

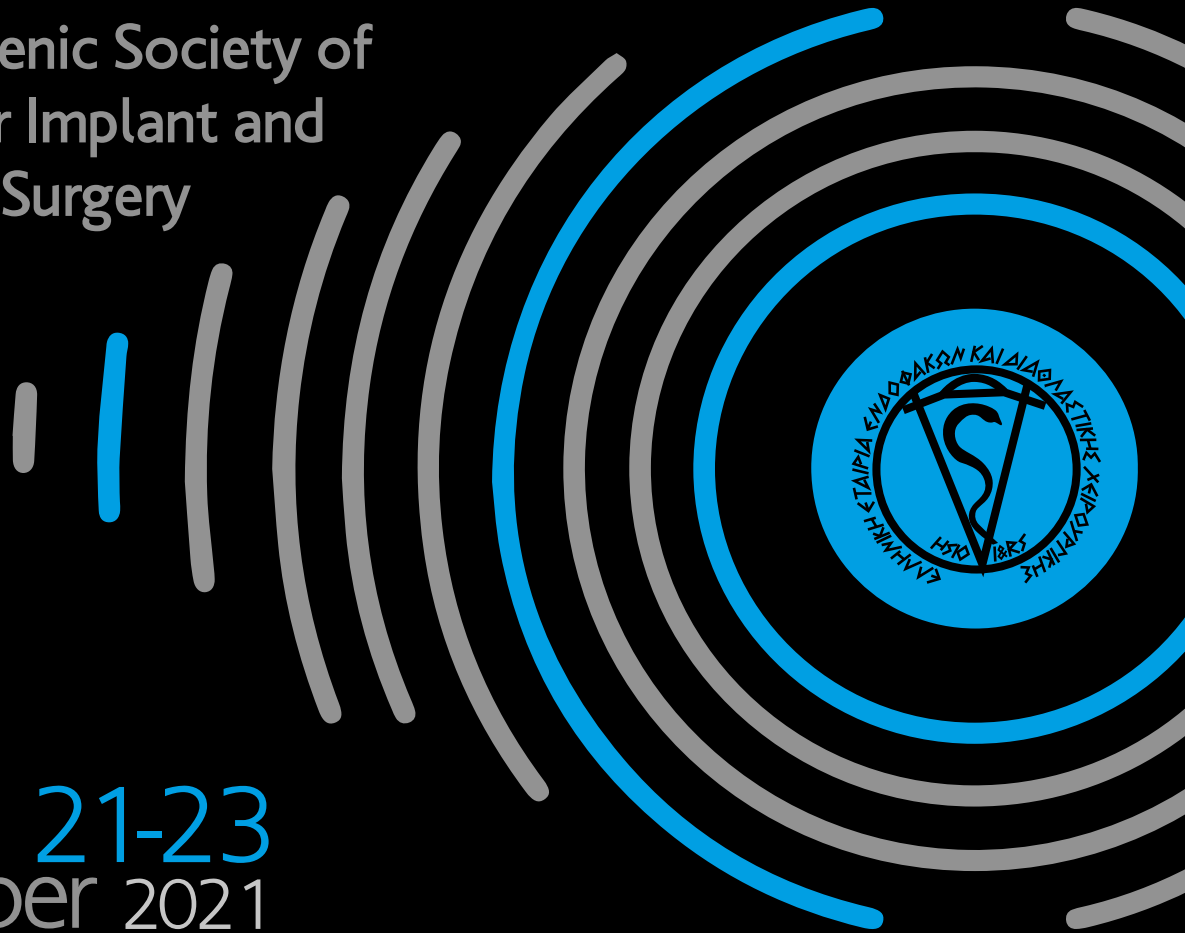
35TH

INTERNATIONAL
CONGRESS

of the Hellenic Society of
Intraocular Implant and
Refractive Surgery

Final Programme

Book *of* Abstracts

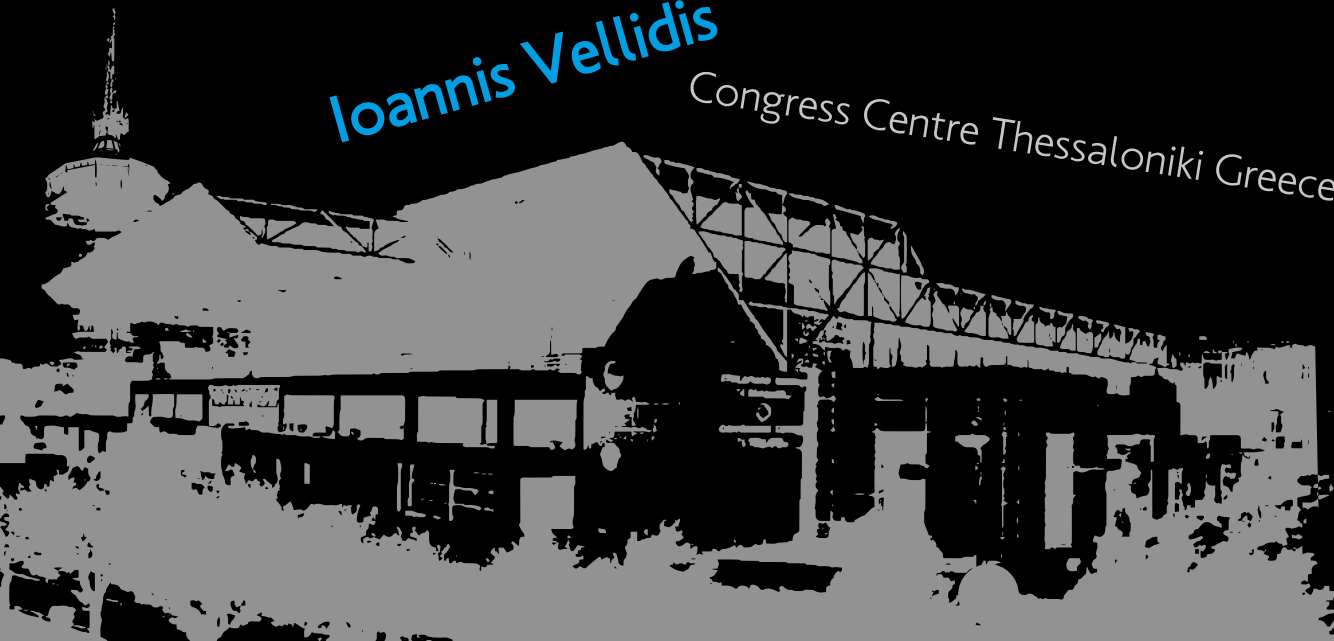


21-23
October 2021

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Ioannis Vellidis

Congress Centre Thessaloniki Greece



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1. AcrySof® IQ Vivity® Extended Vision IOL Directions for Use.
 2. Alcon Data on File. TDOC-0055576. 29-Mar-2019
 3. Alcon Data on File. Optical Evaluations of Alcon Vivity®, Symphony®, and Zeiss® AT LARA® IOLs
- * Τα εμπορικά σήματα αποτελούν ιδιοκτησία των αντίστοιχων κατόχων τους

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Παρακαλούμε διαβάστε προσεκτικά τις οδηγίες χρήσης του προϊόντος πριν τη χρήση του για περισσότερες λεπτομέρειες ως προς τις ενδείξεις, αντενδείξεις και προφυλάξεις.
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 **Advancing**
CATARACT SURGERY

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Organization

BOARD of DIRECTORS of the HSIOIRS

President	Miltiadis Balidis
Vice-president	Georgios Roussopoulos
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Hellenic Society of Intraocular Implant and Refractive Surgery

198 El. Venizelou str. & 1 Apollodorou str.,
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Invited speakers



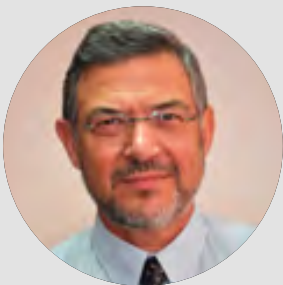
Ike Ahmed
CANADA



Bruce Allan
UNITED KINGDOM



Ashraf Armia
EGYPT



Ehud Assia
ISRAEL



Gerd Auffarth
GERMANY



Rajesh Fogla
INDIA



Farhad Hafezi
SWITZERLAND



Welcome message

Dear colleagues,

After a long period of adjustment to a new reality imposed by the COVID-19 pandemic, we are pleased to welcome you to the **35th International Conference of the Hellenic Society of Intraocular & Refractive Surgery, on October 21-23, 2021, at the Ioannis Vellidis Conference Center in Thessaloniki.**

The annual conference of the Hellenic Society of Intraocular and Refractive Surgery "moves" **for the first-time outside Athens to the impressive Conference Center "Ioannis Vellidis",** with the main goal for 2021, not only to continue the successful course of the HSIORS Congress, but also to upgrade it to a different experience in beautiful Thessaloniki.

"Vellideio", where we chose to meet you, is the **largest conference center in the country and while being informed, educated and enjoying the company of friends and colleagues, we will also feel completely safe.** We believe that the venue we have chosen is the most suitable to implement all the health protocols, without losing any of the conference experience, which we have missed so much.

In this conference we focus on the **training** of our young colleagues, presenting an **enhanced program of wet labs** with emphasis on **phacoemulsification**, while we are also focusing on the theory with the Basic Courses of cataract, refractive surgery and cornea. **Free papers, video presentations, e-posters, clinical courses and round tables** presenting the latest developments in cataract and refractive surgery are the backbone of the scientific program. While, at the center of the discussion will be this year the **technological developments and the new IOLs.**

Of course, as every year, the scientific program will include lectures by distinguished ophthalmologists from around the world, such as **Ike K. Ahmed, Bruce Allan, Ehud Assia, Ashraf Armia, Gerd Auffarth, Rajesh Fogla, Farhad Hafezi,** who wish to return to normalcy and vote for Greece!

One of the most important elements of this conference will be the **large exhibition of ophthalmic instruments and products.** Surely, we all look forward to touring a rich exhibition again, meeting colleagues and exchanging views.

Thank you all, delegates, speakers and sponsors, for your presence and your continued support and we wish you a pleasant and constructive three-day conference!

Kind regards,
Miltos Balidis
HSIORS President

General information

VENUE & DATES

The 35th International Congress of the HSI OIRS will take place at “Ioannis Vellidis” Congress Centre in Thessaloniki, on 21-23 October 2021.

‘IOANNIS VELLIDIS’ CONGRESS CENTRE



Thessaloniki International Exhibition & Congress Centre (TIECC) is located in the centre of the city.
A: 154 Egnatias Street, 546 36 THESSALONIKI
T: +30 2310 2911111 | F: +30 2310 284732
E: exhibitions@helexpo.gr | W: www.helexpo.gr

CME-CPD ACCREDITATION

The participants of the 35th International Congress of the HSI OIRS will be provided with 24 CME-CPD credits by the Panhellenic Medical Association.

CONGRESS LANGUAGES

The official languages of the Congress will be English and Greek.

EXHIBITION OF OPHTHALMIC INSTRUMENTS & TOOLS

During the Congress, there will be an exhibition and trade fair of pharmaceutical companies, surgery products and diagnostic equipment, in a special setting, where there will be direct access through the rooms that all the sessions take place.

SPEAKERS PREVIEW DESK

A Speaker Preview Desk will be operating throughout the Congress. Speakers and presenting authors are kindly requested to hand in their presentation (PowerPoint) at least one (1) hour before their scheduled presentation time to the Speakers Preview Desk; for presentations scheduled early in the morning, you are kindly requested to hand in your presentation the day before. All MS-PowerPoint versions will be available. The following equipment

will also be available: laptop, and laser pointer. We would like to kindly draw your attention to the importance of complying with your session's schedule, in order to ensure the smooth running of the Scientific Program.

CERTIFICATE OF ATTENDANCE

A certificate of attendance will be sent to each registered participant, after the end of the Congress. We would be grateful if you could take a few minutes to answer an online survey that will be sent to you shortly after the end of the meeting.

SECRETARIAT AND HOSPITALITY DESK

The Congress Secretariat desk will be at the entrance of the Conference Hall and will operate throughout the Congress hours.

INTERNET ACCESS

Wireless internet connection is available in all Congress's areas.

SARS-COV-2 / UPDATES

During the organization of the 35th International Congress of the HSI OIRS, all guidelines and sanitary operating protocols are strictly followed.

Participants are allowed to enter the meeting's venue only if they have one of the following:

- A vaccination certificate (stating that 14 days have passed since full vaccination for Covid-19)
- A certificate stating that one has recovered from the coronavirus. The certificate must be issued two months after an individual's recovery (valid for nine months).

The use of mask and disinfection of hands is mandatory for all participants entering the Meeting's venue. Antiseptic dispensers will be available.

The 35th International Congress of the HSI OIRS will be broadcasted via live streaming, as well.

AWARDS

At the 35th International Congress of the HSI OIRS, awards for the Best Free Paper Presentation, Best E-Poster and Best Video Presentation will be nominated. The nomination of the awards, will take place at the end of the Congress, during the Closing Ceremony.

E-POSTERS

At the e-posters area there will be screens where each delegate will be able to see the e-poster that interests him with an easy search throughout the Conference.

WET LABS

For participation in wet labs, registration at the main congress is required. Due to limited places, strict order of priority will be observed. Registrations will be made at the Congress Secretariat of the Conference, upon availability.

REGISTRATION

PARTICIPATION	COSTS
Doctors, Members HSIOIRS	180€
Doctors, Non Members HSIOIRS	200€
Residents / Trainees*	90€
Opticians - Optometrists	90€
Nurses*	30€

*The participants of the categories with * will need to present a certification of their profession or a letter from the director of the clinic where they work.*

Note: Postgraduate Students belong to the category of Residents / Trainees.

The registration covers:

- Participation to the Main Scientific Program of the Congress, as well as the Advanced Courses
- Congress Material
- Certificate of Attendance with the CME-CPD credits
- Coffee Breaks
- Access to the Exhibition Area

In order to confirm your registration, the full deposit of the fee is required.

Fees are applicable to 24% VAT upon issuance of the relevant invoice.

PROFESSIONAL CONGRESS ORGANIZERS



CONGRESSES, EVENTS, INCENTIVES,
BUSINESS TRAVEL, TOURISM

A: 17 Asklipiou str | 106 80 Athens, Greece

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W: www.era.gr

THURSDAY 21.10.2021

THESSALONIKI HALL

12:00-14:50

INSTRUCTIONAL COURSES

12:00-12:50

DRY EYE AND ANTERIOR SEGMENT SURGERY

13:00-13:50

INFECTIVE KERATITIS.

TREATMENT PROTOCOLS

14:00-14:50

ENDOTHELIUM AND CATARACT

15:00-16:50

ROUND TABLE DISCUSSION

CATARACT AND GLAUCOMA

17:00-18:20

LECTURES

BY INTERNATIONAL FACULTY

18:30-19:00

OPENING CEREMONY

ALEXANDROS HALL

12:00-14:50

INSTRUCTIONAL SYMPOSIUM

BASIC REFRACTIVE SURGERY

Part I

15:30-17:20

INSTRUCTIONAL SYMPOSIUM

BASIC REFRACTIVE SURGERY

Part II

18:00-18:30

SPONSORED

LECTURE



KASSANDROS HALL

13:30-15:00

VIDEO PRESENTATIONS

15:30-17:00

FREE PAPERS I

FILIPPOS HALL

09:20-19:40

HIGH COMMUNICATION

WETLABS

FRIDAY 22.10.2021

THESSALONIKI HALL

09:00-13:50

INSTRUCTIONAL SYMPOSIUM

BASIC CATARACT

15:00-16:50

ROUND TABLE DISCUSSION

VIDEO SESSION:

TRAUMATIC CATARACT

17:00-17:50

INSTRUCTIONAL COURSE

COMPLICATIONS MANAGEMENT IN REFRACTIVE SURGERY

ALEXANDROS HALL

09:00-09:50

FREE PAPERS II

10:00-10:50

INSTRUCTIONAL COURSE

CATARACT AND CORNEA PATHOLOGY

12:00-13:50

ROUND TABLE DISCUSSION

UNDERSTANDING NEW TECHNOLOGY IN REFRACTIVE SURGERY

14:00-15:00

SPONSORED

SYMPOSIUM



15:00-16:50

INSTRUCTIONAL COURSES

15:00-15:50

FLACS: GAINS AND PAINS

16:00-16:50

CORRECTION OF PRESBYOPIA

17:30-18:00

SPONSORED

LECTURE



18:00-18:30

SPONSORED

LECTURE



18:30-19:00

SPONSORED

LECTURE



19:00-19:30

SPONSORED

LECTURE



KASSANDROS HALL

09:00-10:50

INSTRUCTIONAL COURSES

09:00-09:50

RECURRENT PTERYGIUM. MODERN TECHNIQUES AND FUTURE DEVELOPMENTS

10:00-10:50

POSTERIOR SEGMENT SURGERY CREATING COMPLICATIONS TO THE ANTERIOR SEGMENT

11:00-12:00

CXL WETLAB

12:00-13:50

INSTRUCTIONAL COURSES

12:00-12:50

CURRENT CONCEPTS IN CROSS LINKING

13:00-13:50

REFRACTIVE SURGERY IN HYPEROPIA AND HIGH AMETROPIA: CORNEA OR LENS?

15:00-16:50

INSTRUCTIONAL COURSES

15:00-15:50

TRANSPRK OR FEMTOLASIK?

16:00-16:50

REFRACTIVE REOPERATIONS AND ENHANCEMENTS

FILIPPOS HALL

09:20-19:40

HIGH COMMUNICATION

WETLABS


OLYMPIAS HALL

WETLAB

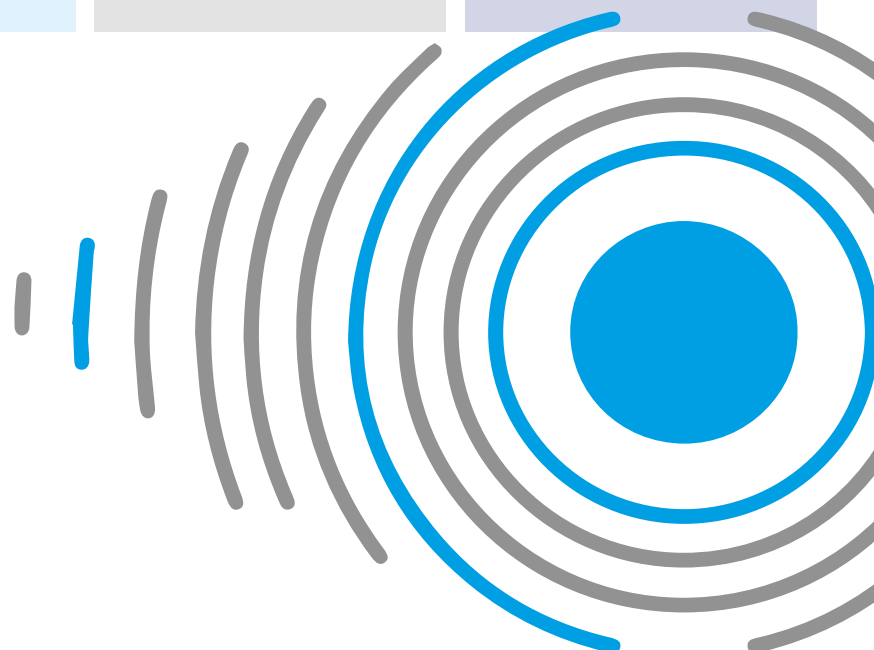


WETLAB



THESSALONIKI HALL	ALEXANDROS HALL	KASSANDROS HALL	FILIPPOS HALL
09:00-09:50 FREE PAPERS III	09:00-13:50 INSTRUCTIONAL SYMPOSIUM BASIC CORNEA	09:00-09:50 FREE PAPERS IV	09:20-19:40 HIGH COMMUNICATION WETLABS
10:00-10:50 INSTRUCTIONAL COURSE SUTURES TO STABILIZE INTRAOCULAR LENSES - TENSION RINGS, AND FOR IRIDOPLASTY		10:00-10:50 INSTRUCTIONAL COURSE ENDOPHTHALMITIS AFTER CATARACT SURGERY AND INTRAVITREAL INJECTIONS	
11:00-11:30 KELMAN AWARD CEREMONY			
11:30-12:00 LECTURE MIGS, THE NEW AGE OF GLAUCOMA SURGERY			
12:00-13:50 ROUND TABLE DISCUSSION LENS SURGERY FOR PRESBYOPIA		12:00-13:50 INSTRUCTIONAL COURSES 12:00-12:50 BROKEN POSTERIOR CAPSULE, THE SINKING NUCLEUS AND THE DANGLING IOL VITRECTOMY BY THE ANTERIOR OR POSTERIOR SEGMENT SURGEON 13:00-13:50 BIOMETRY IN DIFFICULT CASES	OLYMPIAS HALL
14:00-15:00 SPONSORED SYMPOSIUM			WETALB
15:00-15:30 SPONSORED LECTURE	15:00-16:50 INSTRUCTIONAL COURSES 15:00-15:50 CORRECTING APHAKIA WITH SCLERAL FIXATION IOLS 16:00-16:50 TOPO AND WAVEFRONT GUIDED ABLATIONS: CASES	15:00-16:50 INSTRUCTIONAL COURSES 15:00-15:50 PHACIC IOLS 16:00-16:50 INTRAOPERATIVE PRACTICES TO MANAGE SMALL PUPIL AND FLOPPY IRIS SYNDROME	
15:30-17:20 INSTRUCTIONAL COURSE CATARACT SURGERY FOR RESIDENTS BY RESIDENTS			
17:30 CLOSING CEREMONY FREE PAPERS, VIDEO PRESENTATION & E-POSTER AWARDS HSIORS GEN. ASSEMBLY	17:00-17:30 SPONSORED LECTURE		

