
Narrow and Closed Angle Glaucomas: Diagnosis and Therapy in 2014

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Sacramento, CA

Disclosures

n Aerie

n Allergan

n Alcon

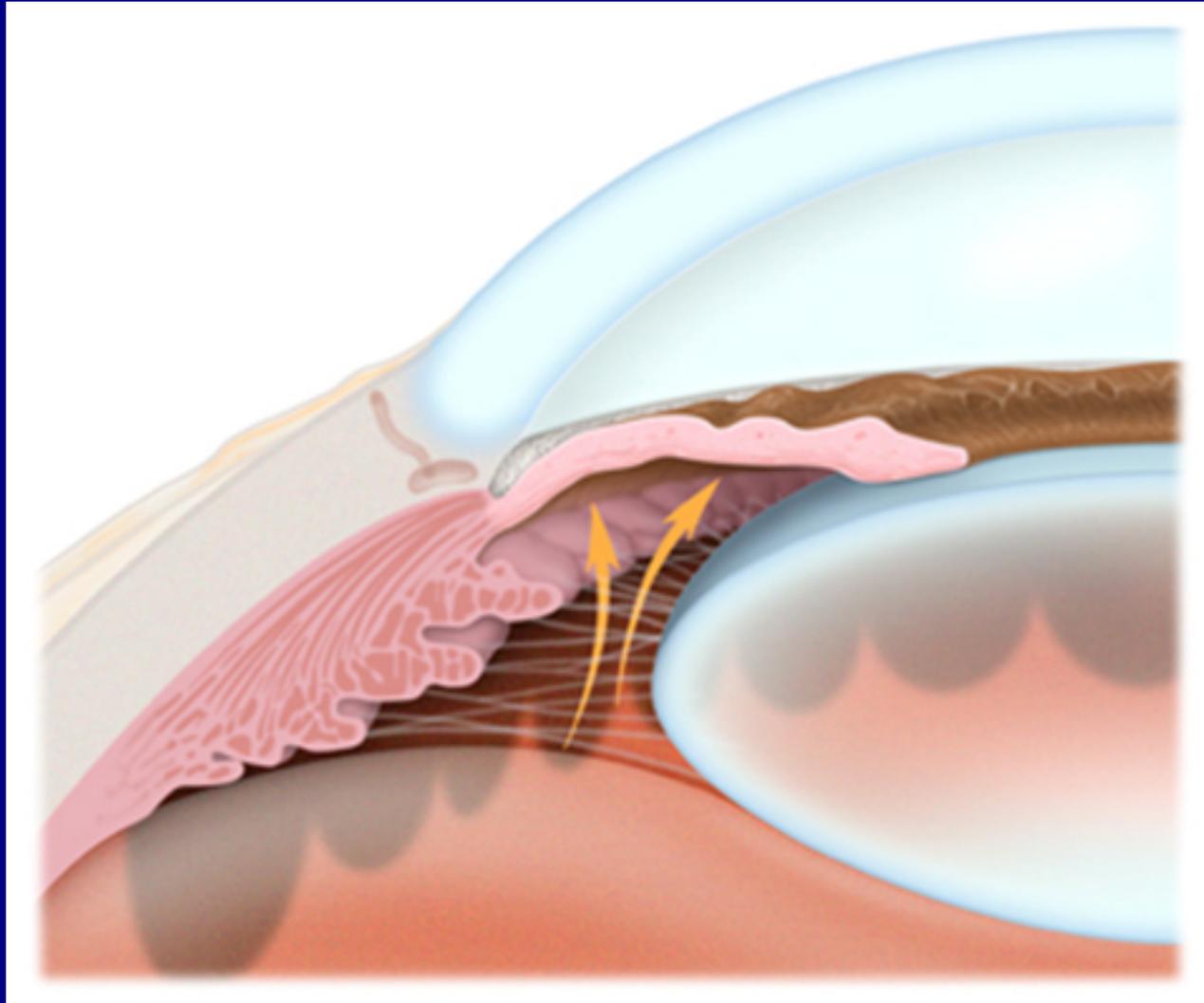
n Aquesys

n AVS

n Glaukos

n Ivantis

Narrow Angles and Glaucoma Risk



Narrow Angles

Higher Risk Patients:

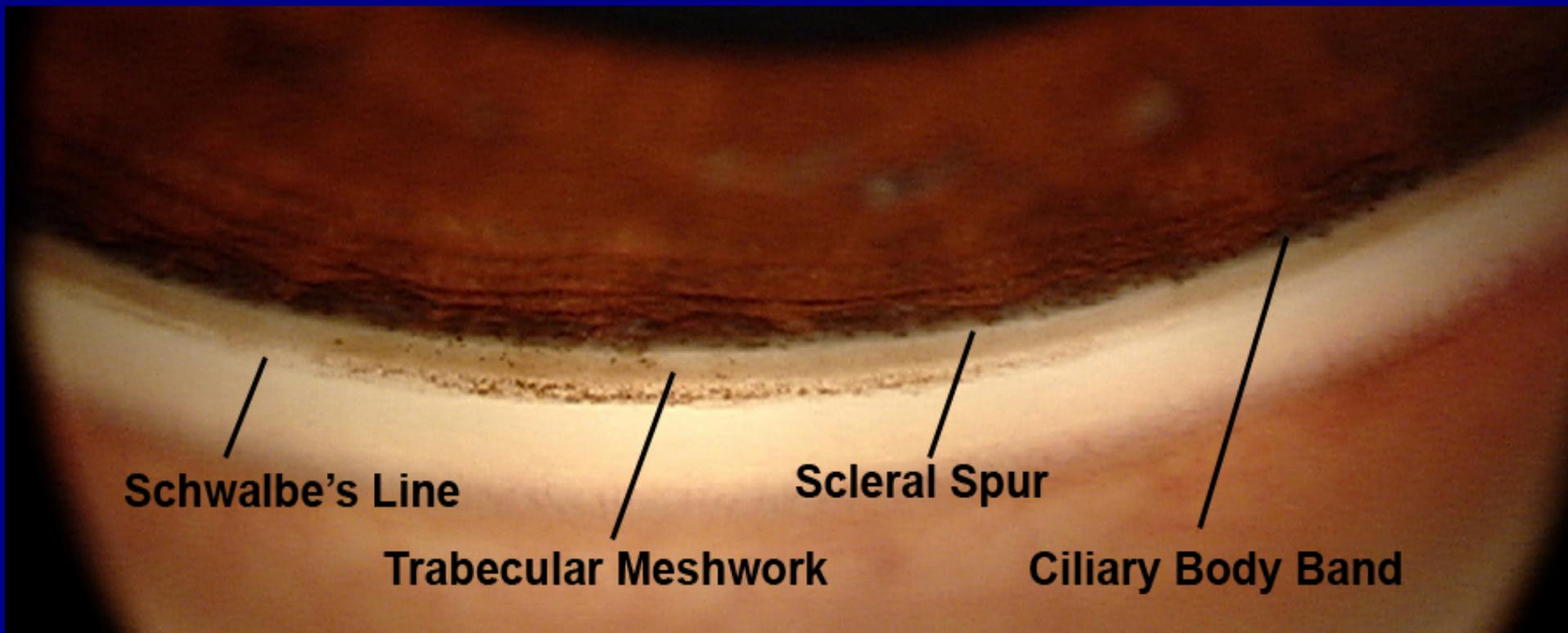
- **Small eye with hyperopia**
- **Early to moderate NS**
- **Demographics:**
 - **More common in Chinese, Eskimo**
 - **Less likely in pts of African descent**

Narrow Angles

- n Determined by:**
 - Angle appearance of PAS
 - Axial length: Nanophthalmos
 - Lens thickness:
 - Spherophakia
 - Ectopia Lentis
 - Phacomorphic

