



Farhad Hafezi

Emilio Torres-Netto

Lamis Baydoun

Kaweh Mansouri

Francesca Gilardoni



SURGICAL SKILLS TRAINING COURSES

Location: Level 7.3, East

Cost per course €100 or *€150 (plus VAT)
All courses are €100 (plus VAT) for trainees

	Course Number	Time	Course	Instructor
Saturday 14 September				
Room East 3	1	15.30 – 18.00	Intraocular and Transscleral Suturing*	V. Pfeifer <i>SLOVENIA</i> , E. Assia <i>ITALY</i>
Room East 4	2	09.45 – 11.30	Basic Suturing Techniques	B. Frueh <i>SWITZERLAND</i>
	3	12.00 – 13.45	Basic Suturing Techniques	P. Schollmayer <i>SLOVENIA</i>
	4	14.15 – 16.00	Basic Suturing Techniques	R. Bellucci <i>ITALY</i>
	5	16.30 – 18.15	Basic Suturing Techniques	C. Leydolt <i>AUSTRIA</i> , D. Schartmüller <i>AUSTRIA</i>
Room East 5	6	12.30 – 14.15	Basic Suturing Techniques	T. Rudolph <i>SWEDEN</i> , C. Jansén <i>SWEDEN</i>
	7	14.45 – 16.30	Basic Suturing Techniques	D. Kook <i>GERMANY</i> , W.J. Mayer <i>GERMANY</i>
	8	17.00 – 18.45	Basic Suturing Techniques	R. Lapid-Gortzak <i>THE NETHERLANDS</i> , M. Dickman <i>THE NETHERLANDS</i>
Room East 6	9	13.30 – 15.30	Intraocular and Transscleral Suturing*	P. Stodulka <i>CZECH REPUBLIC</i>
	10	16.45 – 18.45	Lens Explantation*	D. Hildebrand <i>UK</i> , R. Packard <i>UK</i>
Sunday 15 September				
Room East 1	11	08.00 – 10.00	Basic Phacoemulsification	P. Schollmayer <i>SLOVENIA</i>
	12	10.30 – 12.30	Basic Phacoemulsification	P. Stodulka <i>CZECH REPUBLIC</i>
	13	13.30 – 15.30	Iris Fixation Phakic IOL	E. Pedrotti <i>ITALY</i>
	14	16.30 – 18.00	Basic Phacoemulsification	N. Reus <i>THE NETHERLANDS</i>
Room East 2	15	08.30 – 10.30	Boston Keratoprosthesis (B-KPro)*	A. Crnej <i>SLOVENIA</i> , M. Cortina <i>USA</i> , A. Cruzat <i>USA</i>
	16	11.00 – 13.00	Boston Keratoprosthesis (B-KPro)*	A. Crnej <i>SLOVENIA</i> , M. Cortina <i>USA</i> , A. Cruzat <i>USA</i>
	17	13.30 – 15.30	DSEK*	D. Calladine <i>UK</i>
	18	16.00 – 18.00	DMEK*	L. Baydoun <i>GERMANY</i> , D. Dagnea <i>ROMANIA</i> , L. Ham <i>THE NETHERLANDS</i> , S. Ní Dhubhghaill <i>IRELAND</i> , J. Peraza-Nieves <i>SPAIN</i>
Room East 3	19	09.00 – 10.30	LASIK*	A. Stojanovic <i>NORWAY</i>
	20	11.00 – 12.30	LASIK*	P. Jirak <i>AUSTRIA</i> , V. Derhartunian <i>AUSTRIA</i>
	21	13.00 – 14.30	PRK, LASEK & Epi-LASIK*	D. Epstein <i>SWITZERLAND</i>
	22	16.45 – 18.15	PRK, LASEK & Epi-LASIK*	D. Epstein <i>SWITZERLAND</i>
Room East 4	23	12.15 – 15.15	Modern MIGS Techniques Using Implants*	Z. Khoeir <i>LEBANON</i> , K. Mansouri <i>SWITZERLAND</i> , A. Tatham <i>UK</i> , A. Al Habash <i>SAUDI ARABIA</i>
	24	15.45 – 18.45	Modern MIGS Techniques Using Implants*	Z. Khoeir <i>LEBANON</i> , A. Tatham <i>UK</i> , A. Al Habash <i>SAUDI ARABIA</i>

SURGICAL SKILLS TRAINING COURSES

	Course Number	Time	Course	Instructor
Room East 5	25	08.30 – 10.30	Corneal Cross-Linking Therapy	K. Mikek <i>SLOVENIA</i> , C. Koppen <i>BELGIUM</i>
	26	11.00 – 13.00	Corneal Cross-Linking Therapy	K. Mikek <i>SLOVENIA</i> , C. Koppen <i>BELGIUM</i>
	27	14.00 – 15.45	Basic Trauma Suturing Techniques	B. Sitki Aslan <i>TURKEY</i>
	28	16.00 – 17.45	Basic Keratoplasty Suturing Techniques	D. Calladine <i>UK</i>
Room East 6	29	09.00 – 11.00	DMEK*	A. Saad <i>FRANCE</i> , F. Badala <i>ITALY</i>
	30	12.45 – 14.45	Manual Small Incision Cataract Surgery	S. Jacob <i>INDIA</i>
	31	15.00 – 17.00	DSEK*	A. Salvador <i>SPAIN</i> , I. Sassot <i>SPAIN</i>

Monday 16 September

Room East 1	32	10.30 – 12.30	Astigmatism Management & Toric IOL	R. Fernández-Buenaga <i>SPAIN</i>
	33	14.00 – 16.00	Basic Phacoemulsification	J. Peraza-Nieves <i>SPAIN</i> , J. Torras Sanvicens <i>SPAIN</i>
	34	16.45 – 18.45	Posterior Capsulorhexis ‘Bag in the Lens’*	M.J. Tassignon <i>BELGIUM</i> , S. Ní Dhubhghaill <i>IRELAND</i> , C. Billotte <i>FRANCE</i> , L. Van Os <i>BELGIUM</i>
Room East 2	35	08.00 – 10.00	Glaucoma: Viscocanalostomy & Canaloplasty (Ab Externo & Ab Interno)*	V. Jasinskas <i>LITHUANIA</i>
	36	10.30 – 12.30	Glaucoma: Viscocanalostomy & Canaloplasty (Ab Externo & Ab Interno)*	S. Ondrejka <i>GERMANY</i>
	37	13.00 – 16.00	Modern MIGS Techniques Not Using Implants*	Z. Khoueir <i>LEBANON</i> , I. Singh <i>USA</i> , S. Dorairaj <i>USA</i>
	38	16.30 – 19.30	Modern MIGS Techniques Not Using Implants*	Z. Khoueir <i>LEBANON</i> , I. Singh <i>USA</i> , S. Dorairaj <i>USA</i>
Room East 3	39	08.30 – 10.00	PRK, LASEK & Epi-LASIK	D. Epstein <i>SWITZERLAND</i>
	40	10.30 – 12.00	LASIK*	K. Ditzen <i>GERMANY</i>
	41	13.15 – 14.45	LASIK*	K. Ditzen <i>GERMANY</i>
	42	15.15 – 17.45	DSEK*	A. Sabala <i>SPAIN</i>
Room East 4	43	09.00 – 11.00	Lens Implantation*	L. de Benito-Llopis <i>SPAIN</i> , R. Angunawela <i>UK</i>
	44	14.00 – 16.00	Lens Implantation*	M. Fernandez <i>INDIA</i> , A. Borthakur <i>INDIA</i>
	45	16.30 – 18.30	Refractive Success in Astigmatism Management with Toric IOLs and Image-Guided Technologies	A. Dmitriew <i>POLAND</i>
Room East 5	46	09.30 – 11.15	Basic Corneal Suturing Techniques	F. Mutlu <i>TURKEY</i>
	47	11.45 – 13.30	Basic Scleral Suturing Techniques	D. Kook <i>GERMANY</i> , A. Wolf <i>GERMANY</i>
	48	14.00 – 15.45	Basic Trauma Suturing Techniques	M. Nanavaty <i>UK</i> , S. Khan <i>UK</i> , S. Vasavada <i>INDIA</i>
	49	16.00 – 17.45	Basic Keratoplasty Suturing Techniques	F. Akata <i>TURKEY</i>
Room East 6	50	08.30 – 10.30	Manual Small Incision Cataract Surgery	A. Chakrabarti <i>INDIA</i> , R. Solanki <i>INDIA</i>
	51	11.30 – 13.00	Supplementary Lens*	G. Kahraman <i>AUSTRIA</i> , K. Gundersen <i>NORWAY</i>
	52	14.00 – 16.00	DMEK*	M. Busin <i>ITALY</i> , C. Bovone <i>ITALY</i> , A. Ruzza <i>ITALY</i> , V. Scorgia <i>ITALY</i>
	53	16.45 – 18.45	Phaco: Management of Complications*	R. Packard <i>UK</i> , A. Panico <i>ITALY</i>



SATURDAY

14 September

08.30 – 17.45

EBO Accredited see p. 164

REFRACTIVE SURGERY DIDACTIC COURSE

South 1

Part 1: Diagnostic Techniques

Moderators: **D. Epstein** *SWITZERLAND*
C. Roberts *USA*

- 08.30 **D. Siganos** *GREECE*
Patient selection
- 08.45 **F. Ribeiro** *PORTUGAL*
Corneal topography
- 09.05 **G. Kymionis** *GREECE*
Lasers in refractive surgery
- 09.25 **C. Roberts** *USA*
Biomechanics of the cornea
- 09.45 **S. Barisic** *SERBIA*
IOL calculation strategies
- 10.00 **R. Applegate** *USA*
Quality of vision evaluation
- 10.20 Break

