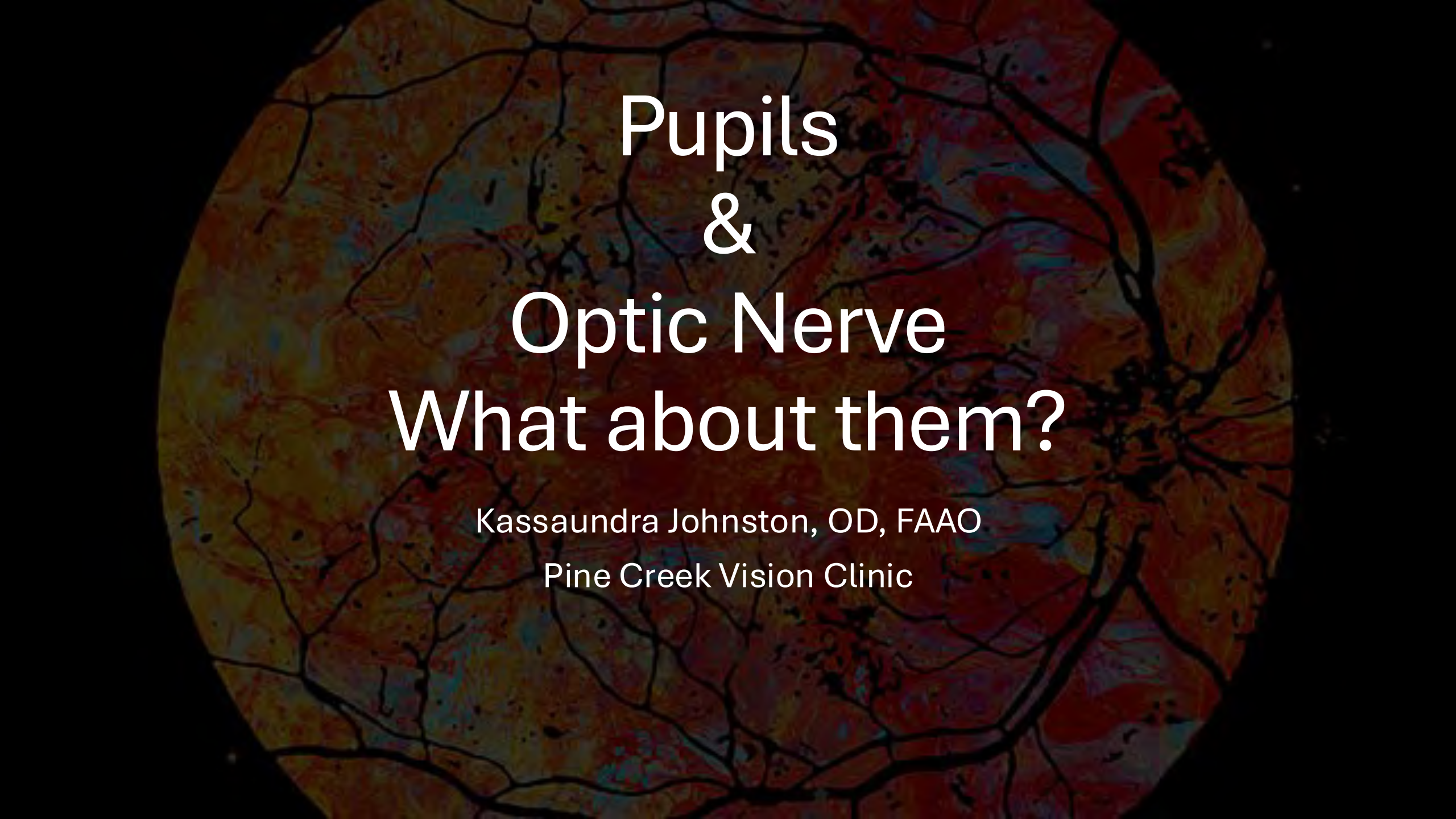
College of Optometry
UNIVERSITY OF HOUSTON

CE in
Austin
October 26-27, 2024

Sunday Handouts

Conference Director
Janet Garza, OD, FAAO

Sunday, October 27, 2024			
7:00 am - 8:00 am	**Check-In, Continental Breakfast, & Exhibit Hall**		
8:00 am - 8:05 am	**Announcements & CE Credit Overview**		
8:05 am - 9:45 am	**Pupils and Optic Nerves—What About Them?** *Kassaundra Johnston, OD, FAAO*	2 D/T Hours	COPE ID # 94073-NO
9:45 am - 10:15 am	**Break**		
10:15 am - 12:00 pm	**Neuro-Referral Grand Rounds** *Kassaundra Johnston, OD, FAAO*	2 D/T Hours	COPE ID # 94072-NO
12:00 pm - 1:00 pm	**Lunch**		
1:00 pm - 1:50 pm	**When Things Don't Line Up-- A Crash Course** *Kassaundra Johnston, OD, FAAO*	1 D/T Hour	COPE ID # 94074-NO
1:50 pm - 2:05 pm	**Break**		
2:05 pm - 2:55 pm	**Ball Room 1**		
	Opioids: Ongoing Challenges in Pain Management *David Dinh, OD, FAAO*	1 D/T Hour	COPE ID # 90832-PH
	Ball Room 2		
	Advancements in Presbyopia Management *Jung-Sun Kim, OD, PhD*	1 D/T Hour	COPE ID # 93887-GO
2:55 pm - 3:05 pm	**Break**		
3:05 pm - 3:55 pm	**Ball Room 1**		
	2024 Professional Responsibility Course for Texas Optometrists *Andrew Kemp, OD, FAAO*	1 GEN/PR Hour	COPE ID # 89780-EJ
	Ball Room 2		
	Red Flags in Geriatrics Care - Part 1 *Jung-Sun Kim, OD, PhD & Pat Segu, OD, FAAO*	1 D/T Hour	COPE ID # 93888-SD
3:55 pm - 4:05 pm	**Break**		
4:05 pm - 5:00 pm	**Ball Room 1**		
	Human Trafficking Training for Health Care Providers *Natalie Pirrone, MBA*	1 GEN/ HT Hour	COPE ID # 92565-PB
	Ball Room 2		
	Red Flags in Geriatrics Care - Part 2 *Jung-Sun Kim, OD, PhD & Pat Segu, OD, FAAO*	1 D/T Hour	COPE ID # 93889-SD

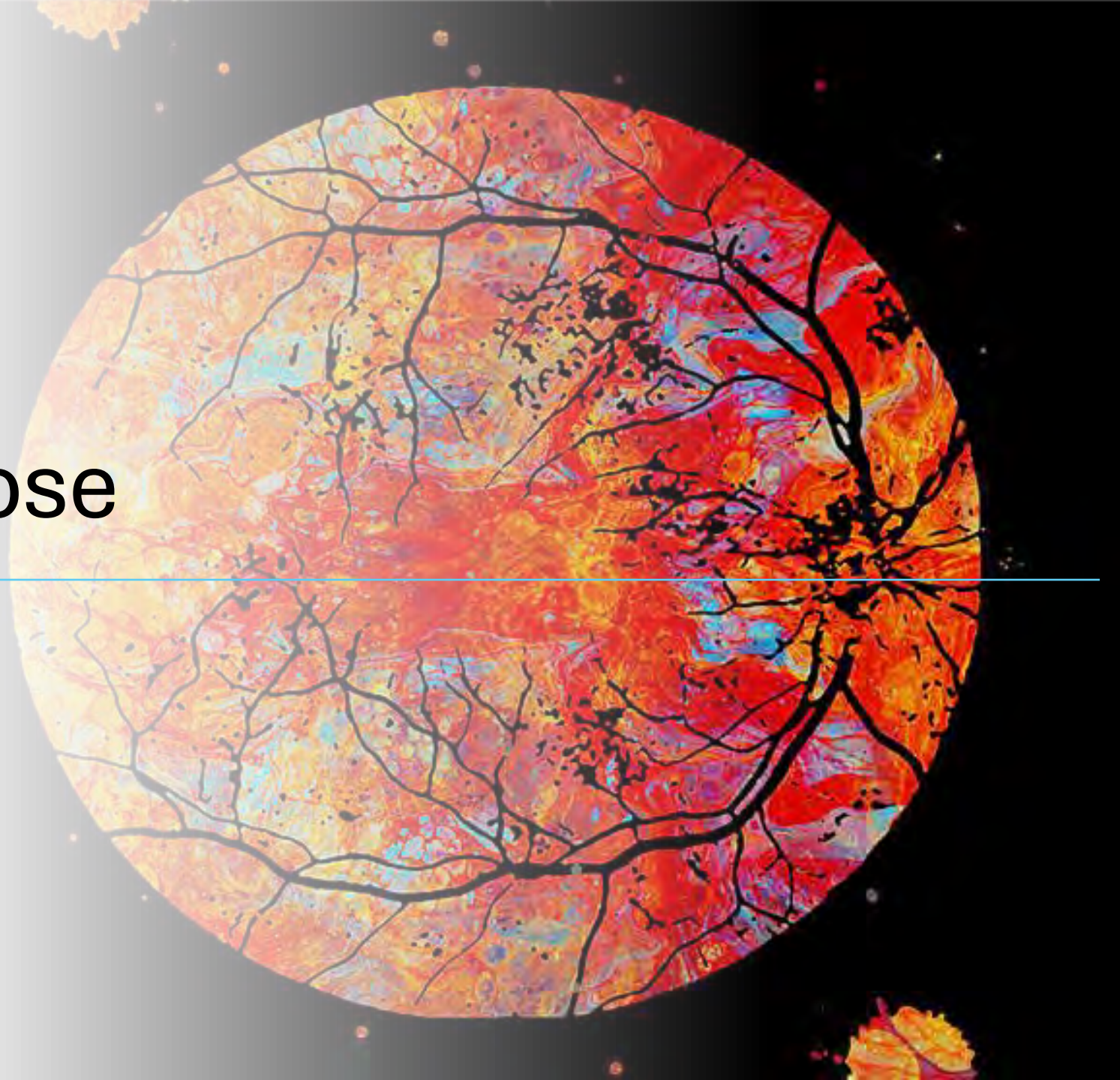


Pupils & Optic Nerve What about them?

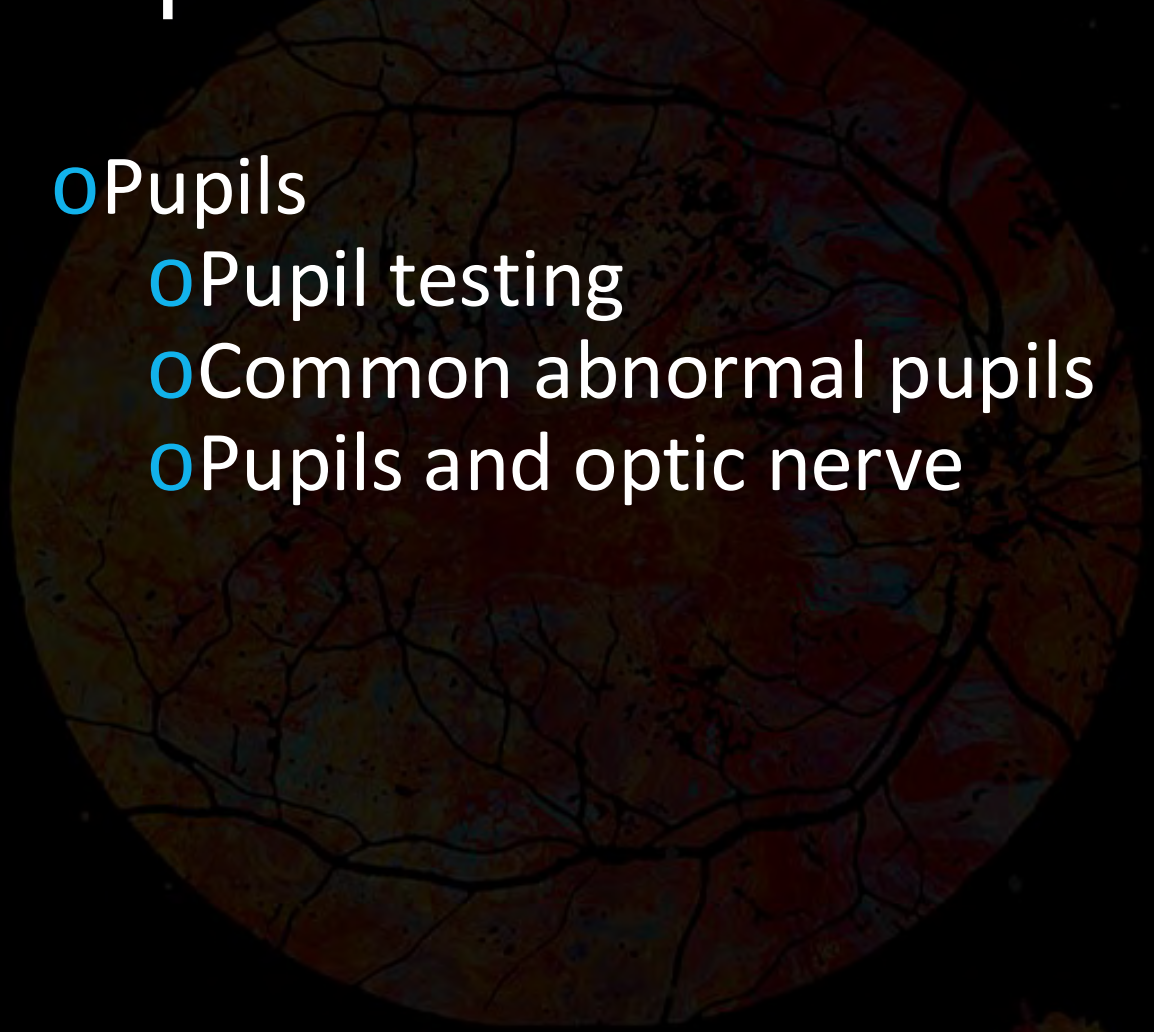
Kassaundra Johnston, OD, FAAO

Pine Creek Vision Clinic

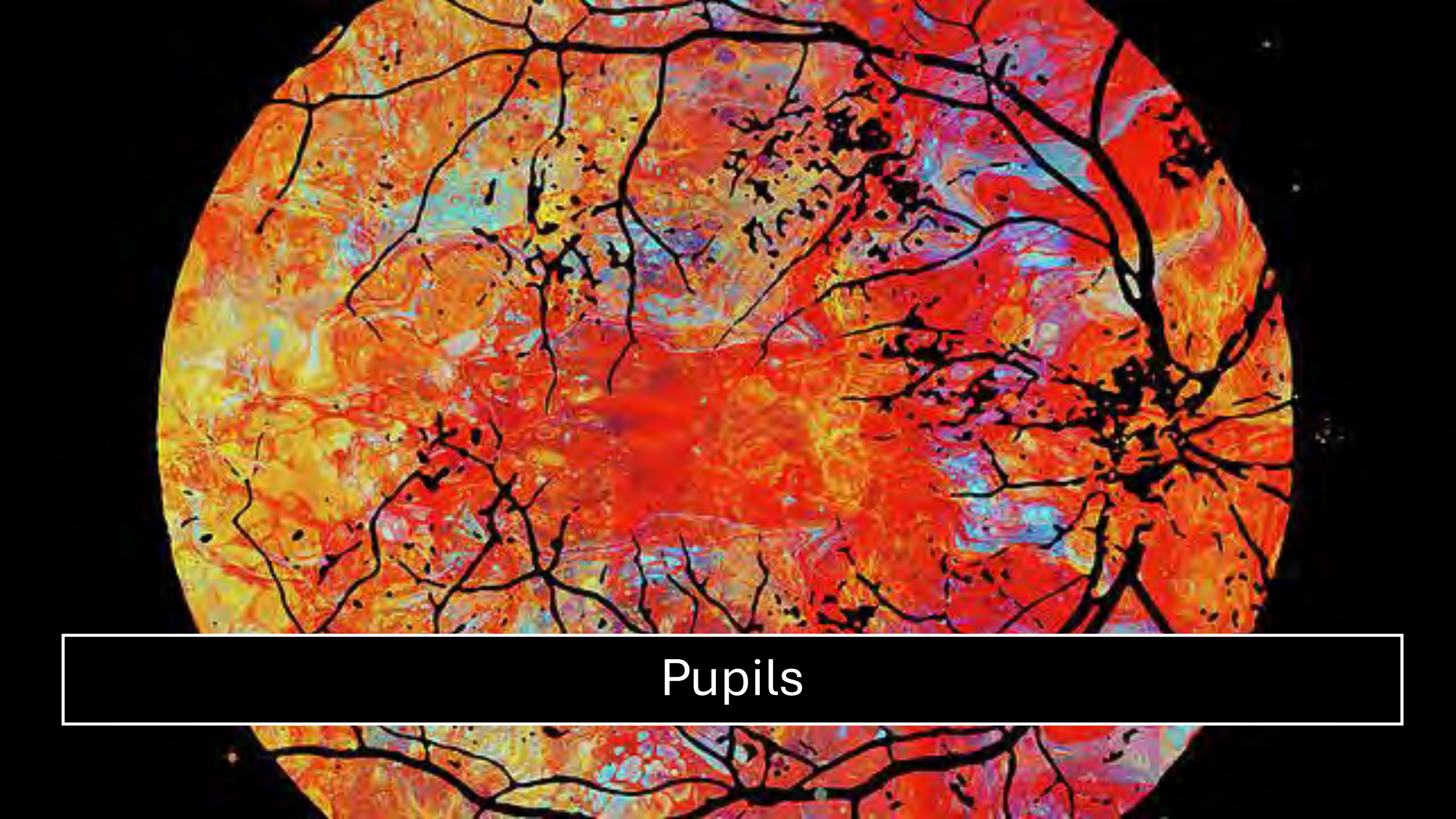
Nothing to Disclose



Topics for lecture



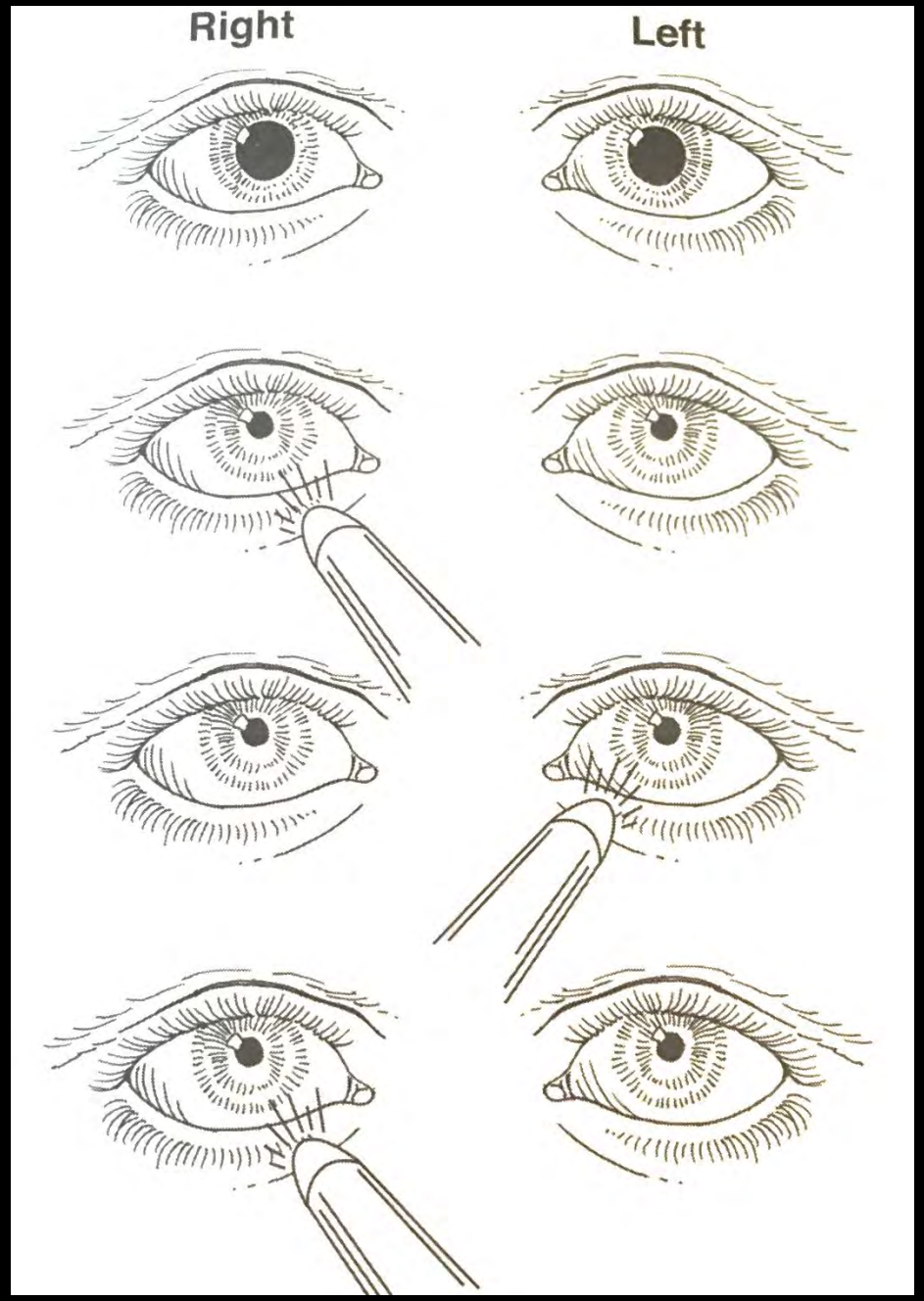
- Pupils
  - Pupil testing
  - Common abnormal pupils
  - Pupils and optic nerve
- Optic Nerve
  - Visual acuity
  - Optic Neuritis/papilledema
  - VF changes
  - Co-management
  - Ancillary testing
  - Optic atrophy & Ischemia



Pupils

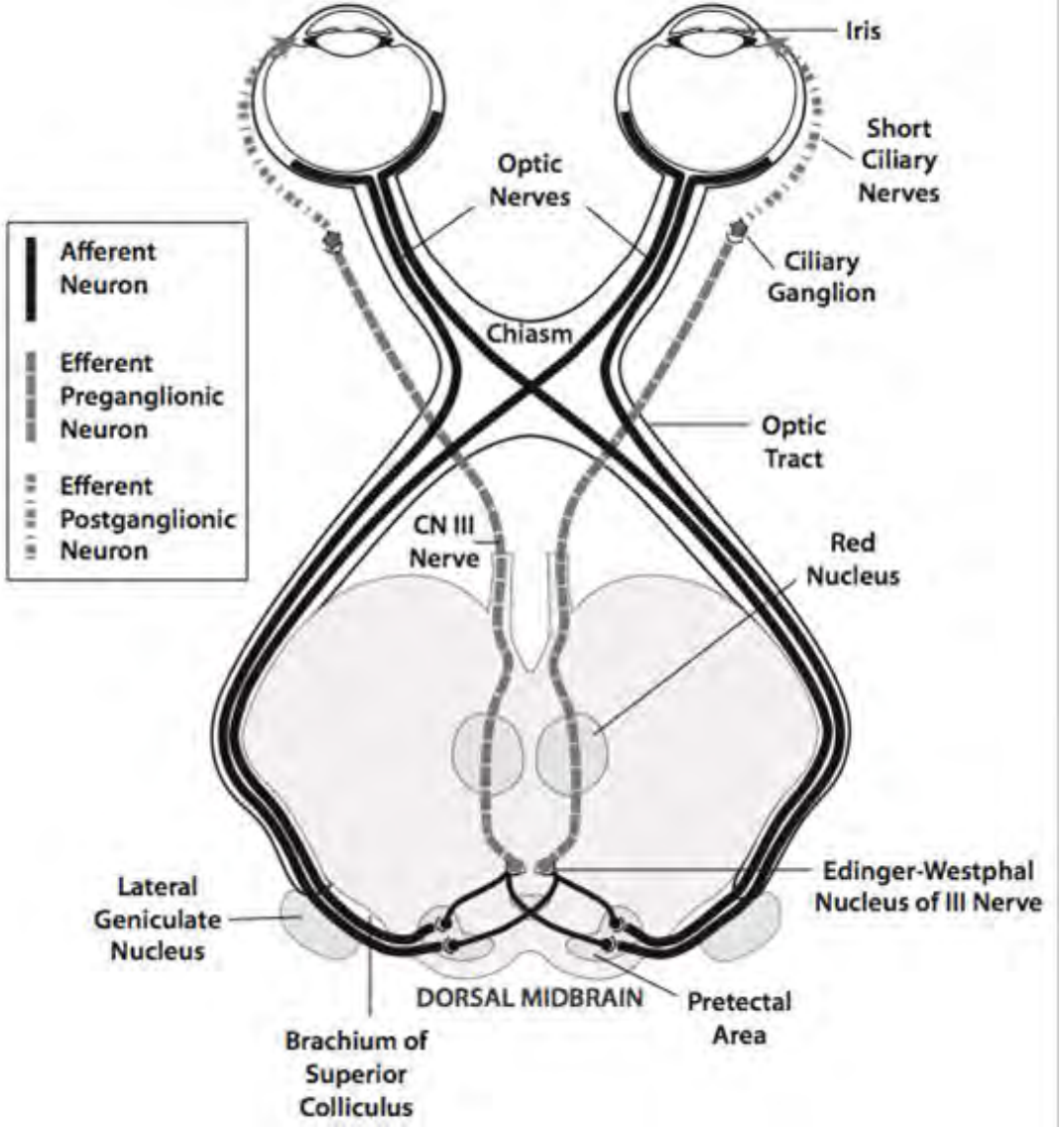
How/what to measure?

- Pupil sizes
  - BOTH: bright & dim illumination of each eye
- Direct/consensual assessment
- Swinging flashlight
- Near response
  - Good near accommodative target



Swinging Flashlight Test

- After testing pupil size in light and dark
- Swing back and forth *close and quickly*
- Lighting?
- Hippus concern?
- Allow time for normal re-dilation
- Unsure???
  - Use brighter light like BIO or light on phone ☺


Iris
Short Ciliary Nerves
Optic Nerves
Ciliary Ganglion
Chiasm
Optic Tract
Afferent Neuron
Efferent Preganglionic Neuron
Efferent Postganglionic Neuron
CN III Nerve
Red Nucleus
Edinger-Westphal Nucleus of III Nerve
Lateral Geniculate Nucleus
DORSAL MIDBRAIN
Pretectal Area
Brachium of Superior Colliculus

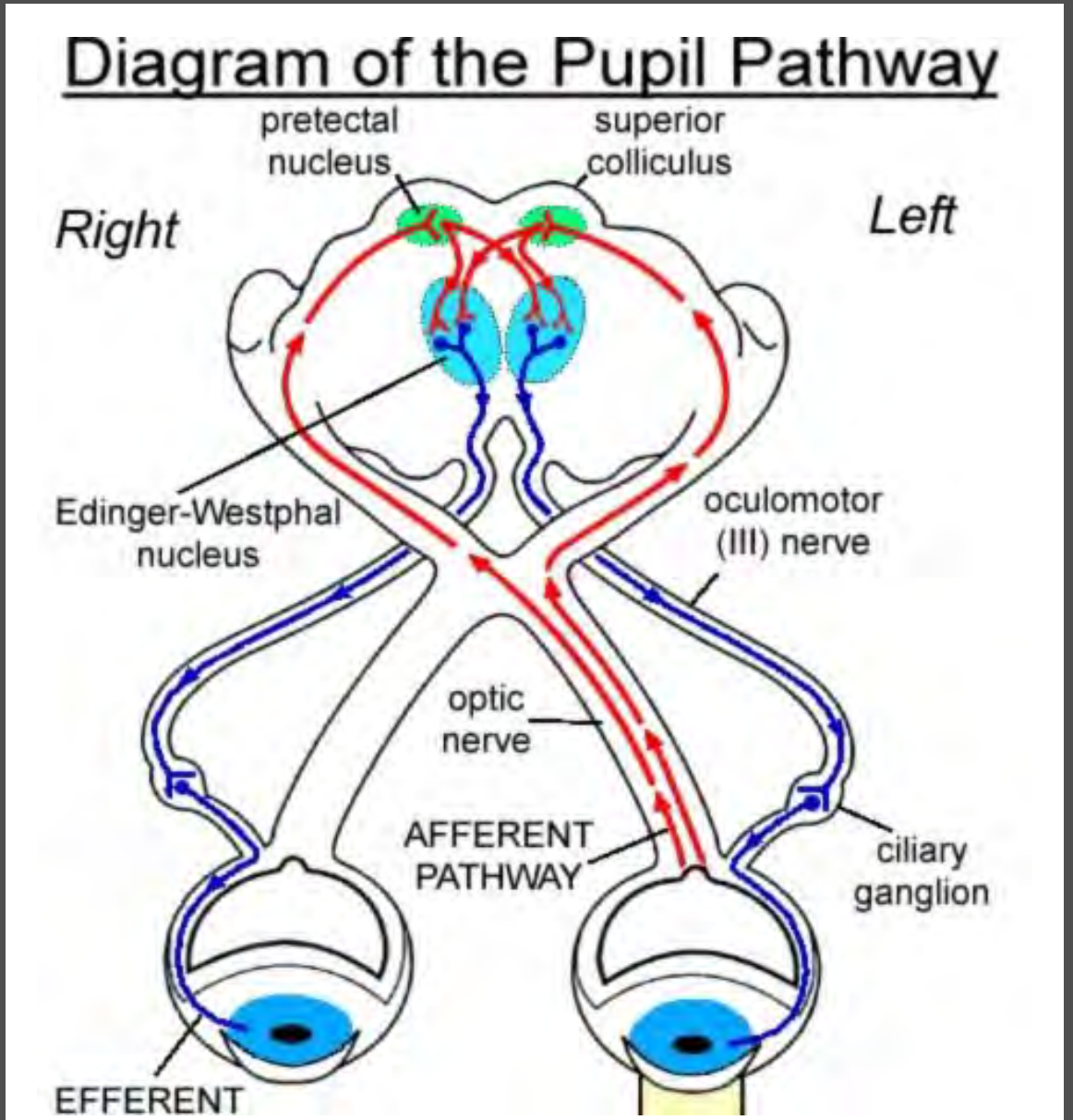


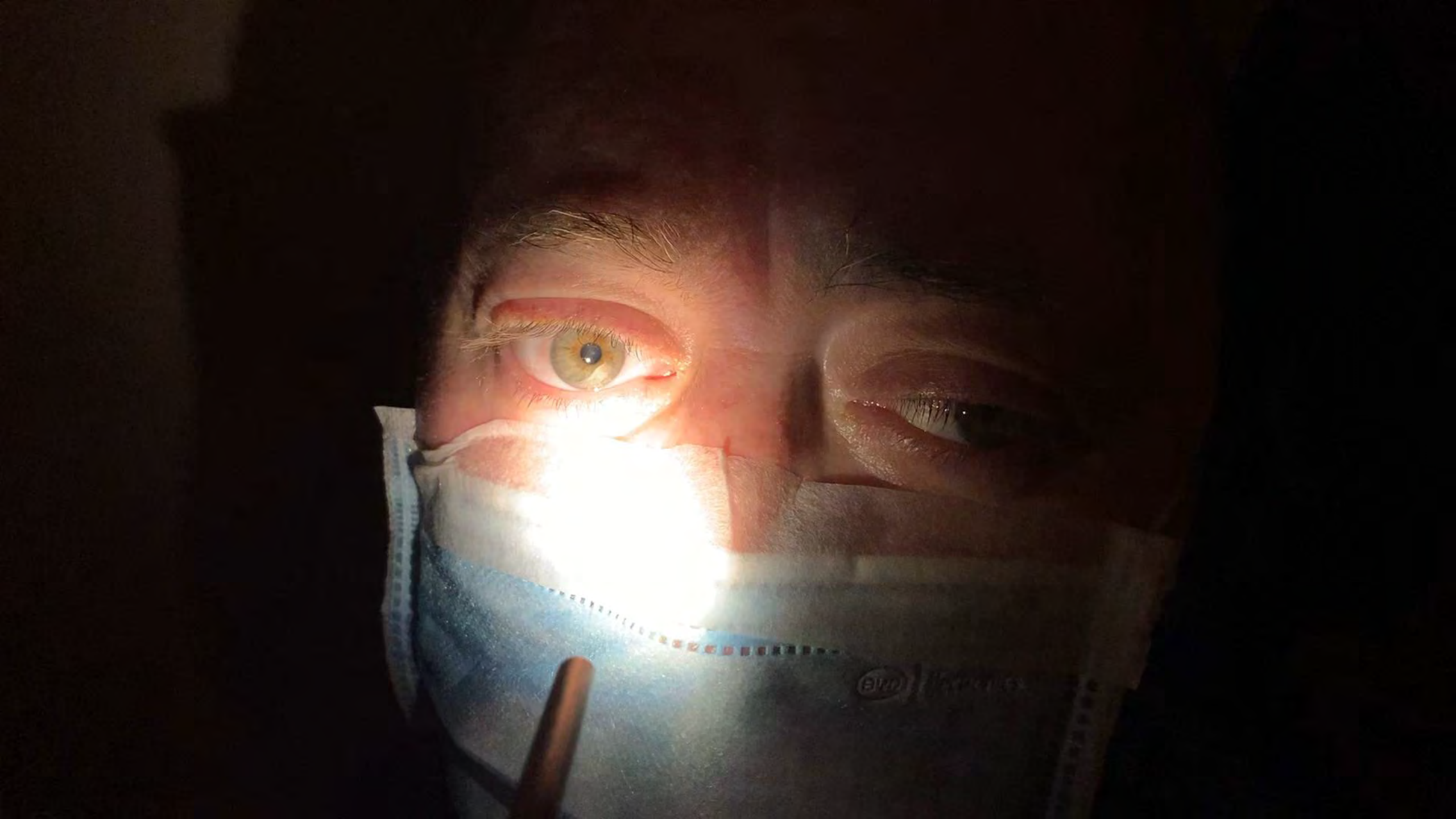
Diagram of the Pupil Pathway
pretectal nucleus
superior colliculus
Right
Left
Edinger-Westphal nucleus
oculomotor (III) nerve
optic nerve
AFFERENT PATHWAY
ciliary ganglion
EFFERENT

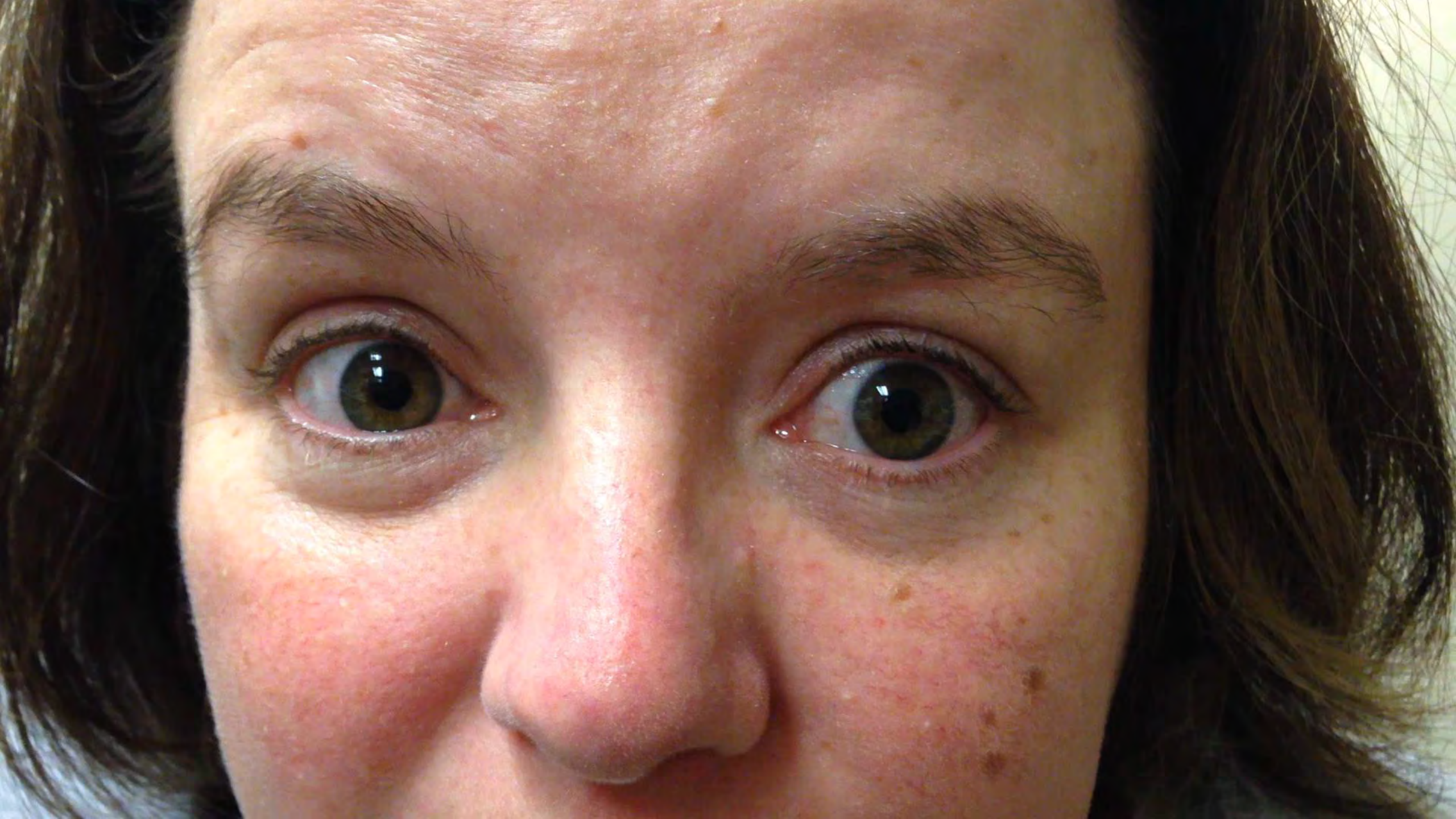
Swinging flashlight test

How would you test RAPD with a fixed or blown pupil????

Optic Neuropathy

- Does NOT cause an anisocoria
  - The good eye will lead the pupil size
  - Refer to pathway





What does ***NOT*** cause RAPD

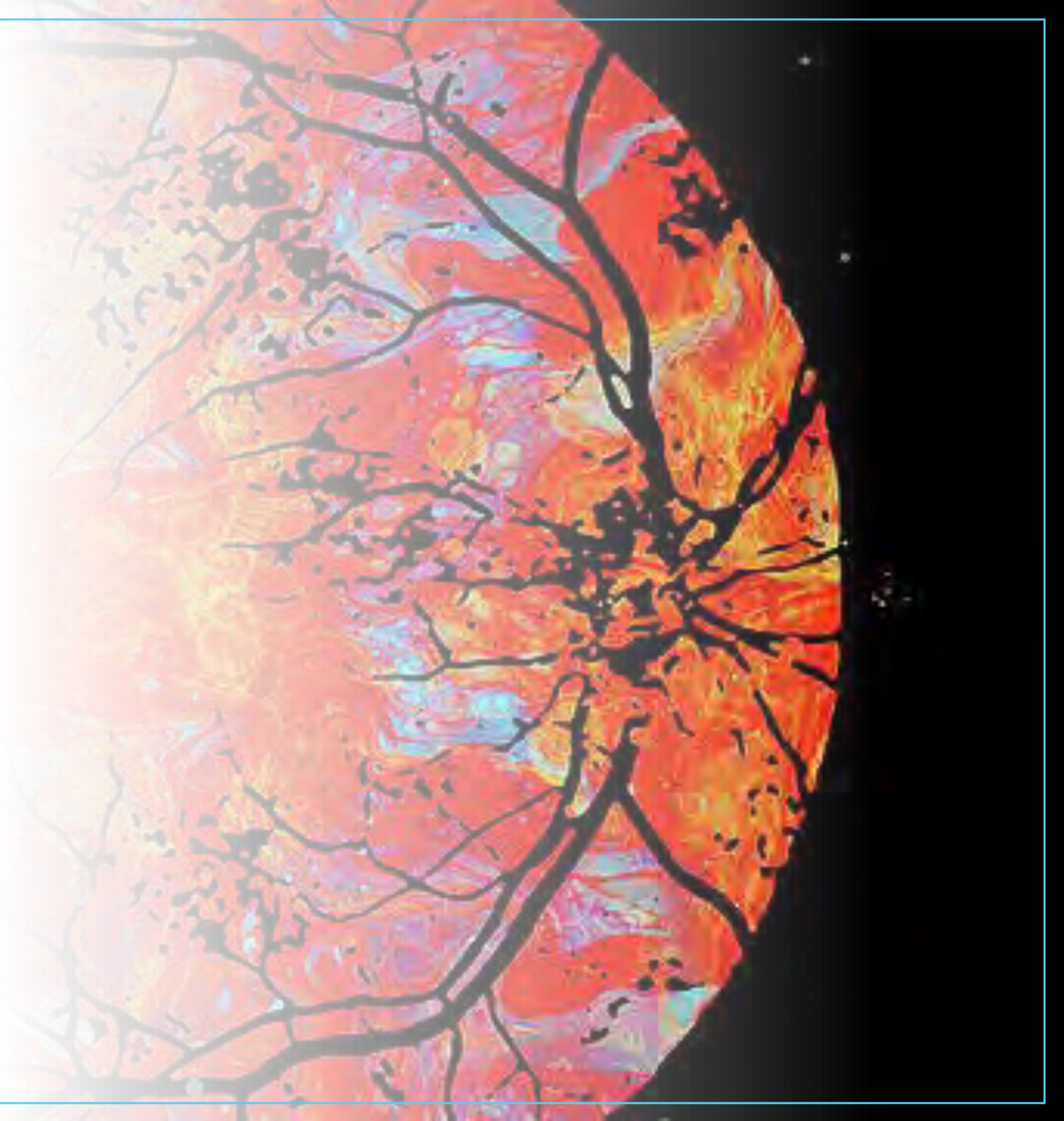
- Opacities*
  - Corneal
  - Cataract**
  - Vitreous
- Amblyopia
- Strabismus
- Maculopathy

RAPD & Visual Acuity

- RAPD magnitude = degree of damage to RGCs and axons
- May NOT parallel visual acuity if papillomacular bundle is spared or if lesion is “tectal APD”
- 4+ APD may be seen with normal acuity

Normal Pupils

- Physiologic anisocoria
- Pupillary unrest (hippus)
- Near synkinesis
- Psychosensory reflex
- Direct/Consensual/Swinging flashlight test



Abnormal Pupil

- Relative afferent pupillary defect
  - RAPD or Marcus Gunn pupil
- Adie’s tonic pupil
- Argyll Robertson Pupil
- Light-near dissociation

- Coma
- Pharmacological*
- Traumatic
- Horner syndrome

Rare Abnormal Pupil

- Benign episodic pupillary dilation
  - “Springing pupil”
- Tadpole pupil
- Midbrain corectopia
- Paradoxical pupils

Horner's Syndrome

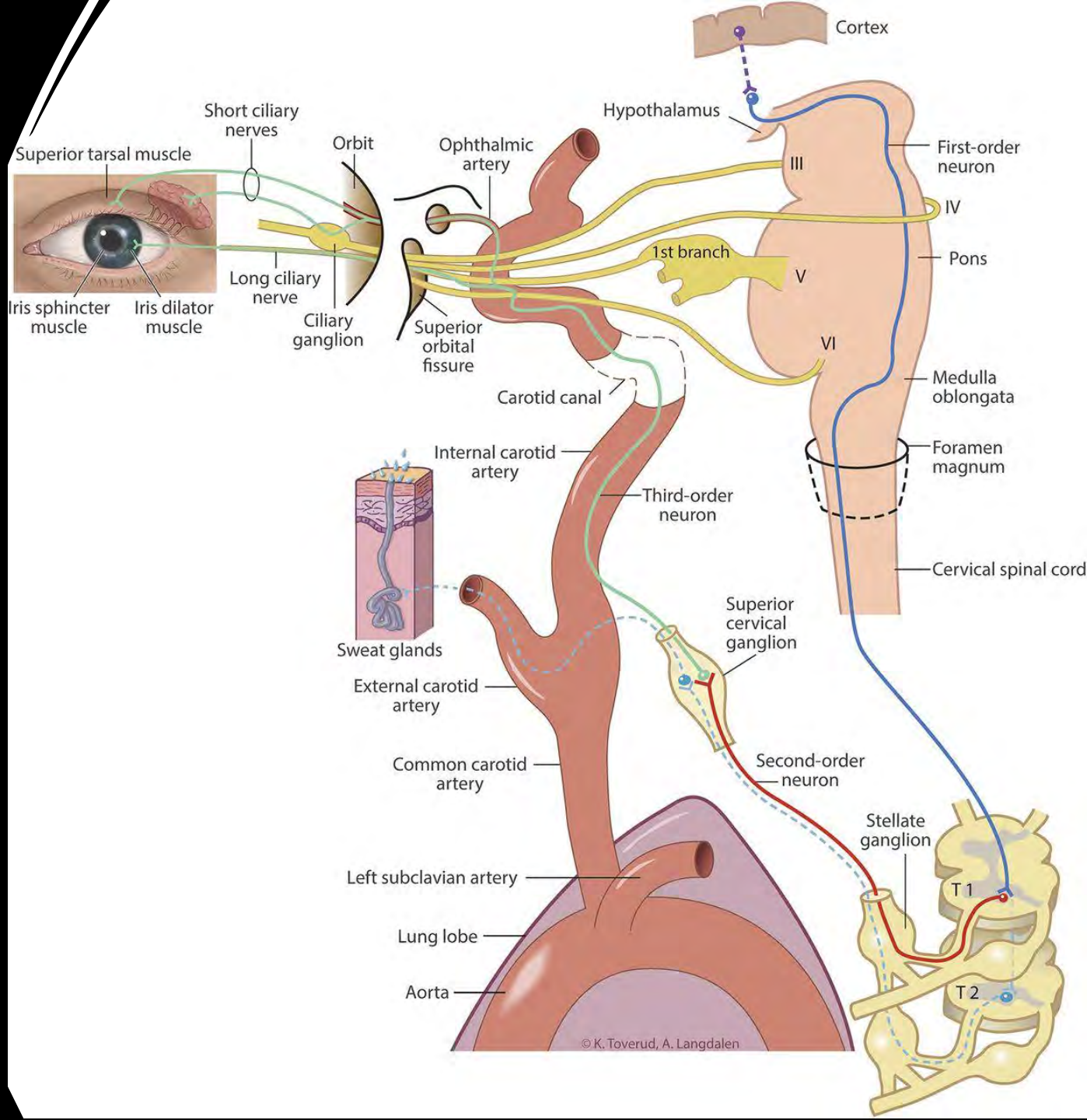
- Typical TRIAD
  - Ptosis
  - Miosis
  - Anhidrosis
- But is there more???

YES…there is MORE

- Upside-down ptosis
  - Narrowing of palpebral fissure
    - Enophthalmos?
- Heterochromia/Ipsilateral straight hair
  - Congenital
- Possible findings (transient)- ACUTE PHASE
  - Dilated conjunctival and facial vessels
  - Decreased IOP
  - Increased accommodation or paresis
- **Dilation lag**

Horner Syndrome

A lesion at ANY point of the pathway can result in Horner Syndrome



Horner Syndrome- *pupil testing*

- Anisocoria greater in dim (Abnormal pupil is smaller)
- Light & near reflex is normal
  - BUT… there is a dilation lag
    - Affected side is SLOWER to re-dilate in the dark
- Typically, all you need for diagnosis of Horner's but you can do additional testing for confirmation and location

Adie's Tonic Pupil- *the patient*

- Typically, female (70%)
- Young: 20-40 yrs. old
- May be symptomatic
  - Photophobia
  - Blur at near, unilateral
- Otherwise, healthy individual

Adie's Tonic Pupil- *the exam*

- Unilateral, partially dilated pupil
- *Poor to absent* light reaction in *dilated* pupil
- Accommodative paresis
  - Trouble refocusing at distance/blur at near

Adie's Tonic Pupil- *the exam*

- Unilateral, partially dilated pupil
- *Poor to absent* light reaction in *dilated* pupil
- Accommodative paresis
  - Trouble refocusing at distance/blur at near
- Light-near dissociation
  - Slow re-dilation
    - "tonic"
  - Better response of miosis to near vs. light

Adie's Tonic Pupil- *the exam*

Sector Paralysis

- Partial preservation of the pupil's parasympathetic innervation = areas of segmental contraction adjacent to sector paralysis

Adie's Tonic Pupil- *the reason*

- Typically idiopathic, benign (97%)
- Lesion in the ciliary ganglion* (or short posterior ciliary nerves)
  - Most common cause of tonic pupil

Aberrant regeneration: fibers destined for CB now innervate iris sphincter

Adie's Tonic Pupil- *testing*

- Cholinergic super-sensitivity
  - Weak/diluted Pilocarpine
  - 0.125% or 0.10%
- Instill drops, OU
  - Wait… 60 minutes ☹
- If POSITIVE: abnormal pupil will be constricted MORE than normal pupil

The good news…

Adie’s tonic pupil

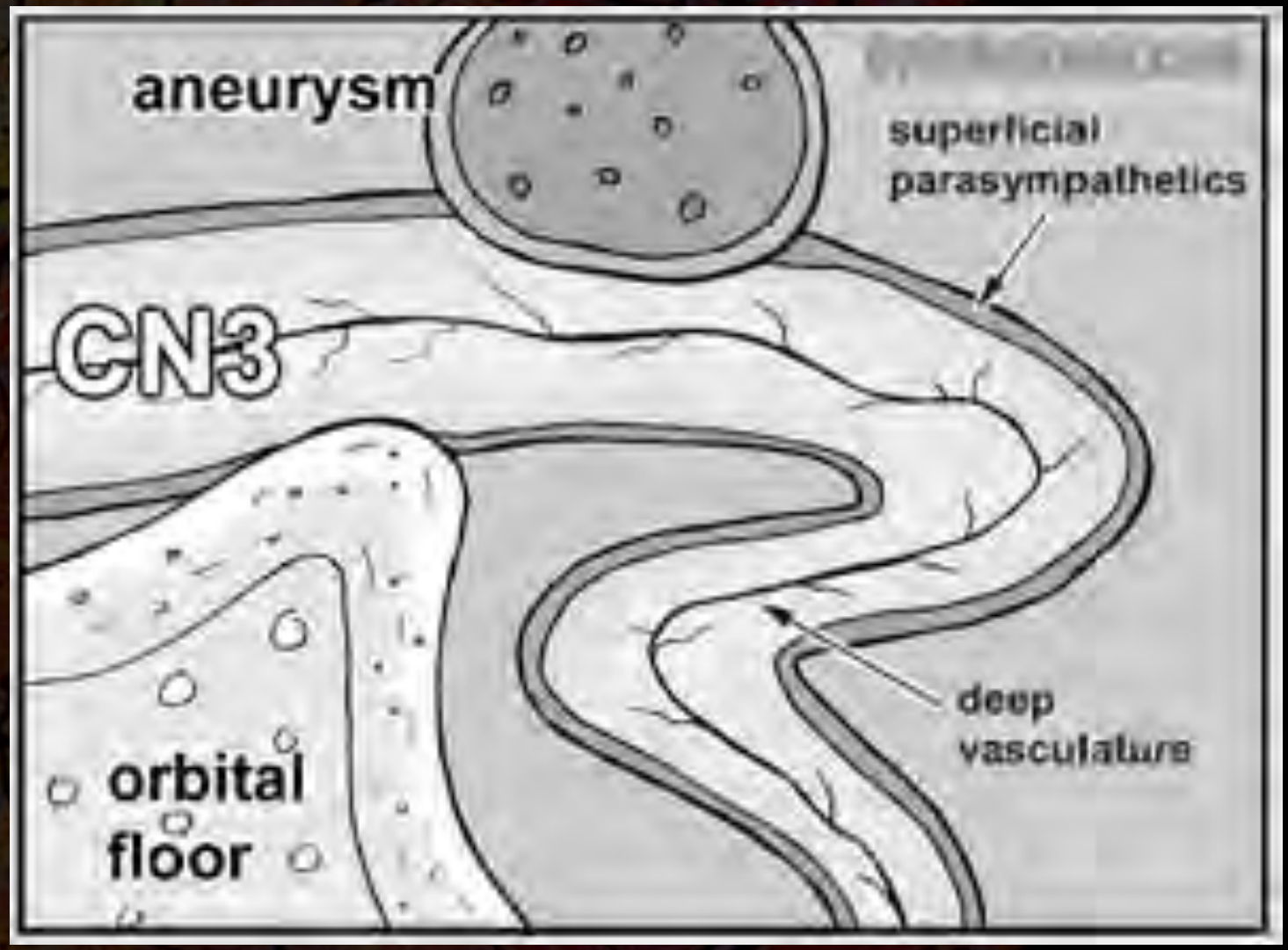
- Typically resolves within a few months spontaneously!

Treatment?

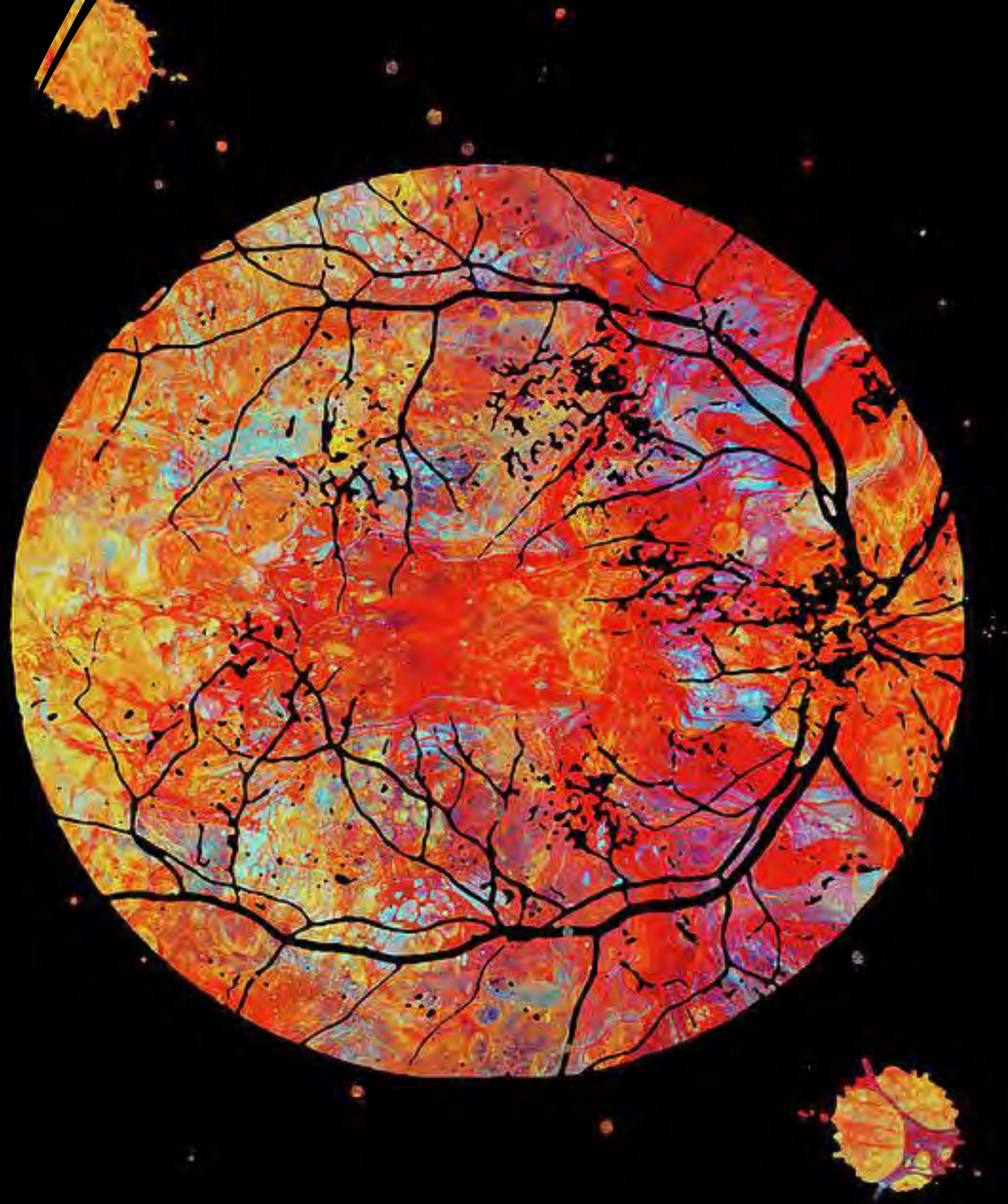
- Accommodation
- Photophobia

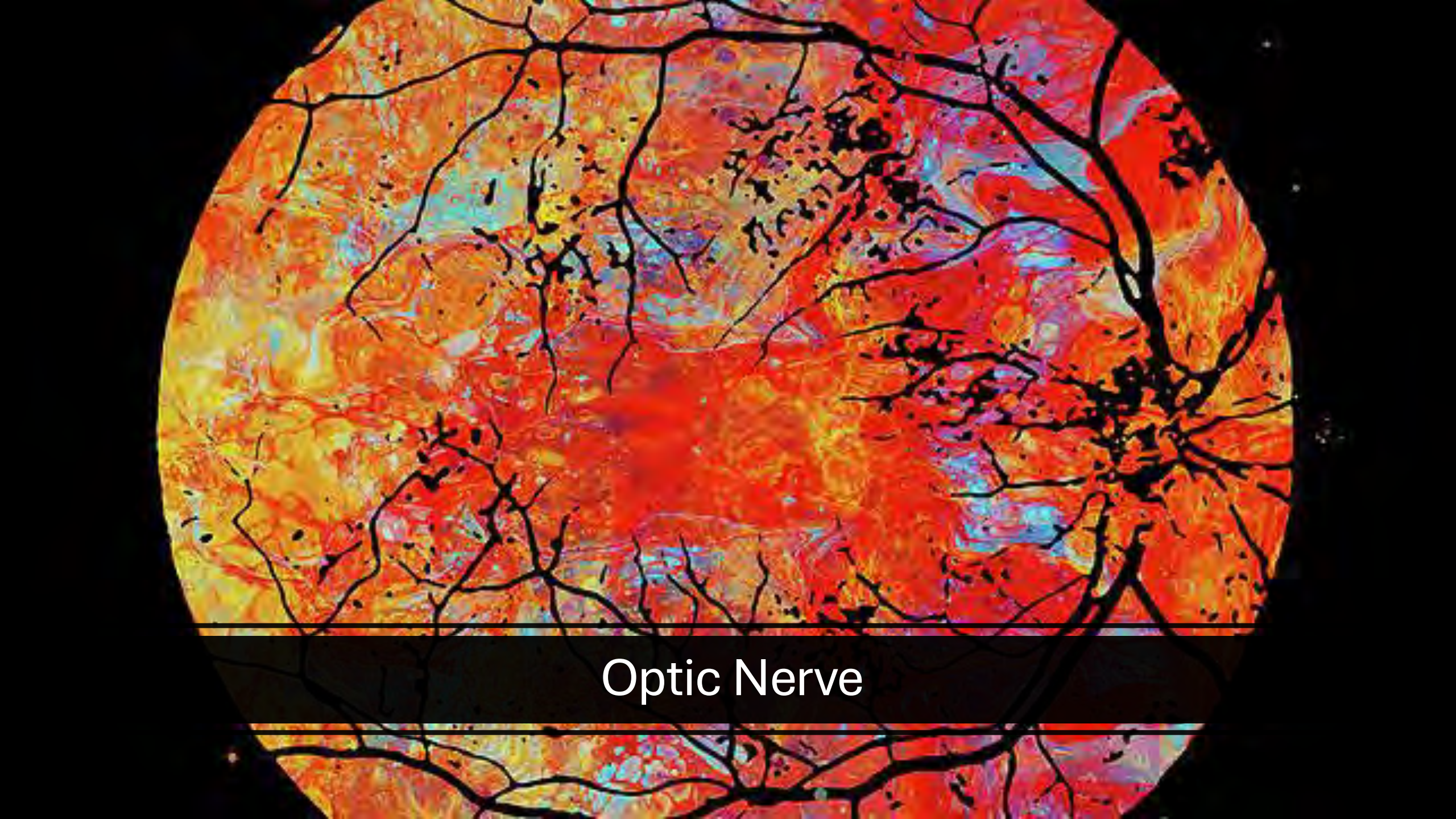
CN III- Pupil Pathway

- Pupil fibers of CN III lie superficially and dorsally
  - Vulnerable to compression from above; specifically, PCoA
- Central fibers control the extraocular muscles
  - Affected by microvascular disease



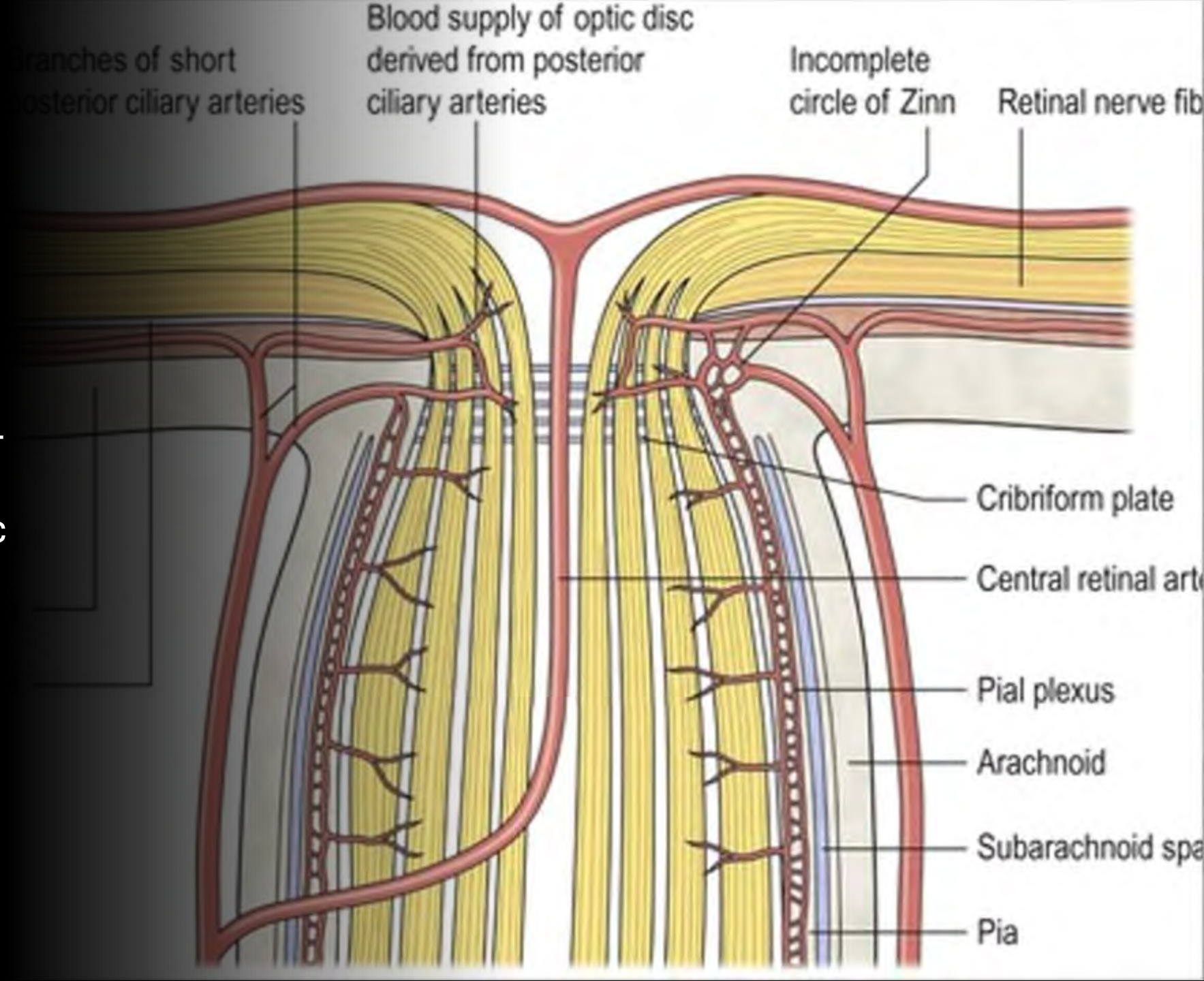
Non-pupil Involving CN III???




Optic Nerve

Anatomy drives what we see

- Optic disc= consolidation of rNFL
- Axons travel via ON, chiasm, and the optic tract→ LGN→ visual occipital cortex



Visual Acuity & Optic Nerve

- My 2 cents:
  - Don’t be misguided by normal visual acuity
  - If vision is decreased…is there any damage to show for it?

