



The Role of Scleral Lenses in Dry Eye

Dr. Caitlin Morrison

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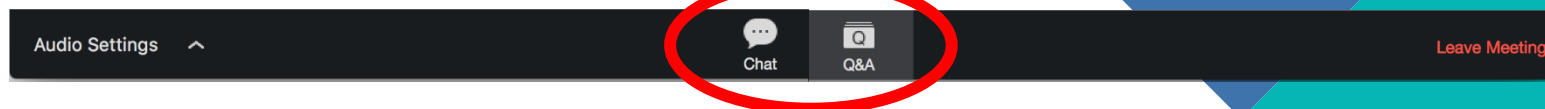


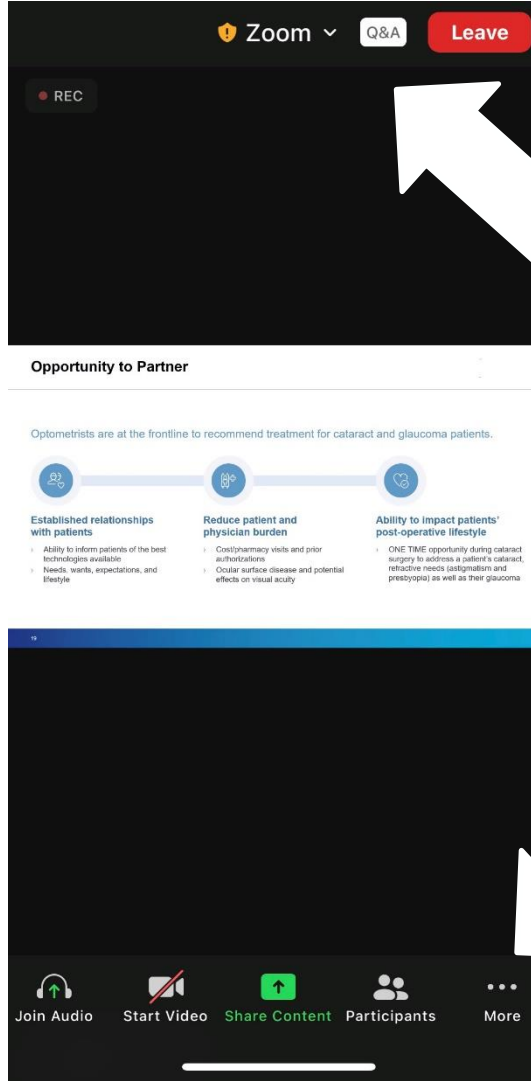
Host: Dr. Stephanie Woo

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- Ask questions using the zoom on-screen floating panel



A screenshot of a Zoom mobile app interface. At the top, it shows 'Zoom' with a dropdown arrow, 'Q&A', and a red 'Leave' button. Below this is a 'REC' indicator. The main content area is titled 'Opportunity to Partner' and contains a paragraph: 'Optometrists are at the frontline to recommend treatment for cataract and glaucoma patients.' This is followed by a horizontal timeline with three circular icons. The first icon is labeled 'Established relationships with patients' and lists: 'Ability to inform patients of the best technologies available' and 'Needs, wants, expectations, and lifestyle'. The second icon is labeled 'Reduce patient and physician burden' and lists: 'Cost/pharmacy visits and prior authorizations' and 'Ocular surface disease and potential effects on visual acuity'. The third icon is labeled 'Ability to impact patients' post-operative lifestyle' and lists: 'ONE TIME opportunity during cataract surgery to address a patient's cataract, refractive needs (astigmatism and presbyopia) as well as their glaucoma'. At the bottom, the Zoom control bar is visible with icons for 'Join Audio', 'Start Video', 'Share Content', 'Participants', and 'More'. A large white arrow points from the bottom right towards the 'Leave' button, and another white arrow points from the bottom right towards the 'Share Content' button.

Speaker Bio

Dr. Morrison is passionate about designing specialty contact lenses to restore sight to those who have lost vision due to severe ocular surface conditions including keratoconus, pellucid marginal degeneration, radial keratotomy, corneal scarring, pediatric aphakia, severe dry eye, corneal transplants, and ocular disfigurement.

After graduating from the New England College of Optometry in Boston, Dr. Morrison completed a Cornea & Contact Lens Residency at SUNY College of Optometry in New York City.

She is a Fellow in the American Academy of Optometry (FAAO), a Fellow of the Scleral Lens Society (FSLs), and the recipient of both the Bert C. and Lydia M Corwin Contact Lens Award and the Johnson & Johnson Award for Excellence in Contact Lens Patient care.



Financial Disclosures

Bausch & Lomb Specialty Vision Products, Consulting





The Role of Scleral Lenses in Dry Eye

Caitlin Morrison, OD, FAAO, FSLs

In Focus: Specialty Contact Lens & Vision Solutions

Scottsdale, AZ

Objectives

- Identify dry eye patients in your clinic who would benefit from scleral lenses
- Be able to educate patients at all stages of the process
- Learn tips and tricks for each specific type of dry eye
- Guide your fits to achieve to the best results

Introduction



Types of Dry Eye Patients

Which patients should you be recommending scleral lenses to?

- Aqueous-Deficient Dry Eye
 - Sjogren's Syndrome
 - Inflammatory Dry Eye
 - Autoimmune disorders

