

A Practical Approach to the Angle Closure Spectrum

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- COPE # 76813-GL

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Disclosure

- Key opinion leader and/or speaker for:
 - Visionix (Optovue)
 - Quidel
 - New World Medical
 - LKC Technologies
 - Allergan
 - Tarsus

2

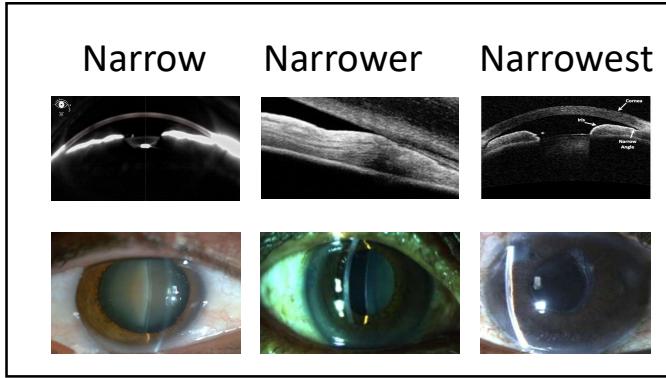
Ways to reach out

| | | |
|--|--|---|
| | www.mikcymbor.com | Handouts Webinars Useful glaucoma information |
| | mcymbor@nittanyeye.com | |
| | www.nittanyeye.com | |
| | LinkedIn | |
| | 814-880-6210 | |

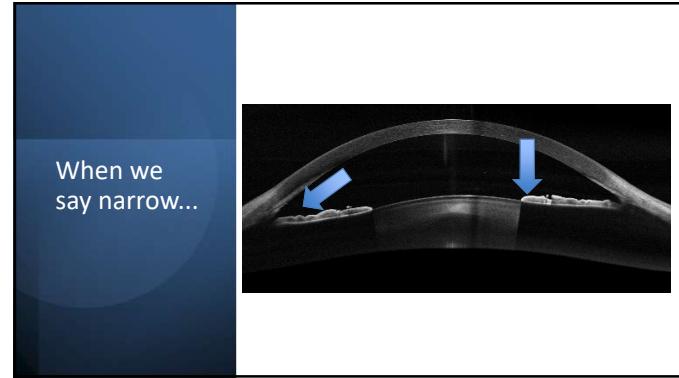
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Fred H. Carlin,
O.D. Community
Vision Foundation

4



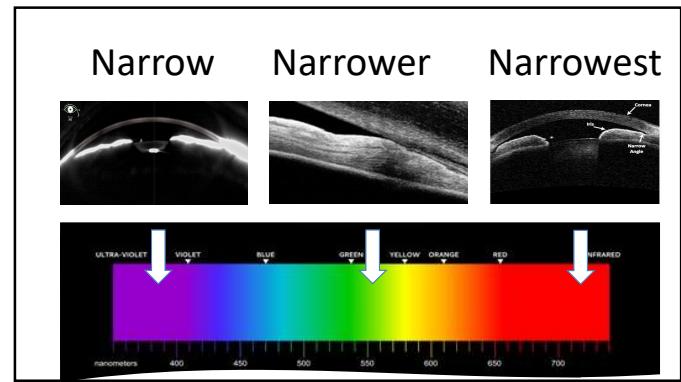
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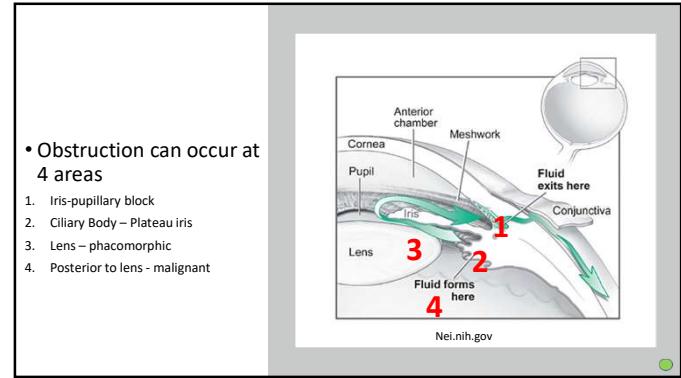


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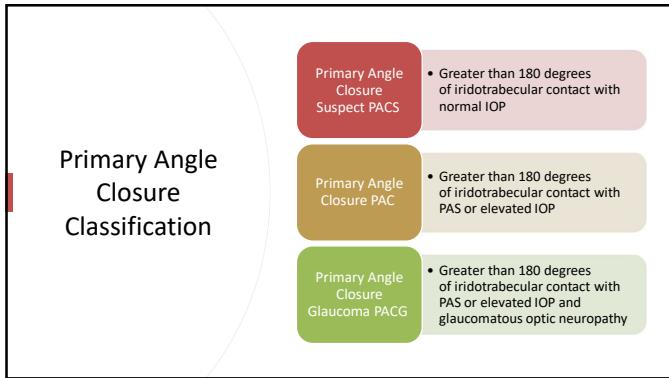
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| PAC/CAC | + | +/- | +/- | - |
| PACG/CACG | + | +/- | +/- | + |
| AAC | + | + | +/- | +/- |

Emanuel ME, Parrish RK, Gedde SJ. Evidence-based management of primary angle closure glaucoma. Current opinion in ophthalmology. 2014 Mar 1;25(2):89-92.

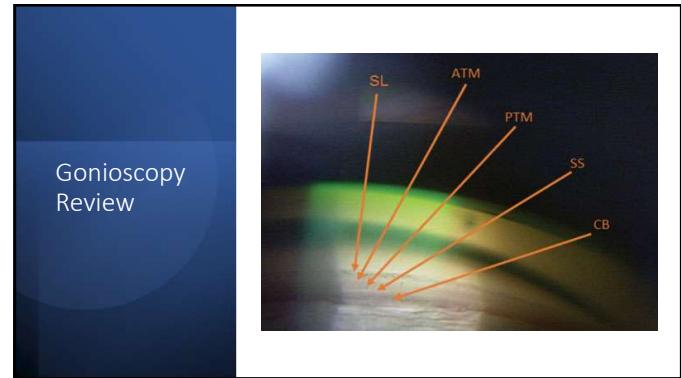
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Case

- 55 Y/O W/F
- Presents with intense pain in the left eye
- Started the previous night and has worsened
- Reports the pain as 11 on a 1-10 scale
- Ochx: optic nerve coloboma OS
- Va 20/20 OD and LP OS (from coloboma)
- GAT 20/56 mmHg
- Grade 1 cells A/C, VH 1, Grade 4 NS
- Mid-dilated pupil

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Risk Factors

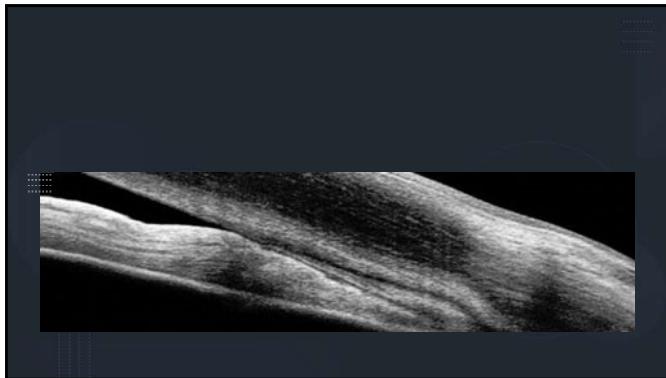
Demographic

- Advancing age
- Female gender
- Asian or Inuit ancestry

Ocular

- Hyperopia
- Short axial length
- Shallow anterior chamber
 - Less than 2.5mm
 - Small anterior chamber volume and area
- Thicker peripheral iris with higher insertion
- Increased lens vault
- Anterior ciliary body position

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Pupillary Block

- Occurs when movement of the aqueous from the posterior to anterior chamber is halted, creating a pressure gradient that leads to forward bowing of the peripheral iris, resulting in sudden obstruction of the TM
- Of all acute angle-closure patients in the United States, 90% present with pupillary block
 - Ritch R, Lowe RF, Reyes A. Angle-closure glaucoma: therapeutic overview. *The Glaucomas*. 1996;2:1521-31

16

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Diagnosis

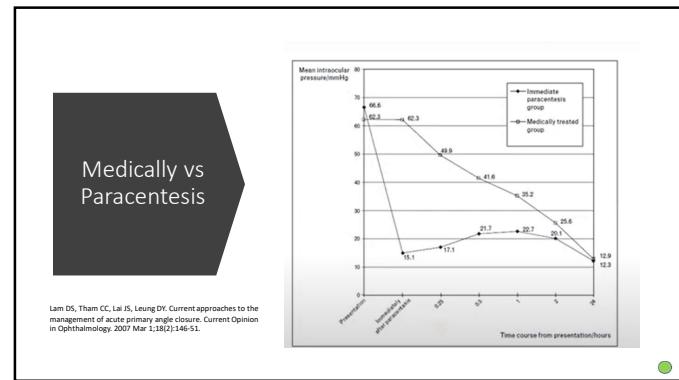
- Acute angle closure attack
 - Phacomorphic

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How should we treat?