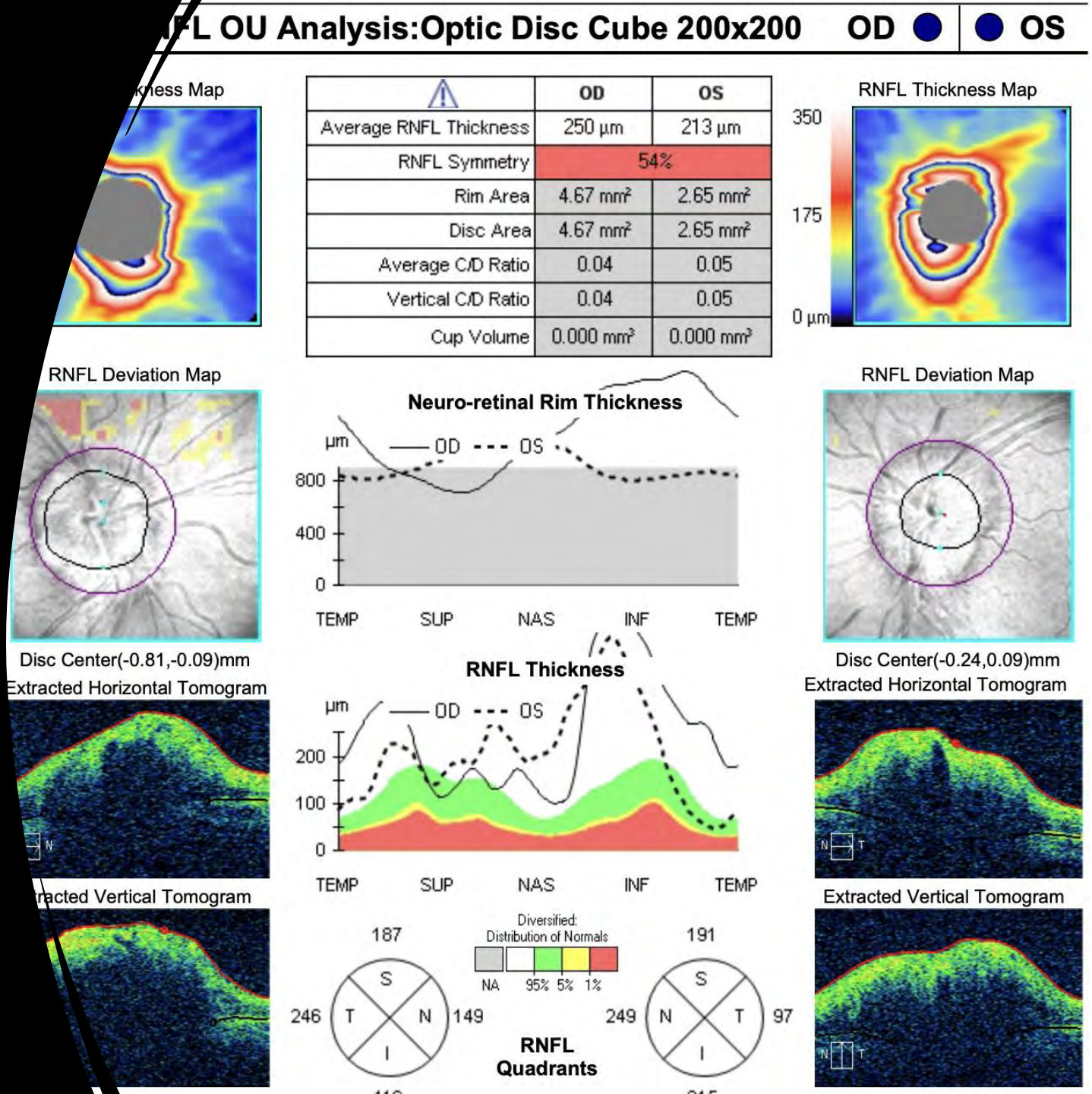
Elevated ONH: Will appearance give you diagnosis?

NO!

The appearance is not specific and cannot differentiate the various possible etiologies for optic neuropathy.

Papilledema

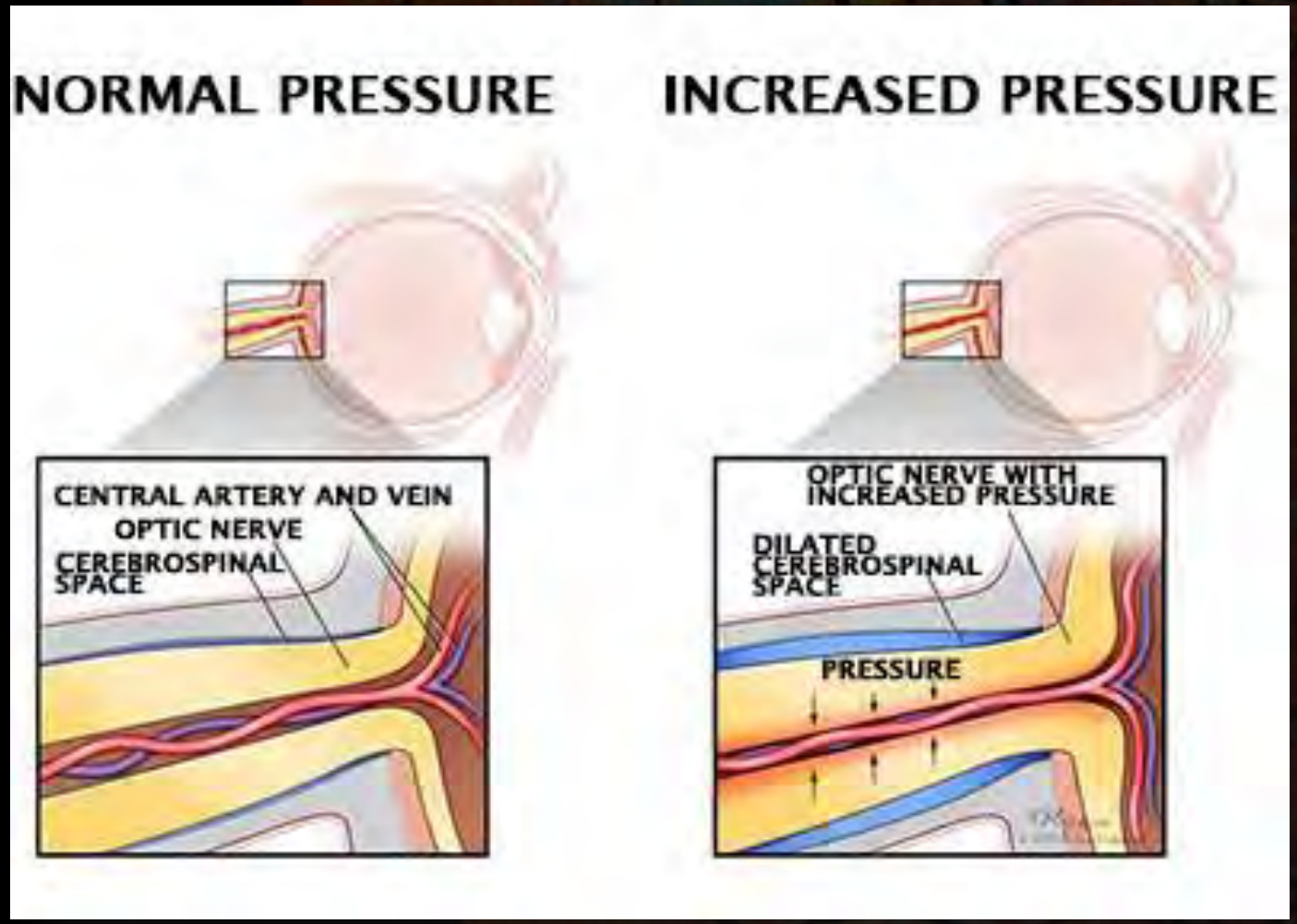
- Definition: disc edema **secondary** to elevated intracranial pressure
- SO…that means if you are the first to see it without any additional information…it is disc edema until further testing can confirm or deny true papilledema



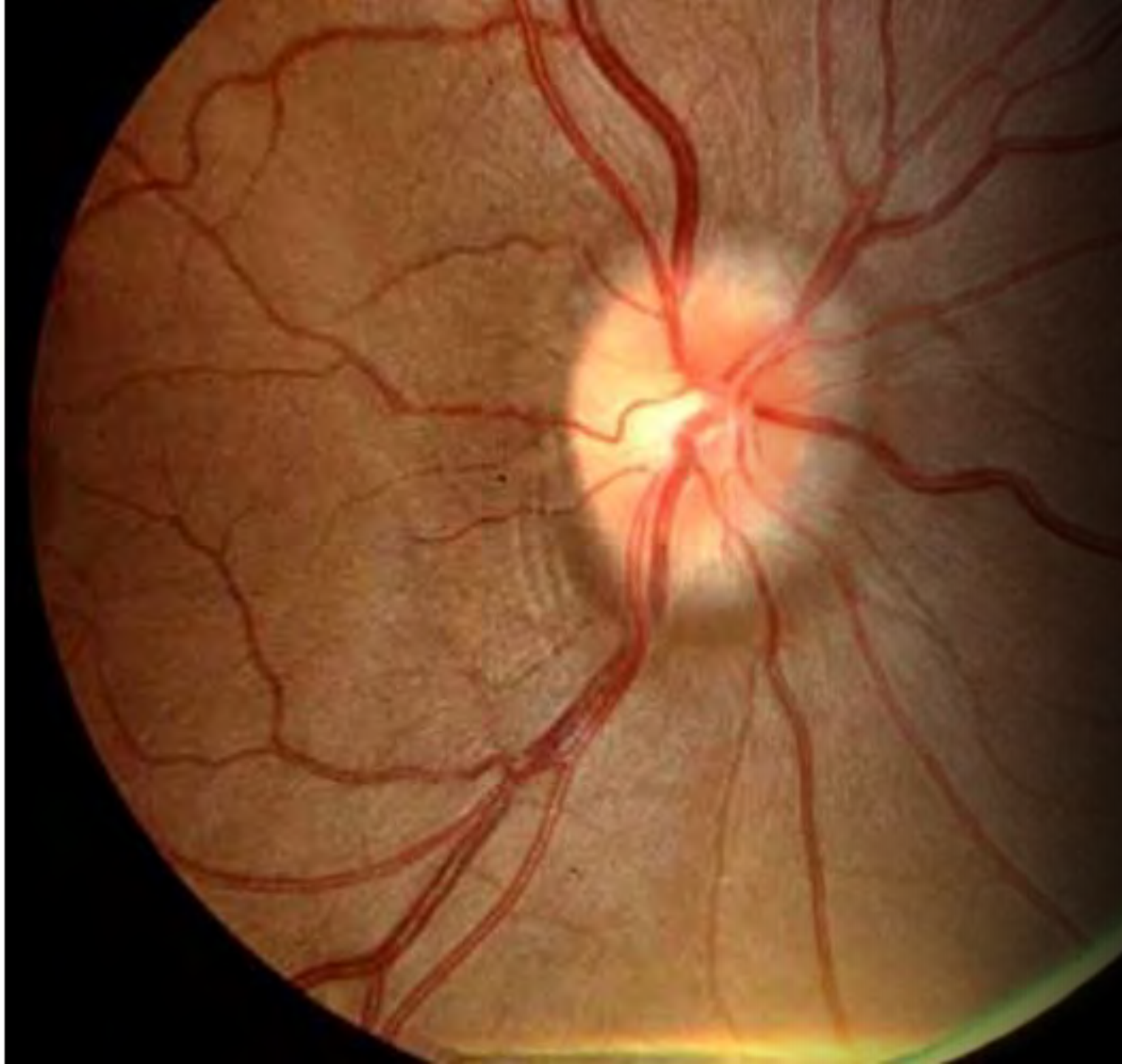
Mnemonic for ICP

M	Mass/Meningitis
O	Obstructive hydrocephalus
V	Venous hypertension
I	Infectious causes (abscess/meningitis)
E	Extra causes (non-infectious meningeal syndromes, e.g., sarcoid)
S	pSeudotumor cerebri (PTC) – (cheating a little bit)

So why disc swelling?



- Accumulation of axoplasmic flow (primarily the slow component) at the lamina produces disc swelling & NFL opacification

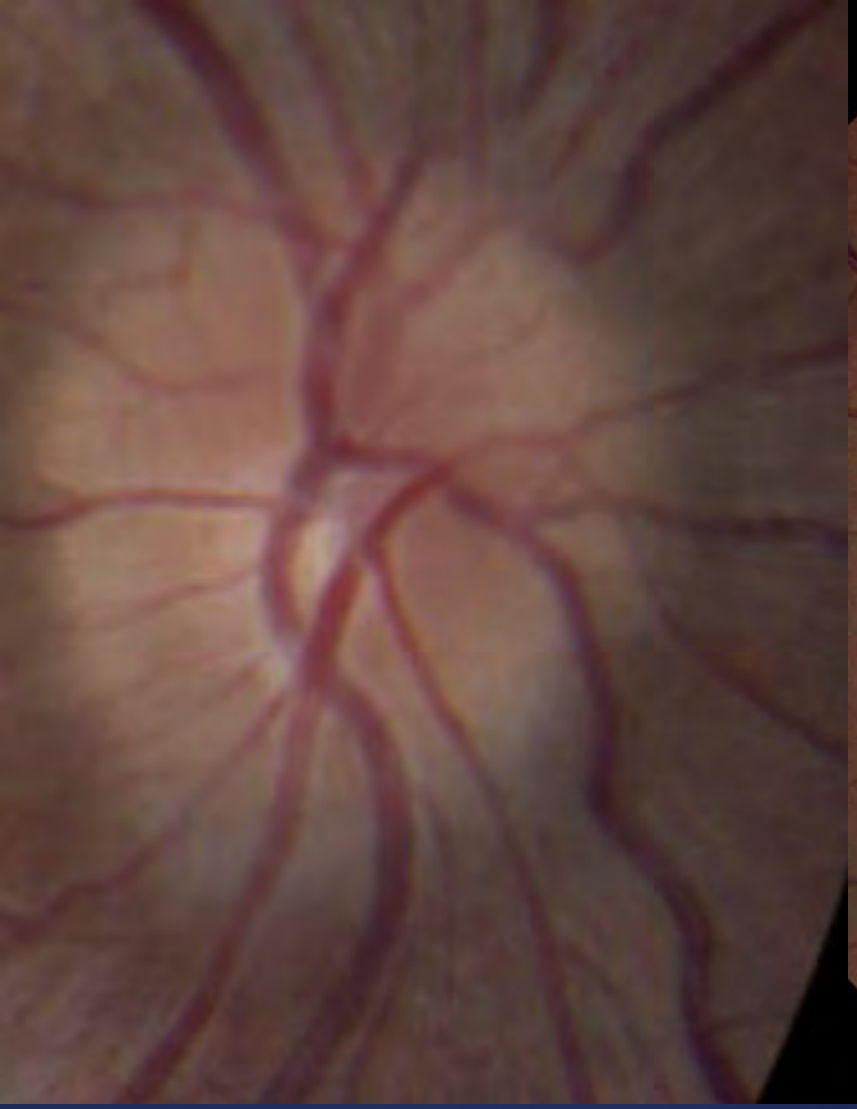


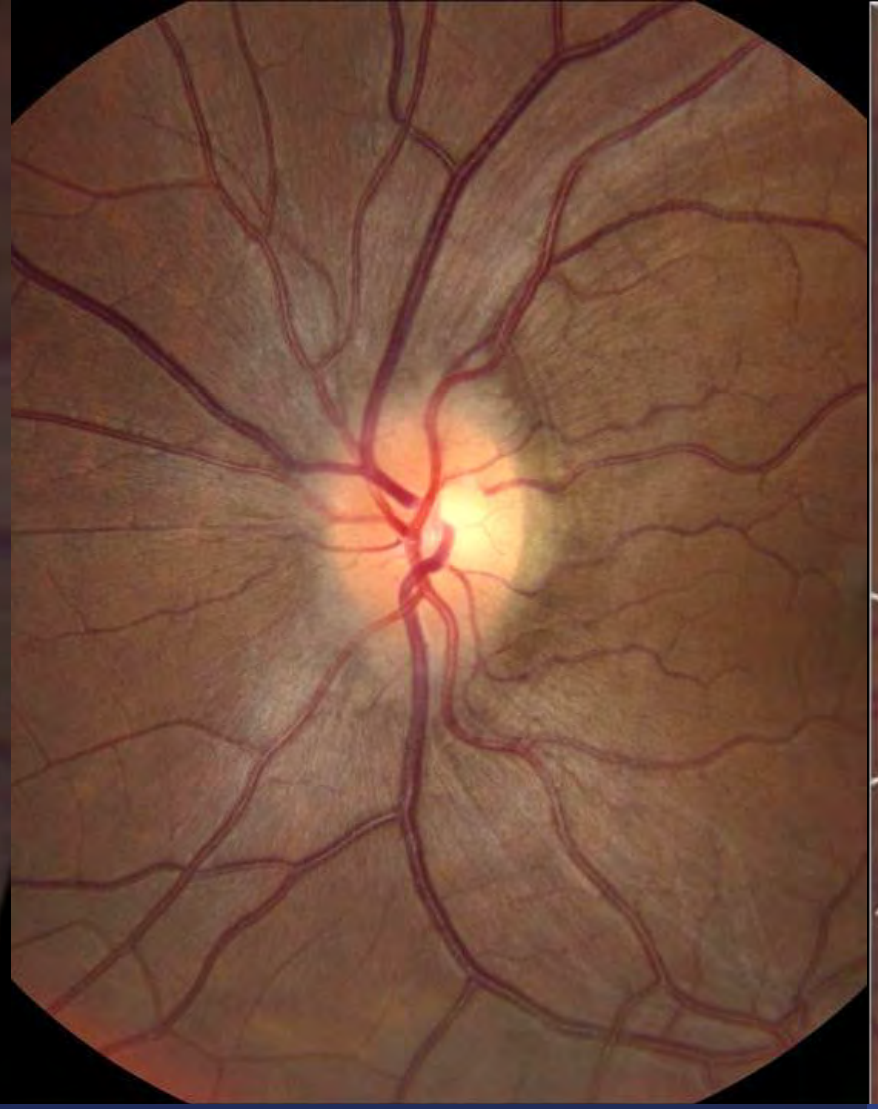
Clinical features of papilledema

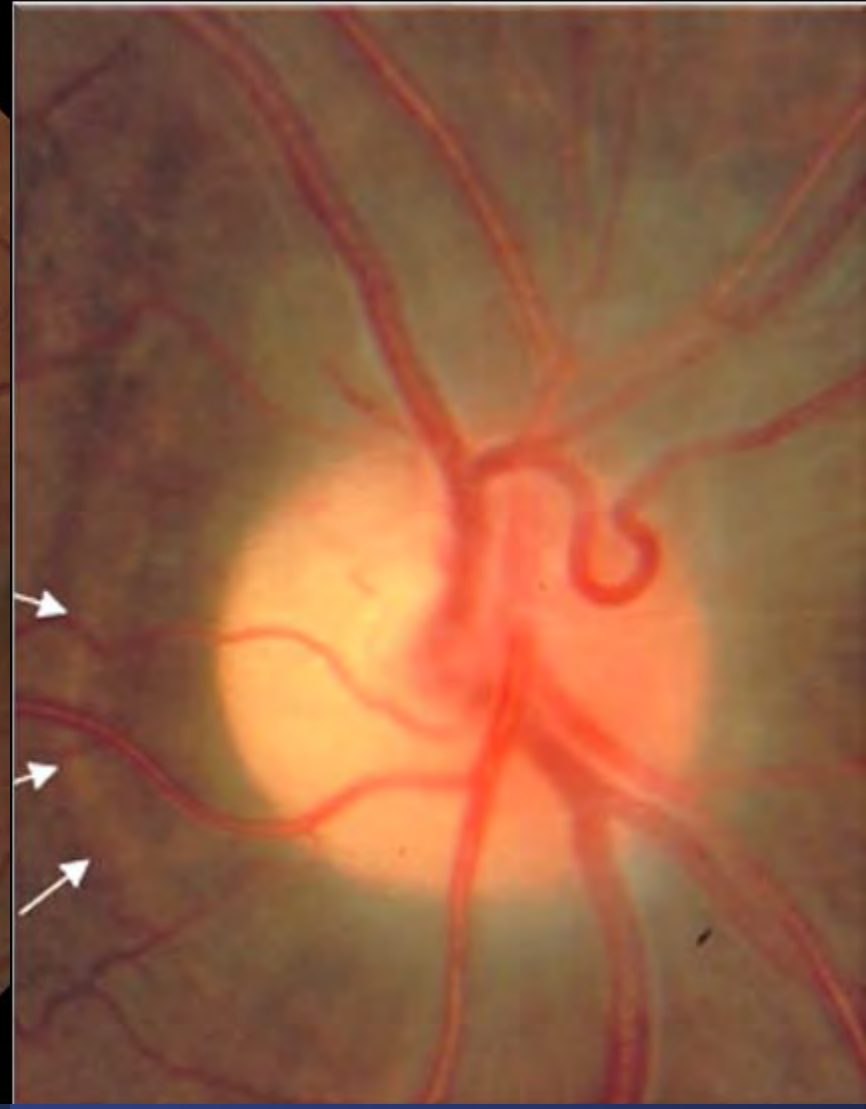
- Typically, bilateral
- Unusually normal VA and color vision early
- May have TVL lasting seconds
- VF defects
- No APD unless severe and asymmetric
- Fluorescein angiography (FA) signs

Modified Frisén Scale for Grading Papilledema

STAGE 0 - Normal Optic Disc or Not a Disc but no Edema/Swelling
A. Prominence of the retinal nerve fiber layer at the nasal, superior and inferior poles in inverse proportion to disc diameter
B. Radial nerve fiber layer striations, without tortuosity
STAGE I – Minimal
*A. C-shaped halo that is subtle and grayish with a temporal gap; obscures underlying retinal details
B. Disruption of normal radial NFL arrangement striations
C. Temporal disc margin normal
STAGE II – Low Degree
*A. Circumferential halo
B. Elevation - nasal border
C. No major vessel obscuration
STAGE III – Moderate
*A. Obscuration of one or more segments of major blood vessels leaving disc
B. Circumferential halo
C. Elevation - all borders
D. Halo - irregular outer fringe with finger-like extensions
STAGE IV – Marked
*A. Total obscuration on the disc of a segment of a major blood vessel on the disc
B. Elevation - whole nerve head, including the cup
C. Border obscuration – complete
D. Halo – complete
STAGE V – Severe *A. Partial obscuration of all vessels on disc and total obscuration of at least one vessel on disc





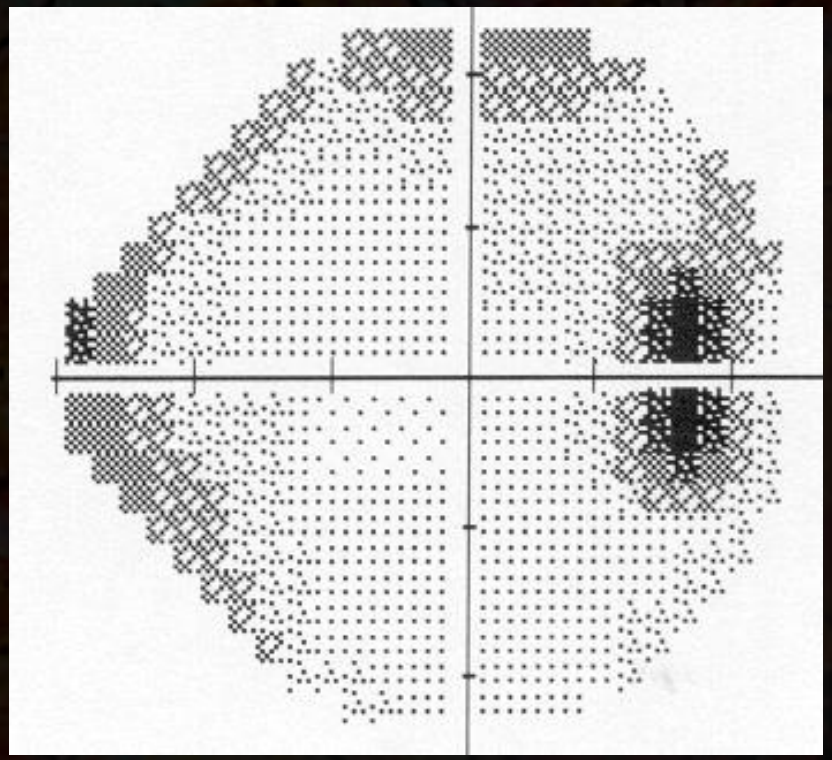


Signs of previous papilledema

“Water marks”

The patient-IIH

- Awake and alert
- Symptoms:
  - HA, nausea, vomiting, TVO, diplopia
- Signs:
  - ONH edema
  - VF defects
  - MRI- clear



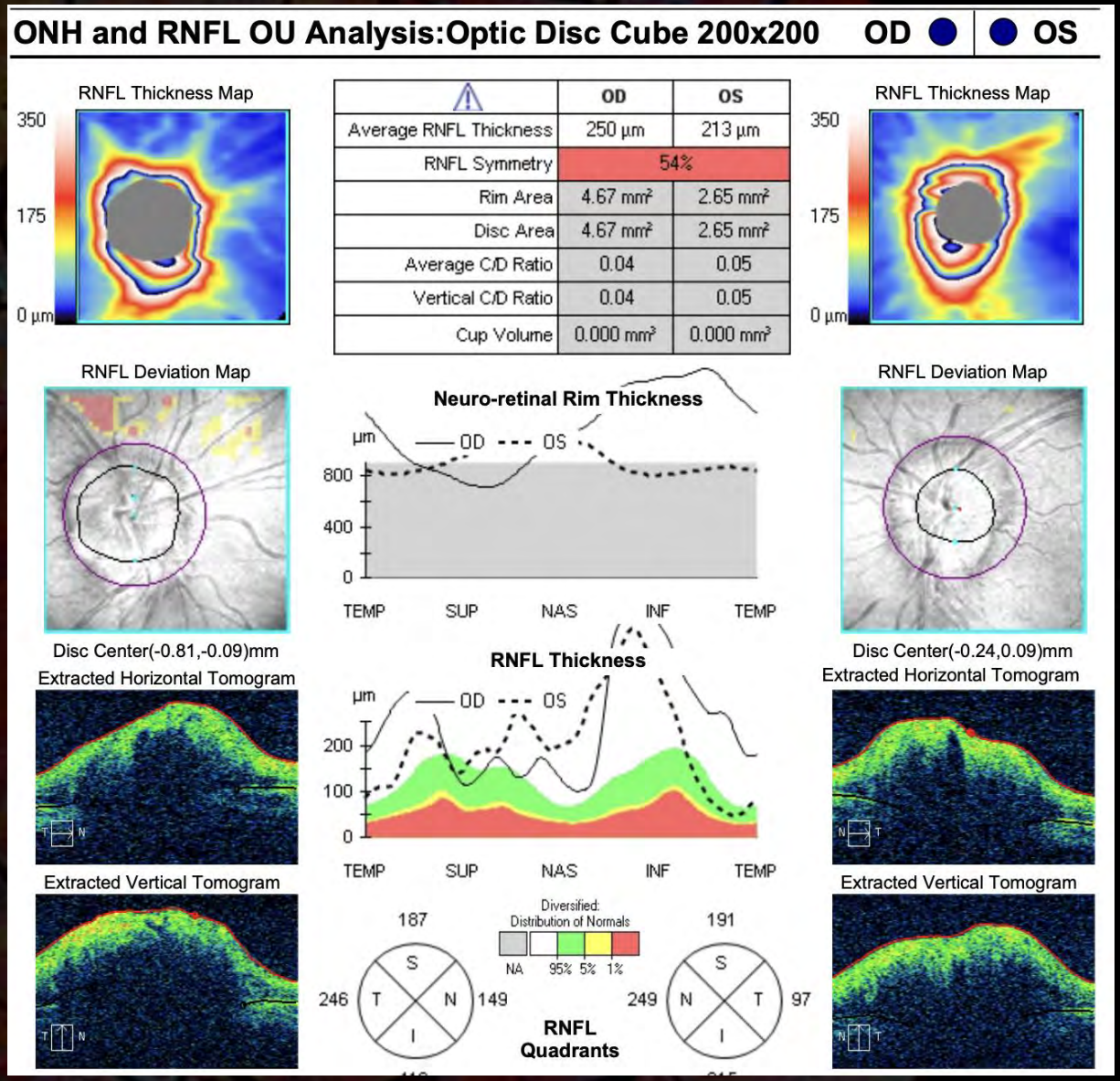
- Papilledema?
  - Lumbar puncture
- Attributes
  - Overweight
  - Fertile
  - Female
  - Middle-aged (~20-40yrs)

Idiopathic Intracranial Hypertension

- My classic work-up
  - BCVA
  - Pupils
  - VF 30-2
  - Color vision
  - OCT
    - ONH rNFL
    - ONH 5-line
  - Internal health assessment
- Possible follow-up/additional testing
  - OCT
    - Macular GCA
  - Contrast acuity
  - Binocular vision
- Monitoring/ on treatment
  - 3-4 month intervals

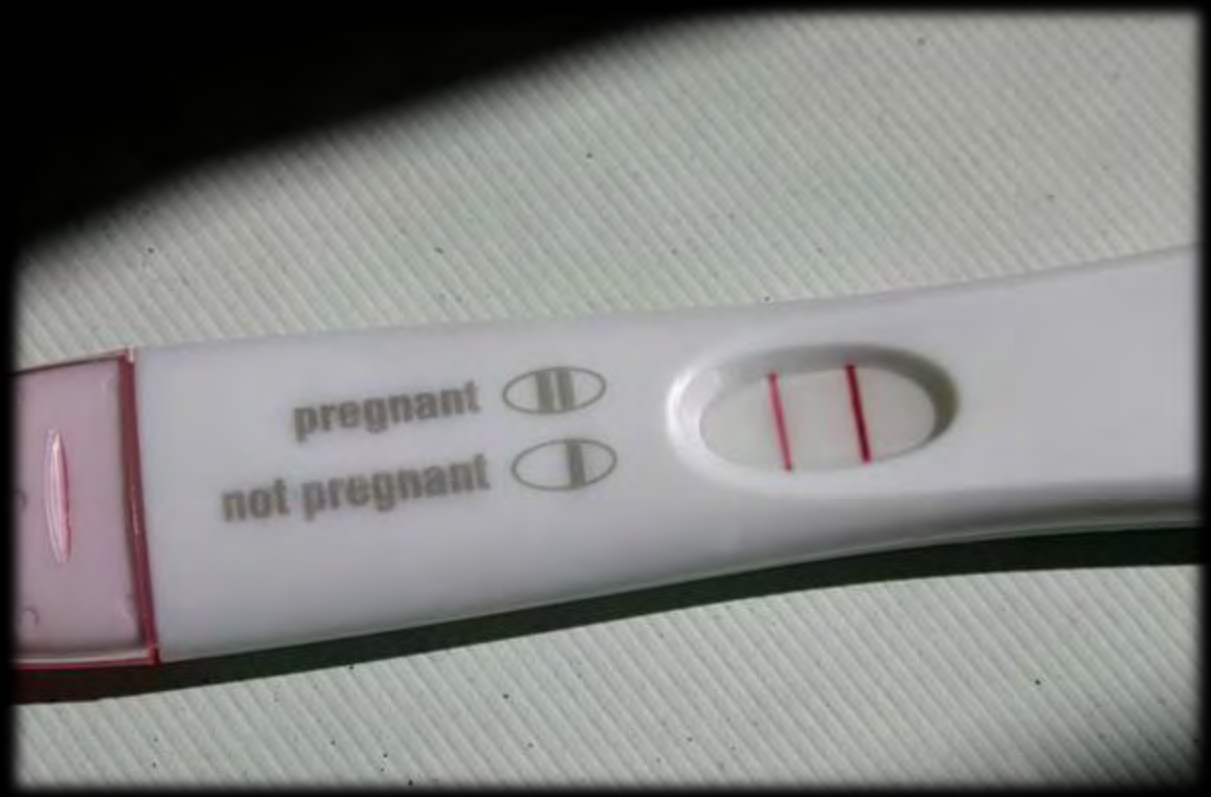
35yo CF

- No brainer on this eval
- She was referred for a recent diagnosis of IIH and they wanted to see if it was affecting her eyes…

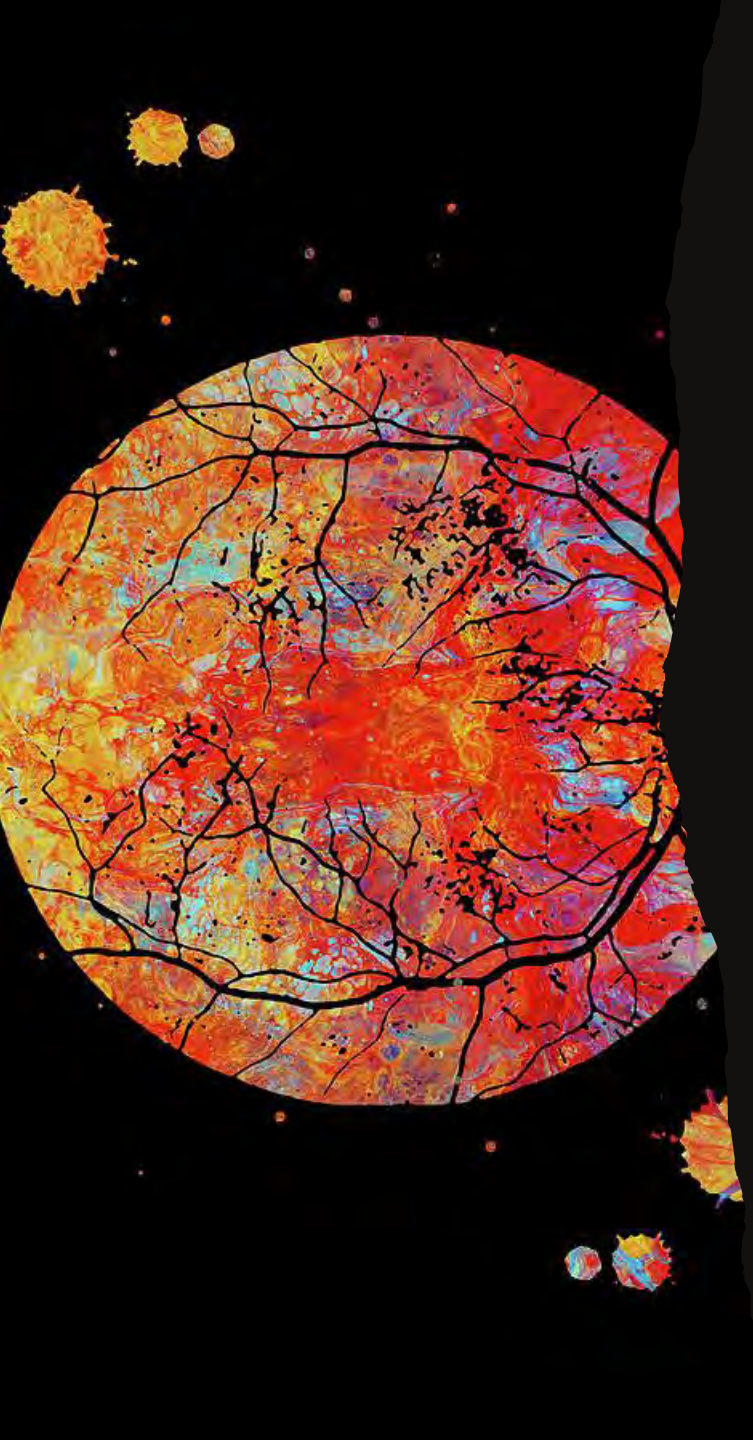


	OD	OS
Average RNFL Thickness	250 µm	213 µm
RNFL Symmetry	54%	
Rim Area	4.67 mm²	2.65 mm²
Disc Area	4.67 mm²	2.65 mm²
Average C/D Ratio	0.04	0.05
Vertical C/D Ratio	0.04	0.05
Cup Volume	0.000 mm³	0.000 mm³

35yo
CF w/ IIH



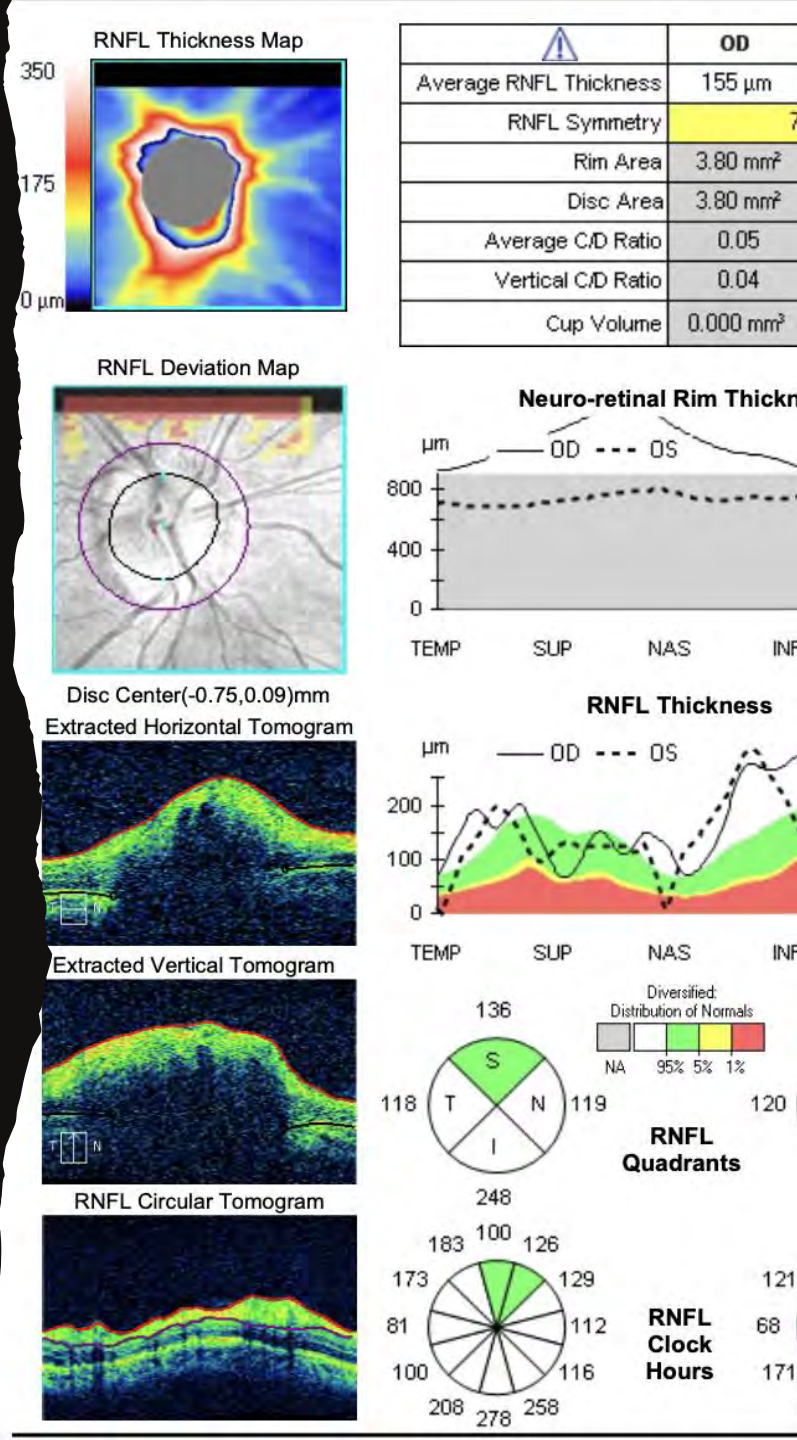
- AND…she is 11 weeks pregnant



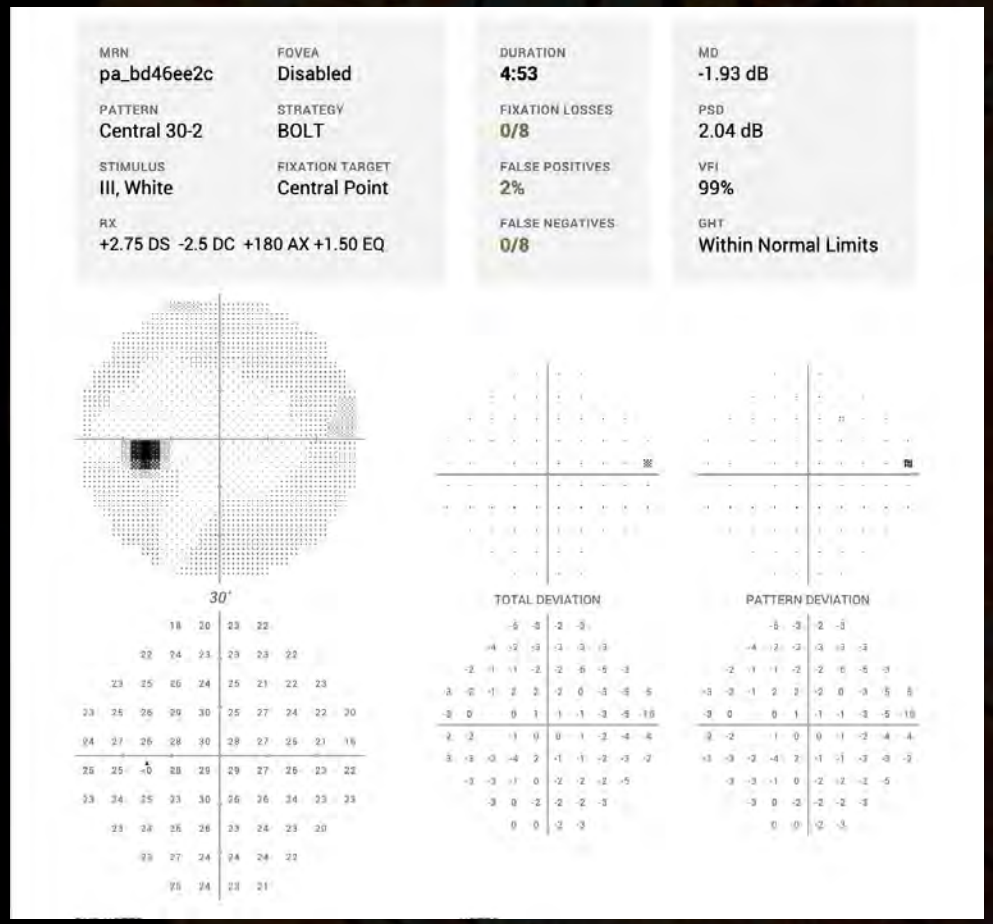
35yo CF w/ IIH
29 weeks pregnant

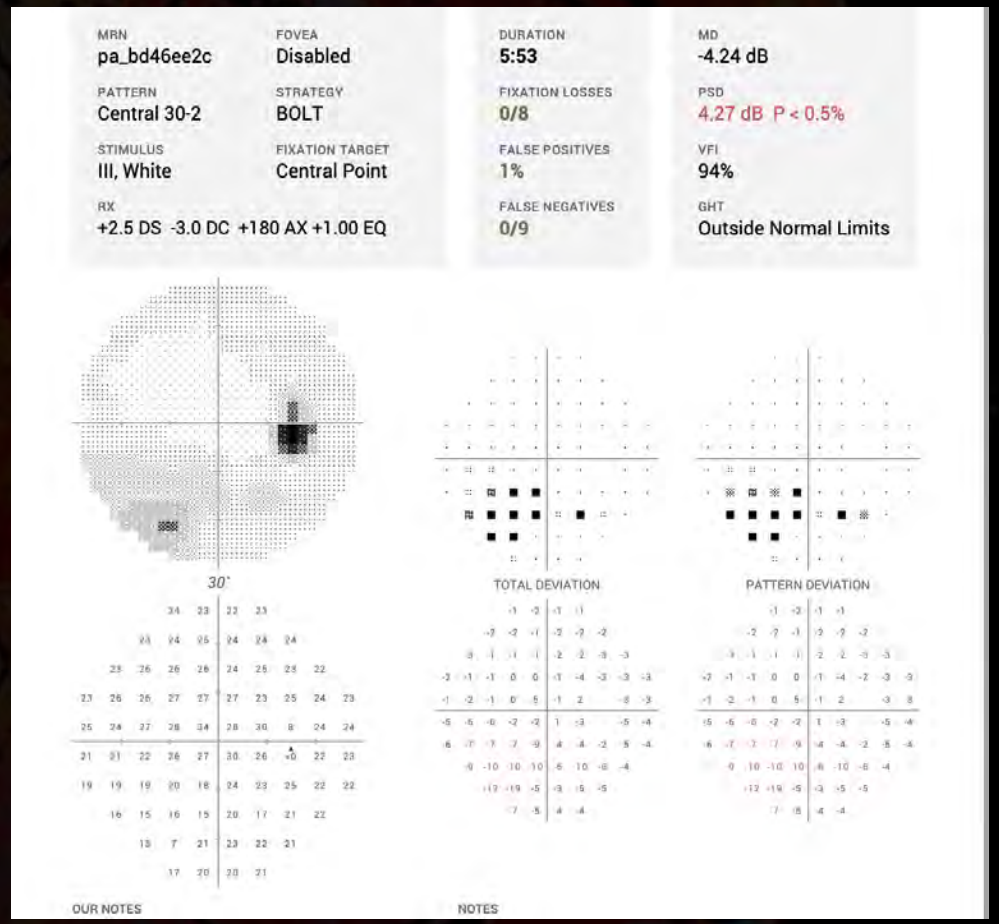
Note the GREEN superior NFL

GREEN is typically GOOD…but NOT when everything is elevated…it may mean loss

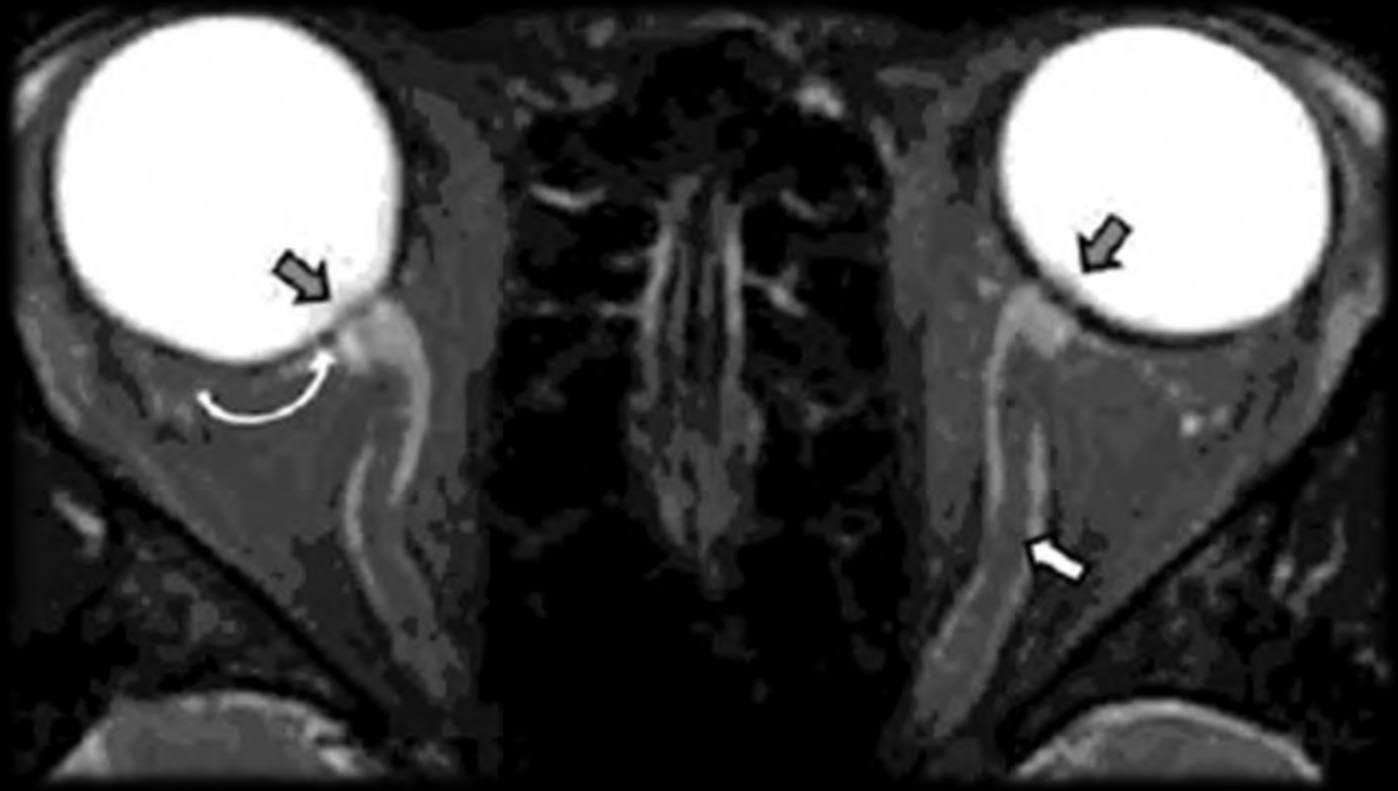


35yo CF; 29 weeks pregnant





The patient-IIH



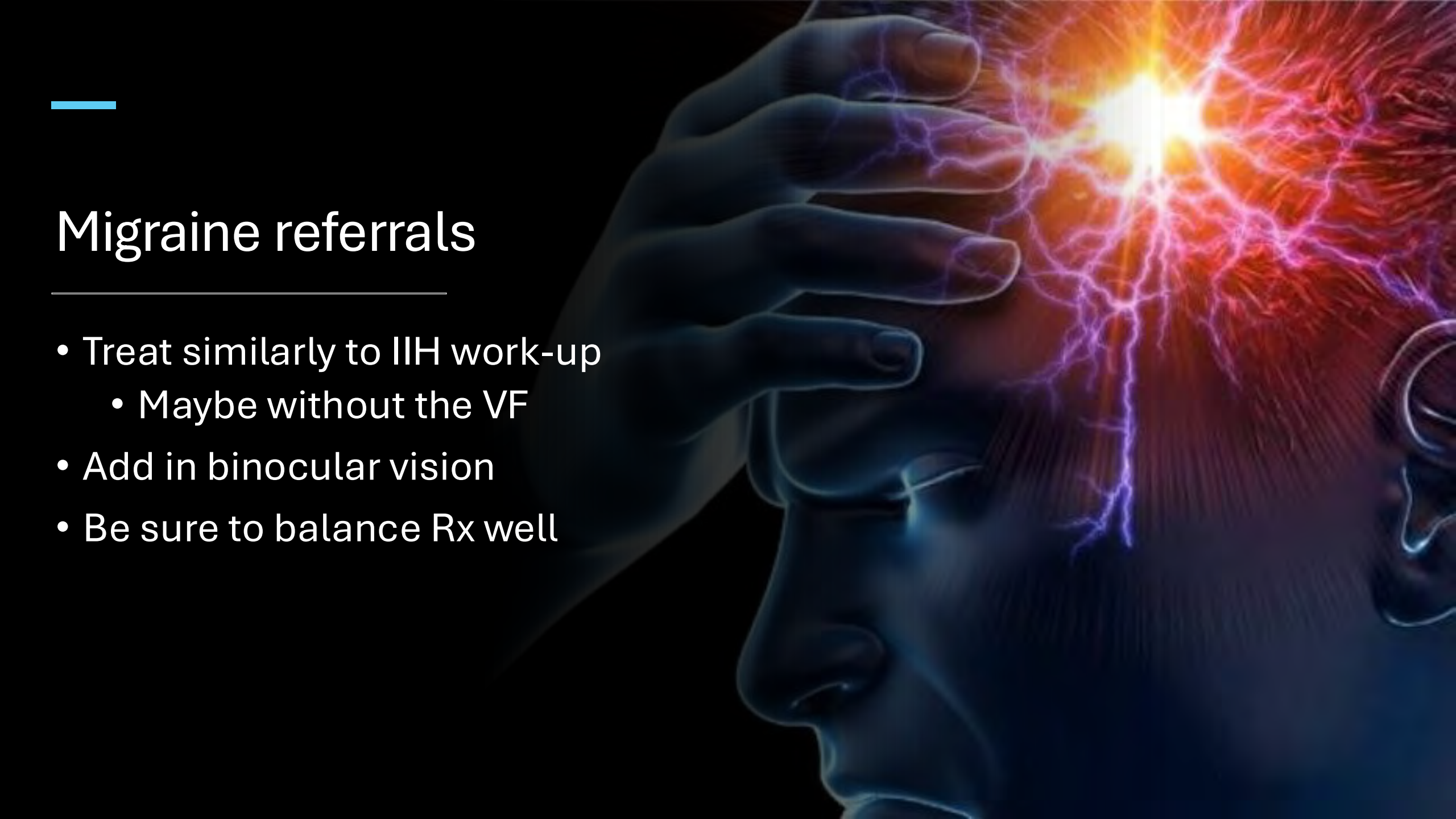
- MRI: clear
  - Signs of flattening of posterior sclera- 80%
  - Tortuosity of ON
  - ONH protrusion

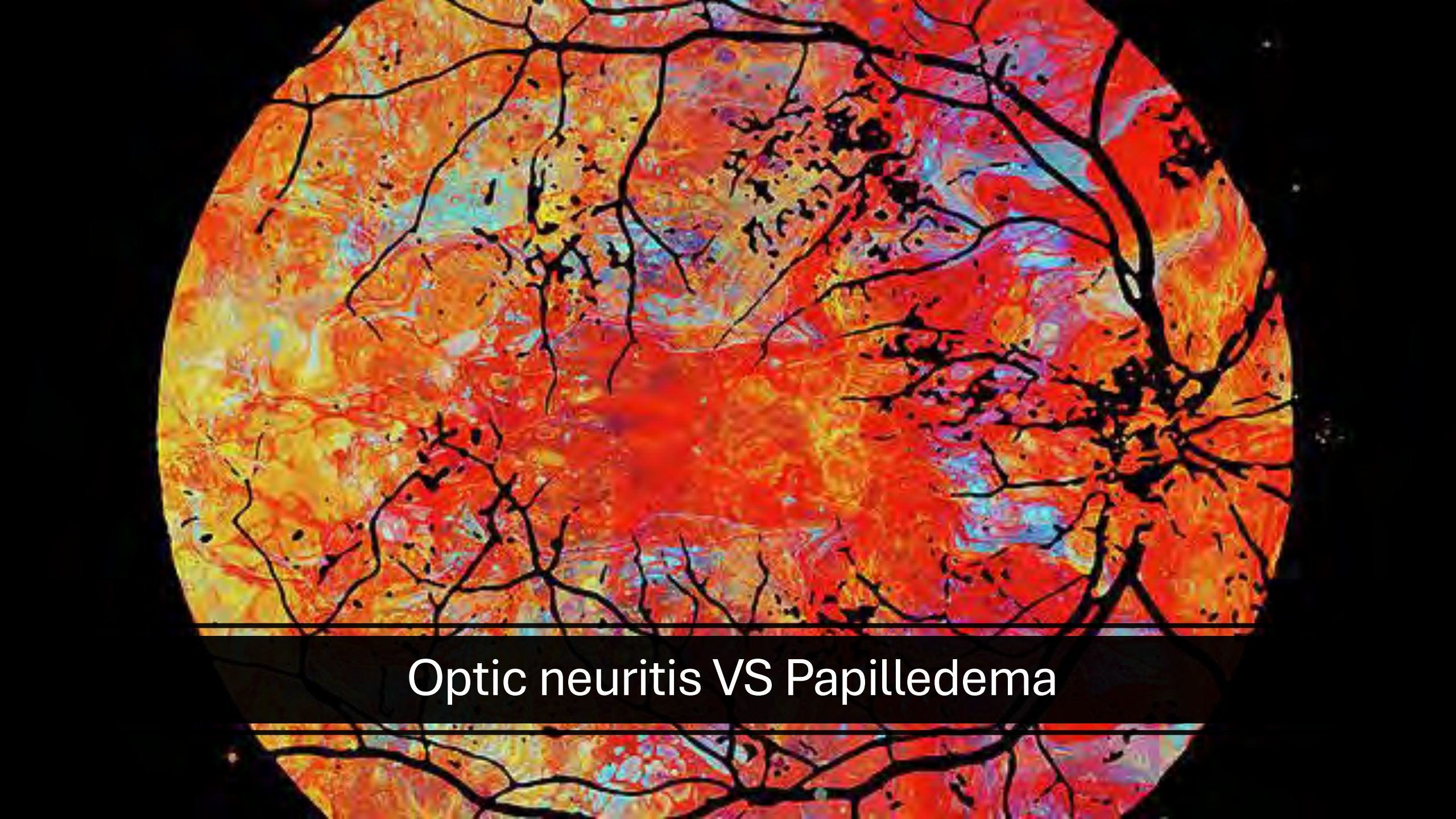
IIH Management

- Weight loss
- Medication:
  - acetazolamide
  - Furosemide (Lasix)
  - Avoid corticosteroids
  - analgesics
- Optic nerve sheath decompression

Migraine referrals

- Treat similarly to IIH work-up
  - Maybe without the VF
- Add in binocular vision
- Be sure to balance Rx well





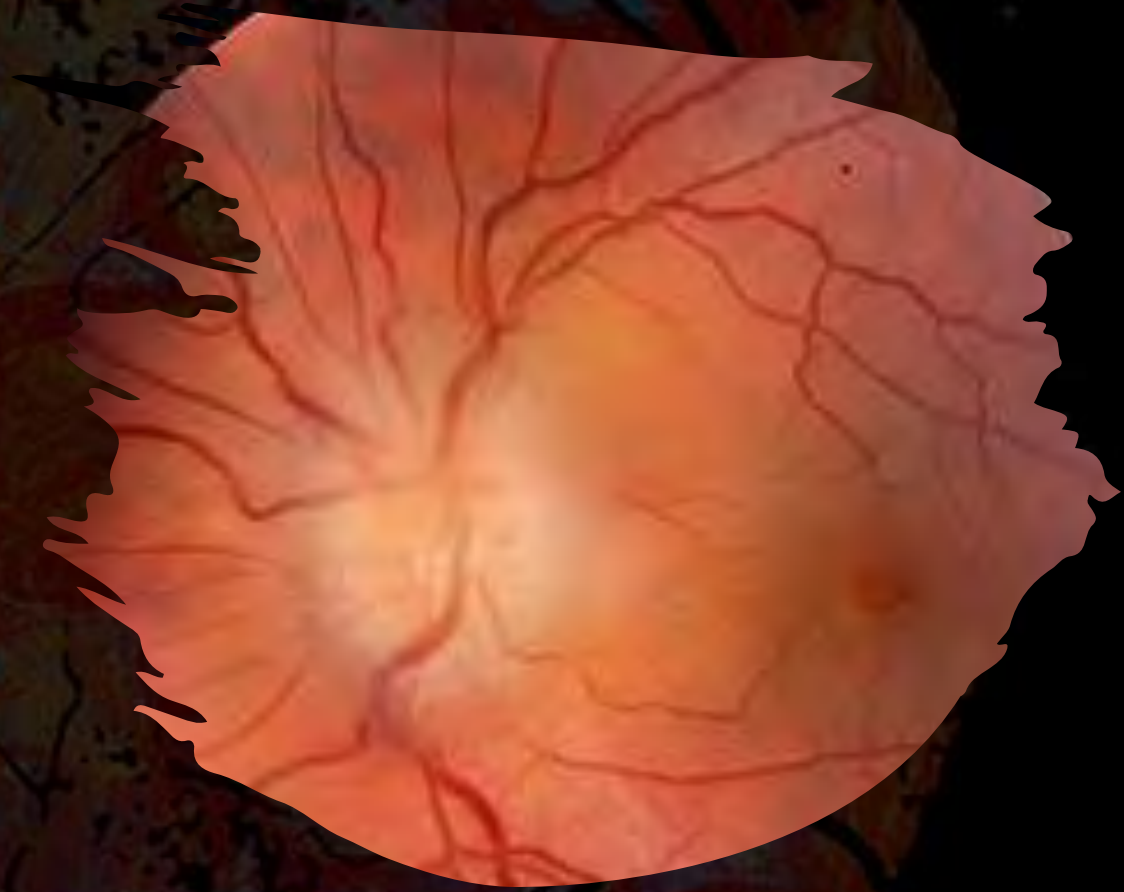
Optic neuritis VS Papilledema

Symptoms of ON

- Decreased vision
- Visual field defects
- Reduced color vision
- Uhthoff’s symptom: TVO
- Decreased depth perception
- Pain->90%
- Phosphenes: movement or sound induced

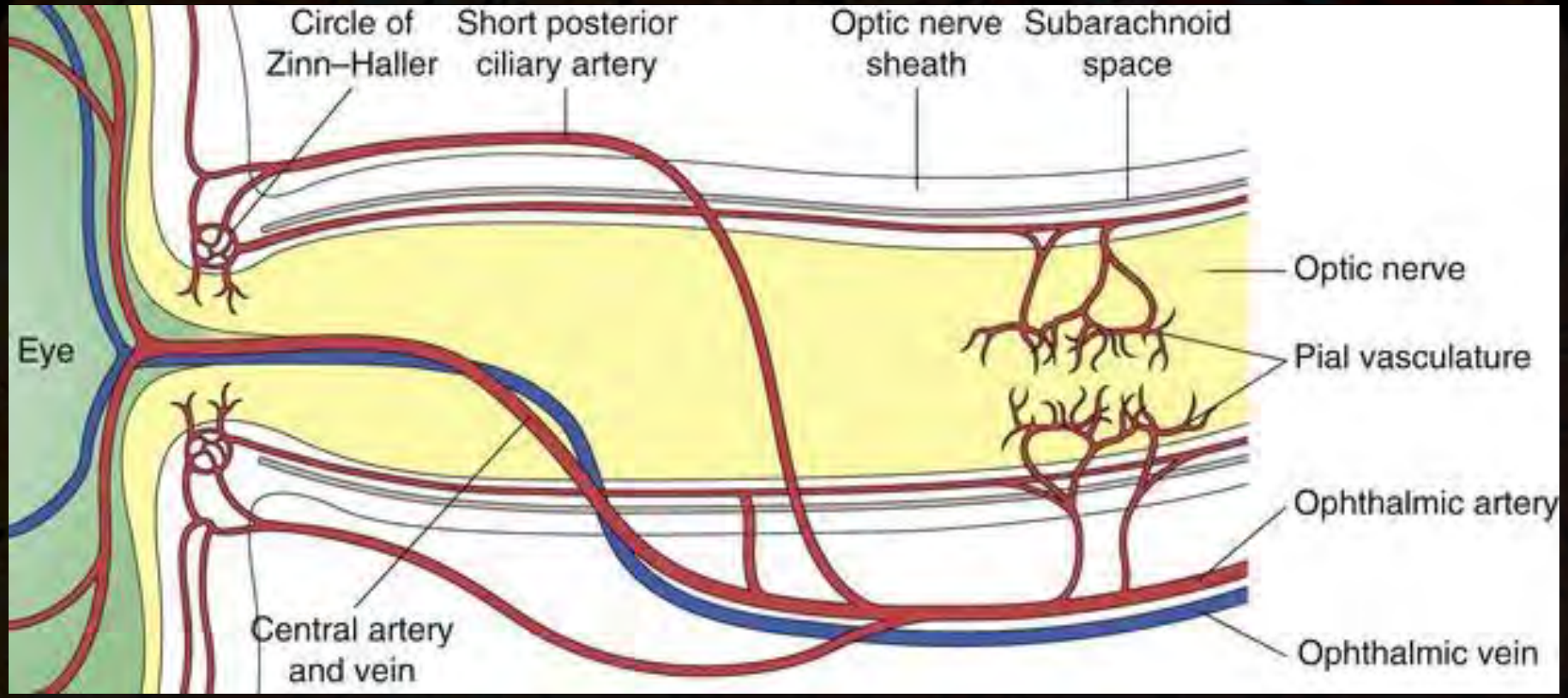
Additional Signs of ON

- Approximately 1/3 will have mild ONH swelling
  - Much less marked than papilledema
  - Noticeable RAPD- (unilateral)
  - **Un**associated with:
    - Capillary dilation
    - Splinter hemorrhages
    - Exudates
    - Vitritis
    - Retinal sheathing




ION

- Sudden loss of central vision, side vision or both due to decreased or interrupted blood flow to the optic nerve



Ischemic Optic Neuropathy

Anterior ION

- Ischemia of *anterior portion* of the optic nerve
- Always has disc swelling in acute phase
- Primarily due to ischemia of the pre-laminar and laminar portions where ON exits the globe

Posterior ION

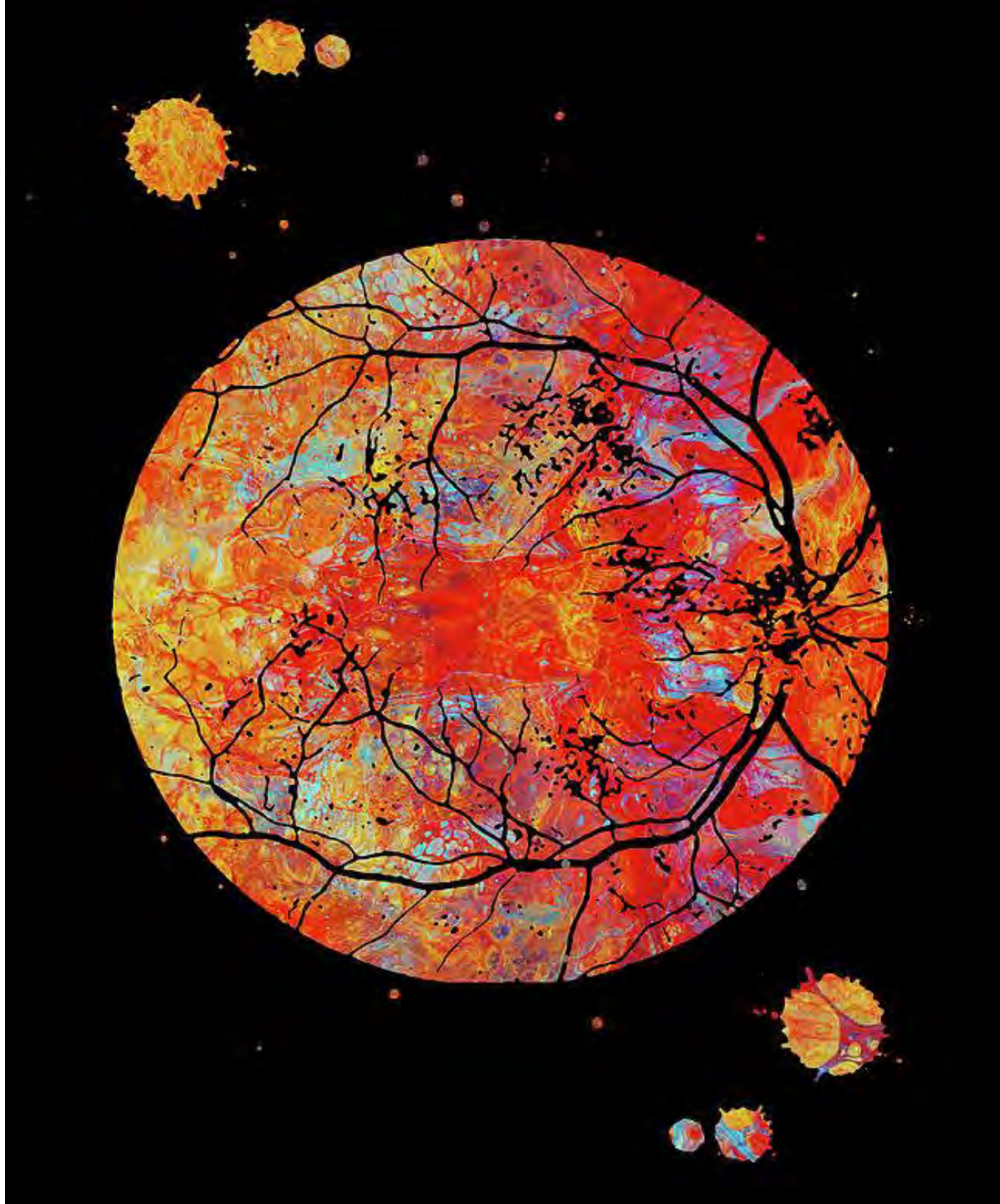
- Ischemia of the *posterior portion* of the optic nerve
- No edema noted
- Little data published on PION
  - Low incidence
- Primarily due to ischemia of the intra-orbital portion