**SCLERAL LENSES AS
FIRST-LINE
MANAGEMENT?**

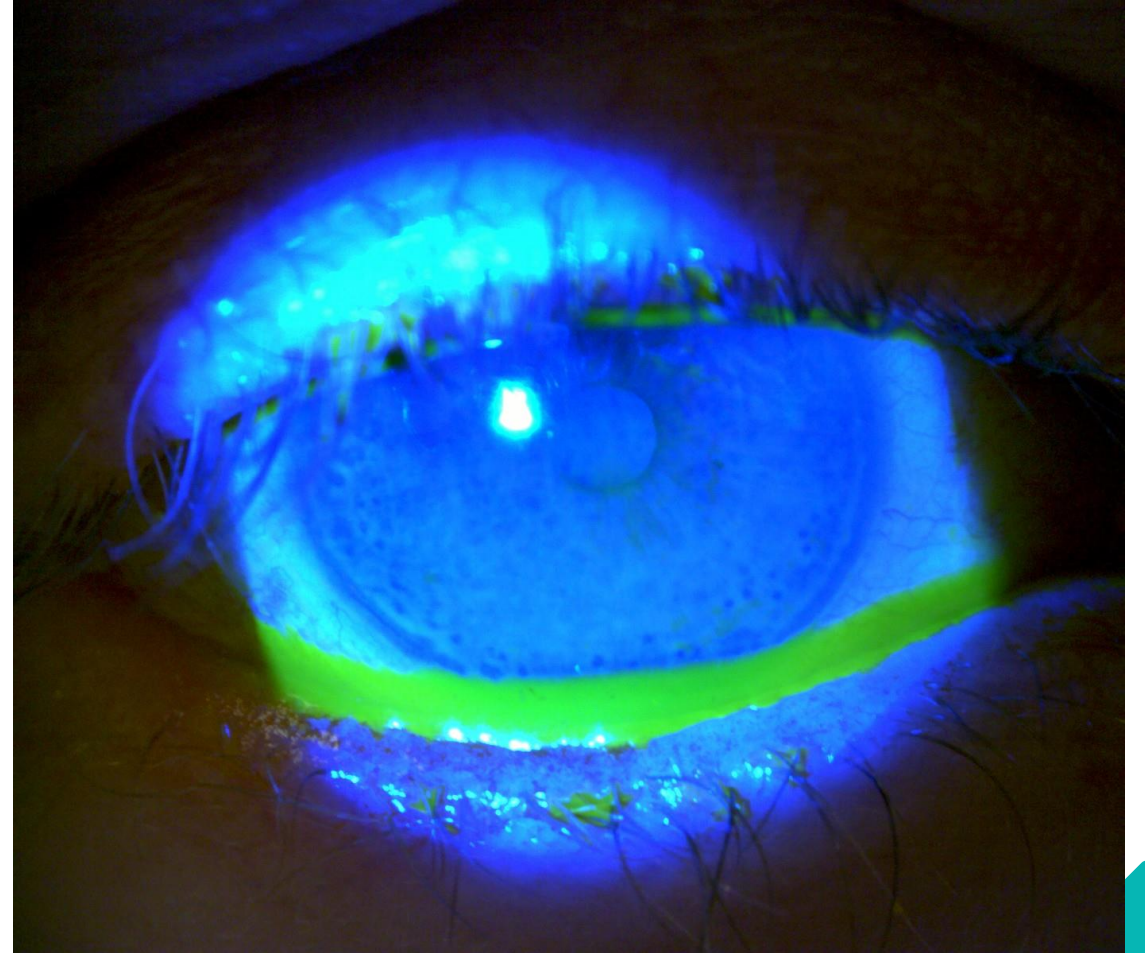
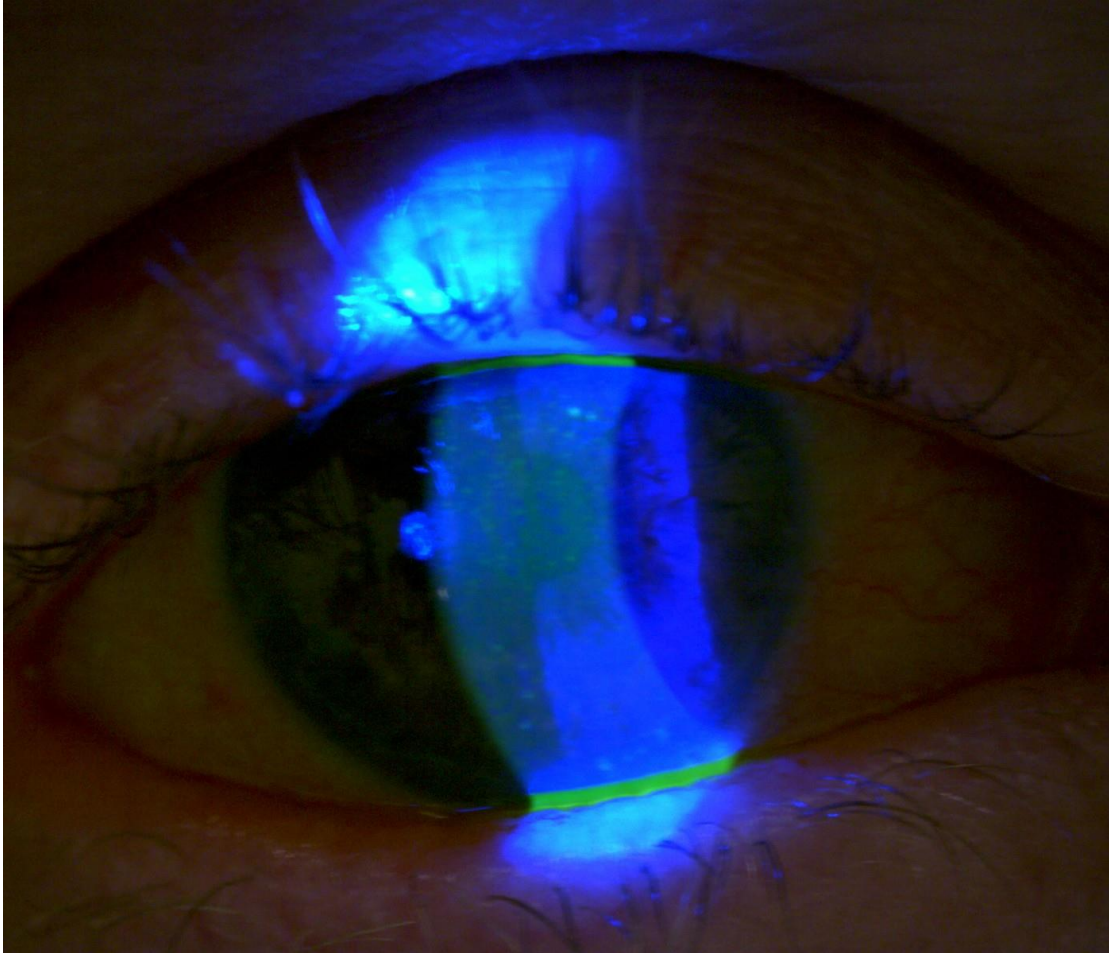
Types of Dry Eye Patients

- Evaporative
 - Meibomian Gland Dysfunction
 - Graft-Versus-Host
 - Ocular Cicatricial Pemphigoid
 - Stevens Johnson Syndrome

**SCLERAL LENSES AS
FIRST-LINE
MANAGEMENT?**



**Scleral Shell vs.
Soft Bandage
Contact Lens?**



Acute myeloid leukemia w/ bone marrow transplant



Neurotrophic Keratitis & Scleral Lenses

- Non-healing persistent epithelial defects (PEDs)
 - PROSE: 24-hour wear w/ daily replacement w/ PF saline + fluoroquinolone¹
 - Vigamox (Alcon)
- Non-healing Ulcers
- Safe & Effective²



Types of Dry Eye Patients

- Neuropathic keratitis
 - Post-LASIK
 - Chronic Dry Eye
- Dysfunction of nervous system occurring in the cornea
- No increase in corneal nerve density³

Types of Dry Eye Patients

41 y.o. female s/p LASIK (2019)

- CC: Dryness, discomfort, pain
- Serum tears 40%, Cymbalta 20mg, Xiidra BID, Systane ung qHS, Systane gtts PF q30 min, Lotemax BID
- TBUT 3 seconds, MGD Grade 3

Scan-Designed Scleral Lenses

- Lens awareness
- Results – 70% improvement, d/c Xiidra, Serum, Lotemax

**SCLERAL LENSES AS
FIRST-LINE
MANAGEMENT?**

Types of Dry Eye Patients

- Exposure
 - Seventh Cranial Nerve Palsy / Damage
 - Lagophthalmos
 - Surgical Complications
- Tarsorrhaphy / gold eyelid weights versus scleral lens wear