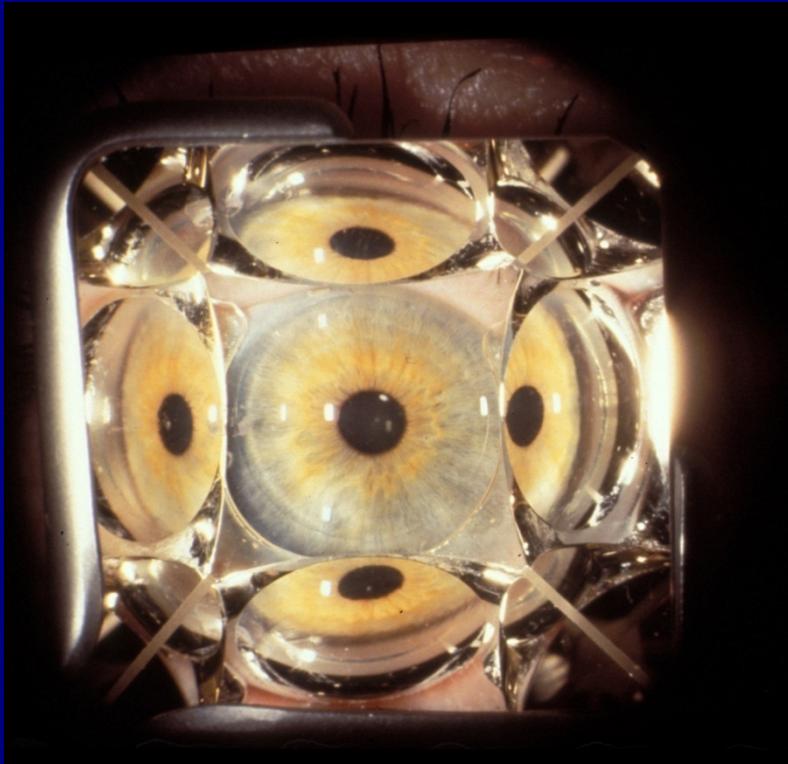
Gonio Imaging - Angle Structures

Normal angle - inferior view

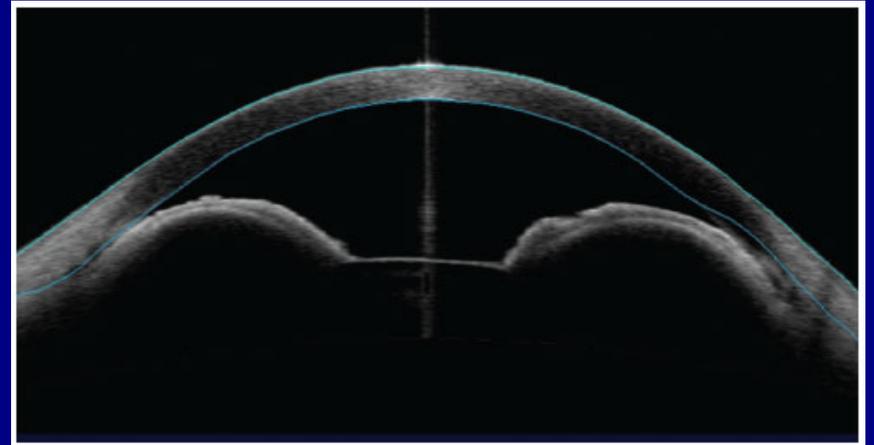


Diagnosis of Narrow Angles

Gonioscopy

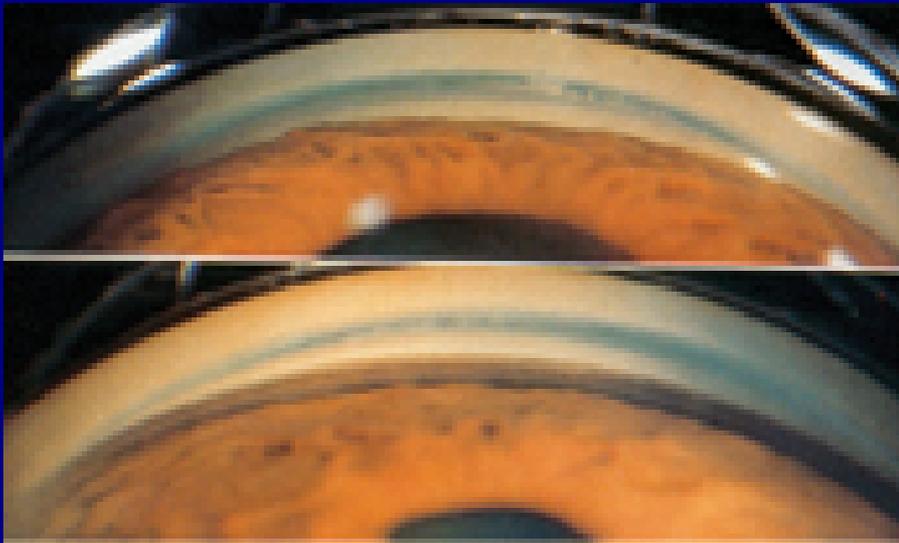


OCT

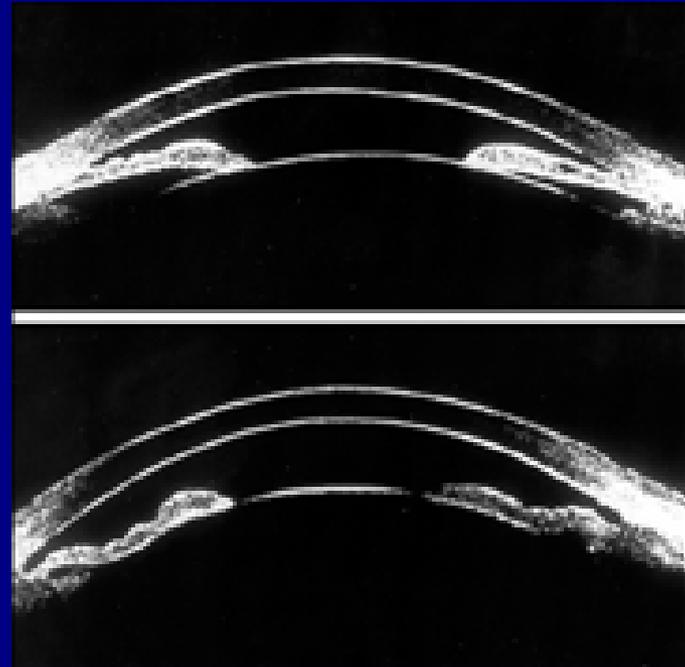


Diagnosis of Narrow Angles

Gonioscopy

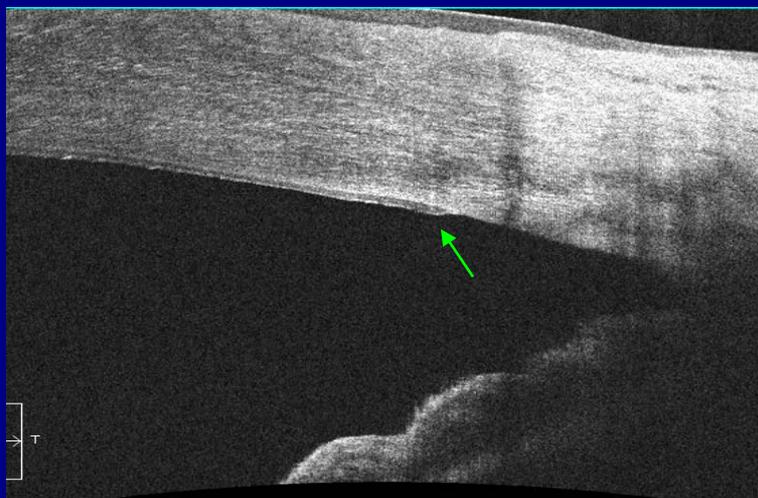
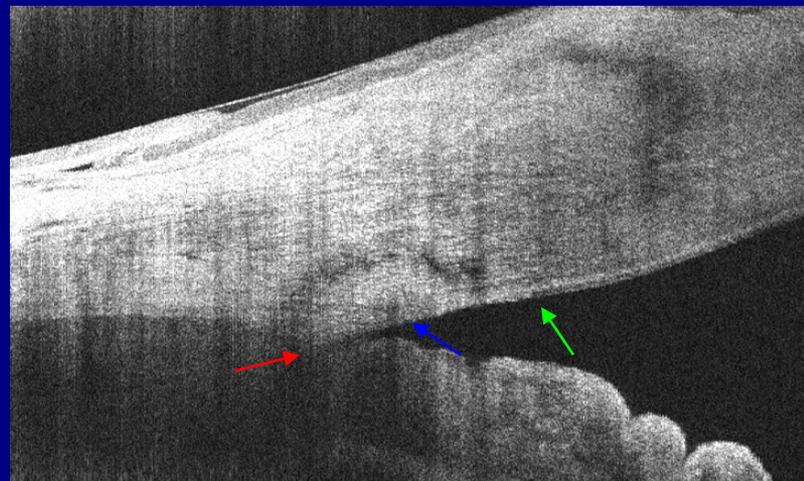
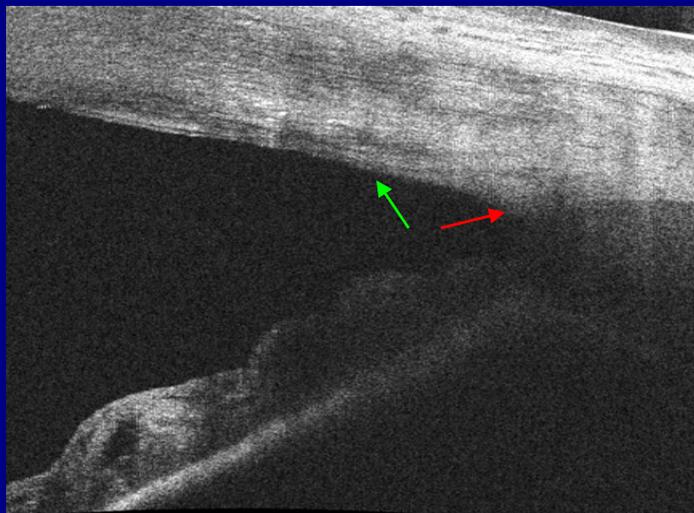


OCT



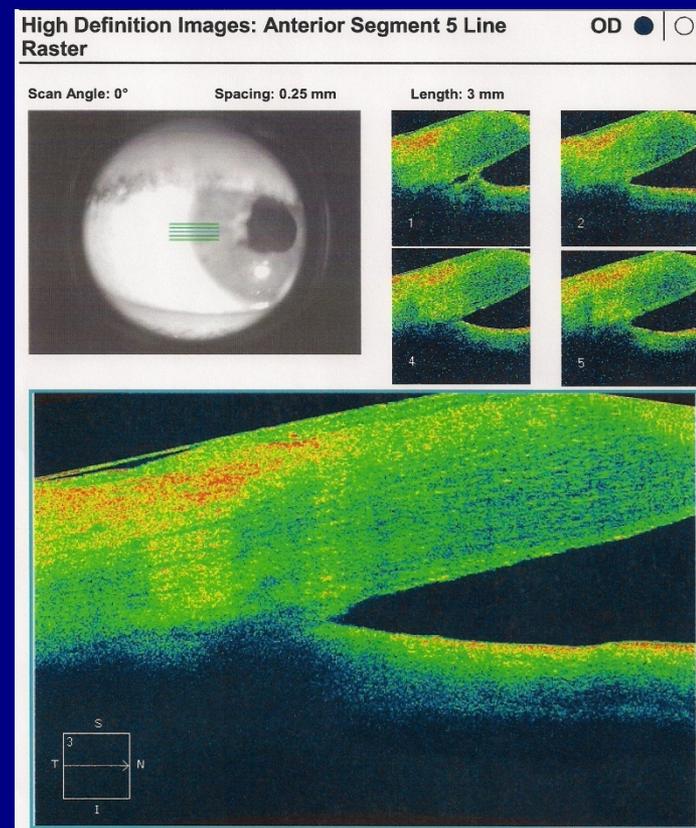
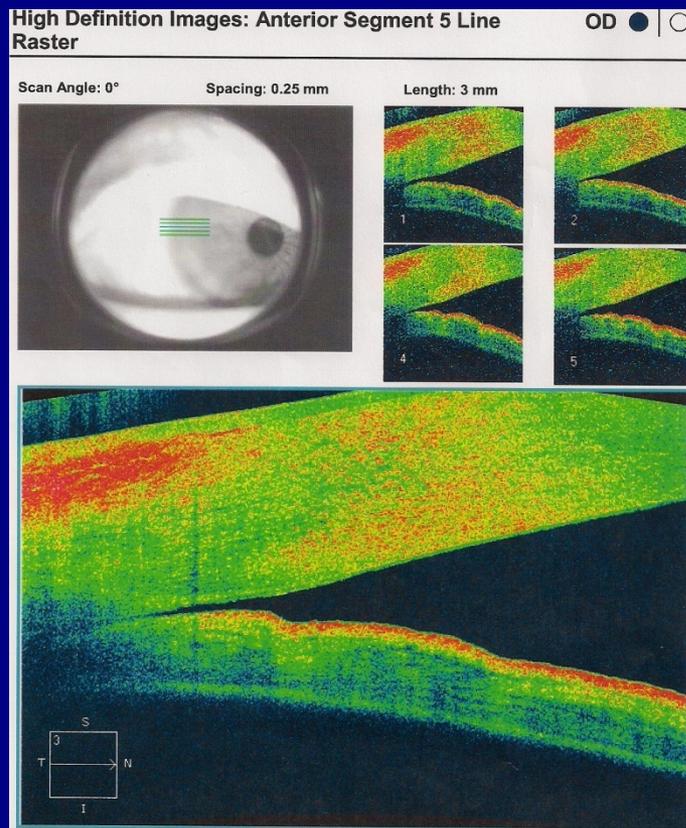
HD-OCT Anterior Segment Imaging

