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Holland, Gary N.
Holz, Eric R.
Horton, Jonathan C.
Huang, Andrew
Humayun, Mark S.
Iliff, Nicholas T.
Iliff, W. Jackson
Ing, Malcolm R.
Jabs, Douglas A.
Jampel, Henry D.
Jampol, Lee M.
Jampolsky, Arthur
Johnson, David A.
Johnson, Mark W.
Jones, Dan B.
Kaiser, Peter K.
Kass, Michael A.
Kaufman, Paul L.
Kauschal, Shalesh
Kelley, James S.
Kenyony, Kenneth R.
Kikkawa, Don O.
Kinyoun, James L.
Klein, Barbara E. K.
Klein, Ronald
Koch, Douglas D.
Krachmer, Jay H.
Lakhanpal, Vinod
Lawrence, Mary Gilbert
Lemp, Michael A.
L'Esperance, Francis A.
Levin, Leonard A.
Lewis, Richard Alan
Lichter, Paul R.
Liesegang, Thomas J.
Lindstrom, Richard L.
Liu, Don
Ludwig, Irene H.
Maesai, Marian S.
Mannis, Mark J.
Mazow, Malcolm L.
McCulley, James P.
McDonald, Marguerite
McLeod, Stephen D.
Meredith, Travis A.
Merriam, John C.
Mets, Marilyn B.
Meyers, Sanford M.
Mieler, William F.
Miller, Joan W.
Miller, Joseph M.
Miller, Marilyn T.
Mills, Richard P.
Minckler, Donald S.
Mindel, Joel S.
Mitchell, Paul R.
Morrison, John C.
Nelson, J. Daniel
Netland, Peter Andreas
Newman, Steve A.
Nirankari, Verinder S.
Nork, T. Michael
O'Day, Denis M.
Olsen, Timothy W.
O'Neill, John F.
Packer, Samuel
Parke, II, David W.
Perrish, II, Richard K.
Parver, Leonard M.
Paysse, Evelyn A.
Pollard, Zane F.
Pulido, Jose S.
Puro, Donald G.
Raab, Edward L.
Rao, Narsing A.
Rapuano, Christopher J.
Ravin, James G.
Reynolds, James D.
Ritch, Robert
Robin, Alan L.
Rogers, Gary L.
Runge, Paul E.
Ryan, Jr., Stephen J.
Sadun, Alfredo A.
Scheafer, Daniel P.
Schanzlin, David J.
Schein, Oliver D.
Schubert, Hermann D.
Schuman, Joel S.
Schwab, Ivan R.
Schwartz, Daniel M.
Scott, Alan B.

Members

Sebag, Jerry
Sergott, Robert C.
Sherwood, Mark
Shields, Carol L.
Shields, Jerry A.
Sieving, Paul A.
Simon, John W.
Small, Kent W.
Smith, Ronald E.
Sommer, Alfred
Spaeth, George L.
Spencer, Rand
Stager, David R.
Stamper, Robert L.
Steinert, Roger F.
Stone, Edwin M.
Stout, Tim
Sugar, Alan
Summers, C. Gail
Taylor, Hugh R.
Terry, Mark A.
Thompson, John T.
Tornambe, Paul E.
Townsend, William M.
Traboulsi, Elias I.
Tsai, James C.
Tse, David T.

Tychsen, Lawrence
Van Meter, Woodford S.
Van Newkirk, Mylan R.
Wallace, David K.
Waltman, Stephen R.
Walton, David S.
Waring, III, George O.
Weakley, David R.
Weinreb, Robert N.
Weiss, Jayne S.
Wilensky, Jacob T.
Wilhelmus, Kirk R.
Wilkinson, Charles P.
Wilson, David J.
Wilson, Jr., M. Edward.
Wilson, M. Roy
Wilson, Steven E.
Woog, John J.
Wright, Kenneth W.
Yannuzzi, Lawrence A.
Yeatts, R. Patrick
Yee, Robert D.
Young, Terri L.
Younge, Brian R.
Zacks, David N.
Zarbin, Marco A.

EMERITUS MEMBERS 2010

Aaberg, Thomas M.
Albert, Daniel M.
Alper, Melvin G.
Anderson, Douglas R.
Anderson, W Banks
Annesley, William H.
Apt, Leonard
Asbury, Taylor
Baum, Jules L.
Becker, Bernard
Benedict, Walter H.
Bennett, James E.
Berrocal, Jose A.
Biglan, Albert W.
Blankenship, George W.
Bourne, William M.
Breinin, Goodwin M.
Brockhurst, Robert J.
Bronson, II, Nathaniel R.
Brubaker, Richard F.
Bullock, John D.
Bunde, Ronald M.
Burton, Thomas C.
Caldwell, Delmar R.
Carr, Ronald E.
Coleman, D Jackson
Cooper, William C.
Cox, Morton S.
Curtin, Brian J.
Darrell, Richard W.
Davis, Matthew D.
Dayton, Glenn O.
Dellaporta, Angelos
Drews, Robert C.
Duke, James R.
Durham, Davis G.
Elliott, James H.
Ellis, Philip P.
Everett, William G.
Farris, R. Linsky
Federman, Jay L.
Forbes, Max
Fraunfelder, Frederick T.
Frayer, William C.

Freeman, H. MacKenzie
Glew, William B.
Goldberg, Morton F.
Grayson, Merrill
Gutman, Froncie A.
Hagler, William S.
Hamilton, Ralph S.
Hedges, Thomas R.
Helveston, Eugene M.
Henderson, John Woodworth
Hiatt, Roger L.
Hull, David S.
Hyndiuk, Robert A.
Irvine, Alexander R.
Jaeger, Edward A.
Jakobiec, Frederick A.
Jarrett, William H.
Jones, Ira S.
Kearns, Thomas P.
Kennedy, Robert E.
Knox, David L.
Kolker, Allan E.
Members

Kreiger, Allan E.
Kupfer, Carl
Laibson, Peter R.
Landers, Maurice B.
Laties, Alan A.
Lawwill, Theodore
Levene, Ralph Z.
Little, Hunter L.
Luxenberg, Malcolm N.
Macdonald, Jr., Roderick
Manchester, Jr., P. Thomas
Maumenee, Irene H.
McDonald, James E.
McMeel, J. Wallace
Metz, Henry S.
Meyer, Roger F.
Miranda, Manuel N.
Okun, Edward

O'Rourke, James
Owens, William C.
Payne, John W.
Pico, Guillermo
Pollack, Irvin P.
Regan, Ellen F.
Rich, Larry F.
Richards, Richard D.
Robb, Richard M.
Robertson, Dennis M.
Rubin, Melvin L.
Schocket, Stanley S.
Schultz, Richard O.
Sears, Marvin L.
Shields, M. Bruce
Small, Robert G.
Snell, Albert C.
Spalter, Harold F.
Spaulding, Abbot G.
Spencer, William H.
Spivey, Bruce E.
Srinivasan, B. Dobli
Stark, Walter J.
Straatsma, Bradley R.
Streeten, Barbara W.
Tasman, William S.
Taylor, Daniel M.
Thompson, H. Stanley
Troutman, Richard C.
Tsuhslen, Stanley M.
Tso, Mark O. M.
Van Buskirk, E. Michael
Veronneau-Troutman, Suzanne
Vine, Andrew K.

HONORARY MEMBERS 2010
Zimmerman, Lorenz E

Emeritus Members  129
Honorary Members  1

Total Membership 360
Active Members 230

von Noorden, Gunter K.
Waller, Robert R.
Watzke, Robert C.
Welch, Robert B.
Wilson, Sr., Fred M.
Wilson, II, Fred M.
Wilson, R. Sloan
Wolff, Stewart M.
Wong, Vernon G.
Wood, Thomas O.
Yanoff, Myron
NECROLOGY

IN MEMORIUM

BARTLEY R. FRUEH MD, ELECTED 1984
ROBERT MACHEMER MD, ELECTED 1977
ARNALL PATZ MD, ELECTED 1968
STEVEN M. PODOS MD, ELECTED 1976
BARTLEY RICHARD FRUEH, MD

BY Victor M. Elner, MD, PhD

Bartley Richard Frueh was born September 1, 1937 in Cleveland, Ohio. He died February 16, 2010 in Ann Arbor, Michigan from severe head injury sustained in a fall. Bart Frueh was an esteemed and gifted academic surgeon who greatly contributed to the growth of oculoplastic surgery as a distinctive ophthalmic subspecialty. He will be greatly missed around the world by colleagues, friends, and scores of ophthalmologists who were fortunate to be trained by him.

Dr. Frueh earned his baccalaureate degree in chemical engineering from Cornell University in 1960 and his medical degree from Columbia University in 1964. After serving for two years as a Flight Medical Officer in the United States Air Force, he completed his residency and Master of Science in Ophthalmology at the University of Michigan in 1970. He then trained in the new field of oculoplastic surgery with one of its founders, Alston Callahan, in Birmingham, Alabama. The next year he was appointed Director of Ophthalmic Plastic and Reconstructive Surgery at the University of Missouri, serving in this role from 1971 to 1979. He promoted oculoplastic surgery nationally and internationally through lectures, courses, and academic collaborations. He became involved in educational and administrative roles through the American Academy of Ophthalmology (AAO) and the American Society of Ophthalmic Plastic and Reconstructive Surgery (ASOPRS) for which he served as President in 1976, Chairman of the Advisory Board in 1977, and Co-Chairman of the Ethics Committee. In 1978, he represented the field of oculoplastic surgery as the AAO separated from its association with Otolaryngology. He was also a long-standing member of the Orbital Society, American Board of Ophthalmology, and the American Ophthalmological Society.

Dr. Frueh was recruited to the University of Michigan in 1979, developing the oculoplastic program at the University of Michigan into one of the finest in the country. He was an avid teacher, a role he thoroughly enjoyed. He took great pride in teaching medical students, residents, and 19 oculoplastic fellows. He developed great respect for the field of oculoplastic surgery among his otolaryngology, plastic surgery, and dermatology colleagues by teaching them oculoplastic techniques to improve patient care. Dr. Frueh was a recognized expert in Graves’ eye disease and the physiology and biomechanics of ocular muscles. He was honored by ASOPRS with the prestigious Wendell L. Hughes Lecturer Award in 1993 and by the University of Michigan Department of Ophthalmology with the F. Bruce Fralick Lecturer in 2003.

