CONTINUING MEDICAL EDUCATION

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DOHENY EYE INSTITUTE | UCLA Stein Eye Institute

5th Annual International Glaucoma Symposium

Targeted Glaucoma Surgeries: MIGS vs. Traditional

Saturday, September 30, 2023
7:30 am - 12:35 pm

Doheny Eye Institute | 150 N. Orange Grove Blvd. | Pasadena, CA 91103

FEATURED SPEAKERS

Inaugural Donald Minckler Doheny Glaucoma Lecturer

Wallace L.M. Alward, MD
Professor Emeritus
Department of Ophthalmology and Visual Sciences
University of Iowa Health Care
Carver College of Medicine

Alex Huang, MD, PhD
Associate Professor
Alfred Vogt Endowed Chair in Ophthalmology
UC San Diego Health
Shiley Eye Institute, San Diego

Course Director

Vikas Chopra, MD
Charles Stewart and Hildegard Warren Endowed Chair
Professor of Ophthalmology
David Geffen School of Medicine UCLA
Medical Director, Doheny Eye Center UCLA – Pasadena
Doheny Eye Institute

ACCREDITED CALIFORNIA MEDICAL ASSOCIATION CONTINUING MEDICAL EDUCATION

Doheny Eye Institute is accredited by the California Medical Association (CMA) to provide continuing Medical Educaiton for physicans.
Credit Designagtion Statement: Doheny Eye Instiute designates this line activity for 4 AMA PRA Category 1 credits.
Physicans should only claim credit commensurate with the extent of their particp[ation in this activity.

W E L C O M E

Dear Colleagues:

Welcome to the 5th Annual Doheny-UCLA International Glaucoma Symposium hosted by Doheny Eye Institute. Thank you, if you are back with us again, and welcome if this is the first time you have joined us. Today we bring together friends from around the world to discuss the most recent updates and advancements in glaucoma clinical care and research.

To accomplish this, we open a forum to discuss imaging pearls, medical and surgical management with MIGS vs. traditional approaches, cataract surgery and glaucoma, as well as complex cases (diagnostic and management dilemmas*).*

We thank our exhibitors for recognizing the importance of this gathering through their generous support.

Special thanks to Doheny and Stein Eye Institutes glaucoma and ophthalmology faculty for capturing the spirit of collaboration and fellowship across our unprecedented affiliation.

Thank you to each one of you for taking your time to come today. We hope you enjoy the program!

Vikas Chopra MD

Vikas Chopra, MD
Director, 5th Annual Doheny-UCLA International
Glaucoma Symposium
Charles Stewart Warren and Hildegard Warren Endowed Chair
Medical Director, Doheny Eye Center UCLA, Pasadena
Doheny Eye Institute
UCLA David Geffen School of Medicine

MD FACS.

Benjamin Bert, MD, FACS
Medical Director, Doheny CME Program
Doheny Eye Institute
Health Sciences Associate Clinical Professor
UCLA David Geffen School of Medicine

ABOUT DOHENY EYE INSTITUTE

The story of Doheny Eye Institute begins with a woman of great heart and great hope: Carrie Estelle Doheny. After experiencing a sudden catastrophic vision loss, she founded the Doheny Eye Foundation in 1947 with the ambitious mission: "To further the conservation, improvement and restoration of human eyesight." To fulfill her dream, Mrs. Doheny called upon her trusted ophthalmologist, Dr. A. Ray Irvine, Sr., and his two sons, Drs. S. Rodman Irvine and A. Ray Irvine, Jr., to establish the first eye pathology laboratory in Los Angeles, which was located on the ground floor of St. Vincent's Hospital.

Eager to advance Mrs. Doheny's goal to create a major vision research institute, the Irvines strongly advocated for a close association with an academic medical school, either UCLA or USC. Although Doheny's trustees voted to affiliate with USC in 1961, it took 10 years to finalize the formal agreement – and then only after USC agreed to Doheny remaining an independent entity. Doheny then purchased property on USC's Health Sciences Campus upon which it built its state-of-the-art vision research facility.

Over the next two decades, Doheny thoughtfully assembled a brain trust of outstanding vision scientists, clinicians, faculty, and residents whose dedication and brilliance steadily elevated Doheny to the forefront of ophthalmological training, research, and patient care.

Then, in 1992, USC's President Steven Browning Sample and Doheny's Chairman J. Sidney Webb crafted a revised agreement to assure "the relationship between USC and Doheny will remain unchanged in the years ahead." By the time the Sample/Webb Agreement expired in December 2012, DEI had been counted among the nation's Top 10 vision programs for years.

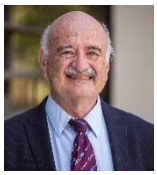
In December 2013, Doheny Eye Institute and UCLA's Stein Eye Institute signed a long-term affiliation agreement. Under this agreement, Doheny-affiliated physicians and researchers are UCLA Department of Ophthalmology faculty members.