STABILIZE MEDICALLY?
STABILIZE WITH PARACENTESIS?
IMMEDIATE PI?
URGENT CATARACT SURGERY?

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Pilocarpine?

- Pilocarpine (muscarinic agonist) and Atropine (muscarinic antagonist)
- Malignant (Narrowest) vs Acute Angle Closure (Narrower)
- Pilocarpine can help break acute angle closure and atropine can help break malignant glaucoma
- BUT!!!

Opposites

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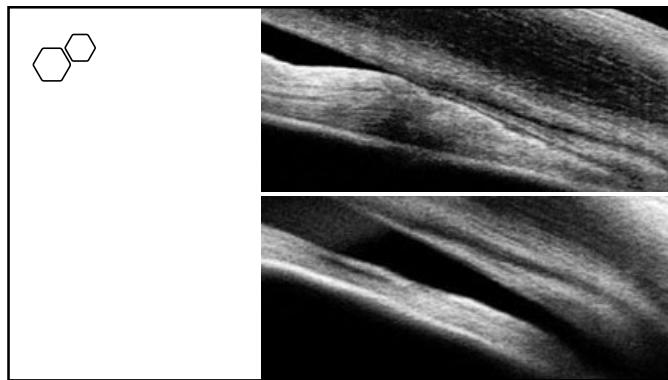
Medical stabilization

