Paul J. Dougherty, MD

Dougherty Laser Vision

Westlake Village, California

Camarillo, California

Beverly Hills, California

Jules Stein Eye Institute

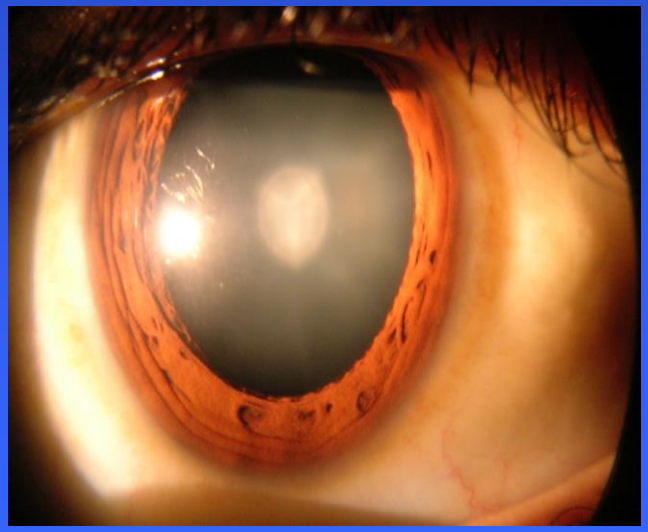
Los Angeles, California

DLV VISION

Cataract/RLE Surgery Co-management

DLV VISION

Dysfunctional Lens Syndrome (DLS)/Cataracts



Age-related loss of visual quality and natural lens clarity

DLS/Cataracts eventually affect everyone!

The Dysfunctional Lens

- The lens begins to age from the day we are born.
- We lose accommodation (zooming) as the lens grows in size and hardens.
- Clarity and zooming is lost due to oxidation of lens proteins

Loss of Zooming by Age

Age	Amplitude	Age	Amplitude
10	14.00	**45**	03.50
15	12.00	**50**	02.50
20	10.00	**55**	01.75
25	08.50	**60**	01.00
30	07.00	**65**	00.50
35	05.50	**70**	00.25
40	04.50	**75**	00.00

DLS Stages

- Stage 0: Great accommodation and visual quality
- Stage 1: Good visual quality with loss of accommodation
- Stage 2: Loss of accommodation and decreased night vision/quality
- Stage 3: Loss of visual acuity (Snellen chart) in addition to accommodation and visual quality

DLS: Slit Lamp

Stage *One*	Stage *Two*	Stage *Three*
		

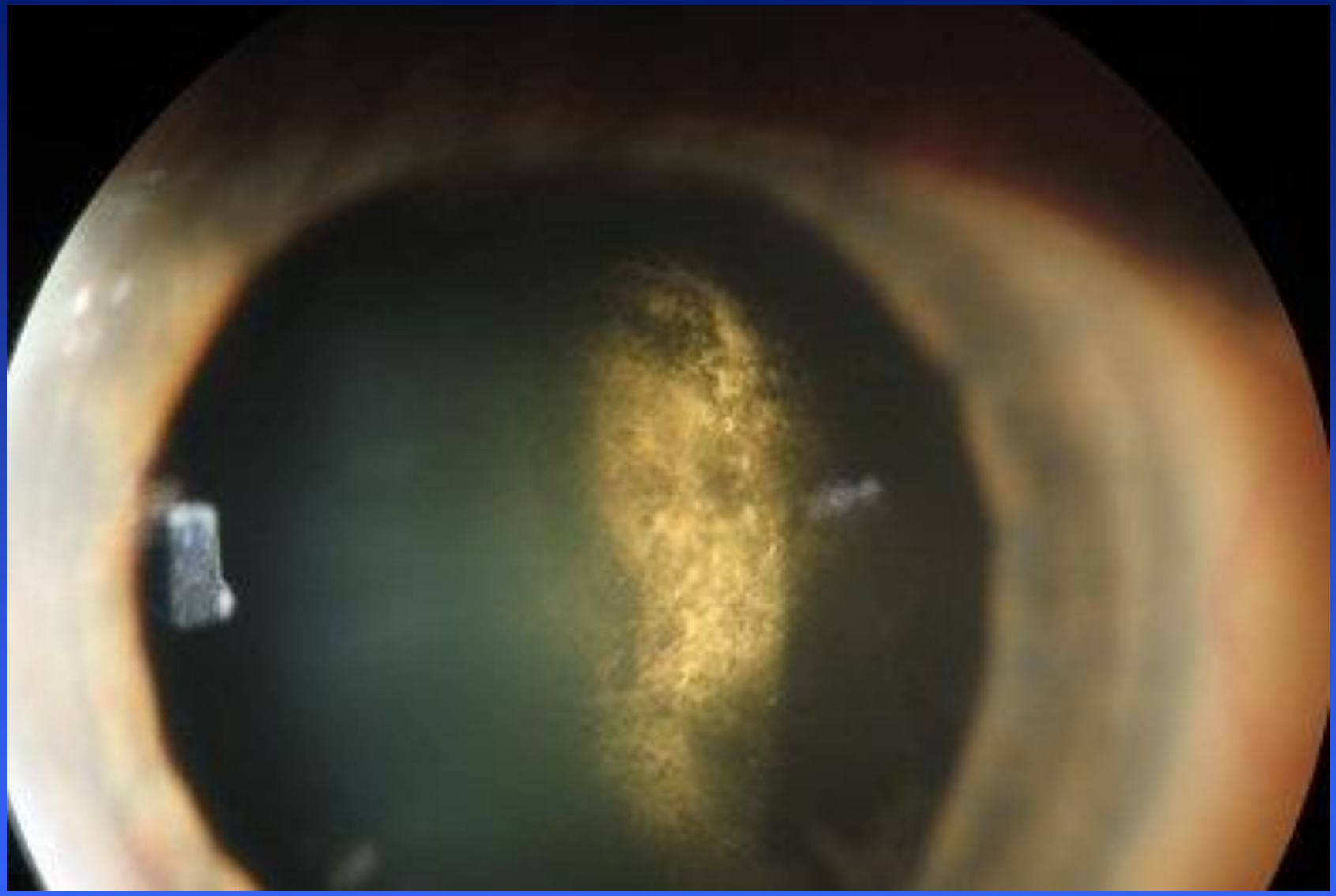
Poll Everywhere
When do you send a cataract out?

- 20/25
- 20/30
- 20/40
- When the patient complains about vision impairment from the cataract regardless of acuity

When to Refer Cataract

- As soon as the patient has ANY complaint related to lens opacity (even minimal – usually night glare) even if 20/20
- Highest rate of glasses re-makes in a practice is an early cataract patient – lost revenue, chair time and patient referrals
- Glare vision (BAT) will frequently be much worse
  - PSC cataract
- Insurance coverage if 20/40 with glare – some start paying at 20/30
- Benefit – early treatment of symptoms, surgery less complicated, minimize use of glasses/contacts, fewer re-makes

