

AMERICAN ACADEMY
OF OPHTHALMOLOGY®

AAO 2022 News

CHICAGO

Subspecialty Day Edition

The Insiders' Guide
to All 7 Meetings

AAO 2022
gather



We're willing to bet most eye care professionals don't realize just how prevalent *Demodex* blepharitis is.¹

In fact, ~**25 million eye care patients** are affected by *Demodex* blepharitis (DB).^{2,3}

References: **1.** Data on file, Tarsus Pharmaceuticals Inc. June 2022. **2.** Trattler W, Karpecki P, Rapoport Y, et al. The prevalence of *Demodex* blepharitis in US eye care clinic patients as determined by collarettes: a pathognomonic sign. *Clin Ophthalmol.* 2022;16:1153-1164. **3.** Saydah SH, Gerzoff, RB, Saaddine JB, Zhang X, Cotch MF. Eye care among US adults at high risk for vision loss in the United States in 2022 and 2017. *JAMA Ophthalmol.* 2020;138(5):479-489.

A close-up photograph of a person's eye. The eyelid is closed, and the text "WHEN YOU GET YOUR PATIENTS LOOKING DOWN" is written in black, bold, capital letters across the eyelid. The text is slightly curved to follow the shape of the eye. The skin around the eye is visible, showing some texture and fine lines.

WHEN YOU GET
YOUR PATIENTS
LOOKING DOWN

JEANETTE, real DB patient

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From the Editor

Welcome to Subspecialty Day 2022



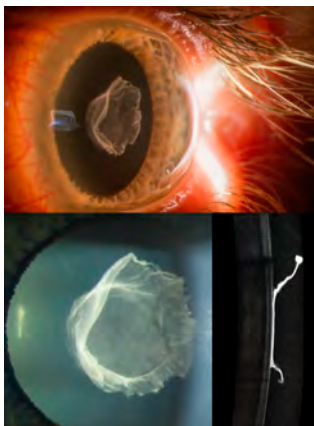
Take advantage of this year's Subspecialty Day lineup and explore disciplines other than your own. See the previews (pages 6-9) to find topics that might interest you.

The Opening Session is on Friday evening. Don't miss the Academy awards ceremony, the Michael F. Marmor Lecture in Ophthalmology and the Arts, and the Jackson Memorial Lecture. The Opening Session takes place 5:00-6:30 p.m., in Room E354.

For more meeting tips, look for the second edition of *AAO 2022 News* on Sunday and check your email each evening for *AAO 2022 Daily*, a round-up of news from Subspecialty Day and AAO 2022. The e-newsletter content can also be found at aao.org/eyenet/daily.

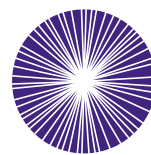
Ruth D. Williams, MD
Chief Medical Editor, *EyeNet Magazine*

Note: Program information was accurate at time of press. For updates, check aao.org/mobile.



On the Cover Fibrin Flower

Photo by Angela Chappell, CRA, OCT-C
Flinders Medical Centre
Ophthalmology Department
Bedford Park, Adelaide, South Australia



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information.

McCormick Place Convention Center

E353c Lakeside

Check-in and Lunch Pickup

12:30-12:45 p.m.

Lunches are provided
on a first-come basis.

Program

12:45-1:45 p.m.

These programs are non-CME and are developed independently by industry. They are not affiliated with the official program of AAO 2022 or Subspecialty Day. By attending a lunch, you may be subject to reporting under the Open Payments Program (Sunshine Act). Also, by attending a lunch, you consent to share your contact data, inclusive of National Provider ID, with the corporate partner.

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Program Directors Share Insights on Subspecialty Day From Cornea to Uveitis

To provide an inside look at Subspecialty Day, *EyeNet* contacted the program directors from each meeting and asked the following questions: 1) Which presentation will have broad appeal across subspecialties? 2) Which presentation might cause subspecialists to reconsider an area of their clinical practice? 3) Which presentation addresses particularly novel or exciting developments within the field? Here are those answers, accompanied by descriptions directly from the program directors.

Friday or Saturday? Most Subspecialty Day meetings are held on Friday. However, the Cornea and the Oculofacial Plastic Surgery Subspecialty Day meetings take place on Saturday only. As always, Retina Subspecialty Day is scheduled for both Friday and Saturday.

Access. Your Subspecialty Day registration includes the flexibility to float among Subspecialty Day meetings taking place the same day in Chicago. Also, you will get access to virtual Subspecialty Day content taking place the same day.

Note: Get the most current information online. All summaries were written in advance of Subspecialty Day. Be sure to check the Subspecialty Day schedule in the Mobile Meeting Guide, accessible at aao.org/mobile, for the most up-to-date information.

Of Interest Across Subspecialties

CORNEA

Room E354

Section IV: Noninfective Keratitis, moderated by Sonal S. Tuli, MD; and Christina R. Prescott, MD, PhD (Saturday, 1:02-2:18 p.m.)

This year's Cornea Subspecialty Day features exciting talks on anterior and posterior lamellar corneal transplantation. One of the highlights of this session is endothelial keratoplasty, with or without simultaneous cataract surgery.

Among the several topics that are extremely relevant to comprehensive ophthalmologists is the session on non-infectious keratitis, which includes management tips for common conditions such as filamentary keratitis as well as the increasing problem of systemic drug-induced keratopathy. One of the highlights of this session is the medical management of neurotrophic keratitis, which not only covers the use of nerve growth factor and autologous serum eyedrops but also describes novel treatment modalities that are in the pipeline. We have assembled a group of world-

renowned speakers for these sessions and anticipate a stimulating discussion on these topics.

—Vishal Jhanji, MD; Sonal S. Tuli, MD;
and Christina R. Prescott, MD, PhD.
Cornea program directors

GLAUCOMA

Grand Ballroom S100ab

Section II: MIGS Case-Based Section, moderated by Manjool M. Shah, MD; and Ramya N. Swamy, MD (Friday, 9:07-10:09 a.m.)

As MIGS have become established tools in the surgical management of glaucoma over the past decade, the 2022 Glaucoma Subspecialty Day aims to build on the basics. Experts who have vast experience with the different MIGS devices and procedures share their pearls on patient selection, surgical technique, and postoperative management. An update on MIGS coding provides valuable information to optimize billing, and a talk about MIGS in the pipeline highlights the future of the field. The session ends with an interactive case-based discussion that allows audience participation in addition to discussion with the expert panel. The information shared in this session is of value to comprehensive ophthalmologists and glaucoma specialists alike.

—Kelly Walton Muir, MD;
and Teresa C. Chen, MD.
Glaucoma program directors

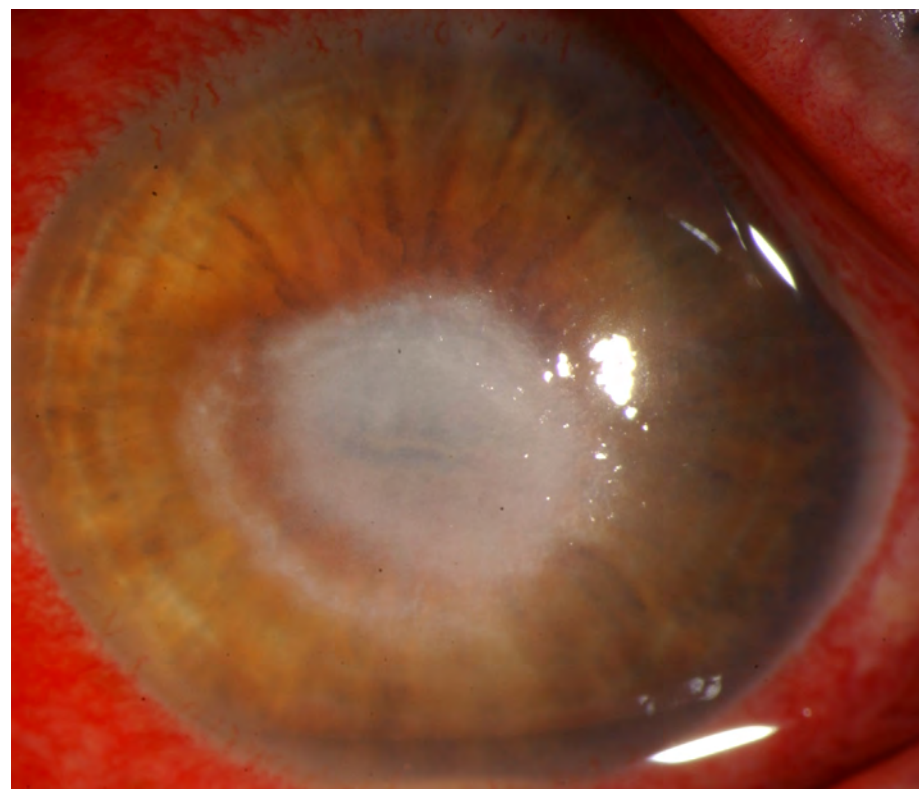
OCULOFACIAL PLASTIC SURGERY

Room E450

Section I: Fine Tuning Aesthetics, moderated by Cat Burkat, MD, FACS; and Thomas Edward Johnson, MD (Saturday, 8:03-9:06 a.m.)

Aesthetic treatments, especially botulinum toxins, fillers, and lasers, are offered by many ophthalmologists as well as physicians in other specialties. Facial and lower eyelid techniques using the latest toxins and fillers are giving patients non-surgical options to look younger and feel naturally rejuvenated. In addition, laser skin rejuvenation is another option with minimal downtime that often produces excellent results. This year's Subspecialty Day meeting highlights and provides updates on new techniques and ideas for minimally invasive enhancement of the lower eyelid. Also, pearls on preventing complications and addressing concerns of unhappy patients after aesthetic blepharoplasty are emphasized.

—Thomas E. Johnson, MD; and



CORNEA. The Cornea Subspecialty Day includes treatment updates for both infectious and noninfectious keratitis.

Cat Burkat, MD, FACS.
Oculofacial Plastic Surgery
program directors

PEDIATRIC OPHTHALMOLOGY

Room E450

Section V: Prohibition of Myopia Progression, moderated by Robert A. Clark, MD; and David G. Morrison, MD (Friday, 2:00-3:00 p.m.)

Myopia control is a hot topic in ophthalmology now, and ophthalmologists across subspecialties have patients asking about it. The information covered in this section is useful in all practices because it will update ophthalmologists on state-of-the-art myopia control, which will help them to advise their patients.

—David K. Wallace, MD, MPH; and
David G. Morrison, MD.
Pediatric Ophthalmology
program directors

REFRACTIVE SURGERY

Room S406a

Section V: Physician, Heal Thyself, moderated by Deepinder K. Dhaliwal, MD, LAC; and Michelle K. Rhee, MD (Friday, 1:48-2:24 p.m.)

The past two years have produced a significant change in the way all ophthalmologists practice. To combat the stress of the last two years, a new session on mindfulness, ergonomics, and self-heal-

ing is sure to offer some advice of interest to physicians across specialties. First, you'll learn about surgical posture and ergonomics that can save your neck and back. Next, you'll hear presentations on nutrition and advice for prolonging your surgical life. Finally, the session closes with an open discussion.

—Deepinder K. Dhaliwal, MD, LAC;
and Jodhbir S. Mehta, MBBS, PhD.
Refractive Surgery program directors

RETINA

Arie Crown

Section XV: Gene- and Cell-Based Therapies, moderated by David N. Zacks, MD, PhD (Saturday, 2:19-2:49 p.m.)

Advances in gene therapy have been led by ophthalmology. The first FDA-approved gene therapy highlighted the revolutionary impact of this approach but also illuminated the difficulties associated with gene targeting, surgical techniques, and other treatment-related adverse events. Allen C. Ho, MD, and Peter A. Campochiaro, MD, elaborate on the status of gene therapy targeting both the neovascular and atrophic forms of age-related macular degeneration. The impact of these novel strategies may establish a framework for a paradigm shift in the management of the most common sight-threatening disease in the United States. As with all novel therapies, con-

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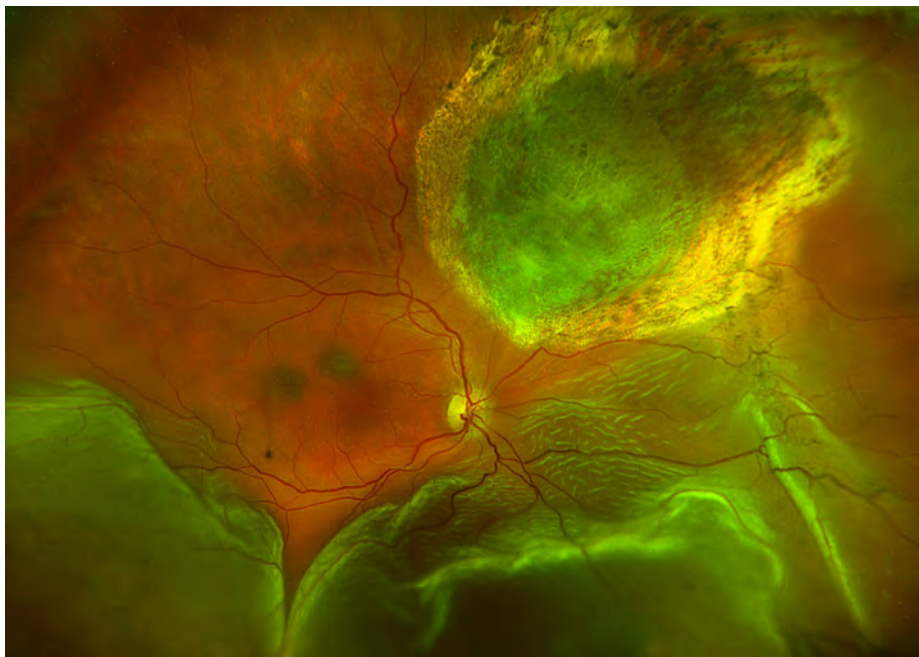
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RETINA. Retina Subspecialty Day features updates on retinal imaging, diagnostic evaluation, and advanced vitreoretinal surgical approaches for complex retinal disease.

cerns about treatment-associated complications, cost of therapy, approach to delivery (office- versus OR-based care), along with potentially unique issues associated with long-term alterations to the genetic milieu of the treated eye, will require novel approaches to patient care and follow-up.

—Srinivas R. Sadda, MD; and
Timothy G. Murray, MD, MBA.
Retina program directors

UVEITIS

Room E350

Section I: Basics, moderated by Russell W. Read, MD, PhD (Friday, 8:05-9:05 a.m.)

Regardless of subspecialty, all ophthalmologists will eventually need to manage a uveitis patient. The 2022 Uveitis Subspecialty Day's opening session covers the basics of diagnosing and managing the uveitis patient. Beginning with an overview of the epidemiology of disease by Eric L. Crowell, MD, the session also covers how to approach the uveitis patient by Ramana S. Moorthy, MD; don't-miss diagnoses by Arthi Ganesh Venkat, MD; laboratory testing by Lyndell Lim, MD, PhD; ocular imaging in uveitis by Marion Ronit Munk, MD, PhD; and it concludes with the effect of health disparities on uveitis patients, presented by Grace A. Levy-Clarke, MD. This not-to-be-missed session provides valuable insight on taking care of these complex patients.

—Russell W. Read, MD, PhD; and
Lucia Sobrin, MD.
Uveitis program directors

Clinical Practices to Reconsider

CORNEA

Room E354

Recalcitrant Mycotic Keratitis, presented by Lauren Jeang, MD (Saturday, 10:52-11:00 a.m.)

Fungal keratitis is often a therapeutic challenge due to poor penetration and efficacy of topical antifungal agents, resulting in recalcitrant disease and high risk of needing therapeutic corneal transplantation. In addition to describing the traditional topical and systemic options, the discussion includes novel approaches to managing keratomycosis, including adjunctive procedures such as intrastromal and intracameral antifungals, drug-eluting and drug reservoir contact lenses, and the current status of cross-linking for this condition, among others. This session provides additional tools to cornea specialists who manage this complex condition, allowing them to evaluate and discuss the various therapeutic options with patients. We hope that these tools and information will decrease the need to take a patient not responding to therapy to the OR for an urgent corneal transplant.

—Vishal Jhanji, MD; Sonal S. Tuli, MD; and Christina R. Prescott, MD, PhD.
Cornea program directors

GLAUCOMA

Grand Ballroom S100ab

Section I: Imaging/Diagnostics/Visual Fields, moderated by Christopher A. Girkin, MD; and Luis E. Vazquez, MD (Friday, 8:11-9:07 a.m.)

Recent advances in OCT and visual field strategies have significantly improved management of glaucoma. This year, we have put together a great educational session on glaucoma imaging and diagnostics for the Glaucoma Subspecialty Day. A number of experts in the field cover the latest on glaucoma OCT with different platforms, new visual field testing strategies, and use of OCT angiography in glaucoma management. Challenging clinical cases are discussed to show how emerging concepts are put into practice. Speakers share perspectives, tips, and

pearls to help participants interpret OCT and visual field information to diagnose glaucoma and detect disease progression.