Angle Structures

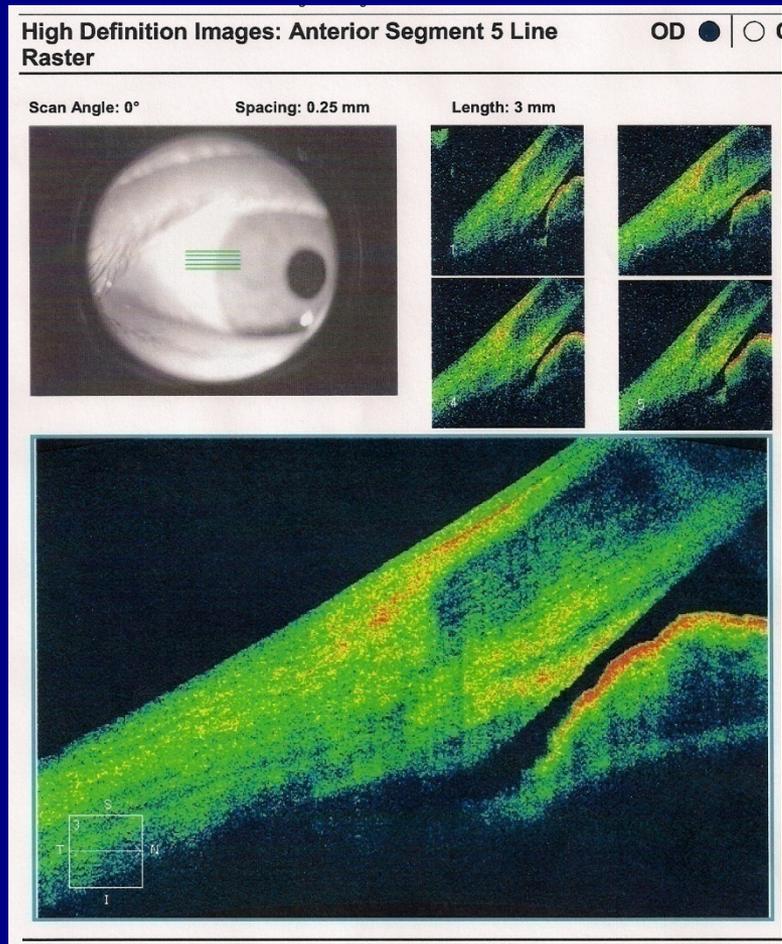
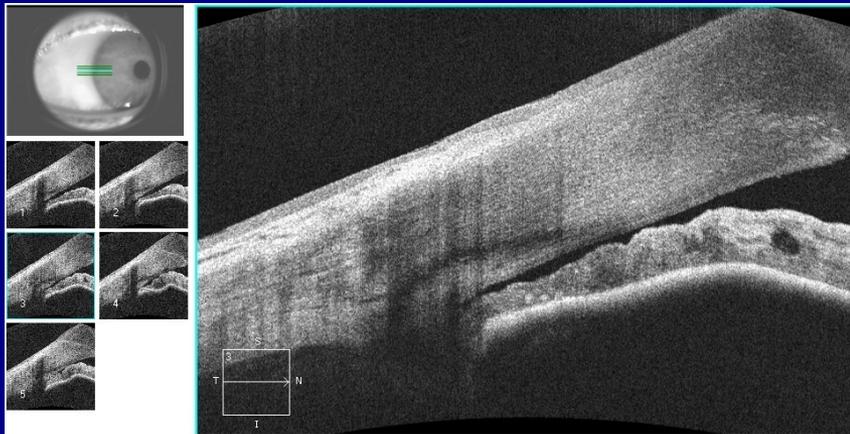


- Scleral spur (red arrow)
- Schlemm's canal (blue arrow)
- Schwalbe's line (green arrow)

