

## Wednesday 19th - Friday 21st October 2022

Jury's Inn Hinckley Island Hotel, Hinckley, Leicestershire

## About your society

Founded in 1976, UKISCRS is one of the oldest implant societies in the world. We have an active membership of Consultant Ophthalmologists, speciality grades, fellows, trainee grades and Allied Professions.

UKISCRS is at the forefront of promoting education and learning in cataract and refractive surgery. UKISCRS is a Charity Incorporated Organisation (CIO) with registered charity number: 1191256.

The Society comprises of Trustees, Officers and Council members along with elected representatives from the membership. The Society is managed, day to day, by the Society & Congress Manager.

## Are you a member of UKISCRS?

#### Benefits include:

- Free membership of ESCRS
- Subscription to the Journal of Cataract & Refractive Surgery
- Subscription to the EuroTimes & CRSToday Magazine
- · Reduced registration fees at the UKISCRS & ESCRS meetings
- Free UKISCRS & ESCRS membership to trainees in an NHS post
- Prizes for trainees for free-papers presented at the Annual Meeting
- Bursary for trainee members to present a paper at the ESCRS Annual Congress \*UKISCRS membership is tax deductable

## For more information on how to become a UKISCRS member please contact Gill Wood:

Please contact Gill Wood by email at: ukiscrs@ukiscrs.org.uk visit: www.ukiscrs.org.uk

#### How to become a Council Member

Council members are elected for a three year term. Nominations for council are announced three months before the Annual General Meeting (AGM). Candidates are nominated and entered in to a ballot. The new council members from 2022 will be welcomed formally to council by the President in his welcome address.

## XLVI Congress Programme Committee & Sub-committee Members

Mr. Romesh Angunawela, Mr. James Ball, Prof. Arthur Cummings,
Ms. Laura Crawley, Mr. JP Danjoux, Mr. Alexander Day, Ms. Navpreet Dhillon,
Mr. Panos Georgoudis, Prof. Andrew Graham Dr. Sally Hayes, Ms. Sharmina Khan,
Professor Thomas Kohnen, Mr. Marcello Leucci, Professor Nick Mamalis,
Mr. Sanjay Mantry, Ms. Bita Manzouri, Dr. Laura Maubon, Mr. Mayank Nanavaty,
Dr. Johnson Yan Ning Neo, Dr. Radhika Patel, Mr. Jonathan Ross,
Mr. Mario Saldanha, Mr. Konstantinos Samaras, Mr. David Shahnazaryan,
Mr. Indy Sian, Prof. Sathish Srinivasan, Dr. Penelope Stanford, Mr. Andrew Turnbull,
Mr. Paul Ursell, Mr. Martin Watson and Dr. Keir Yong.

## UKISCRS COUNCIL 2022

President
Sathish Srinivasan

Immediate Past-President
Philip Bloom

President Elect
Paul Ursell

Secretary Mayank Nanavaty

> Treasurer Saj Khan

Trustees
Paul Rosen
David Spalton

Council
David Lockington
Bita Manzouri
Sanjay Mantry
Mayank Nanavaty
Jonathan Ross
Laura Crawley
Rizwana Khan

Co-opted Members
Mario Saldanha

YOP Consultant Lead Saj Khan David Lockington

YOP Trainee Lead
Laura Maubon

UKISOP President
Rebecca Turner

**Enquiries** 

Please direct all enquiries to ukiscrs@ukiscrs.org.uk

Society & Congress Manager
Gill Wood Email:
gillwood@ukiscrs.org.uk

## General Information

#### Registration

The registration desk is open as follows:

Wednesday (YOP) in the Lakeside Suite 09.00 - 14.00 08.00 - 16.00 Thursday (Main Programme) in the Paris Suite Friday (Main Programme) in the Paris Suite 08.00 - 14.00

Once registered, please ensure you always wear your badge. Entrance will not be permitted to any area without a visible badge. All badges are printed on biodegradable card. Lanyards will be provided please keep your lanyard and reuse. There will not be a printed programme this year. This is to help reduce carbon footprint and to reduce how many materials are touched by hand.

Please note that masks are by choice - there will be plenty around the venue should you wish to wear one. We will also supply disposable gloves should you wish to wear them. You will receive, upon check-in, a delegate bag supported by EyeSupply.

#### **Exhibition & Catering**

The exhibition is in the London Suite and registration area. We are hugely grateful to our industry colleagues who are supporting us so generously this year. Thank you!

The exhibition area is free for speakers and delegates attending the meeting and is open from 08.30 to 17.00. Registered delegates and exhibitors have full access to the exhibition.

Please visit all the stands to enjoy the educational and technological updates they provide.

Lunch and refreshments are provided throughout the day. Lunch will offer a hot & cold buffet with a vegetarian option and dessert. Please note that individual requirements cannot be catered for without pre-notification.

All lunches and refreshments will be served in the London Suite.

Members of the public/hotel guests are not permitted to enter these areas.

#### Drinks Reception & Gala Dinner

The Drinks Reception starts at 19.15 on Thursday evening in the Rotunda, followed by the Dinner at 20.00 in the Paris Suite. The dinner includes live entertainment throughout which we hope you all enjoy. Please note that the Awards Dinner is a ticket-only event and is fully-booked.

Dress code: Lounge suits and cocktail dresses.

#### **CPD**

The UKISCRS Annual Meeting, is self-validating, you will be awarded 1-point per hour of attendance up to a total of 17-hours/points:

Wednesday Dry Lab:	09.30 - 12.30	2.5 hours = 2.5 CPD points
Wednesday YOP session:	14.00 - 18.00	4 hours = 4 CPD points
Thursday Main Session:	09.00 - 18.00	6.5 hours = 6.5 CPD points
Friday Main Session:	09.00 - 16.00	5.5 hours = 5.5 CPD points

Your evaluation form will be sent electronically for completion and return. Your attendance certificate will then follow by email. You will need to use this attendance certificate to claim your CPD points.

#### Acknowledgement

UKISCRS would like to acknowledge and thank the following for the design and delivery of this meeting:

AV & Set design: Mustard Presentations Graphic Design: Creative Shockwave Walter Brown Printers Ltd. Printing:

UKISCRS team: Patricia Finney Dean Williams Raymond Finney Gill Wood

Mike Inkley (Official photographer)

Malcolm Redfearn

Andrew Wooderson

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### President's Address



Dear delegates, faculty, industry colleagues, council and trustees,

It gives me the greatest of pleasures to offer you a warm welcome to the 46th UKISCRS Annual Congress, the second in my presidency.

On behalf of the Society I would like to offer our sincere thanks and appreciation to the UKISCRS council members and trustees, we look forward to your continuing commitment.

The main aim of UKISCRS is to educate and bring together like-minds, friends and colleagues in an engaging, educational environment. UKISCRS plays an important role in delivering education that includes internationally reputed chair-people and speakers with a wealth of experience who are at the forefront of their sub-specialties. They offer their expertise to present, discuss and debate their topics of interest in order to inform our membership about current developments and obtain a well-balanced view of current opinion. The result is content that provides you with a highly focused educational experience delivered in a short 2.5-day meeting.

The programme on Wednesday and Thursday:

**UKISCRS** Αt we invest in our Young Ophthalmologists - the future drive of this society and ophthalmology. Our meeting starts, on Wednesday morning, with our popular Young Ophthalmologists Programme (YOP) Dry Lab, supported by Thea Pharmaceuticals. This is followed by a topical afternoon didactic session an 'Introduction to refractive surgery & management for the NHS' chaired by Bita Manzouri the YOP team and supported financially by Daybreak Medical. The YOP then have their own small drinks reception to disseminate the day's education.

UKISCRS also provides education and hands-on learning those professions allied to ophthalmology (UKISOP). The UKISOP programme and workshop 'Ophthalmology... into the future', runs in parallel to the main symposium on Thursday and is chaired by Rebecca Turner, the UKISOP President. The programme features Paul Ursell and John Mould, a veterinary ophthalmologist, and the workshop is supported by AOS, Alcon, Daybreak, Bausch+Lomb, Haag-Streit Heidelberg.

One of my honours, as President, is to create the Plenary Symposium. This year, I am proud to deliver a session with my co-chair, and president-elect, Paul Ursell. 'Dementia & Cataract Surgery' is set to be topical and highly educational. The faculty is a panel of leading experts in this field and include Andrew Graham, Keir Yong and Radhikha Patel.

UKISCRS are most fortunate to have our bi-annual Rayner Medal Lecture presented by Professor of Ophthalmology at the John A. Moran Eye Center of the University of Utah in Salt Lake City, Professor Nick Mamalis. Prof. Mamalis has been extensively involved in research regarding intraocular lenses and has been involved in evaluating the design, biocompatibility, and materials used in these intraocular lenses. I am sure his lecture entitled "Adjustable and accommodating intraocular lens update" will be a lasting memory of this Congress' education.

The programme should have also been offering you a further medal lecture in the shape of the 'Lifetime Achievement Award' which was to be presented by Professor Michael O'Keeffe. We were sad to learn that Michael is unwell and unable to deliver the lecture, which we have therefore deferred. Please may I take this opportunity, on behalf of all of us, to wish Michael a good and prompt recovery.

The afternoon programme delivers the refractive session, supported by Instinctive Vision UK, and featuring international speaker Professor Thomas Kohnen supported by STAAR surgical. This is followed by the Cataract session 'Intracameral adjuncts' - a debate session chaired by Laura Crawley and myself with a bonus talk from Prof. Mamalis. To Thursday evening and our Gala dinner. An opportunity to catch up with friends and colleagues in a relaxed and informal atmosphere.

Drinks will be in the rotunda at 7.15pm with dinner in the Paris Suite at 8pm. Fantastic live entertainment might even get you onto the dance floor!

The programme on Friday:

On Friday we open with 'Breakfast with the Experts', where you will have the opportunity to feed your body and your mind with clinical pearls from the experts. We then move on to the Corneal Session, chaired by council members Mayank Nanavaty & Mario Saldanha, featuring updates on management of keratoconus. After this we move on to the Free-Papers and videos which we encourage you to attend.

The closing afternoon presents the all-new 'Innovation in Industry' Summit, which we encourage you to attend to hear first-hand about the most recent research & development in ophthalmic medical devices and pharmaceutical products. This is followed by the expert video panel where tips, tricks and pearls of wisdom will be shared. We are honoured to welcome to the expert video panel, in virtual format, Dr. Volodymyr Melnyk who will be presenting "War in Ukraine: Cases of traumatic cataract in Ukrainian militaries". A not to be missed talk, and one very close to all of our minds at this time of unrest. Chaired by Paul Ursell and Mayank Nanavaty this is a fitting close to the 2-day educational programme.

The UKISCRS Council and I have worked with passion and education in mind whilst creating this meeting that will hopefully inform, challenge and inspire you to continue developing your skills as ophthalmologists. It has been my aim during my presidency to make this meeting more sustainable and reduce our carbon footprint. We have moved to a digital programme, reusable lanyards, biodegradable name badges and have selected a venue that is itself working towards a positive impact on society. Please see their statement at the foot of my welcome notes\*.

I express gratitude to the UKISCRS Trustees, Officers and Council Members for their commitment, support and hard work and also to Gill Wood, and her team for their service to the Society.

We sincerely hope you value the educational content whilst valuing the ability to enjoy yourselves.

Yours,

4. 9m.

Prof. Sathish Srinivasan

"Jurys Inns and Leonardo Hotels UK and Ireland are built on strong ethical values, and we want to do more than just grow a successful business. We want to have a positive impact - on society and the environment, today and tomorrow. That's why we've called our new responsibility strategy Positive Impact. It guides us to do more, by setting out goals and commitments for all our hotels. We've made some good progress to date, but there is still much more we can do. We'd love to hear any ideas you have for how we could be doing more."

## The 2022 Rayner Medal Lecture

# Adjustable and accommodating intraocular lens update

Thursday 20th October, 1355 - 1430

Prof. Nick Mamalis, MD
Professor of Ophthalmology.
Director, Intermountain Ocular Research Center & Director, Ocular Pathology.
John Moran Eye Center, University of Utah.



Nick Mamalis is a Professor of Ophthalmology at the John A. Moran Eye Center of the University of Utah in Salt Lake City, Utah. He received his BA in Biochemistry from Harvard University and his Doctor of Medicine at the University of Utah, School of Medicine. He fulfilled a fellowship in Ophthalmic Pathology at the University of Utah and completed his residency in Ophthalmology at Loyola University Medical Center. He is currently the Director of Ophthalmic Pathology as well as the co-Director of the Intermountain Ocular Research Center at the University of Utah.

Dr. Mamalis has been extensively involved in research regarding intraocular lenses (IOLs) which are placed into the eye following cataract surgery. He has been involved in evaluating the design, biocompatibility, and materials used in these intraocular lenses. Present research studies include the evaluation of a

light adjustable intraocular lens which will allow the power of the lens to be adjusted after placement within the patient's eye. In addition, Dr. Mamalis has been involved in the design and evaluation of multiple different types of accommodating IOLs which will allow the patient to see at both distance and reading following cataract surgery. Another major area of research that Dr. Mamalis is involved in is evaluating post-operative infections (endophthalmitis) as well as sterile toxic reactions following surgery which he has coined Toxic Anterior Segment Syndrome (TASS). Through funding by the American Society of Cataract and Refractive Surgery (ASCRS) and Fight for Sight, Dr. Mamalis has established a center at the University of Utah which is involved in the analysis and prevention of outbreaks of post-operative inflammation worldwide. He is co-chairman of the ASCRS TASS Task Force.

He is co-Director of the Ophthalmic Pathology/Research Fellowship Program for the Ophthalmology Department at the University of Utah. Dr. Mamalis is also involved in the teaching and advising of medical students, residents, and fellows. He is the Editor Emeritus of the Journal of Cataract and Refractive Surgery as well as a member of the Cataract Clinical Committee of the ASCRS and the ASCRS Executive Committee. Dr Mamalis is the Past President of the ASCRS. Dr. Mamalis is a former President of the Utah Opthalmology Society. He was given the American Academy of Ophthalmology Honor Award in 1994 and the Senior Achievement Award in 2005. Dr. Mamalis received the Life Achievement Honor Award from the American Academy of Ophthalmology in 2015. He was the recipient of the Binkhorst Medal of Honor in 2013 by the American Society of Cataract and Refractive Surgery. He has given several hundred presentations at numerous meetings nationally and internationally, as well as greater than 30 invited lectures. Dr. Mamalis has submitted and published over 200 peer review journal articles and has written multiple text books and text book chapters.



