

## **2015 Annual Meeting Abstracts**

### **Berry, Jesse** -- "Short Course Chemoreduction for Group B Retinoblastoma Eyes"

- Purpose: At most centers, chemoreduction (CRD) protocols for Group B retinoblastoma consist of 6 monthly cycles of multi-agent systemic chemotherapy. Herein we present outcomes of a short-course 3-cycle CRD regimen for Group B eyes. The objective of this study is to compare long-term outcomes between a short-course 3-cycle CRD versus a 6-cycle CRD regimen for Group B retinoblastoma. Methods: A non-randomized, comparative retrospective review from a single retinoblastoma center in the United States. Participants included all unilateral and bilateral retinoblastoma patients diagnosed with Group B disease in at least one eye from 1991-2011. The main outcome measure is globe salvage. Secondary measures include need for external beam radiation. Systemic complications of CRD therapy were also evaluated. Results: A total of 72 Group B eyes of 63 patients were included in the review: 46 patients (55 eyes) received the short course 3-cycle protocol and 17 patients (17 B eyes) received a 6-cycle protocol. The mean follow-up period was 82 months (range 3-272 months). In the short-course group, 37 of 55 eyes (67%) were preserved with 3 cycles of chemotherapy, and 12 additional eyes were rescued with 3 additional cycles of chemotherapy, for a total salvage rate of 89% with CRD (49/55 eyes). In the 6-cycle group, 16 of 17 eyes (94%) did not require radiation or enucleation. Conclusion: The initial CRD success rate for the 3 cycle group was slightly lower than the 6 cycle group ( $p=0.028$ ). However, patients failing the 3-cycle regimen can be successfully rescued with 3 additional cycles, which translates into a similar overall event-free survival for both groups ( $p=0.485$ ). Therefore, in our cohort the 3 cycle regimen spared 63% (29 / 46) of patients an additional 3 cycles of systemic chemotherapy.

- *Educational objectives:* new treatment schemes for retinoblastoma and use of shorter course systemic therapy will be discussed.
- *Schedule:* NOT Tuesday

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### **Chan, R.V. Paul** -- "Fluorescein Angiography for the Diagnosis and Management of ROP"

- Fluorescein Angiography has an evolving role in the diagnosis and management of ROP. Among experts, there is a variability in the diagnosis and management of ROP based on FA. Using FA may influence diagnosis of certain categories of ROP as well as affect confidence in diagnosis.

- *Educational objectives:* There is still no clear consensus on the utility of FA in the diagnosis and management of ROP.
  - *Schedule:* Anytime
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**Chiang, Michael F.** -- "Computer-based Image Analysis for ROP Diagnosis"

- *Schedule: Wednesday*
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**Clifford, William S.** -- "AMPAC Political Candidate School"

- The AMA runs two courses for Physicians, spouses, and other allied individuals considering an elected office. The "short course" is a weekend Candidate School which concentrates on political messaging, speaking, and fundraising. The more intensive course is the Political Campaign School, lasting 4 days, with attendees participating in a mock political campaign with professional DC-based advisers and consultants. I will describe the highlights from my participation in this year's Campaign School.

- *Educational objectives:* Physicians need expertise and a better understanding of the political system to help us better advocate for our patients and our profession.

- *Schedule: Anytime*
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**Coney, Joseph M.** -- "The Emerging Role of Physician Assistants in Vitreoretinal Medicine and Surgery"

- Physician assistants (PAs) can assist the vitreoretinal physician in both the office setting and the operating room. Many of these PA services are billable. This presentation will discuss the practical and economic value of PAs in a 10-physician retina practice.

- *Educational objectives:* This lecture will illustrate the practical and economic advantages of employing physician assistants, whose roles may be unfamiliar to vitreoretinal physicians, as the American Academy of Physician Assistants estimates that only approximately 70 PAs are currently working in ophthalmology practices.

