



GLAUCOMA: IMPROVING OUTCOMES & QUALITY OF LIFE

LAURA CRAWLEY

CONSULTANT GLAUCOMA & CATARACT SURGEON

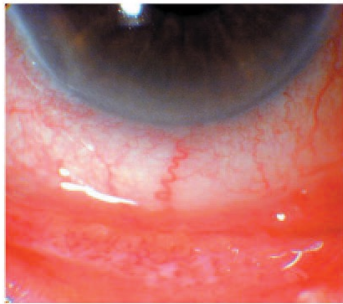
CLINICAL DIRECTOR OPHTHALMOLOGY IMPERIAL NHS TRUST

HONORARY SENIOR LECTURER IMPERIAL COLLEGE LONDON

GLAUCOMA

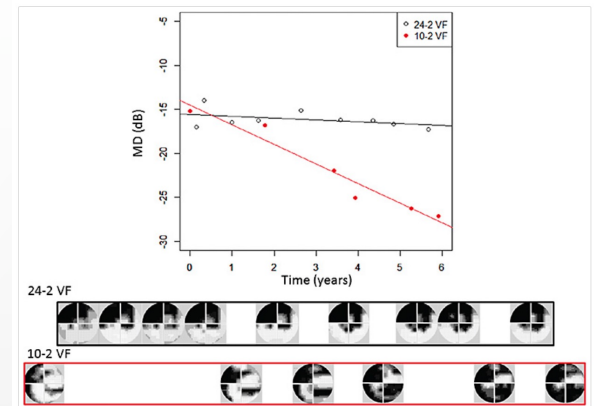


- LIFELONG TREATMENT
- MISSING THE BOAT- FUNCTIONAL VISUAL LOSS
- OVER-DIAGNOSIS AND BURDEN OF TREATMENT
- ENJOYING THE SIDE EFFECTS OF TREATMENT



WHAT ARE WE TRYING TO ACHIEVE

- DETECT DISEASE
- PREDICT FUNCTIONAL LOSS
- DETECT PROGRESSION
- MEASURE RATE OF CHANGE AND EXPECTED SEVERITY OF FUNCTIONAL LOSS
- EQUITY OF ACCESS- LATE PRESENTATION, POORER OUTCOME



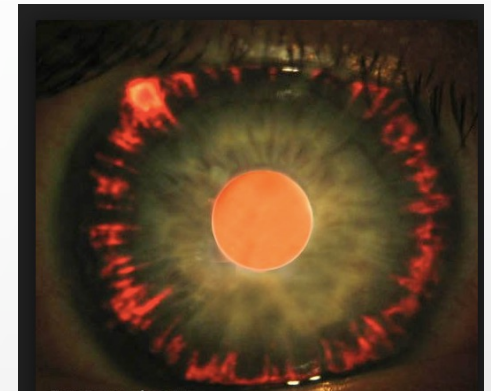
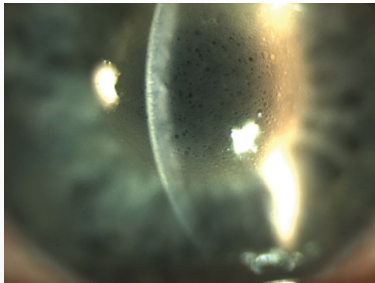
The background features a light gray gradient with several realistic water droplets of various sizes scattered in the corners. The droplets have highlights and shadows, giving them a three-dimensional appearance. They are located in the top-left, top-right, and bottom-right areas of the frame.

RED FLAGS

BEFORE WE EVEN GET TO THE DISCS....

RECORDING ANTERIOR SEGMENT FINDINGS

- VA
- CCT
- CORNEAL ENDOTHELIUM
 - SPINDLE
 - ENDOTHELIAL CELL MORPHOLOGY
 - KPS
- IRIS TRANSILLUMINATION
 - PDS, PREVIOUS ANGLE CLOSURE, TRAUMA, SURGERY, PI, “BLUE EYES”
- CONJUNCTIVA
 - RED, PREVIOUS VR SURGERY, PREVIOUS GLAUCOMA SURGERY, RA
- PUPIL
 - POSTERIOR SYNECHIAE, PXF, POST PHACO PUPIL OBSERVATIONS