We aim to show how OCT improves our ability to detect early glaucoma and, in particular, how OCT allows us to discriminate normal anatomical variants, such as myopia, from true glaucomatous loss. This distinction is critical for clinical management of glaucoma suspects and the clinician's decision to treat or monitor patients. We also discuss how to use and interpret OCT progression analyses and how macular OCT complements retinal nerve fiber layer scans in detecting disease progression. A forum on clinical cases allows panelists to share their views on how to recognize change and choose appropriate intervention strategies. New visual field strategies aimed at improving clinic efficiency without compromising accuracy are discussed and compared to current strategies.

—Kelly Walton Muir, MD;
and Teresa C. Chen, MD.
Glaucoma program directors

OCULOFACIAL PLASTIC SURGERY

Room E450

Section III: Bass-ics and Improvisation in Ptosis Surgery, moderated by Cat Burkat, MD, FACS; and Thomas Edward Johnson, MD (Saturday, 10:25-11:40 a.m.)

If ptosis were easy to correct, there would not be such a variety of techniques to address this common oculoplastic surgery problem. We have devoted an entire session of our Subspecialty Day meeting to discuss ptosis, both congenital and adult. Specialists describe both external and internal ptosis surgery, as well as a newer technique to perform the frontalis sling, the frontalis muscle advancement. The role of tarsectomy, a previously rarely performed surgical adjunct, will be debated as well. Innovative variations on conjunctival Müller muscle resection surgery are described by two experts in this popular procedure. Interesting back-and-forth discussions should prove to be quite enlightening.

—Thomas E. Johnson, MD; and
Cat Burkat, MD, FACS.
Oculofacial Plastic Surgery
program directors

PEDIATRIC OPHTHALMOLOGY

Room E450

Section I: The Untouchables—Are Good Results Possible With Less Surgery? moderated by David K. Coats, MD; and David G. Morrison, MD (Friday, 8:02-9:32 a.m.)

In this section, several experts compare two different surgical approaches to the same problem. One approach is simpler and involves less surgery. The other is

more complicated and may give better results—or, it may not. Both sides will be presented and defended.

An example is Esotropic Duane syndrome, for which the surgeon could pursue a strategy of recessing the medial rectus muscle on the affected eye. Or, instead, they could work on the contralateral eye in an attempt to match the duction deficit as much as possible.

This section aims to affect outcomes by influencing the surgical approaches that attendees pursue in similar cases in the future.

—David K. Wallace, MD, MPH; and
David G. Morrison, MD.
Pediatric Ophthalmology
program directors

REFRACTIVE SURGERY

Room S406a

Section I: Refractive Surgery in the New Era, moderated by Nicole R. Fram, MD; and William B. Trattler, MD (Friday, 8:05-9:02 a.m.)

This year, the theme of the Refractive Surgery Subspecialty Day is "Refractive Surgery in the New Age." The "new age" is the era in which ophthalmologists have learned to live with the COVID-19 virus instead of shutting down practices. This session in particular focuses on the learnings of this period. It includes presentations on virtual consultations, custom treatments, and transitioning to implantable contact lenses.

—Deepinder K. Dhaliwal, MD, LAc;
and Jodhbir S. Mehta, MBBS, PhD.
Refractive Surgery program directors

RETINA

Arie Crown

The Port Delivery System Will Be My Preferred Treatment for Neovascular AMD Patients Requiring Frequent Therapy, presented by Caroline R. Bauman, MD (Friday, 2:29-2:32 p.m.)
Longer-Acting VEGF Agents Will Be My Preferred Treatment for Neovascular AMD Patients Requiring Frequent Therapy, presented by Dante Pieramici, MD (Friday, 2:32-2:35 p.m.)

Intravitreal injection therapy is the most common surgical procedure in the United States. Anti-VEGF treatment has maintained visual function and anatomic stability for a wide spectrum of macular diseases but confers a significant burden on the patient, the patient's family/caregivers, and treating physicians. Thus, there has been a major clinical research focus on developing strategies to reduce treatment burden without sacrificing vision. Two novel FDA-cleared approaches, targeting this goal, may offer opportunities to reduce treatment burden. One uses a surgically implanted reservoir to enable extended release of anti-VEGF therapy, and the other is a novel bispecific molecule that inhibits both VEGF

and angiopoietin-2 to enhance action and durability. In our “2022 Debates,” Caroline R. Bauman, MD, and Dante Pieramici, MD, highlight the impact on our clinical practices in light of the unique advantages of and concerns about these new approaches.

—Srinivas R. Sadda, MD; and
Timothy G. Murray, MD, MBA.
Retina program directors

UVEITIS

Room E350

Perioperative Management of the Uveitis Patient, presented by Caroline L. Minkus, MD (Friday, 3:10-3:20 p.m.)

Whether or not an ophthalmologist plans to be the primary caretaker of a uveitis patient's inflammation, these patients often require surgery for the complications of the condition, whether it be cataract, glaucoma, corneal, or retinal surgery. And when this need arises, it is common that the surgeon is not a uveitis subspecialist. Proper management of medications before, during, and after surgery is critical to a successful outcome. During the afternoon session on “Complications and Surgery in Uveitis,” Caroline L. Minkus, MD, presents “Perioperative Management of the Uveitis Patient.” From topical to periocular to systemic medications, this presentation outlines current best practices in managing medications for uveitis patients undergoing ophthalmic surgery.

—Russell W. Read, MD, PhD; and
Lucia Sobrin, MD.
Uveitis program directors

Exciting Developments

CORNEA

Room E354

Section VI: Exciting Discoveries in the Corneal World, moderated by Vishal Jhanji, MD, FRCOphth; and Christina R. Prescott, MD, PhD (Saturday, 3:55-5:00 p.m.)

It is such an exciting time to be a cornea specialist, and we are pleased to share the latest advances in our field. Some of the highlights of the program include new diagnostics and treatments for ectasia, the latest in selective corneal transplantation, and treatment updates for both infectious and noninfectious keratitis. The final session of the day focuses on new and upcoming treatments and technologies. The “Exciting Discoveries in the Corneal World” session highlights hot topics, including corneal regeneration, deep learning and artificial intelligence, novel dry eye treatments, corneal graft delivery devices, and updates on treatment for cystinosis and neurotrophic corneas.

—Vishal Jhanji, MD; Sonal S. Tuli, MD; and Christina R. Prescott, MD, PhD.
Cornea program directors

GLAUCOMA

Grand Ballroom S100ab

Section V: Hot Topics in Glaucoma, moderated by Teresa C. Chen, MD; and Luis E. Vazquez, MD (Friday, 2:24-3:27 p.m.)

This year's Glaucoma Subspecialty Day has a session titled “Hot Topics in Glaucoma,” which summarizes the best research presented at the 2022 American Glaucoma Society Meeting. Six lectures were selected to cover the latest work on MIGS and glaucoma surgery, clinical trials, artificial intelligence, findings from the IRIS (Intelligent Research in Sight) Registry, telehealth and remote monitoring of glaucoma, and genetics. We are very excited about this year's program.

—Kelly Walton Muir, MD;
and Teresa C. Chen, MD.
Glaucoma program directors

OCULOFACIAL PLASTIC SURGERY

Room E450

Section V: Trumpeting in a New Era in the Management of Thyroid Eye Disease, moderated by Keith D. Carter, MD, FACS; and Andrea N. Kossler, MD (Saturday, 1:51-2:54 p.m.)

This year's Oculofacial Plastic Surgery Subspecialty Day meeting highlights new biologic treatments in the management of periocular tumors as well as thyroid eye disease. Immune checkpoint inhibitors and hedgehog pathway inhibitors are providing effective therapies for extensive and aggressive periocular squamous and basal cell carcinomas. In addition, intracarotid chemotherapy for adenoid cystic carcinoma of the lacrimal gland is improving the prognosis for patients with this difficult cancer. New biologics are also being employed in certain stages of thyroid eye disease and improving proptosis, strabismus, and inflammatory signs, as well as reversing many of the changes caused by this autoimmune syndrome.

—Thomas E. Johnson, MD; and
Cat Burkat, MD, FACS.
Oculofacial Plastic Surgery program directors



OCULOFACIAL PLASTIC SURGERY. This year's Oculofacial Plastic Surgery Subspecialty Day includes a session devoted to ptosis.

PEDIATRIC OPHTHALMOLOGY

Room E450

Section VI: Top Secret Tips for Pediatric Ophthalmologists, moderated by David K. Coats, MD; and Amy K. Hutchinson, MD (Friday, 3:30-4:15 p.m.)

In this section, 13 pediatric experts share some of their best tips on caring for children with eye diseases, based on decades of experience in the field. Speakers include (in this order) Evelyn A. Paysse, MD; David I. Silbert, MD; Virginia Miraldi Utz, MD; Sharon F. Freedman, MD; Meghan S. Flemmons, MD; Richard C. Allen, MD, PhD; Nandini G. Gandhi, MD; Joseph L. Demer, MD, PhD; Sylvia R. Kodsi, MD; Irene H. Ludwig, MD; Deborah K. VanderVeen, MD; Ramesh Kekunnaya, MD, FRCS; and David K. Coats, MD.

—David K. Wallace, MD, MPH; and
David G. Morrison, MD.
Pediatric Ophthalmology program directors

REFRACTIVE SURGERY

Room S406a

Section II: What's New for Me in 2022, moderated by Jodhbir S. Mehta, MBBS, PhD; and Bonnie An Henderson, MD (Friday, 9:02-9:57 a.m.)

This session focuses on recent innovations and covers new refractive technologies that became available in 2022 (or will be available soon).

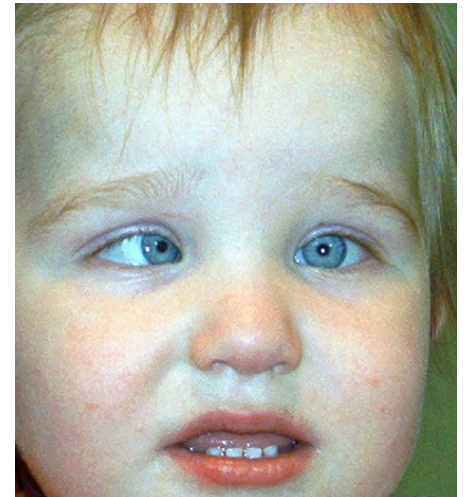
Presentations include Expanding Indications for Presbyopia-Correcting IOLs; Corneal Allogenic Intrastromal Ring Segments: Where Are We Now?; and Phakic IOLs: New Indications, New Sizing Techniques.

—Deepinder K. Dhaliwal, MD, LAC;
and Jodhbir S. Mehta, MBBS, PhD.
Refractive Surgery program directors

RETINA

Arie Crown

Section XVI: Artificial Intelligence, presented by Aaron Y. Lee, MD; Tien Yin Wong, MD; Justis P. Ehlers, MD; Srinivas R. Sadda, MD; Ursula M. Schmidt-Erfurth, MD; and Michael F. Chiang, MD (Saturday, 2:49-3:25 p.m.)



PEDIATRIC OPHTHALMOLOGY. Are good results possible with less surgery? Find out at this year's Pediatric Ophthalmology Subspecialty Day.

Artificial intelligence (AI) is likely to play a key role in the field of retinal disease. Recent advances have highlighted the ability of AI to determine the risk of cardiovascular and central nervous system disease by evaluating retinal images. Advances in retinal imaging are ideal for AI evaluation and may revolutionize the approach to both patient screening and therapy. Challenges remain in the advancement of AI in medicine, including validation, platform specificity, and real-world deployment, as well as determining the ideal role for AI within our health care framework. Tien Yin Wong, MD, and Srinivas R. Sadda, MD, present the evolving face of AI in ophthalmology and its impact on clinical care in the setting of an aging and expanding population.

—Srinivas R. Sadda, MD; and
Timothy G. Murray, MD, MBA.
Retina program directors

UVEITIS

Room E350

Health Disparities in Uveitis, presented by Grace A. Levy-Clarke, MD (Friday, 8:55-9:05 a.m.)

The COVID-19 pandemic highlighted an all-too-familiar topic: that serious, significant disparities affect all fields of medicine. This is particularly true in uveitis, perhaps more than in some other ophthalmic subspecialties, as many ocular inflammatory diseases and systemic inflammatory diseases with ocular manifestations are more prevalent in minority populations. In the opening session, “Basics,” Grace Levy-Clarke, MD, discusses the specifics of health disparities in uveitis and potential strategies for mitigation. Although not every aspect of this important topic can be covered in 10 minutes, the planning committee hopes that this presentation begins a conversation that ultimately leads to an improvement in outcomes for all patients.

—Russell W. Read, MD, PhD; and
Lucia Sobrin, MD.
Uveitis program directors

A Look at a Legend

2022 Academy Laureate Morton F. Goldberg, MD

The Laureate Award is the Academy's highest honor, recognizing an individual who has made an extraordinary and lasting contribution to the profession of ophthalmology. This year's recipient is Morton F. Goldberg, MD, Joseph Green Professor of Ophthalmology at the Wilmer Eye Institute in Baltimore. Dr. Goldberg is one of the most influential ophthalmologists of the 20th century by virtue of his intellectual contributions, his mentorship of hundreds of residents and fellows, his role in a number of ophthalmic organizations, and his visionary leadership of two leading departments.

Earlier this year, Dr. Goldberg was the focus of a profile in *Scope*, slightly adapted and reprinted here with permission. For the original article, see aao.org/senior-ophthalmologists/scope/article/morton-f-goldberg-md.

Looking Back: Marine Biology or Medical Practice?

Morton ("Mort") Falk Goldberg was born in Lawrence, Massachusetts, in 1937. The only child of Helen Janet Falk (also born in Lawrence, though her family had immigrated from Vilna, Lithuania) and Maurice Goldberg (who also immigrated from a region of Lithuania that is now part of Belarus), Dr. Goldberg's family moved to Amesbury, a small town near the coast, when Mort was 3 years old.

During the summer in high school and college, Mort served as an ocean beach lifeguard. The 15-mile-long beach presented big rolling waves, a strong undertow, and 60-degree F water temperature. Each summer morning, Mort completed a one-mile swim, and on several occasions, he saved swimmers from drowning. From these experiences, Mort's interest in scuba diving, marine biology, and water life had their origins.

Although Mort considered becoming a marine biologist, exposure to his father's general medical practice fostered an interest in medicine. Maurice Goldberg's office was based in their home. Mort made house calls with his father; through this experience, Mort was exposed to the full spectrum of society. And apart from that brief contemplation of marine biology, Mort never seriously considered anything other than a career in medicine.

Educational Journey

Mort was a precocious student (transitioning directly from kindergarten to

second grade), and he was the valedictorian of his public high school class. His love of English led inevitably to his love of writing: he served as the editor of the senior class yearbook—and as a high school student, he was a reporter for the *Amesbury Daily News* and wrote a weekly bylined column, "Report from Mort," which featured interviews with various leaders at the high school. Mort explained that he was paid 25 cents/inch, so he quoted the interviewees at length!

In high school, Mort was fortunate to have outstanding teachers in Latin, English, and biology, all of whom were graduates of Harvard and wrote letters in support of his college application. Although accepted at Yale, Cornell, Dartmouth, and Brandeis, Mort received a scholarship at Harvard, which was a source of great pleasure as well as pride for his parents.

At Harvard, Mort was a biology major. Once again, he was inspired by his teachers, some of whom were Nobel laureates—e.g., James Watson and George Wald—and all of whom were open to speaking with undergraduates and committed to their education. After his sophomore year, Mort spent the summer at Woods Hole, where he indulged his fascination with marine invertebrates. This knowledge later led to some apt descriptions of ophthalmic clinical findings, including the "brittlestar" description of the posterior tunica vasculosa lentis present in patients with persistent fetal vasculature and the "sea fan" description of retinal neovascularization in sickle cell retinopathy. After his third year, he spent the summer at the Jackson Laboratory in Bar Harbor, Maine, where he learned about genetics.

Mort loved all of his courses at Harvard Medical School except for psychiatry, which is somewhat surprising in view of the scope of responsibilities he eventually had as a department chair. Nonetheless, the subject that held his attention most deeply was pathology, possibly because of the influence of yet another mentor, Arthur Hertig, a noted gynecological pathologist who studied blood vessels in



PATIENT CARE. Dr. Goldberg during his second year of residency at the Wilmer Eye Institute.

uterine development and blood vessel physiology.

When Mort sought to complete an elective with Dr. Hertig, Hertig advised him to study with David Cogan instead, explaining that Dr. Cogan was a better pathologist! As it happened, Dr. Cogan was developing the trypsin digest technique with Toichiro Kuwabara at that time. This pioneering work immediately engaged Mort's interest, afforded him an opportunity to work closely with Dr. Cogan, and, most importantly, enabled him to know Dr. Cogan well. Dr. Cogan was brilliant, humble, honest, and charming. It is because of Dr. Cogan's mentorship and example that, after graduation, Mort chose to pursue a career in ophthalmology.

Welcome to Wilmer

The story of how Mort came to be a Wilmer resident will not surprise and may amuse those who are familiar with

the past and current resident selection process. After explaining to Dr. Cogan that he wanted to be a resident at the Massachusetts Eye and Ear Infirmary, Dr. Cogan advised Mort to go to Wilmer instead.

During this conversation, Dr. Cogan called A. Edward Maumenee, the chair of Wilmer at the time, whom Dr. Cogan knew well. He suggested that Dr. Maumenee accept Mort as a resident. Dr. Maumenee agreed on the spot—with the proviso that Dr. Cogan accept a Hopkins medical student whom Dr. Maumenee was not going to take as

a resident at Wilmer. At that propitious moment, Mort literally had never heard of the Johns Hopkins Hospital, Wilmer, or Dr. Maumenee.

