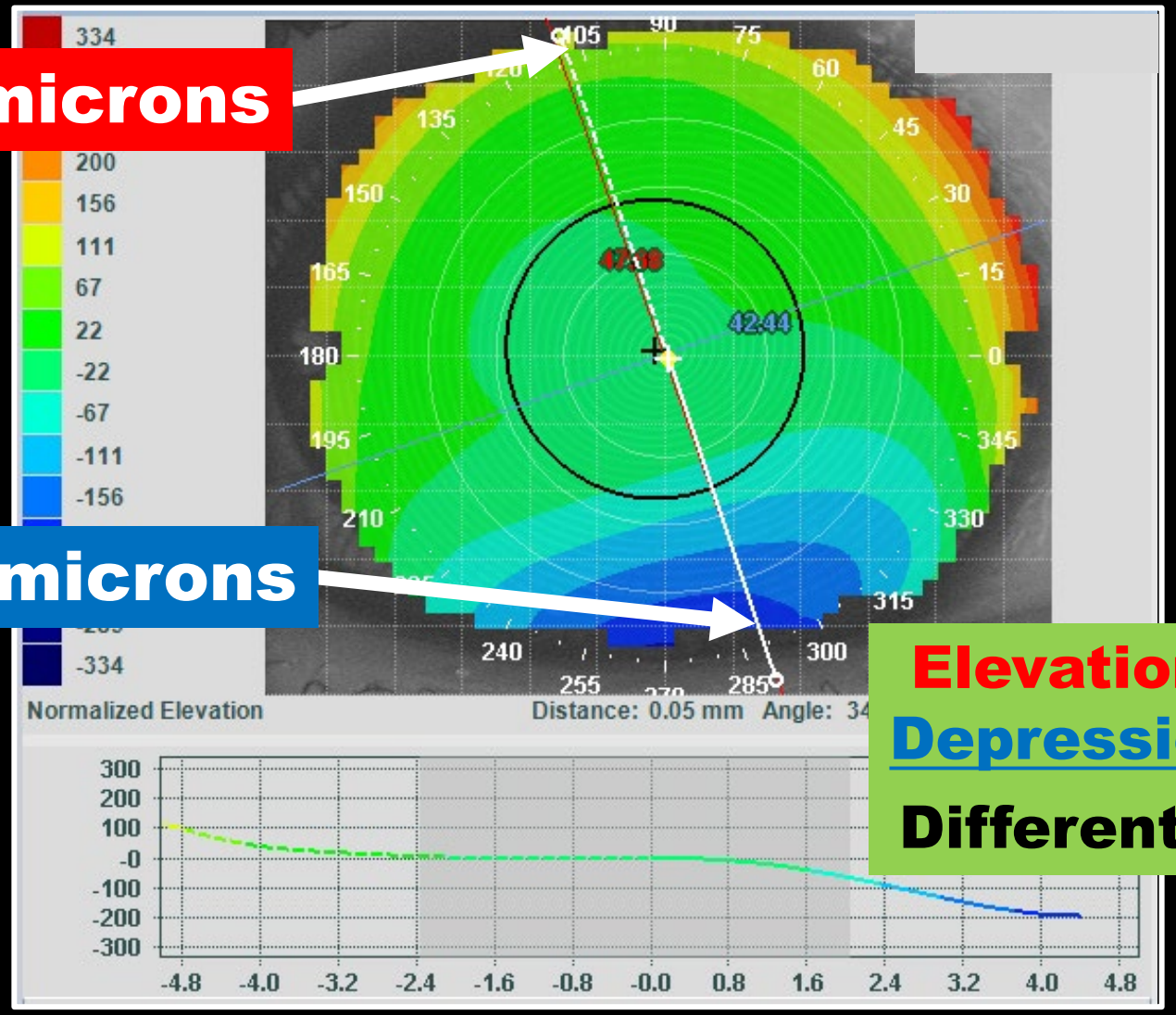
The answer is in the Elevation Map



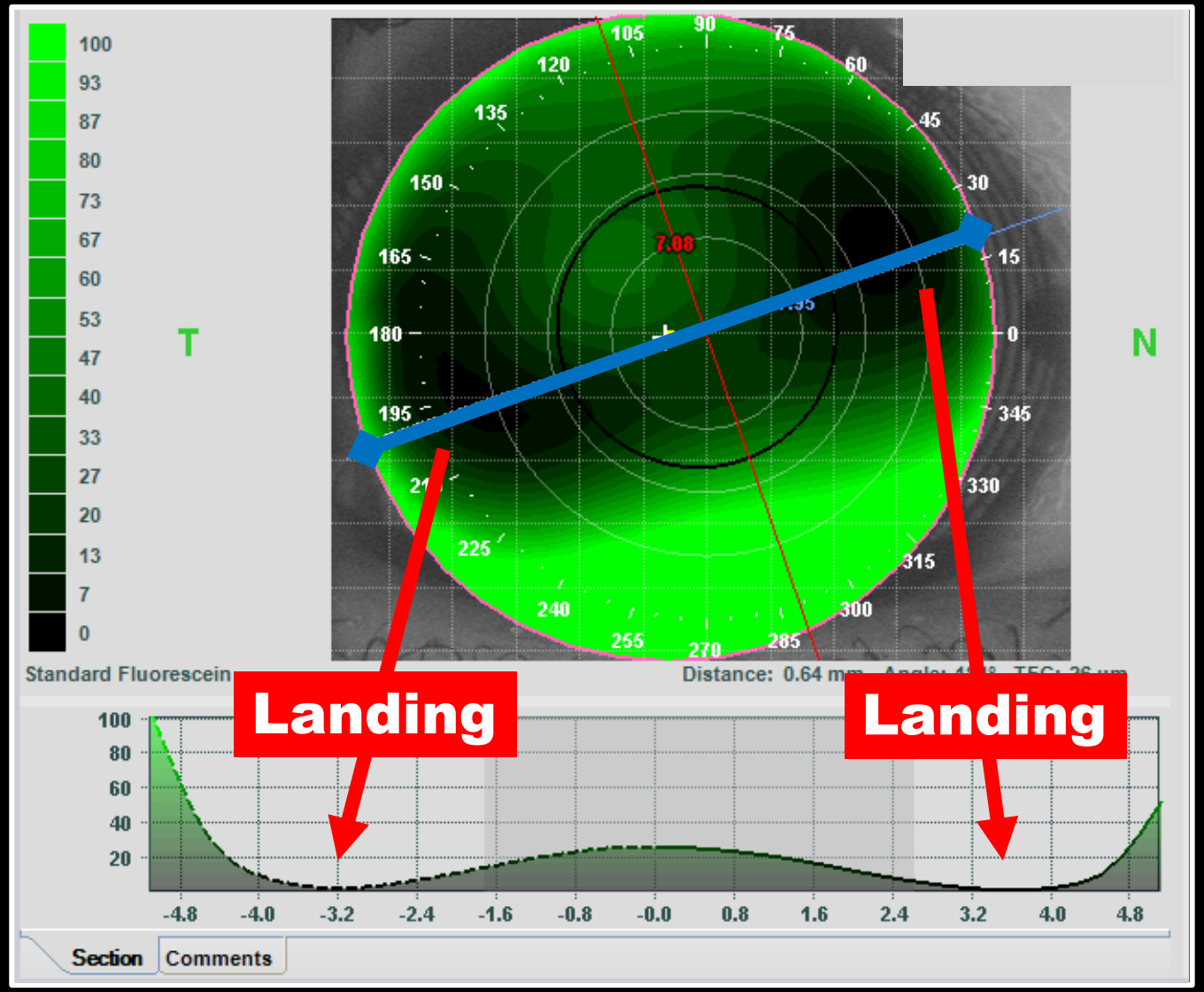
Corneal Elevation Above or Below the Spherical Surface



