# 2. Basic Interpretation

# Welcome to Basic Interpretation

Med Sales Academy

- Emma Deighan
- Trainer in Ophthalmology for 20 Years
- Please ask questions!
- Email emma@medsalesacademy.co.uk

# Today we will learn

- Exam tips
- Exam Quality, checking for artefacts
- Placido Maps, Axial, Tangential, Refractive, Elevation
- Schiempflug - Axial, Tangential, Refractive, Elevation
- 4 Maps refraction, terms and comparison
- Ring, Zone, Pupil, Apex,

# Tips for Exams

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- Is your patient comfortable?
- Do they have problems keeping still?
- Assess them walking in
- Can they fixate?
- Check VA on notes
- Position yourself
- Be comfortable

# Tips for Exams

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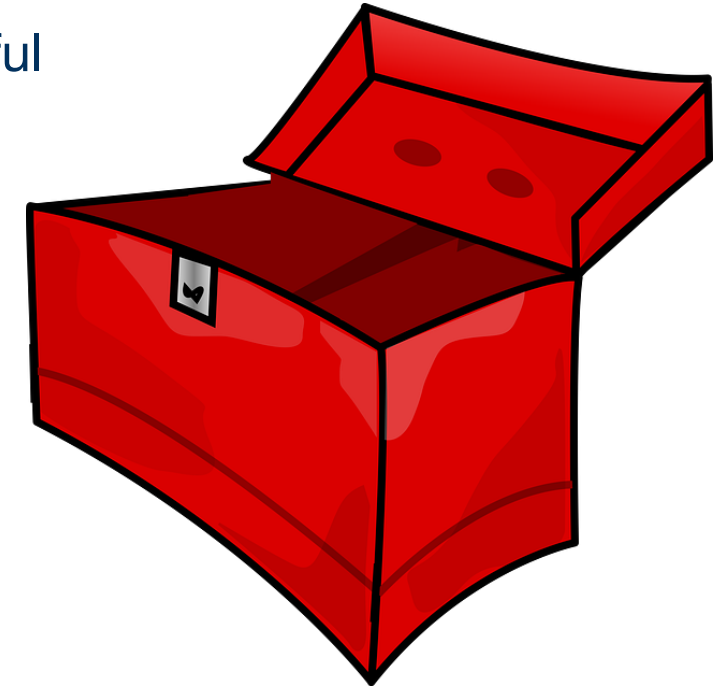
- Toolkit with the following items may be useful
  - Patch
  - Micropore tape
  - Artificial tears
  - Blackout cloth
  - Anaesthetic??



# Interpretation I

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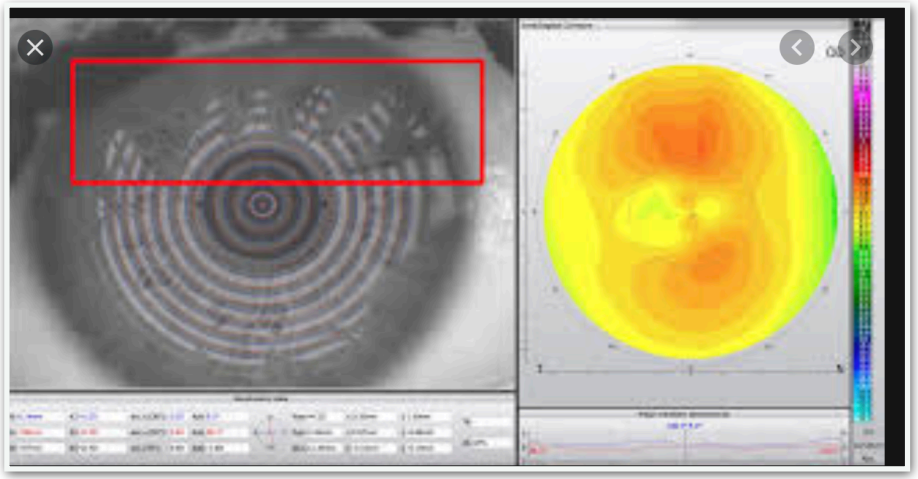
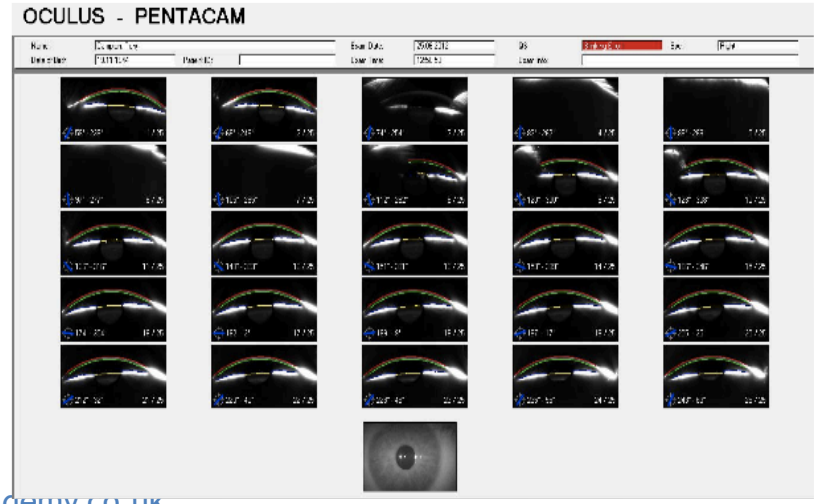
- Check the Images for
  - Blinks
  - Poor Contrast
  - Missing Data
  - Alignment





