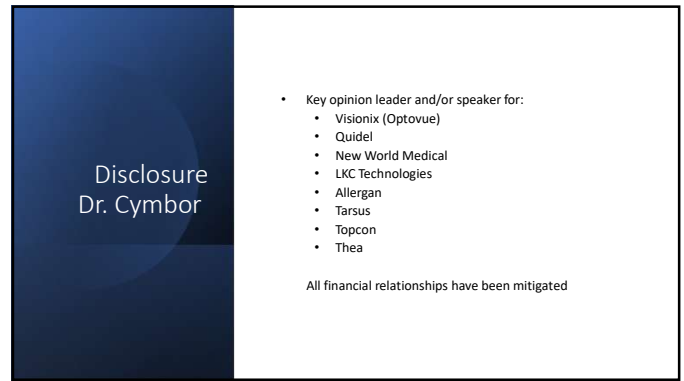


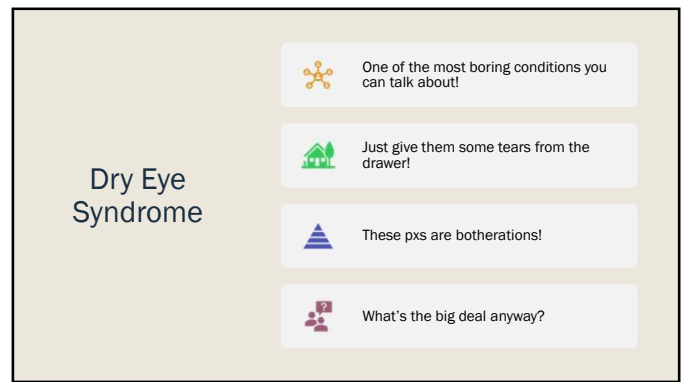
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6

# The 53 y/o lady's exam findings

- BCVA OD: 20/20-2 OS 20/25-2
- Elevated Speed 2 21
- Osmolarity 312 OD, 320 OS
- (+) MMP-9
- Slit lamp
  - 1+ Bulbar Injection
  - Mild meib gland capping - LL OU
  - Very few collarettes
  - No papillae

[illegible]

The diagram is split into two panels. The left panel shows a blue background with a dark blue L-shaped frame representing the slit lamp. The text "SLIT LAMP" is written in black capital letters. The right panel shows a close-up of a yellow, curved object (the cornea) with a bright green, circular light source (the slit lamp) illuminating it, creating a green, textured area on the cornea.

A close-up photograph of a human eye. The iris is a light blue color with a dark pupil in the center. The sclera (white part of the eye) is visible around the iris. There are some red, inflamed, and possibly bruised areas around the eye socket, particularly on the lower and outer sides. The eyelids are partially closed, and the skin around the eye appears slightly swollen and irritated.

The remainder of the exam was normal

- So now what...
- What is your diagnosis?
  - *How Do We Know?*
- Do we need more information?
  - *If so, what...?*

2

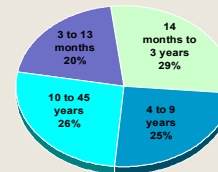
Would you  
treat this  
patient now?

- If so, with what?
- When would you see her back?

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## How Long Have You Suffered From Dry Eye

Average Length of Time = 6½ years  
(n=99)\*

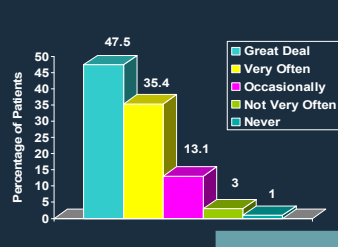


- On average, patients suffered with dry eyes for 6.5 years.
- Overall, the majority (76%) of patients report that their dry eye worsened over time (data not shown).

[Q1%, Q3%, T18, T19]

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## HOW OFTEN DOES DRY EYE AFFECT YOUR NORMAL ACTIVITIES?



Data on file, Allergan

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## How Does Dry Eye Affect Patient QOL?