PSEUDOEXFOLIATION



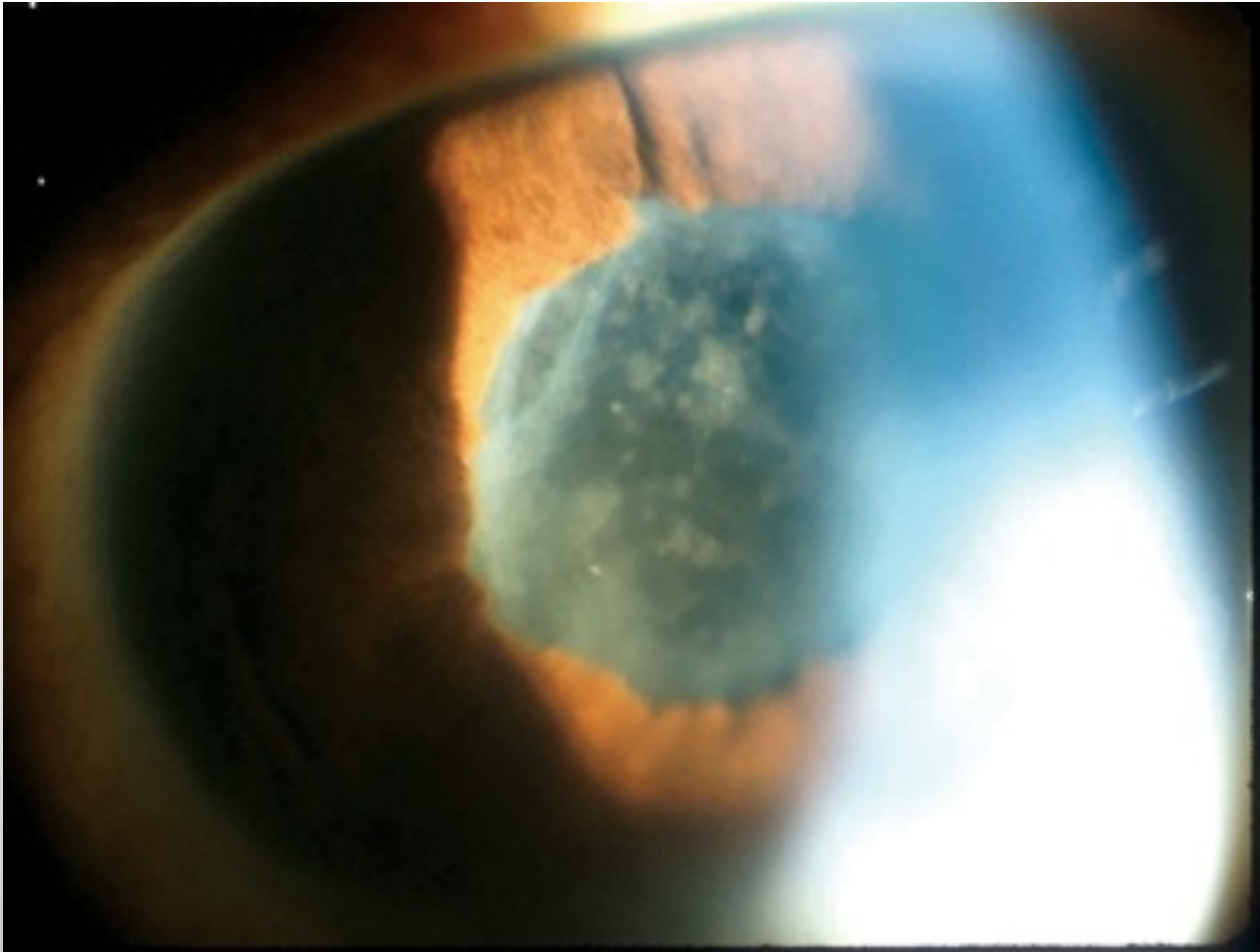
Pupil Margin

On surface of lens

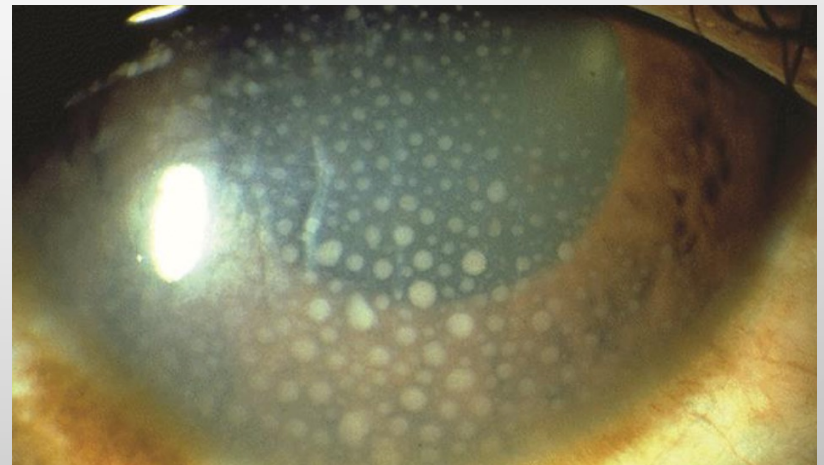
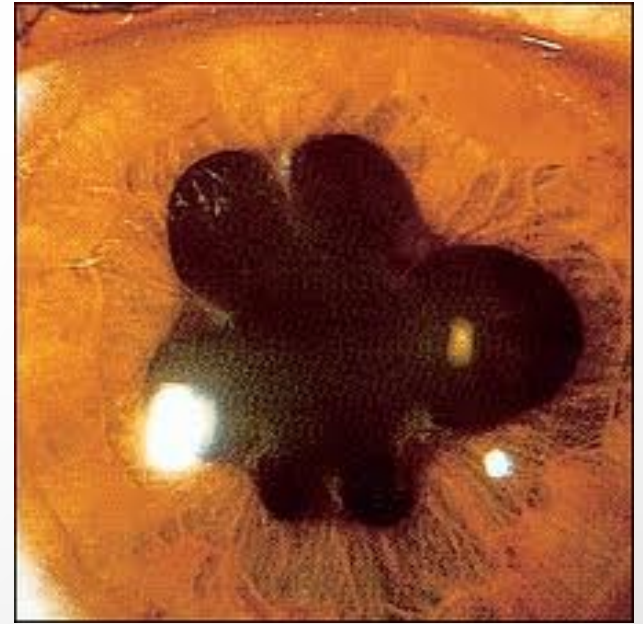
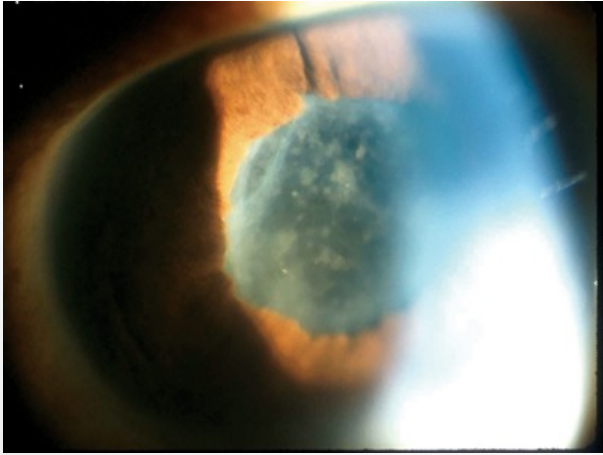
Glaucoma Risk

High IOP glaucoma
Cataract surgery
significant increased
risk

UVEITIS/IRITIS



UVEITIS



HETEROCHROMIA

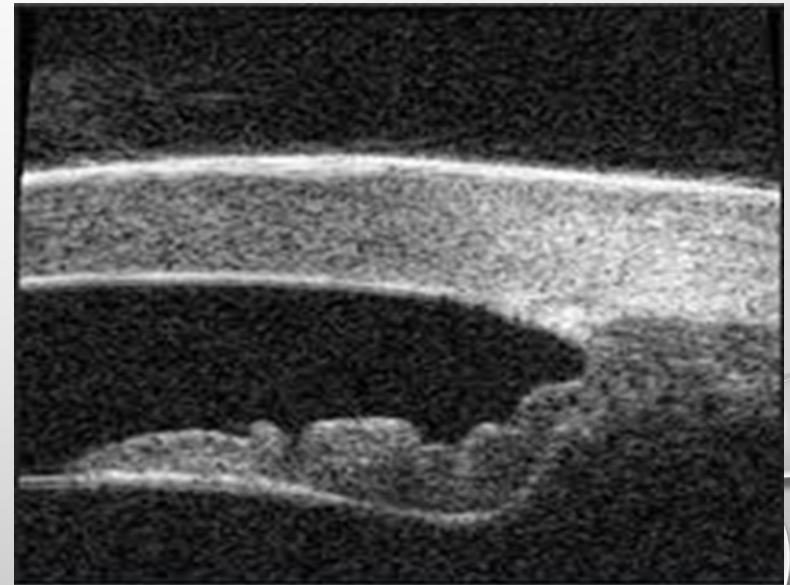
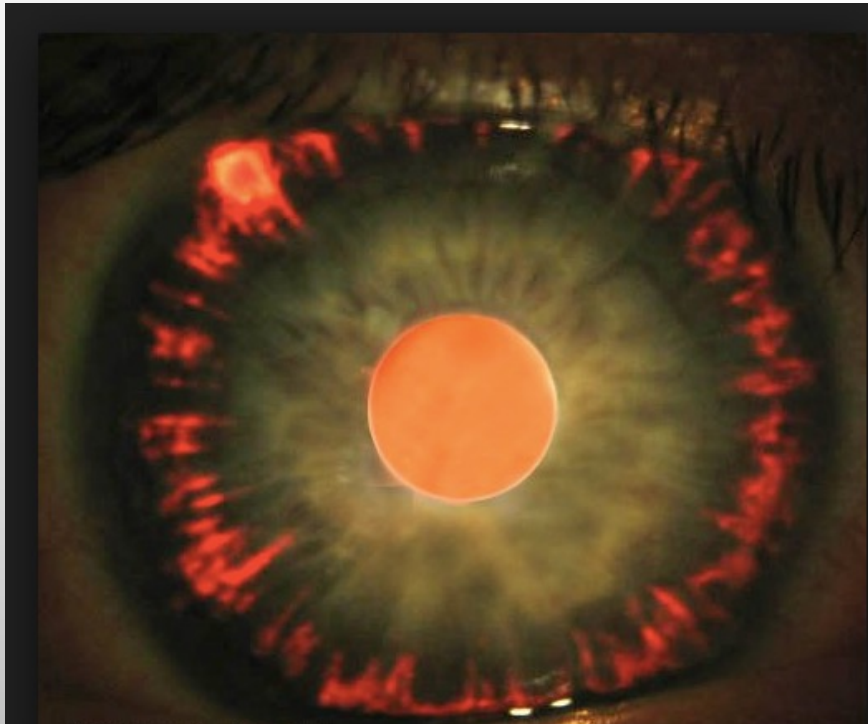


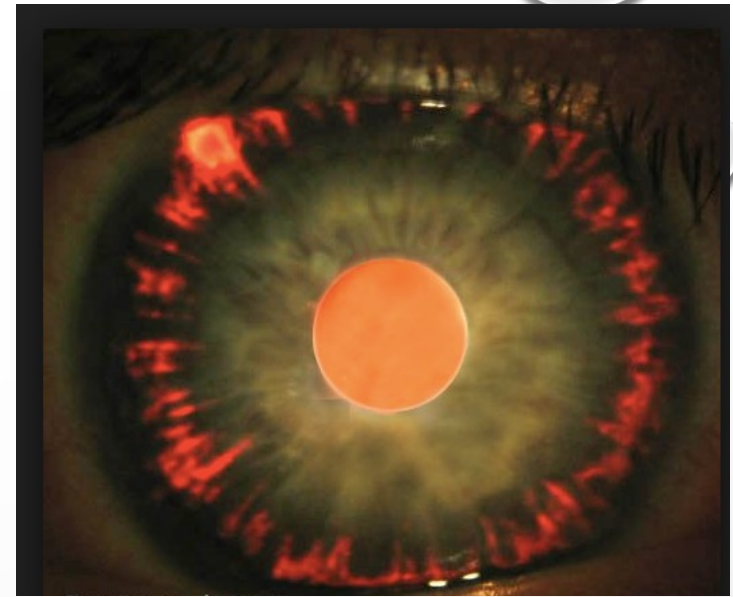
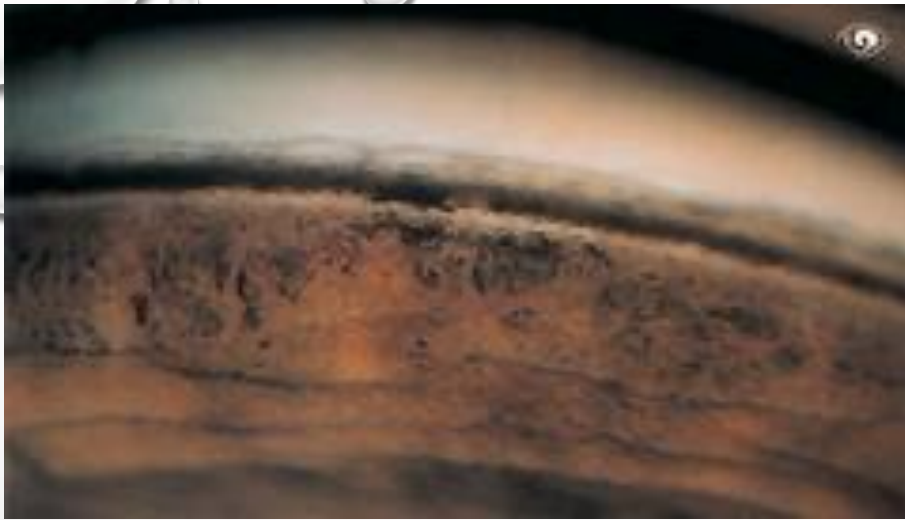
Associated with Uveitis, cataract and raised pressure

