RUSH

DEPARTMENT OF

OPHTHALMOLOGY

22ND ANNUAL

RESIDENT & ALUMNI DAY

RUSH

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RUSH

DEPARTMENT OF OPHTHALMOLOGY

22ND ANNUAL

RESIDENT & ALUMNI DAY

Professional Building

Brainard Conference Room (Rm. 542) & Main Lounge (Rm. 500)

1725 W. Harrison St., **Fifth floor**

Chicago, IL 60612

FRIDAY, JUNE 19, 2026

RUSH UNIVERSITY MEDICAL CENTER

Sponsored Continuing Medical and Nursing Education

Credit by: Rush University Medical Center

22nd Annual Resident & Alumni Day
Hybrid Symposium

COURSE DIRECTOR:

Jonathan Rubenstein, MD, FACS

MICROSOFT TEAMS MEETING

Join: https://teams.microsoft.com/meet/248298456091758?p=3l2qclvTiBCV5pMYPD

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Passcode: ty6zJ6eD

RUSH UNIVERSITY MEDICAL CENTER

Presented by: The Department of Ophthalmology of Rush University

Sponsored for Continuing Medical and Nursing Education Credit by: Rush University Medical Center

WELCOME TO RUSH UNIVERSITY MEDICAL CENTER

June 19, 2026

Dear Program Participant:

I am delighted to welcome you to the **22nd Annual Rush Department of Ophthalmology Resident and Alumni Day** Academic Symposium. The purpose of this symposium series is to provide a forum to showcase the research activities and interests of the residents, faculty, and alumni of the Rush University Department of Ophthalmology. Although our department is private practice based and clinically oriented, research remains the backbone of any university program. The Ophthalmology Department here at Rush is committed to enhance its state-of-the-art clinical expertise with state-of-the-art clinical and basic science research. Research projects are required as part of our residency curriculum, and this day highlights the research efforts of our residents, faculty, and alumni over the past year. We expect that this program will be both stimulating and useful in your day-to-day practices. Special thanks are extended to everyone presenting today, and particularly to our residents, fellows and students, all of whom have shown their commitment to continuing medical education and to our department. We also want to thank our Education Coordinator Mohammad Yassin, MS, Administrative Manager, Yolanda K. Booker, Residency Program Director, Anjali Tannan, MD and our Research Director Matthew MacCumber, MD, PhD and Lulu Halig, OD, MS our Research Coordinator, for their help in putting this program together.

Sincerely yours,

Jonathan B Rubenstein MD

Jonathan Rubenstein, MD, FACS

Deutsch Family Professor and Chairperson

The Department of Ophthalmology of Rush University

Rush Medical College, the first medical school in the city of Chicago, was founded in 1837, two days before the city of Chicago was incorporated. The medical school had a hiatus at the start of World War II but re-started in 1971.

Edward Lorenzo Holmes, M.D. became the first chairman of the department of Ophthalmology at Rush in 1869 after being invited to Rush from its founder, Daniel Brainard, MD. Subsequent chairs included: Ferdinand C. Hotz, MD 1898-1907; William H. Wilder, MD 1908-1922; EVL Brown, MD 1922-1946; Justin M. Donegan, MD 1947-1954; William F. Hughes, MD 1955-1978; William E. Deutsch, MD 1979-1996; Thomas A. Deutsch, MD 1996–2004; Kirk H. Packo, MD 2004-2020; Jonathan B Rubenstein, MD 2020-present.

The department of Ophthalmology now trains 3 residents per year. There are 35 active attending physician-teachers in the Eye Center with a total of 55 on the faculty. All nine sub-specialties in Ophthalmology are represented by our faculty, and many have risen to prominent positions locally and nationally.

Graduates of our residency program have become both comprehensive Ophthalmologists and sub-specialists in private and academic practices throughout the country and have reached prominence in their communities and in organized Ophthalmology.

The teaching practice for the department of Ophthalmology, the Eye Center Physicians Ltd, is a multi-subspecialty and primary eye care resident run clinic supported by our Rush Ophthalmology faculty. It was established in 1977 in response to our institution’s need to deliver efficient, high-quality eye care for Rush and the local community and with a mission to improve subspecialty consultation to Chicagoland ophthalmologists.

THE REGENSTEIN EYE CENTER

The Joseph and Helen Regenstein Eye Center houses the Department of Ophthalmology and was renovated last in 2005 with plans for new renovations very soon. The facility has state-of-the-art diagnostic and therapeutic instrumentation for both patient care and resident & student education.

THE MISSION STATEMENT OF THE REGENSTEIN EYE CENTER AT RUSH

The mission of the Eye Center at Rush is to provide an infrastructure for the training of ophthalmology residents, medical students, and fellows at Rush University Medical Center through the delivery of state of the art diagnostic and therapeutic patient care within all areas of ophthalmology with oversight by the finest ophthalmic practitioners in Chicago, utilizing the best equipment and techniques available, and by so doing further support the missions of the Rush Department of Ophthalmology and Rush University Medical Center.

REFERRALS

Referrals for any primary or subspecialty services can be made directly to the individual physicians or by calling the Regenstein Eye Center at **(312) 942-5315**.

SUPPORT OUR MISSION

At Rush, we are advancing the future of ophthalmology through groundbreaking research, exceptional education, and compassionate patient care. Your generosity helps make this work possible. The Randy J. Epstein, MD, and Linda Katz, MD, Benefit Fund was established to honor Dr. Epstein's enduring legacy and deep gratitude for Rush. Reflecting his lifelong commitment to discovery, innovation, and excellence in patient care, the fund supports the next generation of ophthalmic leaders and researchers. Your gift provides vital resources for trainees pursuing advanced education and innovative research in corneal disease, surgery, and treatment. By investing in their development, you help drive scientific breakthroughs, enhance clinical expertise, and strengthen Rush's reputation as a leader in ophthalmic education, research, and patient care.

The Impact of Your Support

Your contribution helps to:

- Advance pioneering research and innovation in vision science
- Expand educational and training opportunities for future ophthalmologists
- Accelerate progress in the diagnosis, treatment, and surgical management of corneal disease
- Improve access to high-quality, patient-centered eye care
- Shape a brighter future for patients and families around the world

Together, we can transform lives through discovery, education, and compassionate care while ensuring that Dr. Epstein's legacy of excellence continues to inspire future generations.

To make a gift, please scan the QR code below using your smartphone.

Thank you for your support and for helping us create a lasting impact in the field of ophthalmology.

ACKNOWLEDGEMENTS

Thank you to the Department of Ophthalmology administrative team for your hard work, dedication, and support in making the 22nd Annual Resident & Alumni Day Symposium a success. Your efforts behind the scenes were essential to the planning, coordination, and execution of this event. We sincerely appreciate your commitment to our department, our learners, and our mission of excellence in education and research.

DEPARTMENT ADMINISTRATOR

Will Tsang, MHA, PMP

ADMINISTRATIVE MANAGER

Yolanda K. Booker, BS

EDUCATION COORDINATOR

Mohammad Yassin, MS

RESEARCH COORDINATOR

Lulu Halig, OD, MS

MEDIA & AUDIO-VISUAL SYSTEMS

Kisung Woo, BFA

ACKNOWLEDGEMENTS

The Rush Department of Ophthalmology and its faculty extend their sincere thanks to our invited guest speakers for generously sharing their time and expertise in support of our educational mission.

Jeremiah Tao, MD, FACS

Clinical Professor of Ophthalmology
Chief, Oculofacial Plastic & Orbital Surgery
Gavin Herbert Eye Institute

Madhuri Chilakapati, MD

Pediatric Ophthalmologist
Professor, Department of Ophthalmology
Baylor College of Medicine

ACKNOWLEDGMENTS

We extend our sincere gratitude to all faculty, residents, fellows, medical students, alumni, co-authors, and collaborators who contributed their time, expertise, and scholarship to this year's symposium. Your dedication to research, education, and advancing the field of ophthalmology is reflected in the outstanding quality of the presentations and abstracts shared today. Thank you for your hard work, commitment, and invaluable contributions to the success of the 22nd Annual Resident & Alumni Day Symposium and to the continued academic excellence of the Rush Department of Ophthalmology.