Today, the two internationally recognized eye institutes, Doheny Eye Institute and Stein Eye Institute, underpinned by the UCLA Department of Ophthalmology, are ranked fifth among the top ophthalmology programs by *U.S. News & World Report*. This distinction recognizes the strength, reputation and standing of our two top-tier institutions, working together since 2013 to advance vision research, education, and patient care under the leadership of:

Marissa Goldberg
Chief Executive Officer
Doheny Eye Institute

Anne Coleman, MD, PhD
Chairman, Department of Ophthalmology
David Geffen School of Medicine UCLA
UCLA Stein Eye Institute

Deborah Ferrington, PhD
Chief Scientific Officer
Doheny Eye Institute



Alfredo Sadun, MD, PhD
Vice Chairman and Flora L. Thornton Endowed Chair in Vision Research
David Geffen School of Medicine UCLA
Doheny Eye Institute

Doheny Eye Center UCLA

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625 S. Fair Oaks Ave, Suite 280
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Fountain Valley, CA 92708
Tel: (714) 963-1444

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Santa Monica, CA 90403
Tel: (310) 829-0160

UCLA Stein Eye Center Calabasas
26585 Agoura Rd #270
Calabasas, CA 91302
Tel: (818) 431-4414

UCLA DEPARTMENT OF OPHTHALMOLOGY CLINICAL FACULTY & PHYSICIANS

Cataract and Refractive Surgery
John D. Bartlett, MD
Shawn Lin, MD
Kenneth Lu, MD
Kevin Miller, MD
Mitra Nejah, MD

Comprehensive
Gavin Bahadur, MD
Laura Bonelli, MD
Monica Khitri, MD
Amanda Lu, MD

Glaucoma
Joseph Caprioli, MD
Vikas Chopra, MD
Anne Coleman, MD, PhD (Chair)
Brian Francis, MD, MS
JoAnn Giaconi, MD
Simon Law, MD
Christine Nguyen, MD
Kouros Nouri-Mahdavi, MD
Victoria Tseng, MD, PhD

Cornea and Uveitis
Anthony Aldave, MD
Saba Al-Hashimi, MD
Benjamin Bert, MD, FACS
Judy Chen, MD
Sophie, Deng, MD, PhD
Seyed Reza Ghaffari Dehkharghani, MD
Gary Holland, MD
Hugo Hsu, MD
John Irvine, MD
Bartly Mondino, MD
Edmund Tsui, MD
Victoria Yom, MD

Neuro-Ophthalmology
Anthony Arnold, MD
Jane Chan, MD
Lynn Gordon, MD, PhD
Peter Quiros, MD
Alfredo Sadun, MD, PhD (Vice Chair)

Ocular Oncology
Tara McCannel, MD, PhD

Ophthalmic Pathology
Ben Glasgow, MD

Orbital and Ophthalmic Plastic Surgery
Robert Goldberg, MD
Justin Karlin, MD
Kelsey Roelofs, MD
Daniel Rootman, MD, MS

Pediatric Ophthalmology and Strabismus
Joseph Demer, MD, PhD
Simon Fung, MD
Monica Khitri, MD
Stacy Pineles, MD
Soh Youn Suh, MD
Federico Velez, MD

Retina
Aya Barzelay Wollman, MD, PhD
Gad Heilweil, MD
Hamid Hosseini, MD
Kirk Hou, MD, PhD
Jean-Pierre Hubschman, MD
Michael S. Ip, MD
Allan E. Kreiger, MD
Phil Le, MD, PhD
David Lozano Giral, MD
Tara McCannel, MD, PhD
Moritz Pettenkofer, MD
Pradeep Prasad, MD
SriniVas Sadda, MD
Steven Schwartz, MD
Irena Tsui, MD

Retinal Disorders and Ophthalmic Genetics
Michael Gorin, MD, PhD
Colin McCannel, MD
David Sarraf, MD

DOHENY EYE INSTITUTE

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Lecture abstract or summary in order of program

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Continuing Medical Education

Program Schedule
2024

January 27, 2024

Doheny-UCLA International Retina Symposium: Update for 2024

Course Directors: Michael Ip, MD and Kirk Hou, MD, PhD
Location: 150 N. Orange Grove Blvd., Pasadena, CA 91103
CME Max Credits: 7
For more information or to register, please visit **www.doheny.org/cme**.

February 8-11, 2024

*The Annual UCLA (DEI/SEI) Comprehensive Ophthalmology Review Course

Course Directors: John Irvine, MD and Mitra Nejad, MD
Location: UCLA Stein Eye Institute, RPB Auditorium, Los Angeles
CME Max Credits: 27.25
For more additional information, please visit: **www.cme.ucla.edu**.

March 23, 2024

Annual CME Conference Featuring Doheny Alumni

Course Directors: Judy Chen, MD; Hugo Hsu, MD; Peter Quiros, MD
Location: 150 N. Orange Grove Blvd., Pasadena, CA 91103
CME Credits: 8
For more information or to register, please visit **www.doheny.org/cme**.

June 7-8, 2024

*UCLA Department of Ophthalmology Annual Seminar

Course Directors: Anne L. Coleman, MD, PhD and Anthony C. Arnold, MD
Location: UCLA Stein Eye Institute, RPB Auditorium, Los Angeles
CME Max Credits: 11.25
For more information and registration, please visit **www.cme.ucla.edu**.

September 2024 (DATE TBA)

6th Annual Doheny-UCLA International Glaucoma Symposium

Course Director: Vikas Chopra, MD
Location: 150 N. Orange Grove Blvd., Pasadena, CA 91103
CME Credits: TBA
For more information or to register, please visit **www.doheny.org/cme**.

