

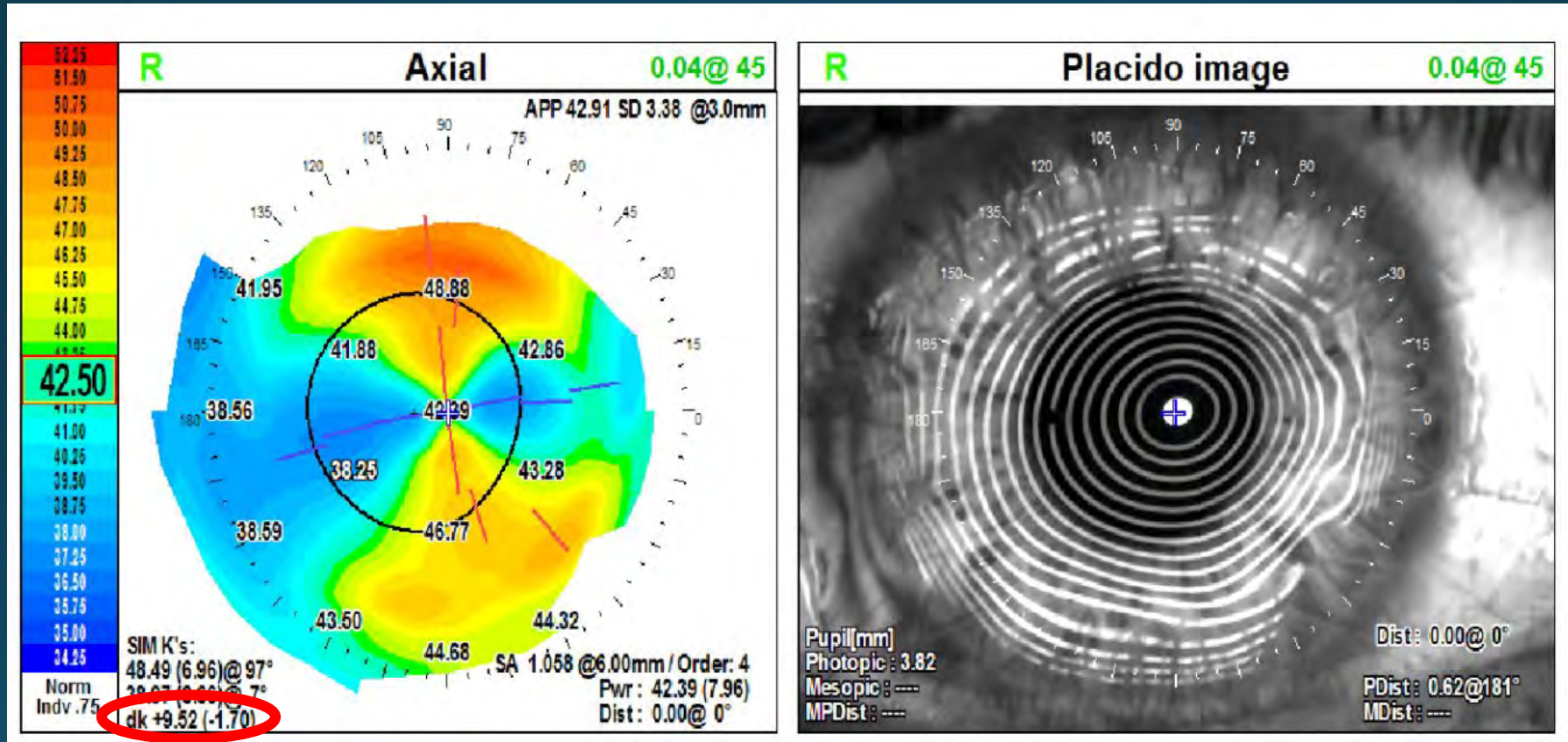
Large Diameter DALK:

