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**EOS 2023**

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## Optimizing glaucoma management

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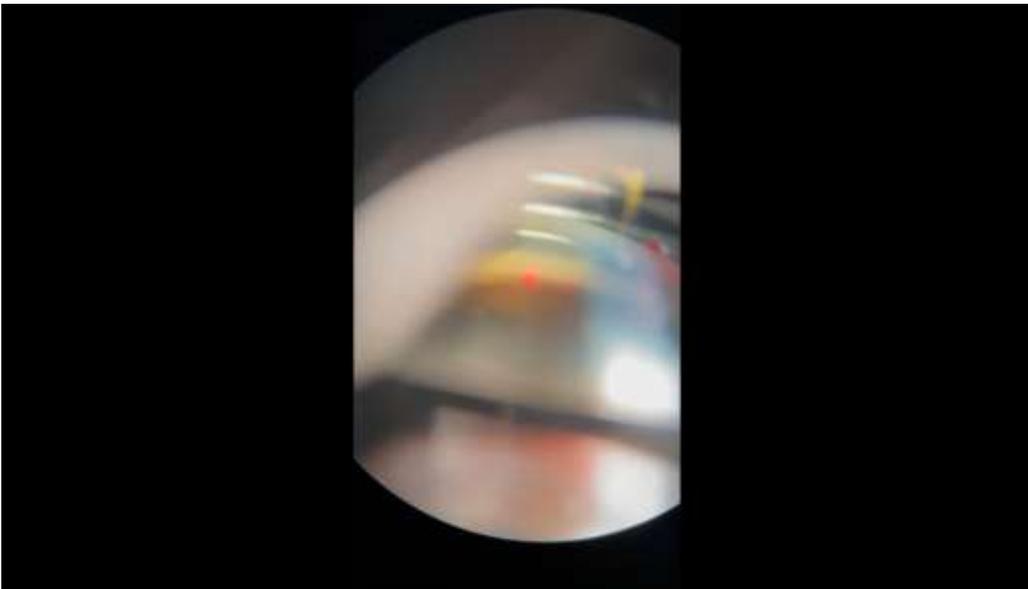


## Recently diagnosed POAG

- A 60-year-old lady
- Moderate POAG
- IOP fluctuation
- 28 & 30 mmHg

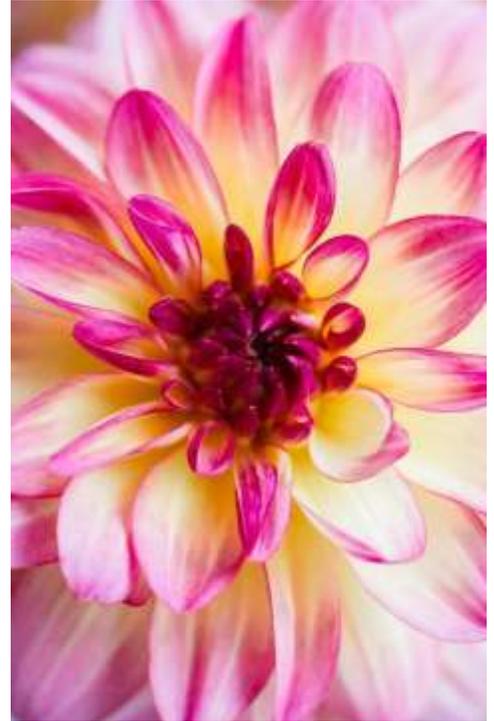






**3** treatments over **5** years

- No medical treatment
- 20 and 16 mmHg



THE LANCET

Landmark Clinical Trial

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ARTICLES | VOLUME 393, ISSUE 10180, P1305-1316, APRIL 13, 2019

**Selective laser trabeculoplasty versus eye drops for first-line treatment of ocular hypertension and glaucoma (LiHT): a multicentre randomised controlled trial**

Gus Gazzard, FRCOphth • Evgenia Konstantakopoulou, PhD • Prof David Garway-Heath, MD • Anurag Garg, FRCOphth  
Victoria Vickerstaff, MSc • Rachael Hunter, MSc • et al. [Show all authors](#) • [Show footnotes](#)

[Open Access](#) • Published: March 09, 2019 • DOI: [https://doi.org/10.1016/S0140-6736\(18\)32213-X](https://doi.org/10.1016/S0140-6736(18)32213-X) • Check for updates

PlumX Metrics

### Interpretation

Selective laser trabeculoplasty should be offered as a first-line treatment for open angle glaucoma and ocular hypertension, supporting a change in clinical practice.