While Mort was a Wilmer resident, there were only four full-time faculty members: Drs. Maumenee, Frank Walsh, David Knox, and James Duke. Each was inspiring in a different way. Dr. Knox was like a "big brother" to Dr. Goldberg. Dr. Duke fostered Dr. Goldberg's ongoing interest in eye pathology. Dr. Walsh, arguably the greatest neuro-ophthalmologist in the world, had a teaching style that reflected simultaneously his respect for the residents, his concern for his patients, his great humility, and his awesome fund of knowledge and clinical experience. The quality of the Saturday morning conferences, run by Dr. Walsh, was legendary and had a great impact on Dr. Goldberg. When Dr. Goldberg assumed responsibility as the chair of Wilmer, he never failed to attend resident teaching conferences,

and he conducted them masterfully, with evident pleasure.

The primary role model in Mort's life at that point and for many years thereafter, though, was Dr. Maumenee. Dr. Maumenee was an excellent and innovative surgeon, had an encyclopedic fund of knowledge, set high standards for everyone (including himself), was charismatic, and was an excellent fund raiser, an



PRESIDENTIAL VISIT. Dr. Goldberg with President George W. Bush at the Wilmer Eye Institute, approximately two weeks before Sept. 11, 2001.

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activity that at the time was not held in high regard by many faculty members at Hopkins. In short, Dr. Maumenee was the exemplar of a department chair, and he had a profound influence on Dr. Goldberg's values concerning scholarship, clinical excellence, and leadership.

As a resident, Mort continued to be academically precocious. He described, for example, fundus anomalies in the Waardenburg syndrome and corneal findings in mucopolysaccharidoses such as the Hunter syndrome. In fact, his pioneering work describing sickle cell retinopathy was done when he was a second-year resident! He explained that a number of scleral buckle procedures for retinal detachment in patients with hemoglobin sickle cell (HbSC) disease had resulted in phthisis (due to anterior segment ischemia).

During a trip to the Bahamas in which he was scuba diving at 70 feet, he saw enormous sessile colonial soft coral, *Gorgonia flabellum*, also known in the vernacular as "sea fan." After returning from the trip, he examined fundus photos of retinal neovascularization in patients with sickle cell retinopathy and recognized the morphological similarity. As patients with HbSC disease and vitreous hemorrhage were admitted, Dr. Goldberg then began to seek out and do fundus drawings of these patients at night. He identified retinal neovascularization on fundus exams and later examined the patients with Robert Welch, one of two principal retinal surgeons at Wilmer (the other being Leslie Harrell Pierce).

Mort mentioned to Dr. Welch the morphological similarity of the retinal new vessels in patients with HbSC disease and sea fans. Dr. Welch agreed immediately and then brought to work a preserved *Gorgonia* specimen of his own to show Mort! It is remarkable that the characterization of HbSC retinopathy pathogenesis, developed by Mort more than 50 years ago, continues to be regarded as accurate. This classification was the first to use fluorescein angiography as a basis for defining the different stages of a retinal disease.

Mort chose to pursue fellowship training under the tutelage of Victor McKusick, a professor at Hopkins and the father of medical genetics. When asked why he did not pursue additional surgical training, Mort explained that his surgical anterior segment and retina training during residency were robust. These experiences—and Mort's growing familiarity with Dr. McKusick's textbooks on medical genetics—led him to believe that ophthalmic genetics was the future. Recent treatments of blinding retinal disease with gene therapy have validated that perception.

Heading to Chicago

At the completion of fellowship training, Mort was offered a lucrative private prac-



TOUCHSTONE. Dr. Goldberg and his wife, Myrna Goldberg, MSW, pictured in 2000.

tice job in Miami, where he wanted to live. His love of writing, however, rendered complex what otherwise could have been a simple choice. Dr. Maumenee offered him a position on the faculty at Wilmer (for substantially less money) and even identified what is now known as the Wilmer Portrait Room as Mort's office.

While contemplating these options, Mort also was offered several chair positions, the most attractive of which was in Chicago. Discussing with Dr. Maumenee the decision to turn down the job at Wilmer, Dr. Maumenee said, "Don't you want to tell other people what to do?" So, at the age of 32, Mort became professor and chair of ophthalmology at the University of Illinois College of Medicine in Chicago, then the youngest chairman of ophthalmology in the United States.

Mort spent what he regards as 19 of the most productive years of his life at the University of Illinois. He recruited full-time staff, established a nationally ranked research program, raised the funds to build a research building, established a chief resident position in a program that trained 32 ophthalmology residents annually, and established teaching rounds. He recruited highly influential faculty members to his program (such as Gholam Peyman and Mark Tso) and trained some of the most important ophthalmologists of my generation (e.g., Lee Jampol). Mort explained that when confronted with a problem, he would ask himself, "What would Dr. Maumenee do?"

Returning to Baltimore

Mort returned to Baltimore in 1989 as director of Wilmer. He served as an outstanding role model for the residents: he treated us (and our patients) with courtesy and respect, and this helped us to respect ourselves and to aspire to excellence as physicians.

Mort was a remarkable listener who made me, as a chief resident, feel that he really cared about us as people and about the world in which we, as residents, lived.

He had a great sense of humor and generosity, which enabled us to really enjoy professor's rounds, which he conducted with disciplined regularity. I suspect that he even let us win bets on clinical unknowns so that he could enjoy the pleasure of our company outside of work at local restaurants. Mort also gave wise counsel and never put his own interests ahead of those of us who sought his guidance. He was like a wonderful father, never allowing his larger concerns to intrude into our lives. It seemed to me that we, the residents, were the center of his universe.

However, institutional excellence is not due to any single individual. It is the fruit of the labor of many talented, dedicated individuals, as with an orchestra. At Wilmer, Mort was a remarkable conductor of this ensemble of committed individuals. Wilmer was ranked the No. 1 ophthalmology program in the United States in *US News and World Report* for 12 of his 14 years as director. Following the example of his mentors, Mort was self-sacrificing and always gave credit to his organization and deflected it from himself. At a professional workshop, Mort was asked to identify the number of endowed chairs at Wilmer (13 at the time). It was the largest number at any department in the United States, but one could barely hear his voice as he responded modestly. Most importantly, Mort was a servant leader. He knew his job was to serve everyone—the residents, the faculty, the staff, the donors, and the patients.

Mort's stewardship of the Wilmer Eye Institute was extraordinary. He increased the full-time faculty from 64 to

132, increased the number of endowed chairs from three to 20, increased the number of outpatient visits from 58,000 to 120,000 a year, increased the annual operating budget from \$27 million to more than \$60 million, and increased the endowment from \$21 million to \$110 million. He recognized the need to expand Wilmer's research infrastructure and so secured the land and initiated the fundraising effort that led to the construction of the Clarice and Robert Smith building, a freestanding eye research and surgery center. In addition, he spearheaded a renovation of all the major floors and the library of the Wilmer Institute (taking care to keep the portrait room!) and the addition of two new floors to the preexisting Maumenee building. But the legacy that he left at the close of his tenure—and that has truly helped to keep Wilmer great—is not the buildings or the endowment. It is the values that he sought to instill in each of us.

Guiding Light

Mort met his wife, Myrna Davidov, at a beach party on the Severn River hosted by Charles Iliff, a prominent oculoplastic surgeon and member of the volunteer Wilmer faculty. Mort was a first-year resident at the time, and Myrna was a social worker at the Johns Hopkins Hospital.

Their union has been blessed with two children, Matthew Falk Goldberg (lawyer, age 48) and Michael Falk Goldberg (chief of neuroradiology at Allegheny Medical Center and associate professor at Drexel University, age 45). Matthew and Michael married wisely, and they and their wives have produced four grandsons, a source of great joy in Mort's and Myrna's lives. Myrna is an intelligent, perceptive, and charming woman who not only created a loving home environment but also served as a source of wise counsel and support.

"I have never made any decision of consequence without her approval," Mort said.

PROFESSIONAL ACHIEVEMENTS

Dr. Goldberg's professional achievements span myriad leadership positions as well as multiple accolades and contributions to ophthalmic knowledge.

As the director and William Holland Wilmer Professor of the Wilmer Ophthalmological Institute of the Johns Hopkins University School of Medicine (1989 to 2003), he also found time to be president of several organizations—the Macula Society, the Association for Research in Vision and Ophthalmology (ARVO), and the Association of University Professors of Ophthalmology—and editor of *Archives of Ophthalmology* (now known as *JAMA Ophthalmology*).

His numerous awards and honors include membership in the Institute of Medicine, the Howe Medal of the American Ophthalmological Society, the Ida Mann Medal of Oxford University, the Isaac Michaelson Medal of the Israel Academy of Sciences and Humanities, the Weisenfeld Prize of ARVO, and the Arnall Patz Medal of the Macula Society.

Moreover, Dr. Goldberg has contributed more than 600 papers to the literature and published 10 books on subjects from eye trauma to genetic and metabolic eye disease. And he continues to publish. A sample: reports on the use of ultra-widefield fundus photography for screening for sickle cell retinopathy (2022) and findings of torpedo-like lesions observed in patients with Gardner syndrome (2021).



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The Jackson Memorial Lecture Next-Generation Cornea Surgery

Gerrit R.J. Melles, MD, PhD, presents the 79th Jackson Memorial Lecture at the Opening Session of AAO 2022. Dr. Melles is a cornea specialist and founder of the Netherlands Institute for Innovative Ocular Surgery (NIIOS), which incorporates the Melles Cornea Clinic Rotterdam and the Amnitrans EyeBank Rotterdam. His clinical work focuses on the management of corneal disorders, and he continues to be actively involved in research and development of ophthalmic surgical techniques.

Dr. Melles said that he is honored to be chosen as this year's Jackson Memorial lecturer. He will address the next generation of corneal surgery, with a look at what he describes as "low-risk techniques, joy-stick practice management, and blockchain data processing."

Father of Corneal Grafts

In 1998, Dr. Melles reported on his invention of endothelial keratoplasty.¹ Since then, he has been a pioneering force in the field with a number of other cornea procedures, including DALK (deep anterior lamellar keratoplasty), DLEK (deep lamellar endothelial keratoplasty), DSEK (Descemet stripping endothelial keratoplasty), DMEK (Descemet membrane endothelial keratoplasty), DMET (Descemet membrane endothelial transfer), and Bowman layer transplantation.

Dr. Melles continues to focus on endothelial keratoplasty for endothelial disorders. He envisions DMEK as a potential "final" technique, "although we are still working on improvements, especially for more complex cases," he said.

His other primary area of investigation is keratoconus, which he is now attempting to manage with Bowman layer-only transplantation to eliminate most intraoperative and long-term complications associated with lamellar and/or penetrating keratoplasty.

A Commitment to Innovation

In addition to pioneering the revolution in corneal transplantation, Dr. Melles has developed several instruments and devices that enhance minimally invasive surgical techniques, such as VisionBlue and MembraneBlue (DORC).

Another area of interest involves the simplification of the ophthalmic infrastructure. In 2003, he developed the SurgiCube (SurgiCube International), a stand-alone surgical device that provides

sterile airflow in any clinical setting. Additionally, he is aiming to streamline postoperative care with the development of an e-device to filter out routine cases. This device would monitor such basic ophthalmic parameters as visual acuity, IOP, and biomicroscopy findings, thus potentially reducing the number of post-op consultations or other forms of screening.

Mentors at Home—and Abroad

Dr. Melles became familiar with ophthalmology by watching his father, who did his residency in a clinic that focused on challenges in strabismus surgery and later ran a strabismus surgery practice at their home. This offered Dr. Melles the opportunity to learn the "ins and outs of being a medical doctor."

Dr. Melles went on to receive his medical degree at the University of Leyden, The Netherlands. He then spent time at Sharp Cabrillo Hospital in San Diego, where he was a research fellow in the laboratory of one of his greatest mentors, Perry S. Binder, MD. According to Dr. Melles, Dr. Binder taught him more than he could learn during his entire residency. "I had the privilege of working in his laboratory, which held a huge number of corneal pathology specimens. It was conveniently located underneath the takeoff path of the San Diego International Airport, so any artifacts in our published material were to be attributed to the equipment bouncing through the laboratory."

Dr. Melles then completed his residency in ophthalmology at the University of Nijmegen, The Netherlands, where he completed a thesis on keratotomy incision dimensions and wound healing. He then pursued a fellowship in cornea and served as a staff member at the Rotterdam Eye Hospital and later founded NIIOS.

Dr. Melles is now a mentor himself, serving as a role model for many aspiring ophthalmologists. He offers some advice to young trainees: "The earlier you are in your career, the easier it is to visit and



FRIDAY NIGHT HIGHLIGHT. Dr. Melles delivers the Jackson Memorial Lecture (6:00-6:30 p.m.) during the Opening Session on Friday (5:00-6:30 p.m.) in Room E354.

connect without an agenda. If you have the opportunity, go abroad." He also encourages younger ophthalmologists to "keep in mind that nature is always right, while humans are most often wrong!"

Collaboration and Concerts

In addition to his ophthalmic research and practice, Dr. Melles also enjoys music composition and has written music for as long as he can remember.

And as it turns out, music and medicine have overlapped in his life: in 2009, Dr. Melles performed a bilateral DMEK for the first violinist of a German orchestra. Their mutual interest in classical music sparked a collaboration, which has led to several projects over the years.

Dr. Melles now serves as president and chairman for Melles Classical Music Foundation and organizes performances of his symphonic music a few times a year. "A composition is basically a big puzzle," he said, and he gives credit to the evolution of notation software, which makes "the painstaking task of writing every note down—as well as copying notes by hand for each instrument part—greatly simplified."

Honors in Ophthalmology

As one who has contributed to innovative research time and time again, Dr. Melles has received several awards, including the Hellen Keller Prize for Vision Research (2017) and the Bressler Prize in Vision Science (2020).

In addition, in 2019, he was the first ophthalmologist to receive the Tilanus Medal, a prestigious Dutch award given only once per decade. And although he says that he is "too much of an introvert" to consider himself to be in any hall of fame, Dr. Melles will undoubtedly leave a substantial legacy as an ophthalmic pioneer.

1 Melles GRJ et al. *Cornea*. 1998;17(6):618-626.

Selected Publications

Dr. Melles has published more than 200 clinical studies. Here is a representative selection, drawn from 2021 and 2022.

- Kocaba V et al. **Toward a paradigm shift in the therapeutic approach to Fuchs endothelial corneal dystrophy.** *JAMA Ophthalmol*. 2021;139(4):431-432.
- Parker JS et al. **DMEK without postoperative supine posturing.** *Cornea*. Published online Feb. 5, 2022.
- Melles GRJ. **Landmark study on Descemet stripping with endothelial keratoplasty: Where has it led us?** *J Cataract Refract Surg*. 2021;47(5):561-562.
- Miron A et al. **Endothelial cell viability after DMEK graft preparation.** *Curr Eye Res*. 2021;46(11):1621-1630.
- Spinozzi D et al. **New developments in corneal endothelial cell replacement.** *Acta Ophthalmol*. 2021;99(7):712-729.
- van der Star L et al. **First clinical experience with ophthalmic e-device for unaided patient self-examination during COVID-19 lockdown.** *Cornea*. 2022;41(3):353-358.
- van der Star L et al. **Long-term outcomes of Bowman layer inlay transplantation for the treatment of progressive keratoconus.** *Cornea*. Published online Oct. 6, 2021.
- Vasanthanathan K et al. **Misconceptions in DMEK surgery.** *Acta Ophthalmol*. Published online Oct. 14, 2021.
- Vasiliauskaite I et al. **Effect of six-month postoperative endothelial cell density on graft survival after Descemet membrane endothelial keratoplasty.** *Ophthalmology*. 2021;128(12):1689-1698.

BY NATASHA P. KESAV, MD.

Meet the 2022 Presidential Guests Dr. Wiggins' Mentors

Each year, the Academy president selects three individuals to be guests of honor at the annual meeting. Robert E. Wiggins Jr., MD, MHA, 2022 president, chose his guests for their roles in his early career and their contributions to the profession. Here, he details the specific reasons for each selection. Dr. Wiggins will recognize his Guests of Honor as well as the recipients of the 2022 Special Recognition Award and Distinguished Service Award. This happens at the Opening Session, which takes place on Friday from 5:00 to 6:30 p.m. in Room E354.

GUEST OF HONOR

Edward G. Buckley, MD

Who is Dr. Buckley? Ed Buckley is professor and chair of the Duke University department of ophthalmology. He also serves as vice chancellor for Duke-National University Singapore affairs and is vice dean of education at the Duke School of Medicine.

How did you meet him? My first rotation as a second-year ophthalmology resident was pediatric ophthalmology and strabismus. Ed was the attending physician. It was my first chance to perform surgery in the OR, an unforgettable rite of passage on the way to becoming an ophthalmologist. A few years ago, I ran across the note cards I made after that first surgery. The detail on those cards is a testament to the teaching of precision ophthalmic surgery by Dr. Buckley.

What do you admire most about him? His enthusiasm for the fields of pediatric ophthalmology and strabismus and neuro-ophthalmology was evident during my training and one of the main reasons for my decision to pursue a career in both.