Part 2: Therapeutic Techniques: Intraocular Surgery

Moderators: **J. Güell** *SPAIN*
A. Marinho *PORTUGAL*

- 10.30 **A. Marinho** *PORTUGAL*
Phakic IOLs
- 10.50 **P. Rosen** *UK*
Refractive lens exchange
- 11.10 **R. Nuijts** *THE NETHERLANDS*
Toric IOLs
- 11.30 **O. Findl** *AUSTRIA*
Multifocal and EDOF IOLs
- 11.50 **J. Güell** *SPAIN*
Refractive reoperations and enhancements
- 12.10 **N. Hirschall** *AUSTRIA*
Discussion of case reports
- 12.30 Break

Part 3: Therapeutic Techniques: Corneal Surgery

Moderators: **J. Alió** *SPAIN*
D. Touboul *FRANCE*

- 14.30 **D. Epstein** *SWITZERLAND*
Cross-linking and refractive surgery
- 14.50 **F. Malecaze** *FRANCE*
Intrastromal inlays (biological and synthetic)
- 15.10 **J. Alió** *SPAIN*
Topo and wavefront-guided ablations
- 15.30 **V. Katsanevaki** *GREECE*
LASIK complications
- 15.50 **F. Malecaze** *FRANCE*
Laser refractive surgery for presbyopia
- 16.10 **J. Hjortdal** *DENMARK*
Surface ablation techniques
- 16.30 **B. Cochener-Lamard** *FRANCE*
Small lenticule extraction
- 16.50 **T. Kohnen** *GERMANY*
Incisional corneal procedures
- 17.05 **D. Touboul** *FRANCE*
Intracorneal ring segments
- 17.25 **R. Bellucci** *ITALY*
LASIK: surgical technique
- 17.45 End of session



Voting via the
'ESCRS Paris 2019' app

08.30 – 16.00

YOUNG OPHTHALMOLOGISTS PROGRAMME YO

Starting Phaco

Including 'Learning from the Learners'
(Video cases submitted by young ophthalmologists)

South 2

Chairpersons: **O. Findl** *AUSTRIA*
S. Morselli *ITALY*
F. Ribeiro *PORTUGAL*
K. Vannas *FINLAND*

08.30 **P. Rosen** *UK*
 Preparing for the first operation

08.45 **N. Hirschall** *AUSTRIA*
 Biometry: what you need to know

09.00 – 10.30

Discussants: **R. Packard** *UK*,
N. Reus *THE NETHERLANDS*, **P. Rosen** *UK*

09.00 **B. Strong** *IRELAND*
 Introduction to ESCRS iLearn

09.05 **R. Packard** *UK*
 Incisions, OVD

Video Authors: *L. Eisenkopf* *GERMANY*,
L. Van Lancker *UK*

09.45 **N. Reus** *THE NETHERLANDS*
 Capsulorhexis, hydrodissection

Video Authors: *M. Astete* *CHILE*,
Y. Azses *MEXICO*, *R. Bala* *ROMANIA*,
E. Muñoz *SPAIN*, *S. Toufeeq* *UK*

10.30 – 12.40

Discussants: **L. Benjamin** *UK*, **F. Ribeiro** *PORTUGAL*

10.30 **O. Findl** *AUSTRIA*
 Phacoemulsification I: getting a crack

Video Authors: *M. Astete* *CHILE*, *E. Zouzoulas* *GREECE*

11.15 **L. Benjamin** *UK*
 Phacoemulsification II

Video Authors: *K. Aggarwal* *UK*, *S. Ahuja* *INDIA*,
N. Ghandi *INDIA*, *R. Ismail* *UK*

11.55 **F. Ribeiro** *PORTUGAL*
 Intraocular lenses: tricks

Video Authors: *R. Chaudhary* *INDIA*, *Z. Khatib* *INDIA*,
M. Pastore *ITALY*, *S. Porto Castro* *SPAIN*

12.40 Break

14.10 – 16.00

Discussants: **B. Malyugin** *RUSSIA*, **P. Rosen** *UK*

14.10 **M. Dickman** *THE NETHERLANDS*
 Using EUREQUO for documentation and audit

14.25 **B. Malyugin** *RUSSIA*
 Small pupil / floppy iris

Video Authors: *A. Behera* *INDIA*, *M. Prencipe* *ITALY*

15.10 **P. Rosen** *UK*
 Managing the torn posterior capsule and the
 dropped nucleus

Video Authors: *A. Fahem* *UK*, *P. Larco Jr.* *ECUADOR*,
R. Mukhija *INDIA*, *V. Singh* *INDIA*, *P. Subudhi* *INDIA*

16.00 End of session



Send your questions to the chairpersons
 via the 'ESCRS Paris 2019' app

SATURDAY 14 SEPTEMBER

08.30 – 09.30

INSTRUCTIONAL COURSE

IC01* **Basic microsurgical suturing techniques for beginners (B)**



EBO

B. Frueh *SWITZERLAND*, **B. Bachmann** *GERMANY*,
A. Geerards *THE NETHERLANDS*
West 3

10.30 – 12.30

INSTRUCTIONAL COURSES

IC02* **Malpositioned lenses: optimal surgical management techniques (A)**

B. Malyugin *RUSSIA*, **M.J. Tassignon** *BELGIUM*,
E. Assia *ISRAEL*, **V. Pfeifer** *SLOVENIA*, **A. Crandall** *USA*,
S. Yamane *JAPAN*
South 3

IC03 **Conquering capsule complications: my best teaching videos (I)**

D. Chang *USA*, **R. Yeoh** *SINGAPORE*
South 4

IC04* **Explanting IOLs and refixating secondary IOLs (I)**

C. Mehta *INDIA*, **K. Mehta** *INDIA*, **S. Arshinoff** *CANADA*,
M. Piovella *ITALY*, **E. Assia** *ISRAEL*, **Z. Biro** *HUNGARY*
South 5

IC05* **LASIK: basic steps for safety and great results (I)**

A. Kanellopoulos *GREECE*, **G. Pamel** *USA*,
A. Sedky *EGYPT*, **A. Stojanovic** *NORWAY*,
J. Vryghem *BELGIUM*, **K. Stonecipher** *USA*
South 6

IC06 **Glaucoma surgery: modern perspectives (A)**

K. Barton *UK*, **N. Anand** *UK*, **S. Lim** *UK*,
T. Shaarawy *SWITZERLAND*
West 1

This course is organised by the European Glaucoma Society

IC07* **Corneal cross-linking therapy (I)**

K. Mikek *SLOVENIA*, **C. Koppen** *BELGIUM*,
D. O'Brart *UK*, **T. Seiler** *SWITZERLAND*
West 2

IC08 **How to avoid the mistakes we made in converting to DMEK (I)**

F. Badala *ITALY*, **S. Hannush** *USA*, **A. Saad** *FRANCE*,
D. Tan *SINGAPORE*, **M. Straiko** *USA*,
M. Dirisamer *GERMANY*
West 3

IC09 **Correction of astigmatism using Toric IOLs, LRIs and refractive laser surgery (B)**

N. Alpins *AUSTRALIA*, **G. Stamatelatos** *AUSTRALIA*,
M. Goggin *AUSTRALIA*, **D. Smadja** *ISRAEL*,
D. Pinero *SPAIN*
West 4

IC10* **Basic phacoemulsification (Part 1) (B)**



K. Tjia *THE NETHERLANDS*, **A. Chakrabarti** *INDIA*,
N. Reus *THE NETHERLANDS*
West 5

* Wetlab Pre-Requisite (A) Advanced (B) Basic (I) Intermediate
 Handouts available at www.esccs.org

14.00 – 16.00

ESCRS/EUCORNEA SYMPOSIUM

Cataract Surgery in Eyes with Diseased Corneas

Auditorium

Chairpersons: **M. Busin** ITALY (ESCRS)
J. Hjortdal DENMARK (EUCORNEA)

- 14.00 **B. Bachmann** GERMANY
Performing cataract surgery with an opaque cornea: overcoming poor visualization
- 14.15 **V. Scoria** ITALY
Opting for cataract extraction alone, despite endothelial pathology
- 14.30 Discussion
- 14.40 **V. Borderie** FRANCE
DALK with cataract surgery: a sensible approach?
- 14.55 **F. Larkin** UK
DSAEK or DMEK: which to combine with cataract surgery in the diseased cornea?
- 15.10 Discussion
- 15.20 **B. Seitz** GERMANY
When PK is still preferable to endothelial keratoplasty
- 15.35 **T. Olsen** DENMARK
IOL calculations in the pathological cornea
- 15.50 Discussion
- 16.00 End of session

14.00 – 15.00

MODERATED POSTER SESSION

Refractive Surgery: Can Results Improve Even Further?