DLV VISION



DLV VISION

DLV VISION

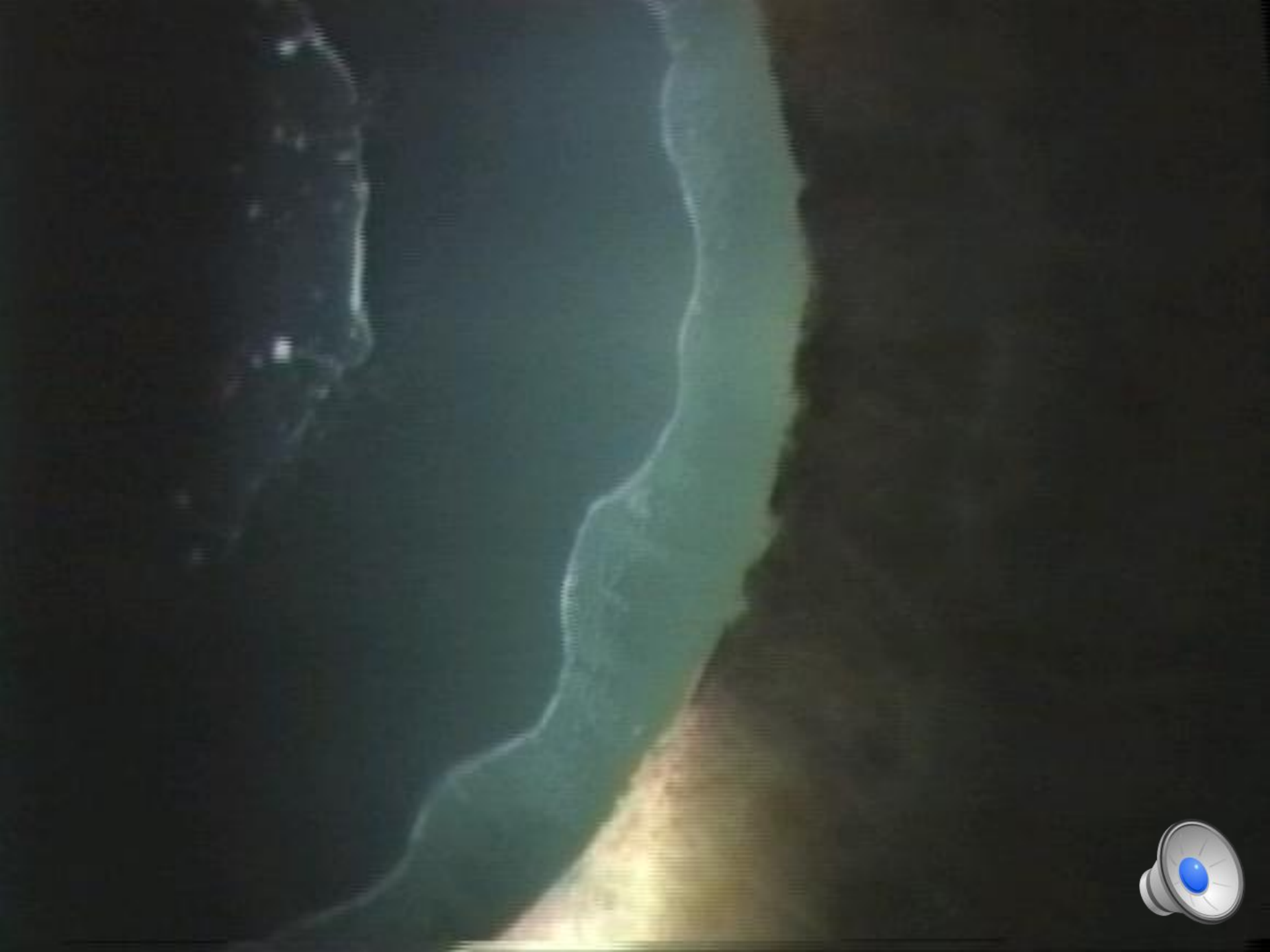
Your Cataract Pre-Op Work Up

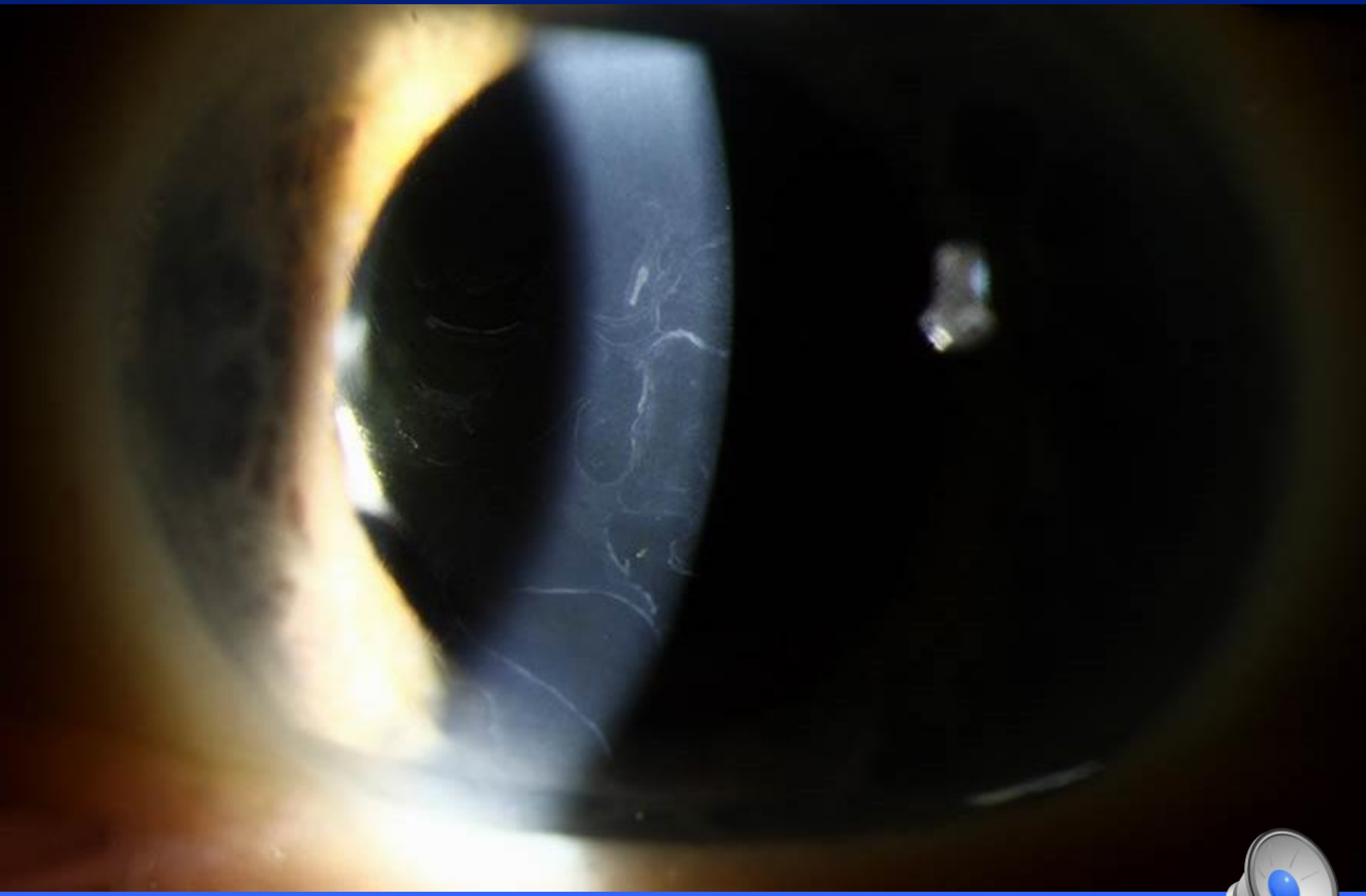
- IF NOTHING ELSE, PLEASE SEND US YOUR MOST RECENT REFRACTION AND BCVA
- What to send
  - Most recent refraction (the last time that you refracted them)
  - Best-corrected vision