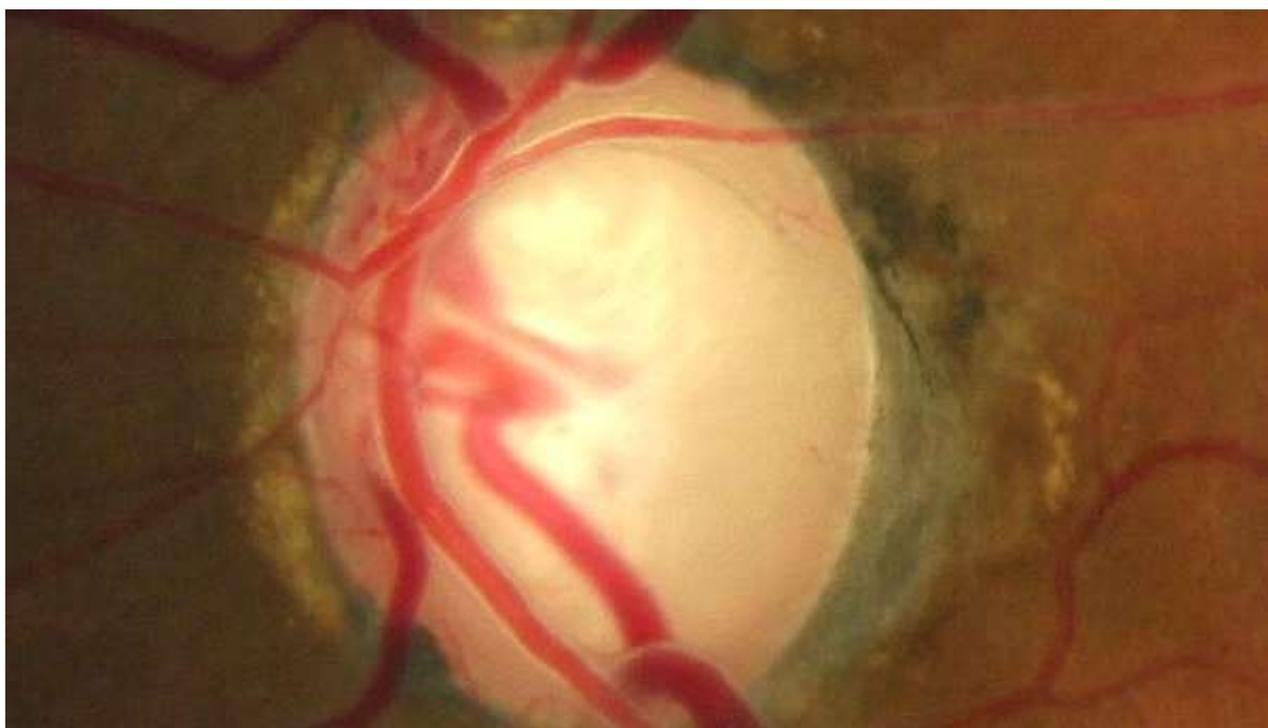
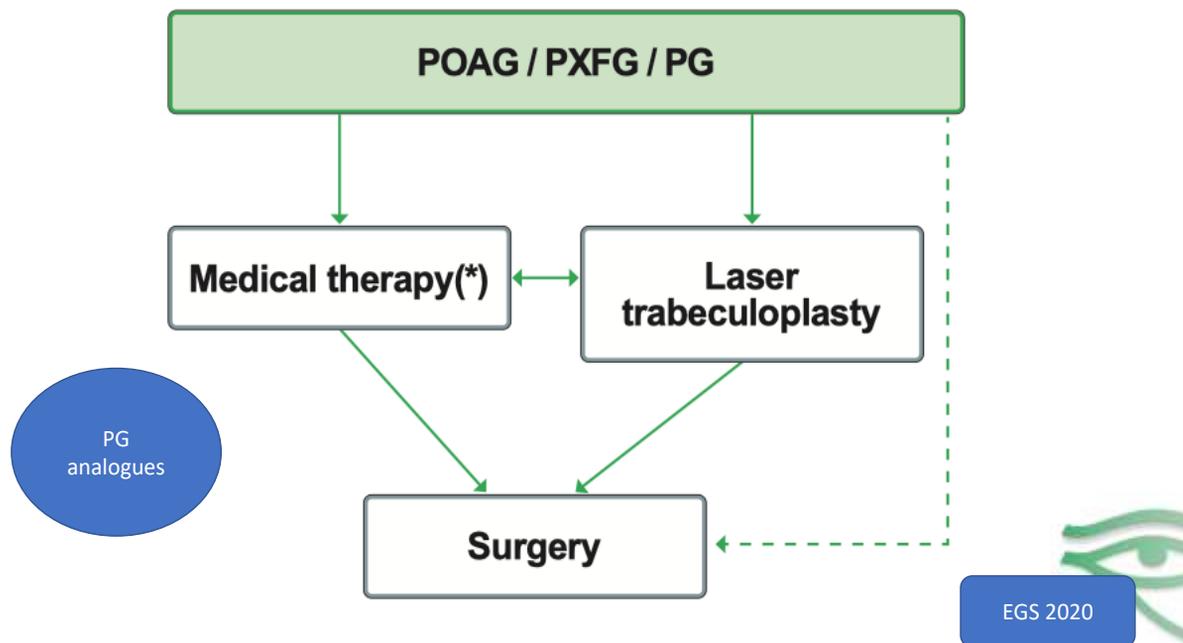
- 718 patients randomised to the selective laser trabeculoplasty and 362 to the eye drops group, 50 % are OHT.
- At 36 months, **74.2%** of patients in the SLT group required no drops to maintain intraocular pressure at target.
- Eyes of patients in the selective laser trabeculoplasty group were within target intraocular pressure at more visits (93.0%) than in the eye drops group (91.3%).
- Cost-effective than eye drops.