Dr. Frueh was known for his love of life, gregarious attitude, and intellectual curiosity, all of which dovetailed perfectly with his love for travel and numerous interests. He combined travel with professional and teaching accomplishments and performed mission work and research abroad. Throughout his career, Dr. Frueh sought to provide eye care in countries where eye surgeons were in short supply. As a board member of the World Eye Mission, Dr. Frueh traveled on missions to Asia, and Central and South America where he performed surgery, gave medical lectures, and helped train local surgeons. In the past 11 years, he had traveled to 24 different countries.

His eclectic interests included cooking, wine collecting, woodworking, refurbishing, and driving antique automobiles, architecture and design, University of Michigan football, and billiards. After retiring from his full-time faculty position in 2008, Dr. Frueh was
named Emeritus Professor of Ophthalmology and Visual Sciences and continued to see patients and perform surgery at the U-M Kellogg Eye Center while he undertook studies in Chinese calligraphy, Italian language, and Roman archeology. In 2009, he participated in an archeological dig near Rome, Italy and was chosen to serve as numismatist and onsite physician at the site in 2010.

His passion for his work was one reason that he and his wife, Cheryl, decided to honor his parents by creating the Lloyd and Virginia Frueh Research Professorship in Eye Plastics and Orbital Surgery at the University of Michigan. In addition to his wife Cheryl Frueh, Dr. Frueh is survived by sons Christopher (Karen) Frueh, Terry (Kerstin) Frueh, Eric (Annette) Sargent, and Cain (Char) Christen, daughters Cherilyn (Cameron) Boswell, and Laura Sargent and the grandchildren he adored, Kal and Benjamin Frueh, William Sargent, and Noah, Rosa, and Anna Christen. He is also survived by his sister Elizabeth (Bernard) Goldsmith, and his brother Lloyd Frueh. He was preceded in death by his father and son, Dylan Frueh.

Having been his colleague and friend for over 20 years, I know all of us at Michigan will miss his cheerful and engaging attitude, his wonderful human, and his numerous and colorful stories. I am also certain the same is true for members of the Society and far-flung friends and colleagues.
The world of vitreoretinal surgery lost a great friend and consummate physician-scientist when Robert Machemer, MD, Chair Emeritus of the Department of Ophthalmology at Duke University, died December 23, 2009. He died of cancer in his hometown of Durham, NC. He was 76 years old.

His creativity and impact on the treatment of difficult retinal disorders will be remembered throughout the world. His academic self-discipline drove him to explore basic disease pathology, design experimental models and ultimately develop courses of therapy for difficult vitreoretinal problems.

Quite simply, he was a renaissance clinician-scientist whose global view of life and medicine was to develop knowledge by bringing together inventive minds and then unselfishly sharing the results. He was, however not merely a colleague but also a true friend to many. Behind that serious German scientist was a heart of gold and a witty sense of humor. When co-authoring the second edition of his vitrectomy book, he barricaded us in a lake cottage, darkened the windows to prevent distractions and we wrote constantly, finishing the book in one week. His only side activity was dismantling the dash of my car for a noise he found annoying, eventually leaving a pile of nuts and bolts "that probably weren’t necessary”.

Born in 1933, Dr. Machemer was a German native, having received his medical degree in Freiburg, Germany (1959). Aptly he was the son of an ophthalmologist thus pursuing an ophthalmology residency in Gottingen, and subsequently immigrating to the United States in 1966 where he completed a research fellowship in retina at Bascom Palmer Eye Institute. Following an appointment as instructor in 1968, he rose to associate professor (1974-1978 concurrently holding the position of Chief of the Ophthalmology Section, Veterans` Administration Hospital, Miami.

He conducted far-reaching research on the pathophysiology of retinal detachment and created the vitreous infusion suction cutter (VISC), facilitating closed-eye vitrectomy through the pars plana. His inaugural pars plana vitrectomy in 1970 earned him the laudable title of “father of modern retinal surgery.” Generous of spirit, Dr. Machemer credited Dr. Ed. Norton’s encouragement and his decade-long collaborator Jean-Marie Parel, co-developer of the VISC, with his progress in the United States.

He remained at Bascom Palmer through 1978, where he was the first physician to produce an experimental retinal detachment in a primate animal model, an accomplishment which led to information on how the retina can heal following detachment.

In 1978 he accepted the position of Chairman at Duke, a position he held with great distinction for 13 years, helping the department to rise to a national standing, particularly in research. Always known as an excellent teacher in addition to his research and
clinical talents, at Duke he trained numerous residents and fellows, many of whom were international, training under his generous tutelage. He stepped down as chair in 1991, but remained on faculty through 1998 when he stepped down to a highly productive retirement in which he pursued his many hobbies and talents: music, reading, building intricate clocks as well as building remote control ships and airplanes, and exploring his genealogy.

Dr. Machemer's achievements are widely recognized receiving high honors and awards from a multitude of national and international organizations including the Association for Research in Vision and Ophthalmology, the American Academy of Ophthalmology, and the Club Jules Gonin.

He is survived by his wife, Dr. Christel (Haller) Machemer and daughter Ruth Domurath, her husband Franz, and a granddaughter, Hallie, all of Durham in addition to numerous family members in this country and Germany.
ARNALL PATZ, MD  
BY Irvin P. Pollack, MD

Admired, respected and loved by everyone who knew him, Arnall Patz died shortly before his 90th birthday on March 11, 2010 in Baltimore, Maryland. He was emeritus Professor of Ophthalmology at The Johns Hopkins University and Emeritus Director of the Wilmer Eye Institute.

After graduating from Emory University School of Medicine in 1945, he served in the military during which time he learned of an assistant position in the eye clinic at Walter Reed General Hospital. He spent 9 months there before becoming a resident in ophthalmology at the District of Columbia General Hospital. While there he noted that 18 of 21 infants who had retinopathy of prematurity (ROP), then known as retrolental fibroplasia, had received high levels of oxygen. They also had severe constriction of the developing retinal vessels prior to onset of the proliferative stage. Dr. Patz felt that high oxygen administration was a factor in the pathogenesis of ROP and then recommended rigidly controlled studies to establish this concept. Indeed, a subsequent larger trial was led by Dr. Everett Kinsey who worked with Dr. Patz to study patients at 18 hospitals. The results substantiated the earlier findings and confirmed the relationship between hyperoxia and ROP. This was no small finding because ROP was the major cause of blindness in children at that time. For this research Doctors Patz and Kinsey received the very prestigious Albert Lasker Clinical Medical research Award. Helen Keller presented the award in 1956.

Dr. Patz was in private practice when I first joined him in 1961. His office was at 1212 Eutaw Place where Jonas Friedenwald and his father, Harry, had practiced. Jonas’ wife, Mary Louise, still lived on the upper 2 floors of the house. However, the waiting room (really the living room) was not large enough to accommodate our growing practices and we moved to new and larger quarters in north Baltimore. During this time Arnall spent half the time doing his research at Wilmer. He was now interested in not only the mechanism and treatment of ROP, but of all neovascular diseases of the retina.

In 1970 he decided to leave private practice and work full-time at Wilmer where he could more conveniently see patients and conduct his research. As the Seeing Eye Research Professor he founded the Retinal Vascular Center and he was one of the first people in this country to recognize the potential of using lasers to treat retinal disease. He collaborated with colleagues at The Johns Hopkins Applied Physics Laboratory to develop one of the first argon lasers used to obliterate abnormal growth of blood vessels in the eyes of patients with diabetic retinopathy and other blinding neovascular diseases. He encouraged residents and fellows to conduct clinical and basic research in the mechanism and treatment of retinal neovascularization and he fostered the careers of young clinician-scientists and basic scientists, many of whom are now in leadership positions throughout the United States. Ophthalmologists from around the world came to learn from him. He developed especially close ties with Dr. Michelson and other leading ophthalmologists in Israel and trained many of Israel’s leading retinal specialists.

In 1979 Dr. Patz became the fourth director and William Holland Wilmer Professor of the Wilmer Eye Institute. During that time
he enlarged the clinical and research facilities. In 1987 he served as president of the American Academy of Ophthalmology. In 1991 he organized and chaired the Academy’s National Diabetic Retinopathy project, Diabetes 2000, that served as the academy’s effort to dramatically reduce preventable blindness from diabetes mellitus. In addition, he served on innumerable boards of directors and advisory groups.

He holds honorary degrees from the University of Pennsylvania, Emory, Thomas Jefferson University and The Johns Hopkins University. He has received a multitude of awards including the Lucien Howe Medal of the American Ophthalmological Society in 1991, the Friedenwald Research Award from the Association for Research in Vision and Ophthalmology in 1980 and the Distinguished Scientist Award from the National Society for the Prevention of Blindness in 1982 and election to the Ophthalmology Hall of Fame of the American Society of Cataract and Refractive Surgery in 2001. A highlight was when President George W. Bush presented him with the Presidential Medal of Freedom in 2004.

Dr. Patz was remarkable in his humility and kindness. He was a tremendous inspiration to everyone who worked with him and benefited from his teaching. He was patient, warm, kind and supportive. He would spend an inordinate amount of time helping a resident or fellow write a research grant or set up an experiment. He was willing to have you share his equipment and space. He would take care to introduce his young associates to even the most highly regarded guest at a reception. He would never offend anyone, never speak ill of someone and every student considered him a friend. He was ill at ease as the receiver, but abundantly generous in awarding praise.

His wife, the former Ellen Levy, has all of these same qualities and worked closely with Arnall in a loving and supportive role. Their home was always open to guests including residents, fellows, visiting professors and doctors from all over the world. The Patz hospitality is, indeed, legendary.

They have 3 sons, William, David and Jonathan and a daughter, Susan, who have given them 8 grandchildren. After Arnall’s brother and his wife died in a plane crash, Arnall and Ellen raised their children, Samuel, Harry and Sarah Anne.

Arnall was an avid fisherman and was especially talented at fly-fishing. After winning the trophy on 3 successive occasions he was banned from participating in the American Ophthalmology Society’s annual fly-fishing contest. He and the family built a log cabin (no indoor plumbing) by a lake in the woods of northern Maine. Of course, the lake contained abundant trout. A perennial student, Dr. Patz, in later life, studied Beethoven’s music and world religions and then received a master’s in liberal arts from the Johns Hopkins University.