- *Schedule: Wednesday & Thursday*
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**Ellis, Forrest J.** -- "The history of the Chicago Yacht Club Race to Mackinac"

- Since 1898, The Race to Mackinac has evolved into a world-class yachting event. After the first race in 1898, the race had developed into an annual test of sailing, navigation, weather, and endurance. It is 333 miles long and has many past and perhaps future AESC participants.

- *Educational objectives:* Understanding the perspective of physicians participating in sporting events.

- *Schedule: NOT Saturday.*
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**Epley, K. David** -- "White and Gold or Blue and Black?"

- The science behind the dress that spurred the controversy. This lecture will educate the attendee about the Craik-O'Brien-Cornsweet illusion and the phenomena of lateral inhibition and

Adelson shadow illusion and relate these to clinically relevant situations seen in the practice of ophthalmology.

- *Educational objectives:* Additional education on the function of the visual system not typically covered in residency or continuing medical education but commonly encountered in the practice and community settings.
  - *Schedule:* Anytime
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**Giangiacomo, Annette--** "Emory Experience with Exposed Glaucoma Drainage Devices"

- Retrospective review of outcomes of surgical repair of glaucoma drainage devices at Emory.
  - *Educational objectives:*
  - *Schedule:*
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**Gold, Robert--** "The 50 Year View"

- AESC - History 1965.
  - *Educational objectives:*
  - *Schedule:*
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**Hagedorn, Curtis--** "Electrical Injury of the Retina"

- The clinical findings of cataract formation are a well documented and agreed upon ocular finding following electrical injury, however, retinal and choroidal changes are less well known. Here, we present 2 cases of severe electrical trauma (one TASER and one high voltage power line) and the associated unique chorioretinal manifestations.
  - *Educational objectives:* There is little in the ophthalmic literature describing chorioretinal findings in electrical eye injury.
  - *Schedule:* NOT Saturday
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**Hoar, Glen G.--** "First Nation TeleOphthalmology Screening Program"

- The First Nation populations of Vancouver Island and Coastal BC are an underserved and geographically diverse group of patients. With an estimated 40% increased rate of diabetes over the general population there was a concern that significant retinal disease was going undiagnosed and untreated. Five years ago we undertook a telescreening program of 51 local First Nations communities. I would like to review our results and demonstrate how TeleOphthalmology can aid in providing services to rural communities.
  - *Educational objectives:* The ability of TeleOphthalmology to provide screening eye care to remote and underserved communities.
  - *Schedule:* Anytime
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**Hutchins, Robert-- "Sub-retinal Pigment Patterns: Presentation of Cases as Unknowns"**

- The diagnoses of many sub-retinal pigment disorders can be established by pattern recognition without relying on extensive testing. A promptly determined, correct diagnosis should help allay the patient's concerns. Each of seven different sub-retinal pigment disorders will be represented by a short case report: one fundus photo and a one-sentence history. Then, the fundus photos will be re-projected and the audience will be asked to supply the diagnoses. A short discussion of each disorder will follow.
  - *Educational objectives:* Upon conclusion of this talk, the attendee should be able to better use pattern recognition in determining the diagnoses of posterior segment disorders of the eye, lessening the need for extensive testing.
  - *Schedule:* Anytime
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**Kipp, Michael A.-- "Low dose Atropine for myopia progression"**

- Background information regarding methods to halt myopia progression will be reviewed, particularly studies that have demonstrated clinical utility of low dose Atropine drops in Asian children. A case series of children, mostly caucasian, who have been treated at the Wheaton Eye Clinic with Atropine 0.01% will be presented.
  - *Educational objectives:* This presentation will educate all ophthalmologists about the efficacy and side effects of low dose Atropine for the treatment of myopia progression in children.
  - *Schedule:* NOT Saturday
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**Kishor, Krishna-- "Incidence of bleb-associated endophthalmitis in the United States"**