- Mr. Nasr
- 64 YS
- IOP : 27 & 32 mmHg

- central corneal thickness
- OS ( 540 )  $\mu$ m
- OD ( 539 )  $\mu$ m





9/2018

47 years old lady.

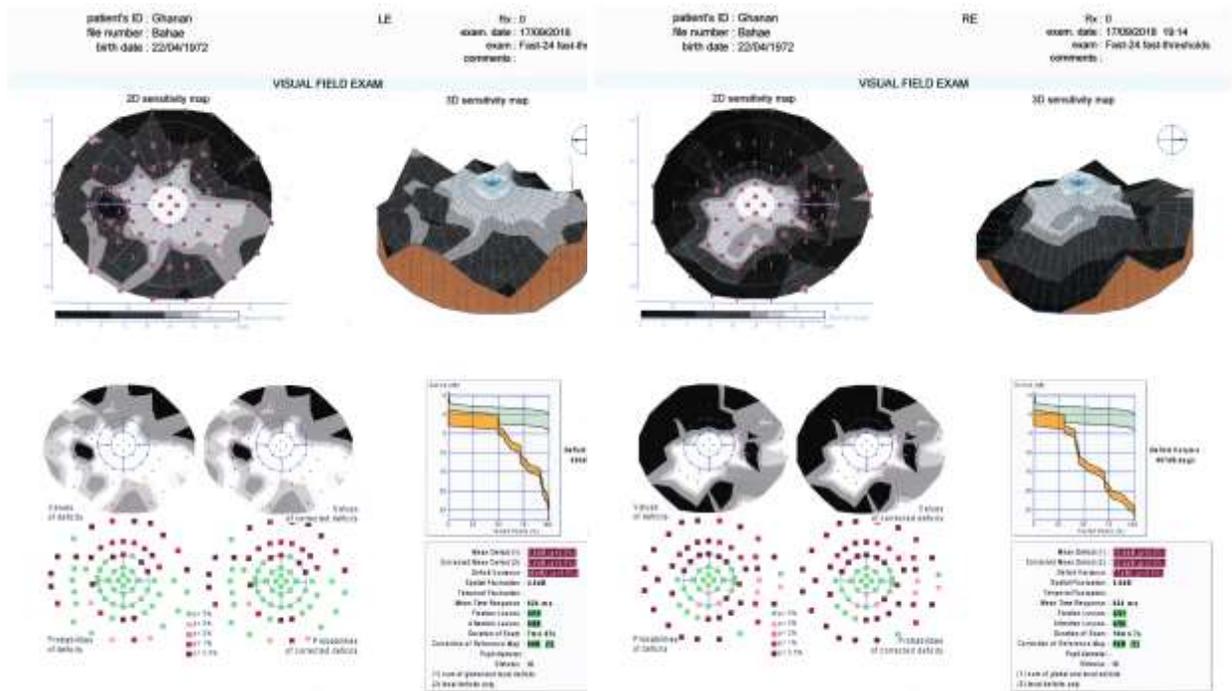
47 & 40 mmHg.