Program
 AT A
 glance

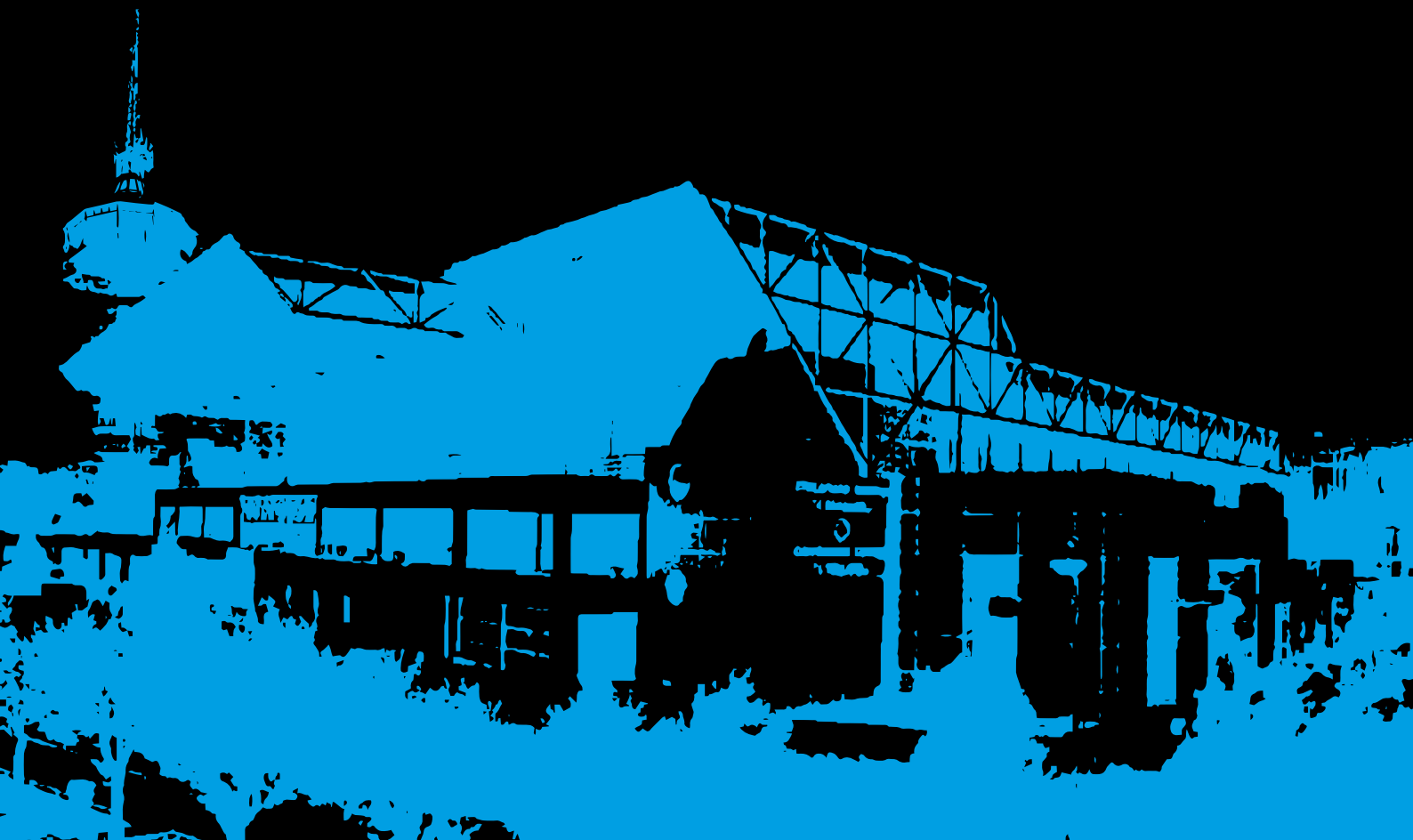




35

INTERNATIONAL
CONGRESS
HSI  IIRS

THURSDAY 21.10.2021



12:00-14:50 INSTRUCTIONAL COURSES

- 12:00-12:50 **Dry eye and anterior segment surgery**
Moderator: **K. Boboridis**
Speakers: **G. Labiris, E. Lokovitis**
- 13:00-13:50 **Infective keratitis. Treatment protocols**
Moderator: **M. Tsatsos**
Speakers: **N. Ziakas, I. Athanasiadis, D. Eleftheriadou**
- 14:00-14:50 **Endothelium and cataract**
Moderator: **N. Ziakas**
Speakers: **A. Tzamalidis, S. Palioura, K. Droutsas, M. Tsatsos**

15:00-16:50 ROUND TABLE DISCUSSION

Cataract and Glaucoma

Moderators: **E. Patsoura, V. Karabatakis**

Cataract as an IOP lowering procedure
Cataract surgery in eyes with pseudoexfoliation syndrome
Premium IOLs in glaucoma patients
Cataract & MIGS
Staging glaucoma and cataract surgery

Th. Filippopoulos
D. Mikropoulos
V. Kozobolis
M. Georgopoulos
N. Matthaïou

17:00-18:20 LECTURES BY INTERNATIONAL FACULTY

Chairpersons: **P. Papadopoulos, P. Rasoglou**

Uveitic Cataract as a Challenging situation
1+1=3 Achieving Binocular Trifocality
PRK for very high myopia without MMC
Design and clinical results of the novel Intensity polyfocal IOL
Custom Smile. A novel cornea remodeling concept for correcting irregular cornea

A. Armia
G. Auffarth
F. Hafezi
E. Assia
I. Pallikaris

18:30-19:00 OPENING CEREMONY

Moderators: **A. Maniatis, P. Rasoglou**
Address by the HSIORS President, **Miltos Balidis**

Lecture by **Giannis Epaniondas**:
"From photograph to raster. The case of Thessaloniki"

ALEXANDROS Hall

12:00-14:50

BASIC REFRACTIVE SURGERY INSTRUCTIONAL SYMPOSIUM

Moderators: K. Koufala, G. Roussopoulos

Introduction

The eye as a refractive tool
Ophthalmic surface and refractive surgery
Contraindications for refractive surgery

K. Koufala
Chr. Terzidou
P. Boussalis

Corneal refractive surgery

Corneal biomechanics and refractive surgery
Clinical preoperative examination
Topography examination

D. Kyroudis
H. Vounotripidis
Th. Orfanidis

Surgical procedures & Intraoperative complications:

PRK / TransPRK
LASIK
Smile
Advanced treatments: Topoguided / wavefront guided
Postoperative follow-up and complications
Enhancements and reoperations
Keratectasia and Cross linking
Cross linking as a refractive surgery

G. Roussopoulos
A. Manaios
K. Moschou
M. Arvanitis
G. Kontadakis
D. Bouzoukis
Ch. Siganos
G. Roussopoulos

Lens refractive surgery

Patient selection: when to intervene
Surgical technique
Postoperative follow-up and complications
Enhancements and reoperations

V. Diakonis
A. Voudouri
D. Sakellaris
V. Kozobolis

Implants

Intracorneal ring segments
Phakic IOLs
Corneal Inlays
Bonus: Presbyopia?

K. Samaras
D. Siganos
Sp. Gorezis
K. Koufala

15:30-17:30

BASIC REFRACTIVE SURGERY INSTRUCTIONAL SYMPOSIUM

Moderators: K. Koufala, G. Roussopoulos

Clinical cases - Decision making

Commentary: I. Chalkiadakis, L. Chatzipanagiotou, D. Karatzenis, Th. Moutos,
A. Oikonomou, A. Tourmouzis

18:00-18:30

SPONSORED LECTURE

Latest update on the treatment of patients with wet AMD

Moderator: M. Niskopoulou

Speaker: Ath. Kotsolis



13:30-15:00

VIDEO PRESENTATIONS

Chairpersons: N. Nitsas, A. Polychronakos, I. Poulas



First Case of living relative Limbal Epithelial Stem cell Transplantation with the IrSLET technique in Greece, in a patient with congenital Limbal Epithelial Stem Cell Deficiency due to Addison's Disease

Konstantinos Samaras

¹AthensLaserSight, Athens, Greece



DALK in advanced keratoconus

Ioanna Gardeli^{1,2}, Cristina Bovone¹, Riccardo Dondi¹, Konstantina Mouriki², Massimo Busin¹

¹Department of Ophthalmology V.Igea Hospital/University of Ferrara, , Italy,

²Cornea Department, State Ophthalmology Clinic, General Hospital of Athens G. Gennimatas, Greece



Traumatic globe rupture by a retained metallic fragment, affecting iris and lens, which demanded urgent corneal suture and subsequent phacoemulsification, with secondary reposition of the initially dislocated IOL

Nikolaos Papadopoulos, Panagiotis Nanos, Alessio Sorarruf

Department of Ophthalmology, General Hospital of Messinia (Kalamata inpatients unit)



Keratoplasty after chemical burn and conjunctival flap

Efstratios Theofrastou¹, Sofia Karachrysafi^{1,2}, Eleni Psimenidou¹, Anastasia Sarafi¹, Frageskos Loizou¹, Georgios Fadel¹, Panagiota-Sofia Apostolidou¹, Konstantina Misiou¹, Elie Fadel¹

¹Eye Clinic, Department of Corneal Transplantation, General Hospital G.Papanikolaou, 57010 Thessaloniki, Greece

²Laboratory of Histology-Embryology, School of Medicine, Faculty of Health Sciences, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece



Intraocular lens exchange by the folding technique: a case report

Marios Katsimpras, Anna-Nina Dimitropoulou, Andreas Katsimpris, Andreas Mouxtouris, Myrsini Petrelli, George Kymionis

Ophthalmology Department, General Hospital of Athens "Georgios Gennimatas", Athens, Greece

KASSANDROS Hall

15:30-17:00

FREE PAPERS I

Chairpersons: N. Georgiadis, I. Papaefthimiou, Ch. Siganos



Terrien's marginal degeneration in a 4-year-old boy: presentation and outcome
Penelope Politis, Miltos Balidis, Georgios Sidiropoulos, Despoina Vasileiou, Spyridon Koronis, Achilleas Rasoglou
Ophthalmica Eye Institute, Thessaloniki, Greece



Keratoconus in children. From which age to begin screening?
Marina Banteka, Christina Keskini, George Charitoudis, Leonidas Mavroudis
LMVision, Laser Microsurgery Vision, Day Case Surgery Unit, Thessaloniki, Greece



Customized transepithelial cross-linking for keratoconus: 2-year follow-up
Spyridon Koronis, Penelope Politis, Achilleas Rasoglou, Georgios Sidiropoulos, Miltos Balidis, Renato Ambrosio Jr.
Ophthalmica Eye Institute, Thessaloniki, Greece



Comparison of tomographic outcomes after topography-guided photorefractive keratectomy with accelerated cross-linking versus accelerated cross-linking alone in patients with keratoconus
Achilleas Rasoglou, Despoina Vasileiou, Penelope Burle, De Politis, Georgios Sidiropoulos, Spiros Koronis, Miltos Balidis
Ophthalmica Institute, Thessaloniki, Greece



Continuous intraocular pressure monitoring with a contact lens sensor: a new perspective for monitoring glaucoma patients
Christina Skatharoudi¹, Plainis S.², Detorakis E.T.¹
¹University Hospital Of Heraklion, Heraklion, Greece,
²Laboratory of Optics and Vision, University of Crete, Heraklion, Greece



Anterior segment A-OCT in monitoring low grade limbal ischemia and custom scleral lens design aiming the elimination of the clinical findings
Lefteris Karageorgiadis, BScOptom¹, Nikos Vasileiou, BScOptom², Leonidas Mavroudis, MD³, Marina Banteka, MD³
¹EYEART Fitting center, Thessaloniki, Greece, ²EYEART Laboratories, Thessaloniki, Greece,
³LMVision clinic, Thessaloniki, Greece



Five-year outcomes of corneal densitometry after uneventful Descemet membrane endothelial keratoplasty (DMEK)
Nikolaos Kappos¹, Apostolos Lazaridis², Ioannis Giachos¹, Vasiliki Katsiampoula¹, Walter Sekundo², Konstantinos Droutsas^{1,2}
¹First Department of Ophthalmology, National and Kapodistrian University of Athens, Athens, Greece
²Department of Ophthalmology, Philipps University of Marburg, Germany



Development and validation of a video-based eye blink identification and classification system
Eirini-Kanella Panagiotopoulou¹, Georgios Nousias², Aikaterini-Maria Chaliasou², Eleftherios Chatzimichael¹, Sergios Taliantzis¹, Prof. Konstantinos Delibasis², Georgios Labiris¹
¹Department of Ophthalmology, University Hospital of Alexandroupolis, Alexandroupolis, Greece,
²Department of Computer Science and Biomedical Informatics, University of Thessaly, Lamia, Greece

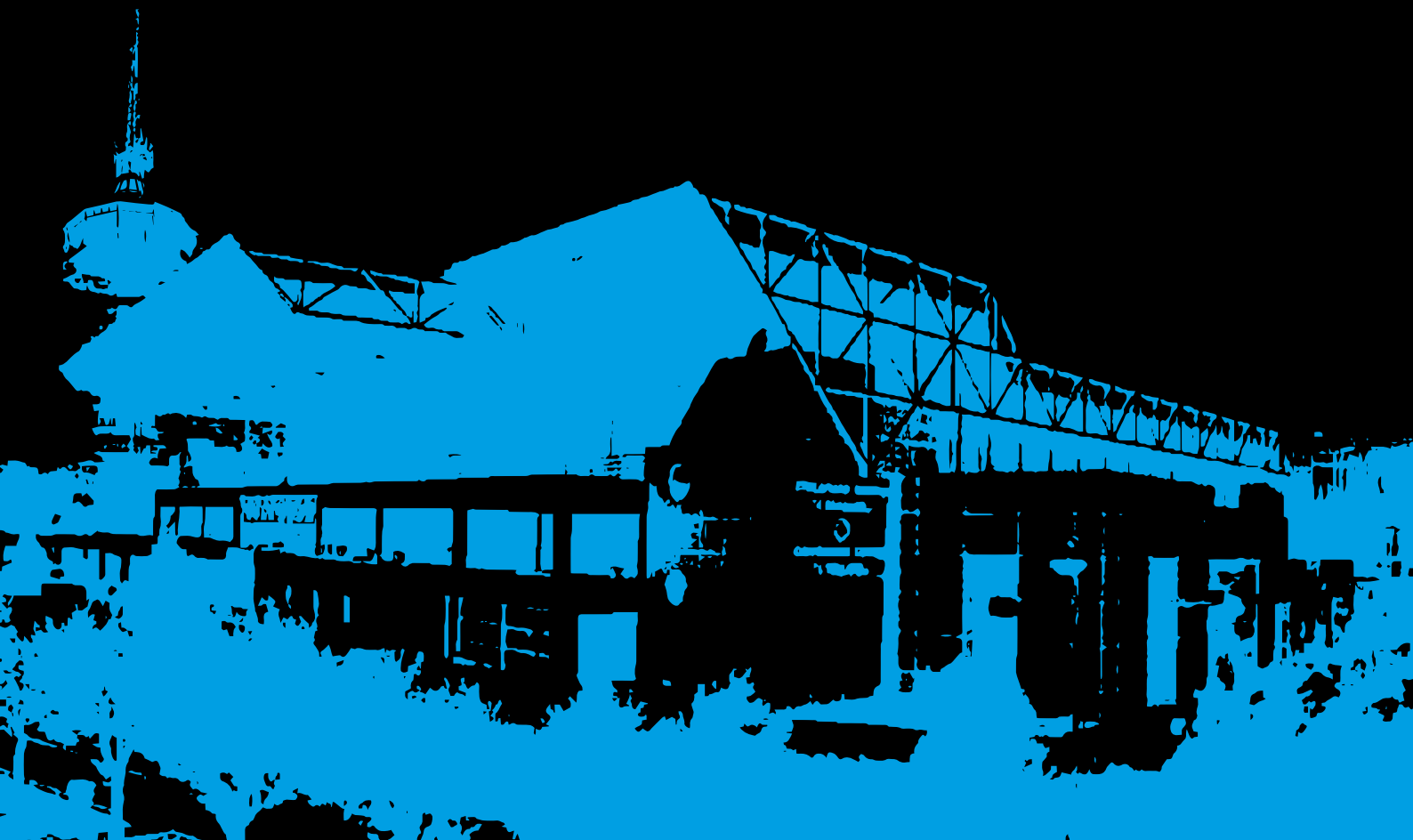


Choroidal thickness as a potential progression marker for keratoconus
Vasileios Nasikas¹, Miltos Balidis¹, Giorgos Sidiropoulos¹, Zachos Zachariadis¹, Penelope Burle de Politis¹, George Kymionis²
¹Ophthalmica Eye Institute, Department of Cornea, External Disease and Refractive Surgery, Thessaloniki, Greece
²Medical School University of Athens, Athens, Greece

FILIPPOS Hall

- 09:20-19:40** **HIGH COMMUNICATION WETLABS**
Moderators: V. Karampatakis, D. Mikropoulos
- 09:20-10:40 **Phaco (for beginners) Basic steps**
Instructors: Ch. Terzidou, D. Almaliotis, A. Praidou, D. Stratis
- 11:00-12:20 **Phaco (for beginners) Basic steps**
Instructors: D. Almaliotis, I. Athanasiadis, A. Maniateas, I. Bisbas
- 12:40-14:00 **Phaco (for beginners) Basic steps**
Instructors: E. Chatzispasou, A. Aristeidou, A. Gratsonidis, E. Koulali
- 15:00-16:20 **Phaco (advanced) Phaco steps - Sulcus and in the bag IOL implantations**
Instructors: A. Antoniadis, I. Katsibris, G. Balanikas, I. Tzamichas
- 16:40-18:00 **Phaco (advanced) Management of phaco complications / Anterior Vitrectomy**
Instructors: Th. Mirahtsis, Th. Giannopoulos, E. Papavasileiou, Th. Papatomas
- 18:20-19:40 **Phaco (advanced) Implantation of Toric IOLs**
Instructors: K. Samaras, V. Lakidis, D. Peironidis, A. Zafeiriadis

FRIDAY 22.10.2021



09:00-13:50

BASIC CATARACT INSTRUCTIONAL SYMPOSIUM

Moderators: **V. Karabatakis, D. Mikropoulos, E. Patsoura, I. Tsinopoulos**

Cataract Basics

Preoperative evaluation of cataract patients

Biometry

Anesthesia in cataract surgery

Preparing the surgical field

Hydrodynamics

Intracameral used medication

Basic Phaco steps

Femtocataract

Discussion & short break

Intraoperative complications I

Intraoperative complications II - Dropped nucleus

Postoperative complications

Late Postoperative complications

Endophthalmitis

Monofocal lenses characteristics –new models

Multifocal, EDoF accommodative & Toric IOLs

Discussion & short break

Cataract plus

Diabetes and cataract

Cataract and age-related macular degeneration

Cataract and glaucoma

Cataract and Corneal diseases

Cataract after refractive surgery

Discussion & short break

Soft, hard and mature cataract,

IOL fixation,

Cataract in children,

Traumatic cataract,

Uveitic cataract. Small pupil,

Discussion

I. Tsinopoulos

E. Patsoura

S. Voutas

E. Christou

V. Karabatakis

E. Zotta

P. Smachliou

K. Moschou

G. Roussopoulos

A. Vakalis

A. Antoniadis

T. Rotsos

S. Androudi

Sp. Gorezis

P. Papadopoulos

M. Niskopoulou

Th. Mirahtsis

V. Kozobolis

D. Mikropoulos

K. Koufala

V. Tsigos

An. Charonis

N. Ziakas

Th. Giannopoulos

Ch. Kalogeropoulos

15:00-16:50

ROUND TABLE DISCUSSION

Video Session: Traumatic Cataract

Moderators: **M. Balidis, E. Paroikakis**

Speakers: **A. Armia, A. Vakalis, E. Gotzaridis**

17:00-17:50

INSTRUCTIONAL COURSE

Complications management in refractive surgery

Moderator: **P. Smachliou**

Speakers: **D. Kyrourdis, K. Koufala, Z. Zachariadis**

ALEXANDROS Hall

09:00-09:50

FREE PAPERS II

Chairpersons: V. Katsanevaki, K. Koufala, A. Manaios



Contrast sensitivity and corneal aberrations analysis in relation with epithelial thickness changes at the corneal apex after refractive surgery
Themistoklis Gialelis¹, Haris Sideroudi^{2,3}, Dimitra Portaliou⁴, Aikaterini Mouzaka¹, Miguel Teus⁵, Gema Bolívar⁵, Vassilios Kozobolis^{2,3}

¹Department of Biomedical Sciences, Sector of Optics and Optometry, University Of West Attica, Athens, Greece,

²Department of Ophthalmology, University Hospital of Alexandroupolis, Alexandroupolis, Greece,

³Eye Institute of Thrace, Alexandroupolis, Greece,

⁴Department of Ophthalmology, University Hospital of Sheffield, Sheffield, UK,

⁵Professor of Ophthalmology, University of Alcalá, Madrid, Spain



Quality of vision and quality of life after implantation of presbyopia-correcting IOL's: a systematic review

Tzakri D., Liatou E., Mataftsi A., Ziakas N., Tsinopoulos I.