# Exam Quality

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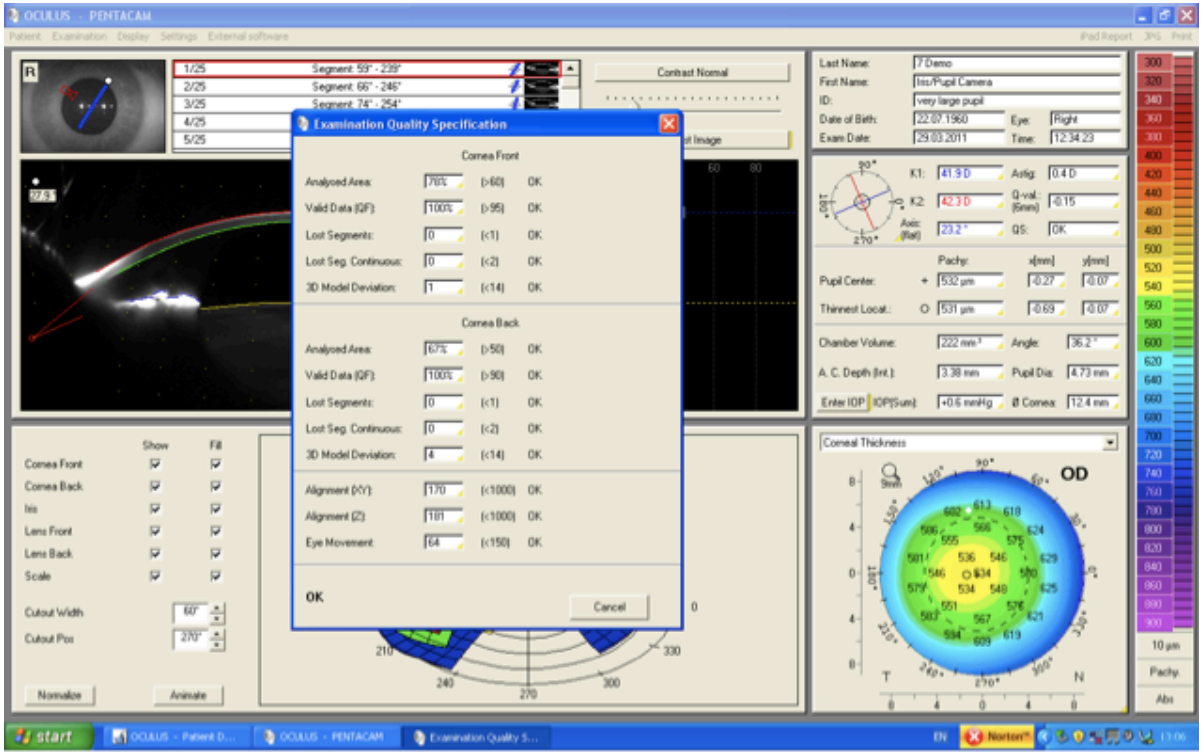