## Programme:





0915 - 0955 1000 - 1130	YOP Registration - The Lakeside Suite Corneal laceration - suturing techniques, slip knots macroscopic and microscopic and more The Dry Lab is supported by Thea UK	Session Leads: Bita Manzouri & Mario Saldanha Supported by Dr. Laura Maubon & Dr. Johnson Neo
1130 - 1150	Working coffee break in the lakeside	
1150 - 1300	Second half trauma session	Ms. Bita Manzouri
1300 - 1400	YOP Lunch in the Rotunda	
1400 - 1700	Introduction to refractive surgery & management for the NHS - the YOP session is supported by Daybreak Medical	Ms. Bita Manzouri & YOP
1400 - 1420	The Basics: intro to LRS: PTK, PRK, LASEK, LASIK, SMILE	Mr. Alex Day
1420 - 1425	Questions	
1425 - 1450	Non laser refractive surgery: in introduction (RLE, ICL, phakic IOL)	Mr. Panos Georgoudis
1450 - 1455	Questions	
14.55 -15.20	Complication management in the NHS	Mr. Romesh Angunawela
1520 - 1525	Questions	
1525 - 1545	Suitablility of patients for different types of Laser procedures; risk benefit stratification	Mr. James Ball
1545 - 1550	Questions	
1550 - 1615	Working coffee break in the lakeside	
1615 - 1700	Room 101 - Cataract, corneal or refractive related pet peeves	Chairs: Ms. Bita Manzouri, Mr. Alex Day, Mr. James Ball, Mr. Romesh Angunawela, Mr Panos Georgoudis Ms. Bita Manzouri Audience (free mic) and panellist invited to speak on the following themes.
1615 - 1620	Introduction	
1620 - 1630	Theme 1: Trainee who says: "My last consultant did it another way"	
1630 - 1640	Theme 2: Patient who says: "I don't want a student like you to operate on me"	
1640 - 1650	Theme 3: Trainee who passed the refraction certificate exam: "I just passed the same exam that opticians do"	
1650 - 1700	Theme 4: Referral from eye casualty: "This patient with CLAK has been started on topical antibiotics and booked into your corneal clinic for an URGENT review (<24 hours)"	
1700 - 1830	YOP SOCIAL - in the Triumph Lounge	Supported by Daybreak Medical





## Thursday 20th October 2022

	<b>Learning Objective:</b> "To explore the evolving practices and roles within Ophthalmology and its implications		
	for the training and education of the associated Ophthalmic Professions".		
0845 - 0900	Welcome by UKISOP president & introduction to the interactive case studies	Rebecca Turner, Consultant Nurse, Oxford Eye Hospital	
0900 - 0930	Environmental impact of cataract surgery. How you can help reduce the carbon footprint of a Phako procedure	Paul Ursell, Consultant Ophthalmologist & UKISCRS President Elect	
0930 - 1000	ECLO role	Clare Abbott, Eye Clinic Liaison Officer, Oxford Eye Hospital	
1000 - 1030	Artificial Intelligence: the DORA study for (pre and) post op cataract surgery	Aisling Higham, Associate Medical Director Ufonia and Registrar Oxford deanery	
	Coffee in the exhibition hall		
1100 - 1130	The Value of an Ophthalmic Nurse Education	Penelope Stanford, Senior Lecturer, University of Manchester & Chair, RCN Ophthalmic Forum	
1130 - 1200	The role of the Ophthalmic Science Practitioner	Will Kay, Ophthalmic Science Practitioner, Sheffield Teaching Hospitals NHS Foundation Trust	
1200 - 1230	The role of a trainee Advanced Clinical Practitioner	Petya Ford, Trainee ACP, Frimley Health NHS Foundation Trust	
1230 - 1300	Veterinary Eye Surgery	John Mould, Veterinary Ophthalmic Surgeon, Eye Veterinary Clinic, Leominster, Herefordshire.	
	Lunch in the exhibition hall		
1400 - 1415	Optical Supplies Association (OSA) Think Tank	Karl Hans Jeebaun, CEO Advanced Ophthalmic Systems abd Chair of OSA thinktank E-Focus group	
1415 - 1700	Clinical Skills Workshop (hands on learning)	Advanced Ophthalmic Systems, Alcon, Daybreak, Haag Streit & Heidelberg plus a cataract dry lab with Bausch & Lomb	
1700 - 1715	Summary & Close		



## Programme:



## Thursday 20th October 2022

0800 - 0850	The YOP Breakfast Club - New for 2022	The Breakfast room -
	Talk to the YOP team for advise. Whether its less than full time training, getting involved in reseach, fellowships, parenting and training or you	with the YOP committee!
	just want to grill the RCOphth OTG chair we will be here for you!	
0900 - 1030	An introduction to refractive cataract surgery & ocular surface peculiarities	Chair: Ms. Bita Manzouri, Mr. Mario Saldanha & YOP
0905 - 0925	An Introduction to reading ocular surface imaging	Dr. Marcello Leucci
0925 - 0945	Introduction to challenging corneal pathology and cataract surgery	Mr. Martin Watson
0945 - 1005	Managing astigmatism in cataract surgery	Mr. Paul Ursell
1005 - 1025	Introduction to refractive intraocular lenses	Mr. David Shahnazaryan
1025 - 1030	Discussion and Close	
	Free Papers (other)	Chair:
		Mr. Mario Saldanha & YOP
1030 - 1035	PCR and Case Complexity Rates in ISTCs vs NHSTs	Dr. Hussein Al-Kazwini
1036 - 1041	Refractive Lens Exchange (RLE) in high ametropia	Ms. Clare O'Donnell
1042 - 1047	The Efficacy of Post-operative Lubricating Drops to Limit Dry Eye Disease Symptoms and Signs Following Cataract Surgery: Preliminary Data of a Randomised Control Trial	Dr. Khayam Naderi
1050 - 1120	COFFEE	
1120 - 1250	Plenary Symposium - Dementia & Cataract Surgery	Chair: Prof. Sathish Srinivasan & Mr. Paul Ursell
1120 - 1140	General dementia with visual symptoms	Mr. Andrew Graham
1140 - 1200	PCA and visual symptoms - patient perspectives	Dr. Kier Yong
1200 - 1220	Diagnosis of dementia (OCT)	Ms. Radhika Patel
1220 - 1240	Dementia in Cataract Surgery	Mr. Paul Ursell
1240 - 1250	Summary Q&A	
	Questions	
1250 - 1355	LUNCH	
1355 - 1435	Rayner Medal Lecture - 'Adjustable and accommodating intraocular lens update'	Mr. Nick Mamalis, MD - USA Rayner & Sathish
1435 - 1535	Refractive - Optics	Chair: Mr. Sanjay Mantry, Mr. Jonathan Ross & Prof. Arthur Cummings
1435 - 1450	Overview of Laser refractive surgery: Topography interpretation/ latest technology	Prof. Arthur Cummings
1450 - 1515	Phakic IOL: 20 Years of Experience with the ICL in Refractive Surgery	Prof. Thomas Kohnen
1515 - 1530	Laser certification update: Entry criteria and discussion around the remit of RCOphth	Mr. J. P. Danjoux
1530 - 1535	Questions and discussion	
1535 - 1555	COFFEE	
1555 - 1715	Cataract: Intracameral adjuncts pro/con (debate)	Chair: Ms. Laura Crawley, Prof. Sathish Srinivasan & Dr. Laura Maubon
1555 - 1600	Introduction	Prof. Sathish Srinivasan
1600 - 1620	Intracameral midriatics	Ms. Bita Manzouri
1620 - 1640	Intracameral dyes in cataract surgery	Prof. Sathish Srinivasan
1640 - 1700	Update on Toxic anterior segment syndrome	Dr. Nick Mamalis, MD
1700 - 1715	Summary & questions	
1915 - 2000	DRINKS RECEPTION GALA DINNER & Entertainment	The Rotunda The Paris Suite



## Programme:





0900 - 1030	Corneal Session - Keratoconus	Chair: Mr. Mayank Nanavaty, Mr. Mario Saldanha & Dr. Johnson Neo
0900 - 0910	Introduction	Mr. Mayank Nanavaty & Mr. Mario Saldanha
0910 - 0925	Overview of Management of KC	Mr. Mayank Nanavaty
0925 - 0940	An insight into corneal cross-linking practices in the UK	Dr. Sally Hayes
0940 - 0955	Choice of intraocular lenses for KC	Mr. Mario Saldanha
0955 - 1010	Trans PRK of KC; outcome of Kymionis protocol	Dr. Kostas Samaras, MD
1010 - 1025	Surgical management (DALK)	Mr. Indy Sian
1025 - 1030	Summary	
1030 - 1105	COFFEE	
1105 - 1245	Free papers & Video presentations	Chaired by: Jonathan Ross & Bita Manzouri plus YOP
1105 - 1110	To Document the Visual Outcome and Efficacy of Sulcus Positioned Pinhole IOL in a Case of Traumatic Mydriasis with Irregular Pupil and Irregular Astigmatism Post Cataract Surgery	Dr. Prateek Agarwal
1111 - 1116	Time and motion study to investigate efficiency and productivity in the post-Covid-19 high-volume trainee involved cataract surgery lists	Dr. Divya Jacob
1117 - 1122	Off the shelf Toric Intraocular Lenses (TIOLs) for patients in the National Health Service: A Randomised Control Trial	Dr. Khayam Naderi
1123 - 1128	Full-thickness femtosecond-assisted arcuate keratotomy with cataract surgery presenting with corneal oedema	Dr. Rachel Mercer
1129 - 1134	Wide diameter DALK in the management of conventional diameter DALK associated high astigmatism in keratoconus	Dr. Jesse Panthagani
1135 - 1140	Three-Year Post-Implantation Multinational Evaluation of a New Aspheric Hydrophobic Monofocal IOL	Mr. Mayank Nanavaty
1141 - 1146	Unusual occurrence of graft-host interface epithelial ingrowth imitating infection following DMEK surgery	Dr. Isabeau Houben
1147 - 1152	Management of acute corneal hydrops with full-thickness suturing, a case series	Dr. Ritika Mukhija
1153 - 1158	Accuracy of predicting refractive outcomes following phacoemulsification in patients with keratoconus - A Regional Audit	Dr. Toby Al-Mugheiry
1159 - 1204	Audit on the outcomes of contact lens associated keratitis (CLAK)	Dr. Yijun Cai
1205 - 1210	Safety and efficacy of an automated telephone call for post-op follow up after cataract surgery	Dr. Aisling Higham
1211 - 1216	Post-operative Refractive Cylinder Following Toric Intraocular Lens Implantation: To Flip or not to Flip	Dr. Khayam Naderi
1217 - 1222	Initial objective and subjective outcome data for the new HOYA Vivinex Gemetric Trifocal IOL	Mr. Mohammed Muhtaseb
1223 - 1228	Modified Monovision Using a Aspheric Non-Diffractive Monofocal IOL	Mr. Alastair Stuart
	VIDEOS	
1230 - 1237	Fixation of Subluxated Iol and Bag Complex with Lasso Technique	Dr. Prateek Agarwal
1238 - 1245	Cortical Cleaving Viscodissection	Dr. Alex Buller
1245 - 1350	LUNCH	
1050 1055	The Lifetime Acheivement Award - Professor Michael O'Keeffe	Deffered due to ill-health
1350 - 1355	Introduction to the innovation in industry summit	Chair: Prof. Sathish Srinivasan - UKISCRS President
1355 - 1405	How global market growth changed with innovations in PCIOLs	BVI Medical - Mr. Warwick Strand
1405 - 1415	Innovation in industry	Scope Eyecare - TBC
1415 - 1425	STAAR Surgical - EVO ICL. Innovation in lens-based refractive surgery	Ms. Mar Zugaldía - Scientific Communication Specialist
1425 - 1435	A vote of thanks to UKISCRS Imm. Past Trustee & Director Clive Peckar	The UKISCRS Trustess
1435 - 1540	Tips N Tricks - council expert panel	Chair: Mr. Paul Ursell & Ms. Rizwana Khan
1440 - 1450	Anterior Segment Case	Mr. Andrew Turnbull
1450 - 1500	Cataract Case	Ms. Navpreet Dhillon
1500 - 1510	War in Ukraine. Cases of traumatic cataract in Ukrainian militaries	Dr. Volodymyr Melnyk
1510 - 1520	An unusual complication of corneal glueing	Mr. Mayank Nanavaty
1540 - 1550	Summary & Questions	
1550 - 1610 1555 - 1610	AGM & Free Paper Prize giving  Meeting Summary, Objectives & Presidential handover	Prof. Sathish Srinivasan & Mr. Paul Ursell
	CONGRESS CLOSE	IVII. FAUI UISEII

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## Additional Notes

## TYPE YOUR NOTES HERE:

(Compatible with keyboard and tablet use)

## Chairs



### Ms. Laura Crawley



Laura Crawley is a consultant ophthalmic surgeon with specialist interests in glaucoma, cataract surgery and common red eye conditions such as blepharitis and conjunctivitis. Her expertise includes bespoke cataract surgery, glaucoma laser treatments, and minimally invasive and penetrating glaucoma surgery Laura holds an NHS contract at Imperial College Healthcare NHS Trust where she covers planned and emergency ophthalmology. She is also an Honorary Senior Lecturer at Imperial College London.

Laura is active in Ophthalmic Research coordinating ophthalmology assessments in multi-disciplinary clinical trials at Imperial seeking new drugs in Oncology, Neurology and Dementia care.

Ms Crawley qualified in medicine from the University of Bristol in 1999. There, she won the Gold Medal and Suple prizes for medicine and surgery. Having completed physician training and becoming a member of the Royal College of Physicians she undertook Ophthalmology training in Oxford, Moorfields and Imperial. She won the National Alcon Glaucoma Prize in 2009. The Royal College of Ophthalmologists' awarded her the Treacher Collins prize in 2012. She won the Imperial College Ophthalmic Research Group Medal in 2011.

Laura publishes and lectures widely. Her lecturing commitments include the UCL Ophthalmology MSc course and BMJ Masterclasses for GPs series. She is passionate about medical education and has published widely in this field and glaucoma.LC

## Mr. Arthur Cummings



Mr. Arthur Cummings is Consultant Eye Surgeon at the Wellington Eye Clinic and Consultant Ophthalmologist at the Beacon Hospital. He has vast experience in LASIK and refractive and cataract surgery and is an internationally acclaimed expert on laser eye surgery, keratoconus, custom lens replacement and cataract surgery.

UKISCRS welcome Mr. Cummings as a guest Co-Chair and Head Judge on the Poster display.

## Mr. Sanjay Mantry FRCS (Glas), FRCOphth (Lond)



Mr Sanjay Mantry is a Consultant Ophthalmologist with a specialist interest in Cornea and Refractive Surgery.

He trained (HST) in Birmingham and has had the opportunity to do two renowned fellowships in anterior segment in Birmingham and Nottingham. Mr Mantry provides tertiary corneal refractive surgery expertise for routine and complex corneal problems. He has been providing lamellar and complex corneal transplant over 14 years at Tennent Institute of Ophthalmology, the biggest eye unit in Scotland.