^{2nd} University Ophthalmology Clinic AUTH, Papageorgiou General Hospital, Thessaloniki



Association of Corneal Biomechanics with Keratometric Data and Demographic Factors in Individuals Aged 22 Years or Younger

Christina Keskini, Marina Banteka, George Charitoudis, Leonidas Mavroudis

LMVision, Thessaloniki, Greece



Presbyopia and preferred means of therapeutic management according to Ophthalmologists in Greece

Panagiota Ntonti¹, Eirini Kostopoulou², Athanasia-Maria Mikropoulou¹, Ayse Adem¹, Ioannis Fotiadis¹, Irfan Perente¹, Georgios Labiris¹

¹Department of Ophthalmology, University Hospital of Alexandroupolis, Alexandroupolis, Greece,

²Faculty of Social Sciences, Hellenic Open University, Patras, Greece



Comparison of premium monovision with myopic monovision, hybrid monovision and bilateral implantation of trifocal intraocular lens.

Panagiota Ntonti¹, Eirini-Kanella Panagiotopoulou¹, Asli Perente¹, Aikaterini Mprintsou¹, Aristeidis Konstantinidis¹, Konstantinos Delibasis², Georgios Labiris¹

¹Department of Ophthalmology, University Hospital of Alexandroupolis, Alexandroupolis, Greece,

²Department of Computer Science and Biomedical Informatics, University of Thessaly, Lamia, Greece



Choroidal thickness in different refractive status measured with EDI mode Spectral-Domain Optical Coherence Tomography

Vasileios Nasikas¹, Miltos Balidis¹, Dimitris Sakellaris¹, Giorgos Sidiropoulos¹, Penelope Burle de Politis¹, George Kymionis²

¹Ophthalmica Eye Institute, Department of Cornea, External Disease and Refractive Surgery, Thessaloniki, Greece

²Medical School, University of Athens, Athens, Greece



The use of preservative-free hydrocortisone in the postoperative treatment regimen after TRANS-PRK

P. Burle de Politis, D. Sakellaris, Z. Zachariadis. M. Balidis

10:00-10:50

INSTRUCTIONAL COURSE

Cataract and cornea pathology (Biometry – IOL selection – Surgical technique)

Moderator: **M. Balidis**

Speakers: **R. Fogla, B. Allan, D. Sakellaris, P. Georgoudis**

12:00-13:50

ROUND TABLE DISCUSSION

Understanding new technology in refractive surgery

Moderators: **A. Maniateas, E. Patsoura**

CORNEAL TOPOGRAFY

Introduction- new technology

AS OCT: Spectral-Domain or Swept-Source?

Game of Throne: OCT vs Schleimpflug

A. Maniateas

V. Liarakos

D. Sakellaris

Discussion

BIOMETRY

Introduction

AXL measurement is no longer a problem...!

“Combo” devices. Measuring the Right Ks

E. Patsoura

I. Tsinopoulos

Sp. Gorezis

Discussion

WAVEFRONT & QUALITY OF VISION

Introduction

Wavefront devices. Anatomy or function? What do we correct?

Assessing visual disturbance

D. Kyroudis

G. Kontadakis

M. Petrelli

Discussion

14:00-15:00

SPONSORED SYMPOSIUM

Cutting edge technology in refractive and cataract surgery

Moderator: **I. Giannakis**



Advanced technology Femtosecond Laser VICTUS® &

Excimer Laser TENEO™ & ACE™

Speakers: **A. Aristidou, A. Metaxiotis**

New Extended Depth of Focus IOL LuxSmart-First results

Speakers: **I. Giannakis, Th. Papatomas**

ALEXANDROS Hall

15:00-16:50 **INSTRUCTIONAL COURSES**

15:00-15:50 **FLACS: Gains and Pains**
 Moderator: **K. Moschou**
 Speakers: **D. Kyrourdis, P. Papadopoulos, K. Samaras**

16:00-16:50 **Correction of presbyopia**
 Moderator: **P. Papadopoulos**
 Speakers: **Sp. Georgaras, Sp. Gorezis, I. Poulas, P. Smachliou**

17:30-18:00 **SPONSORED LECTURE**
Rethinking clinical strategy for treating dry eye disease
 Speakers: **K. Boboridis, P. Georgoudis**



18:00-18:30 **SPONSORED LECTURE**
Premium IOLs from the TECNIS Family
 Speaker: **Ch. Lenis**



18:30-19:00 **SPONSORED LECTURE**
Artis Symbiose Multifocal IOL: Binocular Phase Continuity
 Moderator: **I. Kosmidis**
 Speaker: **N. Pagonis**



19:00-19:30 **SPONSORED LECTURE**
The effect of chronic use of preservatives in eye surgeries
 Moderator: **M. Balidis**
 Speaker: **A. Dastiridou**



09:00-10:50 INSTRUCTIONAL COURSES

09:00-09:50 **Recurrent pterygium. Modern techniques and future developments**

Moderator: **Ch. Terzidou**

Speakers: **K. Boboridis, S. Palioura, Ch. Siganos, Ch. Terzidou**

10:00-10:50 **Posterior segment surgery creating complications to the anterior segment**

Moderator: **S. Asteriadis**

Speakers: **P. Petrou, P. Tranos, K. Anastasilakis**

11:00-12:00 CXL WETLAB

Instructor: **Farhad Hafezi**

12:00-13:50 INSTRUCTIONAL COURSES

12:00-12:50 **Current Concepts in Cross Linking**

Moderator: **A. Kanellopoulos**

Speakers: **F. Hafezi, M. Balidis, K. Karabatsas**

13:00-13:50 **Refractive surgery in hyperopia and high ametropia: cornea or lens?**

Moderator: **K. Karabatsas**

Speakers: **An. Kanellopoulos, D. Siganos, M. Arvanitis**

15:00-16:50 INSTRUCTIONAL COURSES

15:00-15:50 **TransPRK or FemtoLasik?**

Moderator: **G. Roussopoulos**

Speakers: **V. Tsigos, I. Giannakis, E. Sykakis**

16:00-16:50 **Refractive reoperations and enhancements**

Moderator: **K. Moschou**

Speakers: **K. Moschou, Ath. Oikonomou, G. Roussopoulos, D. Sakellaris**

FILIPPOS Hall

- 09:20-19:40 HIGH COMMUNICATION WETLABS**
Moderators: V. Karampatakis, D. Mikropoulos
- 09:20-10:40 **Phaco (advanced) Bimanual irrigation – aspiration. Tension rings**
Instructors: E. Fadel, G. Poulakis, M. Soultanidis, K. Chalioulias
- 11:00-12:20 **Phaco to Extra**
Instructors: D. Balatsoukas, S. Voutas, N. Kyropoulos, V. Lakidis
- 12:40-14:00 **Phaco (advanced) Small pupil management: Malyugin ring and iris hooks**
Instructors: M. Lygeros, Ch. Linardi, N. Nitsas, I. Tzamichas
- 15:00-16:20 **Phaco (advanced) Trypan blue – Difficult rhexis**
Instructors: D. Mikropoulos, E. Panakleridou, G. Poulakis, D. Stratis
- 16:40-18:00 **Phaco (advanced) Combined cataract – glaucoma operations
Phaco – Trab – valves**
Instructors: V. Karabatakis, V. Lakidis, D. Balatsoukas, E. Fadel
- 18:20-19:40 **Iris – claw and anterior chamber IOLs**
Instructors: I. Poulas, K. Samaras, An. Charonis, Th. Papatomas

OLYMPIAS Hall

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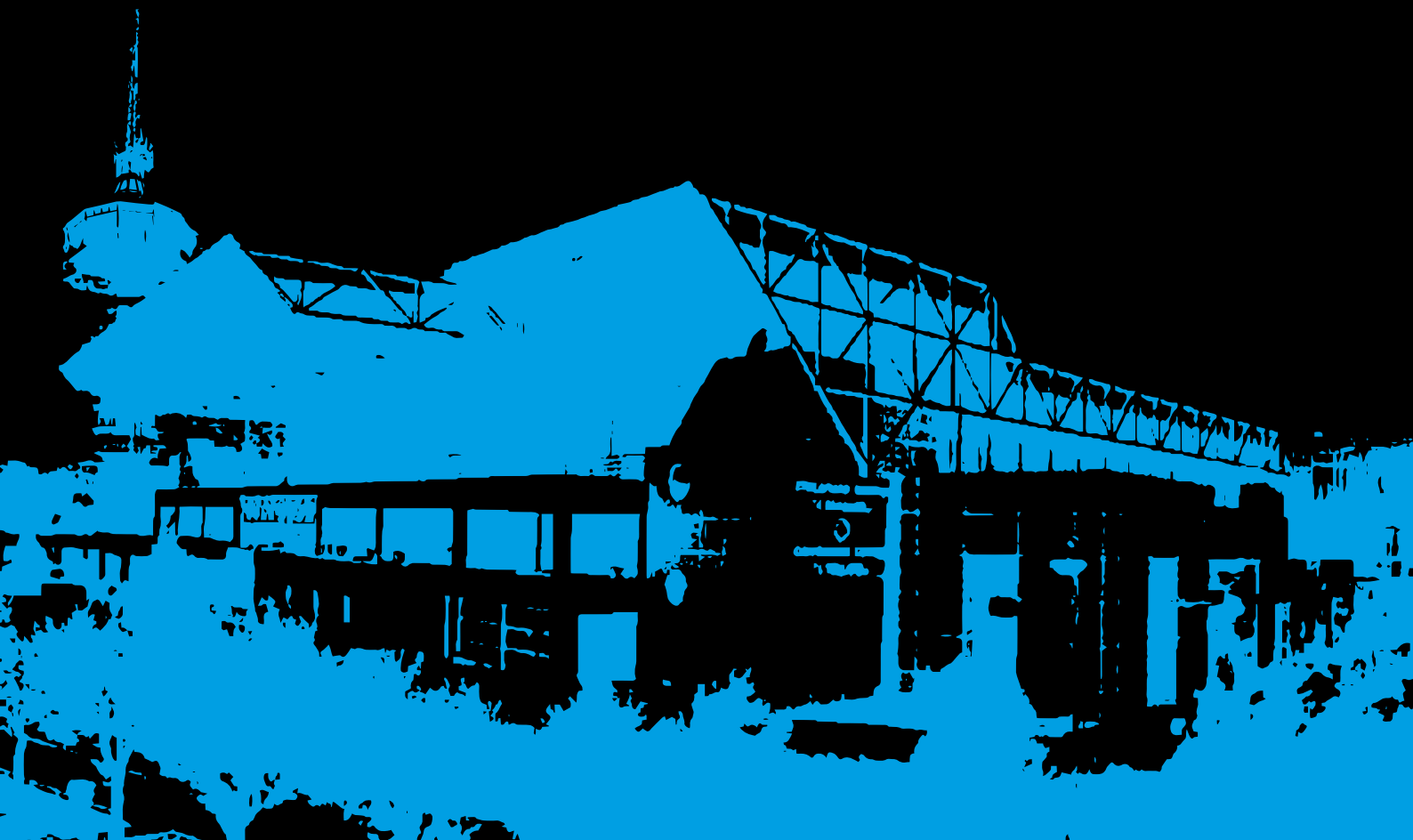
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SATURDAY 23.10.2021



THESSALONIKI Hall

09:00-09:50

FREE PAPERS III

Chairpersons: S. Androudi, Ath. Vakalis, P. Oikonomidis



The effect of iStent Inject combined with cataract surgery using hydrophilic versus hydrophobic intra-ocular lenses on intra-ocular pressure in patients with glaucoma: real-life 2 years follow-up

Fadi Haddad, Arij Daas, Minas Georgopoulos

Surrey And Sussex Nhs Healthcare Trust, Reigate, United Kingdom



Development and validation of a web-based application for defocus-curves assessment - Democritus Defocus Curves Test (DDECT)

Agni Mokka^{1,2,3}, Eirini-Kanella Panagiotopoulou¹, Asli Perente^{1,2}, Panagiotis-Zikos Mparkas¹, Christina Mitsi¹, Aristeidis Konstantinidis¹, Georgios Labiris^{1,2}

¹*Ophthalmology clinic, University Hospital of Alexandroupoli, Alexandroupoli*

²*Faculty of Social Sciences, Hellenic Open University, Patra*

³*1st Ophthalmology clinic, AHEPA University General Hospital, Thessaloniki*



2 Years Result of iStent Inject combined with Phacoemulsification and IOL Implantation

Minas Georgopoulos, Arij Daas¹

Surrey And Sussex Nhs Healthcare Trust, Reigate, United Kingdom



Validation of the Greek version of the Catquest-9SF questionnaire

Nikolaos Papadopoulos¹, Eirini-Kanella Panagiotopoulou², Panagiotis Nanos¹, Vasiliki Kouteliari¹, Aysel Mehmet², Doukas Dardabounis², Georgios Labiris²

¹*Department of Ophthalmology, General Hospital of Kalamata, Kalamata, Greece,*

²*Department of Ophthalmology, University Hospital of Alexandroupolis, Alexandroupolis, Greece*



SUTURELESS, TRANSCONJUNCTIVAL, TROCAR-CANNULA-BASED FLANGED INTRASCLERAL IOL FIXATION: A RETROSPECTIVE REVIEW OF 26 CASES

Tzamichas I., Mikropoulou I., Papadopoulos K., Vasiloglou P., Kamaras I., Glynatsis M., Balatsoukas D.

Department of Thessaloniki, Hippokrateio General Hospital of Thessaloniki, Greece



2001-2021: Bilateral cataract extraction results

Petros Smachliou, Vassiliki Mela

Smachliou Eye Clinic

10:00-10:50 **INSTRUCTIONAL COURSE**
Sutures to stabilize intraocular lenses - tension rings, and for Iridoplasty
Moderator: **S. Georgaras**
Speakers: **K. Moschou, An. Charonis, P. Papadopoulos, K. Chalioulas**

11:00-11:30 **KELMAN AWARD CEREMONY**
Moderators: **M. Balidis, E. Patsoura**

- Presentation of Prof. Ike Ahmed, **E. Patsoura**
- Kelman 2021 Award to Prof. Ike Ahmed
- Kelman Lecture by Ike Ahmed: Complex IOL Fixation: Extending our Limits

11:30-12:00 **LECTURE**
MIGS, the New Age of Glaucoma Surgery
Speaker: **M. Georgopoulos**

12:00-13:50 **ROUND TABLE DISCUSSION**
Lens Surgery for Presbyopi
Moderators: **P. Papadopoulos, K. Moschou**

Current IOL technology for Presbyopia Correction
Patient Selection for Presbyopia Lens Surgery
Surgical Applications in Presbyopia Surgery
Premium Lens surgery with Femtosecond Laser
Management of Complications and Dissatisfied Patients

G. Auffarth
G. Roussopoulos
D. Siganos
P. Papadopoulos
P. Smahliou

14:00-15:00 **SPONSORED SYMPOSIUM**
Expanding the options in refractive cataract surgery
Moderator: **M. Balidis**
Speakers: **Sp. Gorezis, N. Ziakas, M. Balidis, K. Moschou**

Alcon
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15:00-15:30 **SPONSORED LECTURE**
Dry eye syndrome after cataract and refractive surgery
Speakers: **D. Mikropoulos, G. Roussopoulos**

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15:30-17:20 **INSTRUCTIONAL COURSE**
Cataract surgery for residents by residents
Moderators: **I. Asproudis, E. Chatzispasou**
Speakers: **E. Georgopoulos, Alk. Giannoukaki, A. N. Dimitropoulou, K. Kagkellaris, D. Kalogeropoulos, N. Kappos, I. Kassos, A. Papadopoulos**

17:30 **CLOSING CEREMONY -**
FREE PAPERS, VIDEO PRESENTATION & E-POSTER AWARDS
HSIOIRS Gen. Assembly

ALEXANDROS Hall

09:00-13:50 BASIC CORNEA INSTRUCTIONAL SYMPOSIUMModerators: **G. Kymionis, D. Mikropoulos**

Corneal scraping and culture: procedure and interpretation
 Keratitis (bacterial-fungal)
 Herpetic keratitis
 Non-infectious keratitis
 Keratoconjunctivitis in children (atopic-vernal)
 Corneal topography
 Alternative corneal imaging modalities (OCT-UBM-CONFOCAL)
 Keratoconus: diagnosis and monitoring of progression
 Dry eye disease
 Corneal epithelial defects-Corneal infiltrates
 Recurrent corneal epithelial erosion
 Corneal edema. Differential diagnosis-Management.
 Steroids or hypertonic solution?
 Neurotrophic ulcer-Neovascularization
 Autologous serum-Amniotic membrane
 Limbal Stem Cell Deficiency
 Management of ocular chemical burns
 Management of Descemetocoele and Corneal Perforation
 Iatrogenic corneal diseases and conditions

M. Grentzelos
S. Palioura
Ch. Siganos
Ch. Kalogeropoulos
N. Ziakas
K. Karabatsas
A. Voudouri
M. Balidis
K. Boboridis
P. Georgoudis
V. Diakonis

An. Charonis
V. Liarakos
Chr. Terzidou
K. Samaras
M. Petrelli
E. Sykakis
G. Kontadakis

15:00-16:50 INSTRUCTIONAL COURSES**15:00-15:50 Correcting Aphakia with Scleral Fixation IOLs**Moderator: **G. Pappas**Speakers: **A. Vakalis, M. Balidis, E. Assia****16:00-16:50 Topo and Wavefront guided ablations: cases**Moderator: **D. Kyroudis**Speakers: **B. Allan, An. Kanellopoulos, D. Sakellaris****17:00-17:30 SPONSORED LECTURE****Well begun is half done**Moderator: **D. Mikropoulos**Speakers: **E. Patsoura, A. Maniateas**

09:00-09:50

FREE PAPERS IV

Chairpersons: G. Dalianis, Ch. Linardi, E. Chatzispasou



**How much astigmatism is it worth correcting during cataract operation?
Case series with correction of small magnitude of astigmatism**
Marina Banteka, Christina Keskini, Leonidas Mavroudis
LMVision, Laser Microsurgery Vision, Day Case Surgery Unit, Thessaloniki, Greece



Risk factors for IFIS development: An updated meta-analysis
**Argirios Tzamalīs, Chrysanthos Christou, Stepan Esagian, Ioannis Tsinopoulos,
Nikolaos Ziakas**
2nd Department Of Ophthalmology, Aristotle University Of Thessaloniki, Thessaloniki, Greece



**Intraocular Lens (IOL)-Induced Astigmatism, Spherical Equivalent Prediction Error
and IOL Constant Optimization Values of Extended Depth-Of-Focus (EDOF)
AcrySof IQ Vivity IOL Implant**
Leonidas Mavroudis, Marina Banteka, Christina Keskini
LMVision, Thessaloniki, Greece



**Visual and Refractive Performance of Extended Depth-Of-Focus (EDOF)
AcrySof IQ Vivity Intraocular Lens Implant in Subjects with Corneal Astigmatism**
Leonidas Mavroudis, Marina Banteka, Christina Keskini
LMVision, Thessaloniki, Greece



**Cataract surgery needs during the Covid 19 pandemic in Greek National
Healthcare System**
**Aliki Liaska, Dimitra Mitsiou, Styliani Stamelou, Eleni Koutsotheodorou,
Konstantina Andrianopoulou, Dimitrios Papantoniou**
Department of Ophthalmology, General Hospital of Lamia, Lamia, Greece, LAMIA, GREECE



Long term survival of filtering bleb after trabeculectomy surgery in cataract patients
**Aliki Liaska, Styliani Stamelou, Dimitra Mitsiou, Eleni Koutsotheodorou,
Konstantina Andrianopoulou, Dimitrios Papantoniou**
Department of Ophthalmology, General Hospital of Lamia, Lamia, Greece, LAMIA, Ελλάδα



**Visual Performance of Extended Depth-Of-Focus (EDOF) AcrySof IQ Vivity
Intraocular Lens Implant**
Christina Keskini, Marina Banteka, Leonidas Mavroudis
LMVision, Thessaloniki, Greece

KASSANDROS Hall

10:00-10:50 INSTRUCTIONAL COURSE

Endophthalmitis after cataract surgery and intravitreal injections

Moderator: P. Tranos

Speakers: M. Tsilibaris, S. Asteriadis, E. Paroikakis, T. Xirou

12:00-13:50 INSTRUCTIONAL COURSES

12:00-12:50 **Broken Posterior Capsule, the Sinking Nucleus and the Dangling IOL Vitrectomy by the Anterior or Posterior Segment Surgeon**

Moderator: A. Vakalis

Speakers: Ath. Nikolakopoulos, F. Pavlidis

13:00-13:50 **Biometry in difficult cases**

Moderator: E. Patsoura

Speakers: A. Maniateas, A. Voudouri, Sp. Gorezis, M. Arvanitis

15:00-16:50 INSTRUCTIONAL COURSES

15:00-15:50 **Phacic IOLs**

Moderator: K. Koufala

Speakers: K. Moschou, D. Siganos, An. Charonis

16:00-16:50 **Intraoperative practices to manage small pupil and floppy iris syndrome**

Moderator: V. Tsigos

Speakers: I. Giannakis, V. Liarakos, A. Maniateas, I. Papaefthimiou

FILIPPOS Hall

09:20-19:40 HIGH COMMUNICATION WETLABS

Moderators: V. Karampatakis, D. Mikropoulos

- 09:20-10:40 **Phaco (for beginners) Basic steps**
Instructors: D. Karatzenis, A. Antoniadis, E. Koulali, A. Koskosas
- 11:00-12:20 **Phaco (for beginners) Basic steps**
Instructors: P. Bousalis, E. Zotta, D. Peironidis, D. Lioumi
- 12:40-14:00 **Phaco (for beginners) Basic steps**
Instructors: G. Dalianis, S. Voutas, E. Zotta, G. Poulakis
- 15:00-16:20 **Phaco (for beginners) Basic steps**
Instructors: I. Giannakis, M. Arvanitis, G. Athanasopoulos
- 16:40-18:00 **Trauma – sutures**
Instructors: V. Karabatakis, V. Lakidis, T. Xirou, M. Stefaniotou
- 18:20-19:40 **Cornea gluing**
Instructors: K. Boboridis, D. Mikropoulos, P. Georgoudis, G. Kontadakis