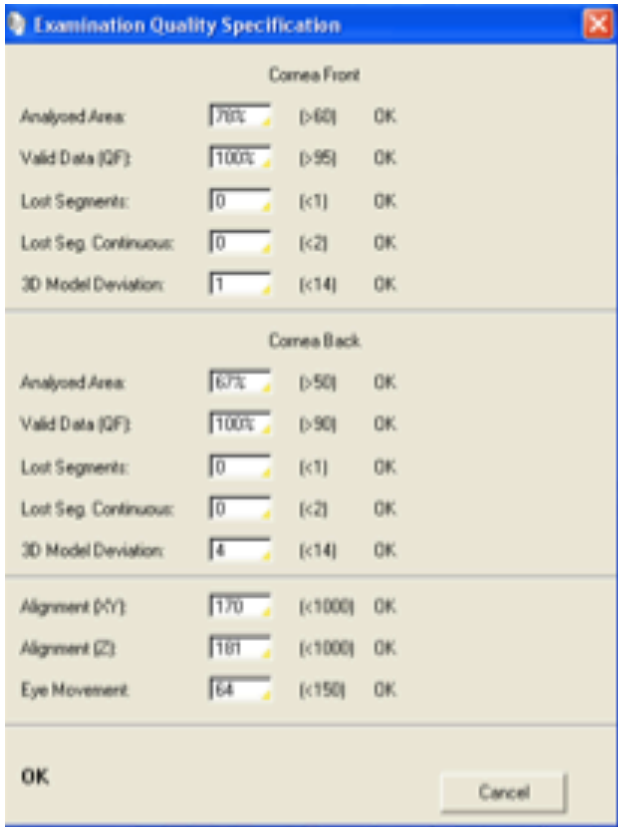

# Check all images

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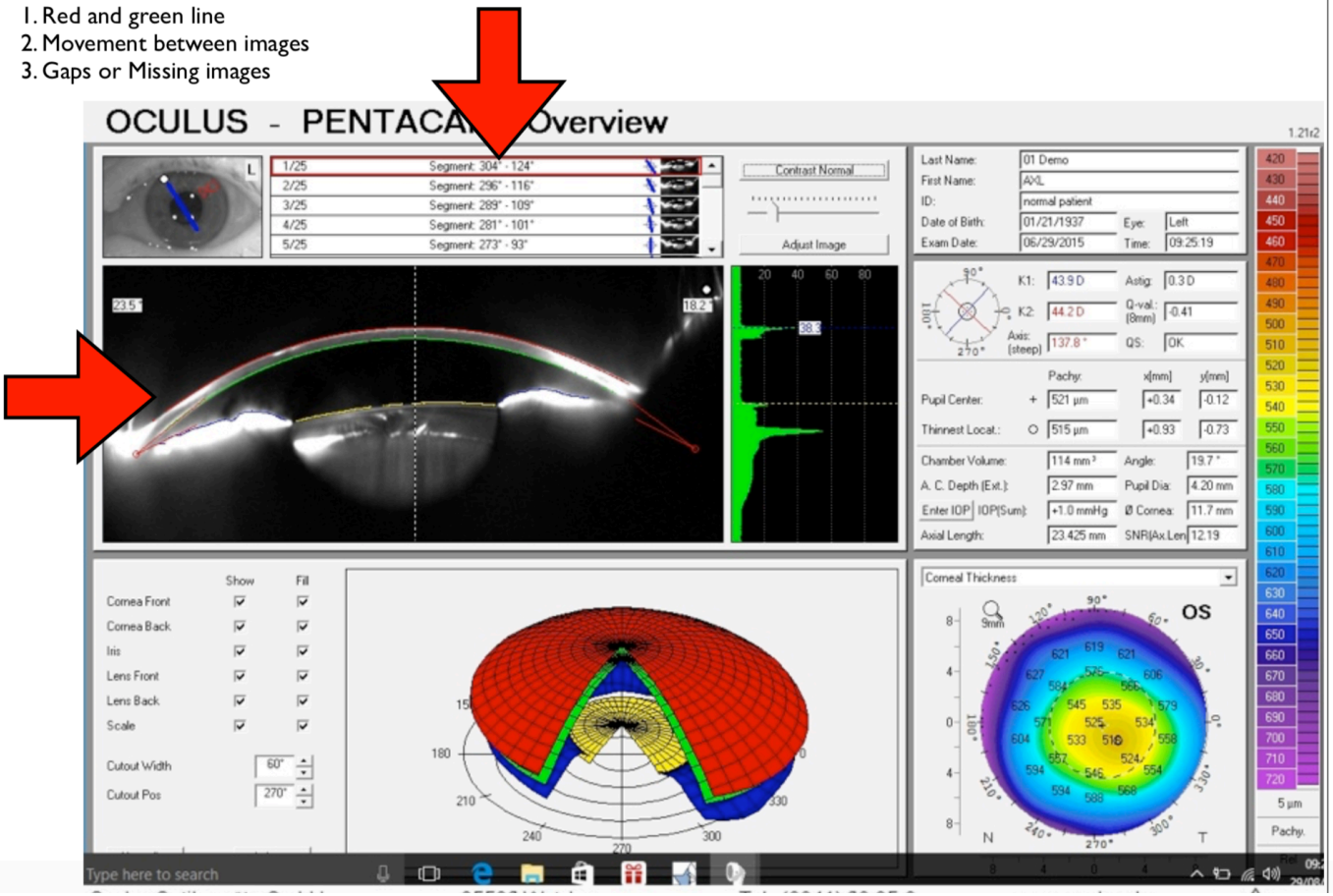
**Scroll though the images by clicking on the first image and using the down arrow**

