

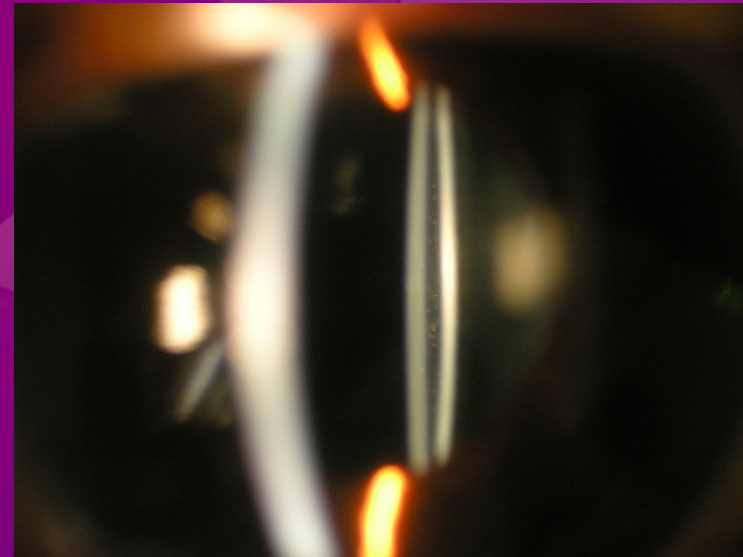
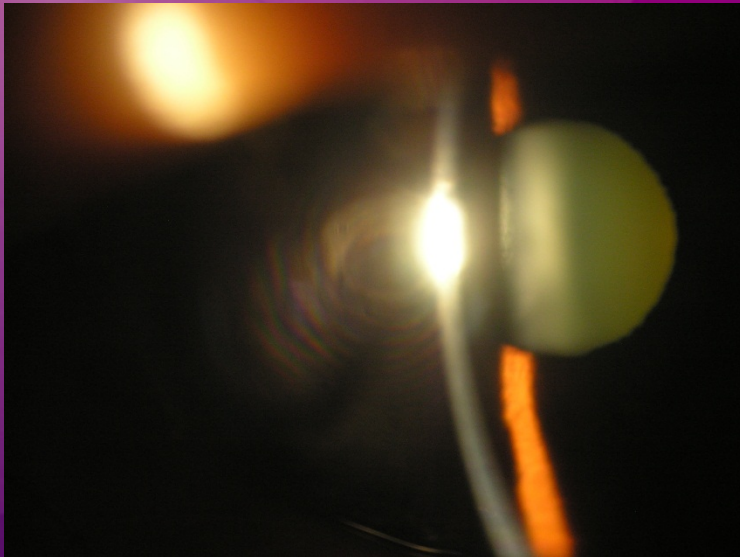
Clear lens extraction Pros and cons