Narrow Angles

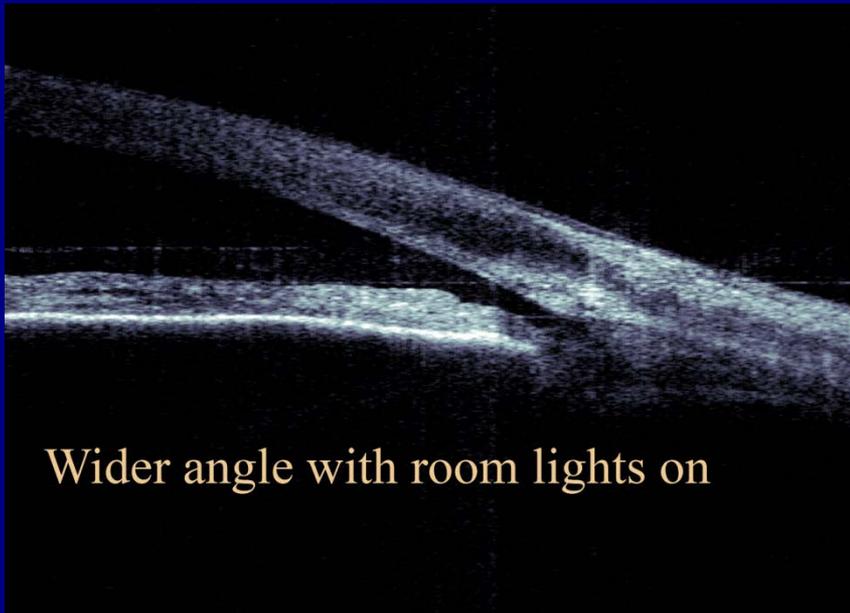


SD-OCT: Plateau Iris

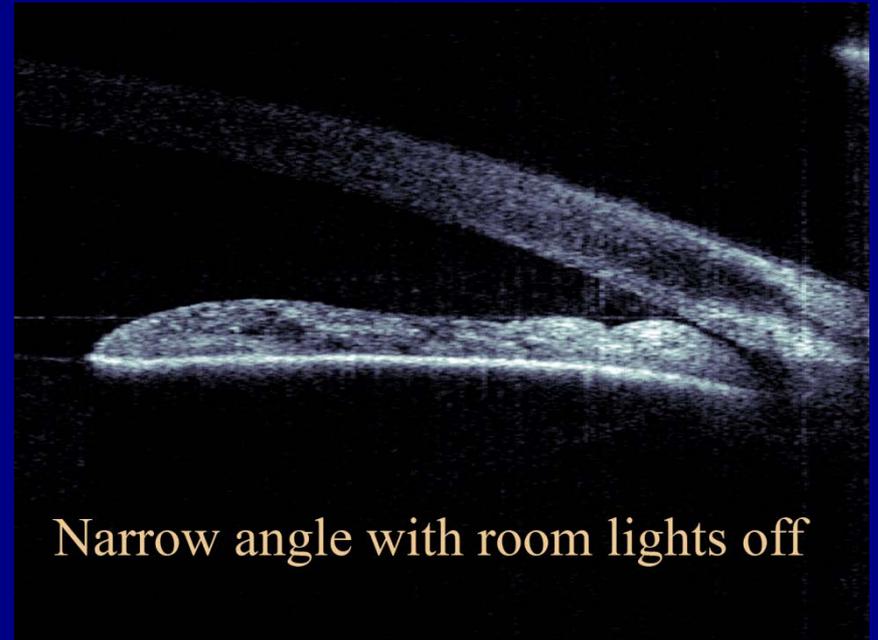


SD-OCT: Provocative Testing of Angle Closure

Lights On

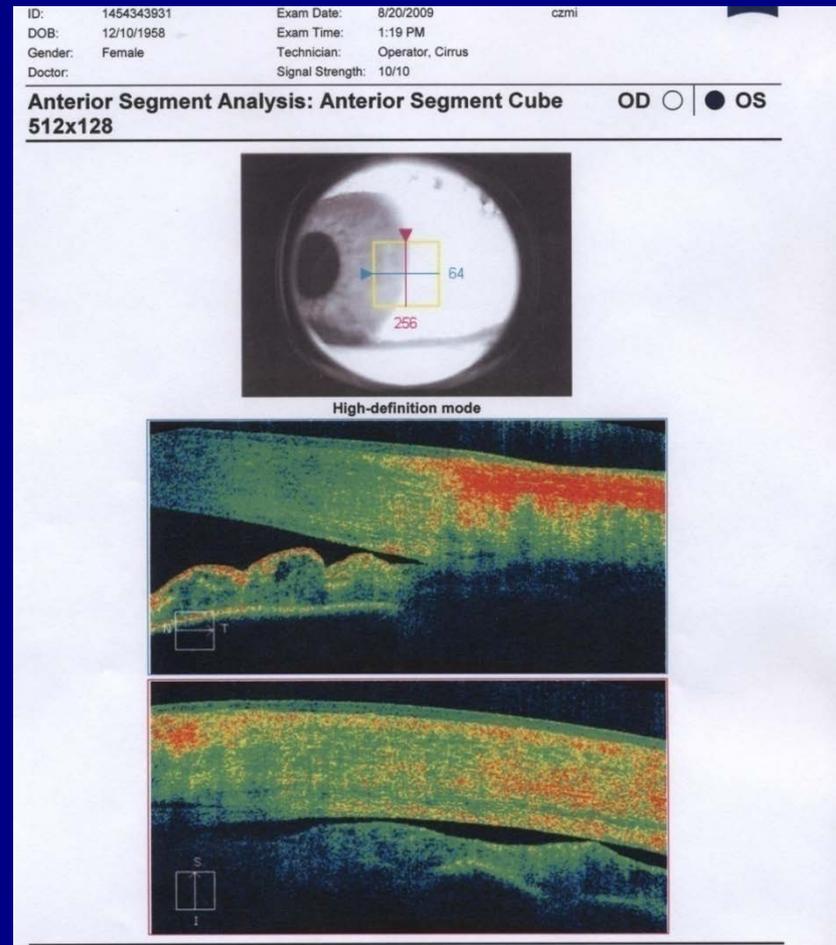


Lights Off

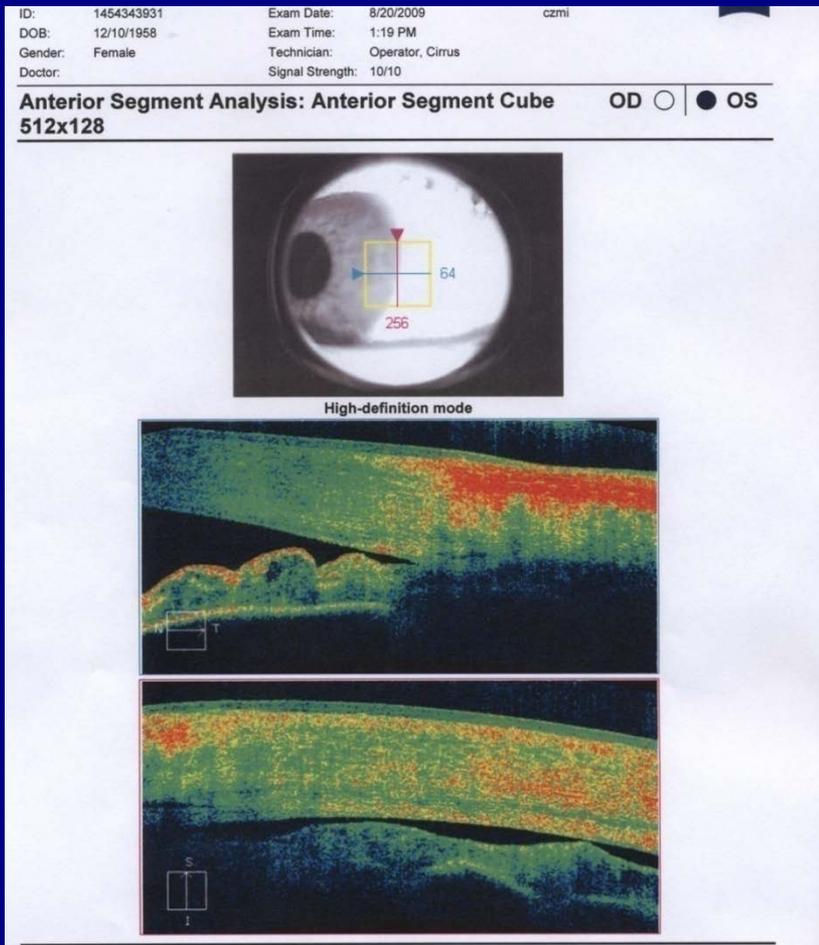


Case Presentation: MCR

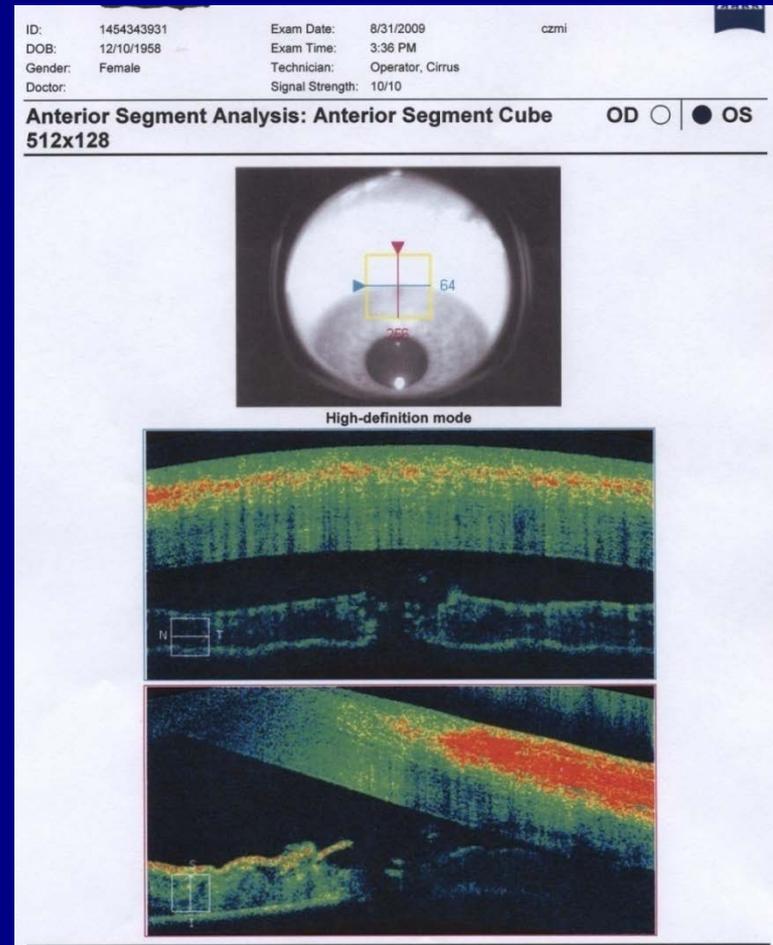
- 50 y/o hyperopic OD
- No symptoms and healthy exam except grade 0-1 angles on gonio
- Despite gonio evidence of narrow angles, she refused YAG laser PI until SD-OCT