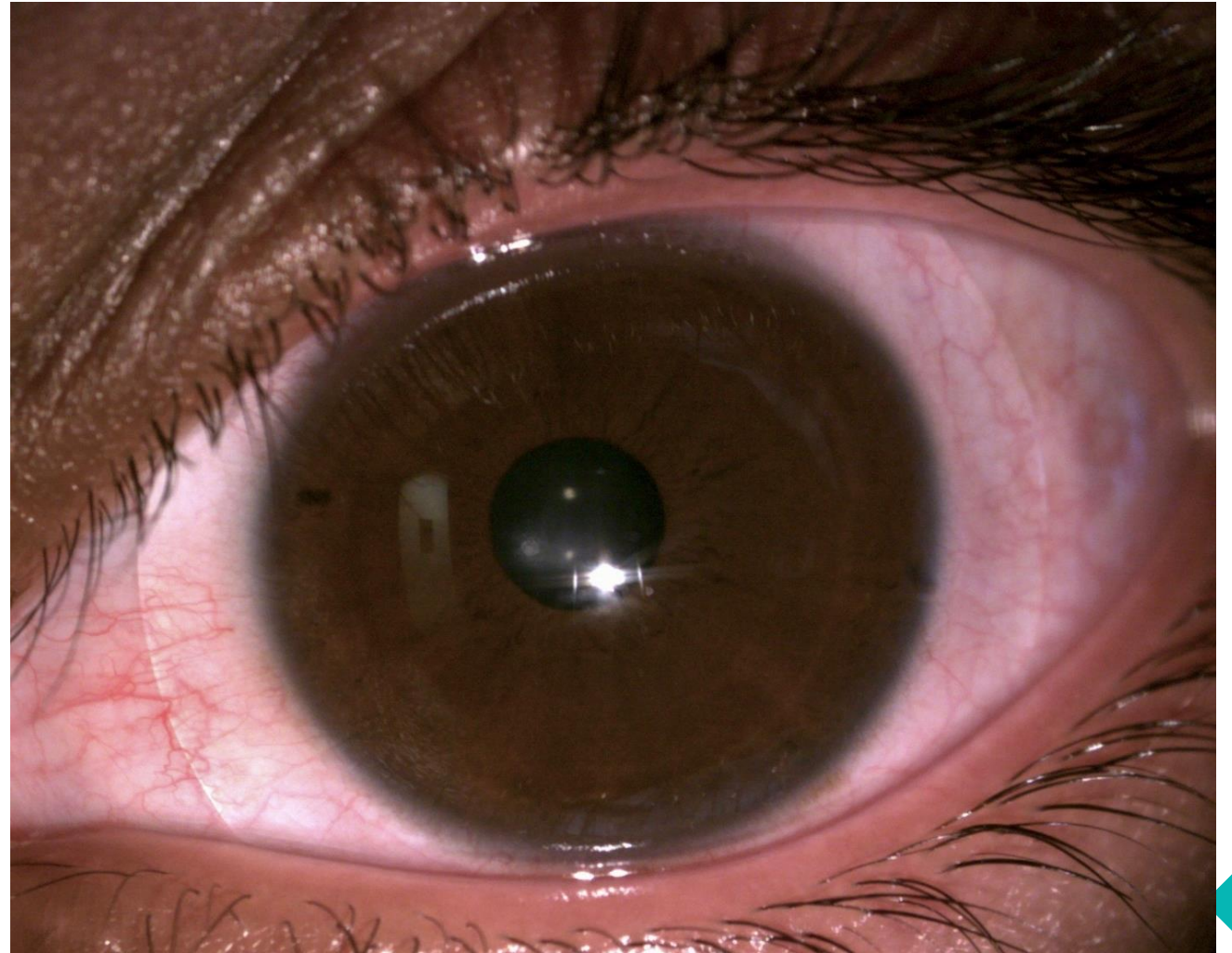
**SCLERAL LENSES AS
FIRST-LINE
MANAGEMENT?**



**Who Can Benefit
from Scleral
Lenses?**

How Do They Protect The Eye?

- Protective Shell
 - Avoids lid insult
 - Avoids exposure to elements
- Prevents Evaporation
- Liquid Reservoir
- Adjunct Management of Non-Healing PEDs



Should You Put Medication Treatment Into Bowl of Lens?



Can You Put Dry Eye Treatment Into Bowl of Lens?

- Preservative-free artificial tears
- Serum tears



My Recommendations for Scleral Designs For Patients with Dry Eye

- Thinner
- Tighter edges
 - Fluorescein evaluation
- Too tight but no blanching?
 - Symptoms to look for
- Reduce clearance



My Recommendations for Patient Expectations

- Dry eye patients will feel dry (sometimes drier) at first
 - AT insertion
- Fogging
- Sensitivity
 - Edge profile
- Discussion w/ patient on dispensing





Drop Use
WITH Scleral
Lenses

Drop Use WITHOUT Scleral Lenses



Many patients can dramatically decrease artificial tear usage



Benefit of decreasing costly treatments

Lipiflow
Serum Tears
Amniotic membranes



EBMD?

Still treat at night

For Best Patient Outcomes



Start treatment at least 2 weeks to 1 month before receiving lenses



Consistency is KEY



Dry eye regimen handout + document!

Does Filling Solution Matter?

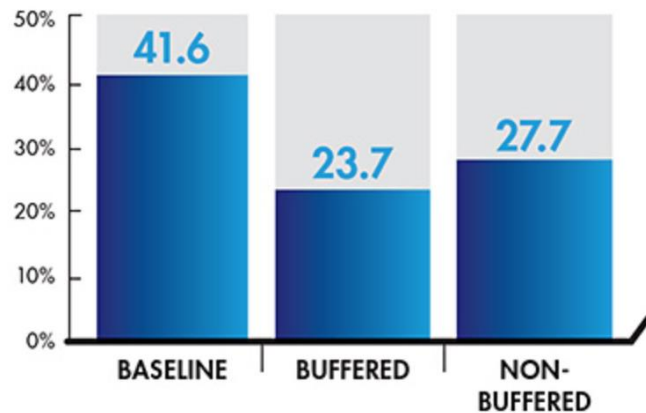


Figure 1. The mean DEQ score prior to scleral lens wear and following two weeks of buffered versus non-buffered saline solution.

Dry eye improved regardless of solution.⁴
Patients preferred 4/5 times, buffered solution