Intraoperative and Post-operative Astigmatism Management

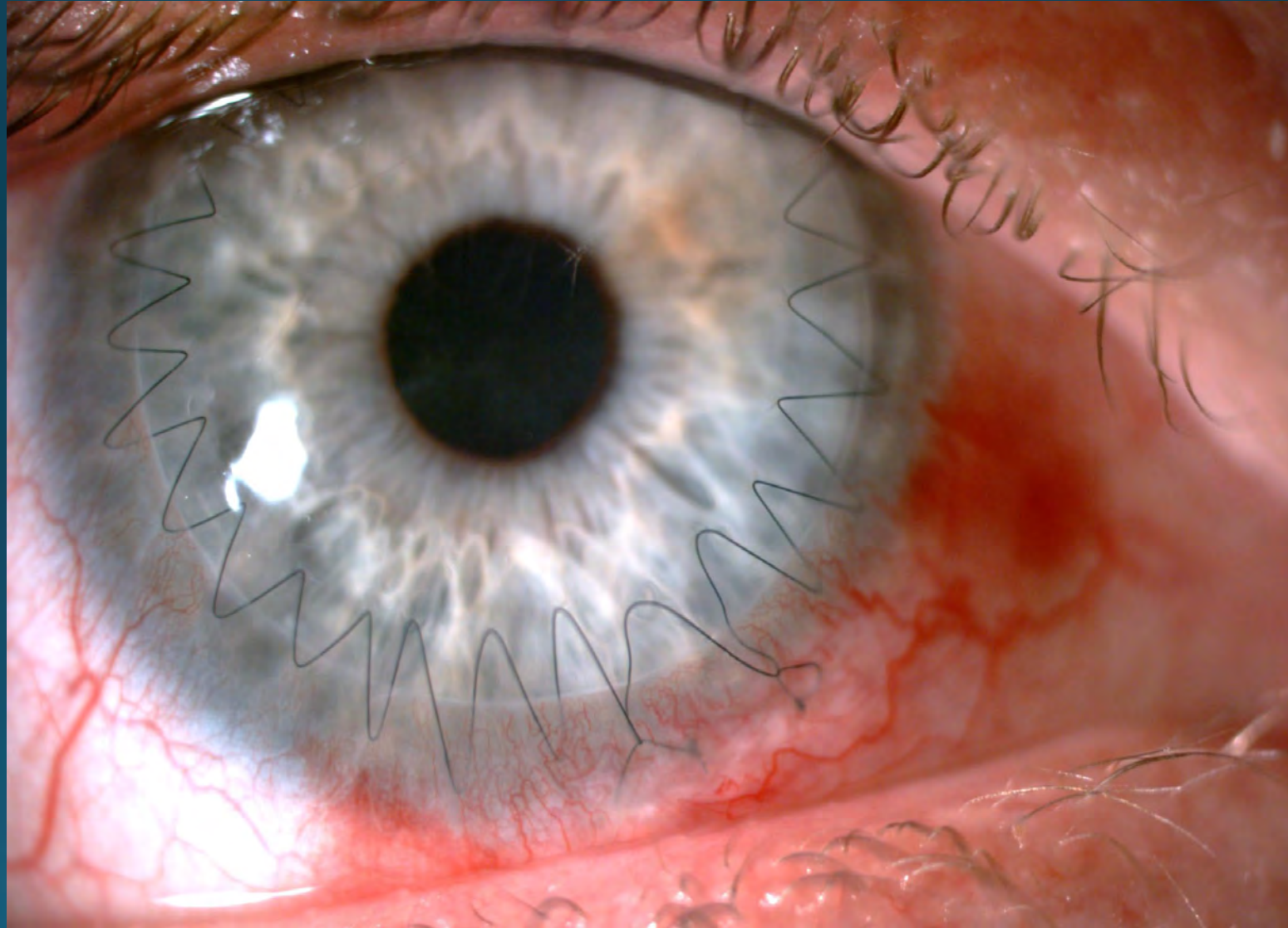
Is DALK Adjustable in early post-op period?