PIGMENT DISPERSION SYNDROME

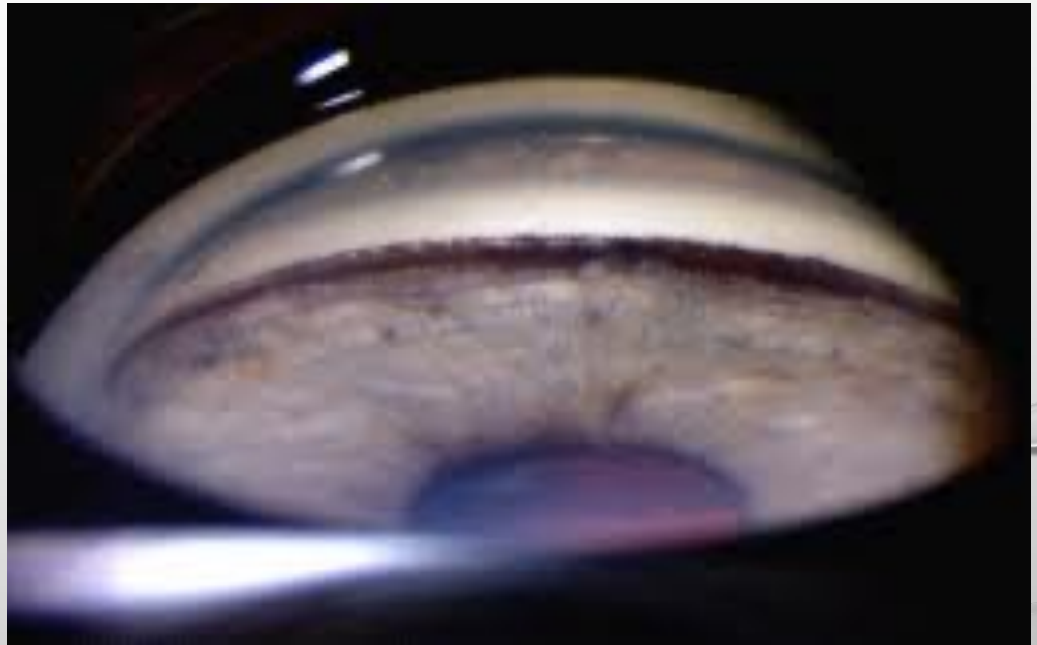


Iris Transillumination
Iris rubs against the lens
Pigment released
Clogs the net Trabecular Meshwork





Pigment Dispersion
Syndrome



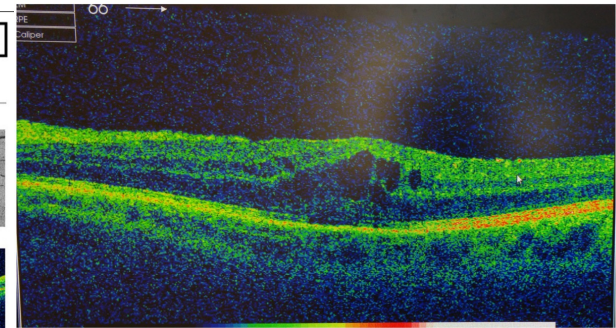
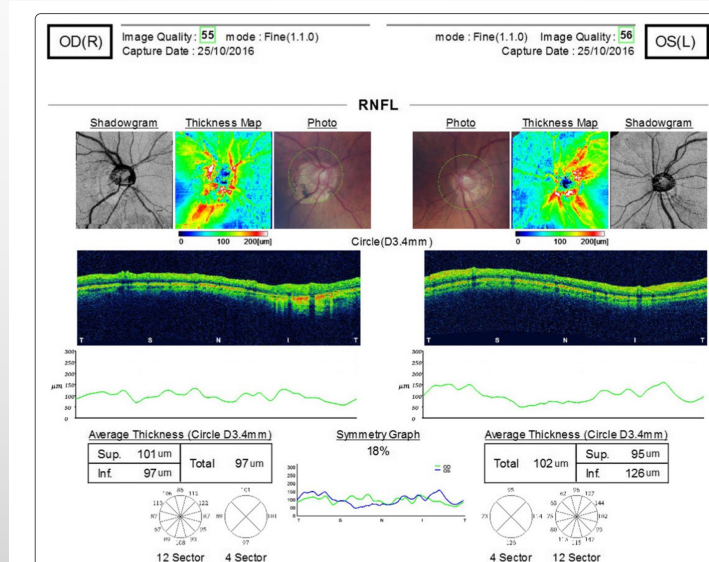
CASE REPORT

Open Access

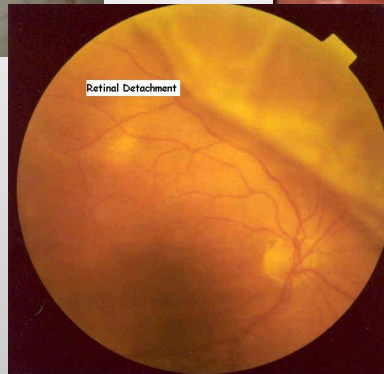
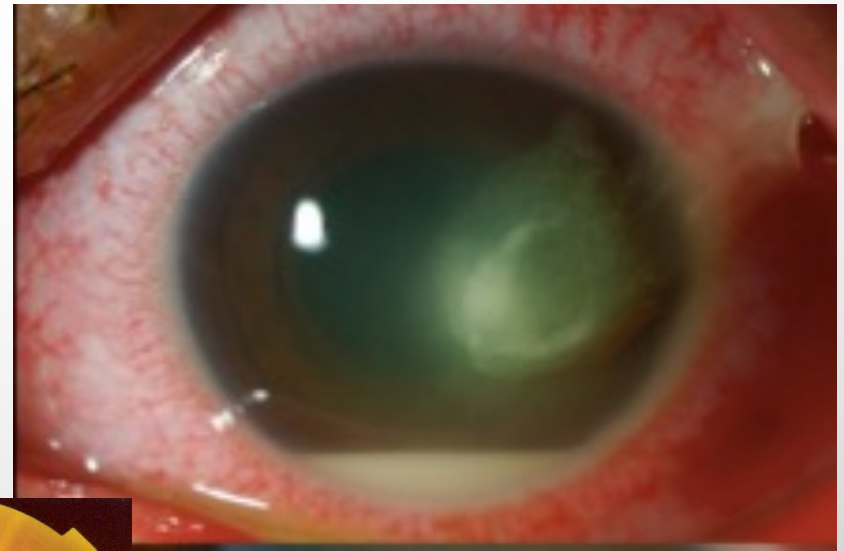
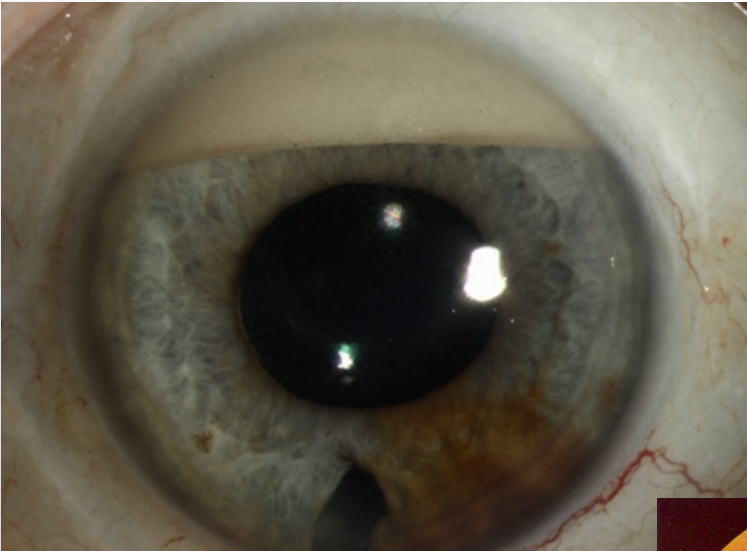


Case report of secondary pigment dispersion glaucoma, recurrent uveitis and cystoid macular oedema following inadvertent implantation of an intraocular lens into the ciliary sulcus following cataract surgery

Alastair Porteous* and Laura Crawley



CONSIDER....





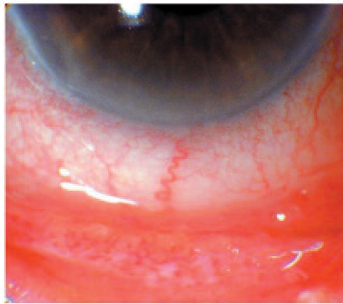
GLAUCOMA TREATMENT IS FOR LIFE

NEVER START JUST IN CASE

BASELINE DATA CRITICAL

GLAUCOMA

- LIFELONG TREATMENT
- MISSING THE BOAT- FUNCTIONAL VISUAL LOSS
- OVER-DIAGNOSIS AND BURDEN OF TREATMENT
- ENJOYING THE SIDE EFFECTS OF TREATMENT



GLAUCOMA & COVID RESET & RECOVERY

- IMMENSELY CHALLENGING
- DROP CHANGES, QUERIES, DRY EYE ETC
- SERVICE/ RESOURCE MISMATCH

Hospitals

Hospital waiting lists in England at longest since records began

Impact of Covid pandemic is revealed with nearly 388,000 waiting more than a year to start treatment

- [Coronavirus - latest updates](#)
- [See all our coronavirus coverage](#)

Robert Booth
Social affairs correspondent

Thu 15 Apr 2021 14:16 BST

f t e

410



One in 10 patients face at least year's wait for hospital care

Health Service data reveals that 387,885 people had been waiting for hospital treatment for more than a year in February

By **Henry Bodkin**, HEALTH AND SCIENCE CORRESPONDENT
15 April 2021 - 9:45pm



Evening Standard NEWS SPORT BUSINESS ES MONEY CULTURE INSIDER MORE

Pandemic waiting lists: The concerning healthcare crisis left in Covid's shadow

Missed diagnoses, delays and postcode lotteries for vital treatment. A year into lockdown, Katie Strick meets the patients who've become Covid's collateral damage

VIEW 1 COMMENTS

f t e



NHS

Covid: 4.6m people missed out on hospital treatment in England in 2020

Exclusive: millions of 'missing patients' could send overall NHS waiting list soaring to nearly 10m

- [It was one big whirlwind: artist on being denied access to cancer treatment](#)
- [Coronavirus - latest updates](#)
- [See all our coronavirus coverage](#)

Denis Campbell and Sarah Marsh

Tue 13 Apr 2021 06:00 BST

f t e

234



The image features a light gray background with a subtle gradient. In the top-left and bottom-right corners, there are several realistic water droplets of various sizes, rendered with soft shadows and highlights to give them a three-dimensional appearance. The text 'TOPICAL TREATMENT' is centered in the middle of the page.