For Best Patient Outcomes

Mean pH of tears: 7.0⁵

TABLE 1 pH OF COMMON SCLERAL FILLING SOLUTIONS

SOLUTION	pH
Addipak	5.3
Modudose	5.6
Lacripure	6.5
ScleralFil	7.3
Purilens	7.4

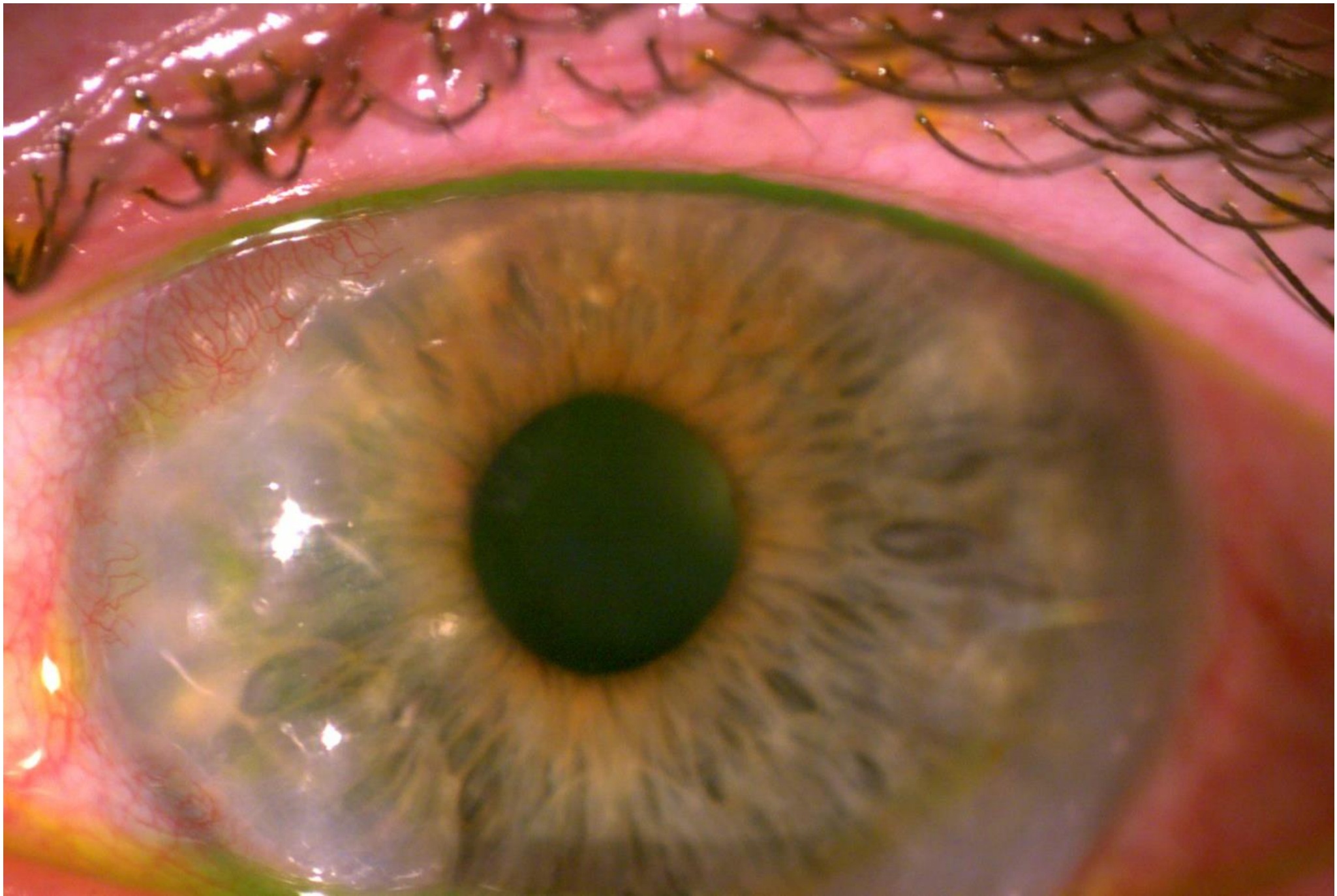


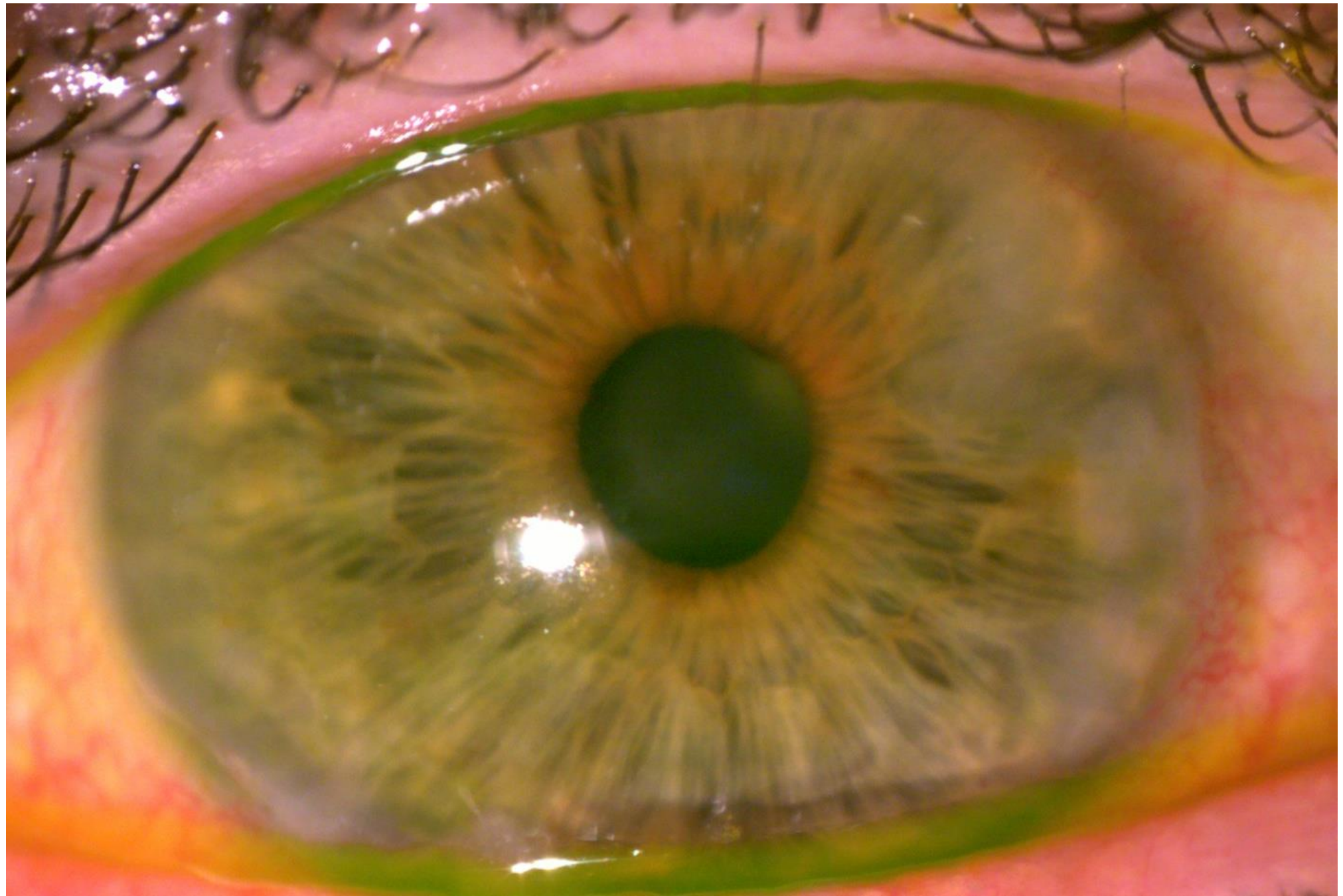
For Best Patient Outcomes

- Exact Drop Usage – Pt Communication
- Handouts
- Re-iteration of instructions on an email sent out after patient leaves dispensing
- Links to where to purchase drops, masks, etc
- Online store