Poster Village: Pod 2

Moderators: **V. Katsanevaki** GREECE
T. Kohnen GERMANY

- 14.00 **P. Paritekar, A. Ghosh, A. Sinha, Roy P. Khamar, P. Patel** INDIA
Is pellucid marginal degeneration (PMD) a variant of keratoconus (KC)? A structural, molecular and biomechanical study
- 14.08 **J. Fernández, M. Rodriguez-Vallejo, J. Garcia-Montesinos, J. Martinez, D. Pinero Llorens** SPAIN
Prevalence of central islands after small incision lenticule extraction (SMILE) and influence in the postoperative refraction
- 14.16 **D. Breyer, H. Kaymak, K. Klabe, P. Hagen, L. Beckers, F. Kretz, G. Auffarth** GERMANY
Five-year results of refractive lenticule extraction (ReLEx SMILE) compared to Femto-LASIK
- 14.24 **Z. Jihong, S. Li, W. Gu, Y. Gao, L. Wu, X. Guo** CHINA
Clinical outcomes of a large sample after small incision lenticule extraction and femtosecond laser-assisted in situ keratomileusis for myopia by generalised linear mixed models (GLMM) analysis
- 14.32 **M. Balgos, D. Pinero Llorens, J. Alío Del Barrio, M. Canto-Cerdan, J. Alió** SPAIN
A comparison of the cost effectiveness of SMILE, LASIK, and PRK for treating myopia in a private eye center in Spain
- 14.40 **E. Torres-Netto, S. Kling, A. Hammer, S. Arba Mosquera, T. Magnago, N. Hafezi, F. Hafezi** SWITZERLAND
Stromal bed smoothness after excimer laser surface ablation as a key element for the expression of inflammatory genes
- 14.48 **Y. Horigome, S. Yamane, M. Inamura, H. Arai** JAPAN
Novel technique of intrascleral IOL fixation with intraoperative adjustment of refraction
- 14.56 Discussion
- 15.00 End of session

16.00 – 18.00

INSTRUCTIONAL COURSES

IC21 Posterior capsule rupture: mastering vitrectomy and IOL implantation, a video-based course (I)

A. Agarwal *INDIA*, A. Agarwal *INDIA*, D. Chang *USA*,
B. Little *UK*
South 3

IC22 Big bubble, no trouble: a step-by-step approach to successful deep anterior lamellar keratoplasty with the big bubble technique (I)

M. Eldanassoury *SAUDI ARABIA*, S. Daya *UK*,
G. Gerten *GERMANY*
South 4

IC23 Paediatric penetrating keratoplasty: to do or not to do? (I)

M. Fernandes *INDIA*, A. Borthakur *INDIA*,
J. Sengupta *INDIA*, N. Gangopadhyay *INDIA*,
K. Nischal *USA*
South 5

IC24 New concepts and research on keratoconus (I)

A. Barbara *ISRAEL*, C. Roberts *USA*, M. Belin *USA*,
R. Ambrosio Jr *BRAZIL*, D. Gatinel *FRANCE*,
A. Marcovich *ISRAEL*
South 6

IC25* Boston type 1 keratoprosthesis: from indications to innovations (I)

M. Cortina *USA*, J. de la Cruz *USA*,
S. Hannush *USA*, E. Arrondo *SPAIN*, C. Mateo *SPAIN*,
M. Harissi-Dagher *CANADA*
West 1

IC26* LASIK: update with surgical tips in primary and secondary cases – basic comparison with surface ablation technique (B)

D. Elies Amat *SPAIN*, J. Gaytan-Melicoff *MEXICO*,
A. Marinho *PORTUGAL*, J. Aramberri *SPAIN*,
G. Rocha *CANADA*
West 2

IC27* PRK, LASEK and Epi-LASIK (B)

D. Epstein *SWITZERLAND*, I. Pallikaris *GREECE*
West 3

IC28* Minimally invasive glaucoma surgery: time to shine (B)

K. Mansouri *SWITZERLAND*, Z. Khoueir *LEBANON*,
B. Pajic *SWITZERLAND*, F. Ruefer *GERMANY*,
S. Dorairaj *USA*, A. Tatham *UK*
West 4

IC29* Basic phacoemulsification (Part 2) (B)

YO N. Reus *THE NETHERLANDS*, K. Tjia *THE NETHERLANDS*,
A. Chakrabarti *INDIA*
West 5

IC30* Primary posterior capsulorhexis: indications and surgical techniques (A)

M.J. Tassignon *BELGIUM*, T. Neuhann *GERMANY*,
R. Menapace *AUSTRIA*, R. Stegmann *SOUTH AFRICA*,
C. Billotte *FRANCE*
West 6

* Wetlab Pre-Requisite (A) Advanced (B) Basic (I) Intermediate
Handouts available at www.es CRS.org

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SUNDAY

15 September

08.00 – 10.00

FREE PAPER SESSION

Keratoconus & Secondary Ectasia

Free Paper Forum: Podium 2

Chairperson: J. Vryghem *BELGIUM*

Co-Chairperson: P. Fournie *FRANCE*

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| <p>08.00 W. Ali Abousamra, E. Azmy, A. Elkannishy <i>EGYPT</i>
Objective and subjective outcome of clear lensectomy with toric IOL implantation after corneal collagen cross-linking in selected cases of keratoconus</p> <p>08.06 C. Trindade, B. Trindade, F. Trindade <i>BRAZIL</i>
A new approach to keratoconus: refractive lens exchange with piggyback intraocular pinhole</p> <p>08.12 A. Mounir, M. Elghobaier, E. Mostafa <i>EGYPT</i>
Risk factors and clinical outcomes of femtosecond laser implanted keraring extrusion in keratoconic patients</p> <p>08.18 E. Jarade, M. Issa, W. Chanbour <i>LEBANON</i>
The bio-ring: a new solution for stromal melting after ICRS implantation</p> <p>08.24 N. Balakrishnan, R. Shetty, A. Sinha Roy, P. Khamar, V. Laalgudi <i>INDIA</i>
Customised topography-guided PTK and CXL following intrastromal ring segments in decentred cones</p> <p>08.30 V. Mittal, P. Narang, N. Sahdev, R. Mittal <i>INDIA</i>
Femtosecond-assisted Bowman's stromal inlay using IOL injector as an option in keratoconus management</p> <p>08.36 D. Johnson, A. Ralhan, J. Leroux <i>CANADA</i>
Design and validation of a device to detect and quantify eye-rubbing behaviour</p> <p>08.42 M. Ghabra, H. Ghabra <i>UK</i>
The effect of a novel radial corneal inlay implant (corneal arches) in keratoconic eyes</p> <p>08.48 Discussion</p> <p>08.57 A. Kachanov, S. Nikulin, T. Churakov, S. Bauer, V. Kornikov, B. Zimin <i>RUSSIA</i>
Corneal ectasia after 10,000 ReLEx SMILE operations</p> <p>09.03 C. Chan, A. Saad, D. Gatinel <i>SINGAPORE</i>
Ectasia after laser in situ keratomileusis: lessons learnt from a multicentre case control study</p> <p>09.09 M. Fakhry Khattab, S. Eissa, K. Abdel-Aziz, T. Einaggar, O. Said, A. Abdelatif, M. Anis <i>EGYPT</i>
Post-laser vision correction (LVC) ectasia: a study enrolled by the Egyptian Society of Keratoconus & Corneal Transplants</p> | <p>09.15 R. Chandregowda Rajalakshmi, S. Ganesh, S. Brar <i>INDIA</i>
Incidence of corneal ectasia in patients undergoing ReLEx SMILE and ReLEx SMILE Xtra in a high volume tertiary refractive surgery centre</p> <p>09.21 E. Torres-Netto, B. Spuru, S. Kling, F. Gilardoni, A. Lazaridis, W. Sekundo, F. Hafezi <i>SWITZERLAND</i>
Biomechanical effect of corneal cross-linking (CXL) in fellow human corneas following SMILE or PRK in an ex vivo model for postoperative ectasia</p> <p>09.27 P. Ahuja, R. Shetty, A. Ghosh, S. Sethu, P. Khamar <i>INDIA</i>
Rituals to prevent development of visually significant corneal haze after photorefractive keratectomy (PRK) or cross-linking (KXL)</p> <p>09.33 J. Tan, D. Lin, S. Holland, A. Covello, S. Arba Mosquera, V. Shwetabh, M. Al Obthani <i>CANADA</i>
Topography-guided photorefractive keratectomy for correction of irregular astigmatism following penetrating keratoplasty</p> <p>09.39 A. Behndig <i>SWEDEN</i>
Phototherapeutic intrastromal corneal collagen cross-linking (PiXL) for treatment of low-grade myopia: comparison of two different protocols with 12 months' follow-up</p> <p>09.45 C. Kranemann <i>CANADA</i>
Patterned cross-linking (PiXL) for refractive errors with epithelium-on (EPI ON) or epithelium off (EPI OFF) or corneal pocket approach</p> <p>09.51 Discussion</p> <p>10.00 End of session</p> |
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14.00 – 16.00