TOPICAL TREATMENT



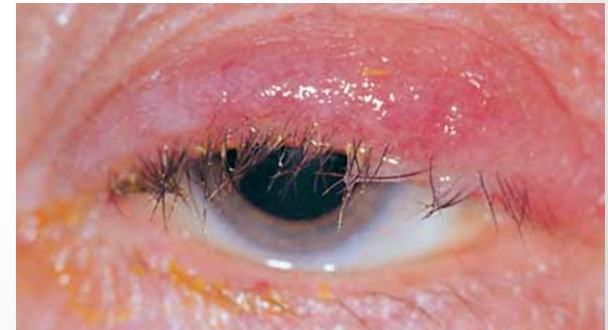
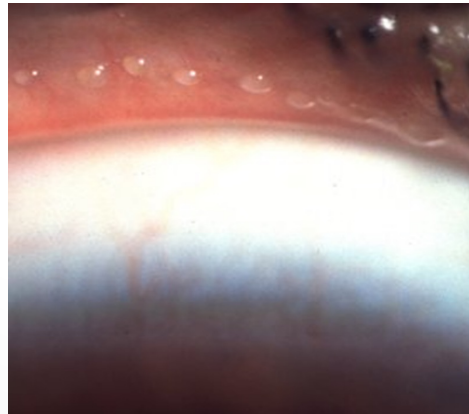
- 1. Prostaglandin analogues- first line treatment**
 - Latanoprost (xalatan), bimatoprost (Lumigan), travoprost (Travatan) tafluprost (Saflutan)
- 2. Beta blockers**
 - Timolol
- 3. Alpha agonists**
 - Brimonidine (alphagan), iopidine
- 4. Carbonic anhydrase inhibitors**
 - Dorzolamide (Trusopt), brinzolamide (Azopt)
 - Combination therapies

We sometimes inadvertently create problems for ourselves & patients

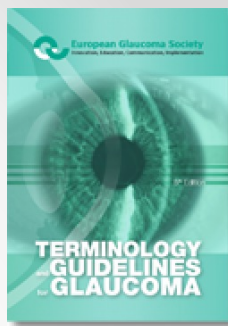
Diagnostic hubs
Provider agnostic
Community care/clinics

Ocular Surface disease

- Leading cause of patient visits to ophthalmologist in the developed world
- 15% OSD over age 65 years
- Prevalence of glaucoma in patients with OSD 65.7%
 - Tsai et al., Cornea 2006
- Symptoms
 - Itchy/burny eye, red, scratchy, blurred vision, dry eye, tears running down face, gritty in morning, grey/mucus discharge, fatigue, smeary vision, foreign body sensation.....

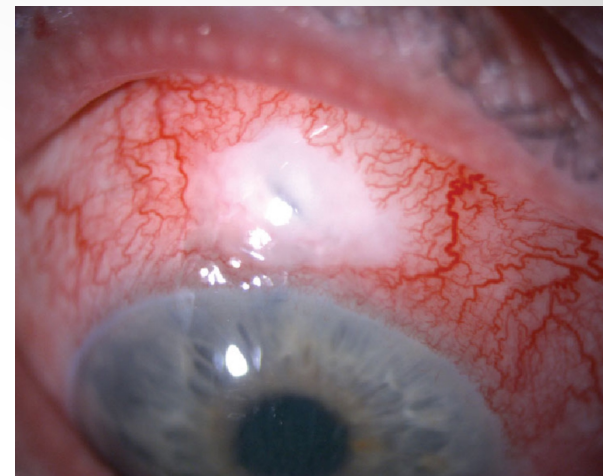
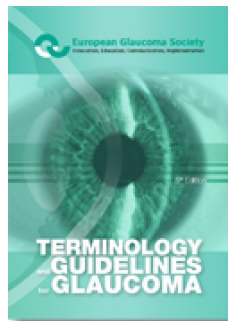
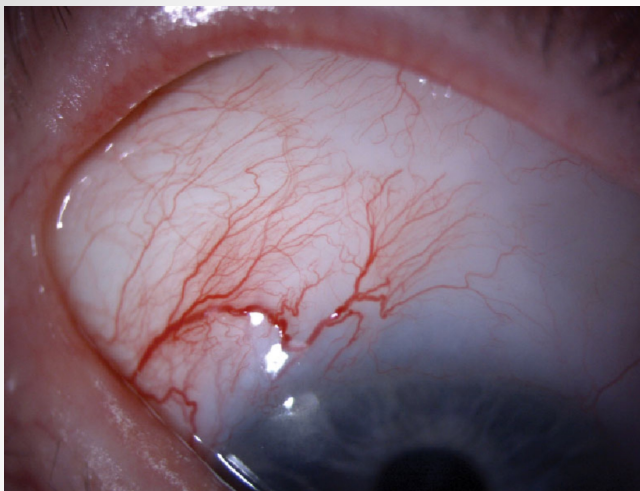


Preservative free/BAK free drops



- EGS guidelines state preserved eye drops should be avoided in patients requiring long-term therapy and/or with existing OSD
- Dose-dependent and cumulative toxic effects of BAK are linked with ocular surface changes
- Chronic use of BAK-preserved eye drops impairs corneal and conjunctival healing





- EGS Guidelines state: 'An unwanted effect of BAK is a reduction in the success rate of filtering surgery
- Time to surgical failure is shorter in patients using higher pre-operative daily doses of BAK
- Each additional BAK-containing drop increases the risk of early failure by a factor of 1.21

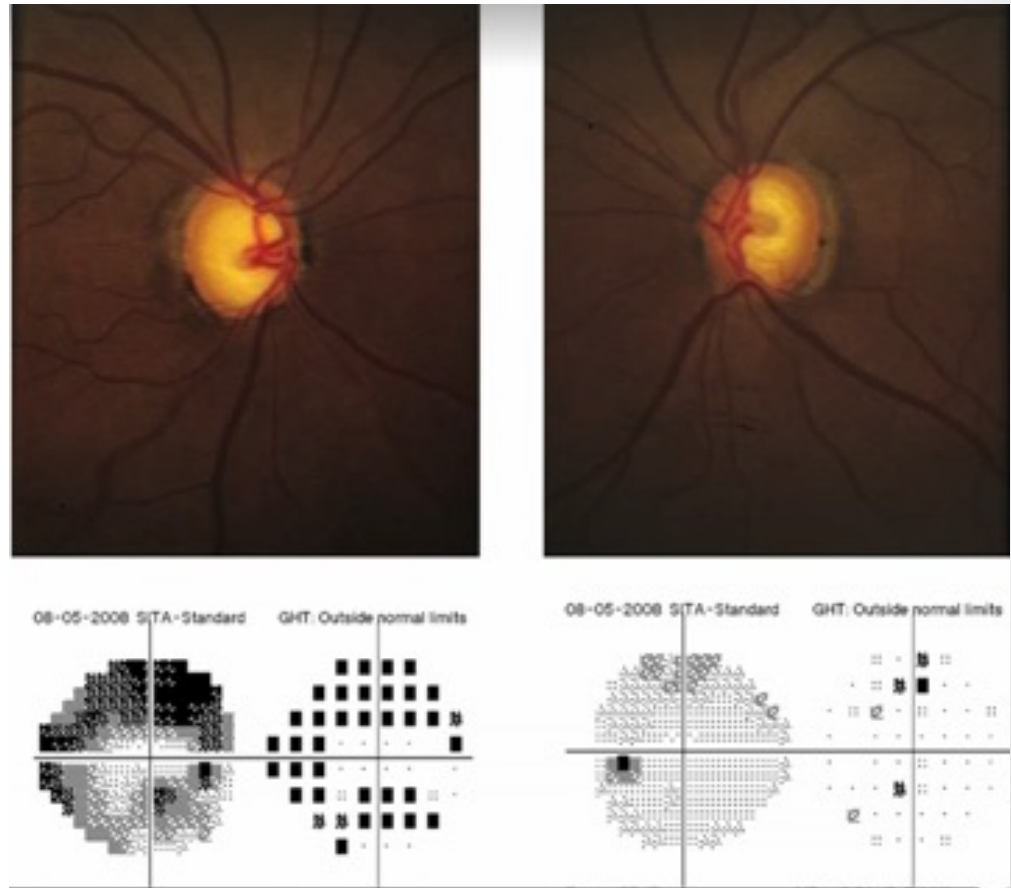


Preservative free drops

- **Cost**
- **Cost of under treatment due to poor compliance**
 - Unused medications
 - Prescribing multiple bottles that are never used
 - Increased visits to OPD and GP
 - Surgery and laser Rx's
 - Visual impairment
- **Packaging**
- **Storage**

Clinical Case

- 58 y old male
- POAG
- IOP max 32,34mmHg
- -3 myope
- CCT 570microns
- Travoprost nocte
- Timolol 0.25% BD