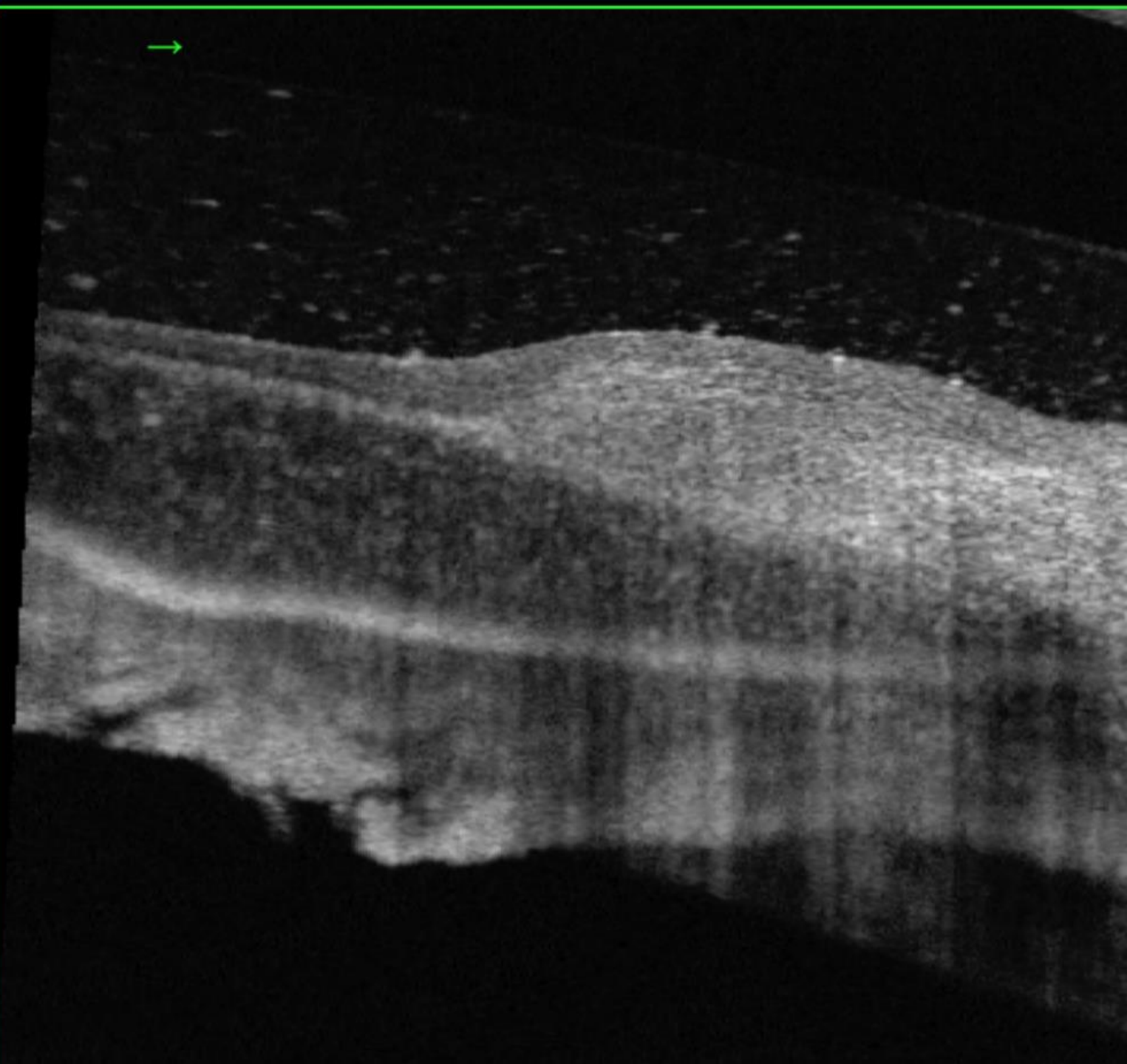
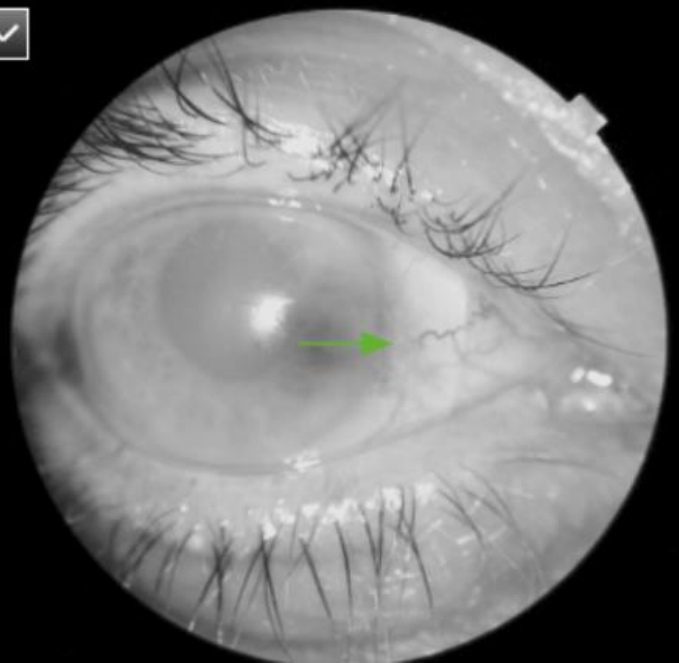
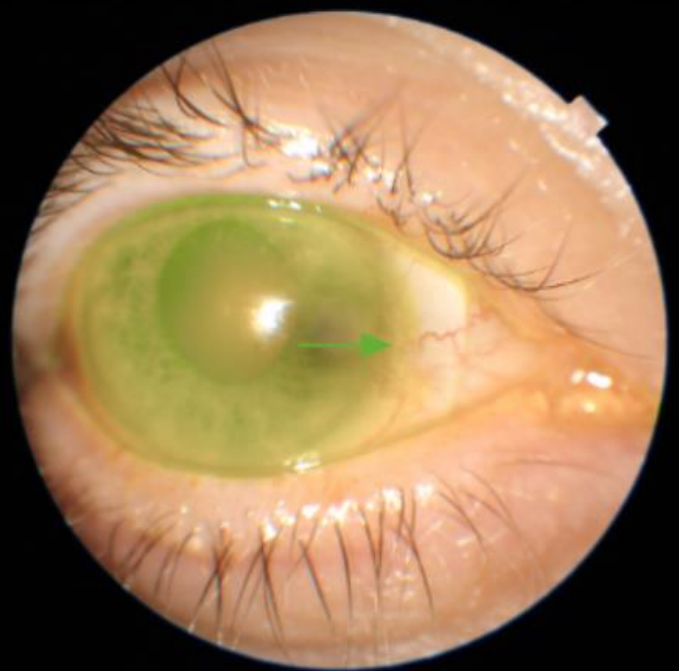
Case Report #1

- 62 y.o male c/o longstanding dry eye
 - Crohn's Disease
 - Long history, now just uses Refresh PF QID OU and Alaway BID OU
 - Decreased sensitivity in the eyes
 - Redness end of day