- *Purpose:* To evaluate the 5-year incidence rate of blebitis and bleb-associated endophthalmitis in the United States. *Methods:* In this retrospective cross-sectional study, we utilized a large commercial health insurance claim-based database during 2007- 2011 and identified all patients who had a record of trabeculectomy in 2007. These patients were followed until the end of 2011. During the follow-up period, all incidences of blebitis, confirmed bleb-associated endophthalmitis, and presumed bleb-associated endophthalmitis were recorded. Kaplan-Meier survival analysis was utilized to calculate 5-year cumulative incidence rates of blebitis and bleb-associated endophthalmitis following trabeculectomy procedures. *Results:* Among the 1,461 trabeculectomies included in our analysis, eight cases of blebitis, five cases of confirmed bleb-associated endophthalmitis, and eight cases of presumed bleb-associated endophthalmitis were identified. We found that the 5-year cumulative incidence of blebitis was 0.55% - 0.19%. The 5-year cumulative incidence of bleb-associated endophthalmitis was 0.45% - 0.2% when only confirmed cases were included and 1.3% - 0.34% when presumed cases were also added to the analysis. The mean time from procedure to diagnosis was 45 months for blebitis and 33 months for bleb-associated endophthalmitis. *Conclusion:* Blebitis and bleb-related endophthalmitis are uncommon in the United States. The 5-year cumulative incidence was 0.55% for blebitis and 0.45% - 1.3% for bleb-associated
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endophthalmitis.

- *Educational objectives:* The audience will be able to identify the incidence of blebitis and bleb associated endophthalmitis.
  - *Schedule:* Wednesday
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### **Klapper, Stephen R.**-- "Breast Carcinoma: An Oculoplastic Perspective"

- Breast cancer is one of the most common malignancies occurring in women. An overview of metastatic breast cancer involvement of the eye and ocular adnexa is presented. Specific cases with ophthalmic plastic manifestations are described.
  - *Educational objectives:* The ocular manifestations of breast cancer and the chemotherapeutic agents used to treat this disease may be underappreciated by ophthalmologists and other health care providers involved in the management of breast cancer patients.
  - *Schedule:* Anytime
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### **Knauer, Jerry**-- "The Gigg's Boson as Relates to the Trabecular"

- ***Ruedemann Lecture:*** Meshwork, strabismus and retinal architecture.
  - *Educational objectives:* Expand the members minds.
  - *Schedule:* Anytime
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### **La Rosa, Francis A.**-- "Mitomycin Injection for Glaucoma Surgery"

- Video Presentation of my technique
  - *Educational objectives:* Many surgeons are transitioning to injection from pledgett application.
  - *Schedule:* NOT Wednesday
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### **Lelli, Gary**-- "Life or Death (in ophthalmology?)"

- Plan to present 1-2 cases of aggressive fungal disease in the orbit.
  - *Educational objectives:* Treatment decisions in aggressive orbital fungal disease
  - *Schedule:* Anytime
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### **Lichter, Paul** -- "Money and Morality in Medicine"

- *Jerry & Donna Knauer Lecture:*
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  - *Schedule:* Friday
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**Mahajan, Vinit-- "Personalized Proteomics for Diagnosis and Therapy of Idiopathic Inflammatory Disease"**

- Summary - The etiology of most uveitis cannot be determined or clinically classified, which makes diagnosis and therapy challenging. We describe a patient who suffered from an inflammatory eye disease of unknown etiology. Personalized proteomics was used to evaluate biopsy fluid from the eye and compare it to biopsies from fourteen other cases of inflammatory eye disease. Unbiased cluster analysis identified a unique cytokine expression pattern that showed the patient biopsy fluid was highly similar to patients generating antiretinal antibodies. Subsequent laboratory testing verified serum expression of antibodies against S-arrestin, a known antigenic trigger of retinal inflammation, and appropriate therapy was initiated. The analysis also identified a common cytokine expression signature: IL-23, IL-1 RI, IL-17R, TIMP-1, TIMP-2, IGFBP-2, b-NGF, PDGFRb, BMP-4, and SCF, suggesting the use of specific anti-cytokine therapies that are otherwise typically not used for uveitis. Personalized proteomics of biopsy fluid from inflamed organs can help diagnose idiopathic disease and point to rational therapies.