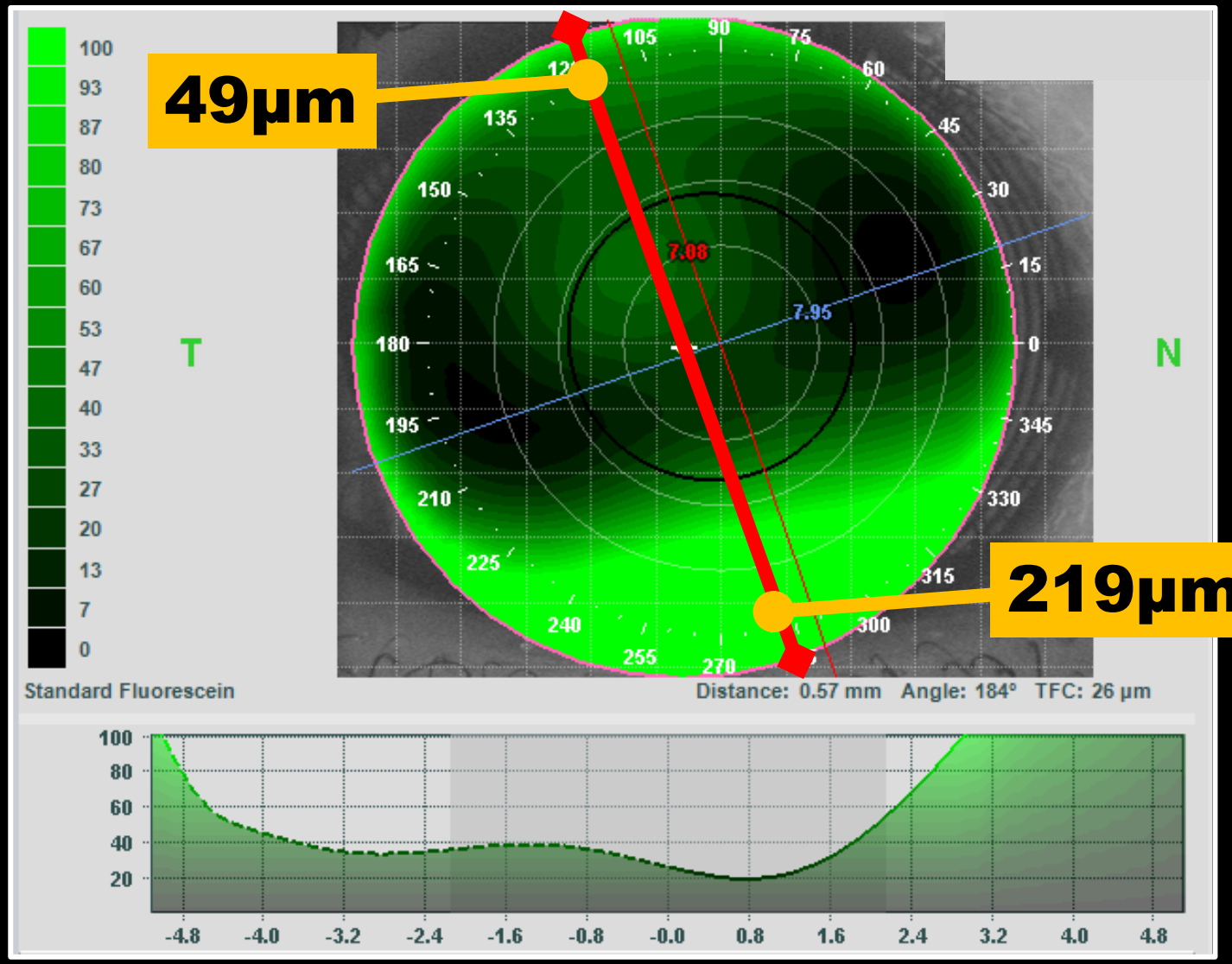
Elevation Differential



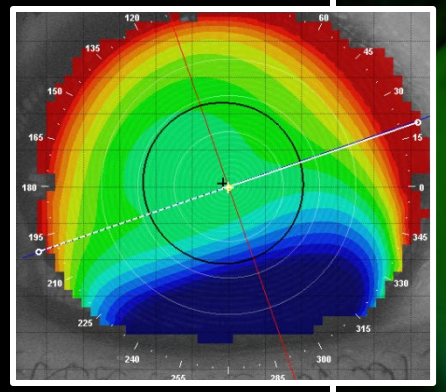
10.2mm Diameter
Horizontal Meridian