Mr Mantry is one of the only Fellowship trained refractive surgeon in Scotland who provides complete solution in Cornea and refractive service including dealing with complications from other providers. He has performed over 2000 laser refractive procedures and over 20,000 lens procedures (cataract and RLE). He is currently the Council member for United Kingdom and Ireland Society of Cataract and Refractive Surgeons (UKISCRS). He is also faculty member on for the national and international conference for Cornea, Cataract and Refractive Surgery and a key opinion leader in the field. As an honorary lecturer for Glasgow Caledonian University, he has published over 20 peer reviewed articles, and he's also an examiner for the Fellowship exam for Ophthalmologists (Glasgow).

Mr Mantry is also involved in the teaching and training for Ophthalmologists and Optometrists in training and has been College tutor and educational supervisor as well as an appraiser for Greater Glasgow and Clyde.

Mr Mantry recently moved to the new state of art Eye Centre at Golden Jubilee Hospital. The NHS Golden Jubilee Eye Centre already completes around 18 per cent of all cataract treatment in Scotland and will carry out over 18,000 procedures a year in this specialty. Receiving referrals from across Scotland, the eye centre will be a leading light for other National Elective Centres over the next few years.

### Ms. Bita Manzouri



Bita Manzouri is a consultant corneal and cataract surgeon, with extensive experience in leading the corneal and eye casualty services as well as in clinical governance. She graduated from University College London with a first class honours intercalated degree in molecular biology and biochemistry, for which she was given the University of London medal, as well as honours in her medical degree. Prior to entering ophthalmology, she undertook general medical training to obtain her MRCP. She underwent her ophthalmic training at Moorfields Eye Hospital and undertook research leading to a PhD degree in the immunopathology of vernal keratoconjunctivitis in children, She has dual fellowship training in cornea/external disease and paediatric ophthalmology. She is an Honorary Clinical Senior Lecturer at Barts & the London Medical School where she is actively involved in teaching of medical students as well as students in various specialities affiliated with medicine.

## Mr. Mayank A. Nanavaty, MBBS, DO, FRCOphth, PhD



I am a cataract, cornea and refractive surgery Consultant at the Sussex Eye Hospital, Brighton & Sussex University Hospitals NHS Trust, Brighton and honorary senior clinical lecturer at the Brighton & Sussex Medical School.

My areas of clinical interests are medical and surgical cornea, external eye disease, cataract and refractive surgery. I am the lead for cataract, corneal crosslinking, contact lens & research departments at the Sussex Eye Hospital. I have received several research grants from the prestigious institutions and industry to conduct clinical studies in the National Health Services (NHS). My areas of research interest include, astigmatism, wavefront aberrations, ectatic corneal disorders, endothelial disease, lamellar corneal transplant surgeries, quality of vision in pseudophakes, cataract surgical techniques, intraocular lenses and posterior capsule opacification. I regular publish and have several publications including randomized controlled trials, Cochrane review, case-control studies, cohort studies and retrospective studies in high impact peer-review literature and over 300 national and international presentations. I regularly contribute as a organizer, committee member, panelist or faculty at several national and international ophthalmology meetings and organizations including the ESCRS, ASCRS, AAO, RCOphth, BSRS, etc. I am a member of Scientific Committee, the Senior Examiner for Certificate of Laser refractive Surgery Examination committee and Cataract surgery workforce committee at the Royal College of Ophthalmologists. I am on the UKISCRS council since 2014 and has been the programme lead for UKISCRS since 2018 and Hon. Secretary since January 2021. I am an external examiner at Ulster University.

### Mr. Paul Rosen FRCS FRCOphth



Mr Paul Rosen FRCS FRCOphth is a Consultant Ophthalmic Surgeon at the Oxford Eye Hospital and was Head of Department from 1998 to 2004. His special interests are postgraduate teaching, cataract/refractive surgery, laser refractive surgery, vitreoretinal/trauma surgery and medico-legal reporting.

He is a senior lecturer at the University of Oxford, Visiting Ophthalmologist, Refractive Service Moorfields Eye Hospital, President, UK and Ireland Society of Cataract and Refractive Surgeons, Medical Editor of 'Eurotimes', a publication of the European Society of Cataract and Refractive Surgeons (ESCRS), Elected Council member of the European Society of Cataract and Refractive Surgeons (ESCRS), an Honour Award recipient from the American Academy of Ophthalmology and a Royal College of Ophthalmologists Examiner.

### Mr. Jonathan Ross



Mr. Ross is a specialist in refractive cataract surgery and laser eye surgery, performing nearly 2,000 eye operations every year in Glasgow and Edinburgh. Originally from Edinburgh, he trained in eye surgery in London, Liverpool and Glasgow before working as a consultant in New Zealand.

He is the only eye surgeon in Scotland – and only one of four eye surgeons in the United Kingdom – performing pioneering lens surgery with the Implantable Miniature Telescope for patients with advanced macular degeneration. He is an active member of the European Society of Cataract and Refractive Surgeons and a council member of the United Kingdom and Ireland Society of Cataract and Refractive Surgeons. To date he has performed more than 10,000 eye operations. Jonathan lives in the centre of Edinburgh and is married with four children.

### Prof. David Spalton



David Spalton trained at Moorfields Eye Hospital and St Thomas' Hospital. He did fellowships in uveitis, medical and neuro-ophthalmology at St Thomas' Hospital and the Hospital for Neurology and Neurosurgery, Queen Square, London. In 1981 he was appointed Consultant Ophthalmologist at the Charing Cross Hospital and in 1983 moved to St Thomas' Hospital where he established a special interest in cataract surgery, complex cataract surgery and intraocular lens design. In 2010 he was appointed Professor of Ophthalmology at King's College, London in recognition of his research work. In 2012 he moved into private practice from which he retired in 2018 and now has a busy medico legal practice as well as consulting for Ocular Express and a number of ocular device companies. He was Honorary Consultant Ophthalmic Surgeon to the Royal Hospital Chelsea, King Edward VII's Hospital for Officers, London and Civilian Advisor to the Metropolitan Police and the ophthalmic adviser to the Motor Sports Association.

He is a Past President of UKISCRS and has given both the Choyce Medal and the Rayner Medal lectures and received the Gold Medal Award in 2010 and the Lifetime Achievement Award in 2013 and is now a UKISCRS Trustee. He was President of the ESCRS from 2016 - 2017 and has served on the ESCRS Program Committee, the Research Committee, and Executive, Finance, General Purposes, Ethics and Charity committees and the Board of Examiners for the specialist exam in cataract and refractive surgery (FEBO-CRS).

He has published over 180 scientific papers and his book, 'An Atlas of Clinical Ophthalmology', won the prize for the Best Medical Textbook of the Year in 1984 for the 1st edition and 2005 for the 3rd edition, a unique feat in medical publishing. It is now translated in 10 languages and was voted one of the 100 most important ophthalmic textbooks of the 20th century by Archives of Ophthalmology.

### Prof. Sathish Srinivasan



Sathish Srinivasan is a consultant corneal surgeon at University Hospital Ayr, Ayr, Scotland and Professor of Health and Life Sciences at the University of West of Scotland. His interests are in lamellar corneal surgery, laser refractive surgery, micro incision cataract surgery and anterior segment reconstruction. He has published over 130 papers in peer-reviewed journals, has over 100 scientific presentations to his credit in national and International meetings.

He is a recipient of the Senior Achievement award, International Scholar award and the International Ophthalmologist Education Award from the American Academy of Ophthalmology. He serves as the cataract subcommittee member of the American Academy of Ophthalmology and as the Associate Editor of the Journal of Cataract and Refractive Surgery and he is current President of the UK and Ireland Society of Cataract and Refractive Surgeons.

### Mr. Paul Ursell



Paul Ursell is President elect of UKISCRS and consultant at Epsom & St Helier University NHS Trust. He has published over 30 peer reviewed papers on and been a leader in cataract surgery in the UK for 20 years. Paul sits on the RCOpth International Committee & Exams Committee and is RCOpth rep to EBO & UEMS in Europe. He is an honorary consultant at the Royal Marsden Hospital Drug Development Unit and Liveryman of the Worshipful Company of Spectacle Makers. Previously he has been President of Epsom Medial Society and Trustee of SeeAbility. Paul's current research interests are cantered mainly on cataract surgery in people living with Dementia.



## **YOP Chairs**

### Dr. Sunil Mamtora

Sunil Mamtora obtained his medical degree from Newcastle Univeristy and worked in the North-East as a foundation doctor before commencing training in Ophthalmology. He is currently an Ophthalmology Registrar in the South-West of England and serves as a Young Ophthalmologists Programme (YOP) representative for UKISCRS. He is also the Chair of the Ophthalmologists Training Group (OTG) as well as the OTG representative for the Severn deanery.

Sunil Mamtora is an Academic Clinical Fellow at the Bristol Eye Hospital and holds the post of Honorary Clinical Lecturer at Bristol University. Sunil's is particularly interested in technology and its application within Ophthalmology. His previous publications and ongoing research have explored the utility of smartphone-based technology in imaging, something that has become particularly relevant in light of COVID-19.



### Dr. Laura Maubon

Laura Maubon has recently completed a prestigious corneal transplant fellowship at Moorfields Eye Hospital. She is now currently completing her training in South London, prior to taking time out for her second child. Laura has presented many times for both UKISCRS and ESCRS, winning the UKISCRS best cataract paper in 2016, and ESCRS cataract bursary award in 2017. These led onto her joining the young ophthalmologist programme (YOP) committee in 2018. She had been the committee lead since 2020 which nurtures her interests in anterior segment and surgical education and training.

Most recently she has published work on returning to cataract surgery following a hiatus which reviews the impact of deskilling and surgeons subjective experiences on their returns to operating. With the YOP committee she has delivered innovative new teaching, utilising remotely supervised simulation surgery at home in order to to overcome the physical barriers to accessing surgical learning resources.

Laura intends to pursue further cataract and anterior segment studies in addition to developing her teaching portfolio. Outside of medicine she enjoys experimenting with patisserie and wine tasting which she holds a WSET qualification and prior experience as international wine and spirits (IWSC) associate judge.



### Dr. Johnson Neo

Johnson is a senior ophthalmology registrar of the North London deanery. He currently works across sites at both Western Eye Hospital, Imperial College Healthcare NHS Trust and Moorfields Eye Hospital. Johnson is the latest recipient of the prestigious RCOphth BOSU Research Bursary to carry out the epidemiological study in primary lens exchange after cataract surgery. He is also the ophthalmologist representative to the UK Cataract National Ophthalmic Database (NOD).

Since joining ophthalmology residency in London, Johnson has had a strong track record in leading quality improvement projects which translated to improved patient care locally and regionally. He was awarded the coveted Health Education England / London KSS School of Ophthalmology Leadership Prize for four consecutive years. He is a board-certified fellow of the Royal College of Ophthalmologists, European Board of Ophthalmologists and Higher Education Academy UK.



### Mr. Mario Saldanha

Mr. Mario J Saldanha is currently a Consultant Ophthalmologist at Singleton Hospital, Swansea. He holds an Honorary Senior Lecturer position with Cardiff University. He has over 20 years experience in ophthalmology.

He has completed a prestigious fellowship at the University of Toronto in Cornea and Refractive Surgery, where he mastered the technique of Cornea Transplantation, Lamellar Keratoplasty (DMEK). He is the lead for Cross-linking for Keratoconus in wales. He is invited faculty to teach cornea transplantation techniques at the American Academy of Ophthalmology and the European Board of Cataract and Refractive Surgeons. His interests lie in multifocal, EDOF and RLE surgeries.

Outside work he enjoys walking, films and spending time with family.





## **UKISOP** Chair

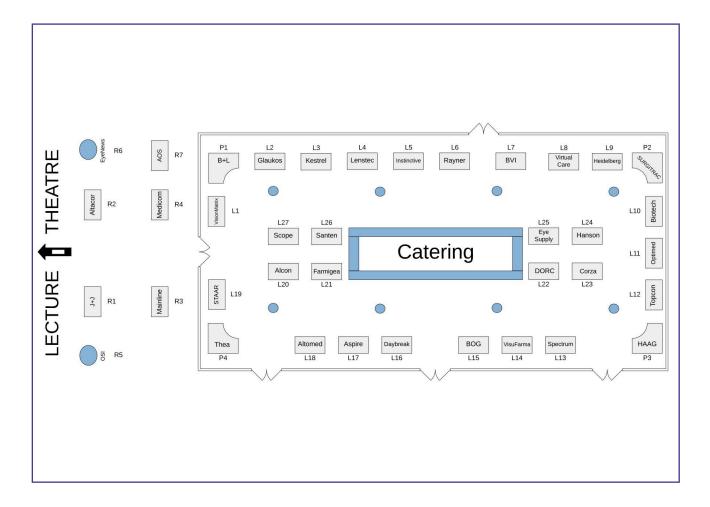


### Mrs Rebecca Turner



I first became "addicted" to Ophthalmology as a third year student nurse at the Norfolk and Norwich Hospital. I then join the team at the Oxford Eye Hospital in 1986 having studied as a specialist Ophthalmic nurse at Moorfields. I was appointed as Consultant Nurse in Oxford in 2015 and have had many years in senior nursing/leadership roles at the Oxford University Hospitals Trust, both within and outside Ophthalmology. Now part time, I am delighted to be back, working clinically within the Ophthalmology family and lead on listing patients for cataract surgery. I have had the great privilege to have worked with UKISCRS council in the development of UKISOP since its inception in 2010.

## Floor Plan



### **Ophthalmic Product Exhibitors**

UKISCRS would like to thank our industry colleagues, who have exceeded their support and friendship through this very challenging time for our Charity/Society.

Their show of support for this meeting has been beyond expectation and the Council extend their genuine, heartfelt thanks. Please thank our trade partners by visiting their stands and asking about their innovations in their specialist field.

The specialist representatives will be delighted to take you through a demonstration or to provide further product information.

## **Industry Support**

The best Free Paper submissions have been selected from abstracts, by an expert panel, and invited to present a rapid- fire free paper. The Society award the Founder's Medal to the trainee who wins the prize for the best overall paper. This year the following prizes are available for Paper, Poster & Video submissions. See paper abstracts at the end of this programme.