Ed's best educational sessions were the live neuro-ophthalmology patient visits, which were teaching sessions in front of all the residents. Particularly memorable, more than 30 years later, was a patient with NLP vision who miraculously was demonstrated to have quite good vision by the end of the session. You never knew who was going to be called up to ask the patient a few questions or perform an exam, but you did know what question was coming next: "And what do you think might be the source of this patient's problems, *Doctor*?" No slides or textbooks could replicate these events.

In addition to being an excellent teacher, he's also a great lifelong student as evidenced by an extensive publication history and a career path that has taken



DR. BUCKLEY has an enthusiasm for pediatric ophthalmology and strabismus and neuro-ophthalmology that inspired Dr. Wiggins to pursue a career in those fields. Here, the pair is seen at the 2016 American Association for Pediatric Ophthalmology and Strabismus meeting.

him in many different directions. Such role models are important, as both pediatric specialists and neuro-ophthalmologists are in short supply these days!

What's the best advice he's given you? As an academic referral center, Duke was a magnet for complicated cases and unsolved mysteries. He taught me to be skeptical of everything, including prior diagnoses, findings, and tests. He would say, "*Doctor*, did you look at the head scan?" By starting at the beginning with the medical history and examination, Dr. Buckley helped me become a detective capable of solving tough cases.

Fun facts. Ed is a pretty good bowler. He would frequently invite the residents out to the bowling alley, which added to the camaraderie in our training program. Ed attended Duke as an undergraduate, as a medical student, and as a resident. He returned to Duke on the faculty and later became chairman of the ophthalmology department. He is an avid Duke basketball fan and bleeds dark blue!

GUEST OF HONOR

Edward K. Isbey Jr., MD

Who is Dr. Isbey? Ed Isbey is the (retired) founding partner of Asheville Eye Associates, where I am currently the physician administrator. He was a consulting professor of ophthalmology at Duke and trained many Duke ophthalmology residents in cataract surgery at the Asheville VA Medical Center. He is a former trustee of the board of the Academy.

How did you meet? I first met Ed as a third-year Duke resident during my ro-

tation at the Asheville VA Medical Center. We performed a lot of cataract surgery there, and much of it was taught by Ed. In fact, the ophthalmology clinic at the VA is named in his honor because he trained so many ophthalmologists there. One of the unique aspects of surgery day was meeting Ed for an early breakfast at the diner across the street from the VA. We'd be the first ones there at 6:00 a.m., and he'd often help open the restaurant and make coffee. Of course, I got to know Ed very well when I joined the practice he started. It has grown to 15 ophthalmologists, seven optometrists, and over 200 employees.

What do you admire most about him? Ed has always lived life to the fullest and had a great joy for the profession and his interactions with patients, staff, and colleagues. That enthusiasm was contagious. He's been a great mentor to me, particularly in helping with practice administration. I obtained my master's degree in health care administration after I began practice in Asheville, and he was of great assistance in helping me navigate the early years in my role as the practice's managing partner.

What's the best advice he's given you? Ed has given me a lot of advice over the years. Perhaps the best was to get involved in organized medicine. Ed

had found great joy in volunteering with the Academy in numerous positions. It was something I didn't think I had time to do, given a busy clinical practice, administrative responsibilities in the practice, and a family. It turned out to be a great way to meet and become friends with like-minded colleagues who were interested in improving the profession through work at a variety of professional associations.

Fun facts. Ed is an avid fly fisherman. He organized a couple of fly-fishing clubs for ophthalmologists. He also played football for Dartmouth and continues to be in great shape. Ed set a high bar at our organization; he practiced ophthalmology for 50 years and retired at age 80!



DR. STEINKULLER worked with Dr. Wiggins during the latter's fellowship at the Baylor College of Medicine in 1988.

GUEST OF HONOR

Paul G. Steinkuller, MD

Who is Dr. Steinkuller? Paul Steinkuller is a retired assistant professor of ophthalmology and former chair of pediatric ophthalmology at Texas Children's Hospital at the Baylor College of Medicine.

He has also worked in Africa extensively, including Kenya, Malawi, and Madagascar.

How did you meet him? Paul had just joined Gunter von Noorden, MD, in the department of pediatric ophthalmology and strabismus at Texas Children's Hospital and Cullen Eye Institute at the Baylor College of Medicine in 1988. I was fortunate to spend time with him, screening for ROP in a large maternity hospital in Houston, working in his clinic, and assisting in the OR when Dr. von Noorden was out.

What do you admire



DR. ISBEY has been a longtime mentor to Dr. Wiggins and encouraged him to get involved with the Academy. Here, they are pictured catching up at Dr. Isbey's granddaughter's wedding in 2019.



MINORITY OPHTHALMOLOGY MENTORING. At AAO 2022, Executive Committee chair Dr. Carter and Executive Committee member Dr. Olivier will accept the Special Recognition Award on behalf of the Minority Ophthalmology Mentoring program leadership and sponsors at AAO 2022. Pictured above, Dr. Olivier [center right] and Dr. Carter [far right] are seen with program chair Susan H. Forster, MD [far left], and program participant Princess Ogidi [center left] at Student Engagement Weekend in 2019.

most about him? Paul is an excellent clinician and humanitarian. He had just returned from working in Africa when I met him in 1988. He worked as the assistant project director with Kenya Rural Blindness Prevention Project from 1979 to 1983. He was also the project codirector with Malawi Blindness Prevention Project from 1984 to 1987. He was an outstanding teacher, who was honored with several teaching awards while at the Baylor College of Medicine. In 1998 he left Baylor for another stint overseas, this time in Madagascar, where he trained physicians in ophthalmology. He has been an inspiration to everyone he has worked with, and he exemplifies the true meaning of being a physician. Paul was awarded the Academy's Outstanding Humanitarian Service Award in 2007.

What's the best advice he's given you? I asked Paul about my career after I finished training, as I was debating between a career in academic and private practice medicine. He said, "you can be happy in any of the numerous practice options open to ophthalmologists; your greatest satisfaction, wherever you land, will come from your patients."

Fun fact. Paul has taken up golf in retirement. Fore!

SPECIAL RECOGNITION AWARD

This award recognizes individuals or organizations for outstanding service in a specific effort or cause that improves the quality of eye care. The recipient of the 2022 Special Recognition Award is the Minority Ophthalmology Mentoring program leadership and sponsors. On behalf of the group, Keith D. Carter, MD, FACS, and Mildred M.G. Olivier, MD, will accept the award. The Minority Ophthalmology Mentoring program is a partnership between the Academy and the Association of University Professors of Ophthalmology. The purpose of the program is to increase diversity in oph-

thalmology by helping underrepresented in medicine students become competitive ophthalmology residency applicants. Students receive one-on-one mentorship, valuable guidance in medical career planning, networking opportunities, and access to a variety of educational resources.

Learn more at aao.org/minority-mentoring.

DISTINGUISHED SERVICE AWARD

This award recognizes individuals or organizations for ongoing notable service to ophthalmology and the Academy. The recipient of the 2022 Distinguished Service Award is the COVID Dream Team: James Chodosh MD, MPH; Gary N. Holland, MD; Thomas L. Steinemann, MD; Sonal S. Tuli, MD; and Steven Yeh, MD.



Dr. Chodosh



Dr. Holland



Dr. Steinemann



Dr. Tuli



Dr. Yeh

2022 ISRS AWARDS

On Friday, the president of the International Society of Refractive Surgery (ISRS), Renato Ambrosio Jr., MD, presents some of the profession's most prestigious awards at Refractive Surgery Subspecialty Day 2022: Refractive Surgery in the New Age. Following are the awards and their recipients.



2022 José I. Barraquer Lecture and Award: Graham Barrett, MCCCh (Australia). The José I. Barraquer Lecture and Award honors a physician who has made significant contributions in the field of refractive surgery during his or her career. This individual exemplifies the character and scientific dedication of Dr. José I.

Barraquer—one of the founding fathers of refractive surgery, who innovated both in techniques and instrumentation. Attend the lecture.

2022 Annual Richard C. Troutman, MD, DSc (Hon) Prize: To Be Announced.

The Troutman Prize recognizes the scientific merit of a young author publishing in the *Journal of Refractive Surgery*. This prize honors Dr. Richard C. Troutman. As of press time, the award recipient had not been announced. Check the Mobile Meeting Guide for updates aao.org/mobile.



Casebeer Award: Deepinder K. Dhaliwal, MD (United States).

The Casebeer Award, named in honor of Dr. J. Charles Casebeer, recognizes an individual for his or her outstanding contributions to refractive surgery through nontraditional research and development activities.



Founders' Award: Soosan Jacob, MBBS, FRCS (India). The Founders' Award recognizes the vision and spirit of the Society's founders by honoring an ISRS member who has made extraordinary contributions to the growth and advancement of the Society and its mission.



Kritzinger Memorial Award: Sri Ganesh, MBBS, MS, DNB (India).

The Kritzinger Memorial Award recognizes an individual who embodies the clinical, educational, and investigative qualities of Dr. Michiel Kritzinger, who advanced the international practice of refractive surgery.



Lans Distinguished Award: Edward Manche, MD (United States).

The Lans Distinguished Award honors Dr. Leedert J. Lans. Given annually, this award recognizes an individual who has made innovative contributions to the field of refractive surgery, especially in the correction of astigmatism.



Lifetime Achievement Award: Sheraz M. Daya, MD (United Kingdom). The Lifetime Achievement Award honors an ISRS member who has made significant and internationally recognized contributions to the advancement of refractive surgery during his or her career.

Presidential Recognition Award: Michael W. Belin, MD (United States), and Liliana Werner, MD, PhD (United States). Dr. Ambrosio notes the following about his selections:



Dr. Belin is a world-class cornea and refractive surgeon. With significant contributions to the development of laser vision correction, including the understanding of elevation-based corneal tomography, Dr. Belin's contributions have made important impacts on the diagnosis, classification, staging, follow-up, and treatment of keratoconus and corneal ectatic diseases.



Dr. Werner is a Utah-based, Brazilian clinician-scientist ophthalmologist. Dr. Werner has become the international authority on the understanding of the interactions between ocular tissues and different intraocular lens designs, materials, and surface modifications. Her contributions are used to enhance the safety and efficiency of IOLs, impacting the lives of millions of patients around the world.



Waring Memorial Award for a Young Ophthalmologist: Riccardo Vinciguerra (Italy). The Waring Memorial Award for a Young Ophthalmologist recognizes an ISRS member early in his or her career who has demonstrated a commitment to ISRS, as well as a commitment to the promulgation of knowledge and the practice of refractive surgery. This award honors Dr. George O. Waring III for his commitment to the profession and ISRS.

To join ISRS, visit the Member Services desk at the Academy Resource Center (Booth 1408), where you can pick up an ISRS application form. You also can visit www.isrs.org.

Meeting Veterans' Top Tips, Part 1: Networking, Camaraderie, Dancing

Want to make the most of AAO 2022? Three meeting veterans share advice on how to take full advantage of your time at McCormick Place, and how to avoid some of the biggest mistakes that new attendees commonly make.

A glaucoma physician and two practice managers share their meeting do's and don'ts.

Dr. Brown—Learn How to Build Your Practice's Wealth While Preserving Your Own Health

Ninita H. Brown, MD, PhD, is a glaucoma specialist at Thomas Eye Group, a practice with 16 offices in the Atlanta region. She also serves as a member of the Young Ophthalmologist (YO) advocacy subcommittee.

My first annual meeting—2008. At my first meeting, in Atlanta, I was a medical student in search of Eve Higginbotham. I was applying for ophthalmology residency and knew that she would be there. She was extremely delightful—though probably a little overwhelmed by my desperation—and invited me to a breakfast of Black women ophthalmologists. There, I was greeted by my past classmate Vanessa Ngakeng, and we embraced like sisters. At that meeting, I also met Leslie Jones, who was able to secure a residency interview for me, and I actually matched at Howard University Hospital.

My tips for getting the most out of AAO 2022—don't sit through the meeting alone. Find people to sit with, sit at the front, ask questions, and network. The meeting also provides a chance for my colleagues and staff at Thomas Eye Group, a large practice, to learn together in one place and get new perspectives.

Events I look forward to—there are so many! My favorites are those sponsored by the YO Committee, Women in Ophthalmology (WIO), and the National Medical Association's Ophthalmology Section.

Sessions I recommend for young ophthalmologists—learn how to build your practice's wealth and preserve your health. When I was a new YO, with zero business knowledge, I quickly found the American Academy of Ophthalmic Exec-

utives (AAOE) program to be extremely helpful in teaching me everything from lean practice to accounting. I wasn't quite so quick to appreciate the importance of the wellness sessions. I didn't realize how many ophthalmologists have to deal with exhaustion and chronic pain. It's important to learn early on how to keep your mind and body healthy.

How I pamper my inner engineer—by visiting the exhibits. I was drawn to ophthalmology because of my background in biomedical engineering. We are a group of innovators, and I love to see all the new gadgets and imaging tools.

My guilty pleasure at the annual meeting—dancing the night away. My regular dance partners at the Orbital Gala are Cathy Cohen and Chasidy Singleton. I like to bid on things, but I never win. It is also fun to go to the YO Reception, which includes a dance party organized by the Academy's Neeshah

Azam and Gail Schmidt. You're likely to run into Janice Law and even get a glimpse of our Past President Tamara Fountain. Clearly, ophthalmologists like to have a good time!

Ms. Collins—Your Practice Will Reap the Benefits If You Invest Some Time in Networking

Stephanie Collins, COA, MBA, OCSR, is CEO at Austin Retina Associates in Austin, Texas. The retina-only practice has 10 physicians, 17 locations, and 200 employees. She serves the AAOE as its Board Chair and on its Content Committee.

My first annual meeting—2011. The Academy and AAOE are constantly trying to keep the meeting content relevant, so I enjoy



MS. COLLINS: "I love the camaraderie at the annual meeting. The people you meet here can help you throughout the year."



T'AI CHI WITH MOM. "My mother, Florida Brown [right], taught a class in the YO lounge at AAO 2019," said Dr. Brown (middle). "It was absolutely hilarious to see everyone do T'ai chi in business suits."

seeing all the new speakers and topics each year.

My tip for getting the most out of AAO 2022—go out and network. This is a great place to establish connections with people who are in the same specialty and experiencing many of the same challenges. Later on, when you are in a bind, they can provide you with great advice or a shoulder to lean on. We can truly relate to each other and turn to each other for ideas and tips to better serve our practices, staff, and patients.

Best lessons I've learned at AAOE presentations—anything to do with lean. At our practice, we have really embraced the lean approach to process improvement, and I love to hear how others are using it. They are utilizing the same lean tools that we use but applying them in different areas. [For more on lean, see aao.org/lean.]

Biggest rookie mistake—overbooking yourself! I have made the mistake of booking days of back-to-back classes, leaving no time to network and meet new people. We can only absorb so much information in a certain amount



MS. LOYACANO: "It is rewarding to network with fellow practice administrators and put faces to the names that I see on AAOE-Talk."

of time, so make sure you take a break.

Ms. Loyacano—Make Sure You Plan Your Agenda

Natalie Loyacano, COMT, ROUB, OSA, OCSR, (F)ATPO, is the practice administrator for a solo vitreoretinal clinic that has nine employees and two locations in Biloxi, Mississippi. She also is Secretary for Certification on the Board of Directors for the International Joint Commission on Allied Health Personnel in Ophthalmology.

My first annual meeting—1986. My first meeting was at New Orleans in 1986. Since then, I've been able to share my knowledge and experiences by participating on panels and presenting lectures.

My tip for getting the most out of AAO 2022—arrive with a plan. It is best to plan your day's agenda before you arrive at the convention center. If you don't, you may find yourself wandering. Know the courses that you want to attend and set aside a day for the exhibits.

Best lessons I've learned at AAOE presentations—too numerous to list! The work environment is constantly changing, which means I must keep up with the times, and the meeting gives me that platform to stay informed and educated. I always learn something new every time.

Guilty pleasure at annual meetings—the AAOE Lounge! Refreshments, foot massagers, and comfortable sofas in the AAOE Lounge (Room S104b, Level 1).

An Insider's Guide to Chicago

Want to make the most of your time in the Windy City? *EyeNet* Chief Medical Editor and Chicago local Ruth D. Williams, MD, shares her favorite places to explore, eat, shop, catch a show, and more.

Chicago is a spectacular city, especially in October when the weather is lovely, the buildings reflect the blue of the sky, and the autumn mood is pleasant. I've loved Chicago since I was a teenager when I stepped off the train (in October) and experienced its energy for the first time. Now, decades later, I'll share some of my favorite spots and things to do. Here is an insider's guide to America's best city.

Chicago Riverwalk

Once a polluted, smelly shipping channel, the cleaned-up Chicago River and the accompanying Riverwalk is now a thriving outdoor community that extends from the lake all the way to Wolf Point.

The mile-plus walkway has six coves that host outdoor musicians, a gelato shop, City Winery, a brewhouse, cafes, a Vietnam memorial, boat and kayak rentals, and a view of many iconic Chicago buildings. Art on the Mart is a video production that's projected onto the face of The Merchandise Mart in the evenings.

The Riverwalk is a great place for an early morning run or an evening stroll.

Outdoor Dining

While Chicago has always had great spaces for outdoor dining, the options multiplied during the pandemic, turning it into a city that eats, drinks, and lounges outside even when the weather is blustery.