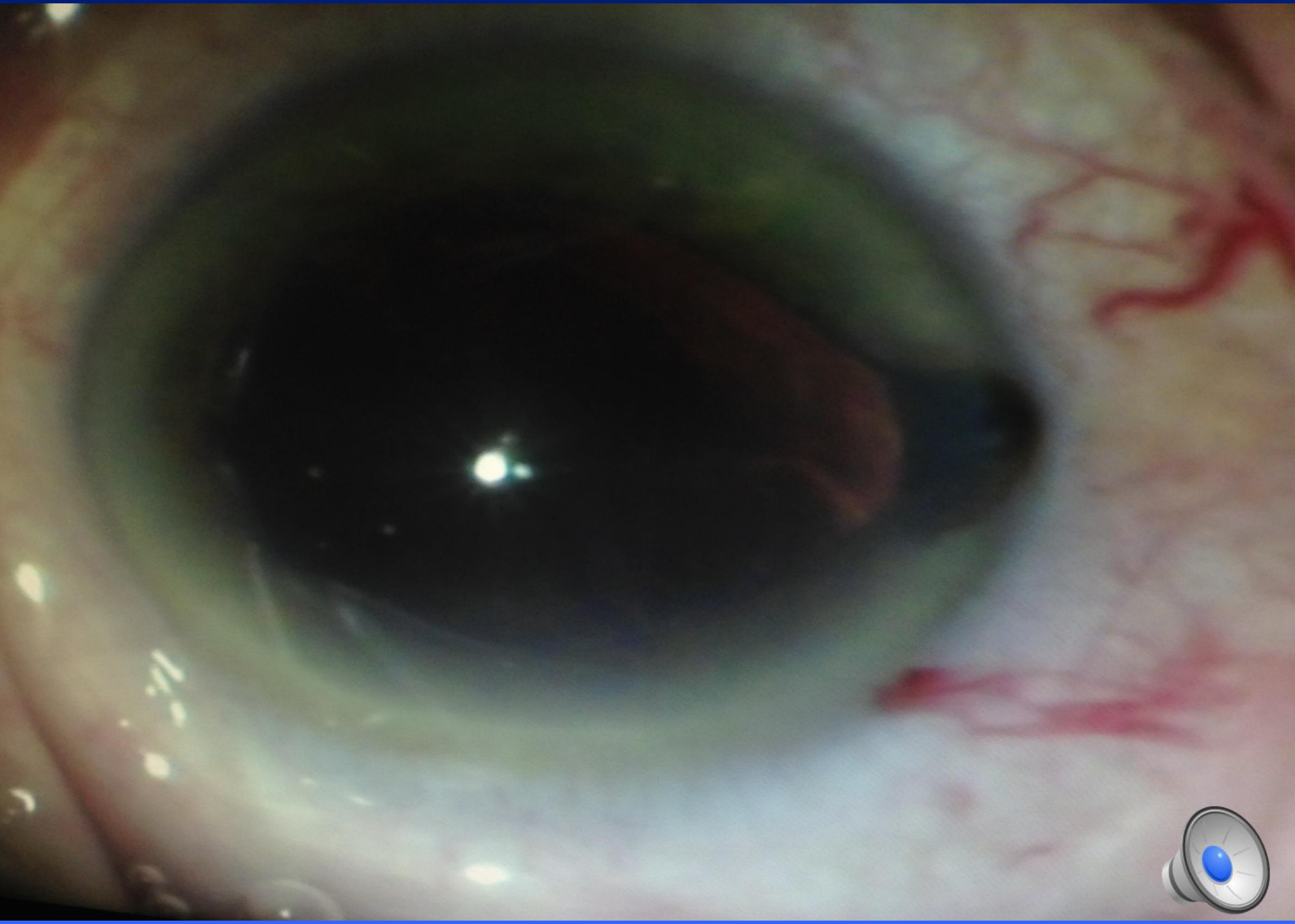
DLV VISION

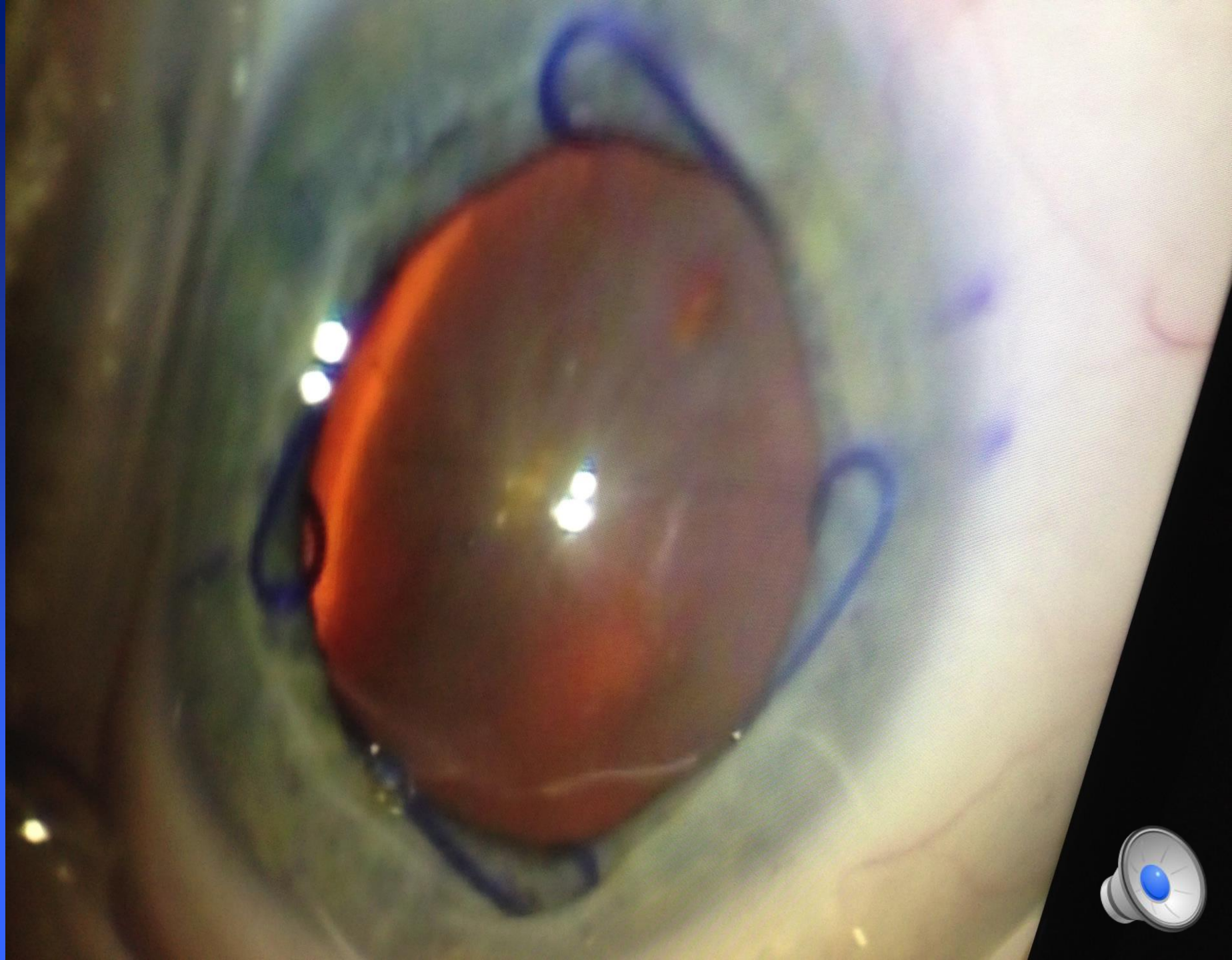
Our Cataract Pre-Op Work Up

- Patients now can complete the pre-op paperwork online in advance through our patient portal (cuts appointment time by 30 minutes)
- Document a functional complaint (reading, night driving)
- Document decreased BCVA (20/40 with BAT) and lack of spectacle improvement
- Ask about history of trauma, look for phaco/iridodynesis
- Ask for a history of prostate meds (ie Flomax) – floppy iris
- Look for corneal guttata/dense cataract – corneal edema
- Look for pseudoexfoliation – glaucoma, loose zonules
- Look for Map-dot fingerprint dystrophy - abrasion
- B-scan if mature cat to r/o RD, tumor
- Start NSAID (Prolensa qd or Diclofenac tid) 3 days prior if ERM, Active DR



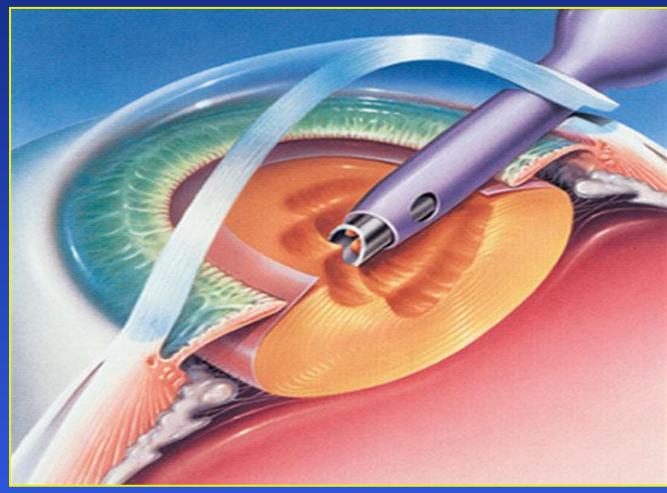


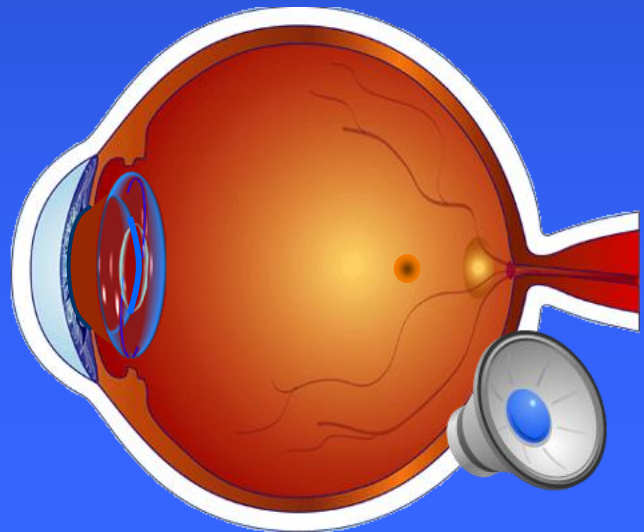




Cataract/IOL

- +/- laser then phaco (ultrasound)
- Eyedrop anesthetic
- 7 minutes/eye
- Minimal discomfort
- Vision usually returns in the first few days





DLV VISION

DLV does In-office Lens Surgery

- Class A in-office surgery suite in Westlake
- Different from a hospital or outpatient ASC
- How?
  - Surgery is done INSIDE of our office
- Easier and more cost-effective for the patient
- This is the future of cataract surgery
- Allows us to do both eyes on the same day for cataract/RLE/ICL

DLV VISION

ASC or In-office?

What's the Difference?	In Office	ASC
Bilateral Surgery	Yes	No
Anesthesia	No	Yes(More Expensive)
Refractive Lens Exchange	Yes	No (More Expensive)
ICL	Yes	No (More Expensive)
Patient Privacy	Yes	No
Cash Pricing (HMO, High D)	Yes	No
Scheduling Flexibility	Yes	No
Medical Problems	No	Yes
Medicare	No	Yes

Same-Day Bilateral Surgery

- Routinely offered except for following circumstances
  - Insurance Cases (pay for 1 eye at a time)
  - Certain medical and ophthalmic conditions such as previous refractive surgery, Fuch's Dystropy, PXE etc.

DLV VISION

Post-Operative Visit Schedule

- Visits at 1 Day, 1 Week, 1 Month, 3 Months, 1 year
- **Refer at 3 months or after for YAG, LVC enhancement – but can do 6 weeks**
  - **YAG - CME and lens movement**
  - **LVC - refractive instability**
- Refer sooner if any other issues (ie suspected CME, persistent edema/iritis, high IOP)