**CME credits awarded by UCLA Office of Continuing Medical Education*

ACCREDITATION

Doheny Eye Institute is accredited by the California Medical Association to provide continuing medical education for physicians.

CREDIT DESIGNATION

The Doheny Eye Institute Office of Continuing Medical Education designates a maximum of 4 AMA PRA Category 1 Credits™ for this live activity. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

LEARNING OBJECTIVES

Upon completion of the course, participants will be able to:

1. Understand the pathophysiology of outflow obstruction in open angle glaucoma
2. Understand the principles of gonioscopy and improve essential techniques for better visualization of iridocorneal angle anatomy especially in challenging angles
3. Learn to apply principles from bench research regarding outflow obstruction to better target outflow "devices" and procedures for trabecular bypass
4. Assess various MIGS device attributes and how to integrate them into a customized treatment plan
5. Understand the role of traditional glaucoma surgeries including trabeculectomy and tube shunts in the MIGS era
6. Understand the risks of potential complications and improve recognition and management, if needed

EVALUATIONS

Evaluation forms are an important tool in physician gaps and program planning. We welcome your comments and suggestions. Your input is valuable and will be used for planning future programs.

OBTAINING CME CREDIT

To receive continuing medical education credit, a CME evaluation form (form at the back of this program) must be completed (include number of credits requested) and returned to the registration desk at the end of the conference or emailed to **cme@doheny.org**.

You must complete, sign, and submit an evaluation form to receive CME credit. Credit will not be given if a form is not submitted. A CME certificate will be e-mailed to you within 7 business days upon completion of the evaluation.

QUESTIONS

If you have questions or comments, please contact our CME office at 323-342-6427 or email **cme@doheny.org**.

ACKNOWLEDGEMENTS

Doheny Eye Institute offers an opportunity for physicians and other health care professionals to examine the newest products and services available in ophthalmology and vision care. We invite you to discuss your needs with representatives of the exhibiting companies.

Doheny Eye Institute acknowledges with gratitude the support of the following organizations for our program.

Exhibitors:

AbbVie, Inc.
Representatives: Chris Alturas, Sarah Fishman, Lilan Hom, Kimberly Shih, OD

Alcon Vision
Representatives: Jeremy Henak, Tim McAbee

Dompé
Representative: Tatiana Cousins

Glaukos
Representative: Sam Michaels

Heidelberg Engineering
Representative: Josh Gutierrez

New World Medical
Representatives: Jessica Valenzuela, Lillian Marker

Sight Sciences
Representatives: Jennifer Verhees, Nichola Ruch

DISCLOSURE STATEMENT

The Doheny Continuing Medical Education policy is to ensure balance, independence, objectivity, and scientific rigor in all CME activities. CME content will be evidence-based and free of commercial bias. Furthermore, Doheny CME providers have identified, reviewed, and resolved all conflicts that persons involved in the development, management and presentation disclose prior to an educational activity. All financial relationships are disclosed below.

DISCLOSURE SUMMARY

The speakers and CME program planners listed below have indicated that they do **not** have financial relationships with commercial interests:

Judy Chen, MD	JoAnn Giaconi, MD	Stephanie Midtling, MD
Mary Collins-Smith	Kirk Hou, MD, PhD	Victoria Tseng, MD, PhD
Vikas Chopra, MD	John Irvine, MD	Cecilia Zamudio

The speakers and CME Committee members listed below have indicated financial relationships with commercial interests/industry.

Key

AB – Advisory Board	PI – Principal Investigator
DSC – Data Review/Security Committee	RG – Research Grant/Support
E – Equipment	S – Speaker Fees/Honorarium
HD – Hardware Data	SO – Stock Options
PC – Payment/Consulting Fees	

Wallace L.M. Alward, MD: Santen – DSC

Benjamin Bert, MD, FACS: Novartis – RG, PI; Regeneron – RG, PI

Brian Francis, MD, MS: Bausch + Lomb – S; Diopsys – PC; Endo Optiks – PC; Glaukos – PC; Neomedix – PC; Valeant Pharmaceutical – PC

Alex Huang, MD, PhD: Amydis – PC, SO; Celanese – PC; Diagnosys – E, RG; Equinox – PC; Heidelberg Engineering – E, RG; Qlaris – PC; Santen – PC; Topcon – PC

Kevin Miller, MD: Alcon – PC; Oculus USA – E

Kouros Nouri-Mahdavi, MD, MS: Heidelberg Engineering – RG; Topcon – HD

Daniel Rootman, MD, MS: Argenx – AB; Horizon – PC

FEATURED SPEAKER

WALLACE L.M. ALWARD, MD

Professor Emeritus
Department of Ophthalmology and Visual Sciences
University of Iowa Health Care
Carver College of Medicine

BIOGRAPHY

Dr. Alward is one of the world's leading Glaucoma experts and has been a member of the Orbis family for more than 20 years. In 2020 he gave more virtual training sessions than any other Orbis Volunteer Faculty. Dr. Alward has served at the University of Iowa for over 30 years.

A major focus of his research has been the molecular genetics of glaucoma. He was involved in the discovery of the myocilin gene for primary open angle glaucoma, the PITX2 and FOXC1 genes for Axenfeld-Rieger syndrome, and the TBK1 gene for normal tension glaucoma.