Best Poster £500 Best Video £500

Best Refractive Surgery Paper £500 Best Overall Paper wins the Best Cataract Surgery Paper £500 Founder's Medal & certificate

The following Industry Partners have supported these cash prizes:

Best Video Prize:

Bausch+Lomb

Best Poster Prize:

Biotech healthcare

Best Cataract Paper Prize:

Alcon

Best Refractive Paper Prize:

Surgitrac



YOP Symposia & Drinks Reception Support:

Daybreak Medical

YOP Dry Lab Support:

Thea Pharmaceuticals Ltd

**UKISOP Symposia CET Support:** 

Bausch+Lomb

**UKISOP Workshop Support:** 

Alcon & Heidelberg

Thursday Plenary Symposia Support (2-years):

Beaver Visitec International

Refractive Symposia Support:

Instinctive Ltd

The Rayner Medal Lecture Support:

Rayner IOLS Ltd.

Lanyards provided by:

Surgitrac Ltd.

Delegate bags provided by:

EyeSupply Ltd.

## Past Presidents & Officers

1976 - 1980 Neil Dallas

Trustee:		Secretary:	
Paul Rosen		2018 - 2022	Mayank Nanavaty
David Spalton		2015 - 2018	Sathish Srinivasan
		2012 - 2015	Christopher Liu
		2009 - 2012	Charles Claoué
		1996 - 2009	David Smerdon
Past Truste	ee:	1990 - 1996	Jim Hunter
Clive Peckar		1984 - 1990	Emanuel Rosen
		1982 - 1984	Piers Percival
		1976 - 1982	John Pearce
Presidents	:		
2020 - 2022	Sathish Srinivasan		
2018 - 2020	Philip Bloom	Treasurer:	
2016 - 2018	Larry Benjamin	2018 - 2022	Saj Khan
2014 - 2016	Brian Little	2015 - 2018	Philip Bloom
2012 - 2014	David O'Brart	2012 - 2015	Paul Ursell
2010 - 2012	Milind Pande	2010 - 2012	David O'Brart
2009 - 2010	Tayo Akingbehin	2008 - 2010	Som Prasad
2008 - 2009	Paul Chell	2002 - 2008	Tayo Akingbehin
2006 - 2008	David Spalton	1996 - 2002	John Roberts-Harry
2004 - 2006	Paul Rosen	1994 - 1996	Tayo Akingbehin
2002 - 2004	David Allen	1991 - 1994	William Haining
2000 - 2002	Helen Seward	1984 - 1991	Stephen Haworth
1998 - 2000	David Boase	1976 - 1982	Piers Percival
1996 - 1998	David Hunter		
1994 - 1996	Patrick Condon		
1992 - 1994	Stephen Haworth		
1990 - 1992	Emanuel Rosen		
1988 - 1990	Michael Roper-Hall		
1986 - 1998	Walter Rich		
1984 - 1986	Piers Percival		
1982 - 1984	John Pearce		
1980 - 1982	Peter Choyce		

## Historical Lectures

### Choyce Medal Lecture:

#### 2021 Mr. Richard Packard 2019 Mr Julian Stevens 2017 Mr Robert Stegmann 2015 Mr Larry Benjamin 2013 Burkhard Dick MD 2011 Professor R Foster 2009 Mr Sheraz Daya 2007 Mr Peter Barry 2005 Dr G Barrett 2003 Mr PI Condon 2001 Mr D Spalton 1999 Professor L Buratto 1997 Professor G Baikoff Professor P Sourdille 1995 1993 Professor T Neuhann 1991 Professor M Blumenthal 1989 Professor D Apple 1987 Dr R L Lindstrom 1985 Professor K W Jacobi 1983 Mr J L Pearce

### Lectures in Honour of:

2012	Eric Arnott by Richard Packard
2010	Neil Dallas by Larry Benjamin

#### Lifetime Achievement Awards:

2020	deferred Prof Micheal O'Keeffe
2018	Mr Patrick Condon
2017	Mr David Boase
2016	Mr Clive Peckar
2015	Mr Richard Packard
2014	Professor John Marshall
2013	Mr Emanuel Rosen
2013	Professor David Spalton

### Pearce Medal Lecture:

Mr D P Choyce

1981

2001

2021	Professor Tara Moore
2019	Professor Oliver Findl
2017	Dr Boris Malyugin
2015	Mr Ike Ahmed
2013	Prof. K. Meek
2011	Mr C Peckar
2009	Dr A Glasser
2007	Professor Ray Applegate
2005	Dr J Colin
2003	Professor K W Jacobi

Dr J T Holladay

### **Abstracts**



Poster 1

POSTER ONLY

Title:

Laser-assisted cataract surgery versus standard ultrasound phacoemulsification cataract surgery: Cochrane Review Update

**Lead Author:** 

Akshay Narayan

**Purpose:** Femtosecond laser assisted cataract surgery (FLAC) has for cataract surgery now been available for 10 years. The potential advantages of their high accuracy and reproducibility include greater safety and visual outcomes. Our aim was to compare the effectiveness of FLAC with standard ultrasound phacoemulsification cataract surgery (PCS) by gathering evidence from RCTs.

Method: We last searched the electronic databases on 10 May 2022 and included RCTs where FLACS was compared to PCS. The certainty of the evidence was graded using GRADE. Two review authors independently screened the search results, assessed risk of bias and extracted data using the standard methodological procedures expected by Cochrane. The primary outcome was intraoperative complications and main secondary outcomes were visual acuity and postoperative complications.

Result: We included 42 RCTs conducted that enrolled a total of 6548 eyes of 5845 adult participants. Overall, the studies were at unclear or high risk of bias. There was moderate-certainty evidence of little or no difference in the risk of intraoperative or postoperative complications between FLACS and PCS.

We found no difference in either unaided or corrected postoperative visual acuity between FLACS and PCS arms, with the exception of that at 6 months or more follow-up, there was moderate-certainty evidence of a very small advantage for the FLACS. This difference is equivalent to less than 1 logMAR letter (0.01 logMAR) between groups and although statistically significant is not clinically significant.

Conclusion: The evidence from the 42 RCTs included in this review suggests equivalence of FLACS to PCS for our chosen outcomes. Differences may still exist and further research is needed.

Poster 2

POSTER ONLY

Title:

Improving the Surgical Efficiency and Throughput of High Volume Cataract Lists with the Use of Intracameral Mydrane

**Lead Author:** 

Yunzi Chen

Purpose: Ophthalmology trainees are increasingly expected to perform high volume cataract lists, yet the balance between surgical efficiency and patient safety remains a key barrier. Intracameral Mydrane (which contains tropicamide, phenylephrine and lidocaine) has been shown to induce rapid mydriasis and intraocular anaesthesia, with the potential of improving surgical efficiency, throughput and safety.

**Method:** We investigated the sole use of intracameral Mydrane for mydriasis on supervised high volume trainee lists (TL; n=12 patients/list) compared to consultant lists (CL; n=14 patients/list) in an independent sector. Data collected included patient's demographic, case complexity, pre- and post-injection pupil size, pain score (0-10; 0=no pain, 10=maximum pain), intraoperative complication rate, systemic adverse effects, and total duration of patient stay (from first check-in to completion of the surgery).

Result: A total of 302 patients were included, with 232 patients and 70 patients from the CL and TL. The demographic factors and case complexity were similar in both groups. Rapid and effective mydriasis was achieved by Mydrane injection (mean pupil size of  $6.7 \pm 3.0$ mm at 30s, and  $6.6 \pm 1.1$ mm at the end of surgery), with good intraocular anaesthesia (mean pain score =  $0.5 \pm 1.2$ ). No intraoperative complication or systemic adverse effect was observed. All lists were completed within 4 hours, with a significant but expected difference in the mean overall patient stay between CL and TL ( $31 \pm 10$ mins vs.  $49 \pm 16$ mins; p<0.001).

**Conclusion:** Our study demonstrated an efficient and safe model for training the ophthalmology trainees on high volume cataract surgeries, which can be adopted in the NHS and independent sector.



POSTER ONLY

#### Title:

## Foreseeing the future of cataract surgery training with Virtual Reality

#### **Lead Author:**

Periklis Giannakis

Purpose: Cataract surgery is one the most common elective surgeries performed worldwide. One in three people over the age of 65 require cataract surgery, so high fidelity is vital for all ophthalmology trainees. Virtual reality (VR) has been progressively popular in surgical training, including ophthalmology. VR is an emerging teaching tool to train and achieve proficiency in cataract surgery for ophthalmology trainees. This review aims to explore VR on cataract surgery.

Method: PubMed, Embase and Cochrane library were accessed using the keywords 'virtual reality' and 'ophthalmologytraining'. 284 publications were assessed collaboratively on Rayyan and were included if they met the inclusion criteria: talking about cataract surgery and virtual reality training; exclusion criteria included publications that are editorials, letters to the editor. 23 met the criteria and were included.

**Result:** Of the 23 publications, 5 were in the UK, 5 were in Denmark, 7 in the USA, and 2 in Sweden.

**Conclusion:** Cataract surgery training is essential to train competent future ophthalmologists on such a basic yet essential skill. The rise of VR has made cataract surgery training much more accessible adding stimulation to the, 'watch, study, practice and teach' paradigm.

Poster 4

**RAPID FIRE** 

#### Title:

Time and motion study to investigate efficiency and productivity in the post-Covid-19 high-volume trainee involved cataract surgery lists

#### Date & Time:

21/10/22 1111 - 1116

#### **Lead Author:**

Yunzi Chen

Purpose: The Royal College of Ophthalmologists (RCOphth) has emphasised the need for training in high-volume cataract surgery lists. Studies have shown that appropriately skilled staff, possessing effective communication skills, play a vital role in the efficiency and productivity of surgical training.

Method: We prospectively analysed high-volume cataract theatre lists where a trainee was involved. We assessed the effect of intracameral Mydrane on pupil dilation and anaesthesia, average time spent in the pre-op area, anaesthetic room, inside theatre and recovery area. We also assessed case complexity, intraoperative complication rate and total duration of patient stay.

Result: 60 patients were included in this study (10 per list). The trainee performed surgery on 40% of cases. The mean duration of patient stay in the preassessment area was 13.1 minutes, in the anaesthetic room was 7.45 minutes, in the operating theatre was 19.1 minutes, and in the post-op recovery area was 26.5 minutes. The average Mydriasis achieved by intracameral Mydrane was 6.3mm and good anaesthesia was achieved with a mean pain score of 0.25.

The average duration of patient stay was 70.3 minutes. We had no intraoperative complications.

Conclusion: Our study showed that the use of intraoperative intracameral Mydrane to induce mydriasis and anaesthesia significantly reduced total duration of patient stay. We also found that sufficient staffing, pre-op briefing, precise planning and the ethos of ergonomics play a pivotal role in the seamless completion of high-volume cataract lists without complications.



POSTER ONLY

#### Title:

Laser-assisted cataract surgery versus standard ultrasound phacoemulsification cataract surgery: Cochrane Review Update

#### **Lead Author:**

Akshay Narayan

Purpose: Femtosecond laser assisted cataract surgery (FLAC) has for cataract surgery now been available for 10 years. The potential advantages of their high accuracy and reproducibility include greater safety and visual outcomes. Our aim was to compare the effectiveness of FLAC with standard ultrasound phacoemulsification cataract surgery (PCS) by gathering evidence from RCTs

Method: We last searched the electronic databases on 10 May 2022 and included RCTs where FLACS was compared to PCS. The certainty of the evidence was graded using GRADE. Two review authors independently screened the search results, assessed risk of bias and extracted data using the standard methodological procedures expected by Cochrane. The primary outcome was intraoperative complications and main secondary outcomes were visual acuity and postoperative complications.

Result: We included 42 RCTs conducted that enrolled a total of 6548 eyes of 5845 adult participants. Overall, the studies were at unclear or high risk of bias. There was moderate-certainty evidence of little or no difference in the risk of intraoperative or postoperative complications between FLACS and PCS. We found no difference in either unaided or corrected postoperative visual acuity between FLACS and PCS arms, with the exception of that at 6 months or more follow-up, there was moderate-certainty evidence of a very small advantage for the FLACS. This difference is equivalent to less than 1 logMAR letter (0.01 logMAR) between groups and although statistically significant is not clinically significant.

Conclusion: The evidence from the 42 RCTs included in this review suggests equivalence of FLACS to PCS for our chosen outcomes. Differences may still exist and further research is needed.

Poster 6

POSTER ONLY

#### Title:

Blame the lens 'not its position' in refractive surprise

#### **Lead Author:**

Dr Josephine Bates

Refractive surprise important Purpose: is an complication following cataract surgery. Underlying factors include those that already affect the patient such as a history of refractive surgery, biometric assessment and surgical factors. Lens manufacturers must abide by a 2014 standard to ensure the nominal labelled on IOLs are within tolerances. The objective of this investigation is to uncover what information manufacturers readily about their maintenance of IOL power standards.

Method: Six key IOL manufacturing companies were identified from the thirteen leading European companies. They were contacted over a three-month period to obtain further information about the production of IOLs, and how they are ensured to be within the power tolerances stated in the standard.

Result: Manufacturing companies are largely unwilling provide further information on how they ensure IOLs accurately meet power tolerances, or whether they use their own ranges within the set standard. There is no identifiable distribution of where manufactured IOLs are, within power tolerance ranges.

Conclusion: True dioptric powers and their tolerances are not labelled on lens packaging, and the accuracy of power measurement methods are not public domain knowledge. If surgeons cannot determine the probability of whether IOLs truly lie at their within nominal power instead of elsewhere pre-specified ranges, then manufacturers imposing a rate-limiting step on the improvement in precision of refractive outcomes after cataract surgery.



**RAPID FIRE** 

#### Title:

PCR and Case Complexity Rates in ISTCs vs NHSTs

#### Date & Time:

20/10/22 1030 - 1035

#### **Lead Author:**

Hussein Al-Kazwini

Purpose: Posterior capsule rupture (PCR) is an important perioperative complication in cataract surgery. From 2016-2021, 633,175 national health service trust (NHST) and 172,827 independent sector treatment centre (ISTC) surgery outcomes were submitted to the national ophthalmology database (NOD). This study provides the largest comparison of PCR rates and case complexities observed between NHSTs and ISTCs.

Method: Data was obtained from NOD, the largest cataractsurgery database in the UK, using electronic medical records (EMRs) and audit reports. From September 2016 to March 2021, trends/relationships in PCR rates and case complexities for NHSTs and ISTCs were analysed.

Result: ISTCs had lower mean unadjusted PCR rates versus NHSTs in all studied audits - 2016/17: 0.52% vs 1.31% (p<0.0073); 2017/18: 0.55% vs 1.31% (p<0.0001), 2018/19: 0.54% vs 1.19% (p<0.0001); 2020/21: 0.51% vs 1.39% (p<0.0001).

ISTCs had lower case complexities in all studied audits - 2016/17: 1.27% vs 1.65% (p<0.009); 2017/18: 1.25% vs 1.72% (p<0.0001); 2018/19: 1.25% vs 1.74% (p<0.0001); 2020/21: 1.20% vs 1.79% (p<0.0001).