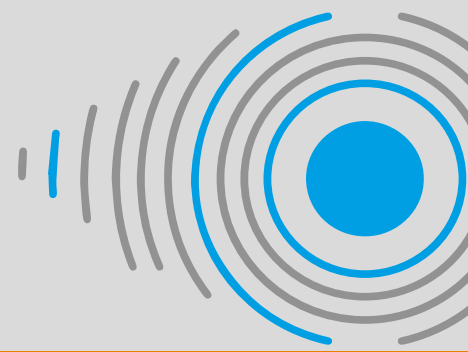
OLYMPIAS Hall

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FRIDAY 22.10.2021

OLYMPIAS Hall

Instructional Wet Lab of Microsurgical Goniotomy with TRABEX+™

ERGHANI SA
pharmaceutical

Trainers:

- Prof. S. Georgaras
- Dr. S. Spai
- Dr. D. Alonistiotis
- S. Fitzpatrick

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FRIDAY 22.10.2021 & **SATURDAY 23.10.2021**

OLYMPIAS Hall

Mavrogenis- Bausch+Lomb is organizing wetlabs during the 35th International Conference of the Hellenic Society of Intraocular & Refractive Surgery for intern ophthalmic surgeons. You will have the opportunity to be trained at Phaco with Strellaris Elite by experienced Ophthalmic Surgeons

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35

INTERNATIONAL
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EP1

A case of Acanthamoeba keratitis

Konstantina Mouriki¹, Petros Dovas¹, Maria Orfanidou², Ioanna Gardeli¹

¹Cornea Department, State Ophthalmology Clinic, General Hospital of Athens G. Gennimatas, Athens, Greece,

²Microbiology Department, General Hospital of Athens G. Gennimatas, Athens, Greece

EP2

A case of peripheral ulcerative keratitis in a patient with Systemic Lupus Erythematosus

Konstantina Mouriki¹, Sofia Tsoutsoura¹, Ioanna Gardeli¹

¹Cornea Department, State Ophthalmology Clinic, General Hospital of Athens G. Gennimatas, Athens, Greece

EP3

Permanent vision loss due to acute Vitreomacular traction syndrome (VMT) post complicated cataract surgery

Marianthi Bourlaki, Konstantinos Chalioulis, Spyros Georgaras

Oxford University Hospitals NHS Trust, Oxford, UK

EP4

Corneal perforation related to Beauveria bassiana and post penetrating keratoplasty management discussion: a case report

Spyros Atzamoglou, Ioannis Markopoulos, Loukas Kontomichos, George Batsos, Efstartios Paroikakis, Vasileios Peponis

¹Ophthalmiatreio Eye Hospital, Athens, Greece

EP5

Cataract surgery through COVID-19 pandemy: a clinical study

Sevasti Tsironi¹, Sofia Karachrysafi^{1,2}, Georgios Delis³, Frageskos Loizou¹, Panagiota-Sofia Apostolidou¹, Konstantina Misiou¹, Victoria Kapourani¹, Eustratios Theofrastou¹, Thaleia Panakleridou¹, Eleni Psimenidou¹, Anastasia Sarafi¹, Elie Fadel¹

¹General Hospital G.Papanikolaou, 57010, Thessaloniki, Greece,

²Laboratory of Histology-Embryology, School of Medicine, Faculty of Health Sciences, Aristotle University of Thessaloniki, 54124, Thessaloniki, Greece,

³Laboratory of Pharmacology, School of Veterinary Medicine, Faculty of Health Sciences, Aristotle University of Thessaloniki, 54124, Thessaloniki, Greece

EP6

Combined corneal retransplantation and cataract surgery with insertion of IOL PC

Sofia Karachrysafi^{1,2}, Eustratios Theofrastou¹, Victoria Kapourani¹, Georgios Fadel¹, Thaleia Panakleridou¹, Sevasti Tsironi¹, Elie Fadel¹

¹Eye Clinic, Department of Corneal Transplantation, General Hospital G.Papanikolaou, 57010 Thessaloniki, Greece,

²Laboratory of Histology-Embryology, School of Medicine, Faculty of Health Sciences, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece

EP7

Our first 10 results from the use of extended depth of focus (EDOF) intraocular lenses

Panos Gartaganis, Efthymios Karmiris, Ioannis Giannakis

251 Hellenic Airforce General Hospital, Greece

EP8

Post-traumatic myopia: Case report and literature review

Stergios Chaloulis, George Mousterris, Konstantine Tsaousis

Ophthalmology dept., "Achilopoulos" General Hospital - Volos

EP9

Statistical analysis of patients treated with Nd-YAG laser capsulotomy due to posterior capsule opacification (PCO) in General Hospital of Volos

Stergios Chaloulis, George Mousterris, Evaggelia – Aggeliki Sarri, Konstantine Tsaousis

Ophthalmology department, "Achilopoulos" General Hospital of Volos

EP10

The impact of the COVID-19 pandemic on ophthalmological outpatient visits and scheduling of cataract surgeries

George Mousterris, Stergios Chaloulis, Evaggelia – Aggeliki Sarri, Konstantine Tsaousis

General Hospital of Volos "Achilopoulos"

EP11

Do those helping us see as clearly as they need?**Tatiana Tziola¹, Irene Oustoglou¹, Maria Samouilidou¹, Ioannis Kassos¹, Savvas Mauromatidis², Nikolaos Ziakas¹**¹2nd Department of Ophthalmology, Aristotle University of Thessaloniki, Thessaloniki, Greece²Nursing Department, Papageorgiou General Hospital, Thessaloniki, Greece

EP12

Case report of an inert intraocular body and its conservative treatment. Review of the literature
Ilias Milionis¹, Ekaterini Christodoulou², Athanasios Kaliartas¹, Paraskevas Zafeiropoulos³, George Kitsos⁴, Chris Kalogeropoulos⁵¹Ophthalmology resident, ²Consultant, ³Consultant, ⁴Ophthalmology Professor,⁵Ophthalmology Professor and Head of Department Eye Clinic University Hospital of Ioannina

EP13

Effect of the COVID-19 pandemic on AMD patients treated with anti-VEGF agents
Ioanna Mylona¹, Mikes Glynatsis², Serafeim Roumelis³, Georgios Floros⁴¹Department of Ophthalmology, General Hospital of Katerini, Katerini, Greece,²Ophthalmology Department, "Hippokratation" General Hospital of Thessaloniki, Thessaloniki, Greece,³Department of Ophthalmology, General Hospital of Serres, Serres, Greece,⁴2nd Department of Psychiatry, Aristotle University of Thessaloniki, Thessaloniki, Greece

EP14

Corneal implant rejections and retransplantations**Efstratios Theofrastou, Victoria Kapourani, Thaleia Panakleridou, Sevasti Tsironi, Anastasia Sarafi, Georgios Fadel, Elie Fadel**

Eye Clinic, Department of Corneal Transplantation, General Hospital G.Papanikolaou, 57010 Thessaloniki, Greece

EP15

Penetrating keratoplasty in the acute phase in eccentrically perforated abscess
Viktoria Kapourani¹, Sofia Karachrysafi^{1,2}, Thaleia Panakleridou¹, Sevasti Tsironi¹, Frageskos Loizou¹, Georgios Fadel¹, Panagiota-Sofia Apostolidou¹, Konstantina Misiou¹, Eleni Psimenidou¹, Elie Fadel¹¹Eye Clinic, Department of Corneal Transplantation, General Hospital G.Papanikolaou, Thessaloniki, Greece,²Laboratory of Histology-Embryology, School of Medicine, Faculty of Health Sciences, Aristotle University of Thessaloniki, Thessaloniki, Greece

EP16

Sir WILLIAM BOWMAN, the Great Anatomist, Pathologist and Ophthalmic Surgeon and his contribution to the evolution of Ophthalmology**Georgios N. Balanikas¹ Md, Phd, Dimitris Pirounides¹ Md, Phd, Polydari Foteini¹ Md, Petros Rasoglou² Md, Phd, Dimitrios Christodoulou³ Md, Msc, Phd, Karampatakis Vasileios⁴ Md, Phd**¹-A' Ophthalmologic Clinic, AHEPA Hospital, Aristotle University of Thessaloniki²-Institute Ophthalmica, Thessaloniki³-Laboratory of History of Medicine, Medical School, Aristotle University of Thessaloniki⁴-Laboratory of Experimental Ophthalmology, Medical School, Aristotle University of Thessaloniki

EP17

ALEXANDER MONRO, THE GREAT ANATOMIST, AND HIS CONTRIBUTION TO THE STUDY OF THE EYE**Balanikas G. MD¹, PhD, Peironidis D. MD¹, Georgiadou C. OD, MSc¹, Papapavlidou D. MD¹, Giannoukaki A. MD¹, Polydari F. MD¹, Christodoulou D. MD, MSc, PhD²**¹A' Ophthalmologic Clinic, Aristotle University of Thessaloniki, AHEPA Hospital, Greece²Laboratory of history of Medicine, Medical School, Aristotle University of Thessaloniki

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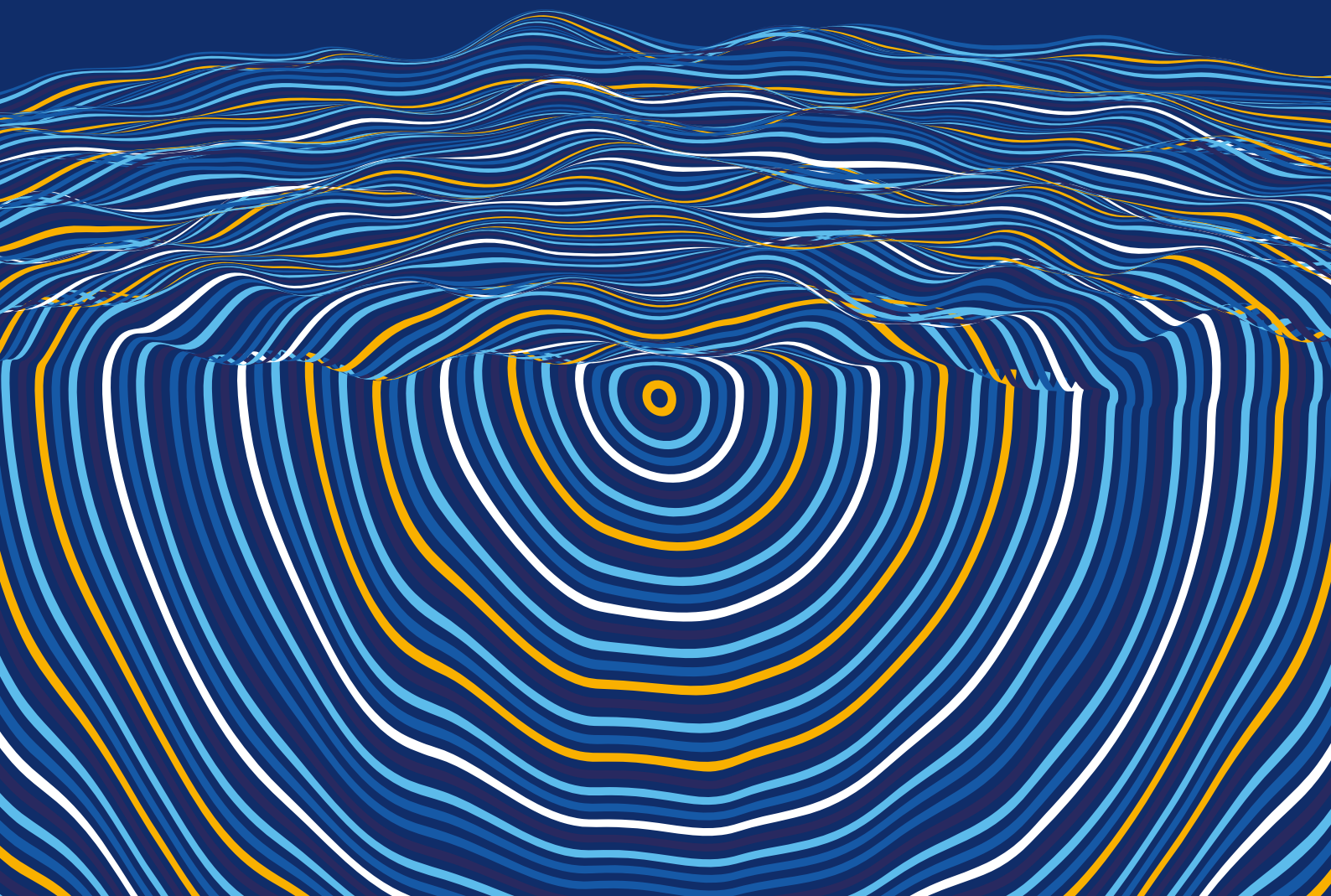


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GREEK MOORFIELDS ALUMNI

Dear colleagues,

It is a great pleasure to announce the foundation of the **Greek Moorfields Alumni (GMA) Club**.

The GMA club applies to all ophthalmologists who have been trained in Moorfields Eye Hospital and wish to establish and maintain clinical, research and social communication with other Greek Moorfields fellows as well as the mother institution.

Further details on the scope of the GMA club and the required criteria which the candidate members are expected to fulfil can be found in our webpage "moorfieldsalumni.gr".

Upcoming activities including the GMA club annual meeting will be announced shortly, so stay tuned!

On behalf of the board,

Paris Tranos



Abstracts **BOOK**

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**Terrien's marginal degeneration in a 4-year-old boy: presentation and outcome**

Penelope Politis, Miltos Balidis, Georgios Sidiropoulos, Despoina Vasileiou, Spyridon Koronis, Achilleas Rasoglou¹

Ophthalmica Eye Institute, Thessaloniki, Greece

Purpose: Terrien's marginal degeneration (TMD) is an uncommon ophthalmic condition compromising corneal periphery, allowing for bulging of intraocular structures, and carrying the risk of ocular rupture under ordinary circumstances. Corneal curvature is affected, giving rise to high ametropia, and ultimately compromising visual acuity. Cases of young individuals are rare and reports in children are limited to a few. Early-onset TMD bears the additional challenge of the prevention of amblyopia. This report emphasizes the need for appropriate management of TMD presenting during childhood.

Methods: This is a case report of TMD occurring in a 4-year-old boy, the lowest age reported in medical literature. The condition was discovered by chance, due to iris herniation after a slight fall. Surgical repair of the corneal lesion was conducted shortly after the diagnosis. The case is presented and described from the time of diagnosis to postoperative evaluation. Materials include pre- and postoperative photographs and the trans-operative video.

Results: A favorable outcome was achieved through surgical intervention, with preservation of the iris anatomy and adequate maintenance of anterior chamber depth and corneal integrity. Long-term results will be available upon continuation of follow-up.

Conclusions: This is the first report of TMD presenting under the age of 5. Preserving ocular integrity and improving visual acuity are the mainstream of TMD management. Terrien's marginal degeneration occurring in young children must be closely monitored to prevent amblyopia from high ametropia induced by corneal curvature change and for the prompt diagnosis and treatment of ocular complications.

**Keratoconus in children. From which age to begin screening?****Marina Banteka, Christina Keskini, George Charitoudis, Leonidas Mavroudis***LMVision, Laser Microsurgery Vision, Day Case Surgery Unit, Thessaloniki, Greece*

Purpose: To determine the frequency of corneal topographic patterns that may be associated with keratoconus in children under 15 years.

Methods: 3458 eyes of 1784 children up to 15 years old were investigated using the corneal topography-refraction system KR7000p (Keratometer Refractometer Topographer, Topcon Healthcare, USA). Corneal maps were classified into 10 categories according to the patterns described by Rabinowitz et al. The classification was performed by two separate and independent ophthalmologists. A third reviewer reexamined all topographies that included inferior steepening, asymmetric bowtie with inferior steepening, asymmetric oblique astigmatic bowtie or topographies that could not be categorized. The above corneal patterns have been associated with the possibility of developing keratoconus.

Results: Topography compatible with keratoconus suspect was found in 6 eyes. Inferior steepening in 34, asymmetric bowtie with inferior steepening in 49 and asymmetric oblique astigmatic bowtie in 3 eyes.

Conclusions: In order to detect keratoconus early, it is useful to include topographic screening in the pediatric routine ophthalmological examination. More specifically, children with inferior steepening, asymmetric bowtie with inferior steepening or asymmetric oblique astigmatic bowtie should be monitored topographically on a regular basis as these corneal topography patterns are likely to be related with the possibility of developing keratoconus.

**Customized transepithelial cross-linking for keratoconus: 2-year follow-up**

Spyridon Koronis, Penelope Politis, Achilleas Rasoglou, Georgios Sidiropoulos, Miltos Balidis, Renato Ambrosio Jr.

Ophthalmica Eye Institute, Thessaloniki, Greece

Purpose: To present one- and two-year results of customized transepithelial corneal collagen cross-linking (customized remodeled vision – CuRV) in patients with keratoconus.

Methods: We performed CuRV on consecutive keratoconus patients with confirmed progression between 03/2018 and 08/2019. Each patient was evaluated for best-corrected visual acuity (BCVA) measured in ET-DRS charts, maximal K readings (Kmax) and thinnest corneal pachymetry measured with Scheimpflug corneal tomography/topography, and demarcation line depth measured with anterior segment optical coherence tomography.

Results: Thirty-one eyes of 27 patients with a mean age of 25.1 ± 8.7 years have a complete one-year follow-up. Among those, 14 eyes of 13 patients completed the two-year follow-up. BCVA was stable at one month postoperatively ($p=0.1$) and significantly improved thereafter, from 20/25 at baseline to 20/20 at the end of follow-up ($p=0.035$). Demarcation line was most prominent at one month postoperatively, with a mean depth of $348.5 \pm 62 \mu\text{m}$. Kmax significantly decreased by 1D at one month postoperatively ($p < 0.001$) and remained stable during follow-up (median change of -0.8D compared to baseline, $p < 0.001$). Thinnest pachymetry significantly decreased at one month postoperatively ($-10.7 \pm 17.4 \mu\text{m}$, $p < 0.001$) but returned to baseline without significant thinning at 24 months ($-9.3 \pm 19.8 \mu\text{m}$, $p=0.09$).

Conclusions: CuRV is an effective cross-linking protocol for stabilizing keratoconus, improving BCVA for at least two years after the procedure.



Comparison of tomographic outcomes after topography-guided photorefractive keratectomy with accelerated cross-linking versus accelerated cross-linking alone in patients with keratoconus

Achilleas Rasoglou, Despoina Vasileiou, Penelope Burle, De Politis, Georgios Sidiropoulos, Spiros Koronis, Miltos Balidis

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Comparison of tomographic outcomes after topography-guided photorefractive keratectomy with accelerated cross-linking versus accelerated cross-linking alone in patients with keratoconus

Purpose: To evaluate the medium to long-term stability of post-operative tomographic outcomes after combined topography-guided photorefractive keratectomy (topo-PRK) and accelerated cross-linking (CXL) versus standalone epithelium-off CXL in patients with progressive keratoconus.

Methods: This retrospective study evaluated the medical files of patients with keratoconus who underwent epi-off CXL with VibeX Rapid riboflavin solution and the KXL system, with or without topography-guided PRK, between the dates of 01/2013 and 01/2017. Medical files containing Pentacam tomography outcomes through 3 or more years post-operatively were identified for inclusion. To evaluate the stability of the post-operative outcomes, tomography parameters from the last follow-up visit were compared to the first-postoperative visit. Outcome parameters obtained from Pentacam included maximum keratometry (Kmax), pachymetry at the thinnest location (pachy), flat keratometry (K1), steep keratometry (K2), index of surface variance (ISV) and mean keratometry (Km).

Results: Ninety-one eyes of 66 patients with a pre-operative diagnosis of progressive keratoconus who underwent topo-PRK + CXL (n=47 eyes) or CXL alone (n=44 eyes) were identified for inclusion in the study. In the topo-PRK + CXL group, mean Kmax at the first post-operative follow-up visit was 48.6 D ($\pm 5.2D$), compared to 51.3 D ($\pm 5.7D$) in the CXL group. Outcome measures showed comparable improvement from the first-post-operative visit through the last follow-up visit in both groups (topo-PRK + CXL, mean difference: Kmax: -1.3 ± 2.9 D; Km: -2.1 ± 2.6 D; ISV: -5.4 ± 19.8 ; CXL group, mean difference: Kmax: -1.1 ± 3.1 D; Km: -1.0 ± 2.8 D; ISV: -1.5 ± 23.9).

Conclusions: Topo-PRK may reduce corneal irregularity in patients with progressive keratoconus. CXL aims to stabilize against progression of keratoconus but may result in post-operative flattening. To distinguish the gradual flattening induced by the accelerated CXL procedure from the immediate change in curvature induced by topo-PRK, we compared the first post-operative visit to the longest follow-up visit (3-7 years post-procedure). The results of this study suggest that the addition of topo-PRK did not significantly impact the rate of flattening that occurred after CXL.



**Continuous intraocular pressure monitoring with a contact lens sensor:
a new perspective for monitoring glaucoma patients**

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Purpose: To evaluate the use of continuous intraocular pressure monitoring with a contact lens sensor (TF) in two patients with normal tension glaucoma and to compare findings with Goldmann applanation tonometry.