- In a recent survey of 100 patients with dry eye
  - Patients reported that they suffered from dry eye for a median 48 months (mean 86.8 months, SD 103.9 months)
  - Most patients (75.8%) felt that their dry eye had worsened over time

Data on file, Allergan

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## Comparative Time Trade-off Scores

Health State	Mean Score
Moderate Dry Eye Disease	0.78
Moderate Angina	0.75
Severe Dry Eye Disease	0.72
Class III/IV (severe) Angina	0.71
Disabling Hip Fracture	0.65
Monocular Painful Blindness	0.64

- The affect that moderate dry eye has on quality of life is comparable to that for moderate-severe angina

Schiffman et al. *Ophthalmol*. 2003;110:181

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## So How Do We Take Advantage of This Opportunity?

1. You have to want to do this.
2. You have to raise your level of suspicion
3. You have to ask the right (and better) questions
  1. Train our technicians!!!!
4. You have to have a plan for it
5. You have to plan for it
6. You have to design a workup
7. You have to have treatment options

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## Who Gets OSD?

- 16% of Americans over age 40
- 35% over age 65
- Females
- CL Wearers
- LASIK pxs
- Pxs undergoing hormonal changes
- Computer users

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## Case Presentation

- 67 y/o Female
- BCVA 20/25 OD and OS, Glare test 20/60 OD and 20/70 OS
- CC: Reduced vision that worsens with prolonged reading
  - Longstanding issue (> 5yrs) with soreness and foreign body sensation OU
    - Chronic redness that worsens through the day
    - She is "always" aware of her eyes but they get worse when outdoors or around a ceiling fan
    - She has been diagnosed with dry eye but is skeptical because her eyes are itchy
    - She has used multiple drops over the years with minimal success
    - Currently using Xidra OU BID, OTC Afs frequently
    - Has become very disillusioned with both the way her eyes look and feel

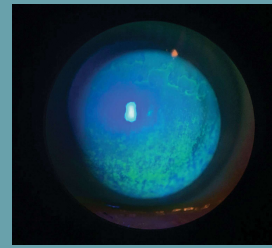
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## Clinical Exam

- NS 2
- Thickened Lid margin
- No madarosis
- 2+ bulbar injection
- Scattered 1-2+SPK (NaFl)
- (+) LG stain conjunctiva
- Moderate meibomian gland obstruction
- Osmolarity - 322 OD, 308 OS
- TBUT 4 secs OD, 6 secs OS
- SPEED score - 11
- MMP9 (+)

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## SLIT LAMP



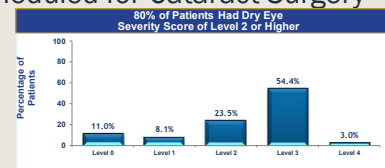
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## Treatment options

- Topical therapy
  - Immunomodulators
  - Topical antibiotics
  - Steroids
  - Combo drops
  - Autologous serum
  - Miebo?
  - Vevye?
- Oral Therapy - Doxycycline
- Amniotic membrane
  - Dehydrated or cryopreserved?
- What about a specific artificial tear?
- Oral antibiotics
  - Which one?
  - How much?
- Lid hygiene
  - Anything specific?
- Lid procedures
- IPL/
- Nutritional concerns?

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## Dry Eye Prevalence in Patients Scheduled for Cataract Surgery<sup>1</sup>



- 22.1% of patients had previously received a diagnosis of Dry Eye Disease
- 80.9% of patients had an ITF Dry Eye Level 2<sup>+</sup> or higher, based on the presence of signs and symptoms

\* An ITF level of 2 indicates moderate Dry Eye. 1. Tessler et al. Clinical Study Report: Cataract and Dry Eye Prospective Health Assessment of Cataract Patients (Cataract Surface Study, 2010) (unpublished study)

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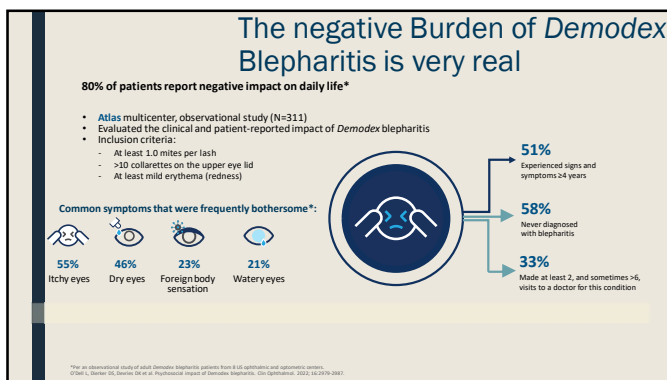
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### Collarettes = *Demodex* blepharitis