- Yes! Running suture adjustment under intraoperative keratometer

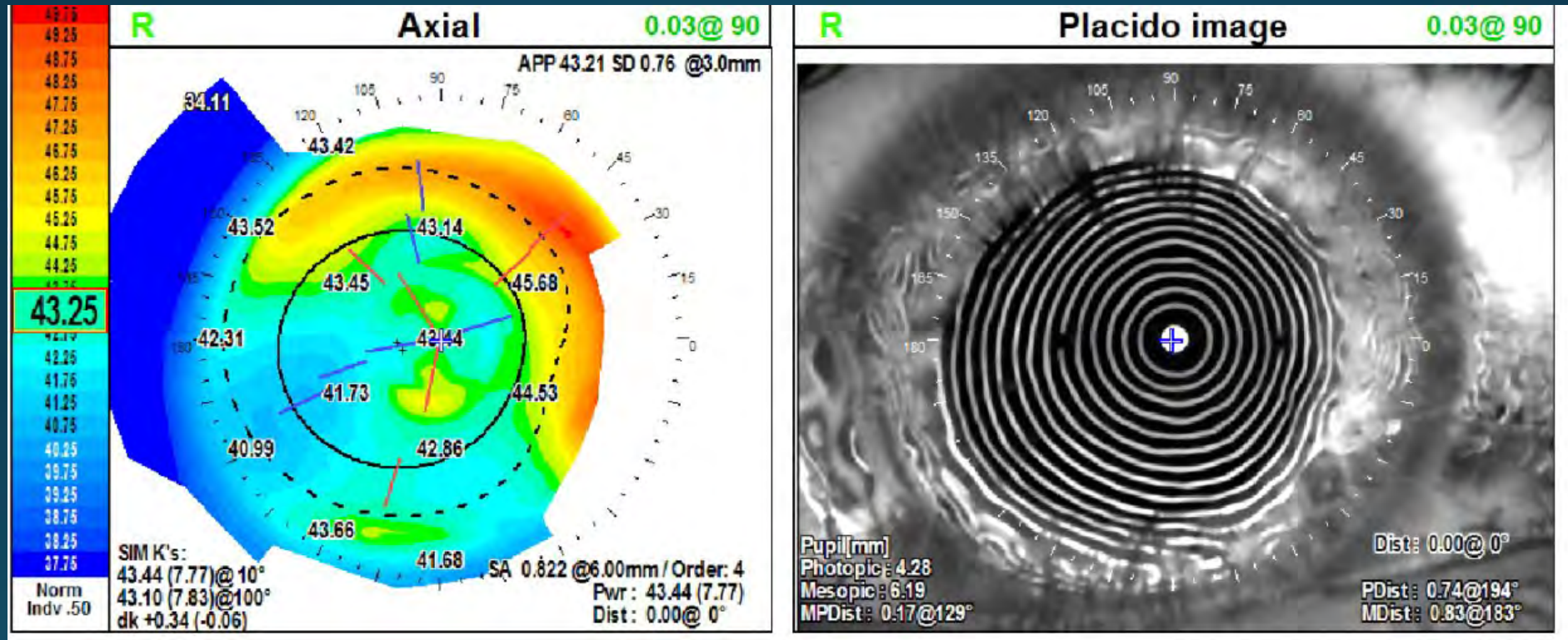
Case 1
 18yo Keratoconus 5 wks after DALK
 almost 10 D w-t-r astigmatism



Case 1: Running suture cheese-wired @ 4-5 o'clock
added 2 interrupted 10-0 nylon sutures and readjusted suture tension under
intraoperative keratometer



Case 1:
2 wks after running suture adjustment:
Uncorrected VA 20/40 +0.5+0.75x78 20/30