Both have arteritic and non-arteritic forms

ION

ION

- Long list of clinical reasons:
  - Arterial disease
    - Arteritis
      - GCA
    - NAION
    - DM
    - Malignant HTN
    - Embolic disease
    - Migraine
    - Post-irradiation



- 2 Types
  - Arteritic (AAION)
    - GCA
  - Non-arteritic (NAION)

	ARTERITIC AION	NON ARTERITIC AION
MEAN AGE	70 years	60 years
GENDER	Female > male	No relation
ASSOCIATED SYMPTOMS	Headache, scalp tenderness, jaw claudication	Occasional orbital pain
VISUAL ACUITY	<6/60 in 76%	>6/60 in 61%
OPTIC DISC APPEARANCE	Pale more than hyperemic edema Normal to large cup	Hyperemic more than pale edema Small cup
ESR	>70 (highly raised)	20-40 (mildly raised)
FFA	Choroidal (> 30 – 69 s) and disc filling delay	Disc filling delay
NATURAL HISTORY	Poor prognosis for recovery Fellow eye involved in upto 95%	Upto 3 line improvement in about 43% cases Fellow eye involved in <30% cases
TREATMENT	Urgent administration of corticosteroids	Doubtful role of corticosteroids

Anterior Ischemic ON

Patient Reason for Visit	Provider Reason for Visit
LEE 09/2022 Pt states she has a big shadow in OS that she noticed when she woke up Pt states that the shadow seems pixelated Pt states nothing makes it better or worse Pt states she was having pressure on the drive here	additional questions: no HA, pain around the face or jaw, no difficulty eating

ROS

No Changes | Normal | Clear

Constitution	Cancer	GI	Negative
ENT	Negative	GU	Negative
Neuro	Negative	Musc/Skel	Other
Psych	Negative	Integ	Negative
Cardiovasc	Hypertension, Other	Endo	Type 2 Diabetes Mellitus
Respiratory	Negative	Hem/Lymph	Hypercholesteremia
		Allergy/Imm	Negative

Comments

Myasthenia Gravis
Cancer- Kidney- 2012- Clear
pre-diabetic

11 months prior

Aided Visual Acuity

Aided VA	Distance		Near @	16 in
OD	20/ 30		20/ 40	
OS	20/ 30		20/ 50	
OU	20/ 25		20/ 40	

VA Method: Snellen

Rx Worn: Habitual Glasses

Pinhole VA	Distance		Comments
OD	20/		
OS	20/		

On presentation

Aided Visual Acuity

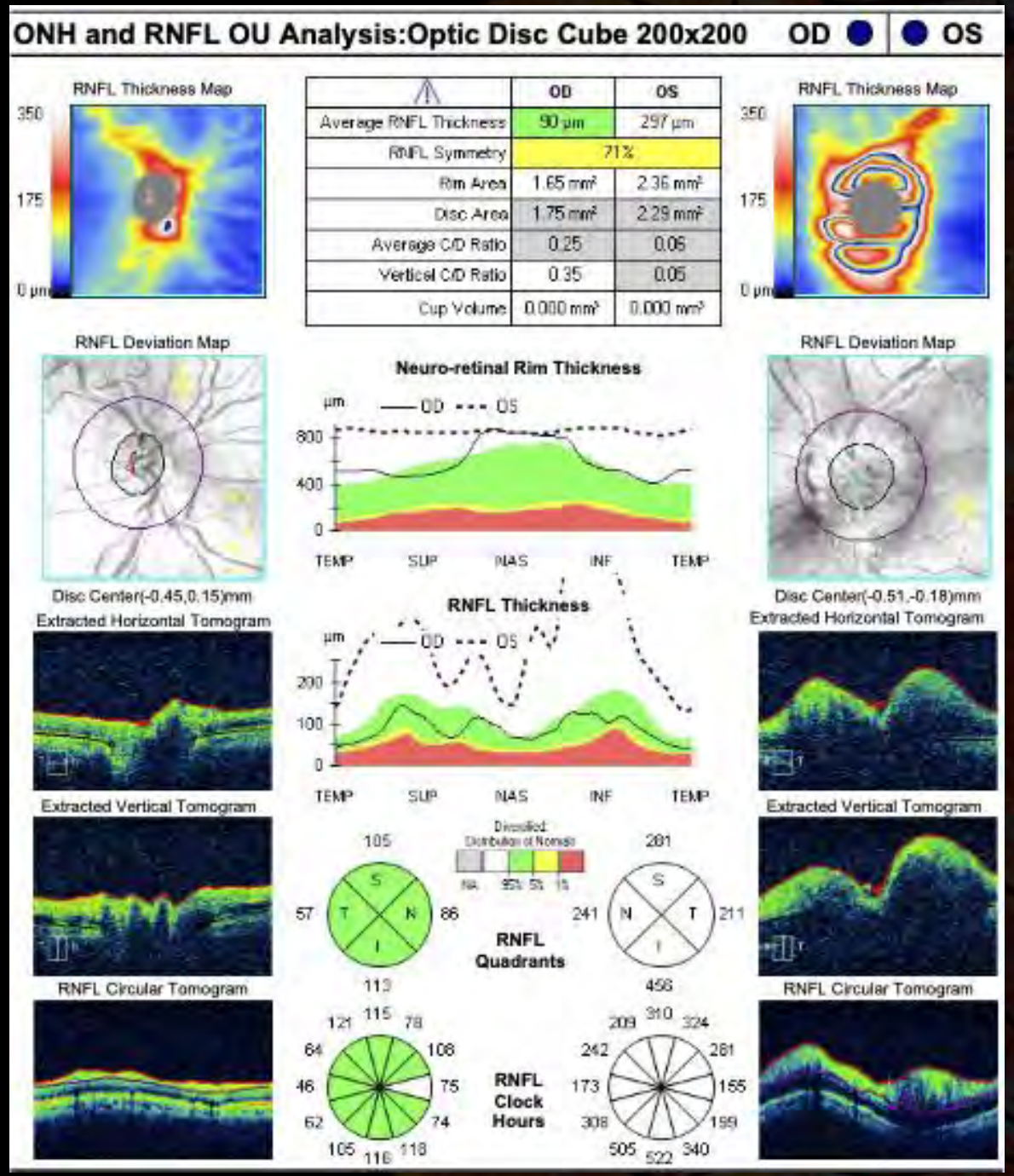
Aided VA	Distance		Near @	16 in
OD	20/ 25	-1	20/ 30	
OS	20/ 70		20/	
OU	20/		20/	

VA Method: Snellen

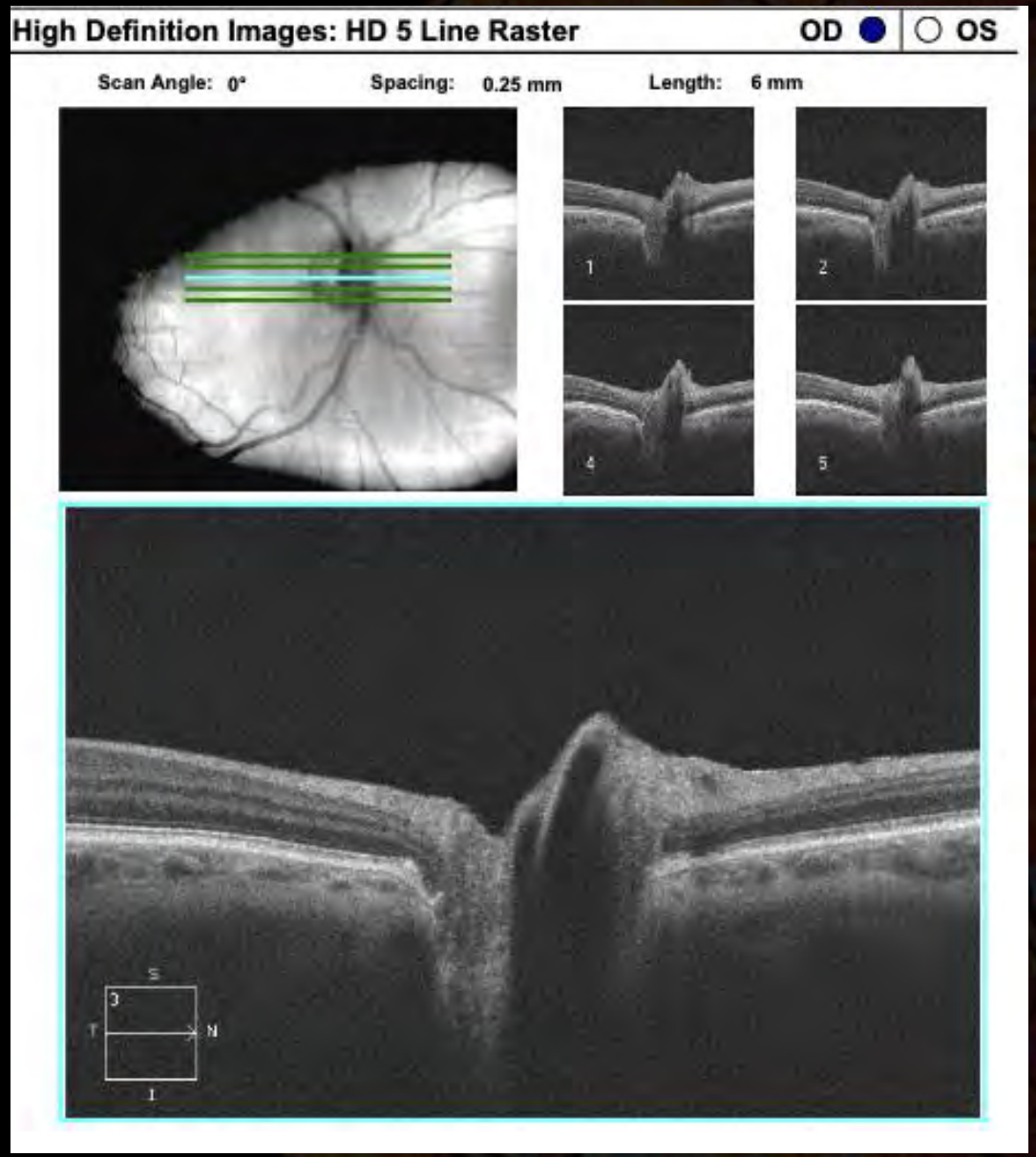
Rx Worn: Habitual Glasses

Pinhole VA	Distance		Comments
OD	20/		
OS	20/		

70yo CF



70yo CF NAION


High Definition Images: HD 5 Line Raster
OD
OS
Scan Angle: 0°
Spacing: 0.25 mm
Length: 6 mm
1
2
4
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S
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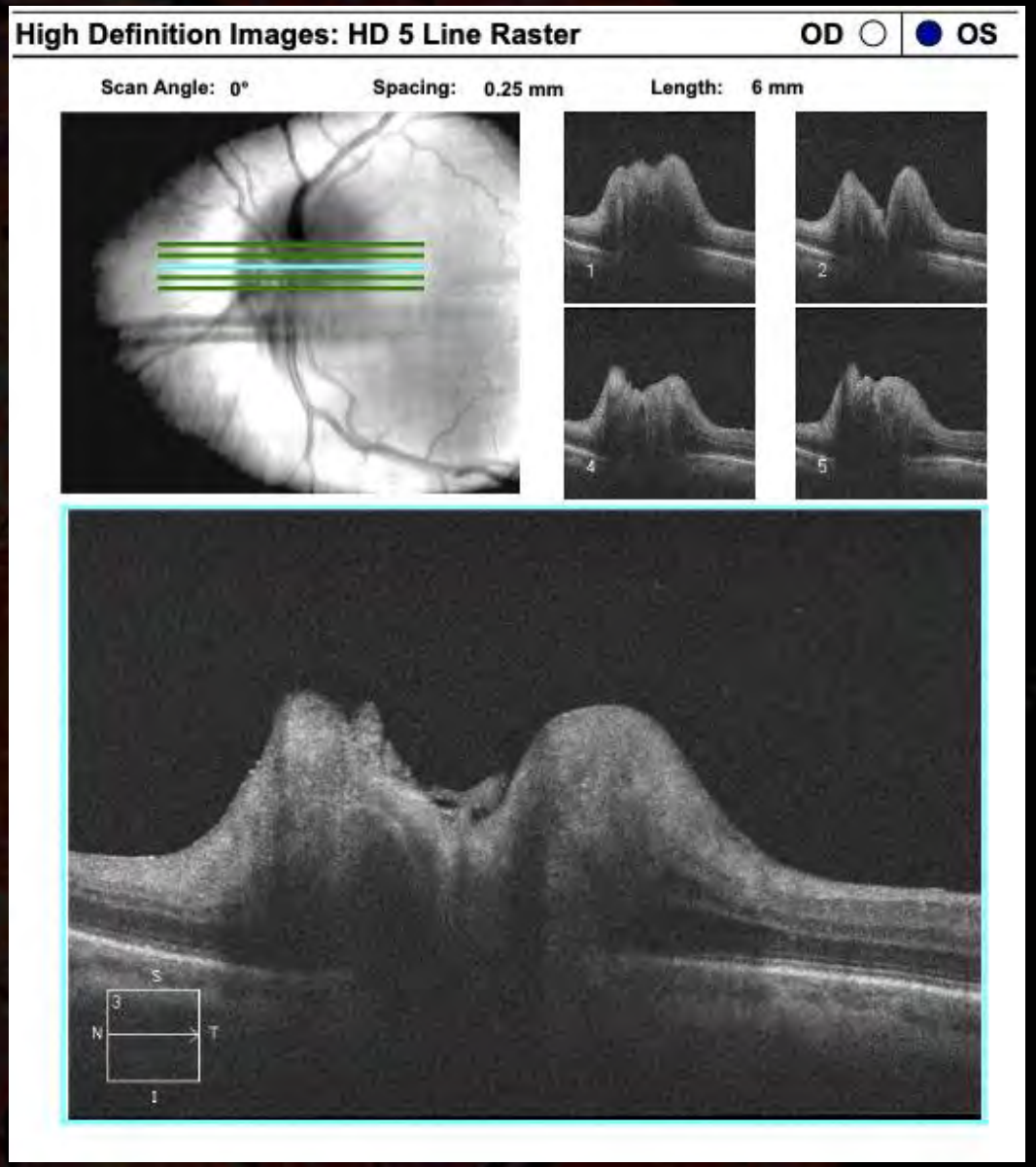
High Definition Images: HD 5 Line Raster
OD
OS
Scan Angle: 0°
Spacing: 0.25 mm
Length: 6 mm
1
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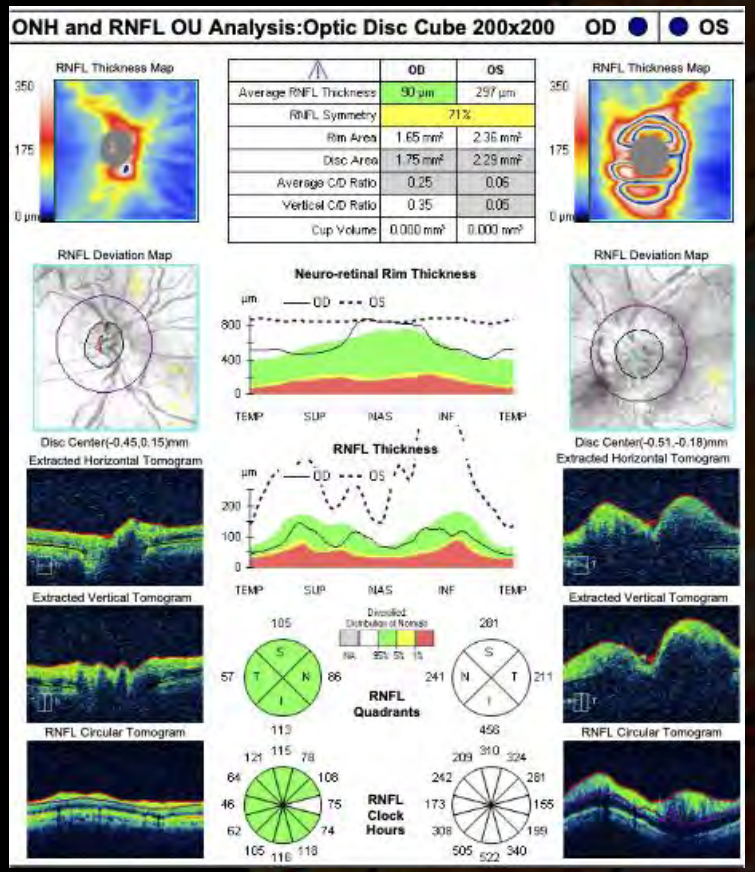
70yo CF

08/15/23

09/15/23

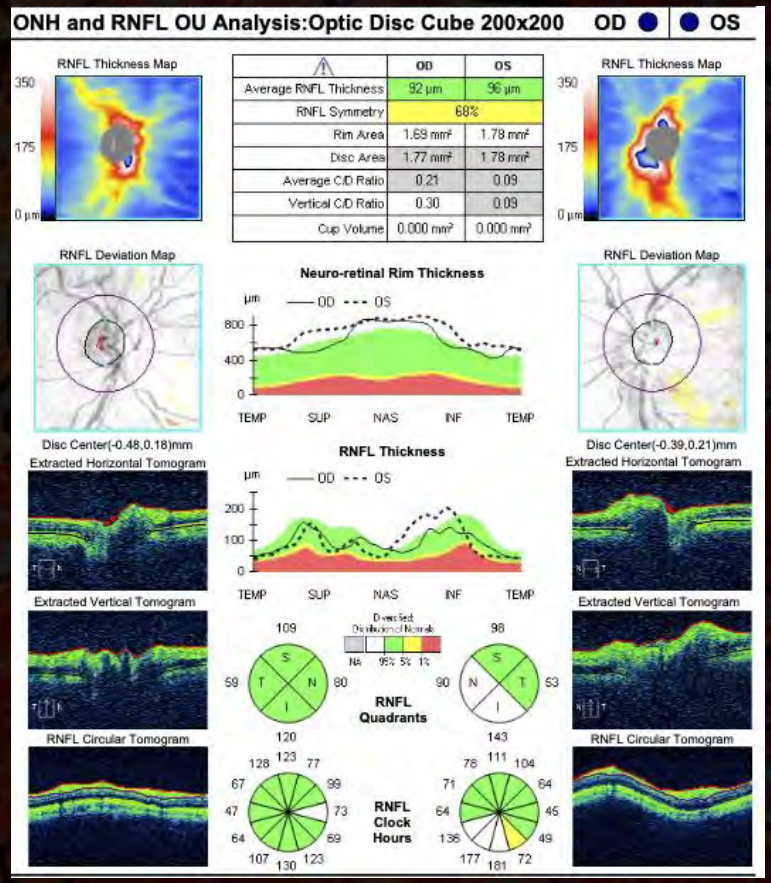
12/21/23

70 yo CF



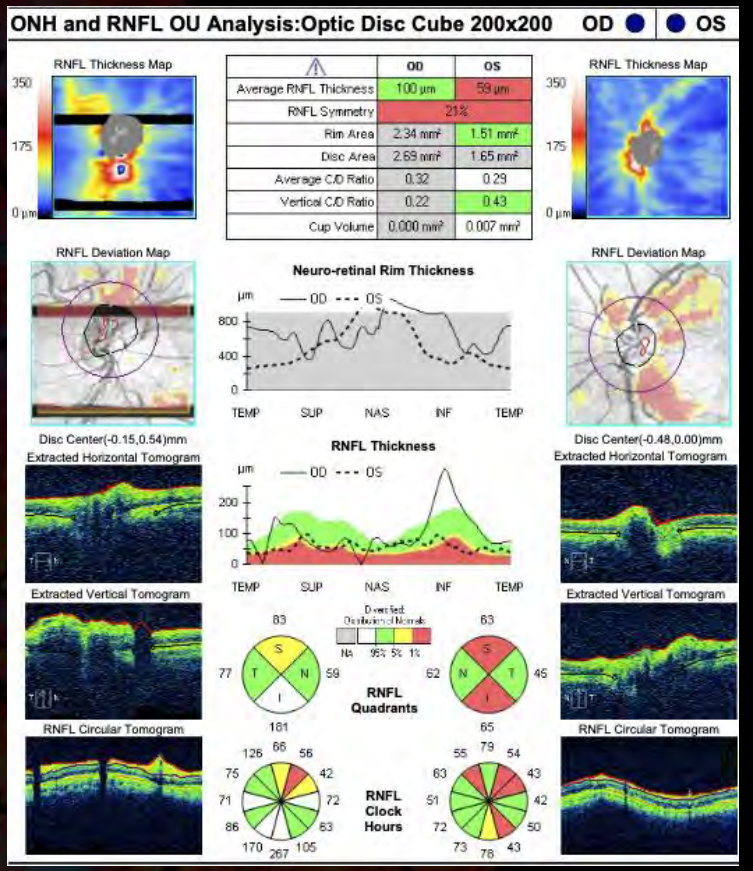
	OD	OS
Average RNFL Thickness	90 µm	297 µm
RNFL Symmetry	71%	
Rim Area	1.65 mm²	2.35 mm²
Disc Area	1.75 mm²	2.29 mm²
Average C/D Ratio	0.25	0.06
Vertical C/D Ratio	0.35	0.05
Cup Volume	0.000 mm³	0.000 mm³

08/15/23



	OD	OS
Average RNFL Thickness	92 µm	96 µm
RNFL Symmetry	68%	
Rim Area	1.69 mm²	1.78 mm²
Disc Area	1.77 mm²	1.78 mm²
Average C/D Ratio	0.21	0.09
Vertical C/D Ratio	0.30	0.09
Cup Volume	0.000 mm³	0.000 mm³

09/15/23

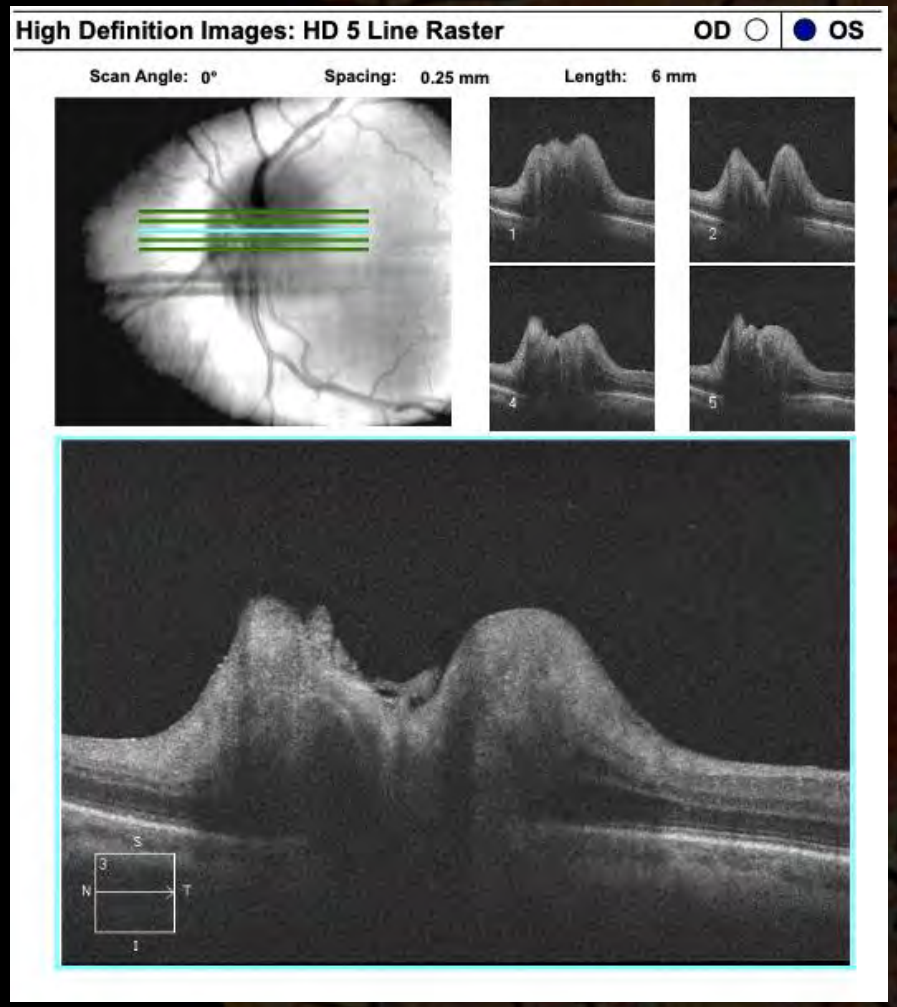


	OD	OS
Average RNFL Thickness	100 µm	59 µm
RNFL Symmetry	21%	
Rim Area	2.34 mm²	1.51 mm²
Disc Area	2.69 mm²	1.65 mm²
Average C/D Ratio	0.32	0.29
Vertical C/D Ratio	0.22	0.43
Cup Volume	0.000 mm³	0.007 mm³

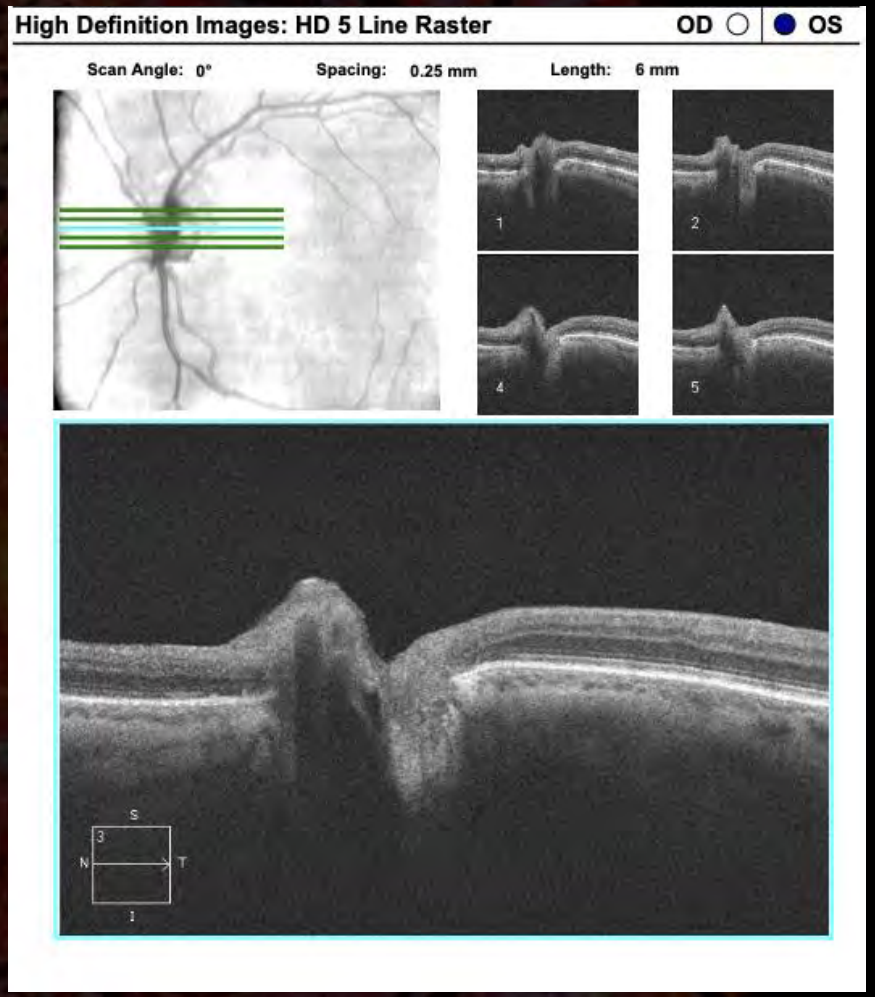
12/21/23

70 yo CF

08/15/23

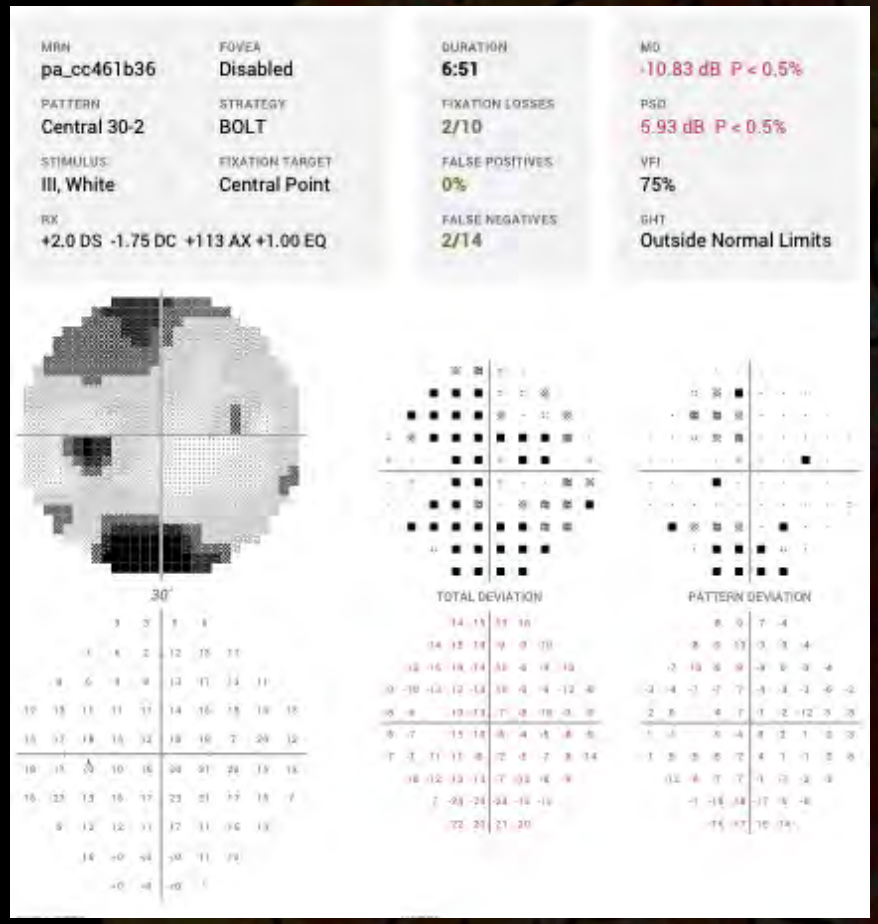


12/21/23

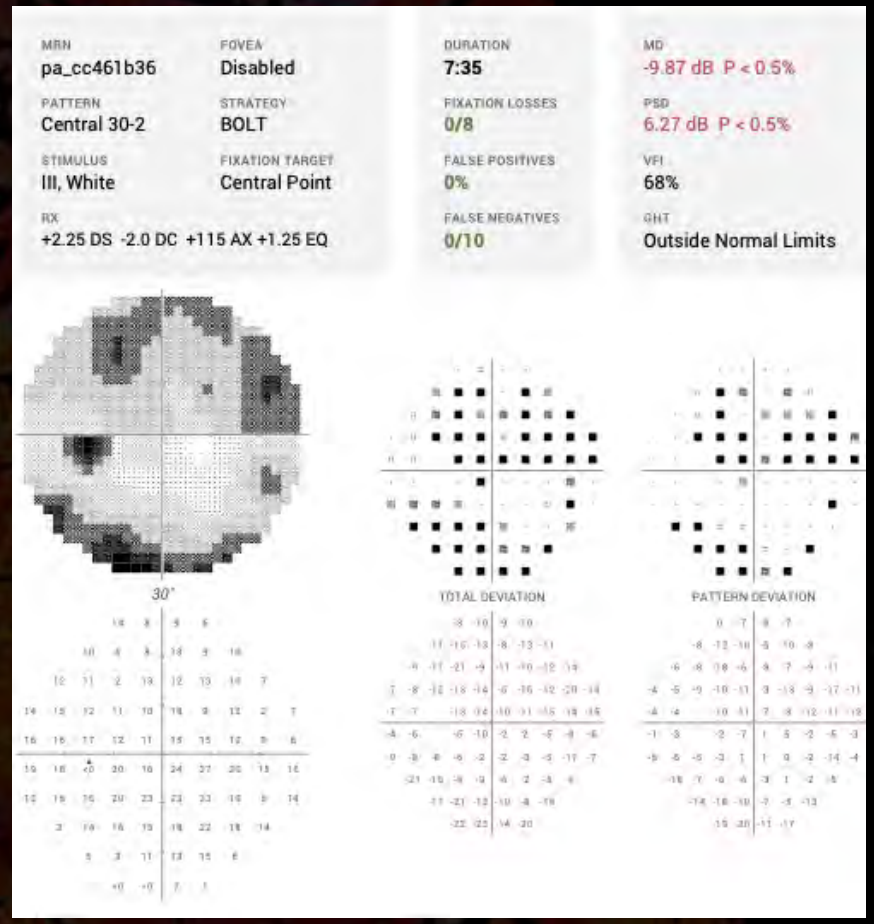


70yo CF

09/15/23

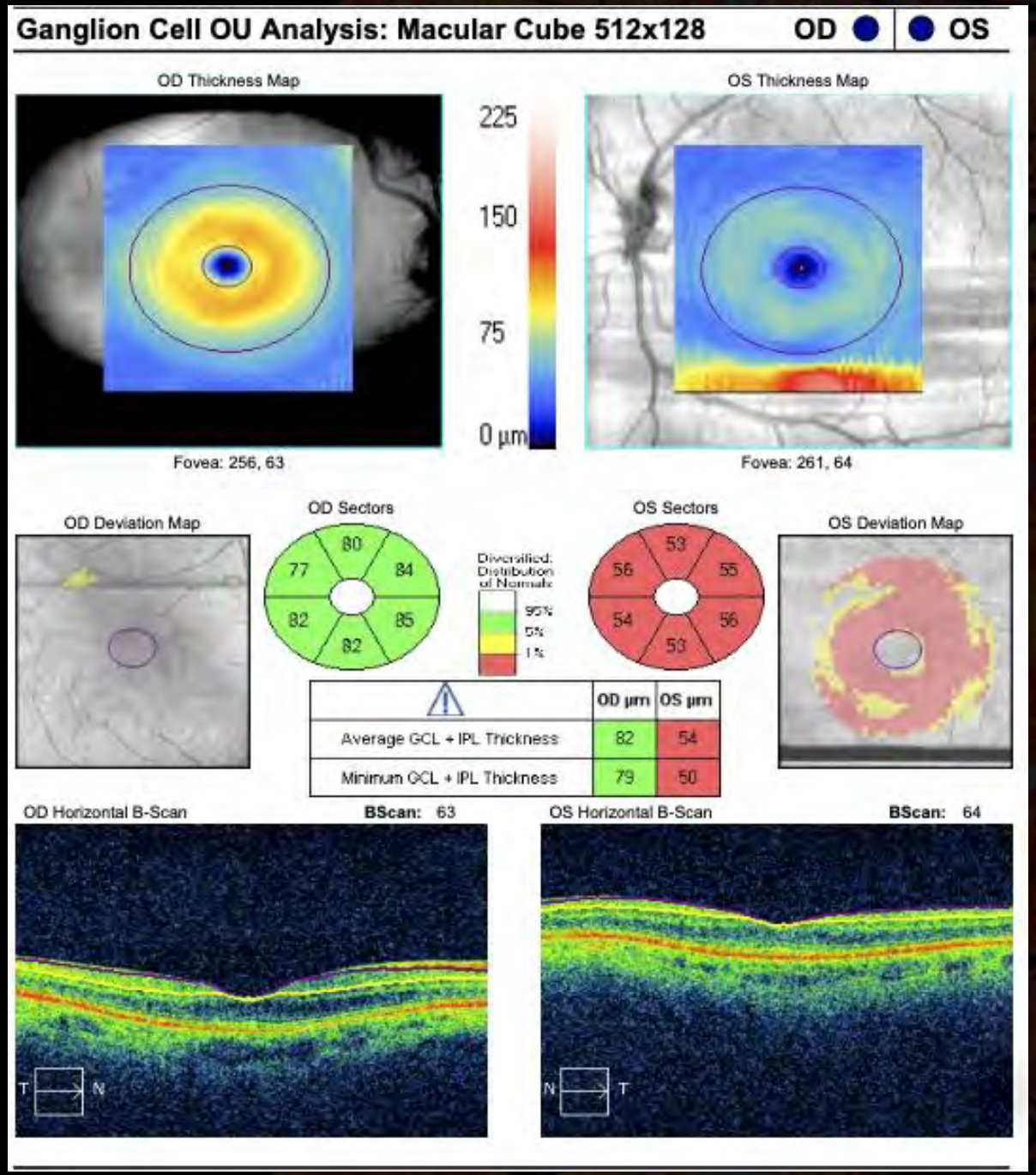


12/21/23



70yo CF

70yo CF


Ganglion Cell OU Analysis: Macular Cube 512x128
OD
OS
OD Thickness Map
OS Thickness Map
225
150
75
0 µm
Fovea: 256, 63
Fovea: 261, 64
OD Deviation Map
OD Sectors
80
77
84
82
85
82
Diversified Distribution of Normals
95%
5%
1%
OS Sectors
53
56
55
54
56
53
OS Deviation Map
OD µm
OS µm
Average GCL + IPL Thickness
82
54
Minimum GCL + IPL Thickness
79
50
OD Horizontal B-Scan
BScan: 63
OS Horizontal B-Scan
BScan: 64
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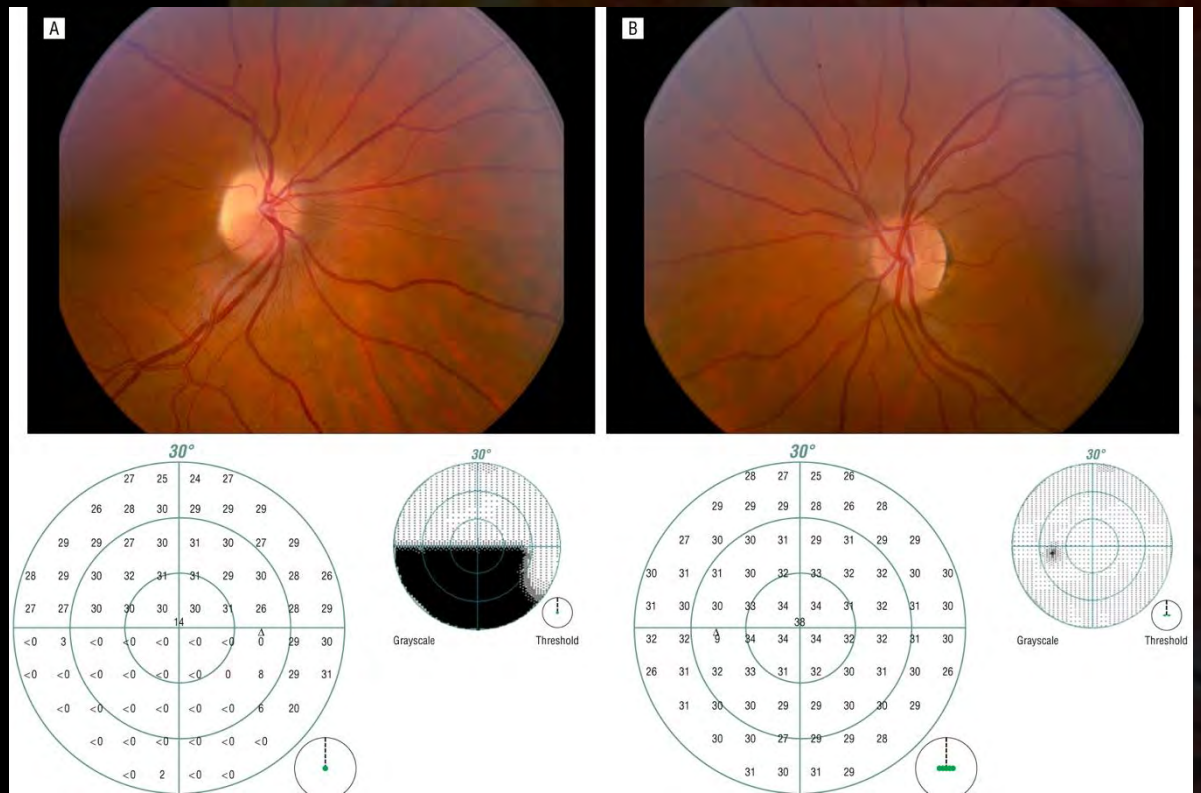
Cause

- Compromised optic disc microcirculation in crowded discs
  - AKA: “discs at risk”



Symptoms

- Wake up with VA loss
  - Can be episodic or steady decrease for weeks to months
- Field loss
  - Most common: altitudinal
- NO systemic symptoms associated

Non-arteritic AION

Presentation

- Typically, less severe VA loss
  - Better than 20/200 in >60% patients
  - Monocular
- Increased risk:
  - DM
  - Hypercholesterolemia
  - HTN
  - Ischemic heart disease
  - Sleep apnea

Internals

- Diffuse or segmental optic disc edema
  - Hyperemic or pale
- Contralateral eye has small ONH with small or absent C/D
- Splinter hemorrhages
- CWS close to ONH

Non-arteritic AION

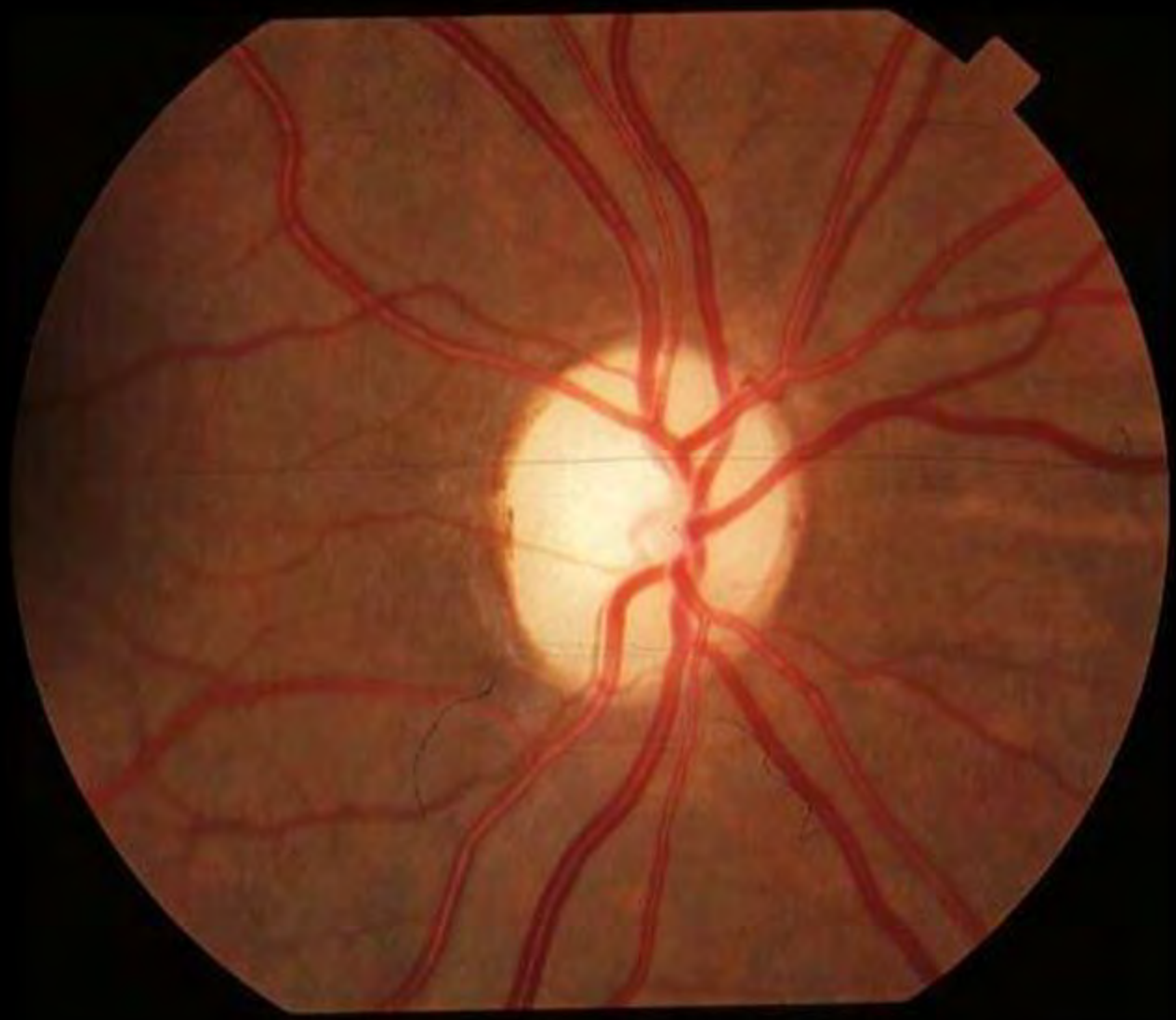
- No further work-up is necessary but…
- ESR and CRP should be checked for screening of GCA

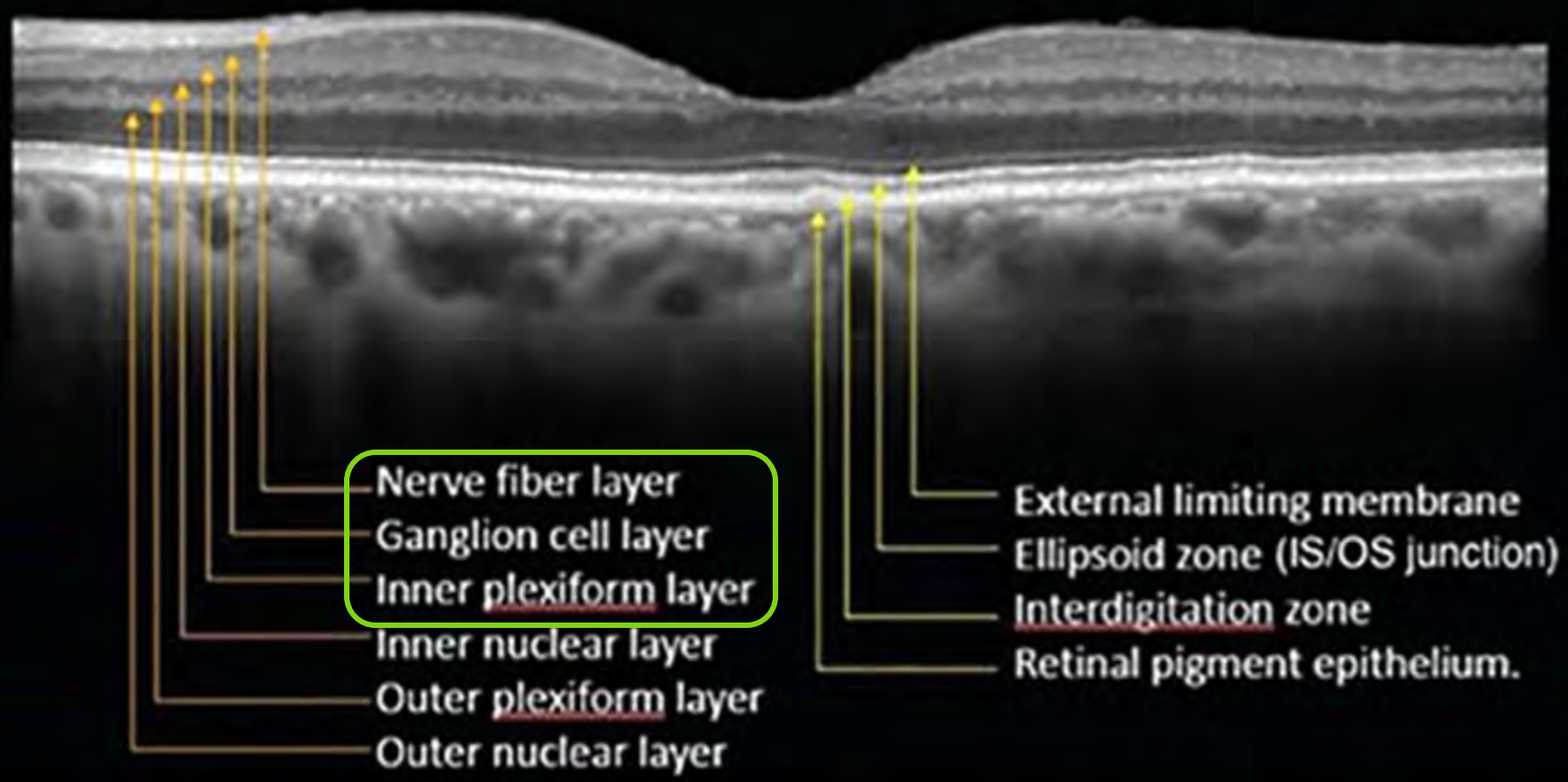
- Other:
  - OCT: may show sub-retinal fluid that can resolve and may have improved vision as a result

- Follow-up/Results:
  - Often a fixed deficit but…
    - Some may progress with VA loss over next month
    - Some have spontaneous resolution!
  - Pallor typically develops in 6-8 weeks

You diagnosed it…NOW WHAT?

Optic Atrophy

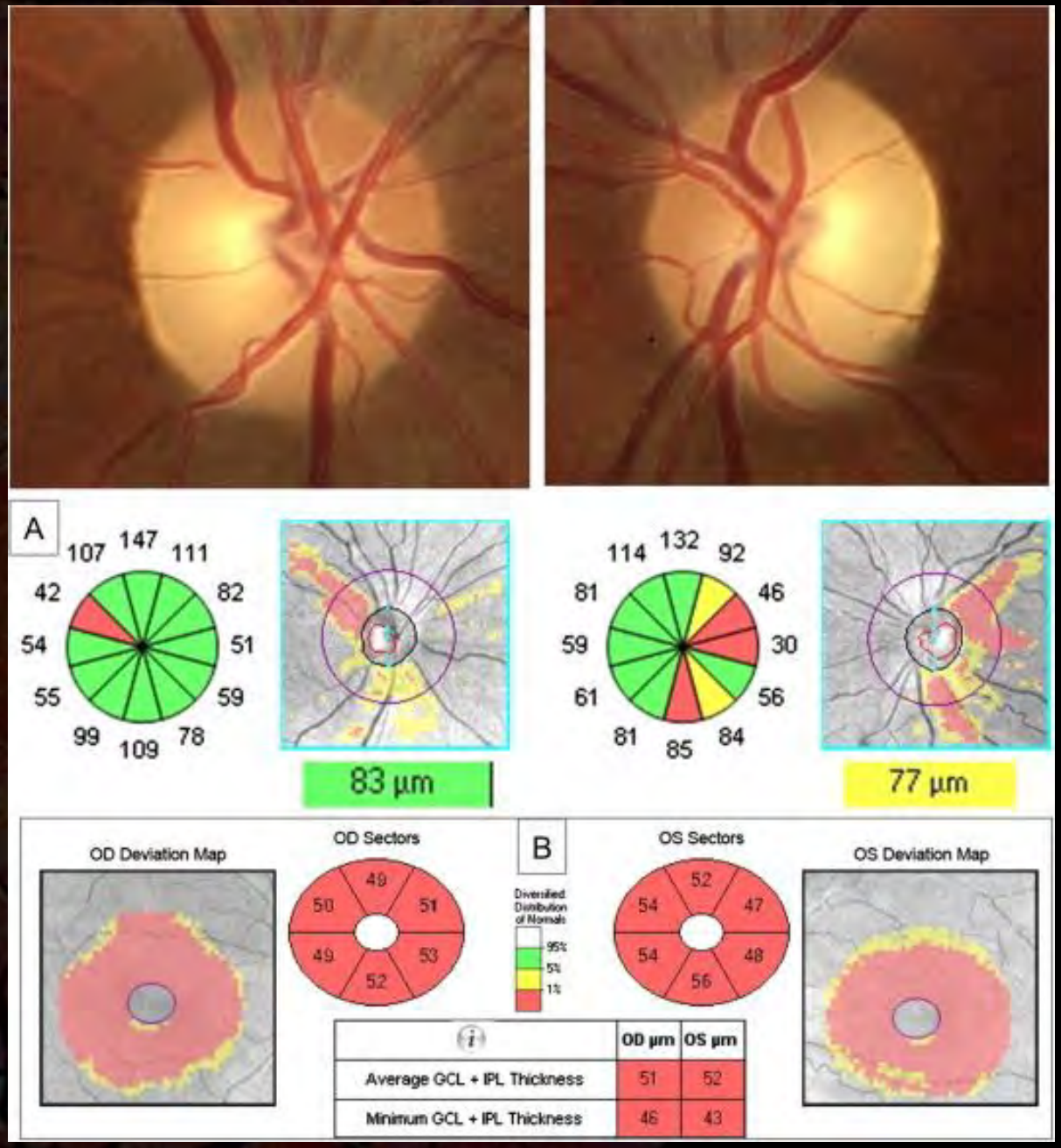




Normal Retinal Layers

How does temporal thinning change the GCA?

Temporal fibers connect continue to the macula

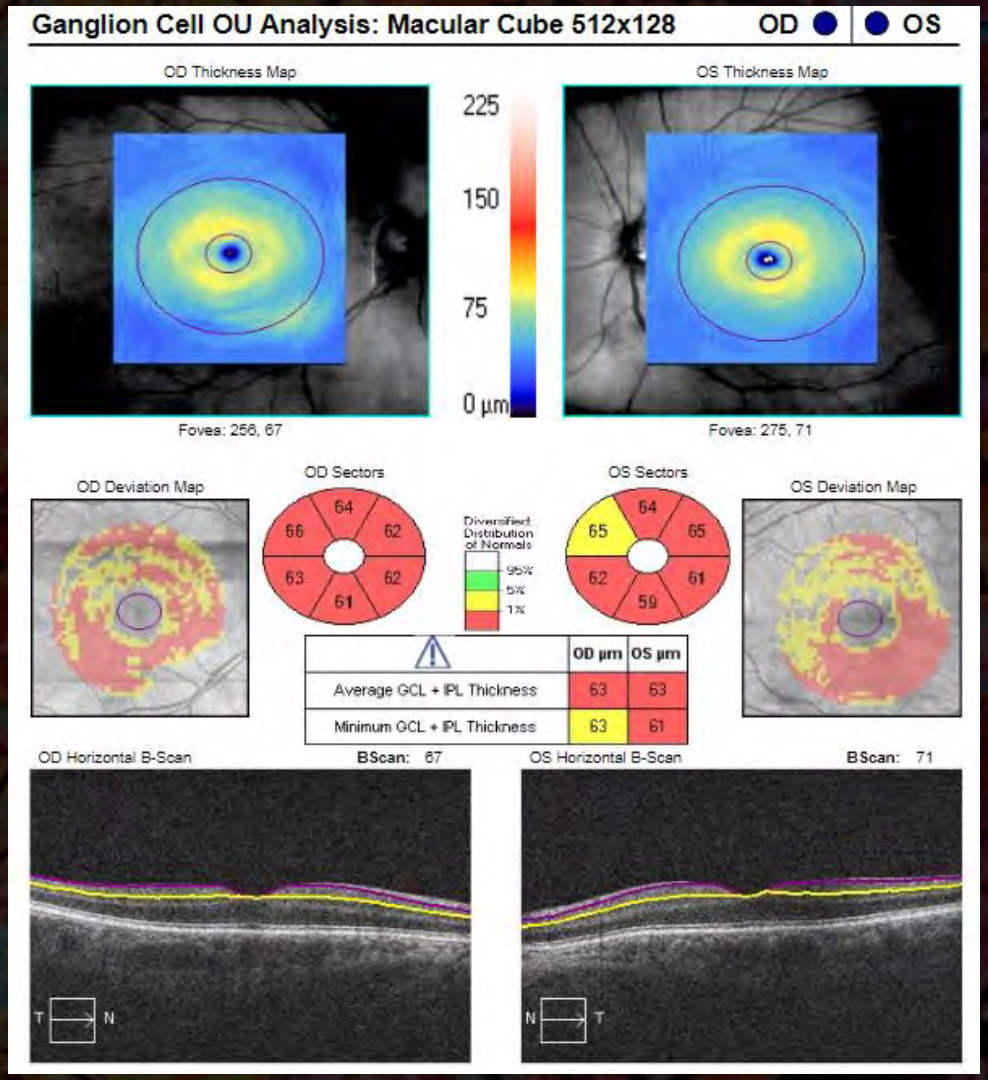


GCA thinning…now what?

- Reduced Contrast
- Difficulty in low lighting

Example of GCA thinning

OD
Log Contrast Acuity
1.28
Moderate Contrast
Acuity Loss

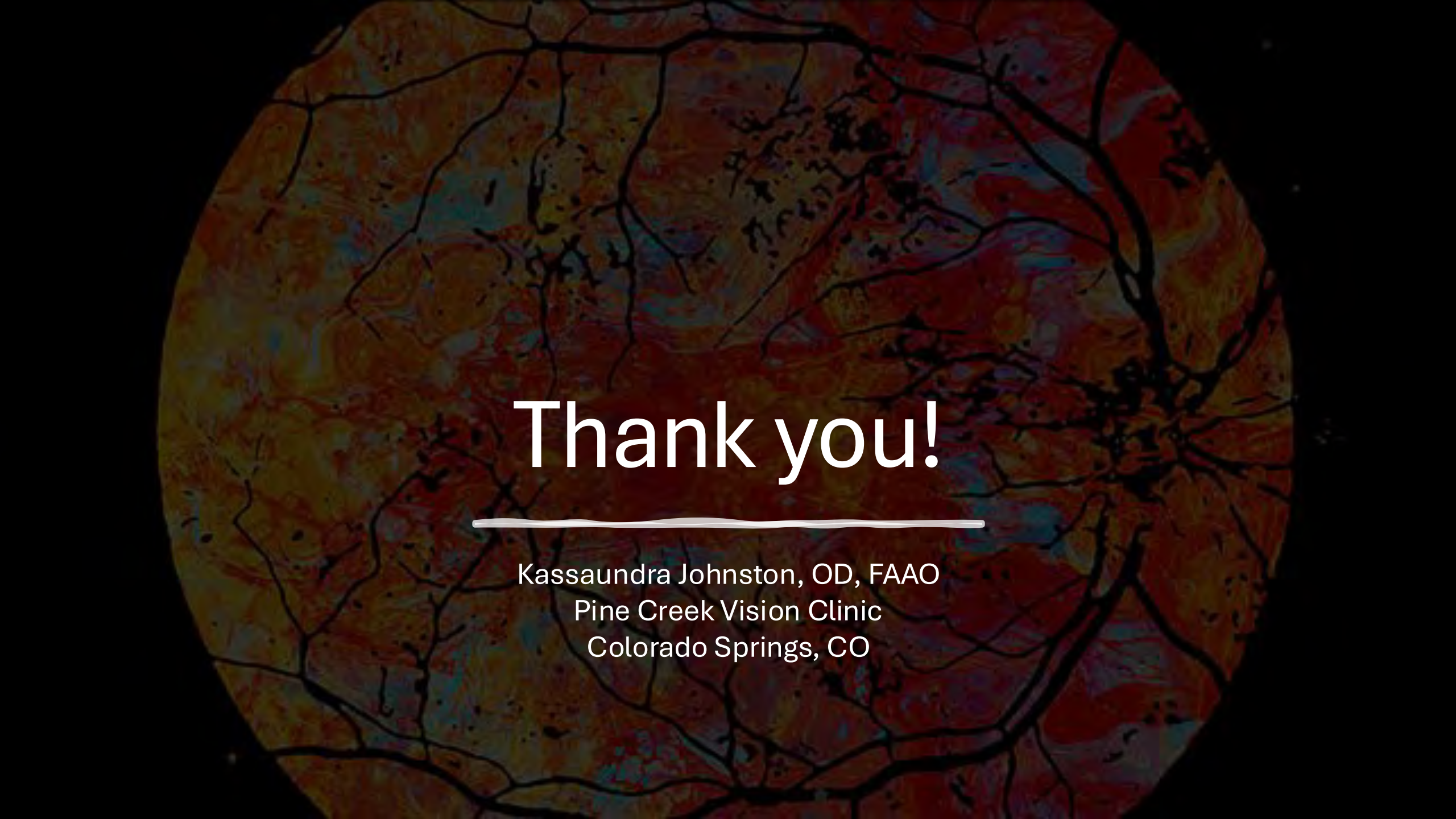


OS
Log Contrast Acuity
1.20
Moderate Contrast
Acuity Loss


Reduced Contrast

Reduced Contrast Acuity

- Flippers in yellow
- Night driving glasses
- Sport shooting glasses



Thank you!

Kassaundra Johnston, OD, FAAO
Pine Creek Vision Clinic
Colorado Springs, CO

Kassaundra Johnston, OD, FAAO

Pine Creek Vision Clinic

Neuro-Referral Grand Rounds

Nothing to disclose

Case 1

66yo CM

- CC: Trouble reading at near
  - “I am losing my place while reading and not able to read as fast as before.”