Conclusion: Since PCR is a measure of cataract surgery quality, the lower PCR rates in ISTCs initially suggest they provide higher quality care. However, ISTCs had lower case complexities which explains these lower PCR rates. This is potentially due to high volume surgery necessitating case selection bias. Whilst diverting complex cases to NHSTs provides an economical model for ISTCs, there are consequences on complex patients including treatment costs. Also, availability of training for NHS ophthalmic trainees may be compromised leading to a less qualified workforce with a higher likelihood of reduced investment.

Poster 8

RAPID FIRE

#### Title:

Three-Year Post-Implantation Multinational Evaluation of a New Aspheric Hydrophobic Monofocal IOL

#### Date & Time:

21/10/22 1135 - 1140

#### **Lead Author:**

Mayank A. Nanavaty

Purpose: Purpose: To report visual acuity, refractive, and safety outcomes of the Clareon (Alcon Vision) aspheric, hydrophobic, monofocal, intraocular lens (IOL) 3-years post-implantation.

Setting: Prospective, multinational, single-arm long-term (3-year) safety and effectiveness trial.

Method: Prospective, multinational, single-arm trial assessing 3-yr safety and effectiveness of the Clareon IOL implanted bilaterally. Participants attended 12 study visits (9 post-implantation) over approximately 36 months. Primary study objectives were to demonstrate long-term visual acuity and adverse event (AE) outcomes, and one-year visual acuity and AE outcomes compared to historical safety and performance endpoint (SPE) rates as reported in EN ISO 11979-7:2014.

Result: 245 participants enrolled; 215 were implanted; 183 first and 182 second eyes were analyzed at 3 years. At 1 year, the primary effectiveness and safety endpoints were met and were greater than the SPE rates. At 3 years, mean corrected distance visual acuity (CDVA) was 0.032D in first and second eyes, and 92.3% of eyes had CDVA 20/25. Mean manifest refractive spherical equivalent was within target (emmetropia) by 1-week and maintained at 0.088D in first and 0.106D in second eyes at 3 years.

All eyes had Grade 0 glistenings at 3 years. There were no unanticipated AEs. Over 3 years, 20 eyes (4.7%) had clinically significant PCO requiring Nd:YAG laser capsulotomy

Conclusion: The 3-year visual outcomes were excellent and had stable refractive results. There were no unanticipated AEs, all IOLs had Grade 0 glistenings, and rates of PCO and Nd:YAG were very low.



**RAPID FIRE** 

#### Title:

The Efficacy of Post-operative Lubricating Drops to Limit Dry Eye Disease Symptoms and Signs Following Cataract Surgery: Preliminary Data of a Randomised Control Trial

Date & Time:

20/10/22 1042 - 1047

#### Lead Author:

Khayam Naderi

Purpose: Modern micro-incision cataract surgery (CS) can lead to disruption of the tear film homeostasis, leading to development of dry eye disease (DED) symptoms. In this study we investigated the effects of routine prophylactic lubricating eye drops for six weeks following CS, compared to standard treatment alone.

Method: Patients with no history of DED were recruited and randomised into the standard care group (SCG) (n=29) (dexamethasone and chloramphenicol eye drops for 4 weeks) or intervention group (IG) (n=25) where patients received additional lubricating drops for 6 weeks. Primary outcomes were DED symptom questionnaire (SPEED II) and patient reported outcome measures (CATPROM-5 and EQ-5D-3L).

Secondary outcomes included uncorrected distance visual acuity (UDVA), best corrected visual acuity (BCVA), automated non-invasive tear break-up time (NTBUT), Schirmer I test (ST), tear meniscus (TM), ocular surface staining (OST), and automated percentage of meibomian gland dropout (MGD). Follow up was at two weeks and two months post-surgery.

Result: The median baseline, 2- and 8-weeks (w) SPEED II scores were 2 (0-12), 2 (0-8), 2 (0-19) in the SCG, and 2.5 (0-10), 2 (0-9), 2 (0-8) in the IG, with 8w SPEED II scores superior to baseline in the IG (p=0.023). In the SCG, NTBUT and TM were improved at 8w, while TM was improved at 2w in the IG from baseline. The CATPROM-5 scores were superior at 2w and 8w (p<0.0001) compared to baseline in both groups.

In the SC group, there were no differences in the EQ5D3L scores compared to baseline whereas in the IG the median EQ5D3L raw score was higher compared to baseline (p=0.02). There were no differences between the two groups at baseline, 2w or 8w in any of the primary or secondary outcomes between the two groups.

Conclusion: Our preliminary results indicate that in small incision phacoemulsification CS in patients without known DED, there are no adverse changes post-operatively in measured DED parameters. Although Speed II scores were significantly improved at 8 weeks in the IG, there were no differences between the primary and secondary outcomes between the groups, suggesting that post-operative lubricant drops after routine CS in eyes without known DED do not seem to be required in preventing post-CS DED symptoms.

Poster 10

POSTER ONLY

#### Title:

The Effect of the COVID-19 Lockdown on Cataract Complication Rates

#### **Lead Author:**

**Scott Cutting** 

Purpose: During the COVID-19 pandemic, NHS England postponed non-urgent surgery for 3 months in 2020. During this time, only small numbers of emergency cataract surgeries were performed and ophthalmologists many performed no cataract We surgery. aimed to determine whether complication rates increased when non-urgent cataract surgery restarted and whether surgical simulation was offered.

Method: A retrospective analysis was performed of all cataract surgeries performed by surgeons of all grades during 2019 and 2020 at 6 trusts in Southern England, Total numbers of cataract surgeries, complications and posterior capsular ruptures (PCRs) were recorded. A chi-square test was used to compare PCR rates and total complication rates for corresponding months in 2019 and 2020. The annual rates were also compared. Trainees were asked whether simulation was offered when surgery was postponed.

**Result:** There were no significant differences in PCR rate or total complication rate between corresponding months in 2019 and 2020. Annual PCR rates (1.02% and 0.92% for 2019 and 2020 respectively, p=0.42) and total complication rates (1.80% for both 2019 and 2020, p=0.9996) also showed no significant difference. Only one trust offered simulation whilst non-urgent surgery was postponed.

Conclusion: There was no significant increase in complications on recommencement of non-urgent cataract surgery and the annual PCR rates for both 2019 and 2020 were below the national averages from the National Ophthalmology Database Audit. This suggests that patient safety was unaffected by surgeons having little or no surgical experience for at least 3 months with surgical simulation offered at only one trust.



**VIDEO** 

#### Title:

Fixation of Subluxated Iol and Bag Complex with Lasso Technique

#### Date & Time:

21/10/22 1231 - 1238

#### **Lead Author:**

Prateek Agarwal

Purpose: Elderly female presents with History of trauma, with Subluxated IoI and Bag complex, with previous cataract surgery done 10 years ago Fairly good vision for more than 9 years until 6 months back Other eye absolutely normal pseudophakia with no pseudophacodonesis No RP, Psedudoexfoliation or other causes Subtle trauma not very significant history Challenge: I am not the primary surgeon.

Method: Superior scleral pocket fashioned, 10-o prolene passed through rail road technique over the IOL plane and then another arm of needle under the IOL piercing through fibrous capsule to form a lasso and tied superiorly. Well centred IOL with BCVA 6/9.

Result: Efficient technique to centre subluxated IOL and Bag rather than Pars plana virectomy and secondary IOL a less invasive procedure a smaller corneal incision the use of topical or regional anesthesia a faster procedure with less anterior chamber inflammation and trauma, resulting in less inflammatory postoperative response and a lower risk of endothelial or macular damage; (5) Faster visual recovery. (6) Also eliminates the need for secondary IOL biometric calculations.

**Conclusion:** (5) Faster visual recovery. (6) Also eliminates the need for secondary IOL biometric calculations.

Poster 12

**VIDEO** 

#### Title:

**Cortical Cleaving Viscodissection** 

#### **Date & Time:**

21/10/22 1239 - 1246

#### **Lead Author:**

Alex Buller

Purpose: A surgical technique for lens cortex removal without traction on the lens capsule or zonules.

**Method:** Description of the surgical technique with video footage from numerous cases, and surgical pearls.

**Result:** Removal of the entire lens cortex can be achieved without lens capsule traction.

Conclusion: This technique applies in a variety of cases including where loose zonules are present or may be present and the surgeon would prefer to avoid traction, when very slow flow is desired such as in the presence of a floppy iris or ruptured posterior capsule, for situations where visibility or access is poor, and as an alternative when standard techniques are challenging.



RAPID FIRE

#### Title:

Safety and efficacy of an automated telephone call for post-op follow up after cataract surgery.

#### Date & Time:

21/10/22 1205 - 1210

#### Lead Author:

Aisling Higham

Purpose: Demands on ophthalmology services are rising. Many parts of the care pathway are highly stereotyped, repetitive, and burnout inducing. Dora is a UKCA marked artificial intelligence (AI) enabled autonomous conversational assistant that can conduct routine telephone conversations with patients and enable greater efficiency in the delivery of care. This study aimed to assess the safety and effectiveness of using Dora for post-operative cataract follow-up.

Method: Patients were recruited from two UK teaching hospitals with different demographic profiles: Oxford University Hospitals NHS Foundation Trust and Imperial College Healthcare NHS Trust. Any patient having routine, uncomplicated cataract surgery was eligible for inclusion. Patients had a Dora call in addition to the standard of care. The work was funded by an NIHR Artificial Intelligence in Health and Care Award. ClinicalTrials.gov identifier: NCT05213390. Patients were recruited between September 2021- January 2022 and had a scheduled call with Dora 3-4 weeks postoperatively. This was a mixed methods study. The primary outcome measure was the agreement between Dora and a supervising clinician when assessing 5 key symptoms (red eye, pain, vision concerns, floaters and flashing lights) and the overall management decision (pass or fail indicating whether further human review was required). Dora's Al algorithms were locked for the duration of the study.

Result: 211 patients had calls with Dora, of which 197 calls completed autonomously. Mean patient age was 74 years. For the 5 symptoms, the sensitivity of Dora compared to a clinician in detecting significant red eye, pain or flashing lights was 100%, but 61.5% for vision and 87.0% for floaters. The sensitivity of Dora in identifying patients who the supervising clinicians believed needed further clinician review was 96.6% (95% CI: 92-99), with a specificity of 84.3% (95% CI: 77-90), Kappa agreement = 0.758 (p=<0.001). There were four type II errors, which were due to symptoms of monocular diplopia, contralateral eye watering and floaters and ocular imbalance. 113 (57%) patients passed the Dora assessment and thus no clinician review was required.

Conclusion: Dora is able to autonomously elicit relevant symptoms and identify patients who require further clinician review. The algorithm was locked during the study so couldn't be adjusted to improve sensitivity of the vision and floaters assessment, or to adjust for the type II errors, but this has now been improved in the current live conversation. These results suggest there is the potential for almost 60% of post operative cataract surgery patients to be discharged without the need of human review.

Poster 14

POSTER ONLY

#### Title:

To present a new and versatile registry and analysis software for cataract and refractive lens exchange surgeons involved in clinical practice and/or clinical research.

#### **Lead Author:**

Mohammed Muhtaseb

Purpose: To demonstrate the ease of use, utility, and versatility of a new software & app tailored for Cataract and RLE surgeons. To show that data entry is fast, easy, & intuitive. To illustrate the simplicity of generating reports of essential performance outcomes as well as detailed custom reports that analyse multiple objective and subjective parameters.

Method: The software was used by a single surgeon to log cataract and refractive lens exchange activity and analyze the results of the surgery in a robust and sophisticated way. It was used to record all routine activity over a 24-month period and analyze the outcomes. Captured data could be the minimum needed to report on key performance measures such as complication rates, refractive accuracy, vision loss, etc; or very detailed to allow for versatile multi-factorial analysis and graphical representation of the results combining objective and subjective outcomes analysis, & outcomes over time. The software was used to analyze data & generate reports used in papers at international conferences.

Result: The software was easy to use, intuitive, and produced a variety of outcomes reports. Essential reports include posterior capsule rupture rate (by risk stratification), refractive outcome accuracy, loss of best visual acuity, & post-op cumulative visual acuity. Custom reports can be prepared with multiple levels of filtering to allow bespoke & robust data analysis. Time-lapse reports show outcome evolution over time, with analysis of 1 or 2 parameters in a single graph. Patient reported outcomes and satisfaction could be recorded and analyzed, including perception & severity of halos and glare, independence from spectacles, satisfaction with vision, and willingness to make a recommendation.

Conclusion: This new software can be used as a web-based tool or an App. It is easy to use, allows fast data entry while in the office or the OR, and produces rapid outcomes analysis. It is a useful new opportunity for surgeons to easily record their surgical activity, analyze the results, inform the continual process of optimizing patient outcomes, and meet regulatory requirements.



RAPID FIRE

#### Title:

Initial objective and subjective outcome data for the new HOYA Vivinex Gemetric Trifocal IOL.

#### Date & Time:

21/10/22 1217 - 1222

#### **Lead Author:**

Mohammed Muhtaseb

Purpose: To report initial results of a new diffractive trifocal IOL, the Vivinex Gemetric, (HOYA Surgical Optics, Singapore), both non-toric and toric versions. The IOLs were implanted to replace the lens during cataract and refractive lens exchange surgery. Setting: Private practice in South Wales, United Kingdom.

Method: A single surgeon used the CLEARlog software to upload pre-operative, surgical, and post-operative data for patients receiving the Gemetric trifocal IOL. Parameters evaluated were uncorrected distance visual acuity (UDVA), corrected distance visual acuity (CDVA), manifest residual spherical equivalent (MRSE), spectacles usage at different distances, photic phenomena, and patient satisfaction. All visual acuity measurements were reported using LogMAR scale. Eyes that have not yet concluded post-op follow-up are not included.

Result: Initial data for 56 eyes were analyzed. Of these, 96% had UDVA  $\geq$  0.2, 89% had UIVA  $\geq$  0.3, and 96% had UNVA  $\geq$  0.3. 72% of eyes were within  $\pm$  0.50 D MRSE and 93% of eyes were within  $\pm$  1.0 D MRSE . Spectacle independence was achieved in 96% for distance, 98% for intermediate and 89% for near (reading) where patients reported never needing to use glasses at each distance. Photic phenomena were reported as either Never or Sometimes in 91% for halos, 95% for starbursts and 95% for glare. In 100% of cases these phenomena were either Mild or Moderate, but never severe. 100% of cases were Very Satisfied or Mostly Satisfied (89% and 11% respectively), 100% say they totally achieved their desired objective, and 100% would recommend this procedure.

Conclusion: The Vivinex Gemetric trifocal IOL yielded very high levels or spectacle independence and patient satisfaction, with low rates of photic phenomena (which were not severe when they occurred), and a very high willingness to recommend the surgery to friends or family members. The Vivinex Gemetric trifocal IOL is a new trifocal lens that performs at least as well as comparable lenses and offers surgeons an alternative option to discuss with patients.