RUSH OPHTHALMOLOGY FACULTY

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Anjali Tannan, MD
Assistant Professor of Ophthalmology
Residency Program Director

RUSH FACULTY

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Professor, Department of Pediatrics

FELLOWS

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Paul De Bustros, MD

RESIDENTS

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Erika Zheng, MD

Leah Doro, MD

Rohun Gupta, MD

Mohit Uppal, MD

Sparsh Jain, MD

Polina Prokhoda, MD

Dylan Raiker, MD

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Opeyemi Obiwumi, MD

Kevin Tooln

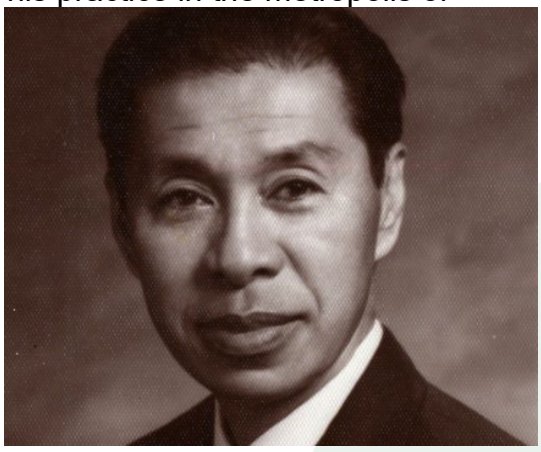
Yanyu Zha

Wayne Won Wong, MD Lectureship

Wayne Won Wong, MD was born in Maui, Hawaii on March 31, 1914. He graduated from Baldwin High School in Maui prior to receiving his bachelor's degree at the University of Hawaii in Honolulu. He was accepted at The University of Chicago (Rush University) where he received his medical degree in 1940. His post-graduate training began at the Cook County Hospital in 1940. His internship and residency training were in ophthalmology and otolaryngology from 1940-1944. He was in Chicago at the time of the attack on Pearl Harbor on December 7, 1941. He attempted to enlist in the military but was turned down by the War Department because of a duodenal ulcer. Following completion of his residency he received additional training with Dr. Wayne Slaughter in plastic surgery and Dr. Frederick Mohs in skin cancer surgery at the University of Wisconsin at Madison.

**Wong Family,
Honolulu, HI, 1957**

He returned to his native Hawaii in 1948 where he began his practice in the metropolis of Honolulu. His practice was initially in both ophthalmology and otolaryngology, but he later concentrated only on ophthalmology. Although being isolated in Hawaii far from academic centers he took an active interest in bringing the latest thoughts and technology to Honolulu. He was the first in Hawaii to perform a cataract extraction with an intraocular lens implant though at the time, the concept of implanting a foreign material into the eye was "radical." He later became intrigued by the burgeoning field of vitreous surgery. He increased his education and exposure to these rapid developments by visiting leaders in the field at the Bascom-Palmer Eye Institute and the Mass Eye & Ear Infirmary. In April of 1977 he organized the



Wayne Won Wong, MD

first vitrectomy workshop in Hawaii with the faculty consisting of Conor O'Malley, Steve Charles, and Ron Michels.

Dr Wong had a wonderful family life. He was married to Mabel Lee on October 2, 1948, and together they had five children. Dr. Wong passed away on April 8, 1982. He is survived by his children: Marc Wong, MD, Rush Class of 1977, Deen Wong, MD and Jan Wong, MD, Rush Class of 1978, Keye Wong, MD, Rush Class of 1982, and Li-Ann Wong, and four grandchildren: Carrie Wong, David Wong, Brendon Wong and Lindsay Wong.

Key, Lucy and their children

17th Annual Wayne Won Wong, MD Lecturer

Jeremiah Tao, MD, FACS

Jeremiah Tao, MD, FACS is a professor and the chief of oculofacial plastic and orbital surgery at the University of California, Irvine School of Medicine. He is editor of Ophthalmic Pearls, and oculoplastic surgery section editor of EyeNet, the American Academy of Ophthalmology's (AAO) newsmagazine. Past positions have included scientific meetings program chair and executive committee member for the American Society of Ophthalmic Plastic and Reconstructive Surgery (ASOPRS).

He was the oculofacial plastic surgery subspecialty liaison to the American Board of Ophthalmology for which he is currently an examiner and a member of the Oculoplastics Exam Development Committee. Dr. Tao has trained many oculofacial plastic surgeons practicing in the USA, as well as several around the world. He is the editor of the textbooks Plastic Surgery of the Lower Eyelids and Efficient Oculofacial Plastic Surgery.

He has written over 120 peer reviewed papers and is a regularly invited speaker nationally and internationally. He has a US patent for an operating room fire prevention device and a patent pending for a nano-printed biofilm resistant tear drain tube.

The Sunny B Patel, MD lectureship

Sunny B Patel, MD

The Sunny B Patel, MD lectureship is named after one of our former residents, Sunny Patel, who tragically died in October of 2020. He was a second-year ophthalmology resident at the time.

Sonny originally grew up in Las Vegas NV as part of the devoutly Hindu immigrant family from India. He did his first year of undergraduate work at University of Nevada in Las Vegas and then transferred to the University of Cincinnati where he got his bachelor's degree. He then went on to medical school at the University of Cincinnati and ophthalmology residency here at Rush.

Sunny was extremely bright, extremely hard working and well loved by his fellow residents, staff and attendings. He had a great sense of humor and showed the promise to be an excellent ophthalmologist. Therefore, his death was a shock to everyone.

As a way of remembering Sunny, we renamed the Rush Alumni Lectureship in his honor as the **Sunny B Patel, MD Memorial Lecture.**

The Sunny B Patel, MD Lecture

Madhuri Chilakapati, MD

Dr. Madhuri Chilakapati is a Professor of Ophthalmology at Baylor College of Medicine and serves as Associate Chief of Pediatric Ophthalmology and a Quality Director in the Department of Surgery at Texas Children's Hospital.

Her work focuses on improving patient outcomes through systems-based innovation, with an emphasis on surgical safety, inpatient care redesign, and multidisciplinary coordination. She has developed and implemented several practice-changing initiatives that have improved safety, efficiency, and reliability of care, and have been disseminated through national presentations and peer-reviewed publications.

In addition to her clinical and leadership roles, Dr. Chilakapati is a dedicated educator and mentor, actively involved in training residents and fellows and advancing quality improvement as a core component of clinical practice.

AGENDA

MORNING SESSION

8:00 AM – Welcome & Introduction

Jonathan B. Rubenstein, MD, FACS

8:05 AM – Long-Term Follow-Up for Laser Barricade of Large Rhegmatogenous Retinal Detachments

Tarin T. Tanji, MPH; Kevin F. Elwood, MD; Sarah Kee, BS; Alicia Wang, BS; Qianyi Pu, MS; Anne Shepherd, MD; Vivek Chaturvedi, MD, FASRS

8:20 AM – Early Epiretinal Membrane Surgery Is Associated with Improved Visual Outcomes After Macula-On Retinal Detachment: A Large Database Study

Paul de Bustros, MD; Chakshu Sharma, MS; Vivek Chaturvedi, MD, FASRS

8:35 AM – Comparative Outcomes Between Local Steroid Therapies in Non-Infectious Uveitis

Allison L. Wuller, BS; Veena Raiji, MD, MPH

8:50 AM – Rescan or Recycle: Examining the Longitudinal Variability of Topographic and Biometric Intraocular Lens Measurements

Mohit Uppal, MD; Anjali Tannan, MD

9:05 AM – Hyperacute Epiretinal Membrane After Retinal Detachment Repair: Optical Coherence Tomography Characteristics, Progression, and Surgical Outcomes of Membrane Peel

Madelyn Malvitz, BS; Kevin Elwood, MD; Rishabh Gupta, MD; Vivek Chaturvedi, MD, FASRS

9:20 AM – Triple or Staged? Comparing Outcomes in Patients Undergoing Corneal Endothelial Keratoplasty

Erika Zheng, MD; Opeyemi Obiwumi, MD; Mohan Bhadriraju, BA; Gabriella Tran, BA; Neel Vaidya, MD; Jonathan B Rubenstein, MD, FACS

9:35 AM – Live Exhibitors Breakout Session-*Main Lounge (Rm. 500)***

9:50 AM – The Devil Is in the Details: Avoiding Disasters in Oculofacial Surgery

Jeremiah Tao, MD, FACS

10:05 AM – The Influence of Bandage Contact Lenses on Tonometry Devices

Matthew Lim, MD; Allison Wuller, BS; Oscar Chen, MD, MS; Jonathan B. Rubenstein, MD, FACS

10:20 AM – Anatomical and Functional Outcomes in Primary Uncomplicated Pars Plana Vitrectomy for Retinal Detachment: Peripheral Vitreous Shave Versus a No-Shave Technique

Rishabh Gupta, MD; Kevin Elwood, MD; Olga Gomeniouk; Ankita Batra, BS; Madelyn Malvitz, BS; Quyen Diep; Yanyu Zhang; Vivek Chaturvedi, MD, FASRS

10:35 AM – Educational Quality of Glaucoma Content on TikTok: Implications for Patient Education and Engagement

Nicholas J. Pizzo, BS; Tejas C. Sekhar, BA; Mohit Uppal, MD

10:50 AM – Intravitreal Cerliponase Alfa for CLN2-Associated Retinal Degeneration: Safety and Early Clinical Outcomes in a Pediatric Case

Praewpailin Rich, BS; Nicholas J. Pizzo, BS; Tejas C. Sekhar, BA; Mohit Uppal, MD; Sara Fard, MD; Elizabeth M. Berry-Kravis, MD

11:05 AM – A Mixed-Methods Approach to Characterize Nonadherence to Topical Therapy in Glaucoma and Dry Eye Disease