Case 2: DALK: early visual rehabilitation

47 yo male Severe keratoconus

Left Eye

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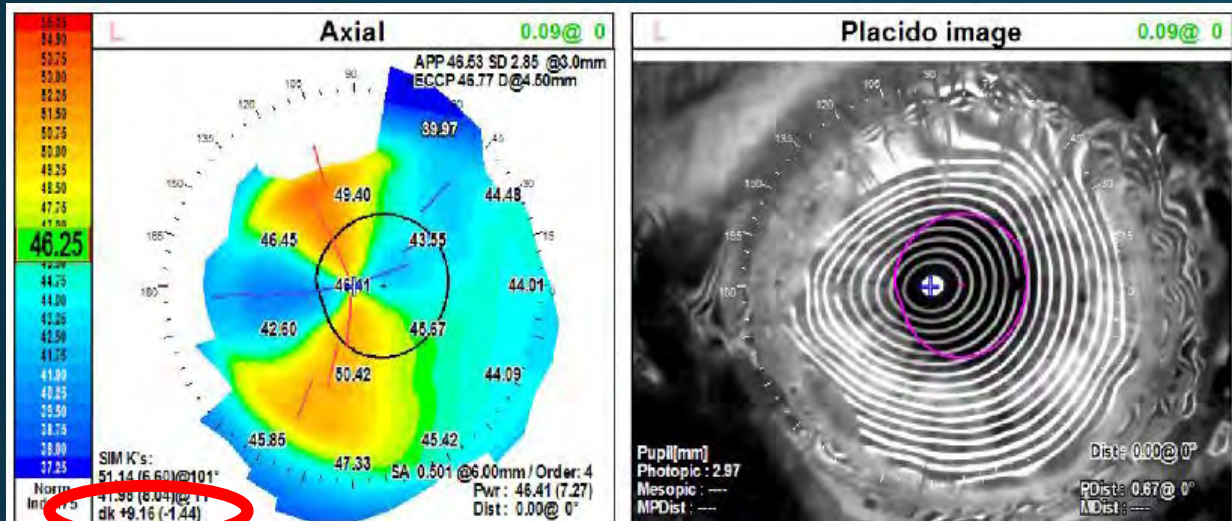
3/5/2024 OS donor epithelialized, deturgescenced and initial shape reveals high astigmatism - running suture adjusted again under intraoperative keratometer

2/6/2024 OS DALK 9.5mm bed/9.75mm donor 24 bite running suture adjusted under intraoperative keratometer

Case 2: 47 yo male Severe keratoconus

Left Eye

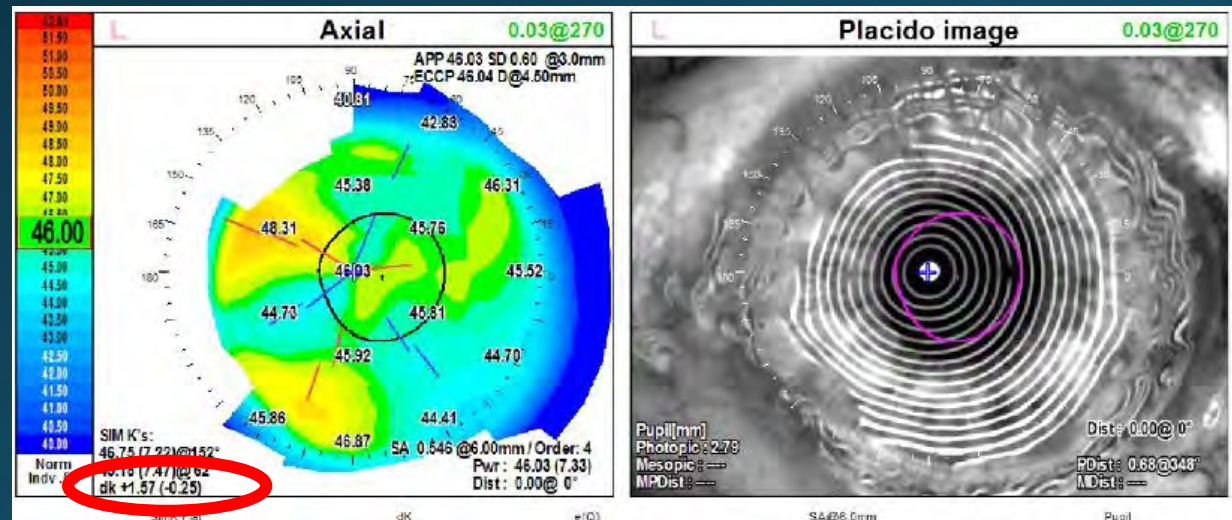
2/6/2024 OS DALK 9.5mm bed/9.75mm donor



2/28/2024

-2.0 +5.0 x 105 20/80

3/5/2024 running suture adjustment



3/18/2024

-4.75+1.50 x 160 20/25

Richard Erdey MD

Is DALK Astigmatism Adjustable after suture removal?

- Yes! With scleral tunnel lamellar incisions made on steep axis.
- Caveat: AVOID penetration into the anterior chamber at end of tunnel
- Why? I've experienced 2 cases where penetration into the ac caused late decemet's membrane detachment resistant to multiple attempts at air rebubbling. One required PKP, the other was reattached after 4 rebubble attempts, did well for 2 yrs then developed endothelial failure requiring DMEK.
- While you get a bit more meridional flattening with full thickness scleral tunnel penetration into the ac it is NOT worth this unnecessary risk!
- Non-penetrating incisions still work surprisingly well.