- Collarettes are the pathognomonic sign of *Demodex* blepharitis<sup>1</sup>
  - Symptoms may overlap with those of ocular surface diseases, such as dry eye or allergies<sup>1,2</sup>
- 100% of patients with collarettes are found to have *Demodex* mites<sup>3</sup>**
- Collarettes are composed of mite waste products, eggs, and digestive enzymes, all of which cause irritation<sup>1</sup>

Refractive & Contact Lens, Hershkov D, Patel A, Gupta D. Demodex blepharitis: clinical perspectives. Clin Vision Sci. 2018;10(1):1-3. 2. Ocular Allergies: A Practical Approach. International Association of Allergy and Ophthalmology. 2018;10(1):1-3. 3. Demodex mites and their role in ocular surface disease. Invest Ophthalmol Vis Sci. 2018;59(10):3000-3004.

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### Xdemvy thoughts

- Will it have to be used every year?
- Will adjunct therapy be needed?
- Why not just do IPL?
- Or BlephEx?
- Is this approved?

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### Case

- 50-Year-old Caucasian female – with longstanding symptoms of tearing, itching, redness and ocular pain.
- Past Ocular Hx: POOL OD 2018 with reposition surgery 2015
- Systemic/Surgical Hx: Hypothyroid, Fibromyalgia, Hysterectomy
- Ocular medication Hx: Using Cequa OU BID and Qasys tears pm
- Systemic medication Hx: Gabapentin 600mg daily

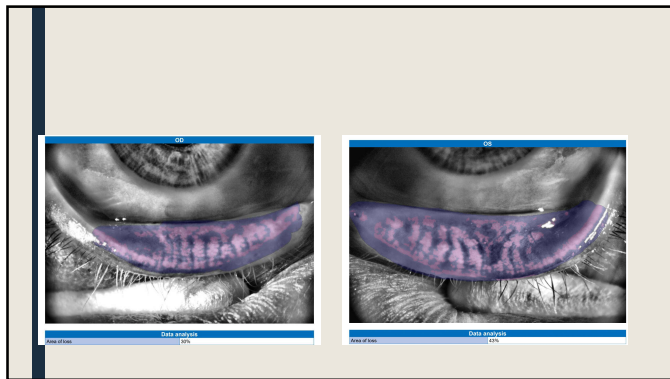
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### Clinical Findings

- BCVA: OD: +1.50+0.75 x 110 20/20- OS: +0.25 sphere 20/20 Add: +2.50
- IOP 13 OD: 16 OS
- Schirmer testing OD: 5mm OS: 1mm
- SLE:
 

	OD	OS
Tear Film:	TBUT 0 sec	TBUT 0 Sec
Conjunctiva:	Mild Hyperemia	Mild Hyperemia
Cornea:	1+ SPK paracentral	1+ SPK paracentral
	<b>Reduced corneal sensitivity OU</b>	
Eyelids:	Grade 4 MGD	Grade 4 MGD

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## How do you evaluate Meibomian Glands?

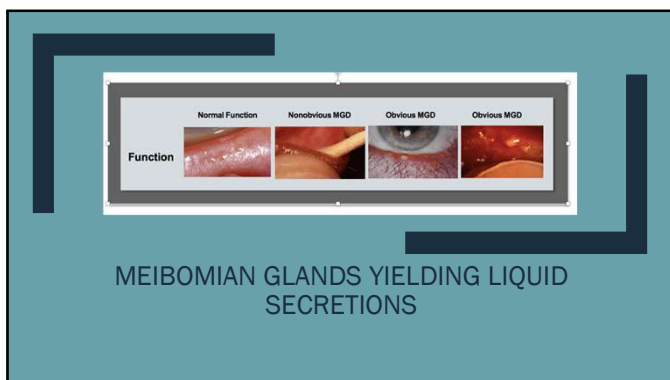


STRUCTURE



FUNCTION

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## Let's think systemic

- Sjogren's workup
  - Low Schirmer scores
  - Dry eye symptoms
  - Systemic hx
- ANA
- SSA/SSB
- Other labs?