A natural born teacher and keen traveler, over the last two decades Dr. Alward has dedicated his free time to exchanging skills with local eye doctors on Flying Eye Hospital projects in China, Kenya, Indonesia, the Philippines, and most recently Hue, Vietnam in 2019.

Speaking about the long-term positive impact of being an Orbis volunteer and boosting the skills of eye professionals, Dr. Alward believes that the most gratifying thing is to work somewhere where those whom you trained with Orbis go on to become prominent in their field. An example was from a trip to Kenya.

“My role was to teach them pediatric glaucoma because there was no care for it at the time in the country. They were like sponges and so eager to learn, they went on to pursue more training in Canada with the support of Orbis and have now become prominent figures in glaucoma in Africa. That's been fun to see and hear their names called out as leaders in ophthalmology.”

A thoughtful and thorough educator with a deep passion for his work, Dr. Alward’s many students have gone on to pursue successful careers in the field. In 2023 the University of Iowa’s annual faculty teaching award was named the Dr. Lee Alward Award for Teaching Excellence.

Dr. Alward has published over 250 scientific articles, books, and editorials and presented over 160 lectures, presentations, and courses and has been named a Best Doctor of America since 2000. He is a recipient of the Academy’s Achievement Award (1995), Senior Achievement Award (2011) and Secretariat Award (2009). He was also honored with the inaugural Outstanding Educator Award from the American Glaucoma Society in 2016. In 2012, Dr. Alward served as a Director and Chair of the American Board of Ophthalmology.

FEATURED SPEAKER

ALEX HUANG, MD, PhD

Associate Professor
Alfred Vogt Chair in Ophthalmology
UC San Diego Health
Shiley Eye Institute, San Diego

BIOGRAPHY

Alex Huang, MD, PhD is a glaucoma specialist, advanced cataract surgeon and clinician-scientist who performs all current (and minimally invasive) glaucoma surgical procedures.

Dr. Huang's goal is to maximize the efficacy of glaucoma therapeutics while decreasing their burden to augment the best quality-of-life. He carries his interests regarding angle-based approaches and native outflow pathway improvement into his laboratory as a National Institutes of Health (NIH) R01-supported scientist. His NIH research program focuses on improving glaucoma surgical outcomes by enhancing aqueous humor outflow understanding.

Dr. Huang is supported by the National Aeronautics and Space Administration (NASA) to protect the eyes of American astronauts on the International Space Station from Space Flight-Associated Neuro-ocular Syndrome (SANS). Specifically, Dr. Huang is tasked with determining the cause of SANS and to develop countermeasures necessary for a long-haul spaceflight mission to Mars.

Establishment of the Donald Minckler Doheny Glaucoma Lecture at Doheny Eye Institute: Creating an Enduring Legacy

Dale Heuer, MD
Retired Professor and Chair of Ophthalmology and Visual Sciences
Medical College of Wisconsin
Senior Volunteer Research Scientist
Doheny Eye Institute

Donald S. Minckler Biography

Donald S. Minckler, MD is currently Professor Emeritus and retired as Director of Ophthalmic Pathology at UC Irvine's School of Medicine. He is a world-renowned clinician, surgeon, and researcher in the field of glaucoma.

At Doheny, he was the Director of the Glaucoma Service and Professor of Ophthalmology at the University of Southern California Keck School of Medicine from 1988 to 2006. Dr. Minckler performed clinical consultations, laser and surgical treatment and was involved in both research and clinical aspects of glaucoma. In cooperation with the other members of the glaucoma faculty, Dr. Minckler conducted clinical and laboratory research on several of the currently available glaucoma shunt devices.

Dr. Minckler was awarded his MD from the University of Oregon Medical School, cum laude. He completed two residencies, one in ophthalmology and another in anatomic pathology at the University of Washington School of Medicine in Seattle and subsequently became board certified in both specialties. He completed two fellowships, one in ophthalmic pathology at the Armed Forces Institute of Pathology in Washington, D.C. and another in glaucoma at the Shaffer Associates and UC Medical Center, San Francisco. He served as Editor-in-Chief of Ophthalmology, the official peer reviewed journal of the American Academy of Ophthalmology (AAO), and president of the Glaucoma Society of the International Congress of Ophthalmology. He also served as Director of the American Board of Ophthalmology.

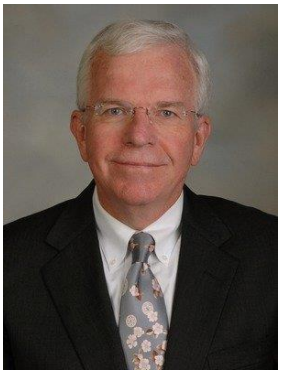
Dr. Minckler established himself as a pre-eminent clinical ophthalmologist, basic and clinical researcher, and teacher before being appointed as Editor-in-Chief of Ophthalmology in 1995. Besides continuing his involvement in clinical research, he led the Journal into the electronic age and instituted important Journal-related initiatives that elevated scientific vision publications to higher standards than ever before.

Among Dr. Minckler's long list of notable accomplishments and numerous awards which include the AAO's Senior Honor Award (1997), Lifetime Achievement Award (2007), and Secretariat Award (2008) to name only a few, he is known at Doheny for receiving multiple Resident Teaching awards and being a favorite of residents, fellows, faculty, and staff alike.