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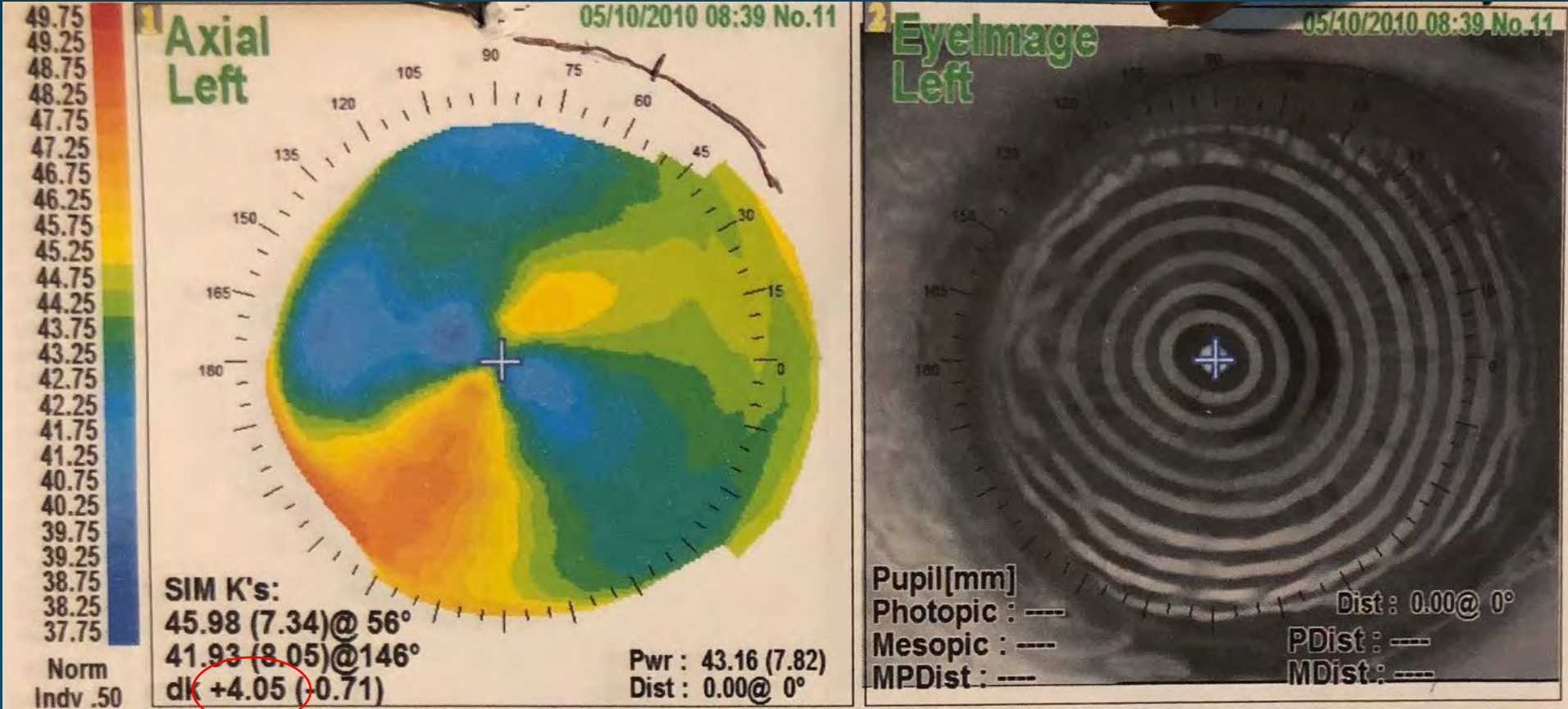
The Incision



3-7. Shelf of the incision. The shelf portion of the incision holds the iris back and helps prevent iris prolapse.