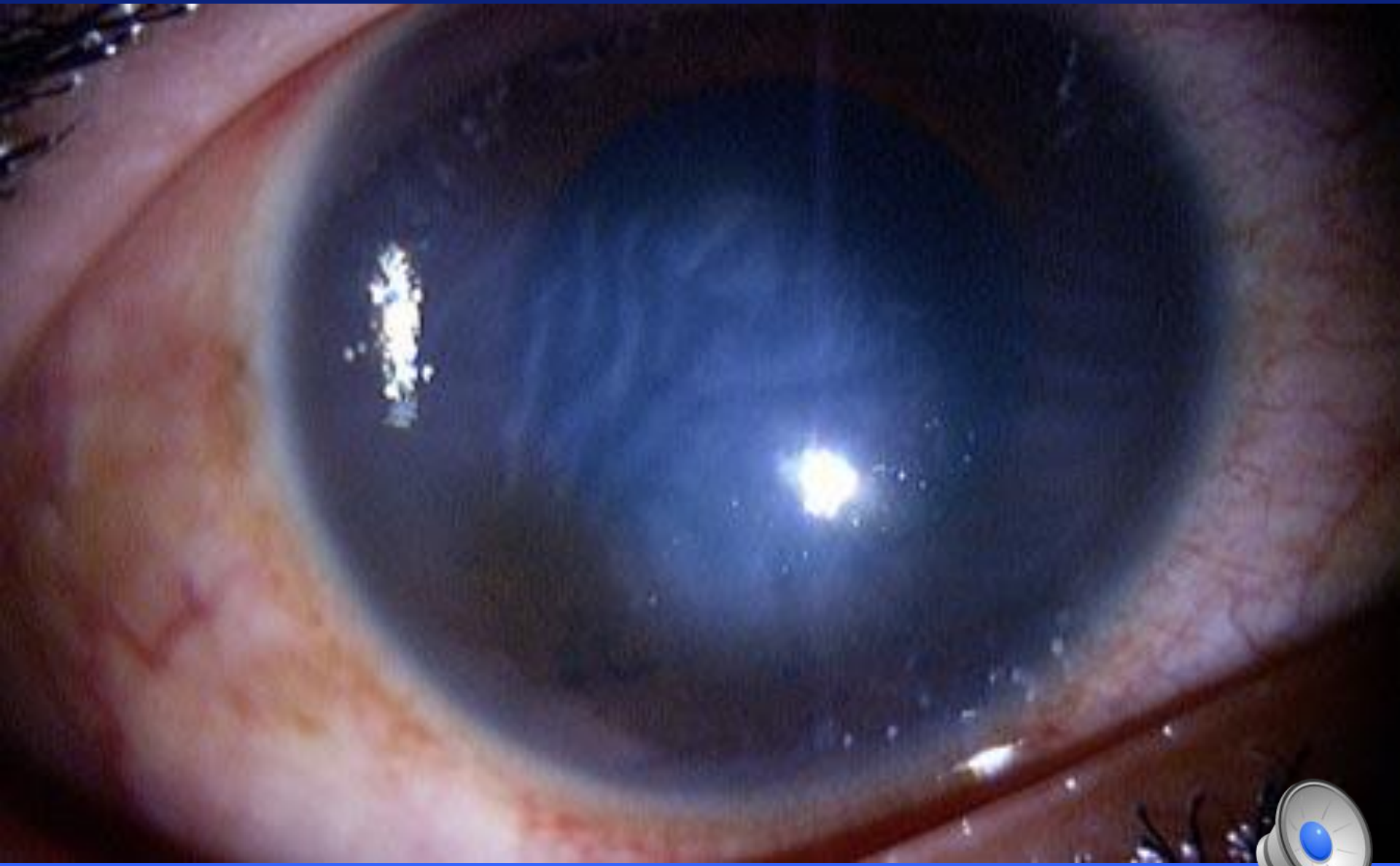
Cataract Post-op Instructions

- Where? Co-management guidebook and website
- Expect blurred vision (edema), red tint to vision (microscope light) for 3-4 days
- If dropless, expect floaters for up to a week or longer, red spot sub-conj heme infero-temporally
- Shield - 1 Week unless stomach sleeper, then 4 weeks
- No dust or sweat for 48 hours
- No swimming for 5 days
- No lifting more than 20 pounds or bending past the waist for 5 days

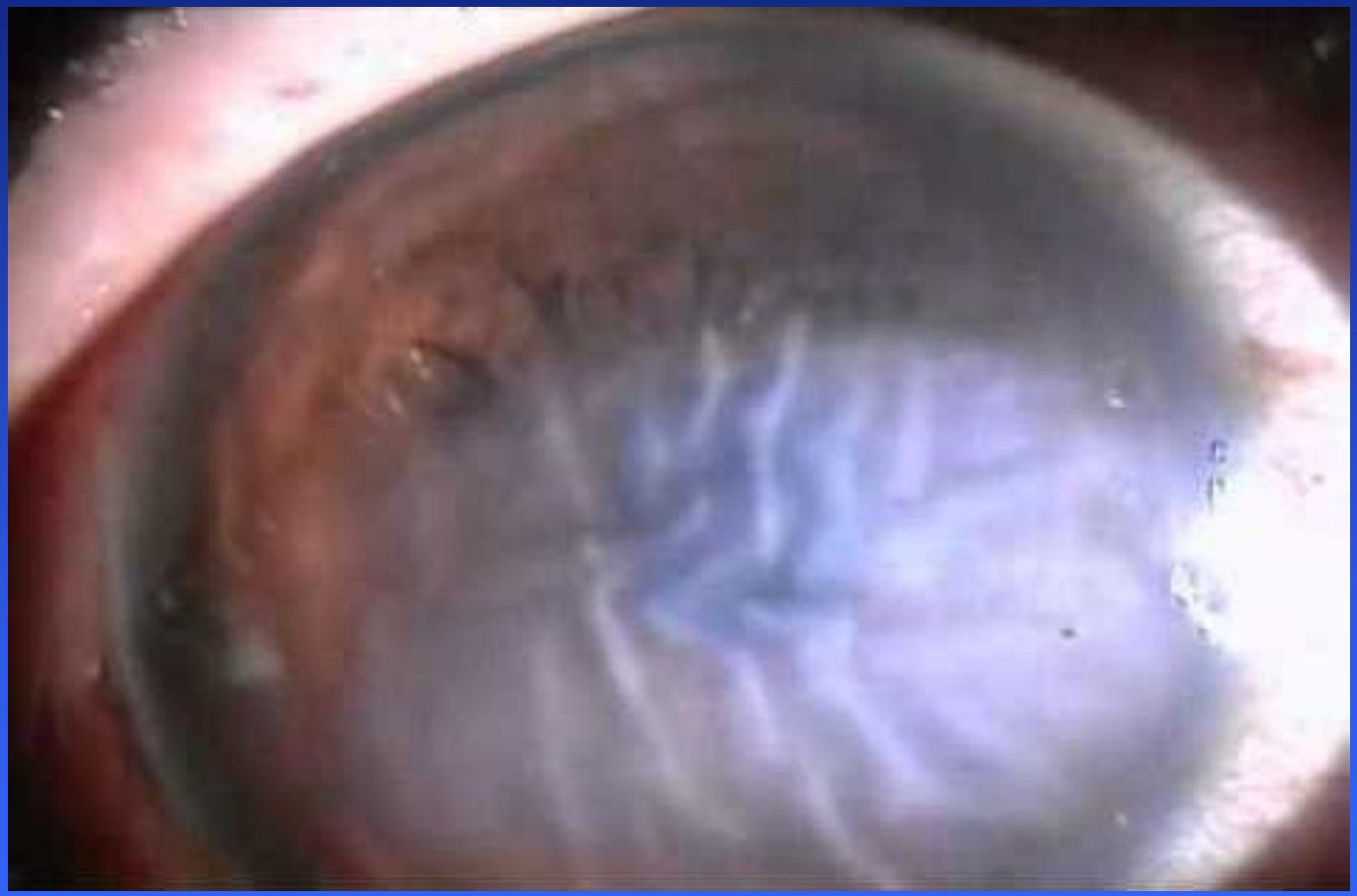
DLV VISION

What could happen on POD # 1 & what should you do?

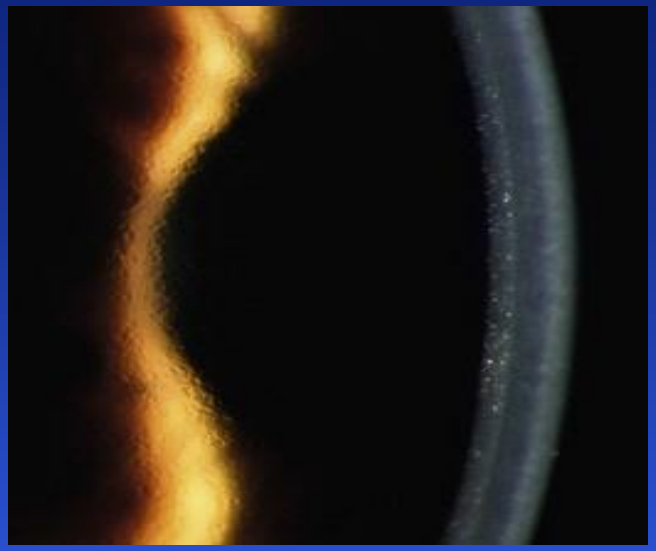
- Corneal Edema
- IOP Spike
- Corneal Abrasion
- Dislocated/Decentered IOL
- Endophthalmitis
- Vitreous in AC