Check

1. Red and green line
2. Movement between images
3. Gaps or Missing images



# Saggital/ Axial

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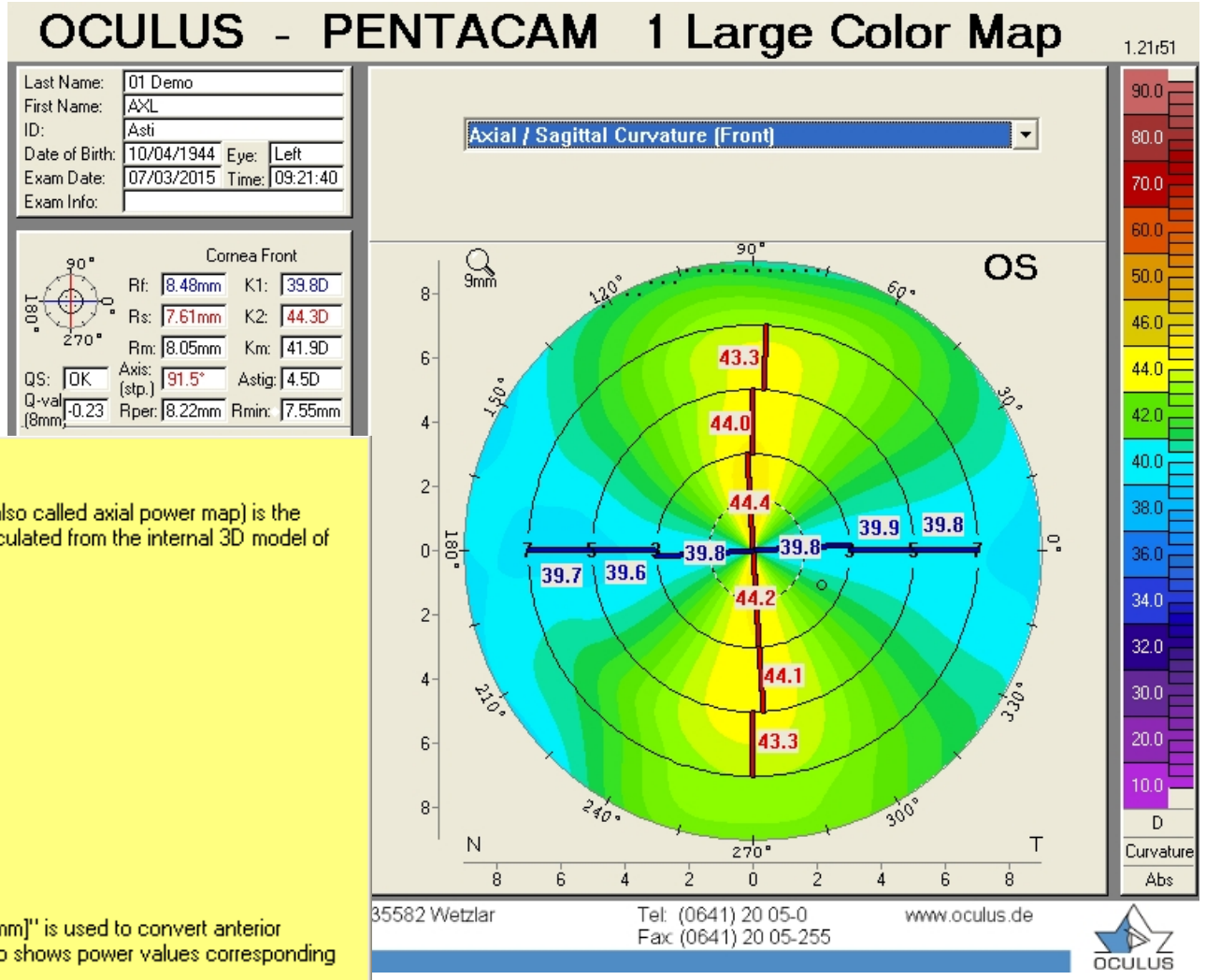
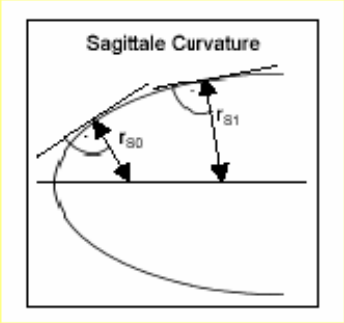



Axial/Sagittal Curvature (Front)

The anterior Axial/Sagittal Power map (also called axial power map) is the common "Placido Style Map" and is calculated from the internal 3D model of the Pentacam software.




The formula "Dpt=(1.3375-1)*(1000)/R[mm]" is used to convert anterior curvature into refractive power. This map shows power values corresponding to Placido topographers.
Each single point at any location of the color map can be individually evaluated while clicking into it with the left mouse pointer.