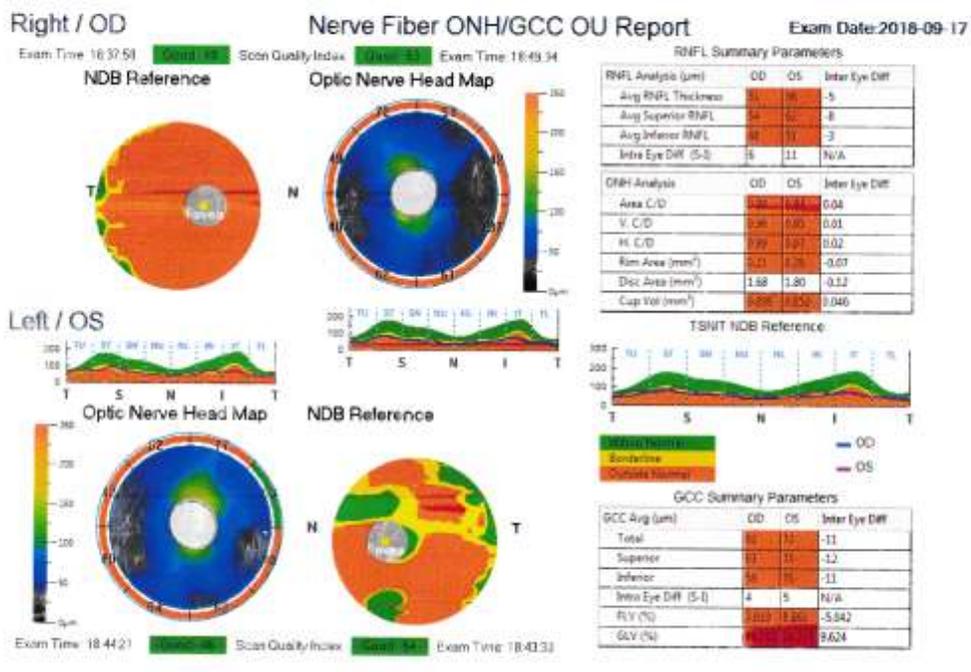
BCVA is 1.0 OU

CCT : 559/555

Advanced POAG, the undesirable presentation

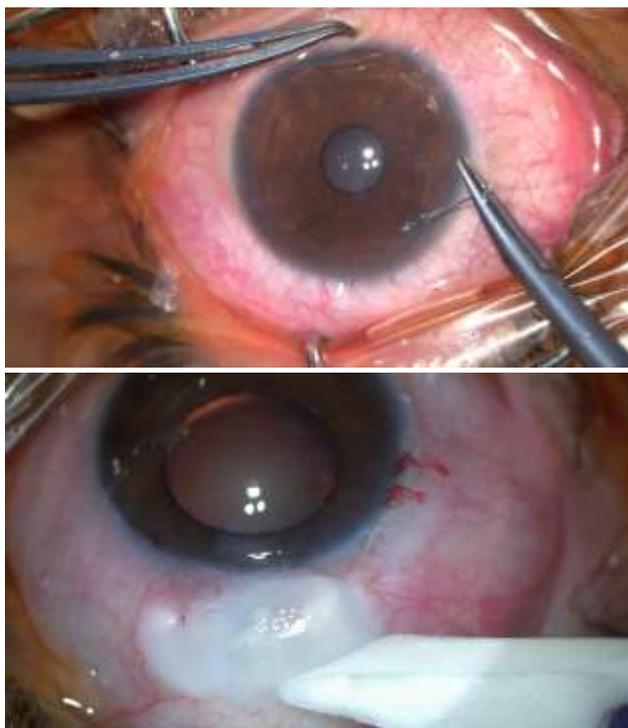
A positive family history.





20 years ago

Her father  
 One-eyed  
 C.F 50 cm  
 47 mmHg  
 All treatments  
 Trabeculectomy  
 IOP 9 mmHg



## Target IOP and quality of life:

### A. Target intra-ocular pressure (IOP):

#### ↳ Setting the Target IOP



- An IOP of **<21 mmHg** with a reduction of at least **20%** may be sufficient.