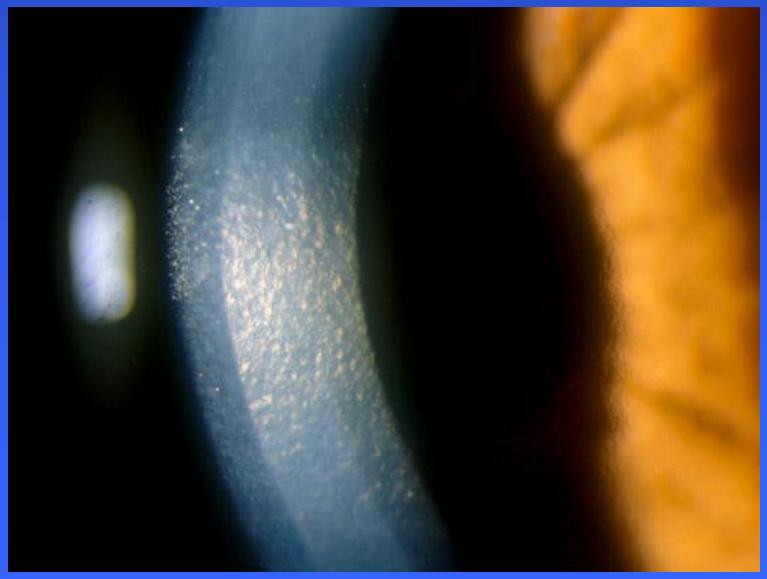


Increased Corneal Edema



Cornea Guttata



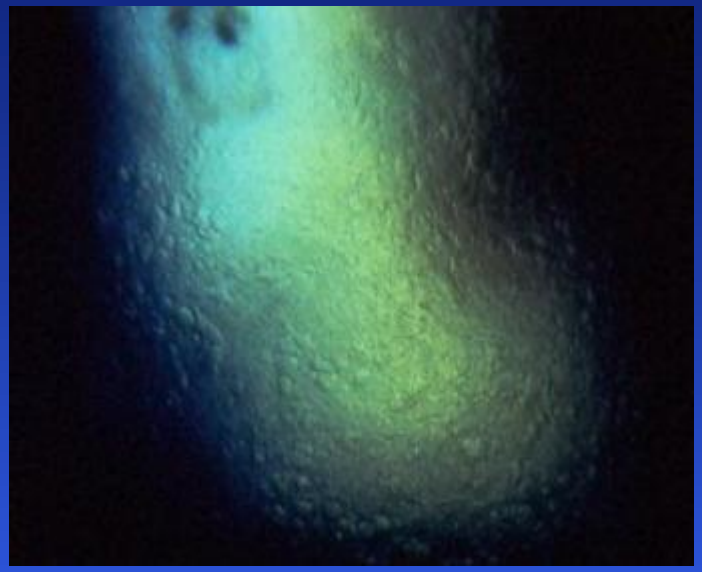


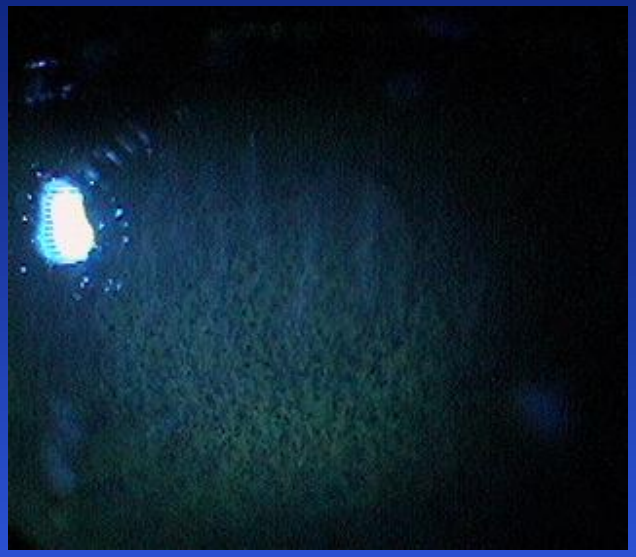
Early Corneal Edema

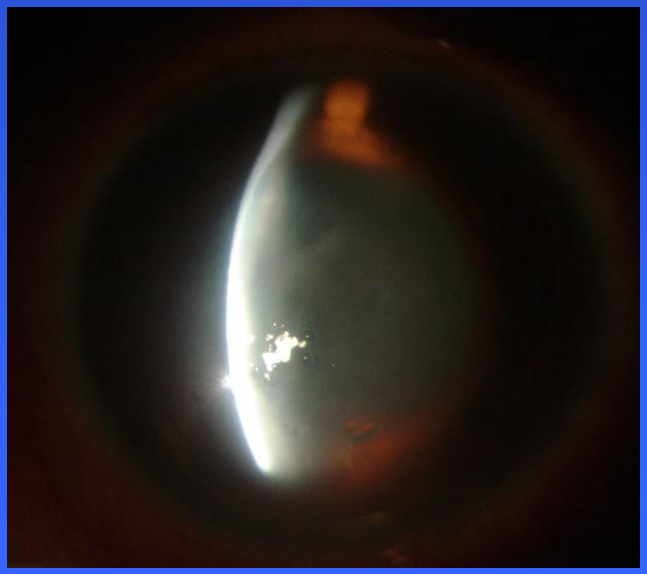
- Most common cause of decreased vision in the early post-op period
- Most common with dense cataracts and guttata/Fuch's dystrophy
- Almost always resolves spontaneously over the first few days/weeks (refer back at 1 month if persists)
- Risk is reduced with Laser-assisted surgery and earlier referral
- Treatment is topical steroid and IOP control
- In rare circumstances, DSEK if persists > 6 mos

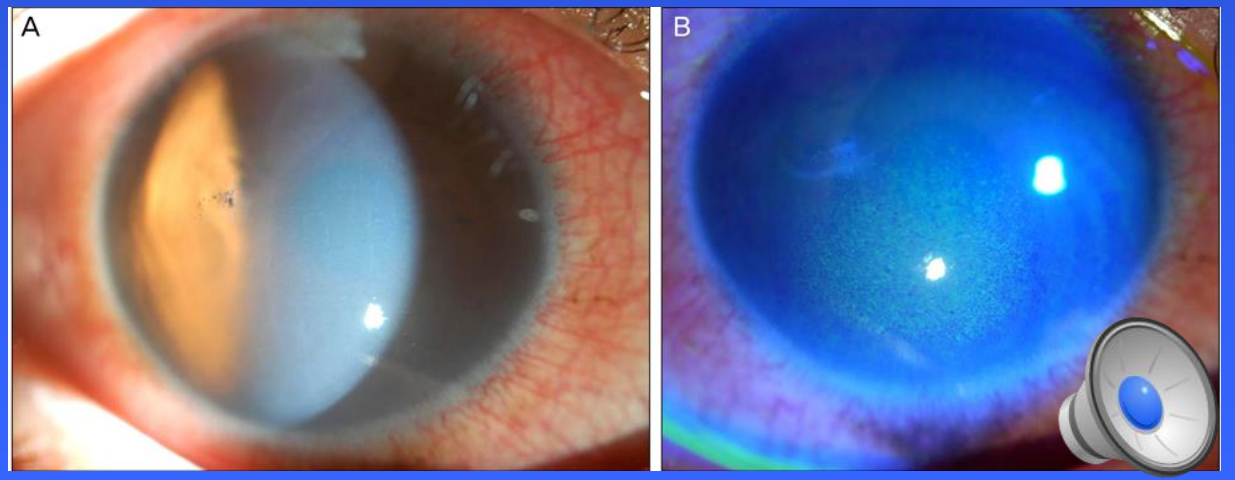
DLV VISION

Microcystic Edema









POD #1 IOP Spike

- Typically from residual viscoelastic
- Higher incidence in glaucoma patients
- Resolves spontaneously in 24-48 hours
- If untreated – risk for CRVO, CRAO
- Associated with microcystic corneal edema and decreased vision
- **If IOP <35** and patient comfortable – treat with drops (Alphagan-P, Combigan or Co-sopt). Follow-up next day
- **If IOP >35** or patient uncomfortable – refer for paracentesis
- **Pre-treat** the second eye with glaucoma meds

- IF THE PRESSURE IS 35 OR OVER, REFER THE PATIENT FOR PARACENTESIS (removal of fluid from the eye through one of the incisions)

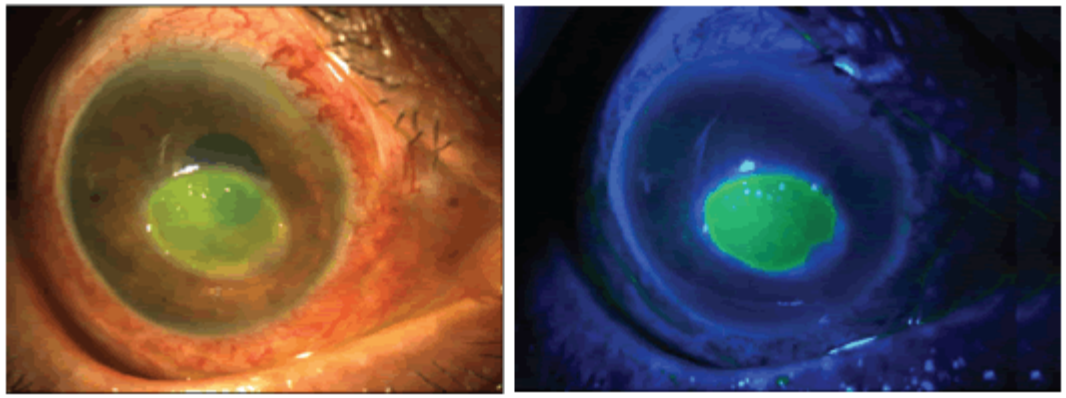


Figure 3: Corneal Abrasion. Note the fluorescein uptake where the corneal epithelial defect is present. This view is enhanced with cobalt blue lighting. Image courtesy of Kanski, JJ. Clinical ophthalmology: a systematic approach. Elsevier/Saunders; 2011.