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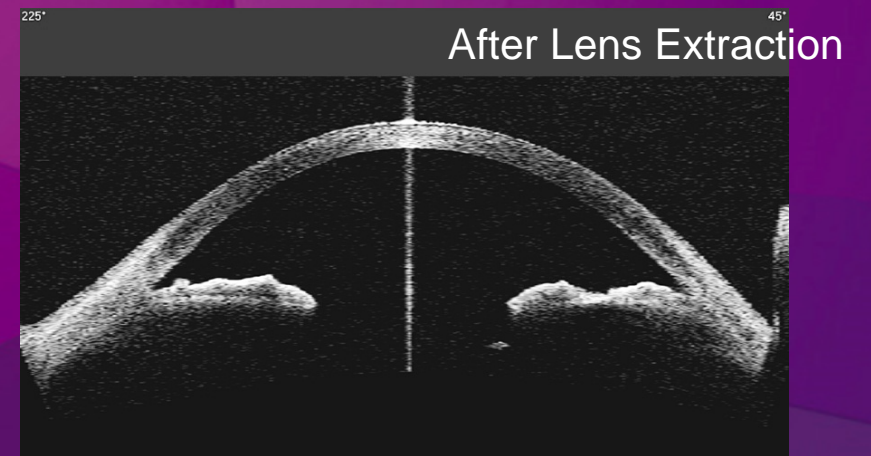
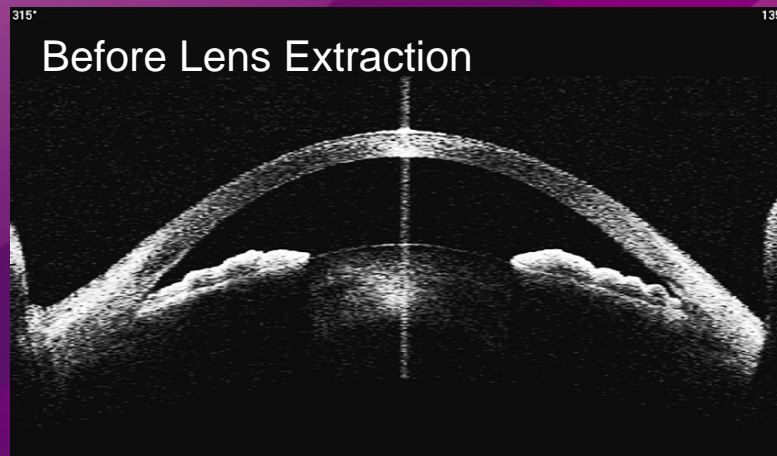
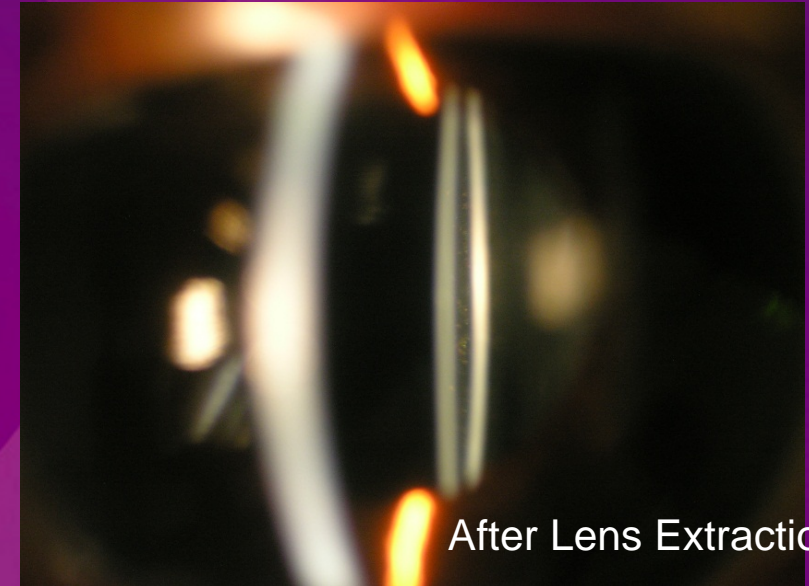


'Clear' Lens Extraction

- Lens in PACG is PATHOLOGICAL: too thick +/- too anterior -> shallow AC and angle closure
- Should we emphasize the only 'normal' aspect of this lens??