Tejas C. Sekhar, BA; Jessica D. Toledo, MS; Oneke Gwan, BS, MA; Nandi Thales Mogo, BS; Nina A. Goyal, MD

11:20 AM – Introduction to the 17th Annual Wayne Won Wong, MD Memorial Lecture

Jonathan B. Rubenstein, MD, FACS

11:25 AM – Wong Memorial Lecture: Blink Twice: From Surgical Flaps to Nature's Third Eyelid

Jeremiah Tao, MD, FACS

11:55 AM – Lunch Break & Exhibits *-Main Lounge (Rm. 500)* **

Featuring:

Alcon, Astellas, Bausch + Lomb, Dompé, Glaukos, Heidelberg Engineering, Johnson & Johnson, MicroSurgical Technology, New World Medical, Regeneron, RxSight, Sight Sciences, Tarsus Pharmaceuticals, Théa Pharma Inc., ZEISS, & 4DMT

AFTERNOON SESSION

12:55 PM – Introduction to the Sunny B. Patel, MD Memorial Lecture

Jonathan B. Rubenstein, MD, FACS

1:00 PM – Sunny B. Patel, MD Memorial Lecture: Wrong-Site Risk in Strabismus Surgery: A Quality Improvement Approach

Madhuri Chilakapati, MD

1:30 PM – Atopic Dermatitis as a Risk Factor for Retinal Detachment and Proliferative Vitreoretinopathy in a U.S. Population

Catherine Chang, BA; Nathan Vance, BSPH; Nitika Aggarwal, BTech; Nick Boucher, BS; Mathew MacCumber, MD, PhD

1:45 PM – Listening, Observing, and Thinking Beyond the Exam

Madhuri Chilakapati, MD

2:00 PM – Live Exhibitors Breakout Session- *Main Lounge (Rm. 500)* **

2:15 PM – Greening the OR: Reducing Cataract Surgery Material Waste

Terrence Murphy, MD, MPH; Anjali Tannan, MD

2:30 PM – Comparative Efficacy of Membrane Peel After Retinal Detachment Repair Versus After Retinal Horseshoe Tear Repair

Leah Doro, MD; Mohit Uppal, MD; Madelyn Malvitz, BS; Sarah Syeda, MD; Anne Shepherd, MD

2:45 PM – Continuous-Wave Cyclodiode vs. Micropulse Transscleral Cyclophotocoagulation for Treatment of Severe Glaucoma at Rush University Eye Center

Sparsh Jain, MD; Jason Lau, BA; Reece Elowe, BSA; Anjali S. Hawkins, MD, PhD

3:00 PM – Quantifying Use of Selective Laser Trabeculoplasty as First-Line Treatment of Mild to Moderate Open-Angle Glaucoma and Ocular Hypertension at Eye Center Physicians

Polina Prokhoda, MD; Anjali S. Hawkins, MD, PhD

3:15 PM – Effects of Posterior Capsular Opacification and Timing of YAG Capsulotomy on Refractive Outcomes with the Light Adjustable Lens

Rohun R. Gupta, MD; Neel Vaidya, MD

3:30 PM – Final Comments

Jonathan B. Rubenstein, MD, FACS

3:40 PM – Adjourn

***This session is not designated for continuing education credit. This is in no way a reflection of the integrity or quality of the content.*

PRESENTATION ABSTRACTS & SUMMARIES

TITLE: Long-Term Follow-Up for Laser Barricade of Large Rhegmatogenous Retinal Detachments

AUTHORS: Tarin T. Tanji, MPH; Kevin F. Elwood, MD; Sarah Kee, BS; Alicia Wang, BS; Qianyi Pu, MS; Anne Shepherd, MD; Vivek Chaturvedi, MD, FASRS

PURPOSE: To evaluate long-term visual and anatomical outcomes of in-office laser barricade for large (≥2 clock hours) rhegmatogenous retinal detachments (RRD) and to report the frequency of additional laser treatment or pars plana vitrectomy (PPV).

METHODS: This retrospective chart review included patients treated between 2015 and 2023 at a large retina-only private practice in Chicago, IL. Included cases had documented fundus diagrams confirming RRDs involving at least two clock hours of circumference and a minimum of three months of follow-up. Procedure success was defined as successful management of RRD without the need for PPV.

RESULTS: Seventy-six eyes (mean age, 51.2 ± 17.7 years) were analyzed, with a mean follow-up of 38.6 months. The mean RRD size was 2.9 ± 1.1 clock hours (range: 2–6). Mean BCVA improved from 20/31 to 20/30. The procedure success rate was 92.1%, with six eyes (7.9%) requiring PPV for RRD progression. Thirteen eyes (17.1%) required an additional laser. In univariate analysis, RRD requiring PPV trended toward worse baseline BCVA (P = .066) and phakic lens status (P = .060). In logistic regression, RRD requiring PPV trended toward association with baseline posterior vitreous detachment (PVD) (P = .081), vitreous hemorrhage (VH) (P = .077) and phakic status (P = .060). Laser barricade was performed on same day of diagnosis in 47 eyes (61.8%) and delayed by ≥1 day in 29 eyes (38.2%). Same-day treatment trended toward a higher need for PPV (p = .08).

CONCLUSIONS: In-office laser barricade is an effective treatment for RRDs involving ≥2 clock hours, with a 92.1% long-term success rate. PVD, VH, and phakic status demonstrated trends toward an increased risk of RD progression requiring PPV. Patients who do not require

same-day intervention may achieve excellent outcomes with laser barricade alone

PRESENTATION ABSTRACTS & SUMMARIES

TITLE: Early Epiretinal Membrane Surgery Is Associated with Improved Visual Outcomes After Macula-On Retinal Detachment: A Large Database Study

AUTHORS: Paul de Bustros, MD; Chakshu Sharma, MS; Vivek Chaturvedi, MD, FASRS

PURPOSE: The purpose of this study is to evaluate visual outcomes based on timing of membrane peel (MP) for epiretinal membrane (ERM) developing within 1 year of rhegmatogenous retinal detachment (RRD) repair in pseudophakic patients diagnosed with macula-on RRD.

METHODS: Pseudophakic patients who underwent RRD repair for a diagnosis of macula-on RRD and subsequently developed an ERM treated with MP within 1 year of RRD repair between January rma collected from the database including demographic data, date of RRD diagnosis, diagnosis of ERM, date of RRD repair and MP, past ocular history including lens status, and pre-operative and post-operative visual acuity (VA). VA was reported using ETDRS letter scores: ≥70 letters (≥20/40), 35–69 letters, and <35 letters (<20/200). Statistical analyses were performed using the chi-square test, two-sample t test, and Fisher's exact test.

RESULTS: A total of 253 eyes met inclusion criteria and were stratified into Group 1 (MP within 0 to 6 months after RRD repair; n=139) and Group 2 (MP between 6+ to12 months; n=114). There was no significant difference in demographic data between the groups. Mean VA at RRD repair was similar between groups (57.0 letters in Group 1 vs 53.9 letters in Group 2; p=0.45). ERM presented significantly earlier in Group 1, with mean and median times to diagnosis of 70 and 64 days, respectively, compared with 121 and 115 days in Group 2 (p<0.001). The mean interval from RRD repair to MP was significantly shorter in Group 1 (118 days) compared with Group 2 (257 days; p<0.001). Critically, the mean time from ERM diagnosis to MP was significantly shorter in Group 1 (48 days) versus Group 2 (137 days; p<0.001). Preoperative VA prior to MP did not differ significantly between groups (46.2 vs 44.4 letters; p=0.566). In contrast, postoperative final VA was significantly better in Group 1 (62.5 vs 55.3 letters; p=0.031), with a higher proportion achieving VA ≥20/40 (53% vs 43%). Furthermore, the mean VA improvement was significantly greater in Group 1 (16.2 vs 10.9 letters; p=0.032).

CONCLUSIONS: Compared with Group 2, eyes in Group 1 were diagnosed with ERM earlier, underwent MP sooner following ERM diagnosis (approximately 7 weeks versus 20 weeks), and achieved better final visual outcomes, despite similar VA at the time of RRD repair and prior to MP. Analysis was restricted to pseudophakic eyes with macula-on RRD, thereby reducing the influence of baseline RRD-related vision loss and cataract progression. Collectively, these findings suggest that earlier MP may result in superior final visual outcomes. Study limitations include the retrospective design and lack of OCT imaging to assess ERM severity or morphology. Future prospective studies with standardized ERM grading may further clarify optimal MP timing.

PRESENTATION ABSTRACTS & SUMMARIES

TITLE: Comparative Outcomes between Local Steroid Therapies in Non-Infectious Uveitis

AUTHORS: Allison L. Wuller, BS; Veena Raiji, MD, MPH

PURPOSE: To compare real-world anatomic and functional outcomes among eyes with non-infectious intermediate, posterior, or panuveitis treated with dexamethasone intravitreal implant (DEX), fluocinolone acetonide implant (FAc), or suprachoroidal triamcinolone acetonide (SCS-TA).