DOHENY EYE INSTITUTE | UCLA Stein Eye Institute

5th Annual Doheny-UCLA International Glaucoma Symposium
Saturday, September 30, 2023
7:30 AM - 12:35 PM

Saturday, September 30, 2023				
7:30 AM	8:00 AM		Registration & Breakfast	30 min
8:00 AM	8:10 AM	Vikas Chopra, MD	Welcome and Introduction	10 min
8:10 AM	8:20 AM	Dale Heuer, MD	Announcement of the Donald Minckler, MD, Doheny Glaucoma Lecture at Doheny Eye Institute: Creating an Enduring Legacy	10 min
8:20 AM	8:45 AM	Wallace L.M. Alward, MD	Gonioscopy: Essential Skill for MIGS with Techniques for Difficult Angles	20 min/ 5 Q&A
8:45 AM	9:15 AM	Alex Huang, MD, PhD	Segmental Aqueous Humor Outflow and Targeted Minimally Invasive Glaucoma Surgeries - *Pearls Learned from Bench to Bedside: GPS Guidance on Where to Put 'em!*	20 min/ 10 Q&A
9:15 AM	9:35 AM	Kevin Miller, MD	Cataract Surgery and MIGS – Perspective from a Non-Glaucoma Specialist, AAO Preferred Practice Guidelines	15 min/ 5 Q&A
9:35 AM	9:55 AM	Kouros Nouri-Mahdavi, MD, MS	Canaloplasty/Trabeculotomy - Indications, Pitfalls, and Complications: *Again with the 'otomy vs. 'ectomy Debate*	15 min/ 5 Q&A
9:55 AM	10:15 AM	Wallace L.M. Alward, MD	GATT for MYOC Juvenile Open Angle Glaucoma	15 min/ 5 Q&A
10:15 AM	**10:35 AM**	**N E T W O R K I N G**	**B R E A K**	**20 min**
10:35 AM	10:55 AM	Vikas Chopra, MD	Trabeculectomy and Aqueous Shunts: *Oldies but Goodies!*	15 min/ 5 Q&A
10:55 AM	11:15 AM	Victoria Tseng, MD, PhD	Complications of Incisional Glaucoma Surgery – Prevention, Recognition, and Management: *NIMBY - Not In My BackYard*	15 min/ 5 Q&A
11:15 AM	11:35 AM	JoAnn Giaconi, MD	Glaucoma and Cornea - Glaucoma Management Post Keratoplasty: *The "Who's at Fault" Conundrum!*	10 min/ 5 Q&A
11:35 AM	11:55 AM	Judy Chen, MD	Uveitis and Glaucoma: *No Pressure!*	15 min/ 5 Q&A
11:55 AM	12:15 PM	Brian Francis, MD, MS	Video-based Surgical Pearls: MIGS and Traditional Surgeries - *No Limits!*	15 min/ 5 Q&A
12:15 PM	12:30 PM	Stephanie Midtling, MD	MIGS Clinical Case Discussion: *Didn't Someone Say "Easy Breezy" for MIGS?*	15 min
12:30 PM	12:35 PM	Vikas Chopra, MD	Closing Remarks	5 min



WALLACE L.M. ALWARD, MD

Medical School: Ohio State University
Residency: University of Louisville
Fellowship: Bascom Palmer Eye Institute, University of Miami
Currently: Professor Emeritus
Department of Ophthalmology and Visual Sciences
University of Iowa Health Care
Carver College of Medicine

GONIOSCOPY: ESSENTIAL SKILL FOR MIGS WITH TECHNIQUES FOR DIFFICULT ANGLES

SUMMARY

While gonioscopy has always been an essential part of a complete ophthalmology examination, identifying angle structures has become even more critical in the age of MIGS. This talk will focus on techniques to employ when the angle structures are not obvious.

REFERENCES

1. Boese EA, Alward WLM, Fingert JH. Gonioscopy-assisted transluminal trabeculotomy for myocilin juvenile glaucoma. Ophthalmol Glaucoma. 2022; 5(3):369-370.

ALEX HUANG, MD, PhD

Medical School: John Hopkins University, School of Medicine
Residency: Doheny Eye Institute/USC + LAC
Fellowship: Shiley Eye Center
Hamilton Glaucoma Institute
University of California at San Diego
Currently: Associate Professor
Alfred Vogt Chair in Ophthalmology
UC San Diego Health
Shiley Eye Institute, San Diego

SEGMENTAL AQUEOUS HUMOR OUTFLOW AND TARGETED MINIMALLY INVASIVE GLAUCOMA SURGERIES: PEARLS LEARNED FROM BENCH TO BEDSIDE: GPS GUIDANCE ON WHERE TO PUT 'EM!