This was a man who prevented blindness in millions of infants, prevented blindness in millions of adults with diabetes mellitus and neovascular diseases, was the recipient of the highest awards in ophthalmology and in the country; but who was humble, kind, and a role model for his many students as well as his peers. We will miss Dr. Patz, but we shall remember him every time we see a premature infant receiving oxygen or we use a laser to treat blinding neovascular diseases.

STEVEN M. PODOS, MD
BY Alan H. Friedman, MD

Steven M. Podos was born in Brooklyn, NY on November 7, 1937 and died on October 10, 2009 of complications related to an autoimmune vasculitis. He graduated from Princeton University as a Chemistry major summa cum laude and was elected to Phi Beta Kappa and Sigma Xi. While at Princeton he found the time to win the interclub billiards championship. He received his MD from Harvard Medical School and interned at the University of Utah Affiliated Hospitals. He served an ophthalmology residency at Barnes Hospital, Washington University School of Medicine in St. Louis, Missouri. He was Chief Resident at Barnes, and then spent two years at The National Institutes of Health. He returned to Washington University for six years, rising to the rank of Professor of Ophthalmology. He was elected to membership in The American Ophthalmological Society in 1976.

In 1975 he was appointed chairman of the Department of Ophthalmology at the Mount Sinai School of Medicine in New York. He built a superb department, served as Chairman for 30 years and retired in 2005. While at Mount Sinai he directed the training of nearly 150 ophthalmology residents and more than 50 glaucoma fellows. He led many major organizations in ophthalmology: President and Secretary-Treasurer and later Executive Vice-President of ARVO, Editor-in-Chief of Investigative Ophthalmology & Visual Science for 5 years, President and long-standing Executive Vice-President of the Association of University Professors of Ophthalmology, and helped to found the Alcon Research Institute. The Alcon Research Institute honored him by establishing the annual Steven M. Podos Keynote Lecture.

He received numerous honors during his lifetime and delivered 20 named lectures. He was a gifted lecturer which well-served his every endeavor and the entire field of ophthalmology. He authored or coauthored nearly 300 articles, chapters and textbooks. Steve was the ultimate and consummate academic scientist. Reading his curriculum vitae, one is impressed by the breadth of topics covered: ocular manifestations of homocystinuria, pars plana cysts in multiple myeloma, inborn errors of metabolism, congenital diseases and, of course, glaucoma. He was a respected world authority on the understanding and management of glaucoma. He wrote or co-wrote more than 200 articles on all facets of glaucoma. As a practicing clinician-ophthalmologist he had a huge clinical practice encompassing patients referred from the four corners of the earth.

Steve promoted the advancement of academic ophthalmology and was passionately devoted to fostering the training and advancement of young physician-scientists and basic scientists. He was a lifelong student of ophthalmology. The totality of his professional accomplishments was always in the top tier of international ophthalmology. He was a true polymath in the best sense of the word, and there was no subject that he could not carry out a lucid and penetrating discussion. Whether it was a discourse on fine wine, good food, animal models of glaucoma or literature Steve’s depth of knowledge was profound. His legacy lives on in the countless people he taught, worked with, and treated.

He is survived by his wife, Wendy, as well as his daughters Lisa, Marnie and Samantha, his son Richard and his grandson, Cason.
MINUTES OF THE PROCEEDINGS

One Hundred and Forty-Sixth Annual Meeting
May 20-23, 2010

The ONE HUNDRED AND FORTY-SIXTH ANNUAL MEETING of the American Ophthalmological Society (AOS) was held at The Greenbrier, White Sulphur Springs, West Virginia, on May 20-23, 2010. There was a “Spotlight Session” on the Thursday afternoon, May 20, prior to the start of the meeting to introduce all the new members elected to the AOS the prior year. Each new member presented a 10-minute summary of their thesis project and comments on their personal and professional life.

President Charles P. Wilkinson MD called the opening session to order on Friday, May 21. The program began with the AOS- Knapp Symposium and the Verhoeff Lecture on Friday, May 21, as follows:

Symposium: Managing Presbyopia – How Far Have We Come?
1. Introduction, Steven E. Feldon MD
2. Verhoeff Lecture, “Physiology of Accommodation and Pathogenesis of Presbyopia”, Adrian Glasser PhD
3. “Optics of Current Technology – Accommodation or Pseudoaccommodation”, Geunyoung Young PhD
4. “Pseudophakic Approaches to Correcting Presbyopia”, Roger F. Steinert MD
5. “Corneal Approaches to Correcting Presbyopia”, Richard L. Lindstrom MD

The Meeting Was Continued With The Following Scientific Program:
3. "Conjunctival Melanoma. Origin De Novo Is Worse Prognosis Than Origin From Nevus Or Primary Acquired Melanosis.", Carol L. Shields*, Jeremy Markowitz, Irina Belinsk, Hal Schwartzstein, Nina George, Sara Lally, Arman Mashayekhi, Jerry A. Shields"
4. "Keratoconus And Normal-Tension Glaucoma: A Study Of The Possible Association With Abnormal Biomechanical Properties As Measured By Corneal Hysteresis", Elisabeth J. Cohen*

BOLD = AOS Member

EXECUTIVE SESSION, SATURDAY, MAY 22, 2010

CHARLES P. WILKINSON MD: I am going to call to order the 146th Executive Session of the Society. I have appointed Dr. Edward Raab as our parliamentarian. The minutes of the Executive Session of last year are printed in the 2009 Transactions. I would like to hear a motion for approval of them as printed. Second, any discussion, anyone opposed. The motion carries.

REPORT OF THE EXECUTIVE VICE-PRESIDENT

THOMAS J. LIESEGANG MD: The Society is recovering well from the financial losses over the past year that reflected the financial turmoil in the world over the last two years. The Society remains in a strong financial condition. The Council has been monitoring the investments and accounts closely and has actively engaged with the Society’s financial managers at Vanguard, including direct dialog during the Council meetings. The AOS Council recommends no increase in dues next year. The AOS now has an Investment and Audit Committee to monitor the activities of the Society.

The three sources of income for the AOS are membership dues, annual meeting registration fees, and investment income. The AOS investment income continues to subsidize the meeting and the Transactions, and the membership activities although the expenses of the Transactions have declined significantly now that it is published only online. The Knapp symposium during the Annual Meeting is funded by the Knapp Fund.

There are now 231 active members and 127 emeritus members with the bylaws permitting up to 275 active members. New members who have been accepted for membership were featured in the Spotlight Session during the Annual Meeting on Thursday afternoon and they will be introduced at the banquet. The AOS website continues to be refreshed each year with information on new members, Council and Officers, as well as past and present members. There is information about the history of the Society, of the Charitable, Educational and Scientific Trust Fund, of the Herman Knapp Testimonial Fund, and of the Howe Medal; a listing of all past members and prior meeting sites; membership requirements, and a calendar of activities for the year. There is linkage to the full text of each article in each Transactions volume since 1864. All members are encouraged to submit a biosketch and photo for the Website. The bylaws have been altered over the past few years as discussed in Executive Session, with recent changes related to a
clarification of the status and encouragement of international members. This year the Society introduces changes to the meeting format to make the Society more contemporary and competitive with other ophthalmology meetings. Papers can be presented without the requirement for providing a written manuscript for publication in the Transactions.

The AOS Council has published a Newsletter twice a year over the past 3 years, highlighting AOS activities, announcements, and encouragement of participation in leadership positions and the annual meeting. The AOS Council produced a white paper on the topic, “A Perspective on Commercial relations between Ophthalmology and Industry” that was published in the September 2009 issue of the Archives of Ophthalmology.

CHARLES P. WILKINSON MD: Thank you, Tom. You’re doing a great job. We now will here the report from the Chair of the Council, Doug Koch.

REPORT OF THE CHAIR OF THE COUNCIL

DOUGLAS D. KOCH MD: This year marks the end of a major transition for the Society. It began with a retreat that was held in 2001 by our leaders, who had the foresight to understand that we needed to revitalize the Society. It involved a reexamination of the core principles of the Society and the problems facing it. The major goal was to make AOS more relevant—and popular, so we could grow and contribute and have a meaningful place in our profession. As I said, this year marks the end of that transition; with this year’s program the final set of changes have been implemented. I will mention some of them. We no longer will publish papers presented at the meeting in the Transactions. We can see the immediate benefit from this: we had 37 abstract submissions this year, many more than we have had in the past several years. Many are being presented as posters that you see displayed around the room, and I hope you all will actively participate in the poster presentation session. The theses can be presented either from the podium or in poster session. The inclusion of two symposia is a major change in the program format for this year, and we also have two symposia planned for next year’s meeting. There has been a major transition in membership. We are now accepting international members as candidates and have already received the names of several international nominees for membership this year, which is very exciting. We now permit multi-author theses, which I believe will also facilitate and encourage people to join the Society. It is important to acknowledge the members of the Council and other past leaders who have been responsible for implementing these changes. I am sure I am going to omit some names, but I do want to mention some: John Clarkson, Dan Jones, Mel Rubin, Susan Day, Travis Meredith, George Bartley, Lee Jampol, Pat Wilkinson, Thomas Liesegang, Richard Parrish, and Lisa Brown have been so critical in this transformation. We owe them a wonderful debt of gratitude, and we are reaping the benefits of their hard work this year. The Society is in its best position in a long time to meet its primary mission as stated in the Constitution in the Articles of Incorporation:
Minutes of the Proceedings

“The purpose of this society shall be the advancement of ophthalmic science and art.” I like the art part. Our founders were wise. At this point our society is growing by adding superb new members, our program is dynamic and highly relevant, and our finances are strong. We continue to foster our social activities. We are in a wonderful position to serve our members and our profession, and, as the white paper demonstrated, we are serving medicine in general. Thank you. That is my report.

CHARLES P. WILKINSON MD: Thank you, Doug. Do I hear a motion to accept the reports of the Executive Vice President and the Council Chair? Second? Any discussion? All those in favor say “Aye”. Any opposition? We will now here the report from the Committee on Theses from Jim Chodosh.