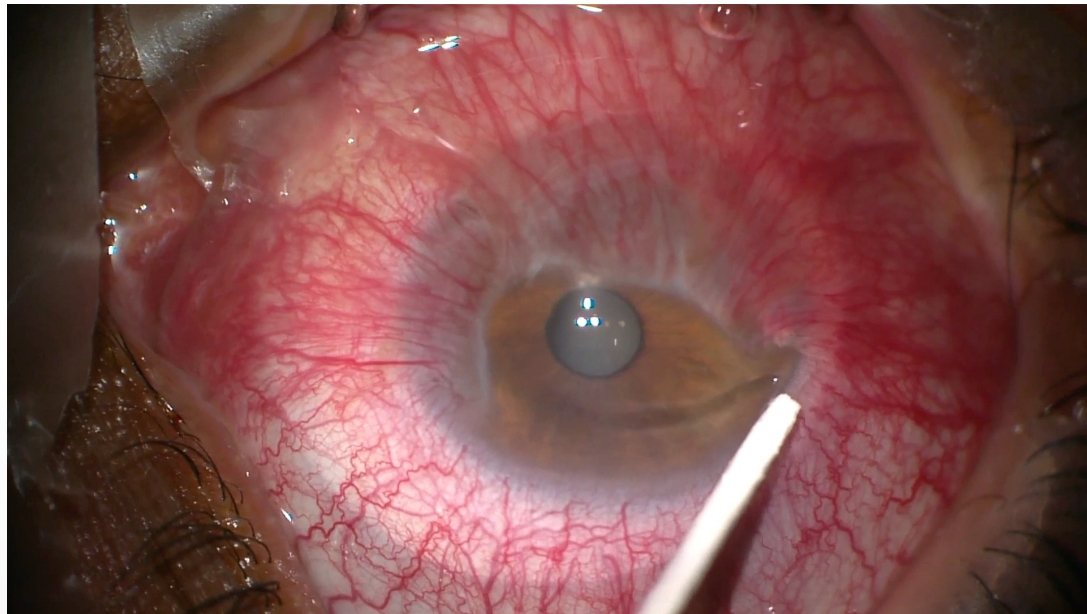
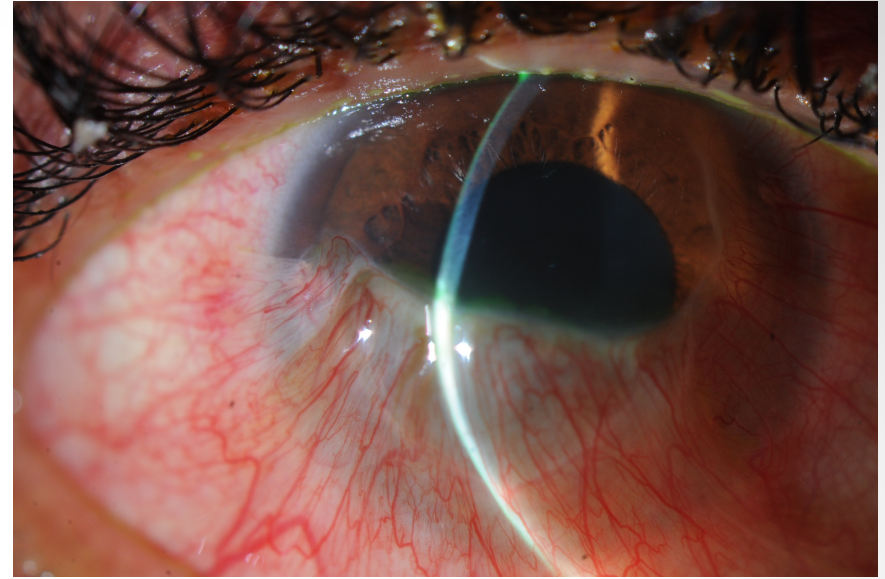
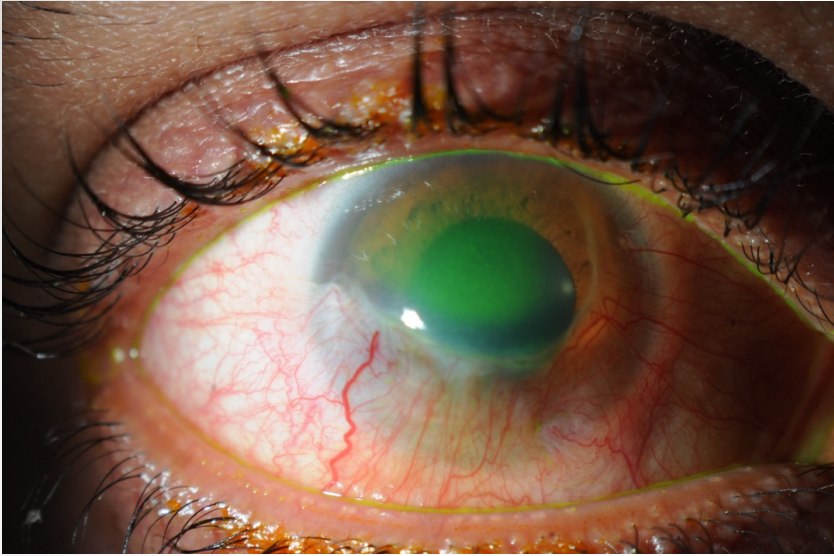


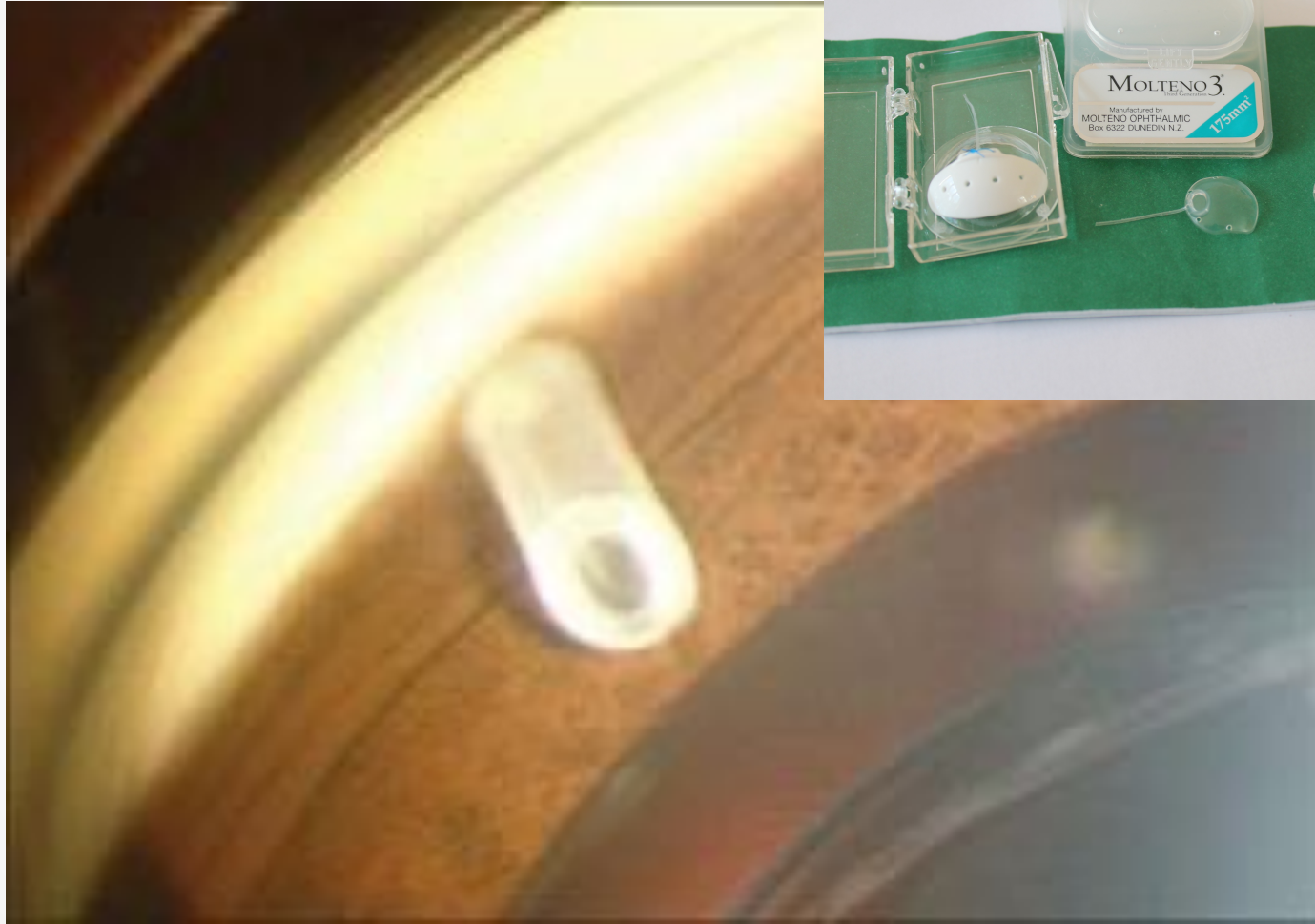
Type 2
hypersensitivity

Antibody mediated

Allergy







Tubes
Glaucoma Drainage Devices



LASER TREATMENTS

INFLOW- ECP

OUTFLOW- SLT

BOTH? MICROPULSE CYCLOPHOTOCOAGULATION

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



Gus Gazzard, Evgenia Konstantakopoulou, David Garway-Heath, Anurag Garg, Victoria Vickerstaff, Rachael Hunter, Gareth Ambler, Catey Bunce, Richard Wormald, Neil Nathwani, Keith Barton, Gary Rubin, Marta Buszewicz, on behalf of the LiGHT Trial Study Group*



Summary

Background Primary open angle glaucoma and ocular hypertension are habitually treated with eye drops that lower intraocular pressure. Selective laser trabeculoplasty is a safe alternative but is rarely used as first-line treatment. We compared the two.