One of my favorites is Beatnik on the River, a throwback to the Bohemian style of the 1950s with an outdoor terrace that faces the river, serving tapas-style food with flavors from just about everywhere. Another space that overlooks the river is the rooftop bar at LondonHouse. Piccolo Sogno is a popular Italian restaurant with a large outdoor patio, and another Italian restaurant, Pelago Ristorante, has more intimate, elegant patio seating in Streeter-ville.

The Randolph Restaurant Row now has several blocks cordoned off for outdoor seating. A few favorites include Leña Brava, Girl & the Goat, and Bar Siena.

Shop, Shop, Shop

Shopping on Michigan Avenue is glorious, and the favorites are especially enticing after two years of wearing scrubs. Saks Fifth Avenue, Neiman Marcus, Nike, Bloomingdale's, Tiffany's, and Ralph Lauren are all close to the iconic Water Tower, as is the consignment shop The RealReal. Cartier requires an appointment. The shops on Oak Street are more intimate and include Giorgio Armani, Prada, Chanel, Dolce & Gabbana, Escada, and Christian Louboutin.

Space 519 is a hidden boutique just a few blocks off Michigan Avenue where shoppers can also get lunch, pick up something in the bakery, or browse the curated collections while sipping a glass of wine. Another spot for lunch while shopping is the quiet and elegant restaurant in the back of the Ralph Lauren store. Have fun.

Nordstrom is a little closer to the river, and the beautiful Apple store is right on the river across from the famous Wrigley Building.

The Art Institute and The Field

There is no such thing as too many visits to The Art Institute or The Field Museum. I'll often spend less than an hour to stroll through a few rooms of The Art Institute when in the area for another purpose. The entrance on Michigan Avenue is flanked by the iconic lions, but the entrance to The Modern Wing on Monroe Street is breathtaking.

The Field Museum—locals call it The Field—is a destination. The Evolving Planet is a favorite permanent exhibition that moves visitors through 4.5 billion years of a changing Earth. A timeline ribbon on the floor designates the epoch associated with the fossils on display. See the skeleton of Sue, the 40-foot-long T. Rex, a giant sloth, and the Tully Monster. A visit to The Field is worth it simply to see the beautiful architecture as the building was part of the 1909 Burnham Plan for Chicago.

Other great Chicago museums include the Museum of Contemporary Art, the DuSable Museum of African American



EXPLORE CHICAGO. During your spare time, you can visit outdoor cafés and ice cream kiosks along the Chicago Riverwalk (left) or take in The Art Institute's (right) collection of almost 300,000 works.

History, and the Museum of Science and Industry. If you make the trip to Hyde Park, take in the remarkable museum at the Oriental Institute of the University of Chicago. The National Museum of Mexican Art is in Pilsen, another interesting Chicago neighborhood. Surrounding Kahlo: Works From the Permanent Collection is currently on display there.

Music

What kind of music do you like? Chicago has it all, and it's an adventure to experience a new genre. There's an advertisement at O'Hare that states, "no trip to Chicago is complete without a visit to the Lyric Opera." During AAO 2022, The Lyric presents the dramatic and melodic Verdi opera "Ernani" and the musical "Fiddler on the Roof." The opera hall is an opulent, gold-painted art deco space with a dramatic red curtain, and it contrasts with the cool, silvery, elegant hall of the Chicago Symphony Orchestra.

There is a myriad of options for jazz. I asked my jazz singer-songwriter friend for recommendations, and she sent me to Martyrs', a neighborhood club in north Lincoln Park, and Jazz Showcase, which opened in 1947. She also recommends Fitzgerald's in Berwyn, a half hour drive west from the city, and the ever-popular Green Mill.

Chicago has dozens of rock, punk, and indie clubs. City Winery on Randolph Street (not the one on the Riverwalk) is a good music venue, and don't forget Blue Chicago and B.L.U.E.S.

Theater

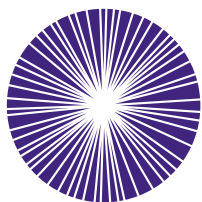
Chicago is a great town for theater. The theater district is just west of Millennium Park, where large theater houses include The Goodman. Chicago Shakespeare Theater is at Navy Pier, although during AAO 2022, the new musical "The Notebook" is playing instead of Shakespeare. There are also dozens of smaller theater companies with superb productions.

Foodie Favorites

The new and super hip foodie neighborhood is the Fulton Market district on the near west side, which is just blocks from the Randolph Street Restaurant Row. Fulton Market favorites include Aba, a Mediterranean tapas joint with a rooftop bar, Duck Duck Goat, Momotaro, and the uber cool cocktail bar, The Aviary. Gibsons Italia is close by and has more traditional fare along with a spectacular view of the Chicago River. I love taking a walk along the river before or after dinner there.

Bike, Hike, Run, or Kayak

October is the perfect month for outdoor sports. The lakefront trail hugs Lake Michigan for 18 miles and is a great path for a run or a bike ride. Just behind the Gehry band shell McDonald's Cycle Center rents bikes, although the best place is Bobby's Bike Hike, a little bike shop tucked down an alley near Lake Shore Drive. A fun ride is to head north on the



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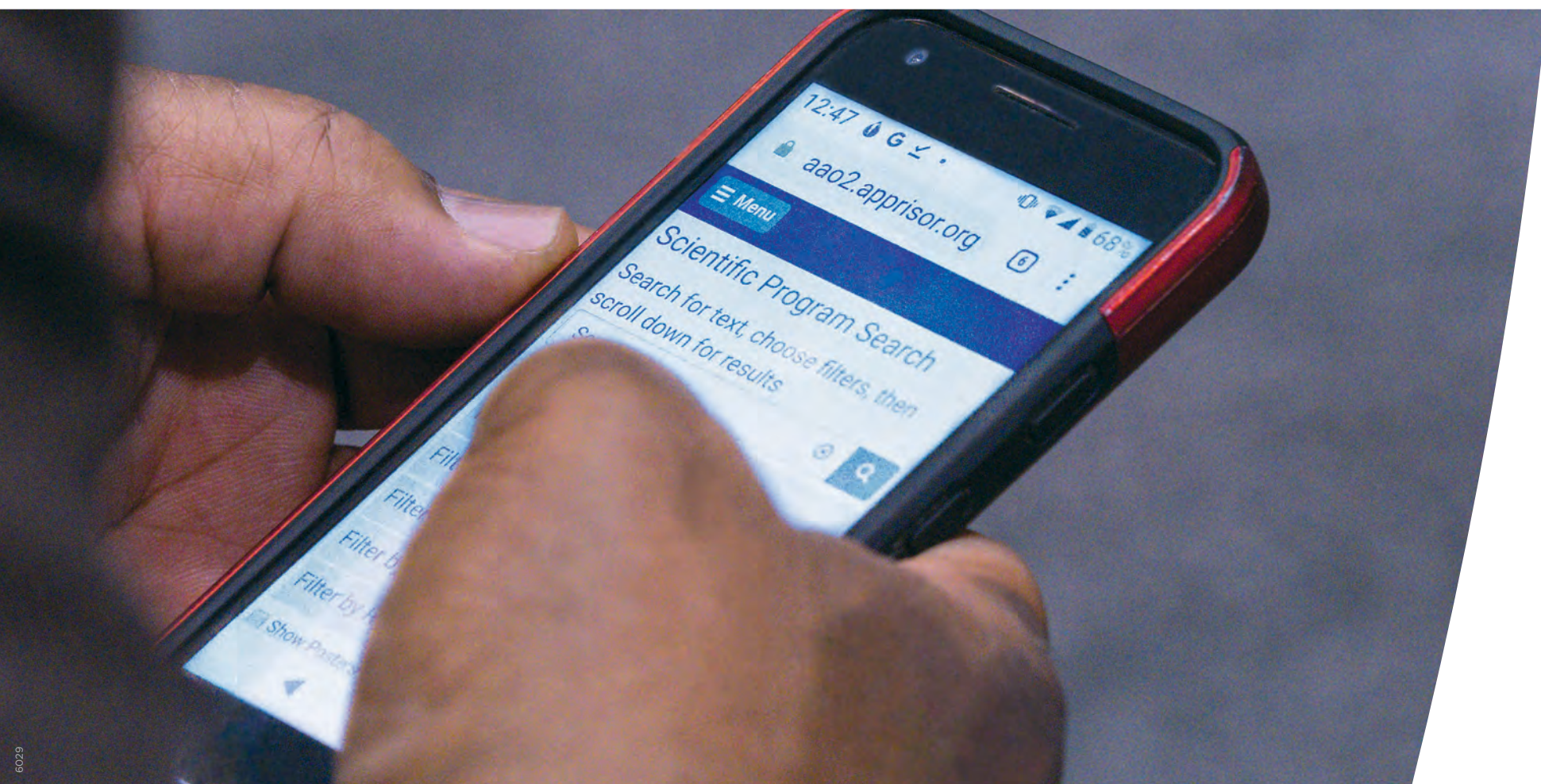
AAO 2022 gather

Mobile Meeting Guide aao.org/mobile

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Diversity, Equity, and Inclusion: What's Happening at the Meeting

Want to know what the Academy is doing in regard to DEI? Two new initiatives are bearing fruit, one established program is ever-more successful, and several sessions can provide DEI tips that you can take back to your practice.

The Academy is committed to nurturing a diverse ophthalmologist community that optimally meets the complex eye care needs of a diverse patient population. Among various Academy DEI initiatives and programs, a few are happening during AAO 2022.

WHAT THE ACADEMY IS DOING

The Academy Task Force on Disparities in Eye Care, which, in part, is charged with providing an understanding of current knowledge about visual health and disparities, including gaps in data, just published its first position paper titled:

- “Disparities in Vision Health and Eye Care,” by Angela R. Elam, MD, et al. This paper provides a comprehensive view of the existing disparities, insight into why and how these disparities persist, and a road map for how eye care providers can help to eliminate disparities and achieve equity in eye care. For a full list of authors for this paper and the papers and commentaries below, see this article at aao.org/eyenet/academy-live.

Four additional papers by the task force subcommittees were published simultaneously with it. They include:

- “Improving Access to Eye Care: A Systematic Review of the Literature,” by Sharon D. Solomon, MD, et al.
- “Enhancing Diversity in the Ophthalmology Workforce,” by Fasika A. Woreta, MD, MPH, et al.
- “The Importance of Health Literacy in Addressing Eye Health and Eye Care Disparities,” by Hilda Capó, MD, et al.
- “Data Sources for Evaluating Health Disparities in Ophthalmology: Where We Are and Where We Need to Go,” by Aaron Y. Lee, MD, et al.

In addition, an editorial—“Why Ophthalmologists Should Care About Disparities in Vision Health,” by Tamara R. Fountain, MD, et al.—and five commentaries related to the papers were published alongside them. The commentaries include:

- “Disparities in Vision Health and Eye Care—Where Do We Go From Here?” by Angela R. Elam, MD, et al.
- “Access to Eye Care in the U.S.: Evidence-Informed Decision-Making Is

Key to Improving Access for Underserved Populations,” by Ruth Y. Shoge, OD, MPH, et al.

- “Improving Ophthalmic Workforce Diversity: A Call to Action,” by César E. Pérez-González, PhD, et al.
- “Impact of Health Literacy on Eye Health Disparities,” by Hilda Capó, MD, et al.
- “Data Sciences and Vision Health Disparities,” by Gary Legault, MD, et al.

Pick up *Ophthalmology* journal in the Resource Center. *Ophthalmology* posted all these papers and commentaries on its website at aaojournal.org. In addition to appearing online, the commentaries are also published in print in the October *Ophthalmology*. Pick up a copy from the literature bin in the Resource Center (Booth 1408).

The Academy Task Force on Organizational Diversity and Inclusion was charged with assessing the Academy’s diversity in its physician leadership, committees, presenters on the podium at Academy events, and recognition programs. Although the annual meeting committees have always been committed to having diversity in the overall program, now they are working to ensure every session and panel are representative.

Minority Ophthalmology Mentoring program. Since 2018 the Academy has hosted URiM (underrepresented in medicine) medical students at the Academy’s annual meeting for Student Engagement Weekend as part of its Minority Ophthalmology Mentoring program. Sixty students accepted into the program’s Class of 2022 are meeting their mentors for the first time, establishing the beginning of a multiyear relationship. They are also participating in roundtable discussions, networking opportunities, hands-on suturing wet labs, as well as exhibition hall visits.

The purpose of the program is to increase diversity in ophthalmology by helping URiM students become competitive ophthalmology residency applicants. Students in the program are given the opportunity to:

- connect with enthusiastic ophthalmologists who provide one-on-one mentorship to support students’ academic



STUDENTS. Minority Ophthalmology Mentoring program students on a tour of the exhibit hall during Student Engagement Weekend.

and career development,

- explore the field of ophthalmology and gain hands-on experience with ophthalmic technology,
- learn how ophthalmologists positively impact community health by preventing vision loss from diseases such as diabetes and glaucoma,
- discover why ophthalmologists enjoy rewarding work and report high career satisfaction, and
- see how ophthalmologists are passionate about protecting sight and empowering lives.

Past classes. Students from past classes will benefit from a separate program targeting their interests about matching, residencies, and more.

WHILE YOU ARE IN CHICAGO

Social Determinants of Health in Geriatric Ophthalmology (Sym01). **Chairs:** Simon K. Law, MD, and Samuel Masket, MD. **When:** Saturday, 8:00-9:15 a.m.

Where: Room S406b.

Review the important elements of social determinants of health (SDOH) on vision loss among older adults. Also, review the effect of the pandemic on ocular care for older adults in the context of SDOH and explore ways to normalize SDOH and provide resources that can be integrated to achieve and maintain equitable eye care in our practices.

Elevating Glaucoma Research

Through Diversity (Sym04). **Chairs:** Angela R. Elam, MD, and O'Rese J. Knight, MD. **When:** Saturday, 9:45-11:00 a.m. **Where:** Grand Ballroom S100ab.

Racial and ethnic minorities are dis-

proportionately more likely to have glaucoma and to have greater odds of having undiagnosed disease. Yet significant gaps remain in our knowledge of why these disparities exist and how to eliminate them. It is important to understand how diversity—of thought and methodology, funding, and workforce—in glaucoma research can advance the field and lead to better care and outcomes for all patients.

Ophthalmology and the LGBTQ+ Community (414). **Senior instructor:** Peter A. Quiros, MD. **When:** Sunday, 8:00-9:15 a.m. **Where:** Room S102d.

The goals of this course are threefold: to establish a baseline working knowledge of key concepts related to gender identity, gender expression, and sexual orientation; to examine the status of health equity for LGBTQ+ patients and professional equity for LGBTQ+ providers; and to discuss ways to engage with the LGBTQ+ community as an ally.

Creating an Inclusive Learning Environment (Sym24). **Chairs:** Grace Sun, MD, and Fasika A. Woreta, MD. **When:** Sunday, 9:45-11:00 a.m. **Where:** Grand Ballroom S100c.

Diversity, equity, and inclusion are foundational values in medicine and medical education. However, educational models guiding the creation of inclusive learning environments to promote these values are limited in ophthalmology training. This symposium will highlight best practices to foster a belonging mindset, embrace learner diversity, mitigate implicit bias, and develop an inclusive, antiracist lens in medical education.

Need Risk Management Advice? Check Out OMIC

Stop by the Ophthalmic Mutual Insurance Company, Booth 2003, to peruse risk management resources and talk with an expert one-on-one. Founded by the Academy in 1987, OMIC has decades of experience, making it a sound source of candid advice, like that in the case study below.

Chart Alteration Hinders the Defense of a Complicated Cataract Surgery

The patient presented to an OMIC insured group for evaluation of bilateral cataracts with an OMIC insured. He had a history of difficulty reading small print, seeing in bright sunlight, and glare at night. A dilated exam revealed significant amblyopia OS, with BCVA of 20/100 and a modest cataract OD with BCVA of 20/30. It was decided that cataract surgery OD would be performed.

The surgery was complicated by a floppy iris and iris prolapse, which required iridectomy and placement of sutures in two separate corneal incisions. On postoperative day one, the insured documented that the patient reported pain the previous night, with blurry vision. The insured also documented swelling to and around the patient's cornea. Postop drop instructions were reviewed with the patient and the caregiver. The patient was instructed to return to the office the following Monday and to call the insured with any increased redness, increased pain, or decreased vision.

On Saturday, the patient's caretaker called the insured and reported that the patient was feeling tired with no further changes in regard to vision, pain, or redness. The insured informed the caretaker that the Diamox can cause tiredness and offered to see the patient in the office, but the caretaker declined. The patient was again advised to call with increased pain, decreased vision, or redness.

When the patient returned on Monday, an obvious infection was present. The patient was immediately referred to an oculoplastic and retina specialist where he was treated with IV antibiotics. An eye culture revealed *Citrobacter koseri* resulting in panophthalmitis. Five days later, an enucleation was performed, and the patient was eventually fitted with a prosthetic implant.

Analysis

Plaintiff expert opined that the patient was not a candidate for cataract surgery in his "good" right eye where the BCVA was 20/30, since the patient had amblyo-

pia in the "poor" left eye. Plaintiff expert also opined that, based on the insured's documentation on postoperative day one of swelling and decreased vision, an infection was already present.