Early Glaucoma



- An IOP of **<18 mmHg** with a reduction of at least **30%** may be required.

Moderate Glaucoma



- Lower Target IOP may be needed in more advanced disease.

Advanced



A- MIGS

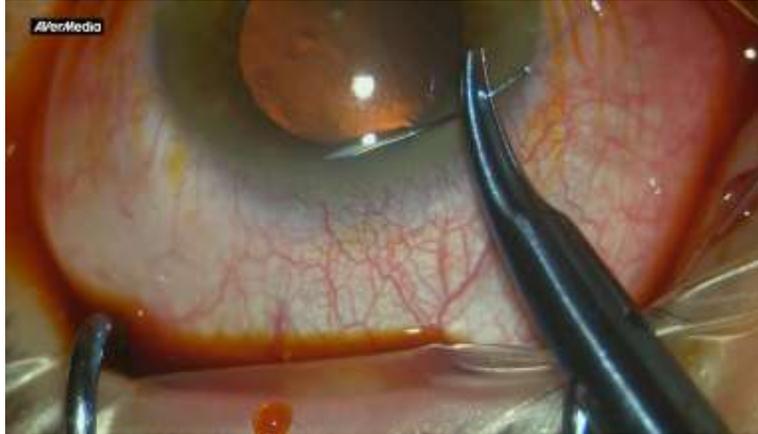
B- Trabeculectomy

C- Non-penetrating surgery

D- GDD

E- Angle surgery

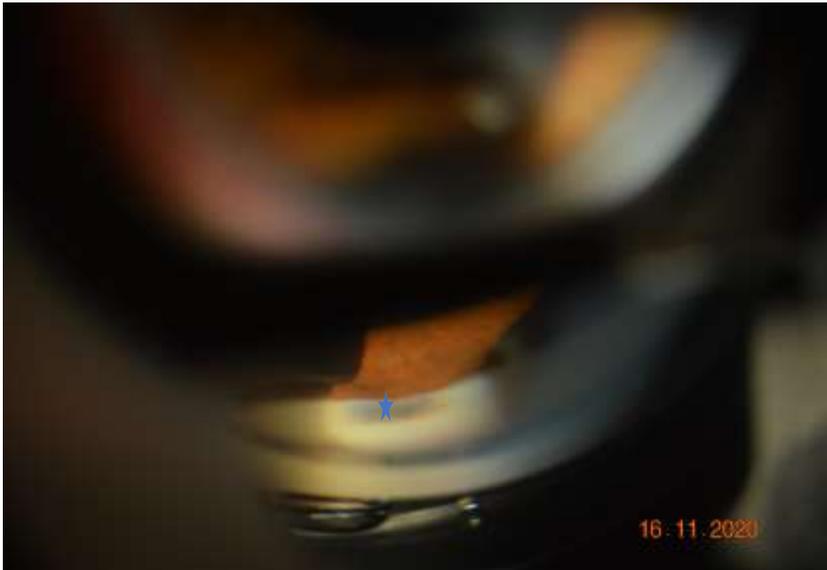




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NPGS

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12 & 14 mmHg , No  
treatment.