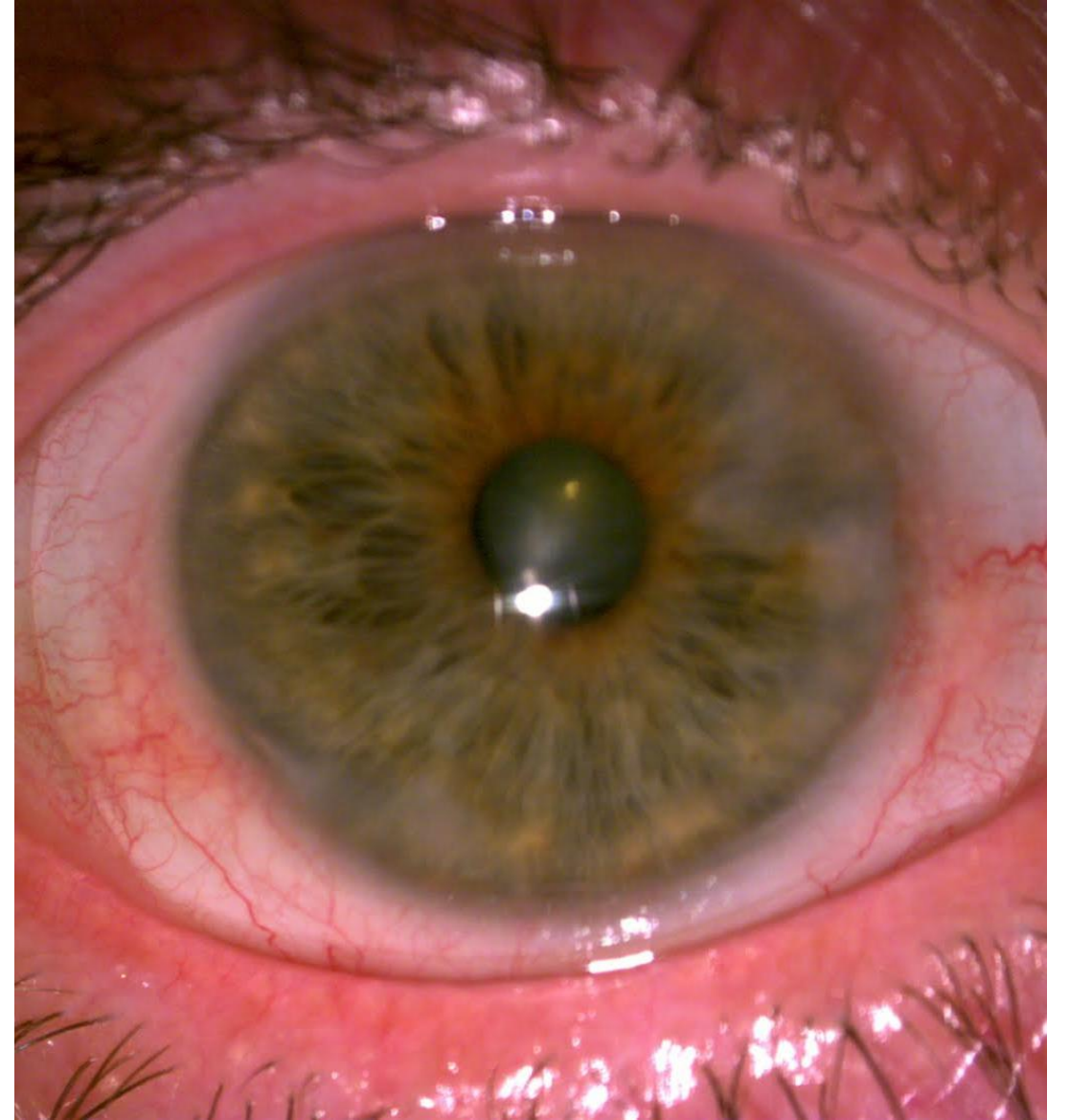
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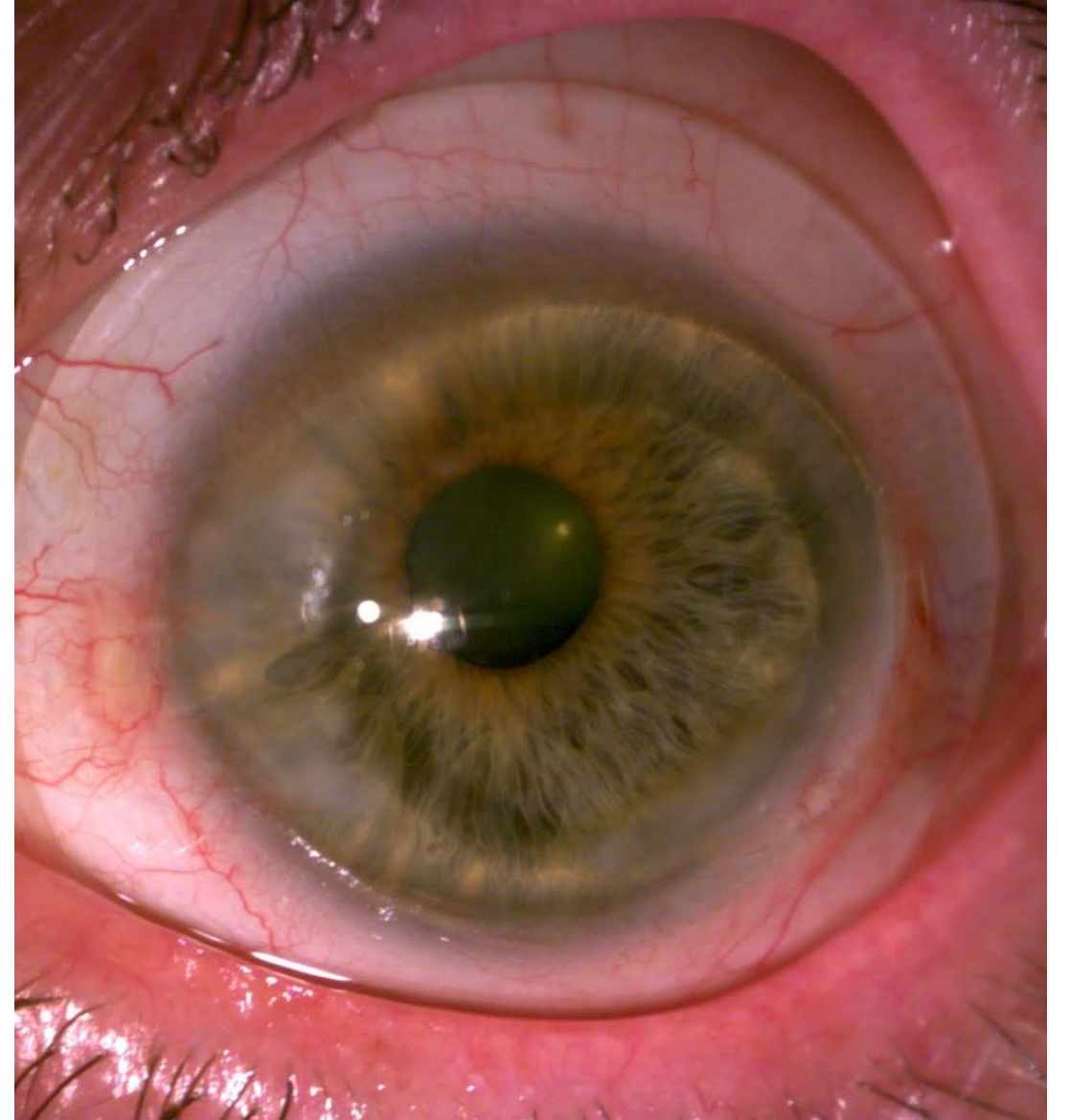
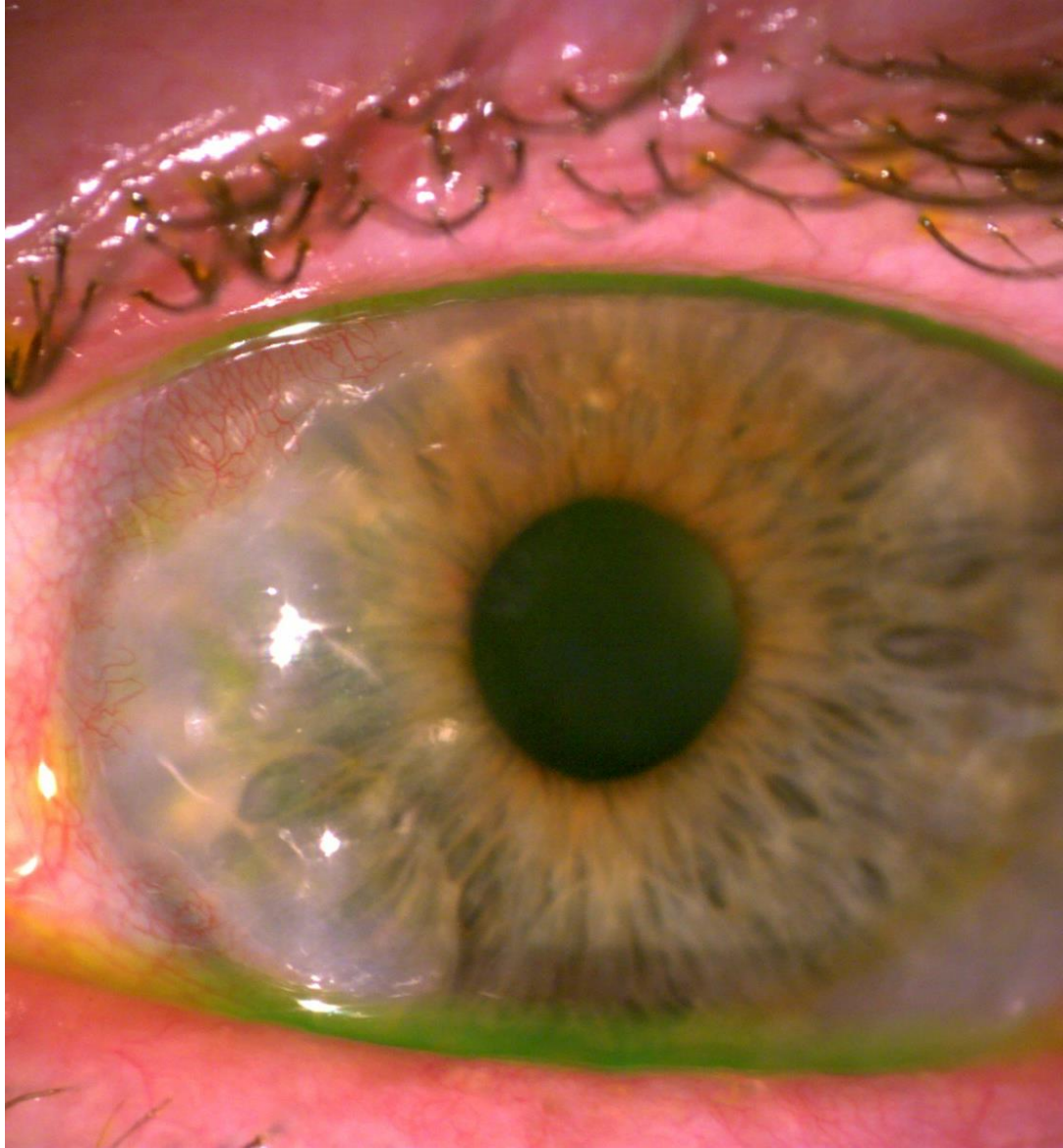