0.5% apraclonidine, 0.5% timolol/dorzolamide, 500mg acetazolamide

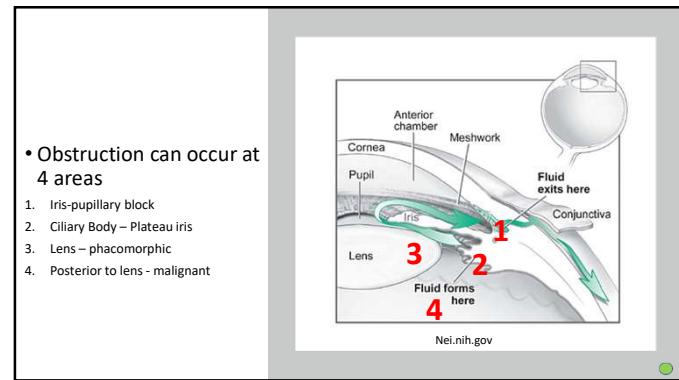
IOP similar 1 hr later

Compression gonioscopy

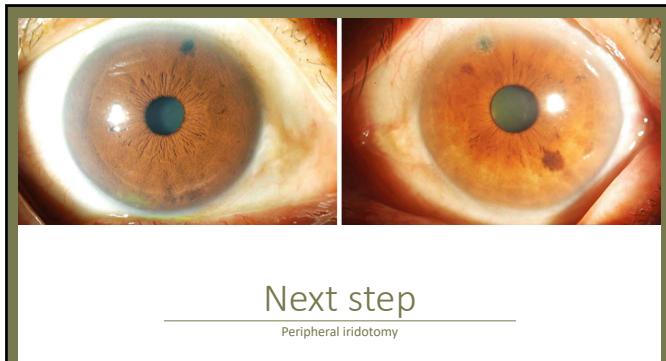
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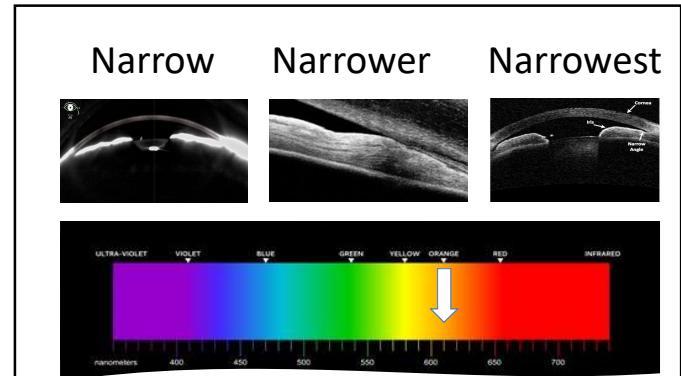
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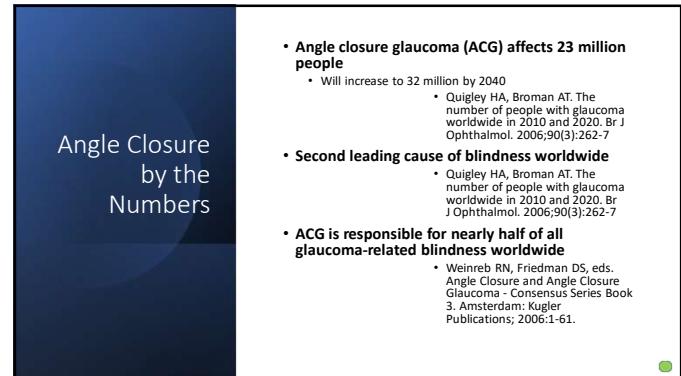
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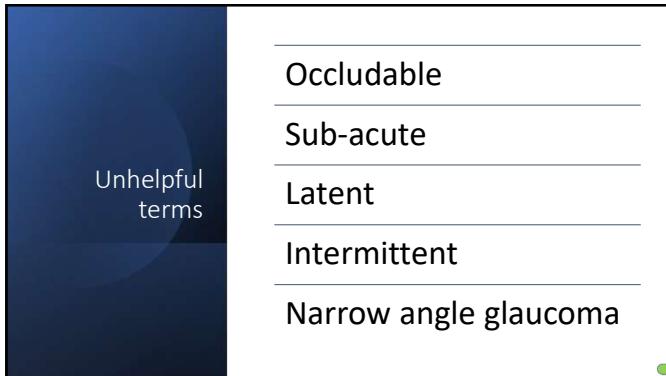
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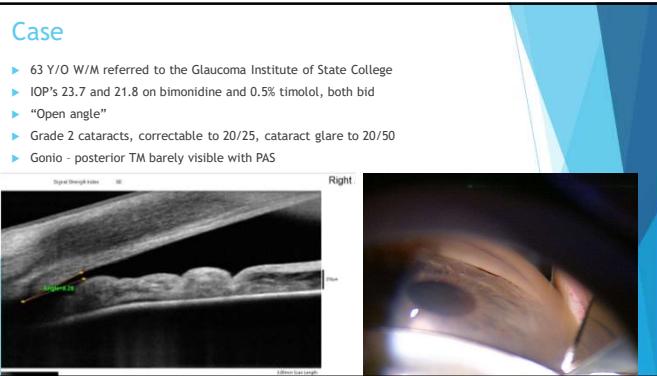
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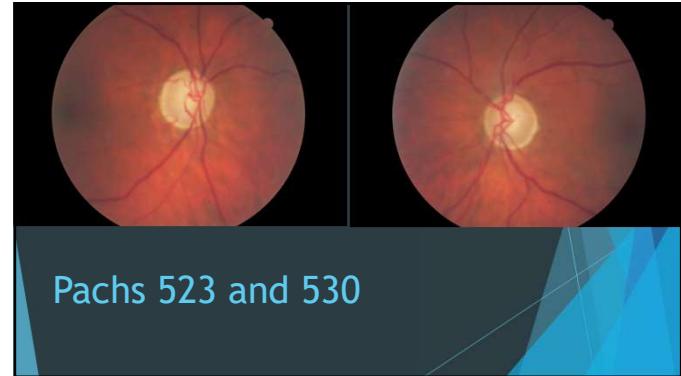
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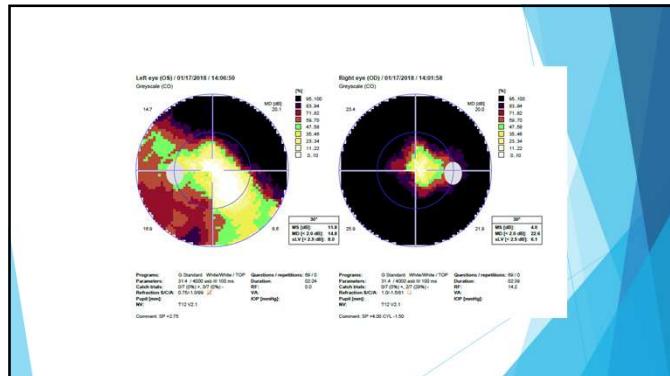
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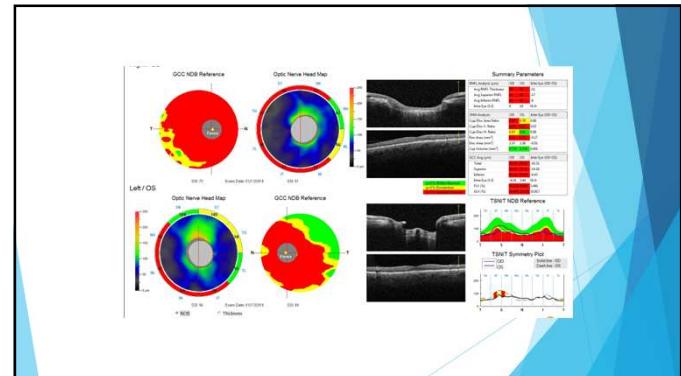
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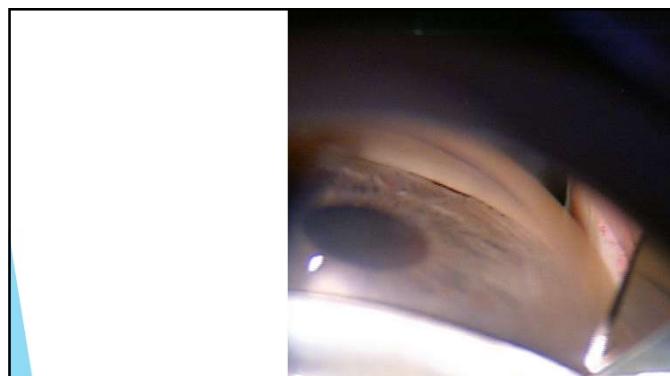