FREE PAPER SESSION

Microinvasive Glaucoma Surgery

Free Paper Forum: Podium 4

Chairperson: F. Aptel *FRANCE*Co-Chairperson: C. Traverso *ITALY*

- 14.00 **F. Rüfer, M. Dabiri, B. Alokla, M. Matthäi, D. Holland** *GERMANY*
IOP-lowering effect with the iStent inject® in POAG eyes with or without history of previous ocular surgery
- 14.06 **A. Carceller Guillamet** *SPAIN*
Prospective randomised study evaluating one, two, or three trabecular micro-bypass stents for OAG: 5 year outcomes
- 14.12 **F. Hengerer** *GERMANY*
Personal experience with second-generation trabecular micro-bypass stents (iStent inject®) in patients with glaucoma: 4 year follow-up
- 14.18 **J. Van Der Hoek** *UK*
Comparison of six-month outcomes of trabeculectomy, XEN and iStent performed by a single surgeon
- 14.24 Discussion
- 14.30 **A. Cywiński, L. Bednarski** *POLAND*
A treatment of refractory glaucoma in patients after posterior vitrectomy using Ahmed valve in an own modification
- 14.36 **C. Clement, A. Ioannidis, M. Shiu, D. Manning, F. Howes** *AUSTRALIA*
Outcomes with second-generation trabecular micro-bypass stents (iStent inject®) combined with cataract surgery in patients with glaucoma: an Australian experience
- 14.42 **E. Liang** *USA*
Initial real-world experience with iStent inject® trabecular micro-bypass stents in combination with cataract surgery
- 14.48 **F. Aptel, J. Batlle, H. Beckers, J. García-Feijoó, Y. Lachkar, I. Riss, T. Shaarawy** *FRANCE*
One-year results from a pooled analysis of three studies assessing the MicroShunt in patients with primary open-angle glaucoma with low or high preoperative intraocular pressure
- 14.54 Discussion
- 15.00 **F. Thattaruthody, S. Pandav, N. Seth, A. Jurangal, S. Kaushik, S. Raj** *INDIA*
Intermediate and long-term outcomes of a low cost non valved glaucoma drainage device in refractory glaucoma
- 15.06 **J. Izquierdo, N. Agudelo, B. Rubio, C. Ponte, J. Camargo, L. Cañola** *PERU*
Initial outcomes of combined phacoemulsification with endocyclophotocoagulation with and without ab interno trabeculotomy in open-angle glaucoma
- 15.12 **G. Bravetti, K. Mansouri, A. Villamarin, K. Gillmann, N. Stergiopoulos, A. Mermoud** *ITALY*
XEN-augmented Baerveldt vs eyeWatch in refractory glaucoma: one year outcomes
- 15.18 **G. Gazzard** *UK*
3 year safety and efficacy outcomes from an international, prospective, multicentre and randomised study of a Schlemm's canal microstent (HORIZON trial)
- 15.24 Discussion
- 15.30 **K. Gundersen** *NORWAY*
Initial clinical results after implantation of 2nd generation trabecular micro-bypass stents (iStent inject®) with cataract surgery
- 15.36 **T. Neuhann** *GERMANY*
My observations after almost 300 trabecular micro-bypass glaucoma surgeries with iStent inject over a period of five years
- 15.42 **G. Moussa, P. Pandey, J. Panthagani, M. Kutubi, I. Masood** *UK*
Phacoemulsification with iStent® trabecular micro-bypass stents in complex and moderate to advanced glaucoma: three-year effectiveness and safety outcomes
- 15.48 **J. Simão, J. Chaves, M. Raimundo, J. Cardoso, P. Faria, J. Filipe, J. Pereira** *PORTUGAL*
CO2 laser-assisted sclerectomy vs trabeculectomy: one year results
- 15.54 Discussion
- 16.00 End of session

16.30 – 18.00

FREE PAPER SESSION

Corneal Biomechanics

Free Paper Forum: Podium 4

Chairperson: **R. Ambrosio Jr** *BRAZIL*

Co-Chairperson: **D. Touboul** *FRANCE*

- 16.30 **G. Mahadevan, R. Shetty, N. Dhami, A. Ghosh, A. Roy** *INDIA*
Regional biomechanics and its correlation with molecular signatures in keratoconus
- 16.36 **R. Vinciguerra, A. Tzamalís, V. Romano, E. Arbabi, M. Batterbury, S. Kaye** *ITALY*
Assessment of the association between in vivo corneal biomechanical changes after collagen cross-linking and depth of demarcation line
- 16.42 **S. Rodrigo Rey, R. Cañones-Zafra, M. García-González, P. Drake, I. Rodriguez, G. Bolívar-de Miguel, M. Teus** *SPAIN*
Variation in the inter-day corneal thickness measurements performed with Corvis ST vs Pentacam in healthy corneas: a comparative study
- 16.48 **S. Pirhadi, S. Daryabari, K. Jadidi, N. Mohamadi** *IRAN*
Corneal biomechanical metrics in patients with keratoconus according to gender group
- 16.54 Discussion
- 17.00 **S. McCafferty, J. Levine, A. Mccolgin** *USA*
A novel clinical method for measuring corneal elasticity in vivo
- 17.06 **S. Chen, P. Zhu, A. Vega-Estrada, J. Silvestre-Albero, J. Alió, F. Rodríguez-Reinoso, L. Bataille** *CHINA*
Biomechanical effect of carbon nanomaterial implanted in rabbit corneal stroma
- 17.12 **K. Jadidi, F. Nejat, S. Daryabari, S. Pirhadi** *IRAN*
Corneal biomechanics metrics in patients following DSAEK surgery compared with healthy eyes
- 17.18 **N. Menassa, M. Brunner, C. de Lossada, D. Borroni, G. Czanner, S. Kaye, V. Romano** *UK*
Posterior corneal curvature changes in patients with keratoconus
- 17.24 Discussion
- 17.30 **N. Shilova, N. Anisimova, B. Malyugin** *RUSSIA*
Corneal optical densitometry following femtosecond laser-assisted DSEK vs microkeratome-assisted DSAEK: a comparative study
- 17.36 **I. Toprak, A. Vega-Estrada, E. Esplá-Almodóvar, J. Alió** *TURKEY*
Changes in corneal epithelium-to-stroma ratio in patients with keratoconus without visual limitation

- 17.42 **B. Benito, L. Morales-Fernández, J. García-Bella, L. Perucho-González, J. Martínez-de-la-Casa, J. García-Feijoo** *SPAIN*
Densitometric and biomechanical corneal characteristics in patients with primary congenital glaucoma
- 17.48 **W. Sekundo, B. Spuru, S. Kling, E. Torres-Netto, A. Lazaridis, F. Hafezi** *GERMANY*
Biomechanical properties of human cornea tested by two-dimensional extensimetry ex vivo in fellow eyes: PRK vs SMILE
- 17.54 Discussion
- 18.00 End of session

MONDAY

16 September

08.00 – 18.00

ESCRS PRACTICE MANAGEMENT AND DEVELOPMENT PROGRAMME

Challenges and Opportunities for the 21st Century Practice

West 8

Chairperson: **P. Rosen** *UK*

Moderator: **R. Solar** *UK*

- 08.00 **C. Kerr** *IRELAND*, **P. Rosen** *UK*
Report on ESCRS Practice Management and Development Activities 2019
- 08.15 **T. Evans** *USA*
Next-generation marketing
- 09.15 **D. Evans** *USA*
Diversification: your key to digital success
- 10.15 **P. McGinn** *IRELAND*
GDPR: lessons learned
- 11.00 Break
- 11.30 Presentation of Innovations Prize
- 12.45 Break
- 14.00 **A. Cummings** *IRELAND*, **P. Rosen** *UK*,
G. Sallet *BELGIUM*, **P. Stodulka** *CZECH REPUBLIC*
Ask the experts
- 14.45 **M. Cherfan** *LEBANON*
Build it and they will come
- 15.15 **G. Sallet** *BELGIUM*, **P. Stodulka** *CZECH REPUBLIC*
Build a high-performing practice by investing in your staff and patients
- 16.15 **A. Cummings** *IRELAND*, **P. Rosen** *UK*
Optimising patient flow in a busy practice
- 17.15 **S. Daya** *UK*, **D. Kook** *GERMANY*
How to negotiate
- 18.00 End of session

08.00 – 10.00

INSTRUCTIONAL COURSES

- IC70** **NEW** **EVICR.net: anterior segment medical devices – the facts and future trends (All Levels)**
J. Alió *SPAIN*, M.J. Tassignon *BELGIUM*, F. Cordeiro *UK*,
P. Bloom *UK*, A. Grzybowski *POLAND*,
V. Pfeifer *SLOVENIA*, M. Eydelman *USA*,
K. Januschowski *GERMANY*
South 2
- IC71** **Phaco nightmares and worst case scenarios: a video-based course (I)**
A. Agarwal *INDIA*, D. Chang *USA*, R. Osher *USA*,
A. Agarwal *INDIA*, T. Kohnen *GERMANY*
South 3
- IC72** **Tips and tricks for challenging cataract surgery (I)**
M. Nanavaty *UK*, B. Little *UK*, R. Packard *UK*,
D. Spalton *UK*, L. Benjamin *UK*
South 4
- IC73** **EBO** **Endophthalmitis after cataract surgery (B)**
P. Montan *SWEDEN*, S. Kaynak *TURKEY*,
L. Cordoves Dorta *SPAIN*, T. Chan *SINGAPORE*,
N. Shorstein *USA*
South 6
- IC74** **Early quantitative and qualitative keratoconus diagnosis and progression criteria utilising a combination of modern cornea diagnostics (I)**
A. Kanellopoulos *GREECE*, G. Pamel *USA*,
R. Ambrosio Jr *BRAZIL*, D. Reinstein *UK*
West 1
- IC75** **Current state of CXL: controversies and recommendations (A)**
F. Hafezi *SWITZERLAND*, C. Mazzotta *ITALY*,
R. Shetty *INDIA*, R. Vinciguerra *ITALY*,
B. Randleman *USA*, T. Seiler *SWITZERLAND*
West 2
- IC76** **Astigmatism management with toric IOL (B)**
J. Bovet *SWITZERLAND*, F. Soler-Fernandez *SPAIN*,
G. Barrett *AUSTRALIA*, H. Carreras Dias *SPAIN*,
K. Mehta *INDIA*
West 3
- IC77** **NEW** **Rock hard cataracts the easy way (A)**
S. Mohan *INDIA*, M. Rajan *INDIA*, S. Ganesh *INDIA*,
S.P. Chee *SINGAPORE*, S. Jacob *INDIA*, K. Singh *INDIA*
West 4
- IC78** **Decision-making in medical and surgical retina for cataract and refractive surgeons (A)**
G. Richard *GERMANY*, O. Zeitz *GERMANY*,
L. Konstantinidis *SWITZERLAND*, B. Weingessel *AUSTRIA*,
L. Wagenfeld *GERMANY*
West 5
This course is organised by the European Society of Retina Specialists