METHODS: A retrospective analysis was conducted using the Vestrum Database, a de-identified patient database. Patients with non-infectious intermediate, posterior, and panuveitis treated with DEX, FAc, or SCS-TA between January 2015 and June 2025 were analyzed at baseline, 90 days, 180 days, and 365 days post index treatment. This study measured intraocular pressure (IOP) changes, best corrected visual acuity (BCVA, ETDRS) changes, CRT changes, and pseudophakic lens status rates.

RESULTS: A total of 1,638 eyes met our inclusion criteria: 1,510 were treated with DEX, 79 with FAc, and 49 with SCS-TA. The average age was 64.1 ± 15 years old (1,045, 63% female). The average number of implants for DEX, FAc, and SCS-TA were 2.1, 1.0, and 1.9 respectively.

At 90 days, IOP increased by 0.5, 0.4, and 1.8 mmHg for DEX, FAc, and SCS-TA while an increase in IOP by 0.1, 0.7, and 0.3 mmHg was seen respectively. Mean BCVA improved in all three groups from baseline to 365 day follow up: 58.8 letters to 62.9 for DEX, 67.3 to 70 for FAc, and 55.3 to 57.4 for SCS-TA. CRT (um) decreased in all three groups from baseline to 365 day follow up: 446.5 to 348.9 for DEX, 344.7 to 283.2 for FAc, and 415.1 to 384.1 for SCS-TA. At baseline, the majority of eyes in all treatment groups were pseudophakic (66% DEX, 80% FAc, and 80% SCS-TA), while only

30%, 19%, and 12% respectively were phakic. The proportion of pseudophakia continued to grow a year after baseline (82% DEX, 91% FAc, and 84% SCS-TA).

CONCLUSIONS: In this large real-world cohort of eyes with non-infectious uveitis, all three local steroid approaches were associated with BCVA gains (~2-4 letters) and CRT reductions (31-98um) over 12 months. Because the data comes from a group of retina specialists, any pseudophakic patients may have been post-surgical cystoid macular edema and not true uveitic macular edema. This could influence CRT and VA responses to steroid treatment. This interpretation of between-treatment differences should consider the smaller sample sizes for FAc and SCS-TA and the descriptive, non-inferential nature of this analysis.

PRESENTATION ABSTRACTS & SUMMARIES

TITLE: Rescan or Recycle: Examining the Longitudinal Variability of Topographic and Biometric Intraocular Lens Measurements

AUTHORS: Mohit Uppal, MD; Anjali Tannan, MD

PURPOSE: To evaluate the longitudinal variability of intraocular lens (IOL) measurements, including ocular biometry and topography. As cataract surgery volumes continue to rise, optimizing clinic workflow is vital. While routine repetition of biometric measurements prior to surgery is common practice to mitigate the risk of refractive surprises in patients who have previously undergone such measurements, there is limited consensus on the actual time interval during which these measurements remain reliable. If there is significant variability in measurements over time, utilizing outdated scans may lead to unanticipated refractive error postoperatively. However, if this longitudinal variation in measurements does not exist, unnecessarily repeating this testing would waste patient and physician time and resources.

METHODS: A retrospective, single-center study was conducted analyzing databases from the Lenstar LS900 and Atlas 9000 Corneal Topography System at University Ophthalmology Associates (Rush University Medical Center, Chicago, IL). The study included eyes that underwent two distinct sets of ocular biometry and topography separated by an interval of at least 3 months. Analyzed biometric variables included axial length, central corneal thickness, aqueous depth, anterior chamber depth, and lens thickness. Topographic variables evaluated included flat and steep keratometry. Furthermore, we assessed theoretical changes in recommended IOL power and predicted postsurgical refractive error when utilizing six standard IOL calculation formulas: Hoffer Q, Holladay I, SRK/T, Olsen, Barrett Universal II, and Hill-RBF. A linear mixed-effects model with random intercept was applied to determine statistical significance.

RESULTS: A total of 200 eyes of 102 patients, aged 55 to 90 years, were included in this analysis. Average time interval between the two sets of measurements was 1.37 years (16.47 months). When comparing the two sets of measurements captured by the Lenstar LS900 and Atlas Topography 9000, only a significant difference in lens thickness ($p = 0.026$) was appreciated. There were no significant differences appreciated in axial length, central corneal thickness, aqueous depth, anterior chamber depth, and flat or steep keratometry. There were no significant differences observed in recommended IOL power or theoretical postsurgical refractive error using the Hoffer Q, Holladay I, SRK/T, Olsen, Barrett Universal II, and Hill-RBF formulations.

CONCLUSIONS: Current clinical dogma warns against utilizing outdated IOL measurements for cataract extraction with IOL implantation. However, no significant differences exist in recommended IOL power or theoretical postsurgical refractive error between measurements captured at the 1.37-year time point. Because historical scans do not yield clinically significant differences in recommended IOL power or predicted refractive error, routinely repeating biometry and topography in otherwise stable eyes may be unwarranted. Safely reusing these baseline measurements can optimize clinical workflow, reduce redundant diagnostic testing, and maximize clinic resources without compromising patient refractive outcomes.

PRESENTATION ABSTRACTS & SUMMARIES

TITLE: Hyperacute Epiretinal Membrane After Retinal Detachment Repair: Optical Coherence Tomography Characteristics, Progression, and Surgical Outcomes of Membrane Peel

AUTHORS: Madelyn Malvitz, BS; Kevin Elwood, MD; Rishabh Gupta, MD; Vivek Chaturvedi, MD, FASRS

PURPOSE: To characterize the onset, progression, optical coherence tomography (OCT) features, and visual outcomes of hyperacute epiretinal membranes (ERMs) developing after uncomplicated retinal detachment (RD) repair, and to identify factors influencing postoperative visual acuity following membrane peel (MP).

METHODS: A retrospective cross-sectional study was conducted at a retina-only practice from 2015-2022. Inclusion criteria consisted of eyes undergoing primary rhegmatogenous RD repair that developed OCT-confirmed ERM within 6 months and subsequently underwent ERM with internal limiting MP within 1 year. Only patients with serial OCT imaging between RD repair and MP were included. Exclusion criteria included proliferative vitreoretinopathy, ERM at time of RD diagnosis, ocular trauma, cystoid macular edema requiring treatment, or need for silicone oil. ERM stage, central foveal thickness (CFT), and visual acuity (VA) were recorded at initial ERM diagnosis and preoperatively. Time intervals from RD repair to ERM diagnosis and to MP were calculated. Univariate and multivariate linear regression analyses were performed to assess associations between clinical variables and final postoperative logMAR VA.

RESULTS: Forty eyes met inclusion criteria. Mean time to ERM diagnosis following RD repair was 69 days, with 95% identified within 4 months. At presentation, ERMs were advanced, with a mean stage of 3.48 and a median of stage 4. Before MP, the mean stage increased to 3.75, with 82.5% classified as stage 4. CFT increased from a mean of 497 μm at diagnosis to 576 μm preoperatively (mean

change +79 μm), indicating progressive macular thickening. Visual acuity remained stable preoperatively (mean Snellen ~20/125), but improved postoperatively to a mean of 20/40. The mean time from RD repair to MP was 171 days.

Univariate regression analysis demonstrated that increased time to MP, greater number of preoperative OCTs, worse preoperative VA, and increasing CFT were all significantly associated with worse final postoperative VA ($p<0.05$). However, in multivariate analysis, only increased time from RD repair to MP remained independently associated with worse final logMAR VA ($p<0.05$). A negative correlation was observed between surgical delay and visual outcomes, indicating that longer intervals before MP were associated with poorer vision.

CONCLUSIONS: Hyperacute ERMs following uncomplicated RD repair develop rapidly, often within 2-4 months, and present at advanced stages with continued progression in both structural severity and retinal thickening before intervention. Despite the ceiling effect of current staging systems, OCT findings such as increasing CFT suggest ongoing disease progression even within stage 4 ERMs. Importantly, delayed timing of membrane peel is independently associated with worse visual outcomes, underscoring the time-sensitive nature of surgical intervention in this population.

These findings support the need for early and routine postoperative OCT surveillance after RD repair to facilitate prompt detection of ERM formation. Earlier identification may allow for more timely surgical consideration and improved visual prognosis. Additionally, the aggressive course observed in hyperacute ERMs suggests potential limitations in current staging systems and highlights the need for refined classification methods that better capture disease progression. Further prospective studies are warranted to establish optimal monitoring intervals and surgical timing guidelines to minimize long-term visual morbidity

PRESENTATION ABSTRACTS & SUMMARIES

TITLE: Triple or Staged? Comparing Outcomes in Patients Undergoing Corneal Endothelial Keratoplasty

AUTHORS: Erika Zheng, MD; Opeyemi Obiwumi, MD; Mohan Bhadriraju, BA; Gabriella Tran, BA; Neel Vaidya, MD; Jonathan B Rubenstein, MD, FACS

PURPOSE: Patients with corneal endothelial diseases who have concurrent, visually significant cataracts are at an increased risk of corneal decompensation with cataract surgery. Surgeons may choose to perform a combined “triple procedure” (phacoemulsification, intraocular lens implantation, and a DMEK or DSEK) for reduced surgical burden or surgeons may opt for staged procedures, allowing healing between surgeries. The literature presents conflicting evidence regarding the optimal surgical approach, leaving the choice largely to surgeon experience and preference. Corneal surgeons at University Ophthalmology Associates (UOA) and Chicago Cornea Consultants (CCC) use both approaches. This study hopes to 1) identify the outcomes of both approaches and 2) compare these outcomes.