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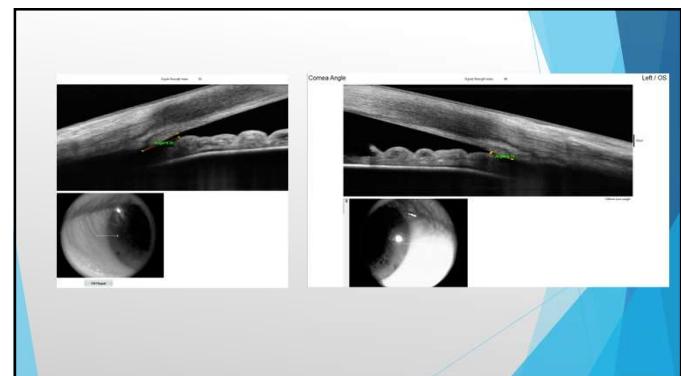
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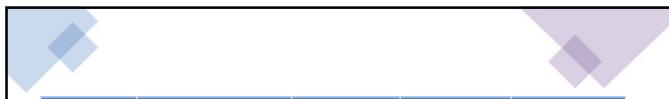
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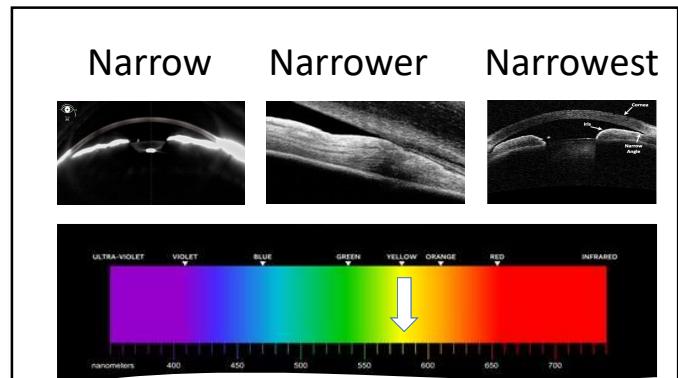
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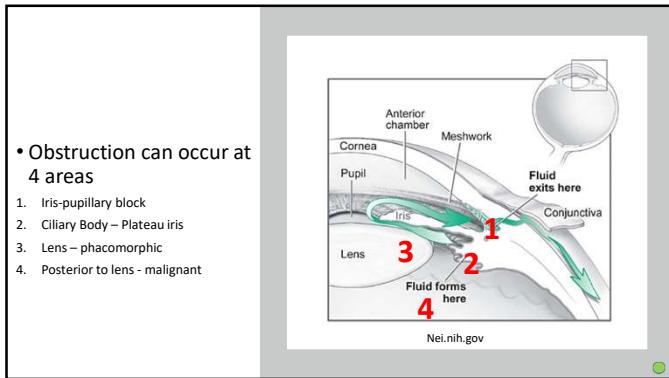
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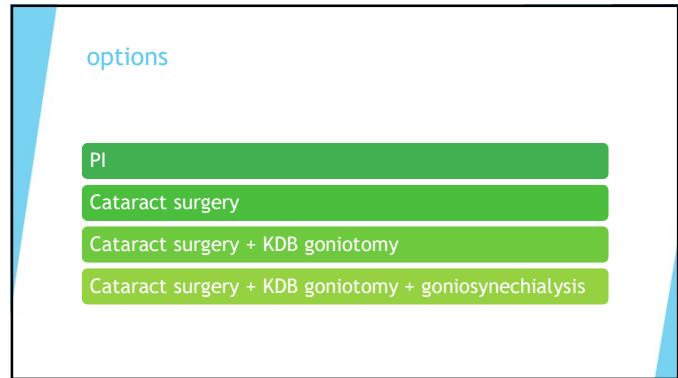
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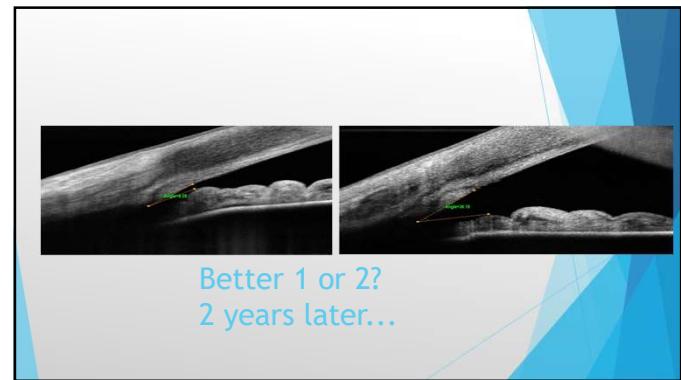
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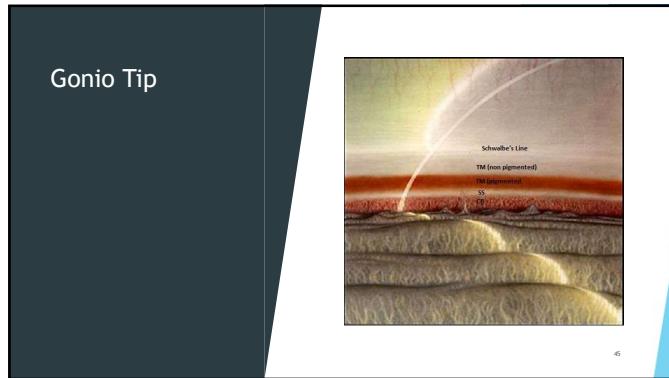
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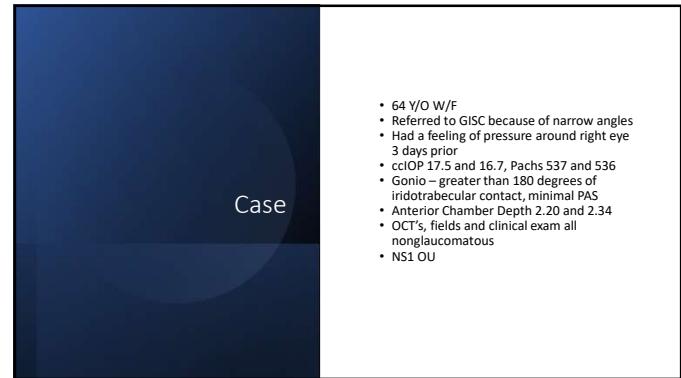
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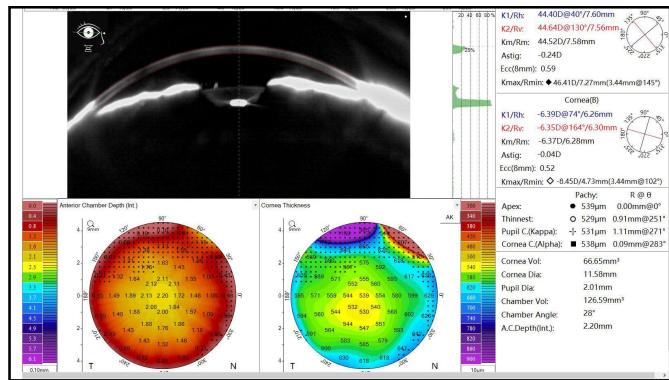
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46