- 10.25 **M. Yamada, M. Kawashima, Y. Hiratsuka, T. Nakano, H. Tamura, K. Ono, S. Inoue** *JAPAN*
Assessment of physical inactivity and locomotor dysfunction in adults with visual impairment
- 10.30 **N. Dergacheva, I. Medvedev, D. Pokrovskiy** *RUSSIA*
Clinical results of 3D virtual occlusion in patients with refractive and anisometropic amblyopia
- 10.35 **T. Verdina, F. Stiro, C. Ferrari, F. Bruni, G. Cavallini** *ITALY*
Evaluation of the effect of cataract surgery on cognitive function in very elderly patients
- 10.40 **A. Koshy, R. Shetty, L. Kaweri, G. Kundu** *INDIA*
Dysfunctional lens index: the future of refractive lens surgery?
- 10.45 **M. Kasikci** *TURKEY*
Comparison of sweep VEP visual acuity and Snellen visual acuity in healthy and amblyopic children
- 10.50 **M. Henriquez, S. Arba Mosquera, J. Camargo, R. Zuñiga, K. Ruiz-Montenegro, M. Camino, L. Izquierdo Jr** *PERU*
Comparison of the quality of vision using double-pass technique in eyes with corrected refractive errors and emmetropic eyes
- 10.55 **A. Azimi, S. Bamdad** *IRAN*
The relationship between tear film osmolarity and dry-eye symptoms in patients with type 2 diabetes: a comparison between the conventional methods of dry-eye assessment and the TearLab system
- 11.00 End of session

10.30 – 12.30

INSTRUCTIONAL COURSES

- IC80*** **Measuring, marking and managing astigmatism in cataract surgery and RLE: all you need to know (I)**
R. Nuijts *THE NETHERLANDS*, J. Alfonso *SPAIN*, O. Findl *AUSTRIA*, T. Kohnen *GERMANY*, D. Koch *USA*, N. Bauer *THE NETHERLANDS*, N. Visser *THE NETHERLANDS*
South 2
- IC81** **Glaucoma surgery, TRABS, NPGS and MIGS for the cataract surgeon (I)**
C. Mehta *INDIA*, K. Mehta *INDIA*, G. Scharioth *GERMANY*, K. Mansouri *SWITZERLAND*, I. Ahmed *CANADA*, A. Mermoud *SWITZERLAND*
South 3
- IC82** **Strategies and techniques for IOL exchange (A)**
M.J. Tassignon *BELGIUM*, S. Masket *USA*, V. Pfeifer *SLOVENIA*, G. Auffarth *GERMANY*
South 4
- IC83** **Corneal biomechanics for the clinician: understanding the basics (I)**
C. Roberts *USA*, J. Hjortdal *DENMARK*, P. Vinciguerra *ITALY*, R. Vinciguerra *ITALY*, W.J. Dupps *USA*, F. Faria Correia *PORTUGAL*
South 6
- IC85** **Mastering small aperture intraocular implants: irregular astigmatism, depth-of-focus extension, multifocal IOL dissatisfaction and iris defects (A)**
C. Trindade *BRAZIL*, B. Trindade *BRAZIL*, F. Trindade *BRAZIL*, R. Zaldivar *ARGENTINA*, L. Werner *USA*, S. Srinivasan *UK*
West 1

* Wetlab Pre-Requisite (A) Advanced (B) Basic (I) Intermediate
Handouts available at www.es CRS.org

14.00 – 16.00

FREE PAPER SESSION

Keratoconus

Free Paper Forum: Podium 2

Chairperson: J. Güell *SPAIN*

Co-Chairperson: J. Murta *PORTUGAL*

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| <p>14.00 H. Studer, T. Koller, M. Jankov, E. Businaro, T. Seiler <i>SWITZERLAND</i>
Finite element simulation of tomographic parameters of keratectasia</p> <p>14.06 S. Alswailem, A. Albahlal, A. Alqassimi <i>SAUDI ARABIA</i>
Keratoconus in Asian children</p> <p>14.12 J. Parker, K. van Dijk, R. Birbal, S. Oellerich, I. Dapena, G. Melles <i>USA</i>
Are Descemet's membrane ruptures the root cause of corneal hydrops in keratoconic eyes?</p> <p>14.18 S. Watson, A. Ferdi, V. Nguyen, M. Abbondanza, F. Arnalich Montiel, M. Garcia, Y. Kerdraon <i>AUSTRALIA</i>
Treatment outcomes data in keratoconus from routine clinical practice collected via the Save Sight Keratoconus Registry</p> <p>14.24 Discussion</p> <p>14.30 F. Hafezi, N. Hafezi, F. Gilardoni, J. Randleman, L. Kollros, M. Hillen, E. Torres-Netto <i>SWITZERLAND</i>
Assessment of the mechanical forces applied during eye rubbing</p> <p>14.36 A. Cunha, P. Correia, L. Torrão, R. Moreira, F. Falcão-Reis, J. Pinheiro-Costa <i>PORTUGAL</i>
Novel tomographic determinants of keratoconus progression: keratoconus area</p> <p>14.42 J. Randleman, O. Golan, A. Piccinini, S. Khandelwal <i>USA</i>
Distinguishing highly-asymmetric keratoconus eyes using dual Scheimpflug/Placido analysis</p> <p>14.48 M. Henriquez, R. Zúñiga Iracheta, M. Camino, K. Ruiz-Montenegro, J. Camargo, C. Maldonado, L. Izquierdo <i>PERU</i>
Comparison of the variability of Scheimpflug imaging measurements between normal eyes, progressive and non-progressive keratoconus eyes at one year of follow-up</p> <p>14.54 Discussion</p> <p>15.00 R. Ambrosio Jr <i>BRAZIL</i>
Optimised artificial intelligence for integrating Scheimpflug tomography and biomechanics for enhanced ectasia detection</p> <p>15.06 M. Ziaei, A. Gokul, H. Valleria, D. Patel, C. McGhee <i>UK</i>
Topographic, keratometric, refractive and wavefront changes attributable to epithelial removal in keratoconus</p> | <p>15.12 E. Pedrotti, E. Bonacci, T. Cozzini, J. Bonetto, T. Merz, P. Talli, G. Marchini <i>ITALY</i>
Twelve months' follow-up of intrastromal keratoplasty: new perspectives for the treatment of keratoconus</p> <p>15.18 A. Rosa, M. Raimundo, C. Azenha, J. Gil, C. Tavares, P. Barbeiro <i>PORTUGAL</i>
Grading keratoconus progression using a novel decision-support software tool: an agreement analysis</p> <p>15.24 Discussion</p> <p>15.30 P. Khamar, R. Shetty, A. Ghosh, N. Kumar <i>INDIA</i>
Can unknown microbiomes drive keratoconus and cross-linking outcomes?</p> <p>15.36 D. Godefrooij, S. Roohé, R. Wisse <i>THE NETHERLANDS</i>
The independent effects of various cross-linking treatment modalities on treatment effectiveness in keratoconus</p> <p>15.42 S. Wahba, M. Roshdy, A. Hashem, A. Elawamry, B. Aziz <i>EGYPT</i>
Diagnostic accuracy of different keratoconus detection indices of rotating Scheimpflug camera in paediatric eyes</p> <p>15.48 D. Smadja, D. Chen, B. Chiu, M. Santhiago, A. Abulafia, D. Zadok, J. Young <i>ISRAEL</i>
Comparison of machine learning algorithms in diagnosis of subclinical keratoconus</p> <p>15.54 Discussion</p> <p>16.00 End of session</p> |
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16.00 – 18.00