Methods In this observer-masked, randomised controlled trial treatment-naive patients with open angle glaucoma

Lancet 2019; 393: 1505-16

Published Online

March 9, 2019

[http://dx.doi.org/10.1016/S0140-6736\(18\)32213-X](http://dx.doi.org/10.1016/S0140-6736(18)32213-X)

50140-6736(18)32213-X

This online publication has

SLT

Nd-:YAG 532nm

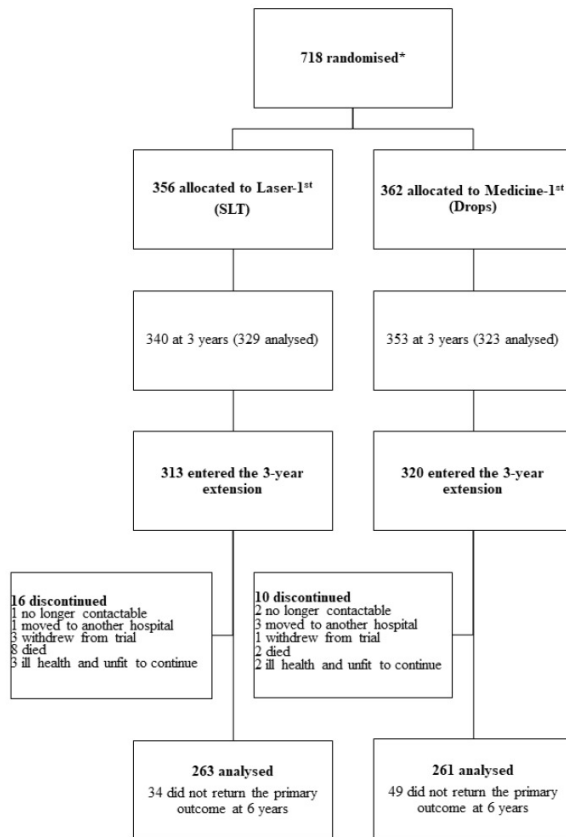
Spot size 400µm

Exposure 3ns

Power 0.4-1.2mJ

- Cost effective
- No significant difference in health related quality of life or clinical outcomes
- Cheaper
- 73% drop free at 3 years

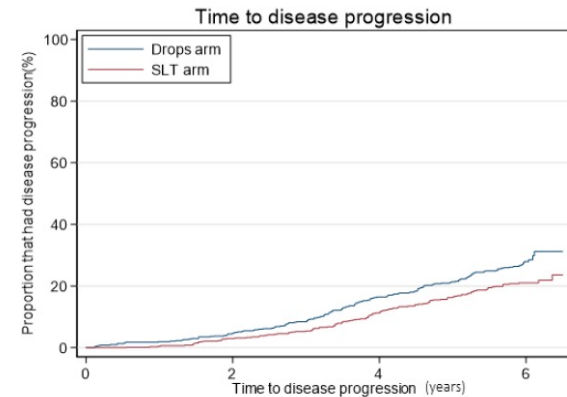
LIGHT TRIAL 6 YEAR DATA



- 692 PATIENTS COMPLETED 3 YEAR OUTCOMES
- 524 COMPLETED 6 YEARS
- 73% OF ORIGINAL COHORT

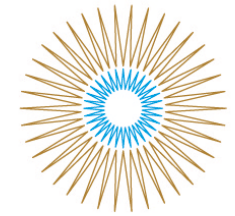
LIGHT TRIAL 6 YEAR DATA

- 69.8% SLT GROUP AT OR BELOW TARGET –NO DROPS
- MORE EYES IN DROP GROUP PROGRESSED 26.8% VS 19.6% SLT
- 90% NEEDED 2 SLT TREATMENTS



Number of patients at risk / years	0	2	4	6*
Drops arm	361	335	282	235
SLT arm	355	339	287	243

Eyes initially treated with SLT had higher IOP at 72 months compared to eyes initially treated with IOP-lowering eye drops (16.3mmHg vs 15.4mmHg, respectively, $p < 0.001$); however, VF MD loss and visual acuity at 72 months were similar between the two groups (-4.0dB vs -3.9dB, and 0.1 vs 0.1, respectively, both $p > 0.05$)



CLINICA
LONDON

SLT

- NO DEPENDENCE ON PATIENT BEHAVIOUR
- NO DEPENDENCE ON GP/PHARMACY/SUPPLY CHAIN...
- ACCESS- EQUITY & SERVICE DEMAND MISMATCH
 - LEARN FROM IVT

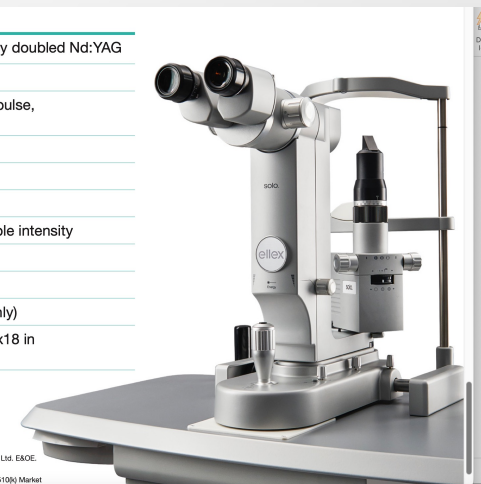
- EYE DROPS

Specifications

Laser Source	Q-switched, frequency doubled Nd:YAG
Wavelength	Green 532 nm
Energy	0.3 to 2.6 mJ, single pulse, continuously variable
Pulse Width	3 ns
Spot Size	400 µm
Repetition Rate	up to 3 Hz
Aiming Beam	Red 635 nm, adjustable intensity
Magnification	10x, 16x, 28x
Cooling	Air-cooled
Weight	30 kg, 66 lbs (laser only)
Dimensions (HxWxD)	57x75x44 cm, 23x30x18 in (laser only)



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Solo™ has a CE Mark (Conformité Européenne) and US Food and Drug Administration (FDA) 510(k) Market



MICROPULSE DIODE LASER

> [Graefes Arch Clin Exp Ophthalmol](#). 2020 May;258(5):1073-1079.

doi: [10.1007/s00417-020-04611-0](#). Epub 2020 Feb 8.

Micropulse transscleral cyclophotocoagulation: initial results using a reduced energy protocol in refractory glaucoma

[Niten Vig](#)¹, [Sally Ameen](#)², [Philip Bloom](#)², [Laura Crawley](#)², [Eduardo Normando](#)^{2 3}, [Alastair Porteous](#)², [Faisal Ahmed](#)²

Affiliations + expand

PMID: 32036425 DOI: [10.1007/s00417-020-04611-0](#)

NICE National Institute for Health and Care Excellence



Repetitive short-pulse transscleral cyclophotocoagulation for glaucoma

Interventional procedures guidance

Published: 28 April 2021

www.nice.org.uk/guidance/ipg692

ORIGINAL STUDIES

Outcomes of Micropulse Transscleral Cyclophotocoagulation in Eyes With Good Central Vision

[Varikuti, Venkata N.V. PhD, MBA*](#); [Shah, Parth DO*](#); [Rai, Oshin BS†](#); [Chaves, Ariel C. MD†,‡,§](#); [Miranda, Alex MD*](#); [Lim, Boon-Ang MD†](#); [Dorairaj, Cyril K. MD†](#); [Sieminski, Sandra F. MD*](#) [Author Information](#) ▾

> [Eur J Ophthalmol](#). 2021 Jan;31(1):112-119. doi: [10.1177/1120672119877586](#). Epub 2019 Sep 23.

Micropulse transscleral cyclophotocoagulation using a standard protocol in patients with refractory glaucoma naive of cyclodestruction

[Soufiane Souissi](#)¹, [Christophe Baudouin](#)¹, [Antoine Labbé](#)¹, [Pascale Hamard](#)¹

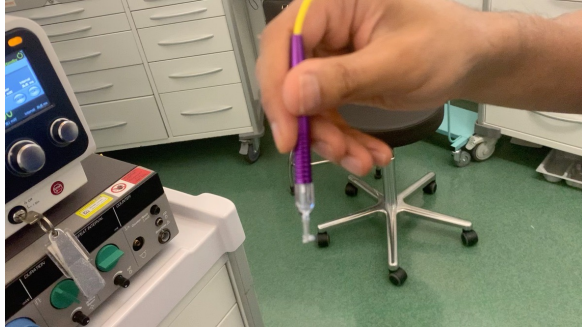
Affiliations + expand

PMID: 31544505 DOI: [10.1177/1120672119877586](#)

Laser Trabeculoplasty with MicroPulse™ technology (MLT) offers a more precise way to target the trabecular meshwork than Selective Laser Trabeculoplasty (SLT).

- Thermally affects without destroying pigmented TM cells
- Creates no visible tissue reaction
- Smaller 300um spot size to better access narrow angles
- Treatment risks are reduced or eliminated, with increased patient comfort than with conventional, continuous-wave laser treatment





REPEITIVE SHORT-PULSE DIODE LASER

Repetitive short-pulse transscleral cyclophotocoagulation for glaucoma

Interventional procedures guidance
Published: 28 April 2021
www.nice.org.uk/guidance/ipg692



1 Recommendations

- 1.1 Evidence on the safety of repetitive short-pulse transscleral cyclophotocoagulation for glaucoma shows no major safety concerns. Evidence on efficacy is inadequate in quality. Therefore, this procedure should only be used in the context of research. Find out [what only in research means on the NICE website](#).
- 1.2 Further research should ideally be in the form of randomised controlled trials comparing the procedure with standard care. It should report details of patient selection, particularly whether the glaucoma is refractory or non-refractory. Outcomes should include duration of effect.



A glass jar containing dried flowers sits on a wooden surface. The background is dark with bokeh lights and water droplets. The text "BIG THINGS HAPPEN IN SMALL SPACES" is centered in white.