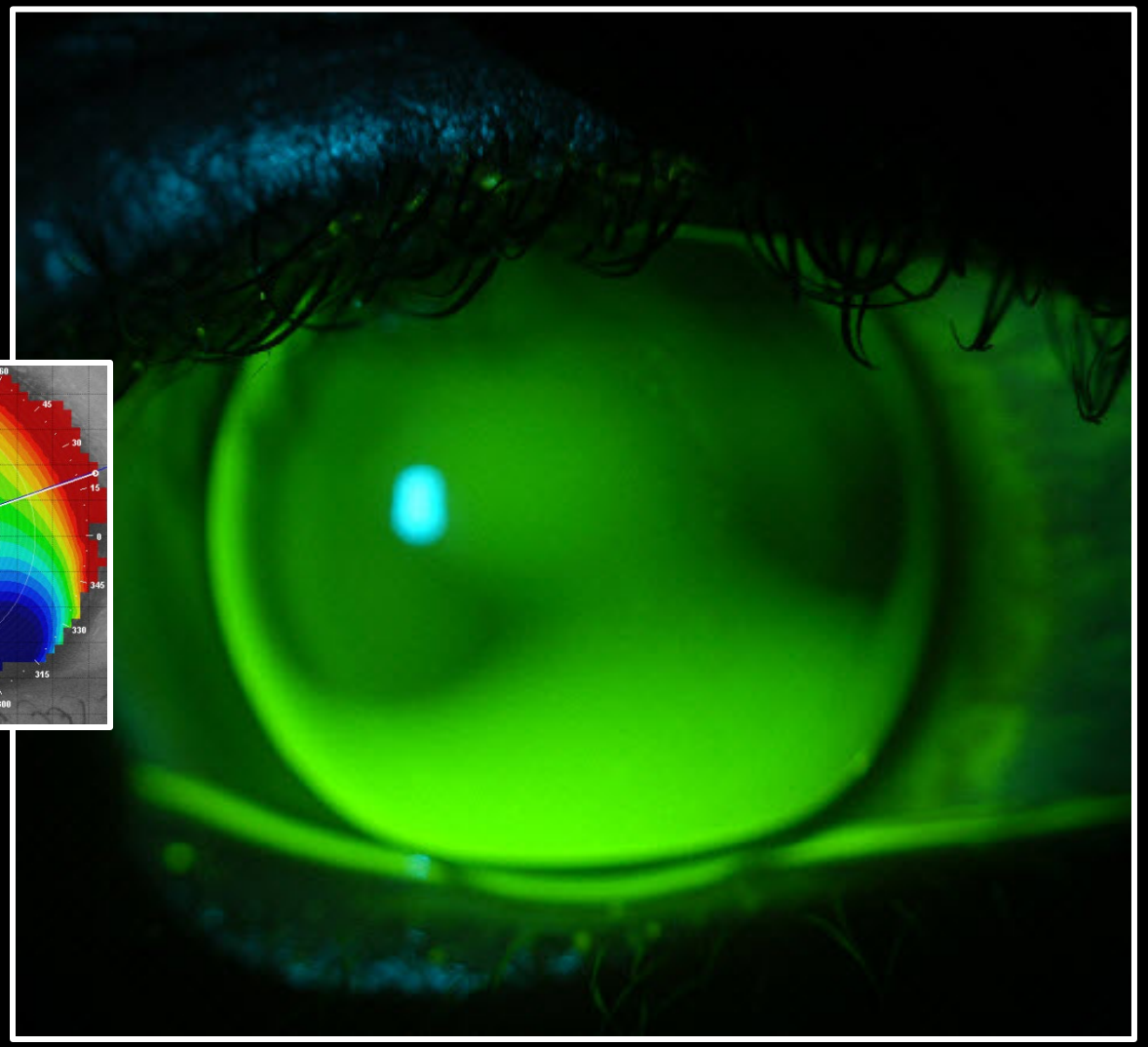


10.2mm Diameter
Vertical Meridian

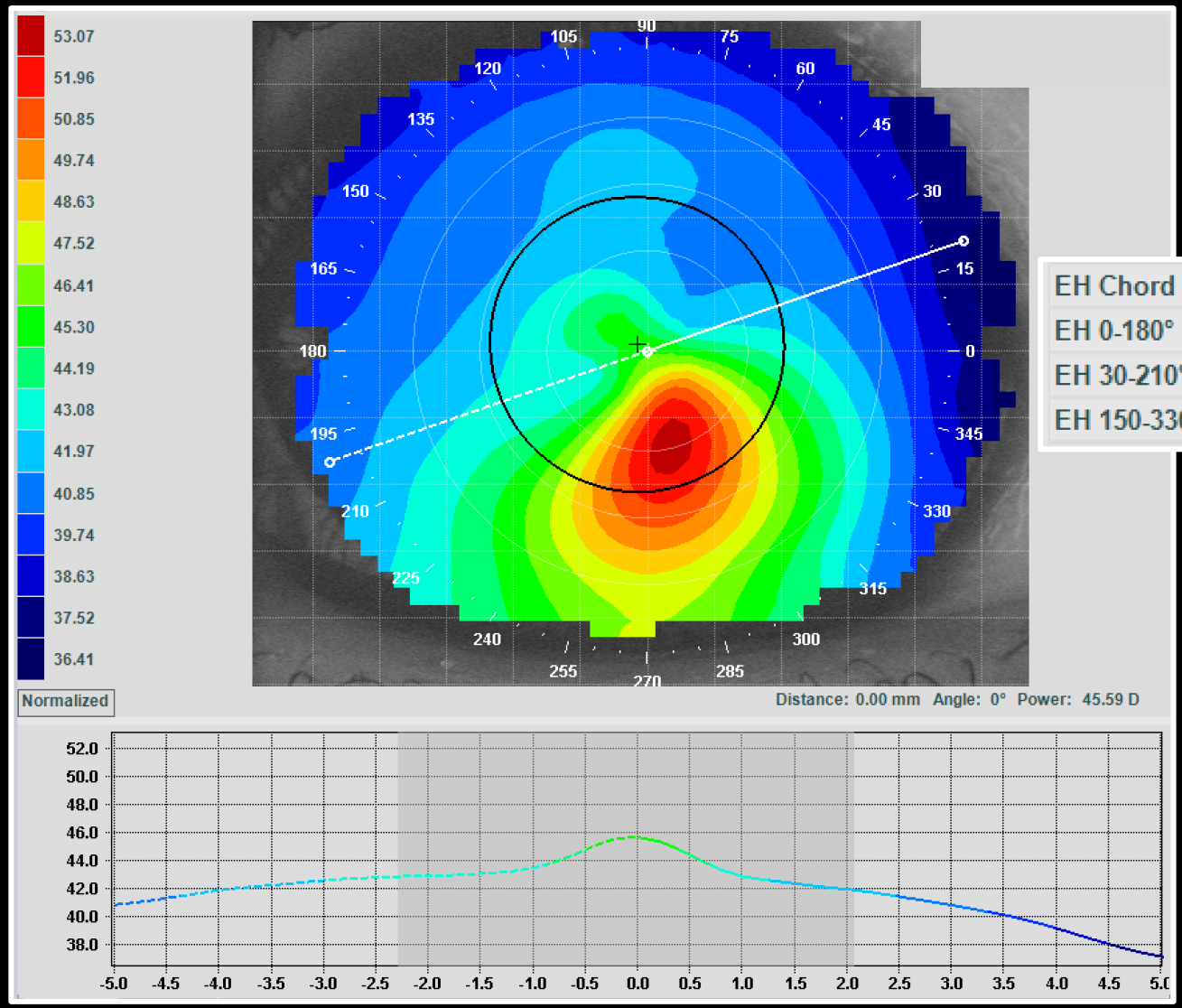