REPORT OF THE COMMITTEE ON THeses

JAMES CHODOSH MD: Thank you very much. This year the thesis committee consisted of Timothy Stout, Robert Weinreb, and me. We had 16 thesis submissions for review, of which 11 were first time submissions, 4 were first revisions, meaning the second submission, and 1 was a second revision, or third submission. We requested minor revisions of 5 theses and major revisions of 11. We anticipate that if the minor revisions are made in a timely fashion, then 5 will be approved. Of the first submissions 1 was designated for minor revision and 10 were returned for major revision. Of the first time resubmissions, all 4 were designated for minor revision only. The single second time submission was designated for major revision, which under the AOS rules equates to rejection. The thesis committee applauds the 5 nominees for whom only minor thesis revisions were requested and expects the majority of those who were asked to submit a major revision will be approved next year. Thank you very much.

CHARLES P. WILKINSON MD: Thank you, Jim. Our Executive Vice President will now read the names of the new members.

THOMAS J. LIESEGANG MD: These are the names of the authors and their theses that required minor revisions, with the expectation that they should be able to return the revisions within a month and then finally be accepted:

- Dr. Mary Elizabeth Hartnett: Studies on the Pathogenesis of Avascular Retina and Neovascularization into the Vitreous in Severe Retinopathy of Prematurity
- Dr. Joseph M. Miller: A Hand Held Open Field Infant Keratometer
- Dr. Don O. Kikkawa: Histopathological Analysis of Palpebral Conunctiva in Thyroid Related Orbitopathy
- Dr. David J. Browning: Interpreting Thickness Changes in the Diabetic Macula - the Problem of Short Term Variation in Optical Coherence Tomography Measured Macular Thickening
- Dr. Alan Y. Chow: The Artificial Silicon Retina in Retinitis Pigmentosa Patients.

CHARLES P. WILKINSON MD: Thank you, Tom. Now I would appreciate hearing a motion to accept these candidates as new members. Seconded. Any discussion? All those in favor? Aye? Opposed? Fine, the motion carries and they are new members. We will now hear a series of reports. The first will be from our editor, Richard Parrish.
REPORT OF THE EDITOR OF THE TRANSACTIONS OF THE AMERICAN OPHTHALMOLOGICAL SOCIETY

RICHARD K. PARRISH II MD: Thank you very much. I would like to review the status quo of the Transactions and tell you where we are going. This year was the fifth online only year of publication. The 2009 Transactions became available through the AOS homepage on January 2, 2010, and was available through PubMed Central on February 2, 2010. The contents have remained unchanged with the Table of Contents, Necrology, Proceedings of the Executive Session, and Banquet. This year we have a separate section for the Report of the Athletic Awards Committee which will make it easier for Woody to find. There are 23 papers and 6 theses in this year’s publication. As we received no poster abstracts last year, no poster abstracts were published. As Tom mentioned the articles can be searched through PubMed Central, or if you know the name of the article and the year, they are retrievable directly through the AOS homepage. I am frequently asked, “How often are these articles actually searched by interested readers?” On May 13, 2010, 1,050 individual IP users went to PubMed for articles that had been published in the Transactions. Those users had the option of choosing from 4,824 articles and 5,220 items that were available. They searched among 295 full text articles, 480 pdf articles, and scanned summaries. On that one day alone, users accessed over 1,900 documents from the Transactions. In the month of April 2010, more than 24,000 IP users accessed information through PubMed that was contained in the Transactions, including over 8,000 full text articles, 12,000 pdf articles, and summaries for a total of an in excess of 54,000 retrievals. Dan Durrie authored most frequently requested article from April 2009 thru April 2010 that received approximately 2800 hits. Preston Blomquist was number 5 on the most frequently requested list with about 1600 requests. Three of the most frequently sought articles were previously accepted AOS theses. For 2010, the Transactions will look very much the same as in the past with the format of the Frontmatter unchanged. Only the abstracts of the papers presented at the Annual Meeting will be included this year. Poster abstracts and theses will be published as in the past. The absence of the papers presented at the 2010 Annual Meeting will be the main difference in this year’s publication. Thank you very much.

CHARLES P. WILKINSON MD: Thank you Rich. The Transactions look great. Our next report will be from the Committee on Programs and will be given by Chair, Steve Feldon.

REPORT OF THE COMMITTEE ON PROGRAMS

STEPHEN FELDON MD: The program committee membership includes Steven Feldon (Chair), Stephen McCleod, Mark Johnson, and Ron Gross. The response to call for abstracts for the 2010 meeting was particularly good, with 37 submissions compared with 23 the prior year. Changes in the rules publication were credited for the renewed interest in presenting at the AOS meeting. Only 18 were accepted for platform presentation to 1) avoid running late, impacting social/recreational functions 2) accommodate a second symposium (on Health Care Policy).

After extensive discussion, a decision was made not to offer CME credit for the Scientific Session this year. The reasons included 1) uncertain important to the membership 2) onerous paperwork 3) difficulty in fitting current format into requirements. There was interest in videotaping the Symposia, but issues arose regarding videotaping PowerPoint Slides that contain copyrighted information, for which permission of the authors/publishers would need to be obtained. Therefore, a decision was made not to videotape this year, but to keep this option open for future years.

In the past, posters were available for viewing during breaks for the duration of the conference. Due to the large number of submissions accepted as posters this year, a decision was made to have a one hour session, during which authors will stand by their posters to present the information and answer questions. This change encouraged a number of authors not to withdraw their abstracts.

Two symposia highlight the 2010 meeting. The Knapp Symposium is titled “Managing Presbyopia: How Far Have We Come”. It features Adrian Glasser, Ph.D. from University of Houston as the Verhoeff Lecturer, speaking on “Physiology of Accommodation and Pathogenesis of Presbyopia”. Geunyoung Yoon, Ph.D. from University of Rochester, Flaum Eye Institute is speaking on “Optics of Current Technology: Accommodation or Pseudoaccommodation?” Roger Steinert, M.D. is discussing “Pseudophakic Approaches to Correcting Presbyopia.” Richard Lindstrom, M.D. of Minnesota Eye Consultants is speaking about “Corneal approaches to Correcting Presbyopia.” Douglas Koch, M.D. from Baylor College of Medicine is letting us know “What Lies Ahead”. The second symposium on Health Care Reform features two distinguished guest speakers, Humphrey Taylor, Chairman of the Harris Poll, giving “An Outsider’s Prospective” and Regina Herzlinger, Nancy R. McPherson Professor of Business Administration, Harvard Business School, speaking on “Next Steps for Health Care.”

CHARLES P. WILKINSON MD: Thank you, Steve. Penny Asbell will now give the Report of the Committee on Membership.

REPORT OF THE COMMITTEE ON MEMBERSHIP

PENNY ASBELL MD: Thank you good morning. We had an excellent committee that worked very hard to study two issues: recommending new nominees who will soon be presented to the Council and later for your consideration, and secondly reviewing the nominees from last year to assure their credentials and interests fit those of the Society. The committee membership included me, Jose Pulido, Lou Cantor, and Malcolm Ing, who all actively participated. One of our goals was to increase international membership. We now have of the 20 new nominees for this year, and 9 of them are international candidates. Currently the AOS has one international member, so an increase from one to possibly ten by next year is a large percentage change. We also are pleased that we had 20 new nominations, many of them from members here in the audience. We thank everybody both individually and as a group for preparing excellent primary and secondary letters that are so important when we consider new candidates. In terms of historical precedence, 20 nominees for this year is a good number and certainly are among the highest in the last decade. Those are the highlights of this year’s committee. I really thank everybody and the administration at AOS for helping us successfully complete this year.
CHARLES P. WILKINSON MD: Thank you, Penny.

THOMAS J. LIESEGANG MD: These are the members that Penny had mentioned. I will read the names the candidates and their specialty, but will not read the primary or secondary nominators. If they are from the United States, then I will mention not that fact. If they are international nominees, then I will specifically mention their country.

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<tr>
<th>NAME</th>
<th>COUNTRY</th>
<th>SPECIALTY</th>
<th>PROPOSER</th>
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<tr>
<td>Anita Argarwal</td>
<td>Retina</td>
<td>Jose Pulido</td>
<td>Denis O’Day</td>
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<td>Esen Akpek</td>
<td>Cornea</td>
<td>Penny Asbell</td>
<td>Michael Lemp</td>
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<td>Augusto Azuara-Blanco</td>
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<td>Lou Cantor</td>
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<td>France</td>
<td>Cornea</td>
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<td>Jorge G. Camara</td>
<td>Oculoplastics</td>
<td>Malcolm Ing</td>
<td>Doug Koch</td>
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<td>Pediatric Retina</td>
<td>David Wilson</td>
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<td>Peter Laibson</td>
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<td>Mohamad Jaafar</td>
<td>Pediatrics</td>
<td>Ed Raab</td>
<td>John O’Neill</td>
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<td>Randy H. Kardon</td>
<td>Neuro-ophthalmology</td>
<td>Richard Mills</td>
<td>Alfredo Sadun</td>
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<td>Oculoplastics</td>
<td>David Tse</td>
<td>Dan Jones</td>
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These candidates will be invited to submit applications for review by the Committee on Membership. Comments concerning any of these candidates should be submitted by you, the members of the Society, to the committee in advance of the fall Council retreat meeting.

CHARLES P. WILKINSON MD: Now, we are going to move ahead with our archivist and photographer, the eminent, Ralph Eagle.

REPORT OF THE PHOTOGRAPHER ARCHIVIST

RALPH C. EAGLE, JR, MD: I took 788 digital photographs at the one hundred forty-fifth annual meeting of the Society held at The Ritz-Carlton in Half Moon Bay, California. Seven of these were included as color illustrations in the Frontmatter of the 2009 on-line volume of the TRANSACTIONS OF THE AMERICAN OPHTHALMOLOGICAL SOCIETY. These included photos of 2009 AOS President Susan H. Day, MD, a group photo of The Council, a group photo of the new members, a photo of new member Marian S. Macsai signing the AOS membership book, a photo of new member Frederick W. Fraunfelder, MD and his father AOS member Frederick T. Fraunfelder, MD, and several photos of 2009 Howe Medalist Denis O’Day, MD.

A show that includes more than 200 selected photos from the 2009 meeting in PDF format can be downloaded from the AOS website. Meeting photos from 1996 through 2009 can be accessed in the Members Only section of the website. The web address for the 2009 photos is http://www.aosonline.org/membersonly/mtgpix/2009_AOS_Meeting.pdf.

The digital archives of the Society now comprise more than 4,888 high resolution digital photographs stored on CDs and DVDs. A presentation from the 2010 Annual Meeting will be posted on the website in July 2010.