- *Educational objectives:* This lecture address an educational need to understand methods for diagnosing uveitis disease biomarkers.

- *Schedule:* Anytime

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**Mahajan, Vinit-- "Using a Tano Scraper to Close Macular Holes: A Surgical and Electron Microscopy Study"**

- Summary - We conducted a retrospective study of macular hole repair surgeries where a Tano diamond dusted membrane scraper (DDMS) was used for internal limiting membrane (ILM) abrasion instead of ILM peeling. Macular hole closure was achieved with a single surgery in 94 of 100 eyes. Mean pre-operative visual acuity was 20/125 (log MAR  $0.79 \pm 0.46$ , range: 20/40-20/250) and mean post-operative visual acuity was 20/60 (log MAR  $0.46 \pm 0.31$ , range: 20/40-hand motion). In closed stage II holes (36/38 eyes), 100% of pseudophakic and 65% of phakic eyes obtained a >2 line visual acuity gain. In closed stage III/IV holes (58/62 eyes), 90% of pseudophakic and 78% of phakic eyes obtained a >2 line visual acuity gain. To identify the structural and histological effects to the retinal surface after the ILM abrasion, tissue from 11 tips and 3 postmortem eyes were studied by immunohistochemistry and electron microscopy. The tips of the Tano DDMS showed evidence of cellular membranes and ILM removal. The retinas showed distinct areas of lamellar ILM removal without penetration of the retinal nerve fiber layer (RNFL). Abrasion of the ILM with a diamond-dusted membrane scraper at the time of pars plana vitrectomy is sufficient to achieve high rates of macular hole closure. This technique avoids the complete removal of the retinal ILM basement membrane and subjacent tissues, and provides hole closure rates that are comparable to traditional ILM peeling.

- *Educational objectives:* This lecture address an educational need for new surgical methodology.

- *Schedule:* Anytime

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**Maltzman, Jeff**-- "Under Pressure: Improving the Trabeculectomy"

- Presentation will discuss changes in trabeculectomy technique over the past 15 years and how these changes have improved patient care.
  - *Educational objectives:* Practicing ophthalmologists should be aware of the latest developments and improvements in glaucoma filtering surgery in order to achieve improved patient outcomes.
  - *Schedule:* Anytime
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**Melendez, Robert**-- "Followership is Foundational to Leadership?"

- I will discuss the importance of leadership in ophthalmology and review the different types of followers and highlight why followership is foundational to leadership. I will also review the characteristics of effective follower.
  - *Educational objectives:* Improve leadership skills.
  - *Schedule:* Anytime
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**Neely, Daniel** -- "A Randomized Trial of Amblyz<sup>TM</sup> Liquid Crystal Occlusion Glasses vs Traditional Patching for Treatment of Moderate Unilateral Amblyopia in Children"

- **INTRODUCTION:** A previous non-randomized pilot study of Amblyz<sup>®</sup> liquid crystal occlusion glasses suggested that this new device is an effective treatment option for amblyopia. However, there has not been prior comparison to a traditional occlusion patch control group. This randomized clinical trial is designed to compare the effectiveness of Amblyz<sup>TM</sup> glasses versus adhesive occlusion patching for treating moderate, unilateral amblyopia in children. **METHODS:** Forty children ranging from 3 to 8 years of age with previously untreated, moderate, unilateral amblyopia (visual acuity of 20/40 to 20/100 in the amblyopic eye) were enrolled. All subjects had worn optimal refractive correction (if needed) for at least 12 weeks without improvement and their amblyopia was associated with strabismus, anisometropia, or both. Subjects were randomized into one of two treatment groups: a 4-hour daily Amblyz<sup>®</sup> occlusion glasses group with liquid crystal shutter set at 30-second opaque/transparent intervals, or the 2-hour adhesive patching control group. For each patient, visual acuity was measured with ATS-HOTV methods before and after 12 weeks of treatment. Compliance was estimated with a calendar log as well as an Amblyopia Treatment Index questionnaire characterizing the treatment experience of the child and family. **RESULTS:** At the conclusion of the first 12 week-treatment interval, visual acuity in the amblyopic eye improved an average of 2.04 lines in the 2-hour adhesive patch group and 2.01 lines in the 4-hour Amblyz<sup>TM</sup> glasses group. This difference was not statistically significant. **CONCLUSION:** Amblyz<sup>TM</sup> liquid crystal occlusion glasses are equally effective compared to adhesive occlusion patches when treating 3-8 year old children with moderate unilateral amblyopia. This new device is a promising alternative treatment for amblyopia.
  - *Educational objectives:* Update the audience on the latest development in amblyopia
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management.