Methods: Two patients aged 81 and 79 years old with severe normal tension glaucoma, were scheduled for a 3-day 24-hr tonometric curve at the department of Ophthalmology, University Hospital of Heraklion. On the following day, they participated in 24hour monitoring (86600 total data points) with a contact lens sensor (SENSIMED Triggerfish, TF, Sensimed AG, Lausanne, Switzerland), which measures minute dimensional changes in corneal shape and corresponding ocular volume. Box-plot analysis was used for IOP comparison between the three days IOP measurements from hospitalization and the continuous TF recordings analysis.

Results: Both patients tolerated the contact lens sensor well and displayed a strong correlation in IOP daily fluctuations between TF analysis and Goldmann applanation IOP measurements.

Conclusions: TF information can be used in conjunction with a single tonometric reading for monitoring glaucomatous patients without the need to perform 24-hr tonometric curve. In addition, the contact lens showed good safety and tolerability in both eyes. Further work is warranted to explore the correlation between TF recordings and conventional IOP measurement.



Anterior segment A-OCT in monitoring low grade limbal ischemia and custom scleral lens design aiming the elimination of the clinical findings

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Purpose: Scleral contact lenses (SCL) have gained significant approval from practitioners and patients, as they provide a stable optical surface in challenging cases of irregular astigmatism without contact on the corneal surface. Nevertheless, non-optimal fitting and prolonged wear can cause blood vessels blockage, leading to possible corneal surface degradation and limbal ischemia. OCT-Angiography well established for the posterior segment monitoring and diagnosis, may also be used to monitor blood vessel circulation of the conjunctival and scleral region on the anterior segment. Furthermore, angiography driven lens modifications can be designed to restore reduced circulation.

Methods: Two cases of SCL wearers with reduced comfortable wearing time (4-6 hours daily) underwent OCT-Angiography to capture conjunctival and scleral blood vessel circulation. Specially modified parameters have been used, to focus on the anterior segment. Based on the findings, new lenses were designed with custom scleral landing zone geometry, aiming to relieve and restore more fluent circulation. The same monitoring procedure performed with the new SCL.

Results: Substantial relieve of circulation was achieved and wearing schedule has been doubled. Follow up clinical examination on days 17 and 30 following the modified fitting, showed normal anterior surface physiology.

Conclusions: Anterior segment OCT-Angiography technology can help in monitoring blood vessel circulation in areas that the SCL is supported, enabling an ameliorated custom design of the lens, that could minimize or even eliminate clinical findings, and increase patient comfort. Functionality and repeatability of the OCT-Angiography can contribute as it to become helpful in everyday clinical diagnosis and monitoring.



Five-year outcomes of corneal densitometry after uneventful Descemet membrane endothelial keratoplasty (DMEK)

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Purpose: To analyze the course of corneal densitometry (CD) 5 years following uneventful Descemet membrane endothelial keratoplasty (DMEK).

Methods: From a larger pool of DMEK procedures, 60 uneventful cases (51 patients) with a minimum follow-up of 5 years were included. CD of various corneal layers (anterior, central, posterior and total layer) and zones (0-2 mm, 2-6 mm and 6-10 mm) was measured with Scheimpflug tomography. ECD, BCVA and CCT were also evaluated.

Results: Total CD at 0-2 mm and 2-6 mm zones significantly decreased from 33 ± 10 and 27.8 ± 8 grayscale units (GSU) preoperatively to 21.8 ± 3.1 and 22.2 ± 4.2 GSU at 5 years respectively ($P < 0.001$). On the contrary, total CD at 6-10 mm zone significantly increased from 30 ± 8.3 GSU preoperatively to 34.6 ± 7.8 GSU at 5 years ($P < 0.001$). ECD significantly decreased from 2496 ± 267 cells/mm² preoperatively to 1063 ± 470 cells/mm² at 5 years ($P < 0.001$). Similarly, CCT significantly decreased from 686 ± 109 μ m preoperatively to 557 ± 37 μ m at 5 years ($P < 0.001$). Postoperative BCVA was significantly better after DMEK for every examination time point.

Conclusions: Despite a slight CD increase at all layers of all corneal zones from the second to the 5th postoperative year, the excellent visual outcome was maintained throughout 5 years follow-up. Thus, DMEK seems to treat effectively corneal endothelial disease in the long term.



Development and validation of a video-based eye blink identification and classification system

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Purpose: To design, develop and validate a system that automatically detects blinks and classifies them as “complete” or “incomplete”, in image sequences.

Methods: A short video was shown to 8 participants (with or without spectacles), while their faces were recorded with an infrared camera. The iris and eyelids were segmented in both eyes from the acquired videos, using two deep learning encoder-decoders DeepLabv3+ (DLEDs). DLEDs were trained with manually segmented images acquired from a 4-minute video. The segmented images were further processed for the calculation of palpebral fissure height and iris diameter of each eye for the blink detection and classification. For the validation of the system, blink classification, as well as starting and ending time calculated automatically by the system were compared to the same parameters measured manually by three independent experts. Expert conflicts were resolved by a senior expert.

Results: The proposed system achieved blink classification accuracy between 79.8% and 98.7% for each participant. It outperformed all experts in accuracy for 3 participants, 2 out of 3 experts for 2 participants, and at least one of the experts for the remaining 3 participants. Finally, the system was proven robust in handling unexpected movements of the face, actions like putting on and off reading glasses, as well as glare and reflections from the glasses.

Conclusions: The proposed system achieved high accuracy both in blink detection and blink classification into complete and incomplete blinks, for 8 participants, with and without spectacles. System accuracy was comparable to or better than the experts.

**Choroidal thickness as a potential progression marker for keratoconus****Vasileios Nasikas¹, Miltos Balidis¹, Giorgos Sidiropoulos¹, Zachos Zachariadis¹, Penelope Burle de Politis¹, George Kymionis²**¹*Ophthalmica Eye Institute, Department of Cornea, External Disease and Refractive Surgery, Thessaloniki, Greece*²*Medical School University of Athens, Athens, Greece*

Purpose: Keratoconus is a bilateral ectatic disorder characterized by progressive thinning and steepening of the cornea. The pathogenesis of keratoconus has been partly attributed to atopy and inflammation, whose effects on collagen structure have been implicated in disease progression. Choroidal collagen type and vascular response to inflammatory mediators may be indirect indicators of such pathophysiologic mechanisms. In this study, we aim to determine choroidal thickness in keratoconus patients and compare the results with a control group.

Methods: This is a cross-sectional, comparative study. We have been gathering data from 200 eyes, of which 100 are keratoconic and 100 are control cases, age- and refraction-matched. We use Pentacam® HR (Oculus, Inc.) topography for keratoconus confirmation and Spectralis® (Heidelberg Engineering) SD-OCT to measure choroidal thickness on a 12 mm B-scan image obtained with the enhanced depth imaging (EDI) mode without pupil dilation. EDI measurements are taken at nine points: one subfoveal, three nasal and five temporal to the fovea, at 500 µm intervals.

Results: This is an ongoing study and 96 eyes, 44 healthy eyes and 51 keratoconic eyes were analyzed so far. Mean age of the participants was 32.5 years. There was a statistically significant correlation between age and thinnest corneal pachymetry, mean choroidal pachymetry and thinnest choroidal pachymetry, ($P < 0.05$). Nonetheless, age was not found to affect keratoconus index (KI), ($P > 0.05$). Mean choroidal thickness was 322,6 and 346,4 microns in keratoconus patients and healthy subjects, respectively. There was not a statistically significant difference between keratoconus patients and healthy subjects in terms of choroidal thickness, ($P > 0.05$). Moreover, keratoconus stage (TKC) does not affect mean choroidal thickness in keratoconus patients, ($P > 0.05$). Finally, there was a statistically significant positive linear correlation between thinnest choroidal thickness and the choroidal thickness measured 1500 microns nasally from the umbo.

Conclusion: Choroidal thickness may be a clinical marker for disease progression in keratoconus. Further research is needed to determine whether there is actual correlation between choroidal thickness and keratoconus.



Contrast sensitivity and corneal aberrations analysis in relation with epithelial thickness changes at the corneal apex after refractive surgery

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Purpose: To report the changes in contrast sensitivity (C.S) and corneal aberrations (HOAS and LOAS) in relation with the epithelial thickness (ET) changes at the corneal apex (ET peak) after PRK and LASIK.

Methods: 58 eyes underwent LASIK and 60 PRK. Corrected Distance Vision Acuity (CDVA), Weber Contrast (SC WEBER), logarithm of CS (CS LOGS), ET peak, Lower Order Aberrations (LOAs) and High Order Aberrations (HOAs) were measured before and after refractive surgery. Moreover, the correlation was studied among changes of all parameters.

Results: Statistically significant differences were found between preoperative and postoperative values in C.S, E.T and HOAs in both refractive surgery methods.

In the PRK group, the mean increment of ET peak was 6.62 ± 1.31 microns and it was appeared to be associated with change in C.S and changes in aberrations, LOAs (Z00, Z02, Z11) and HOAs (Z31 and Z42). However, the change in the epithelium did not seem to affect the CDVA.

In the LASIK group, the mean increment of E.T peak was 6.55 ± 1.26 microns but it was not found any association with C.S reduction, changes in HOAs and CDVA. However, there was a correlation with the ET increment and the LOAs (Z00, Z02, Z11).

Conclusions: Although PRK and LASIK found to have similar ET postoperative increment, in PRK these changes seemed to strong correlate with CS contrary to LASIK.



**Quality of vision and quality of life after implantation of presbyopia-correcting IOL's:
a systematic review**

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This systematic review aims to assess the quality of vision and quality of life of patients after the implantation of presbyopia-correcting intraocular lenses. It was conducted according to PRISMA criteria (reporting items for systematic review and meta-analysis) and included extended literature research in MEDLINE, Science Direct and Cochrane library databases until January 2021. In addition, unpublished articles in clinicaltrials.gov and Clinical Trials Registry Platform, as well as manuscripts and magazines were evaluated in search of relevant studies. The Newcastle-Ottawa Scale was used for assessing the risk of bias of those non-randomised studies. Out of the 3581 articles recovered by our search, 20 fulfilled the inclusion criteria, having used specific standardized questionnaires. The results showed that all presbyopia correcting IOL's were accompanied by a high level of patient satisfaction with regards to overall quality of vision.

Moreover, significant degree of spectacle independence was observed with all IOL's as compared to monovision, while no statistically significant difference was found between the different types of lenses. The only exception involved EDOF lenses, which were associated with more frequent use of spectacles for near distances. As far as vision disturbances were concerned, they were common with multifocal IOL's and EDOF lenses, but in their majority were not so severe as to significantly affect the patients' quality of life. In conclusion, modern presbyopia-correcting IOL's seem to live up to patients' expectations and need for better vision. More studies with randomized design are needed, however, so that we can have more robust results regarding the effect of those lenses in patients' quality of vision and quality of life.



Association of Corneal Biomechanics with Keratometric Data and Demographic Factors in Individuals Aged 22 Years or Younger

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Purpose: To investigate the association of corneal hysteresis (CH) and corneal resistance factor (CRF) with keratometric data and demographics in individuals ≤ 22 years.

Methods: Medical records of subjects ≤ 22 years were retrospectively reviewed. Corneal biomechanics and corneal-compensated intraocular pressure (IOPcc) were assessed with Ocular Response Analyzer (ORA). Keratometric data were based on corneal topography. One eye of each subject was selected. For subjects with bilateral ORA-readings, the eye with highest K_{max} was selected. In cases with bilateral ORA-readings and K_{max} equal for both eyes, the eye with highest absolute value of corneal astigmatism (Ast_c) was selected. In cases with bilateral ORA-readings and equal $K_{max} - Ast_c$ for both eyes, right eye was selected. In cases with ORA-readings available for one eye, this eye was selected. Individuals with $K_{max} > 47.00D$ and/or $Ast_c > 2.00D$ were excluded as keratoconus suspects. The association of age, gender, IOPcc, K_{max} , Ast_c with CH and CRF was investigated with univariate linear regression. Univariate associations with $p < 0.2$ were included in multi-variable models.

Results: A total of 1091 eyes were analyzed. Mean CH and CRF were 10.82 ± 1.92 mmHg and 11.26 ± 2.05 mmHg, respectively. CH was positively associated with female gender and negatively associated with age and IOPcc. CRF was positively associated with female gender and IOPcc and negatively associated with age. K_{max} and Ast_c values were not associated with biomechanical properties.

Conclusion: Corneal biomechanics are associated with age, gender and IOPcc in subjects ≤ 22 years. The change in biomechanical properties should be taken into account both when planning refractive surgery and when evaluating refractive surgery outcomes.



Presbyopia and preferred means of therapeutic management according to Ophthalmologists in Greece

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Purpose: To determine Greek ophthalmologists' perceptions regarding presbyopia, their preferred means of examination and their proposed therapeutic interventions.

Methods: This was a cohort study that included 100 Ophthalmologists practicing in Greece either in public hospitals or privately. They were given structured questionnaires in the Greek language to evaluate their preferences on presbyopia examination and its therapeutic management. The aim was to determine those preferences on common cases defined by patients' age, vision impairment and everyday requirements. Only prerequisites for Ophthalmologists were adequate knowledge of the Greek language and engagement with adult population.

Results: The majority were specialists evenly distributed among public and private practice. Most popular is Snellen chart for distance vision evaluation and Jaeger chart for near and intermediate. 15.3% usually omit intermediate vision evaluation. Vast majority prescribe presbyopia spectacles regardless of patient's distant refractive status, considering age the most important factor. 3.5% believes that surgery cannot treat presbyopia. Most Ophthalmologists would suggest LASIK before 55 years and clear lens extraction after 55. 20% regarded multifocal IOL's a good solution, while 5.9% believes this is a different procedure than phacoemulsification. Fundus, tear film and patients' personality evaluation were important.

Conclusions: Since presbyopia is common and affects productive individuals there is a multitude of examination tests, digital and printed, with varying degrees of accuracy. The choice of test depends on available means and the examiner's preferences. This also applies to therapeutic options such as reading glasses, contact lenses and surgical methods. Those are laser assisted and cornea oriented or involve crystalline lens replacement. An important factor, besides doctors' preferences is patients' needs.



Comparison of premium monovision with myopic monovision, hybrid monovision and bilateral implantation of trifocal intraocular lens

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Purpose: To compare the efficacy of premium monovision (hybrid bifocal intraocular lens - IOL in the dominant and diffractive trifocal IOL in the recessive eye), against bilateral myopic monovision, hybrid monovision (monofocal IOL in the dominant and diffractive trifocal IOL in the recessive eye) and bilateral trifocal implantation.

Methods: Cataract patients were categorized into 4 study groups: Monovision Group, Multifocal Lens Group, Hybrid Monovision Group and Premium Monovision Group. 6 months following the second eye operation, binocular uncorrected distance visual acuity, binocular uncorrected reading acuity and critical print size at 60cm and 40cm, contrast sensitivity, subjective satisfaction, dysphotopsia symptoms and spectacle independence were evaluated in all study groups. A mathematical model was constructed, which calculated the relative efficacy of each surgical intervention based on the total Visual Function Index-14 (VF-14) score as a function of each measured clinical parameter score.

Results: 120 participants were recruited and populated equally the study groups. No significant differences could be observed in postoperative binocular uncorrected distance visual acuity ($p=0.12$) and binocular uncorrected intermediate reading acuity ($p=0.24$) among study groups, while significant differences were noticed in critical print size at 60 cm ($p=0.04$) and 60 cm ($p=0.01$) and UNRA($p=0.02$). Dysphotopic phenomena were significantly more in the multifocal patients followed by the premium monovision group ($p=0.04$ & $p=0.02$, respectively), while satisfaction and spectacle independence rates were significantly better in premium monovision group which also presented the best relative efficacy.

Conclusions: All surgical techniques present satisfactory outcomes. Premium monovision seems to demonstrate the best relative efficacy.



Choroidal thickness in different refractive status measured with EDI mode Spectral-Domain Optical Coherence Tomography

Vasileios Nasikas¹, Miltos Balidis¹, Dimitris Sakellaris¹, Giorgos Sidiropoulos¹, Penelope Burle de Politis¹, George Kymionis²

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²*Medical School, University of Athens, Athens, Greece*

Purpose: To determine the choroidal thickness (CT) profile in myopia, hyperopia and astigmatism.

Methods: This is a cross-sectional, comparative study. We have been gathering and analyzing data from 100 eyes with different refractive errors of candidates for refractive surgery. We use Pentacam® HR (Oculus, Inc.) topography for corneal analysis and Spectralis® (Heidelberg Engineering) SD-OCT to measure choroidal thickness. Choroid thickness measurements of individuals with different refractive status were compared. The choroidal thickness profile was created by manually measuring the distance between the retinal pigment epithelium and the choroidal scleral junction, using the Enhanced Depth Imaging (EDI) mode on horizontal B-scans of 12mm length at nine different locations: one subfoveal, three nasal and five temporal to the fovea, at 500 µm intervals.

Results: This is an ongoing study and 44 eyes were analyzed so far. Mean choroidal thickness was 346,4 microns. Mean K Max value was 45.3 D and mean Cylinder value was 1.2 D. The refractive status (myopia, hyperopia, astigmatism, as well as the combinations of the former) does not affect the mean choroidal thickness ($P>0.05$). Finally, there was a statistically significant positive linear correlation between thinnest choroidal thickness and the choroidal thickness measured 1500 microns nasally from the umbo.

Conclusions: Choroidal thickness may become a useful tool in the preoperative evaluation for refractive surgery, helping in decision-making dilemmas such as thin corneas susceptible to post-laser iatrogenic ectasia. Furthermore, it may eventually help devise treatment options and provide a better understanding of the pathogenesis of keratoconus.



The use of preservative-free hydrocortisone in the postoperative treatment regimen after TRANS-PRK

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Purpose: To study the use of preservative-free hydrocortisone in the postoperative treatment regimen after TRANS-PRK in order to promote epithelization and minimize the risk of early-onset haze.

Method: A prospective, randomized controlled study of 40 patients undergone trans-PRK with the Schwind Amaris 1050RS performed by three surgeons. Patients were randomly divided in two equal groups of 20 patients each.

First group received hydrocortisone sodium phosphate (Softacort) 2 drops q.i.d for 7 days. Both groups received artificial tears (Thealoz-Duo) 2 drops hourly for 7 days, then administered every 2 hours for 21 days and tapered till 3 months postop. All patients received antibiotic drops (quinolone q.i.d), and autologous serum hourly for 7 days and a bandage contact lens till complete epithelization of surgical wound.

The patients were monitored daily to determine time of complete epithelization and then on day 15 and 30 to assess any signs of early-onset haze and visual acuity. As standard practice on all our refractive patients, we also included Scheimpflug topography and anterior segment OCT upon day 15 and 30 and IOP tonometry prior to surgery and on day 15 and 30.

On day 30, all patients were asked to complete a questionnaire thus achieving a satisfaction and comfort scale score

Conclusions: Both groups reached similar time of complete healing with slightly earlier epithelization in the hydrocortisone sodium phosphate group. The hydrocortisone sodium phosphate group reported significantly higher scores in the questionnaire in terms of postoperative comfort, with less reported pain and higher postoperative comfort.



The effect of iStent Inject combined with cataract surgery using hydrophilic versus hydrophobic intra-ocular lenses on intra-ocular pressure in patients with glaucoma: real-life 2 years follow-up

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Purpose: To compare the effect of iStent combined with cataract using different lens materials (hydrophobic versus hydrophilic) on intra-ocular pressure in patients with glaucoma at 1 year follow-up

Methods: A longitudinal prospective real-life study including 27 patients who underwent iStent inject with hydrophobic (n=15) (HOYA iSert250 preloaded IOL system, Hoya Medical, Singapore) or hydrophilic (n=12) (RayOne, Rayner intraocular lenses limited, UK) IOL implantation uneventfully by a single surgeon. The IOP and number of classes of IOP-lowering medications were recorded at 1, 3, 6, 12 and 24 months post-operatively. Age, baseline visual acuity and 24-2 SITA-Fast mean deviation and pattern standard deviation were comparable in both groups. 2-tailed t-test was performed to compare IOP and medication classes.

Results: The IOPs were 18.5 ± 3.50 , 14.50 ± 2.62 , 11.60 ± 3.29 , 13.91 ± 2.84 and 12.08 ± 2.43 for the hydrophilic IOL group and 19.20 ± 5.20 , 14.40 ± 4.39 , 13.56 ± 3.71 , 14.00 ± 2.90 and 13.38 ± 3.12 for the hydrophobic IOL group at baseline, 1, 3, 6 and 12 months post-operatively, respectively. The medication classes were 2.83 ± 1.95 , 1.82 ± 1.40 , 0.8 ± 0.84 , 1.25 ± 1.36 and 1.25 ± 1.29 for the hydrophilic IOL group and 2.33 ± 1.29 , 1.80 ± 1.47 , 1.80 ± 1.14 , 1.73 ± 1.53 and 1.79 ± 1.76 for the hydrophobic IOL group at baseline, 1, 3, 6 and 12 months post-operatively, respectively. Both groups achieved approximately 30% IOP reduction at 12 months. 1 eye in the hydrophobic IOL group underwent a trabeculectomy.

Conclusions: No evidence of outcome alteration related to IOL structure has been shown in our study. Future larger studies might be required.



Development and validation of a web-based application for defocus-curves assessment - Democritus Defocus Curves Test (DDECT)

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Purpose: To investigate the level of agreement between the traditional defocus curves test and the Democritus Defocus Curves Test (DDECT) web application.