Lens extraction dramatically deepens the anterior chamber



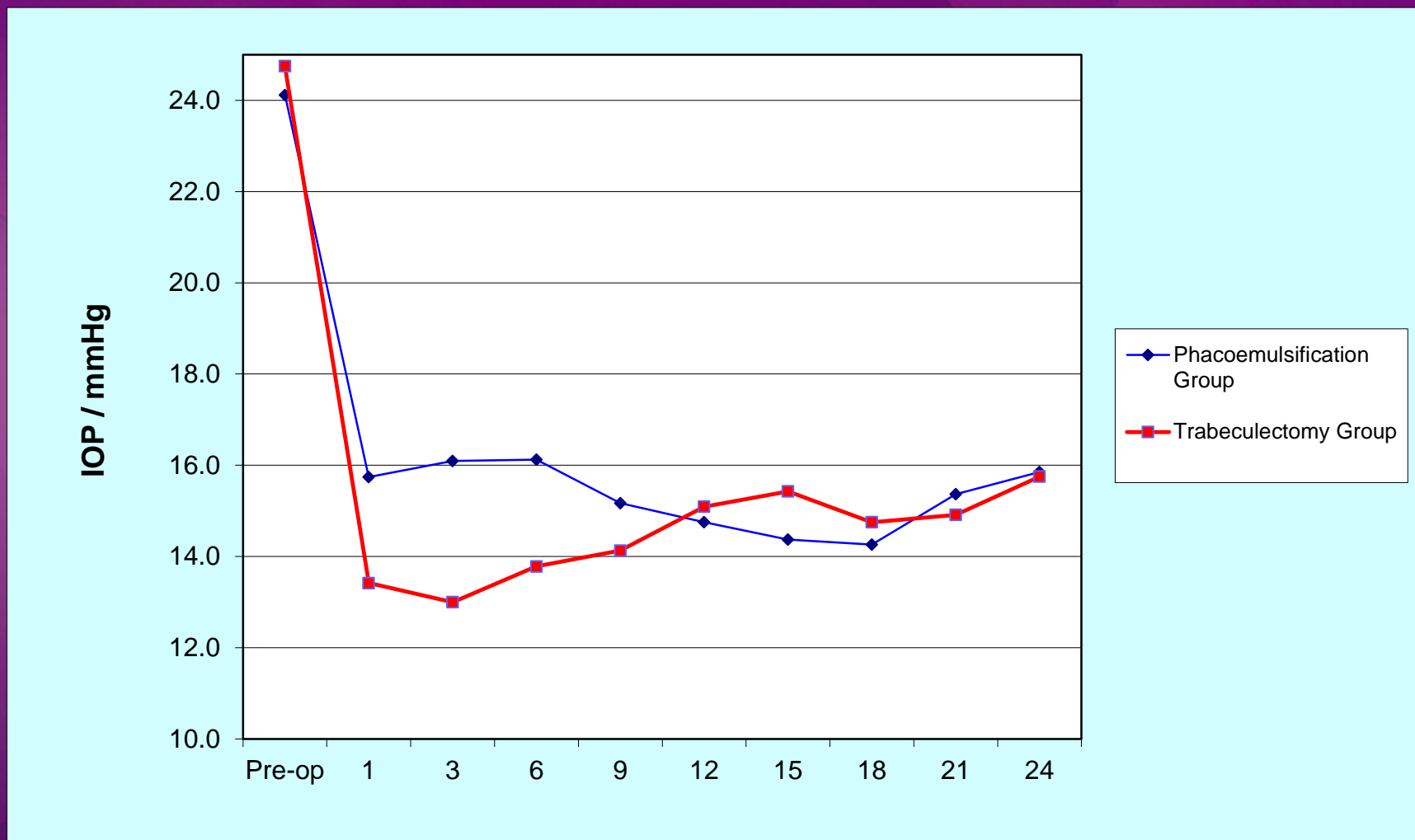
CLE is no doubt one surgical option for PACG

Convincing evidence from:

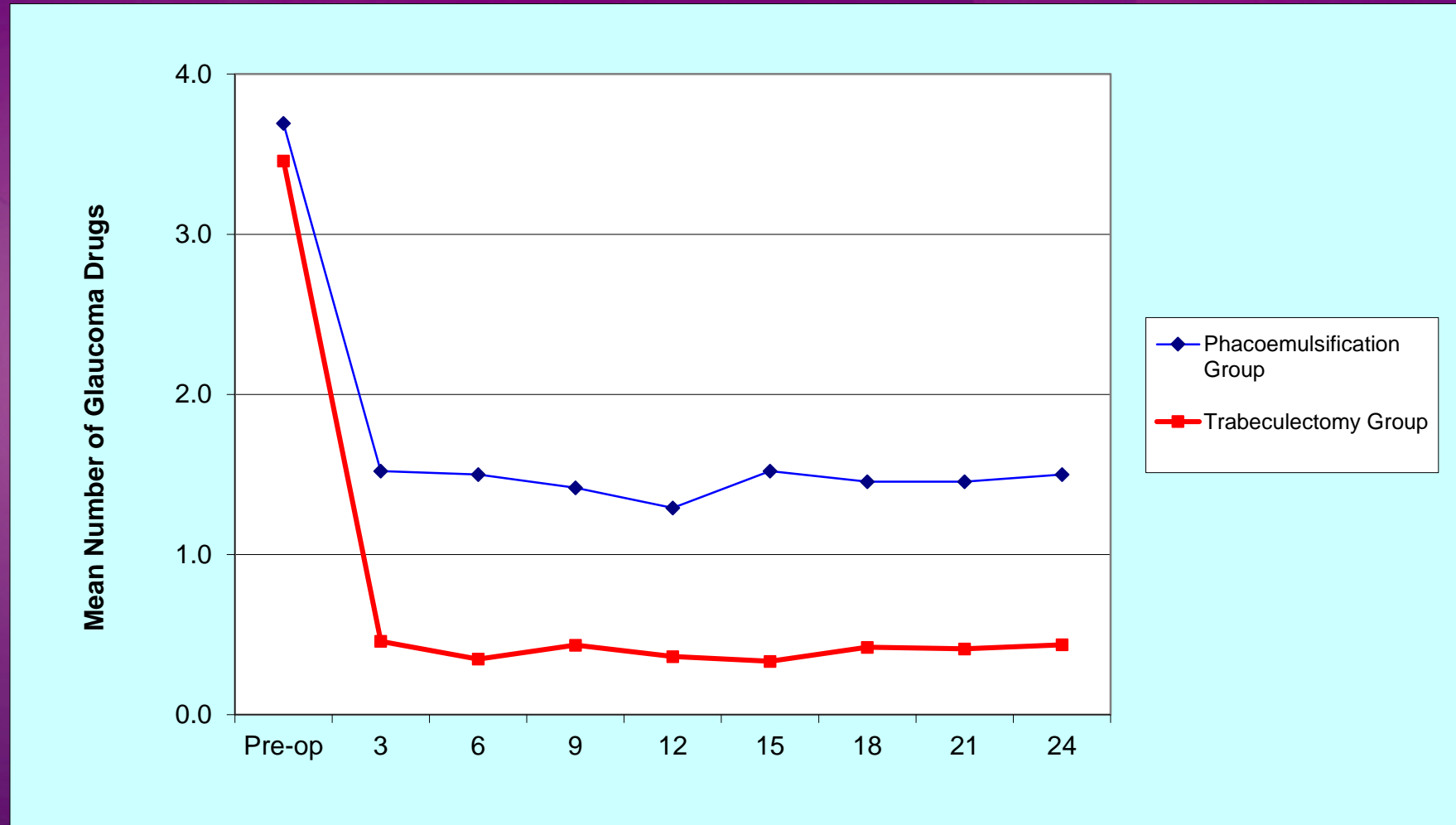
- RCT comparing CLE vs. Trabeculectomy in PACG
 - *Tham CC et al. Ophthalmology. 2013.*
- The EAGLE Study



2. LE significantly reduces IOP



2. LE significantly reduces need for glaucoma drugs



Comparison of Studies

Tham et al 2013 vs. EAGLE Study

	Tham et al 2013	EAGLE Study
Study Design	Randomized controlled interventional trial	Randomized controlled interventional trial
Target Patients	Uncontrolled PACG eyes with prior PI but NO cataract	Newly diagnosed PACG eyes before PI with NO cataract
Interventions Compared	Phaco vs. Trabeculectomy	Phaco vs. PI

What about in PACS?

CLE may not be 1st choice or routine

CLE may not be best option

But CLE should be one of our options in some specific (perhaps more extreme!) clinical scenarios!



When is a procedure 'effective' for PACG?

1. It reverses the anatomical predisposition / defect
2. It reduces IOP and need for drugs
3. It prevents pupil block & acute angle closure
4. It prevents progression of disease