CHARLES P. WILKINSON MD: We all owe Ralph a great debt of gratitude. Thank you so much. I would like to hear a motion to approve, the reports of these committees. Seconded. Any further discussion? All those in favor? Aye? Opposed? Reports are accepted as read. We will now here a report from the Committee on Emeriti delivered by the Chairman, Banks Anderson.
REPORT OF THE COMMITTEE ON EMERITI

W. BANKS ANDERSON JR MD: Mr. President, the American Ophthalmological Society currently has 127 emeritus members. Since the last meeting the deaths of the following members have been reported to the Executive Vice President. Their names are read with the years of election into the Society.

<table>
<thead>
<tr>
<th>NAME</th>
<th>YEAR INDUCTED</th>
<th>RESIDENCE</th>
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<tr>
<td>Arnold Patz</td>
<td>1968</td>
<td>Baltimore, Maryland</td>
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<td>Steven Podos</td>
<td>1976</td>
<td>Tenafly, New Jersey</td>
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<td>Robert Machemer</td>
<td>1977</td>
<td>Durham, North Carolina</td>
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<tr>
<td>Bartley Frueh</td>
<td>1984</td>
<td>Ann Arbor, Michigan</td>
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CHARLES P. WILKINSON MD: I would like to ask the membership to rise and stand for a moment of silence as we honor our friends and mentors from the past.

W. BANKS ANDERSON JR MD: In accordance with the constitution, any active member who has been a member for 25 years or who has reached the age of 70 or has completely retired from active practice or gainful occupation may, upon written request, become an emeritus member. Such a request is subject to a recommendation of the Council and the affirmative vote of three-quarters of the members present at the Executive Session. Mr. President, I am presenting the emeritus applications which you see on the slide: Delmar R. Caldwell, Allan A. Kreiger, Malcolm N. Luxenberg, Irene H. Maumenee, J. Wallace McMeel, Dennis M. Robertson, M. Bruce Shields, and B. Dobli Srinivasan.

CHARLES P. WILKINSON MD: This motion is propose and I would like to hear a second, please. Any further discussion? All those in favor say “Aye”. Any opposed? The report is accepted.
W. BANKS ANDERSON JR MD: Lastly, all the emeritus members and their guests are invited to a luncheon today from noon to 1:30 in the Spring Room and Terrace. This concludes my report.

CHARLES P. WILKINSON MD: Thank you Banks. Doug Koch will now return to the podium to discuss Council appointments.

DOUGLAS D KOCH MD: These are the 2010 Council appointments: Jay Erie to membership on the Council; President, Lee Jampol; Executive Vice President, Tom Liesegang to continue; Editor of the Transactions, Richard Parrish to continue; Committee on Theses, James Chodosh with Bob Weinreb and Tim Stout to continue because of other changes on the committee; Committee on Programs, Carole Shields; Committee on Membership, Ann Coleman and Tim Olsen; New Member Committee, Emily Chew to continue; Committee on Prizes, John Clarkson; Emeritus Committee, Banks Anderson to continue; Committee on Athletics, Woody Van Meter to continue; Audit Committee: John Clarkson, Marilyn Mets, and Tom Liesegang; Archivist Photographer, Ralph Eagle to continue.

The Council appointments to the AAO will be Tom Liesegang with Richard Mills as the alternate; to the International Council of Ophthalmology, Marilyn Miller; to the American College of Surgeons Malcolm Mazow will continue with Ed Raab as his alternate, to the American Orthoptic Council; Tom France, Ed Raab and David Weakley will all continue, and to JCAHPO David Wallace will continue. A new Council appointment to the Pan American Association will be Eduardo Alfonso.

CHARLES P. WILKINSON MD: Thank you Doug. Can I hear a motion to approve these appointments? Second. Any discussion? All those in favor say “Aye”. Opposed? The motion carries.

DOUGLAS D. KOCH MD: For new business this morning, we discussed the new meeting format, and I know Steve Feldon has discussed it with you. You have already by e-mail received your opportunity to critique the meeting. I hope you will use that opportunity to give us other suggestions and comments. A second symposium will be implemented next year, as well. The topic for the 2011 Knapp Symposium will be “The Ophthalmologist of the Future” under the leadership of Marilyn Mets, our incoming Council Chair and Ron Gross, our incoming Chair of the Program Committee. Marilyn and her group are also looking into a possibility of a second symposium on “Maintenance of Licensure and Maintenance of Certification,” since some interesting changes are occurring that our members would benefit from learning more about. For the 2012 Symposium the topic is “Nanotechnology” under then Chair Hans Grossniklaus and Mark Johnson. The Council wants to hear your ideas for other symposia topics, and we welcome your comments and suggestions.

CME continues to be something that we are wrestling with on the Council. The needs assessment and identifying the gaps in learning that pose the biggest challenge. It is difficult to document each of these when the program format primarily involves voluntary submissions of abstracts. We are trying to understand how we might work through that issue to meet CME requirements. As you know, for this year and probably for next year no CME credit will be given.

Regarding membership, we have room to add more members. We are seeking international members and, as Penny reported to you, we have 9 nominees this year. I believe that is an exciting new element of AOS. It is a very important for all of you to get involved in identifying new members. I might also point out that, when you nominate someone for membership, many of us assume that the nominees will carry the ball and complete their theses. One of the insights I have gained while on the Council, and I believe that Jim has also discovered this by working on the Committee on Theses, is that we need to give our nominees more guidance and support. We can help by soliciting an abstract and an outline. We need to help insure that they have a hypothesis that they will work through, analyze, and study in a meaningful way. This means that we should become involved with our nominees at a much earlier phase of the preparation of their thesis. That is the new business I wanted to discuss. Is there any new business from the floor?

CHARLES P. WILKINSON MD: Yes, Ed Raab

EDWARD RAAB MD: Are abstracts of the papers that are presented at the Annual Meeting going to be published in the Transactions?

DOUGLAS D. KOCH MD: Yes, all abstracts of papers and posters will appear in the Transactions. Remember that the Transactions will no longer publish any papers that are presented in this meeting. There is no option for publishing papers that are presented at the Annual Meeting. We are just publishing abstracts and the theses. As Tom has pointed out, this may give us an opportunity to obtain an impact factor for Transactions. We could not qualify previously because the papers did not undergo peer review.

EDWARD RAAB MD: If papers are published that were initially presented at the Annual Meeting, will that information be listed in the printed article?

DOUGLAS D. KOCH MD: Yes. When people publish their work in other places, the authors should indicate that this work was first presented at our meeting.

BRIAN YOUNGE MD: I was going to ask if there was a requirement for somebody outside your own department to nominate candidates within your department or can you nominate from within your department? I understand from Jay Erie that we could not nominate from within our own department.

DOUGLAS D. KOCH MD: You certainly can nominate from within your own department, but we prefer that the second nominator be from outside, as an indicator or measure of national recognition.

DAVID R. STAGER SR MD: I had the experience of nominating a prominent member of a pediatric ophthalmologic community who was asked to submit a paper and then was turned down because of his age. I believe that this should be well known to the membership. Do not invite somebody if he is 65 or older because he will be turned down. That was a surprise and an embarrassment to me.
Minutes of the Proceedings

DOUGLAS D. KOCH MD: Any comments on that? My only comment, David, and I do not remember the details clearly, is that I do not believe that it was a matter of age, but rather of perceived activity. Your points are well made.

THOMAS J LIESEGANG MD: It is written in either the bylaws or the membership requirements that prospective members would be anticipated to contribute on a long-term basis to the Society. I believe this is mentioned in a circuitous way and indirectly implied.

DOUGLAS D. KOCH MD: Ed Raab points out to me that it is not in the bylaws. No, certainly not. As the last item of new business, I would like to call Woody Van Meter to come forward.

CHARLES P. WILKINSON MD: Woody, this award was planned for the banquet this evening, Woody has some family matters to attend at home, so we are moving this forward and yet wanted to honor a man who has spent a great deal of time in trying to get us organized as athletes of the society.

DOUGLAS D. KOCH MD: This is a resolution for Woodford Spears Van Meter: “Whereas his nickname conjures an image of long off the tee, whereas his middle name conjures an image of a wicked first serve, and whereas he has tirelessly sustained the Society’s athletic tradition in spite of the reluctance of many sedentary members who shall remain nameless, and whereas he has administered awards and trophies with no clerical errors, and whereas he has done so with good humor and good sportsmanship, and whereas he has agreed to serve in this capacity in perpetuity (we hope), therefore, it resolved that the Council and officers, members, and staff of the American Ophthalmological Society acknowledge their sincere debt of gratitude to Woodford Spears Van Meter, MD, for service as Chair of the Committee in Athletics of the American Ophthalmological Society from 2001 to forever, May 22, 2010.”

WOODFORD VAN METER MD: Thank you very much, I am not speechless, but Ralph is my hero and, as long as he will take photographs, I will be your Athletics Director.

REPORT OF THE AOS REPRESENTATIVE TO THE INTERNATIONAL COUNCIL OF OPHTHALMOLOGY

DR. MARILYN T. MILLER: At the Hong Kong meeting, the 2008 World Ophthalmological Congress (WOC), the “International Federation of Ophthalmological Societies” (IFOS) voted to change its name to the “International Council of Ophthalmology (ICO). The former “Council” is now the “Board of Trustees” of the ICO and previous IFOS members now make up the member societies of the ICO.

The ICO’s primary focus is to international worldwide education, and in this endeavor has initiated many activities which include: 1) Basic and Clinical Assessment. In 2009 over 2,000 candidates were tested in 92 centers in 61 countries. 2) International fellowships (more than 350 awarded) 3) Residency program director courses in Mexico, Peru, Egypt, Brazil, Slovenia, Ethiopia, China, Colombia, and Indonesia. 4) Development of ophthalmic curriculums for residencies, medical students and allied eye care personnel. They are now working with fellowship groups. 5) Clinical Guidelines based on the AAO benchmark for vision and eye care, plus trachoma, leprosy and HIV/AIDS. 6) Collaboration with AAO in distribution of BSCS and facilitation the availability and marketing of the AAO Ophthalmic News and Education Network (O.N.E.), especially to developing countries (where there is free access).