47

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- Obstruction can occur at 4 areas
 1. Iris-pupillary block
 2. Ciliary Body – Plateau iris
 3. Lens – phacomorphic
 4. Posterior to lens - malignant

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Do you see a difference?

Next step is to proceed to cataract surgery

50

Better 1 or 2?

51

Narrow Narrower Narrowest

ULTRA-VIOLET VIOLET BLUE GREEN YELLOW ORANGE RED INFRARED
nanometers: 400 450 500 550 600 650 700

52

Gonio Tip

How often should it be performed?

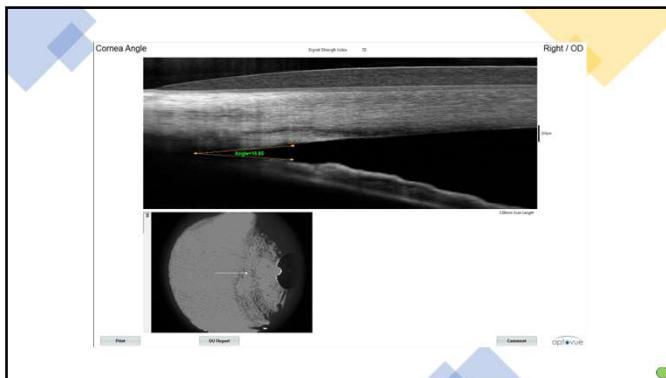
Yearly or more if you suspect a change

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Case

- 41 Y/O W/F
- Refractive Error +7.50-1.25x105 OD and +7.25 OS
- Needs contact lenses updated
- Biomicroscopy shows VH of 2 OD and OS
- Gonio – greater than 180 iridotrabecular contact
- NCT 16mmHg OD and 17mmHg OS

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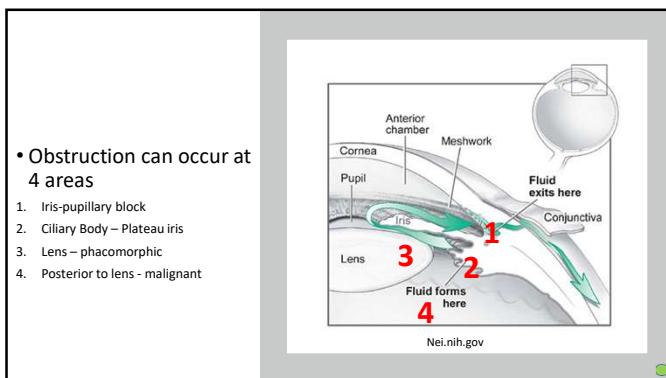


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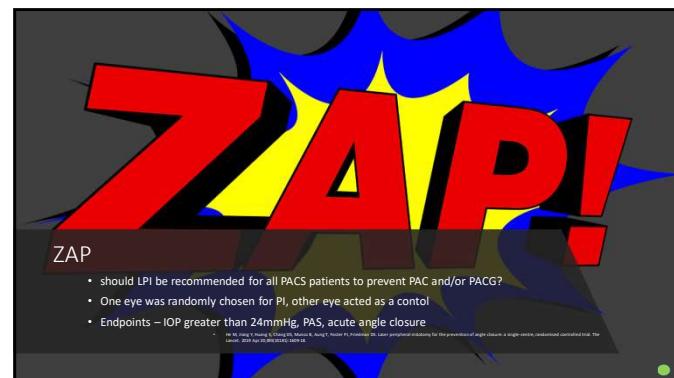
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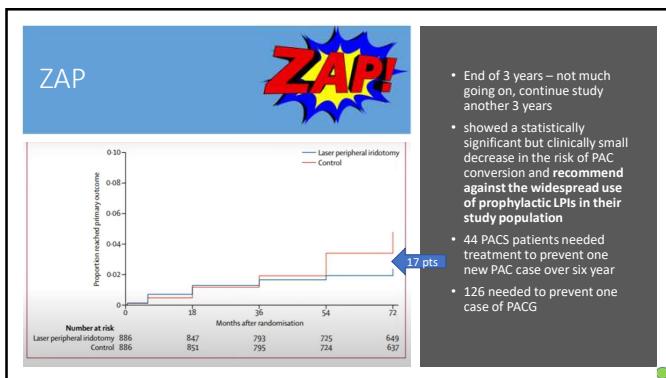
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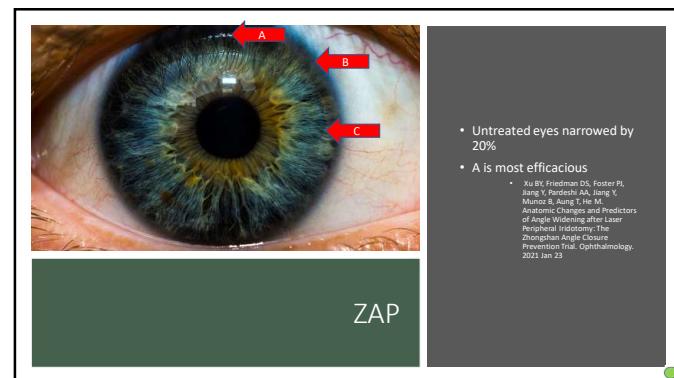
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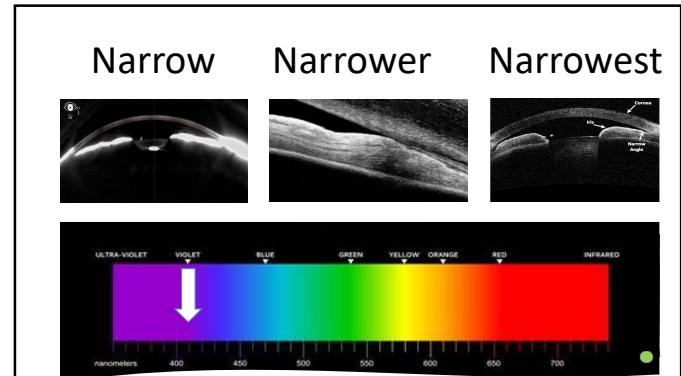
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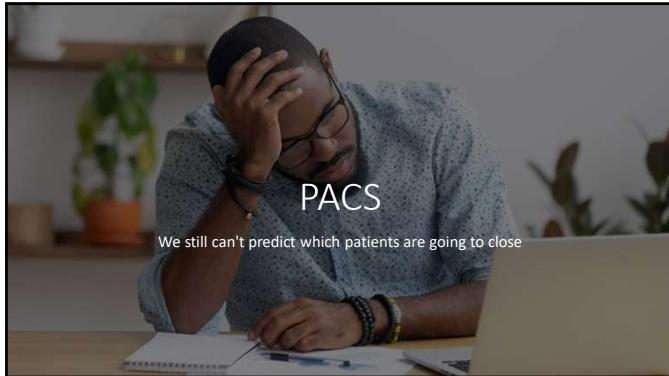
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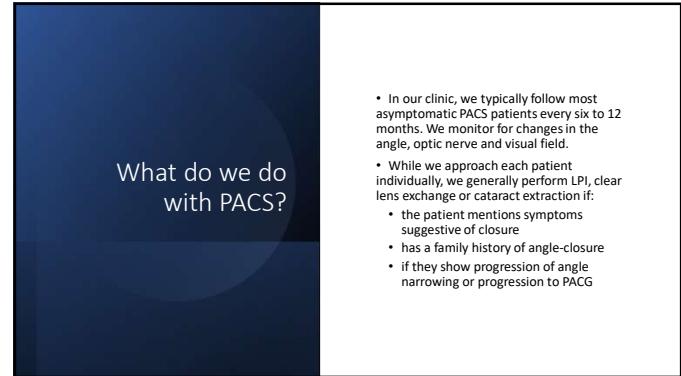
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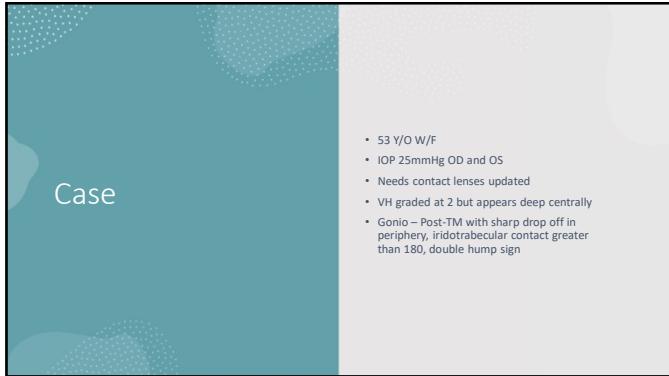
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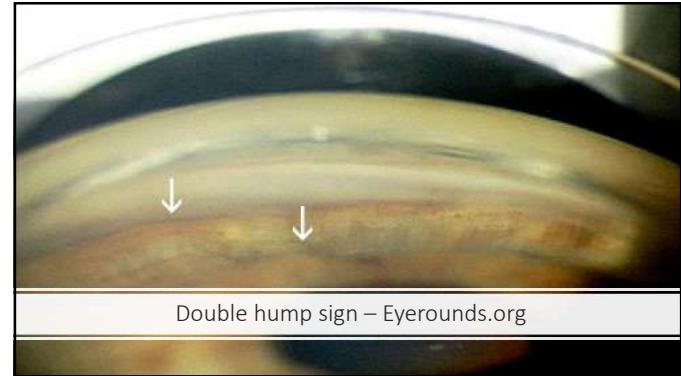
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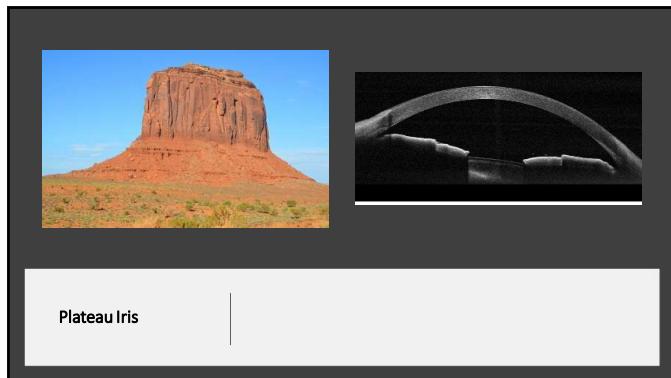
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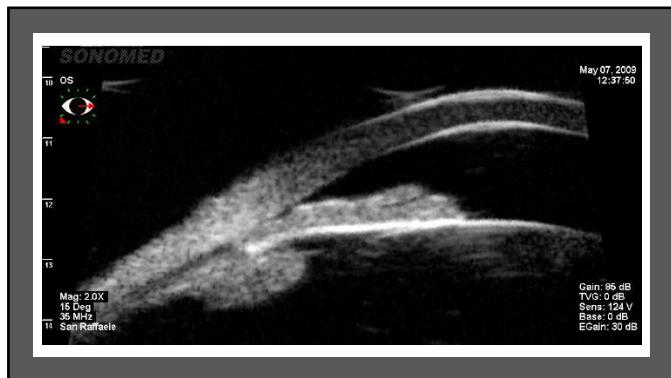
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A comparison chart showing the characteristics of different types of primary angle closure glaucoma (PACS, PAC/CAC, PACG/CACG, AAC) across various clinical features.