METHODS: Eligible patients were identified as those who underwent endothelial keratoplasty between 1/1/2017 – 12/31/2025. This chart review includes patients who underwent phacoemulsification with intraocular lens implantation and endothelial keratoplasty. Pre-operative data will include ocular co-morbidities. Post-operative data collected will include: uncorrected visual acuity (day 1, week 1, and month 1, month 3, and 12 months); best corrected visual acuity at (3 and 12 months); refraction at (1, 3, and 12 months); endothelial cell counts; graft clarity; re-bubbling rates; transplant failure rates; re-operation rates; and pachymetry. Cases were excluded if the endothelial keratoplasty was not performed by one of the aforementioned UOA or CCC surgeons.

Procedures will be categorized as a “triple procedure” when the phacoemulsification with intraocular lens implantation is combined with the endothelial keratoplasty procedure. “Staged procedures” are

those in which these procedures are performed sequentially. “Other procedures” are those that do not fall into either of the aforementioned categories, such as those with an intraocular lens exchange during endothelial keratoplasty. “Transplant failure” was defined as cases requiring a repeat transplant. A two proportion z-test will be used to compare the transplant failure rates between triple and staged procedures.

ACKNOWLEDGEMENTS: We thank Drs. Parag Majmudar, MD, Vanee Virasch, MD, Anjali Tannan, MD for contributing surgical cases and data.

PRESENTATION ABSTRACTS & SUMMARIES

TITLE: The Influence of Bandage Contact Lenses on Tonometry Devices

AUTHORS: Matthew Lim, MD; Allison Wuller, BS; Oscar Chen, MD, MS; Jonathan B. Rubenstein, MD, FACS

PURPOSE: To compare the accuracy of intraocular pressure (IOP) measurements in young individuals with healthy corneas wearing bandage contact lenses (BCLs) with iCare, Tono-Pen, and Ocular Response Analyzer tonometry.

METHODS: Sixty eyes of 30 healthy volunteers, aged 22 to 30 years, were included. The study was approved by the Institutional Review Board at Rush University Medical Center. Subjects were enrolled between March and September 2025, and underwent a slit-lamp examination to rule out anterior segment disease. Measurements were taken on the right eye first and then the left eye. IOP was measured in random order with iCare rebound tonometry (iCare IC200 rebound tonometer), Tono-Pen AVIA, and the Ocular Response Analyzer (Ocular Response Analyzer G3) after the instillation of a single eyedrop of 0.5% proparacaine hydrochloride in the naked eye. A BCL (Air Optix Night & Day Lotrafilcon A, plano, 24% water content, base curvature 8.4 mm, oxygen permeability 140, modulus 1.4) was then placed on the right eye first and then the left eye for a minimum of 3 minutes. Measurements with each device were repeated in random order through the BCL. A single examiner measured with the same calibrated tools between 12 and 1 PM. A second investigator recorded values. Significance was determined via paired t test.

RESULTS: Right Eyes: The average iCare rebound tonometer IOP in the right eyes was 15.8 ± 2.9 (mean ± standard deviation) with a range of 11 to 21 mmHg before lens insertion then 16.5 ± 3.6 mmHg after lens wear ($p = 0.10$). The average Tono-Pen AVIA IOP was 15.4 ± 2.6 mmHg before lens placement with a range of 9 to 19 mmHg then 15.5 ± 3.3 mmHg after insertion ($p = 0.87$). The

average corneal-compensated IOP (IOPcc) was 15.3 ± 2.4 mmHg before insertion with a range of 10.6 to 20.5 mmHg, then 15.4 ± 2.4 mmHg after placement (p = 0.86). The average Goldmann-correlated IOP (IOPg) was 15.0 ± 2.7 mmHg before lens placement with a range of 10.3 to 20.1 mmHg then 16.4 ± 2.4 mmHg after insertion (p = 0.00). Left Eyes: The average iCare rebound tonometer IOP in the left eyes was 15.4 ± 3.1 mmHg before BCL placement with a range of 10 to 21 mmHg then 16.1 ± 3.8 mmHg after insertion (p = 0.23). The average Tono-Pen AVIA IOP was 14.8 ± 2.3 mmHg before insertion with a range of 9 to 19 mmHg and 15.7 ± 3.4 mmHg after placement (p = 0.15). The average IOPcc was 15.3 ± 2.5 mmHg before BCL placement with a range of 9.8 to 20.8 mmHg then 15.2 ± 2.3 mmHg after insertion (p = 0.90). The average IOPg was 14.8 ± 2.7 mmHg with a range of 9.2 to 19.7 mmHg before BCL insertion then 16.3 ± 2.1 mmHg after placement (p = 0.00).

CONCLUSIONS: We demonstrated iCare and Tono-Pen tonometry to be reliable over BCLs in young individuals with healthy corneas. While IOPcc may also be reliable, IOPg accuracy should be interpreted cautiously through BCLs.

PRESENTATION ABSTRACTS & SUMMARIES

TITLE: Anatomical and Functional Outcomes in Primary Uncomplicated Pars Plana Vitrectomy for Retinal Detachment: Peripheral Vitreous Shave versus A No-Shave Technique

AUTHORS: Rishabh Gupta, MD; Kevin Elwood, MD; Olga Gomeniouk; Ankita Batra, BS; Madelyn Malvitz, BS; Quyen Diep; Yanyu Zhang; Vivek Chaturvedi, MD, FASRS

OBJECTIVE: Is there a difference in postoperative anatomical and functional outcomes between eyes undergoing primary uncomplicated pars plana vitrectomy (PPV) for rhegmatogenous retinal detachment (RRD) repair when comparing a depressed peripheral vitreous base shave technique versus a no-shave technique?

PURPOSE: To evaluate postoperative anatomical and functional outcomes of primary uncomplicated RRD repair performed with and without a surgeon guided scleral depressed vitreous base shave, a technique commonly employed by vitreoretinal surgeons despite no published comparative outcome data.

METHODS: A retrospective chart review was conducted on 1186 patients within a Midwest multicenter retina practice between the dates of 1/1/2015 through 12/1/2020. Preset inclusion and exclusion criteria were utilized to include eyes with no significant past ocular history that underwent uncomplicated RRD repair with PPV only. Eyes were separated into “shave” and “no-shave” groups. The “shave” group comprised eyes operated on by four surgeons whose standard approach during PPV utilized a self-scleral depressed vitreous base shave for 360 degrees while using a wide-field illumination system (e.g., chandelier). The “no-shave” group comprised eyes operated on by two surgeons whose standard approach did not include scleral depression during PPV, either independently or with an assistant. Individual operative reports were reviewed for verification of surgical technique, exclusion of confounding variables, and data collection regarding the nature of

each detachment. Statistical analysis was carried out using SAS v9.4 (SAS, Cary, NC) and R (version 4.3.2). This study was approved by the organizational Institutional Review Board.

RESULTS: 564 eyes were included from 564 patients. All available operative reports were reviewed. 203 eyes were included in the no-shave group (two surgeons) and 361 eyes were included in the shave group (four surgeons). Mean follow up was 35 months. Presenting RRD characteristics were similar between groups, with no significant differences in presence of a macula off detachment (p=0.55), detachment location (p=0.39), number of retinal breaks (p=0.13), or use of retinotomy (p=0.39). The rate of proliferative vitreoretinopathy (PVR) was 5.42% in the no-shave group and 6.09% in the shave group (p=0.74). The rate of retinal redetachment after initial surgery was 10.84% in the no-shave group and 9.70% in the shave group (p=0.67). Mean time from surgery to development of PVR was 2.0 months in the no-shave group and 1.8 months in the shave group (p=0.73). Mean time from PPV to development of redetachment was 2.0 months in the no-shave group and 2.1 in the shave group (p=0.87). 12-month postoperative LogMAR best corrected visual acuity (BCVA) was 0.32 in the no-shave group and 0.30 in the shave group (p=0.74). It should be noted that a higher proportion of eyes in the no-shave group were pseudophakic at the time of surgery compared with the shave group (71.9% vs 55.3%, $p<0.05$). However, when analyses were restricted to phakic eyes (group 1 n=61, group 2 n=157), no significant differences were observed between groups in rates of postoperative PVR or retinal redetachment (p=0.30 and p=0.53, respectively). Furthermore, additional analysis with logistic regression models showed that lens status at the time of PPV did not affect postoperative functional visual outcomes in either group.