66yo CM

- PMH
  - TBI secondary to fall:

    R-SAH, L-frontal hemorrhagic contusion, pneumocephalus
  - Multiple facial fractures
    - 3 months prior
  - Hypertension
  - Hyperlipidemia
  - Prostate cancer

- Surgery not indicated for TBI
- POH
  - Childhood strabismus s/p strab. surgery
  - Refractive surgery

66yo CM

- Medications
  - Folic acid
  - Nasal spray
  - Senna
  - simvastatin
  - Colace
  - ranitidine
  - No ocular medications
  - NKDA
- FOH/FMH
  - Non-contributory
- SH
  - Currently in inpatient rehab.
  - Alcohol abuse h/o drinking 3 pints hard liquor daily x many years
  - Prev. worked for Exxon

66yo CM Exam Findings

Habitual SRx (PAL)

OD: +1.00-0.75x155

OS: +1.00DS

add + 2.50

- VA Dist cc:
  - $20/60^{+2}$ OD NIPH
  - $20/50^{+2}$ OS NIPH
- VA Near cc:
  - $20/32^{+}$ OD
  - $20/40^{-}$ OS
- CT cc:
  - Dist. 12^ CAXT
  - Near 8^ CAXT’
- W4D:
  - Constant, alternating suppression
- CVF and Pupils:
  - Normal OD,OS
- SLE:
  - LASIK scars but otherwise unremarkable OD, OS

66yo CM Exam Findings

- BCVA:

OD: +0.50-0.75x085 $20/40^{+2}$

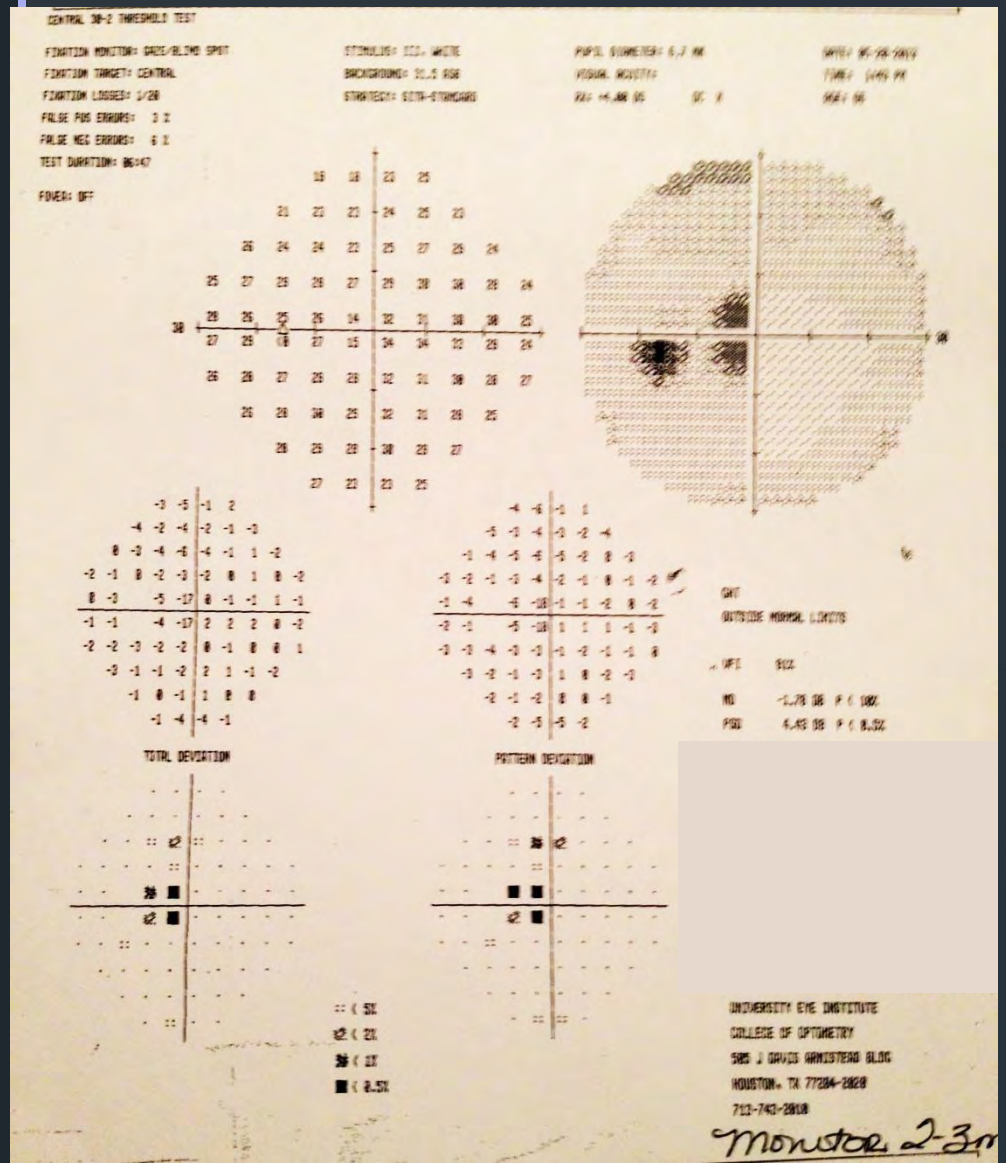
OS: +1.75-0.50x080 $20/30^{+}$

add +2.50 $20/30^{-}$, OU

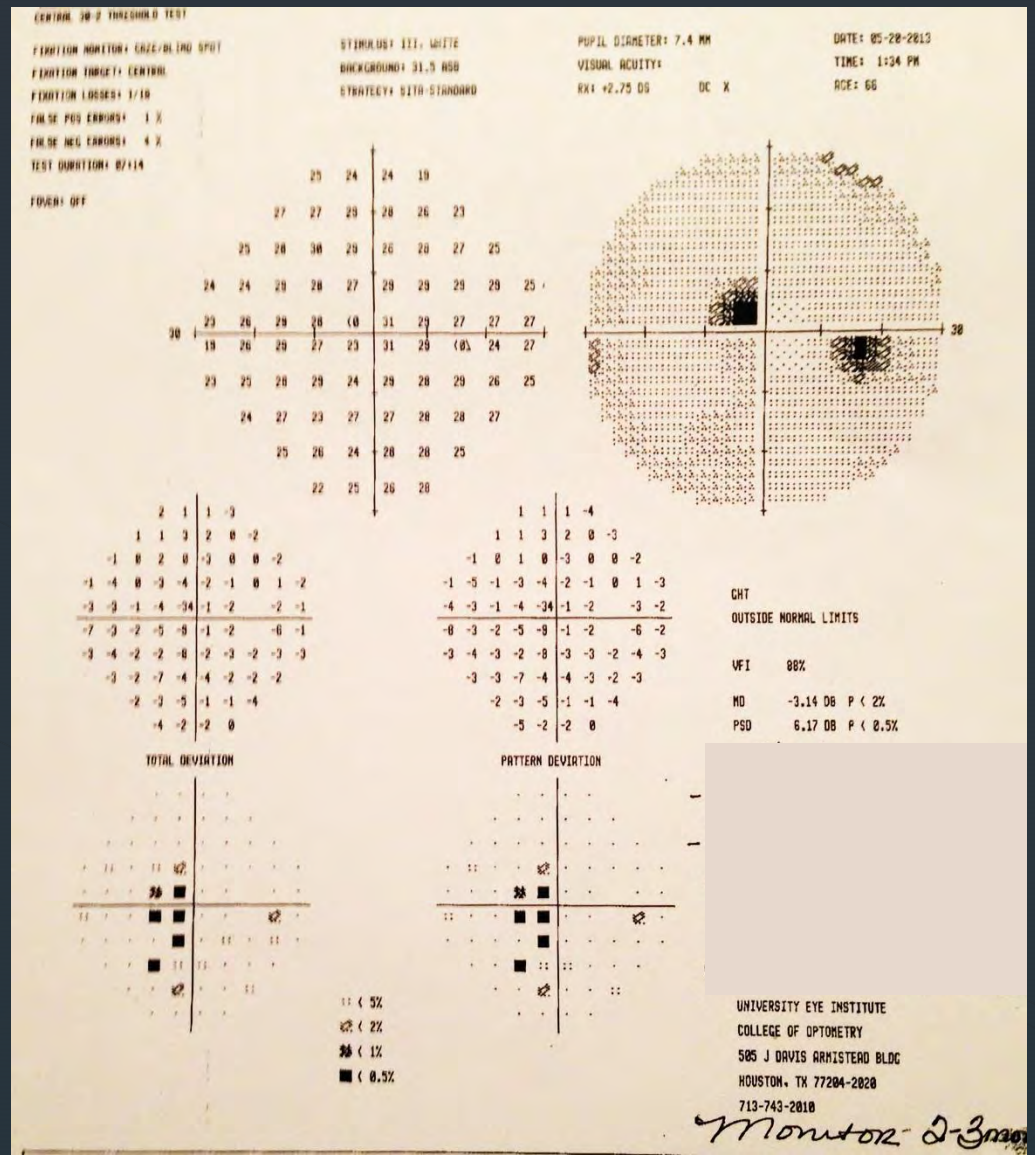
- EOM:
  - -1.5 RSO
- Neglect testing:
  - Normal
- Amsler:
  - Possible wavy lines superior, OD
  - No defects, OS
- IOH:
  - PVD, OU
  - ERM, OU
    - Confirmed with OCT

Humm??? 30-2 SITA-std.

LEFT



RIGHT



66yo CM Diagnosis

Incongruous central (macular) left homonymous hemianopsia secondary to the right SAH.

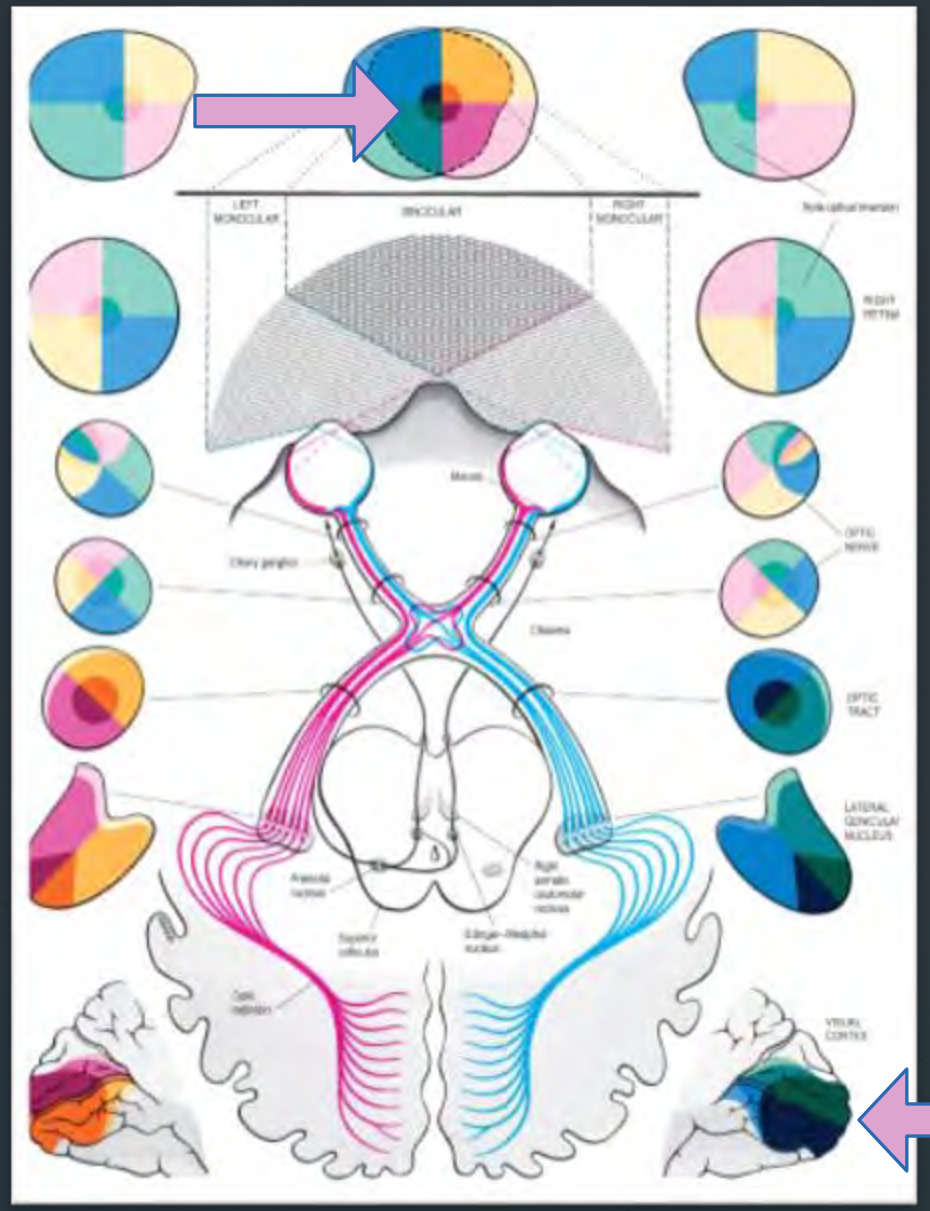
ERM, OU with decreased BCVA

Constant exotropia s/p childhood strabismus surgery with suppression

LASIK scaring, stable, OU

PVD, stable, OU

Localize defect to posterior aspect of occipital lobe

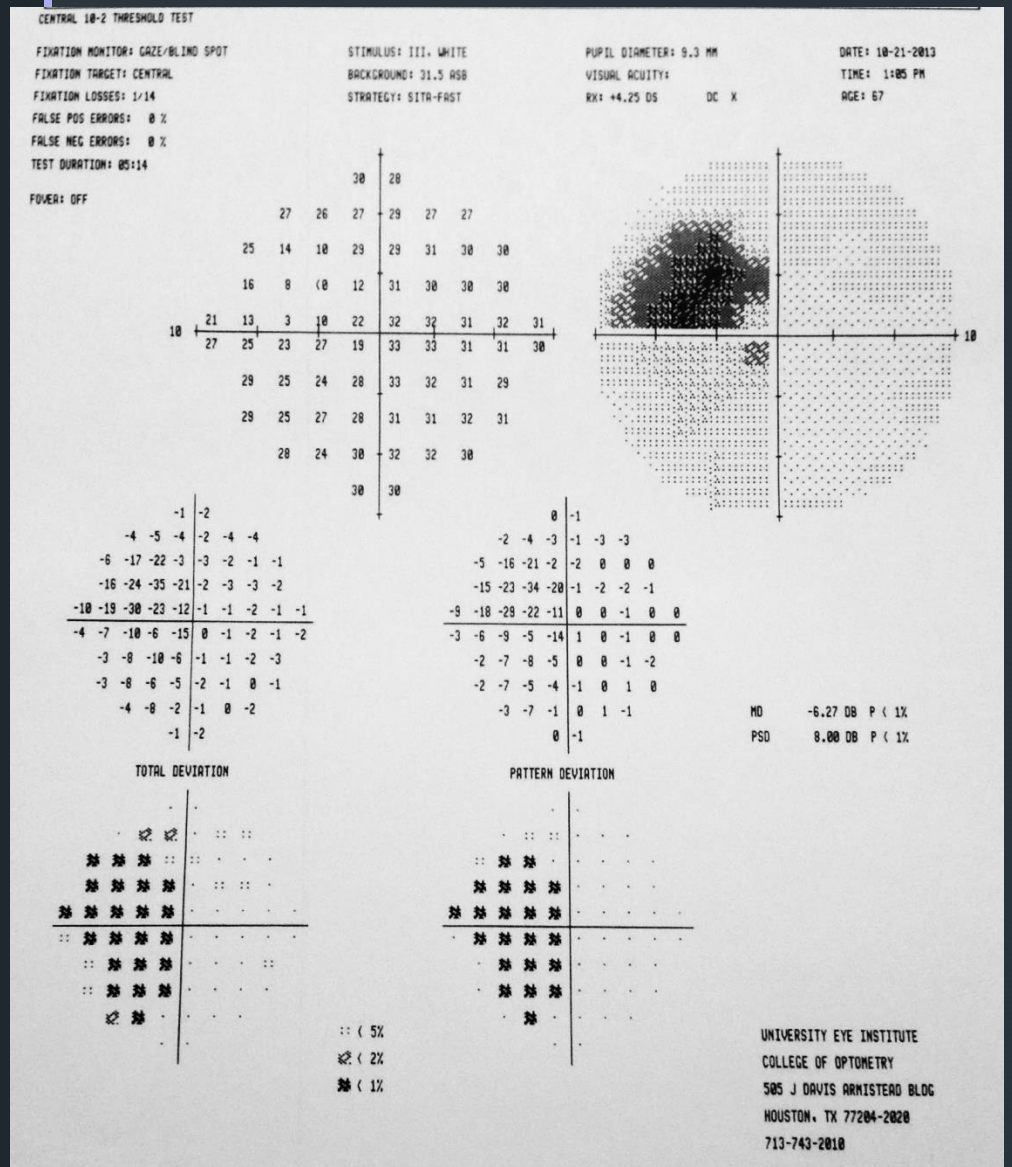


66yo CM: Treatment

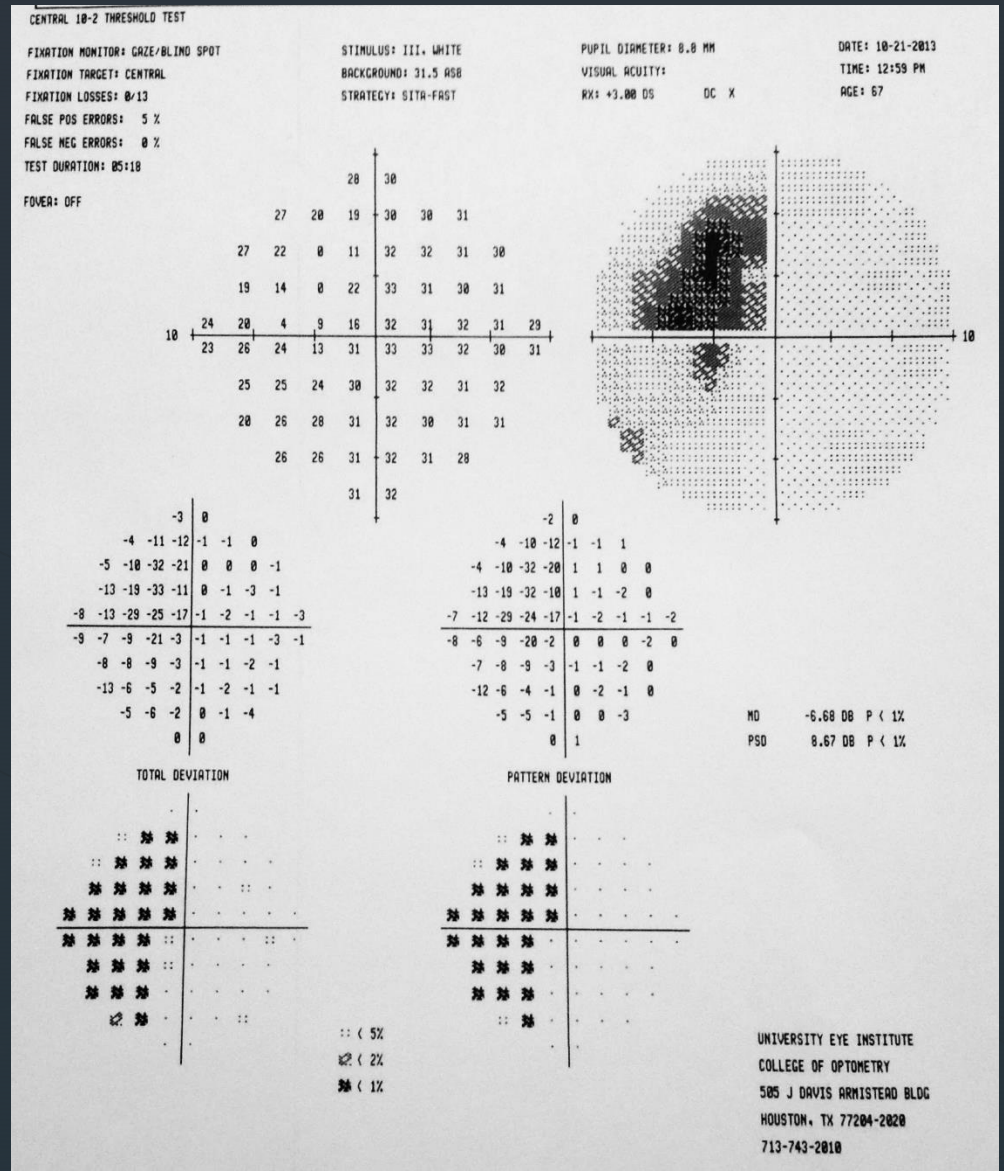
1. Recommend line guides and page markers for near work.
2. Recommend HVF 10-2 SITA std. in 2-3 months
3. Monitor ERM, PVD and strabismus yearly or PRN.

HVF 10-2

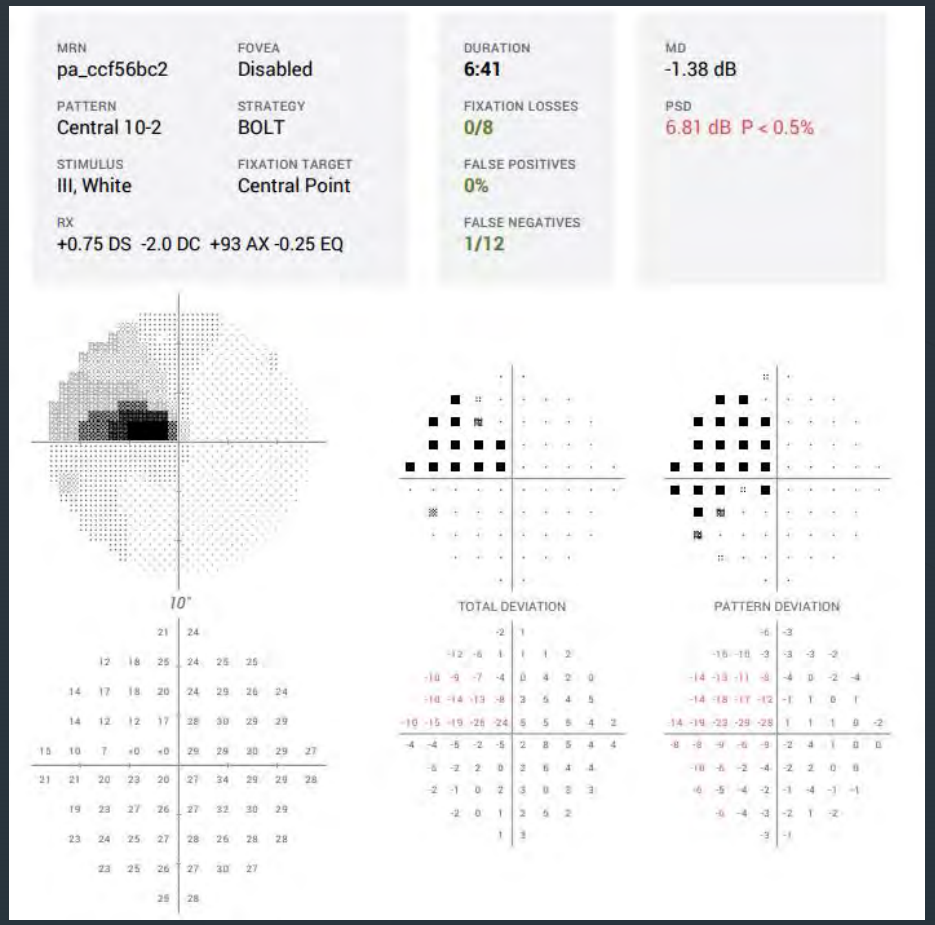
LEFT

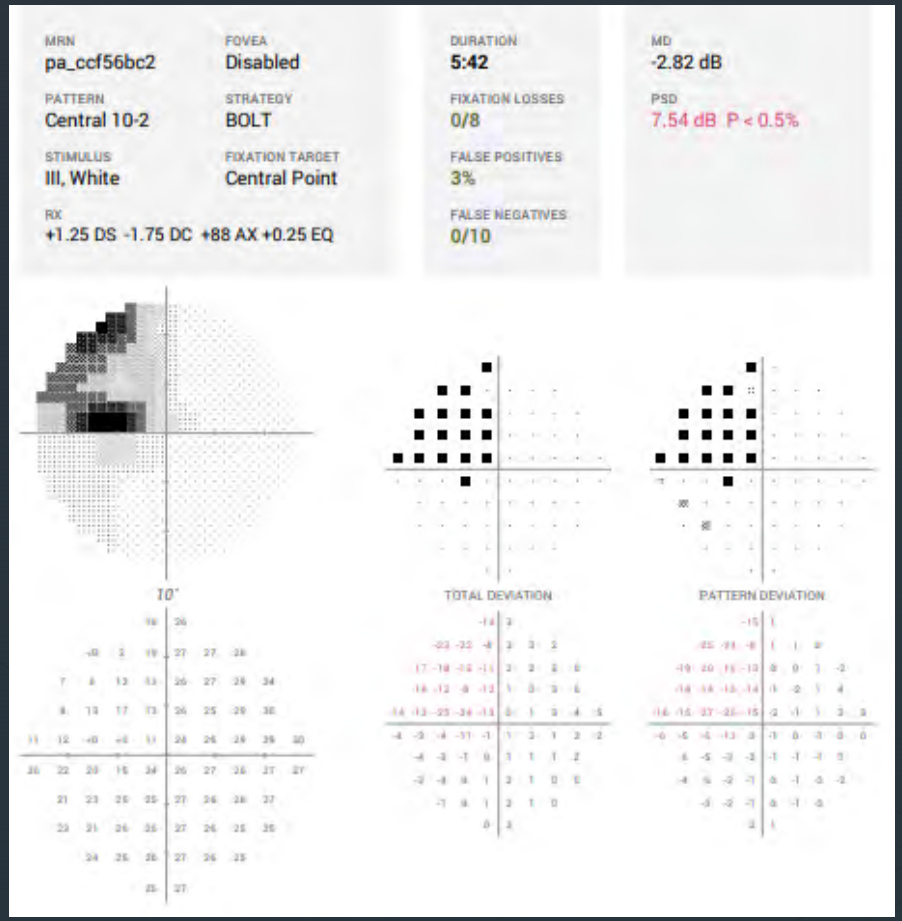


RIGHT



If you think it won't happen again…



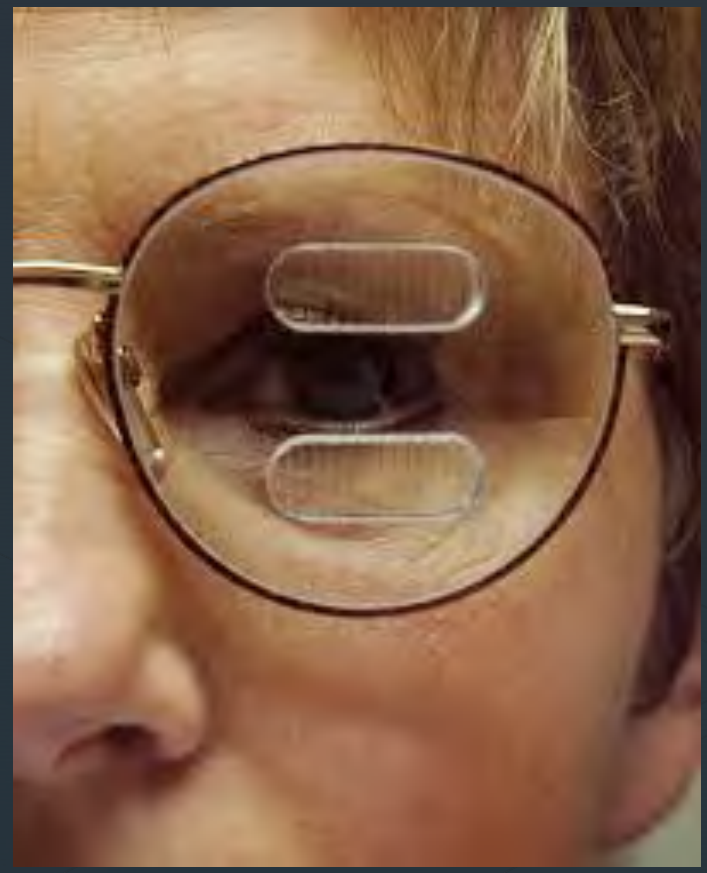


Field loss and near work

- We read from left → right
- Right field cut: reading into their blind spot
- Left field cut: losing their place when going back to the beginning of the sentence/paragraph

Scanning Prism

- Fresnel prism
- Eli-Peli prism



Follow-up

- Every 2-3 months for repeat VF 30-2
  - Until 12-month mark
- Re-evaluate treatment options
  - Prism
  - Referral
  - Driving Rehab

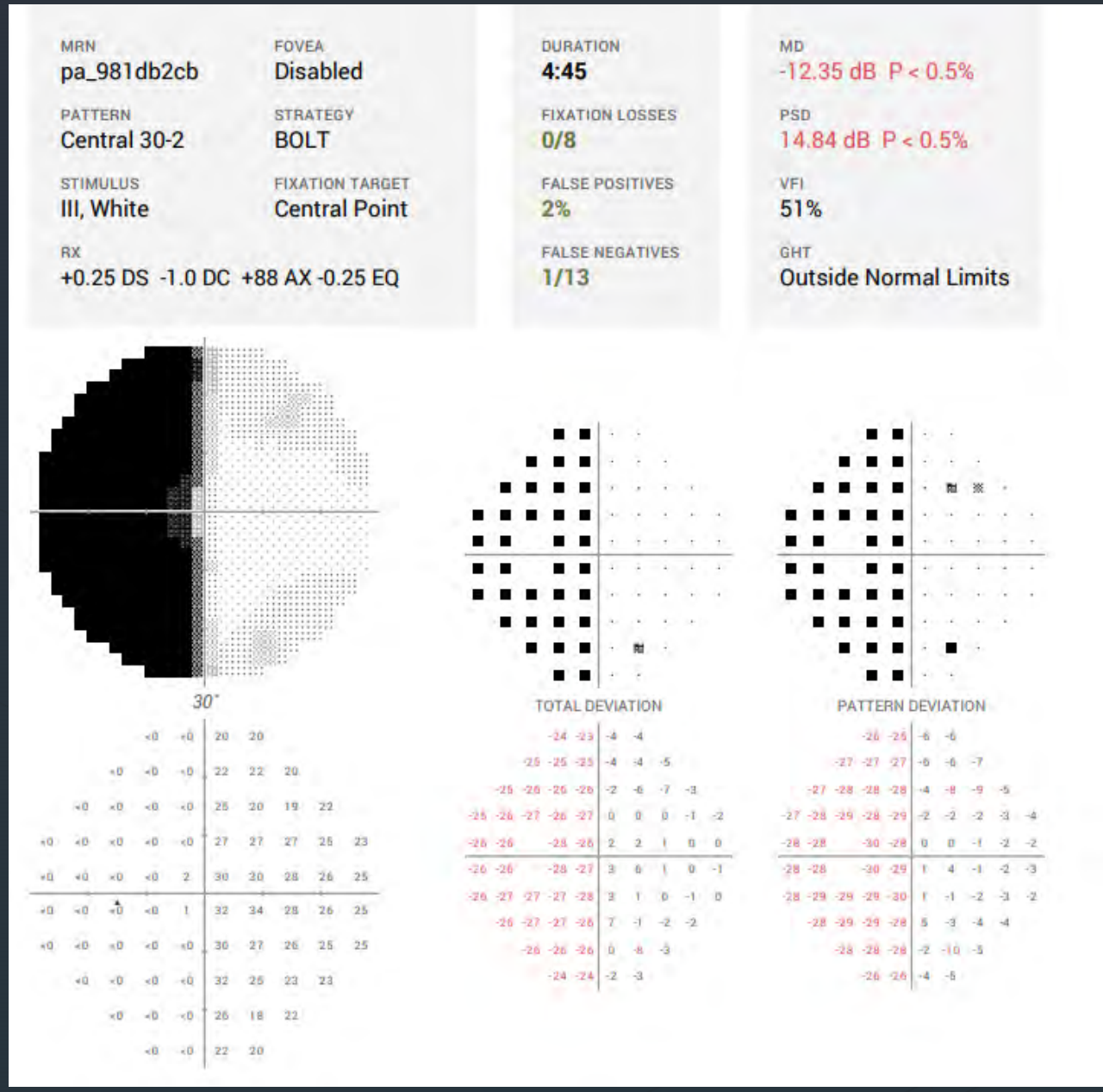
Co-management

- Therapy
  - Occupational
    - Vision trained
  - Physical
- Behind the Wheel Driving Assessment

Case 2

- OD: NLP
- OS: left field cut to midline

Do you want this driving next to you?

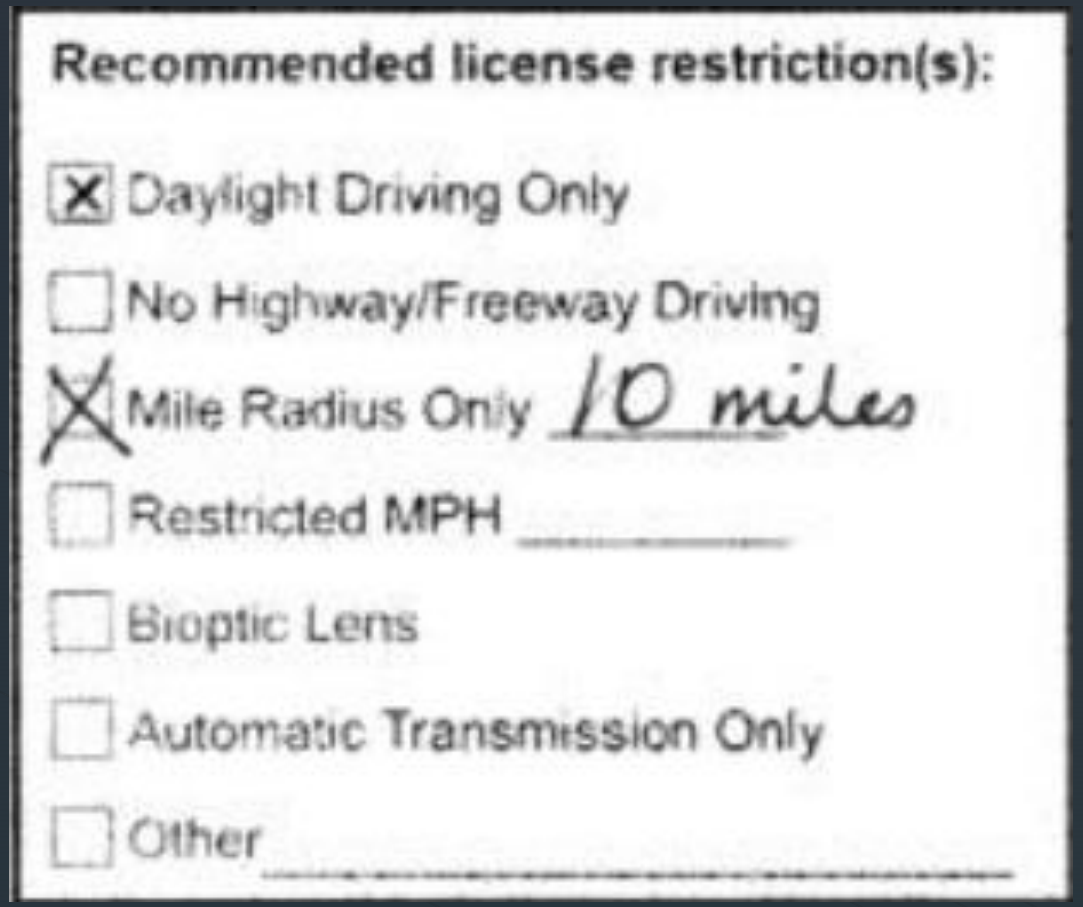


What if…

GOALS:

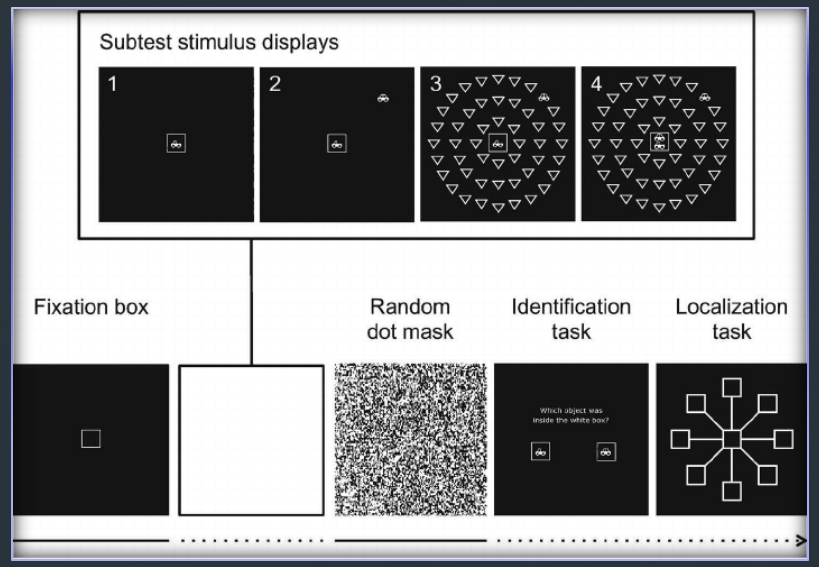
- Manager of golf course
  - Needs to get to work
  - Needs to drive a golf cart
- Primary provider for the family

- What happened in the end…



Recommended license restriction(s):

- [X] Daylight Driving Only
- [ ] No Highway/Freeway Driving
- [X] Mile Radius Only 10 miles
- [ ] Restricted MPH _____
- [ ] Bioptic Lens
- [ ] Automatic Transmission Only
- [ ] Other _____



Other VF assessment options

- Non-seeing to seeing
- Amsler grid
- VF 10-2
- Useful Field of View (UFOV)
  - Driving goals
- Scanning therapy
  - Dynavision
  - Sanet

Case 3

47yo CM

- Referred by other OD
  - Second opinion on vision loss following history of a chemical burn
- Jan. 2022 the patient got Simple Green in his left eye
  - He flushed it at home
  - Went to ER and they recommended to follow-up with an eye doctor
  - Since then he has not been able to see out of his left eye

Exam Findings

- VA Dist & Near sc:
  - 20/20 OD
  - NLP OS
- CT cc:
  - Dist.: ortho
  - Near: ortho
- EOM
  - FROM, OU
- Auto’s
  - +0.25-0.25x167
  - +0.50-0.25x004
- Pupils,
- Stereo Randot
  - 250 global”
  - 20 local”
- Lang II
  - 200” global
- W4D
  - 4 dots all distances
    - Lights on/off

Exam Findings

CVF:

OD- FTFC

OS- NLP *with tech

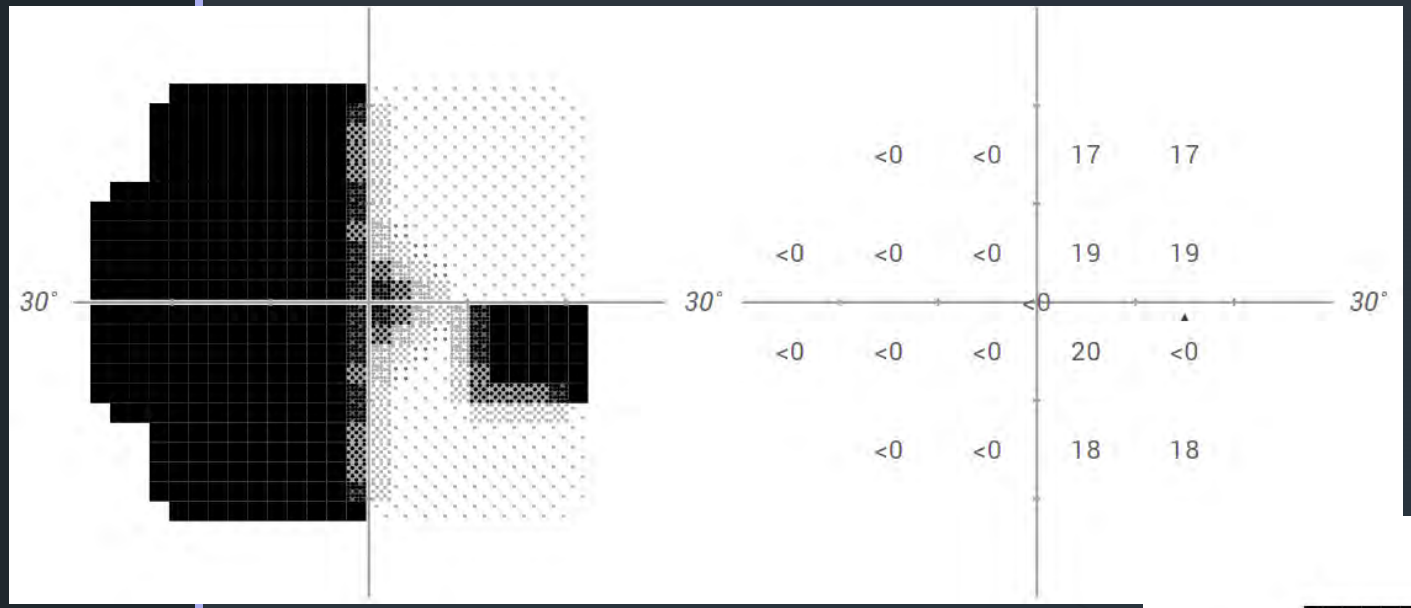
Non-seeing to seeing:

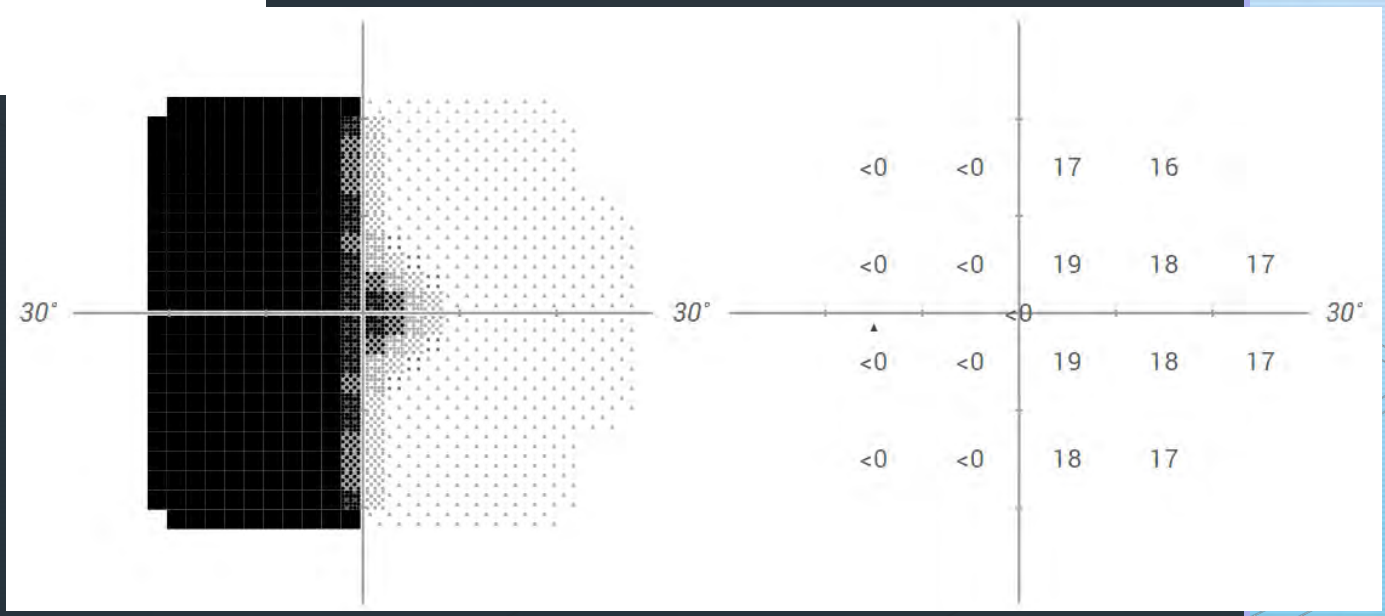
OU: LHH at midline???

EOH:

- Normal, OU
  - No corneal scarring or defects noted
- IOH (Optomap)
  - Normal, OU
- OCT
  - Normal NFL & ONH, OU

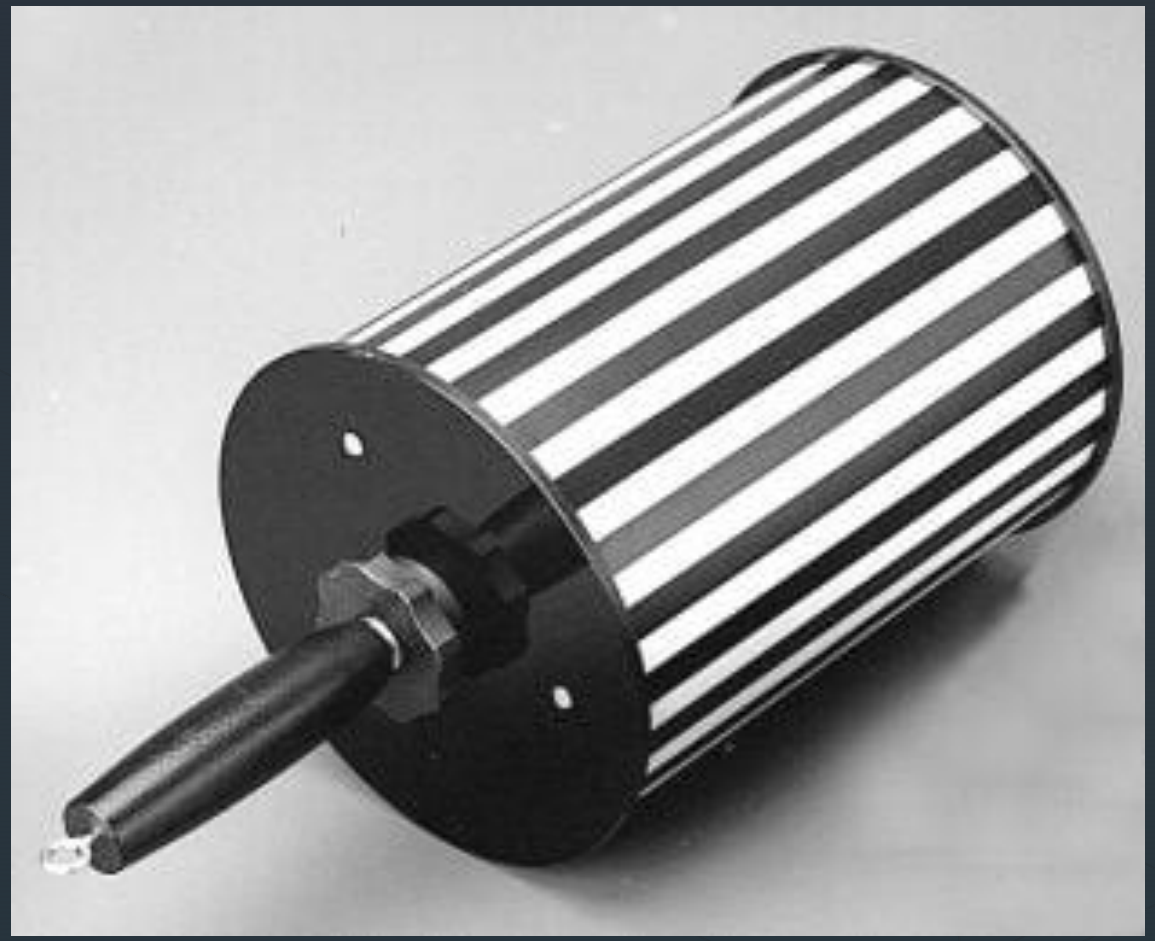
Special testing…





What I didn't tell you…

- Referral notes:
  - Same entering VAs
  - OKN normal
  - Topography normal
  - Also got stereo…



Differential Diagnosis?

- Malingering?
  - The patient was late…then rushing me through the exam for his ride share
  - Immediately handed me his insurance info and claims contacts
  - Kept stating for every test (with both eyes open) that only his right eye was working

Tricks for testing

- Technician instructions
  - Used an Opticlude patch
  - Observation when handing materials
- Screening automated VF
  - Told the patient it was binocular ☺

- Do not discuss how an exam works or what information it provides prior to testing.

Differential Diagnosis?

- Hysterical Amblyopia?
  - Most noted in school aged children or military service
  - Vision loss or visual field constriction in one or both eyes with no noted organic ocular findings

Differential Diagnosis?

- Hysterical Amblyopia vs. Malingering
  - Is the patient looking to gain something?

Difficult Discussion

- You should be upfront, calm and honest with the patient
- State only the facts and how the clinical data does not following the vision loss
- And YES, I did send my results to his claims
- And told him even monocular people can drive and perform work duties!

Case 4

66yo HM

- CC:
  - Referred by neurologist secondary to dizziness x 7yrs
  - “I feel like I am living on a boat.”
  - Hard to see in low lights
  - Blurry vision at distance and near
- PMH:
  - Cancer
  - DM type 2
  - Kidney Disease
    - On dialysis
  - Heart disease
- POH
  - Retinal detachment, OD
  - PRP, OU secondary to DR

66yo HM

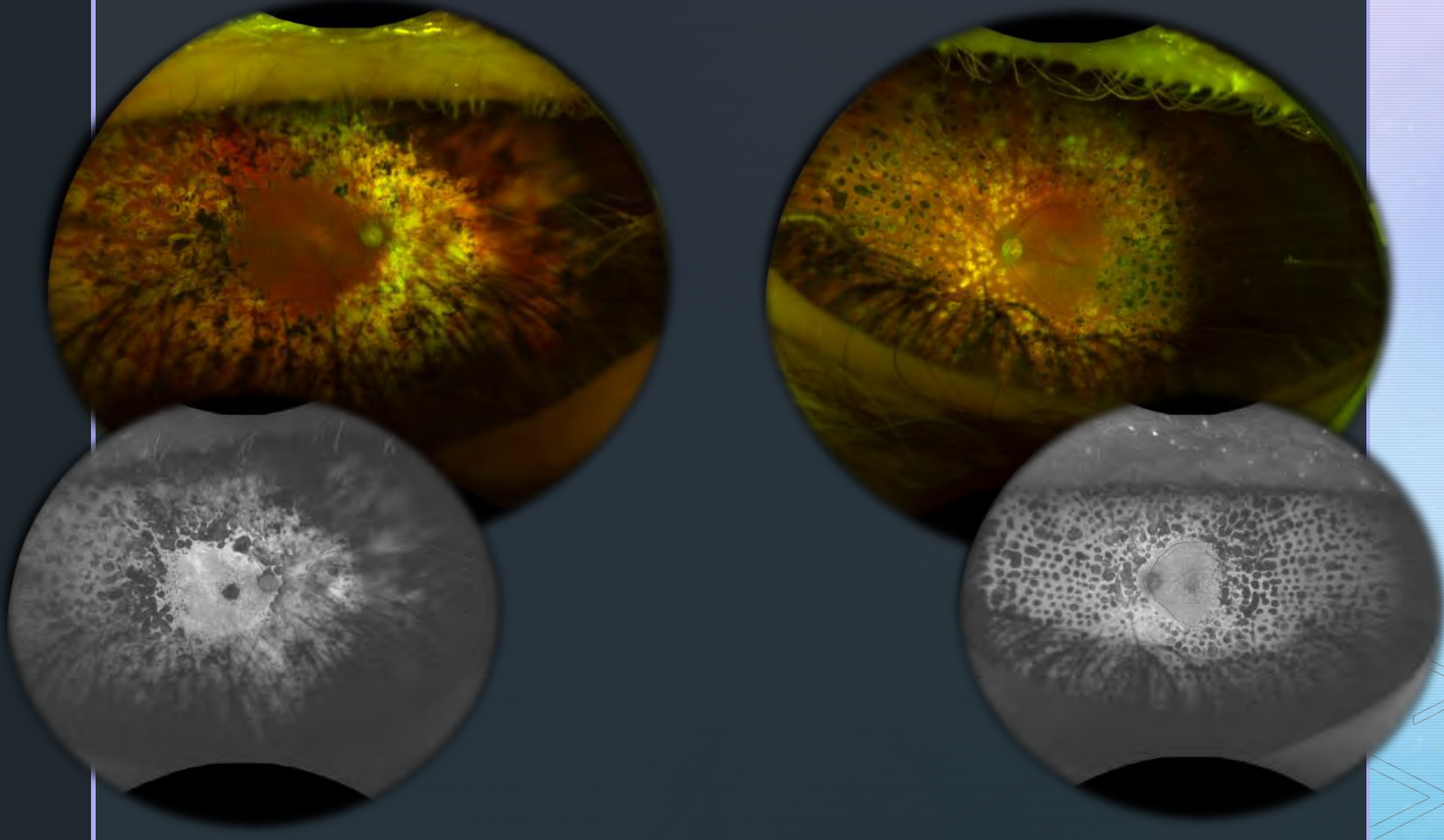
- DVA (cc):
  - OD: HM
  - OS: 20/30
- NVA (cc):
  - OD: UTT
  - OS: 20/20

- Hirschberg: aligned, OU
- EOMs: FROM, OU
- Stereo: no response

- Manifest
  - OS: +1.50-1.25x095
    20/20-1
  - OS: Add +2.50
    20/20

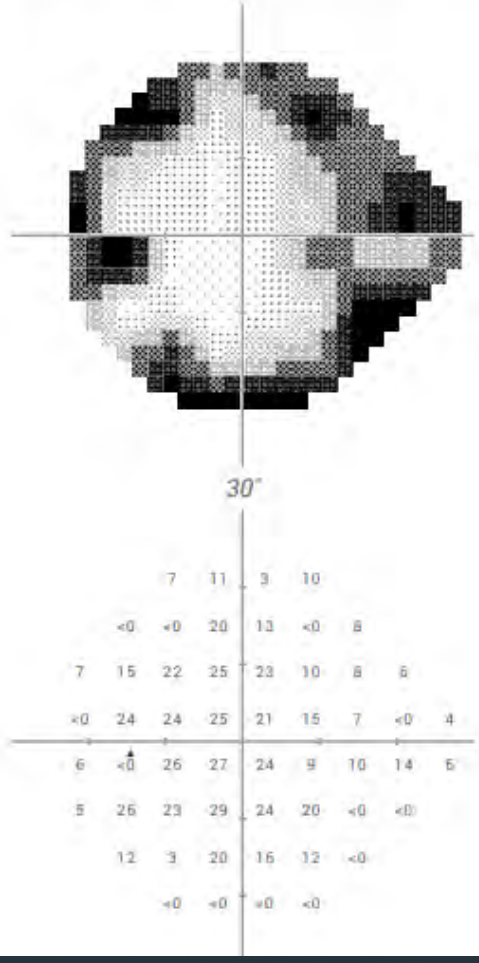
66yo HM

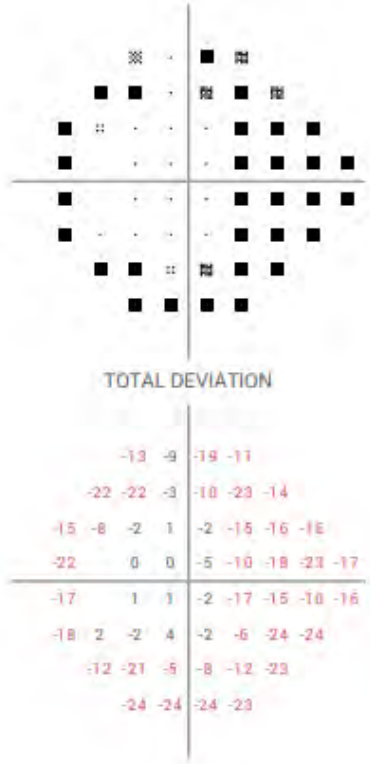
- Why are we dizzy???
  - Already had a vestibular work-up
    - NORMAL
- Is it his binocular vision?
  - HM, OD?
- Worth4Dot
  - Constant, deep suppression, OD

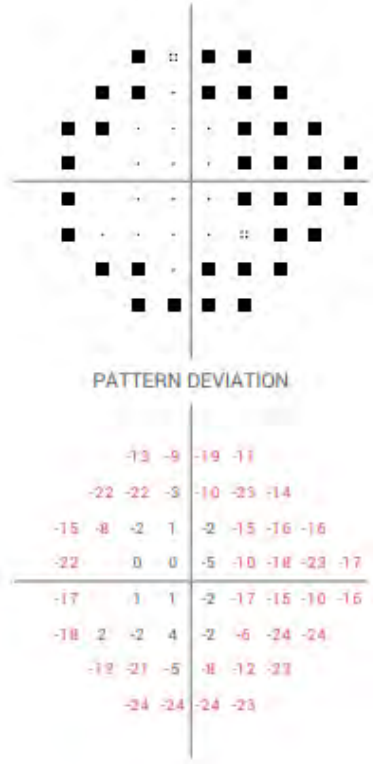


VF 24-2 Left eye

MRN pa_d834a0fb	FOVEA Disabled	DURATION 4:15	MD -11.24 dB P < 0.5%
PATTERN Central 24-2	STRATEGY BOLT	FIXATION LOSSES 3/11	PSD 10.12 dB P < 0.5%
STIMULUS III, White	FIXATION TARGET Central Point	FALSE POSITIVES 0%	VFI 65%
RX +1.5 DS -1.25 DC +95 AX +0.75 EQ		FALSE NEGATIVES 0/9	GHT Outside Normal Limits







- 66yo HM

Image how he sees….

HM w/suppression, OD

Reduced VF, OS

66yo HM

- Treatment options:
  - Orientation & Mobility
  - Occupational Therapy
  - Low Vision?

Case 5

43 yo CF; initial exam

ient History 03/01/2024

Communicate | Review | Total 00:00

RFV

Patient Reason for Visit	Provider Reason for Visit
NP/LEE: unknown pt was referred by Mary Eident for eye exam due to thyroid issues pt c/o bothersome dryness, wakes her out of her sleep OD is more blurry th[redacted] day to day c/o light sensitivity occasional double vision in the distance-variable pain and pressure OU-was her fist symptom of having thyroid issues - started December 2023 states she always had good vision up until the last 6 months and has a lot of questions about how thyroid issues effect your eyes	Start of symptoms Dec. 2023 Blood test to confirm was in Feb. 2024 Started meds 1 week ago

Uncorrected Visual Acuity

Unaided VA	Distance		Near @	16 in
OD	20/ 60	-1	20/ 20	
OS	20/ 40	-2	20/ 20	
OU	20/ 40	-1	20/ 20	

VA Method: Snellen

Cover Test

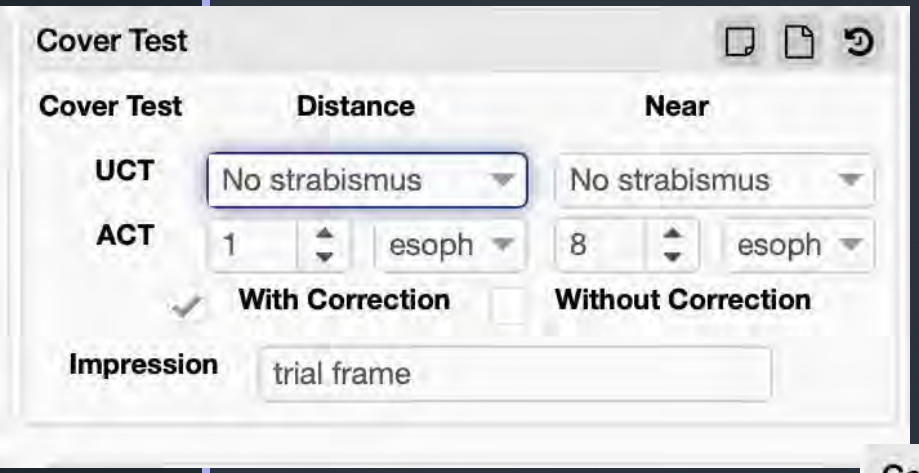
Cover Test	Distance	Near
UCT	No strabismus	No strabismus
ACT	1 esoph	8 esoph

✓ With Correction | Without Correction

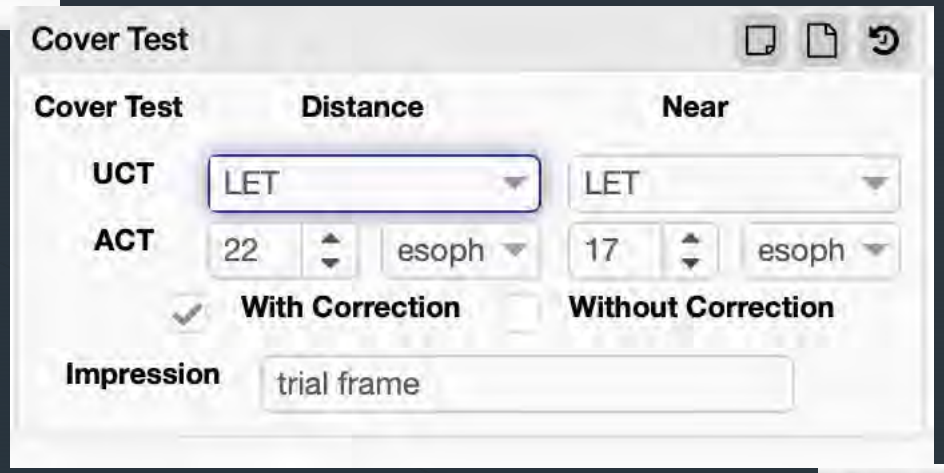
Impression: trial frame

OD	-1.25	-0.75	100	1.00	BO			20/ 20
OS	-0.50	-0.50	150	1.00	BO			20/ 20
OU								20/
ADD	+1.00							20/ 20

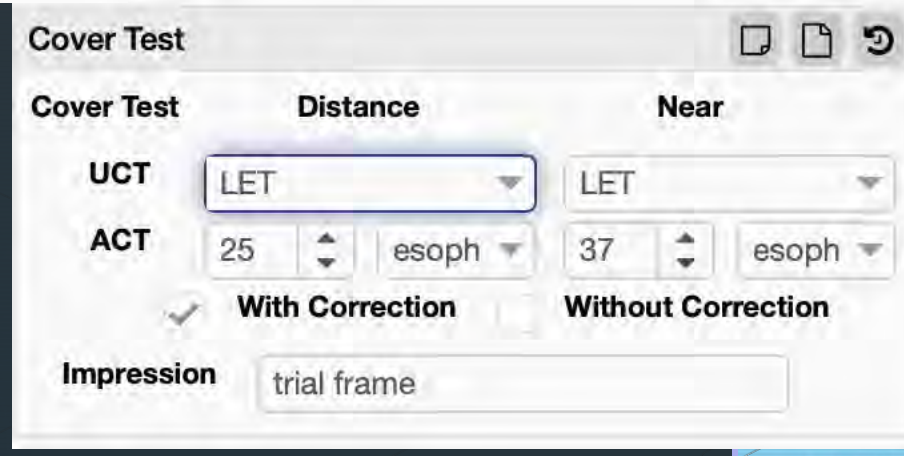
03/01

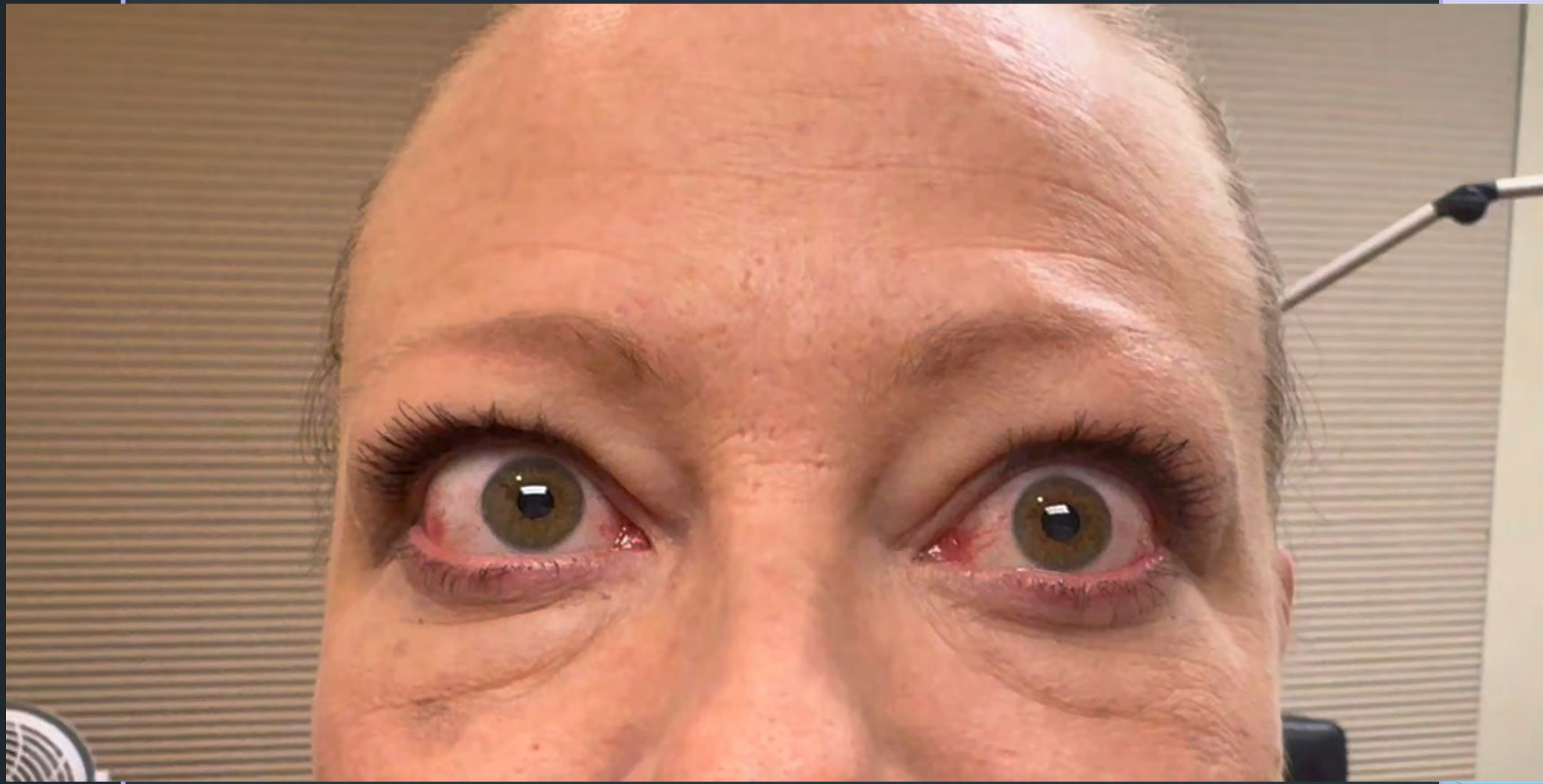


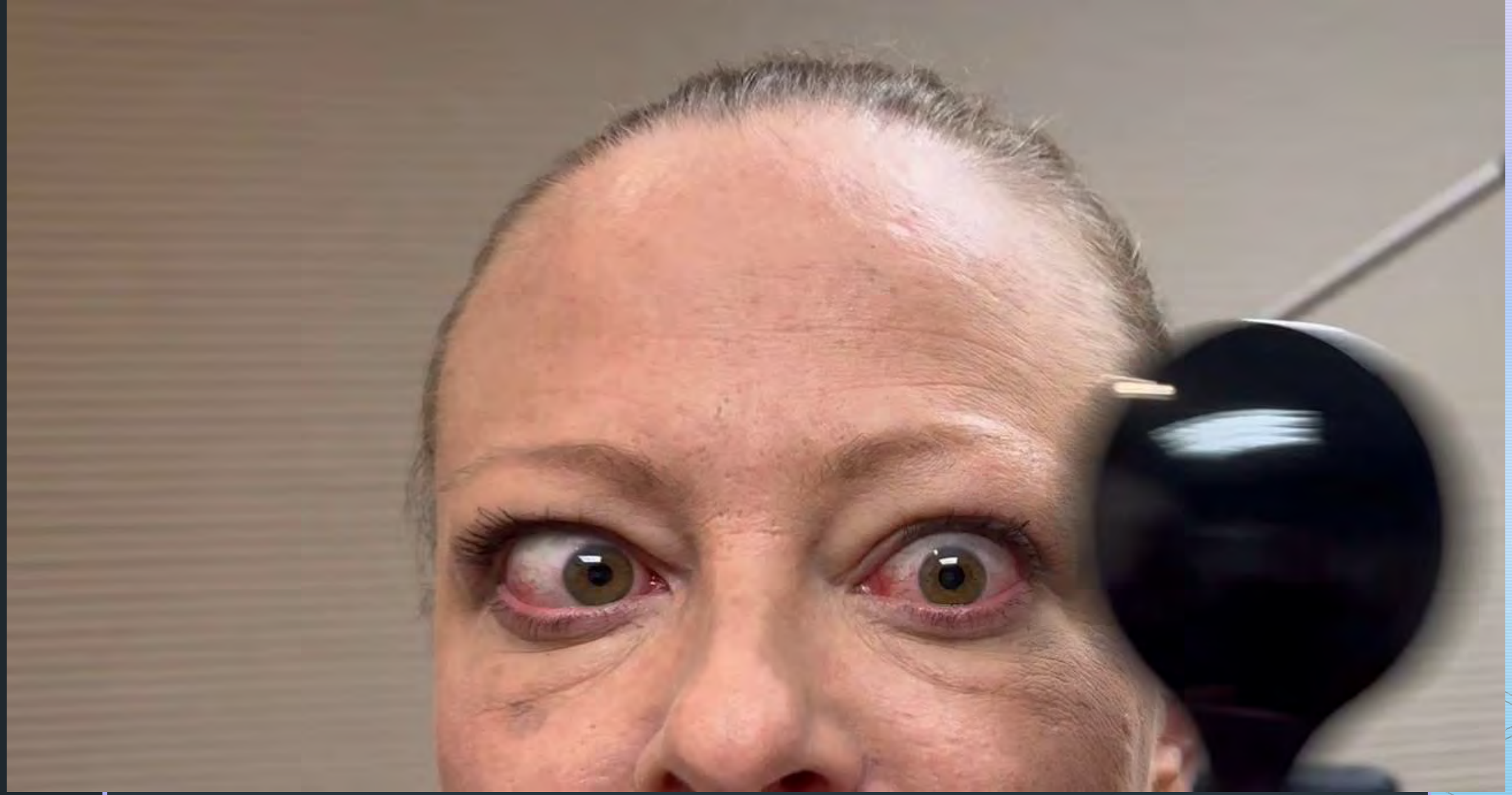
07/03



08/05







I wasn't happy with findings…so I recommended imaging…

07/16

OPINION: Normal MRI of the brain without and with contrast including cerebral perfusion with ASL and additional emphasis on the posterior fossa/cranial nerves.