10.2mm Diameter Keratoconus GP Lens

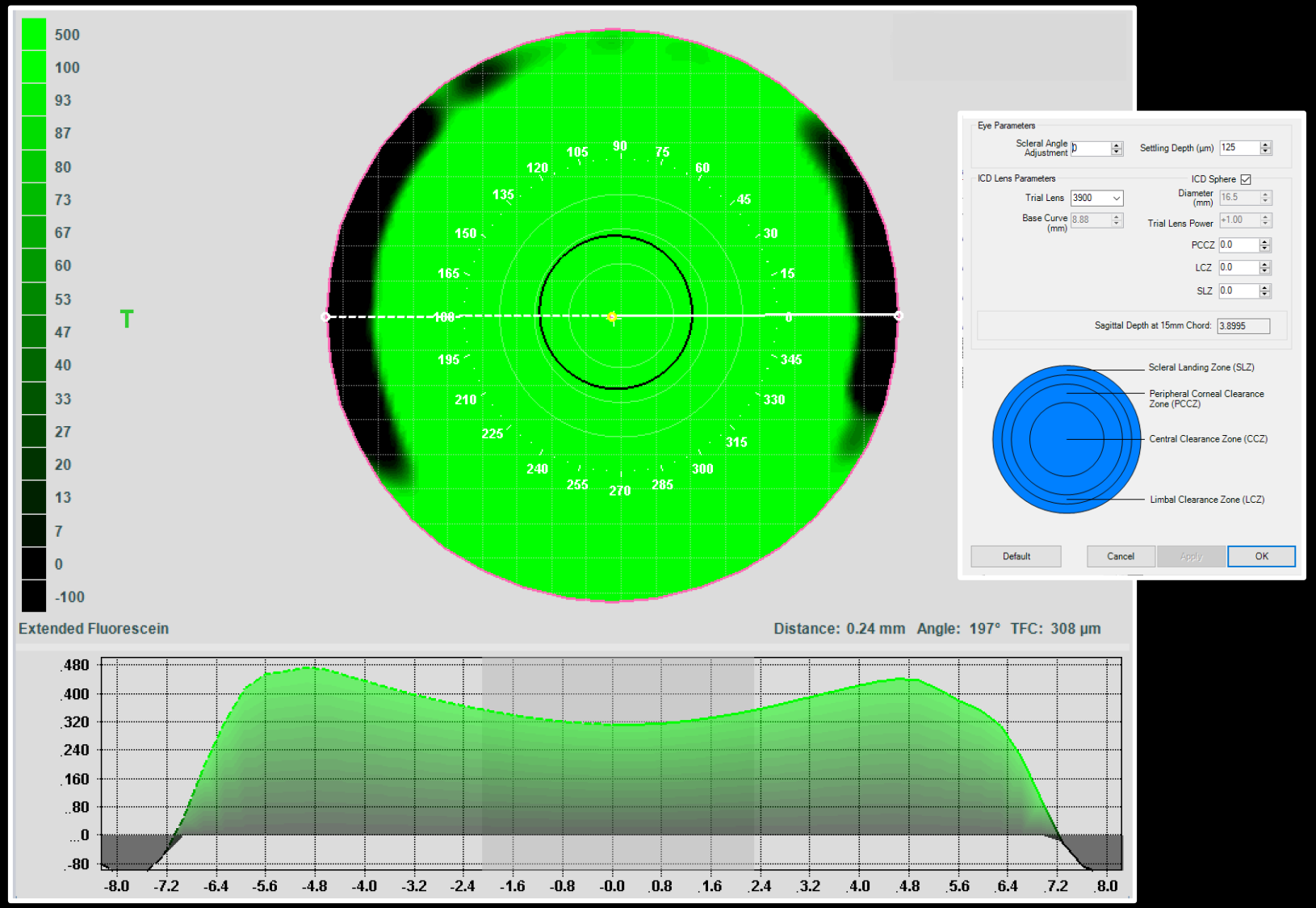




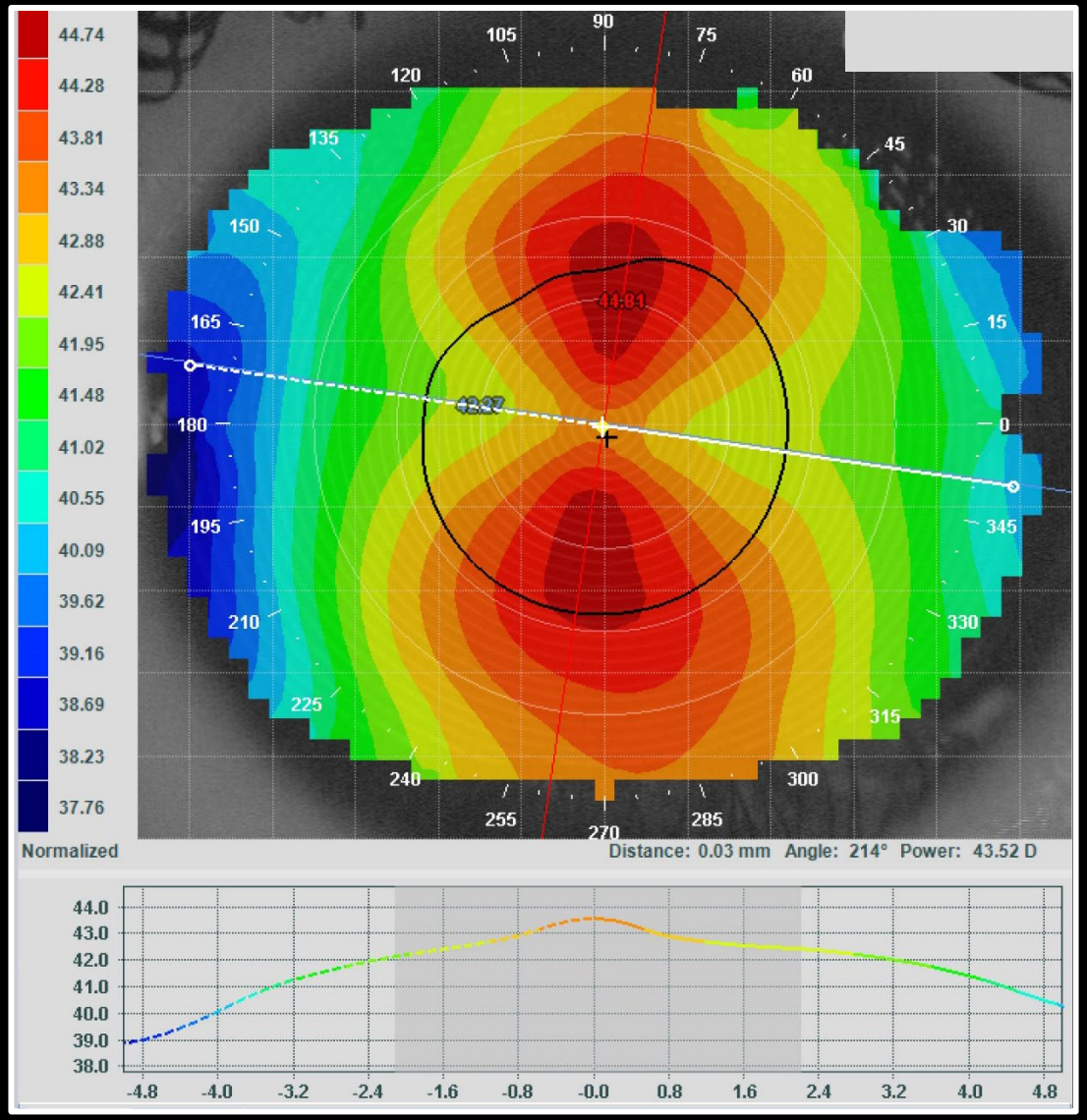
What if we wanted to fit scleral?