# Axial/ Sagittal Maps

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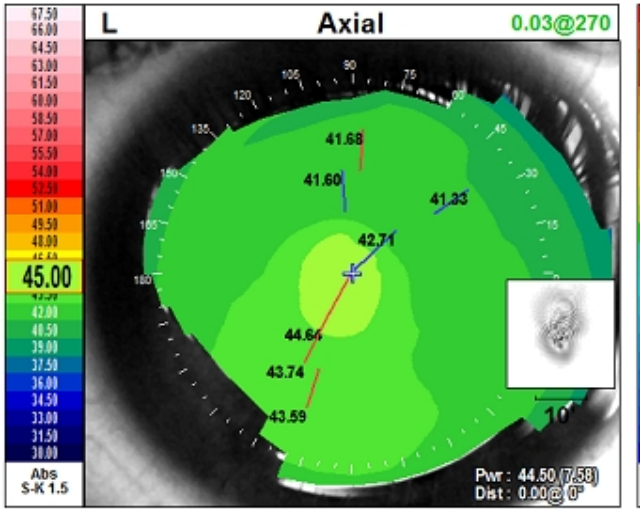
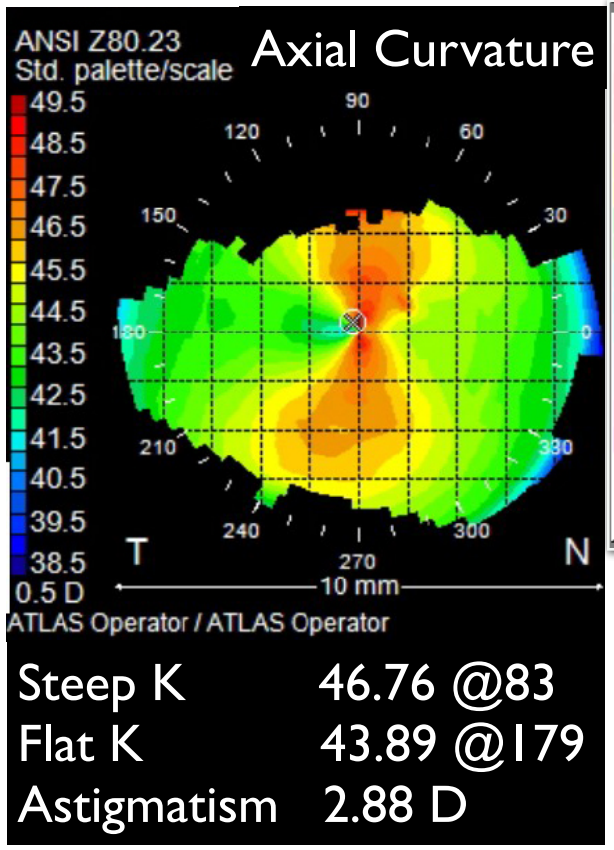
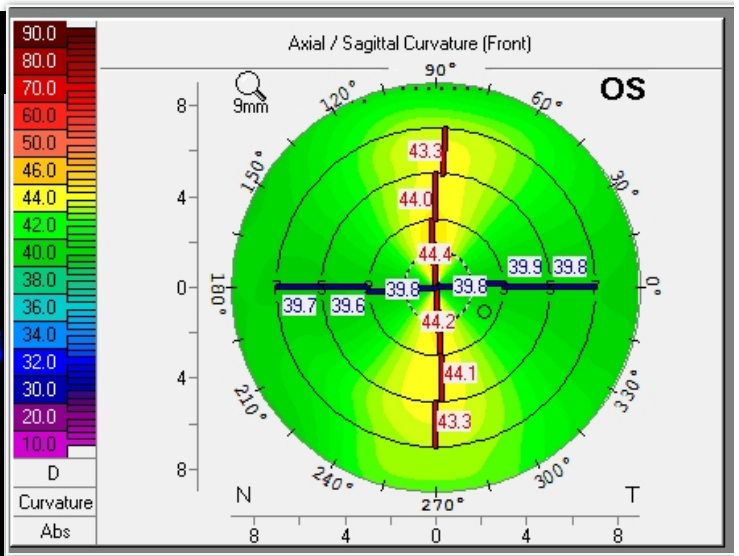
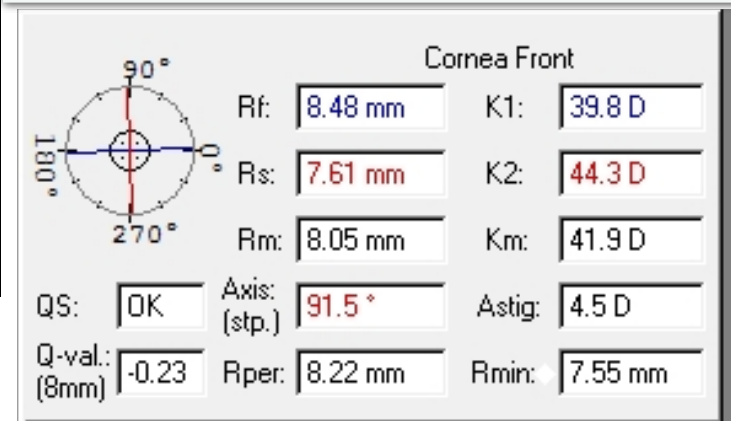



| Corneal Power | Unit:(D) | | | L |
|---|---|---|---|---|
| | Steep | Flat | Avg | Astig |
| SimK | 42.83@ 49° | 42.51@139° | 42.67 | 0.32 |
| APP | | 43.85 SD 0.90 @3.00mm | | |
| | | 43.21 SD 1.08 @Mesopic | | |
| ECCP | | 43.44 @4.50mm | | |
| Cornea SA | | -0.074µm @6.0mm | | |
| Corneal asphericity | | Q: -0.58 | e: 0.76 | |
| Indices | | PVA: 20/20(20/10-20/30) | | |
| | | SDP / SRI / SAI: 1.26 / 1.02 / 0.74 | | |




| | |
|---|---|
| Steep K | 46.76 @83 |
| Flat K | 43.89 @179 |
| Astigmatism | 2.88 D |