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Rt goniopuncture

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18 months  
after  
surgery...

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BCVA : 6/6 OU

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Strict follow up.

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Advanced Glaucoma Intervention  
Study ( AGIS)  
Recommended IOP below 14 mmHG



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Tip of the Month

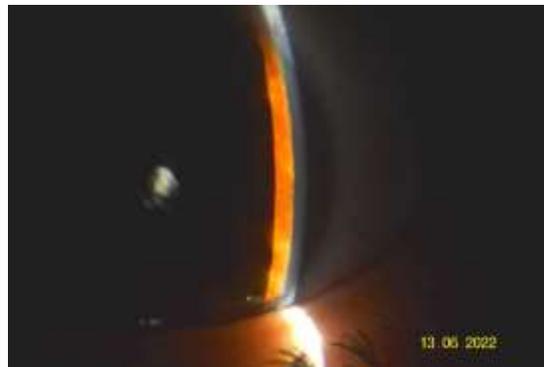
October 2021



**Consider trabeculectomy as initial treatment for newly diagnosed advanced primary open angle glaucoma (POAG)**



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- Primary Angle Closure Suspect ( PACS) . ITC contact >180 degrees.
- Primary Angle Closure ( PAC)= ITC Contact + High IOP
- Primary Angle closure Glaucoma ( PACG) = ITC Contact + High IOP + Glaucomatous optic nerve damage.





Abdelrahman AM



## Outlines

PACS

PAC

PACG (AACC & CACG)

Plateau iris



# Asymatomatic person



Randomized Controlled Trial > [Lancet](#). 2019 Apr 20;393(10181):1609-1618.

doi: 10.1016/S0140-6736(18)32607-2. Epub 2019 Mar 14.

## Laser peripheral iridotomy for the prevention of angle closure: a single-centre, randomised controlled trial

Mingguang He <sup>1</sup>, Yuzhen Jiang <sup>2</sup>, Shengsong Huang <sup>3</sup>, Dolly S Chang <sup>4</sup>, Beatriz Munoz <sup>4</sup>, Tin Aung <sup>5</sup>, Paul J Foster <sup>6</sup>, David S Friedman <sup>4</sup>

Affiliations + expand

PMID: 30878226 DOI: [10.1016/S0140-6736\(18\)32607-2](#)



## Interpretation and conclusions

- Incidence of angle-closure disease was very low among individuals classified as primary angle closure suspects.
- . In view of the low incidence rate of outcomes that have no immediate threat to vision, the benefit of prophylactic laser peripheral iridotomy is limited.
- Therefore, widespread prophylactic laser peripheral iridotomy for primary angle-closure suspects is **not recommended**. LPI is advisable only in high risk eyes.
- It is uncertain whether the findings are generalizable to non-Chinese populations.



## EGS guidelines

- Adopted ZAP trial.
- Not all PACS need LPI .
- Evidence from Chinese showed low risk of disease progression without LPI.
- No studies in white European eyes.
- Recommendations: LPI in high risk individuals ( High hyperopia, repeat pupillary dilatation for retinal diseases or difficult access to healthcare facilities.
- Level of evidence : low
- Strength of recommendation: weak



- Clinical Guidelines
- The Management Of Angle-Closure Glaucoma
- 2021



## Primary Angle closure Suspect ( PACS)

Gnioscopy	IOP	Glaucomatous optic neuroapthy
2 or more quadrants of irido-trabecular contact, <b>no PAS</b>	Normal	No

- No evidence to support any intervention in quite eyes.
- After AACG in the other eye ( LPI, strong recommendation).