CONCLUSIONS: Utilization of a scleral depressed vitreous base shave during primary PPV for uncomplicated RRD repair is often employed with the intent of reducing postoperative PVR and the rate of retinal redetachment. Although there is literature to support high single surgery success rates in eyes that underwent PPV with or without vitreous base shaving, there is no comparative outcome analysis of these two techniques. Based on a review of the literature, this is the first and largest head-to-head retrospective comparison of a scleral depressed peripheral vitreous base shave technique versus a no-shave technique. In this study, no significant differences were observed in rates of postoperative PVR, retinal redetachment, or functional visual outcomes. Although limited by its retrospective design and inability to capture nuanced variability in surgical technique, these findings may suggest that routine 360-degree scleral depressed peripheral vitreous shaving may not confer

additional anatomical or functional benefit in uncomplicated cases. Further prospective studies are warranted to better delineate which surgical factors during a routine PPV, if any, further influence postoperative outcomes in this population.

*Denotes authors who have contributed equally to this work.

PRESENTATION ABSTRACTS & SUMMARIES

TITLE: Educational Quality of Glaucoma Content on TikTok: Implications for Patient Education and Engagement

AUTHORS: Nicholas J. Pizzo, BS; Tejas C. Sekhar, BA; Mohit Uppal, MD

PURPOSE: Inequitable access to glaucoma education contributes to global disparities in disease awareness, early detection, and visual outcomes. Social media platforms such as TikTok are increasingly used to disseminate health information and expand access to eye health education; however, the quality of this content remains uncertain. This study aimed to evaluate the quality of glaucoma-related TikTok videos and to assess whether highly viewed content is higher quality and varies by creator training background.

METHODS: TikTok was searched using the keyword “glaucoma,” and the first 50 eligible English-language videos containing educational content were included. Videos consisting solely of personal testimonials, unrelated material, or duplicates were excluded. Extracted variables included creator type and engagement metrics (views, likes, comments). Educational quality was assessed using the modified DISCERN (mDISCERN) instrument and Global Quality Score (GQS), and videos were categorized by creator training background. A randomly selected subset of 15 videos was independently evaluated by a second reviewer to assess inter-rater reliability using the intraclass correlation coefficient (ICC). Additional platform-specific educational features were recorded using a supplementary checklist.

RESULTS: Fifty videos were included in the analysis. Overall educational quality was moderate (mean mDISCERN 3.46 ± 0.65/5; mean GQS 3.74 ± 0.66/5). Videos demonstrated substantial and highly variable public exposure, with a median of 30,700 views (IQR 8,902–74,375). Inter-rater reliability was good for both mDISCERN (ICC = 0.87, 95% CI 0.63–1.15) and GQS (ICC = 0.85, 95%

CI 0.71–1.02). Video views were not significantly associated with educational quality (Spearman ρ = −0.17 for mDISCERN; ρ = 0.06 for GQS; p > 0.05), while engagement rate demonstrated a weak positive correlation with mDISCERN (ρ = 0.30, p = 0.036). Engagement rate was inversely correlated with total views (ρ = −0.43, p = 0.002). Educational quality scores did not differ significantly across creator groups (Kruskal-Wallis p > 0.4). All videos used lay language (100%) and most disclosed creator credentials (90%), although fewer incorporated visual aids (58%) or provided clear patient-oriented action steps (54%).

CONCLUSIONS: This study highlights the complex role of short-form social media in ophthalmic patient education. Glaucoma-related TikTok content demonstrated moderate educational quality despite broad reach. Although many videos used accessible language, fewer included patient-oriented recommendations, underscoring a gap between awareness and actionable guidance. Engagement patterns did not consistently reflect informational quality or reliability. These findings suggest that social media may serve as a valuable entry point for glaucoma education but requires more patient-centered instruction to support screening and treatment adherence. Increased clinician engagement and evidence-based digital communication strategies.

PRESENTATION ABSTRACTS & SUMMARIES

TITLE: Intravitreal Cerliponase Alfa for CLN2-Associated Retinal Degeneration: Safety and Early Clinical Outcomes in a Pediatric Case

AUTHORS: Praewpailin Rich, BS; Nicholas J. Pizzo, BS; Tejas C. Sekhar, BA; Mohit Uppal, MD; Sara Fard, MD; Elizabeth M. Berry-Kravis, MD

PURPOSE: Cerliponase alfa is an FDA-approved enzyme replacement therapy (ERT) delivered via intracerebroventricular infusion biweekly to slow neurologic decline in neuronal ceroid lipofuscinosis type 2 (CLN2), a rapidly progressive pediatric neurodegenerative disorder. However, retinal degeneration accompanying CLN2 continues to progress due to limited ocular penetrance of the therapy. To address this gap, cerliponase alfa was administered off-label via intravitreal (IVT) injection. We evaluated the safety, tolerability, and early outcomes of IVT cerliponase alfa in a 6-year-old patient with CLN2 receiving monthly injections over 40 weeks.

METHODS: A retrospective chart review was conducted of a 6-year-old boy with CLN2 treated with intravitreal cerliponase alfa every 4 weeks for 40 weeks, with data reported as part of ongoing longitudinal follow-up. Pre-procedural intraocular pressure (IOP) measurement and fundus photography were obtained at each visit. Optical coherence tomography (OCT) was performed at baseline and at follow-up (approximately 8 months from baseline imaging and 6.5 months after treatment initiation).

RESULTS: Intraocular pressure and fundus findings remained stable across all treatment visits. Optical coherence tomography demonstrated scattered ellipsoid zone disruption at baseline that remained stable at follow-up. The patient tolerated serial IVT cerliponase alfa well, and no adverse events requiring treatment interruption or discontinuation occurred.

CONCLUSIONS: Our preliminary findings suggest that intravitreal cerliponase alfa is well tolerated and demonstrates a favorable safety profile in this pediatric patient with CLN2. Retinal structure remained stable bilaterally compared to baseline. Given the novelty of IVT-administered cerliponase alfa for CLN2-associated retinal degeneration, further longitudinal follow-up will be important to better define its long-term safety and therapeutic efficacy.

PRESENTATION ABSTRACTS & SUMMARIES

TITLE: A Mixed-Methods Approach to Characterize Nonadherence to Topical Therapy in Glaucoma and Dry Eye Disease

AUTHORS: Tejas C. Sekhar, BA; Jessica D. Toledo, MS; Oneke Gwan, BS, MA; Nandi Thales Mogo, BS; Nina A. Goyal, MD

PURPOSE: Eye drop nonadherence in glaucoma and chronic dry eye disease (DED) is a significant contributor to preventable disease progression, vision impairment, and reduced quality of life. Despite the widespread use of topical therapies as first-line management, adherence remains suboptimal due to multifactorial barriers. The existing literature has largely focused on quantitative measures of adherence, with limited patient-centered qualitative insight. This study aims to comprehensively evaluate patient experiences with eye drop use, identify perceived barriers and facilitators to adherence, compare patterns across prescription and lubricant eye drop users, and assess patient-informed preferences for assistive device design.

METHODS: This is a mixed-methods study recruiting 50 adult patients diagnosed with glaucoma, DED, or both, from an academic ophthalmology clinic. Eligible participants must have used prescription and/or lubricant eye drops for at least six months. Demographic and clinical data, including age, comorbidities, medication regimen complexity, and self-reported adherence, are securely collected via REDCap. Participants undergo 30–45 minute semi-structured interviews conducted virtually or in person. Interview content explores medication knowledge, adherence behaviors, barriers to administration, perceived treatment efficacy, and experiences with or preferences for assistive devices. Transcripts are analyzed using qualitative thematic analysis in Dedoose, guided by an iteratively developed codebook encompassing domains such as physical limitations, cognitive factors, psychological perceptions, social support, and financial barriers. Quantitative analyses are performed to assess associations between patient characteristics and

adherence patterns, with subgroup comparisons across prescription-only, lubricant-only, and overlapping users.

RESULTS: Primary outcomes include identification of key qualitative themes influencing adherence. Preliminary findings suggest that physical barriers such as difficulty aiming drops, reduced manual dexterity, and challenges with bottle manipulation are the most prominent contributors to nonadherence. Additional factors include side effects (e.g., burning, blurred vision), forgetfulness, cost and insurance limitations, and variable health literacy. Psychological factors, including perceived disease severity and absence of immediate symptomatic benefit, also influence adherence behaviors. Secondary analyses will evaluate correlations between adherence and demographic or clinical variables, including age, comorbidity burden, and regimen complexity. Comparative subgroup analyses are expected to demonstrate lower adherence among prescription-only users relative to lubricant-only users, with the greatest barriers observed in patients using both. Patient-reported preferences for assistive devices highlight the importance of ergonomic design, ease of drop control, and compatibility with various bottle types.

CONCLUSIONS: This study provides a comprehensive, patient-centered evaluation of the multifactorial drivers of eye drop nonadherence in glaucoma and DED. Findings emphasize the predominance of physical usability challenges, alongside cognitive, socioeconomic, and perceptual factors that influence adherence. By integrating qualitative insights with quantitative associations, this work aims to advance understanding beyond traditional adherence metrics. The results of this study have direct implications for clinical practice, including the development of targeted patient education strategies, improved patient-provider communication, and the design of user-centered assistive technologies. Ultimately, addressing these barriers may enhance long-term adherence, optimize treatment outcomes, and reduce preventable vision loss in patients with chronic ophthalmic disease.