**BIG THINGS HAPPEN IN
SMALL SPACES**

CATARACT SURGERY MOST COMMON OPERATION IN THE NHS

Year-long waits for surgery at record level since 2008, says NHS

In September, 139,545 people had been waiting for an operation

- [Coronavirus - latest updates](#)
- [See all our coronavirus coverage](#)

Kat Lay, Health Editor

Friday November 13 2020, 12.00am, The Times

Denis Campbell
Health policy editor

Thu 12 Nov 2020 20:02 GMT



Health leaders urge Sunak to increase NHS spending

NHS Providers warns hundreds of thousands of patients could be at risk



New data show a 100-fold plus increase over the past year in the number of people waiting more than 12 months for hospital treatment © Victoria Jones/POOL/AFP/Getty

■ CORONAVIRUS


NHS waiting times show backlog caused by coronavirus



A huge backlog was created as planned treatments were postponed to help staff cope with coronavirus patients

TIMES PHOTOGRAPHER JAMES GLOSSOP

The number of patients waiting longer than 12 hours on trolleys in casualty departments quadrupled last month, in figures branded



National Ophthalmology Database Audit
Key Findings Summary 2018-2019

The RCOphth NOD audit quality assures NHS cataract surgical services for patients. Approximately 452,000 cataract operations are undertaken in England and 20,000 in Wales during 2018-2019. Cataract surgery is the most frequently performed surgical procedure in the UK.

The RCOphth NOD enables a cataract surgeon to compare their performance against that of their peers nationally. It is a vital safeguard of patient safety and a promoter of best practice, potentially eradicated variation in the provision of cataract surgery and patient care. The RCOphth NOD enables informed decision making and choice for patients.

This fourth prospective national annual report is a snapshot of the standards of surgical performance and care and continues to clearly indicate that high quality surgery is being delivered to NHS patients.

Two primary indicators of surgical quality are audited

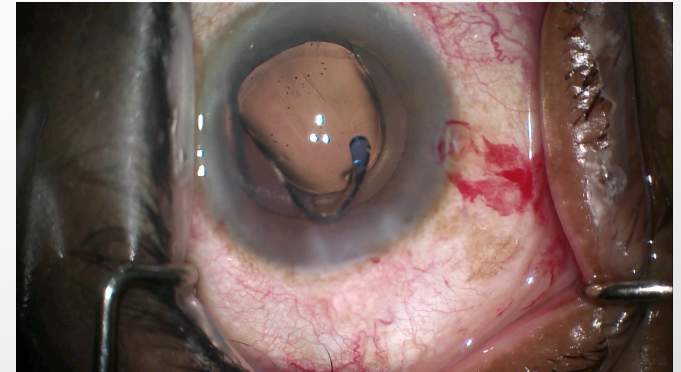
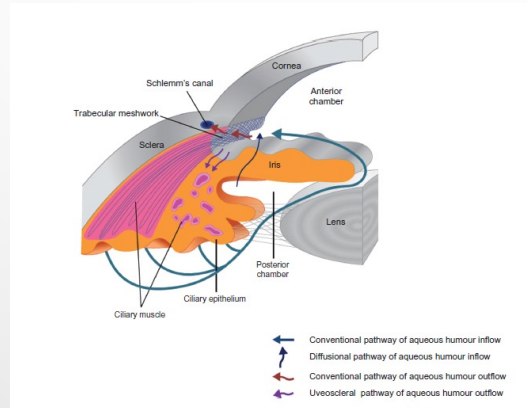
1. **Posterior capsular rupture (PCR)** a break in the posterior capsule of the lens, which can occur as a complication of cataract surgery. PCR is the most important, and only potentially modifiable predictor of visual harm from surgery.
2. **Visual Acuity (VA) Loss (visual harm from surgery)** for cataract surgery, the most important outcome is improved vision; this is what matters most to patients.



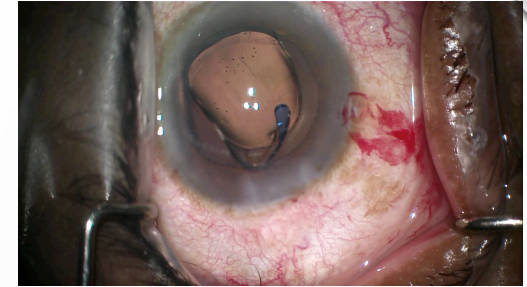
NOD
NATIONAL OPHTHALMOLOGY DATABASE
AUDIT

CATARACTS

THE EQUATOR, IN FRONT AND BEHIND



CATARACTS THE EQUATOR, IN FRONT AND BEHIND



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

Augusto Azuara-Blanco, Jennifer Burr, Craig Ramsay, David Cooper, Paul J Foster, David S Friedman, Graham Scotland, Mehdi Javanbakht, Claire Cochrane, John Norrie, for the EAGLE study group



Summary

Background Primary angle-closure glaucoma is a leading cause of irreversible blindness worldwide. In early-stage disease, intraocular pressure is raised without visual loss. Because the crystalline lens has a major mechanistic role, lens extraction might be a useful initial treatment.

Methods From Jan 8, 2009, to Dec 28, 2011, we enrolled patients from 30 hospital eye services in five countries. Randomisation was done by a web-based application. Patients were assigned to undergo clear-lens extraction or receive standard care with laser peripheral iridotomy and topical medical treatment. Eligible patients were aged 50 years or older, did not have cataracts, and had newly diagnosed primary angle closure with intraocular pressure 30 mm Hg or greater or primary angle-closure glaucoma. The co-primary endpoints were patient-reported health status, intraocular pressure, and incremental cost-effectiveness ratio per quality-adjusted life-year gained 36 months after treatment. Analysis was by intention to treat. This study is registered, number ISRCTN44464607.

Findings Of 419 participants enrolled, 155 had primary angle closure and 263 primary angle-closure glaucoma. 208 were assigned to clear-lens extraction and 211 to standard care, of whom 351 (84%) had complete data on health status and 366 (87%) on intraocular pressure. The mean health status score (0-87 [SD 0-12]), assessed with the European Quality of Life-5 Dimensions questionnaire, was 0.052 higher (95% CI 0.015-0.088, $p=0.005$) and mean intraocular pressure (16.6 [SD 3.5] mm Hg) 1.18 mm Hg lower (95% CI -1.99 to -0.38, $p=0.004$) after clear-lens extraction than after standard care. The incremental cost-effectiveness ratio was £14,284 for initial lens extraction versus standard care. Irreversible loss of vision occurred in one participant who underwent clear-lens extraction and three who received standard care. No patients had serious adverse events.

Lancet 2016; 388: 1389-97

See Editorial page 1340

See Comment page 1352

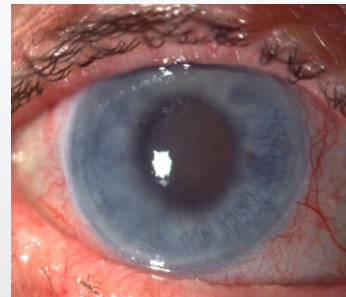
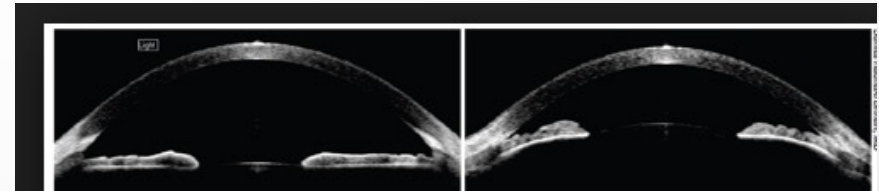
Centre for Public Health, Queen's University Belfast, Belfast, UK

(Prof A Azuara-Blanco PhD), School of Medicine, University of St Andrews, St Andrews, UK (J Burr MD); Health Services Research Unit

(Prof C Ramsay PhD), D Cooper PhD, G Scotland PhD, C Cochrane MSc,

Prof J Norrie PhD), Health Economics Research Unit (G Scotland, M Javanbakht PhD), and Centre for Health Care Randomised Trials

(Prof J Norrie), University of Aberdeen, Aberdeen, UK; NIHR Biomedical Research Centre, Moorfields Eye Hospital and University College London, UK



EFFECTIVE LENS POSITION & REFRACTIVE OUTCOMES PAC & PACG

- MISCONCEPTION THAT PAC IS EXCLUSIVE TO SHORT HYPEROPIC EYES
- INCREASING PREVALENCE OF PAC/PACS IN AXIAL MYOPIA
- MANY HAVE GOOD PREOPERATIVE CORRECTED VISION
- INCREASING SAFETY & PREDICTABILITY OF LENS SURGERY IN PAC/PACG
- INCREASING PRESSURE TO GET POST OPERATIVE REFRACTION RIGHT
- HIGH EXPECTATIONS
- DESPITE RATIONALE FOR SURGERY BEING PRESSURE CONTROL & SIGHT SAVING RATHER THAN A REFRACTIVE PROCEDURE

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

Augusto Azuara-Blanco, Jennifer Burr, Craig Ramsay, David Cooper, Paul J Foster, David S Friedman, Graham Scotland, Mehdi Javanbakht, Claire Cochrane, John Norrie, for the EAGLE study group

Summary

Background Primary angle-closure glaucoma is a leading cause of irreversible blindness worldwide. In early-stage disease, intraocular pressure is raised without visual loss. Because the crystalline lens has a major mechanistic role, lens extraction might be a useful initial treatment.