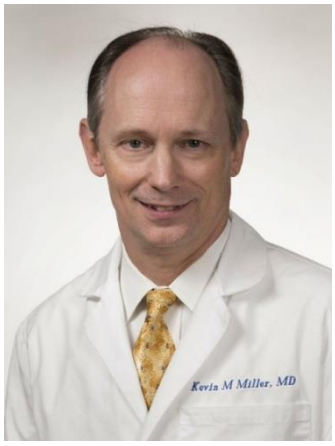
SUMMARY

Minimally Invasive Glaucoma Surgeries (MIGS) are known as a safe surgical approach to lower intraocular pressure (IOP) in mild-moderate glaucoma. The limitation has been the variable and modest IOP reduction. Significant attention has been placed to determining methods to improve how MIGS are performed to enhance IOP lowering efficacy while maintaining excellent safety. This talk will explore the role of targeted surgical placement, involving concepts of segmental aqueous humor outflow (AHO) as well as trabecular meshwork pigmentation.

REFERENCES

1. Huang, A.S., Camp, A., Xu, B., Penteado, R.C., and Weinreb, R.N. Aqueous Angiography: Aqueous Humor Outflow Imaging in Live Human Subjects. 2017 *Ophthalmology* 124(8):1249-125.

2. Greater Outflow Facility Increase After Targeted Trabecular Bypass in Angiographically Determined Low-Flow Regions. Strohmaier, C.A., Wanderer, D., Zhang, X., Agarwal, D., Toomey, C.B., Wahlin K., Zhang, H.F., Stamer, W.D., Weinreb R.N. McDonnell, F.S., and Huang A.S. 2023 *Ophthalmology Glaucoma* June20; S2589-4196(23)00110-2. doi: 10.1016/j.ogla.2023.06.008.



KEVIN M. MILLER, MD

Medical School: Johns Hopkins University School of Medicine
Residency: Jules Stein Eye Institute, UCLA
Fellowship: Wilmer Eye Institute
Johns Hopkins Hospital
Currently: Chief of Cataract and Refractive Surgery Division
Director of Anterior Segment Diagnostic Laboratory
Professor of Ophthalmology and Kolokotrones Chair in Ophthalmology
David Geffen School of Medicine UCLA
UCLA Stein Eye Institute

CATARACT SURGERY AND MIGS – PERSPECTIVE FROM A NON-GLAUCOMA SPECIALIST, AAO PREFERRED PRACTICE GUIDELINES

PURPOSE
To review my personal experience with minimally invasive glaucoma surgery (MIGS) device implantation at the time of cataract surgery and review MIGS topics in the Preferred Practice Patterns (PPPs) developed by the American Academy of Ophthalmology

METHODS
Anecdotal personal observations and review of relevant PPPs

RESULTS
Ab interno trabecular meshwork/Schlemm's canal MIGS devices appear to be safe and effective at lowering IOP in the short term, and better than cataract surgery alone. Long-term efficacy and side effects are unknown.

DISCUSSION
MIGS devices should be considered for any patient who is instilling 1 or 2 topical glaucoma medications and will be undergoing cataract surgery. MIGS device implantation is within the skill set of a competent cataract surgeon.

REFERENCES

1. Miller KM, Oetting TA, Tweeten JP, Carter K, Lee BS, Lin S, Nanji AA, Shorstein NH, Musch DC; American Academy of Ophthalmology Preferred Practice Pattern Cataract/Anterior Segment Panel. Cataract in the Adult Eye Preferred Practice Pattern. Ophthalmology. 2022 Jan;129(1):P1-P126.
2. Gedde SJ, Vinod K, Wright MM, Muir KW, Lind JT, Chen PP, Li T, Mansberger SL; American Academy of Ophthalmology Preferred Practice Pattern Glaucoma Panel. Primary Open-Angle Glaucoma Preferred Practice Pattern®. Ophthalmology. 2021 Jan;128(1):P71-P150.

KOUROS NOURI-MAHDAVI, MD, MS

Medical School: Isfahan University of Medical Sciences/ Affiliated Hospitals, Isfahan, Iran
Residency: Feiz Eye Hospital, Isfahan University of Medical Sciences, Isfahan, Iran
Shiley Eye Center
University of California, San Diego
Fellowship: Hôpital Intercommunal de Créteil, University of Paris XII
St. Joseph Hospital, France
Yale Eye Center, New Haven, CT
Currently: Glaucoma Division Chief for the Department of Ophthalmology
Professor in Residence
Ernest G. Herman Chair of Ophthalmology
Director, Glaucoma Advanced Imaging Laboratory
Department of Ophthalmology
David Geffen School of Medicine UCLA
UCLA Stein Eye Institute

CANALOPLASTY/TRABECULOTOMY - INDICATIONS, PITFALLS, AND COMPLICATIONS: AGAIN WITH THE 'OTOMY VS. 'ECTOMY DEBATE

SUMMARY

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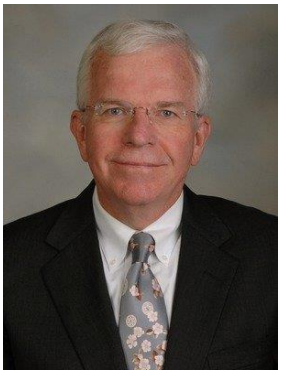

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GATT FOR MYOC JUVENILE OPEN ANGLE GLAUCOMA

SUMMARY

In 1986 a man presented because he worried about his strong family history of glaucoma blindness. His astute observations led to the discovery of myocilin. As the mechanism of myocilin glaucoma was elucidated a genetic-directed surgical approach to his younger relatives shows hope for eliminating the family's blindness.