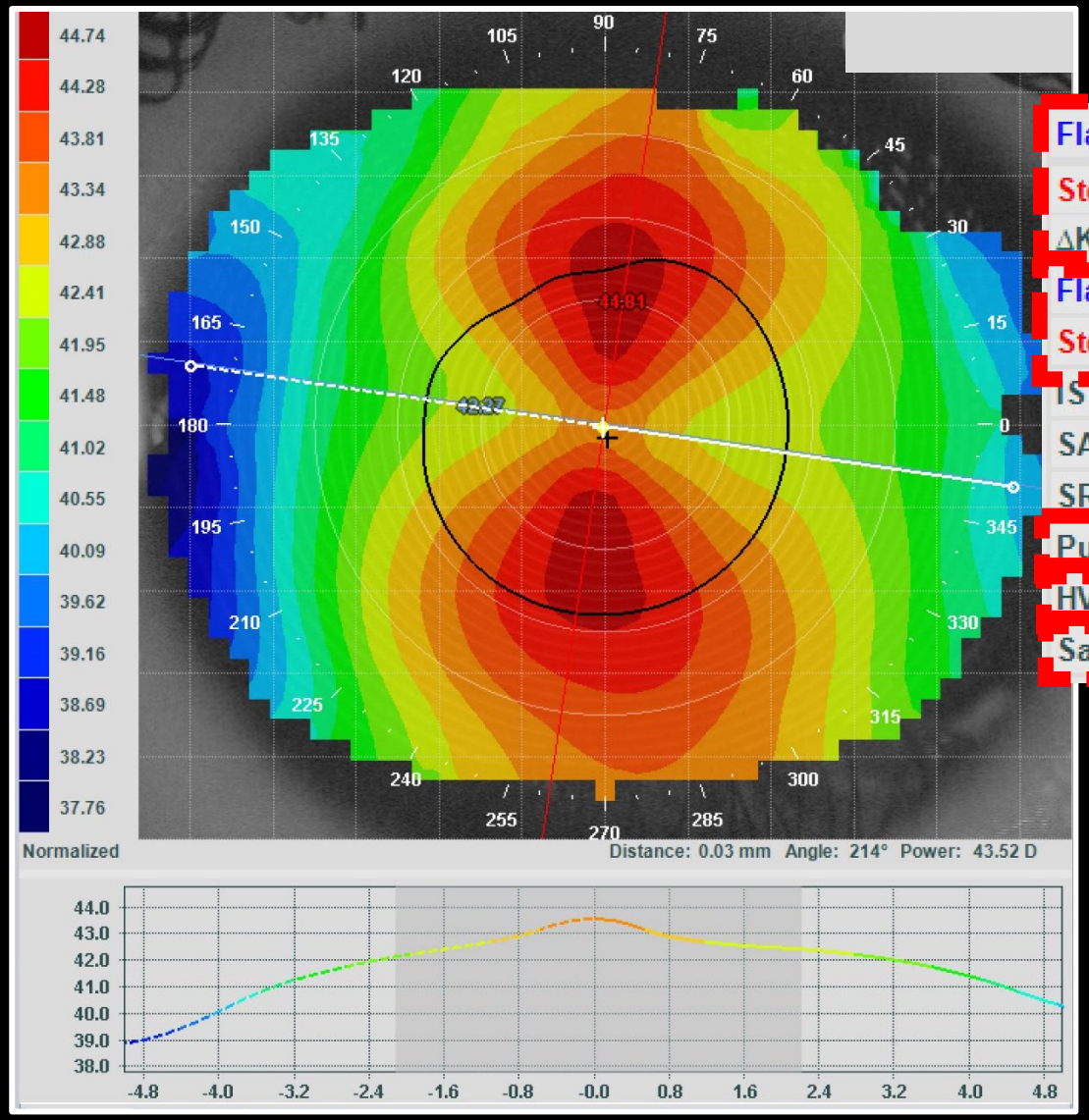
Scleral Contact Lens Software



Is this a good orthok canadidate?