Lancet 2016; 388: 1389-97

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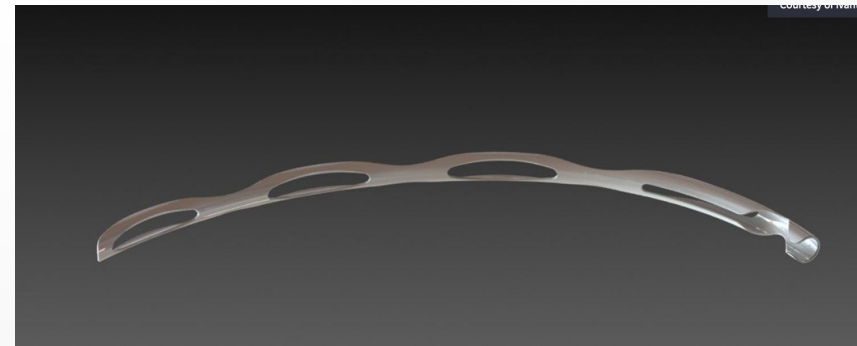
Centre for Public Health,



	Clear-lens extraction (n=208)	Laser peripheral iridotomy (n=211)	Missing data
Demographics			
Women	122 (59%)	121 (57%)	0
Chinese origin	62 (30%)	66 (31%)	0
Age (years)	67.0 (61.0-73.0)	67.0 (61.0-73.0)	0
IOP (mm Hg)	30.0 (24.0 to 33.0)	30.0 (26.0 to 33.0)	0
Axial length (mm)	22.5 (22.0 to 23.1)	22.7 (22.1 to 23.2)	7
Anterior chamber depth (mm)	2.5 (2.3 to 2.7)	2.5 (2.3 to 2.7)	17
Refractive error (dioptres)	1.6 (0.5 to 3.0)	1.1 (0.0 to 2.4)	39

MIGS

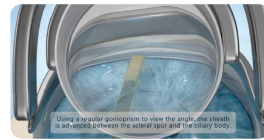
- MULTIPLE DEVICES TARGETING DIFFERENT OUTFLOW PATHWAYS
- LONG-TERM DATA EMERGING
- COST EFFECTIVE & CLINICALLY EFFECTIVE
- EMERGING NEW GOLD STANDARD FOR CATARACT SURGERY IN GLAUCOMA PATIENTS



MINIJECT and Surgical Procedure

MINIJECT™

- Made of proprietary STAR® material
- Soft, flexible with anti-fibrotic properties
- Micro-pores enable a natural flow speed of fluid



SURGICAL PROCEDURE

- Stand-alone, supraciliary space
- Ab interno approach, ≤ 2.2mm corneal incision
- Bleb-free surgery, no MMC or 5-FU required
- Only 0.5mm of the implant remains in the anterior chamber



Micro-invasive glaucoma surgery: current perspectives and future directions

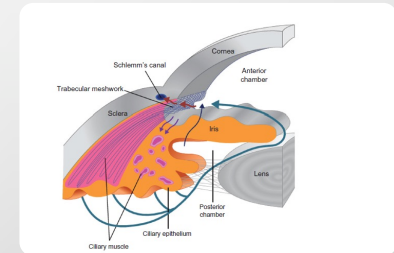
Haily Sabeh¹ and Iqbal Haq K. Ahmed^{2*}

Purpose of review
There is an increasing interest and availability of micro-invasive glaucoma surgery (MIGS) procedures. It is important that this increase is supported by sound, peer-reviewed evidence. This article will define MIGS, review relevant publications in the period of annual review and discuss future directions.

Recent findings
The results of the pivotal trial comparing a trabecular microbypass shunt (Glauk, Glaukos Corporation, Laguna Hills, CA, USA) combined with phacomodulation to phacomodulation alone showed a significantly higher percentage of patients with unmedicated intraocular pressure (IOP) ≤ 21 mmHg, and a comparable safety profile. Initial results are published regarding a second-generation microbypass shunt (Glauk next, Glaukos Corporation, Laguna Hills, CA, USA), a corneal scaffold (Prynos, Ivantis Inc, Irvine, CA, USA) and an ab interno supraciliary approach (CFlow, Torrance Medical, Menlo Park, CA, USA), showing a decrease in mean postoperative IOP. PhacoTubeshunt (Jah intra trabecular shunt, Technolabs Inc, Irvine, CA, USA) was compared to phacodetubulectomy and showed less IOP reduction, less postoperative complications, and a similar success rate. Similar success rates were found with the comparison of incision laser trabeculotomy (ILT, Glauk, Glaukos, Germany), and selective laser trabeculoplasty. A number of publications review the requirements of the location of implantable devices, intraoperative gonioscopy, post-operative and quality of life, studies, and medication cessation rate.

Summary
MIGS procedures offer reduction in IOP, decrease in dependence on glaucoma medications and an excellent safety profile. Their role within our glaucoma treatment algorithm continues to be clarified and differs from the role of more invasive glaucoma surgeries such as trabeculectomy or glaucoma drainage devices.

Keywords
Ab interno glaucoma surgery, micro-invasive glaucoma surgery, novel glaucoma procedures



MIGS- A NEW GOLD STANDARD

If you are inside the eye already consider “can I do something for the IOP”



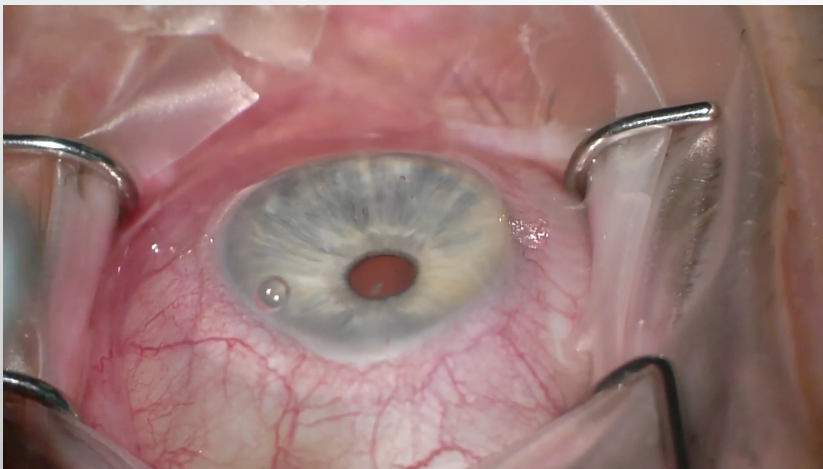
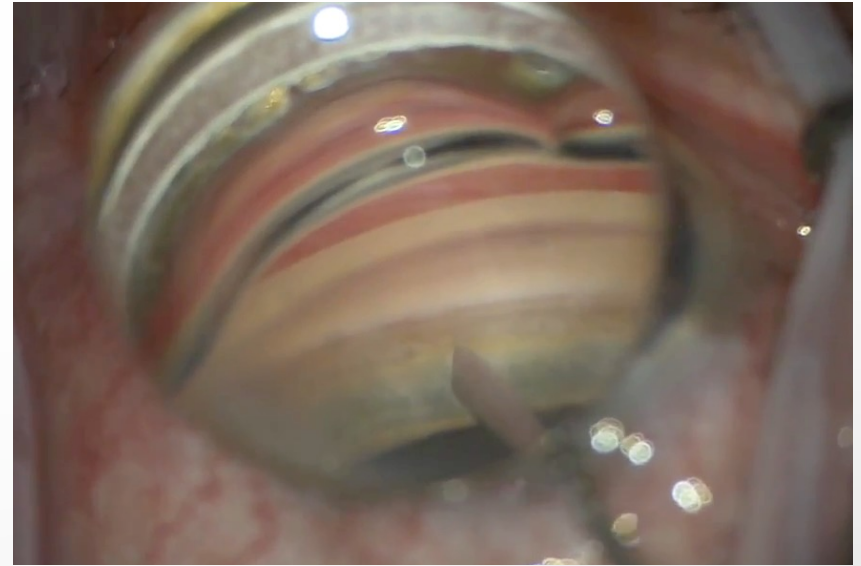
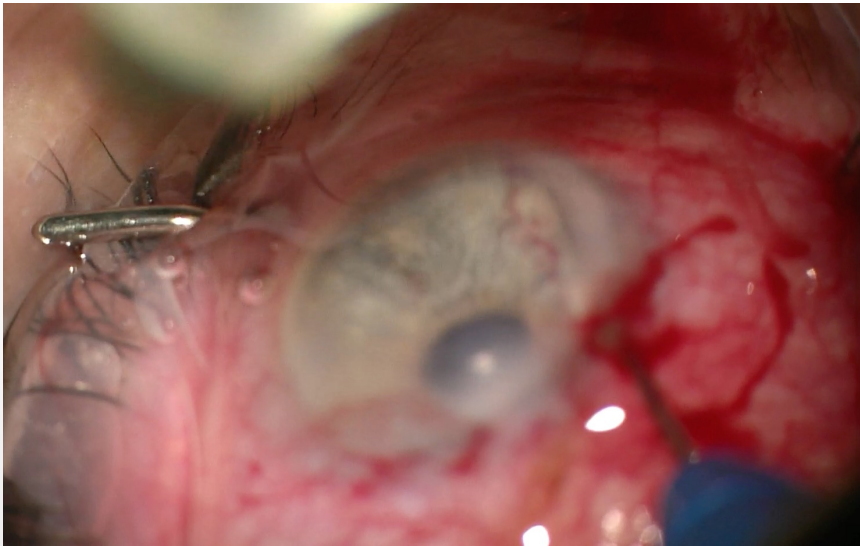
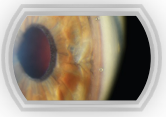
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graph TD; A[If you are inside the eye already consider “can I do something for the IOP”] --> B[Patient benefits-]; B --> C[Individual and cohort]; C --> D[Service benefits]
```

Patient benefits-

Individual and cohort

Service benefits

MORE OPTIONS THAN EVER



SUMMARY

- QUALITY OF LIFE IMPORTANT IN CHRONIC DISEASE
 - MORE OPTIONS THAN EVER BEFORE
 - SLT FIRST LINE TREATMENT
 - MIGS CONTINUES TO DEVELOP
 - CATARACT SURGERY IN GLAUCOMA/OHT PATIENTS
-
- TRANSCLERAL MICRO PULSE DIODE LASER
 - EXCELLENT SAFETY PROFILE
 - FRAIL PATIENTS
 - NATIONAL REGISTRY
 - DROPS HERE TO STAY
 - PRESERVATIVE FREE
 - TREAT OCULAR SURFACE DISEASE