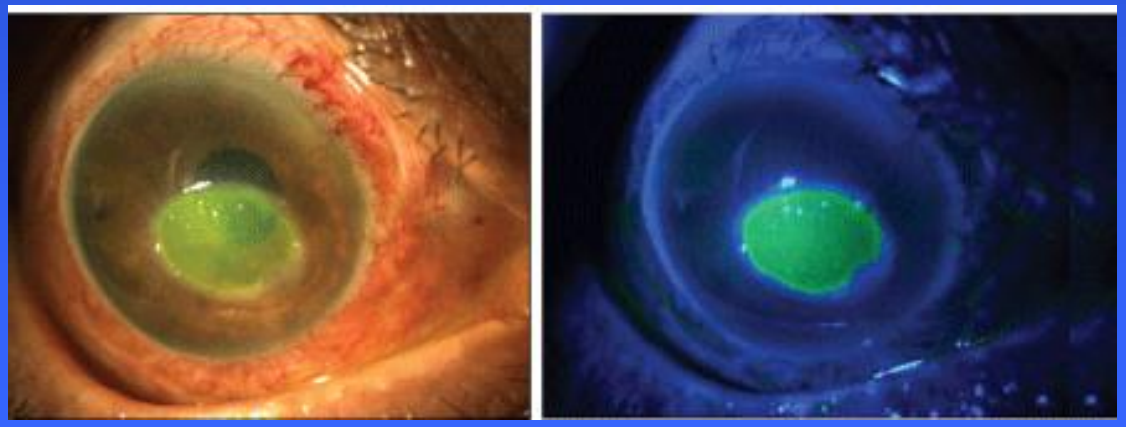
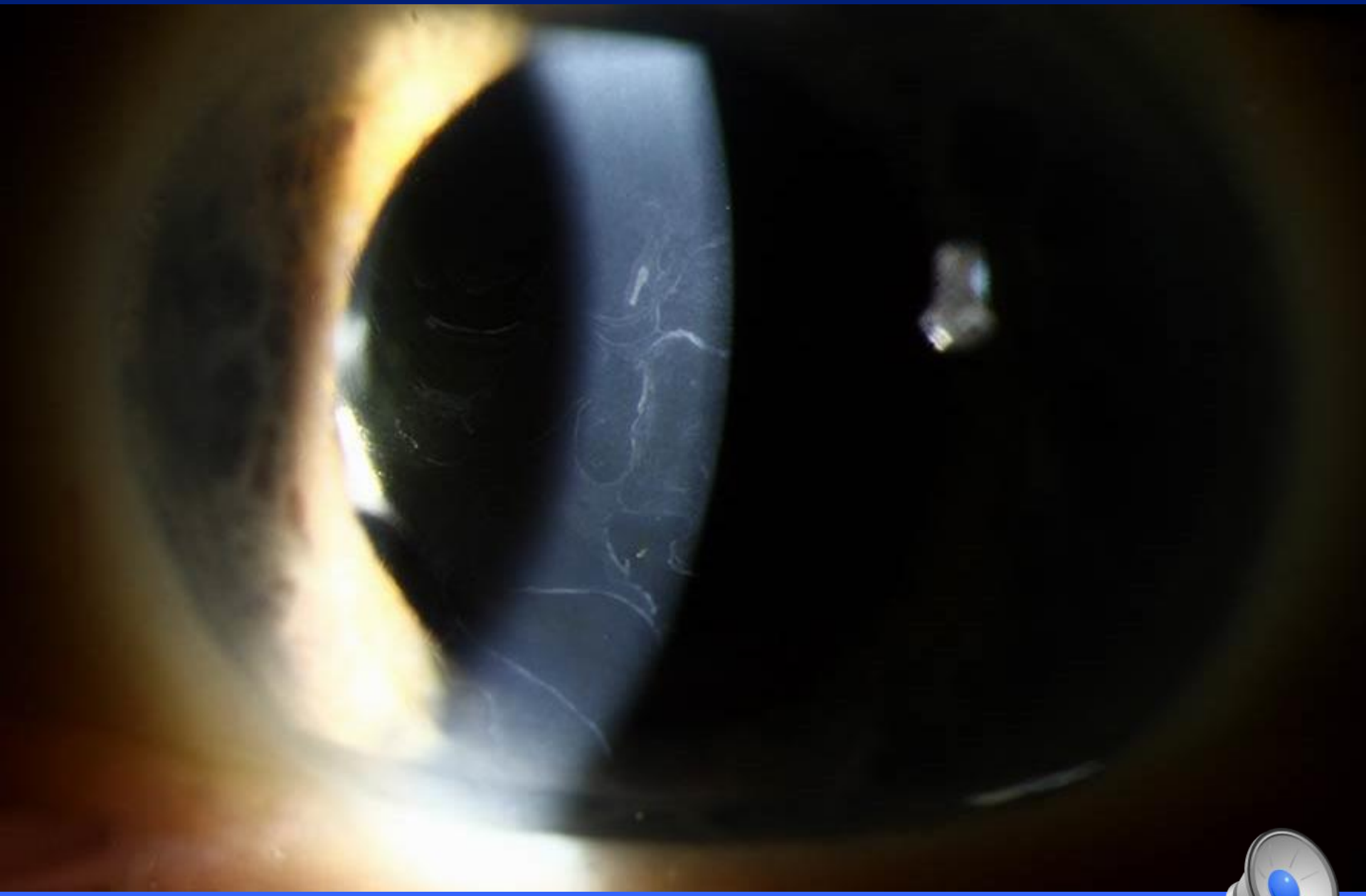
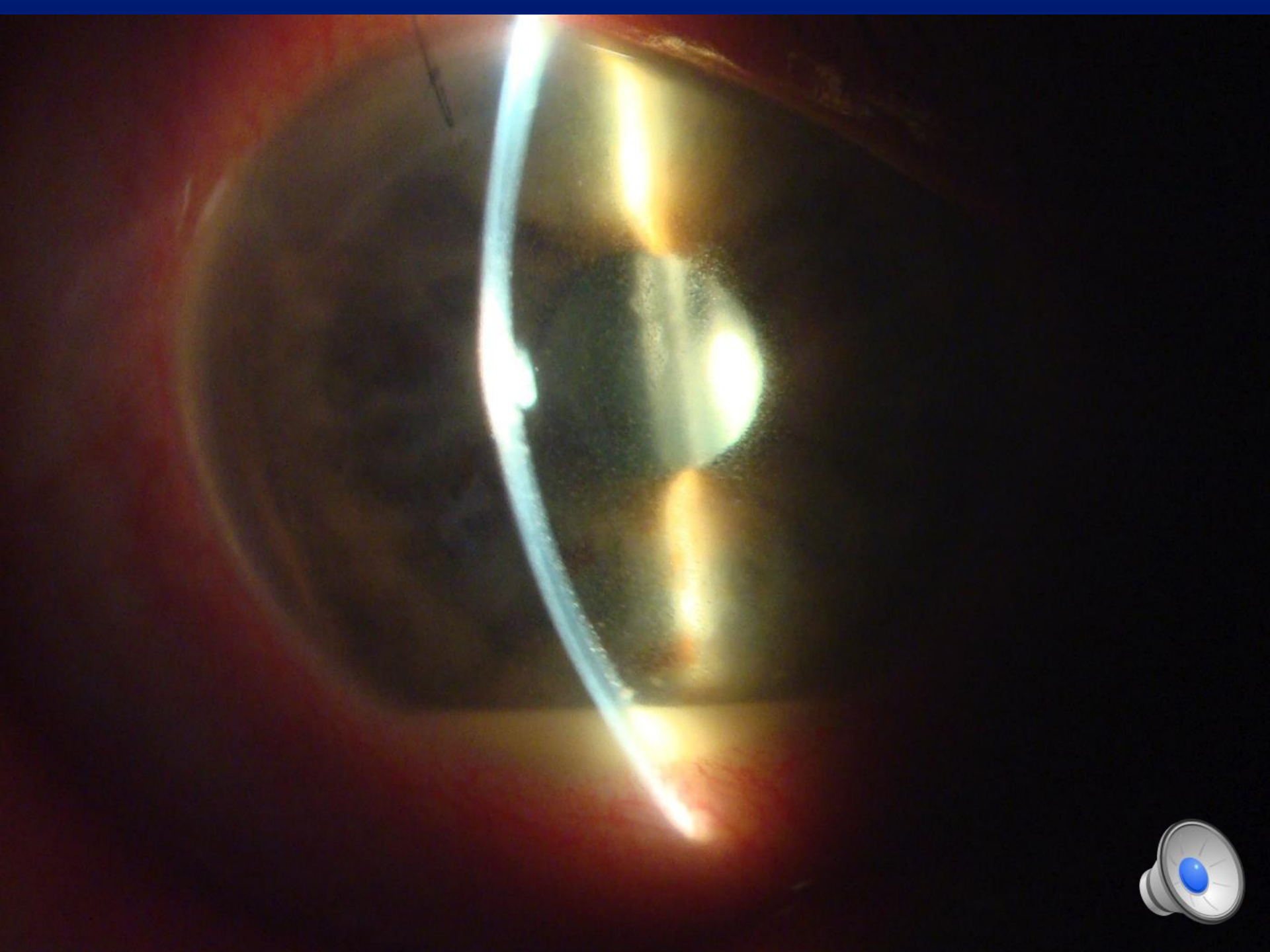


Figure 1. Characteristic corneal abrasion possible found inconsistent with thermal, chemical or mechanical damage to cornea



Early Corneal Abrasion

- Presents with pain and decreased vision
- Most common with map-dot-fingerprint dystrophy, dry eye, advanced age, female gender
- When no findings of MDF dystrophy, assume sub-clinical MDF dystrophy
- Treated with a **bandage contact lens** and topical antibiotic
- Usually healed within 48-72 hours
- On second eye, avoid lidogel (used for anesthesia and to improve visualization)
- We now routinely patch patients for 3 hours post-op when lidogel is used (Shields patch)



Acute Endopthalmitis

- Gram negative bacterial infection occurring typically 2-5 days after cataract surgery
- Treated with urgent intra-vitreous antibiotics unless LP vision – emergency vitrectomy
- My personal rate of endophthalmitis with intra-ocular surgery since 1994 is 2/20,000 (less than 0.01%).