7) Working with ophthalmic societies and supranational ophthalmic societies (MEACO, APAO, SOE, and PAAO). 8) Development of “Research Agenda for Global Blindness Prevention” which has been endorsed by the World Health Organization (WHO). A variety of other projects such as, a) A primer for ophthalmological research to assist beginning researchers (Sommer) and also a medical student handbook in six languages. b) ICO task forces addressing such problems as “continuing education,” international classification of diseases (ICD-11) with WHO, uncorrected refracted error, subspecialty education and emerging technologies for teaching and learning.

REPORT OF THE AOS REPRESENTATIVE TO THE COUNCIL OF THE AMERICAN ACADEMY OF OPHTHALMOLOGY

THOMAS J. LIESEGANG MD: The Council of the American Academy of Ophthalmology (AAO) continues to meet in formal session twice yearly, first during the annual Academy meeting in the fall and then jointly at the Mid-Year Forum in Washington in April. The Council was established to provide liaison between the AAO Board of Trustees and the numerous member societies involved with socioeconomic, governmental and public service issues. The current Council consists of voting representatives of all 50 states and includes Puerto Rico and the District of Columbia. Twenty-four Sub-Specialty societies have equal representation; however, the five “Special Interest Societies” which include the AOS, ARVO, ABO, EBAA (Eye Bank Association) and the Canadian Ophthalmological Society have Associate Non-voting Councilors. Each representative, including the AOS representative, provides a semi-annual report to the AAO Council each year summarizing the activities of the individual states and societies.

Since its founding in 1864, the objective of the AOS has been “the advancement of ophthalmic science and art”, and its activities are primarily for the academic, educational and collegial benefit of its members. Although the AOS maintains no political or economic agenda, participation in the Council reflects its broad support for the Academy’s mission.

As in previous years, the AAO has sponsored and promoted a Congressional Advocacy Day at the Mid-Year Forum during which a significant number of Councilors or alternatives were briefed on the Academy’s top legislative priorities and counseled on relationship building with their congressional representatives before proceeding to Capitol Hill and the offices of their personal representatives in the House and Senate.

During the Mid-Year Forum and Council meeting, several recurring problems continue to take precedence. Hearings included several symposia: the impact of Medicare reform; ethical dilemmas regarding relations with industry, misleading advertising, and improper co-management practices; update on certification and maintenance of certification, relations with optometrists and scope of practice issues; a symposium on quality of care and performance development workgroup developing quality measures and...
evaluation; a symposium on the new social media – use and misuse, EyeWiki and EyeSmart; a symposium on Electronic Health Records – adoption and “meaningful use.”

There are additional meetings held at the MYF, including meetings of different regions of the USA, meetings of state society representatives, and meetings of Subspecialty Societies. The AOS meets with Subspecialty Society group and the AOS Councilor, Thomas J Liesegang, was re-elected to the leadership role as Deputy Section Leader for 2010.

Both the AOS and the AAO continue to receive benefit in the forum provided by the MYF and the AAO Council activities. The next Council meeting is at the Fall Annual Meeting of the American Academy of Ophthalmology.

REPORT OF THE AOS REPRESENTATIVE TO THE AMERICAN COLLEGE OF SURGEONS
MALCOLM L. MAZOW MD: The American College of Surgeons meeting took place in Chicago at the McCormick Place, October 11-15, 2009.

Dr. Zinner, chair of the Board of Governors, reported that membership from the Latin American Countries was the fastest growing segment of International membership within the College, and that it represented the largest section of International graduates and International Fellows within the College. He further reported that they felt the need to organize for themselves the opportunity to have a coalition in order to formulate issues unique to Latin American countries.

Dr. Lenworth M. Jacobs Jr., Chair of the Committee on Chapter Activities, reported that his committee addressed and discussed health care reform in detail. Additionally, in response to an action item brought forward last year, the College hired an advocacy coordinator for regional state affairs to work with the chapters. The initial focus will be on the upper Midwest chapters as a pilot. He also stated that a report on this initiative would be given at the end of the year and, if successful, it is anticipated that the project will be expanded.

Dr. Jacobs then informed the Board of two new action items. A coalition of 27 chapters signed a proposal urging the College to create a grant program that would support chapters’ expenses associated with state-level “capitol hill visit days.” Initially, the grants would be limited to five chapters per year at a maximum of $5,000 per grant and require a 50 percent match in funds per chapter for a potential grant of $7,500. Total costs to the College for the first year would be $34,500 and total costs for the second year would be $31,000 for a grand total of $65,500 for two years’ support from the College. Dr. Jacobs stated that pending approval of the Board of Governors that the proposal would go forward to the Board of Regents for its approval. A motion was made, seconded, and unanimously approved by the Board of Governors to approve the proposal as presented.

Dr. Jacobs then reported that the second proposal related to International membership in the College, specifically the criteria for International Fellowship. The proposed criteria changes are as follows: 1) Graduation from a medical school acceptable to the American College of Surgeons and listed in the Avicenna Directories, published by the WHO and the University of Copenhagen in the WHO database directory. 2) Three years of continuous, uninterrupted surgical practice in one location (same institution or same country, city, town, or village), after completion of all formal training.

After notification of a Governor, or Governor in consultation with a Chapter’s officers, the Member Services Liaison Committee determines whether the requirements for Fellowship are satisfied, and may at its discretion defer any application until such requirements are met. The Board of Regents makes the final decision regarding the applicant's eligibility for Fellowship. The Board of Regents may, at any time, modify the requirements for Fellowship.

Dr. Gerald J. Bechamps, Chair of the Committee on Physician Competency and Health, informed the Governors that the results of his committee’s survey had been published in the September issue of Annals of Surgery, and that some of the data had been presented at the American Surgical Association meeting earlier in the year. He invited the Governors to attend the general session co-sponsored by his committee where the survey results would be discussed. It is the largest survey to date on the subject of physician burnout. It was felt that other manuscripts and presentations could be developed from the data, including subsequent surveys, and possibly a policy statement on promoting physician health.

Dr. Bechamps reported that the results of this survey revealed an 6.4 percent suicidal ideation rate among colleagues, and that perhaps the next survey could be interactive and automatically navigate the survey-taker toward specific Web-based resources when triggered by certain responses to specific questions within the survey. He then stated that his committee would seek outside funding to support further endeavors, and would propose that to the B/G Executive Committee and the Board of Regents.

Mr. Christian Shalgian, Director of the Division of Advocacy and Health Policy, gave an overview of the activities of the DC office in the year since the Board of Governors and the Board of Regents worked to finalize the College’s first statement on health care reform. He emphasized that the document had been incredibly helpful in going to Capitol Hill and letting those who were interested know where the College stood with regards to health care reform. Mr. Shalgian gave the Governors an outline on what was happening on Capitol Hill. He explained that the President sets the tone, and that the Speaker of the House and the Senate Majority Leader make the determinations as to which bills come to the floor for votes. There is general agreement that the U.S. health care system is broken and that health care costs are a problem and need to be addressed. Mr. Shalgian informed the Governors that the Speaker of the House and the Senate Majority Leader were going to do everything possible to get health care reform done by the end of the year, and that if they were successful then the College needed to make sure that the bill was the best possible bill for surgeons and surgical patients. With that as its goal, the College had indeed been pushing on Capitol Hill to make sure that the best possible bill was produced. He then drew the Governors’ attention to a one-page handout which showed a side-by-side comparison of the House bill and the Senate bill, and he highlighted the major differences between the two bills. In summation, the House bill, while not ideal, was more doctor/patient friendly than the Senate bill, by far. In concluding his report, Mr. Shalgian reiterated the College’s active involvement in theses processes over the past year as demonstrated on the College’s Web site and specifically the Advocacy and Health Policy Web and Portal pages.
Minutes of the Proceedings

Following the special reports, the Board of Governors meeting included a 2.5 hour Joint Session with the Board of Regents. The Joint Session was devoted to a detailed discussion of the draft ACS 2009 Statement on Health Care Reform. The 2009 draft evolved in part from the 2008 ACS Statement on Health Care Reform, with added emphasis on medical liability reform. As the College did with its 2008 statement, it will use its finalized 2009 statement to form the basis of its interactions with Congress on health care policy. Comments from the Joint Session were used to modify the draft document.

College leaders made various statements and recommendations prior to and following the Joint Session. Dr. Armstrong reiterated the importance of the ACSPA-Surgeons PAC, and noted its success over the past seven years. He stressed the importance of a strong PAC to achieve advocacy success on Capitol Hill. Dr. Warshaw stated that the creation of the ACSPA and the formation of its PAC were two of the greatest things that the College had done. It changed the nature of the College and its ability to represent all of surgery in a way that has proved increasingly significant and increasingly important. Dr. Armstrong thanked Dr. Mitchell L. Willens for his service as Interim Chair of the PAC. He then encouraged all of the Governors to join the PAC, and indicated that less than half of the Governors were currently members. In referring to the College’s track record with practice guidelines, Dr. Britt highlighted the College’s ATLS and NSQIP programs. He stressed the need to educate the public and the legislators about College programs relative to practice guidelines. Dr. Cameron stated that there should be an American College of Surgeons Practice Guidelines put together and available to all so that it is clear what is appropriate and what is not. Dr. Russell stated that surgeons are going to have to set the standards, and do so before policy makers on Capitol Hill attempt to do so. Dr. Warshaw thanked the Governors and the Regents for all of their comments and indicated that they had been very helpful to his Group in terms of moving forward. On behalf of the Board of Governors, Dr. C. Thomas McHugh thanked Dr. Russell for his ten spectacular years of service as Executive Director of the College. Dr. Britt thanked the Governors for helping to keep the ACS ship on course.

The ophthalmic surgery section met separately. As my term as chairperson of this section had come to an end an election was undertaken to name my successor. I will remain on the committee. James Gigantell, MD from the University of Nebraska department of ophthalmology will succeed me. The committee continues the on going discourse regarding the lack of ophthalmological members of the college and how to entice them to join.

We will have symposium at the next college meeting. This is being put together by William Mieler, MD. The symposium will be on trauma and how and why the ophthalmologist should be involved in the management of these patients.

We also reviewed a college informed consent paper and gave our input to their administrating regarding this paper. There being no further business the meeting was ended.

Your representative had a session with medical students attending the annual meeting. It was an informal round table discussion of the specialty of ophthalmology. There were many students attending and this round table went very well.