FREE PAPER SESSION

Corneal Cross-Linking

South 5

Chairperson: **I. Can** *TURKEY*

Co-Chairperson: **D. Smadja** *ISRAEL*

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| <p>16.00 J. Brekelmans, M. Dickman, S. Verma, S. Arba Mosquera, A. Scherz, R. Nuijts, I. Pinkas, R. Goldschmidt, A. Goz, T. Berendschot, A. Brandis, A. Marcovich <i>THE NETHERLANDS</i>
Excimer laser-assisted selective corneal de-epithelialization for corneal collagen cross-linking</p> <p>16.06 L. Buzzonetti, G. Petrocelli <i>ITALY</i>
Iontophoretic transepithelial collagen cross-linking vs epithelium-off collagen cross-linking in paediatric patients</p> <p>16.12 M. Leucci, B. Allan, D. Gore <i>UK</i>
Continued long-term flattening following accelerated cross-linking for keratoconus</p> <p>16.18 D. Gore, J. Hill, C. Liu, P. Deardorff, V. Thompson, M. Raizman, D. Adler <i>UK</i>
Impact of oxygen, UV parameters, and drug formulation on accelerated epi-on corneal cross-linking</p> <p>16.24 Discussion</p> <p>16.30 M. Rechichi, C. Mazzotta, F. Marco, A. Meduri, V. Romano, D. Borroni, M. Zagari <i>ITALY</i>
The new modified STARE-X EVO protocol for keratoconus: two years' results of full customised transepithelial ablation and pachymetry-guided accelerated cross-linking</p> <p>16.36 S. Awwad, L. Chacra, A. Dhaini, C. Helwe, J. Torbey, E. Torres, F. Hafezi <i>LEBANON</i>
Corneal haze after cross-linking for keratoconic eyes with and without mitomycin C application: a prospective evaluation</p> <p>16.42 T. Seiler, A. Batista, B. Frueh, K. Koenig <i>SWITZERLAND</i>
Riboflavin concentrations at the endothelium during corneal cross-linking (CXL) in humans</p> <p>16.48 N. Pircher, S. Holzer, J. Lammer, G. Schmidinger <i>AUSTRIA</i>
Corneal cross-linking (CXL) with two different riboflavin solutions: a randomised controlled trial</p> <p>16.54 Discussion</p> <p>17.00 D. Borroni, N. Menassa, K. Iselin, S. Kaye, C. De Lossada, G. Coco, V. Romano <i>ITALY</i>
The 'epi-pocket': a new technique for corneal cross-linking</p> <p>17.06 F. Gilardoni, E. Torres-Netto, S. Kling, N. Hafezi, F. Hafezi <i>SWITZERLAND</i>
Individualised corneal cross-linking in ultra-thin corneas: 2 year follow-up</p> | <p>17.12 K. Elsawah, J. Warbey, S. Hamada, M. Elalfy <i>EGYPT</i>
Keratoconus progression following collagen cross-linking treatment in the paediatric population: what are the predicting factors?</p> <p>17.18 M. Sucu, Y. Yildirim, B. Yildiz, A. Ağca <i>TURKEY</i>
Accelerated corneal collagen cross-linking in paediatric keratoconus: long-term results and comparison of two protocols</p> <p>17.24 Discussion</p> <p>17.30 J. Goyal, S. Chaudhary, R. Arora, R. Anjum, V. Veerwal <i>INDIA</i>
Comparison of safety and efficacy of CA-CXL and HPMC-CXL in keratoconus with thin cornea</p> <p>17.36 S. Koronis, A. Rasoglou, A. Adamopoulou, E. Siskou, M. Balidis <i>GREECE</i>
Epithelium-on customised corneal collagen cross-linking for keratoconus</p> <p>17.42 W. Lim, J. Siew, C. Chua, F. Khoo, F. Gasper <i>SINGAPORE</i>
Epithelium-on photorefractive intrastromal cross-linking (PIXL) with supplemental oxygen for low hyperopic and early presbyopic treatment</p> <p>17.48 P. Legout, V. Saunier, D. Touboul <i>FRANCE</i>
Impact of CXL on corneal biomechanics and patient behaviour</p> <p>17.54 Discussion</p> <p>18.00 End of session</p> |
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16.00 – 18.00

INSTRUCTIONAL COURSES

IC96 Astigmatism treatment: the current state of the art (A)
J. Murta *PORTUGAL*, R. Nuijts *THE NETHERLANDS*,
 J. Alfonso *SPAIN*, F. Vaz *PORTUGAL*, A. Rosa *PORTUGAL*
South 1

IC97 Modern management of irregular cornea (I)
M. Shafik Shaheen *EGYPT*, M. Belin *USA*,
 T. Seiler *SWITZERLAND*, J. Güell *SPAIN*,
 F. Hafezi *SWITZERLAND*, S. Lazreg *ALGERIA*
South 2

IC98 Different ways of secondary IOL implantation without capsular support (I)
M. Forlini *ITALY*, B. Malyugin *RUSSIA*,
 G. Scharioth *GERMANY*, C. Carlevale *ITALY*,
 R. Bellucci *ITALY*, A. Mohr *GERMANY*
South 3

IC99 Therapeutic refractive surgery...live! Bring your case (A)
D. Reinstein *UK*, J. Alió *SPAIN*, A. Stojanovic *NORWAY*,
 J. Tan *SINGAPORE*, S. Mosquera *SPAIN*,
 P. Vinciguerra *ITALY*
South 4

IC100 Management of cataract in challenging cases (A)
A. Vasavada *INDIA*, Z. Biro *HUNGARY*, R. Osher *USA*,
 A. Crandall *USA*, S. Arshinoff *CANADA*
South 6

IC101* Phaco techniques and complications (A)
J. Bolger *UK*, S. Haldipurkar *INDIA*, D. Pusnik *SLOVENIA*
West 1

IC102 DMEK from D to K: a step-by-step approach to Descemet's membrane endothelial keratoplasty (I)
N. Singal *CANADA*, A. Slomovic *CANADA*,
 K. Baig *CANADA*, J. Teichman *CANADA*,
 T. Trinh *CANADA*
West 2

IC103 Advances in anterior segment imaging (I)
NEW **M. Ang** *SINGAPORE*, L. Schmetterer *AUSTRIA*,
 O. Stachs *GERMANY*, B. Mani *SINGAPORE*,
 R. Werkmeister *AUSTRIA*, K. Sperlic *GERMANY*
West 3

IC104 Monovision in the 21st century (B)
NEW **F. Llovet Osuna** *SPAIN*, J. Ortega-Usobiaga *SPAIN*,
 G. Muñoz *SPAIN*, M. Calvo *SPAIN*,
 M. Martínez-del-Pozo *SPAIN*, A. Llovet *SPAIN*
West 4

IC105 Extended-depth-of-focus, pinhole, and trifocal IOLs: a practical guide to adopting new advanced technology IOLs (A)
NEW

M. Piovella *ITALY*, R. Zaldivar *ARGENTINA*,
 E. Donnenfeld *USA*, D. Chang *USA*, S. Rossi *ITALY*
West 5

IC106 What's new in paediatric cataract surgery? (I)
EBO **S. Chandramouli** *INDIA*, K. Narendran *INDIA*,
 M.J. Tassignon *BELGIUM*, T. Schultz *GERMANY*,
 N. Ziakas *GREECE*, S. Ravilla *INDIA*, R. Kekunaya *INDIA*
West 6

16.00 – 17.00

INSTRUCTIONAL COURSE

IC107 Deep anterior lamellar keratoplasty: how to standardise and master the procedure (A)
C. Bovone *ITALY*, M. Busin *ITALY*, S. Madi *EGYPT*,
 V. Scorgia *ITALY*
West 7

* Wetlab Pre-Requisite (A) Advanced (B) Basic (I) Intermediate
 Handouts available at www.escrs.org



TUESDAY

17 September

TUESDAY 17 SEPTEMBER

08.30 – 10.30

FREE PAPER SESSION

Cornea Surgical: Lamellar Corneal Grafts

Free Paper Forum: Podium 3

Chairperson: **D. Kook** *GERMANY*

Co-Chairperson: **M. Muraine** *FRANCE*

- 08.30 **D. Touboul, E. Coirier, V. Saunier** *FRANCE*
Clinical evaluation of deeply manually stripped endothelial automated keratoplasty (DMSEAK) as a new ultrathin endothelial keratoplasty
- 08.36 **D. Shahnazaryan, A. Hajjar Sese, E. Hollick** *UK*
Comparison of clinical outcomes of Descemet's membrane endothelial keratoplasty (DMEK) vs DMEK combined with cataract surgery in Fuchs' endothelial dystrophy
- 08.42 **D. Dragnea, R. Birbal, I. Dapena, L. Han, J. Parker, S. Oellerich, G. Melles** *ROMANIA*
Clinical outcomes of Descemet's membrane endothelial keratoplasty in eyes with a glaucoma drainage device
- 08.48 **G. Salsini, J. Myerscough, C. Bovone, M. Mimouni, M. Elkadim, S. Padroni, M. Busin** *ITALY*
Factors predictive of double anterior chamber formation following deep anterior lamellar keratoplasty
- 08.54 Discussion
- 09.00 **G. Gerten, P. Thiee, U. Oberheide** *GERMANY*
Clear cornea femto DALK: a novel approach for deep anterior lamellar keratoplasty (DALK) with femtosecond laser-assistance
- 09.06 **J. Cabrerizo Nunez, I. Potapenko, M. Alberti** *DENMARK*
Evaluation of the use of intraoperative triamcinolone in Descemet's membrane endothelial keratoplasty
- 09.12 **J. Hou, P. Bedard, J. Justin, M. Hansen** *USA*
Inducing a trifold conformation in Descemet's membrane endothelial keratoplasty (DMEK) using small paired radial incisions
- 09.18 Discussion
- 09.24 **L. de Benito-Llopis, S. Koay** *UK*
Refractive outcomes in combined cataract surgery and Descemet's membrane endothelial keratoplasty (phacoDMEK)
- 09.30 **L. Ham, S. Oellerich, K. van Dijk, L. Frank, S. Ní Dhubhghaill, L. Baydoun, G. Melles** *THE NETHERLANDS*
Risk factors associated with high endothelial cell density decrease after Descemet's membrane endothelial keratoplasty (DMEK)
- 09.36 **M. Macsai, M. Shiloach** *USA*
The use of Rho kinase inhibitors after Descemet's stripping only in Fuchs' dystrophy
- 09.42 **J. Cabrerizo Nunez, G. Özer, M. Kyhn, K. HøjgaardOlsen, M. la Cour, J. Cabrerizo** *DENMARK*
Air vs sulphur hexafluoride in DMEK: a randomised controlled trial
- 09.48 Discussion
- 09.54 **M. Petrelli, D. Miltasakakis, K. Andreanos, C. Koutsandrea, K. Droutsas** *GREECE*
Visual outcomes of ultrathin Descemet's stripping endothelial keratoplasty vs Descemet's stripping endothelial keratoplasty
- 10.00 **N. Moura Coelho, D. Hipólito Fernandes, S. Crisóstomo, N. Alves, P. Candelária, V. Maduro, J. Feijão** *PORTUGAL*
Analysis of repeat Descemet's stripping automated endothelial keratoplasty (reDSAEK) from a tertiary centre of ophthalmology in Portugal
- 10.06 **R. Simons, S. Dunker, M. Dickman, F. van den Biggelaar, C. Dirksen, R. Nuijts** *THE NETHERLANDS*
Trial based cost-effectiveness analysis of Descemet's membrane endothelial keratoplasty (DMEK) vs ultrathin Descemet's stripping automated endothelial keratoplasty (UT-DSAEK)
- 10.12 **S. Dunker, M. Dickman, R. Wisse, S. Nobacht, R. Wijdh, M. Bartels, R. Nuijts, M. Tang, F. van den Biggelaar, P. Kruit** *THE NETHERLANDS*
Quality of vision after ultra-thin Descemet's stripping automated endothelial keratoplasty (UT-DSAEK) vs Descemet's membrane endothelial keratoplasty (DMEK): a multicentre randomised controlled clinical trial
- 10.18 **A. Vega-Estrada, C. Fariselli, J. Alió** *SPAIN*
Corneal posterior surface analysis of patients with Down syndrome
- 10.24 Discussion
- 10.30 End of session