# Sagittal Map

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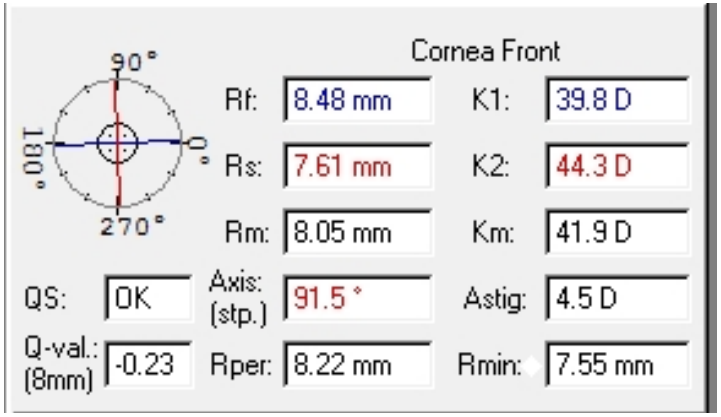


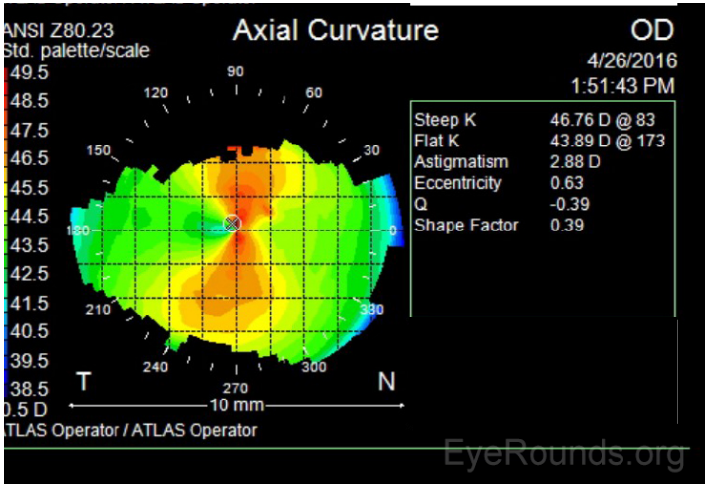


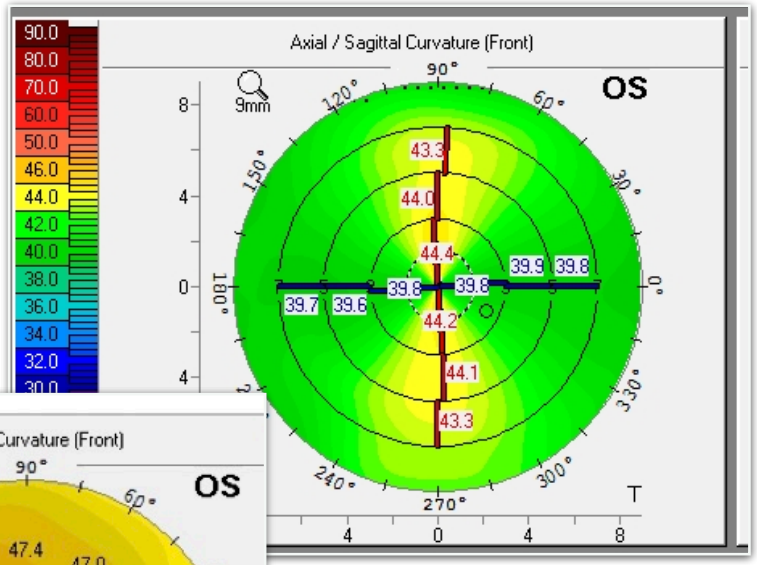


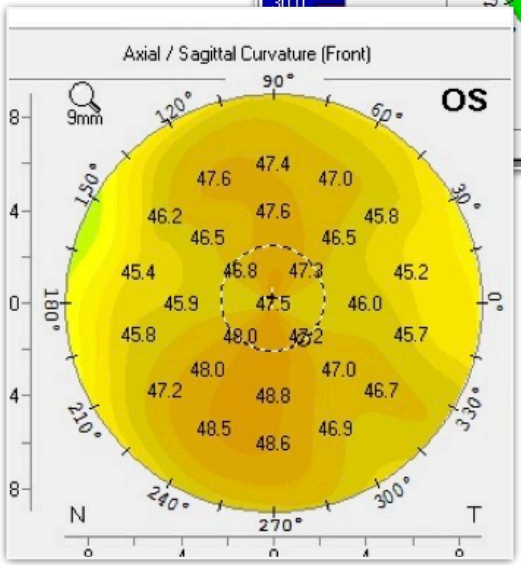

# Scales

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- **Absolute**
  - Colour linked to number is same colour on other maps
  - Colours can be compared between patients
- **Relative**
  - Colours are spread across individual maps
  - Colours can not be compared across patients
- Always look at scales and numbers
- Do not rely on colours