I wasn't happy with findings…so I recommended imaging…

Conclusion

ADDENDUM #1

ADDENDUM there is abnormal enlargement of subarachnoid space along the lateral margin of the left anterior temporal lobe within the left middle cranial fossa. There is a single juxtacortical T2-3 millimeter focus of increased signal. Cerebral cortical
gray matter shows normal signal.

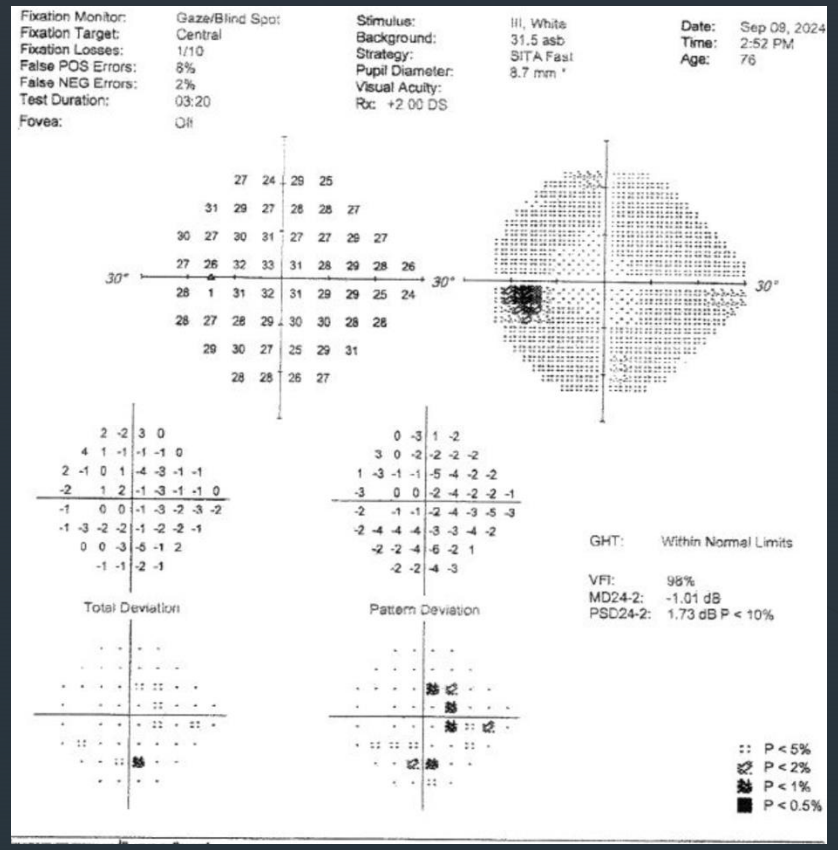
. The fluid collection measures approximately 18 mm in craniocaudad diameter by 25 mm in AP diameter by 7 mm in thickness. There is distortion of the adjacent cortical gray matter. There is no hemosiderin deposition within the area. Postcontrast scans

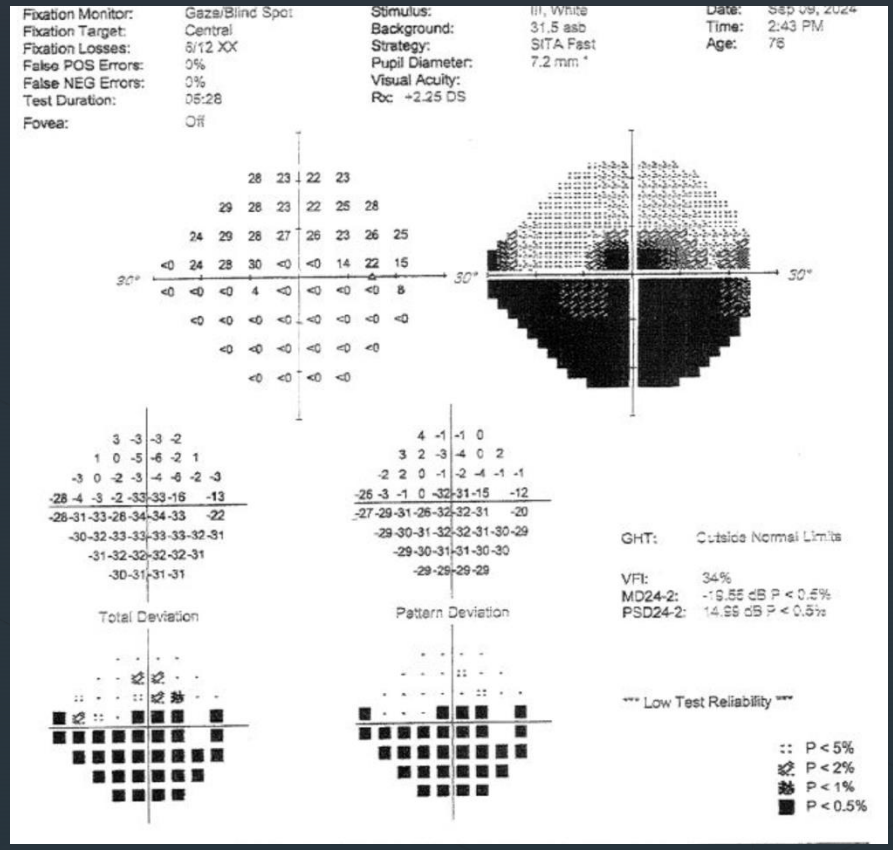
Case 6

76yo CF

- Referred by other OD to help with steroid taper after discharge from hospital stay
- 11 days prior the patient was sent to the ER with concerns of GCA due to vision loss and ONH edema

76yo CF


Fixation Monitor: Gaze/Blind Spot
Fixation Target: Central
Fixation Losses: 1/10
False POS Errors: 8%
False NEG Errors: 2%
Test Duration: 03:20
Fovea: Off
Stimulus: III, White
Background: 31.5 asb
Strategy: SITA Fast
Pupil Diameter: 8.7 mm *
Visual Acuity:
Rx: +2.00 DS
Date: Sep 09, 2024
Time: 2:52 PM
Age: 76
Total Deviation
Pattern Deviation
GHT: Within Normal Limits
VFI: 98%
MD24-2: -1.01 dB
PSD24-2: 1.73 dB P < 10%
P < 5%
P < 2%
P < 1%
P < 0.5%


Fixation Monitor: Gaze/Blind Spot
Fixation Target: Central
Fixation Losses: 5/12 XX
False POS Errors: 0%
False NEG Errors: 0%
Test Duration: 05:28
Fovea: Off
Stimulus: III, White
Background: 31.5 asb
Strategy: SITA Fast
Pupil Diameter: 7.2 mm *
Visual Acuity:
Rx: +2.25 DS
Date: Sep 09, 2024
Time: 2:43 PM
Age: 76
Total Deviation
Pattern Deviation
GHT: Outside Normal Limits
VFI: 34%
MD24-2: -19.55 dB P < 0.5%
PSD24-2: 14.99 dB P < 0.5%
*** Low Test Reliability ***
P < 5%
P < 2%
P < 1%
P < 0.5%

Timeline

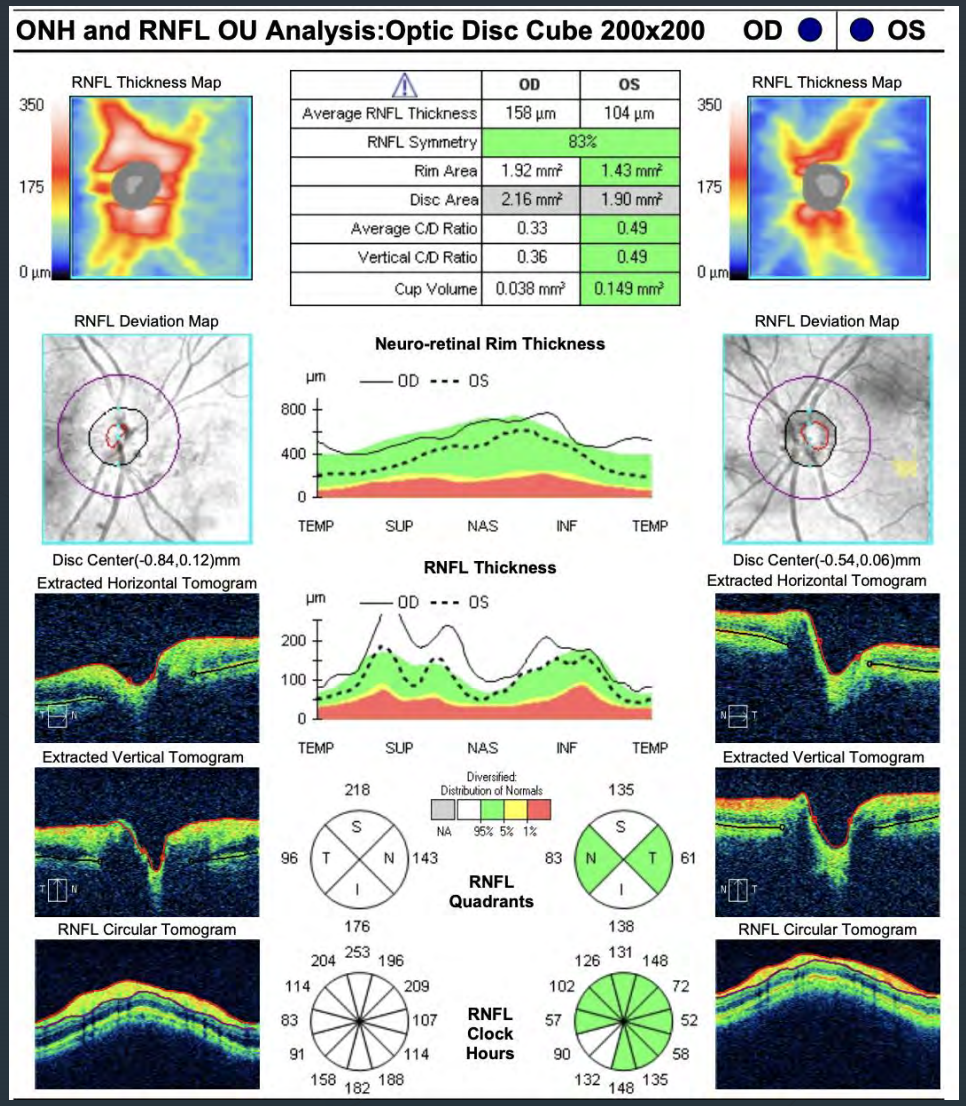
- 09/04- Echocardiogram and carotid ultrasound
- 09/06- “Brain scan”
- 09/08- Woke up with decreased vision OD; new red eye; stable headache
- 09/09- presented to other OD- sent to ER
  - IV steroid was started then given oral
    - Current does 60mg per day (3 pills)
- 09/13- Discharged from hospital with oral steriods

76yo CF

- 09/20- seeing me
- This patient has had everything done…
  - LP, MRI, CBC
    - ALL Normal
      - No inflammation, no MS, no lesions
      - MRI did confirm optic nerve edema, OD
  - No temporal artery biopsy due to normal CBC

76 yo CF

- Improved symptoms
  - 20/30, OD
  - 20/25, OS



76yo CF

- Educated on NAION
- Discussed stopping the steroid
  - No taper necessary due to less than 3 weeks of treatment
- Cell phone # given…seemed classic???

76yo CF

- 2 days later (1.5 days off of steroids)
  - Called my cell Sunday night
  - Headache at night, feeling a little off balance, neck pain
  - Vision is feeling better
- Sent back to ER
  - Continued work-up**….no answers** but started back on steroid just in case
  - Monday decreased vision OS- grey vision
- Referred to Denver for additional specialty consult
  - Temporal artery biopsy a few days later…

76yo CF

- Biopsy
  - Positive for GCA! ☹

What did I learn???

- GCA extra facts…
  - Bloodwork: Hallmark is elevation of ESR & CRP
    - But may be normal in 7-20% of patients with GCA
    - Normal values of ESR are known to increase with age and are higher in women, the ESR should be appropriately adjusted.
  - Tapering steroids: Some symptoms, particularly headaches, may return during this tapering period. This is the point at which many people also develop symptoms of polymyalgia rheumatica.
  - Biopsy: 7% False negative- skipped lesions

Kassaundra Johnston, OD, FAAO

Pine Creek Vision Clinic

Thank you!

WHEN THINGS DON'T LINE UP…A CRASH COURSE

KASSAUNDRA JOHNSTON, OD, FAAO

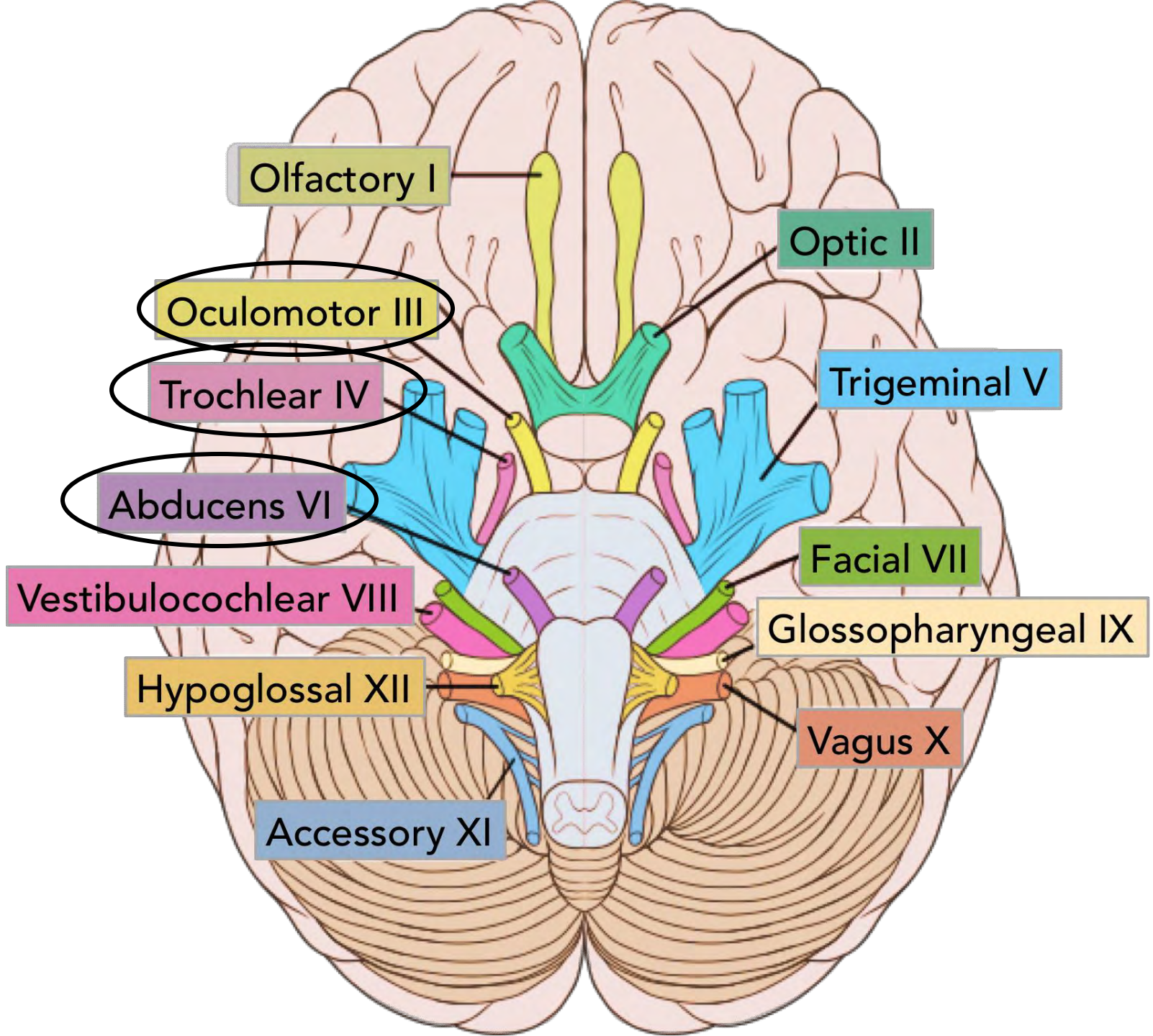
PINE CREEK VISION CLINIC

NOTHING TO DISCLOSE

TOPICS INCLUDED

- Cranial Nerves III, IV, VI
- Double vision
- Testing options
- Treatment options
- Neurological associations

BASICS OF CRANIAL NERVES III, IV, VI

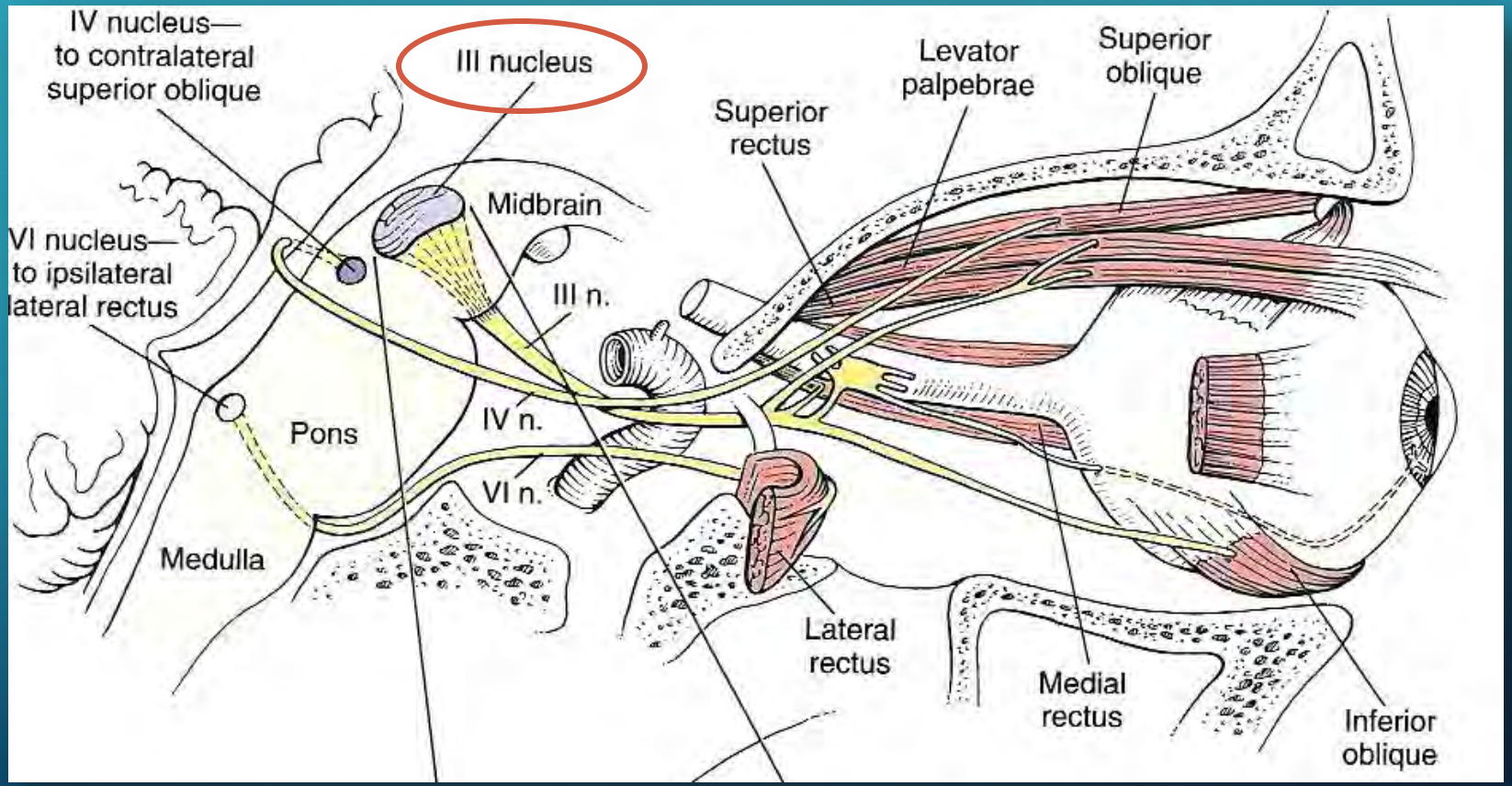


CN III- OCULOMOTOR NERVE

- The "Overachiever" nerve

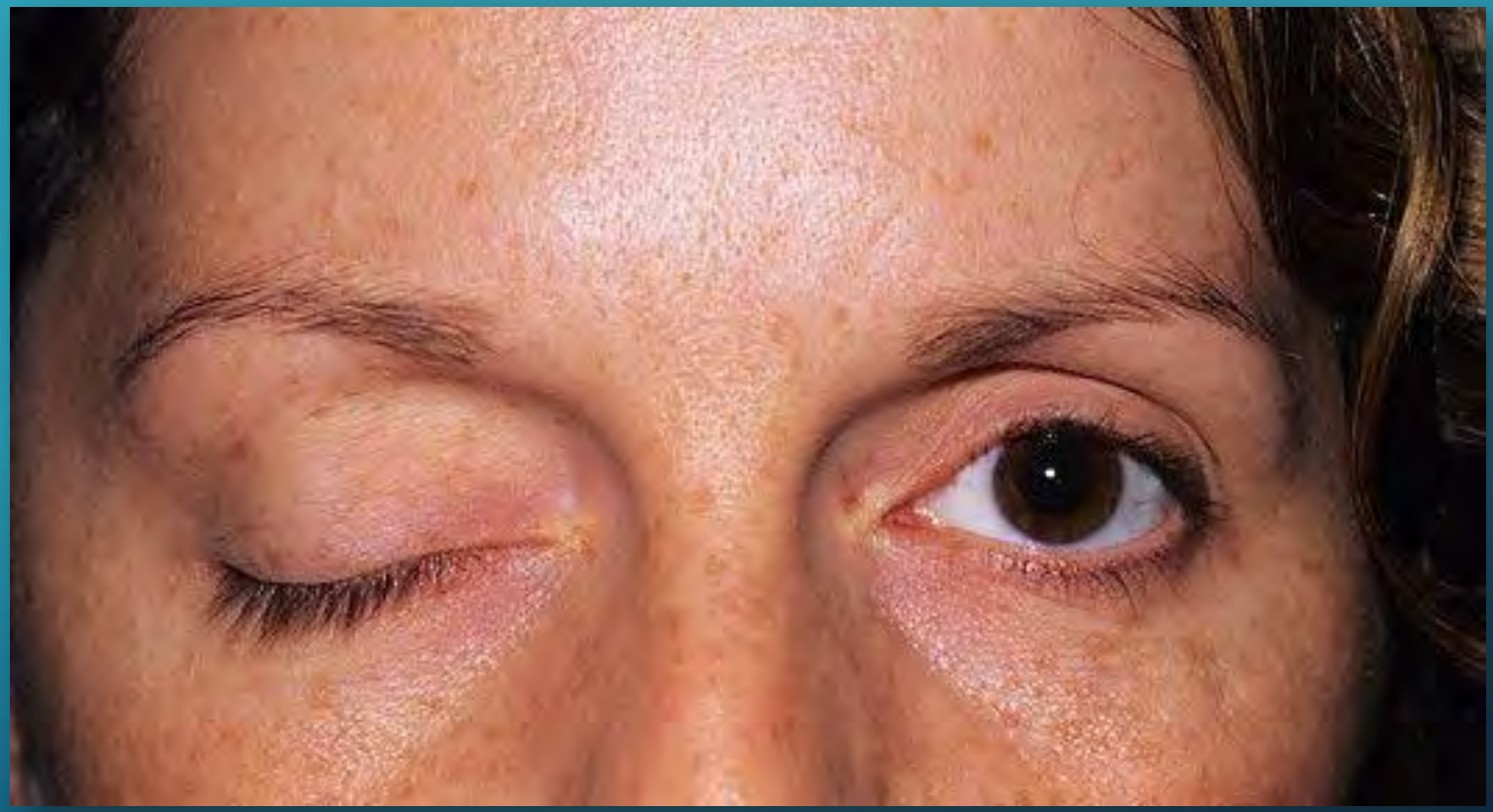
- Innervates:
  - Superior rectus
  - Inferior rectus
  - Medial rectus
  - Inferior oblique
- Levator palpebrae superioris
- Parasympathetic innervation to the sphincter of iris and ciliary body

CN III- ANATOMY

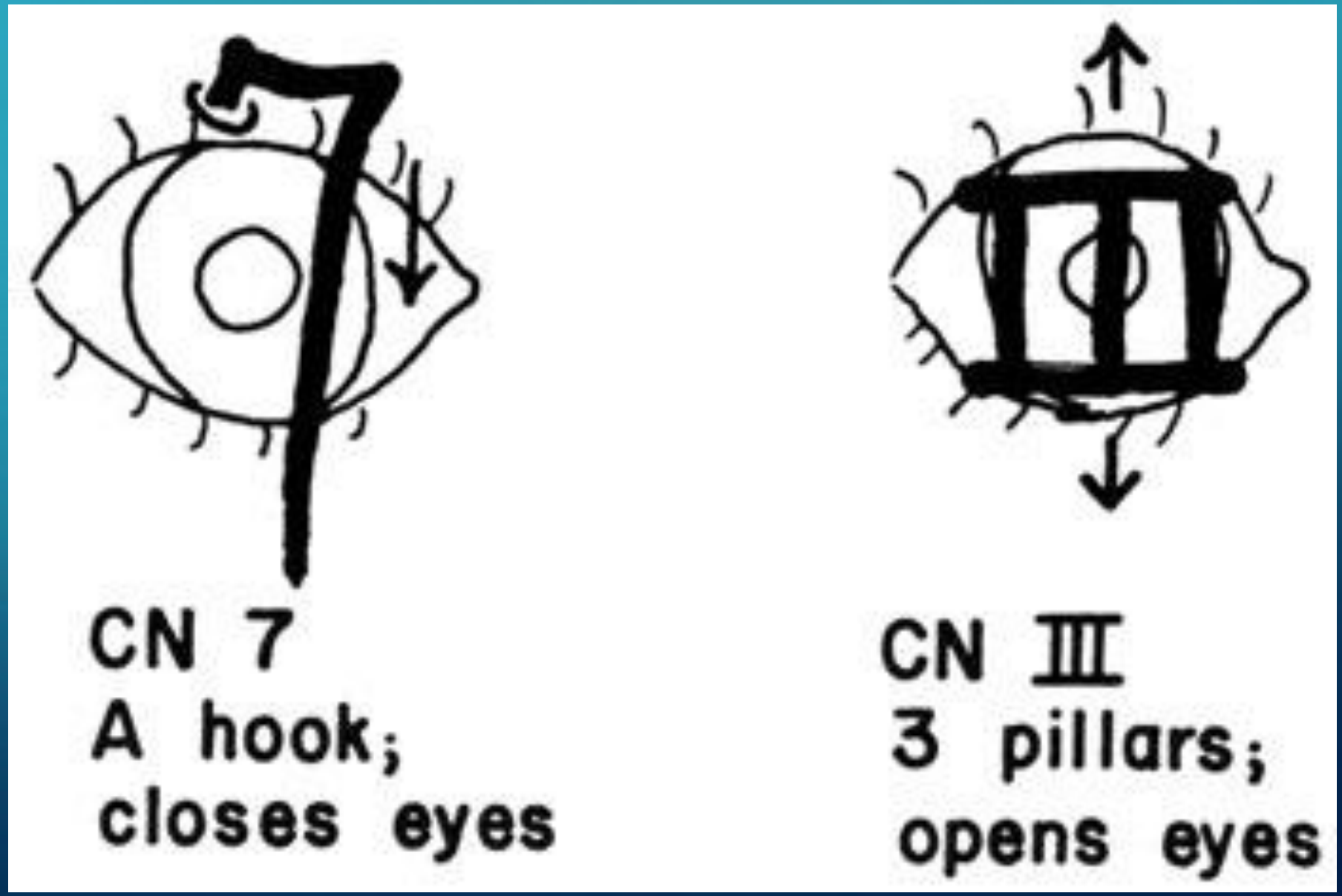


CN III palsy-Presentation

Heaviest eyelid you have ever seen

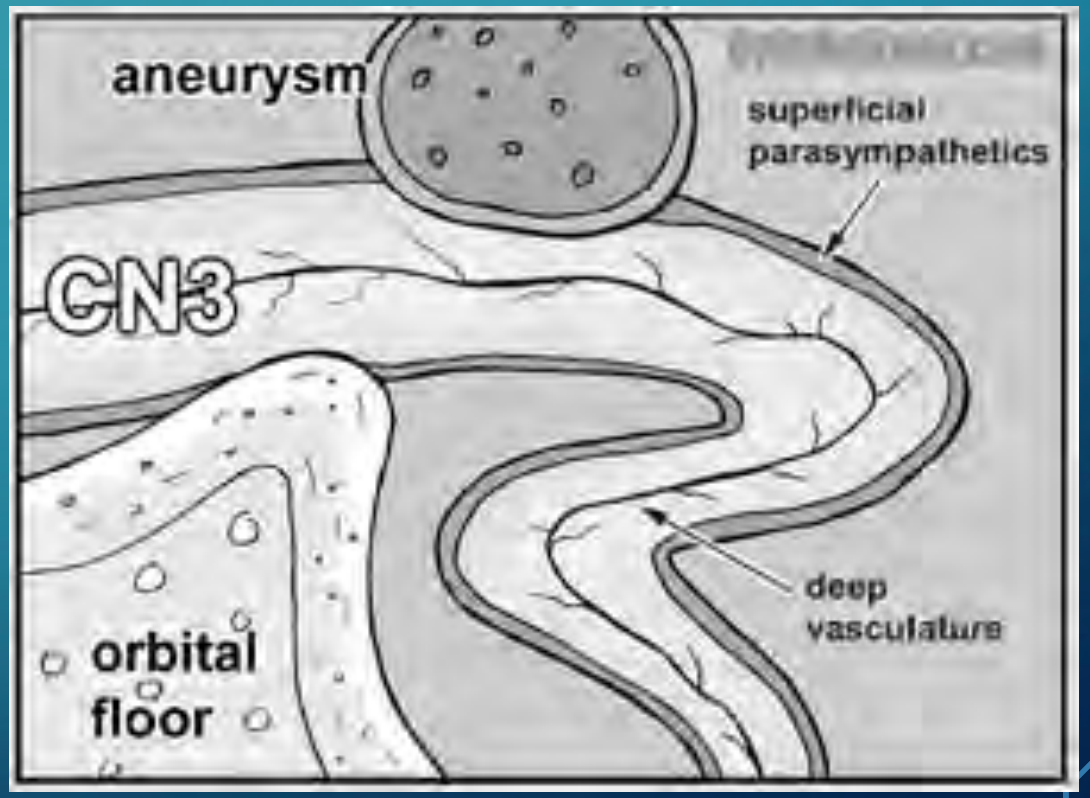


Lid reminder!



CN III- PUPIL PATHWAY…MORE ON NEXT LECTURE ☺

- Pupil fibers of CN III lie superficially and dorsally
  - Vulnerable to compression from above; specifically, PCoA
- Central fibers control the extraocular muscles
  - Affected by microvascular disease



CN IV- TROCHLEAR NERVE

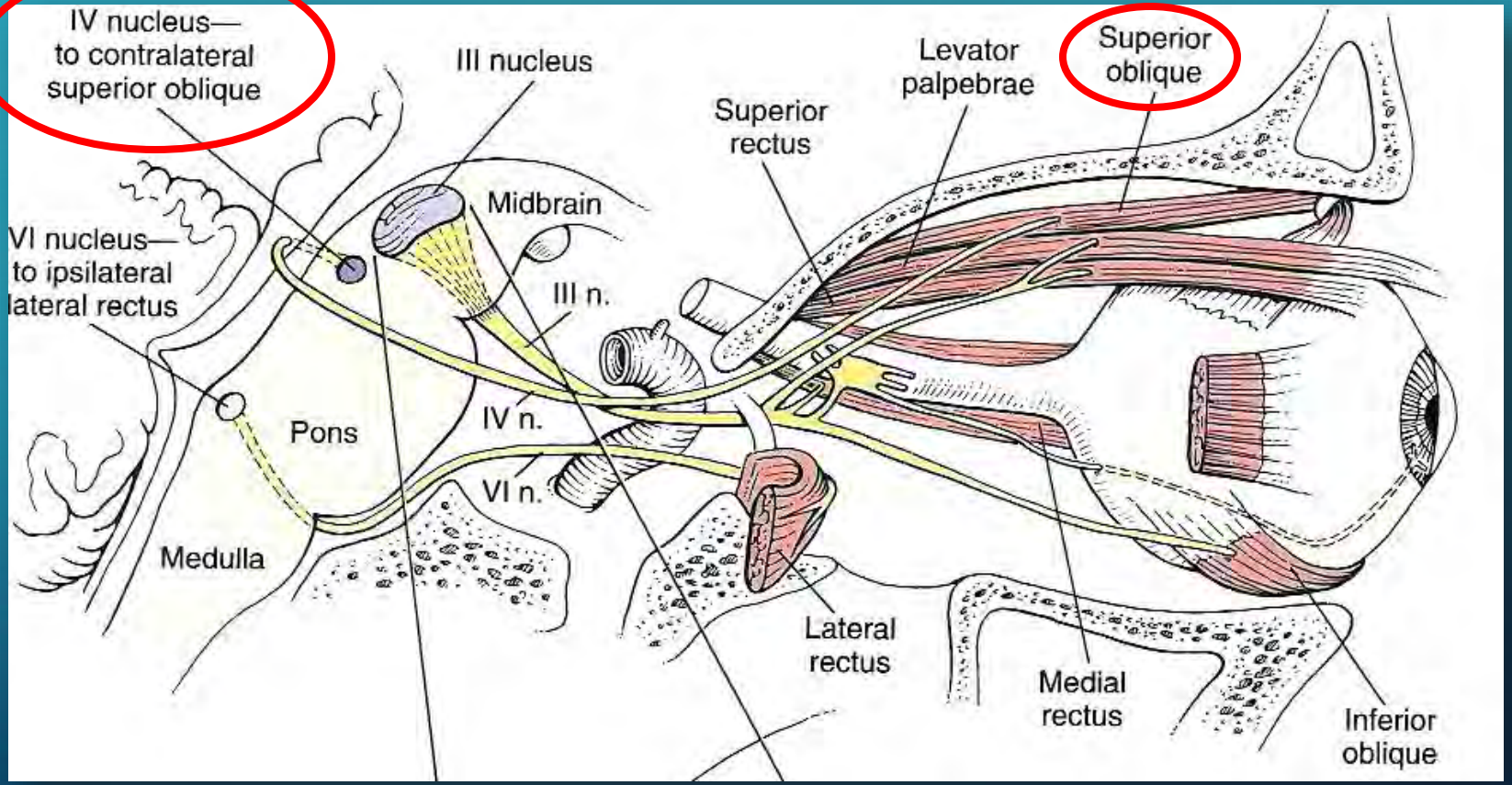
Smallest nerve

Longest course

Controls the *contralateral* **superior oblique**

CN IV- ANATOMY

Due to the length and course it is very susceptible to injury from trauma



CN IV- PALSY PRESENTATION

- Head tilt
  - To opposite shoulder
- Vertical/diagonal diplopia
- Torsion

*Symptoms *increase* in down-gaze and to opposite side*

-Trouble reading

-Walking downstairs

COOL WORD OF THE DAY!

TORTICOLLIS

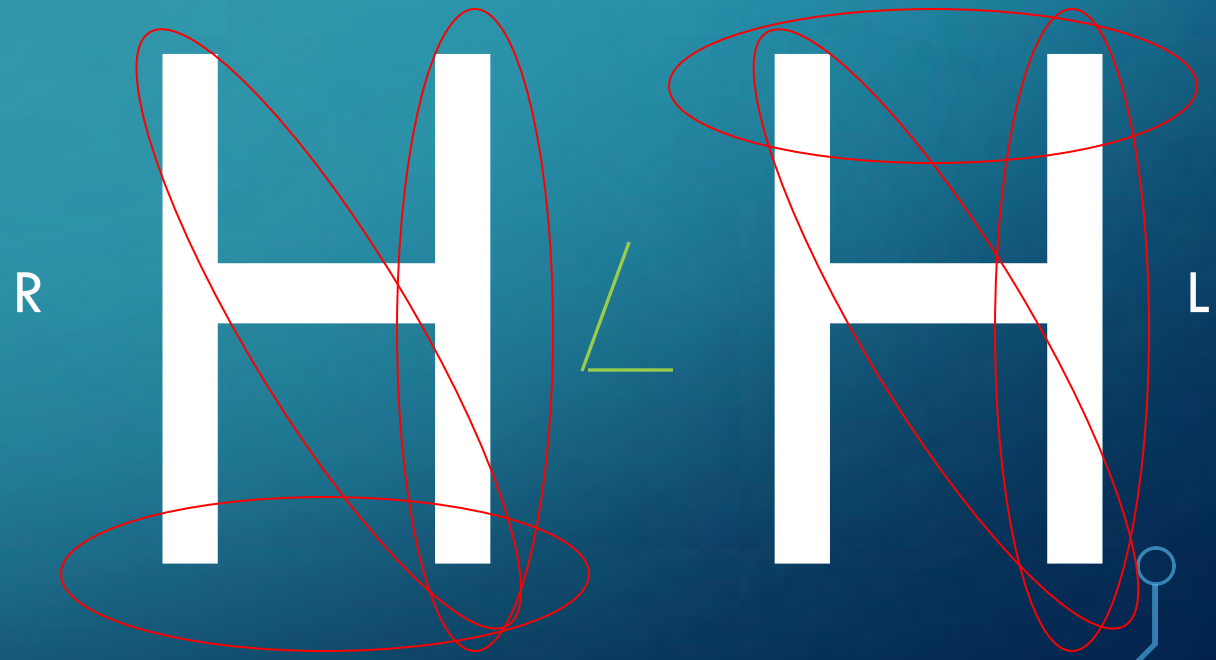
TURNING, TWISTING, OR TILTING OF THE NECK AND HEAD; ABNORMAL HEAD POSTURE

CN IV- PALSY PRESENTATION

- CN IV- Fun FACTS!
  - If it is congenital the patient may have larger than normal vertical ranges
  - Large degrees of torsion (>10° torsion) suggest bilateral weakness
  - You can potentially confirm torsion with BIO or retinal photos

PARK'S 3-STEP

- Test to isolate SO palsy
  - Will not confirm ANY other nerve palsy
- Testing
  - Primary gaze
  - R & L gaze
  - R & L tilt (Bielschowsky Head Tilt Test)



LAST STEP HEAD TILT…WHY DOES IT HAPPEN?

1. When tilting to the side of the SO paresis, intorsion is stimulated.
2. If the SO is weak, the other intorter (SR) tries to help and (with unopposed/weak depression from SO) the action of elevation manifests.
3. This results in the eye with the involved SO paresis to up-shoot and increase vertical deviation

Muscle	Primary	Secondary	Tertiary
Medial Rectus	Adduction	~	~
Lateral Rectus	Abduction	~	~
Inferior Rectus	Depression	Excycloduction	Adduction
Superior Rectus	**Elevation**	**Incycloduction**	**Adduction**
Inferior Oblique	Excycloduction	Elevation	Abduction
Superior Oblique	**Incycloduction**	**Depression**	**Abduction**

CN VI- ABDUCENS NERVE

Controls the *ipsilateral* **lateral rectus**

So what does she have???

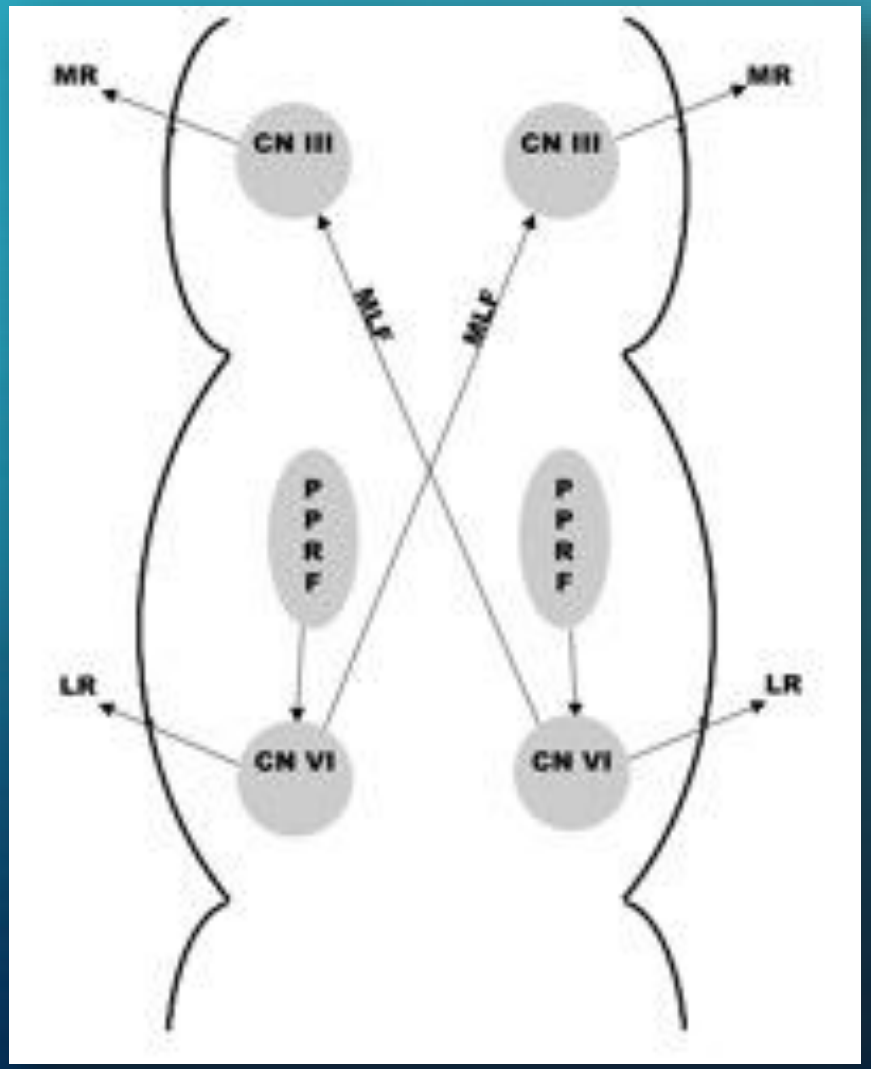
a. Left CN VI palsy
b. Right CN VI palsy
c. Cool trick to show her friends
d. Wait when did we finish talking about CN IV?

CN VI- PATHWAY

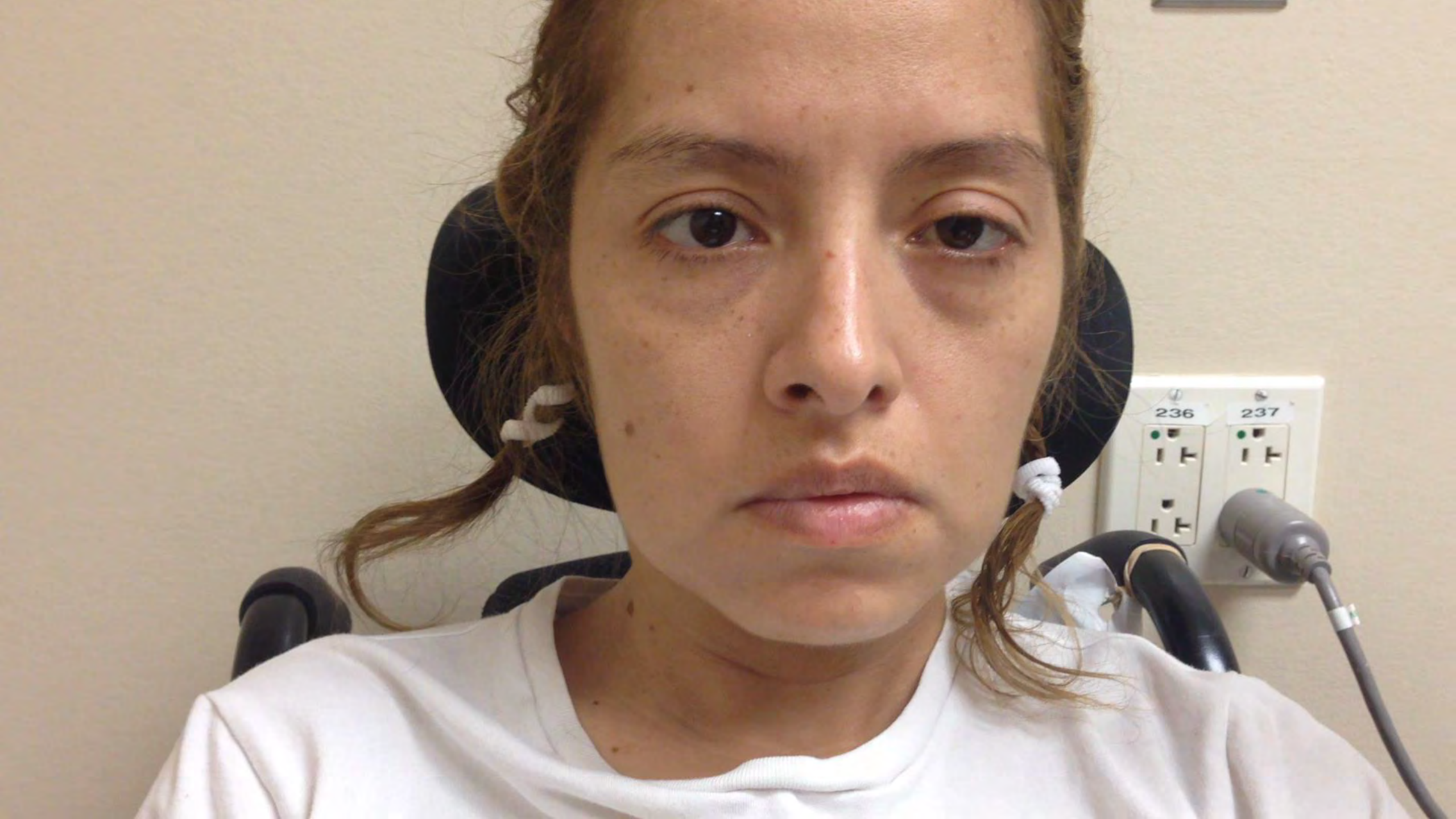
Midbrain

Pons

Medulla



- Really the control center for controlling horizontal eye movements
- Pathways
  - Motor neurons signal *ipsilateral* lateral rectus
  - Interneurons signal *contralateral* medial rectus via MLF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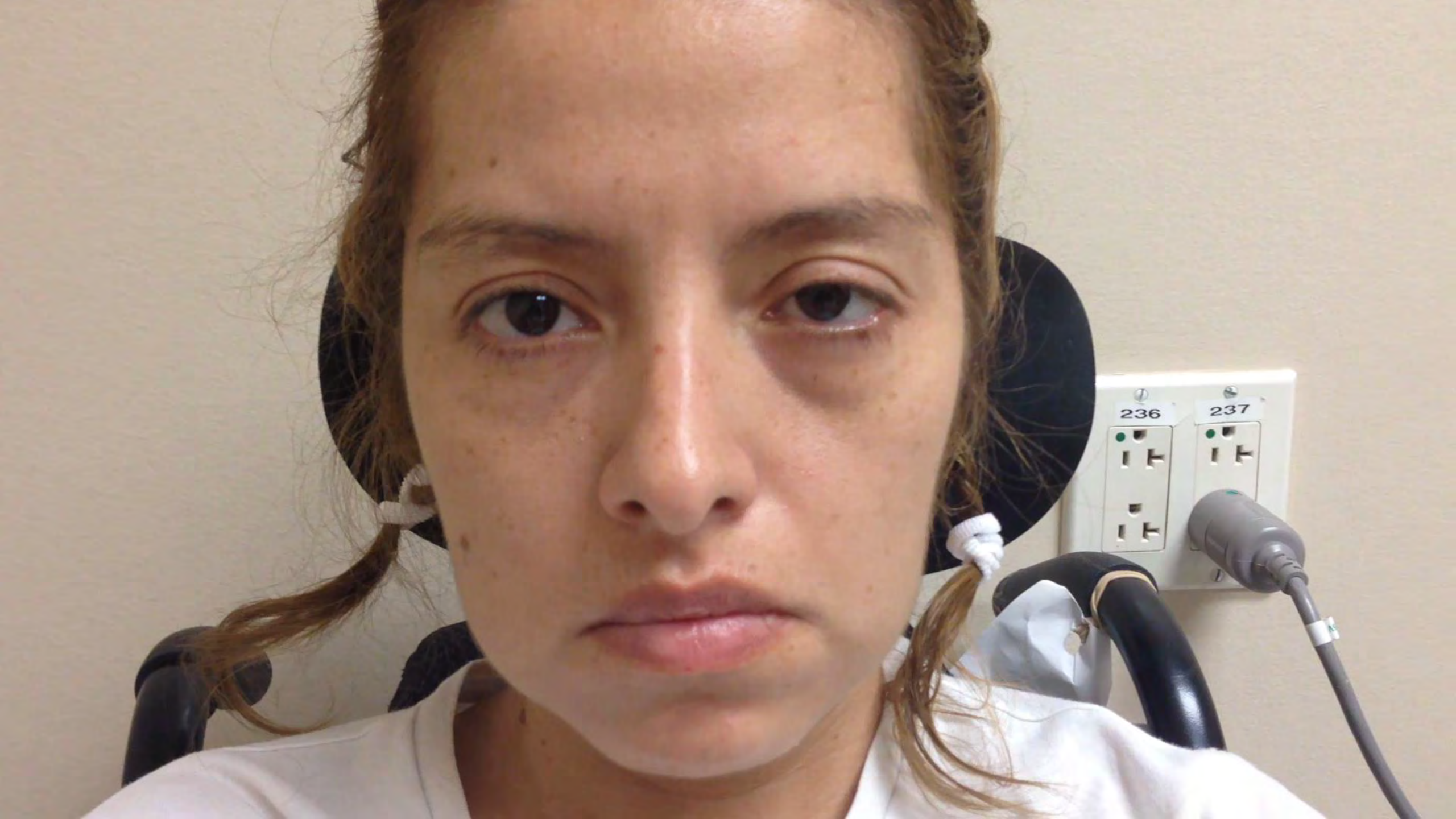
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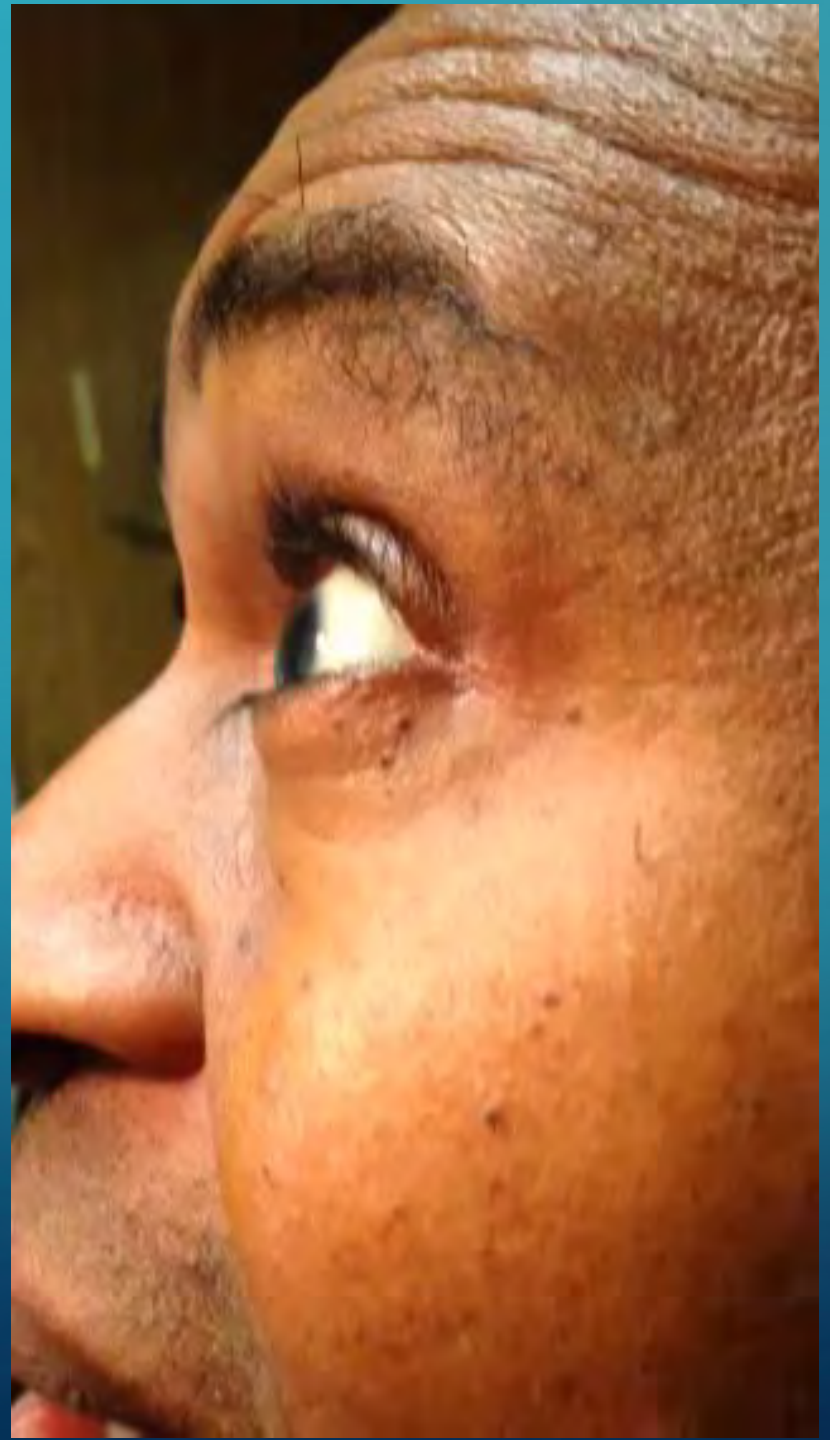
DOUBLE VISION

CONGENITAL

- Brown's syndrome
- Duane's syndrome
- Congenital CN palsies
- Decompensated phoria



What type does he have?

Video credit: Casey Johnston, OD

ACQUIRED….EEEK?

- CN palsy
- Demyelinating disorders
  - MS
- Myasthenia/ocular myopathies
  - MG
  - Thyroid eye disease
  - Idiopathic orbital inflammation
- Causes of acquired strabismus
  - Trauma
  - Tumor
  - Hemorrhage
  - Infarction
  - Inflammation

*Vasculopathic history is important

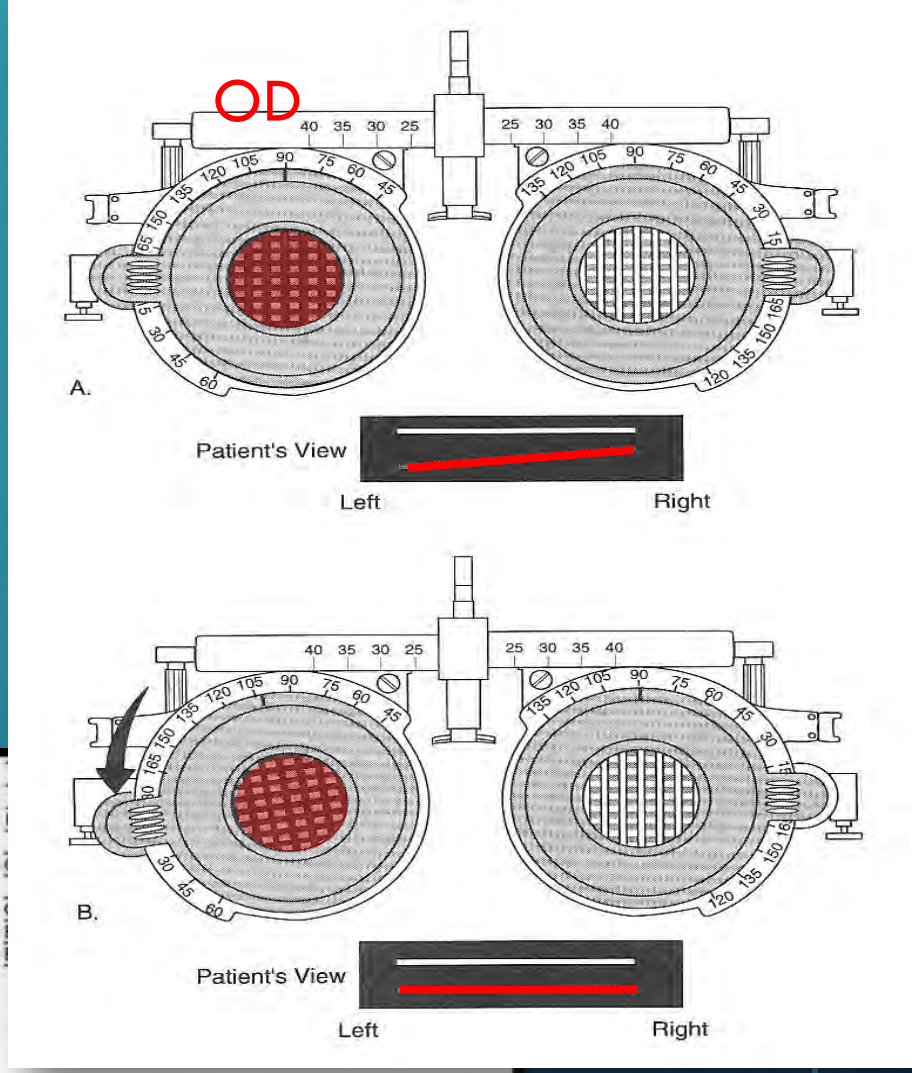
Image:https://icrcat.com/en/eye-conditions/double-vision-diplopia/

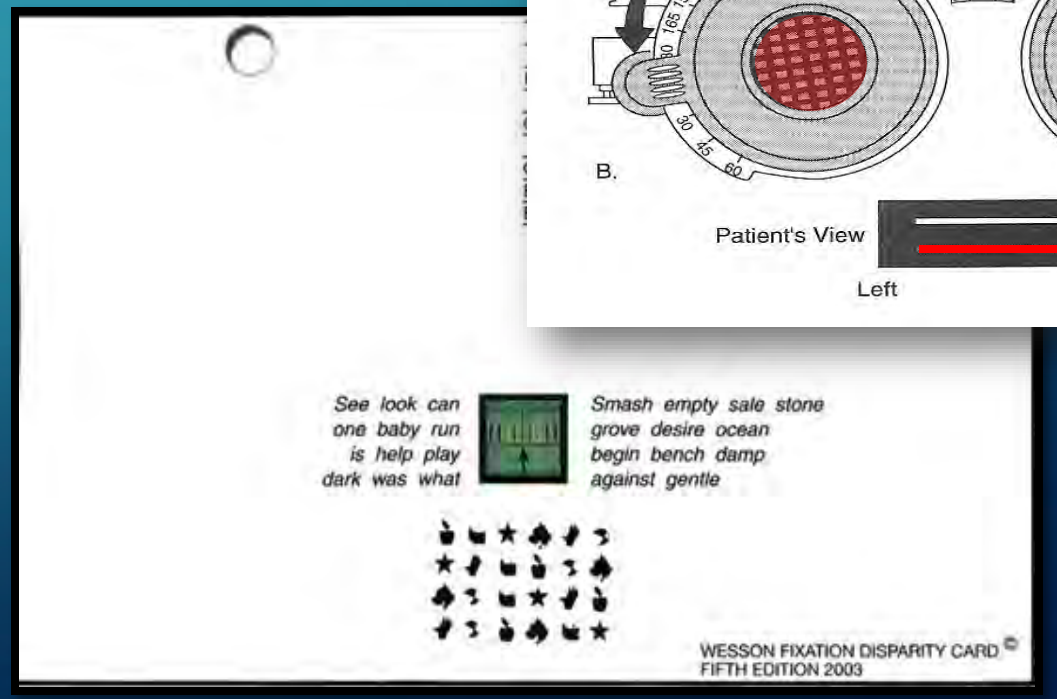
WHAT SHOULD WE ASK?

- Onset
- Direction
- Constant/intermittent
  - Certain gazes or distances
- Other symptoms
- Relieving factors
- Recent trauma

BAG O'TRICKS

- CT for comitancy
- Double Maddox Rod
- Maddox Rod
- Worth 4 dot
- Associated testing
  - (ex: Wesson Card)
- Ranges (horizontal/vertical)
- Stereopsis





COMMON PITFALLS

NOT Trial framing with prism

- All distances

Avoiding comitancy…to hard…too much time

- Maddox Rod/Red Lens

All testing behind the phoropter

- Can be variable

Not looking for a vertical as the real problem

- Wesson card
- Watch lid movement

Not finishing CT

- Need to see reversal

EXTRA TIPS…

If you see a small exoTROPIA…be very concerned about a vertical

Distance eso-deviations: Happy with prism and are often ortho at near…don't be concerned about BO at near…it will just cause XP which patient's can compensate for

PRESCRIBING PRISM: WHAT DO I START WITH?

Guidelines for Vertical…not absolute rules:

- <10pd vertical
  - Recommend giving 2/3 of the vertical amount
- >10pd vertical
  - Recommend giving ½ of the dissociated magnitude
- >1.50pd recommend splitting prism
- Place prism over the paretic eye in acquired cases

GROUND-IN VS. FRESNEL?

GROUND-IN

- Stable/long-standing deviation
- Positive response to trial
- Higher prism → blur from Fresnel
- Lab remake policy?

FRESNEL

- New acquired strabismus/CN palsy
- Variable testing
- Hesitant patient

HOW TO PUT ON A FRESNEL?

- No water necessary
- Inside of the lense
- Over non-dominate (typically) or paretic eye
- Trial before cutting
- Cut to fit just inside the frame

TIP: IN A PINCH…

Specifically Glad Press & seal

WHEN TO REFER FOR SURGERY?

- TIME?
- SIZE?
- DIRECTION?
- GOAL?

WHO WILL BENEFIT FROM VISION THERAPY?

- Decompensation
- Convergence Insufficiency
  - Sorry AC/A is still important
  - Post-concussion
- What about cranial nerve palsies????

ACQUIRED CASES FOLLOW-UP

- Every 6-8 weeks
- Reconsider treatment options
- Check alignment and EOMS

MYASTHENIA GRAVIS

CLINICAL APPROACH

MYASTHENIA GRAVIS & DOUBLE VISION

- *Ptosis and diplopia* are the initial complaints in 75% of myasthenic patients, eventually developing in at least 90% of all myasthenic patients.
- About 30%–40% of patients will remain ocular myasthenics, and 50%–70% progress to generalized myasthenia gravis (MG), typically within the first 2 years of presentation.
- Classic symptoms: variable double vision and ptosis

IN OFFICE ASSESSMENT OF MG/OM

Cogan's Lid twitch-sign

Asymmetric ptosis…opposite retraction?

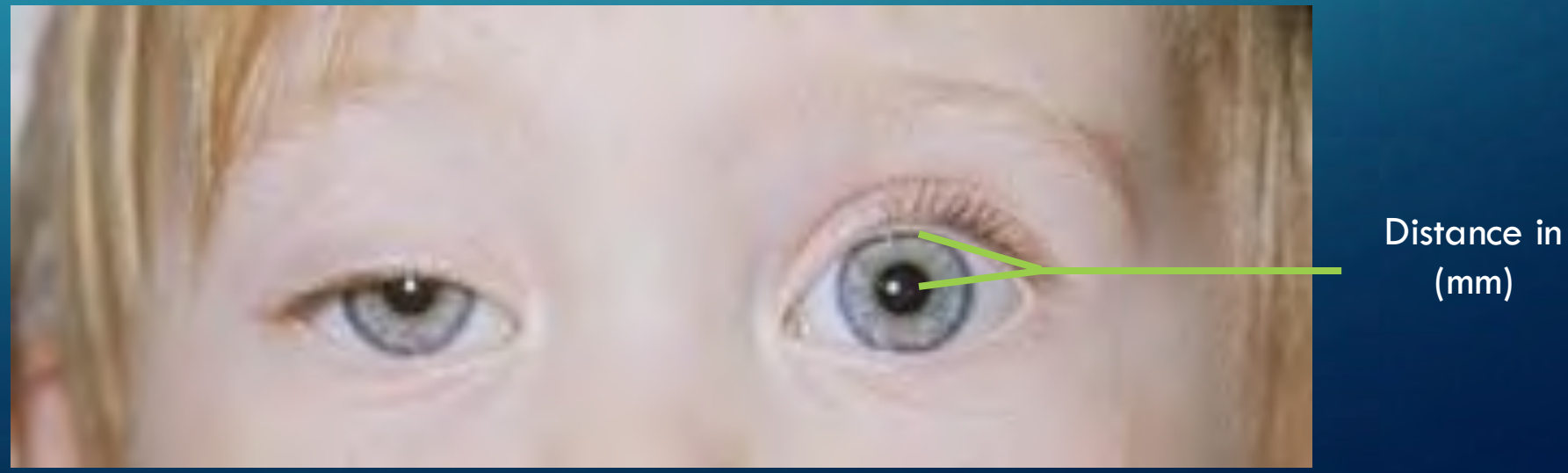
Orbicularis oculi weakness

Ice pack/sleep/rest tests

Refer out: Infusion of IV edrophonium chloride (Tensilon), Repetitive nerve stimulation (RNS)

ICE PACK TEST
(MY FAVE)

- Ice pack placed on closed eyes for 2-5 minutes
  - Measure MRD before and after
- Look for improvement of ptosis
  - 2mm improvement that lasts 1 minute




TED!!!