There was a discrepancy between how the insured and the caretaker described the Saturday phone call. However, after the way the insured described the eye on postoperative day one, the plaintiff expert opined that he was relying on common sense that the caretaker was indeed calling to report increased pain, increased redness, or decreased vision. Likewise, the defense experts could not support the postoperative care as they believed the insured should have requested to see the patient following the Saturday telephone call instead of leaving the decision to the patient and caretaker.

The plaintiff expert was critical of the insured for altering a chart note without noting it as a late entry and that it was inappropriate for the insured to document the caregiver phone call in his personal computer notes versus the patient's chart. The late entry described the caregiver bringing in medication bottles where the cap was missing from the Besivance antibiotic drops. Plaintiff counsel interpreted this note as an attempt by the insured to blame the patient for the infection after the fact.

Our defense experts could not effectively counter plaintiff expert's opinions. Without experts to support the care of the insured, the case was settled for \$750K.

Takeaway

With no supportive experts on the standard of care and an insured that lacked credibility, the defense considered admitting liability and trying the case solely on damages. The jury would not have heard any aspects of the case but would have been tasked only with determining the amount of money to award the plaintiff based on the damages. This strategy prevents the jury from hearing facts related to substandard care that could anger them and lead to an excessive verdict. However, it was ultimately decided to



OMIC BOOTH. Meeting attendees can stop by OMIC, Booth 2003, without an appointment to ask members of the claims staff about an existing claim or any claims-related questions, or ask underwriting staff about policies and coverage. Non-OMIC physicians can drop by to learn about OMIC and receive a preliminary quote indication.

attempt settlement in this case, which was accomplished.

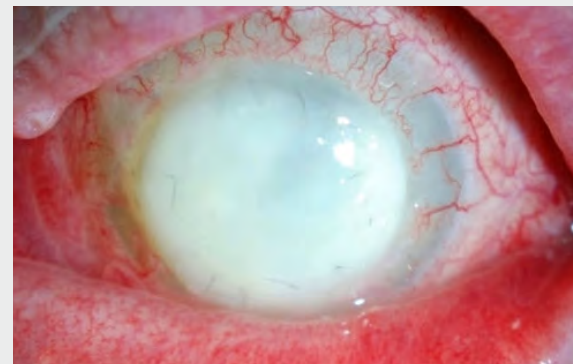
Credibility is essential in successfully defending a lawsuit. When chart notes are altered or made outside the patient's chart, this significantly decreases the credibility of an insured. Such chart alterations and outside notes after an adverse outcome look suspicious, self-

serving, and arouse suspicion that the insured was trying to cover something up or rewrite history. This can hinder the defense of a case and leads to increased settlement value. —By Ryan M. Bucsi, OMIC Claims Vice President

This case study is reprinted from *OMIC Digest*. 2021;31(1):6.

Attend the Saturday OMIC Symposium

Endophthalmitis is a rare but serious complication of ophthalmic surgical procedures. Unfortunately, delayed diagnosis is a factor in many cases and can lead to complete or partial loss of vision, enucleation, or evisceration. Claims for such cases are settled slightly more frequently than other



types of claims, and the average indemnity payments are somewhat higher than OMIC's average. The delay in diagnosis may be shortened by enhancing aspects of informed consent, clarifying postprocedure instructions for patients, and improving thoroughness of the medical history when symptoms first present. The OMIC Bruce Spivey MD Forum (Sym16) reviews OMIC's recent claims history involving endophthalmitis cases and offers strategies to improve factors that contribute to poor outcomes.

Attend the OMIC Bruce Spivey MD Forum (Sym16). "Mitigating the Risk of Endophthalmitis Claims," is presented by Linda Harrison, PhD, Dan Briceland, MD, and Denise Chamblee, MD, with an introduction by Tim Padovese, MBA. **When:** Saturday, 2:00-3:15 p.m. **Where:** Grand Ballroom S100c.

Secrets to Combat the Tech Shortage

How to Hire, Train, and Retain Staff Members

With staffing shortages continuing unabated throughout the nation, most ophthalmology practices are trying to find creative way to find, attract, train, and keep great employees. The American Academy of Ophthalmic Executives (AAOE) offers several courses to help practices provide top notch patient care in these lean times.

Courses are open to all AAO 2022 attendees. *Note that days, times, and locations were accurate at time of press. Check the Mobile Meeting Guide (aao.org/mobile) for the most current information.*

Hiring And Training Staff

Cross-Training Your Staff: A Matter of Practice Health and Fitness (203).

Senior instructor: Julia Lee, JD. **When:** Saturday, 8:00-9:15 a.m. **Where:** Room S105abc.

Cross-training staff adds enormous value to every department, function, and workflow within the practice. Staffing shortages often result in cross-training by default, but it is most successful if implemented proactively and thoughtfully. Whether your practice is large or small, single- or multisubspecialty, organized by departments/locations, or operating out of one office, there are meaningful ways to cross-train staff.

Objectives: This course allows attendees to 1) begin thinking of cross-training as a matter of ongoing practice health and 2) identify concrete steps to begin hiring and training staff accordingly.

Ten Ways to Turn Toxic Employees Into Engaged Culture Champions (277).

Senior instructor: Mike Lyons. **When:** Saturday, 3:45-5:00 p.m. **Where:** Room S105abc.

Based on current labor market trends and hiring challenges during the pandemic, it is clear that practices cannot afford to lose staff. Therefore, this program is designed to provide ways to retain your current team while making your cultural vision a reality. In this course, attendees will learn how to transform a toxic culture into a terrific one. The presenters will focus on 10 elements that define a healthy culture, which you can easily implement in your own practice by working with existing staff. Attendees will return to their practices with actionable ideas that they can adapt and apply immediately.

Objectives: Attendees will learn to 1) create an engaging culture within their workplace, 2) obtain buy-in from physician and senior leadership, and 3) turn

toxic employees into engaged culture champions.

Homegrown Help: Establish In-House Training for Ophthalmic Allied Health (279).

Senior instructor: Heather Hambrick Dunn, COA, OCS. **When:** Saturday, 3:45-5:00 p.m. **Where:** Room S106a.

Finding qualified ophthalmic allied health personnel can be challenging. Hiring experienced technicians often seems like the best option, but your practice area may not offer a large pool to choose from. Then there is the gamble on whether personalities will mesh or preferences of care can be relearned. If you face these issues, perhaps you are considering training your own technicians in house. This presentation will offer starting points and resources to help harvest homegrown help.

Objectives: The target audience is practices that need resources to train allied health staff. While the course is not a step-by-step handbook, attendees will leave with a list of resources and ideas to help them begin or revamp training in house.

Train Your Staff to Become Quality Improvement Champions (469).

Senior instructor: Gregg A. Heatley, MD. **When:** Sunday, 3:45-5:00 p.m. **Where:** Room S105d.

Manage your practice's ongoing quality improvement (QI) process by training your existing staff in QI principles and coaching them to become high-functioning QI champions.

Objectives: Describe a curriculum and process for education and training of ophthalmic staff to expand the resources of a practice to undergo continuous QI without external consultants or costs. Eight years of experience doing this at the University of Wisconsin will be shared, with recommendations for how to adapt these experiences to your own practice.

Hiring An MD

Hiring an Ophthalmologist for Your Practice: Avoiding the Pitfalls (400).

Senior instructor: Lawrence Geller, MBA, MS. **When:** Sunday, 8:00-9:15 a.m. **Where:** Room S105abc.

Adding an associate to the practice requires careful planning and attention to detail. Whether you are hiring an associate for the first time or the 20th time, this course will identify and explain the hiring steps that should be taken to help ensure a successful outcome.



HELP WITH HIRING. AAOE courses can to help you hire and train staff.

Objectives: At the conclusion of this course, the attendee will be able to describe the process and issues to address in adding an associate to the practice. Attendees will learn the key elements of a good employment agreement, how to de-

sign a reasonable compensation package for the associate, and how to structure a model for an associate's buy-in. Participants will also learn how to use an Excel spreadsheet to set up an incentive bonus model.

10 Tips for Hiring

Earlier this year, AAOE members took to AAOE-Talk to share hiring tips and strategies. Below are key takeaways from that conversation.

- 1. Cross-train your entire team** to work the front desk or clinic. Hire with the expectation that your new staff will eventually learn clinical skills as well.
- 2. Hire "gap year" candidates.** Consider posting tech positions on college job boards to attract "gap year" candidates, making clear that training will be provided. You may not have them long term, but it's a win-win in that they are very eager to learn, and it helps you meet immediate hiring needs.
- 3. Offer incentives for interviews.** Some practices are offering gift cards to applicants who show up for interviews.
- 4. Provide referral bonuses.** Your own staff are a potential referral source. Provide bonuses to existing staff as follows: one half due on hire and the balance after the six-month referral anniversary.
- 5. Bring on medical assistants.** Train them . . . they make great techs.
- 6. Promote your superstars.** Do you have any superstars on your front desk, call center, or other areas who would excel on the clinical side? If so, promote and train them.
- 7. Do exit interviews.** Have you conducted exit interviews? Find out why your staff are leaving.
- 8. Try a staffing agency.** You can try a staffing agency. Despite the fee you pay for techs once they are placed, the candidates are generally experienced techs. If the hiring process does not work out in the specified amount of time, the staffing agency will usually give you more candidates without an additional fee.
- 9. Call your surrounding competition.** Find out what are they offering in terms of pay, benefits, and perks.
- 10. Look at your working conditions.** Assess how many patients you are processing per day. Ask yourself if you have enough support staff. Does your staff need to go to a lot of different offices? What are the office hours? These things can matter greatly to your staff. Remember that if your staff are generally happy, they won't be leaving.

AAOE-Talk is a forum for AAOE members (aao.org/practice-management/aaoe-talk-overview).

WHAT COULD THEY SEE THIS YEAR?



10
years
& COUNTING
FDA approved 2011



Inspired by real patients with Wet AMD, ME/RVO, and DME.

- First-line efficacy and safety data from 8 clinical trials¹
- Dosing flexibility across several FDA-approved indications¹
- >20 million doses administered to >1.6 million eyes since launch²
- Broad first-line coverage and dedicated support with EYLEA4U^{®2}

EXPLORE THE DATA
at hcp.eylea.us

IMPORTANT SAFETY INFORMATION CONTRAINDICATIONS

- EYLEA is contraindicated in patients with ocular or periocular infections, active intraocular inflammation, or known hypersensitivity to aflibercept or to any of the excipients in EYLEA.

WARNINGS AND PRECAUTIONS

- Intravitreal injections, including those with EYLEA, have been associated with endophthalmitis and retinal detachments. Proper aseptic injection technique must always be used when administering EYLEA. Patients should be instructed to report any symptoms suggestive of endophthalmitis or retinal detachment without delay and should be managed appropriately. Intraocular inflammation has been reported with the use of EYLEA.
- Acute increases in intraocular pressure have been seen within 60 minutes of intravitreal injection, including with EYLEA. Sustained increases in intraocular pressure have also been reported after repeated intravitreal dosing with VEGF inhibitors. Intraocular pressure and the perfusion of the optic nerve head should be monitored and managed appropriately.
- There is a potential risk of arterial thromboembolic events (ATEs) following intravitreal use of VEGF inhibitors, including EYLEA. ATEs are defined as nonfatal stroke, nonfatal myocardial infarction, or vascular death (including deaths of unknown cause). The incidence of reported thromboembolic events in wet AMD studies during the first year was 1.8% (32 out of 1824) in the combined group of patients treated with EYLEA compared with 1.5% (9 out of 595) in patients treated with ranibizumab; through 96 weeks, the incidence was 3.3% (60 out of 1824) in the EYLEA group compared with 3.2% (19 out of 595) in the ranibizumab group. The incidence in the DME studies from baseline to week 52 was 3.3% (19 out of 578) in the combined group of patients treated with EYLEA compared with 2.8% (8 out of 287) in the control group; from baseline to week 100, the incidence was 6.4% (37 out of 578) in the combined group of patients treated with EYLEA compared with 4.2% (12 out of 287) in the control group. There were no reported thromboembolic events in the patients treated with EYLEA in the first six months of the RVO studies.

ADVERSE REACTIONS

- Serious adverse reactions related to the injection procedure have occurred in <0.1% of intravitreal injections with EYLEA including endophthalmitis and retinal detachment.
- The most common adverse reactions (≥5%) reported in patients receiving EYLEA were conjunctival hemorrhage, eye pain, cataract, vitreous detachment, vitreous floaters, and intraocular pressure increased.
- Patients may experience temporary visual disturbances after an intravitreal injection with EYLEA and the associated eye examinations. Advise patients not to drive or use machinery until visual function has recovered sufficiently.

INDICATIONS

EYLEA® (aflibercept) Injection 2 mg (0.05 mL) is indicated for the treatment of patients with Neovascular (Wet) Age-related Macular Degeneration (AMD), Macular Edema following Retinal Vein Occlusion (RVO), Diabetic Macular Edema (DME), and Diabetic Retinopathy (DR).

Please see Brief Summary of full Prescribing Information on the following page.

References: 1. EYLEA® (aflibercept) Injection full U.S. Prescribing Information. Regeneron Pharmaceuticals, Inc. June 2021. 2. Data on file. Regeneron Pharmaceuticals, Inc.

REGENERON®

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777 Old Saw Mill River Road, Tarrytown, NY 10591

06/2022

EYL.22.05.0005



BRIEF SUMMARY—Please see the EYLEA full Prescribing Information available on HCP.EYLEA.US for additional product information.

1 INDICATIONS AND USAGE
EYLEA is a vascular endothelial growth factor (VEGF) inhibitor indicated for the treatment of patients with:
Neovascular (Wet) Age-Related Macular Degeneration (AMD), Macular Edema Following Retinal Vein Occlusion (RVO), Diabetic Macular Edema (DME), Diabetic Retinopathy (DR).
4 CONTRAINDICATIONS
4.1 Ocular or Periocular Infections
EYLEA is contraindicated in patients with ocular or periocular infections.
4.2 Active Intraocular Inflammation
EYLEA is contraindicated in patients with active intraocular inflammation.
4.3 Hypersensitivity
EYLEA is contraindicated in patients with known hypersensitivity to aflibercept or any of the excipients in EYLEA. Hypersensitivity reactions may manifest as rash, pruritus, urticaria, severe anaphylactic/anaphylactoid reactions, or severe intraocular inflammation.

5 WARNINGS AND PRECAUTIONS
5.1 Endophthalmitis and Retinal Detachments
Intravitreal injections, including those with EYLEA, have been associated with endophthalmitis and retinal detachments [see *Adverse Reactions* (6.1)]. Proper aseptic injection technique must always be used when administering EYLEA. Patients should be instructed to report any symptoms suggestive of endophthalmitis or retinal detachment without delay and should be managed appropriately [see *Patient Counseling Information* (17)].
5.2 Increase in Intraocular Pressure
Acute increases in intraocular pressure have been seen within 60 minutes of intravitreal injection, including with EYLEA [see *Adverse Reactions* (6.1)]. Sustained increases in intraocular pressure have also been reported after repeated intravitreal dosing with vascular endothelial growth factor (VEGF) inhibitors. Intraocular pressure and the perfusion of the optic nerve head should be monitored and managed appropriately.
5.3 Thromboembolic Events
There is a potential risk of arterial thromboembolic events (ATEs) following intravitreal use of VEGF inhibitors, including EYLEA. ATEs are defined as nonfatal stroke, nonfatal myocardial infarction, or vascular death (including deaths of unknown cause). The incidence of reported thromboembolic events in wet AMD studies during the first year was 1.8% (32 out of 1824) in the combined group of patients treated with EYLEA compared with 1.5% (9 out of 595) in patients treated with ranibizumab; through 96 weeks, the incidence was 3.3% (60 out of 1824) in the EYLEA group compared with 3.2% (19 out of 595) in the ranibizumab group. The incidence in the DME studies from baseline to week 52 was 3.3% (19 out of 578) in the combined group of patients treated with EYLEA compared with 2.8% (8 out of 287) in the control group; from baseline to week 100, the incidence was 6.4% (37 out of 578) in the combined group of patients treated with EYLEA compared with 4.2% (12 out of 287) in the control group. There were no reported thromboembolic events in the patients treated with EYLEA in the first six months of the RVO studies.

6 ADVERSE REACTIONS
The following potentially serious adverse reactions are described elsewhere in the labeling:
• Hypersensitivity [see *Contraindications* (4.3)]
• Endophthalmitis and retinal detachments [see *Warnings and Precautions* (5.1)]
• Increase in intraocular pressure [see *Warnings and Precautions* (5.2)]
• Thromboembolic events [see *Warnings and Precautions* (5.3)]

6.1 Clinical Trials Experience
Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in other clinical trials of the same or another drug and may not reflect the rates observed in practice.
A total of 2980 patients treated with EYLEA constituted the safety population in eight phase 3 studies. Among those, 2379 patients were treated with the recommended dose of 2 mg. Serious adverse reactions related to the injection procedure have occurred in <0.1% of intravitreal injections with EYLEA including endophthalmitis and retinal detachment. The most common adverse reactions (≥5%) reported in patients receiving EYLEA were conjunctival hemorrhage, eye pain, cataract, vitreous detachment, vitreous floaters, and intraocular pressure increased.