Case Presentation: MCR



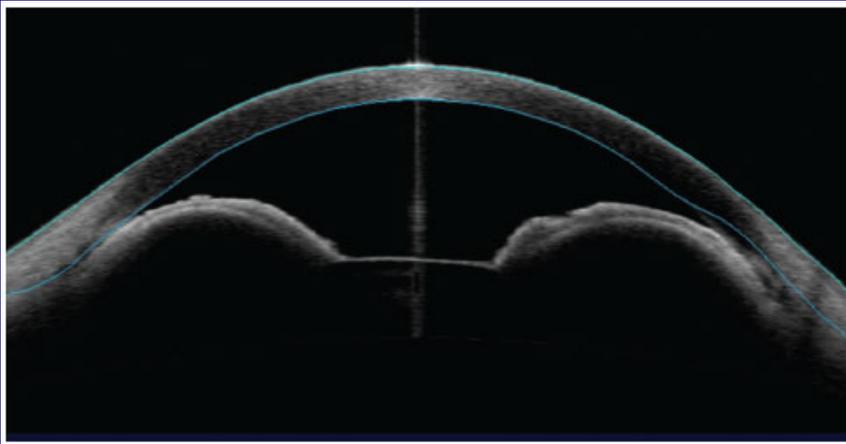
Pre YAG



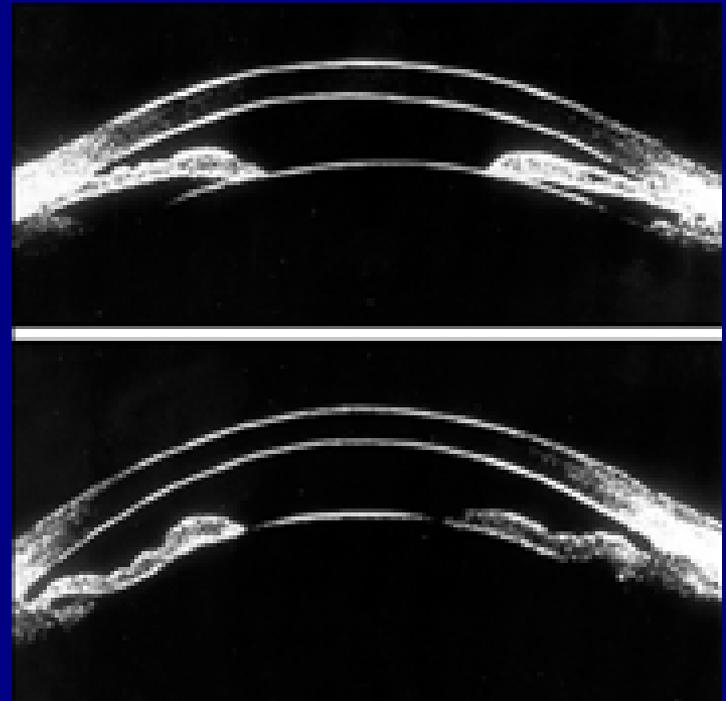
Post YAG

When to do PI vs Lens Removal

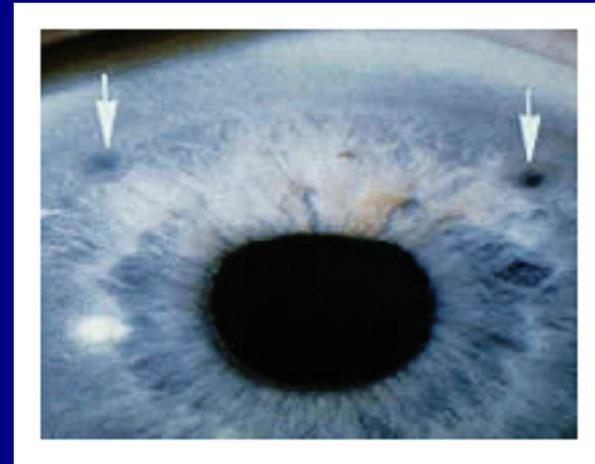
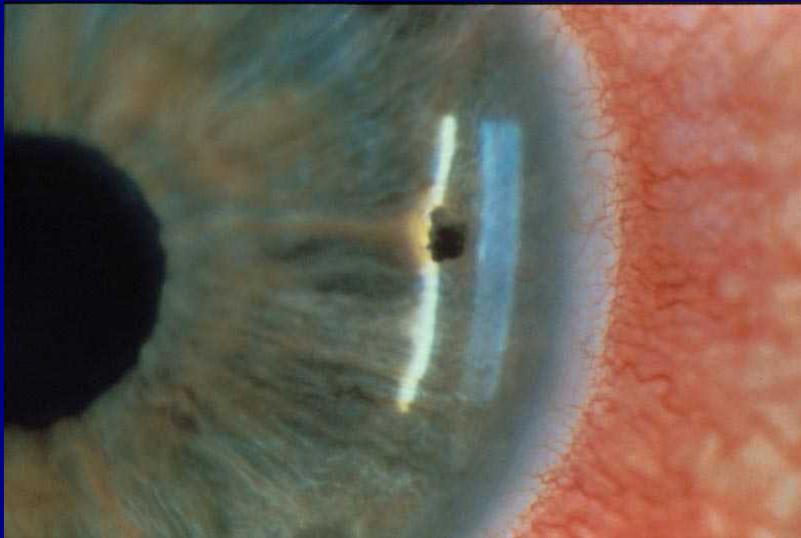
PI is a good first choice



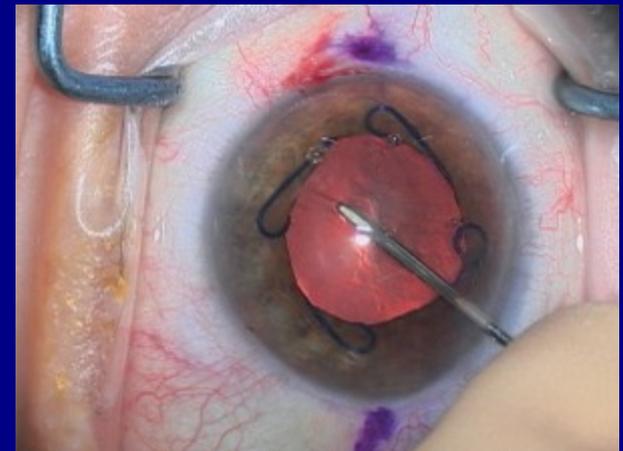
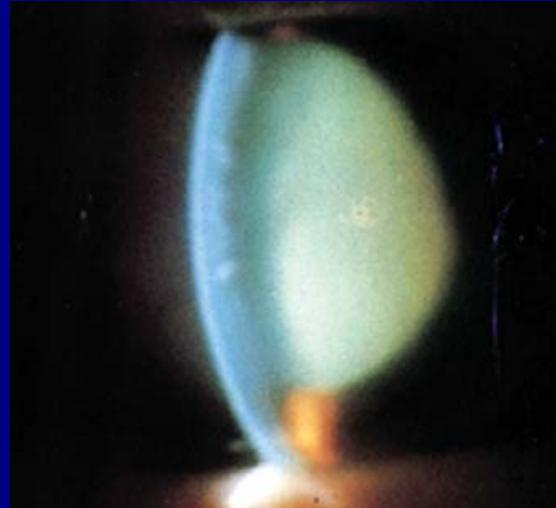
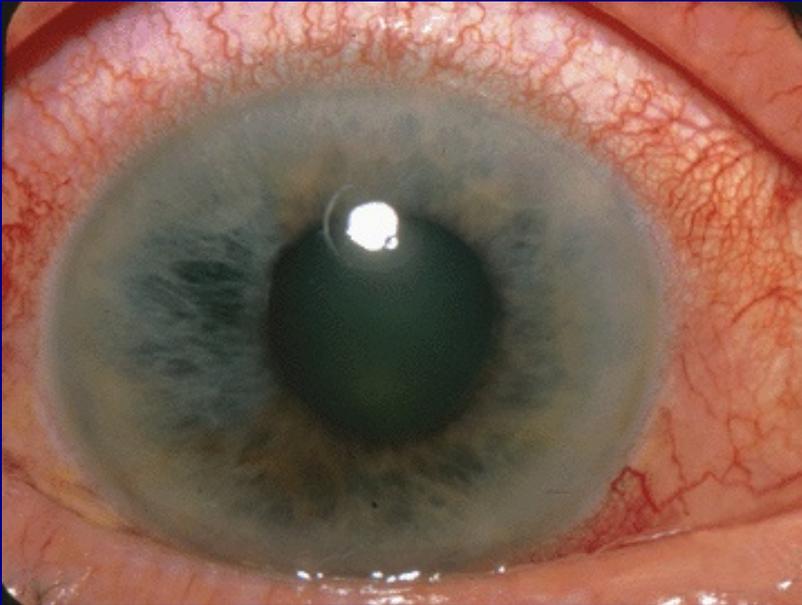
PI will not work



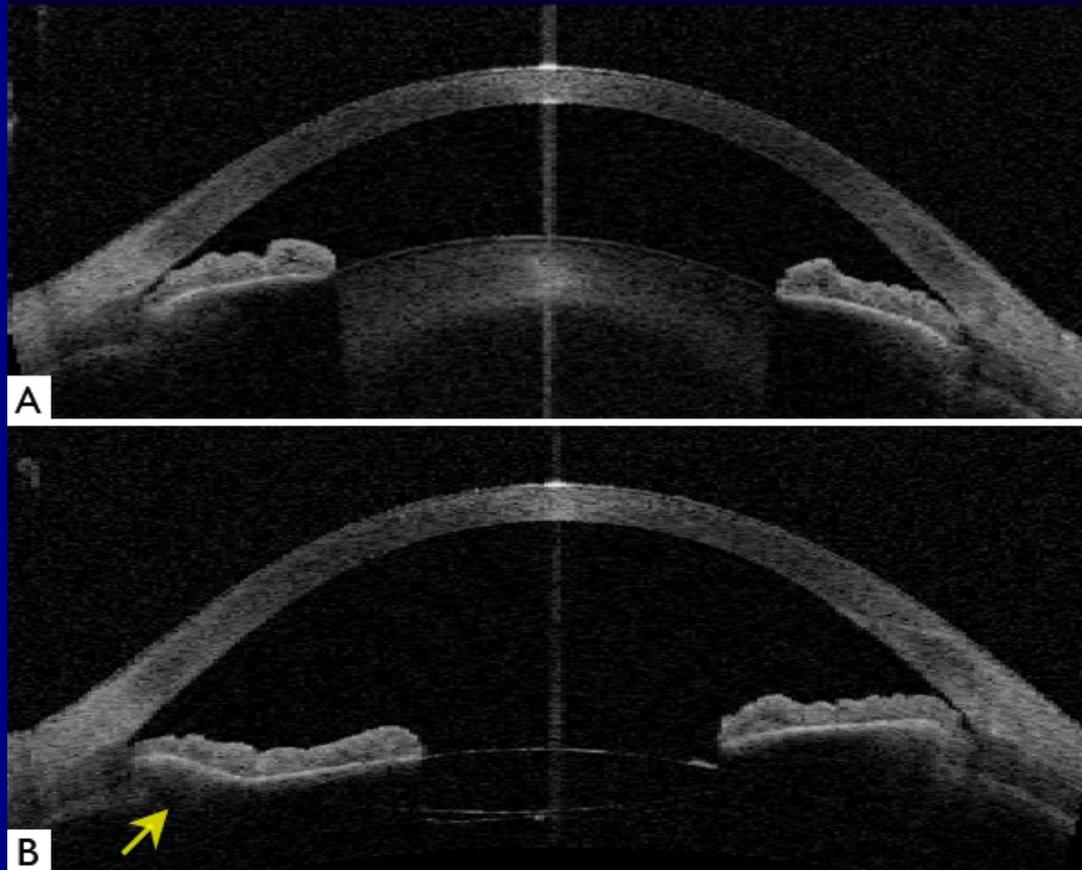
How Many PI's and Where to Place Them?