- *Schedule:* Anytime
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**Patel, Purnima** -- "New Advances in Retinal Imaging and Future Clinical Applications"

- *Schedule:* Wednesday
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**Reinhardt, Rachel** -- "AAO State Affairs Update"

- This will be an update regarding important legislative issues that affect ophthalmology across the country.
  - *Educational objectives:* Ophthalmologists often fall short in understanding the "political" side of practicing ophthalmology.
  - *Schedule:* NOT Saturday
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**Reiser, Bibiana Jin** -- "Incidence of Glaucoma After Pediatric Keratoplasty"

- *Schedule:* Saturday
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**Schwartz, Stephen G.** -- "Inverse Association Between L-DOPA and Age-Related Macular Degeneration"

- The etiology of age-related macular degeneration (AMD) may involve pigmentation. L-DOPA is a precursor of melanin and affects RPE metabolism. We analyzed ICD-9 codes of >87 million patients using the Marshfield Clinic Research databases and the Truven MarketScan databases. We report that L-DOPA use is significantly associated with a lower mean age of first AMD diagnosis and first wet AMD diagnosis compared to patients not treated with L-DOPA. We report a negative association between L-DOPA use and AMD diagnosis. If these results can be confirmed, L-DOPA and its intermediaries may provide future drug targets in the prevention or treatment of AMD.
  - *Educational objectives:* This provides new research data regarding the pathogenesis of age-related macular degeneration.
  - *Schedule:* NOT Friday or Saturday
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**West, Constance** -- "Predicting Total Physician Time per Patient Using Linguistic Features in an Electronic Health Record."

- Differences in inter-patient complexity lead to variability of total physician time per patient, with adverse effects on both patients' and physician's experience and flow. We sought to improve scheduling accuracy, and found that simple linguistic features in an EHR could be
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utilized to accurately predict and account for physician time per patient based on anticipated patient complexity. Not surprisingly, we also found that the "no-show" rate was higher for "Typical" patients than for "Complex" patients. We have designed new templates based on the findings.

- *Educational objectives:* Use information already in the EHR to better schedule patients.
  - *Schedule:* Anytime
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**Wiggings, Jr., Robert E.** -- "Lessons Learned from Malpractice Claims: 2014 and will review claims statistics from last year and several noteworthy malpractice claims that OMIC closed in 2014"

- *OMIC Lecture:* Describe strategies that minimize error, improve patient safety and help prevent malpractice claims. .
  - *Educational objectives:* At the conclusion of this presentation, participants should be able to : Identify the most common errors that lead to patient harm and result in malpractice claims against ophthalmologists and their practice.
  - *Schedule:*
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**Williams, Pamela E.** -- "Louisiana's House of Cards"

- Attempts are being made by optometry to expanded their scope of practice across the country. I would like to inform club members about the optometric scope of practice expansion that occurred in Louisiana in 2014. I will discuss the tactics used by optometry and the legislative efforts from ophthalmology. Club members can take the lessons learned in Louisiana and hopefully apply them in their own states to combat this dangerous trend.

- *Educational objectives:* State Advocacy
  - *Schedule:* Anytime
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**Ying, Michelle**-- "DMEK"

- Description of Descemet's Membrane Endothelial Keratoplasty including surgical technique, indications for procedure, complications and summary of our results.
  - *Educational objectives:* Learn the advantages and disadvantages of performing DMEK and learn the appropriate patient selection for DMEK.
  - *Schedule:* Anytime
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