Neovascular (Wet) Age-Related Macular Degeneration (AMD). The data described below reflect exposure to EYLEA in 1824 patients with wet AMD, including 1223 patients treated with the 2-mg dose, in 2 double-masked, controlled clinical studies (VIEW1 and VIEW2) for 24 months (with active control in year 1).
Safety data observed in the EYLEA group in a 52-week, double-masked, Phase 2 study were consistent with these results.

Adverse Reactions	Baseline to Week 52		Baseline to Week 96	
	EYLEA (N=1824)	Active Control (ranibizumab) (N=595)	EYLEA (N=1824)	Control (ranibizumab) (N=595)
Conjunctival hemorrhage	25%	28%	27%	30%
Eye pain	9%	9%	10%	10%
Cataract	7%	7%	13%	10%
Vitreous detachment	6%	6%	8%	8%
Vitreous floaters	6%	7%	8%	10%
Intraocular pressure increased	5%	7%	7%	11%
Ocular hyperemia	4%	8%	5%	10%
Corneal epithelium defect	4%	5%	5%	6%
Detachment of the retinal pigment epithelium	3%	3%	5%	5%
Injection site pain	3%	3%	3%	4%
Foreign body sensation in eyes	3%	4%	4%	4%
Lacrimation increased	3%	1%	4%	2%
Vision blurred	2%	2%	4%	3%
Intraocular inflammation	2%	3%	3%	4%
Retinal pigment epithelium tear	2%	1%	2%	2%
Injection site hemorrhage	1%	2%	2%	2%
Eyelid edema	1%	2%	2%	3%
Corneal edema	1%	1%	1%	1%
Retinal detachment	<1%	<1%	1%	1%

Less common serious adverse reactions reported in <1% of the patients treated with EYLEA were hypersensitivity, retinal tear, and endophthalmitis.

Macular Edema Following Retinal Vein Occlusion (RVO). The data described below reflect 6 months exposure to EYLEA with a monthly 2 mg dose in 218 patients following central retinal vein occlusion (CRVO) in 2 clinical studies (COPERNICUS and GALILEO) and 91 patients following branch retinal vein occlusion (BRVO) in one clinical study (VIBRANT).

REGENERON

Manufactured by:
Regeneron Pharmaceuticals, Inc.
777 Old Saw Mill River Road
Tarrytown, NY 10591

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Issue Date: 08/2019
Initial U.S. Approval: 2011

Based on the August 2019 EYLEA® (aflibercept) Injection full Prescribing Information.

EYL.20.09.0052

Adverse Reactions	CRVO		BRVO	
	EYLEA (N=218)	Control (N=142)	EYLEA (N=91)	Control (N=92)
Eye pain	13%	5%	4%	5%
Conjunctival hemorrhage	12%	11%	20%	4%
Intraocular pressure increased	8%	6%	2%	0%
Corneal epithelium defect	5%	4%	2%	0%
Vitreous floaters	5%	1%	1%	0%
Ocular hyperemia	5%	3%	2%	2%
Foreign body sensation in eyes	3%	5%	3%	0%
Vitreous detachment	3%	4%	2%	0%
Lacrimation increased	3%	4%	3%	0%
Injection site pain	3%	1%	1%	0%
Vision blurred	1%	<1%	1%	1%
Intraocular inflammation	1%	1%	0%	0%
Cataract	<1%	1%	5%	0%
Eyelid edema	<1%	1%	1%	0%

Less common adverse reactions reported in <1% of the patients treated with EYLEA in the CRVO studies were corneal edema, retinal tear, hypersensitivity, and endophthalmitis.

Diabetic Macular Edema (DME) and Diabetic Retinopathy (DR). The data described below reflect exposure to EYLEA in 578 patients with DME treated with the 2-mg dose in 2 double-masked, controlled clinical studies (VIVID and VISTA) from baseline to week 52 and from baseline to week 100.

Adverse Reactions	Baseline to Week 52		Baseline to Week 100	
	EYLEA (N=578)	Control (N=287)	EYLEA (N=578)	Control (N=287)
Conjunctival hemorrhage	28%	17%	31%	21%
Eye pain	9%	6%	11%	9%
Cataract	8%	9%	19%	17%
Vitreous floaters	6%	3%	8%	6%
Corneal epithelium defect	5%	3%	7%	5%
Intraocular pressure increased	5%	3%	9%	5%
Ocular hyperemia	5%	6%	5%	6%
Vitreous detachment	3%	3%	8%	6%
Foreign body sensation in eyes	3%	3%	3%	3%
Lacrimation increased	3%	2%	4%	2%
Vision blurred	2%	2%	3%	4%
Intraocular inflammation	2%	<1%	3%	1%
Injection site pain	2%	<1%	2%	<1%
Eyelid edema	<1%	1%	2%	1%

Less common adverse reactions reported in <1% of the patients treated with EYLEA were hypersensitivity, retinal detachment, retinal tear, corneal edema, and injection site hemorrhage.
Safety data observed in 269 patients with nonproliferative diabetic retinopathy (NPDR) through week 52 in the PANORAMA trial were consistent with those seen in the phase 3 VIVID and VISTA trials (see Table 3 above).

6.2 Immunogenicity
As with all therapeutic proteins, there is a potential for an immune response in patients treated with EYLEA. The immunogenicity of EYLEA was evaluated in serum samples. The immunogenicity data reflect the percentage of patients whose test results were considered positive for antibodies to EYLEA in immunoassays. The detection of an immune response is highly dependent on the sensitivity and specificity of the assays used, sample handling, timing of sample collection, concomitant medications, and underlying disease. For these reasons, comparison of the incidence of antibodies to EYLEA with the incidence of antibodies to other products may be misleading.
In the wet AMD, RVO, and DME studies, the pre-treatment incidence of immunoreactivity to EYLEA was approximately 1% to 3% across treatment groups. After dosing with EYLEA for 24-100 weeks, antibodies to EYLEA were detected in a similar percentage range of patients. There were no differences in efficacy or safety between patients with or without immunoreactivity.

8 USE IN SPECIFIC POPULATIONS
8.1 Pregnancy
Risk Summary
Adequate and well-controlled studies with EYLEA have not been conducted in pregnant women. Aflibercept produced adverse embryofetal effects in rabbits, including external, visceral, and skeletal malformations. A fetal No Observed Adverse Effect Level (NOAEL) was not identified. At the lowest dose shown to produce adverse embryofetal effects, systemic exposures (based on AUC for free aflibercept) were approximately 6 times higher than AUC values observed in humans after a single intravitreal treatment at the recommended clinical dose [see *Animal Data*].
Animal reproduction studies are not always predictive of human response, and it is not known whether EYLEA can cause fetal harm when administered to a pregnant woman. Based on the anti-VEGF mechanism of action for aflibercept, treatment with EYLEA may pose a risk to human embryofetal development. EYLEA should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.
All pregnancies have a background risk of birth defect, loss, or other adverse outcomes. The background risk of major birth defects and miscarriage for the indicated population is unknown. In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2-4% and 15-20%, respectively.
Data
Animal Data
In two embryofetal development studies, aflibercept produced adverse embryofetal effects when administered every three days during organogenesis to pregnant rabbits at intravenous doses ≥3 mg per kg, or every six days during organogenesis at subcutaneous doses ≥0.1 mg per kg.
Adverse embryofetal effects included increased incidences of postimplantation loss and fetal malformations, including anasarca, umbilical hernia, diaphragmatic hernia, gastroschisis, cleft palate, ectrodactyly, intestinal atresia, spina bifida, encephalomeningocoele, heart and major vessel defects, and skeletal malformations (fused vertebrae, sternebrae, and ribs; supernumerary vertebral arches and ribs; and incomplete ossification). The maternal No Observed Adverse Effect Level (NOAEL) in these studies was 3 mg per kg. Aflibercept produced fetal malformations at all doses assessed in rabbits and the fetal NOAEL was not identified. At the lowest dose shown to produce adverse embryofetal effects in rabbits (0.1 mg per kg), systemic exposure (AUC) of free aflibercept was approximately 6 times higher than systemic exposure (AUC) observed in humans after a single intravitreal dose of 2 mg.

8.2 Lactation
Risk Summary
There is no information regarding the presence of aflibercept in human milk, the effects of the drug on the breastfed infant, or the effects of the drug on milk production/excretion. Because many drugs are excreted in human milk, and because the potential for absorption and harm to infant growth and development exists, EYLEA is not recommended during breastfeeding.
The developmental and health benefits of breastfeeding should be considered along with the mother’s clinical need for EYLEA and any potential adverse effects on the breastfed child from EYLEA.

8.3 Females and Males of Reproductive Potential
Contraception
Females of reproductive potential are advised to use effective contraception prior to the initial dose, during treatment, and for at least 3 months after the last intravitreal injection of EYLEA.

Infertility
There are no data regarding the effects of EYLEA on human fertility. Aflibercept adversely affected female and male reproductive systems in cynomolgus monkeys when administered by intravenous injection at a dose approximately 1500 times higher than the systemic level observed humans with an intravitreal dose of 2 mg. A No Observed Adverse Effect Level (NOAEL) was not identified. These findings were reversible within 20 weeks after cessation of treatment.

8.4 Pediatric Use
The safety and effectiveness of EYLEA in pediatric patients have not been established.

8.5 Geriatric Use
In the clinical studies, approximately 76% (2049/2701) of patients randomized to treatment with EYLEA were ≥65 years of age and approximately 46% (1250/2701) were ≥75 years of age. No significant differences in efficacy or safety were seen with increasing age in these studies.

17 PATIENT COUNSELING INFORMATION
In the days following EYLEA administration, patients are at risk of developing endophthalmitis or retinal detachment. If the eye becomes red, sensitive to light, painful, or develops a change in vision, advise patients to seek immediate care from an ophthalmologist [see *Warnings and Precautions* (5.1)].
Patients may experience temporary visual disturbances after an intravitreal injection with EYLEA and the associated eye examinations [see *Adverse Reactions* (6)]. Advise patients not to drive or use machinery until visual function has recovered sufficiently.

New Thinking in Ophthalmology

8 Honorary Lecturers Preview Their Presentations

The Opening Session and many Academy symposia are capped by an honorary lecture. These informative presentations by leaders in their field are easy to fit into your schedule, as they are usually between 15 and 35 minutes long. The speakers preview their own lectures, below, and in the Sunday AAO 2022 News.

All summaries were written in advance of AAO 2022. At time of press, not all lectures and/or lecture times had been finalized. Be sure to check aao.org/mobile for the most up-to-date information.

FRIDAY, Sept. 30

PEDIATRIC OPHTHALMOLOGY

Leonard Apt Lecture: Thirty Years of Pediatric Ophthalmology: Thoughts and Thanks, presented by Gregg T. Lueder, MD.

When: Friday, 9:32-10:00 a.m., during Pediatric Ophthalmology Subspecialty Day 2022.

Where: Room E450.

“Leonard Apt was the first physician to become board-certified in both pediatrics and ophthalmology. Following in his footsteps, it has been a pleasure to combine these two fields during my career. The Apt lecture will review major advances in pediatric ophthalmology over the past three decades, share some of the best advice I have received throughout my life, discuss how one can establish an academic career outside of a laboratory, and highlight potential future areas of research.”



“There currently exists a vast body of literature exploring a growing number of possible exposures that are associated with a measure of increased risk or a measure of protection against the development of glaucoma—or sometimes, both. This wide spectrum of exposures spans a variety of categories, including genetics (Nature), lifestyle factors (Nurture), the built environment (Neighborhood), and issues related to access (Network). Furthermore, these risk factors and protective factors exist within

Pediatric Ophthalmology Subspecialty Day 2022: Pediatric Ophthalmology in the Roaring '20s (Friday, 8:00 a.m.-5:00 p.m.) is organized in conjunction with the American Association for Pediatric Ophthalmology and Strabismus and the American Academy of Pediatrics.

RETINA

Charles L. Schepens MD Lecture: Rediscovering AMD With SS-OCT Imaging, presented by Philip J. Rosenfeld, MD, PhD.

When: Friday, 9:36-10:01 a.m., during Retina Subspecialty Day 2022.

Where: Arie Crown.

“OCT has revolutionized our ability to diagnose and follow AMD. While structural OCT imaging is now the gold standard for managing wet AMD, we really haven’t adopted OCT imaging as the gold-standard for dry AMD. That’s



about to change. Clinical swept-source OCT (SS-OCT) imaging is all that’s needed to diagnose and manage AMD at every stage of disease

progression. SS-OCT imaging identifies the changes occurring at the level of the retina, retinal pigment epithelium, Bruch membrane, choriocapillaris (CC), and choroid that precede and predict disease progression in AMD. Also, SS-OCT angiography (SS-OCTA) imaging can diagnose nonexudative macular neovascularization in dry AMD, a stage that precedes the onset of exudation by months or years and identifies those patients at greatest risk for wet AMD. SS-OCTA reveals the importance of CC perfusion in AMD, a vital vascular layer that was previously out of reach to the clinician. By extracting both structural and angiographic information from a single SS-OCT raster scan, clinicians will be able to diagnose, follow, and predict disease progression in AMD, and with complement inhibitors entering the clinics, SS-OCT imaging will help us decide when to start and manage therapy.”

Retina Subspecialty Day 2022: Retina Reimagined (Friday, 8:00 a.m.-4:56 p.m., and Saturday, 8:00 a.m.-5:26 p.m.) is organized in conjunction with the American Society of Retina Specialists, the Macula Society, the Retina Society, and Club Jules Gonin.

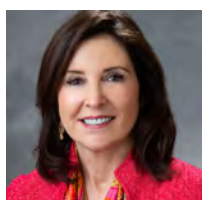
GLAUCOMA

American Glaucoma Society Subspecialty Day Lecture: Nature, Nurture, Neighborhood, Network, and Glaucoma, presented by Anne Louise Coleman, MD, PhD.

When: Friday, 11:34 a.m.-12:07 p.m., during Glaucoma Subspecialty Day 2022.

Where: Grand Ballroom S100ab.

“There currently exists a vast body of literature exploring a growing number of possible exposures that are associated with a measure of increased risk or a measure of protection against the development of glaucoma—or sometimes, both. This wide spectrum of exposures spans a variety of categories, including genetics (Nature), lifestyle factors (Nurture), the built environment (Neighborhood), and issues related to access (Network). Furthermore, these risk factors and protective factors exist within



and are impacted by the surrounding milieu of the social determinants of health, or the conditions in which people are born, grow, live, work, and age.

“This lecture will review the wide-ranging assortment of exposures that have been explored throughout the last decades through the lens of the programmatic grouping introduced above. In my review of these factors that increase or reduce the risk of glaucoma, I will also pay particular attention to their innate interactions. By doing so, I will highlight the importance of studying how these exposures interact with one another (statistically and biologically) rather than assessing each in isolation. Finally, I will emphasize the unignorable impact of the ubiquitous social determinants of health such as racism on the effects of these factors.”

Glaucoma Subspecialty Day 2022: Second to None Glaucoma Care From the Second City (Friday, 8:00 a.m.-5:00 p.m.) is organized in conjunction with the American Glaucoma Society.

REFRACTIVE SURGERY

Troutman Award

When: Friday, during Refractive Surgery Subspecialty Day 2022.

Where: Room S406a.

At time of press, the 2022 lecture had not been finalized. The Troutman Prize recognizes the scientific merit of a young author publishing in the *Journal of Refractive Surgery*. This prize and associated lecture honor Richard C. Troutman, MD.

Refractive Surgery Subspecialty Day 2022: Refractive Surgery in the New Age (Friday, 8:00 a.m.-5:22 p.m.) is the annual meeting of the International Society of Refractive Surgery.

OPHTHALMOLOGY AND THE ARTS

Michael F. Marmor, MD, Lecture in Ophthalmology and the Arts: The Doctor’s Son: Medicine in My Novels, presented by Scott Turow.

When: Friday, 5:33-6:00 p.m., during Sym55, Opening Session.

Where: Room E354.

Every year an eminent practitioner in architecture, music, history, or art with strong links to medicine gives the Marmor Lecture in Arts and Ophthalmology to illuminate how his or her field of expertise relates to and can provide unique insights into ophthalmology.

This year’s lecturer is Scott Turow, writer and attorney. He is the author of 12 bestselling works of fiction, including *Presumed Innocent* and *The Last Trial*.

His newest novel *Suspect* appeared from Grand Central Publishing (September 2022). Mr. Turow has also published two nonfiction books, including *One L*, about his experience as a law student. His books have been translated into more than 40 languages and sold more than 30 million



copies worldwide. He has frequently contributed essays and op-ed pieces to publications such as the *New York Times*, *Washington Post*, *Vanity Fair*, *The New Yorker*, and *The Atlantic*. His works have also been adapted into movie and television projects. Most recently, Apple TV+ announced that it will soon stream an eight-part limited series based on *Presumed Innocent*.

Opening Session (5:00-6:30 p.m.).

UVEITIS

Jackson Memorial Lecture: How Would Nature See Our Corneal Triumphs? presented by Gerrit R.J. Melles, MD, PhD.

When: Friday, 6:00-6:30 p.m., during Sym55, Opening Session.

Where: Room E354.

Endothelial keratoplasty, which provides rapid visual rehabilitation and is widely used to treat corneal endothelial dysfunction, was pioneered by Dr. Melles in 1998. Since that time, he has introduced and developed a number of other cornea procedures, including DSEK (Descemet stripping endothelial keratoplasty), DMEK (Descemet membrane endothelial keratoplasty), and Bowman layer transplantation. He also has developed several instruments and devices that enhance minimally invasive surgical techniques and simplify the ophthalmic infrastructure.