Case 1

May 2010 Cataract Extraction with single long (7mm) Scleral tunnel incision x 60 (on steep axis) and Staar AQ2010V 18.5 IOL
Mar. 2010 (8mos aft DALK) Running Cornea Suture Out

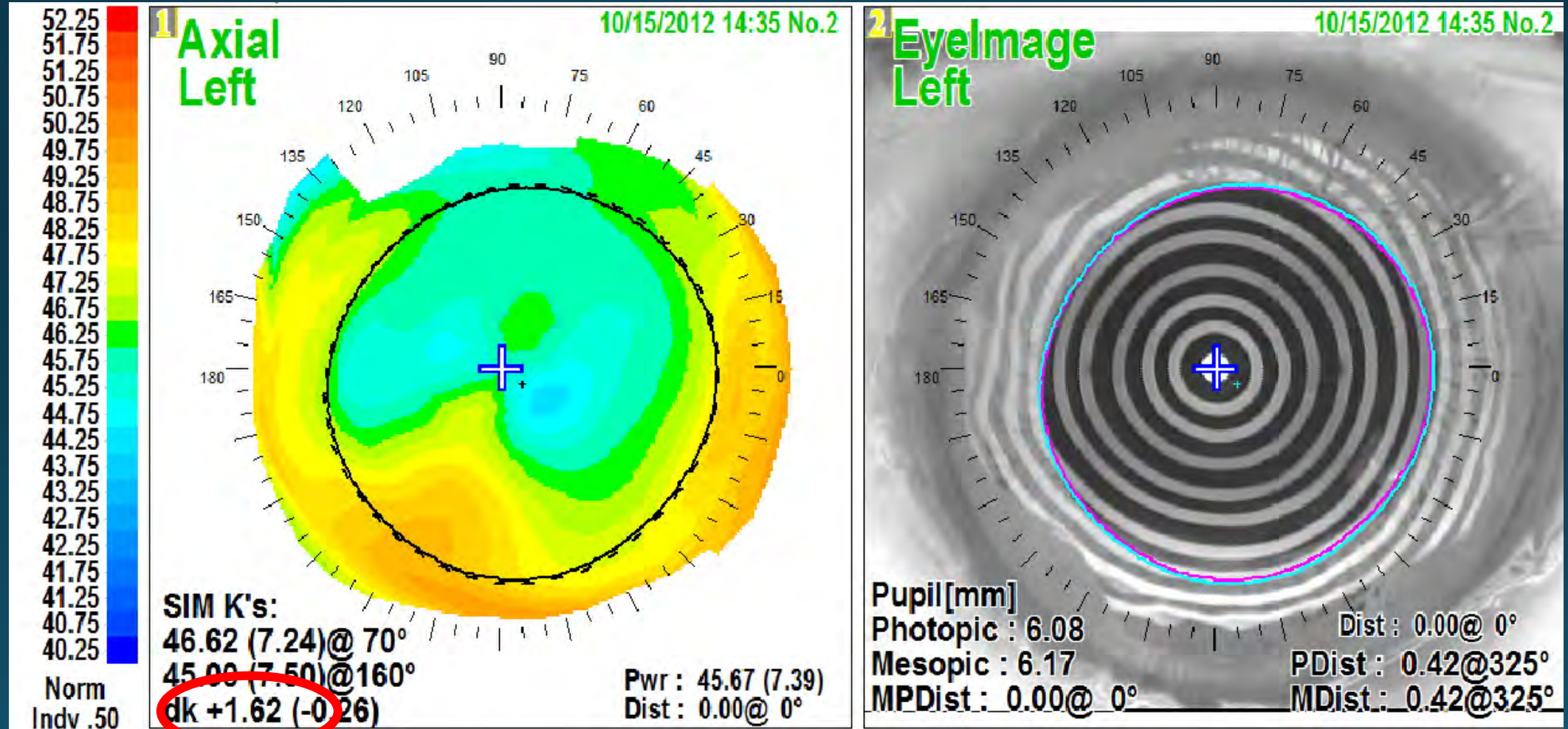


Case 1

Left Eye

Oct. 2012

3yrs aft DALK, 2yrs aft Cat Ext monofocal IOL long scleral tunnel steep axis
-3.5+0.50 x 22 20/25-2 (note low topo cyl 1.62 – circled in red)