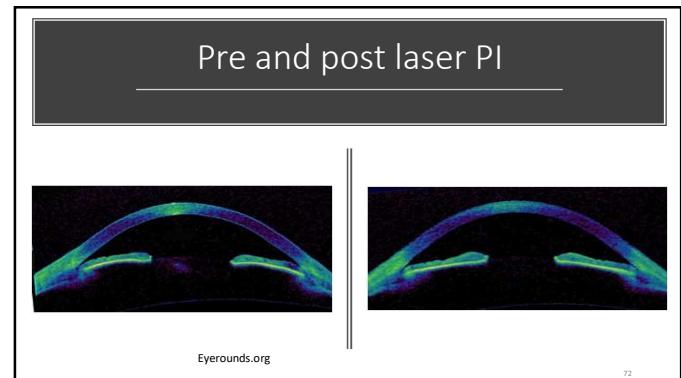
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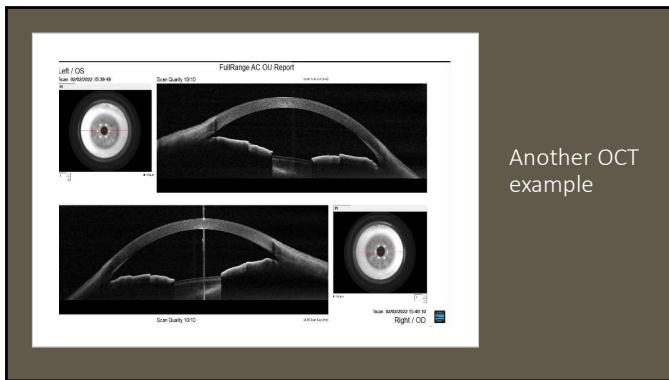
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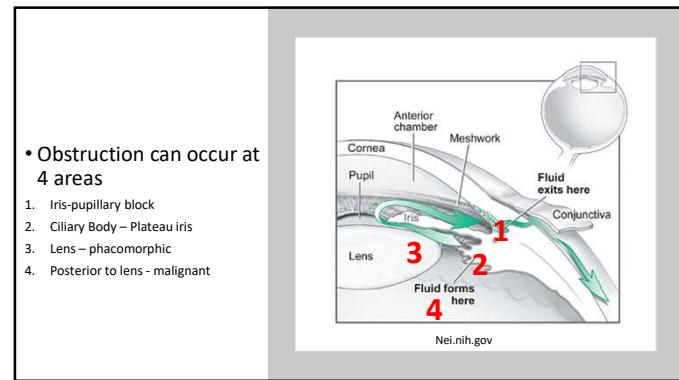
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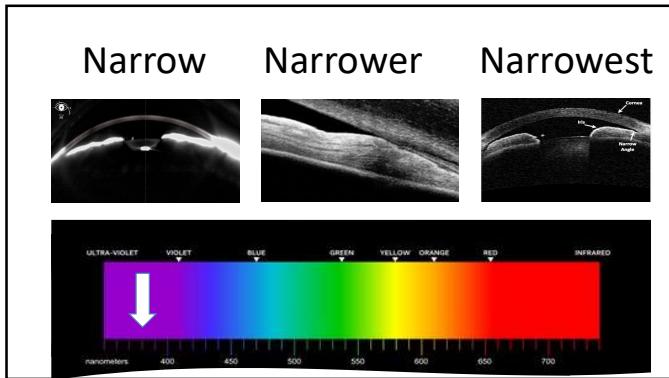
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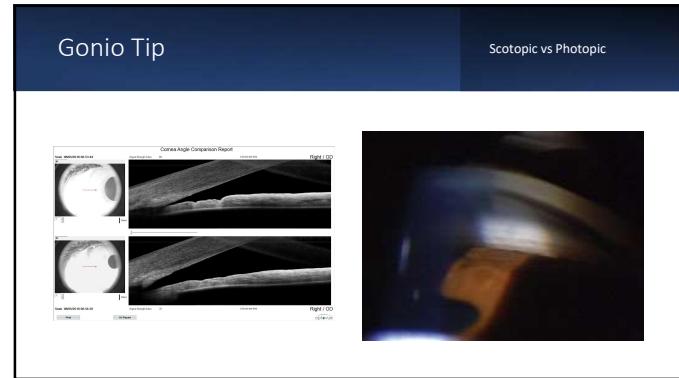
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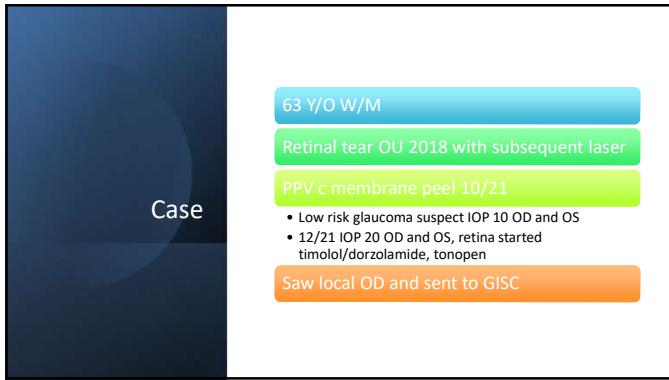
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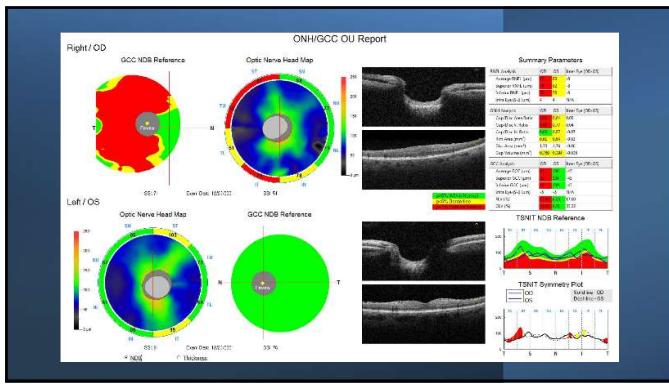
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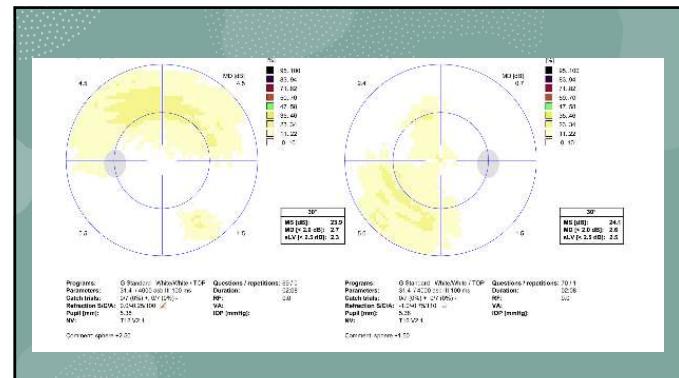
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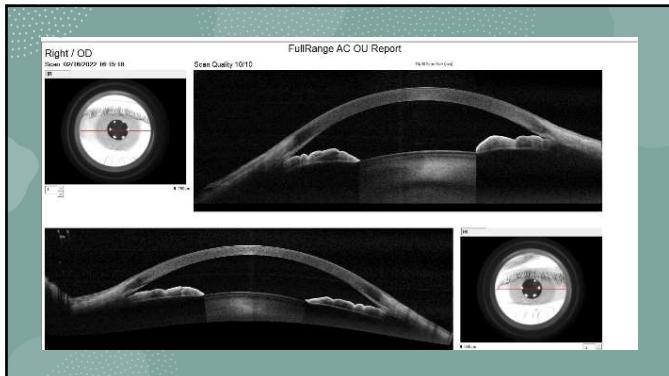
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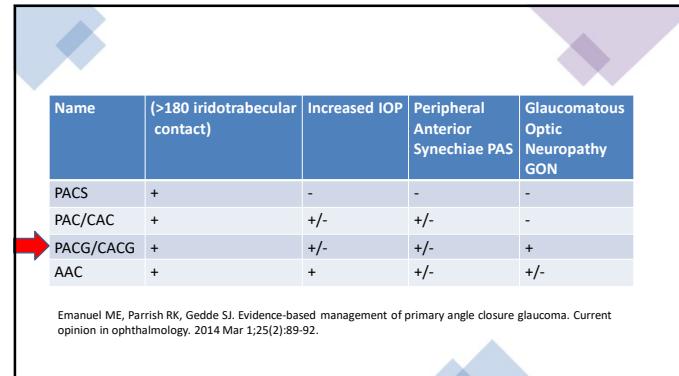
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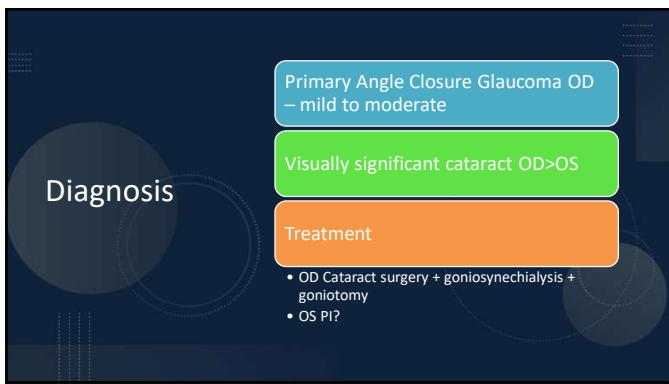
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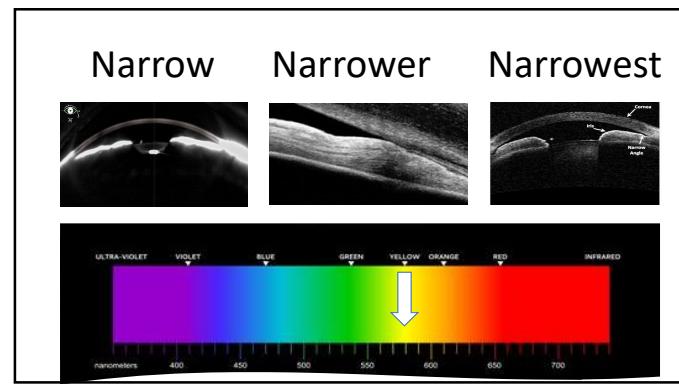
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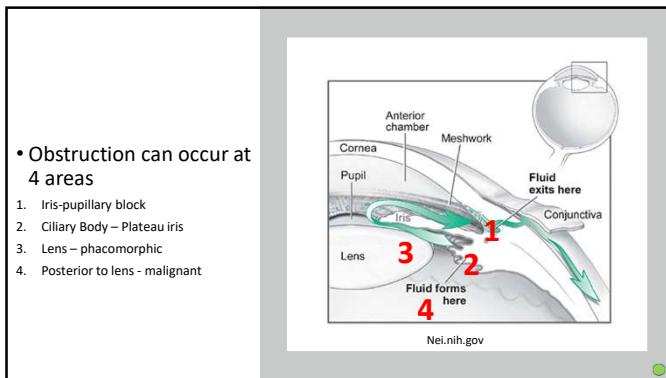
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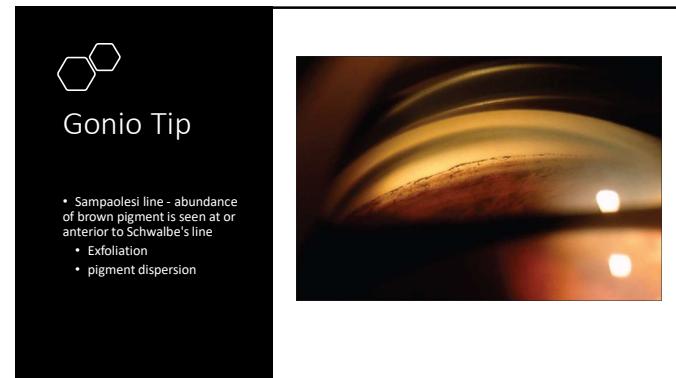
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Case