Looking forward, what’s on the horizon in cornea surgery? In his Jackson Memorial lecture, Dr. Melles will discuss the potential of low-risk techniques, joystick practice management, and blockchain data processing.

Opening Session (5:00-6:30 p.m.).

SATURDAY, Oct. 1

GLAUCOMA

Robert N. Shaffer Lecture, presented by Michael V. Drake, MD.

When: Saturday, 10:40-11:00 a.m., during Sym04, Elevating Glaucoma



Research Through Diversity.

Where: Grand Ballroom S100ab.
Robert N. Shaffer, MD, for whom this lecture is named, was a pioneer in the field of glaucoma. Notably, he cofounded the Glaucoma Research Foundation in 1978, and he was clinical



professor emeritus in ophthalmology at the University of California, San Francisco, where he taught for a half century. The lecture takes place during the symposia cosponsored by Prevent Blindness each year during the Academy's annual meeting.

This year's Robert N. Shaffer lecturer is Michael V. Drake, MD, the 21st president of the University of California.

Elevating Glaucoma Research Through Diversity (9:45-11:00 a.m.) is cosponsored by Prevent Blindness.

PROFESSIONALISM AND ETHICS

Dr. Allan Jensen and Claire Jensen Lecture in Professionalism and Ethics: Professionalism and Accountability After Harm: Closing the Gap Between

Principle and Practice, presented by Thomas H. Gallagher, MD.

When: Saturday, 11:30 a.m.-12:30 p.m., during Sym12, Dr. Allan Jensen and Claire Jensen Lecture in Professionalism and Ethics.

Where: Room S406a.

"It's that terrible, sinking, pit-of-your stomach feeling we all dread—perhaps something just went wrong that harmed your patient. Maybe you noticed your colleague is struggling to provide good care, and you aren't sure if you should let someone know. Or imagine you were just notified that a patient has filed a complaint about you. Principles of professionalism call on us to respond with transparency, compassion, and accountability. Yet most of us struggle to turn these principles into effective practice. We are unsure what to say and how the patient or our colleague might react, worry what negative consequences might befall us, and wonder if this all might blow over if we just keep our heads down and look the other way. Fortunately, there are new tools and strategies to help us face our fears and be prepared when the inevitable harm events occur. In this session, you will learn the core principles underlying an accountable response to harm and practical techniques to turn these principles into action."

Dr. Allan Jensen and Claire Jensen Lecture in Professionalism and Ethics (11:30 a.m.-12:30 p.m.).



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CLINICAL EDUCATION

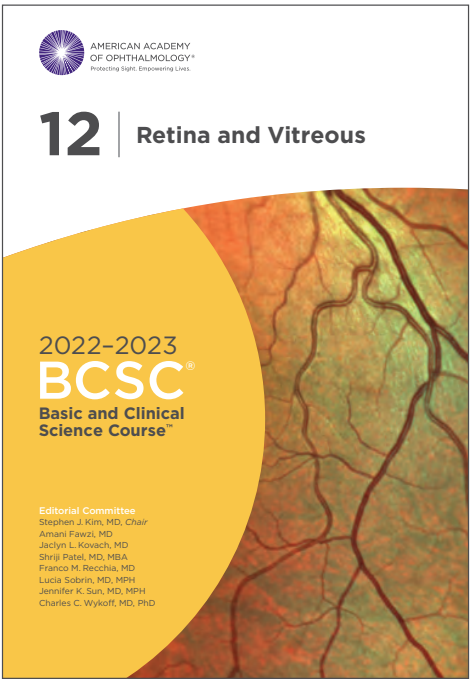
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LEADERSHIP SUMMIT

The American Academy of Ophthalmic Executives (AAOE) debuts its brand-new Practice Management Leadership Summit at AAO 2022. The summit events take place all day Sunday in Room S106b and are free for AAO 2022 registrants.

How to Communicate Better With Your Physician (event code 401).

Moderator: Robert F. Melendez, MD, MBA. **When:** 8:00-9:15 a.m.

Building Your Bench: DIY Leadership Training to Promote From Within (418).

Moderator: Mike Lyons, MHRIR. **When:** 9:45-11:00 a.m.

Becoming an Effective Leader as a New Practice Administrator (432).

Moderator: Alexandra Acaba, MSW. **When:** 11:30 a.m.-12:45 p.m.

How We Built This: Pearls From Leaders Who Turned Around Their Practice Culture (453).

Moderator: Alan E. Kimura, MD, MPH. **When:** 2:00-3:15 p.m.

Leadership Pearls for Young Ophthalmologists (470).

Moderator: Robert F. Melendez, MD, MBA. **When:** 3:45-5:00 p.m.

lakefront trail, cross Lake Shore Drive on an overpass, and ride along the Nature Boardwalk at Lincoln Park Zoo.

Kayaking provides a unique perspective of the city. Urban Kayaks has a location along the Riverwalk for kayaking the river and another at Monroe Harbor for easier kayaking in a Lake Michigan harbor.

The Zoo and The Farm

Take a stroll through the urban oasis of The Lincoln Park Zoo. The gardens are lovely, and the animals are so close. An African lion cub was born in March. Farm-in-the-Zoo is a reproduction of a midwestern farm, and visitors can interact with cows, goats, sheep, chickens, and ducks. Nearby Café Brauer has indoor and al fresco dining with views of the Chicago skyline and of the restored prairie ecosystem of the North Pond Nature Sanctuary.

The Neighborhoods

Chicago officially has 77 community areas as defined by University of Chicago

researchers in the 1920s. Exploring a neighborhood is illuminating and fun.

Consider visiting the Ukrainian Village on the near west side with two Ukrainian cathedrals (one Catholic and the other Ukrainian Orthodox), shops, and restaurants, and the Ukrainian National Museum of Chicago. I once bought a collection of Ukrainian painted eggs at a little shop in the neighborhood.

Wicker Park is a great neighborhood for vintage shopping, dive bars, and hip restaurants. It's known for its street art murals. The Violet Hour is a cocktail lounge with a revolving mural on its façade. Adjacent Bucktown has more upscale boutique shopping.

McCormick Place—where AAO 2022 takes place—is located in Motor Row District, which served as an auto mall in the early 1900s. Now the old automobile showrooms have been converted to condominiums, restaurants, and shops.

Enjoy beautiful Chicago!

Have Your Own Favorites?

Share your suggestions for the best things to do in Chicago. Head to the comment section of this article online at aao.org/eyenet/academy-live.



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Don't Miss the EyeNet Corporate Lunches

Be sure to leave room in your schedule for EyeNet's free corporate educational lunches.

When: From 12:45-1:45 p.m. from Saturday-Monday. Complimentary boxed meals are available on a first-come, first-served basis, with lunch pickup beginning at 12:30 p.m.

Where: E353c Lakeside

Topics are as follows:

Saturday: "Patient Variability in Wet Age-Related Macular Degeneration (AMD)" with speaker Yannek Leiderman, MD, PhD. *This program is presented by Regeneron and designed for U.S. retina specialists.*

Sunday: "Making the Case: Expert Perspectives on Dry Eye" with speaker Jay Mattheis, MD, MSPH, FACS—Director, Peer Education for Novartis US Ophthalmics. *Dr. Mattheis is an employee of Novartis. Dr. Mattheis no longer sees patients. Presented by Novartis Pharmaceuticals Corporation and designed for US eye care specialists.*

Monday: "Explore a Different Path to Treating Dry Eye Disease" with speaker Francis S. Mah, MD. *Presented by Oyster Point Pharma, Inc., and designed for US eye care specialists.*

These programs are non-CME and are developed independently by industry. They are not affiliated with the official program of AAO 2022 or Subspecialty Day. By attending a lunch, you may be subject to reporting under the Open Payments Program (Sunshine Act). Also, by attending a lunch, you consent to share your contact data, inclusive of National Provider ID, with the corporate partner.

For more information, visit aao.org/eyenet/corporate-lunches.

ETHICS COURSES FOR ACADEMY 2022

Get ethics-specific CME credit by attending the following thought-provoking instruction courses and symposia.

Telehealth in Ophthalmology: Ethical Considerations in Virtual Patient Care (event code 805V). **When:** On-demand only. **Where:** Available through the virtual meeting platform.

Dr. Allan Jensen and Claire Jensen Lecture in Professionalism and Ethics (Sym12): **Professionalism and Accountability After Harm: Closing the Gap Between Principle and Practice**, presented by Thomas A. Gallagher, MD. **When:** Saturday, 11:30 a.m.-12:30 p.m. **Where:** S406a.

Hot Topics in Ethics: How Would You Respond? Handling Ethical Practice Dilemmas (415). **Senior instructor:** Carla J. Siegfried, MD. **When:** Sunday, 9:45-11:00 a.m. **Where:** S103d.

Legal, Contractual and Ethical Obligations of Providing Ophthalmology Call Coverage (479). **Senior instructor:** Craig N. Czyz, DO. **When:** Sunday, 3:45-5:00 p.m. **Where:** Room S501abc.



IMPORTANT PRODUCT INFORMATION

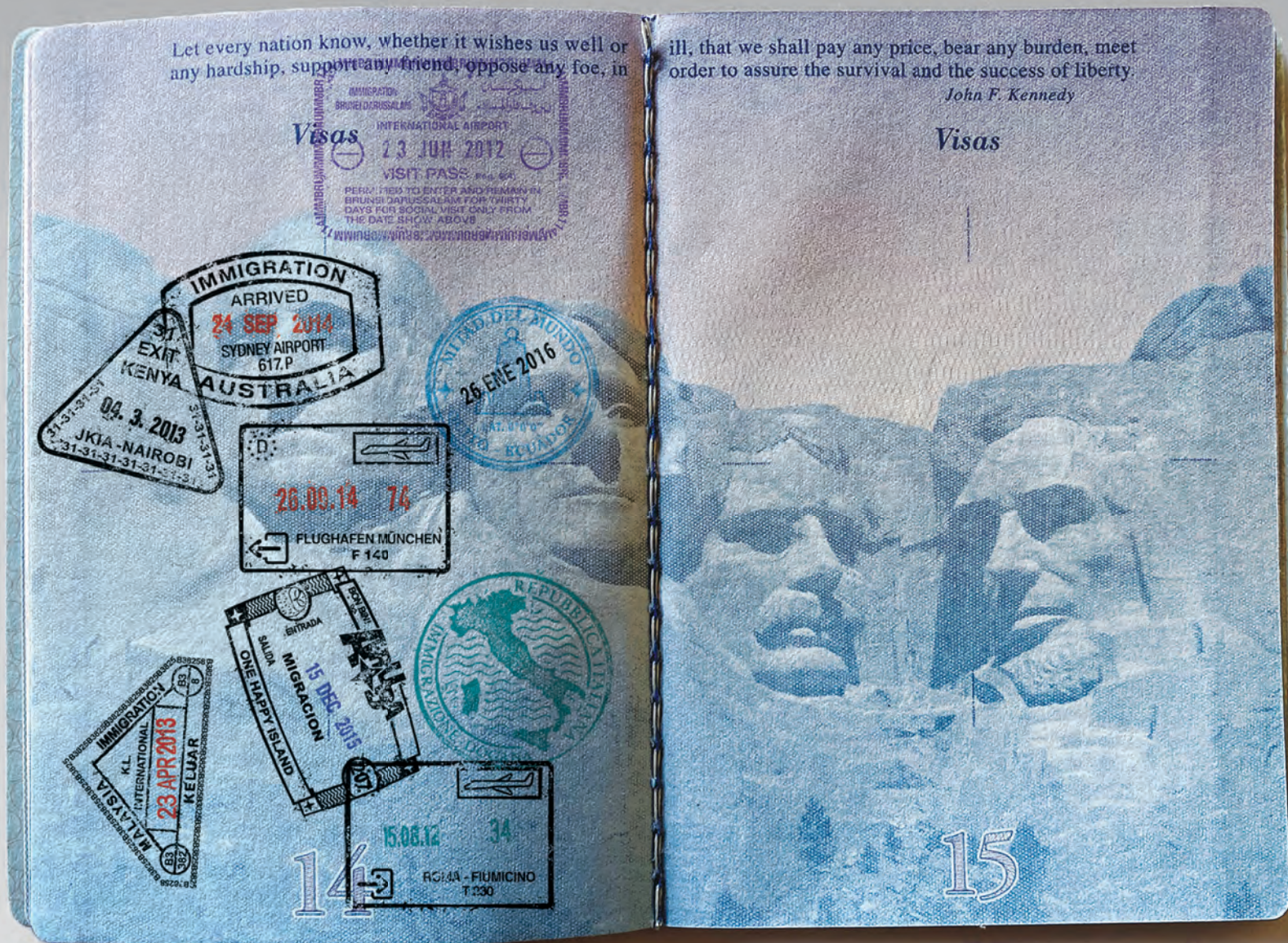
CAUTION: Federal law restricts this device to sale by or on the order of a physician.

INDICATIONS FOR USE: The Hydrus Microstent is indicated for use in conjunction with cataract surgery for the reduction of intraocular pressure (IOP) in adult patients with mild to moderate primary open-angle glaucoma (POAG). **CONTRAINDICATIONS:** The Hydrus Microstent is contraindicated under the following circumstances or conditions: (1) In eyes with angle closure glaucoma; and (2) In eyes with traumatic, malignant, uveitic, or neovascular glaucoma or discernible congenital anomalies of the anterior chamber (AC) angle. **WARNINGS:** Clear media for adequate visualization is required. Conditions such as corneal haze, corneal opacity or other conditions may inhibit gonioscopic view of the intended implant location. Gonioscopy should be performed prior to surgery to exclude congenital anomalies of the angle, peripheral anterior synechiae (PAS), angle closure, rubeosis and any other angle abnormalities that could lead to improper placement of the stent and pose a hazard. The surgeon should monitor the patient postoperatively for proper maintenance of intraocular pressure. The surgeon should periodically monitor the status of the microstent with gonioscopy to assess for the development of PAS, obstruction of the inlet, migration, or device-iris or device-cornea touch. The Hydrus Microstent is intended for implantation in conjunction with cataract surgery, which may impact corneal health. Therefore, caution is indicated in eyes with evidence of corneal compromise or with risk factors for corneal compromise following cataract surgery. Prior to implantation, patients with history of allergic reactions to nitinol, nickel or titanium should be counseled on the materials contained in the device, as well as potential for allergy/hypersensitivity to these materials. **PRECAUTIONS:** If excessive resistance

is encountered during the insertion of the microstent at any time during the procedure, discontinue use of the device. The safety and effectiveness of use of more than a single Hydrus Microstent has not been established. The safety and effectiveness of the Hydrus Microstent has not been established as an alternative to the primary treatment of glaucoma with medications, in patients 21 years or younger, eyes with significant prior trauma, eyes with abnormal anterior segment, eyes with chronic inflammation, eyes with glaucoma associated with vascular disorders, eyes with preexisting pseudophakia, eyes with pseudoexfoliative or pigmentary glaucoma, and when implantation is without concomitant cataract surgery with IOL implantation. Please see a complete list of Precautions in the Instructions for use. **ADVERSE EVENTS:** The most frequently reported finding in the randomized pivotal trial was peripheral anterior synechiae (PAS), with the cumulative rate at 5 years (14.6% vs 3.7% for cataract surgery alone). Other Hydrus postoperative adverse events reported at 5 years included partial or complete device obstruction (8.4%) and device malposition (1.4%). Additionally, there were no new reports of persistent anterior uveitis (2/369, 0.5% at 2 years) from 2 to 5 years postoperative. There were no reports of explanted Hydrus implants over the 5-year follow-up. For additional adverse event information, please refer to the Instructions for Use. **MRI INFORMATION:** The Hydrus Microstent is MR-Conditional meaning that the device is safe for use in a specified MR environment under specified conditions. **Please see the Instructions for Use for complete product information.**

References: 1. Ahmed I, et al; HORIZON Investigators. Long-term Outcomes from the HORIZON Randomized Trial for a Schlemm's Canal Microstent in Combination Cataract and Glaucoma Surgery. [https://www.aaojournal.org/article/S0161-6420\(22\)00160-9/fulltext](https://www.aaojournal.org/article/S0161-6420(22)00160-9/fulltext) 2. Hydrus Microstent Instructions for Use)

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Your patients have seen tremendous things, and plan to see a whole lot more. That's why the Hydrus[®] Microstent was purposefully designed for outcomes that stand the test of time. Choose the MIGS device built to enable life's biggest experiences.

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The only MIGS option proven in a pivotal trial at 5 years to deliver:

- ⇒ 66% of patients medication-free¹
- 👁 >50% relative reduction in incisional SSIs* compared to cataract surgery alone (2.4% in Hydrus vs. 5.3% in CS only)^{2†}
- ⇒ Established long-term safety at 60-months with comparable SAE rates reported vs cataract surgery alone^{2‡}

*SSI = Secondary Surgical Intervention

† includes trabeculectomy, tube shunt, gel stent, ECP/TSCP, non-penetrating; (9/369 Hydrus and 10/187 CS)

‡ 13/369 (3.5%) in Hydrus eyes vs. 8/187 (4.3%) in the control eyes