Poster 16

POSTER ONLY

#### Title:

A rare case of Enterococcus faecalis keratitis in a neurotrophic cornea complicated by a subsequent persistent epithelial defect, successfully treated with topical antibiotics and Omnilenz.

#### **Lead Author:**

Magdalena Niestrata

**Purpose:** The aim of this study is to report a rare case of Enterococcus faecalis keratitis and highlight the challenges in its treatment.

Method: A 60-year-old male presented with pain, redness and reduced vision for 2 days in his only good eye. Past medical and social history revealed diabetes, obesity and high alcohol intake. His vision was 0.95 and 1.1 LogMAR in the affected and fellow amblyopic eye, respectively. Examination showed right eye lower lid tarsal ectropion, blepharitis, deeply injected conjunctiva and large inferior keratitis with surrounding corneal oedema and hypopyon.

Corneal scrapes revealed Enterococcus faecalis, resistant to Levofloxacin (which was started initially) and sensitive to Vancomycin and Ciprofloxacin.

Result: The patient was non-compliant with topical Vancomycin due to severe burning sensation following application; hence, treatment was changed to topical Ciprofloxacin with later addition of preservative-free topical corticosteroids and lubricants, to address his ocular surface disease, resulting in gradual improvement. He was found to have moderate moderate neurotrophia resulting in persistent epithelial defect, requiring inserting amniotic membrane.

Two months from presentation, significant improvement was noted with complete corneal re-epithelialisation and BCVA of 0.3 LogMar.

Conclusion: This rare infection poses a clinical challenge due to high virulence and multi antibiotic resistance. It tends to occur in presence of ocular and systemic risk factors, as in our case: ectropion, blepharitis, neurotrophic cornea, diabetes, obesity and high alcohol intake. It is sensitive to Vancomycin which is not licensed for keratitis treatment, difficult to obtain and known to cause epithelial toxicity.



**RAPID FIRE** 

#### Title:

Full-thickness femtosecond-assisted arcuate keratotomy with cataract surgery presenting with corneal oedema

#### Date & Time:

21/10/22 1123 - 1128

#### **Lead Author:**

Rachel Mercer

Purpose: Arcuate femtosecond intrastromal keratotomy can be done at femto-cataract surgery to treat mild to moderate astigmatism. We present a case report of a full thickness penetration from the arcuate incision, associated complications and its management. We discuss precautions to take to avoid full thickness penetration when planning femto-arcuate keratotomies.

**Method:** Case report described with photos and OCT images. Literature review also discussed.

Result: A patient underwent femto-cataract surgery with femto -arcuate incisions. This was documented as uneventful at the time of the procedure. She presented with decreased vision and corneal oedema 3 weeks later and was found to have full thickness penetration of the arcuate incision with internal wound gape. This was evident on clinical examination and corneal OCT. The patient was managed with full thickness through and through corneal sutures to full recovery by closure of the internal wound gape.

Conclusion: There have been several cases published on full thickness femto-second assisted arcuate keratotomy. Due to gas escape the femto penetration unlike a blade penetration can cause wound gape. When this occurs internally there can be corneal decompensation. Closure can be difficult and requires full thickness through and through suturing. Careful depth setting via OCT assessment at treatment is discussed as a means to minimise the risk of this complication.

Poster 18

RAPID FIRE

#### Title:

Wide diameter DALK in the management of conventional diameter DALK associated high astigmatism in keratoconus

#### Date & Time:

21/10/22 1129 - 1134

#### **Lead Author:**

Jesse Panthagani

Purpose: Modern contact lenses are effective in the refractive management of most cases of post keratoplasty high degree astigmatism. However, particularly in contact intolerant eyes surgical intervention is necessary. We present a surgical technique and its related clinical outcomes for re-grafting post DALK with wider diameter donor graft with the creation of a peripheral posterior stromal shoulder for subsequent effective blunt manual relaxing incisions.

Method: Donor graft is prepared with a 400Ρm microkeratome cutting head splitting the tissue into an anterior and posterior lamellar graft. Host corneal original keratoplasty diameter is measured. Trephination is performed 1.5mm wider than original graft diameter to a depth of 350-400Œ°m. Lamellar dissection is performed centripetally at the base of the trephination to the original wound before removing the graft and replacing it with the wider anterior lamellar graft and suturing it with 2 double running continuous 10-0 nylon sutures.

Result: The first patient treated with this technique was a young atopic keratoconic with keratometric astigmatism of 11 diopters, intolerant to contact lenses and unhappy with best spectacle corrected visual acuity (BSCVA) with all sutures out. Arcuate keratotomies and compressions sutures had not been successful. Wide diameter DALK was performed with subsequent in-the-wound blunt manual relaxing incisions with a final keratometric astigmatism of 2.4D and a BSCVA of 6/9.

Conclusion: Wide diameter DALK is effective in the management of conventional diameter DALK associated high astigmatism in keratoconus. Creation of a peripheral posterior stromal shoulder allows safe further titration of residual astigmatism.



RAPID FIRE

#### Title:

Unusual occurrence of graft-host interface epithelial ingrowth imitating infection following DMEK surgery

#### Date & Time:

21/10/22 1141 - 1146

#### **Lead Author:**

Isabeau Houben

Purpose: To report our experience of interface epithelial ingrowth post-Descemet membrane endothelial keratoplasty (DMEK) surgery.

**Method:** Patient was examined, diagnosed and treated by the corneal team in the Ophthalmology Department at University Hospitals of Leicester, a tertiary care hospital.

Result: An 81-year-old female with Fuchs, endothelial dystrophy, cataract and macular degeneration underwent uncomplicated left triple DMEK surgery. Pre-operative left distance visual acuity 0.50 LogMAR. At 7 weeks post-operatively, multiple left graft-host interface opacities were noted and suspected to be of infectious origin. An emergency anterior chamber tap was performed microbiology culture, and intra-cameral Voriconazole and Cefuroxime were injected. The patient was started on topical antibiotic and antifungal treatment. Topical steroids were stopped. AS-OCT showed hyperreflective interface deposits corresponding to the opacities. Aqueous tap cultures were negative. Topical antimicrobial treatment was tapered and discontinued, and topical steroids were recommenced. The clinical diagnosis of epithelial ingrowth was made and confirmed in vivo confocal microscopy. Despite progression, the patient remained asymptomatic with a visual acuity of 0.28 LogMAR 15 months post-operative.

Conclusion: Epithelial ingrowth is a fairly unknown complication after DMEK surgery which can mimic an insidious infectious interface keratitis. Appropriate investigation and treatment are required, and IVCM may serve as a useful diagnostic modality in achieving the correct diagnosis.

Poster 20

RAPID FIRE

#### Title:

Management of acute corneal hydrops with full-thickness suturing, a case series

#### Date & Time:

21/10/22 1147 - 1152

#### **Lead Author:**

Zahra Ashena

Purpose: Acute corneal hydrops is a painful and visually debilitating complication of keratoconus. Interventions like intracameral air or gas injection with or without full-thickness compressive suture, pre-Descemet membrane suturing, and OCT-guided drainage of intra-stromal fluid have been introduced to accelerate the corneal oedema resolution and hasten visual recovery. We describe the clinical outcome of full-thickness corneal suturing as a solo treatment in the management of acute corneal hydrops.

Method: Our series includes five known keratoconus patients, consisting of four males and one female between 20 and 41 years of age, who presented with acute symptoms of unilateral ocular pain, blurred vision, photosensitivity and epiphora for 3 to 8 days. Visual acuity at presentation was counting fingers in two patients and hand movement in three patients. Conservative management with lubricants, topical antibiotics, and sodium chloride 5% eye drops started in the eye casualty.

Two to five days from their presentation, the procedure was carried out in the theatre: a small air bubble was injected into the anterior chamber, which revealed the Descemet break/s within 10 minutes. This technique was particularly helpful in cases with extensive oedema, where the anterior segment OCT failed to demonstrate the Descemet break. This was followed by placing 3 to 6 full-thickness interrupted 10-0 nylon sutures perpendicular to the Descemet break/s. The air bubble was removed.

Result: A complete resolution of corneal oedema and ocular discomfort was noticed within 10 days in four patients and 8 weeks in one atopic patient, who presented with extensive stromal oedema secondary to a large Descemet break and a corneal thickness of 1493  $\neg \mu$ . Corneal sutures were removed 8 to 10 weeks from the procedure. Following treatment, the mean apex pachymetry reduced from 1225  $\neg \pm 215 \neg \mu$  to 443  $\neg \pm 56 \neg \mu$  and the best corrected visual acuity (using rigid gas permeable contact lenses), was like the pre-hydrops vision in four patients, and reduced by one line in the atopic patient whose visual axis was remarkably involved. None of the patients developed any complications.

Conclusion: Full-thickness corneal suturing perpendicular to the Descemet break as a solo treatment is a safe and efficient intervention to reduce the duration of morbidity and the risk of significant corneal scarring in the setting of acute corneal hydrops and subsequently postpones the need for keratoplasty in this group of patients.



**POSTER ONLY** 

#### Title:

Bilateral irreversible corneal oedema secondary to Amantadine toxicity in a patient with multiple sclerosis

#### **Lead Author:**

Zahra Ashena

Purpose: Amantadine is an antiviral medicine which is used in relieving fatigue in multiple sclerosis. Literature reports the evolution of corneal oedema two months to a few years after starting this medicine, with spontaneous resolution of oedema in short-term intake and irreversible oedema in long-term use. However, its toxicity is yet generally unknown. To highlight the drastic impact of this medicine on the cornea we report a case of bilateral irreversible corneal oedema in a young patient.

Method: A 36-year-old wheelchair-bound Caucasian female, known with MS and suspect neuromyelitis Optica (NMO) presented to the eye casualty with bilateral gradual deterioration of vision over two months. Her past ophthalmic history showed a few episodes of optic neuritis, affecting both eyes in the past with final best corrected visual acuity (BCVA) of 0.65 and 0.55 LogMar in the right and left eye respectively. She presented with a BCVA of 1.25 and 1.20 LogMar in the right and left eye. Examination showed bilateral diffuse corneal oedema with Descemet folds in the absence of endothelial guttata and cell count of 625 and 680 cells/mm2 in the right and left eye with a central corneal thickness of  $835 \neg \mu$  and  $796 \neg \mu$  respectively. The eyes were quiet with no anterior chamber activity and normal intraocular pressure. The corneal sensation was completely normal and there was no past history of herpes simplex keratitis.

Result: A review of her medications revealed that she has been on Amantadine 100mg capsules once a day to treat the MS-related fatigue symptoms for 10 years. The literature review confirmed the adverse effect of this medicine on corneal endothelial cells. Amantadine was discontinued and she was treated with topical sodium chloride 5% eye drops and Aciclovir 400mg tablets 5 times a day for 2 weeks as an empirical treatment for a less likely diagnosis of herpetic keratitis. Unfortunately, her corneal oedema did not resolve three months after her first presentation. She was placed on the waiting list for endothelial keratoplasty (DMEK) after discussing the risks and benefits of this procedure in a phakic eye, in particular development of cataract. However, sadly she passed away due to Covid-related pneumonia when she was waiting for donor tissue.

Conclusion: Bilateral diffuse corneal oedema in the absence of any ocular inflammation should prompt reviewing systemic conditions and medications of the patient. Also, Amantadine, which is proven to have a toxic effect on corneal endothelial cells, should be used with caution and with regular ophthalmology visits and endothelial cell counts. Otherwise, its side effect could be drastic in this young group of patients, who are already visually and physically disabled by MS.

Poster 22

POSTER ONLY

#### Title:

An unusual case of dislocation of cyanoacrylate glue into the anterior chamber

#### **Lead Author:**

Ritika Mukhija

**Purpose:** To report an unusual case of dislocation of cyanoacrylate glue into the anterior chamber and its management.

Method: An 83 year-old lady who had previously undergone right eye penetrating keratoplasty (PK) for viral keratitis presented to our eye casualty (setting: tertiary care eye hospital) with one week history of painful blurring of vision. Examination of right eye revealed infero-nasal graft melt with possible infiltrates and multiple loose sutures along with a flat anterior chamber (AC). The cornea was hazy, making measurement of dimensions of corneal melt and further intra-ocular examination difficult.

Eye was extremely soft to touch and careful B-scan ultrasound revealed 360 degrees serous choroidal detachment. She underwent emergency cyanoacrylate adhesive and bandage contact lens placement in her right eye to restore ocular integrity and was also listed for an emergency PK.

Result: Uncorrected distance visual acuity 20/25 intermediate visual acuity 20/25 Uncorrected near visual acuity J3 Binocular uncorrected distance visual acuity 20/20 Binocular uncorrected intermediate visual acuity 20/20 Binocular near uncorrected visual acuity J1.

Conclusion: We discuss a unique case of possible late dislocation of cyanoacrylate adhesive into the anterior chamber, which had to be managed with an IOL explant. This highlights the possible but rare complication and sequel of using tissue adhesives in cases with large corneal melt.



**POSTER ONLY** 

#### Title:

Clinical outcomes of Descemet's membrane endothelial keratoplasty without routine prophylactic peripheral iridotomy

#### **Lead Author:**

Ritika Mukhija

Purpose: Tamponade with air and gas is essential for graft attachment in Descemet's membrane endothelial keratoplasty (DMEK), and prophylactic peripheral iridotomy (PI) is often performed to prevent pupillary block (PB). The aim of this study is to report the outcomes and complications of DMEK performed without PI in patients with Fuch's endothelial dystrophy (FED).

Method: Retrospective clinical audit conducted at tertiary care eye hospital including all patients who underwent DMEK or DMEK + phacoemulsification for FED, either performed or supervised by a single surgeon using standardised operative protocol between Aug 2016 to July 2021. Previous glaucoma surgery or laser PI, aphakia or complicated pseudophakia were excluded.

Primary outcome was incidence of pupillary block (PB) and secondary outcomes were graft detachment (GD) and re-bubbling rates, uncorrected and best corrected distance visual acuity (UCDVA, BCDVA) and endothelial cell loss (ECL) at 6 months.

Result: 105 eyes were included. PB including angle closure occurred in 5 eyes(4.8%). GD including small peripheral detachments was present in 52 eyes(50%); however, only 35 eyes required rebubbling (33%; 29-slit-lamp, 6-theatre). GD did not vary with type of surgery or surgeon grade but was significantly worse with air(P<0.05); however, rebubbling rates & incidence of PB were similar between these three sub-groups. UCDVA, BCDVA and ECL at 6 months was 0.28+0.26, 0.20+0.27 and 40.46+20.36% respectively.