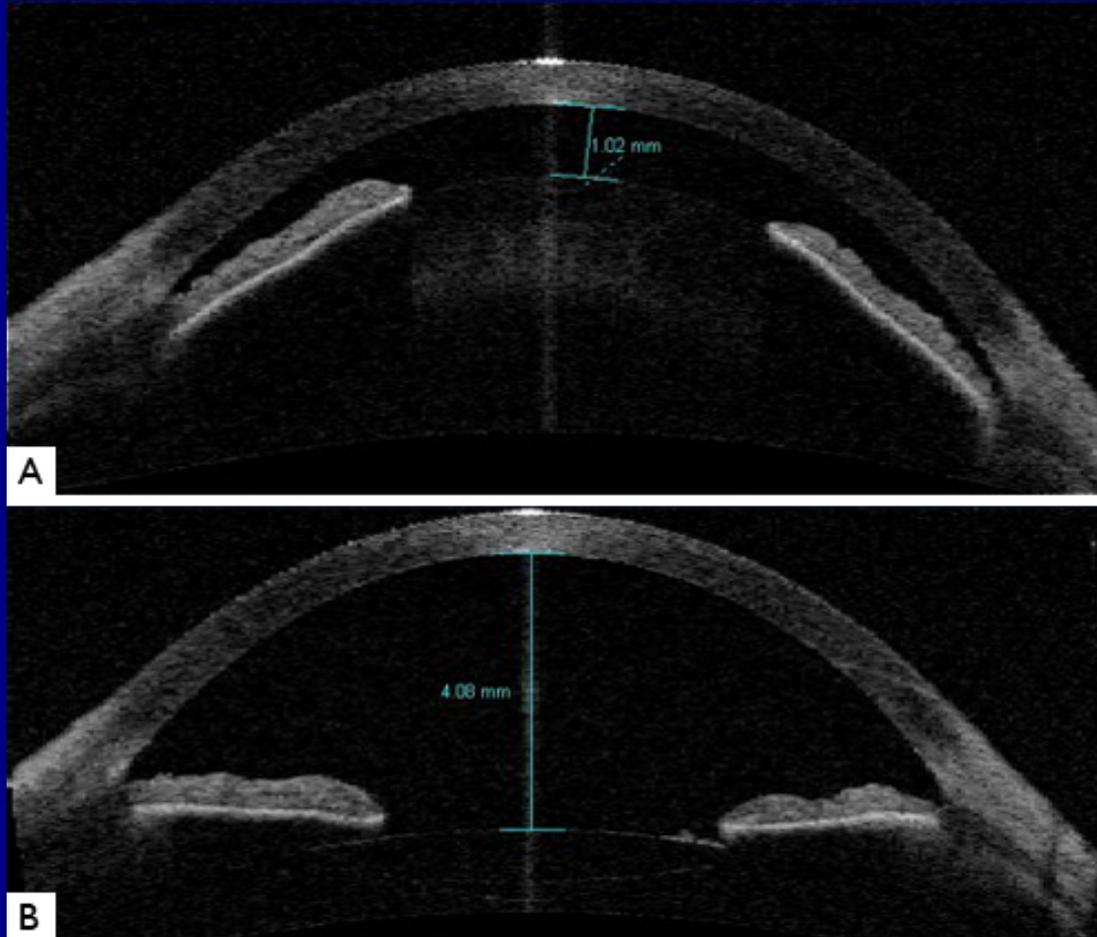
Lens Removal



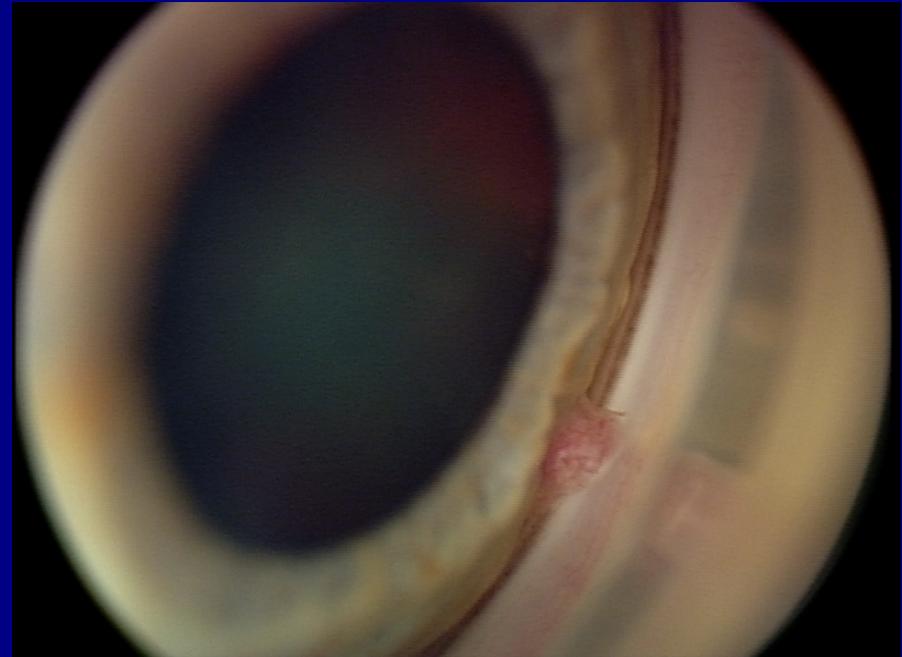
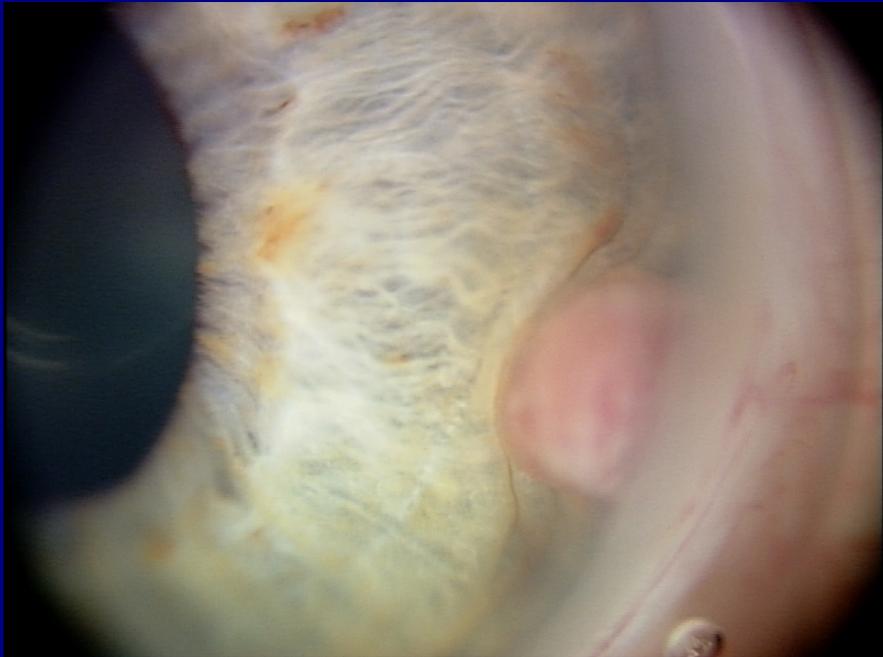
Lens Removal