46 Y/O presents to local OD on day before Thanksgiving

Cc: vision became hazy an hour ago, removed contact lenses – still hazy, now experiencing "kaleidoscope vision"

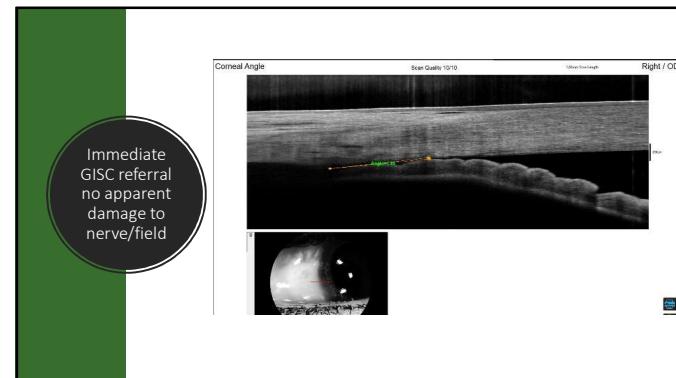
Began topamax 1 week ago, rx'd by PA friend because of headaches, not examined

Va 20/70 OD and OS

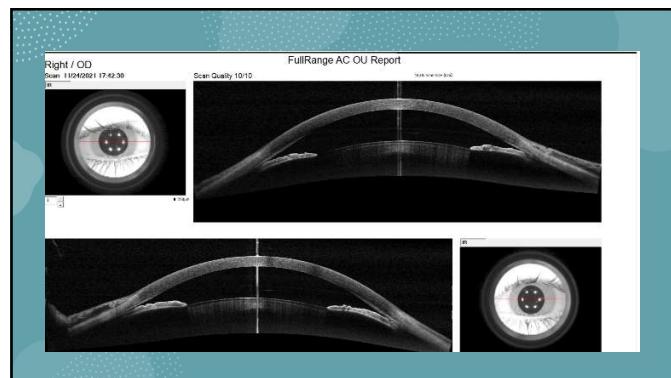
Ta 65mmHg OD and 74mmHg OS

Gonio – no view of TM

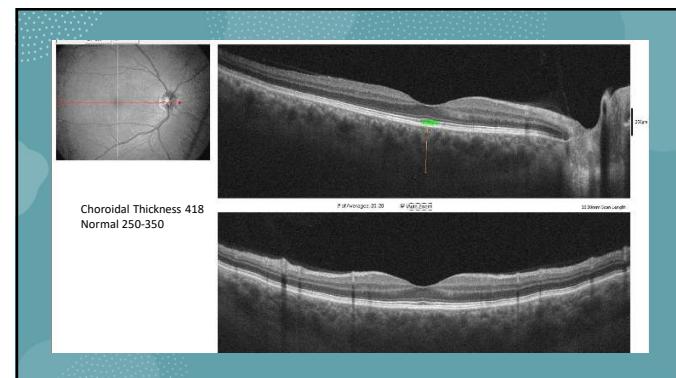
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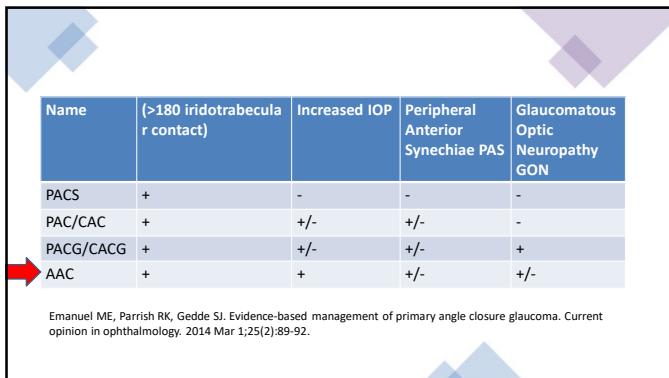
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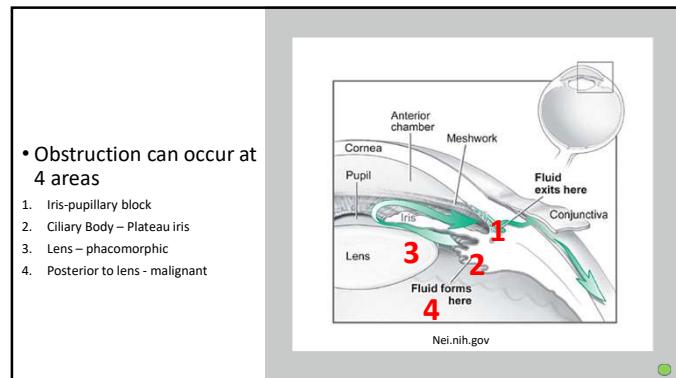
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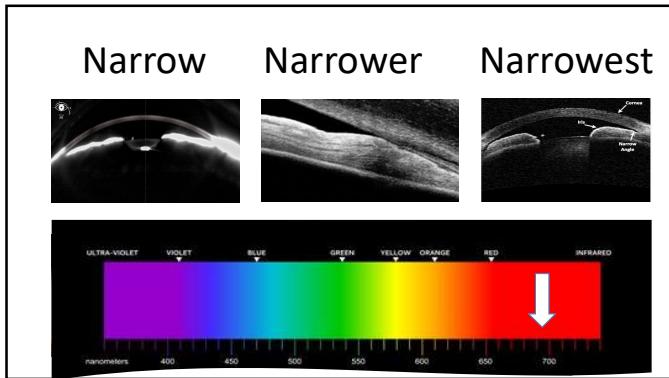
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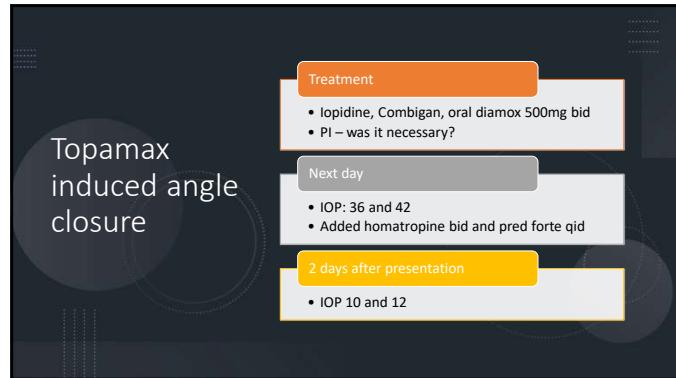
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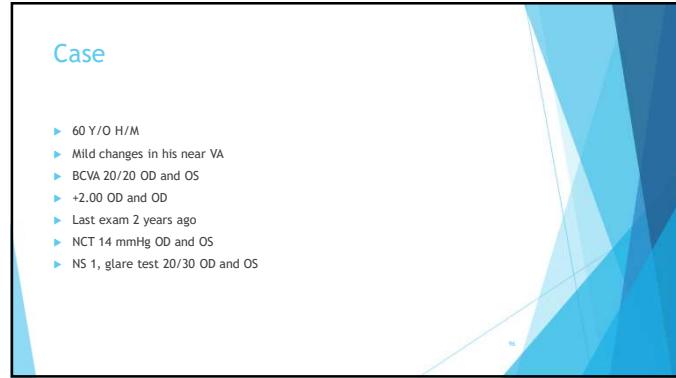
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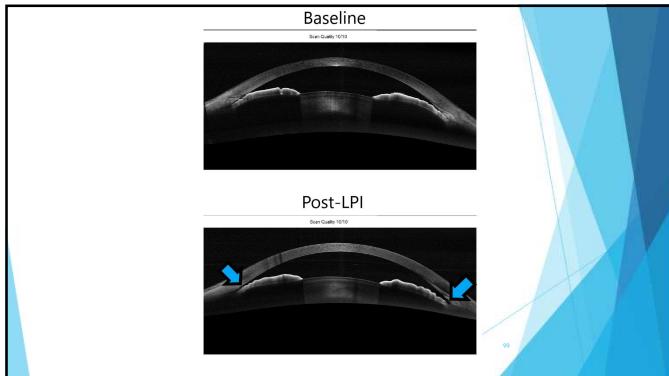


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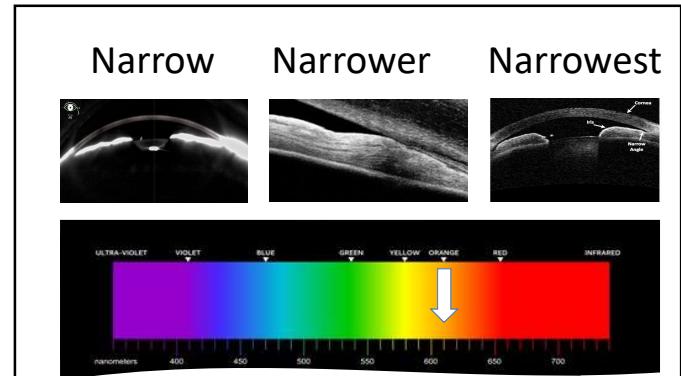
| Name | (>180 iridotrabecular contact) | Increased IOP | Peripheral Anterior Synechiae PAS | Glaucomatous Optic Neuropathy GON |
|-----------|--------------------------------|---------------|-----------------------------------|-----------------------------------|
| PACS | + | - | - | - |
| PAC/CAC | + | +/- | +/- | - |
| PACG/CACG | + | +/- | +/- | + |
| AAC | + | + | +/- | +/- |

Emanuel ME, Parrish RK, Gedde SJ. Evidence-based management of primary angle closure glaucoma. Current opinion in ophthalmology. 2014 Mar 1;25(2):89-92.