Method: This is a prospective, comparative study. Pseudophakic patients were randomly recruited in a consecutive-if-eligible basis from the outpatient clinics of three hospitals of Northern Greece (University General Hospital of Alexandroupolis, General Hospital of Xanthi and AHEPA University General Hospital of Thessaloniki), provided that they met all the inclusion criteria. Their visual acuity (VA) was measured using trial lenses of -3.00 D, -2.50 D, -1.75 D and -1.25 D corresponding to distances of 30 cm, 40 cm, 60 cm and 80 cm respectively. Subsequently, the monocular VA of the same patients was assessed using the DDECT application at the aforementioned distances. Differences in VA between the two methods were compared with paired t-test and Wilcoxon signed-rank test, as well as Intraclass Correlation Coefficients (ICCs).

Results: Sixty-five patients with a median age of 71 years responded to both examinations. No significant difference was found in total between the measurements performed with the conventional defocus curves test and the DDECT web application at all distances ($p < 0.05$). The ICCs between the two methods showed moderate to very good correlation in the majority of the individual measurement pairs ranging from 0.539 to 0.903.

Conclusions: Our results suggest a satisfactory level of agreement between the traditional method for defocus curves testing and the DDECT application. Continuation of the ongoing study is expected to yield even more encouraging data on the further use of the DDECT optotype as a method of measurement and evaluation of near and intermediate visual acuity.



2 Years Result of iStent Inject combined with Phacoemulsification and IOL Implantation

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Introduction: In this real-world, retrospective study we evaluated 24 months safety, performance and other outcomes in consecutive eyes following implantation of iStent inject or iStent inject W trabecular meshwork bypass device with simultaneous cataract surgery.

Methods: 102 eyes of 93 patients were assessed for Intraocular Pressure Reduction, Glaucoma Medications reductions, number of eyes achieving <21 mmHg, <18 mmHg and <16 mmHg, number of eyes requiring further glaucoma intervention, effect on Visual Acuity, effect on Visual Field mean deviation and pattern standard deviation, effect on sphere achieved, adverse events and eyes losing more than 2 Snellen Lines.

Results: All eyes underwent combined micro-bypass trabecular meshwork implantation followed by phacoemulsification of cataract and intraocular lens implantation. All eyes had open angle glaucoma, either primary or secondary and there was a significant range of severity in the cohort. Average medication use was reduced from 2.3 to 0.8. Mean Intraocular pressure has been reduced from 17.6 ± 3.1 mmHg to 13.0 ± 1.7 mmHg. 4 eyes of 3 patients required further filtering surgery. 1 eye developed Cystoid Macular Oedema, which resolved spontaneously. No other adverse events were noticed.

Conclusions: Both iStent inject and iStent inject W are safe and achieve satisfactory IOP reduction when implanted at the same time with cataract surgery on selected cases.

**Validation of the Greek version of the Catquest-9SF questionnaire**

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Purpose: To translate and validate the Catquest-9SF questionnaire in Greek language aiming to evaluate the quality of life of patients before and after cataract surgery.

Methods: This was a prospective clinical study. Greek speaking patients above 18 years old having bilateral or unilateral cataract were included. The Catquest-9SF questionnaire was translated into Greek and completed by patients before and following cataract surgery. Construct validity was assessed with factor analysis and internal consistency was evaluated with Cronbach's alpha. Mean values of the 9 questions were calculated and correlations with demographic and clinical parameters were determined.

Results: 100 patients completed the questionnaire preoperatively and postoperatively. The mean age of the sample was 73.94 ± 6.6 years (55 men and 45 women). Factor analysis revealed two factors with eigenvalue > 1 . The Kaiser-Meyer-Olkin measure was 0.858. The Bartlett's test of sphericity was significant ($p < 0.0001$). Cronbach's α value was 0.846. Postoperative visual acuity, refractive error and intraocular pressure were significantly better than the preoperative values. Additionally, postoperative values of all questions of the questionnaire were found to be significantly better than the preoperative corresponding values. Similarly, postoperative correlations between the questionnaire values, visual acuity and cataract classification became significantly better than the preoperative ones.

Conclusions: Factor analysis suggested that Greek Catquest-9SF demonstrated good validity, while Cronbach's α value indicated good internal consistency. These outcomes make the Greek version of Catquest-9SF capable of evaluating the vision-related quality of life before and following a cataract surgery with a good reliability.



SUTURELESS, TRANSCONJUNCTIVAL, TROCAR-CANNULA BASED FLANGED INTRASCLEAR IOL FIXATION: A RETROSPECTIVE REVIEW OF 26 CASES

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Σκοπός: Η αναφορά των αποτελεσμάτων της ενδοσκληρικής στήριξης ενδοφακών χωρίς ράμματα δια του επιπεφυκότα χρησιμοποιώντας trocar-κάνουλες, σε ασθενείς με αφακία ή μετατόπιση ενδοφακού, λόγω απουσίας επαρκούς στήριξης από το οπίσθιο περιφάκιο/ζίννειο ζώνη.

Μέθοδος: Εξετάστηκαν τα δεδομένα ασθενών που υποβλήθηκαν σε ενδοσκληρική στήριξη υδρόφοβων ακρυλικών 3-piece ενδοφακών δια του επιπεφυκότα χωρίς ράμματα με φυλάκιση των απτικών σε σκληρικά τούνελ διαμέσου 25G-trocar στο διάστημα Απρίλιος 2018 - Ιούλιος 2021. Αξιολογήθηκαν οι χειρουργικές ενδείξεις, η προεγχειρητική κατάσταση (οπτική οξύτητα(BCVA), προϋπάρχουσες οφθαλμολογικές παθήσεις), η μετεγχειρητική κατάσταση (οπτική οξύτητα(BCVA) και επιπλοκές).

Αποτελέσματα: Συμπεριελήφθησαν 26 ασθενείς (26 οφθαλμοί), 11 γυναίκες και 15 άντρες με μέση ηλικία 78,5 έτη. 14 ασθενείς ήταν άφακοι μετά από επιπλεγμένη φακοθρυψία και 12 είχαν μετατοπισμένο σύμπλεγμα περιφακίου/ενδοφακού. Ο ελάχιστος χρόνος παρακολούθησης ήταν 6 μήνες. Η διάμεση προ- και μετεγχειρητική VA(logMAR) ήταν 0.85 (δεκαδικό ισοδύναμο 0.125) και 0.2 (δεκαδικό ισοδύναμο 0.63), αντίστοιχα. Εξαιρουμένων 3 ασθενών με υγρή ΗΕΩ, η διάμεση μετεγχειρητική VA(logMAR) ήταν 0.1 (δεκαδικό ισοδύναμο 0.8). Οι επιπλοκές περιελάμβαναν κυστεοειδές οίδημα της ωχράς (2 περιστατικά), κλινικά μη-σημαντική κλίση ενδοφακού (5 περιστατικά), παροδική ενδοϋαλοειδική αιμορραγία (1 περιστατικό), παροδικό οίδημα κερατοειδούς (2 περιστατικά). Δεν υπήρχε μετατόπιση/αποκέντρωση ενδοφακού, αποκόλληση αμφιβληστροειδούς ή ενδοφθαλμίτιδα. Δεν παρατηρήθηκαν σχετικές με έκθεση απτικών επιπλοκές, αίσθηση ξένου σώματος ή δυσφορία.

Συμπεράσματα: Η ενδοσκληρική στήριξη 3-piece ενδοφακού χωρίς ράμματα δια του επιπεφυκότα χρησιμοποιώντας trocar-κάνουλες είναι μια αποτελεσματική χειρουργική επιλογή για την αντιμετώπιση περιστατικών αφακίας και μετατόπισης ενδοφακού. Η τεχνική οδηγεί σε σημαντική οπτική βελτίωση με ελάχιστες μετεγχειρητικές επιπλοκές, λαμβάνοντας υπόψη το χαμηλό κόστος και την ευρεία διαθεσιμότητα των 3-piece ενδοφακών.

**2001-2021: Bilateral cataract extraction results****Petros Smachliou, Vassiliki Mela***Smachliou Eye Clinic*

Purpose: To evaluate the effectiveness and safety of simultaneous bilateral cataract surgery after 20 years follow up visit.

Methods: Clinical outcome of a prospective study of 1992 eyes (996 patients), which underwent simultaneous bilateral cataract surgery (SBCS). Mean age was 74.57 ± 9.12 y.o (range 44-95). Preoperative and postoperative distance and near visual acuities were compared and 20 years postoperative complications were reported as well.

Results: No intraoperative complications were observed. Spherical equivalent showed a statistically significant reduction from -1.48 ± 4.55 logMAR to -0.38 ± 0.56 logMAR, 20 years postoperatively. Corrected Distance and Near Visual Acuities (CDVA and CNVA) improved from 0.40 ± 0.35 logMAR and 2.58 ± 0.72 Jeager (J) preoperatively, to 0.08 ± 0.16 logMAR and 1.15 ± 0.41 J respectively ($p < 0.005$), 20 years after SBCS. 93.34% of our patients had no complications 20 years postoperatively. 1.71% had posterior capsule opacification (PCO), 0.20% had posterior vitreous detachment (PVD), 0.20% were diagnosed with cystoid macular edema (CME) and 0.10% with central serous retinopathy (CSR). In 4.44% of patients, the preoperative complication (age related macular degeneration (AMD), glaucoma, macular hole, amblyopia and nystagmus) remained 20 years after SBCS.

Conclusions: SBCS is a safe and effective procedure which may reduce postoperative chair time and prevent anisometropia or diplopia problems. Both distance and near visual acuities can be well improved, without causing serious complications even 20 years postoperatively.



**How much astigmatism is it worth correcting during cataract operation?
Case series with correction of small magnitude of astigmatism**

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Purpose: During the last years, cataract patients have high expectations regarding visual acuity postoperatively, and expect to get rid of any refractive errors simultaneously with the cataract operation. In some cases, even small amount of astigmatism ($<1D$) can influence the quality of visual acuity and lead to spectacle dependence, especially if it is oblique or against the rule (ATR). Our goal is to study patients with small amount of astigmatism in order to correct that also during cataract operation.

Methods: We studied patients that underwent cataract operation with toric IOL implanted (Alcon T2 Toric) a) with small amount of corneal astigmatism (up to $1D$) oblique or ATR, b) with no evident astigmatism according to their topography and c) with small difference in astigmatism at the 2 eyes that had toric IOL implanted in one eye and non toric at the other. We recorded the visual acuity, refraction, difference at keratometric readings and at the topography pre- and post-operatively.

Results: Pre-operatively, mean astigmatism was measured $0,86D$ and post-operatively $0,45$. Mean visual acuity was measured pre-operatively $4,5/10$ and post-operatively $9,2/10$. Patients of the third category had $1-3/10$ better unaided visual acuity at the eye that had the toric IOL implanted rather than the non toric, as well as better quality of vision.

Conclusions: The use of toric IOL even for small amounts of astigmatism up to $1D$ gives remarkable results at visual acuity and quality of vision.

**Risk factors for IFIS development: An updated meta-analysis****Argirios Tzamalis, Chrysanthos Christou, Stepan Esagian, Ioannis Tsinopoulos, Nikolaos Ziakas***2nd Department Of Ophthalmology, Aristotle University Of Thessaloniki, Thessaloniki, Greece*

Purpose: To provide an updated meta-analysis regarding all the identified factors predisposing to IFIS. A secondary objective is to evaluate the reported prophylactic measures in addressing IFIS.

Methods: The study was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Meta-analysis was carried out to estimate the association of each variable with the occurrence of IFIS. The random-effects model (DerSimonian-Laird) was adopted to calculate the pooled effect estimates for all variables of interest due to the significant clinical heterogeneity among the included studies.

Results: 40 studies were included in the study. The factors that were found to significantly predispose to IFIS were male gender (OR: 4.25, CI:2.58-7.01), hypertension (OR: 1.55, CI:1.01-2.37), tamsulosin intake (OR:31.06, CI: 13.74-70.22), finasteride intake (OR: 4.60, CI: 1.97-10.73), benzodiazepines intake (OR: 2.88, CI:1.17-7.12), antipsychotics intake (OR:6.91, CI: 2.22-21.50). An increased dilated pupil preoperatively was found as a protective factor to IFIS occurrence (OR: -0.93, CI: -1.19, -0.67). Investigated factors that were studied as potential predisposing factors to IFIS occurrence that did not reach statistical significance were age, diabetes, axial length, glaucoma, pseudoexfoliation, duration of tamsulosin intake, alfuzosin, doxazosin, prazosin, and terazosin intake. Finally, intracameral epinephrine was investigated as a potential prophylactic measure for preventing IFIS, although its preventive impact did not reach statistical significance (OR: 0.29, CI: 0.08-1.06).

Conclusions: To date, the major factor that predisposes to IFIS is tamsulosin. A comprehensive preoperative assessment of all factors predisposing to IFIS is vital to stratify the surgical risk, which is crucial in addressing IFIS since unanticipated IFIS could turn a routine surgery into one of significant visual morbidity.



Intraocular Lens (IOL)-Induced Astigmatism, Spherical Equivalent Prediction Error and IOL Constant Optimization Values of Extended Depth-Of-Focus (EDOF) AcrySof IQ Vivity IOL Implant

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Purpose: To report the intraocular lens (IOL)-induced astigmatism, the spherical equivalent prediction error (SE-PE) and the IOL constant optimization values after phacoemulsification with simultaneous extended depth-of-focus (EDOF) AcrySof IQ Vivity IOL implantation.

Methods: The study was designed as interventional, prospective, case series. Phacoemulsification with AcrySof IQ Vivity IOL implantation was performed in patients in need of lens extraction. Current analysis includes subjects having at least one post-operative visit within at least one week after the operation. Corneal astigmatism values were determined by IOL Master 700. Topcon CC100-ETDRS charts were used for refraction. IOL constant optimization values, SIA, and SE-PE were assessed by Holladay IOL Consultant Software.

Results: Phacoemulsification with AcrySof IQ Vivity IOL implantation was performed in 17 eyes of 9 patients. Limbal relaxing incision (LRI) was performed intraoperatively in two eyes and, therefore, those eyes were excluded from this study. SE-PE was within 0.50D in all 15 eyes, with 46.9% having a SE-PE equal to 0.00D. When comparing pre-operative total K values with post-operative total K values, the incision induced cylinder and axis due was $-0.08 \times 113^\circ$. When comparing pre-operative total corneal cylinder with post-operative refractive cylinder, the surgically induced cylinder and axis was $-0.58 \times 89^\circ$. The optimized AcrySof IQ Vivity IOL constant using Holladay II and SRK-T formulas was 5.639 and 119.319 instead of the official manufacturer's 5.666 and 119.200, respectively.

Conclusions: EDOF AcrySof IQ Vivity IOL shows predictable SE-PE results. Considering the minimal surgically induced corneal astigmatism, it appears that IOL implantation induced refractive astigmatism of less than 0.5D.



Visual and Refractive Performance of Extended Depth-Of-Focus (EDOF) AcrySof IQ Vivity Intraocular Lens Implant in Subjects with Corneal Astigmatism

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Purpose: To report the visual and refractive performance of the extended depth-of-focus (EDOF) AcrySof IQ Vivity intraocular lens implant in subjects with corneal astigmatism.

Methods: Patients in need of lens extraction, presenting with total with-the-rule (WTR) corneal astigmatism $\geq 1.00D$, underwent phacoemulsification with EDOF AcrySof IQ Vivity implantation. Two subjects underwent unilateral EDOF AcrySof IQ Vivity implantation with limbal relaxing incision (LRI), while one subject underwent unilateral EDOF AcrySof IQ Vivity Toric (T3). We evaluated the IOL performance one month post-operatively. Post-operative refraction and best-corrected visual acuity (BCVA) were assessed with Topcon CC100-ETDRS charts. Corneal astigmatism was determined by IOL Master 700. Surgically induced astigmatism and spherical equivalent prediction error (SE-PE) were assessed by Holladay IOL Consultant Software.

Results: In subjects with EDOF AcrySof IQ Vivity implantation and LRI, SE-PE was within 0.25D and BCVA was $\geq 20/20$. LRIs reduced corneal astigmatism from -1.62D to -0.98D (flattening centroid -0.69D) and post-operative refractive cylinder was -0.38D. The subject with EDOF AcrySof IQ Vivity T3 implantation presented with 0.00D SE-PE and BCVA=20/16 at one month post-operative visit. Corneal astigmatism changed from -1.46D to -1.67D (flattening centroid -0.22D), and post-operative refractive cylinder was 0.00D.

Conclusions: EDOF AcrySof IQ Vivity IOL Toric and EDOF AcrySof IQ Vivity IOL with LRI show satisfactory visual and refractive performance in subjects with WTR corneal stigmatism.

**Cataract surgery needs during the Covid 19 pandemic in Greek National Healthcare System**

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Purpose: During the height of the covid-19 pandemic, attention was diverted away from elective surgery, as cataract operation is considered, and primary ophthalmological care's key roles in early detection of disease and management of longterm conditions. However, the core ophthalmological primary healthcare functions of accessible first contact, comprehensiveness, coordination, continuity, and person centredness were challenged even before this in Greek NHS.

Methods: the number of monthly visits in the general and specialty outpatient clinics and cataract operations performed in Department of Ophthalmology in General Hospital of Lamia during the Covid 19 pandemic and retrospective medical records review of cataract patients operated at the same period. Results were compared with 2019 relevant monthly data.

Results: Mean number of outpatient visits in 2020 was 372/month, a reduction of 25.6% in relation to 2019 and there was a strong (monthly) correlation with the official measures of public distancing. However, the decrease was not uniform along all longterm conditions as glaucoma clinic suffered the biggest reduction (37.2%). Cataract operations were decreased by 35.6% but 54% of these patients were experiencing severe visual acuity loss (less than 0.1) either in both or at the operated eye only by the time of cataract operation. 24% of cataract patients presented with complex cataract (white, intumescent cataract or morgagnian or brunescant rock hard cataract).

Conclusions: unmet healthcare needs in cataract patients result in severe visual acuity loss and complex cataract operation. Consultation is necessary in these patients to avoid delays in their surgical treatment and optimize the timing of cataract surgery.

**Long term survival of filtering bleb after trabeculectomy surgery in cataract patients**

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Purpose: To study the real world data of survival of the filtering bleb after trabeculectomy and identify predisposing factors of long term filtering bleb failure in patients who developed cataract during the follow up period.

Methods: Retrospective study of medical records of 68 consecutive primary angle glaucoma (including pseudoexfoliative glaucoma and normal tension glaucoma) patients (38 men, 68-79 yo, 30 women 72-82 yo) who had had trabeculectomy operation (Safe Trabeculectomy Technique with mitomycin or 5-fluorouracil) in General Hospital of Lamia. All patients had a postoperative follow-up of more than two years. Data on intraocular pressure (IOP), visual acuity, visual fields progression, cataract operation and glaucoma medication were recorded. Survival analysis and longitudinal data modelling using STATA was applied. Success was defined as IOP less than 19mmHg at all timepoints postoperatively either without medication (absolute success) or with medication (qualified success).

Results: Time to bleb failure varied between patients in relation to time elapsed since trabeculectomy and the time of cataract operation performed after glaucoma surgery. In a minority of patients use of topical glaucoma medication was required at sometime point postoperatively to maintain IOP less than 19mmHg. Two patients needed additional glaucoma surgery (glaucoma draining device) to obtain the desirable level of IOP. Visual field progression was not strongly correlated with IOP levels. No patient lost his vision after trabeculectomy surgery. All patients experienced vision improvement after cataract surgery.

Conclusions: Long term efficacy of trabeculectomy with antimetabolites in real world has been proven. Additional use of glaucoma medication-if needed for superior IOP control- may be applied without compromising the remaining function of the bleb. Visual field progression in patients with controlled IOP may be correlated with other neurodegenerative diseases. Cataract operation (phacoemulsification) improves vision but some deterioration in bleb's function must be expected. This deterioration is not associated with additional glaucoma procedure in our group of patients.



Visual Performance of Extended Depth-Of-Focus (EDOF) AcrySof IQ Vivity Intraocular Lens Implant

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Purpose: To report the visual performance of the extended depth-of-focus (EDOF) AcrySof IQ Vivity intraocular lens implant in a real-life clinical setting.

Methods: The study was designed as an interventional, prospective, case series. Patients in need of lens extraction and without any other ocular disease underwent phacoemulsification with AcrySof IQ Vivity IOL implantation. The current analysis was performed in subjects having at least one post-operative visit within at least one week after the operation. The main outcome measures were the uncorrected and best-corrected distance visual acuity (4m) (UNVA, BCVA), as assessed with Topcon CC 100-ETDRS charts, and the uncorrected near visual acuity (40cm), as assessed with MNREAD-GR.

Results: Phacoemulsification with AcrySof IQ Vivity IOL implantation was performed in 17 eyes of 9 patients. A limbal relaxing incision (LRI) was performed intraoperatively in two eyes and, therefore, those eyes were excluded from this study. The spherical equivalent prediction error (SE-PE) was within 0.50D in all eyes, with 46.9% having a SE-PE equal to 0.00D. BCVA was $\geq 20/20$ in all 17 eyes, while UNVA was $\geq 20/30$ in 87.1% of the eyes. Median critical print size and mean reading speed (words per minute) in near vision were 9.2 and 129.9, respectively.

Conclusion: EDOF AcrySof IQ Vivity IOL shows excellent visual performance in distance vision and satisfactory results in near vision visual performance.