**Conclusion:** Our results of PI less DMEK using a standardised protocol have similar incidence of PB and rates of GD, rebubbling and ECL as previously reported in literature.

Poster 24

RAPID FIRE

#### Title:

To Document the Visual Outcome and Efficacy of Sulcus Positioned Pinhole IOL in a Case of Traumatic Mydriasis with Irregular Pupil and Irregular Astigmatism Post Cataract Surgery

#### Date & Time:

21/10/22 1105 - 1110

#### Lead Author:

Prateek Agarwal

Purpose: To Document the Visual Outcome and Efficacy of Sulcus Positioned Pinhole IOL in a Case of Traumatic Mydriasis with Irregular Pupil and Irregular Astigmatism Post Cataract Surgery.

Method: History of blunt trauma 3 years ago in a fire cracker injury. operated elsewhere primarily after the trauma for cataract surgery with intraocular lens implantation. Post operative visual outcome with glare and photophobia. Irregular pupil measuring 7 mm with superior loss of iris tissue and large inferior peripheral iridotomy pseudophakia The uncorrected visual acuity was 20/150 improving to 20/50 with glasses. Ultrasound microscopy was done to ensure adequate anterior chamber depth more than 3.5 mm Under topical and monitored anaesthesia care 2.4 mm temporal clear corneal incision was fashioned. Anterior chamber was filled with ophthalmic visco surgical device Provisc and the Xtra focus pinhole IOL was implanted in the ciliary sulcus using Monarch D cartridge and Epsilon injector system. Intracameral Miochol was injected to obtain miosis and ensure proper centration of the IOL. Uncorrected distance visual acuity 20/25 intermediate visual Uncorrected near visual acuity J3 Binocular acuity20/25 distance 20/20 Binocular uncorrected visual acuity uncorrected intermediate visual acuity 20/20 Binocular near uncorrected visual acuity J1.

Result: Irregular corneal astigmatism significantly causes reduction in visual acuity and is associated with multitude of higher-order aberrations. The main causes for irregular corneal astigmatism are post-trauma, keratoconus, corneal scars, post penetrating keratoplasty. Ocular aberrations are directly proportion to the pupil diameter. Reducing the pupil diameter minimizes the higher-order aberrations. Secondary sulcus piggyback IOL implantation corrects large refractive errors and has a long safety.

Conclusion: Irregular corneal astigmatism significantly causes reduction in visual acuity and is associated with multitude of higher-order aberrations. The main causes for irregular corneal astigmatism are post-trauma, keratoconus, corneal scars, post penetrating keratoplasty. Ocular aberrations are directly proportion to the pupil diameter. Reducing the pupil diameter minimizes the higher-order aberrations. Secondary sulcus piggyback IOL implantation corrects large refractive errors and has a long safety



RAPID FIRE

#### Title:

Audit on the outcomes of contact lens associated keratitis (CLAK)

#### Date & Time:

21/10/22 1159 - 1204

#### **Lead Author:**

Yijun Cai

Purpose: Contact lens associated keratitis is one of the most common presentations ophthalmologists see in our casualty departments. Current practices are based historically on patients having a review in a 48-hour timeframe and this places unnecessary strain on an already stretched service as a large number of these patients, particularly the ones with epithelial defect size <1mm do well on a regime of topical antibiotis and should be discharged on the first visit.

Method: The performance team pulled data on a targeted group of patients with the keywords "contact lens", "keratitis" and "ulcer" from their OpenEyes letters from 1st July 2021 to 28 February 2022. Of the 802 attendances, 161 eyes from 153 patients who were intially treated as CLAK were included. They were divided into 3 gradings based on the size of the epithelial defect. Grade 1: <1.0mm Grade 2: 1.0 - 2.0mm Grade 3: >2.0mm The results as well as the risk factors were analysed with recommendations.

Result: Most significant risk factors for CLAK Extended wear CL > Shower > Duration > 10h > Dry eyes/PEEs We can categorise CLAKs into 3 severities based on size of ED Grade 1 ED < 1.0mm are predicted to have excellent outcomes – of those followed-up, 95.9% discharged at their 48h/first EX appointment, 4 had atypical presentations and were referred. Grade 2 ED 1.0 – 2.0mm are predicted to have good outcomes – of those followed-up, 94.1% discharged at their 48h/first EX appointment, 1 had atypical presentation with positive scrapes and was referred Grade 3 ED > 2.0mm are predicted to have good outcomes on prolonged average duration of treatment 29.7% compliance of sterilization regime at St George's.

Conclusion: All Grade 1 and 2 (ED  $\leq$  1.0mm) with no atypical features to be discharged with a standard regime of empirical treatment All Grade 3 CLAKs (ED/infiltrate >2.0mm) to have scrapes performed and require External referrals as they require monitoring for resolution and to check scrape/PCR results whilst on prolonged duration of treatment All atypical presentations regardless of size to be started on standard regime of empirical treatment and referred for External FU within 1 week

Poster 26

POSTER ONLY

#### Title:

Evaluation of Macular Vessels Density Changes in Patients with Primary Open Angle Glaucoma by Swept-source Optical Coherence Tomography Angiography

#### Lead Author:

Asaad Ahmed Ghanem

Purpose: This study aimed to compare the macularvessels density changes in patients with primary open- angle glaucoma with control subjects by Swept source optical coherence tomography angiography.

Method: This was a comparative cross-sectional study included 40 eyes with POAG and 40 control subjects. Detailed ophthalmic examination was done including measurement of intraocular pressure and visual field evaluation by using Humphrey. All subjects were scanned using Swept source OCTA. Quantitative analysis of the retinal vasculature was achieved by evaluating vessel density as the ratio of the retinal area occupied by vessels at the superficial and deep retinal layer.

**Result:** The mean vessel density ratio in the superficial vascular plexuses (SVP) was  $32.77 \, \neg \pm 3.79$  and  $42.45 \, \neg \pm 1.99$  in POAG patients and control, respectively (p<0.001), the mean vessel density of SVP was statistically significantly lower in POAG patients. The mean vessel density in the deep vascular plexuses (DVP) ratio was  $36.37 \, \neg \pm 4.13$  and  $44.48 \, \neg \pm 0.91$  in POAG patients and control, respectively (p<0.001). The mean vessel density of DVP was statistically significantly lower POAG patients.

Conclusion: Macular superficial and deep vessel density by Swept-source optical coherence tomography angiography showed statistically significant decrease in POAG patients.



**RAPID FIRE** 

Title:

Refractive Lens Exchange (RLE) in high ametropia

Date & Time:

20/10/22 1036 - 1041

**Lead Author:** 

Clare O'Donnell

Purpose: To report on the clinical outcomes of a large cohort of high ametropic patients that underwent refractive lens exchange (RLE).

Method: Retrospective audit of 869 high ametropic eyes that underwent RLE at a single specialist eye hospital group in the United Kingdom. Eyes were divided into high myopic (-6.00 D spherical equivalent (SE) pre-operatively) and high hyperopic (+4.00 D SE) groups. All procedures and outcomes were recorded in an electronic medical record system. Complication rates, refractive and visual outcomes were reported.

Result: 865 (99.5%) and 468 (91%) procedures were free from operative and postoperative complications respectively. 518 (78%) eyes had a postoperative SE refraction within  $\neg \pm 0.50D$  of the intended target and the postoperative best measured monocular visual acuity (BMDVA) was statistically significantly better (p < 0.05) than the preoperative BMDVA. Preoperatively, the mean BMDVA was 0.18  $\neg \pm 0.36$  and 0.12  $\neg \pm 0.26$  logMAR in the highly myopic and hyperopic groups respectively.

Postoperatively, the mean BMDVA and UDVA were -0.01  $\neg\pm$  0.11 and 0.05  $\neg\pm$  0.16 logMAR in the myopes and 0.07  $\neg\pm$  0.16 and 0.13  $\neg\pm$  0.16 logMAR in the hyperopes. Although preoperative BMDVA and postoperative SEQ were not statistically significantly different (p > 0.05) between hyperopes and myopes, postoperative BMDVA and UDVA were statistically significantly (p < 0.05) better in high myopes than hyperopes.

**Conclusion:** Outcomes from a large sample of highly ametropic presbyopes seeking refractive surgical correction show that RLE is a safe and effective procedure.

Poster 28

**RAPID FIRE** 

Title:

Off the shelf, Toric Intraocular Lenses (TIOLs) for patients in the National Health Service: A Randomised Control Trial

Date & Time:

21/10/22 1117 - 1122

Lead Author:

Khayam Naderi

Purpose: TIOL implantation is associated with additional chair time and financial expenditure, which is important in a public healthcare setting. We present preliminary data of a randomised controlled trial comparing a 'fully-tailored' (FT) TIOLs, and an 'off the shelf' (OTS) approach with 2.00 or 4.00 dioptre cylinder (DC) corrections with additional opposite clear corneal incisions where appropriate.

Method: Patients with pre-existing regular corneal astigmatism of 1.50 dioptres or more were recruited. 42 patients have been randomised to the FT group, with 41 patients in the OTS group. Primary outcomes include uncorrected distance visual acuity (UDVA), best corrected visual acuity (BCVA), post-operative refractive cylinder (RC).

Secondary outcomes include validated patient reported outcome measures (PROMs) using CATPROM-5 and EQ-5D-3L questionnaires, and adverse events. Follow up was at four weeks and six months.

Result: At 4 weeks, mean UDVA(+/-SD) was 0.15 (0.11) in the FT (n=42) and 0.12 (0.11) in the OTS (n=41) group (p=0.41). Mean BCVA was -0.00071 (0.08) in FT and 0.02 (0.10) in OTS (p=0.32). Mean RC was 0.84 (0.50) in FT, and 0.66 (0.36) in OTS (p=0.073). There were no differences in PROMs between groups. In those patients who have thus far reached 6-month follow-up (FT (n=32) and OTS (n=32)), mean UDVA(+/-SD) was 0.11 (0.14) in the FT and 0.13 (0.15) in the OTS group (p=0.55).

Mean BCVA was -0.0031 (0.0097) in FT and -0.0013 (0.0096) in OTS (p=0.94). Mean RC was 0.81 (0.51) in FT, and 0.91 (0.54) in OTS (p=0.48)). Patients in the OTS had superior CATPROM-5 scores -7.20 (2.13) compared to the FT group -5.099 (2.88) (p=0.0016). There were differences in the EQ-5D-3L scores between the two groups.

Conclusion: The use of ,'off the shelf' 2.00DC and 4.00DC TIOLs with additional opposite clear corneal incisions may improve UVA and allow patients to achieve spectacle independence for distance vision. Our data suggests that it is not inferior to using fully tailored TIOLs.



**RAPID FIRE** 

#### Title:

Post-operative Refractive Cylinder Following Toric Intraocular Lens Implantation: To Flip or not to Flip?

#### Date & Time:

21/10/22 1211 - 1216

#### **Lead Author:**

Khayam Naderi

Purpose: Toric Intraocular lens (TIOL) implantation in patients with high astigmatism can lead to superior uncorrected distance visual acuity (UCVA) and better quality of life (QOL) outcomes compared to monofocal IOLs. Full correction of a patient's cylinder with a TIOL can potentially lead to a 'flip' in the cylindrical axis, which may compromise quality of vision. We analysed the effects of post-operative cylinder axis, 'flip' on astigmatic blur and QOL scores in two groups of patients receiving TIOLs.

Method: 42 eyes of 42 patients received fully tailored TIOLS (FT), and 41 eyes of 41 patients received , off-the-shelf' (OTS) TIOLs of 2.0D or 4.0D cylinder power combined with opposite clear corneal incisions where appropriate as part of a randomised control trial. The refractive aim in each patient was to fully correct the pre-operative astigmatism, aiming for emmetropia. Flipping the cylinder was defined as a change in axis of 900 +/- 22.50 from baseline. Subjective refraction, Uncorrected distance visual acuity (UCVA), CATPROM-5 QOL scores, and astigmatic blur data was collected at 4 weeks post-operatively.

**Result:** Median pre-operative biometric astigmatism was 2.24D (range 1.55-3.84) in FT group, and 2.17D (1.53-3.70) in OTS group (p=0.90). Median post-operative residual refractive cylinder was 0.75 (0.0-2.00) in FT, and 0.50 (0.00-1.50) in OTS (p=0.16). There was an axis ,'flip' in 14/42 in FT group and in 13/42 in OTS group (p=1.0). There was no difference in the CATPROM-5 scores between flipped and un-flipped cases in FT group (p=0.29), OTS group (p=0.37), or in all 83 combined cases (CC) (p=0.86).

There was no difference in the UCVA between the flipped and un-flipped groups in FT (p=0.56), OTS (p=0.69), and CC (P=0.83). There was no significant correlation between astigmatic blur and CATPROM-5 scores in FT (p=0.11), OTS (p=0.77) or in CC (p=0.10). There was a positive correlation between astigmatic blur and UCVA in the FT (r=0.70, p<0.0001), OTS (r=0.37, p=0.02), and in CC (r=0.58, p<0.0001).

Conclusion: Based on the findings in our cohort of 83 eyes with a median residual refractive cylinder of 0.75D (range 0.00-2.00), we did not find any evidence that flipping of the cylinder following TIOL implantation has a negative effect on UCVA, astigmatic blur or on subjective vision related QOL outcomes.

Poster 30

POSTER ONLY

#### Title:

Emerging visual and refractive outcomes using the new Visumax 800 laser

#### **Lead Author:**

Clare O'Donnell

**Purpose:** To report emerging clinical outcomes including complications, post-operative visual acuity, and refractive outcome data laser vision correction using the new Visumax 800 femtosecond laser platform.

Method: A retrospective audit of clinical outcomes of consecutive patients following SMILE undertaken with the Visumax 800 (Zeiss, Germany) for the correction of myopia between November 2021 and February 2022 was conducted. Data audited were recorded in the Medisoft electronic medical record. Procedures were excluded from the analysis if they were enhancement procedures or amblyopic cases.

Result: Results from 179 eyes, 90 patients (45 female and 45 male) with Pre-op Spherical Equivalent (D) range  $\pm 0.13$  DS to  $\pm 0.13$  DS to  $\pm 0.13$  Were included. Mean age of patients was  $\pm 0.13$   $\pm 0.13$  Postoperatively 98% of eyes achieved 20/40 and 78% of eyes achieved 20/20 (UDVA) or better. 84% of eyes had a SEQ within  $\pm 0.50$ D of predicted target. One operative complication 'Cap tear' was reported, (with no impact on visual outcome, UDVA 20/20). Six eyes were reported as postoperative dry eyes, four eyes had raised IOP.

Our data show that the Visumax 800 had low operative and post operative complication rates and that early post operative visual and refractive outcomes were of an excellent standard. The Visumax 800 provided a safe and efficacious mode of corneal laser vision correction.