THYROID EYE DISEASE (TED) ALSO KNOWN AS…

Graves' Orbitopathy

Dysthyroid Ophthalmopathy

Dysthyroid Restrictive Ophthalmopathy

Thyroid-related orbitopathy (TRO)

WHO GETS TED?

MOST patients with TED have biochemical evidence of hyperthyroidism with the most common cause being Graves' disease.

BUT, TED may occur in patients who have hypothyroidism (most commonly Hashimoto's thyroiditis) or normal thyroid function.

GRAVE'S DISEASE

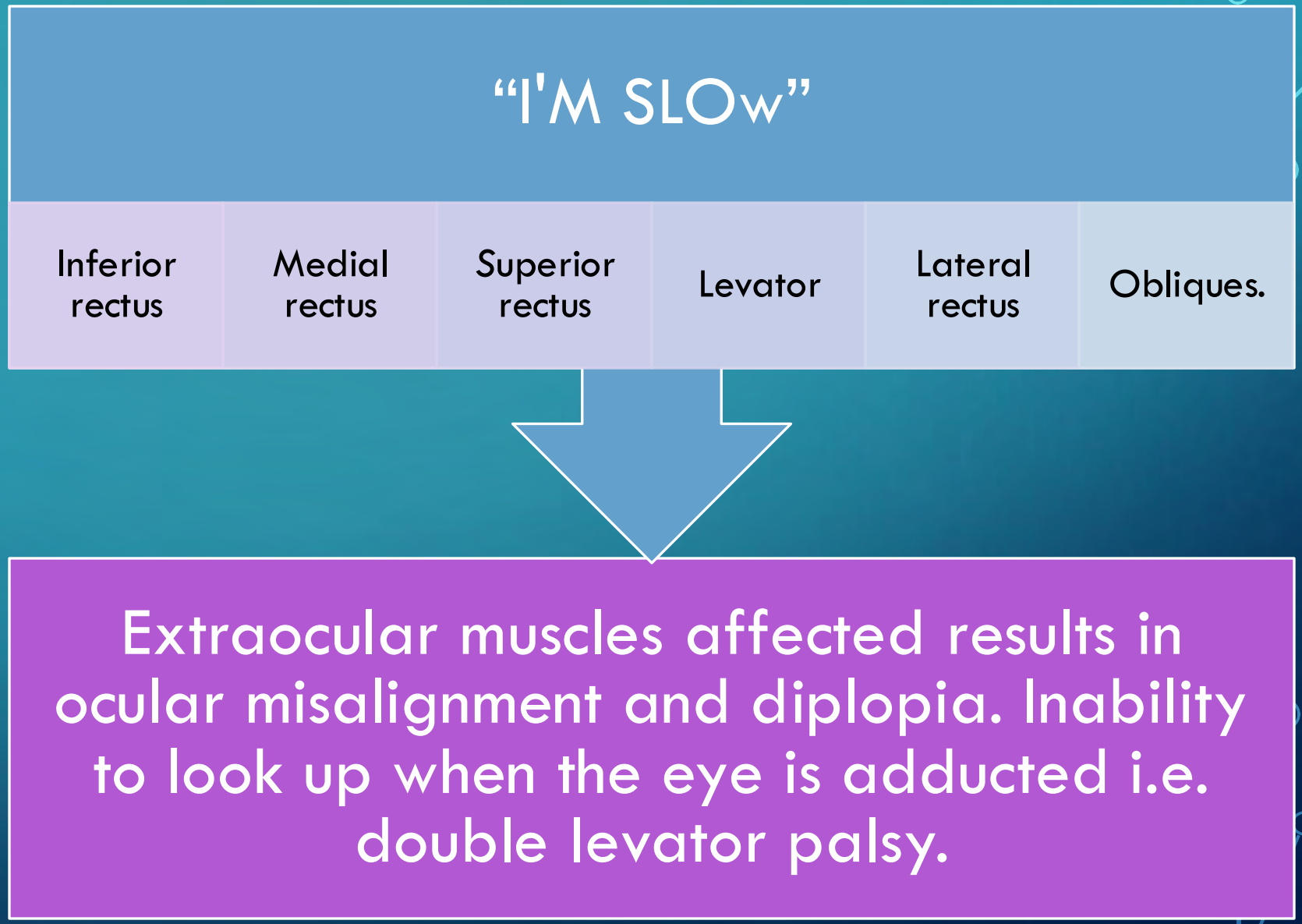
Graves' disease is an immune system disorder that results in the overproduction of thyroid hormones (hyperthyroidism).

About 30% of people with Graves' disease can develop TED (Graves' orbitopathy)

CLASSIFICATION OF TED…MOST REMEMBERED

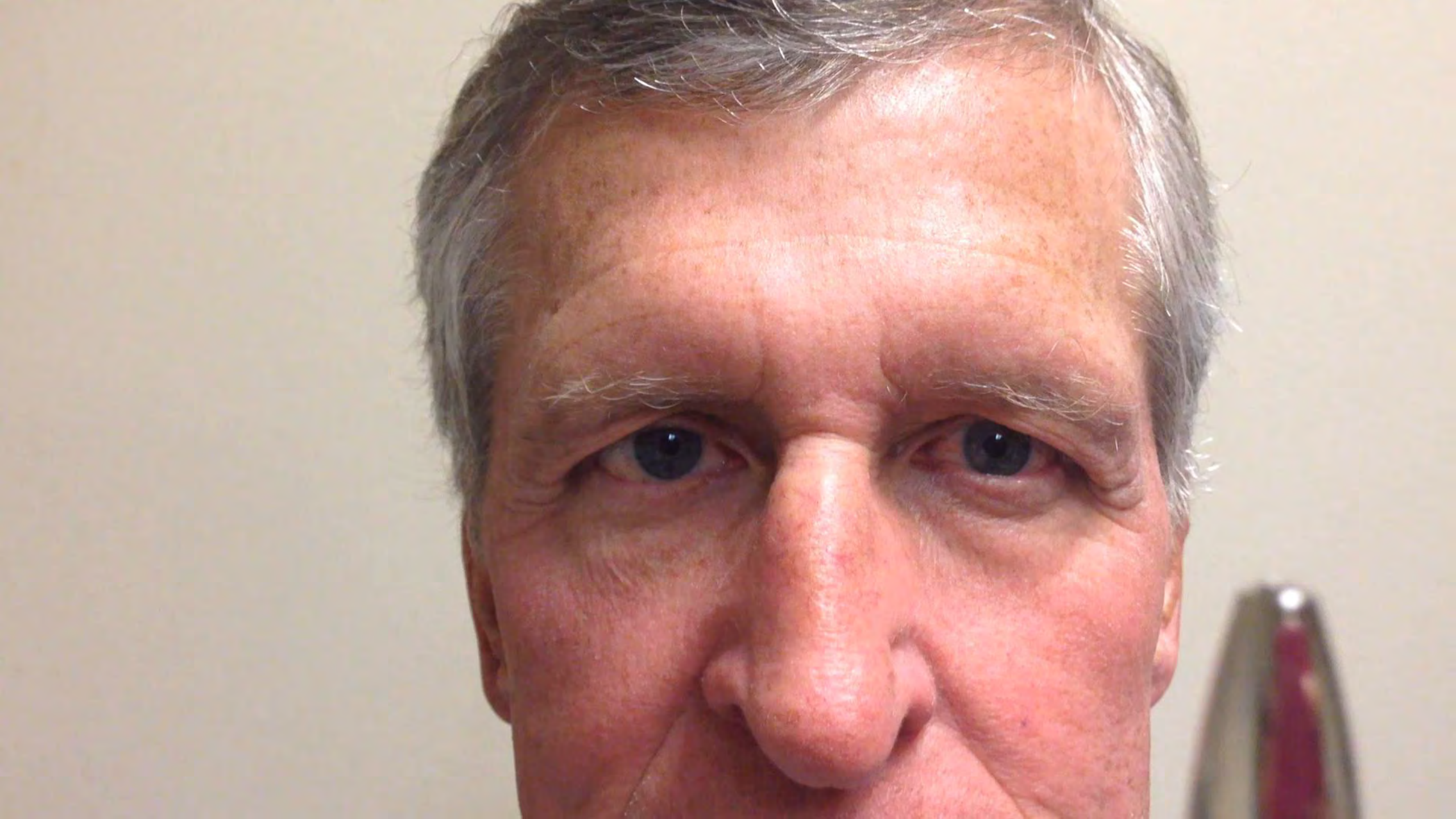
- NO SPECS (1969)
  - No signs and symptoms
  - Only signs
  - Soft tissue involvement
  - Proptosis
  - EOM involvement
  - Corneal involvement
  - Sight Loss
- Problem…
  - It does not adequately identify patients in the active phase of disease only severity

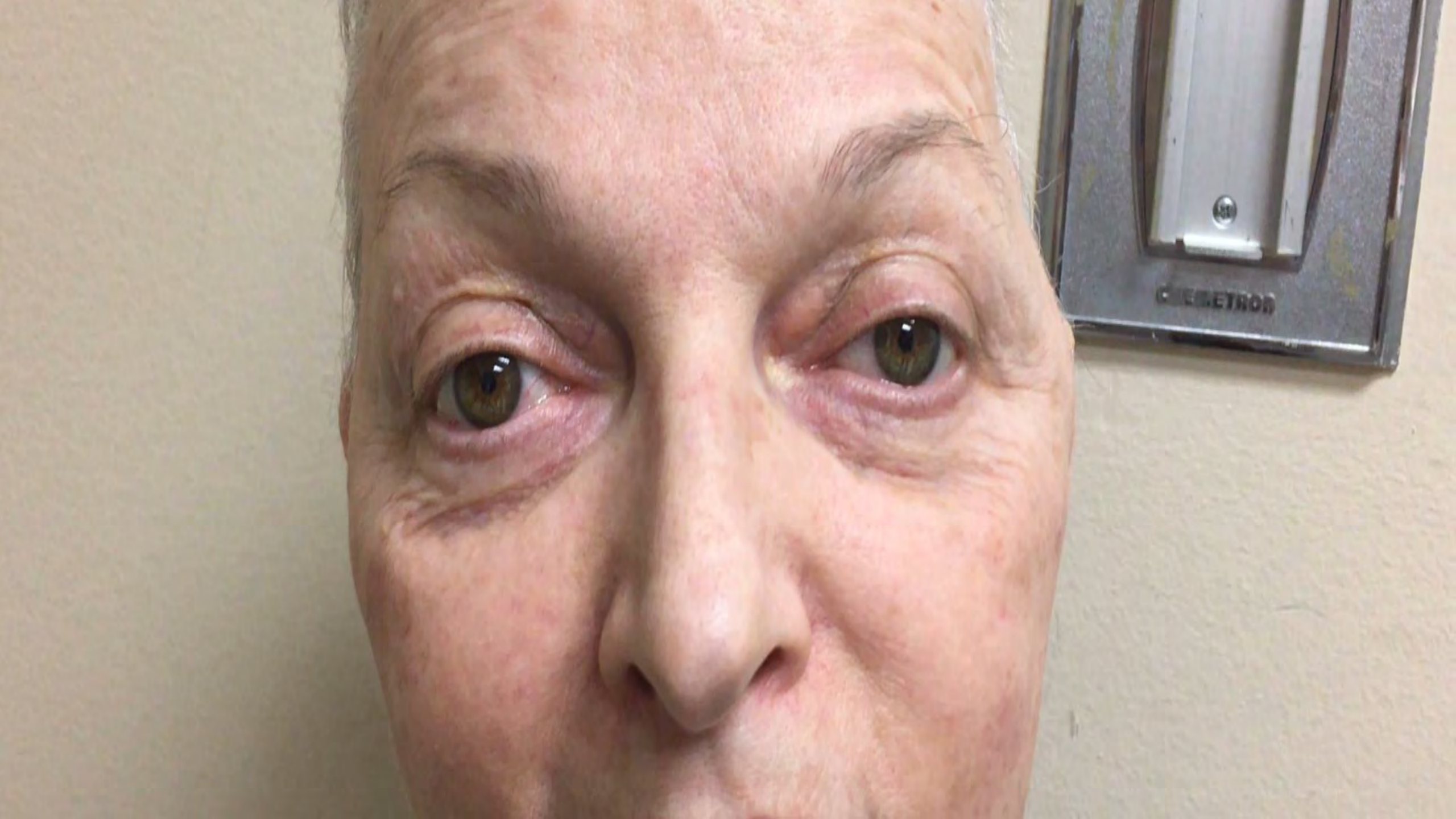
TED: EOM INVOLVEMENT



FUN EOM VIDEOS!

COMPLEX EOMS



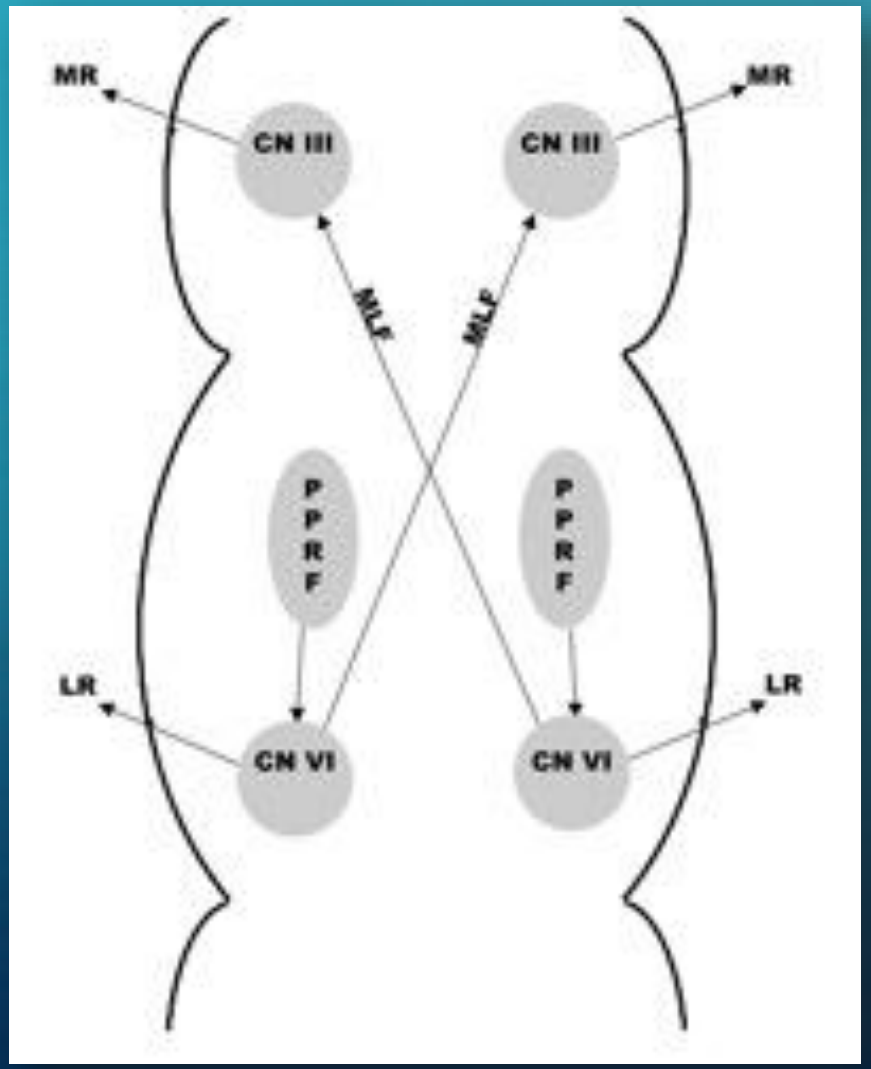


CN VI- PATHWAY

Midbrain

Pons

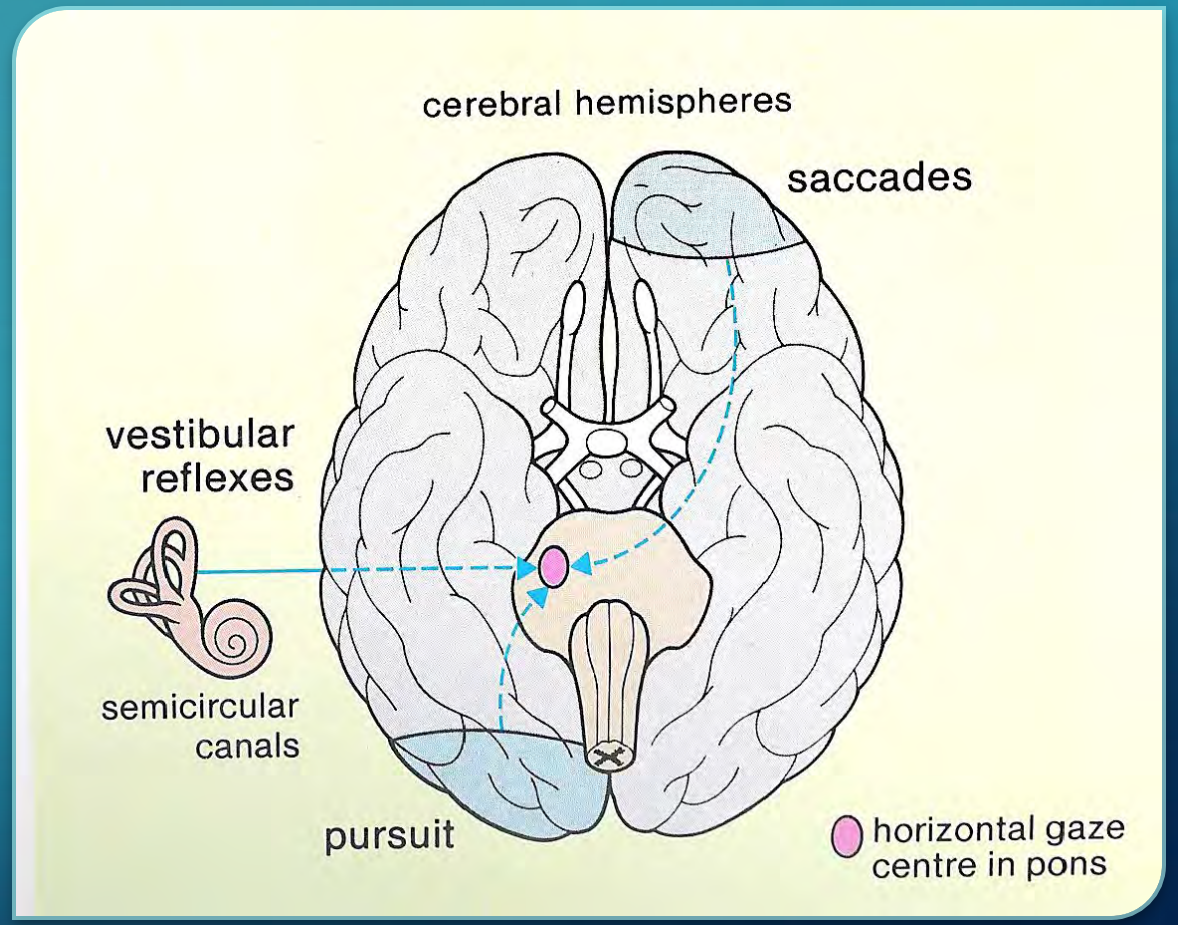
Medulla



- Really the control center for controlling horizontal eye movements
- Pathways
  - Motor neurons signal *ipsilateral* lateral rectus
  - Interneurons signal *contralateral* medial rectus via MLF

VESTIBULAR COMPLAINTS…

- Rule out the following:
  - Vertical phoria
  - Esodeviation
  - Unbalanced Rx
  - Depth perception issues
- Co-manage with a vestibular ENT



THANK YOU!

KASSAUNDRA JOHNSTON, OD, FAAO

PINE CREEK VISION CLINIC

Opioids: Ongoing Challenges in Pain Management

David Dinh, OD FAAO
University of Houston College of Optometry

1

No Financial Disclosures

University of Houston College of Optometry – CE Team

- Amanda Johnson
- Christian Loayza
- Carlos Cole
- Lorellye Graham

2

Disclosure of Relevant Financial Relationships for all Individuals in a Position to Control the Content of this CE Activity

Instructor	Name of Commercial Interest	Nature of Relationship
David Dinh, OD FAAO	Fortrea	Consultant Clinical Investigator
	Essilor	Honorarium

3

Today's Goals

- **History** — What are opioids? What's the big deal?
- **Clinical Impact** — How does this influence patient care?
- **Alternative Options** — What other choices in our toolbox?
- **Optometric Goals** — Applying concepts to everyday scenarios

4

Opioids Through the Years

- Naturally occurring
  - *Papaver somniferum* – opium poppy
  - Use dating back to Neolithic era – 5500 BC
  - Opium → morphine → codeine
- Semi-synthetic
  - Morphine-derived substances
  - Heroin, oxycodone, hydrocodone, buprenorphine
- Synthetic – opioid-like effect
  - Non-morphine opioid substances
  - Methadone, fentanyl

5

Opioids - Who? What? Why?

- *"analgesic to treat pain severe enough to require daily, around-the-clock, long-term opioid treatment and for which alternative treatment options are inadequate"*
- Common opioids:
  - Morphine
  - Heroin
  - Fentanyl
  - Hydrocodone
  - Hydromorphone (Dilaudid®)
  - Methadone
  - Codeine
  - Oxycodone (Oxycontin®)
  - Percocet® (oxycodone + acetaminophen)

6

Getting to Work

01 **Site of Action**

Requires transport across the blood-brain barrier

02 **Absorption**

High GI permeability → oral administration
- Notable exceptions: fentanyl

03 **Metabolism**

High first-pass effect → clinical heterogeneity
- Site of prodrug conversion to active metabolite
- Can be bypassed to enhance effect avoid first-pass inactivation

7

Warm Reception

- **3 opioid receptors – post-synaptic, analgesic effects**
  - μ (MOR) – most commonly used receptor
  - κ (KOR) – used in conjunction for morphine and oxycodone
  - δ (DOR) – little use amongst most prescribed opioids
- **Nociceptin receptor (NOR)**
  - Similarity to classic receptors in analgesic effects
  - Affinity preference: agonists typically do not react to classical receptors

8

What Hurts?

- **Pain – latest IASP updated definition**
  - *An unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage*
- **Some notable features of pain**
  - Biological, psychological, and social influences
  - Life experiences help form our basis of pain
  - Pain does not need to be verbalized
  - A report of pain should be respected
  - Pain and nociception are mutually exclusive
  - Pain have adverse effects on function and social and psychological well-being.

9

Biopsychosocial Model

10

Timing is Everything

- **Acute → <3 months**
  - May be recurrent because of chronic disease
  - Respond well to opioids → USE WITH CAUTION!
- **Chronic → >3 months**
  - Often begin as unresolved acute pain
  - Multimodal approach
  - Identification of risk factors for substance use disorders
  - Non-opioid options

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On the Origin of Pain

- **Nociceptive**
  - Secondary to actual or potential tissue damage
  - Typically acute
  - Examples: stubbed your toe, burned your hand on the stove
- **Neuropathic**
  - Dysfunction within the nervous system
  - Acute or chronic
  - Examples: postherpetic neuralgia, diabetic peripheral neuropathy

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Why Does It Matter?

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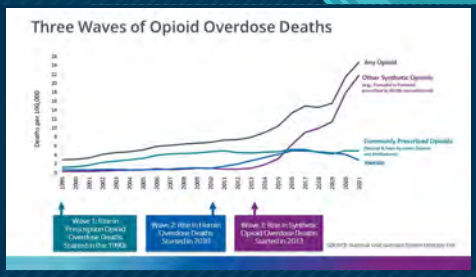
The Opioid Epidemic



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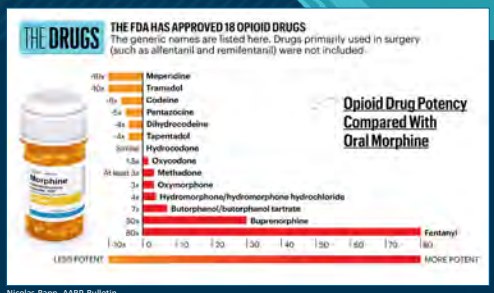

Nicolas Rapp, AARP Bulletin

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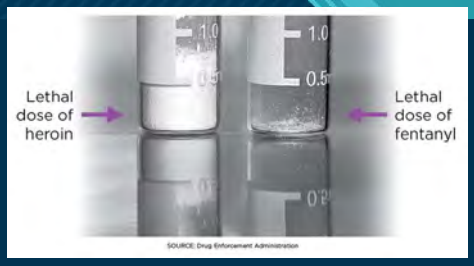

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Attempts at Control

Aggregate Production Quota for Opioids (grams)			
	2016	2024	Overall
Fentanyl	2,300,000	731,360	-68%
Hydrocodone (for sale)	86,000,000	27,143,545	-68%
Hydromorphone	7,000,000	1,951,801	-72%
Morphine (for sale)	62,500,000	20,805,957	-67%
Oxycodone (for sale)	139,150,000	53,658,226	-61%
Oxymorphone (for sale)	6,250,000	464,464	-93%
Overall Decline:	**303,200,000**	**106,069,975**	**-65%**

Source: Established Aggregate Production Quotas for Schedule I and II Controlled Substances and Assessment of Annual Needs for the List I Chemicals Ephedrine, Pseudoephedrine, and Phenylpropanolamine for 2024

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Controlled Substances Act

- **Factors determining schedule classification:**
  - (1) Its actual or relative potential for abuse.
  - (2) Scientific evidence of its pharmacological effect, if known.
  - (3) The state of current scientific knowledge regarding the drug or other substance.
  - (4) Its history and current pattern of abuse.
  - (5) The scope, duration, and significance of abuse.
  - (6) What, if any, risk there is to the public health.
  - (7) Its psychic or physiological dependence liability.
  - (8) Whether the substance is an immediate precursor of a substance already controlled under this subchapter.

Source: Controlled Substances Act Section 201(c), [21 U.S.C. § 811(c)]

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DEA Drug Schedules

Schedule	Potential for Abuse	Examples
I	High Potential for Abuse **NO** medical applications	Heroin, Marijuana, Ecstasy
II	High Potential for Abuse **SOME** medical applications	Hydrocodone, Cocaine, Methadone
III	Moderate-Low Potential for Abuse	<90mg of codeine (e.g. Tylenol III)
IV	Low Potential for Abuse	Tramadol®, Xanax®
V	Lowest Potential for Abuse	Robitussin AC®

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Is it an eyecare problem?

Table 2. Opioid Prescribing Patterns Categorized by Number of Prescriptions Written[a]

Prescriptions Written Annually, No.	Ophthalmologists, No. (%) 2013 (n = 19 615)	2014 (n = 19 587)	2015 (n = 19 712)
0	8718 (44)	9004 (46)	9599 (49)
1-10	8556 (44)	8403 (43)	8032 (41)
11-100	2150 (11)	1977 (10)	1896 (9)
>100	191 (1)	203 (1)	185 (1)

JAMA Ophthalmology. 2017;135(11):1216-1220

20

Can we do better?

Table 3. Opioids Prescribed After Corneal Surgery in Patients Receiving a Prescription

	Opioid Use Cohort							
	Before Guideline Changes (n = 38)			After Guideline Changes (n = 31)				
Tablet Variable	No. of Tablets	Mean (SD)	Median (Range)	No. of Tablets	Mean (SD)	Median (Range)	Difference, Mean (95% CI)	P Value[a]
Prescribed	34	18.8 (4.2)	20 (3-30)	31	6.6 (3.1)	5 (1-15)	12.2 (10.4-14.0)	<.001
Used	29	8.1 (7.0)	6 (0-30)	28	4.0 (3.2)	4 (0-14)	4.3 (1.4-7.2)	.005
Remaining	29	10.3 (6.9)	12 (0-20)	28	2.5 (2.7)	2.5 (0-10)	7.5 (4.7-10.2)	<.001

[a] Calculated using the 2-sample *t* test.

JAMA Ophthalmology. 2019 Oct 31;138(1):76-80

Key Takeaways

- Fewer prescribed opioids resulted in fewer leftover pills
- Fewer prescribed pills maintained adequate pain management

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What Can I Do?

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Best Prescribing Practices

- **2016 CDC Guideline for Prescribing Opioids for Chronic Pain**
  - Originally intended for PCPs
- **Lessons Learned**
  - Rapid reduction in opioid prescribing – Good or Bad?
  - Misapplication by boards, insurances, pharmacies, etc.
  - Loss of nuance in clinical decision making

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Best Prescribing Practices

- **2022 CDC Guideline for Prescribing Opioids for Pain**
- **4 Categories of Updated Recommendations**
  - Should I Start an Opioid?
  - Which Opioid to Use?
  - How Long Should I Use Opioids?
  - How to Assess Risks with Opioid Use?

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I'm Ready to Prescribe. What Next?

- **Internal Controls**
  - Frequent Follow-ups
    - Evaluate therapeutic effect
    - Stabilize and titrate dosing
    - Lab work and counseling to evaluate for misuse
  - Limited dosing quantities and pill counts
    - Consideration for origin of pain, expected duration
  - E-prescribing

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I'm Ready to Prescribe. What Next?

- **Internal Controls**
  - Patient Education
    - Set realistic expectations
    - Situations for discontinuation → Patient Contracts
      - Risks outweigh benefits
      - Evidence of misuse → Urine Drug Screening
  - DEA Drug Disposal Sites
  - Provider Education
    - Education at all levels

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I'm Ready to Prescribe. What Next?

- **External Controls**
  - Abuse-deterrent Formulations (ADF)
    - Abuse Deterrence vs. Access
  - DEA Drug Scheduling
    - 2014 Hydrocodone rescheduling
  - Prescription Drug Monitoring Program

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Prescription Drug Monitoring Program

- **Goals**
  - Prevent doctor shopping
  - Enhance tracking among different state/federal organizations
  - Allow for insight on prescribing habits to identify outliers
- **Key Features**
  - Pharmacy updates after filling controlled substance
  - Prescriber access to patient filled drug history

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Ok, I'm REALLY Ready to Prescribe

- **Are you staying in your lane?**
  - Multimodal approach to chronic pain management
    - Did you perform a comprehensive systemic, family, and social history?
    - Do you have the specialized training to best address the root cause of pain?

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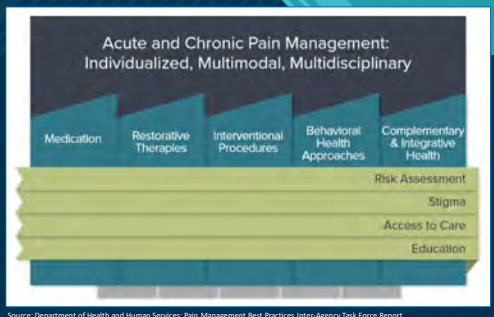

Source: Department of Health and Human Services: Pain Management Best Practices Inter-Agency Task Force Report

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…But Should I?

- **Absolute Contraindications**
  - Current addition to opiates
  - Known history of opiate addiction → technically relative…
- **Relative Contraindications**
  - Pulmonary disease or dysfunction
  - Renal impairment
  - Personal OR family history of substance use disorders (non-opiate related)
  - Allergy to opiates
  - Head injuries

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"Houston, We Have a Problem"

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Houston, we have a problem

- **Drug-drug interaction**
  - Respiratory depression → reversible
  - Cardiac rhythm anomalies: QT prolongation → torsade des pointes (Tdp)
- **Liver metabolism → CYP450, CYP3A**
  - Enhanced by CYP450 inhibitors: alcohol
  - Enhanced by CYP3A4 inhibitors: fluoxetine, clarithromycin, fluconazole, and valproate
  - Genetic mutations preventing expression of liver enzymes used for metabolism

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Expecting the Unexpected

- **Short-term Side Effects**
  - sedation, dizziness, nausea, vomiting, constipation
- **Long-term Side Effects**
  - physical dependence, tolerance, and respiratory depression

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Signs of an Opiate Overdose

- **Things to look for:**
  - Altered/depressed consciousness
  - Difficulties breathing
  - Cold/clammy/cyanotic skin
  - Pupil abnormalities
    - Constricted → Acute
    - Dilated → Anoxic brain injury
- **Opiates account for about half of all suicides**

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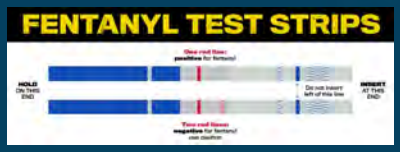
CTRL+Z – The Great Undo Command

- **Naloxone (Narcan®)**
  - Opioid receptor antagonist → requires active systemic opioids
  - Reverses opioid effects and acute respiratory depression → 2-5 minutes latency of action
  - Available as auto-injector or nasal spray
  - All states allow for anyone to purchase from pharmacy and without a prescription in most states

36

An Ounce of Prevention

- **Reducing drug-harm outcomes**
  - Fentanyl test strips
  - Fentanyl "vaccine"



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Choosing a Different Path

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Is There Another Way?

- **Physical manipulation/Manual Therapy**
  - Chiropractic manipulation – high velocity, low amplitude
  - Massage – tissue extensions
  - Exercise – blood flow and endorphins
  - Surgery – positional correction
  - Acupuncture/Acupressure – acupoint activation → endorphins

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And Does It Work?

- **Manual Manipulation → Neurophysiological results**
  - Interaction of inflammatory mediators and nocireceptors
    - Decrease in cytokine concentration
    - Increase in serotonin and endorphins
  - Decreased cortical activity in pain centers of the brain

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Is There Another Way?

- **Stress-reduction**
  - Meditation → mindfulness
  - Cognitive-Based Therapy
  - Yoga

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And Does It Work?

- **Non-invasive, sustained results compared to standard therapies**
  - Mindfulness-Based Stress Reduction vs. lower back pain
    - Improved Quality of Life
    - Lower pain scores
    - Sustained results → three years out
- **Placebo Effect?**

Ann N Y. *Acad Sci.* 2016 June; 1373(1): 114–127.

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Pain in Optometry

- **Concepts to Consider**
  - Sources of eye pain
    - Location
    - Mechanical vs. Inflammation
  - Level of pain management required
  - Duration of disease/condition
  - Discuss disposal
  - Stay vigilant!

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Pain in Optometry

- **Common non-opiate options**
  - Medications
    - Corticosteroids
    - Topical/Oral NSAIDs
    - Immunomodulators
    - Acetominophen/Ibuprofen
  - Mechanical coverage
    - Bandage Contact Lens
    - Amniotic Membranes

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Pain in Optometry

- **Common controlled substance options**
  - Hydrocodone → Schedule II
  - Codeine-containing medication
    - Tylenol #3 → Schedule III
  - Tramadol → Schedule IV
- **Requires DEA number and state pharmacy registration for PDMP access**

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Take Home Points

- **Understand and implement best practices:**
  - Risk-Benefit Analysis
  - Multimodal approach
  - Non-opiate options
- **How important is all of this?**
  - Over the course of this CE, 12 more Americans have died of an opioid-related overdose

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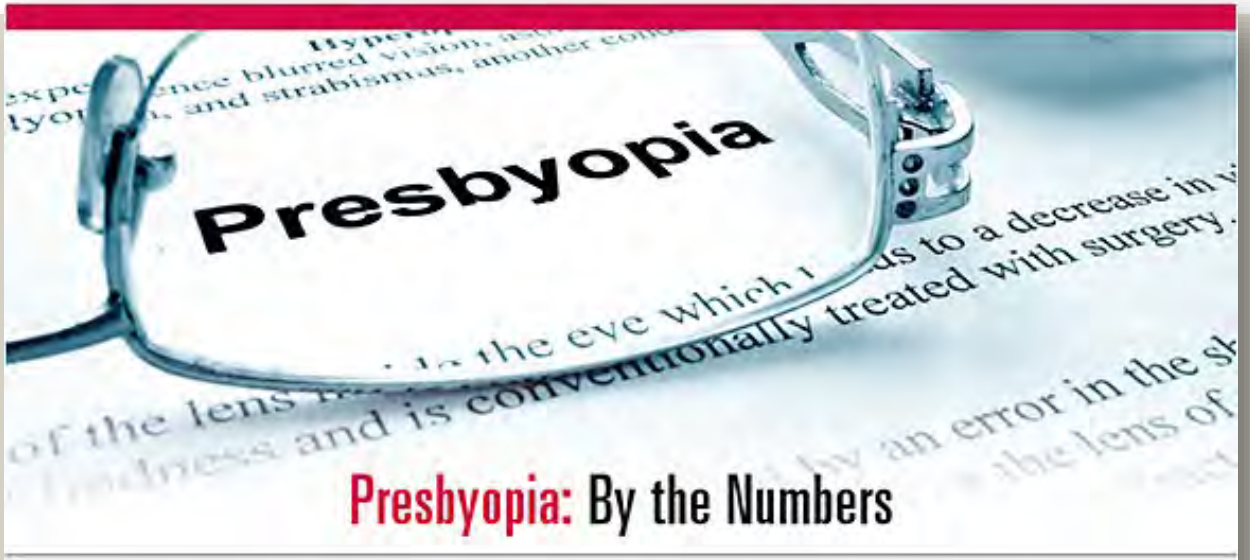
ADVANCEMENTS IN PRESBYOPIA MANAGEMENT

Jung-Sun Kim, OD, PHD, FAAO

Presbyopia

- Age-related vision disorder
  - 40 years or older develop presbyopia
- Progressive inability to focus on near objects.
- Increase in lens rigidity is the primary causative mechanism.
- Undiagnosed hyperopia (low hyperopia) can have earlier onset of presbyopia
  - Needing near-vision correction earlier than 40 years old.
- Problem: patients do NOT want to wear glasses.



Presbyopia: By the Numbers

80%

Amount of uncorrected presbyopia patients who report difficulty in performing near-vision-related activities.

22%

Decrease in quality-of-life score reported by presbyopic patients.

12%

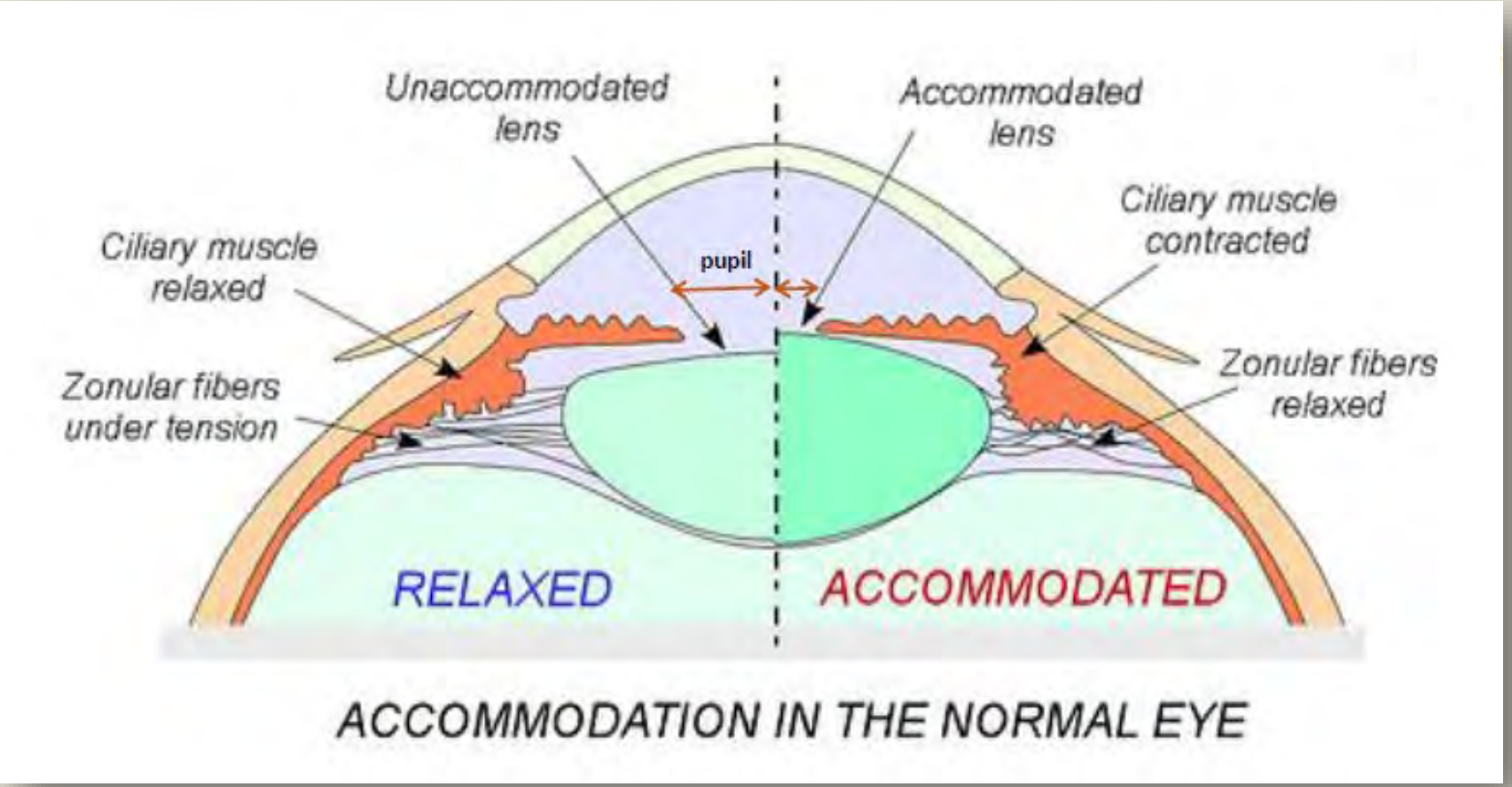
Amount of presbyopic patients who need help in performing routine activities, and these visual limitations reportedly cause them concern and low self-esteem.

$11 Billion

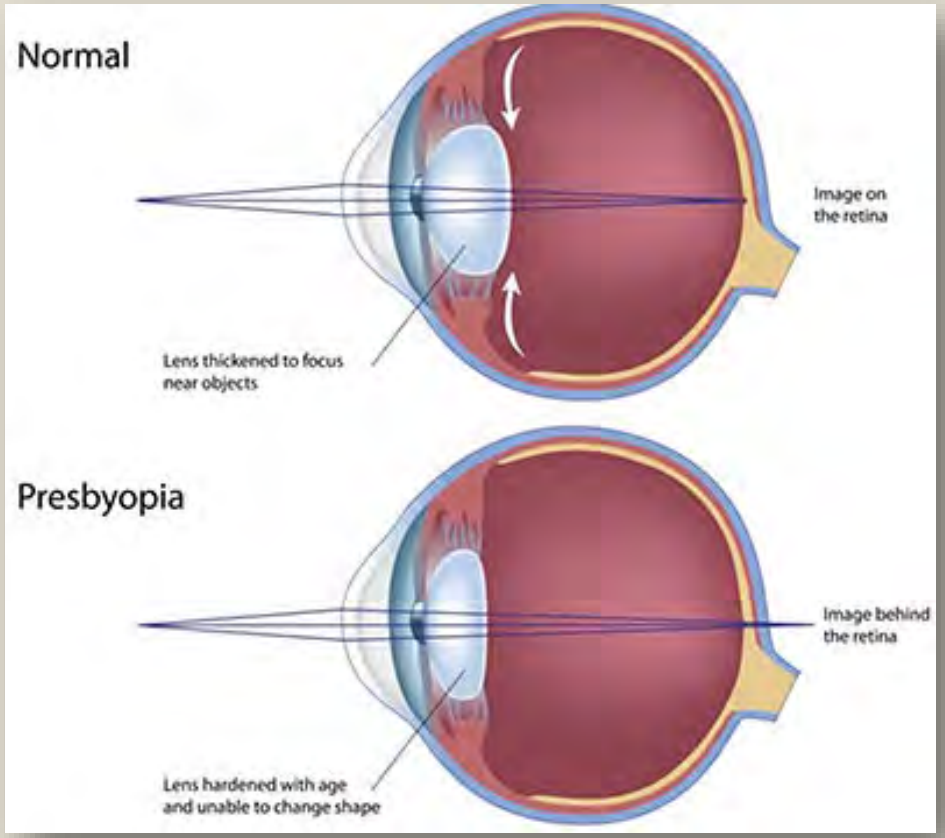
Estimation of annual global productivity losses resulting from uncorrected and under-corrected presbyopia in the working-age U.S. population (<50 years).

Berdahl et al. Clinical Opthalmol. 2020

Focusing ability of eyes



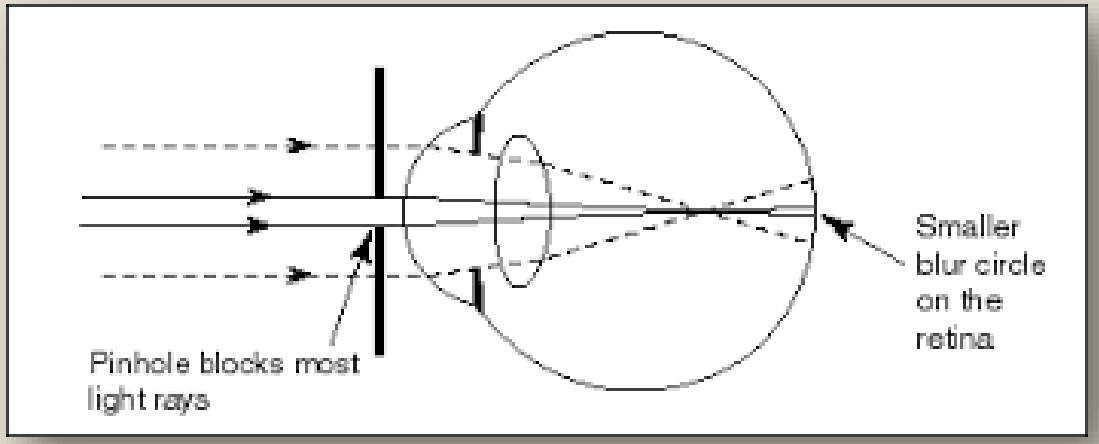
Focusing ability of eyes: Presbyopia

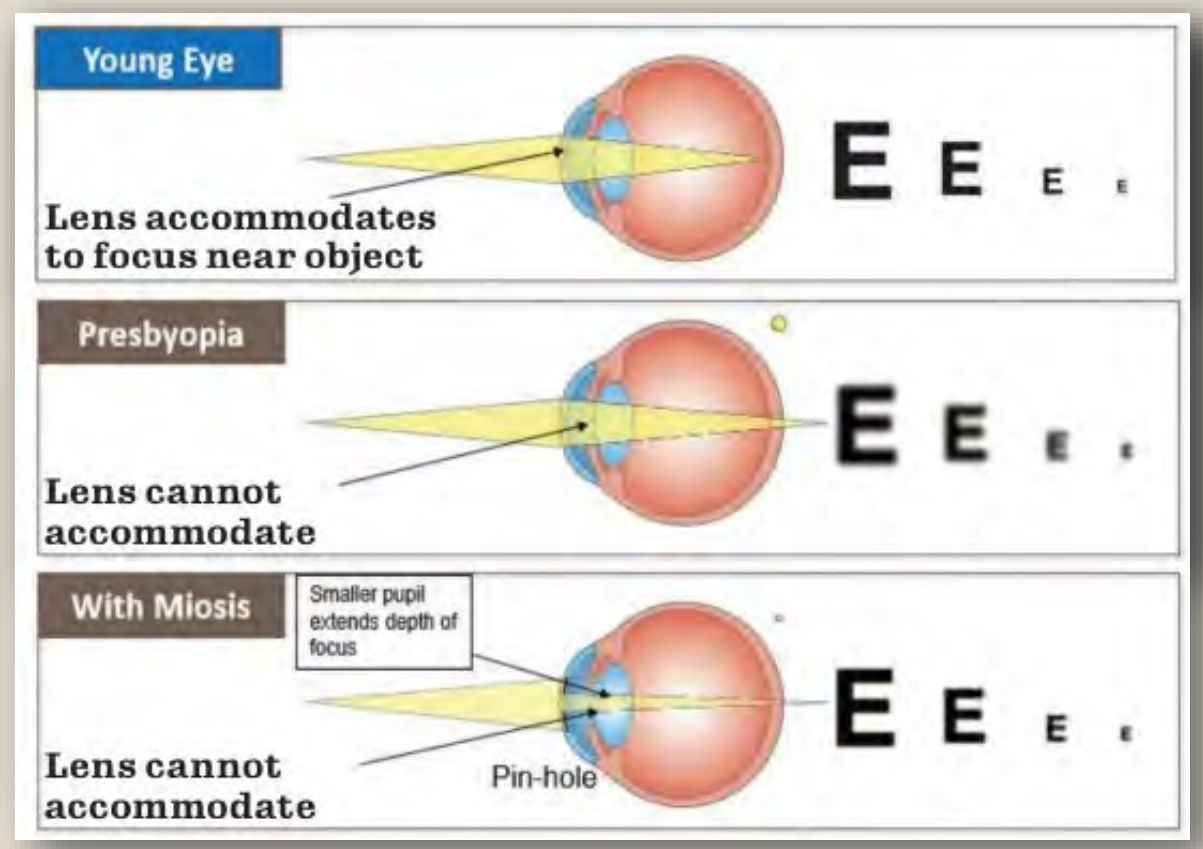


- Lens hardens with age and is unable to change its shape with ciliary muscle contraction.
- Ciliary muscle contraction does not diminish with age.

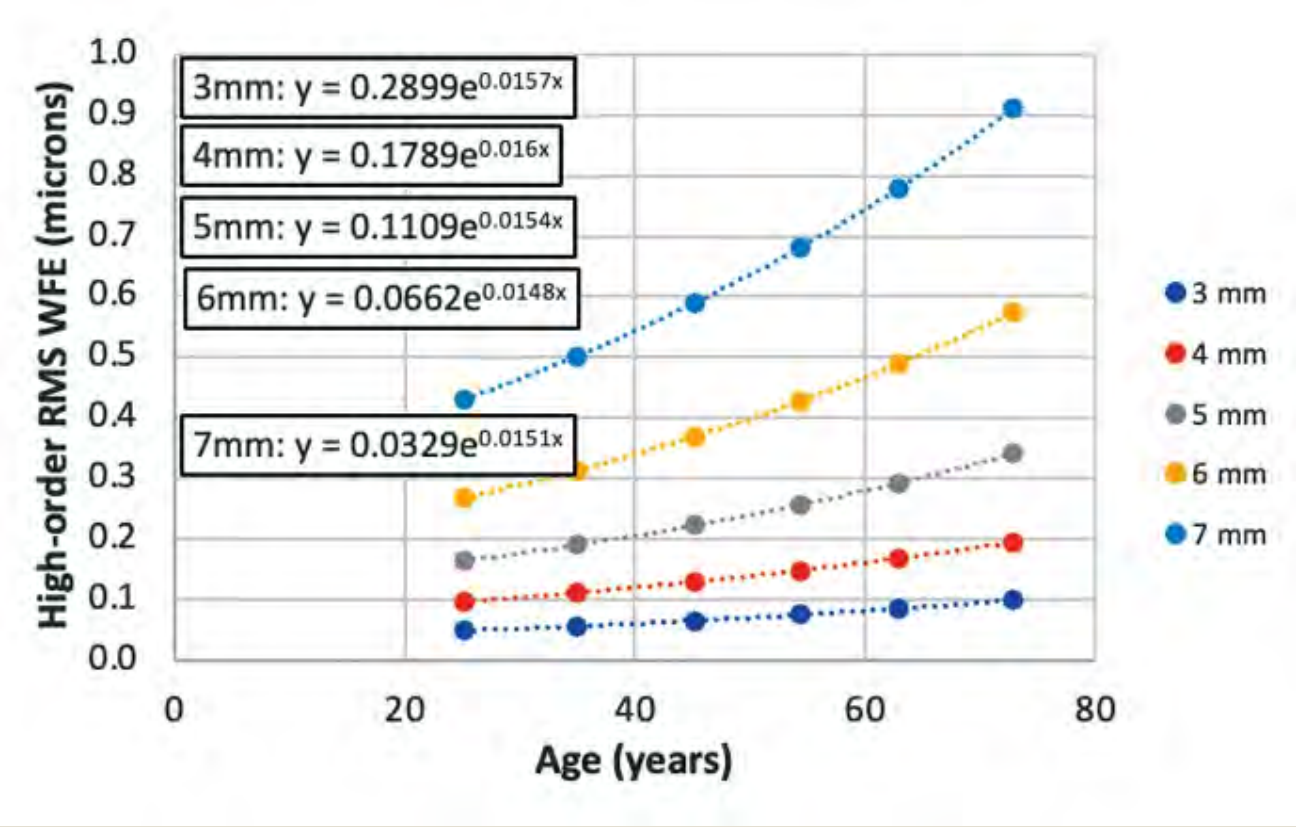
“Pinhole” Effect

- Reduces circle of blur
- Extends depth of focus





High-order aberrations as function of pupil size and age



Koenig. Presbyopia Physician. 2024

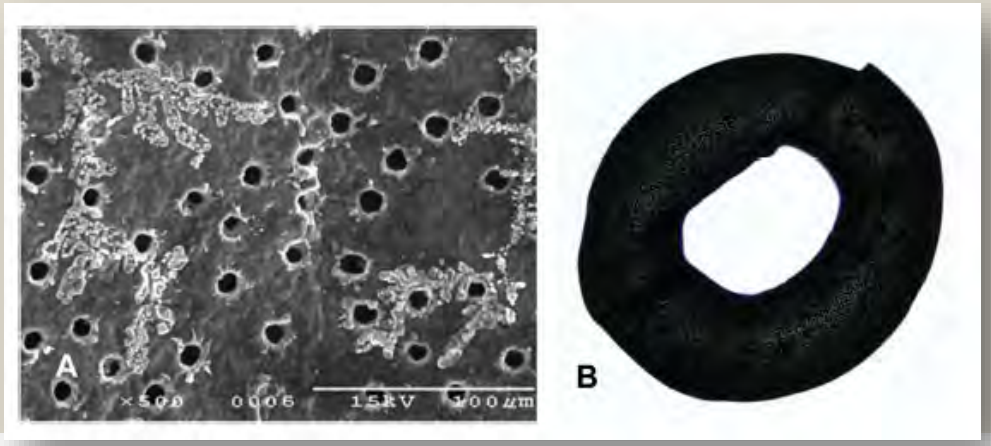
SURGICAL TREATMENT OPTIONS FOR PRESBYOPIA

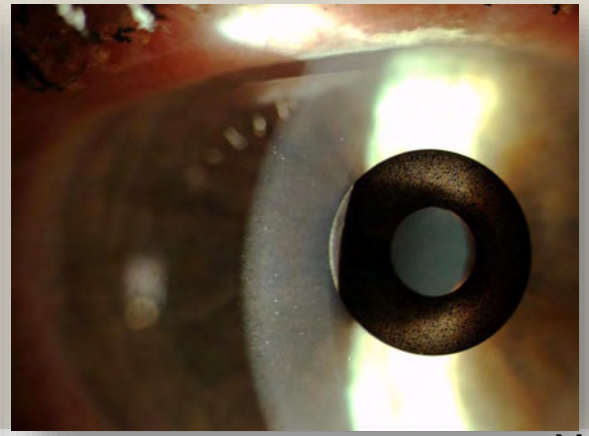
Corneal Inlays

- Get implanted in the stroma of patients' corneas to improve presbyopia.
- Designed as a surgical treatment for presbyopia.

Synthetic Corneal Inlays: KAMRA

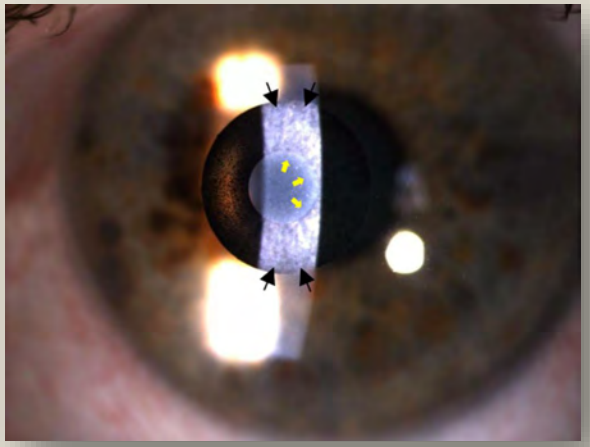
- **KAMRA**
  - Small-aperture corneal inlay
  - Uses optics similar to a pinhole occlude which **increases a patient's depth of focus.**
  - Placed into corneal stroma of the non-dominant eye.
  - Approved by the US FDA in 2015 for use in phakic presbyopes aged 45-60 years
    - First corneal inlay to gain US FDA approval
  - Was used for both natural and post-LASIK ametropic eyes.
  - Numerous (8,400) laser etched holes that facilitate the passage of nutrients and oxygen.



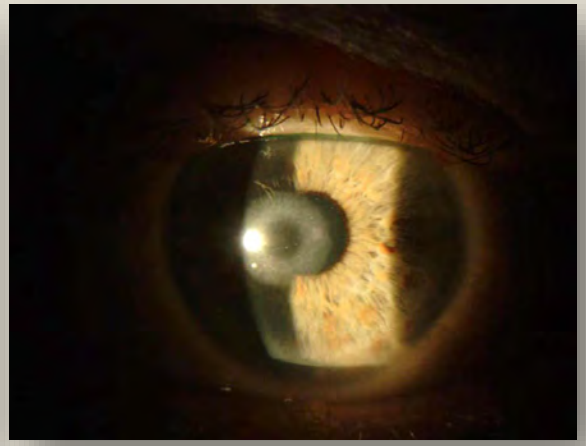


Moshirfar et al. Clinical Opthalmol. 2022

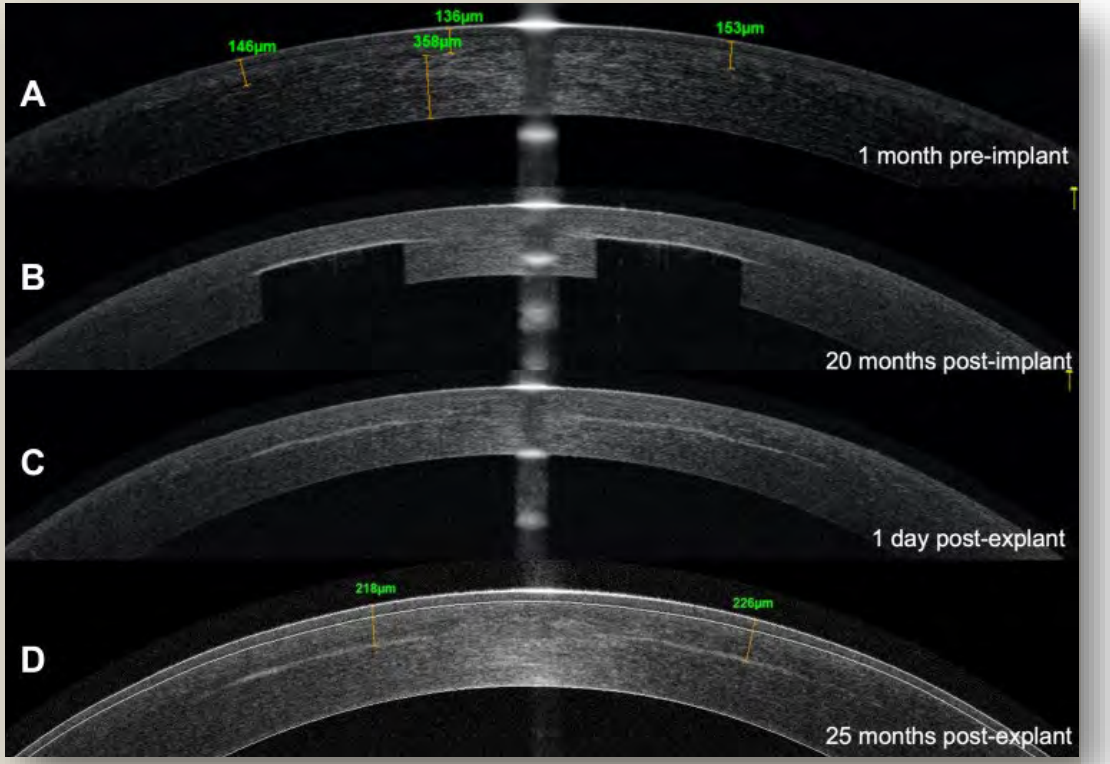
- **KAMRA**
  - By 2017, over 20,000 eyes worldwide had KAMRA implants.
  - 7.1% had undergone explantation by 24 months.
  - *Discontinued* the product in the US in February 2022.
  - Complications:
    - Corneal haze within the inner ring of the inlay
    - Hyperopic shift
      - Most likely due to thickening of the stroma overlying the implant
    - Impairment of DVA



12-years after the implant
Black arrow: haze overlying the implant
Yellow arrow: haze within the inner ring of implant



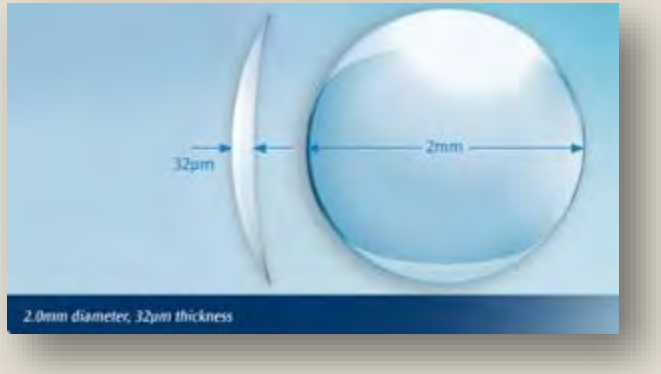
2-weeks post-explantation

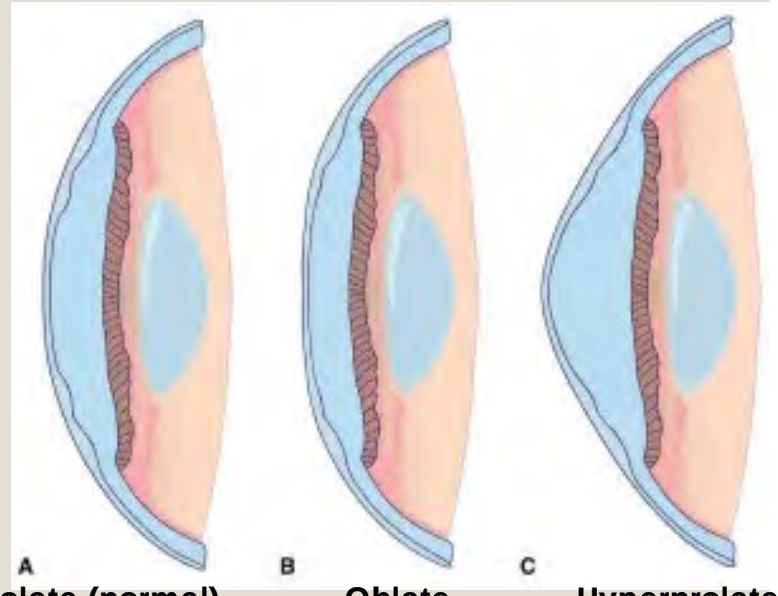


Moshirfar et al. Clinical Opthalmol. 2022

Synthetic Corneal Inlays: Raindrop

- **Raindrop**
  - Shape-changing corneal inlay
    - Increases the curvature of the cornea→ results in hyperprolate cornea → improves near and intermediate vision
  - Placed into corneal stroma of the non-dominant eye.
  - The Raindrop itself has no actual refractive power.
  - Approved by FDA in 2016.
  - *Discontinued* the product in the US in 2018 due to postoperative corneal haze (up to 42% of patients).
  - Complications:
    - Corneal haze
    - Decrease in DVA up to 4 lines





Prolate (normal) **Oblate** **Hyperprolate**

Moshirfar et al. Clinical Opthalmol. 2022

Synthetic Corneal Inlays: Raindrop

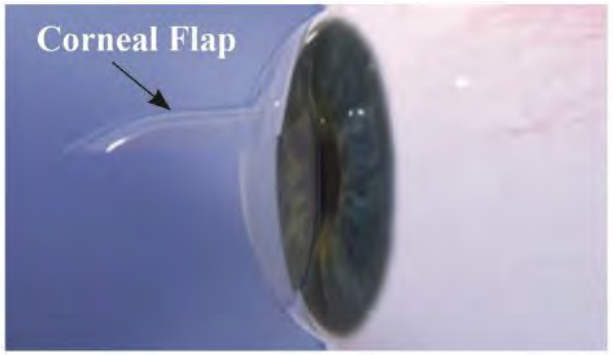


Figure 6: Lifting The Corneal Flap For Implantation Of The Inlay

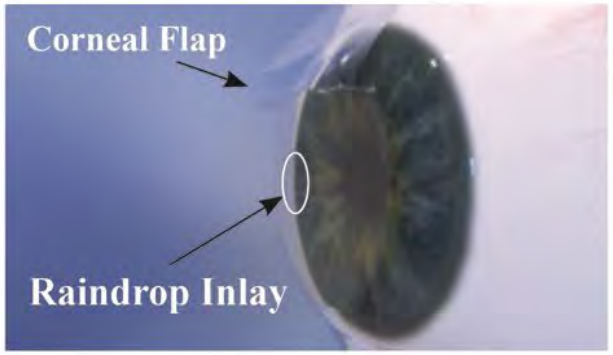


Figure 7: Placing The Inlay In The Middle Of The Cornea

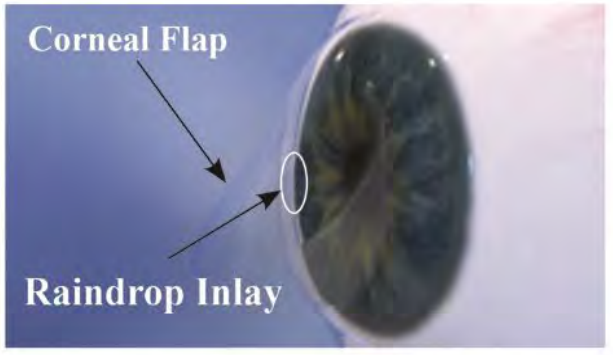
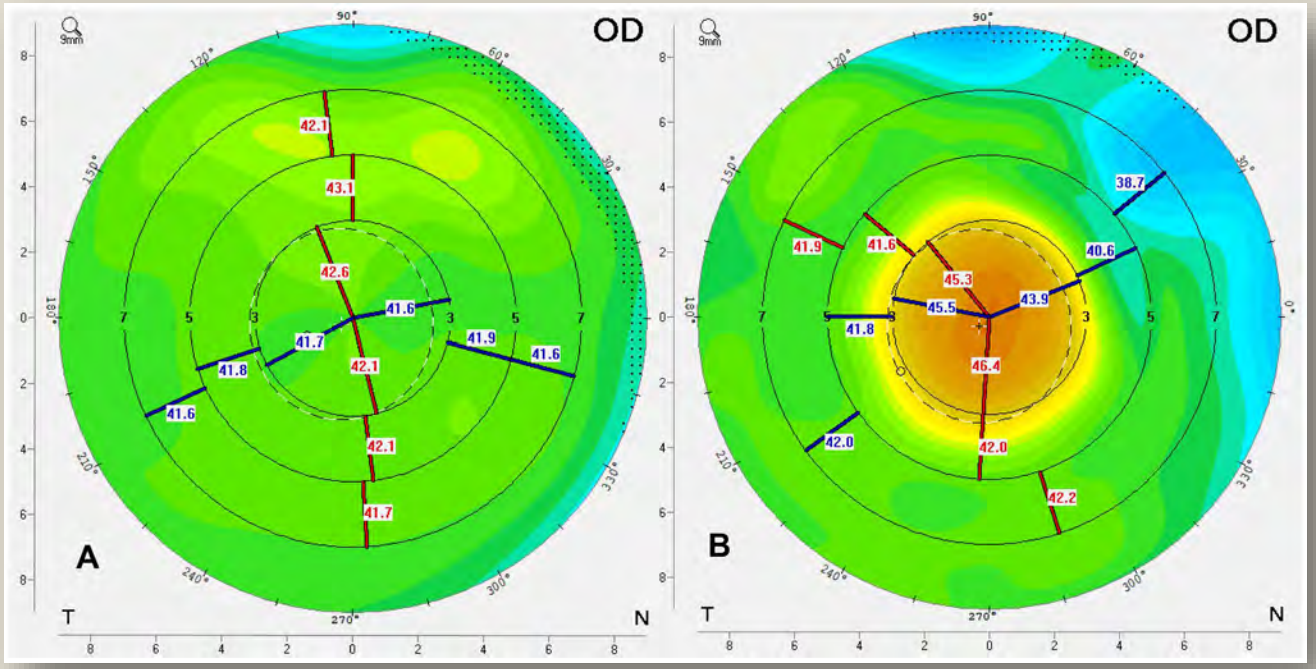
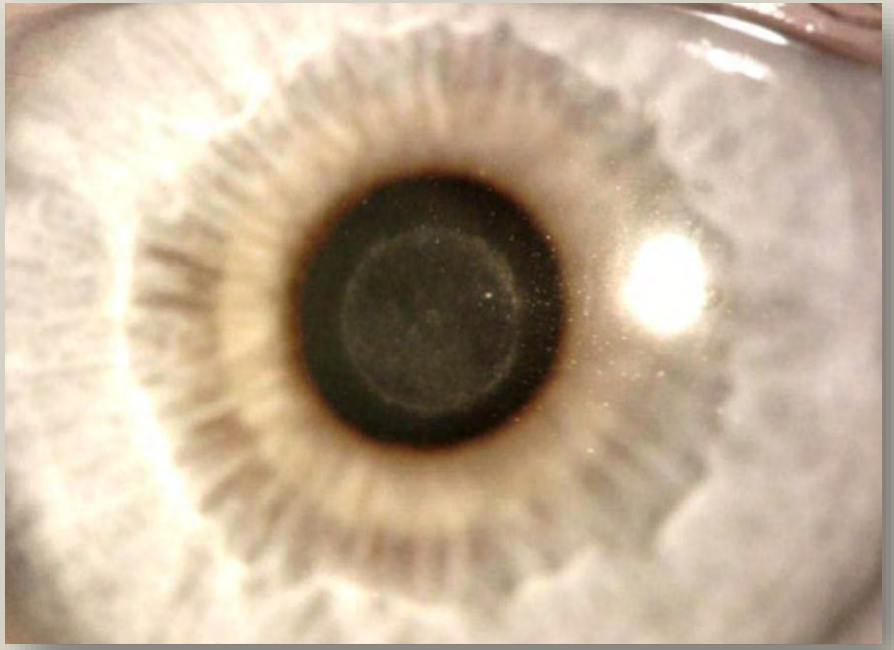


Figure 8: Replacing The Corneal Flap Over The Inlay

Synthetic Corneal Inlays: Raindrop



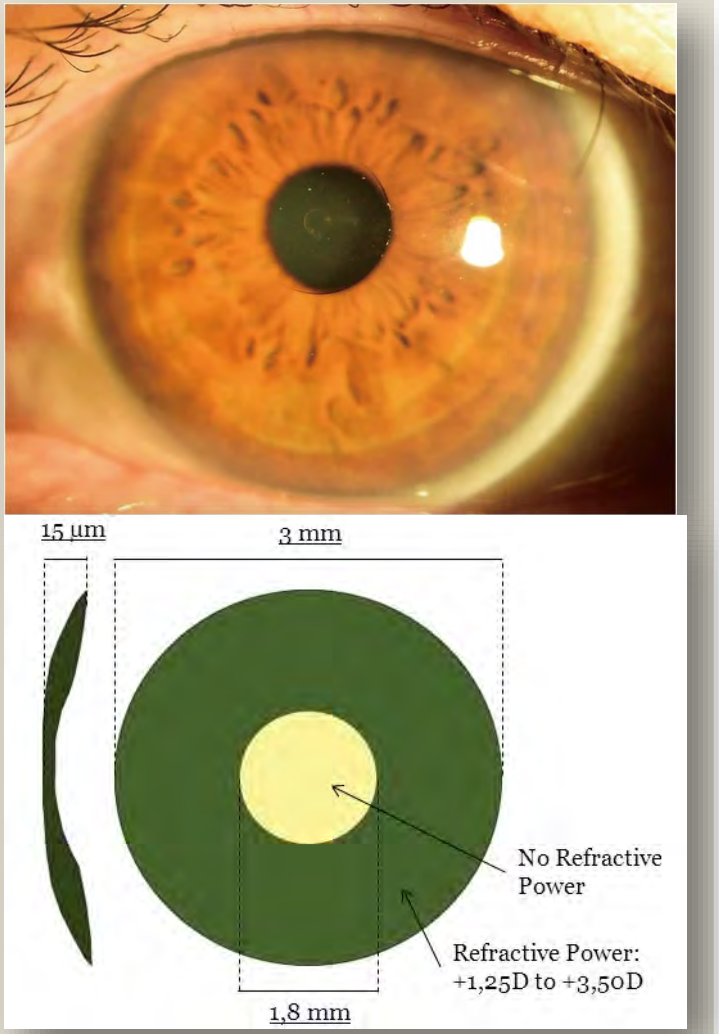
Corneal topography before (**A**) and after (**B**) Raindrop inlay implantation, showing the intended significant increase in central corneal steepness.