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Case Report #1

- Starting dry eye treatment
 - Retaine MGD PF QID OU
 - Warm compresses BID
 - Omega-3 supplementation
- Fit with scleral lenses OU
 - Nutrifill recommended





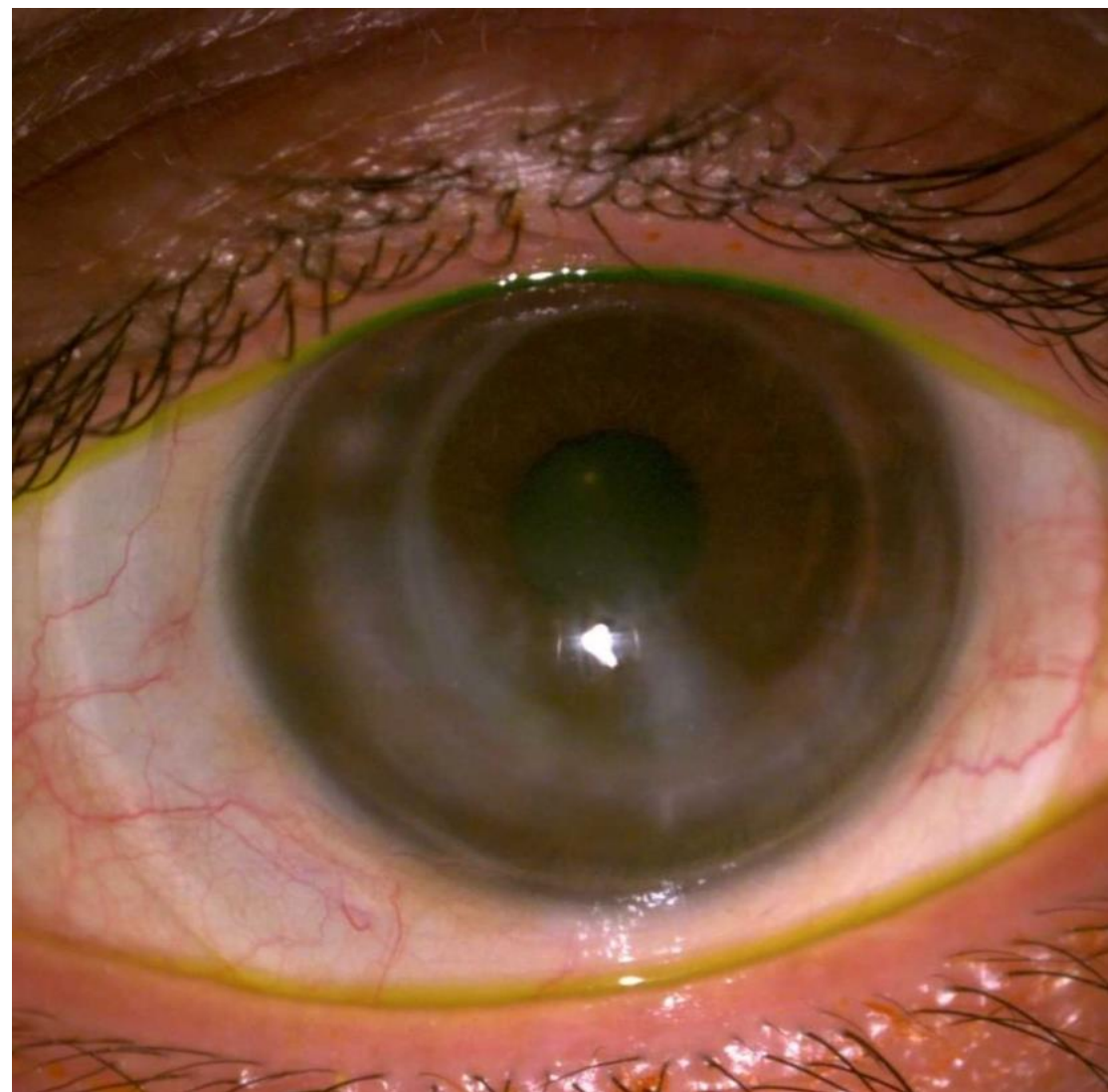
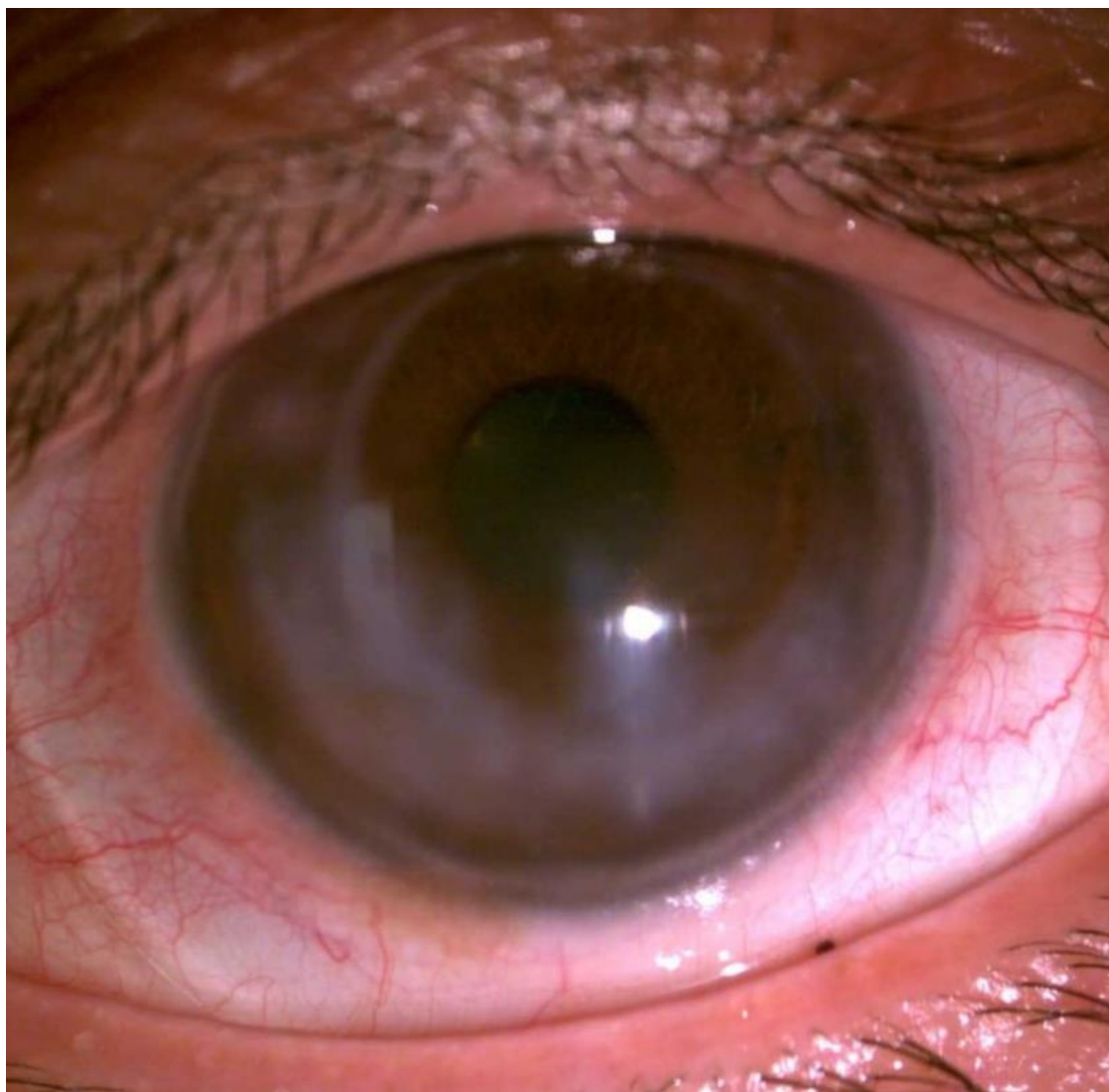
Case Report #1