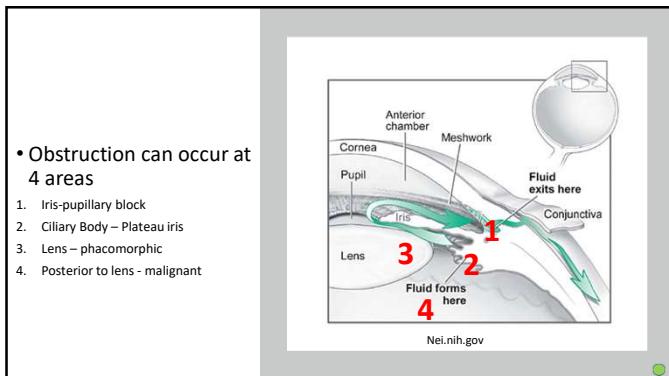
98



99



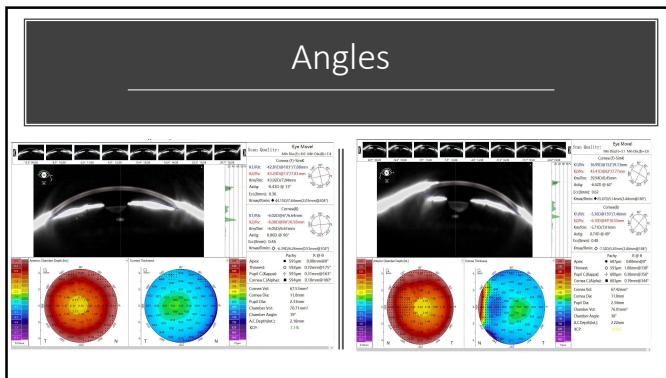
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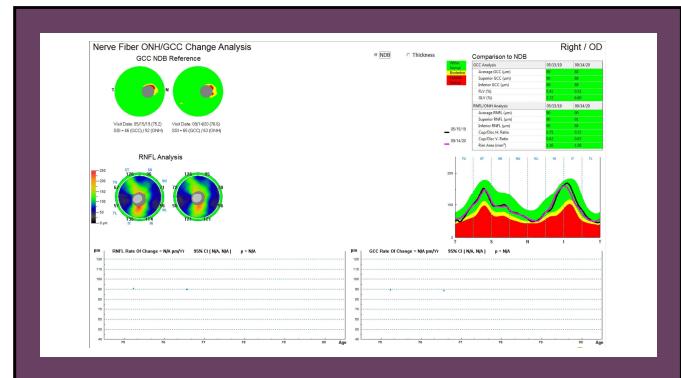
101

| | |
|------|---|
| Case | 76 Y/O W/M |
| | Sent by local OD because of ocular hypertension, IOP's in high 20's after years of being in teens |
| | Also reported to have cataracts, "vision stable" |
| | Rx +2.00 and +3.50 |
| | CclOP 31.9 and 30.3 |
| | NS 2 OU, BCVA 20/25, glare test to 20/60 |

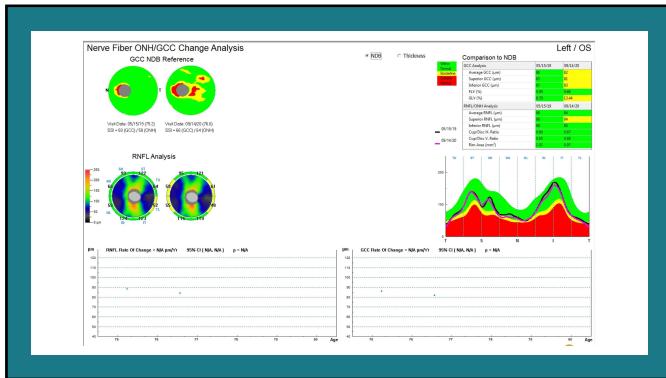
102



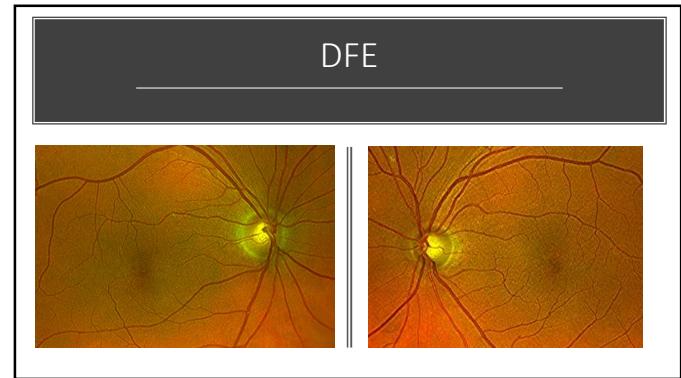
103



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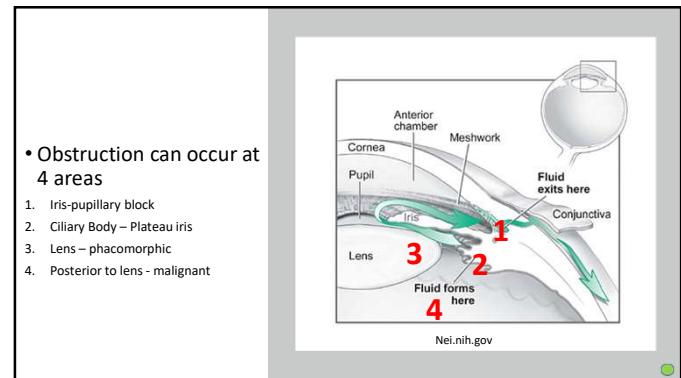


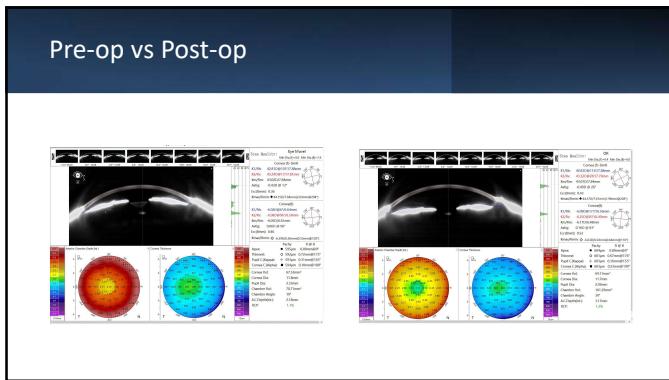
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| Name | (>180 iridotrabecular contact) | Increased IOP | Peripheral Anterior Synechiae PAS | Glaucomatous Optic Neuropathy GON |
|-----------|--------------------------------|---------------|-----------------------------------|-----------------------------------|
| PACS | + | - | - | - |
| PAC/CAC | + | +/- | +/- | - |
| PACG/CACG | + | +/- | +/- | + |
| AAC | + | + | +/- | +/- |

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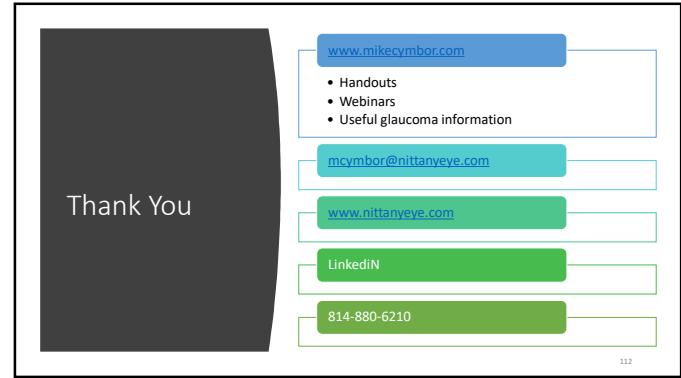
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