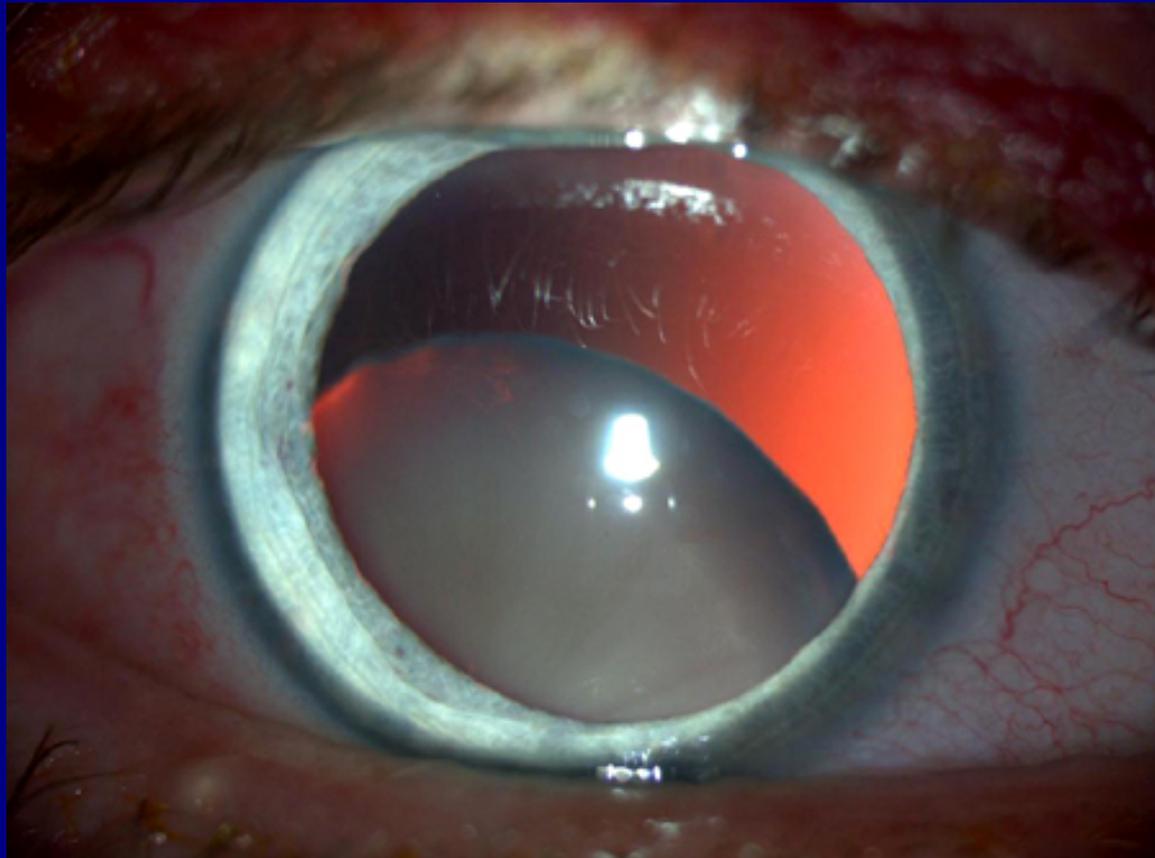
Microspherophakia



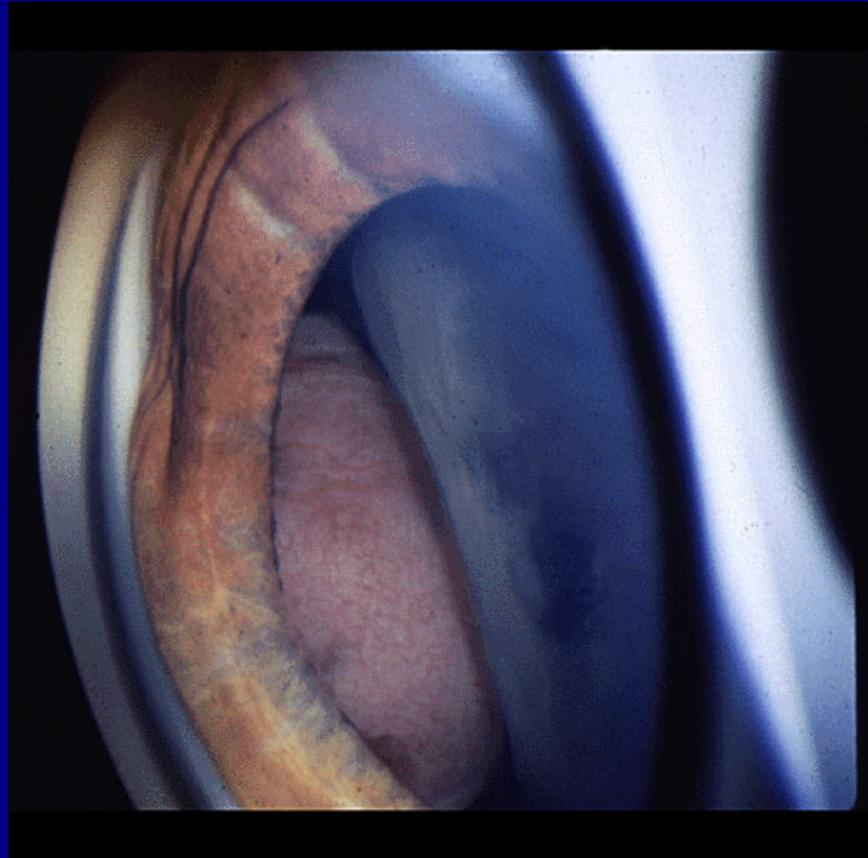
Tumor in the Anterior Chamber



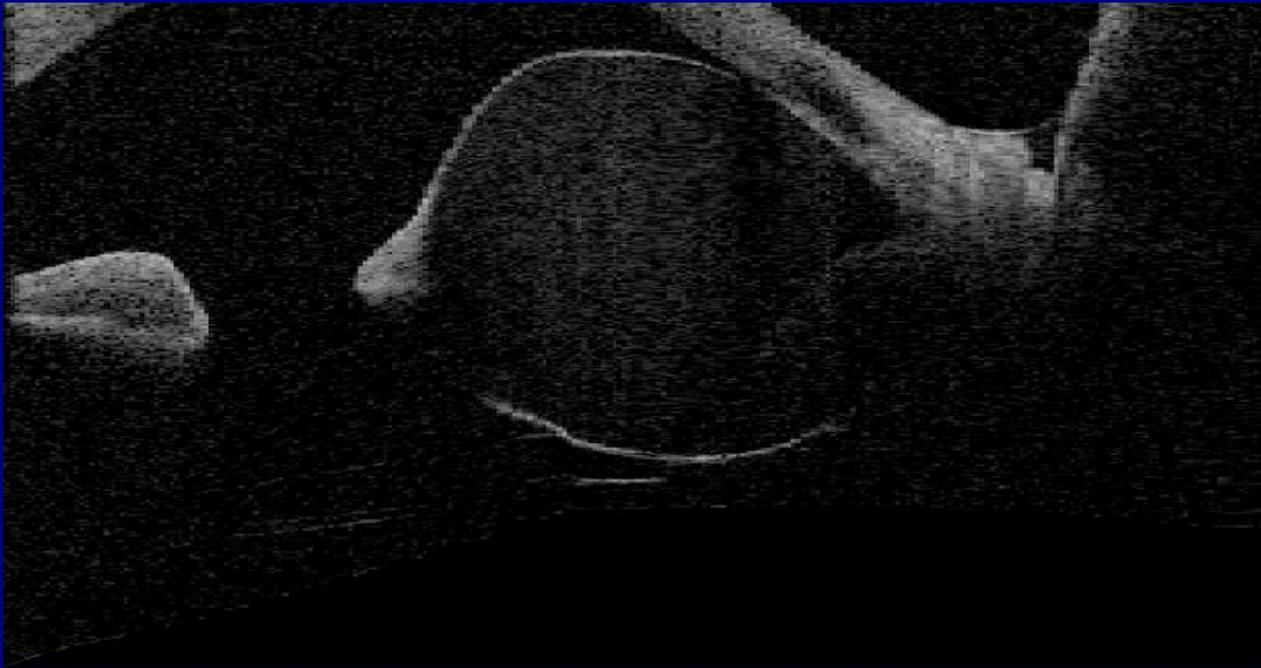
What would you recommend?



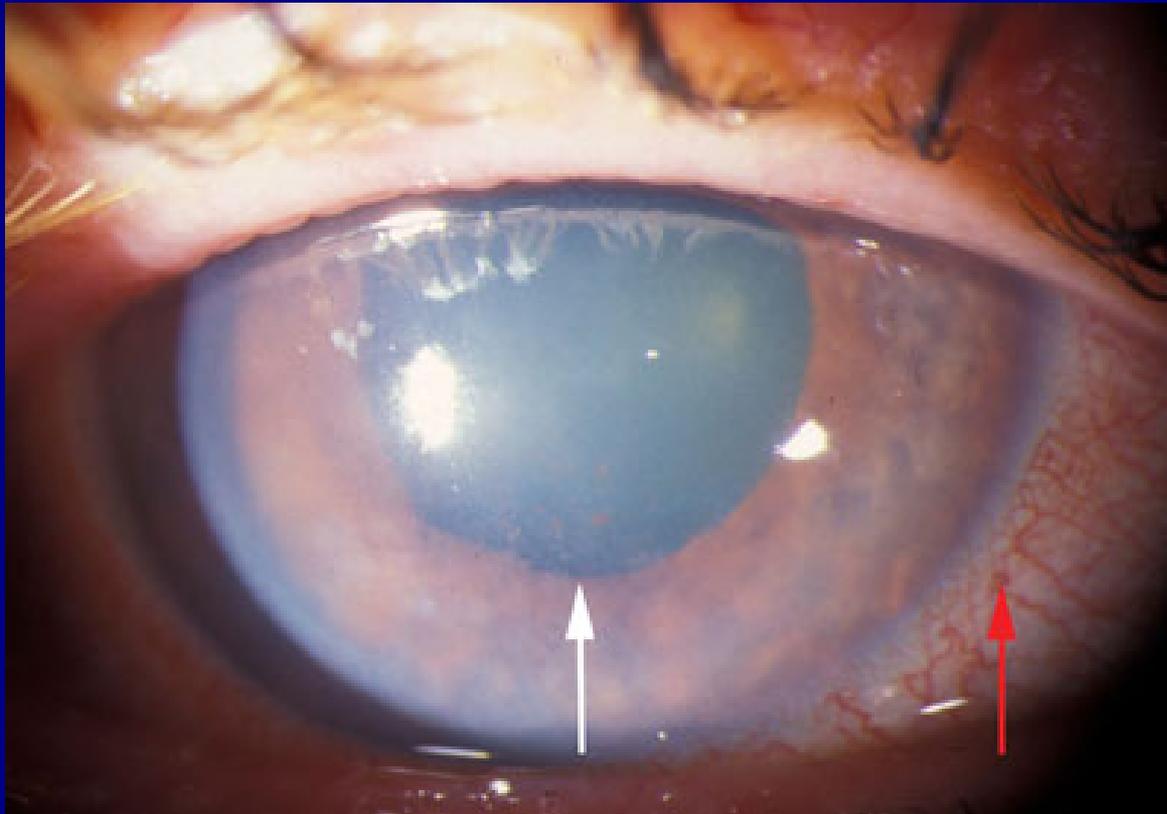
What would you recommend?



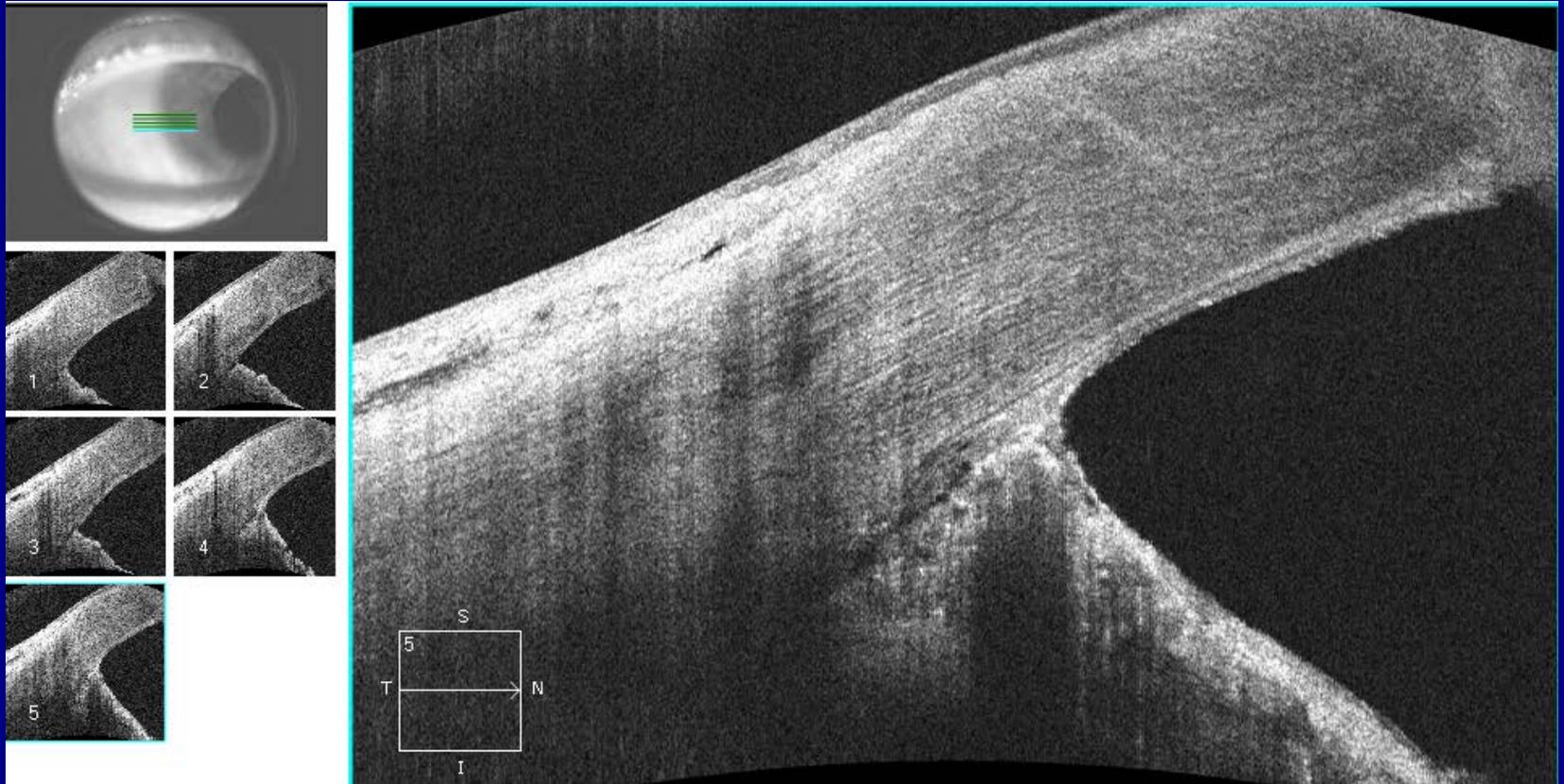
Iris Cyst



Diagnosis and Treatment?