# Tangential

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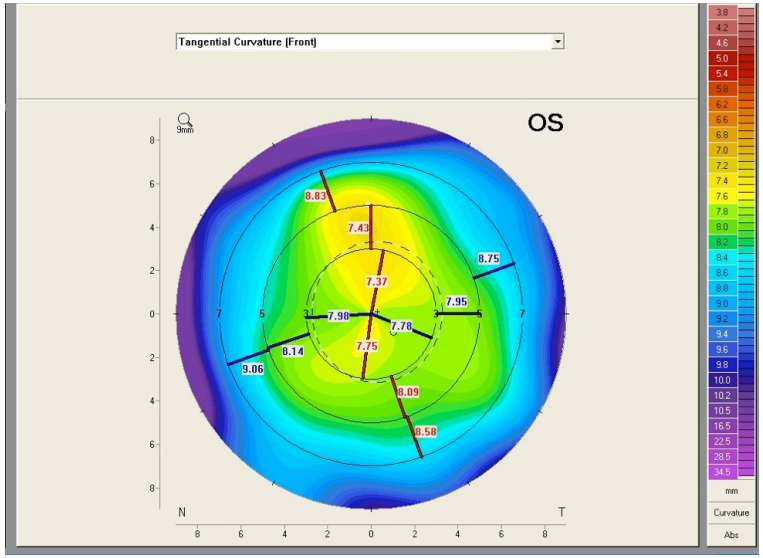


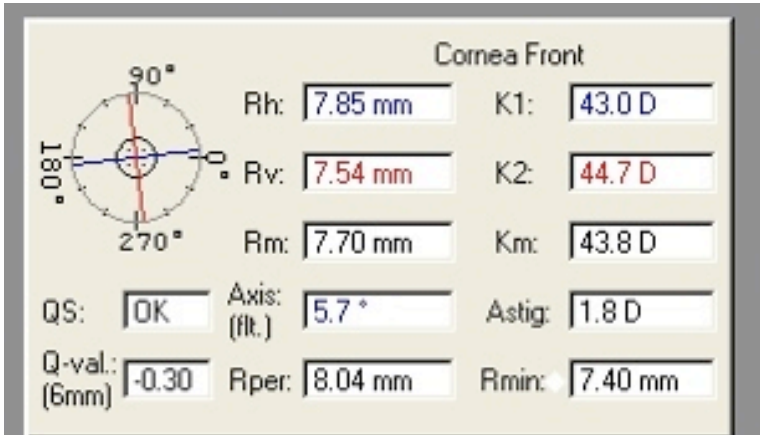


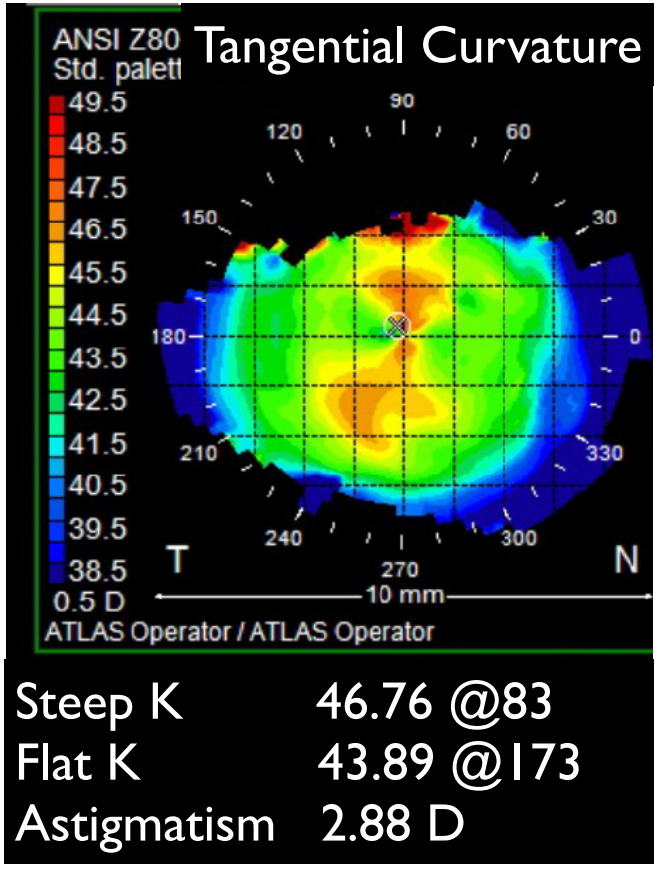


| | |
|---|---|
| Steep K | 46.76 @83 |
| Flat K | 43.89 @173 |
| Astigmatism | 2.88 D |