PRESENTATION ABSTRACTS & SUMMARIES

TITLE: Atopic Dermatitis as a Risk Factor for Retinal Detachment and Proliferative Vitreoretinopathy in a U.S. Population

AUTHORS: Catherine Chang, BA; Nathan Vance, BSPH; Nitika Aggarwal, BTech; Nick Boucher, BS; Mathew MacCumber, MD, PhD

PURPOSE: Atopic Dermatitis (AD) is a chronic inflammatory skin condition linked to a higher risk of rhegmatogenous retinal detachment (RRD) and proliferative vitreoretinopathy (PVR), reported particularly in Asian populations (Grewal et al. JVRD 2019;3:80-85; Choi et al. Eye 2020;34:1909-15). Proposed mechanisms include chronic eye rubbing and retinal structural weakness. PVR is the leading cause of RRD repair failure, driven by inflammatory and fibrotic pathways that may overlap with AD-related immune pathophysiology. Evidence in U.S. populations remains limited. This study investigates whether AD is associated with increased risk of RRD and PVR in a large U.S. clinical database.

METHODS: A multicenter, retrospective cohort study was performed using de-identified data from the Vestrum Health database. AD patients were identified using ICD-10 codes and eczema-related medication records, then matched to controls without AD on key demographic and clinical characteristics. For the RRD outcome, separate multivariate logistic regression models were made using 180-day and 365-day follow-up periods. For PVR, Cox proportional hazards regression was applied. RRD and PVR identification methods were previously validated (Shepherd EA et al. Ophthalmology Retina. 2024;8(12):1174–1180). Final models were selected using Akaike Information Criterion (AIC); standard Cox models outperformed mixed-effects models and were used for reporting.

RESULTS: RRD Cohort: Among 46,584 matched eyes, 11,646 had AD and 34,938 were controls. RRD occurred in 0.4% of AD eyes vs. 0.8% of controls at 180 days, and 0.5% vs. 1.0% at 12 months. Multivariate logistic regression showed AD was significantly associated with lower RRD odds at both follow-up periods: 180-day follow-up (OR = 0.44; 95% CI 0.32–0.60; $p < 0.001$) and 365-day follow-up (OR = 0.47; 95% CI 0.33–0.66; $p < 0.001$). Significant independent risk factors in both models included male sex, history of ocular trauma, uveitis, and vitreous hemorrhage. Choroidal detachment and high myopia reached significance in the 365-day model. PVR Cohort: Among 1,036 eyes with RRD (259 AD, 777 controls), PVR occurred in 34.8% of AD vs. 16.2% of controls at 3 years. Cox regression showed a trend toward increased PVR risk in AD eyes that did not reach significance (HR = 1.5; 95% CI 0.93–2.42; $p = 0.10$). Results were consistent across both follow-up periods.

CONCLUSIONS: In this large U.S. based cohort, AD was independently associated with significantly lower risk of RRD in both multivariate models, contrasting prior East Asian reports. The reduced risk may reflect improved AD management and a lower proportion of Asian patients in this cohort. Although AD was not statistically significantly associated with increased PVR risk, a trend toward higher postoperative PVR suggests inflammatory mechanisms may influence PVR pathogenesis after retinal detachment. These findings support increasing postoperative monitoring and inflammation control in AD patients. Further research is needed to clarify the mechanisms linking AD to vitreoretinal outcomes.

PRESENTATION ABSTRACTS & SUMMARIES

TITLE: Greening the OR: Reducing Cataract Surgery Material Waste

AUTHORS: Terrence Murphy, MD, MPH; Anjali Tannan, MD

PURPOSE: Medical waste accounts for 10% of the United States' carbon footprint per year, with 70% stemming from the operating room. Each cataract surgery generates an estimated 181.9 kg of CO2. As the most common surgical procedure in the US and the world, there is ample opportunity for even minimal reductions in cataract surgery waste to reduce our carbon footprint. Our goal is to reduce waste and the carbon footprint of ophthalmic procedures in the operating room. This study is a follow-up to our prior prospective study and quantifies the impact that an update to Rush's standard cataract pack had over 11 months of implementation.

METHODS: A retrospective study was conducted, estimating the reduction in carbon footprint and waste generated in the time since Rush's MEDLINE-produced cataract pack was adjusted in 2025 to reduce unnecessary utilization.

RESULTS: The Department of Ophthalmology conducts an average of 526 CEIOL cases per year. Our customization of the Rush cataract pack has resulted in a reduction of 15 grams of waste and $1.32 of unnecessary cost for each case.

CONCLUSIONS: Our findings suggest that at least a modest benefit can be realized when optimizing standardized cataract surgical packs in the main operating room. Next steps include identifying reusable substitutes for single-use items commonly included in cataract packs and profiling the differences in intraocular lens packaging, delivery systems, and materials.

PRESENTATION ABSTRACTS & SUMMARIES

TITLE: Comparative Efficacy of Membrane Peel After Retinal Detachment Repair versus After Retinal Horseshoe Tear Repair

AUTHORS: Leah Doro, MD; Mohit Uppal, MD; Madelyn Malvitz, BS; Sarah Syeda, MD; Anne Shepherd, MD

PURPOSE: Epiretinal membranes (ERMs) can form after retinal detachment (RD) repair or, less commonly, after laser retinopexy for horseshoe tear (HST) repair. This study aims to compare ERM characteristics and postoperative outcomes after macular peeling (MP) in patients with a history of RD surgery versus HST repair. Our secondary purpose is to compare postoperative outcomes of MP based on the timing of surgery after HST repair.

METHODS: This study is an extension of a previously published retrospective review examining outcomes of MP based on ERM characteristics and timing of surgery after RD repair. We are conducting a retrospective case series comparing patients from that study with a new group of patients who underwent MP after laser retinopexy for HST. After data collection is complete for the HST cohort, the two groups will be compared to assess differences in patient demographics, ERM characteristics, and postoperative visual acuity outcomes. In addition, the HST cohort will be analyzed independently to determine whether visual outcomes differ based on the timing of MP after initial HST repair.

RESULTS: A total of 55 patients met inclusion criteria for MP after RD repair, and all ERMs were peeled within one year of RD repair. A total of 29 patients met inclusion criteria for MP after HST repair, and all ERMs were peeled within two years of HST repair. In the prior study, final visual acuity was significantly better when MP was performed within six months of RD repair.

CONCLUSIONS: We anticipate that ERM characteristics will be similar in patients undergoing MP after RD repair and after HST repair. We also expect that earlier MP will be associated with better visual acuity outcomes for ERMs that form after HST, similar to what was observed after RD repair.

PRESENTATION ABSTRACTS & SUMMARIES

TITLE: Continuous-Wave Cyclodiode vs. Micropulse Transscleral Cyclophotocoagulation for Treatment of Severe Glaucoma at Rush University Eye Center

AUTHORS: Sparsh Jain, MD; Jason Lau, BA; Reece Elowe, BSA; Anjali S. Hawkins, MD, PhD

PURPOSE: The purpose of this study is to evaluate and compare the clinical outcomes of patients with glaucoma treated with either continuous wave cyclophotocoagulation (CW-TCP) or micropulse cyclophotocoagulation (MP-TCP) at Rush Eye Center and University Ophthalmology Associates. We specifically aimed to assess the effectiveness of the treatment in reducing intraocular pressure (IOP) ≥ 20%, reduction in the number of glaucoma drugs following either treatment, and the number of patients requiring additional intervention following initial treatment.

METHODS: The study design involved retrospective data collection from electronic medical records (EMRs) of patients treated at Rush Eye Center and University Ophthalmology Associates over five years: January 2020 through December 2024, with either CW-TCP or MP-TCP. Patients were identified in EPIC based on CPT codes for the two diode variations mentioned above. Data collected included patient demographics (age, sex, race/ethnicity), clinical characteristics (glaucoma subtype, baseline IOP, number of pre-treatment medications, prior ophthalmic surgeries), treatment details (laser type and parameters, number of sessions), and clinical outcomes such as IOP at various time points, POAG medication use, need for further surgical intervention, and adverse events.

RESULTS: A total of 151 patients between 18 to 101 years old were identified. Of those 151 patients, 76 patients who underwent CW-TCP and 75 patients who underwent MP-TCP between January 2020 and December 2024. Six patients were excluded due to concerns poor follow-up and/or concurrent procedure with the diode that would interfere with the changes in intraocular pressure. Baseline characteristics, including IOP, glaucoma subtype, and pre-treatment medication, will be reported. There were 42 patients who needed a secondary surgery or procedure to control the IOP further. Results demonstrating the amount of IOP reduction following CW-TCP and MP-TCP will be

analyzed and reported. Further analysis will be done to see if there was a reduction in post-op drops in these diodes.