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2. Alward WLM. Gonioscopy.org (http://gonioscopy.org)
3. Stone EM, Fingert JH, Alward WLM, et al. Identification of a gene that causes primary open angle glaucoma. Science 1997; 31(275): 668-670

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TRABECULECTOMY AND AQUEOUS SHUNTS: OLDIES BUT GOODIES!

PURPOSE
Describe the recent clinical evidence for trabeculectomy and aqueous shunts in the management of adult, open angle glaucomas.

METHODS
Randomized clinical trials such as Trabeculectomy vs Tube shunt (TVT), Primary Trabeculectomy vs Tube Shunt (PTVT), Ahmed vs Baerveldt (AVB), Ahmed Baerveldt Comparison (ABC), and others provide long-term data regarding safety and efficacy of these traditional glaucoma surgeries.

RESULTS
Trabeculectomy and Aqueous shunts can lower intraocular pressure (IOP) by between one-third to one-half of baseline IOPs depending on whether it is used as the primary or secondary glaucoma surgery. Success rates for aqueous shunts were found to be greater than that of trabeculectomies in eyes with prior incisional surgery. Conversely, in eyes without prior incisional surgery, aqueous shunts were found to have an overall lower success rate as primary glaucoma procedure compared to trabeculectomy. Both valved- and non-valved aqueous shunts were able to achieve lower IOPs by about 50%, but the non-valved device generally achieved slightly lower long-term IOPs with fewer number of glaucoma medications and less need for additional glaucoma surgery. Both device groups slow rates of visual field (VF) progression with comparable efficacy to trabeculectomy.

DISCUSSION
Trabeculectomy and aqueous tube shunts are effective and generally safe for the management of adult open angle glaucomas.

REFERENCES
1. Gedde SJ, Schiffman JC, Feuer WJ, et al. Treatment outcomes in the tube versus trabeculectomy (TVT) study after five years of follow-up. *Am J Ophthalmol*. 2012; 153:789-803 e782.
2. Gedde SJ, Feuer WJ, Lim KS, et al. Treatment outcomes in the primary tube versus trabeculectomy study after 5 years of follow-up. *Ophthalmology*. 2022.
3. Christakis PG, Kalenak JW, Tsai JC, et al. The Ahmed versus Baerveldt study: Five-year treatment outcomes. *Ophthalmology*. 2016; 123:2093-2102.
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COMPLICATIONS OF INCISIONAL GLAUCOMA SURGERY – PREVENTION, RECOGNITION, AND MANAGEMENT: NIMBY - NOT IN MY BACKYARD!

SUMMARY

The purpose of this presentation is to discuss complications after incisional glaucoma surgery and their management strategies in a case-based format. Complications to be discussed include choroidal hemorrhage, tube erosion, and aqueous misdirection. Management strategies to be presented include choroidal drainage, tube revision, and anterior vitrectomy with hyaloid-zonulectomy, and iridectomy. Relevant outcomes in the literature will also be discussed.

REFERENCES

1. WuDunn D, Ryser D, Cantor LB. Surgical drainage of choroidal effusions following glaucoma surgery. J Glaucoma 2005;14:103-108.
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3. Bitrian E, Caprioli J. Pars plana anterior vitrectomy, hyaloido-zonulectomy, and iridectomy for aqueous humor misdirection. Am J Ophthalmol 2010;150:82-87.

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GLAUCOMA AND CORNEA - GLAUCOMA MANAGEMENT POST-KERATOPLASTY: *THE "WHO'S AT FAULT" CONUNDRUM!*

PURPOSE
To review risk factors for and management of glaucoma after keratoplasty.

METHODS
Literature Review

RESULTS
There are multiple risk factors for glaucoma after keratoplasty.
After full thickness: Top two risk factors are existing glaucoma and peripheral anterior synechiae.
After lamellar: Top two risk factors are existing glaucoma and steroid use.
All glaucoma procedures are possible after keratoplasty in the right circumstances; some have more evidence to support their use than others. Newer glaucoma surgeries have less evidence to date.

DISCUSSION
After PKP, evidence shows tubes provide better IOP control, but have higher loss of endothelial cells. Tube position in the angle may be vital. For DSEK, evidence may favor trabeculectomy. Corneal decompensation is always a risk, even with other glaucoma procedures.

REFERENCES

1. Hau S, Bunce C, Barton K. Corneal endothelial loss after Baerveldt Glaucoma Implant Surgery. Ophthalmic Glaucoma 2021; 4(1): 20-31
2. Tandon A, Espandar L, Cupp D et al. Surgical management for post-keratoplasty glaucoma: a meta-analysis. J Glaucoma 2016; 23(7): 424-429.

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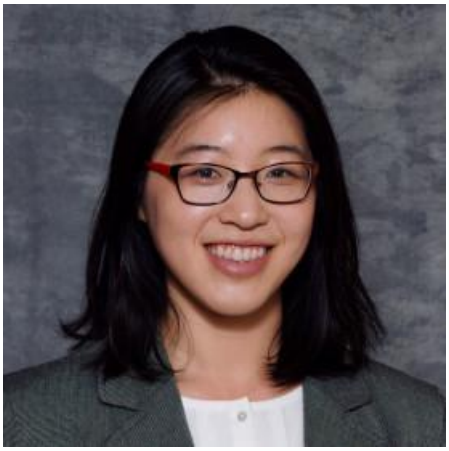

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UVEITIS AND GLAUCOMA: NO PRESSURE!