2 years post-implantation of the RAINDROP

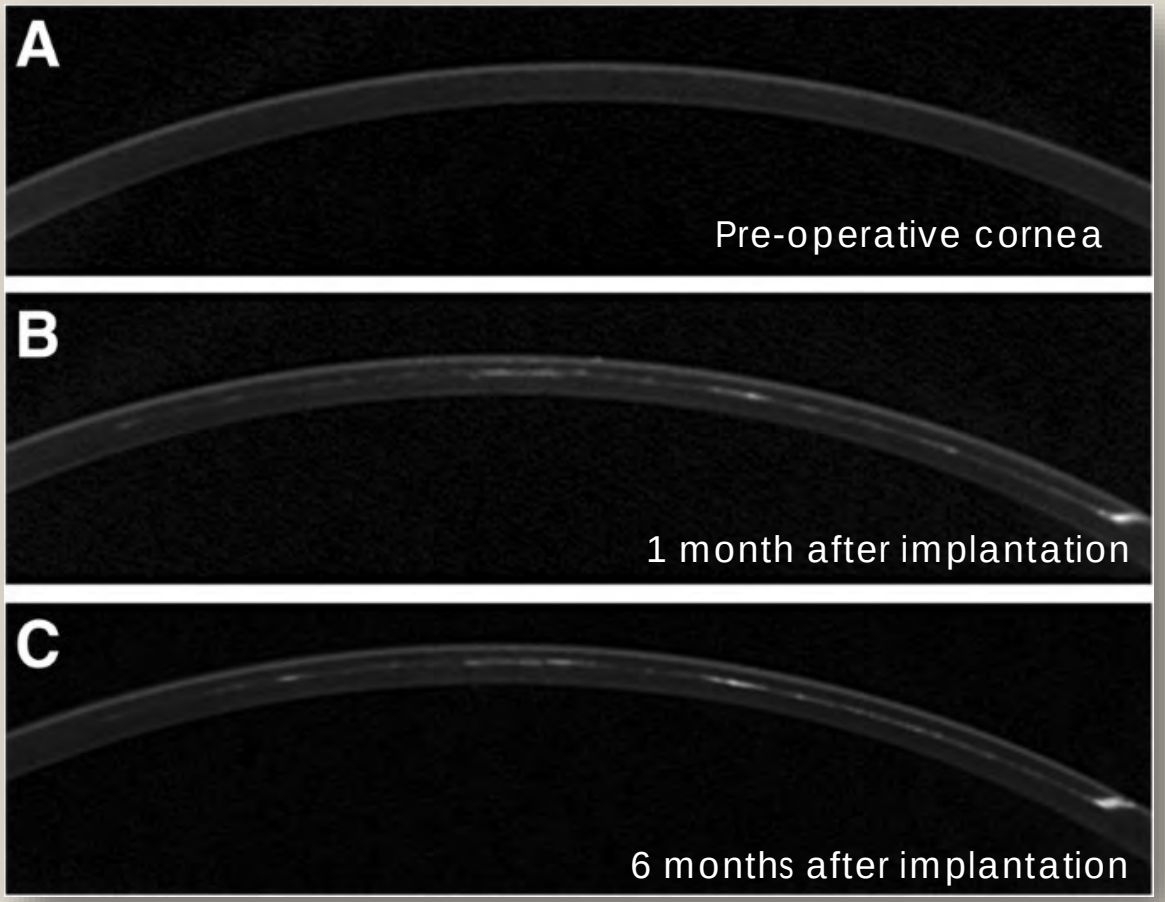
Synthetic Corneal Inlays: Flexivue Microlens

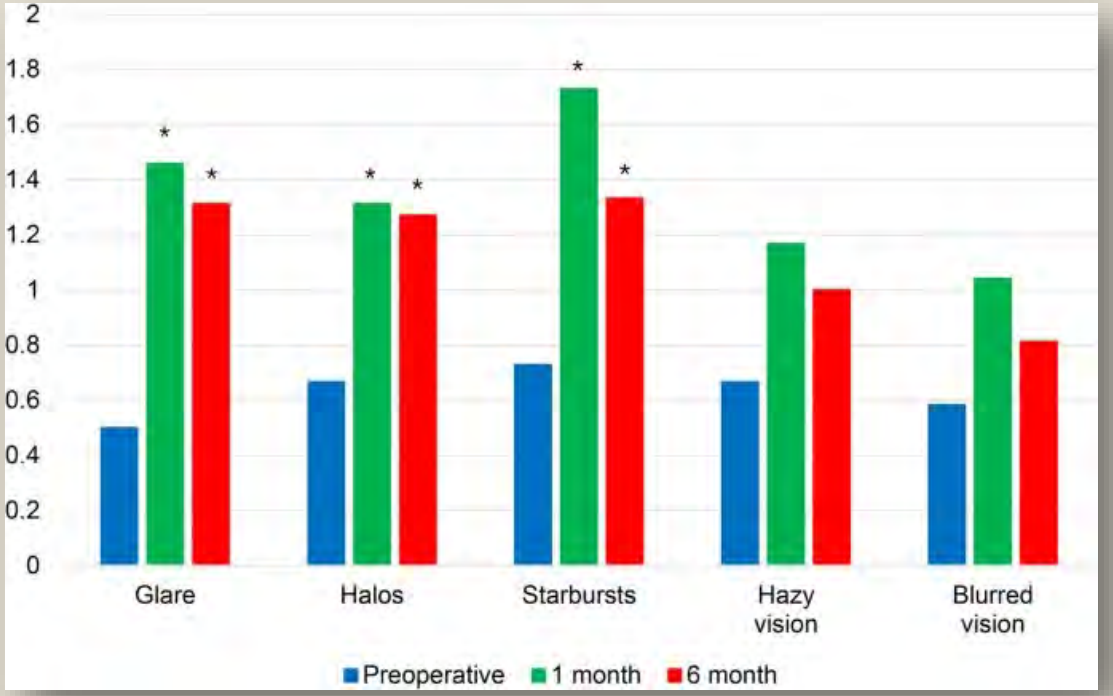
- **Flexivue Microlens**
  - Refractive corneal inlay
    - Transparent refractive corneal inlay
    - A bifocal design
    - A central plano zone with no refractive power for distance and a peripheral positive refractive zone for near vision.
    - Does not change anterior corneal shape
  - Placed into corneal stroma of the non-dominant eye.
  - Compared to the KAMRA corneal inlay, patients with Flexivue Microlens had more decrease in DVA.
  - Not FDA approved in the US.
  - Commercially available in approximately 50 countries worldwide.
    - Middle East, Europe, Latin America



Moshirfar et al. Clinical Opthalmol. 2022

Synthetic Corneal Inlays: Flexivue Microlens

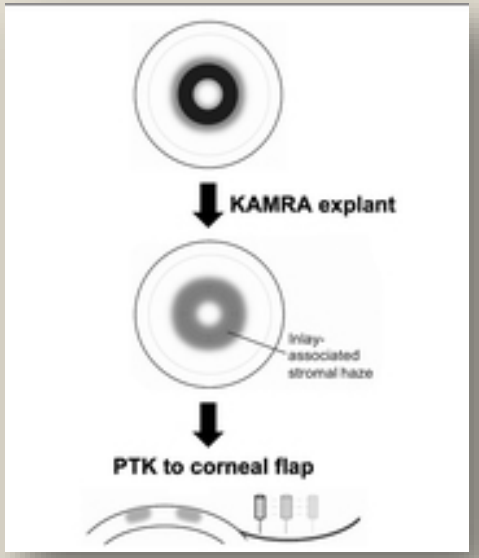


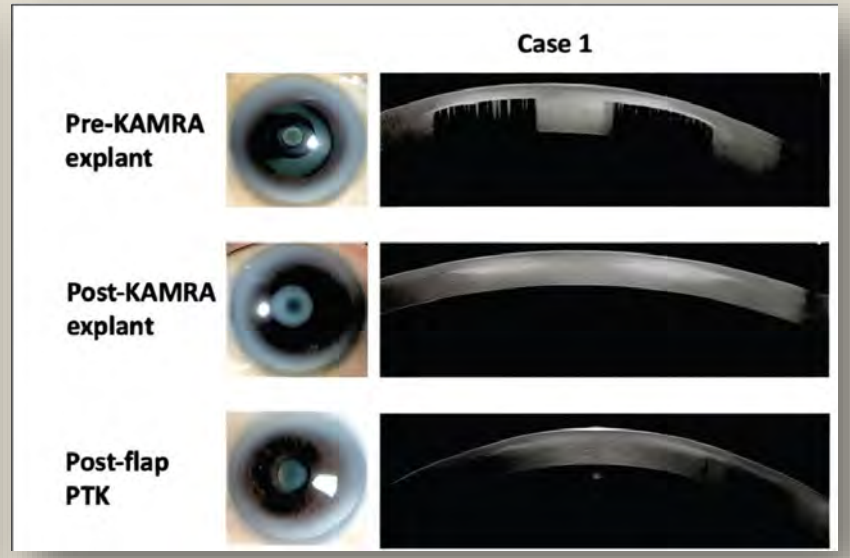


Han et al. BMC Ophthalmology. 2019

Synthetic Corneal Inlays

- **Treatment for corneal haze**:
  - Topical Steroids
    - Reduces immune response → reduced scarring/haze
  - Mitomycin C
    - Inhibits fibroblast proliferation → reduced scarring/haze
  - Phototherapeutic keratectomy (PTK)to corneal flap

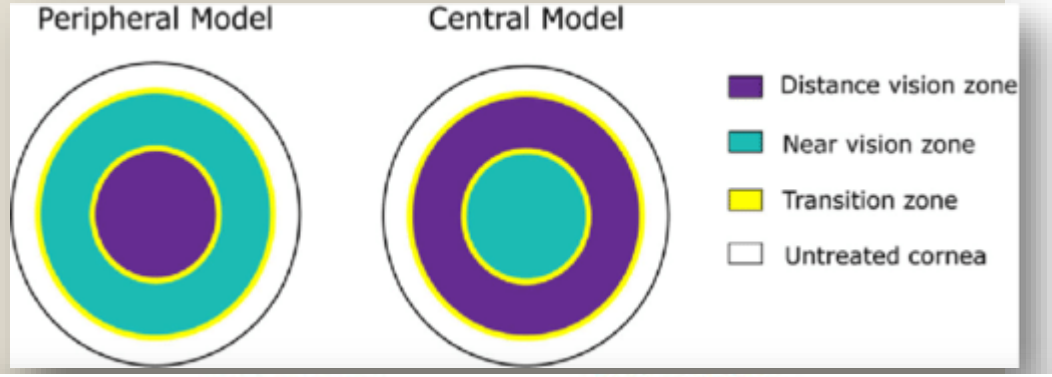


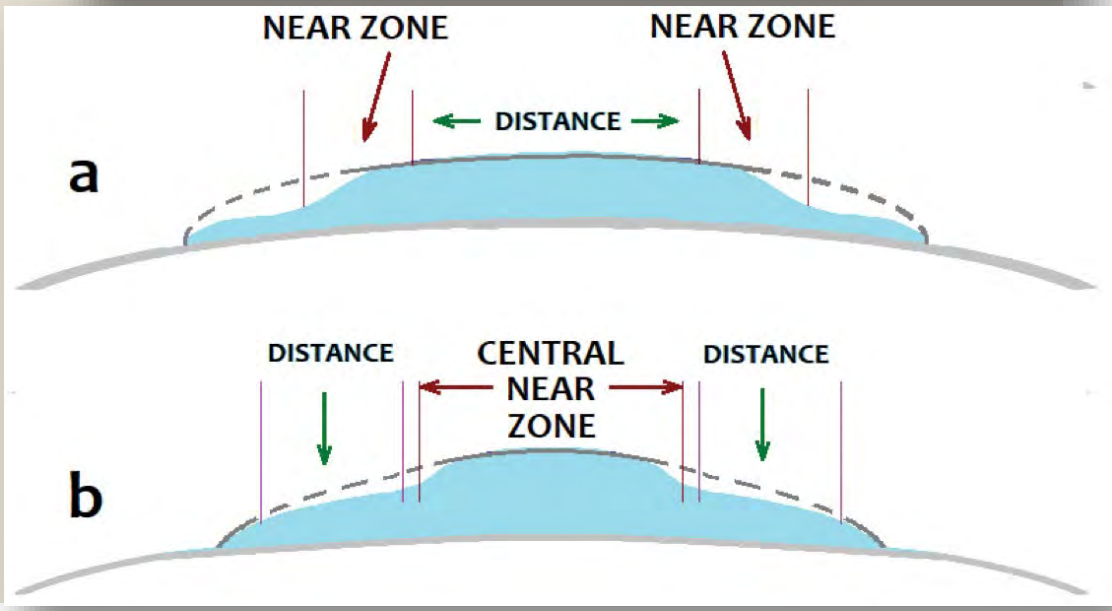


Lee et al. J of Refractive Surgery. 2023

PresbyLASIK

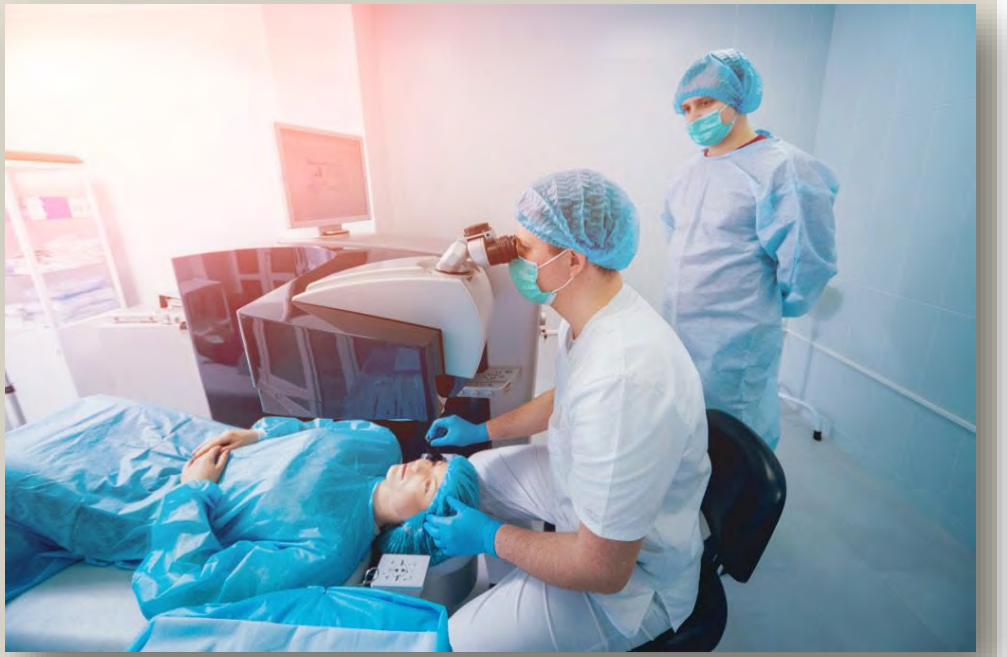
- Utilizes excimer laser technology.
- Shape cornea using a multifocal profile with multi-spheric ablation
- Peripheral presbyLASIK
  - Center of the cornea: shaped for distance vision
  - Periphery of the cornea: reserved for near vision
- Central prebyLASIK
  - Center of the cornea: shaped for near vision
  - Periphery of the cornea: reserved for distance vision
  - Multifocal transition profile where a transitional vertical multifocal ablation is created to de-center a hyperopic ablation profile.





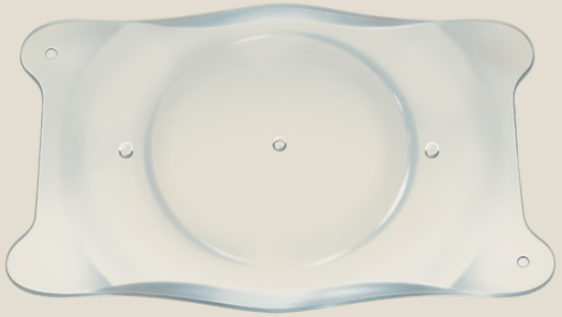
PresbyLASIK

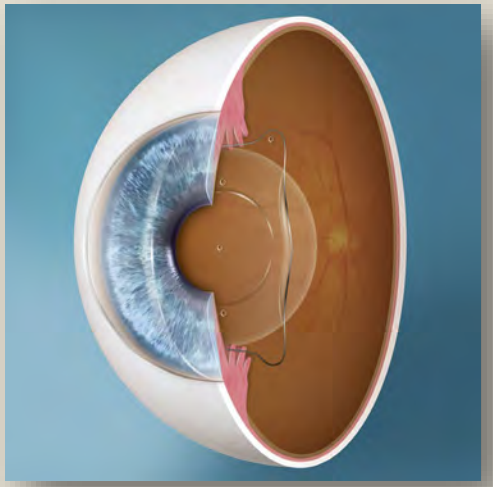
- Can be performed on both eyes or on only one eye.
- Can be performed after other eye surgeries such as cataract, LASIK, PRK.
- PresbyLASIK was as safe and effective as regular myopic LASIK correction.
- Not FDA approved in the US
  - Off-label treatment
- PresbyLASIK are performed in other countries
  - Canada, Europe, India



Implantable Collamer Lens (ICL)

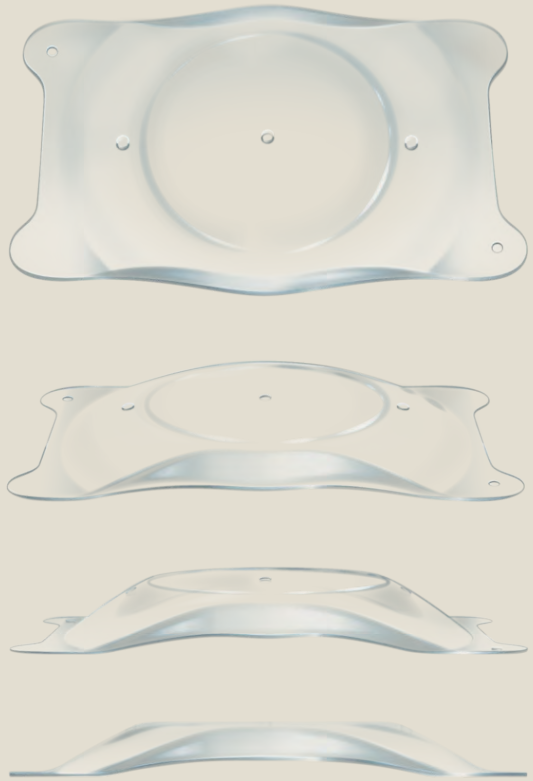
- **EVO/EVO+ VISIAN ICL**
  - Approved by the US FDA in March 2022.
    - For patients 21 to 45 years of age
  - Sphere: -3.00 D to -20.00 D
  - Astigmatism: -1.00 D to -4.00 D
  - A hole in the center allows better aqueous humor circulation.
    - Eliminates the need for LPI





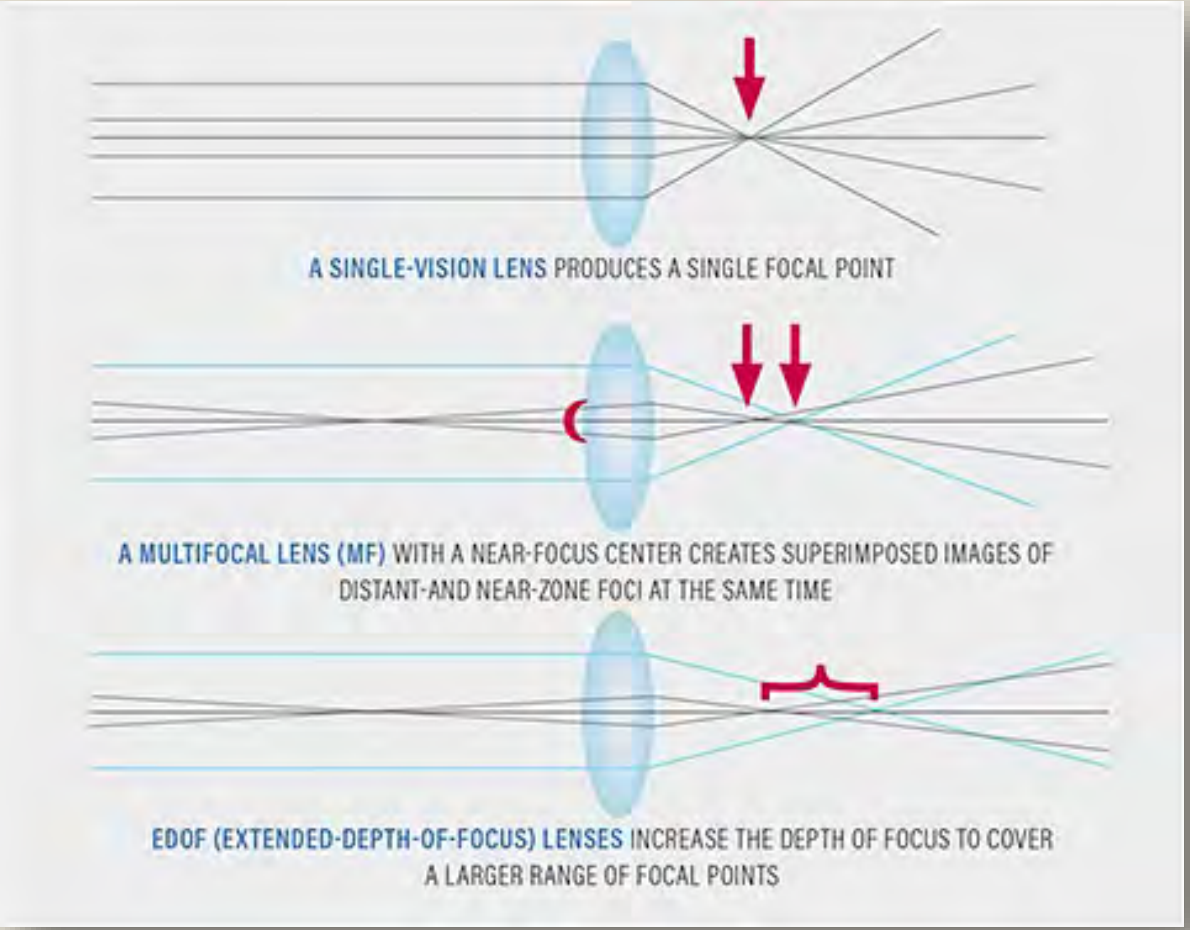
Implantable Collamer Lens (ICL)

- **EVO/EVO+ VISIAN ICL**
  - Advantages compared to laser associated refractive surgeries such as LASIK, PRK:
    - Cornea is preserved
    - No dry eye syndrome
    - ICLs are removable
    - Excellent night vision
  - Potential complications:
    - Rotation of a toric lens
    - Secondary glaucoma (pigment dispersion)
    - Inflammation



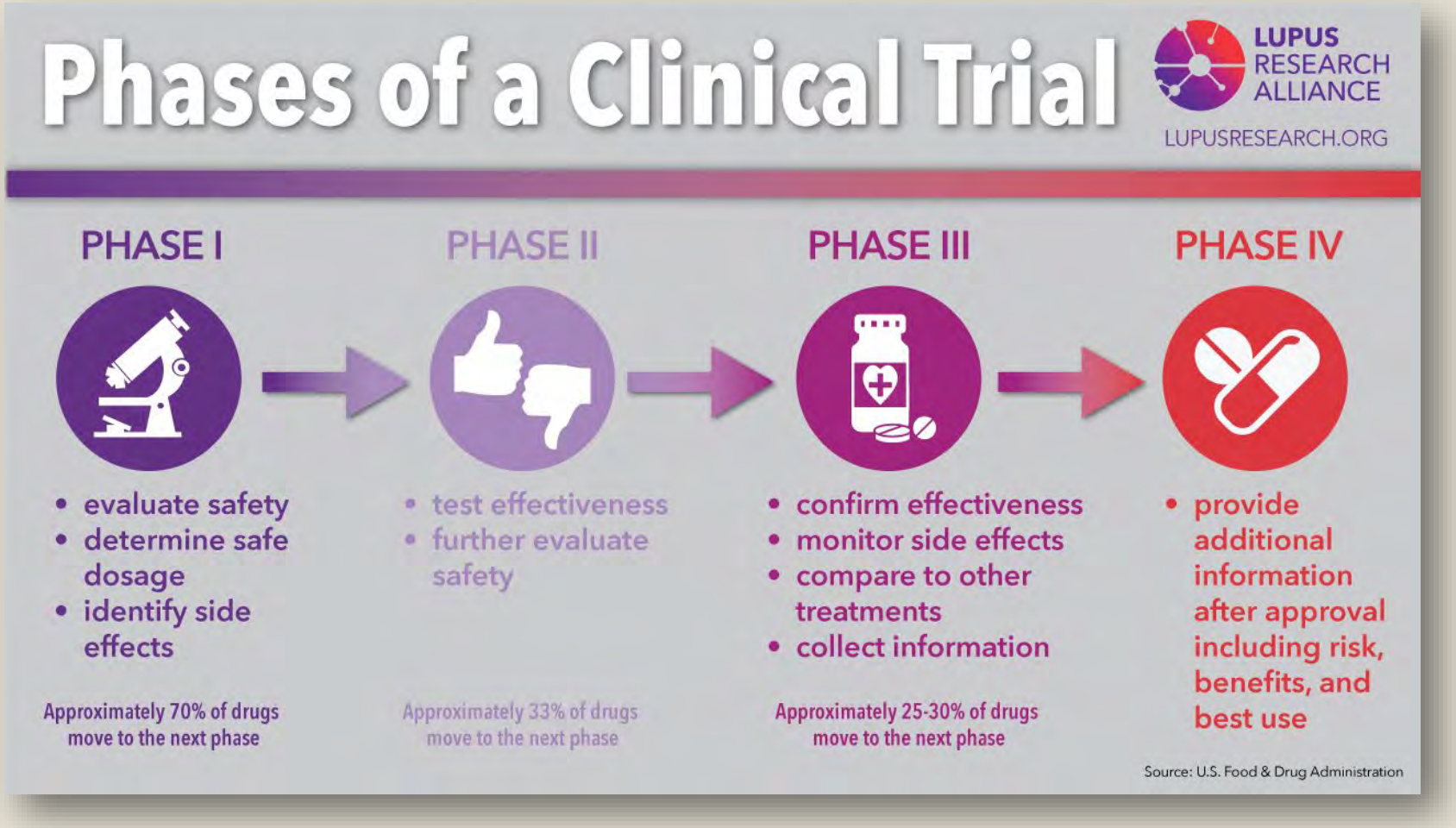
Implantable Collamer Lens (ICL)

- **EVO VIVA**
  - Presbyopia correcting ICL
  - Available in Europe
  - For both phakic and pseudo-phakic eyes.
  - Extended depth-of-focus (EDOF) technology



PHARMACOLOGICAL TREATMENT OPTIONS FOR PRESBYOPIA

Phases of a Clinical Trial

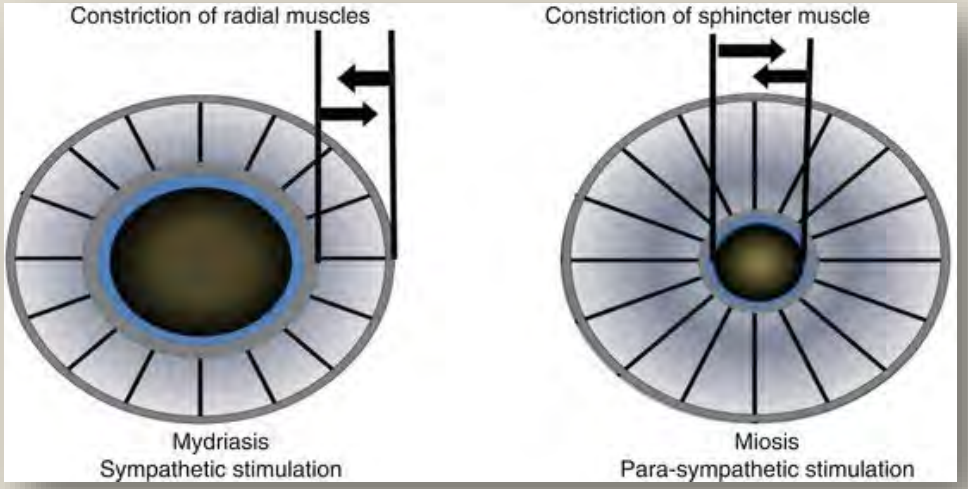


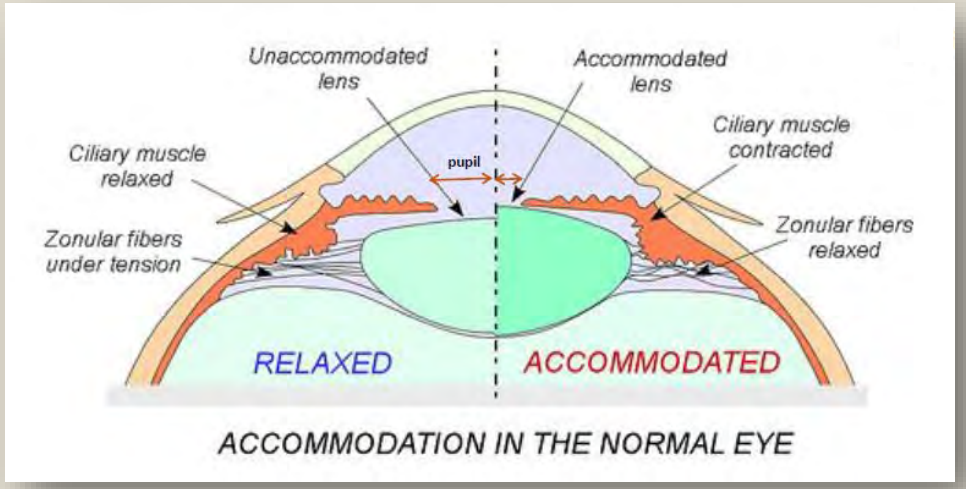
Pharmacological Treatment for Presbyopia

- Drugs approved by US FDA
  - **Vuity** (pilocarpine hydrochloride 1.25%)
    - Commercially available in the US
    - Once-daily dosing approved in October 2021
    - Twice-daily dosing approved in March 2023
  - **Qlosi** (pilocarpine hydrochloride 0.4%)
    - Approved in October 18, 2023
    - Was expected to be available in the US in the first half of 2024 but still not available in the U.S.

Pharmacological Treatment: Vuity

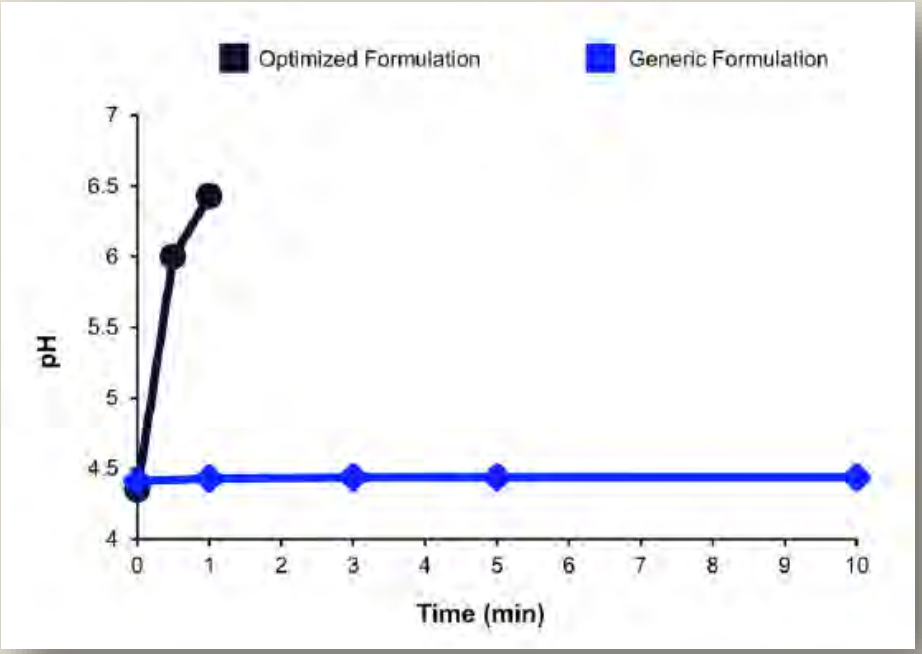
- **Vuity**
  - Allergan
  - Pilocarpine hydrochloride ophthalmic solution 1.25%
  - Patients should have distance vision corrected
    - Ideal for CL wearers
  - A cholinergic agonist → Stimulates parasympathetic effects
    - Acts on iris sphincter and ciliary body → pinhole effect

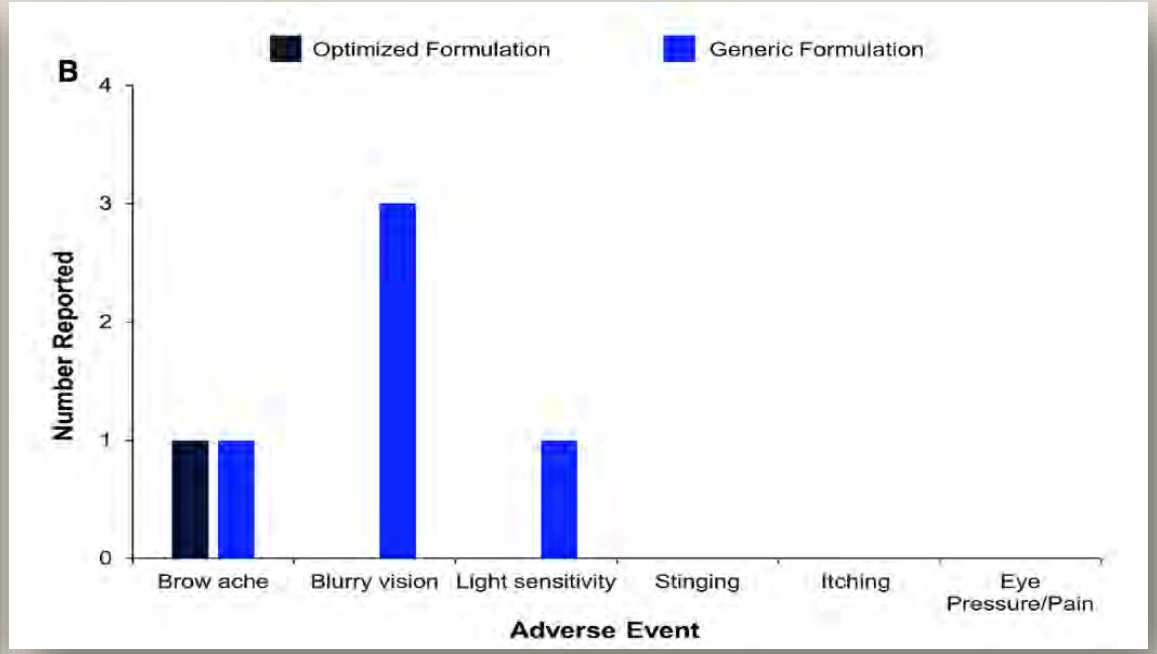




Pharmacological Treatment: Vuity

- **Vuity**
  - Difference between pilocarpine used for glaucoma vs Vuity:
    - Vuity uses optimized buffer called *pHast technology*
      - Rapidly adjusts to the ocular surface pH → increases the bioavailability of drug





Jackson et al. Ophthal Ther. 2022

Pharmacological Treatment: Vuity

GEMINI 1 and GEMINI 2 Clinical Trials (Phase 3 clinical trials)

- A total of 750 participants aged 40 to 55 years old
- Participants were instructed to administer one drop of VUITY or placebo once daily in each eye.
- For 30 days
- Both studies met their primary endpoints:
  - A statistically significant proportion of participants treated with VUITY gaining three lines or more in mesopic (in low light), high contrast, binocular Distance Corrected Near Visual Acuity (DCNVA), without losing more than 1 line (5 letters) of Corrected Distance Visual Acuity (CDVA) at day 30, hour 3, versus placebo.
- No serious adverse events observed in any participants treated with VUITY in either clinical study.
- The most common adverse effects:
  - Headache (14.1%)
  - Visual impairment (4.3%)
  - Conjunctival hyperemia (2.5%)
  - Eye Irritation (2.5%)
  - Eye pain (2.5%)
  - Increased lacrimation (2.5%)
  - Nausea (2.5%)
  - Punctate keratitis (0.6%)

Once-daily dosing approved by FDA in October 2021

Pharmacological Treatment: Vuity

VIRGO Clinical Trial

- A total of 230 participants aged 40 to 55 years old
- One drop of VUITY or placebo twice daily in each eye, each dose administered 6 hours apart
- For 14 days
- Met their primary endpoints:
  - A statistically significant proportion of participants treated with VUITY gaining three lines or more in mesopic (in low light), high contrast, binocular Distance Corrected Near Visual Acuity (DCNVA), without losing more than 1 line (5 letters) of Corrected Distance Visual Acuity (CDVA) at day 14, hour 9, versus placebo.

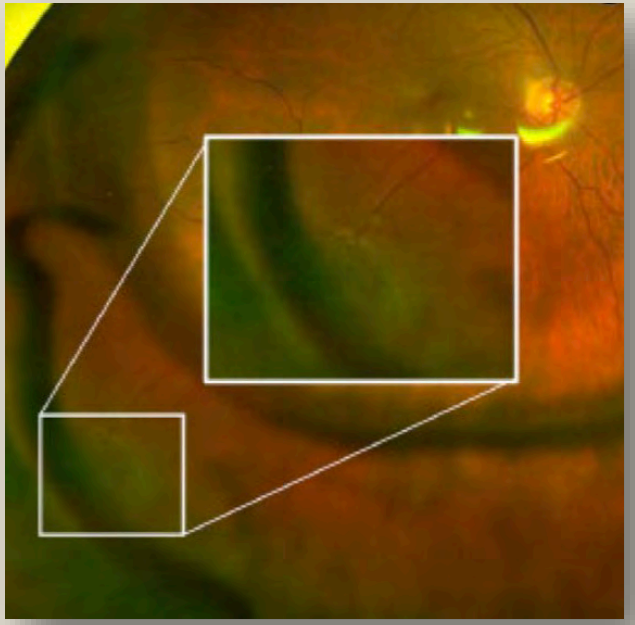
- The most common adverse effects:
  - Headache and eye redness
  - Brow ache
  - No cases of retinal tears or detachments during the clinical trials

Twice-daily dosing approved by FDA in March 2023

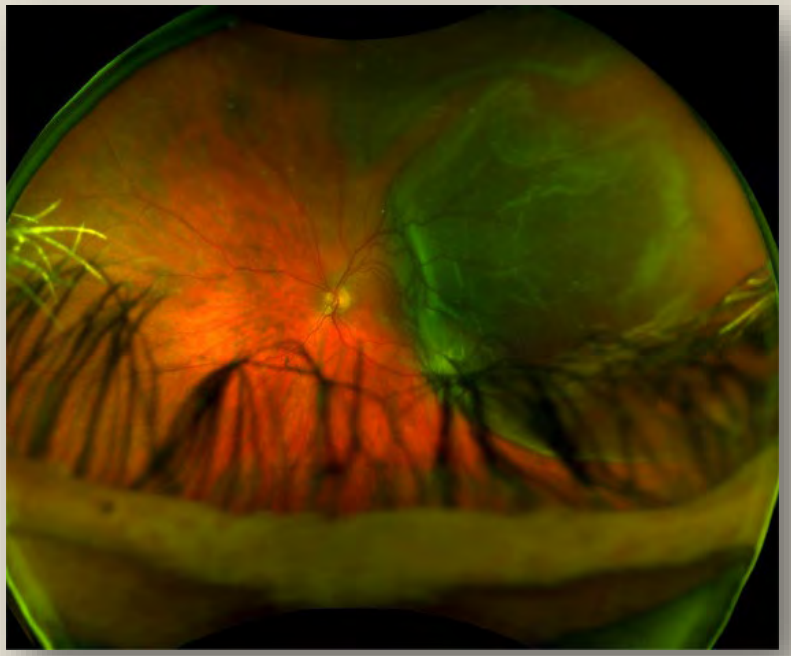
Pilocarpine and Retinal Detachment

- Mechanism of action:
  - Drug-induced forward displacement of the lens → causes anterior movement of the vitreous → traction to areas of retina that have significant vitreous adherence (including posterior pole) → retinal detachment, macular holes or vitreomacular traction
- Presence/Absence of posterior vitreous detachments (PVD) matters
- Careful examination of retina is necessary prior to prescribing pilocarpine

Case Reports: Vuity



- Case 1
  - 47-year-old male
  - CC: flashes of light and floaters
  - Ocular hx: Cataract surgery 3 months prior
  - BCVA, OD: 20/20, refraction: +0.50 +1.00 x180
  - Started Vuity 1 month prior



- Case 2
  - 46-year-old male
  - CC: nasal field defect which progressed to include the central vision by the next morning
  - BCVA OS: 20/30, refraction: -3.25+1.00x180
  - No PVD noted during DFE
  - Started Vuity 5 weeks prior

Al-khersan et al. American J of Ophthal. 2022

Cost: Vuity

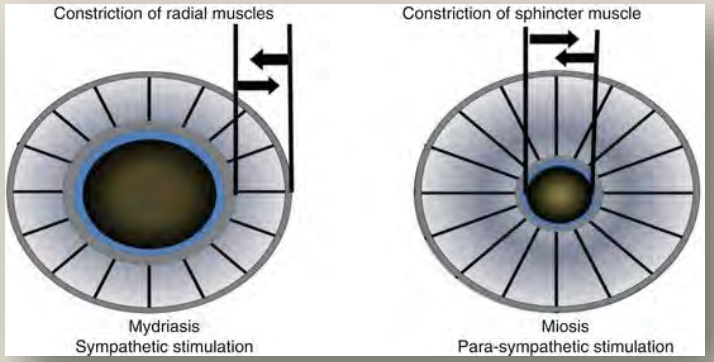
- About $80 for 2.5 ml bottle
  - Lasts approximately 1 month

  - ~30 days if once-daily dose → ~$2.6 per day
  - ~15 days if twice-daily dose → ~$5.3 per day

- Would be a great option for someone who will be using for special occasion.

Pharmacological Treatment: Qlosi

- **Qlosi**
  - Orasis Pharmaceuticals
  - Also known as CSF-1
  - Pilocarpine hydrochloride ophthalmic solution 0.4%
  - Preservative free
  - Twice-daily dosage
  - Same mechanism of action as Vuity → pinhole effect
    - Stimulates parasympathetic effects
      - Acts on iris sphincter and ciliary body



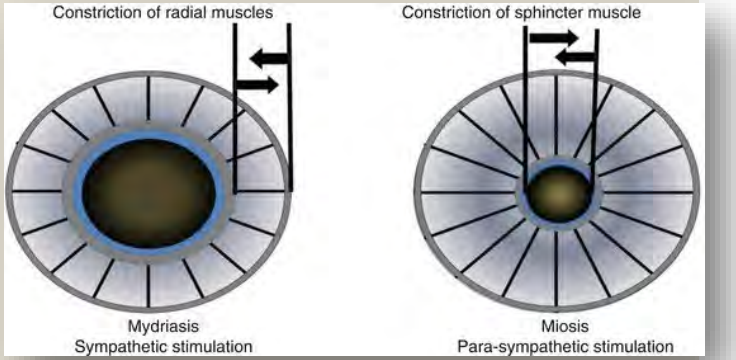
Pharmacological Treatment: Qlosi

- **NEAR-1 and NEAR-2 Clinical Trials** (Phase 3 clinical trials)
  - 613 participants
  - 45-64 years old
  - Administered twice-daily over 15 days
  - CSF-1 met its primary and key secondary endpoints on Day 8.
    - Primary end point: statistically significant 3-line or more gain in distance-corrected near visual acuity (DCNVA)
    - Secondary endpoint: no loss of 1-line or more in distance visual acuity.
  - On Day 15, participants achieved statistically significant 3-line or more improvement in DCNVA *as early as 20 minutes* and *up to 8 hours post-dose 1.*
  - Excellent tolerability and safety profile
    - Comparable redness and comfort versus vehicle
  - The most common adverse events:
    - Headaches (6.8%)
    - Instillation site pain (5.8%)

Twice-daily dosing approved by FDA in October 2023

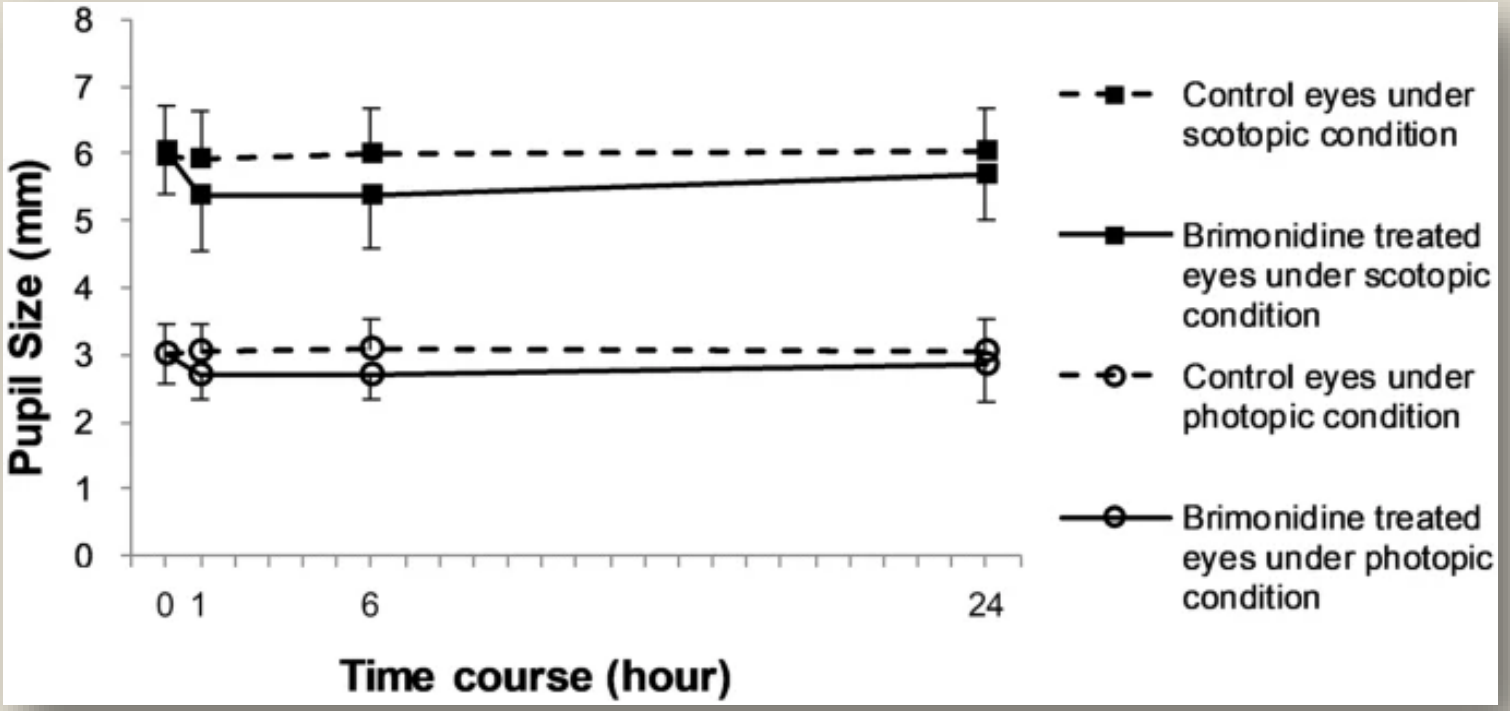
Pharmacological Treatment: Brimochol

- **Brimochol**
  - Currently in development by Visus Therapeutics
  - Once-daily dosage
  - Preservative free
  - NO pilocarpine
  - 2 active ingredients:
    1) Carbachol 2.75%: a cholinergic agonist
       - Acts on the sphincter muscles causing pupil constriction
    2) Brimonidine tartrate 0.1%: an alpha-2 agonist
       - Reduces pupil dilation by reducing the effect of the dilator muscle
       - Also reduces ciliary muscle from contracting too much→ less side effect
  - By working together, they have long-lasting effect with a single dose.
    - Effects last a minimum of 8 hours.



Effect of Brimonidine tartrate 0.1% on Pupil Size

- Mechanism of action: brimonidine stimulates prejunctional alpha-2 agonist receptor → reduces norepinephrine release in the synapse → brimonidine inhibits pupil dilation under scotopic vision.



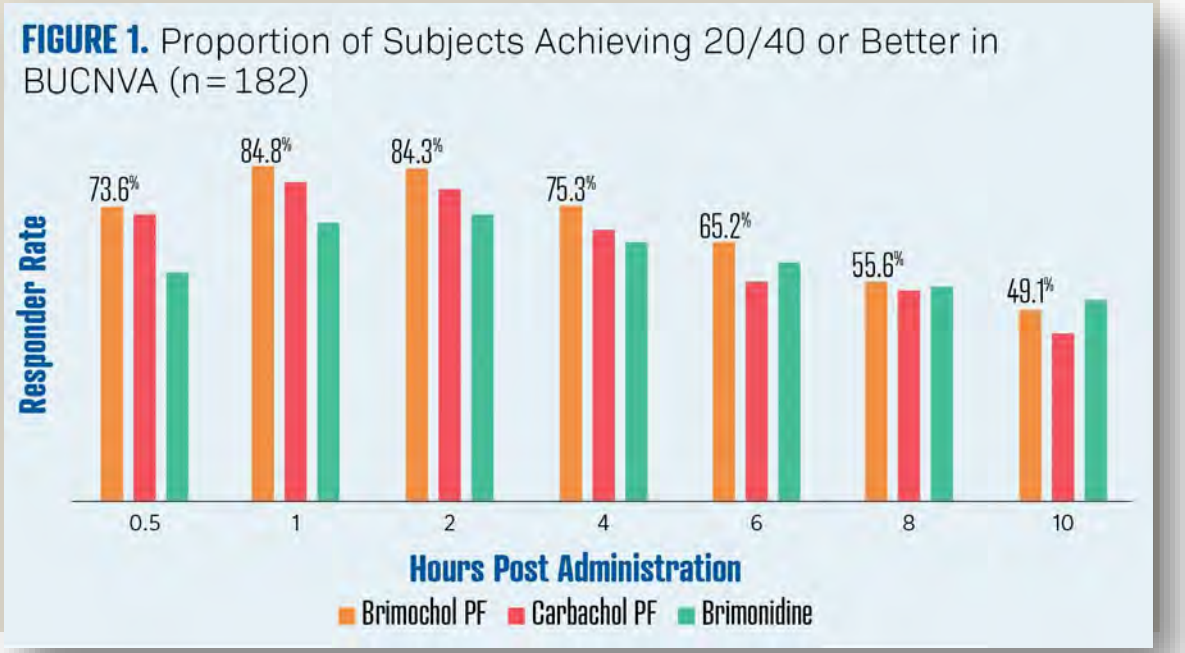
Sayaka Kato et al. Scientific Reports. 2018

Pharmacological Treatment: Brimochol

- **BRIO-1** (Phase 3 clinical trial)
  - For a combination therapy to be approved in the US, the contribution of each of the individual components must be shown.
    - The combination product must be shown to be statistically better to each component administered alone.

Pharmacological Treatment: Brimochol

- **BRIO-1** (Phase 3 clinical trial)
  - 182 participants
  - Phakic or pseudophakic emmetropes (± 0.5 D)
  - 45 – 80 years old
  - One day
  - Significant reduction in pupil diameter
  - Significant increase in NVA compared to each ingredient alone.
  - Common Adverse effects:
    - Eye irritation (14%)
    - Headache (9%)
  - BRIO-2 clinical trial is currently being conducted

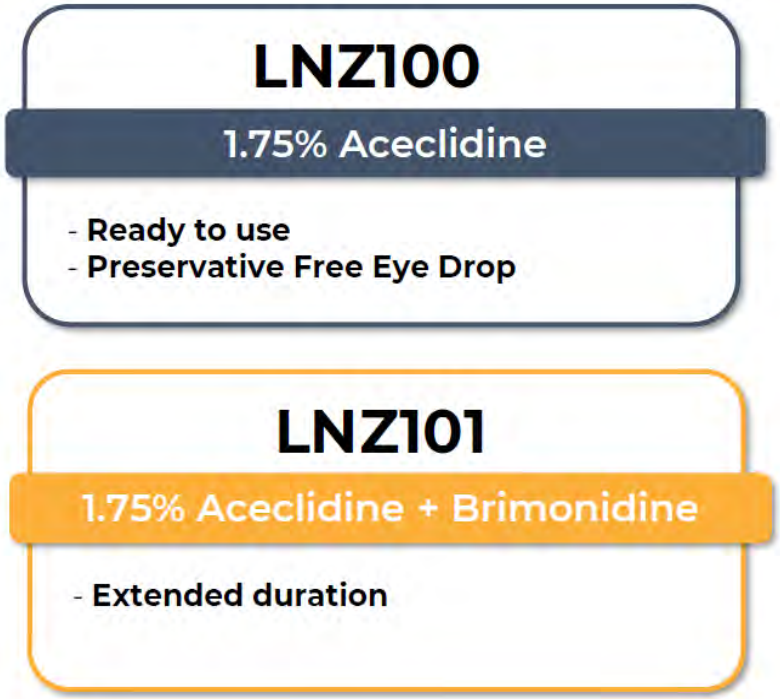


Pharmacological Treatment: Aceclidine

- **Aceclidine**
  - Lenz Therapeutics
  - A cholinergic agonist
  - Used to be glaucoma drops but not utilized as much as pilocarpine because it didn't reduce IOP as much as pilocarpine
  - Similar mechanism or action as other cholinergic agonist (pilocarpine & carbachol) BUT more specific to activating sphincter muscle with less activation of the ciliary muscle.