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## The Results are in

- With a (+) Sjogren's diagnosis base on lab work - how will this influence the management of this patient
- Collaborative care with her Rheumatologist
- Continued efforts to control her ocular surface inflammation with a foundational medication
- Treat flares of symptoms aggressively

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## NK symptoms

- Dryness
- Reduced Blink
- Blurred Vision
- Photophobia
- Px may be asymptomatic

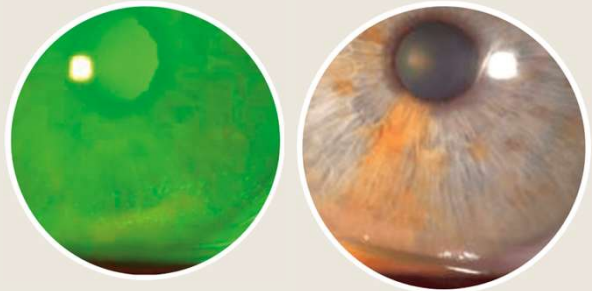
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## NK- Diagnosis

- History
- Slit lamp exam – corneal appearance
- Corneal sensitivity testing

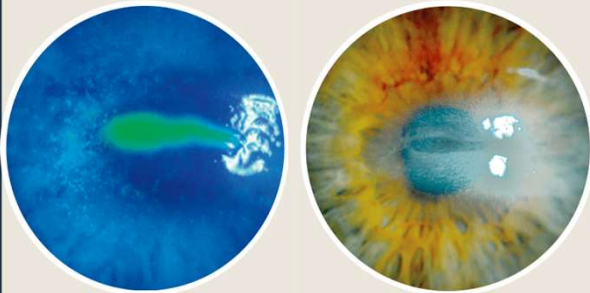
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### NK Stage 1



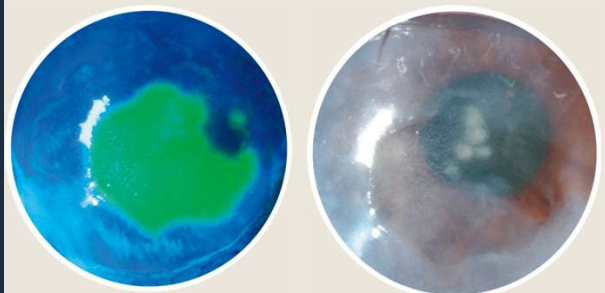
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### NK – Stage 2



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### NK- Stage 3



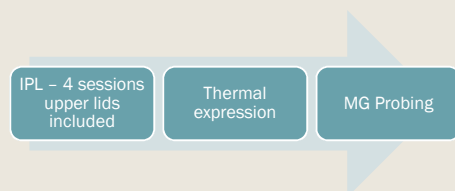
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### Treatment Plan- Corneal Health – decreased corneal sensitivity

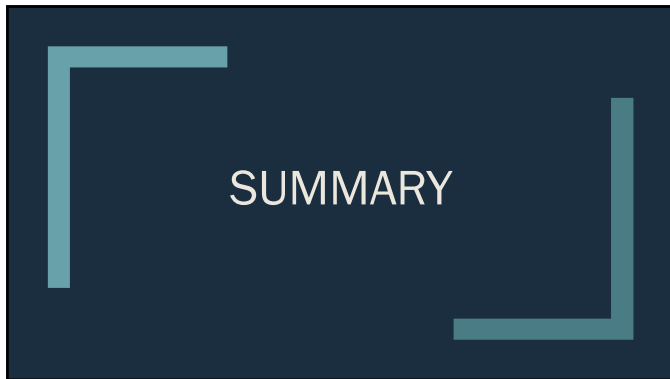


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### Treatment Plan – Meibomian Glands



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