Conclusion: Our data show that the Visumax 800 had low operative and post operative complication rates and that early post operative visual and refractive outcomes were of an excellent standard. The Visumax 800 provided a safe and efficacious mode of corneal laser vision correction.



POSTER ONLY

#### Title:

Early clinical outcomes of a new enhanced monofocal intraocular lens (EMV (Rayner, UK)

#### **Lead Author:**

Clare O'Donnell

Purpose: To report the emerging clinical outcomes including complications, post-operative visual acuity, and refractive outcome data after small incision phacoemulsification surgery with implantation of Rayner RayOne EMV extended depth of focus intraocular lens.

Method: A retrospective audit of the clinical outcomes of 36 consecutive cataract patients (mean age 66+/-10 years) following implantation of an EMV IOL (Rayner, Worthing, UK) was carried out. Either a targeted monovision or emmetropic distance outcome was planned. Data were recorded in an electronic medical record at up to 3 months post-operatively. Procedures were excluded from the visual analysis if they had reasons for guarded visual prognosis such as amblyopic cases or AMD.

Result: Results from 66 eyes from 36 patients were included. 89% of distance targeted eyes achieved UDVA 20/40 or better and 51% achieved UDVA 20/20 or better. 89% of eyes had a SEQ within ±1.00D of predicted target. 100% of patients achieved 20/40 or better, 69% achieved 20/20 and 100% of patients targeted for a monovision outcome achieved N8 or better.

**Conclusion:** Our data show that the emerging clinical outcomes and patient satisfaction appear favourable for this cohort overall. Data collection and analysis are ongoing and final follow up data will be reported.

Poster 32

**VIDEO** 

#### Title:

Modified Monovision Using a Aspheric Non-Diffractive Monofocal IOL

#### Date & Time:

21/10/22 1223 - 1230

#### **Lead Author:**

Alastair Stuart

Purpose: Extended Depth of field lenses present a new option to reduce spectacle dependence after cataract surgery. The purpose of this study was to report the visual outcomes and higher order aberration analysis of modified monovision after cataract surgery using the Rayner EMV IOL.

Method: This was a retrospective analysis of the outcomes of consecutive patients undergoing cataract surgery using the Rayner EMV lens. All patients had visually significant cataract prior to surgery. EMV lenses were used to target plano in the dominant eye and -1.50 in the reading eye. Outcomes measured were pre and post op UDVA and CDVA, pre and post op UNVA and CNVA, pre and post op refractions, and pre and post op whole eye, internal and corneal spherical aberration levels (using CSO aberrometer).

Result: 20 eyes from 11 patients were included in the analysis. 85% of patients were 20/20 N5 or better unaided after surgery. The other patients (15%) were 20/25 N5 unaided. All patients were within +/- 0.25D of the intended Spherical Equivalent. 75% of eyes intended for reading had 20/63 or better unaided distance vision and 75% of eyes intended for distance had N8 or better unaided reading vision. All patients had positive corneal spherical aberration prior to surgery. The average whole eye spherical aberration post operatively was +0.06 microns.

Conclusion: The visual outcomes were excellent and suggest that the EMV lens increases depth of focus through spherical aberration induction. However, the analysis did not show a consistent level of spherical aberration induction. This analysis was based on a very limited sample size and further analysis of more cases is required to draw firm conclusions.



**POSTER ONLY** 

#### Title:

Three-year postoperative refractive outcomes in patients following ICL implantation

#### **Lead Author:**

Clare O'Donnell

**Purpose:** To report the three-year postoperative visual and refractive outcomes in hyperopic and myopic patients fitted with implantable collamer lenses (ICLs).

Method: A retrospective audit of visual and refractive outcomes of consecutive patients following ICL implantation for the correction of high ametropia between 2017 and 2020 was conducted. Data audited were recorded in an electronic medical record typically at 3 months post-operatively. Procedures were excluded from the analysis if they were enhancement procedures, amblyopic cases or had been followed up for less than one week.

Result: Data from 511 eyes with Mean± SD Pre-op Spherical Equivalent (D) -6.77 ¬± 6.26D; range +9.25 to -17.63 D were obtained. Complications rates were low. 77 % of eyes had a SEQ within ¬±0.50D of predicted target. Postoperatively, 68% of myopic and 44% of hyperopic eyes achieved 20/20 or better UDVA. Binocularly 89% of myopic patients and 63% of hyperopic patients achieved 20/20 respectively.

Conclusion: Our data show that visual and refractive outcomes were favourable in terms of uncorrected distance visual acuity and refractive outcome in these highly ametropic patients. ICLs remain a safe and efficacious option for high ametropic patients seeking spectacle independence.

Poster 34

**RAPID FIRE** 

#### Title

Accuracy of predicting refractive outcomes following phacoemulsification in patients with keratoconus - A Regional Audit

#### Date & Time:

21/10/22 1153 - 1158

#### **Lead Author:**

Dr Toby Al-Mugheiry

Purpose: Investigators, scientists, and physicians continue to develop new methods of intraocular lens calculation to improve the refractive accuracy after cataract surgery. Keratoconus patients often have unpredictable refractive outcomes following cataract surgery. Various lens formulae exist for predicting refractive outcome with newer formula able to include 'keratoconus function'. Our regional study assessed the accuracy of modern formulae in predicting refractive outcome in keratoconus patients.

Method: This was a regional multi-center retrospective audit patients with keratoconus who had undergone phacoemulsification surgery over a 10 year period between 2012 and 2022. Data was collected via Medisoft, eHR and from Zeiss IOL Master. For each patient, pre- and post- operative refractive data was collected as well as basic demographic data and pre- and post- operative Visual Acuity. We also noted whether there were any intra-operative or post-operative complications. Patients with post-operative VA worse than <6/12 were excluded. For each patient, a "simulated" calculation for predicted refractive outcome and spherical equivalent was done in which relevant thus data and biometry was inputted into various using online IOL calculators. For each formula, the difference between the "simulated" predicted and actual refractive outcome (spherical equivalent) was calculated i.e. the ABSOLUTE prediction error.

Result: 40 patients were identified at several centres within the East of England who had keratoconus and underwent phacoemulsification surgery over a 10 year period between 2012 and 2022. In all patients SRK/T or Barrett Universal II formula was used at point of cataract surgery for lens choice. We found that SRK/T and Kane had the lowest mean absolute refractive errors (0.31D and 0.75D respectively). The Haigis had the highest mean absolute error. Kane formulae with keratoconic adjustment was more accurate than without adjustment.

The Kane formula was less accurate for large eyes AL > 24.00mm. Holladay II, Barrett Universal II and Hill RBF appear consistent with one another. No intra- or post-operative complications were identified. Initial analysis showed a mean age of 74 years old and a mean Central Corneal thickness of 474 microns.

Conclusion: We found that SRK/T and Kane with keratoconus adjustment seem to be the most accurate at predicting refractive outcome. For all formulae, the mean absolute error is hyperopic. We found that Axial length was very important at predicting absolute refractive error. There is a tendency for hyperopic errors in keratoconus patients. Our study was limited by being a small dataset, however we believe it to be useful as it reflects a regional dataset collected over an extended time period.



**POSTER ONLY** 

#### Title:

The effect of hybrid digital care on contact lens conversion, retention and dropout rates.

#### **Lead Author:**

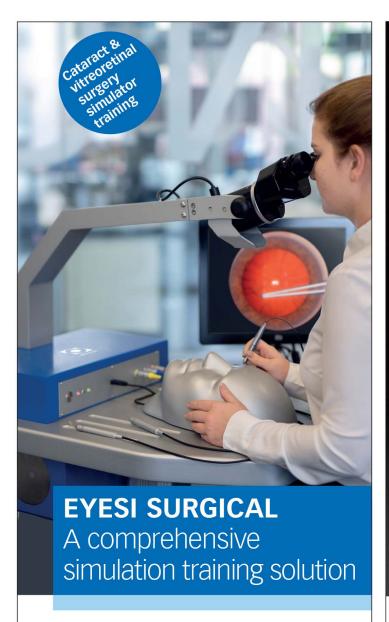
Ben David

Purpose: The aim of this patient centric commercial study is to prove that by following best practice contact lens patient management processes outlined by the BCLA, trial to sale conversion rates will be improved. Key elements of the process include anterior imaging, bulbar grading and video calls.

Method: We have run a trial in 3 different territories (UK, India & USA) with 20 different optometrists and over 300 patients over a 4-month period. A protocol was put in place which involved usage of the AOS digital eyecare platform both in and out of practice; in practice the participants were asked to capture anterior images of contact lens patients during the fitting process and grade these images; out of practice the participants were asked to conduct video calls within 5 days of the patient leaving the practice to provide guidance with insertion & removal and address any issues faced.

Result: Initial results show an improvement in trial to sale conversion rates of up to 30%. Full results will be available when the trials complete in May.

Conclusion: The trial will continue for a further 9-month period to monitor the effect on retention (6 months) and dropout (1 year) rates.



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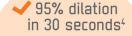


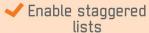
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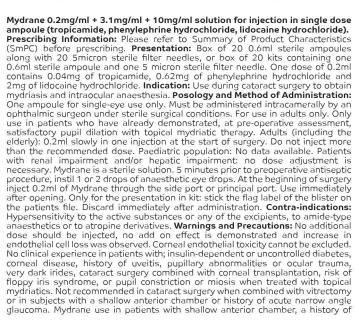
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William VIII

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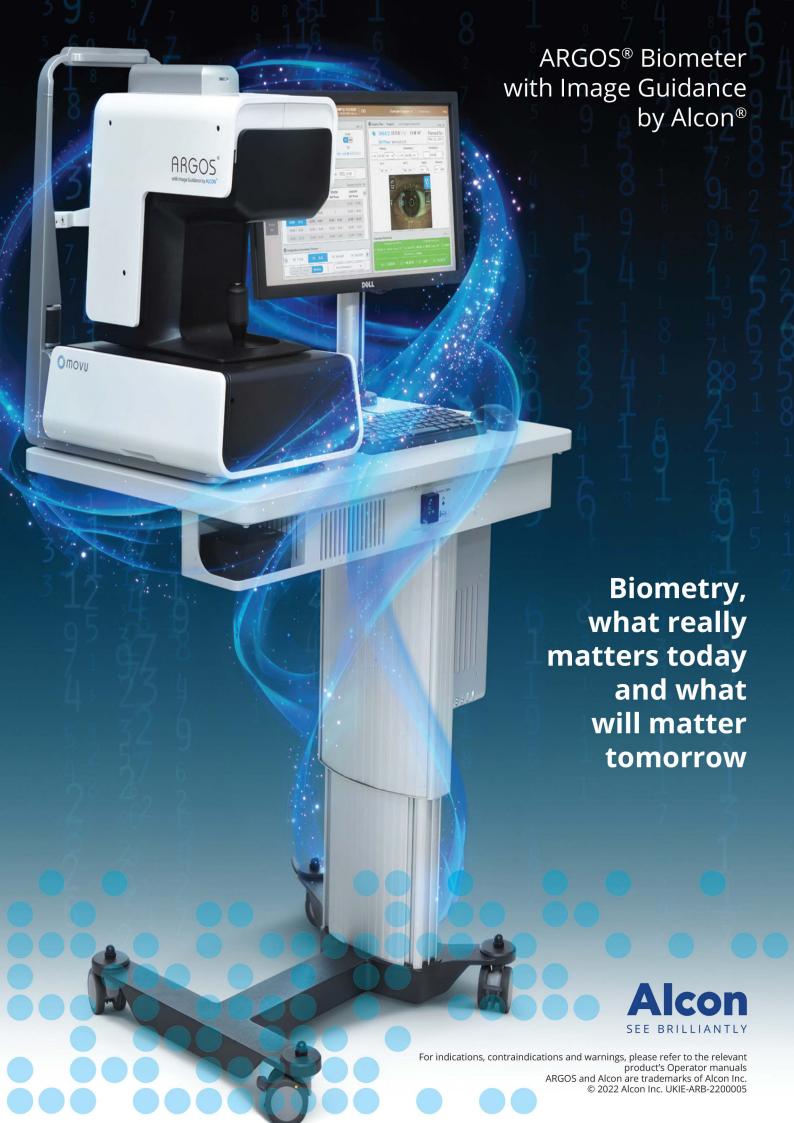
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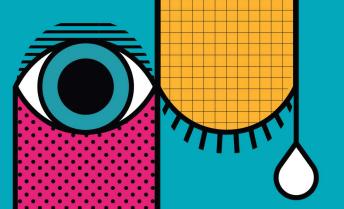




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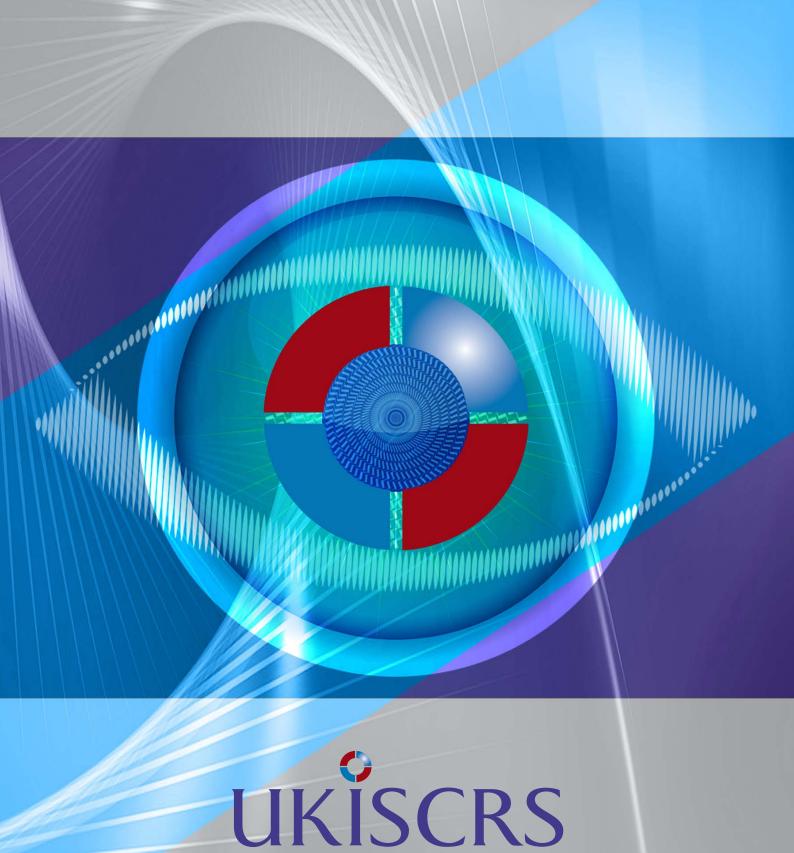
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