Pharmacological Treatment: Aceclidine

- **INSIGHT (Phase 2 Clinical Study)**
  - 45-73 years old



Objective

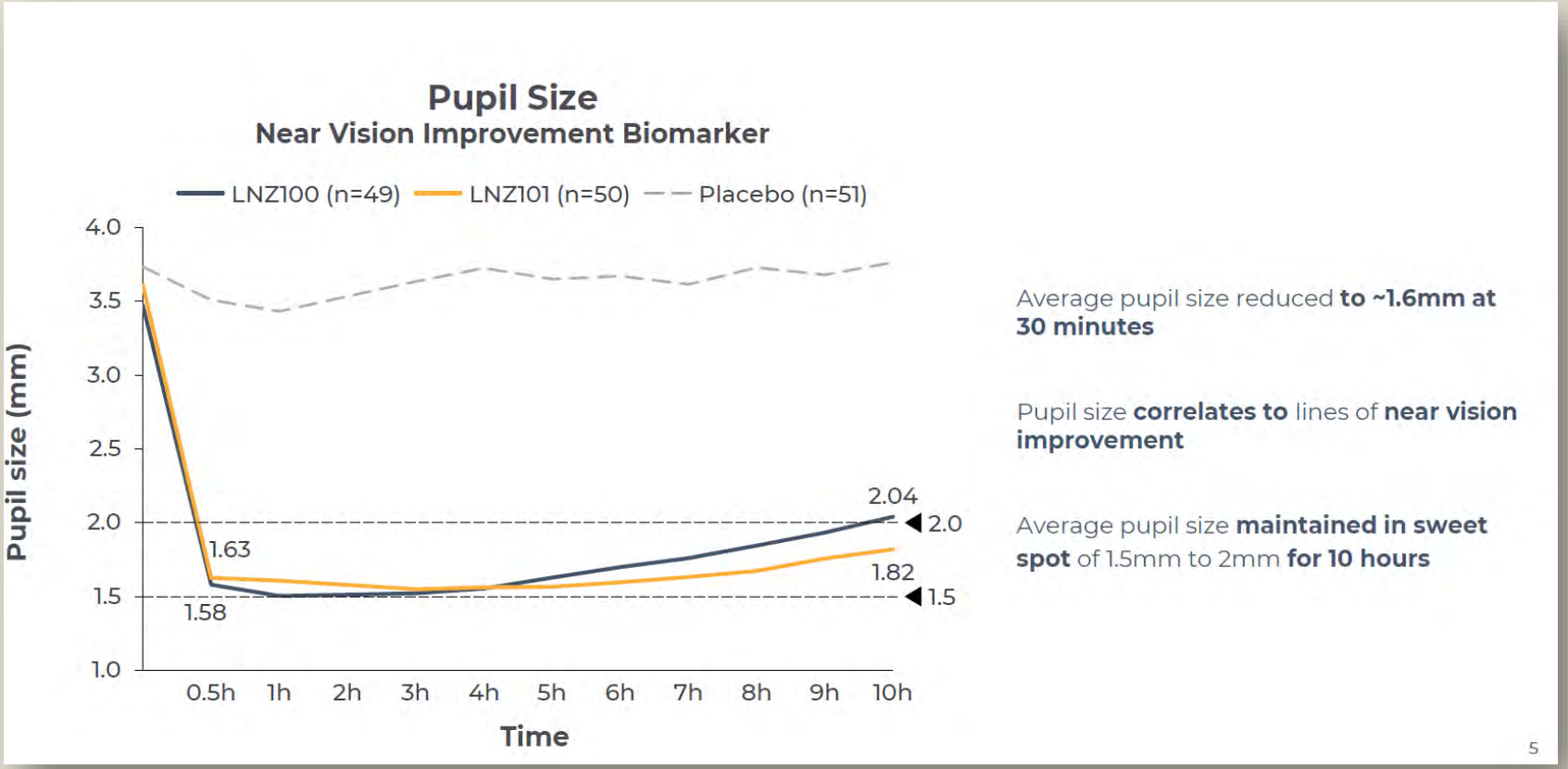
To evaluate the safety and efficacy of LNZ101 compared with LNZ100 and vehicle in the treatment of Presbyopia

Primary Endpoint

Percentage of subjects who achieve a 3-line or greater improvement and no loss in BCDVA ≥ 5 letters at 1h

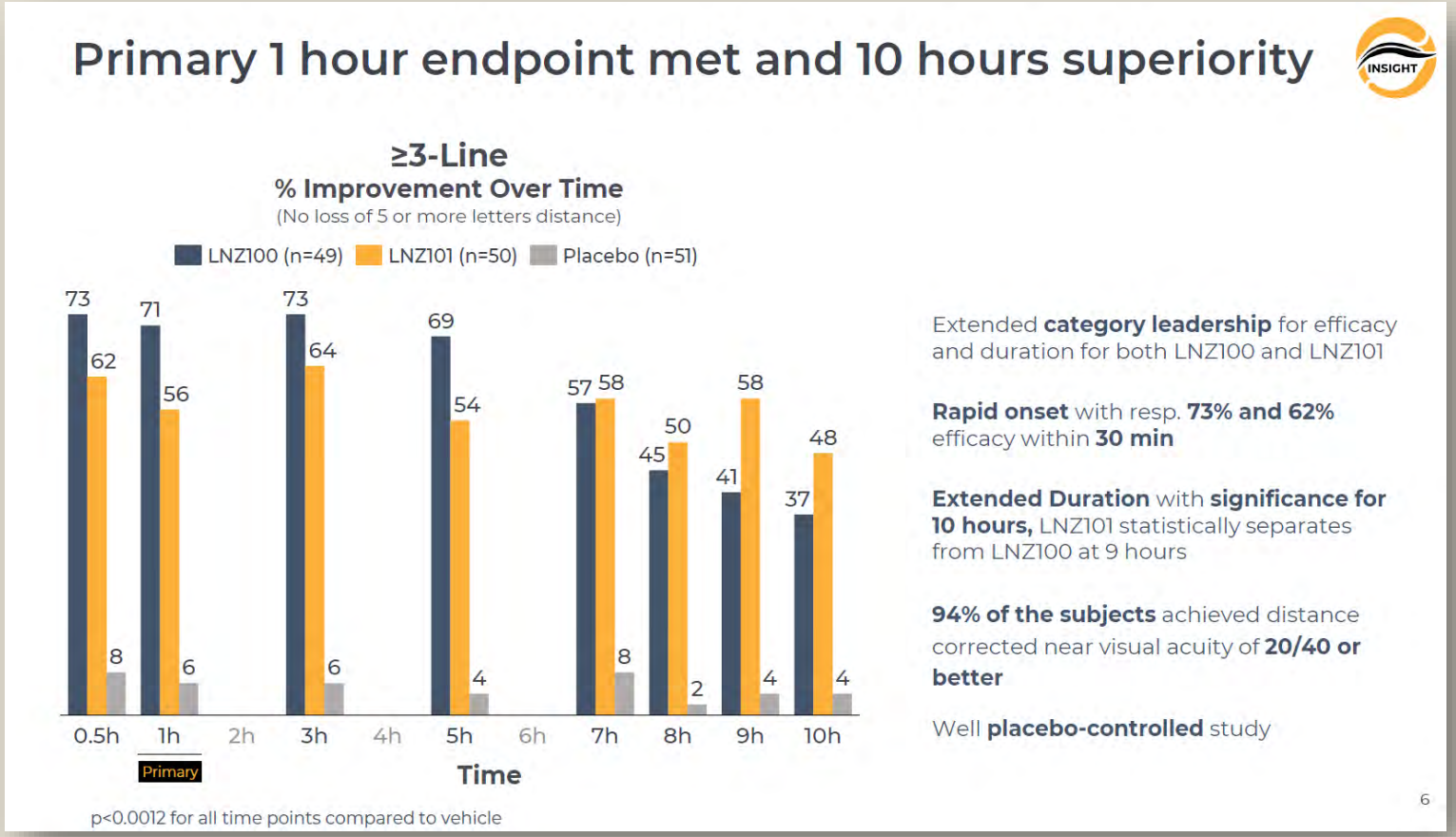
Pharmacological Treatment: Aceclidine

- **INSIGHT (Phase 2 Clinical Study)**



Pharmacological Treatment: Aceclidine

- **INSIGHT (Phase 2 Clinical Study)**

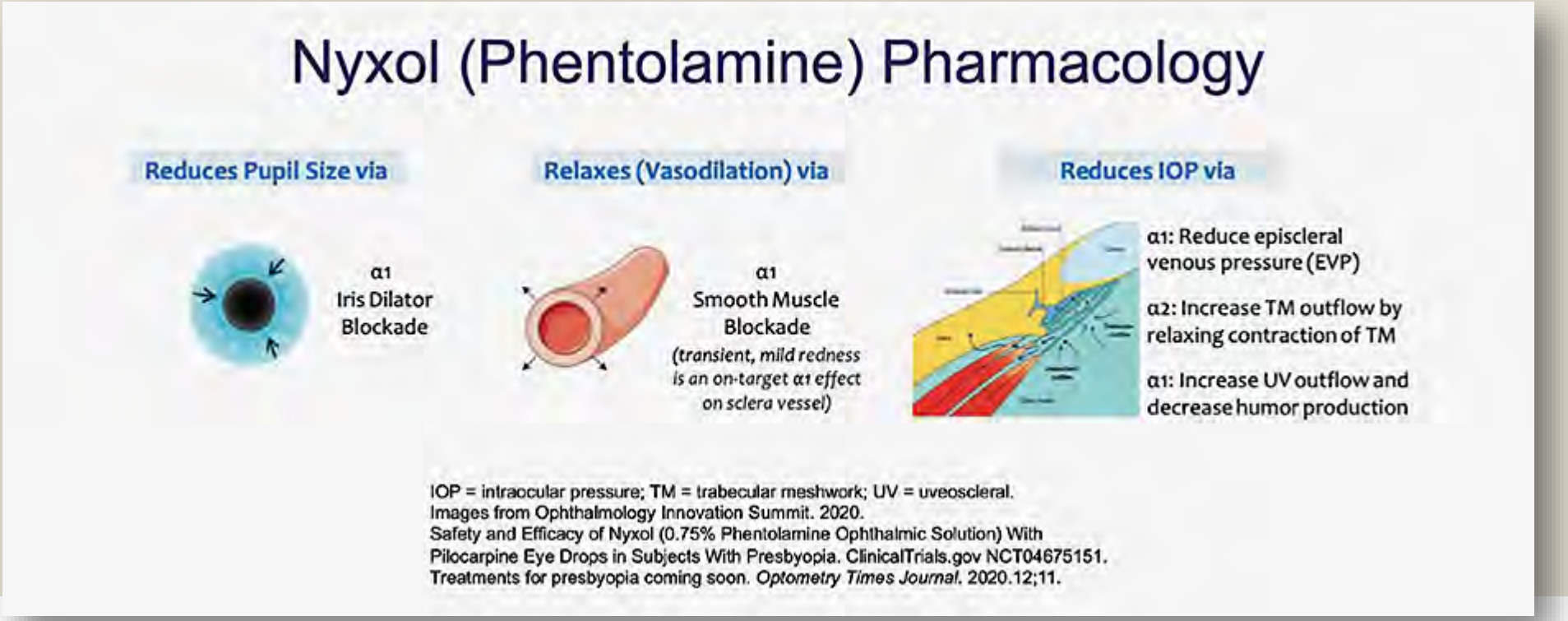


Pharmacological Treatment: Aceclidine

- **CLARITY (Phase 3 Clinical Study)**
  - Evaluating the safety and effectiveness of LNZ101 compared with LNZ100 and Brimonidine for treatment of Presbyopia.
  - Followed up to Day 180.
  - LNZ100: New Drug Application (NDA) to FDA was submitted in August 2024

Pharmacological Treatment: Phentolamine Ophthalmic solution

- **Ryzumvi**
  - Ocuphire
  - Formerly known as Nyxol
  - Phentolamine ophthalmic solution 0.75%
    - Alpha-adrenergic antagonist→ prevents or reverses pupil dilation
    - Allows complementary affect when combined with low dose pilocarpine (0.4%)



Pharmacological Treatment: Phentolamine Ophthalmic solution

- **Ryzumvi**
  - Approved by FDA for the reversal of pharmacologically induced mydriasis
    - Approved in September 2023
    - Available in the US as of April 1, 2024
    - Preservative-free
    - Returns to the baseline pupil diameter as little as 60-90 minutes and lasts up to 24 hours
    - Approved to be used in 3 years and older
    - Common Adverse effects:
      - Site discomfort (16%)
      - Conjunctival hyperemia (12%)
      - Dysgeusia: salty, rancid or metallic taste sensation (6%)

Pharmacological Treatment: Phentolamine Ophthalmic solution

- **VEGA-1 (Phase 2 Clinical Study)**
  - Combination of phentolamine ophthalmic solution 0.75% & low-dose pilocarpine 0.4%
  - 150 participants
  - Once-daily dosage
  - Examine the distance corrected near visual acuity up to 6 hours
  - Placebo alone, phentolamine alone, pilocarpine alone or Phentolamine/pilocarpine combo
  - Phentolamine/pilocarpine combo had significant increase in distance corrected near visual acuity starting at 1 hour.

Pharmacological Treatment for Presbyopia

- Better suited for people who are *not* doing near work all the time.
- Patients who want some clarity at near and distance.
  - Example: a sport coach
- Ultimately, it comes down to patient's desire, lifestyle, amount of near work, amount of clarity needed at near.


LIMITLESS POSSIBILITIES

2024 Texas Professional Responsibility Course

UNIVERSITY OF HOUSTON COLLEGE OF OPTOMETRY

ANDREW KEMP, OD, FAAO

PRESENTER

Welcome to the 2024 Professional Responsibility Course sponsored by the University of Houston College of Optometry. As you know, this course is a requirement for Texas license holders. What you may not know is that ***all*** fees associated with this course are devoted to permanent projects that are important for ***the future of the profession***.

Thank you for choosing UHCO for your continuing education.

The development and production of the 2024 Professional Responsibility Course is underwritten by the Harris Lee Nussenblatt Lecture Series Endowment. This endowment was established in 1992 by the Nussenblatt Family in memory of former Associate Professor Harris Nussenblatt, OD.

The Lecture Series focuses on issues related to professional ethics, public health and practice administration

The following activity planners and speaker have no relevant financial interests in this lecture:

Dr. Andrew Kemp, UHCO Speaker

Amanda Johnson, UHCO

Carlos Cole, UHCO

Cristian Loayza, UHCO

Lorellye Macomber, UHCO

Preface

The content of the Professional Responsibility Course is at the discretion of the Texas Optometry Board. This year, the Board set an aggressive agenda. **Some of the items are presented based on our knowledge of the subject matter as of January 1, 2024 and may change over the course of the year.**

Pay attention to any updates from TOB and TOA.

AGENDA – TEXAS OPTOMETRY BOARD

- Statutory address requirement
- CE Broker update
- CPR/BLS CE requirement
- Professional identification requirements (again…)
- Initial examination of a patient – in detail
- Remote care and initial examination of the patient – where are we?
- Review of HB1696 – Vision Plan Bill

Statutory Address Requirement
Tex.Occ.Code 351.351 – License Holder Information

(a) A license holder shall file with the board:

- *(1) the license holder's mailing address*;
- THIS WOULD BE YOUR PREFERRED MAILING ADDRESS
- **USED FOR COMMUNICATIONS FROM THE BOARD**
- *(2) the address of the license holder's residence;*
- WHERE YOU LIVE
- *(3) the mailing address of each office of the license holder; and*
- MAYBE LESS CLEAR – THIS REFERS TO THE MAILING ADDRESS OF THE OFFICE WHERE YOU PROVIDE PATIENT CARE TO TEXAS PATIENTS
- *(4) the address for the location of each office of the license holder that has an address different from the office's mailing address.*
- PHYSICAL ADDRESS OF THE OFFICE WHERE YOU PROVIDE PATIENT CARE TO TEXAS PATIENTS IF THAT ADDRESS IS DIFFERENT FROM THE MAILING ADDRESS
- **#3 AND #4 USED BY THE BOARD FOR INSPECTION PURPOSES**

This information would be included in your initial application for licensure. We are focusing on CHANGE to that information.

Statutory Address Requirement
Tex.Occ.Code 351.351

LICENSE HOLDER INFORMATION

THIS IS THE BIG ONE….because change happens!

(b) Not later than the 10th day after the date of a change in the information required to be filed with the board under Subsection (a), the license holder shall file with the board a written notice of the change

Some Specifics

- This includes **ALL** the information in the previous slide
- Special instructions related to short-term fill-in work (see next slide)
- Primary updates can be made directly at https://tob.texas.gov/optometrists/update-contact-information/
- To report secondary addresses, email to info@tob.Texas.gov

OK…what about the temporary thing

For licensees who are in an office routinely and provide ONLY fill-in (temporary) services

If you are in a particular office routinely, report that office as your primary business location

If you see patients at multiple locations in a given year, provide the location where **you see the MOST patients** as your primary location (update online) and supply other locations to the Board (by email) as described in the previous slide

If you are not in any office on a routine basis and see a minimal number of patients, report "No primary address – fill-in work only" in the business address field

NOTE FOR EVERYONE: The Board is actively reviewing all aspects of the inspection process they are mandated to make by Texas law. Look for notices in 2024 from the Board for any changes applicable to this information.

Statutory Address Requirement
Tex.Occ.Code 351.351

While this may seem like a minor issue, it is imperative that the Board be able to contact every license holder and know where they provide patient care.

Any failure to receive essential / legal information from the Board based on you not keeping contact information up to date is **TOTALLY on you** and there is no allowed excuse.

CE Broker – Deeper Dive

Key Points

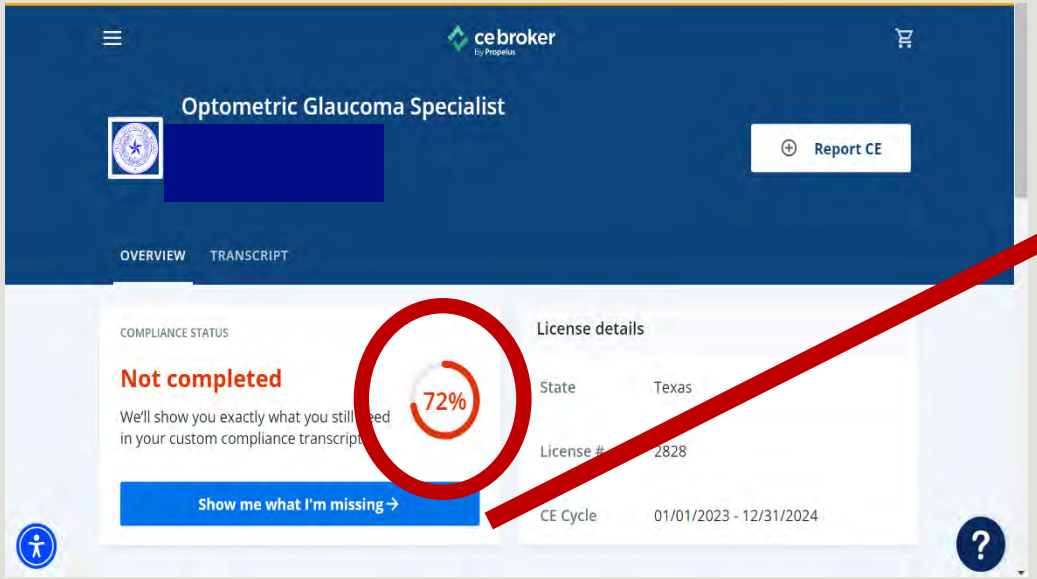
- CE Broker is the official / only CE tracking system for the Board
- CE Broker Basic Account is FREE – you can sign up for an upgraded account ($39 a year) that provides more information, if you wish
- CE hours can ONLY be reported through CE Broker – **NOT the Board**

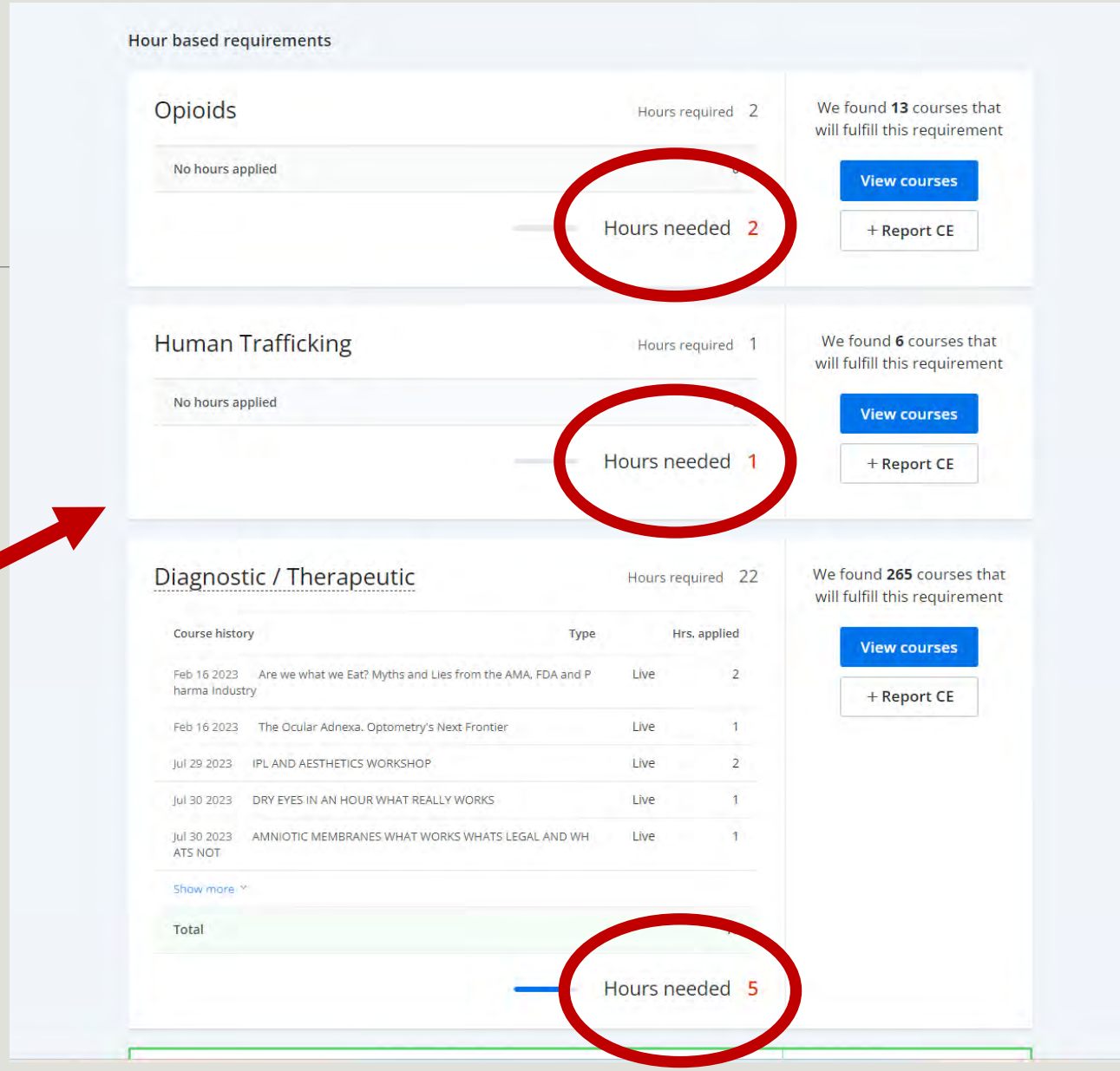
NOTE: **EVERYTHING** CE happens through CE Broker – do not call the Board asking about your hours, asking if a course is approved, asking to approve a course, etc. etc. etc.

CE Broker

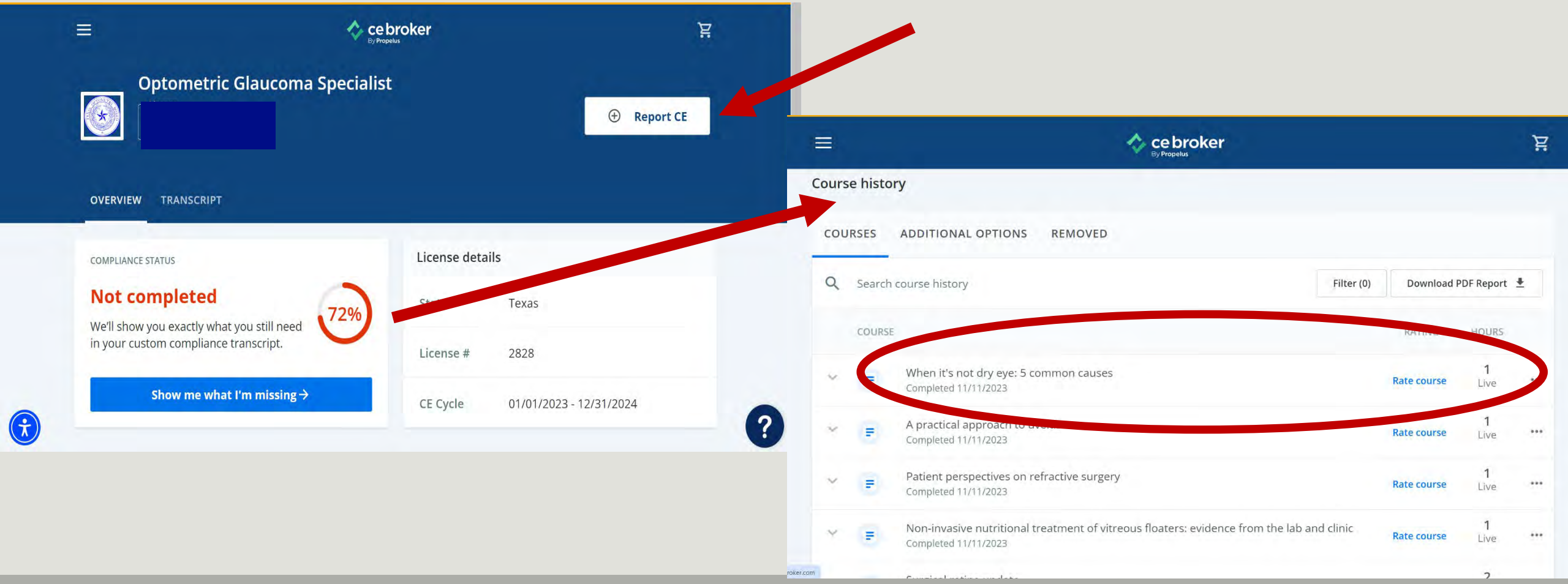
- Everyone should already have a CE Broker account. For new grads or anyone who has never gone through renewal process, simply go to https://cebroker.com and create an account – VERY easy
- Knowing your CE is recorded with CE Broker is **YOUR** responsibility
  - Make sure any CE you expect credit for is going to be recorded with CE Broker **BY THE ENTITY PRESENTING THE CE**
  - You CAN upload CE to your account yourself – a somewhat painful process
  - **There is NO retro-active approval – CE must be approved BEFORE you attend**

Very helpful…





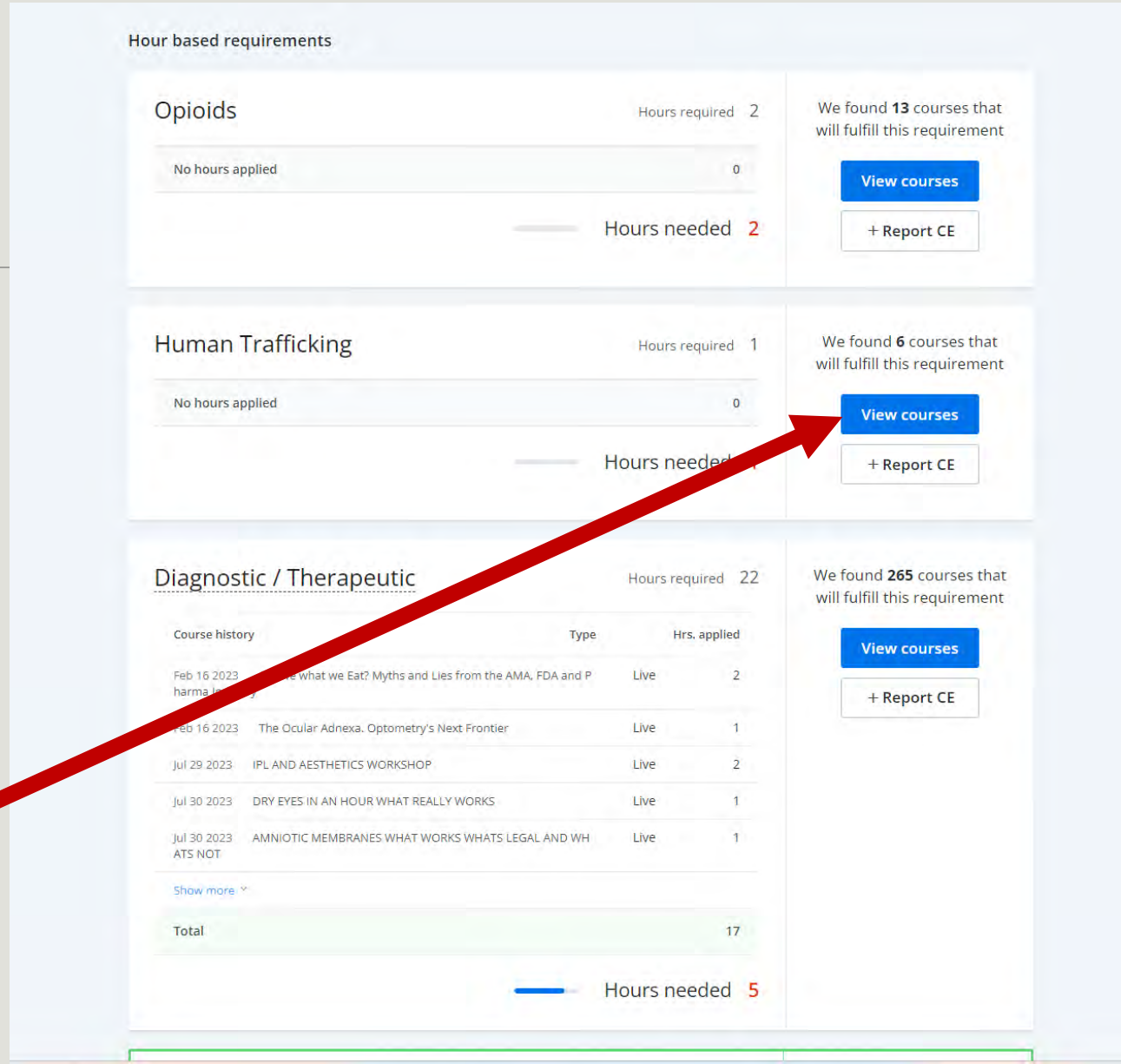
Once you get it, it’s pretty cool…



More help…

CE Broker provides a “Course Search” feature (also free) to find courses needed to help with license renewal. Access at https://courses.cebroker.com/search/tx – select profession and search away! Or look on your account page

NOTE: These are all online courses – remember you are limited to 16 online credit hours per renewal cycle



Some of the features I showed are not available with the basic plan…here is a breakdown

BASIC PLAN – FREE

- ✓ Connect with TOB
- ✓ Complete course history
- ✓ Can report hours manually
- ✓ Check your status any time
- ✓ Take recommended courses

PROFESSIONAL PLAN - $39/YR

- ✓ Everything in Basic Plan
- ✓ Detailed view of missing compliance
- ✓ Details of when each requirement was met
- ✓ Can track multiple licenses
- ✓ Personalized compliance transcript
- ✓ Onsite storage of training certificates

CONCIERGE PLAN ALSO AVAILABLE…PRETTY PRICEY

CPR Requirements

Board Rule 273.17

Everyone who applied or renewed in 2023 had to have this…everyone applying or renewing in 2024 will have to provide this!

(a) Definitions.

(1) Cardiopulmonary resuscitation (CPR) is an emergency lifesaving procedure performed when the heart stops beating. A certification in CPR includes training and successful course completion in cardiopulmonary resuscitation, AED and obstructed airway procedures for all age groups according to recognized national standards.

(2) Basic Life Support (BLS) is a basic level of pre-hospital and inter-hospital emergency care and non-emergency medical services care. A certification in BLS includes training and successful course completion in airway management, cardiopulmonary resuscitation (CPR), control of shock and bleeding and splinting of fractures, according to recognized national standards.

(b) Requirement for Initial License. Commencing effective January 1, 2023, all applicants for initial licensure shall provide proof of successful completion of a CPR or BLS certification prior to receiving a license.

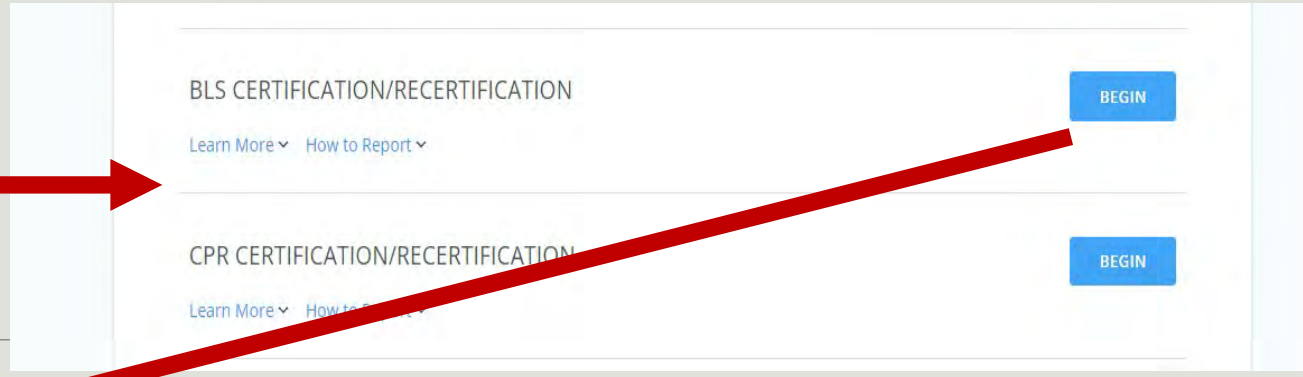
(c) Requirement for Renewal of License. Effective January 1, 2023, all active licensees shall provide proof of successful completion of a CPR or BLS certification for renewal of a license each renewal cycle. Licensees may be credited two general hours of continuing education for CPR certification and four general hours of continuing education for BLS certification.

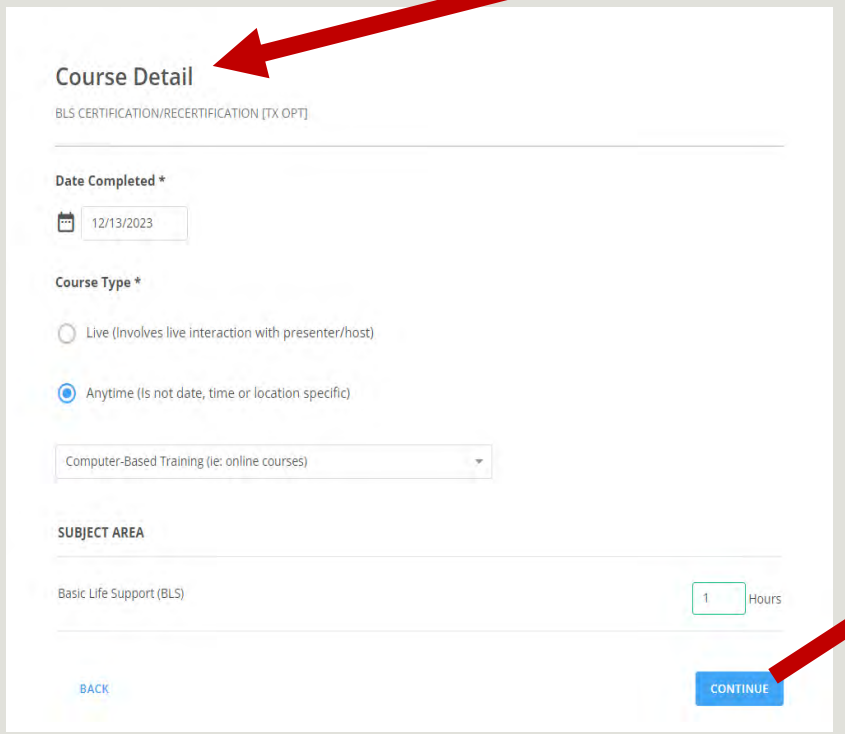
CPR Requirements
Board Rule 273.17

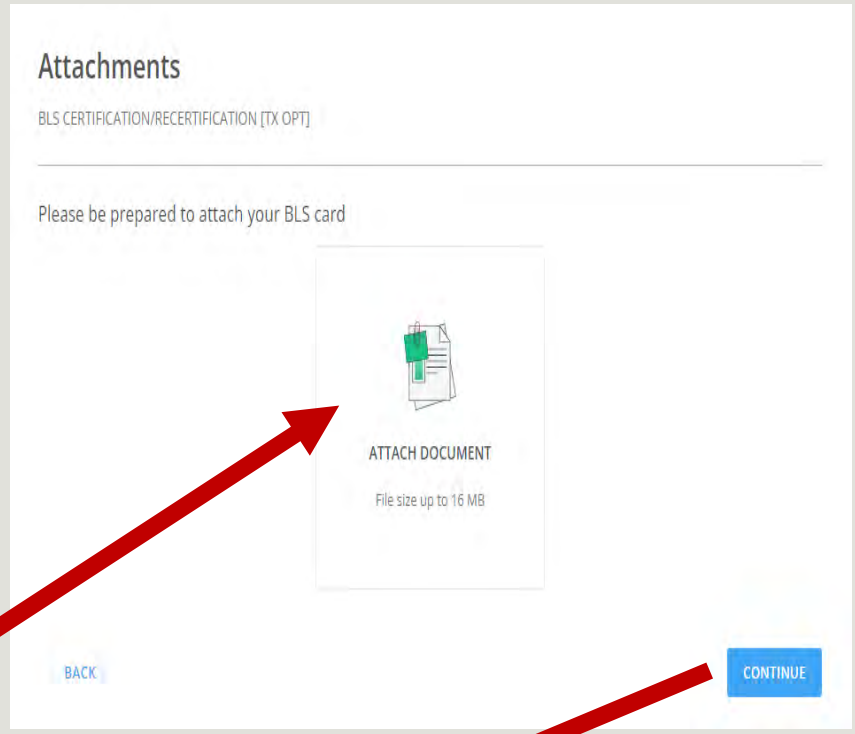
Break it down….

- This requirement was established by Board Rule 2022 – required for all licensee renewals after January 1, 2023
- **CPR** is the basics and entry-level training – **BLS** offers more areas of training for emergency preparedness. Both are allowed for certification – BLS is more applicable to healthcare settings (opinion)
- Courses may be taken live or online – online courses can take less than an hour…advanced live courses can take 2-4 hours
- Courses are readily available – online, certified trainers, fire department, put a group together, extended staff meeting. NOT expensive!!!

Making sure it counts….







You must upload your certificate of training to the CE Broker website – **trainers and online presenters will typically *NOT* do this for you**

Log in to your CE broker account – select “Report CE”. Follow the instructions – have your certificate ready to upload

Check the attestation on the next page….

Professional Identification

Same as seven other PR courses…

Section 351.362 NAME OF PRACTICE

(a) An optometrist or therapeutic optometrist may practice under a trade name, an assumed name, or the name of a professional corporation or association.

(b) An optometrist or therapeutic optometrist practicing in this state shall display the **actual name** under which the optometrist or therapeutic optometrist **is licensed by the board**, so that the name is visible to the public before entry into the optometrist's or therapeutic optometrist's office reception area.

Professional Identification

Same as seven other PR courses…

Rule 279.10

(a) To **protect the public health** and **provide a means for the patient to identify a licensee** in a complaint filed with the Board, §351.362 of the Act requires an optometrist or therapeutic optometrist to display the doctor's name so that the name is visible to the public before entry into the office reception area. This requirement does not apply to an optometrist or therapeutic optometrist practicing at a location on a temporary basis, as defined in subsection (b) of this section.
(b) Temporary basis is defined as the practice of optometry or therapeutic optometry at an office for no more than two consecutive months. For example, an optometrist or therapeutic optometrist practicing at a location one day per week during a three month period is not at that location on a temporary basis, and the doctor's name must be displayed as required in §351.362 of the Act.
(c) Section 351.458 of the Act prohibits the display of an optometrist or therapeutic optometrist's professional designation if the intent of the display is to mislead the public that the named optometrist or therapeutic optometrist owner regularly practices at that location. Therefore an optometrist or therapeutic optometrist practicing at an office in which the doctor has no ownership interest, must display the doctor's name as licensed by the Board, regardless of the percentage of time spent at that office, unless the doctor's practice meets the definition of temporary basis in subsection (b) of this section.

Professional Identification

Break it down…

This is a **STATE law** – Occupations Code 104. In effect since 1999.

Optometrists (me as an example) may identify as:

- ✔ Joe DeLoach, Optometrist
- ✔ Joe DeLoach, Therapeutic Optometrist
- ✔ Doctor Joe DeLoach, Optometrist
- ✔ Joe DeLoach, Doctor of Optometry
- ✔ Joe DeLoach, OD

Key Points

Intent of the law:

- ➢ Individuals cannot mislead the public regarding the licensure/credentials of a healthcare provider
- ➢ Doctors cannot mislead the public into thinking they **do or do not** practice at a particular location (cannot put name on door unless you practice there – including owners). **WORKS BOTH WAYS!**

Professional Identification

Key point..often misunderstood. ***"Temporary basis"***

Does not apply to practice at a location on a temporary basis – defined as the "practice of optometry or therapeutic optometry at an office for no more than two consecutive months". KEY WORD IS **CONSECUTIVE**

EXAMPLES

1. Doctor works at practice full or part-time for two or more consecutive months – NAME ON DOOR
2. Doctor works only one day every week for two or more consecutive months – NAME ON DOOR
3. Doctor fills in full or part-time for six weeks – NO requirement for name on door

Minimum Competency and Remote Eye Examinations

This information is current as of January 1, 2024. Various parties are involved in challenging the law and rules related to Section 351.353.

Information presented **IS** in effect at the time the course was written. It could change at any time.

If this directly applies to you, it is very important you stay aware of any potential changes in the information that will be forthcoming from the TOB, should/when they occur.

Section 351.353 – Initial Examination of Patient
Back to the beginning – 1956!

(formally adopted as law in 1969 after being upheld by the SCOTUS and only a few changes since then)

INITIAL EXAMINATION OF PATIENT.

To ensure adequate examination of a patient for whom an optometrist or therapeutic optometrist signs or **causes to be signed an ophthalmic lens prescription**, in the **initial examination of the patient** the optometrist or therapeutic optometrist shall make and record, **if possible**, the following findings concerning the patient's condition:

First three issues – #1

<u>Causes to be signed an ophthalmic lens prescription</u>

Minimum competency only applies if the examination results in issuing a glasses or contact lens prescription.

In many cases – how would you know beforehand?

Another thought….apply logic

Patient presents with medical emergency - new patient with a corneal ulcer from CL overwear and no glasses. Would this be a logical exemption from 351.353? Law is law and usually rigidly interpreted. You can only trust, and having been there I do, that your colleagues on the Board can understand when it doesn't apply (wouldn't recommend playing games here!).

First three issues – #2

Initial examination of a patient

Current interpretation is initial means the first complete eye examination you conduct on that patient (no specific time limitation like Medicare)

First three issues - #3

If possible

Intent IS - a unique situation results in not being able to perform the service.

- patient refuses autorefractor (or ***any*** element of the care)
- cannot perform tonometry because of uncontrollable nystagmus
- cannot adequately perform internal examination due to mature cataracts
- cannot perform biomicroscopy examination because patient is obese

Intent is NOT – the patient and the doctor just don't happen to be in the same place at the same time

KEY TO "NOT POSSIBLE" IS DOCUMENTING WHY!

And what is required? 1-5
With the addition of points from Rule 279.3

(1) case history - ocular, physical, occupational, and other pertinent information;

KEY POINT: "*Pertinent*" – left to the discretion of the provider

(2) visual acuity;

KEY POINT: Left to the discretion of the provider

(3) results of biomicroscopy examination, including lids, cornea, and sclera;

KEY POINT: Rules add "*using a binocular microscope*"

(4) the results of an internal ophthalmoscopic examination, including an examination of media and fundus;

KEY POINT: Rules add "*using an ophthalmoscope or biomicroscope with fundus condensing lenses*"

(5) the results of a static retinoscopy, O.D., O.S., or autorefractor;

KEY POINT: None – left to discretion of provider

And what is required? 6-10
With the addition of points from Rule 279.3

(6) subjective findings, far point and near point;

KEY POINT: None – left to the discretion of the provider

(7) assessment of binocular function;

KEY POINT: None – left to the discretion of the provider

(8) amplitude or range of accommodation;

KEY POINT: None – left to the discretion of the provider

(9) tonometry; and

KEY POINT: None – left to the discretion of the provider

(10) angle of vision, to right and to left.

KEY POINT: None – left to the discretion of the provider

Other “Key Points” – Rule 279.3

- The optometrist must “*personally make and record*”
  - Biomicroscopy (external) exam
  - Ophthalmoscopic (internal) exam
  - Subjective findings, far point and near point (refraction)
- The optometrist may either personally make and record or authorize an assistant present in the same office with the optometrist to make and record the remaining seven required findings
- **Videos and photographs do not fulfill the internal ophthalmoscopic examination requirement – *YOU MUST LOOK IN THE EYE WITH YOUR OWN TWO EYES!***

"personally make and record"

The current TOB interpretation of "*personally*" means the doctor performed the test. This rule IS currently in effect.

The board has submitted a rule change changing the language to "***in person***" – NOT in effect at the time this course was published. This would make it clear that the doctor is **IN THE ROOM WITH THE PATIENT**.

The terms "personally" or "in person" do not apply to telehealth services outside of the requirements of Section 351.353. The Board has an entire section on Rules related to telehealth services (Rule 279.16) – those rules do state that telehealth services must provide the **same level of care as an in-person visit.**

Few other points…

Section 351.359. Prescription. (a) *An ophthalmic prescription must include:*
(1) the signature of the optometrist or therapeutic optometrist…

UNLESS PRACTICING UNDER DELEGATION, THE DOCTOR WHO PERFORMED THE EXAMINATION MUST SIGN ANY PRESCRIPTION THAT IS THE RESULT OF THE EXAMINATION. THE BOARD POSITION IS THE DOCTOR THAT SIGNED THE PRESCRIPTION PROVIDED THE SERVICE AND IS RESPONSIBLE FOR COMPLIANCE WITH ALL ASPECTS OF 351.353.

Rule 279.2

(o) *an optometrist or therapeutic optometrist may not sign, or cause to be signed, an ophthalmic lens prescription without first personally examining the eyes for whom the prescription is made*

SELF-EXPLANATORY

The Penalty – Rule 279.3

The willful or repeated failure or refusal of an optometrist or therapeutic optometrist to comply with any of the requirements in the Act, §351.353 and §351.359, shall be considered by the board to constitute ***prima facie evidence that the licensee is unfit or incompetent by reason of negligence*** *within the meaning of the Act, §351.501(a)(2), and shall be sufficient* ***ground for the filing of charges to cancel, revoke, or suspend the license.*** *The charges shall state the specific instances in which it is alleged that the rule was not complied with. After the board has produced evidence of the omission of a finding required by §351.353, the* ***burden shifts to the licensee to establish that the making and recording of the findings was not possible.***

Are some optometrists exempt from all this?
Back to the Act – Section 351.005(a)(2) & (b)

(a) This chapter does not:

(2) prevent or interfere with the right of a physician licensed by the Texas Medical Board to:

(A) treat or prescribe for a patient; or

(B) direct or instruct a person under the physician's control, supervision, or direction to aid or attend to the needs of a patient according to the physician's specific direction, instruction, or prescription;

(b) A direction, instruction, or prescription described in Subsection (a)(2)(B) must be in writing if it is to be followed, performed, or fulfilled outside the physician's office

WOW…that is a bunch of words. Is it even possible to break this one down?

What is FACT.

A physician licensed to practice medicine in Texas under the Physicians Medical Practices Act has broad authority to *"delegate to a qualified and properly trained person acting under the physician's supervision any medical act that a reasonable and prudent physician would find within the scope of sound medical judgment to delegate…" (TOTALLY open ended!)*

When an optometrist is under delegation of a physician per the terms of Section 157.001 of the Medical Practices Act which means the physician signs the medical record and the prescription, the optometrist is operating under the PHYSICIAN'S license and IS NOT bound by the Texas Optometry Act. Refer back to Slide 32 – if you sign it, the service was provided by you and you are under the Texas Optometry Law and Board rules.

WOW…that is a bunch of words. Is it even possible to break this one down?

More FACT

Delegation is NOT the same as direction, instruction or prescription.

Optometrists simply employed by, contracted with (legally or illegally), under the direction of, or who receive a paycheck signed by a physician are NOT operating under delegation unless they have a written delegation order from the physician.

NOTE: Texas optometrists have NO legal delegation authority.

WOW…that is a bunch of words. Is it even possible to break this one down?

Sure…we can look to precedent issued in 2023 by a Texas Administrative Law Judge (ALJ) and resultant rulings adopted by the Texas Optometry Board.

Texas Optometry Board Conclusions

The Board has affirmed that licensees must comply with the Act even if acting under the direction of a medical doctor unless that direction is sufficiently specific, addressed to the optometrist, and aids the needs of the patient. If the optometrist signs the prescription, that licensee must comply with the required 10 findings under Section 351.353 during an initial examination when a prescription will be written **even if the examination is conducted in a remote setting**.

NOTE: The Judge ruling in the case concluded *"the optometrist and employer created the **'impossibility' of making the required 10 findings under Section 351.353 when they decided to operate remotely."***

What now?

What NOW is what the last two slides said!

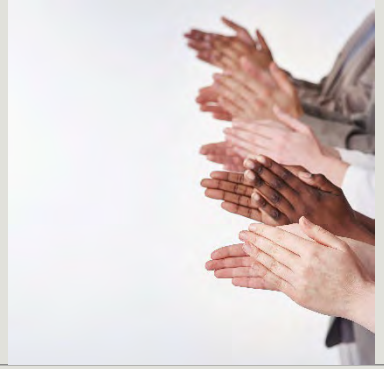
What will happen going forward is in the hands of the courts, as the actions of the State and TOB are being challenged as not legal. The outcome of said challenge will likely take time. In the meantime, **the conclusions of the State ALJ and the TOB are IN FORCE.**

Stay tuned!

And last….

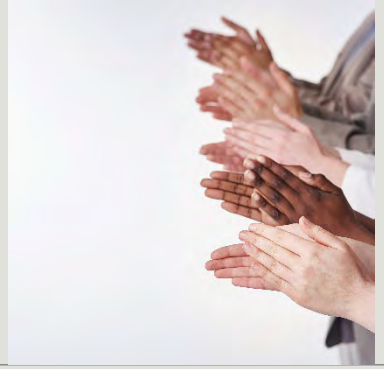
A review of HB1696 – the Vision Plan Bill. What it did, where it is and where it’s going.

Let's Start With What It Did



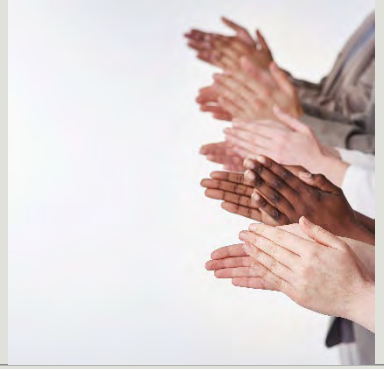
- ✓ Prohibits plans from the identifying and tiering of in-network ODs based on discounts on non-covered services, amounts spent on products, or brands or sources of products utilized by the OD.
- ✓ Prohibits plans from steering patients towards any particular in-network OD, any retail location owned by or affiliated with the plan, or any internet site or virtual provider owned by or affiliated with the plan.
- ✓ Requires plans to provide direct, immediate, electronic access to complete in-network and out-of-network plan benefits to the patient and OD.
- ✓ Requires plans to accept standardized claim submission forms and processes, and reimburse doctors via electronic funds.

Let’s Start With What It Did



- ✓ Prohibits improper chargebacks to reimbursements when the plan is not supplying the materials (cost of goods) for a patient.
- ✓ Prohibits plans from calling services and products "covered" when the reimbursement amount to the OD is considered "de minimus" in nature. De minimis means of nominal or very small value.
- ✓ Prohibits plans from calling services and products as "covered" when zero reimbursement of the service or product comes from the plan to the OD.
- ✓ Prohibits plans from using or offering reimbursement rates that are different from another OD based on the OD's particular practice and business decisions, such as what lab they choose to use or what products they choose for a patient.
- ✓ Requires plans to give 90-day notice to any provider contract changes.

Let's Start With What It Did



- ✓ Prohibits plans from requiring an OD provide a covered product or service at a loss.
- ✓ Prohibits plans from requiring that an OD receive reimbursement by a virtual credit card.
- ✓ Prohibits plans from requiring an OD to use any particular EHR.
- ✓ Prohibits plans from requiring an OD to use any particular clearinghouse or claim filing service.
- ✓ Prohibits plans from requiring unneeded and unrelated patient information to file a claim or receive reimbursement for a wellness eye exam, including glasses/contact lens prescriptions, unique anatomical measurements like PD, or facial photographs.
- ✓ Prohibits vision plans from using extrapolation as a method to complete an audit. This provision does not apply to medical plans.
- ✓ Requires that the provisions of the bill are to be enforced by the Texas Insurance Commissioner.

wow!

So, what's going on now…

Several entities are doing everything in their power to stop this law from making changes in the system

- ☹ Restraining orders
- ☹ Injunctions
- ☹ Law suits
- ☹ Forcing contract renewals

THEY DO NOT LIKE WHAT THE STATE OF TEXAS DID!

When does this law change things? Some specifics

1. If you are under operating under a contract you signed or renewed prior to January 1, 2024, that contract is in force under the terms as written. WATCH FOR #2!!!

2. Any contract signed after January 1, 2024, renewed after January 1, 2024 **or CHANGED after January 1, 2024** – the conditions and terms of the new law are in **FULL FORCE**

WATCH FOR ANY NEW CONTRACT OR CHANGE IN YOUR CONTRACT – this will trigger all the stipulations under HB1696

So what should I do?

This law, in whatever form emerges from the legal war, is just like other practice enhancements – therapeutics, managed care plan access, telehealth. They are all resources / choices.

The TOB nor the TOA can tell you what decision to make or how conduct your practice inside the legal aspects of the law.

Each licensee ultimately has to decide how they interact and cooperate with vision plans, or all managed health plans for that matter.

TOA Has Stepped Up As A Significant Resource for Texas Optometrists

TOA managed care general resource webpage
https://texas.aoa.org/advocacy/managed-care-plan-laws-resources-for-texas-optometrists?sso=y

TOA partner law firm for managed care contract review:
https://texas.aoa.org/Affiliates/TX/Documents/Advocacy/2023/2023-24%20Enoch-Announcement-v4.pdf

TOA complaint submission form:
https://texas.aoa.org/advocacy/managed-care-plan-laws-resources-for-texas-optometrists/manage-care-plan-concerns-form?sso=y

TDI complaint webpage:
https://www.tdi.texas.gov/hprovider/providercompl.html

Thank you for your attention and have a great 2024

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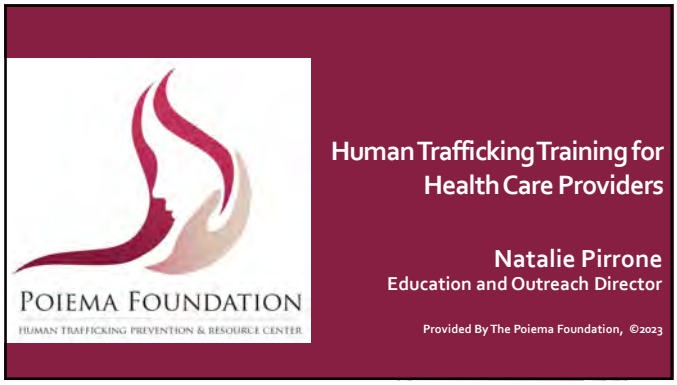
apjohns7@central.uh.edu
Janice.McCoy@tob.texas.gov
www.tob.state.tx.us


POIEMA FOUNDATION
HUMAN TRAFFICKING PREVENTION & RESOURCE CENTER
Human Trafficking Training for Health Care Providers
Natalie Pirrone
Education and Outreach Director
Provided By The Poiema Foundation, ©2023

1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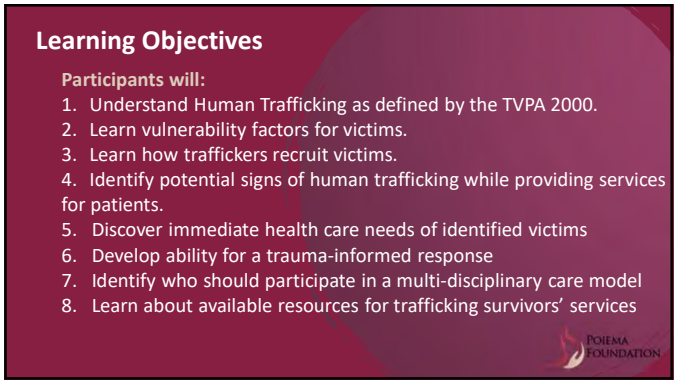
HUMAN TRAFFICKING PREVENTION & RESOURCE CENTER
Conflict of interest and disclosures
• The presenter has no financial relations with commercial interest(s) to disclose
• Statistics in this presentation should be viewed through a critical lens
• No standards currently exist for reporting human trafficking
Trigger warning:
• Violence, sexual assault, and sexual abuse are discussed. This may be triggering or upsetting for some participants

2


Learning Objectives
Participants will:
1. Understand Human Trafficking as defined by the TVPA 2000.
2. Learn vulnerability factors for victims.
3. Learn how traffickers recruit victims.
4. Identify potential signs of human trafficking while providing services for patients.
5. Discover immediate health care needs of identified victims
6. Develop ability for a trauma-informed response
7. Identify who should participate in a multi-disciplinary care model
8. Learn about available resources for trafficking survivors' services
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3

Human Trafficking

Human trafficking is a modern form of slavery.

It involves selling another person's body or labor in exchange for something of value.

TVPA 2000-The United States Department of Justice generally classifies human trafficking into two major categories: sex trafficking and labor trafficking.

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Trafficking Victims Protection Act (TVPA) 2000

PROCESS/ACTION
- Recruitment
- Harboring
- Transporting
- Provision
- Obtaining
- Patronizing*
- Soliciting*

*only for sex trafficking

MEANS
- Force
- Fraud
- Coercion

*Special Issue: These are not required when the victim is a minor.

PURPOSE
- Sexual Exploitation
- Forced Labor

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Trafficking vs. Smuggling

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Trafficking Vs. Smuggling

Trafficking

- Crime against a person
- Done without consent
- Exploitation; transportation not required
- No border crossing required

Smuggling

- Crime against a state
- Done with consent
- Requires transportation
- Must cross an international border

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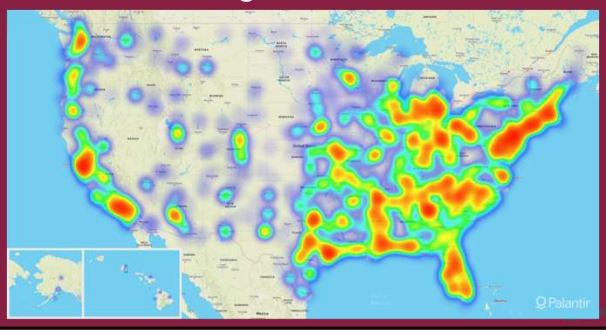
Trafficking in the United States



8

Trafficking in Texas

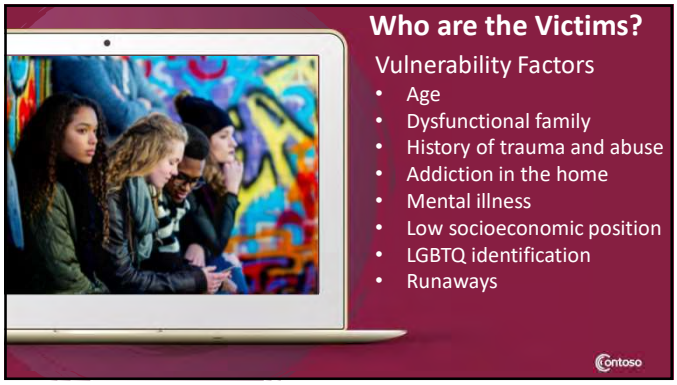
Labor Trafficking

- Agriculture
- Food service
- Factory work
- Day labor/construction
- Nanny
- Domestic work
- Caretaker for the elderly
- Landscaping

Sex Trafficking

- Strip clubs
- Brothels
- Massage parlors
- Nail Salons
- Donut shops
- Internet ads
- Escort services
- Recording studios
- Hotels
- The street
- Pornography
- Modeling
- Neighborhoods

9


Who are the Victims?
Vulnerability Factors
• Age
• Dysfunctional family
• History of trauma and abuse
• Addiction in the home
• Mental illness
• Low socioeconomic position
• LGBTQ identification
• Runaways
Contoso

10


Who are the traffickers?
• Friend
• Family
• Strangers
• "Boyfriends"

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Maslow's Hierarchy of Needs
Maslow's Hierarchy of Needs
Self-actualization
Ego
Social
Safety
Physiological
The need for development, creativity, growth.
The need for self-esteem, power, control, recognition.
The need for love, belonging, inclusion.
The need for safety, shelter, stability.
The need for air, food, water, health.
https://www.educationviews.org/wp-content/uploads/2018/02/Maslow-1024x580.png
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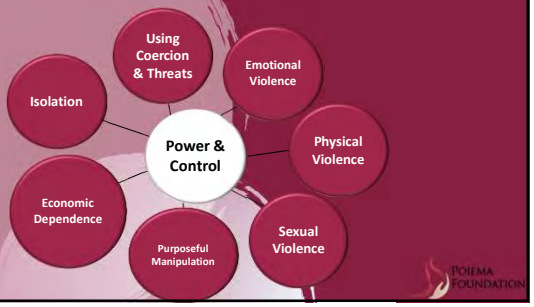
Recruitment/Grooming Process

Domestic Minor Sex Trafficking Power and Control Wheel



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Trauma Bonds

Trauma bonds are a major hurdle to the identification and restoration of victims.

Symptoms:

- Failure to self-identify
- Return to trafficker
- Refuse help
- Disjointed memories
- Aggression
- Protect pimp

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Trauma

DISREGULATED NERVOUS SYSTEM

• Hyperarousal:

Anger, panic and phobias, irritability, hyperactivity, frequent crying and temper tantrums, nightmares and night terrors, regressive behavior, increase in clinging behavior, running away.

• Hypoarousal:

Daydreaming, inability to bond with others, inattention, forgetfulness, shyness.

Physical symptoms can include: eyes widen, pale skin, complaints of being cold, flat affect.

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Characteristics of "The Life"

Impact on Physical Health/Clinical Settings

- Malnutrition
- HIV/AIDS
- STD's
- Hepatitis
- Effects of drug abuse
- Pregnancy/abortions
- Broken bones/bruises
- Dental injuries/cavities
- Cigarette burns
- Head/face trauma
- Exhaustion/sleep depravation
- Skin Conditions
- Concussions, traumatic brain injuries
- High blood pressure
- Untreated diabetes
- Substance abuse

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Characteristics of "The Life"

Impact on Emotional/Behavioral Health

- Nervous/anxiety/panic attacks
- Depression
- Suicidal ideation
- Dissociation
- Avoids eye contact
- Unable to answer questions
- Substance abuse
- Complex PTSD

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Characteristics of "The Life"

Other Indicators of Trafficking:

- Inappropriate clothing for the weather
- Accompanied by an older, controlling boyfriend or woman
- The adult with them doesn't let them answer questions
- Lives in an overcrowded home
- Lives at their place of employment
- Has tattoos indicating ownership/branding
- Disorientation-doesn't know their address
- May have multiple hotel keys or cell phones

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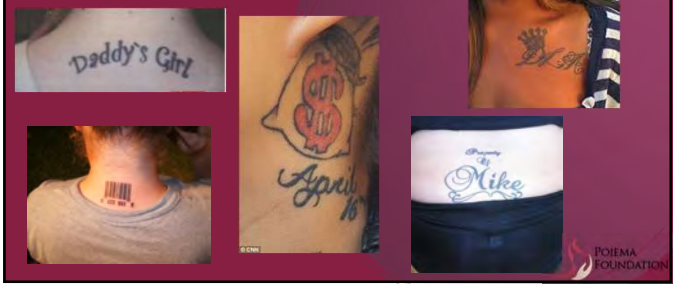
Characteristics of "The Life"



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Characteristics of "The Life"

20

Trauma Informed & Patient Centered Approach

If you suspect your patient is a victim of human trafficking:

- Build trust by asking permission before you do a procedure
- Explain what you are doing during the exam (oral/physical trauma)
- If possible, try to provide a space to speak privately with the patient
- Use your authority to separate the patient from anyone who may have accompanied them to the clinic
- Have protocol in place; limit the number of staff involved
- Safety is of primary importance for everyone; equip your staff to understand the importance of confidentiality

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Trauma Informed & Patient Centered Approach

If you suspect your patient is a victim of human trafficking:

- Use a professional interpreter if possible (It is tempting to use their family member, but this could be their trafficker or their manager)
- Strive to minimize re-traumatization
- Maintain a nonjudgmental attitude

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Trauma Informed & Patient Centered Approach

Questions you may ask a potential victim of human trafficking:

- What type of work do you do?
- What are your work hours?
- Are you being paid?
- Are you able to come and go as you please?
- Where do you eat and sleep?
- How many people stay there?
- Do you owe money to your employer?

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Trauma Informed & Patient Centered Approach

Questions you may ask a potential victim of human trafficking:

- Have you ever been asked to work in an environment that is unfair, unsafe, or dangerous?
- Do you feel pressure to do something you don't want to do?
- Have you been physically hurt?
- Has your family been threatened?

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Trauma Informed & Patient Centered Approach

If you suspect your patient is a victim of human trafficking:

- Provide the patient with options for services, reporting, and resources
- If the patient is in immediate, life-threatening danger, follow your institutional policies for reporting to law enforcement. Whenever possible, try to work with the patient in the decision to contact law enforcement.
- Don't make promises you cannot keep!
- Multidisciplinary approach

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Multidisciplinary Team

This team may include 3-5 people from different organizations such as:

- Law enforcement
- Attorneys/legal experts
- Anti-human trafficking nonprofits
- Human trafficking task force members
- Domestic violence/sexual assault programs
- Local shelters

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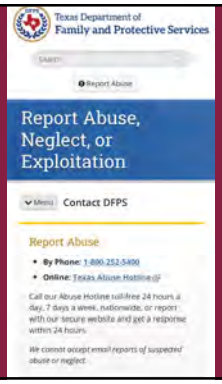
Mandatory Reporting

TEXAS LAW

Anyone who thinks a child, or person 65 years or older, or an adult with disabilities is being abused, neglected, or exploited must report it to DFPS.



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Resources for Protocols

National Human Trafficking Training and Technical Assistance Center

SOAR

https://nhttac.acf.hhs.gov/soar/eguide/respond/Response_Protocol

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Resources for Protocols

i:CARE

Health Care Provider's Guide to Recognizing and Caring for Domestic Minor Sex Trafficking Victims

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National Human Trafficking Resource Center (NHTRC)

1-888-3737-888

email: NHTRC@PolarisProject.org

TOLL-FREE | 24 Hours/day, 7 Days/week

Confidential | Interpreters available

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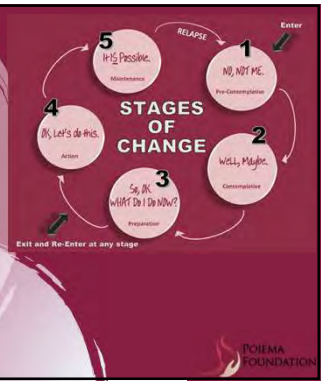
What Can I Do?

- Text BE FREE (233733)
- Respect the patient's decision



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Local Resources

Poiema Foundation
469-757-8888

Valiant Hearts
817-329-6921
Toll Free: 855-524-3747

Traffick 911 (for minors)
817-575-9923

Child Advocacy Centers

Mosaic Family Services
24-Hour Crisis Hotline
214-823-4434

Unbound Ft. Worth
24/7 Survivor Advocacy Referrals
(crisis & non-crisis)
817-668-6462

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Resources

- *Assessing the Threat of Human Trafficking in Texas*. The Texas Department of Public Safety, 2014. (electronic access: http://dps.texas.gov/director_staff/media_and_communications/2014/txHumanTraffickingAssessment.pdf)
- Bowley, Mary Francis. *The White Umbrella: Walking with Survivors of Sex Trafficking*. Chicago: Moody, 2012.
- Carnes, Patrick J. *The Betrayal Bond: Breaking Free of Exploitive Relationships*. Deerfield Beach, FL: Health Communication, Inc., 1997.
- Courtois, Christine A. and Julian D. Ford. *Treating Complex Traumatic Stress Disorders: Scientific Foundation and Therapeutic Models*. New York: The Guildford Press, 2009.
- Dank, Meredith and Bilal Khan. *Estimating the Size and Structure of the Underground Commercial Sex Economy in Eight Major US Cities*. The Urban Institute, 2014. (electronic access: http://www.urban.org/UploadedPDF/413047-Underground-Commercial-Sex-Economy.pdf)
- *DEMAND: A Comparative Examination of Sex Tourism and Trafficking in Jamaica, Japan, the Netherlands, and the United States*. Arlington, VA: Shared Hope International.
- https://polarisproject.org/wp-content/uploads/2019/09/Polaris-2019-US-National-Human-Trafficking-Hotline-Data-Report.pdf
- Human Trafficking by the Numbers: The Initial Benchmark of Prevalence and Economic Impact for Texas, 2016. (electronic access: https://repositories.lib.utexas.edu/bitstream/handle/2152/44597/idvsa-2016-human-trafficking-by-the-numbers.pdf)
- Human Trafficking Definitions. (electronic access: https://hhs.texas.gov/services/safety/texas-human-trafficking-resource-center).
- Human Trafficking Definitions. (electronic access: https://www.acf.hhs.gov/otip/fact-sheet/resource/fshumantrafficking).
- https://www.springfieldnewssun.com/news/national/too-dumb-pimps-texas-police-arrest-connection-with-trafficking-girl/N0FA4mLdXuXdR6LWU7XaIN/
- Bottom: https://www.yourconroenews.com/neighborhood/moco/news/article/Human-trafficking-prostitution-sting-near-The-13363904.php#photo-16452228

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Resources

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Human Trafficking Awareness: Health Care Providers

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