REPORT OF THE AOS REPRESENTATIVES TO THE AMERICAN ORTHOPTIC COUNCIL

EDWARD L. RAAB MD: As described in our prior reports, The American Orthoptic Council continues to accredit orthoptic training programs, examines and certifies graduates of these programs, and oversees the practice of certified orthoptists. Of all allied health personnel, orthoptists can be the most valuable physician extenders to subspecialists in Pediatric Ophthalmology and Strabismus, as their skills in these areas closely approach those of the ophthalmologists with whom they collaborate.

Drs. Thomas France, Edward Raab, and David Weakley continue as our Society’s representatives. In addition to serving over several years as officers of the Council, all are active on Council committees and as examiners of candidates for certification. Dr. France and Dr. Raab are Past Presidents, and Dr. Weakley is the current Council President, and we serve in turn on the Nominating Committee for officers and new Council members.

Dr. France chairs the Accreditation and International Committees, serves on the Editorial, Finance, Program, and Public Relations Committees, and is the representative to the Canadian Orthoptic Council.

Dr. Raab is Chair of the Bylaws Committee and a member of the Ethics, International, and Program Support Committees.

Dr. Weakley, in addition to his Presidential duties, serves as a member of the Accreditation, Editorial, Examination, Program, and Finance Committees.

The Council has progressed in developing Policy and Procedures Manual. Committee Chairs have been requested to submit includable information to further guide implementation of Council bylaws and give broader guidance on activities and processes.

The next oral certifying examinations will be given in August 2010 in Dallas. This examination is under continuous review so as to keep it current as to both content and procedure. Among current proposals for addition to the requirements are hand washing, as an item of professionalism, both the red filter test for retinal correspondence, and synoptophore testing of adult patients as necessary skills for an orthoptist.

A revised Syllabus of Orthoptic Instruction, which embraces the curriculum to be mastered by orthoptic students, has been distributed to all programs. Newly required student logs of their patient encounters help insure compliance with Council requirements for eligibility to take the certifying examinations. The Continuing Education Committee conducts ongoing reviews of its core offerings to insure that they track the content of the Syllabus.

The Council continues to work toward recognition of the American Orthoptic Journal by Medline. The Journal publishes the annual Richard G. Scobee Memorial and John Pratt-Johnson Lectures, the papers from the traditional Academy “Sunday Night Symposium”, and submitted peer-reviewed manuscripts from ophthalmologists and orthoptists. The Journal has declined a proposal that would have merged it into the Journal of AAPOS, preferring to achieve Medline status through efforts to increase readership.

Ophthalmologist and orthoptist Members of the Council present a workshop at the Annual Meeting of the American Association for Pediatric Ophthalmology and Strabismus, as a regular feature of the AAPOS meeting program. The workshop typically deals with the diagnosis and treatment of a particular aspect of children’s eye care, one goal being to demonstrate the value of orthoptists as
members of an ophthalmology practice or department. This year’s workshop is titled “Double Trouble: Tips and Pearls for Prevention and Management of Pre- and Post-Operative Diplopia”. In addition, the 2009 Academy meeting in San Francisco included a symposium co-sponsored by the Academy, the American Orthoptic Council, and the American Association of Certified Orthoptists entitled “What We Really Know About Pediatric Ophthalmology and Strabismus: the Application of Evidence-Based Medicine.”

Orthoptics, despite its present status as a profession, does not come to the attention of legislative or regulatory bodies as to licensure or continuing competence, and has no effective voice or ability to increase public and political awareness of its value. Working to remedy this anomalous situation, the American Orthoptic Council, and the profession of orthoptics and its practitioners, need the firm support of all respected and prestigious organizations within our specialty to maintain credibility. Other physician extenders do not quite bring the same skill set to the evaluation of our child patients with a variety of disorders or to our adult strabismus patients as does a Certified Orthoptist. These patients benefit incrementally from an effort substantially contributed to by orthoptists, whose ability to make that contribution owes much to the efforts of the AOC. Our representatives strongly recommend that the Society continue its support to this important eye care component.

REPORT OF THE AOS REPRESENTATIVE TO THE JOINT COMMISION ON ALLIED HEALTH PERSONNEL IN OPHTHALMOLOGY

DAVID K. WALLACE MD: The mission of JCAHPO is to enhance the quality and availability of ophthalmic patient care by promoting the value of qualified allied health personnel and by providing certification and education.

JCAHPO has a membership of 19 ophthalmology and allied health organizations (AOS is one member) and has 34 representatives who are JCAHPO Commissioners. I serve as the AOS appointed representative to JCAHPO with voting privileges. Important 2009 accomplishments included the following: Certification Initiatives - JCAHPO certified 1,458 candidates at one of its three-certification levels in 2008-2009. JCAHPO has awarded over 18,000 certification credentials to approximately 17,000 individuals in more than 20 countries. In 2009, the last COMT Performance Test using the hands-on observation process was given; in 2010 the COMT Performance Test will be administered via computer simulation. The Job Analysis was completed and JCAHPO is now in the process of updating its certification examinations based on the study’s results. Education Initiatives - The Annual Continuing Education program held in San Francisco had approximately 1,800 attendees and offered 43 new course and 62 workshops. JCAHPO received an unrestricted educational grant from Genentech to conduct 13 regional programs, Retina TechTrax, on retina disease and treatment. A new online e-learning web site, ACTIONED is being launched in April. This e-learning web site will be a collaborative effort between several allied health organizations. A new educational independent study kit, JCAT, is available for new hires and entry-level ophthalmic assistants. OMP Recruitment Initiatives- OJCAHPO received final approval for official listing of Ophthalmic Medical Technician in the U.S. Department of Labor’s Standard Occupational Classification (SOC) directory. This is an important milestone for recognition of the profession as a career and clearly identifies it to job seekers. The MyEyeCareer.org website that provides information on ophthalmic assisting as a career is under revision. A technician shortage & needs assessment will be conducted this spring with AAO. JCAHPO & ATPO promote an Allied Health Week in November. Organization Initiatives - JCAHPO implemented its Bylaws change to reduce the number of Commissioners from two representatives to one per member organization. It is proposing to add two secretariat positions for E-Learning and International Relations in 2010. International Initiatives - JCAHPO joined the ICO membership. JCAHPO and the ICO jointly published a Core Curriculum for Ophthalmic Assistants. JCAHPO will be involved in the International Congress of Ophthalmology (ICO) symposium in Berlin and is chairing two (2) allied health symposiums.

Involvement of the AOS fosters a positive relationship and communications between the two organizations. I recommend that AOS strongly support and endorse JCAHPO’s certification and continuing education to the AOS membership by educating its membership on the value and productivity of certified ophthalmic technical staff. The relationship between the two organizations is important to ophthalmologists and I recommend that this continue to be strengthened.

REPORT OF THE COMMITTEE ON ATHLETICS

WOODFORD VAN METER MD

FEDERICK W. FRAUNFELDER MD (presenting): The Mishima-Michaels Trophy for the men’s low gross score went to Rick Ferris. David Wallace, last year’s winner, actually had the low round, but failed to turn in his scorecard in time to be counted. I should say that the person who won the award gets their name engraved on the trophy at a separate site. You do not take the trophy home with you. The Canada-McCullough Cup for the men’s low net score went to Woody Van Meter. The Truhsen Trophy for senior low gross score went to Brian Young. The Knapp Memorial Trophy for the two man low net team score, with a blind draw for partners, was James Bobrow and Jo Flanagan. The ladies trophy for low gross score goes to Darlene Shipley. The Homestead Callaway Trophy, for ladies low net score, goes to Miriam Ridley. Woody made the following special awards for some of the golfers who produced good shots under pressure. For the men, closest to the pin was won by Jim Ravin. The men’s long drive award goes to Paul Lichter. The senior men’s closest to the pin winner was Malcolm Mazow. The senior long drive award goes to Mylan Van Newkirk. For the ladies, the closest to the pin winner was Debbie Sergott. The ladies long drive winner was a big hitter from Portland Oregon, from the great Northwest and close to my heart, Cindy Terry.

We had some real blood and guts matches yesterday and today for the tennis trophies. The men’s doubles winners were John Gottsch and Douglas Jabs, and they win the EVL Brown Bowl. They narrowly edged out Brian Young and John Thompson, who received the EVL Brown Tray for men’s doubles runners-up. The Wilkinson Trophy, which goes to the senior man who wins the most game, was also won by Brian Young. Now for the ladies tennis trophies: my lovely wife Wendee won the Perera Bowl for
ladies doubles winners with Deena Latis. Alice Wilkinson and Kathy Tychesen were runners up in ladies doubles and get the Hughes Bowl. Now for the mixed doubles trophies. The Wong McDonald Trophy for mixed doubles winners goes to my wife and me. Thank you, Wendy for carrying us. The Wilson Trophy for mixed doubles runners up was won by Ed Raab and Alice Wilkinson.

The skeet shooting trophy, the Beetham-Bullock trophy, was won by Rand Spencer, but you can see that honorable mention went to his wife, Sherry Spencer, who he narrowly edged out for the trophy. The McCaslin-Fralick-Kimura Trophy is my last award of the night. This was a hard one to figure out because none of the official participants wanted to admit that they were part of this event. I asked David Parke, who was one of the fly fishers, “Who won the fly fishing tournament?” David said, “I will defer that decision to Rand Spencer”. So, I asked Rand Spencer the same question, and Rand said, “I won”. So, Rand gets both the shooting and the fishing awards. And that completes our awards for sports.