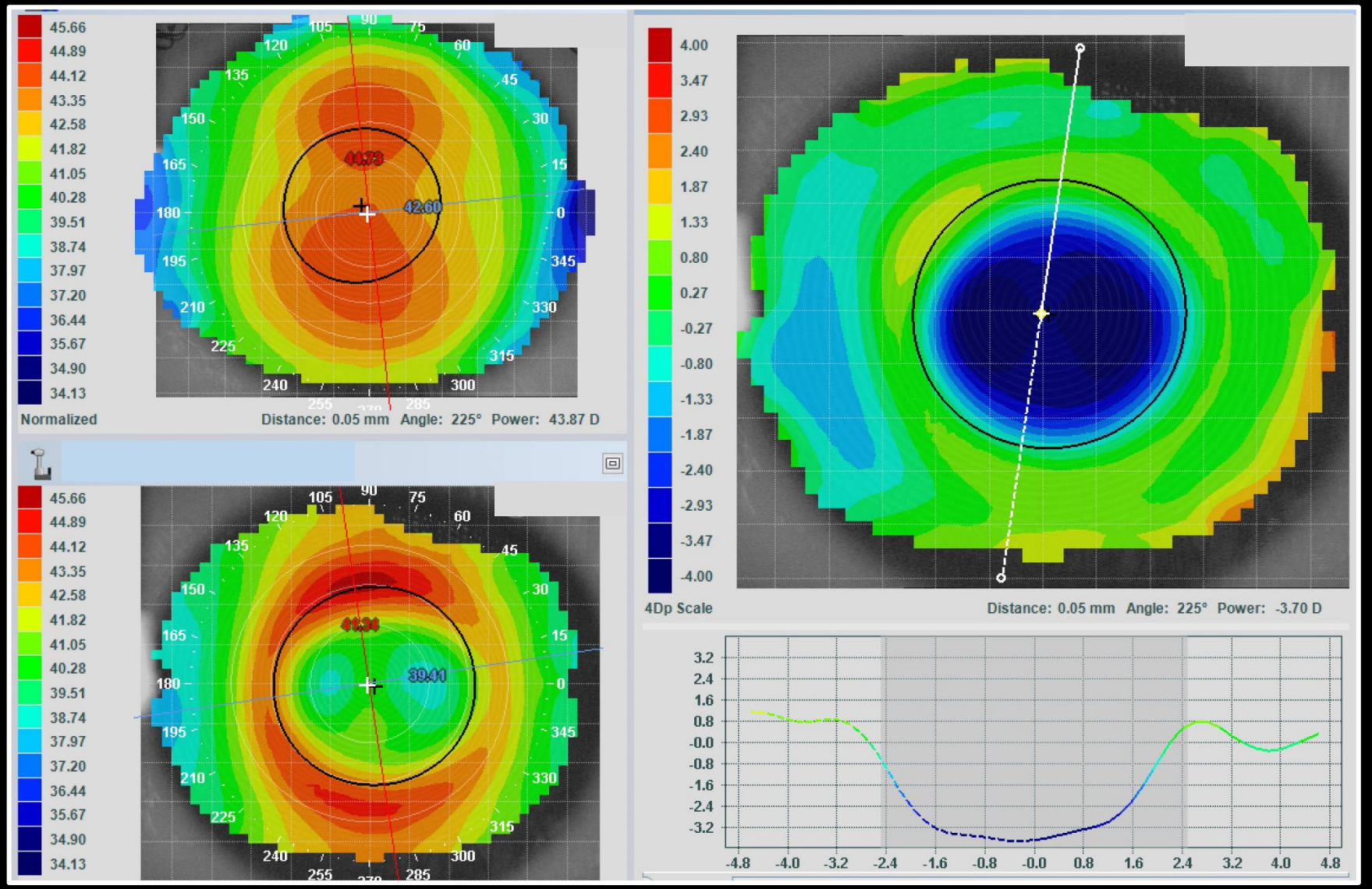
Axial Map



Flat K	42.27 D @ 172 °
Steep K	44.81 D @ 82 °
ΔK	2.54 D
Flat e	0.69 @ 172 °
Steep e	0.30 @ 82 °
IS Index	0.28 D
SAI	0.33
SRI	0.46
Pupil: Width	4.7 mm
HVID	11.7 mm
Sag Differential at 8mm	65 um