## PACS "Plus"

- People with only one "good eye".
- Diabetes or another condition necessitating regular pupil dilation
- Vulnerable adults who may not report ocular or vision symptoms
- Those using antidepressants or medication with an anticholinergic action
- Family history of significant angle closure disease
- People either living in remote locations.
- High hypermetropia ( $> + 6.00$  dioptries)



Primary Angle Closure



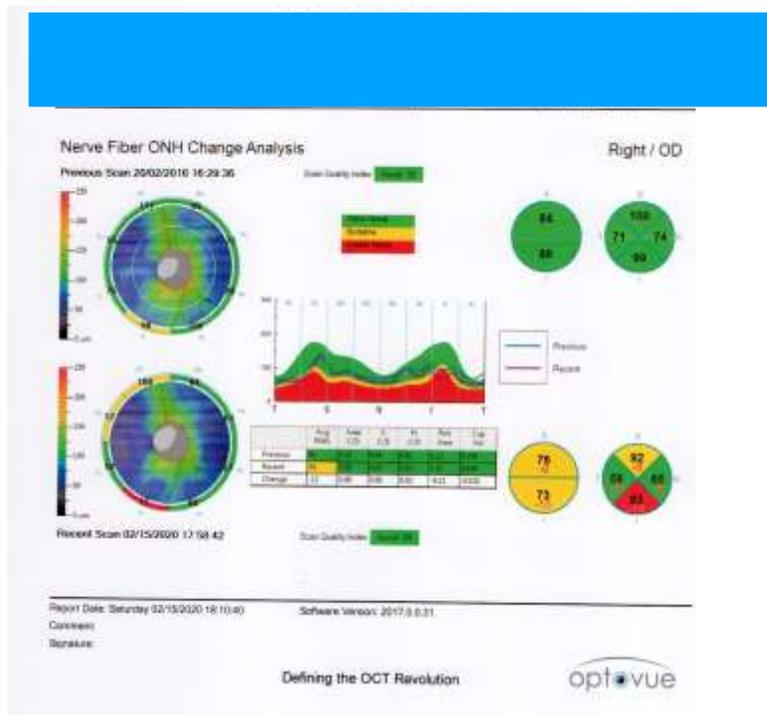
# Primary Angle closure (PAC)

Gnioscopy	IOP	Glaucomatous optic neuroapthy
2 or more quadrants of irido-trabecular contact, (+/-) PAS	(+/-) High	No

- Phacoemulsification ( better on the long term IOP control )
- P.I ( meticulous follow up )

Clear lens extraction in eyes with primary angle closure and primary angle-closure glaucoma.

Costa VP<sup>1</sup>, Leung CKS<sup>2</sup>, Kook MS<sup>3</sup>, Lin SC<sup>4</sup>, Global Glaucoma Academy



# Primary Angle Closure Glaucoma



# Management



## CACG

- Strong evidence : Phacoemulsification ( Etiological treatment)
- Debatable or less evidence for :
  - 1- Goniosynchiolysis or viscosynechiolysis
  - 2- Trabeculectomy
  - 3- Repairing the pupil



J Glaucoma. Sep-Oct 2020;30(5):343-348. doi: 10.1016/j.jglau.2020.06.002.  
 Epub 2020 Jun 9.

### Intraocular Pressure Changes after Cataract Surgery in Patients with and without Glaucoma: An Informatics-Based Approach

Sophia Y Wang <sup>1</sup>, Armin D Azad <sup>2</sup>, Shan C Lin <sup>3</sup>, Tina Hernandez-Boussard <sup>4</sup>, Suzann Parslow <sup>5</sup>



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Landmark trial

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ARTICLES | VOLUME 383, ISSUE 10062, P1389-1397, OCTOBER 01, 2016

 PDF [315 KB]  Figures  Save  Share  Reprints  Request

### Effectiveness of early lens extraction for the treatment of primary angle-closure glaucoma (EAGLE): a randomised controlled trial

Prof Augusto Azuara-Blanco, PhD  Jennifer Burr, MD - Prof Craig Ramsay, PhD - David Cooper, PhD  
Prof Paul J Foster, PhD - Prof David S Friedman, PhD - et al. [Show all authors](#)

Open Access - Published: October 01, 2016 - DOI: [https://doi.org/10.1016/S0140-6736\(16\)30956-4](https://doi.org/10.1016/S0140-6736(16)30956-4)

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# THANK YOU

*See you next year*

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