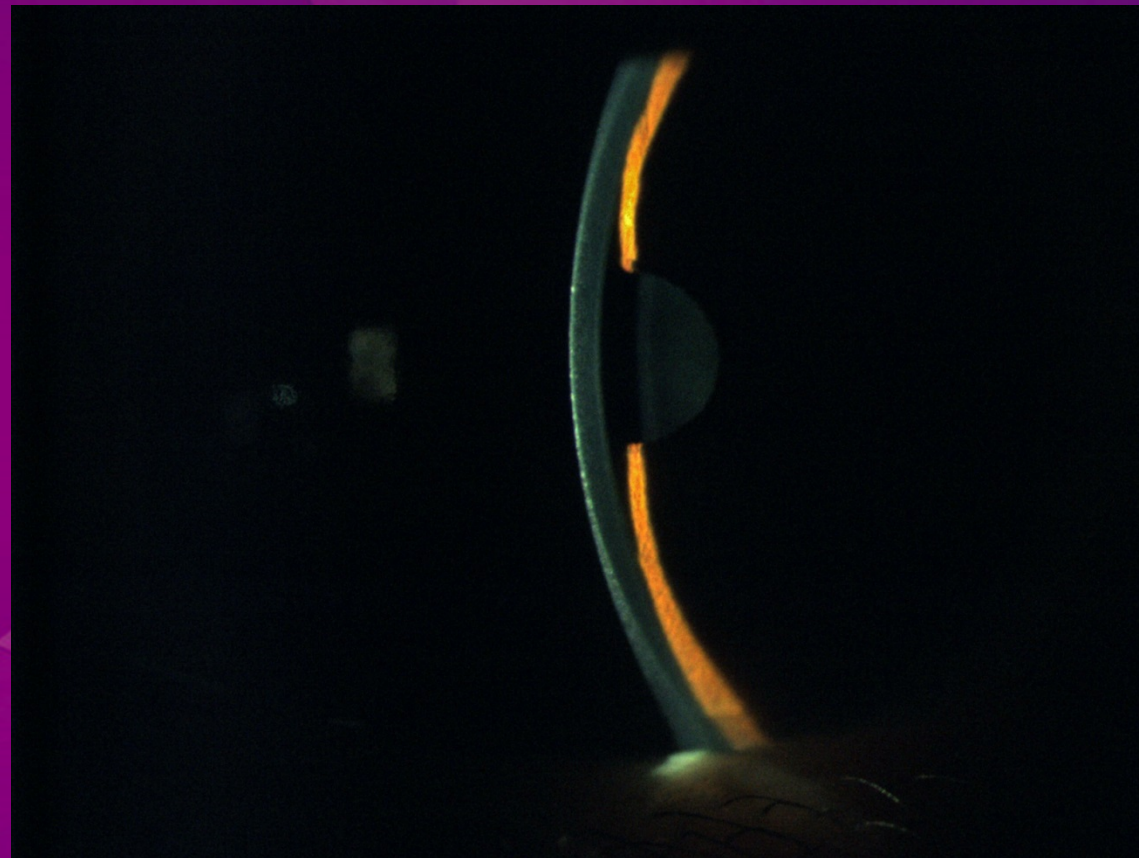
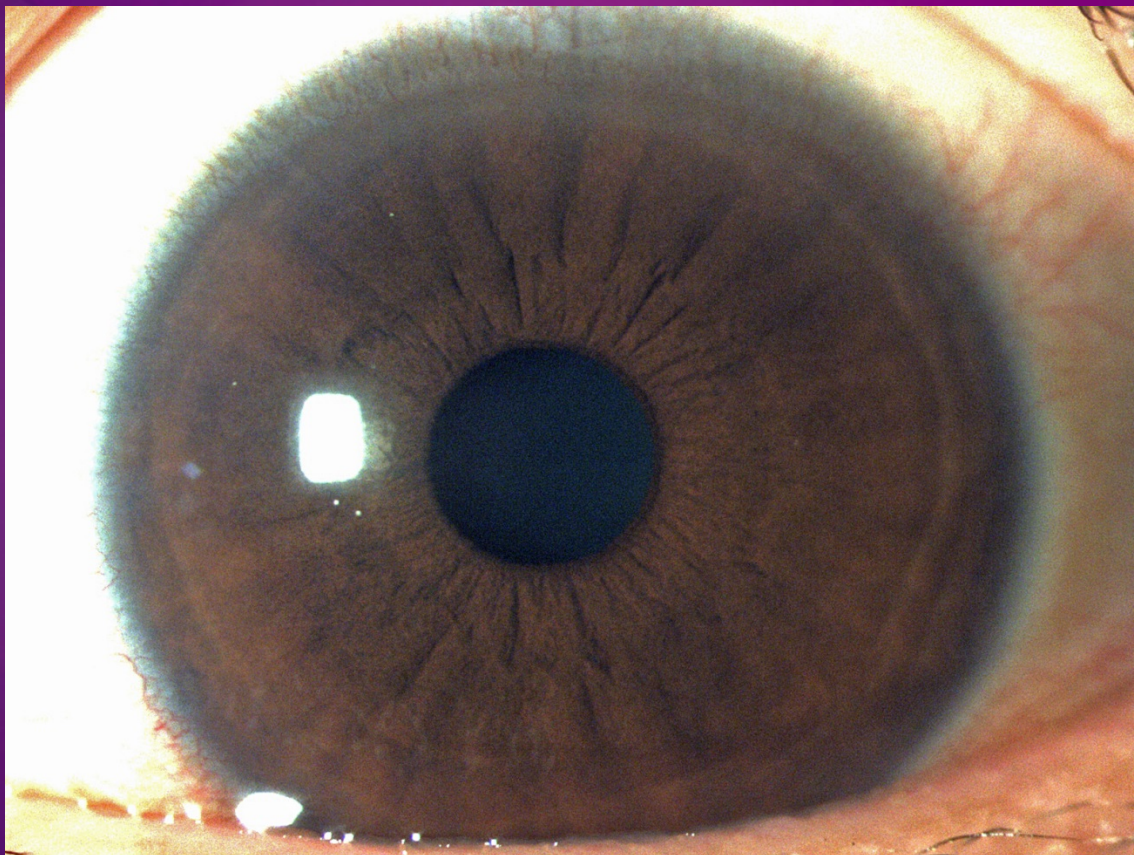
Case Presentation – Ms LYY. Age 46