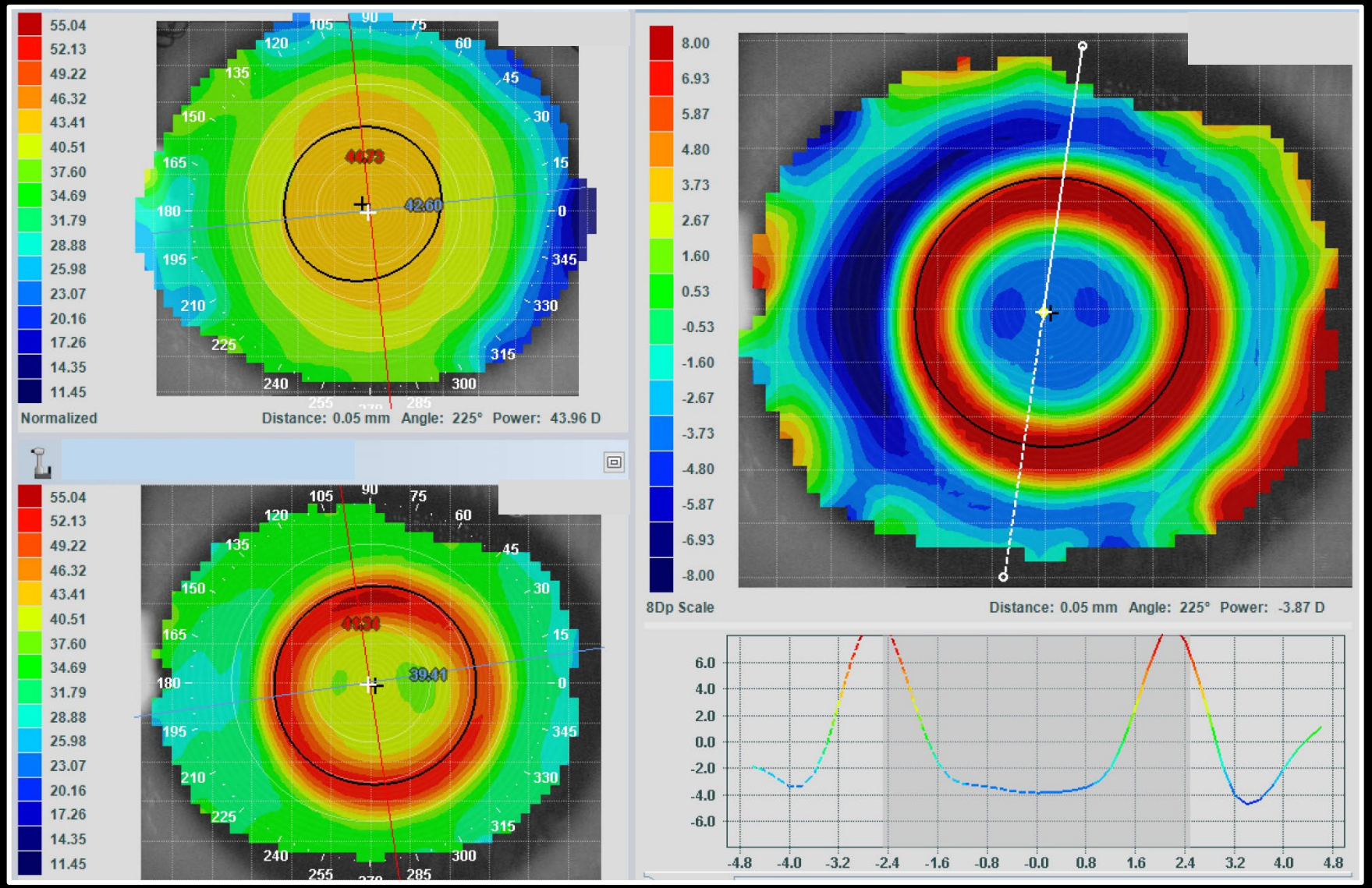
Post Treatment Subtractive Map

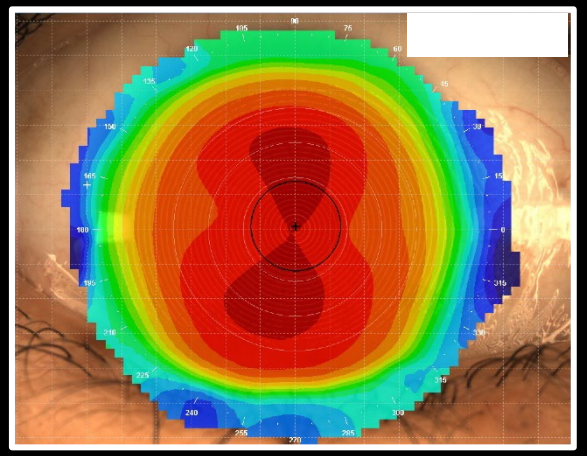
Axial

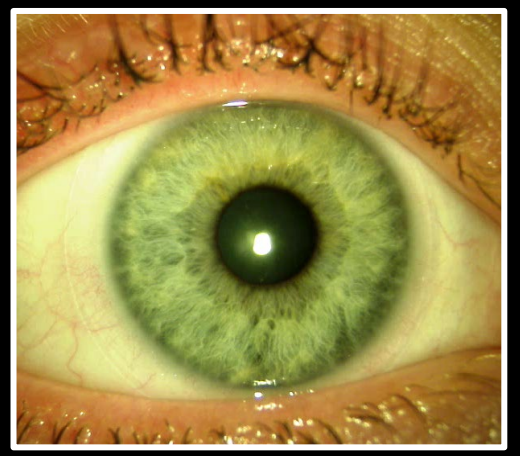


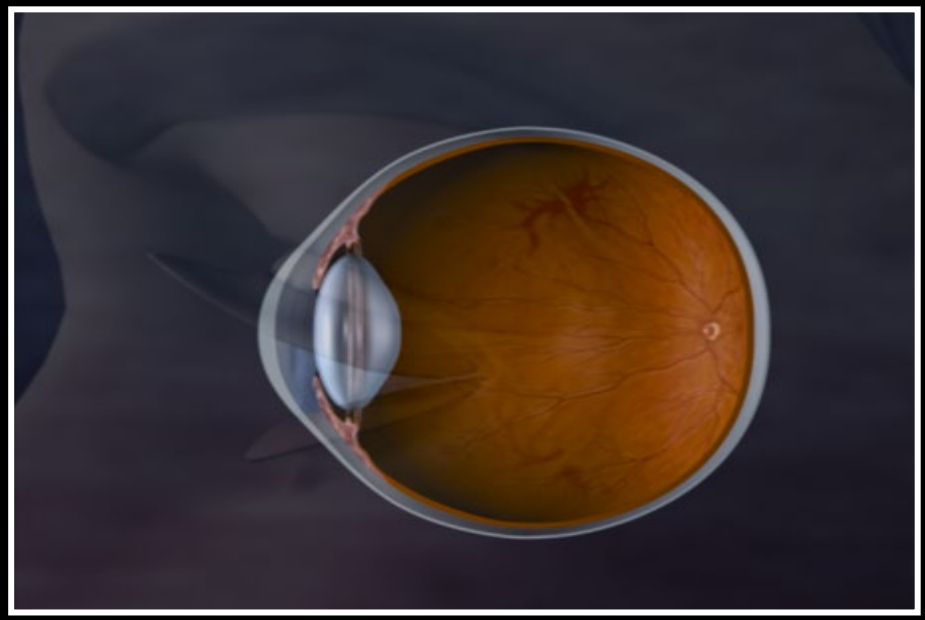
Post Treatment Subtractive Map

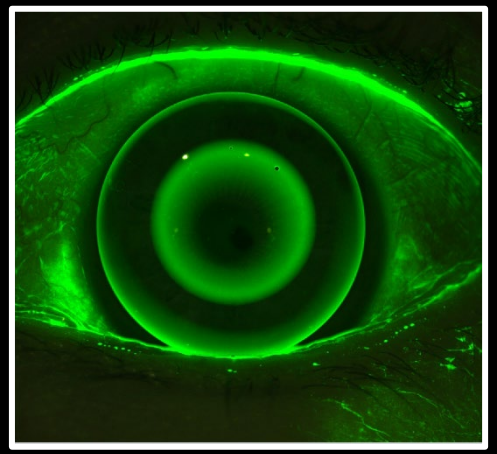
Tangential

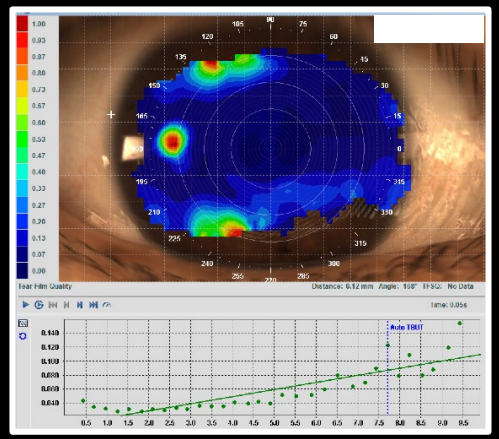


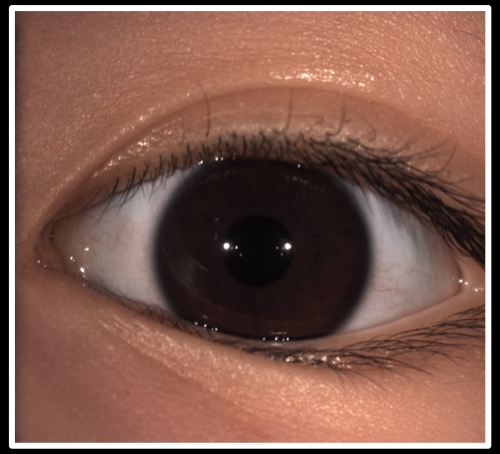


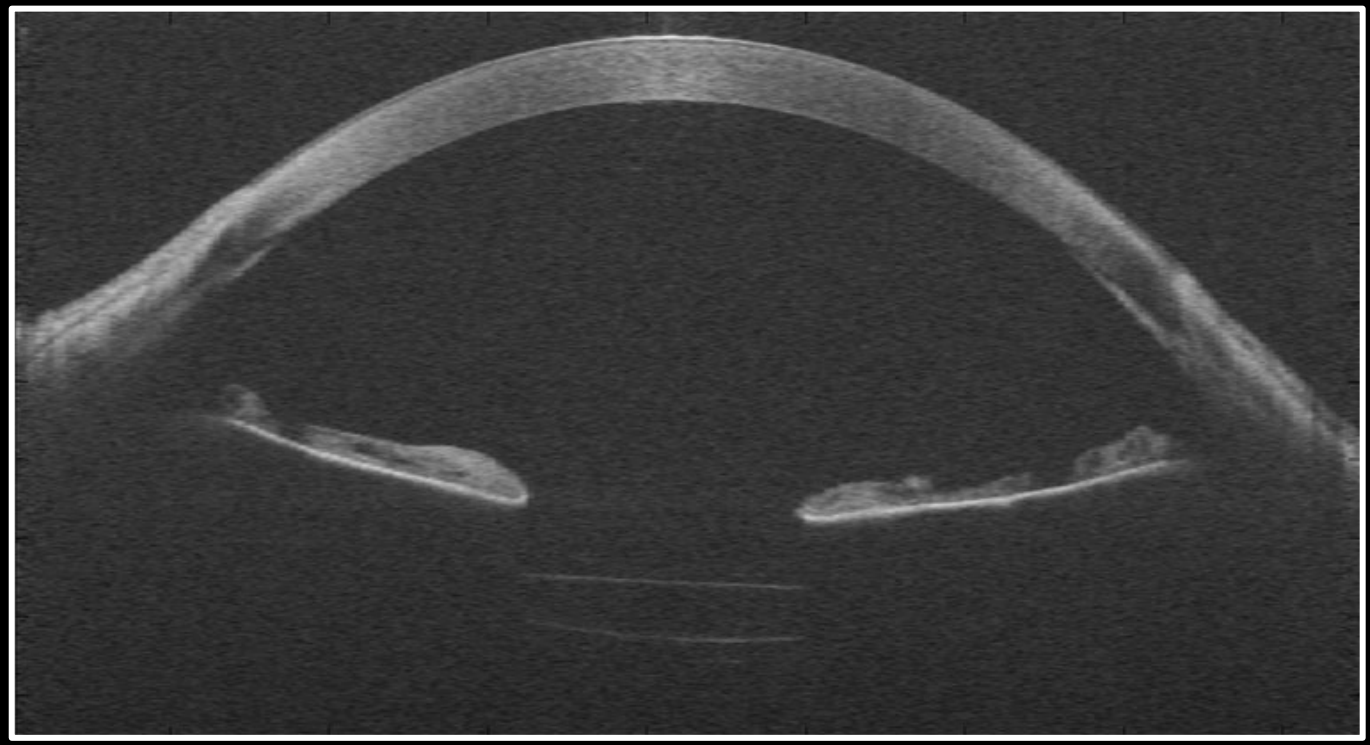







Tear Film Quality
Auto TBUT

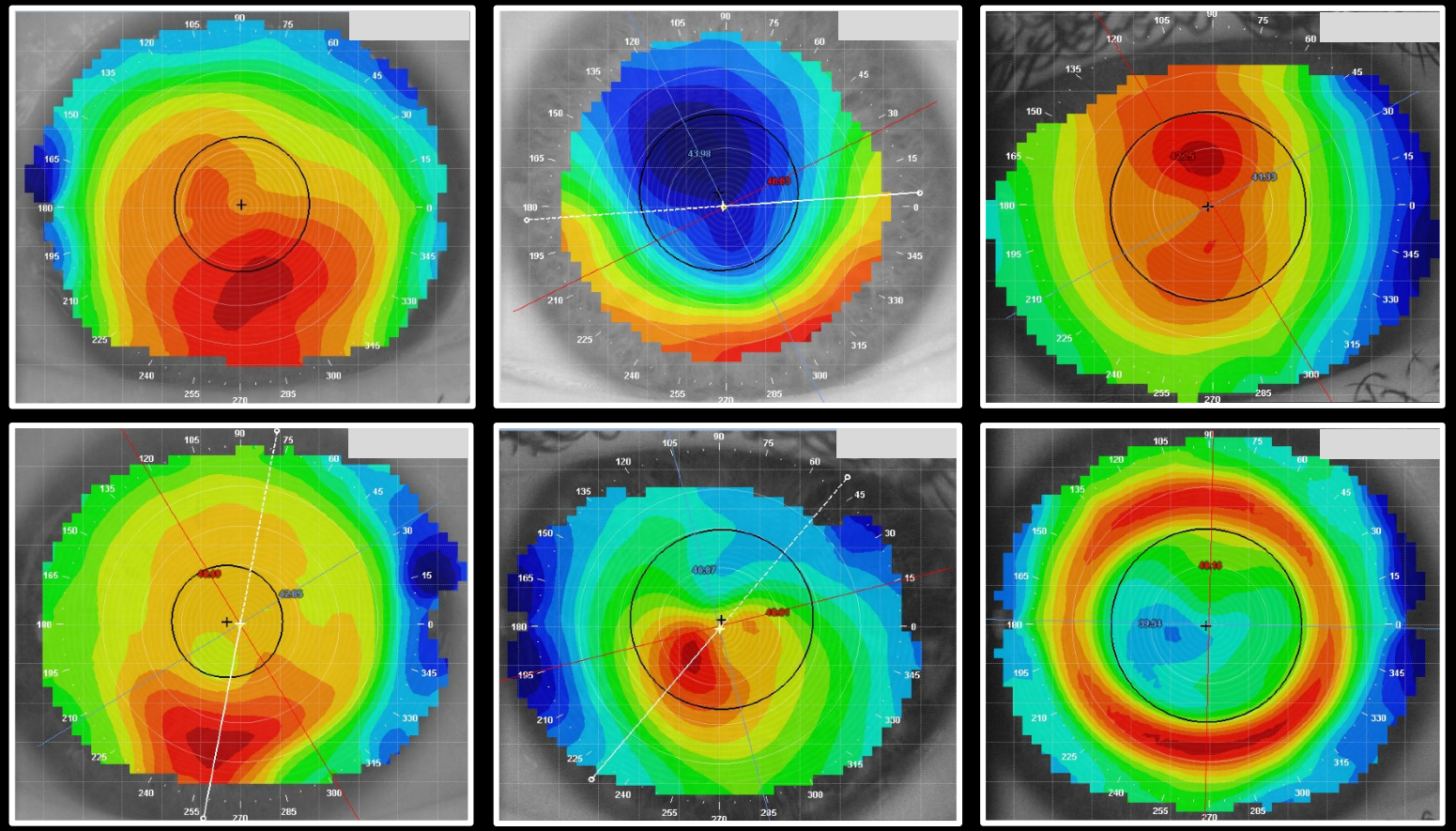




Billing Topography

- 92025 Computerized corneal **topography**, unilateral or bilateral, with interpretation and report
- CPT 92025 is defined as “unilateral or bilateral” so reimbursement is for one or both eyes
- Corneal topography is a non-invasive imaging technique for mapping the surface curvature of the cornea.[1]
- In general, diagnostic tests are reimbursed when medically indicated. Clear documentation of the reason for testing is always required. Most often, the justification is an indication of progression of a chronic disease.

Thank-you!



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