08.30 – 10.30

FREE PAPER SESSION

Advanced Tools for Outcome Assessment

Free Paper Forum: Podium 4

Chairperson: M. Teus *SPAIN*Co-Chairperson: S. Palkovits *AUSTRIA*

- 08.30 **A. Piccinini, O. Golan, E. Torres-Netto, F. Hafezi, J. Randleman** *BRAZIL*
Higher order aberration measurement comparison between Scheimpflug and dual-Scheimpflug technology
- 08.36 **D. Pinero Llorens, A. Molina-Martin, V. Camps, M. Caballero, D. de Fez, H. Fukumitsu** *SPAIN*
Validation of corneal topographic and aberrometric measurements obtained by colour light-emitting diode reflection topography in healthy eyes
- 08.42 **A. Kovalov, O. Averyanova, I. Kovalov** *UKRAINE*
Possible effect of induced higher order aberrations (HOA) on myopia control by orthokeratology
- 08.48 **C. McAlinden, J. Schwiegerling, J. Khadka, K. Pesudovs** *UK*
Corneal aberrations measured with the Oculus Pentacam HR: repeatability and reproducibility
- 08.54 **J. Mehta, A. Hipsley, Y. Liu, B. Hall** *SINGAPORE*
Correlation of wound healing with accommodative stability utilising iTrace wavefront aberrometry
- 09.00 **V. Molebny, O. Molebna, J. Wakil, I. Pallikaris** *UKRAINE*
Q-factor as a descriptor of the refractive dysfunction of the lens
- 09.06 Discussion
- 09.14 **I. Mushkova, N. Maychuk, A. Ignatyev** *RUSSIA*
Hyperopic refraction accompanied by irregular astigmatism after radial keratotomy: two-step technology for optical rehabilitation
- 09.20 **R. Rampat, L. Dumas, J. Malet, D. Gatinel** *UK*
An improved wavefront reconstruction method for human eyes
- 09.26 **I. Salah Mabed, A. Saad, D. Gatinel** *FRANCE*
Investigating the topographic effect of epithelium in myopic eyes with and without topographic preoperative abnormalities
- 09.32 **G. Kundu, R. Shetty, A. Roy, M. Francis** *INDIA*
Next generation mapping of 3D epithelium thickness: a tool to assess wound healing after refractive surgery
- 09.38 **V. Murugesan, S. Azimeera, T. Makhwana, R. Tandon** *INDIA*
Correlation of ocular aberrations with PTA in myopic femtosecond flap LASIK
- 09.44 **S. Mahmoud, Z. Hassanin, A. Shama** *EGYPT*
Comparison of corneal higher-order aberrations after sub-Bowman's keratomileusis and femtosecond laser-assisted LASIK for myopia and myopic astigmatism
- 09.50 **M. Dirisamer, F. Reinking, J. Siedlecki, N. Luft, S. Priglinger** *GERMANY*
Impact of extreme (flat and steep) keratometry on the safety and efficacy of small incision lenticule extraction: a matched comparative study
- 09.56 Discussion
- 10.04 **M. Garcia-Gonzalez, G. Laucirica, G. Bolivar, E. Arranz-Marquez, J. Gros-Otero, V. Blazquez, M. Teus** *SPAIN*
Analysis of intraocular pressure elevation during LASIK surgery: a comparative study of four femtosecond laser devices
- 10.10 **I. De Pascale, M. De Bernardo, L. Vitiello, G. Cembalo, D. Biondino, C. Casaburi, N. Rosa** *ITALY*
Goldmann applanation tonometry-correcting equations: comparison with dynamic contour tonometry
- 10.16 **Z. Dadachanji, P. Khamar, R. Shetty, A. Ghosh** *INDIA*
Translational applications for a point-of-care molecular diagnostic kit in refractive surgery: the future!
- 10.22 Discussion
- 10.30 End of session

TUESDAY 17 SEPTEMBER

08.30 – 10.30

INSTRUCTIONAL COURSES

IC108* Anterior segment surgical solutions for secondary repair of post-traumatic eyes: a video-based course (A)

J. Talma *SOUTH AFRICA*, M.J. Tassignon *BELGIUM*,
G. Auffarth *GERMANY*, B. Malyugin *RUSSIA*,
E. Assia *ISRAEL*
West 1

IC109 The surgeon's guide to SMILE: complications and retreatments (I)

NEW

G. Carp *UK*, D. Reinstein *UK*, A. Day *UK*,
A. Stuart *UK*, R. Vida *UK*
West 2

IC110 Tips and tricks for refractive lens exchange in challenging patients (I)

NEW

M. Nanavaty *UK*, T. Kohnen *GERMANY*, J. Stevens *UK*,
P. Rosen *UK*, M. Pande *UK*, S. Srinivasan *UK*
West 3

IC111 Expanding applications of corneal cross-linking (CXL) and early detection of keratoconus (I)

S. Hamada *UK*, D. O'Brart *UK*, M. Belin *USA*,
F. Hafezi *SWITZERLAND*, T. Seiler *SWITZERLAND*,
T. Koller *SWITZERLAND*
West 4

IC112 Age-related macular degeneration IOLs (B)

NEW

A. Grzybowski *POLAND*, P. Artal *SPAIN*, J. Alió *SPAIN*,
D. Keegan *IRELAND*, M.J. Tassignon *BELGIUM*,
G. Scharioth *GERMANY*
West 5

IC113 The ocular surface and cataract, refractive and glaucoma surgery (I)

NEW

EBO

E. Villani *ITALY*, E. Messmer *GERMANY*,
C. Baudouin *FRANCE*, M. Sacchi *ITALY*
West 6

IC114 The evolution of PTK: from plano to transepithelial custom corneal wavefront-guided ablations, a step-by-step course to achieve optimal results (I)

P. Vinciguerra *ITALY*, R. Vinciguerra *ITALY*,
T. Archer *UK*, J. Tan *SINGAPORE*
West 7

08.30 – 09.30

INSTRUCTIONAL COURSE

IC115 Website content that converts (I)

NEW

D. Butler *USA*
West 8

* Wetlab Pre-Requisite (A) Advanced (B) Basic (I) Intermediate
Handouts available at www.esccrs.org

14.00 – 16.00

INSTRUCTIONAL COURSES

IC116 Management of dissatisfaction after multifocal IOL (B)

G. Muñoz *SPAIN*, F. Llovet Osuna *SPAIN*,
S. Rohrweck *SPAIN*, J. Ortega-Usobiaga *SPAIN*,
M. Martinez *SPAIN*, M. Cabanás *SPAIN*
West 1

IC117 Complications in LASIK: prevention and management (B)

EB0

J. Vryghem *BELGIUM*, M. Assouline *FRANCE*,
G. Sallet *BELGIUM*, A. Kanellopoulos *GREECE*,
G. Pamel *USA*
West 2

IC118 ReLEx SMILE tips and pearls for curious beginners (B)

YO

D. Breyer *GERMANY*, L. Kiraly *GERMANY*,
W. Sekundo *GERMANY*, R. Wiltfang *GERMANY*
West 3

IC119 Descemet's membrane endothelial keratoplasty challenges (A)

G. Melles *THE NETHERLANDS*,
L. Baydoun *THE NETHERLANDS*,
I. Dapena *THE NETHERLANDS*,
S. Ní Dhubhghaill *IRELAND*,
L. Ham *THE NETHERLANDS*,
K. van Dijk *THE NETHERLANDS*
West 4

IC120 The transition from cataract surgery to refractive cataract surgery (A)

R. Morris *UK*, P. Rosen *UK*, A. Shortt *UK*,
R. Packard *UK*, M. Wevill *UK*
West 5

IC121 Updates on ocular inflammation for the cataract and refractive surgeon (I)

NEW

R. Pinto Proenca *PORTUGAL*, J. Cunha *PORTUGAL*,
I. Domingues *PORTUGAL*, P. Gil *PORTUGAL*,
R. Proença *PORTUGAL*, M. Dutra Medeiros *PORTUGAL*,
N. Moura-Coelho *PORTUGAL*
West 6

14.00 – 15.00

INSTRUCTIONAL COURSE

IC122 How to get to #1 in your market (I)

NEW

D. Evans *USA*
West 7

(A) Advanced (B) Basic (I) Intermediate
Handouts available at www.es CRS.org

14.00 – 15.00

MODERATED POSTER SESSION

Poster Village: Pod 2

Cornea

Moderators: R. Bellucci *ITALY*
J. Güell *SPAIN*

14.00 F. Hafezi, R. Shetty, B. Knyazer, S. Chen,
N. Hafezi, E. Torres-Netto *SWITZERLAND*
Corneal cross-linking for the treatment of
infectious keratitis: multicentre trial results