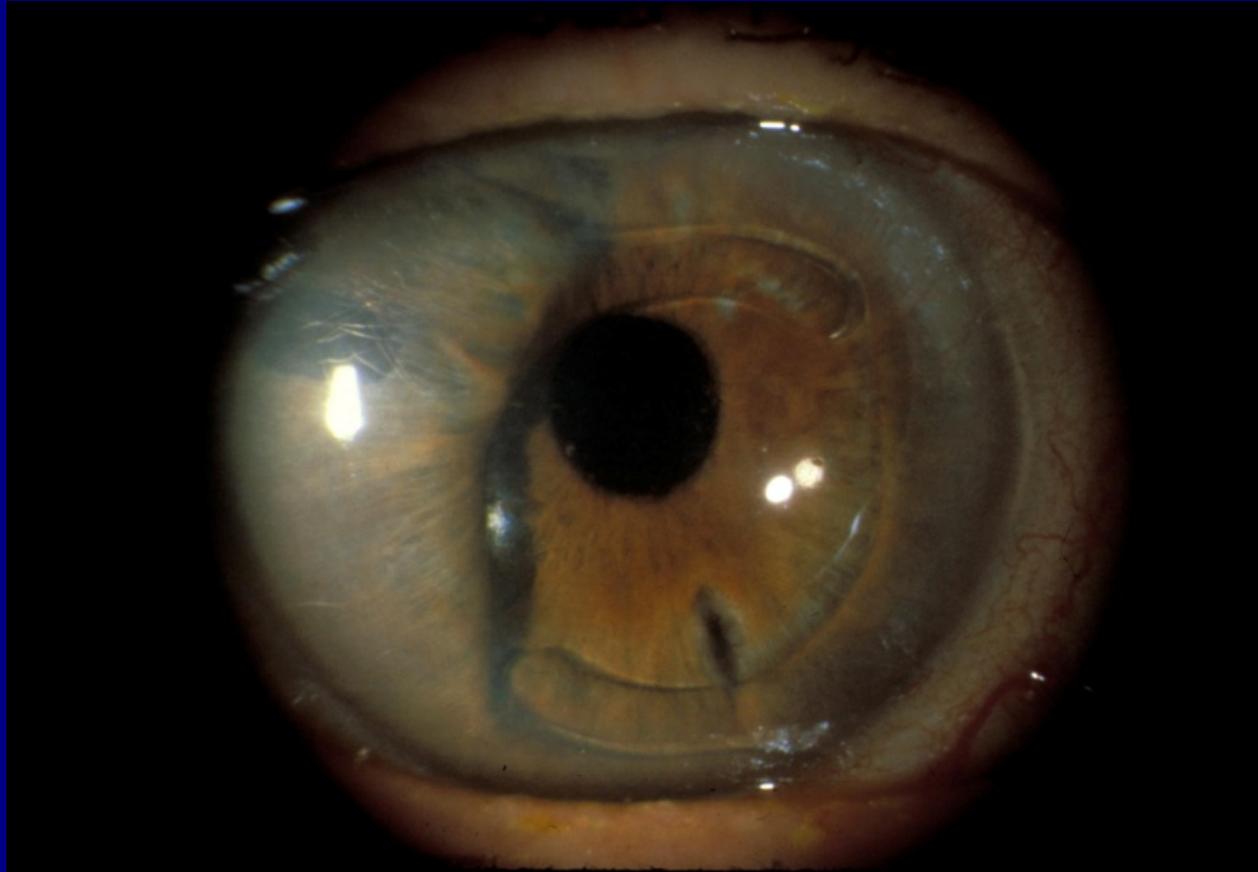


What would you recommend?

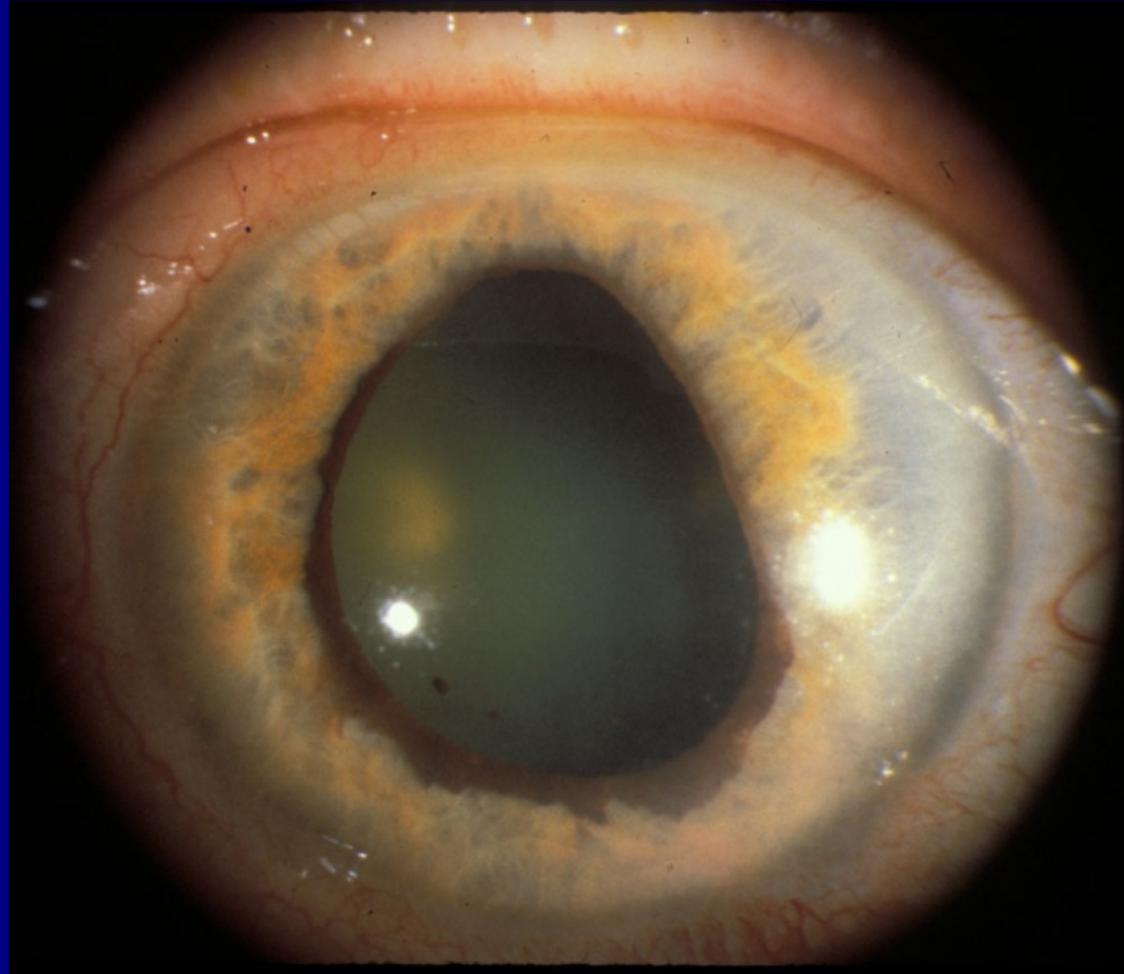


Images courtesy of Martha Leen, M.D. & Paul Kremer M.D. Achieve Eye and Laser Specialists, Silverdale, WA

What would you recommend?



What would you recommend?



Phaco for Narrow Angle Glaucoma

Advantages

- Decongests the anterior segment
- More definitive

Disadvantages

- Higher risk than laser
- In younger pts, loss of accommodation

Summary

- n YAG PI is a safe and very effective means of preventing angle closure in high risk patients**
- n Lens removal is necessary in high hyperopia, nanophthalmos, and lens induced glaucomas.**

Case Report – GR

44 y/o Asian male

One year history of intermittent elevated IOP
with up to 50mmHg.

Childhood injury lost right eye.

PMH: Healthy

Meds: Xalatan OS qhs
 Cosopt OS bid

Case Report - GR

Exam: (left eye only)

Acuity: -2.25 + 3.25 170 = 20/40

Fields: Sup arcuate defect

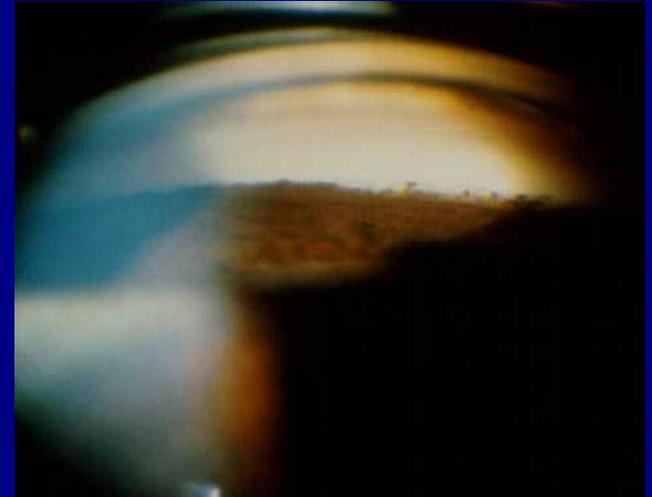
IOP: 27

SLE: Shallow AC

Gonio: Grade 0-I angle, broad PAS

Fundus: 0.8 cup

Pach: 530



Case Report – GR

What differentiates chronic angle closure glaucoma (CACG) from POAG?

How would you manage this patient?