DLV VISION

Dropless Cataract Surgery

-TriMoxi (Steroid/antibiotics) = Triamcinolone + Moxifloxacin

-Injected into the vitreous through pars plana

-I now offer DROPS as first-line treatment because of floater complaints

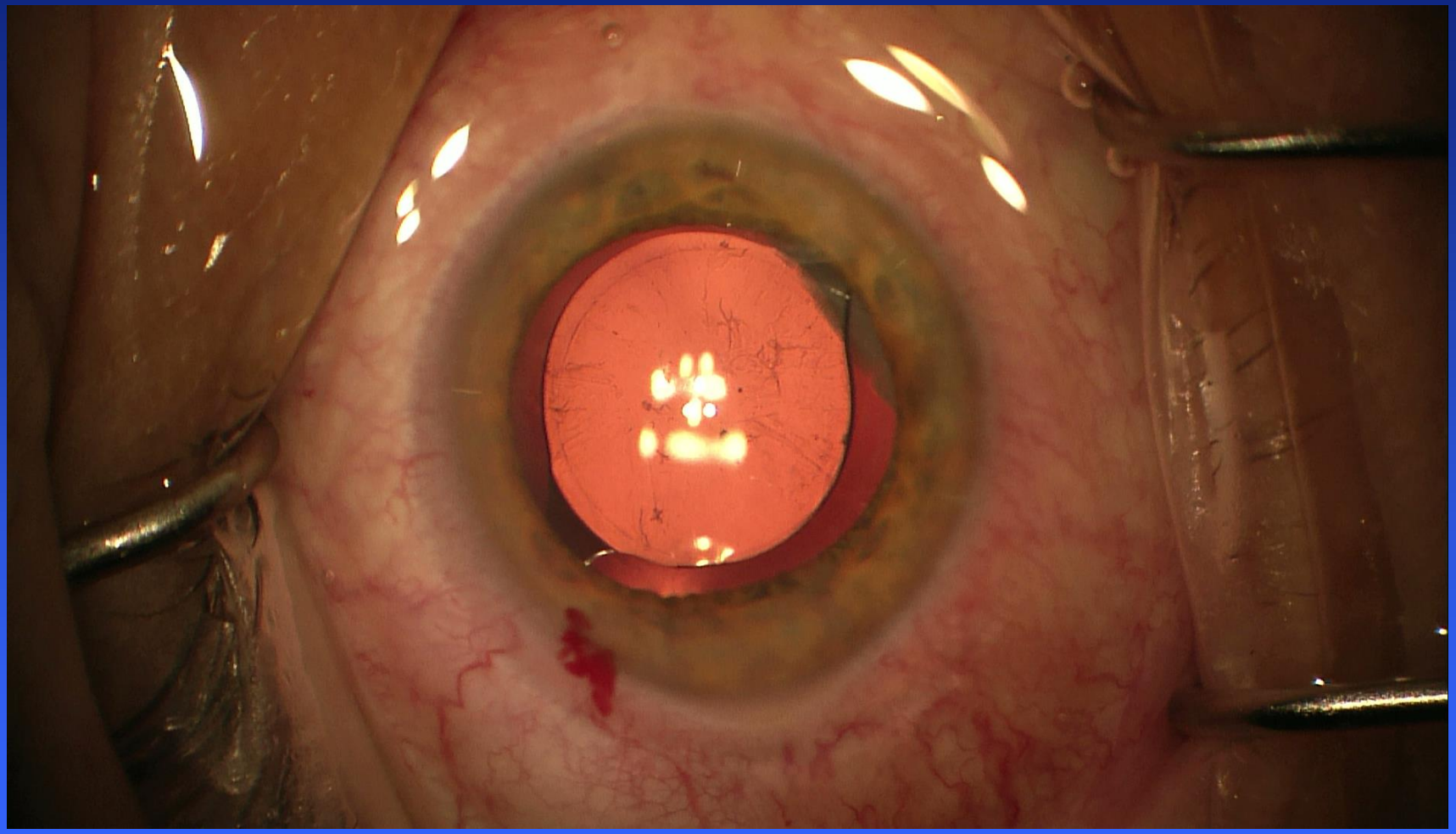
-Advantages

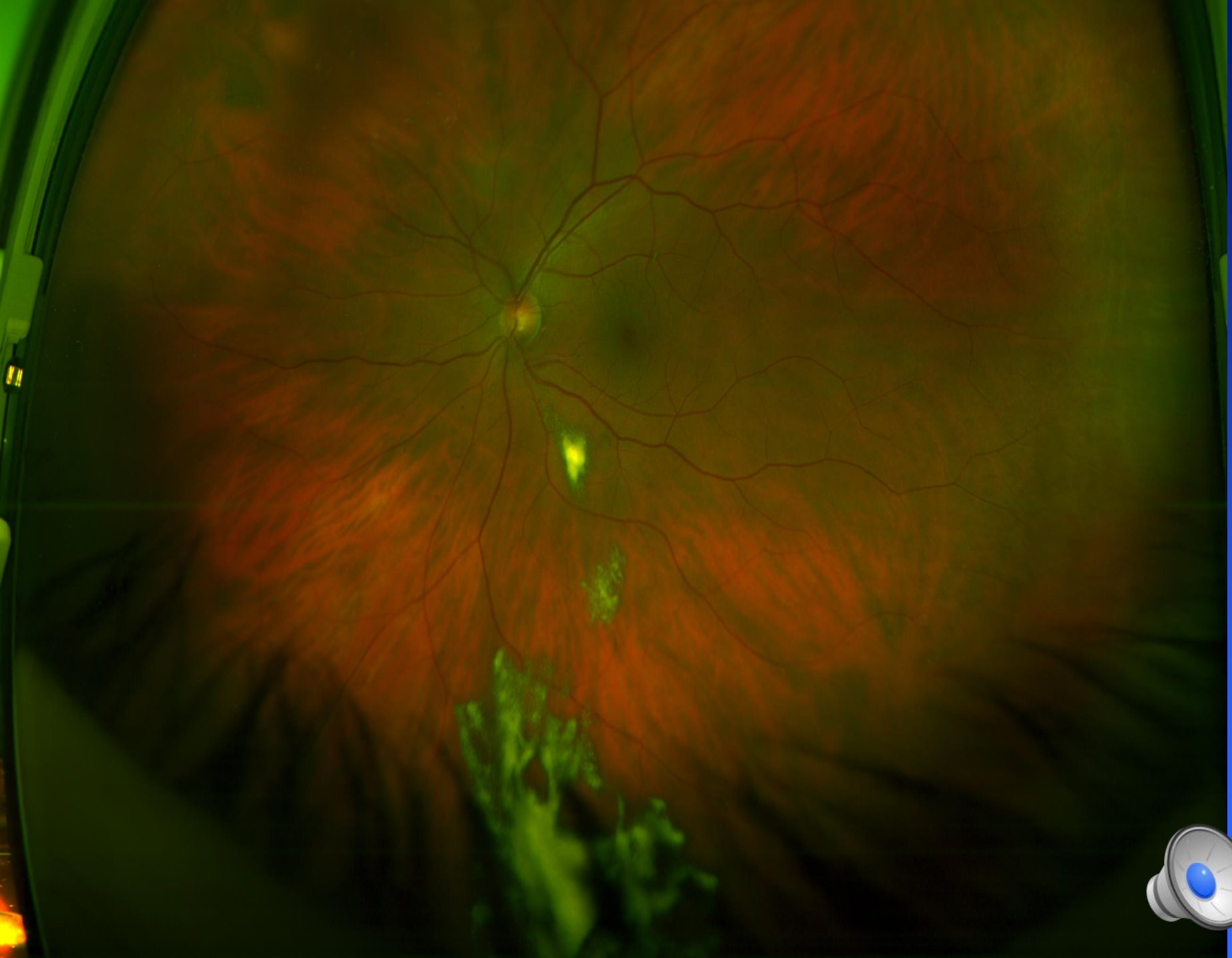
- No drops for most patients

-Disadvantages

- 5% require supplemental topical steroids (iritis, edema)
- Slower vision recovery
- May get floaters for 1-2 weeks
- Diabetes and ERM still require NSAID (Bromsite/Diclofenac))
- Capsular bag must be perfect to use

DLV VISION

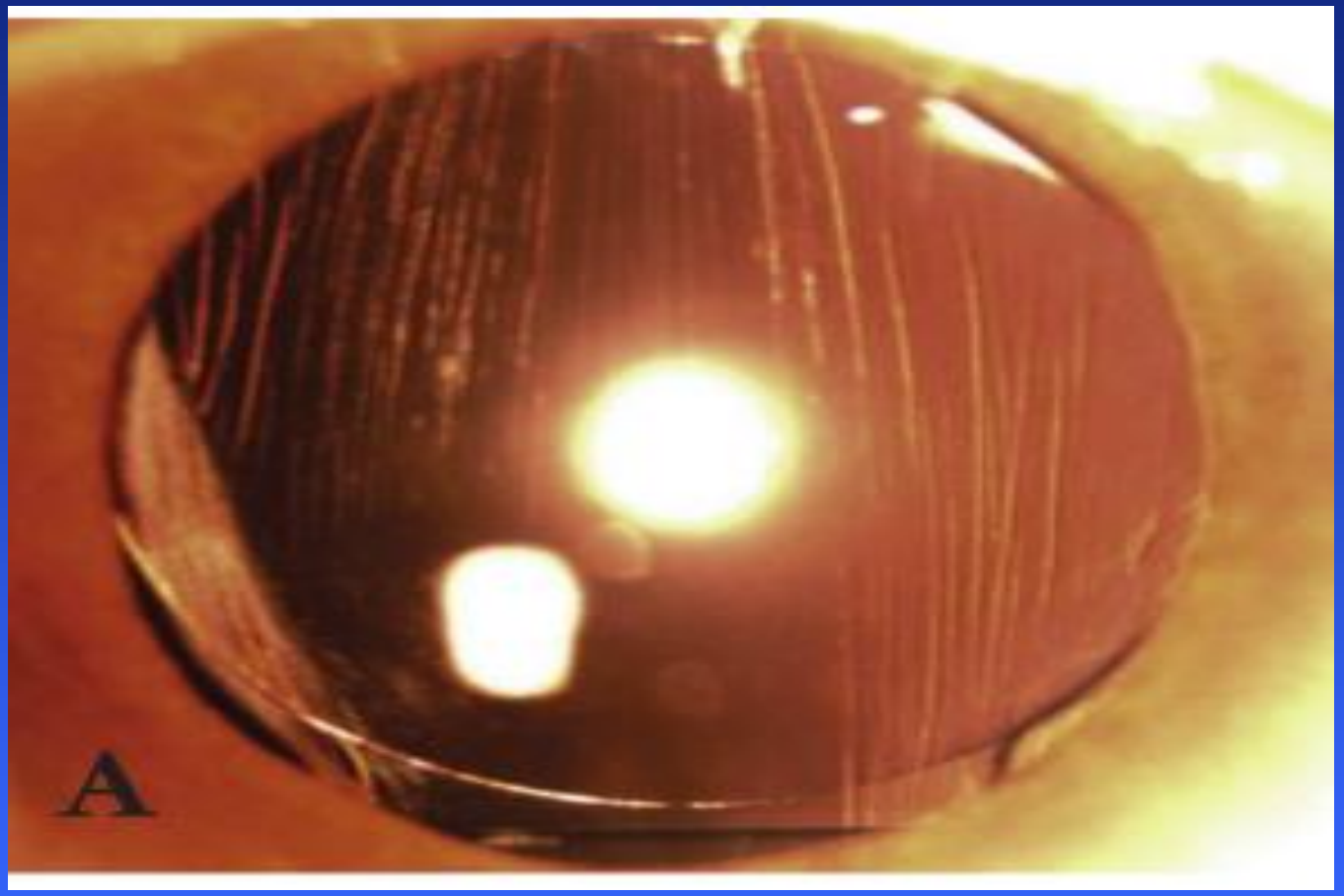




Day 3-7 visit between eyes

- **FOR OPTIMAL PATIENT OUTCOME!!!!!**
- Perform **Manifest Refraction** at this visit on the surgical eye
- Refractive information from the first eye is used for the second eye
- Even -0.25 or +0.25 is helpful in choosing second IOL