Case 2

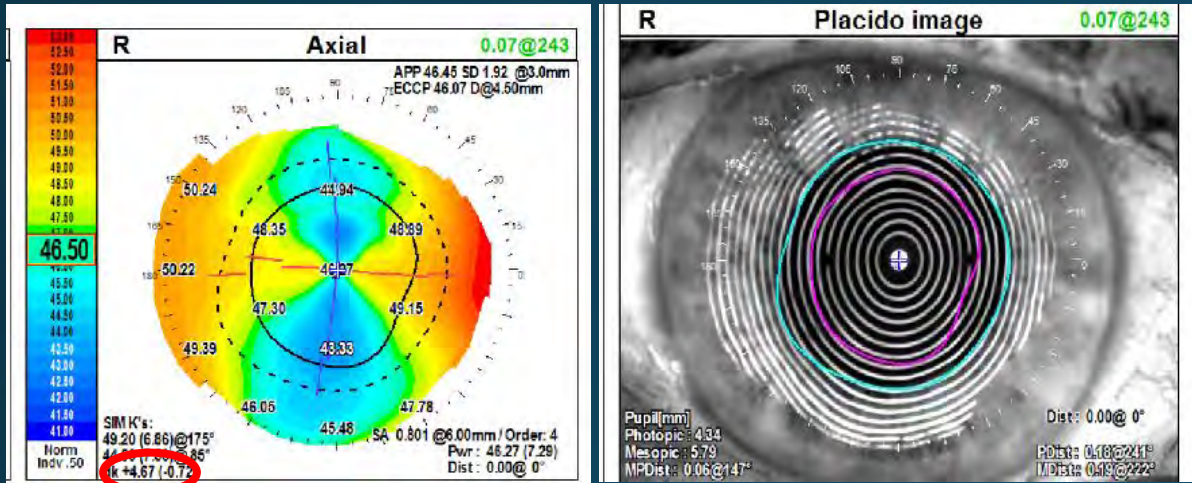
Right Eye

64 yo male Severe Keratoconus

8/10/23 removed running cornea graft suture

2/14/23 removed Intacs/DALK 10.0mm bed/10.5mm donor

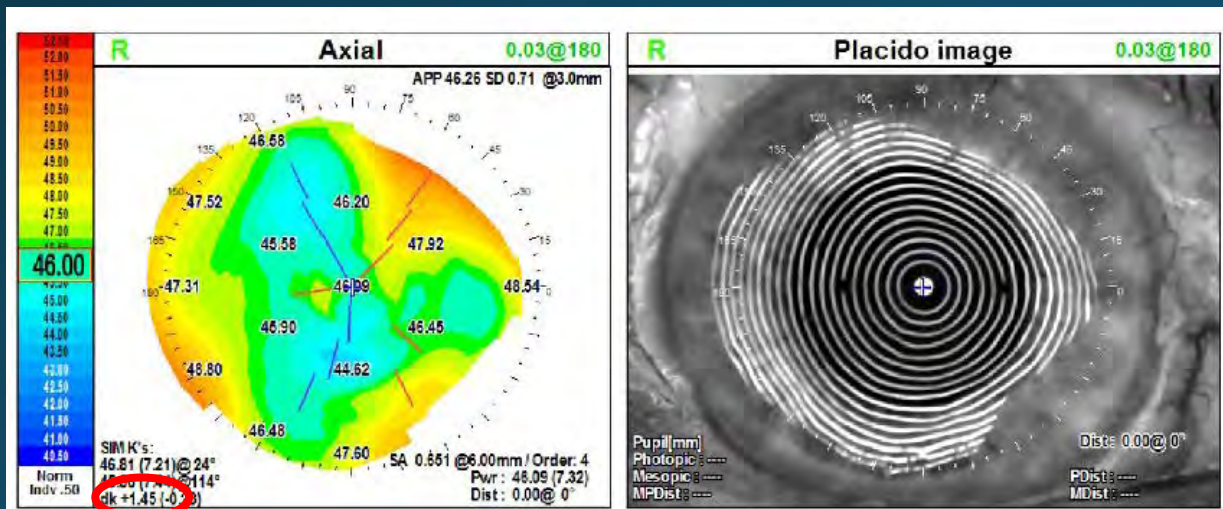
2007 Intacs



10/26/23 topography

- OD -14.0 +6.0 x 173 20/40

1/16/24 AK paired scleral tunnel x 180



3/20/24 topography (left): note reduced astigmatism

- OD -13.5 +1.25 x 160 20/60

7/2/24 cataract ext with LAL for optical rescue

OD near plano 20/25!! LDD treatments will be done over next several weeks