- Results
 - Improved dry eye relief with basic treatment
 - Eyes “whiter and brighter” per wife
 - Still getting fogging under lenses (OS>OD)
 - RTC 6 months

Case Report #2 – A Surprise Result!

- 48 year old male with corneal transplants 2' to KCN
 - OD: Ks: 62.6 x 64.7 @ 118.1
 - H/O scleral lenses in past, OD great vision but uncomfortable
 - Fit with scleral lenses OU
 - Filling solution: Addipak
 - No complaints of dryness, no drop usage



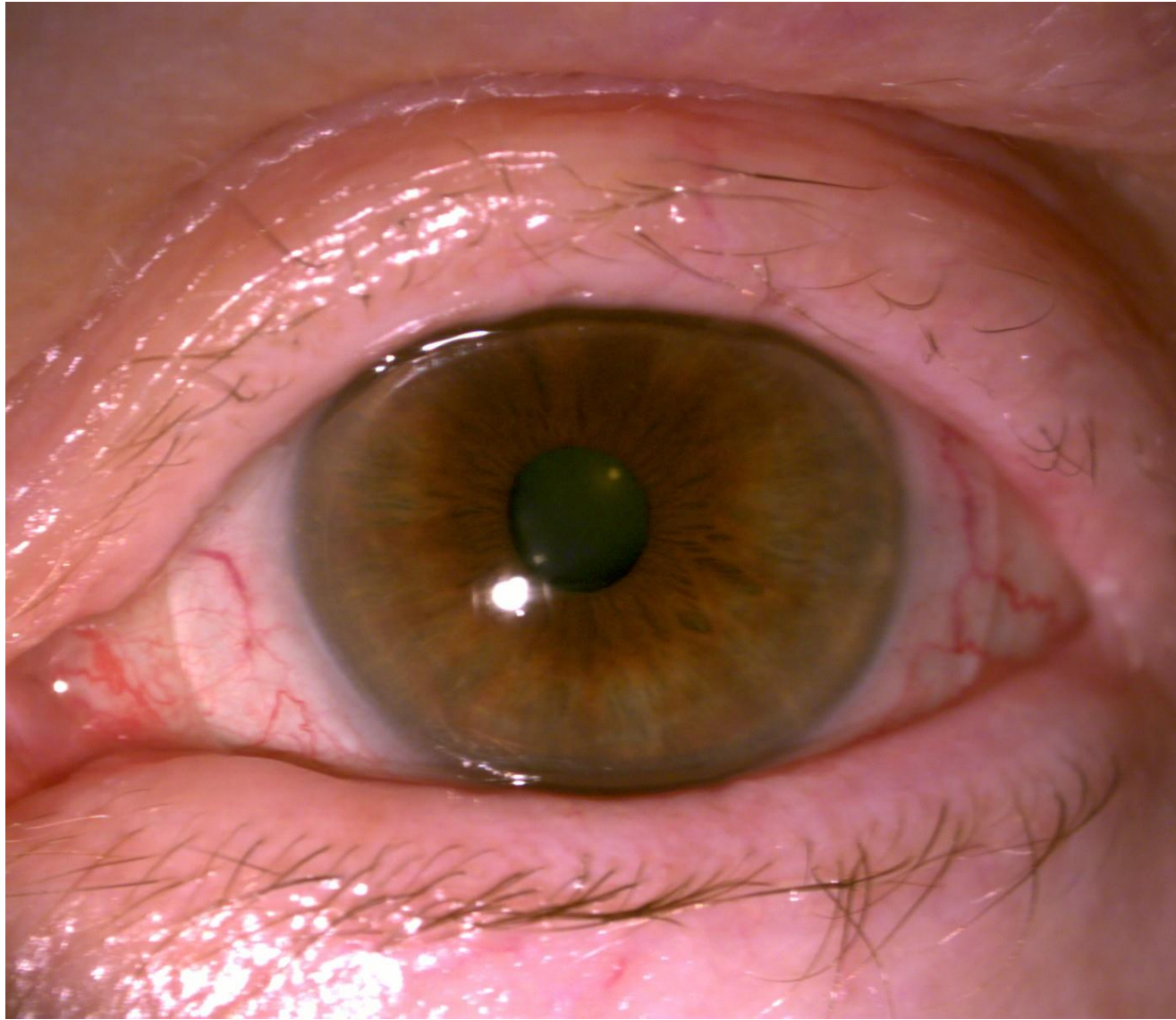


Case Report #3

- 66 year old female with Exposure Keratopathy and Ocular Cicatricial Pemphigoid
 - Triggered by lagophthalmos from blepharoplasty
 - H/O LASIK 15 years ago
 - C/O burning, pain, extreme light sensitivity, inability to look at lights, phones, drive, watch TV
 - Rituximab infusions 2x (monoclonal antibody), Trazodone 50mg PO, Prednisone 40m, etc
 - Restasis BID (improvement), Systane Complete, Systane gel qHS, Refresh PF tears “constantly”, Omega-3 supplementation

Case Report #3

- Dark sunglasses
- Delicate handling of patient experience
 - Decrease light in office
 - Extra time in-office
 - Staff ability to answer FAQs
- Expectation setting



Presentation

- Meibomian gland atrophy
- Rough skin on upper and lower eyelids
- SPK OU 2+

Case Report #3

- Fit with scleral lenses OU
- Dispensing discussion
- Results after 1 week of wear

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THANK YOU!

Questions?