SUMMARY

Adequate control of ocular inflammation is paramount to increase chances of surgical success and limit perioperative complications. In uveitic patients, surgical iridectomy is preferred to laser peripheral iridotomy, which may exacerbate underlying inflammation and lead to closure of the iridotomy site and pupil seclusion. Angle-based surgery, and particularly gonioscopy-assisted transluminal trabeculotomy, is effective in steroid responders and should be considered early on to limit glaucomatous progression and enable use of topical steroids for treatment of uveitis. Patients with chronic uveitis are at greater risk for hypotony following incisional glaucoma surgery; ultrasound biomicroscopy assessment of the ciliary body may identify attenuation of ciliary processes and identify those at increased risk for postoperative hypotony.

REFERENCES

1. Magliyah et al. The effect of perioperative uveitis control on the success of glaucoma surgery in uveitic glaucoma. PMID 33859472.
2. Belkin et al. Gonioscopy-assisted transluminal trabeculotomy is an effective surgical treatment for uveitic glaucoma. PMID 34930723.

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COMBINING MIGS - USING THE POWER OF MIX-AND-MATCH FROM THE ENTIRE MIGS TOOLBOX TO TREAT ANGLE CLOSURE TO OPEN ANGLE GLAUCOMA: NO LIMITS!

SUMMARY

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MIGS CLINICAL CASE DISCUSSION: DIDN'T SOMEONE SAY "EASY BREEZY" FOR MIGS?

SUMMARY

DOHENY EYE INSTITUTE

PROGRAM EVALUATION

To help us determine if your educational needs were met during this course and to further improve upcoming courses, please complete this form. Please print your responses.

1. Please Rate the COURSE FACULTY (in speaking order)

Speaker	Excellent	Very Good	Average	Comments *Your feedback is important!*
Course Director: Vikas Chopra, MD				
Wallace L.M. Alward, MD				
Alex Huang, MD, PhD				
Kevin Miller, MD				
Kouros Nouri-Mahdavi, MD, MS				
Stephanie Midtling, MD				
Presenter: Vikas Chopra, MD				
Victoria Tseng, MD, PhD				
JoAnn Giaconi, MD				
Judy Chen, MD				
Brian Francis, MD, MS				

2. Your present status is: *(check one)* ☐ MD (currently practicing) ☐ MD, PhD ☐ Fellow ☐ Resident ☐ Medical student ☐ PhD ☐ Retired physician ☐ Other _____

3. To what extent did the overall presentation meet the following course objectives? *(check one)*

Objectives:	Excellent	Very Well	Average	Comments
a) Understand the pathophysiology of outflow obstruction in open angle glaucoma				
b) Understand the principles of gonioscopy and improve essential techniques for better visualization of iridocorneal angle anatomy especially in challenging angles				
c) Learn to apply principles from bench research regarding outflow obstruction to better target outflow "devices" and procedures for trabecular bypass				
d) Assess various MIGS device attributes and how to integrate them into a customized treatment plan				
e) Understand the role of traditional glaucoma surgeries including trabeculectomy and tube shunts in the MIGS era				
f) Understand the risks of potential complications and improve recognition and management, if needed				

Continued on next page

4. **Please complete the statement below:**
As a result of what I learned from my participation in this CME activity, I intend to make the following practice/performance changes and/or modifications that I believe will result in improved patient outcomes:

_____

_____

5. **What new knowledge did you gain from this activity?**
   - ☐ Pre-op evaluation
   - ☐ Surgical Procedure
   - ☐ Post-op follow-up care
   - ☐ Clinical evaluation
   - ☐ Use of diagnostic testing
   - ☐ Emerging Treatments
   - ☐ Counsel and inform patients differently
   - ☐ Other _____

6. **Were today's presentations free of commercial bias?** *(Commercial bias is defined as information presented in a manner that attempts to sway participants' opinion in favor of a product or business.)*
   ☐ Yes ☐ No (If No, please explain)

   _____

7. **What barriers do you anticipate encountering in implementing your intended changes in practice?**
   ☐ Time ☐ Resources ☐ Organization ☐ Staff ☐ None ☐ Other _____

8. **Were issues in cultural and linguistic competency (e.g., difference in prevalence, diagnosis, treatment in diverse populations, linguistic skills, and pertinent cultural data) addressed in this activity?** ☐ Yes ☐ No

9. **How did you learn about this program?** ***(Check all that apply)***
   ☐ E-mail ☐ Doheny Physician ☐ Doheny Website ☐ Online Ad ☐ Other _____

10. **Which of the following appealed to you for attending the 5th Annual Doheny-UCLA International Glaucoma Symposium?**
    ☐ Program Speakers ☐ Location ☐ CME Credits ☐ Other _____

11. **Which of the following registration fees is indicative of the educational value and overall quality of today's program?** ***(Please check one)***
    ☐ $200 ☐ $150 ☐ $100 ☐ $75 ☐ $50 ☐

12. **Suggested future topics?** _____

13. **Any comments**: _____

Name and address must be legibly provided for attendance to be logged and CME certificate issued.

5th Annual Doheny-UCLA International Glaucoma Symposium - September 30, 2023

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Thank you for your participation