PCO = Posterior Capsular Opacity



YAG Laser

- **3 months or beyond**
  - –Sooner may cause IOL dislocation, CME
- Refer for YAG eval for any visual complaint not explained by refraction
- Low threshold for treatment with Premium IOL's especially MF

Poll Everywhere
When should a monocular cataract patient have surgery?

- Never
- Immediately
- 20/40
- When functionally impaired

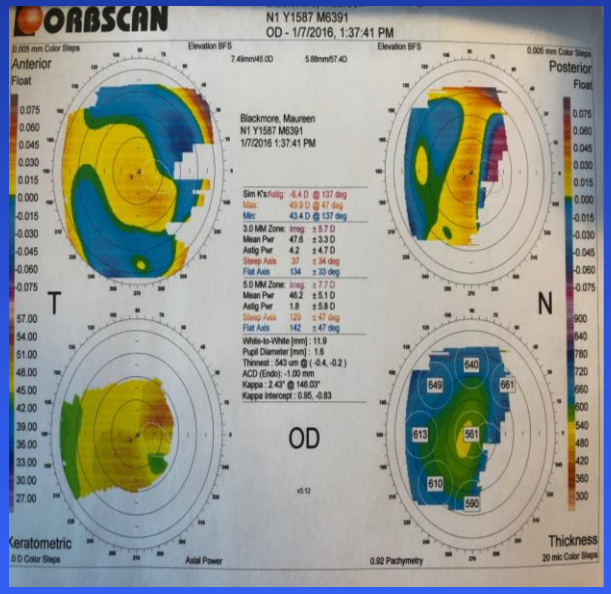
Case 1: 65 yo Female

- C/o: Decreasing vision OS, glasses no longer help. Afraid of having surgery because of being monocular, but she can no longer drive and lives alone.
- Hx: Penetrating pencil injury OD at the age of 5 - Amblyopia
- VAsc OD: LP, OS: CF
- MRx OD: Balance, OS:-9.50 -3.75 x 19 20/40-
- SLEx OD: Mature cat, K scar, Iris to wound OS: 3+ NS, 4+ ACC, 2+ PSC

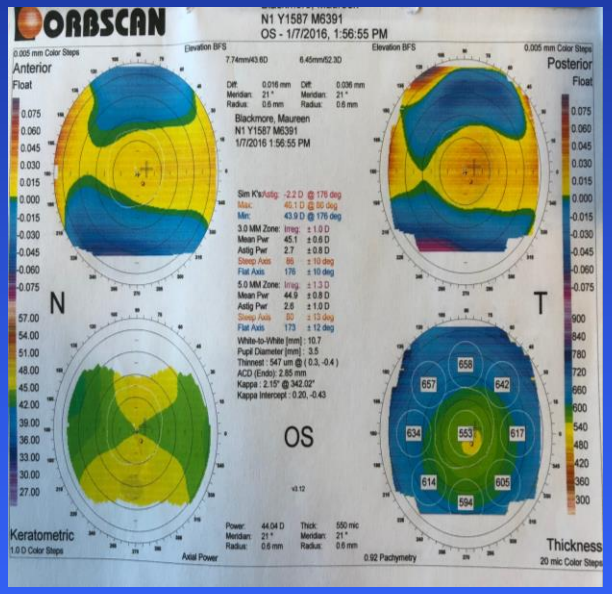
DLV VISION

Orbscans

6.4 D cyl



2.2 D cyl



DLV VISION

Surgery
(after retina clearance)

- OD: ECCE with Spherical IOL/Vitrectomy/Iris Repair
- 1 month post-op: 20/200 UCVA with ambulatory vision, but patient could still not drive
- OS: KPE with Toric IOL

DLV VISION

1 month Post-Op

- Pt extremely happy with outcome
- VAsc OD: 20/200 OS: 20/20
- Back functioning independently

Pearls
Monocular Patients with Cataracts

- Always maximize visual potential in bad eye first
- Perform surgery in the good eye ONLY if the patient can’t function
- Warn the patient of the risks of loss of vision and the eye prior. If they accept these risks, then they are truly non-functional

DLV VISION

Poll Everywhere
When can RK patient have IOL surgery safely?

- Only if they have a visually significant cataract
- Only if they are hyperopic
- Never
- When they have a cataract or refractive error

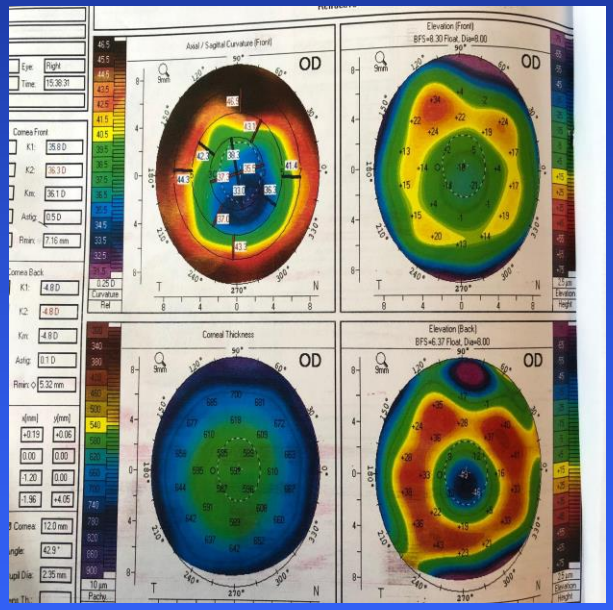
Case 2: 53yo Female

- C/o: Blurry vision, can't see to drive with new glasses
- Hx: RK OU 25 years ago, SLT OU 6 months ago, taking Timolol BID, diabetic on insulin
- Successful monovision contacts in past
- MRx
  - OD: +2.25 -0.50 x 130 20/40
  - OS: +1.75 DS 20/40
- SLEx OU: 8 cut RK scars, 3+ Ns, 2+Acc
- IOP OD: 16mmHg OS: 18mmHg

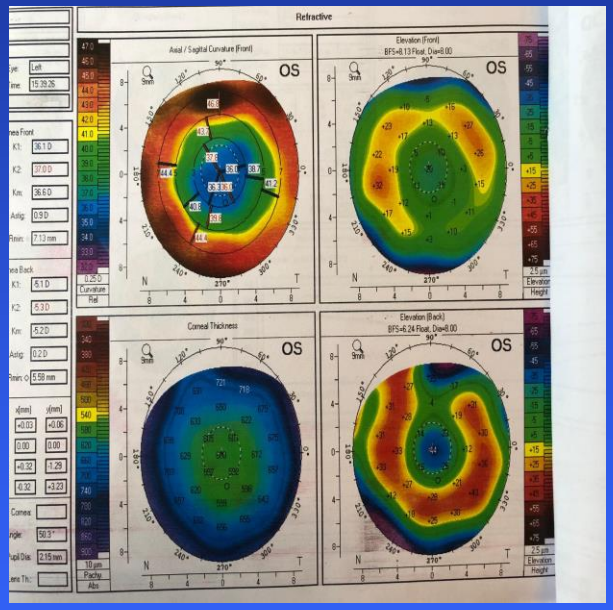
DLV VISION

PentaCam

0.5 D cyl



0.9 D cyl



DLV VISION

Surgery

- OD: KPE c Softec HD IOL
- Refractive Goal: Plano
- Glaukos iStent implant

- OS: KPE c Softec HD IOL
- Refractive Goal: -1.75
- Glaukos iStent implant

DLV VISION

1 Month Post-Op

OD

- VAsc 20/25
- MR: +0.25-0.50x125 *20/25*
- IOP: 15mmHg

OS

- VAsc 20/200 J2
- MR: -2.00 DS *20/20*
- IOP: 15mmHg

DLV VISION

Pearls
Post-RK IOL Surgery/I-Stent

- Don’t be afraid to do IOL surgery on post-RK patients – they can do great with modern IOL calculations! However, they do have a higher risk of needing PRK/piggyback IOL to get them to target
- Offer I-stent to every patient with open-angle glaucoma. They are harmless, paid by insurance and they work. In this case – no glaucoma drops!

DLV VISION

Contact Information

- Flapzap@gmail.com
- Cell- text is preferred (805)444-2015
- How to refer:
  - Doctor Portal: https://www.doughertylaservision.com/doctor-resources/
  - VIP TEXT Hotline: 818-874-3048
  - Call the patient within 10 minutes

Thank You