CONCLUSIONS: Both CW-TCP and MP-TCP are established laser-based approaches for IOP management in glaucoma patients who have failed or are not ideal candidates for conventional surgical interventions. This retrospective study compared the outcomes of each procedure completed at the Rush Eye Center and University Ophthalmology Associates. We hope to establish whether one procedure was more successful than the other in our population.

PRESENTATION ABSTRACTS & SUMMARIES

TITLE: Quantifying use of Selective Laser Trabeculoplasty as first line treatment of mild to moderate open angle glaucoma and ocular hypertension at Eye Center Physicians

AUTHORS: Polina Prokhoda, MD; Anjali S. Hawkins, MD, PhD

PURPOSE: The LiGHT trial published in 2019 showed that Selective Laser Trabeculoplasty (SLT) is the most cost-effective first line treatment for mild to moderate open angle glaucoma and ocular hypertension with reduced need for surgery, lower cost, and similar quality of life1. The purpose of this study is to investigate Eye Center Physicians current practice patterns and determine if we are appropriately incorporating the findings of the LiGHT trial into our practice.

METHODS: In a retrospective cohort study, the schedules of all glaucoma and comprehensive attendings will be reviewed for new patients with mild to moderate glaucoma and ocular hypertension seen at the Eye Center within six months of the LiGHT trial publication until present day. Chief complaints will also be reviewed for mentions of glaucoma or elevated eye pressure. We will then quantify the number of patients that were offered SLT as the first-line compared to the number of patients that were offered pressure lowering eye drops. We will note the reasoning when available to better understand our medical decision making.

RESULTS: Results will be analyzed with comparative statistical analysis to understand how our residents and attendings approach mild to moderate open angle glaucoma and ocular hypertension treatment in new patients. We will also perform qualitative analysis regarding the reasons for certain treatment choices, for example if patients were hesitant about SLT and therefore drops were started instead. This result could indicate that we need to be better about presenting SLT as the superior first line option.

CONCLUSIONS: Obtaining longitudinal data regarding the Eye Center Physicians practice patterns for first line treatment of mild to moderate glaucoma and ocular hypertension will allow us to adjust our approaches if they are not up to date. Addressing any problems will allow our clinic to better serve our glaucoma and ocular hypertension patients with treatment that is in line with current research-backed guidelines.

1. Gazzard G, Konstantakopoulou E, Garway-Heath D et al. Selective laser trabeculoplasty versus eye drops for first-line treatment of ocular hypertension and glaucoma (LiGHT): a multicentre randomized controlled trial. The Lancet, 2019; 393, 1505-1516.

PRESENTATION ABSTRACTS & SUMMARIES

TITLE: Effects of Posterior Capsular Opacification and Timing of YAG Capsulotomy on Refractive Outcomes with the Light Adjustable Lens

AUTHORS: Rohun R. Gupta, MD; Neel Vaidya, MD

PURPOSE: To investigate how posterior capsular opacification (PCO) affects refractive outcomes in patients receiving the Light Adjustable Lens (LAL) and to determine the optimal timing of YAG capsulotomy relative to the LAL adjustment process.

METHODS: This retrospective, single-center study includes adult patients who underwent cataract surgery with implantation of the RxSight Light Adjustable Lens from January 2018 to December 2024, subsequently developing PCO requiring YAG capsulotomy. Patients are categorized based on the timing of YAG capsulotomy relative to the LAL adjustment period: before adjustment, during the adjustment period, and after the lock-in treatment. A control group of LAL patients without PCO is also being analyzed. Data collection is currently underway, utilizing a comprehensive registry to capture demographic variables, surgical details, timing and severity of PCO, refractive measurements, and postoperative complications. Primary outcomes will include changes in spherical equivalent refraction, refractive stability post-YAG capsulotomy, and refractive comparisons among timing groups. Statistical analyses will include paired t-tests, ANOVA, and multiple regression analysis.

CURRENT STATUS & ANTICIPATED RESULTS: Data collection is actively ongoing. Once completed, the results will detail refractive changes associated with PCO and YAG capsulotomy in LAL patients, highlighting differences based on timing. The data will provide insights into refractive stability and the optimal timing for capsulotomy.

CONCLUSIONS: Findings from this study aim to establish evidence-based guidelines for managing PCO in LAL patients, thereby optimizing visual outcomes and refractive stability.

GRADUATION & ALUMNI DINNER

We look forward to celebrating our Residents and Fellows at the graduation dinner on Friday, June 19h at 6:00 PM. Please see the Evening Program for a detailed outline of the night's events. This year's event will take place at:

IVY ROOM

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Parking Information

Valet Parking – $25

12 E. Ohio Street, Chicago, IL 60611

Available for the first 40 vehicles.

Self-Parking (Advance Reservation Recommended)

North Bridge Garage – $13

9 E. Ohio Street, Chicago, IL

Reserve parking at 9 East Ohio Street, Chicago, IL

Ontario Street Garage – $10.25

10 E. Ontario Street, Chicago, IL

Reserve parking at 10 E Ontario St, Chicago, IL

EVENING PROGRAM

Friday, June 19, 2026

6:00 PM – 7:00 PM	**Cocktails & Hors d'oeuvres**	*Courtyard*
7:00 PM – 8:00 PM	**Welcome Address & Award Presentation** *Dr. Rubenstein*	*Grand Ballroom*

Recognition of Graduates

Kevin Elwood, MD

Terrence Murphy, MD, MPH

Rishabh Gupta, MD

8:00 PM – 9:00 PM	**Dinner Service**	*Grand Ballroom*
9:00 PM – 10:00 PM	**Graduation Celebration**	*Lower-Level Lounge*

CONTINUING MEDICAL EDUCATION

OVERVIEW

The **22nd Annual Rush Department of Ophthalmology Resident and Alumni** Day has been designed to provide an open forum for faculty, residents and alumni to present results of individual research and clinical observations as well as an opportunity to share information on new therapies or techniques in a specialty area.

AUDIENCE

Rush ophthalmology residents, faculty, staff, alumni, and Chicagoland eye care professionals.

OBJECTIVES

Upon completion of this activity, participants will be able to:

1. Evaluate current evidence regarding the management and surgical outcomes of retinal detachment and epiretinal membrane disorders.
2. Compare treatment approaches and outcomes for non-infectious uveitis, glaucoma, corneal disease, and pediatric ophthalmic conditions.
3. Assess the accuracy and clinical utility of diagnostic and biometric technologies used in ophthalmic practice.
4. Analyze factors that influence visual and anatomical outcomes following ophthalmic surgical interventions.
5. Apply quality improvement principles to enhance patient safety, reduce surgical errors, and improve healthcare delivery.
6. Identify strategies to improve patient education, treatment adherence, and engagement in ophthalmology.
7. Describe sustainable practices that reduce waste and promote environmental stewardship in ophthalmic surgery.
8. Incorporate emerging research findings and expert recommendations into evidence-based ophthalmic patient care

ACCREDITATION & DESIGNATION

In Support of Patient Care, Rush University Medical Center is accredited by the American Nurses Credentialing Center (ANCC), the Accreditation Council for Pharmacy Education (ACPE), and the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing education for the healthcare team. Rush University Medical Center designates this live for a maximum of 6 AMA PRA Category 1 Credit(s)™. Physicians should claim only credit commensurate with the extent of their participation in the activity.

ANCC CREDIT DESIGNATION – NURSES

The maximum number of hours awarded for this CE activity is 6 contact hours. Rush University is an approved provider for physical therapy (216.000272), occupational therapy, respiratory therapy, social work (159.001203), nutrition, speech-audiology, and psychology by the Illinois Department of Professional Regulation. Rush University designates this live activity for (6) Continuing Education credit(s).

This activity is being presented without bias and with commercial support.

UNAPPROVED USES OF DRUGS/DEVICES

In accordance with requirements of the FDA, the audience is advised that information presented in this continuing medical education activity may contain references to unlabeled or unapproved uses of drugs or devices. Please refer to the FDA approved package insert for each drug/device for full prescribing/utilization information.

CME CREDIT LINK

Certificates of participation will be available the week after the symposium.
A link to access your certificate will be sent via email.

DISCLOSURE INFORMATION

Mathew MacCumber, MD, PhD

- *Regeneron, Genentech, Novartis, Apellis, Iveric Bio/Astellas, Cardinal Health, Ocular Therapeutix, EyePoint Therapeutics, Covalent Medical*

Jonathan B. Rubenstein, MD, FACS

- *Alcon*

All other physicians, residents, students, coauthors and invited speakers listed on pages 6-8 have **no financial agreements or potential conflicts**

EXHIBITORS

This event is presented with **academic independence and impartiality.** We extend our sincere appreciation to these sponsors and our exhibitors for their invaluable support. Their participation plays a vital role in the success of this educational initiative. It has been made possible through the generous support of unrestricted educational grants provided by the following organizations:

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We encourage all attendees to visit the sponsor exhibits during scheduled breaks and lunch periods to explore the latest innovations, products, and services driving advancements in the field.

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