**A case of Acanthamoeba keratitis****Konstantina Mouriki¹, Petros Dovas¹, Maria Orfanidou², Ioanna Gardeli¹**¹*Cornea Department, State Ophthalmology Clinic, General Hospital of Athens G. Gennimatas, Athens, Greece,*²*Microbiology Department, General Hospital of Athens G. Gennimatas, Athens, Greece*

Purpose: The purpose of this paper is the presentation of the clinical course and the management of Acanthamoeba keratitis in a contact lens wearer.

Methods: This case is about a 25-year-old female patient that presented to the outpatient clinic complaining of eye pain and blurry vision in her left eye. The patient referred that she was using topical corticosteroid. The slit-lamp examination revealed radial keratoneuritis.

The superficial corneal swab was used for cultures and Polymerase Chain Reaction (PCR). PCR was found to be positive for Acanthamoeba. In this case cultures of Acanthamoeba were grown.

Results: In this case we used coll desomedine and polyhexamethylene biguanide (PHMB) 0.02%. The clinical course of the patient was good and the Acanthamoeba keratitis was cured without any long-term complications.

Conclusions: Radial keratoneuritis is a presenting sign in Acanthamoeba keratitis. Prompt diagnosis and treatment of Acanthamoeba keratitis can lead to a good visual outcome.



A case of peripheral ulcerative keratitis in a patient with Systemic Lupus Erythematosus

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Purpose: The purpose of this paper is the presentation of the clinical course and management of a case with peripheral ulcerative keratitis (PUK) in a patient with Systemic Lupus Erythematosus (SLE).

Methods: This case is about an 82-year-old male that presented to the outpatient clinic complaining of eye pain and blurry vision in his right eye. He also referred that he was using topical topical dexamethasone. The slit-lamp examination revealed a peripheral corneal keratitis with stromal infiltration without anterior segment reaction.

The InflammaDry test was used and it was found positive.

Results: Treatment of this case was challenging. To improve epithelial healing, our treatment included antibiotic eye drops, col cyclosporine 0.5%, preservative-free artificial tears and tb Vibramycin 100mg. The epithelial defect closed in 10 days. However, the patient presented to the outpatient clinic after 3 weeks and the slit-lamp examination revealed a new corneal ulceration in his right eye. Planning the treatment of this case in collaboration with the rheumatologist we decided to increase the dosage of oral corticosteroids that the patient was receiving. The clinical course of the patient was good in follow up.

Conclusions: Inadequate systemic immunosuppressive treatment should always be suspected in cases of peripheral ulcerative keratitis.



Permanent vision loss due to acute Vitreomacular traction syndrome (VMT) post complicated cataract surgery

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Purpose: To describe a case of sudden and permanent visual loss from VMT caused by posterior capsular rupture after complicated cataract surgery.

Methods: Interventional case report.

Results: The patient presented with a history of complicated cataract surgery with VMT evident on OCT and vision of Counting Fingers (CF). Two months post-surgery there was spontaneous resolution of the VMT but visual acuity did not improve beyond 6/60 with established macular atrophy 6 months after surgery.

Conclusions: VMT has been recognised as a potential cause of temporary vision loss after uncomplicated cataract surgery, but has not previously been reported as a cause of permanent vision loss after complicated cataract surgery.



Corneal perforation related to *Beauveria bassiana* and post penetrating keratoplasty management discussion: a case report

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Purpose: To present a case of corneal graft perforation due to infection by the filamentous fungus *Beauveria bassiana* which was successfully treated with repeat penetrating keratoplasty (PK).

Methods: An 84-year-old male patient with history of bilateral PK for keratoconus presented with pain and decrease in visual acuity on his left eye. A corneal perforation was found, which was treated immediately with a full-thickness corneal transplant. The specimen was sent for bacterial and fungal cultures.

Results: Topical corticosteroids were prescribed postoperatively. *B. bassiana* was isolated from the corneal scrapings. Postoperative treatment was modified by reducing the dose of corticosteroids (topical dexamethasone 0.1% b.i.d) and adding topical natamycin 5% b.i.d together with systemic antifungal therapy initially with posaconazole (100 mg q12h) which was discontinued because of elevated hepatic enzymes and then with voriconazole (200mg q12h) for 1 month according to the in vitro antifungal susceptibility data. No recurrence occurred in the transplant 4 months postoperatively under topical dexamethasone 0.1% b.i.d.

Conclusions: This is the first case of keratitis and perforation in a previously transplanted cornea. Due to the rarity of the infection, there are no clear guidelines for postoperative prophylaxis in *B. bassiana* infection. Either the continuation of corticosteroids or the switch to another immunosuppressive therapy and the selection of the appropriate antifungal regimen posed a significant therapeutic dilemma.



Cataract surgery through COVID-19 pandemy: a clinical study.

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Purpose: A clinical study of the consequences of the worldwide pandemy caused by the SARS-CoV-2 in cataract surgery. Unfortunately, as a result of this situation, the increase of the patients' waiting times and limited access to cataract surgery in many healthcare settings, especially on public funded healthcare systems, due to the prolonged cessation of elective cataract surgery, were recorded. In fact, in some European countries, a 97% reduction in cataract surgery volume has been reported between March and April 2020 compared to the same period in 2019. The following progressive deterioration of the visual function in patients on waiting lists has a negative impact on their quality of life and psychological state, especially in the elderly population.

Methods: In our clinical study, the number of cataract surgeries, the type, the unilateral or bilateral appearance as well as the stage of cataract were recorded for the months between January and June 2019 and compared to the same period in 2021 in the Department of Ophthalmology of General Hospital G. Papanikolaou. Statistical analysis was also performed.

Results: A significant reduction in the number of cataract surgeries as well as a significant increase in advanced and/or bilateral cataracts in 2021 compared to 2019 were observed.

Conclusions: The COVID-19 pandemy has affected equally the value of ophthalmic interventions as well as the patients' quality of life, being a powerful reminder of the significant physical and psychological benefits of cataract surgery, especially for older adults and those suffering from other health problems.

**Combined corneal retransplantation and cataract surgery with insertion of IOL PC**

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Purpose: Presentation of two clinical cases in which combined keratoplasty surgery and cataract surgery were performed. The staging or combination of transplant surgery and cataract surgery depend on the surgeon's abilities as well as the surgical techniques being considered. The decision to perform either combined or staged cataract and transplant surgery depends upon the examination of the eye including assessment of the anterior chamber depth and the status of the anterior surface of the cornea, which affects the ability to reliably assess keratometry. Additionally, the type of lens implant to use, the desired refractive outcome, and the patient's preference about undergoing one or two surgical procedures per eye, should be considered. Phacoemulsification after penetrating keratoplasty especially in elderly people may cause significant endothelial injury affecting long term graft survival.

Methods: In our study we present two clinical cases, a 62 year old male patient with graft rejection and a 52 year old male patient with herpetic ulcer of the corneal graft which led to its rejection. In both cases a combined procedure of penetrating keratoplasty (PKP), open-sky cataract extraction, and intraocular lens (IOL) PC implantation were performed.

Results: The ocular integrity as well as a functional visual acuity were achieved after the procedure. **Conclusions:** Cataract surgery in patients after keratoplasty is more complicated, especially in elderly patients. Therefore, we recommend the simultaneous approach in patients who require corneal retransplantation.



Our first 10 results from the use of extended depth of focus (EDOF) intraocular lenses

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Purpose: To evaluate the visual performance of a new fully preloaded acrylic hydrophobic IOL with Enhanced Depth of Focus (EDOF) technology.

Methods: The study enrolled 10 eyes of 10 patients who underwent age-related cataract surgery with unilateral implantation of the aspheric EDOF LuxSmart (Bausch&Lomb) intraocular lens. All participants underwent Lenstar Optical Biometry (Haag-Streit USA) and the formula used to calculate the intraocular lens (IOL) power was SRK/T. The target refraction of the operated eye was emmetropia. Visual and refractive outcomes and patient satisfaction rates were evaluated 1 month postoperatively. Patients were evaluated for uncorrected distance visual acuity, distance-corrected near visual acuity at 50cm and 30cm, contrast sensitivity, and haloes quantitative assessment.

Results: The mean age of participants was 58.4 ± 10.6 years. All patients had similar distance vision and more especially, in the whole sample, the mean uncorrected distance visual acuity and distance-corrected near visual acuity were, respectively, 0.02 ± 0.07 logMAR and median N1 with addition +2.00 at 30cm and N2 without correction at 50cm, $P < 0.001$. The contrast sensitivity was similar in all patients. The defocus curve confirmed that all participants had great satisfaction for visual acuity in the intermediate and near vision. None of them reported glare, halos, and night visual disturbances.

Conclusions: This preloaded EDOF ringless implant [LuxSmart (Bausch&Lomb)] at our small sample, does not compromise quality of distance vision and provides excellent intermediate near vision without correction.

**Post-traumatic myopia: Case report and literature review****Stergios Chaloulis, George Moustieris, Konstantine Tsaousis***Ophthalmology dept., "Achilopoulos" General Hospital - Volos*

Purpose: To present an interesting case of induced myopia following blunt ocular trauma and to review of literature regarding this clinical entity.

Methods: Clinical case of a patient attended the emergency department in General Hospital of Volos. Review of the relevant literature.

Results: A 17-years old female patient visited the ophthalmology emergency department reporting a blunt ocular trauma accompanied by blurred vision, caused by the metal end of a stretched elastic tie. At presentation, uncorrected visual acuity (VA) was 1/10 in the affected eye, improving to 8/10 with pinhole. She had no prior ophthalmological or other medical history. Slit lamp examination showed a mild anterior chamber reaction, iridoplegia nasally with pupil shape deformation, while IOP measured at 10mmHg. Gonioscopy revealed 2-clock hours extending cyclodialysis with angle recession. Fundoscopy revealed in the nasal mid periphery focal commotio retinae with blot hemorrhages.

The patient was referred for B-Scan ultrasonography, which yielded no pathology.

Next day follow-up included detailed refraction, which showed a myopic shift in the affected eye. Uncorrected VA improved to 4/10 and the patient achieved 9/10 with correction. Clinical findings indicated pseudomyopia.

Topical steroids and cycloplegic were prescribed.

Within a few days, uncorrected vision was further improved and the refractive shift had also gradually been reduced until complete resolution of pseudomyopia. IOP had also raised to 16mmHg.

Conclusions: Pseudomyopia is a reported consequence of blunt trauma, caused by accommodation spasm, choroidal effusion and anterior lens displacement. Literature highlights the important role of anterior segment OCT in depicting these anatomical changes.



Statistical analysis of patients treated with Nd-YAG laser capsulotomy due to posterior capsule opacification (PCO) in General Hospital of Volos

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Purpose: To determine the rate of PCO formation, the time of onset after cataract surgery and the presence of predispository factors among the patients of the Ophthalmology department in General Hospital of Volos.

Methods: We gathered demographic and clinical data from 57 patients treated with YAG capsulotomy due to PCO in Volos Hospital during the years 2017 to present day in 2021, regarding medical and ophthalmological history, age, years of secondary cataract onset from cataract extraction and type of intraocular lens implanted.

Results: It is well established knowledge that secondary cataract formation is caused by remaining epithelial crystalline lens cells migrating and proliferating on the posterior capsule leading to opacification. It happens more often in younger patients, while it also depends on various factors, such as ocular inflammation, adequate surgical technique (capsulotomy size, thorough cortex removal and capsule polishing, in-the-bag IOL fixation) as well as the material and the design of the implanted intraocular lens. Most of our patients treated with YAG laser were over 75-years old, equally men and women. PCO arised at a mean of 4,6 years after cataract surgery. Approximately 17% of PCO patients had initially posterior capsular cataract. Also most of our patients had visual acuity below 5-6/10 and their vision got restored after laser treatment to 9-10/10.

Conclusions: Secondary cataract is the most common postoperative complication of cataract extraction. PCO occurs in 20 - 40% of patients within 2-5 years of cataract surgery. Data analysis from our patients match the literature statistics.



The impact of the COVID-19 pandemic on ophthalmological outpatient visits and scheduling of cataract surgeries

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Purpose: To present how the pandemic affected the attendance of patients for ophthalmological examination on a regular basis and scheduling of cataract surgery.

Methods: For this purpose, we referred to our hospital's Operation Room files for the time period between March 2017-March 2021 and we recorded on a list all cataract surgeries performed per year.

Results: With the mandatory suspension of cataract surgeries – as non-urgent, a significant percentage of patients did not visit the hospital in order to get examined and so a percentage of them who would have been diagnosed with cataract to be scheduled for surgery.

Conclusions: Evaluating our findings we can conclude that the suspension of cataract surgeries for such a long time prevented many patients from undergoing surgery which would significantly improve their quality of life on the one hand, and on the other hand had a cumulative effect on attendance and rescheduling cataract surgeries. According to our current waiting list, since the suspension of surgeries got lifted, there was an increasing demand for the ophthalmology department services.



Do those helping us see as clearly as they need?

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Purpose: Theatre nurses play a significant role in the fast-paced and often stressful operating theatres' environment. Undiagnosed presbyopia may act as an additional burden, especially when working as a scrub nurse. In this study, we aim to define the refractive status of the nursing staff in the operating theaters and the need for near vision (NV) correction spectacles.

Methods: All of the theatre nurses of a single tertiary hospital in Greece were included in the study. Data was gathered on demographic factors, previous refractive status and ocular healthcare seeking behaviors. Subjective refraction (ETDRS) and examination on the slit lamp was performed. Descriptive analysis of all the data was performed and the relationship between previously undiagnosed or undercorrected presbyopia and age, the feeling of inadequate near Vision (NV), length of work experience as theatre nurse and working in the operating theatres with subspecialties with high near vision demands was determined using univariate regression analysis.

Results: A total of 37 theatre nurses were identified. A change in the refractive status was identified in 54% and a need of new NV spectacles or a change in their current prescription was identified in 43% which was considered significant ($P=0.0138$). Increasing age was the only factor found to be significantly associated with a previously undiagnosed or undercorrected presbyopia in our sample ($P=0.0069$).

Conclusions: A significant proportion of theatre nurses were found to have previously undiagnosed refractive errors. Regular annual ophthalmic checks can prevent such events and allow them to achieve optimal near vision, favorably affecting their abilities as scrub nurses.



Case report of an inert intraocular body and it's conservative treatment.

Review of the literature

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Purpose: Presentation of a case report of an inert foreign intraocular body as a random finding and its conservative monitoring.

Material & Methods: A 46-year-old man came for a regular ophthalmological examination, during the fundoscopy in O.S. an inert foreign body was accidentally discovered inside the vitreous cavity. He mentioned the use of lathe at his work. V.A. was 10/10 sc O.U. the patient didn't mention a sense of discomfort, and no obvious foreign body entrance point was found. An image capture was performed with a fundus camera, orbit C.T. and E.R.G.

Results: Orbit C.T. didn't reveal the presence of a foreign body in O.S. in the images though taken with the fundus camera a foreign body was found moving freely inside the left eye's virtual cavity, without any changes in the E.R.G. The patient couldn't recall in his memory a recent or older ocular injury. M.R.I. wasn't performed in fear of the object being magnetic. Due to the absence of symptoms, it was decided to treat him conservatively with regular monitoring.

Conclusion: Rarely intraocular foreign bodies due to their composition, size and location are asymptomatic for decades. In addition to the historical observations of Harold Ridley (for the inert acrylic fragments in the eyes of pilots of the Second World War) that led to the development of the first polymeric intraocular lenses, bibliographically sporadic cases are mentioned with uncomplicated inert intraocular foreign bodies (wood, stone or metal). Regular monitoring is required.



Effect of the COVID-19 pandemic on AMD patients treated with anti-VEGF agents

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Purpose: The COVID-19 pandemic has created an additional burden for patients with AMD under treatment with anti-vascular endothelial growth factor (anti-VEGF) injections, since patients face a congestion of the health system and closing of the outpatient services. This study examines the impact of the uncertainty regarding patients' treatment on their sense of well-being.

Methods: This is a longitudinal cohort study of eighty patients who were followed during the year following the outbreak of the COVID pandemic. Patients reported their sense of well-being with the WHO-5 questionnaire and their perception and fears for the impact of the pandemic on their ongoing AMD treatment.

Results: There was a significant drop in mental well-being during the pandemic that paralleled the self-reported impact of the pandemic on AMD treatment. Patients who reported a higher impact of COVID-19 on their treatment had experienced a higher drop in mental wellbeing compared to those who hadn't, with female sex being an additional risk factor. Objective measurements of visual acuity did not factor in the drop of sense of well-being.

Conclusions: The high initial level of uncertainty regarding AMD patients' long-term course was further exacerbated when exposed to additional uncertainties during the pandemic regarding their standard of care. Planning ahead for continuation of services and close contact with patients during similar health emergencies is of paramount importance.



Corneal implant rejections and retransplantations

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Purpose: Presentation of interesting cases with implant rejections after corneal transplantation due to various causes.

Methods: Six cases underwent penetrating keratoplasty due to causes like corneal ulcer, bullous keratopathy after cataract surgery, herpetic keratitis, alkali corneal burn, post traumatic corneal ulcer.

Results: In all six cases implant rejection occurred and corneal retransplantation was performed after which all six eyes were saved while the visual acuity was restored as much as possible.

Conclusions: Corneal implant rejection is the most common cause of implant insufficiency at the late post-surgical period leading most of the times to retransplantation.

**Penetrating keratoplasty in the acute phase in eccentrically perforated abscess**

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Purpose: The restoration of an eccentrically perforated corneal abscess.

Methods: A 42-year-old patient came to the emergency department of the Ophthalmology Clinic of G. Papanikolaou, with an eccentrically perforated corneal abscess and hypopyon. A penetrating keratoplasty in acute phase was performed and sutured an eccentric graft.

Results: The corneal anatomy was restored to healthy limits while the infection and the hypopyon were treated at the same time.

Conclusions: Penetrating keratoplasty in acute phase is a safe and effective way to treat perforated abscesses.



Sir WILLIAM BOWMAN, the Great Anatomist, Pathologist and Ophthalmic Surgeon and his contribution to the evolution of Ophthalmology

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Purpose: Sir William Bowman (1816-1892) is well known for his discoveries in histology and pathologic anatomy. Maybe he is not so well known as a surgeon ophthalmologist. In this presentation, we describe his contribution mainly to every aspect of Ophthalmology. We use the published works about every side of his engagement with this discipline and more. Our main tool stays 'The Collected Papers of Sir William Bowman'

Setting/Venue: The facts took place in England in the 19th century (Birmingham and London) and this work was conceived and realized at the A' Ophthalmologic Clinic of Aristotle University of Thessaloniki.

Methods: The reference work 'The Collected Papers of Sir William Bowman' is a valuable source of Bowman's contribution to Medicine. Too early, at the age of 25, he became famous for his description of the 'nephron's capsule of kidneys, the well-known 'Bowman's capsule' and the corneal layer called later 'Bowman's membrane'. These essays include detailed descriptions of ophthalmic anatomy, pathology, and physiology. Some of his key works are: 'On the Structure and Use of the Malpighian Bodies of the Kidney' and With Robert Todd, he published the five-volume 'Physiological Anatomy and Physiology of Man (1843–1856)' 'Cyclopaedia of Anatomy and Physiology (1852).

Results: William Bowman had a long career in Medicine starting very early with surgeon Joseph Hodgson (1788-1869) at Birmingham General Hospital in 1832 and continuing in King's College London with the professor of Physiology Robert Bentley Todd. He presented his findings in 1842 in a paper to the Royal Society and was awarded the Royal Medal. He became a Surgeon ophthalmologist at the Royal London Ophthalmic Hospital (later known as Moorefield's Eye Hospital) inventing a number of surgical tools as irrigation probes, the lid speculum, etc. He supported warmly the wide use of the ophthalmoscope.

Conclusions: Sir William Bowman was an inspired scientist of the 19th century who made great discoveries in many fields of our science (Anatomy, Pathology, Surgery, and Ophthalmology). He reformed the current mode and thought of Modern Medicine. He taught at King's College and, in 1880, founded the 'Ophthalmological Society', which was named later 'The Royal College of Ophthalmologists'. His scientific integrity and knowledge, his management of the patient, and his compassion for the poor gave him prestige and universal recognition. He made fundamental discoveries, surgical techniques, and invented surgical instruments. He has also been a distinguished ophthalmic surgeon designing surgical techniques and tools.



ALEXANDER MONRO, THE GREAT ANATOMIST, AND HIS CONTRIBUTION TO THE STUDY OF THE EYE

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Purpose: Alexander Monro (1733-1817) a Scottish physician was a great and pioneering anatomist and surgeon of the 18th century. He combined an exceptional work of anatomical essays 'Three Treatises' (On the Brain, The Eye and The Ear) which was in 1797. We are speaking about the second section of the book concerning the eye.

The 1797 edition is used in this presentation.

Methods: The second 'Treatise' refers to the eye. It has the title 'OBSERVATIONS ON THE STRUCTURE And FUNCTIONS of the EYES. By ALEXANDER MONRO, M.D.'

The book was published in 1797 in Edinburg and consists of 264 pages, 106 of them are dedicated to the eye section.

The first six chapters describe the anatomy of the eye with some of the physiological functions as the refraction and the eye and the route of the light towards the retina. The sixth chapter describes the cornea and the neovascularization after corneal lesions. The last chapter describes the 'Lachrymal Ducts'.

Results: Alexander Monro's work is a concise but complete treatise about the eye and its basic functions and includes also anatomical engravings of the organ very useful for the ophthalmic surgeons of his era.

Conclusion: Alexander Monro, secundus (1733-1817) a member of a medical family was a prominent physician, a great anatomist and writer, who contributed to the establishment of the University of Edinburgh as a powerful international center of medical knowledge and teaching. He provided useful anatomical elements to the ophthalmic surgeons with his second 'Treatise' dedicated to the eye from a more extensive work including the brain and the ear.