# Best Fit Sphere

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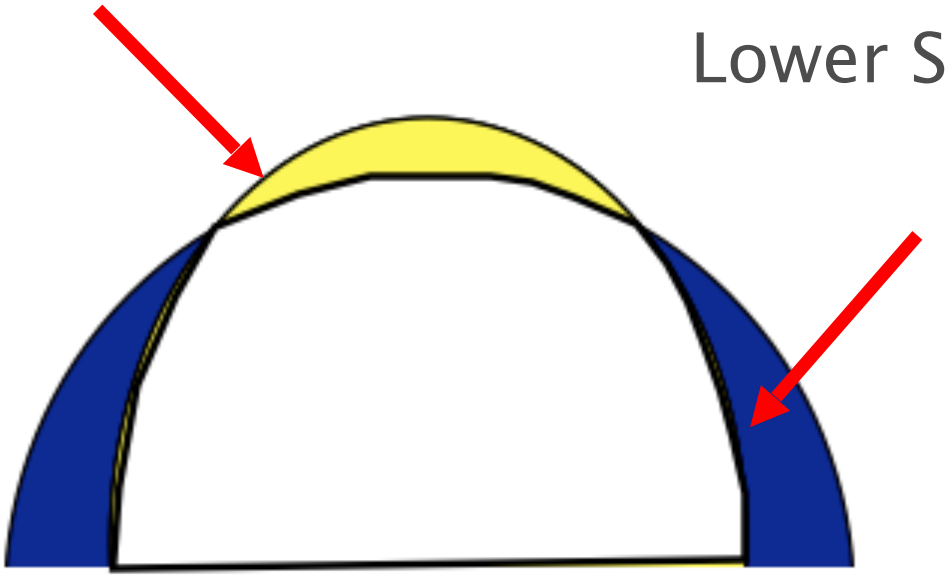
Higher Flatter Tissue

Lower Steeper Tissue



# Elevation

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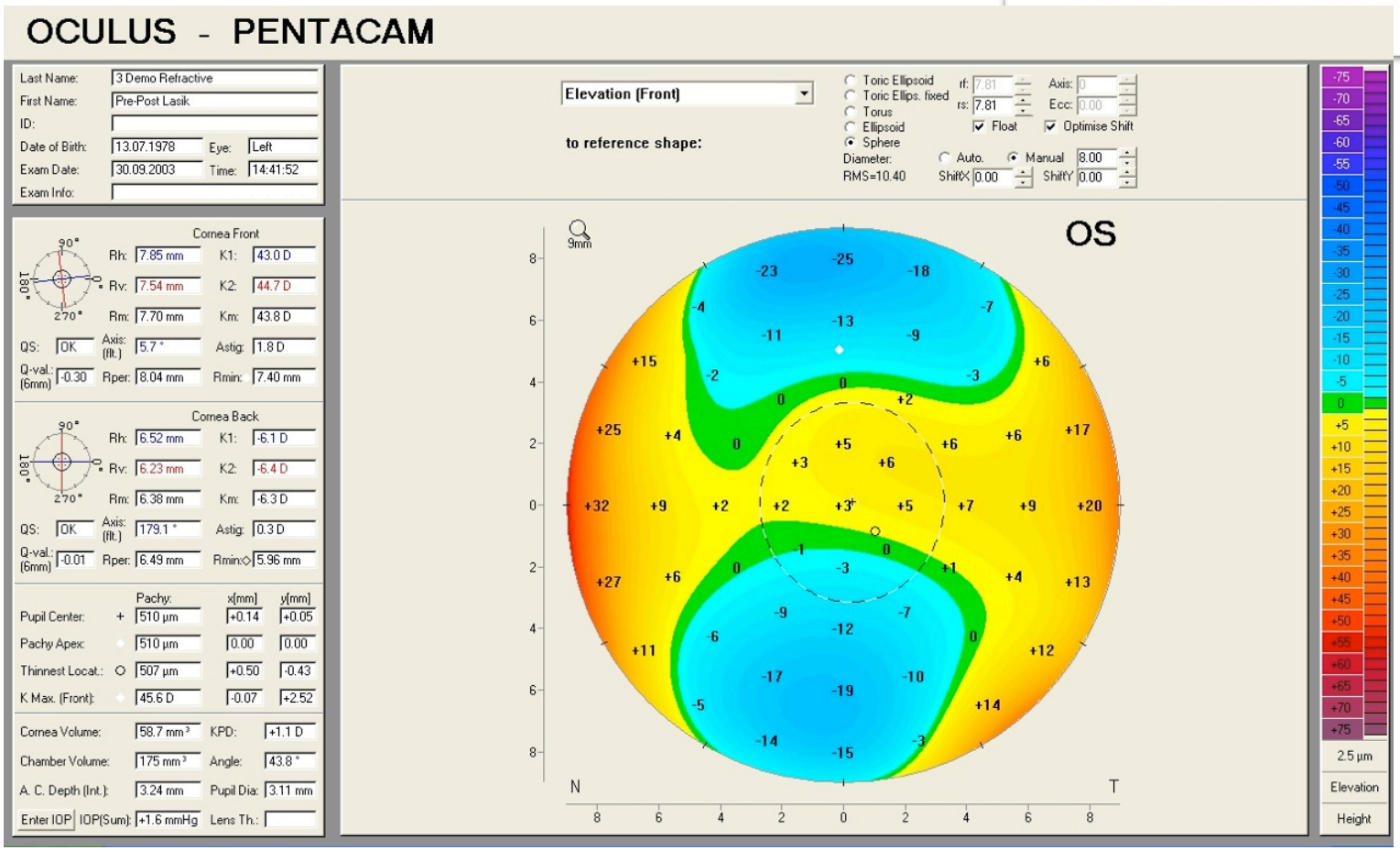

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# Thank you!

- We will email you some questions.
- Please send your questions and comments to emma@medsalesacademy.com
- We look forward to seeing you on the next course - **Understanding Reports**