14.08 E. Torres-Netto, T. Seiler, S. Adamcik,
F. Gilardoni, H. Abdshahzadeh,
F. Hafezi *SWITZERLAND*
Corneal cross-linking for progressive keratoconus:
10-year outcomes

14.16 G. Martin, P. Lebranchu, P. Dureau, I. Cochereau,
J. Devys, G. Caputo, E. Gabison *FRANCE*
Descemet's membrane endothelial keratoplasty
(DMEK) in infants with congenital endothelial
dysfunction: intraoperative OCT-assisted surgery

14.24 S. Koay, M. Lewis, R. Angunawela *UK*
Interfacial fluid dynamics in Descemet's
membrane endothelial keratoplasty

14.32 M. Pellegrini, F. Bernabei, G. Giannaccare *ITALY*
The association between obstructive sleep
apnea and keratoconus: a systematic review
and meta-analysis

14.40 M. Green, A. Apel, F. Stapleton *AUSTRALIA*
Queensland microbial keratitis database,
2005-2015

14.48 S. Hamada, F. Sahin, C. Fassari, I. Lanzl,
N. Maycock, M. Zierhut *UK*
Real-world clinical effectiveness and safety
of cyclosporine eye drop emulsion in patients
with dry eye disease and severe keratitis (the
PERSPECTIVE study): 24-week interim analysis

14.56 Discussion

15.00 End of session

The background features two overlapping orange shapes: a circle on the left and a triangle on the right. The circle is a lighter shade of orange, while the triangle is a darker shade. The text 'E-POSTERS' is centered over the intersection of these two shapes in a white, bold, sans-serif font.

E-POSTERS

L. Baydoun, L. Ham, M. Bruinsma, D. Santander-García, S. Oellerich, G. Melles *GERMANY*
Combined specular microscopy and Scheimpflug imaging to improve detection of an impending allograft rejection after DMEK

A. Belodedova, O. Antonova, M. Melnik, A. Gelyastanov, B. Malyugin *RUSSIA*
Clinical outcomes of OCT-guided femtosecond laser-assisted DALK with intracorneal channel to create big bubble

P. Bertino, C. de Souza Junior, R. Magalhaes, M. Santhiago *BRAZIL*
Intrastromal corneal ring segments combined with photorefractive keratectomy for post-keratoplasty astigmatism (REACT study): one-year outcomes

P. Bertino, T. Prazeres, C. de Souza Jr, R. Magalhães *BRAZIL*
Pachymetry-assisted manual lamellar dissection for Descemet's stripping endothelial keratoplasty (Pachy-DSEK): a novel technique for preparing thin endothelial lamellae

V. Borisov *RUSSIA*
Keratoconus treatment with intrastromal corneal segments complicated by epithelial ingrowth and an ulcerative keratitis in long-term post-op period: case report

E. Branchevskaya, M. Sheutzhenn, S. Branchevsky *RUSSIA*
SAANA classification for intracorneal ring segment implantation in keratoconus patients

A. Campos, P. Alvarez Fernandez, I. Mota Chozas *SPAIN*
Platelets-enriched gel: a new surgical treatment option for catastrophic corneal ulcers and high-tendency corneal graft rejection

E. Can *TURKEY*
One-year results of accelerated corneal cross-linking (CXL) using an increased total dose of 7.2 J/cm² with dextran-free isotonic riboflavin solution

E. Can *TURKEY*
Sutureless amniotic membrane fixation to the conjunctiva in the setting of ocular surface diseases: a novel method

L. Capitian, R. Nose, W. Nose *BRAZIL*
Descemetorhexis without endothelium keratoplasty (DWEK) in a patient with post-radial keratotom (RK)

C. Carriazo, M. Cosentino *COLOMBIA*
Corneal remodelling: a femtosecond laser-assisted technique to treat corneal ectasia – five-year follow-up

T. Chan, C. Bala *AUSTRALIA*
Novel DMEK punch: first human trial

Y. Chen, R. Tan, F. Mostofian, H. Nithianandan, S. Ziai, G. Mintsoulis, K. Baig *CANADA*
Clinical outcomes and complications of Descemet's membrane endothelial keratoplasty vs Descemet's stripping automated endothelial keratoplasty

Y. Chen, R. Tan, F. Mostofian, H. Nithianandan, S. Ziai, G. Mintsoulis, K. Baig *CANADA*
Indications, clinical outcomes, and surgical techniques of corneal transplantation in an academic centre in Canada

D. Choudhary *INDIA*
New surgical modality for management of peripheral non-healing corneal ulcers using Bowman's membrane

E. Coskunseven *TURKEY*
Visual, refractive and topographic outcomes of progressive thickness intrastromal corneal ring segments for the asymmetric bow-tie type of keratoconic eyes

D. Dibina, N. Anisimova, N. Shilova, B. Malyugin *RUSSIA*
Severe superficial calcific corneal deposits following pseudophakic keratopathy in a patient with multiple myeloma

B. Dubinsky-Pertzov, G. Santaella, M. Safir, L. Or, N. Sorkin, D. Rootman, A. Einan-Lifshitz *ISRAEL*
Comparison of Descemet's membrane endothelial keratoplasty (DMEK) and ACIOL exchange with Descemet's stripping automated endothelial keratoplasty (DSAEK) and ACIOL retention in the setting of pseudophakic bullous keratopathy

P. Dubrulle, E. Gabison, Y. Abdelmassih, C. Sitbon, D. Guindolet, I. Cochereau, M. Labetoulle *FRANCE*
Evolution of corneal transplantations on sequelae of herpetic keratitis

K. Duyongco, V. Caparas *PHILIPPINES*
Fine needle diathermy of corneal neovascularization prior to refractive lens exchange in a high hyperope: a case report

M. Elalfy, S. Maqsood, S. Hamada, R. Kannan, C. Nduka, R. Malhotra *UK*
Corneal neurotisation: a novel approach in the management of neurotrophic keratitis

N. Elfarouk, H. Elrashedy, M. Zaatar *EGYPT*
A new technique for corneal tattooing via intrastromal injection of liquid ink

K. Elsayah, S. Hamada, M. Elalfy, D. Lake *EGYPT*
Outcomes of cultivated oral mucosal epithelial transplantation (COMET) for ocular surface disorders and limbal stem cell deficiency (LSCD) in the UK

E. Franco, M. Elkadim, J. Myerscough, C. Bovone, M. Busin *ITALY*
Correction of high astigmatism after deep anterior lamellar keratoplasty by means of blunt relaxing dissection at the graft-host junction

L. Furiosi, J. Myerscough, C. Bovone, M. Busin *ITALY*
Autologous Descemet's stripping automated endothelial keratoplasty to eliminate endothelial rejection in eyes at high risk

S. Ganekal, S. Kodur *INDIA*
Big-bubble deep anterior lamellar keratoplasty for post-keratitis and post-traumatic corneal stromal scars

M. Garcia-Mendieta, N. Barnils, R. Rodriguez, M. Lopez-Lopez, N. Planas, T. Martí, J. Martineau *SPAIN*
Femtosecond laser-assisted descemetorhexis in Descemet's membrane endothelial keratoplasty (DMEK) surgical procedure

Refractive Surgery Practice Styles

I. Aznauryan, S. Agagulyan, V. Balasanyan, A. Shpak *RUSSIA*

Refractive surgery in children with accommodative and partially accommodative esotropia

E. Branchevskaya, S. Branchevsky *RUSSIA*

Choosing the strategy of visual function improvement in RK patients using Scheimpflug tomography and classification of corneal incision healing types

S. Ganesh, S. Brar *INDIA*

Comparison of quality-of-vision following SMILE vs SMILE combined with accelerated cross-linking for borderline corneas

F. Gilardoni, E. Torres-Netto, R. Abrishamchi, N. Hafezi,

F. Hafezi *SWITZERLAND*

Assessment of postoperative haze after deep transepithelial photorefractive keratectomy (trans-PRK) without mitomycin using a new ablation algorithm to smoothen the stromal wound bed

R. Hanna, M. Mimouni, A. Plaza, J. Alió *ISRAEL*

Factors predicting successful customised excimer laser treatment in irregular cornea

P. Patel, R. Shetty, P. Khamar *INDIA*

Psychological evaluation in ophthalmologic office

E. Sunay, F. Helvacioğlu, O. Kavalcioglu, S. Kaya Unsal, E. Bulut *TURKEY*

Long-term outcomes of keratoconus management with corneal wavefront-guided normalisation combined with corneal cross-linking stabilisation

Training and Innovation in Education

N. Dash, D. Choudhury *INDIA*

Effect of wetlab training on construction of sclerocorneal wound and surgically-induced astigmatism thereof by residents performing manual small incision cataract surgery

C. Gunasekera, T. Patel, U. Hussain *UK*

Home-based high fidelity low cost simulation of DMEK using a smartphone and an onion to replace an operating microscope and corneal donor tissue

M. Islam, L. Maubon *UK*

How long does it take for a junior to do a phaco? How can we use this information to improve surgical training?

V. Mittal, R. Mittal, S. Singh, P. Narang, N. Sahdev *INDIA*

Goat's eye as a wet-lab model for learning iris-claw intraocular lens implantation

A. Pujari, J. Urkude, R. Singh, R. Mukhija, N. Sharma *INDIA*

Slit lamp protractor: refinement of existing slit lamp toric scale

J. Toledo Martínez, R. Baldivieso Hurtado, S. Peniche Moreno, J. Soria Viteri *MEXICO*

Impact of the surgical simulator on lowering complications during cataract surgery carried out by ophthalmology residents

S. Tung, P. Watts, D. Ho, G. Williams *UK*

How stressful is cataract surgery for consultants and ophthalmic trainees?