First Case of living relative Limbal Epithelial Stem cell Transplantation with the lrSLET technique in Greece, in a patient with congenital Limbal Epithelial Stem Cell Deficiency due to Addison's Disease

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To describe the case of a 40-year-old patient suffering from congenital Limbal Epithelial Stem Cell Deficiency due to Addison's Disease. She is pseudophakic bilaterally and had previously undergone elsewhere a bilateral penetrating keratoplasty, to improve her vision due to the chronic corneal scarring, that failed due to the ocular surface insufficiency. To restore the ocular surface so that we can repeat in the future the keratoplasty procedure in her right eye, the patient underwent a living relative Limbal Epithelial Stem cell Transplantation with the lrSLET technique. Her postoperative outlook is very satisfactory with an improved phenotype of her ocular surface while at the same time she is on systemic immunosuppression.



DALK in advanced keratoconus

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Purpose: To present the surgical management of advanced keratoconus with DALK surgery.

Methods: This case was about a 69-year-old woman with a history of cataract surgery who presented to the Cornea Transplantation Department. Pentagam examination revealed advanced keratoconus grade 3-4 in her right eye. In this case, DALK surgery was scheduled.

Results: The postoperative clinical course of the patient was good.

Conclusions: DALK in cases with advanced keratoconus is a really challenging surgery.

V3

Traumatic globe rupture by a retained metallic fragment, affecting iris and lens, which demanded urgent corneal suture and subsequent phacoemulsification, with secondary reposition of the initially dislocated IOL.

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Purpose: Eye trauma is very common especially in young people due to their involvement in many car and work accidents. It may affect a number of orbital and globe structures including, as in the case we present, cornea perforation with iris and lens involvement which demanded urgent restoration with corneal suturing and subsequent phacoemulsification in order to restore the shape and the refractive ability of the eye.

Case presentation: An otherwise healthy 35-year-old man presented in the ophthalmic emergencies after being injured with a retained drill-head fragment leading to perforation of the cornea along with iris and anterior lens capsule. Upon examination the patient had vision acuity of 1/10sc, the anterior chamber was deep, as the corneal wound was sealed by the retained metallic fragment, and there was fibrin at the lower aspect of it. The pupil did not respond at that area as it was trapped by the fragment and no blood was noticed inside the anterior chamber nor rupture of the Zinn's zonule. The patient was immediately transferred to the OR where the cornea was restored with one 10-0 suture after the metallic object had been removed. The patient's vision acuity remained the same after the surgery. The next day he had to undergo surgery again for clear lens extraction and intraocular lens implantation due to extended traumatic rupture of the anterior lens capsule (Argentinian flag sign like), which demanded careful manipulation (ie without hydrodissection) due to the extent and the asymmetry of the anterior lens capsule rupture. On the first day post op, dislocation of the intraocular lens implant was noticed, managed with surgical repositioning of the IOL without any further complications. Following this the globe was successfully closed and patient's vision acuity was restored at 6/10 sc, on discharge, and 10/10 at one month's reevaluation.

Conclusion: Ocular trauma is a difficult situation which demands patient's calmness and patience and doctor's well-designed plan during the restoration of the damage. All these procedures must be soon as possible after trauma and with minimum manipulation needed, in order to avoid complications, especially in young people. In this case the damage was restored to a major extent, regardless the adversities that showed up. The patient was happy and his vision restored in a short period of time.

V4

Keratoplasty after chemical burn and conjunctival flap

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Purpose: Presentation of an interesting case in which penetrating keratoplasty was performed in an eye with old conjunctival flap.

Methods: Thirty seven year old man underwent a fourth degree corneal chemical burn in the left eye from asbestos thirteen years ago in which a conjunctival flap was performed. The patient came to our clinic for a routine checkup in the other eye and a decision was made to uncover the conjunctival flap and perform penetrating keratoplasty.

Results: One month ago and six years after the keratoplasty the patient was examined in our clinic and it was found that the implant was transparent and the visual acuity satisfactory.

Conclusion: The corneal uncovering combined with penetrating keratoplasty is a safe procedure and can improve the patient's vision.



Intraocular lens exchange by the folding technique: a case report

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Ophthalmology Department, General Hospital of Athens "Georgios Gennimatas", Athens, Greece

Aim of the study: To present a case report of posterior chamber intraocular lens (IOL) exchange by using an intraocular folding technique through a small incision cataract wound in a 76-year-old man,

Material and Methods: A 76-year-old man presented in the cornea clinic of our tertiary referral centre (Ophthalmology Department, General Hospital "G. Gennimatas," Athens, Greece) at 01/04/2021 complaining about postoperative progressive vision loss in her right eye, following implantation of 1-piece acrylic IOL in the sulcus 3 years ago. The patient also reported that his vision decreased significantly during the last 2 months. After ocular examination of his right eye, the diagnosis of Ellngson syndrome (Uveitis-Glaucoma-Hyphaema) was made (1). Best-corrected visual acuity (BCVA) and intraocular pressure (IOP) of his right eye were 1/10 and 25mm Hg, respectively. We decided to proceed with IOL exchange at 15/04/2021, in order to reduce the IOP and anterior chamber inflammation. Three incisions were made at 3, 6 and 9 o' clock position and a self-sealing (tri-planar) rectangular limbal tunnel at 12 o' clock position was created with a 2.00 mm stainless steel keratome, followed by insertion of viscoelastic in the anterior chamber, posterior synechiolysis and rotation of the IOL out of the capsular bag into the anterior chamber, folding of the IOL over a blunt spatula and removal of it. Finally, a 3-piece IOL in sulcus was implanted.

Results: The patient was assessed 1, 7 and 30 days postoperatively and the BCVA and IOP of his right eye were 5/10 and 13mm Hg, respectively, in the last follow up visit.

Conclusion: The folding technique for IOL exchange in patients with Ellngson syndrome could be a safe and effective surgical treatment option (2).

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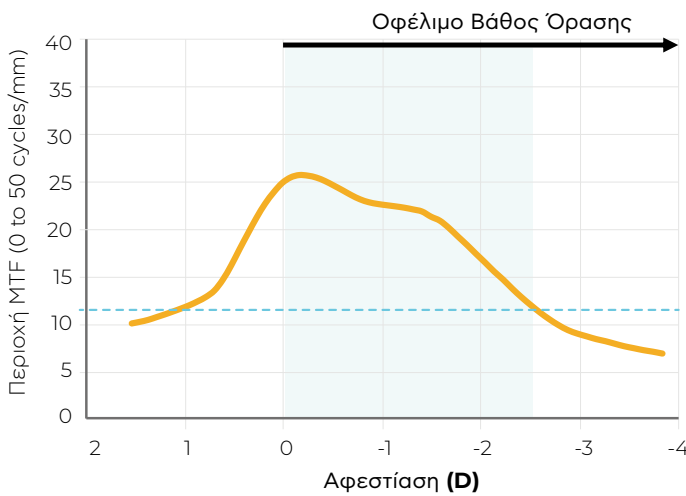
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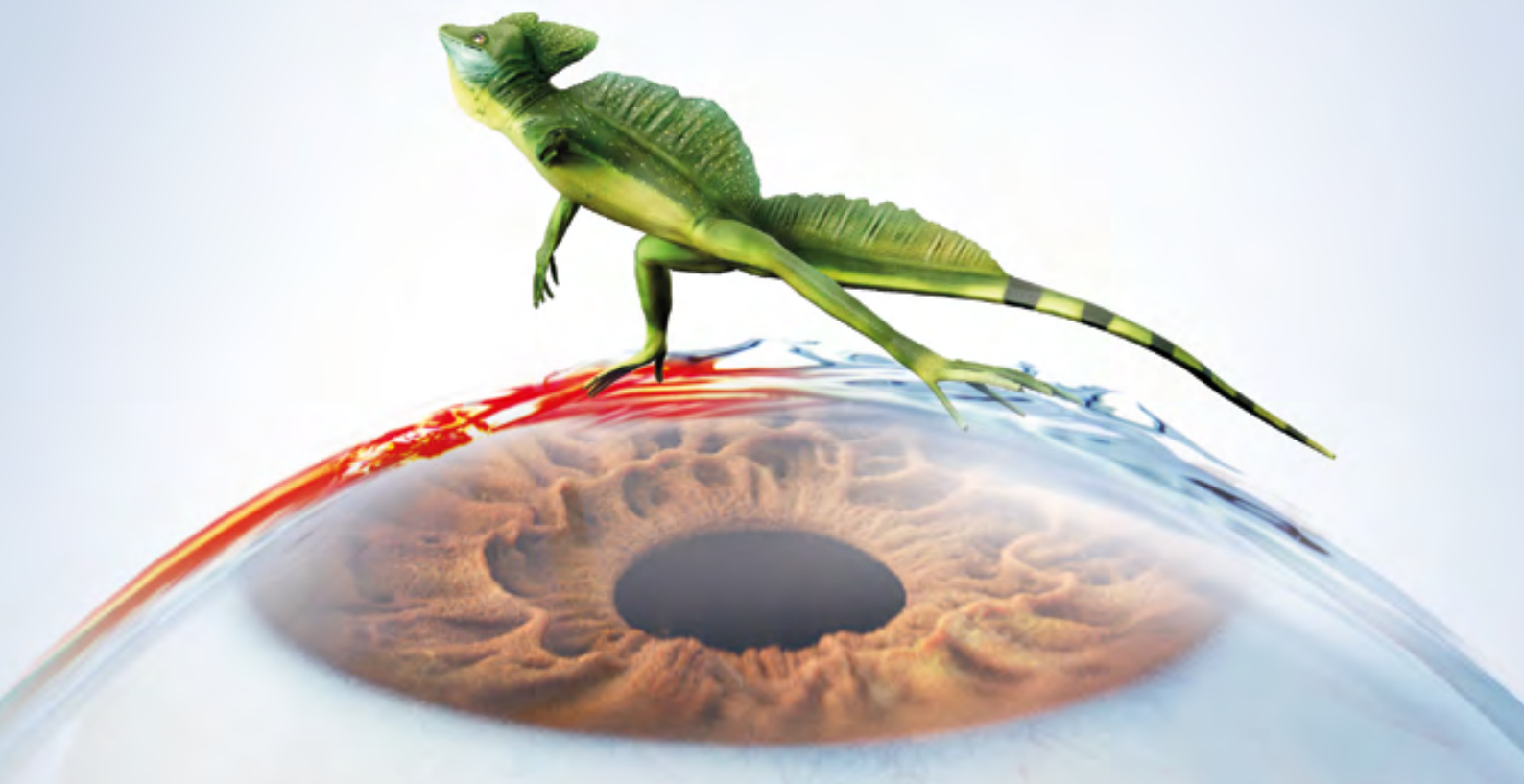
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Μπορεί να συνιστάται σταδιακή μείωση έως και μία χορήγηση κάθε δεύτερη ημέρα με σκοπό την αποφυγή υποτροπής. Σε περίπτωση ανεπαρκούς ανταπόκρισης, πρέπει να χρησιμοποιηθεί ένα πιο ισχυρό κορτικοστεροειδές. **Παιδιατρικός πληθυσμός:** Η ασφάλεια και η αποτελεσματικότητά δεν έχουν τεκμηριωθεί στον παιδιατρικό πληθυσμό. Βλ. παράγραφο 4.4. **Ηλικιωμένοι:** Δεν είναι αναγκαία προσαρμογή της δόσης σε ηλικιωμένους ασθενείς. **Τρόπος χορήγησης:** Οφθαλμική χρήση. Ένας περιέκτης μίας δόσης περιέχει αρκετό διάλυμα για τη θεραπεία και των δύο οφθαλμών. Για εφάπαξ χρήση μόνο. Αυτό το φαρμακευτικό προϊόν είναι ένα στερόν διάλυμα που δεν περιέχει συντηρητικά. Το διάλυμα ενός μεμονωμένου περιέκτη μίας δόσης πρέπει να χρησιμοποιείται αμέσως μετά το άνοιγμα για τη χορήγηση του στον(ους) προσβεβλημένο(ους) οφθαλμό(ους) (βλ. παράγραφο 6.3). **Οι ασθενείς πρέπει να καθοδηγούνται:** - να αποφεύγουν την επαφή μεταξύ του ακροφυσίου και του οφθαλμού ή των βλεφάρων, - να χρησιμοποιούν το διάλυμα οφθαλμικών σταγόνων αμέσως μετά το πρώτο άνοιγμα του περιέκτη μίας δόσης και να απορρίπτουν τον περιέκτη μίας δόσης μετά τη χρήση. Η ρινοδακρυϊκή απόρριξη μέσω συμπίεσης των δακρυϊκών πόρων για ένα λεπτό ενδέχεται να μειώσει τη συστηματική απορρόφηση. Σε περίπτωση ταυτόχρονης θεραπείας με άλλα διαλύματα οφθαλμικών σταγόνων, οι ενστάλαξεις πρέπει να απέχουν μεταξύ τους 5 λεπτά. **4.3 Αντενδείξεις:** - Υπερευαίσθητα στη δραστική ουσία ή σε κάποιο από τα έκδοχα που αναφέρονται στην παράγραφο 6.1. - Γνωστή οφθαλμική υπέρταση επαγόμενη από γλυκοκορτικοστεροειδή και άλλες μορφές οφθαλμικής υπέρτασης. - Οξεία λοίμωξη από τον ιό του απλού έρπητα και από τις περισσότερες από τις άλλες ιογενείς λοιμώξεις του κερατοειδούς κατά την οξεία φάση της εβλκωσίας (εκτός από τον συνδυασμό με ειδικούς χημειοθεραπευτικούς παράγοντες για τον ιό του έρπητα), επιπεφυκίτιδα με ελκώδη κερατίτιδα ακόμη και κατά το αρχικό στάδιο (βηκική δοκιμασία φλουορεσκαΐνης). - Οφθαλμική μυκητίαση. - Οξεία οφθαλμική πυώδης λοίμωξη, πυώδης επιπεφυκίτιδα και πυώδης βλεφαρίτιδα, χαλαζίο και λοίμωξη από έρπητα που μπορεί να καλυφθούν ή να επιδεινωθούν από αντιφλεγμονώδη φάρμακα. **4.6 Γονιμότητα, κύηση και γαλουχία: Κύηση** Δεν διαπίστανται ή είναι περιορισμένα τα κλινικά δεδομένα σχετικά με τη χρήση SOFTACORT σε έγκυο γυναίκα. Τα κορτικοστεροειδή διαπερνούν τον πλακούντα. Μελέτες σε ζώα κατέδειξαν αναπαραγωγική τοξικότητα, συμπεριλαμβανομένου του σχηματισμού λυσοσώματος (βλ. παράγραφο 5.3). Η κλινική σημασία αυτής της παρατήρησης δεν είναι γνωστή. Έχουν αναφερθεί επιδράσεις στο αγέννητο έμβρυο/νεογνό (ενδομήτρια αναστολή της ανάπτυξης, αναστολή της λειτουργίας του φλοιού των επινεφριδίων) μετά από συστηματική χορήγηση κορτικοστεροειδών σε υψηλότερες δόσεις. Ωστόσο, οι επιδράσεις αυτές δεν έχουν παρατηρηθεί μετά από οφθαλμική χρήση. Το SOFTACORT δεν πρέπει να χρησιμοποιείται κατά τη διάρκεια της εγκυμοσύνης, εκτός εάν είναι ασφαλώς απαραίτητο. **Θηλασμός:** Τα συστηματικά χορηγούμενα γλυκοκορτικοειδή απεκκρίνονται στο μητρικό γάλα και μπορεί να προκαλέσουν καταστολή της ανάπτυξης ή της ενδογενούς παραγωγής κορτικοστεροειδών ή μπορεί να έχουν άλλες ανεπιθύμητες ενέργειες. Δεν είναι γνωστό εάν το SOFTACORT απεκκρίνεται στο ανθρώπινο γάλα. Ο κίνδυνος στα νεογνή/νηπιόβραβα δεν μπορεί να αποκλειστεί. **Γονιμότητα:** Δεν υπάρχουν δεδομένα σχετικά με τις πιθανές επιδράσεις της νατριούχου φωσφορικής υδροκορτιζόνης 3,35 mg/ml για τη γονιμότητα. **4.8 Ανεπιθύμητες ενέργειες:** Λίστες ανεπιθύμητων ενεργειών: Οι ανεπιθύμητες ενέργειες κατηγοριοποιούνται σύμφωνα με τη συχνότητα εμφάνισης ως εξής: Πολύ συχνές (>1/10), συχνές (>1/100 έως <1/10), όχι συχνές (>1/1.000 έως <1/100), σπάνιες (>1/10.000 έως <1/1.000), πολύ σπάνιες (<1/10.000), μη γνωστές συχνότητας (δεν μπορεί να εκτιμηθεί με βάση τα διαθέσιμα δεδομένα). **Υδροκορτιζόνη:** Οφθαλμικές διαταραχές: - Μη γνωστές συχνότητας: Αίσθημα καύσου*, αίσθημα νυμφο*. **Αναφορά πιθανολογούμενων ανεπιθύμητων ενεργειών.** Η αναφορά πιθανολογούμενων ανεπιθύμητων ενεργειών μετά από τη χορήγηση άδελος κυκλοφορίας του φαρμακευτικού προϊόντος είναι σημαντική. Επιπλέον η συνεχή παρακολούθηση της σχέσης οφέλους-κινδύνου του φαρμακευτικού προϊόντος. 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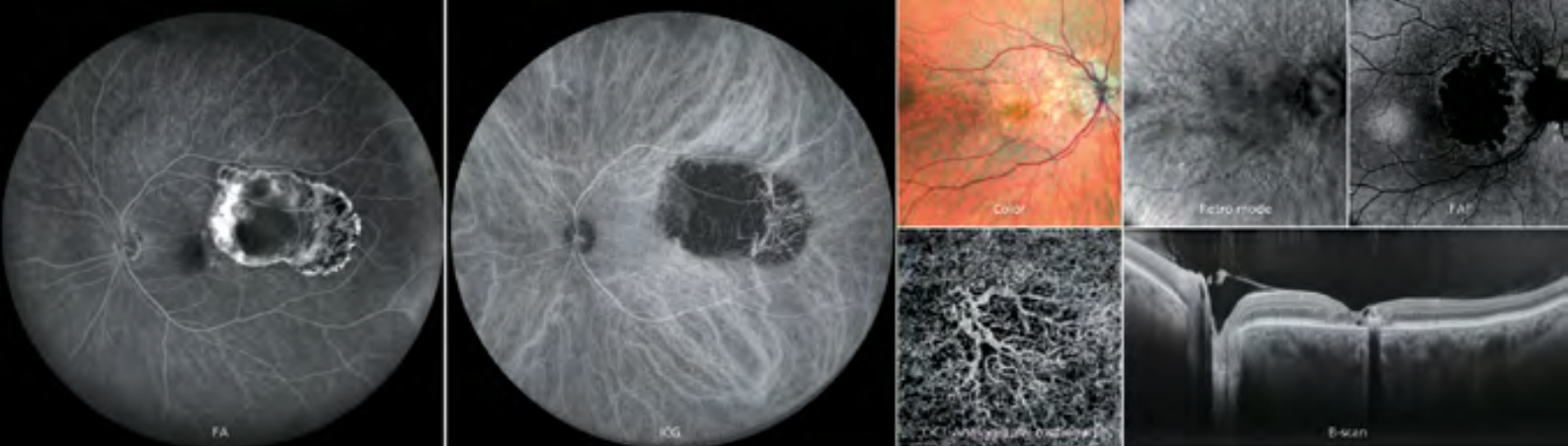


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midimedical



SWISS ADVANCED VISION
INTRAOCULAR LENS

Λεωφ. Κ. Τσαλδάρη 59-61, 11363, Αθήνα, Ελλάδα.
Τηλ.: 210 6995830 Website: www.midimedical.gr



Cosopt[®] †

Χωρίς Συντηρητικά
iMULTI

20 mg/ml dorzolamide + 5 mg/ml timolol eye drops, solution



BIANEX A.E.
ΒΙΟΜΗΧΑΝΙΑ ΦΑΡΜΑΚΩΝ
ΕΤΑΙΡΕΙΑ ΤΟΥ ΟΜΙΛΟΥ ΓΙΑΝΝΑΚΟΠΟΥΛΟΥ

BIANEX A.E. - Έδρα : οδός Τατοΐου, 18° χλμ. Ε.Ο. Αθηνών – Λαμίας 146 71 Ν. Ερυθραία Αττικής,
Ταχ. Θυρίδα 52894, 146 10 Ν. Ερυθραία, Τηλ. : 210 8009111 • Fax: 210 8071573
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562 24 Εύοσμος Θεσσαλονίκης, Τηλ.: 2310 861683

ΑΡ. Γ.Ε.ΜΗ. 000274201000

Τρόπος Διάθεσης: Φαρμακευτικό προϊόν το οποίο χορηγείται με ιατρική συνταγή.

Λιανική τιμή Cosopt iMulti : 24,16 €

Πριν τη συνταγογράφηση παρακαλούμε συμβουλευθείτε την Περίληψη Χαρακτηριστικών του Προϊόντος.

Santen

Βοηθήστε να γίνουν τα φάρμακα πιο ασφαλή και
Αναφέρετε
ΟΛΕΣ τις ανεπιθύμητες ενέργειες για
ΟΛΑ τα φάρμακα
Συμπληρώνοντας την «ΚΙΤΡΙΝΗ ΚΑΡΤΑ»

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