	OD	OS
BCVA	20/25+1	20/20-2
Slit Lamp Exam	No Significant Cataract	No Significant Cataract
Spherical Refraction	+9.0D	+7.5D
Presbyopic Add	+2.0D	+1.5D
Central AC Depth	1.41mm	1.55mm
Axial Length / Corneal Diameter	20.67mm / 10.3mm	21.00mm / 10.2mm
IOP / Drugs	19 mmHg / No Drugs	12 mmHg / No Drugs
Gonioscopy	TM not visualized ~160-degree appositional AC No PAS on Indentation	TM not visualized ~90-degree appositional AC No PAS on Indentation
VF / OCT (RNFL)	Normal	Normal

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Case Presentation – Ms LYY. Age 46



Case 1 – Ms LYY. Age 46

- Patient disliked thick glasses (almost aphakic-like)
- Occasional ‘migraine’ (usually right side): no visual blurring noted, no halo, no eye redness, no N&V
- Possible options at this stage:
 - Conservative + Observe?
 - Prophylactic Laser Peripheral Iridotomy (PI)?
 - Lens Extraction?

Conservative + Observe

<i>Pros</i>	<i>Cons</i>
<ul style="list-style-type: none">• Least immediate invasiveness and risks	<ul style="list-style-type: none">• Occludable angle NOT resolved – risks of APAC + progression to PACG• Angle closure risk will only increase with time and age, and cataract progression

My impression: A viable option if patient can fully appreciate risks, able to have regular and close follow up, and able to seek urgent care if relevant symptoms arise

Prophylactic Laser Peripheral Iridotomy

<i>Pros</i>	<i>Cons</i>
<ul style="list-style-type: none">• Reduce (but not eliminate) risk of APAC & progression to PACG?• Less invasive & risky than lens extraction?	<ul style="list-style-type: none">• Risk to corneal endothelium?• Increase cataract progression?

My impression: A viable option if patient can fully appreciate risks, able to have regular and close follow up, and able to seek urgent care if relevant symptoms arise

Clear Lens Extraction

Pros

- Eliminate risk of APAC & reduce risk of progression to PACG?
- Excellent refractive outcomes with:
 - Correction of extreme hyperopia
 - Presbyopia improved with monovision
 - *Astigmatic correction if needed*
 - Greatest perceived improvement in QOL

Cons

- More invasive than 1st two options
- Technically most challenging?
- Risk of malignant glaucoma



Clear Lens Extraction for PACS?

CLE may not be 1st choice or routine

CLE may not be best option

But CLE should be one of our options in some
specific (perhaps more extreme!) clinical
scenarios!



When will I perform CLE?



Decision is made easier if:

1. Significant refractive error, e.g. hyperopia, astigmatism, presbyopia
2. Already compromised corneal endothelial cell count
3. Excellent rapport with patients