**GOLF TROPHIES:**

**MEN:**
- Mishima-Michaels Trophy: Men’s Low Gross Score, Rick Ferris
- Canada-McCulloch Cup: Men’s Low Net Score, Woody Van Meter
- Truhlsen Trophy: Senior Men’s Low Gross, Brian Younge
- Knapp Memorial Trophies: Men’s Low Net Team, Blind Draw, Joe Flanagan

**LADIES:**
- Ellsworth Trophy: Ladies Low Gross Score, Dorene Shipley
- Homestead Cup: Ladies Low Net Score, Miriam Ridley

**DUBIOUS AWARDS FROM THE ATHLETICS DIRECTOR:**
- Men’s Long Drive: All, Paul Lichter
- Men’s Long Drive Senior: Mylan Van Newkirk
- Men’s Closest to the Pin: All, Jim Ravin
- Men’s Closest to the Pin Senior: Malcolm Mazow
- Ladies Long Drive: All, Cindy Terry
- Ladies Closest to the Pin: All, Debbie Sergott
- Sierra Club Award: Most Trees Hit, Pat Wilkinson

**TEENSY TROPHIES:**

**MEN’S DOUBLES:**
- EVL Brown Bowl: Winners, John Gottsch
- EVL Brown Tray: Runners Up, John Thompson

**LADIES DOUBLES:**
- Perera Bowl: Winners, Wendee Fraunfelder
- Hughes Bowl: Runners Up, Deena Latis

**MIXED DOUBLES:**
- Wong-McDonald Trophy: Winners, Rick Fraunfelder
- Wilson Trophy: Runners Up, Ed Raab

**SKEET SHOOTING:**
- Beetham-Bullock Trophy: Best Score, Rand Spencer

**FLY FISHING:**
- McCaslin-Fralick-Kimura Trophy: Largest Fish, Rand Spencer

CHARLES P. WILKINSON MD: The reports of the Committees on New Members, Athletics and the Committee on Prizes will be presented at the banquet this evening. Other committees and representative reports not presented at this session will be available in the published *Transactions.* I now declare the Executive Session of the 146th Meeting in recess until tonight’s banquet.
Minutes of the Proceedings

SCIENTIFIC SESSION, SATURDAY, MAY 22

The Meeting Continued with the Health Care Symposium as follows:

- Introduction: Steven E. Feldon MD
- “An Outsider’s Perspective, Humphrey Taylor”
- “Next Steps for Health Care, Regina Herzlinger”
- “Discussion”

The Meeting Continued with the Following Scientific Program:

7. “Spectral Domain Optical Coherence Tomography in Glaucome: Qualitative and Quantitative Analysis of the Optic Nerve Head and Retinal Nerve Fiber Layer”, Teresa C. Chen**
8. “Changes Similar To Wet Age-Related Macular Degeneration (Amd) Are Induced In Rats By Light Exposure”, Daniel M. Albert*, Richard R. Dubielzig, Christine M. Sorenson, Nader Sheibani

BANQUET, SATURDAY MAY 22, 2010

DOUGLAS D. KOCH MD: Good evening everyone. I have the great pleasure of introducing our president, Pat Wilkinson. I thought I might just spend a brief moment introducing Pat, not that he really needs one. He graduated from Stanford University and Johns Hopkins. He completed his residency at the Wilmer Eye Institute and a retina fellowship at the Bascom Palmer Eye Institute. Dr. Wilkinson spent 20 years at the Dean McGee Eye Institute and then became Chairman of Ophthalmology at the Greater Baltimore Medical Center in 1992, a position that he still holds. He has published more papers than any of us could ever read and given more lectures than any of us could ever hear. He also has participated in some other activities, as these slides will show. In this one, everybody can identify your esteemed president who is on the left and Ron Michels. I don’t think anybody needs to ask the identity of the third person (Dan Jones). Do you know who the person on the right? Ron Smith. I am not sure that their attire has changed much. The note reads “To Dan Jones”, Pat writes, “Keep swinging, it’s got to get better”.

Pat has been president of almost every major ophthalmic society, and now we can add AOS to this list, which includes the American Academy of Ophthalmology, the Retina Society, Chairman of the American Board of Ophthalmology, and Chairman of the FDA Ophthalmic Advisory Panel. If you look carefully at the photograph, then you will note that he is about ready to dump his drink on that fellow, right front of him.

More importantly he is married to Alice. He has two children, one of whom just received her nursing degree and he has two step children, Randy and Allison Michels. I would say that Pat and Alice know how to have fun. In this photograph they are looking very Oklahoma. Here they are enjoying another activity, fly fishing with the Parkes. Pat was the Secretary Treasurer of AOS from 1999 to 2006. He came into that position with a big smile and he left after doing a wonderful job for the Society with an even bigger smile.

When the Council had the opportunity to consider who would be our President, it was an easy choice, Pat Wilkinson.

CHARLES P. WILKINSON MD: Doug, thank you and ladies and gentleman welcome to this evening’s event. I am going to withhold my comments until later, but I want to welcome all of you. These meetings take a lot of planning and I want to thank all of the Council members and also Stephen Moss, Tim Loshe, and Lisa Brown, who had to go home early today because she had a graduation in here family. After a multitude of us members not showing up for various sessions, her daughter is graduating this evening, and she is the one missing. Thanks so much to all of you for putting this meeting together. I now want to officially reconvene the 146th Meeting and Executive Session of our Society. We will begin by having our first committee representative Emile Chew introduce our six new members.

REPORT OF THE COMMITTEE ON NEW MEMBERS

EMILY Y. CHEW MD: Thank you. It has been a pleasure for Bob Murphy, my husband, and I to serve as the New Member Committee. We have a stellar group this year and they are absolutely terrific people. Some of you were at the New Member’s Spotlight session on Thursday afternoon and it was a real treat. For those of you who missed it we are going to record it next year on “You Tube”.

Teresa C. Chen. Our first new member might possibly be the youngest member we have inducted in the Society. She graduated from Rensselaer on a six year program, and she finished at Albany Medical School. She completed her ophthalmology residency at
the University of Illinois, Chicago and she completed a Massachusetts Eye & Ear Infirmary glaucoma fellowship. She is now an Associate Professor focusing on pediatric glaucoma at the Mass Eye and Ear. You heard today her eloquent presentation on use of OCT and glaucoma. She is a musical wizard and plays the violin and piano. She comes from an academic family and her brother is on faculty at MIT. Teresa could you stand up, please?

Elisabeth J. Cohen. Introducing our next new member is a special treat for me. My brother had the great privilege of being one of her fellows and he tells me she truly is second to none as a mentor. Elisabeth was at Harvard for both her undergraduate degree and medical school. She completed her residency at the Wills Eye Hospital. She went up north to Harvard for her fellowship in cornea and since then she has been back at Wills as a Professor of Ophthalmology and Director of Cornea Service. As of this year she has been a Clinical Professor at New York University, as well. As of this July, I believe that she is going to stop commuting. Her husband has a job in New York, so the two are actually going to get together. Elisabeth has done some great work in many areas of cornea and has been a great inspiration to many fellows. Behind every successful woman there is a man three steps behind. Actually Robert Grossman is a very interesting and wonderful man. When you listened to Elisabeth’s presentation on Thursday, you understood the wonderful partnership they have. She actually broke new grounds for women in medicine and he was right there to support her. Robert is a Dean of the NYU School of Medicine. Robert and Elisabeth please stand up, we welcome you. I did not quite finish her story. She is not only an excellent corneal surgeon, but a very successful mother and wife with two wonderful children, Ben and David, and with now a daughter-in-law, as well. It is very obvious that they are a very tight family, she talked about her thesis and even the boys were involved. Her speech was previewed by her son, and I think that’s really cool to have children so close and involved.

Peter K. Kaiser. I think the Harvard graduates really have it this year! We have many Harvard graduates in the new member class. Peter graduated with honors from both undergraduate and medical school at Harvard. He finished his ophthalmology residency at the Massachusetts Eye and Ear Infirmary and his retina fellowship at the Bascom Palmer Eye Institute. Peter is a real leader in clinical trials, an area that is near and dear to our hearts. He is in charge of several clinical trials and is the director of an OCT reading center. You saw his poster today on the subject of his thesis: evaluating visual acuities. This is a photograph of his wife, Maureen, and their two lovely children. He is very active with the family. He currently is at the Cole Eye Institute at the Cleveland Clinic Foundation as professor. Peter, please stand up so we can welcome you.

Eric R. Holz. He has a big heart from Texas and gave a very heart warming presentation during Thursday’s presentation. He obviously has tremendous energy and is very interested in academics. He was a medical student at Baylor College School of Medicine after having completed his undergraduate studies at the University of Texas, Austin. He did his ophthalmology residency at Baylor and then followed David Parke to Oklahoma where David invited him for a vitreoretinal fellowship. He returned to Baylor as Associate Professor and was there for many years before just recently going into private practice. His interest has been in retinopathy of prematurity and different aspects of vitreoretinal surgery, where he has made great contributions. Here he is pictured with his lovely wife, Joyce, who is a gynecologist. Eric and Joyce have a son who attends Stanford University.

Peter Andreas Netland. He comes from Princeton as his undergraduate alma mater. Peter, there is a lot of tiger power in this room, so don’t worry about the Harvard folks. You went to Harvard also, so it doesn’t matter. Peter graduated from the University of California at San Francisco School of Medicine. His medical school was interrupted by his PhD at Harvard. After finishing medical school, he went to back to Boston for his residency and glaucoma fellowship at the Massachusetts Eye and Ear Infirmary. He currently is at the University of Virginia as Professor and Chairman of the Department of Ophthalmology. I am very thrilled that he is interested in surgical procedures and clinical trials. It is very difficult to do trials in this area. We welcome Peter’s expertise in this type of research. He is married to his lovely wife, Rachael, who is an emergency room nurse and they have three children. Here they are in this photograph with their youngest, Anders. Peter was particularly interested in making sure his mentors were honored and here he is shown with Barrett Haik and C. Stephen Foster. Welcome to Peter and Rachael.

David N. Zacks. He completed his undergraduate from Cornell University and did his MD and PhD in Albert Einstein. He also trained at the Massachusetts Eye and Ear Infirmary for his residency in ophthalmology and a glaucoma fellowship. During his presentation on Thursday, you could feel the passion he had for his research in molecular control of photoreceptor death. He also spoke passionately about his lovely wife Susan Harris, who is a pediatrician. Together they have two children, Gabriel and Daniel. Clearly they have a high priority in doing things together as a family. He balances his research at the University of Michigan, with his family. Welcome David and Susan.

This is our AOS class of 2010, but I still have one more special person to introduce, Joan W. Miller. She was inducted last year and unfortunately was unable to attend. Joan is a very good friend. She is also a fellow Canadian, as well. She did her undergraduate degree at MIT. She is, of course, another Harvard graduate of medical school, Mass Eye and Ear residency, and retinal fellowship. She is currently Professor and Chair there. She has been a real pioneer in macular degeneration research, especially in the use of anti-VEGF therapy and photodynamic therapy. She is an amazing woman. She is married to John Miller. John says he married up, and I am sure that Joan married up, too. They have three wonderful children. She puts them to work building things and moving boulders at their summer cottage in northern Ontario. These are academically gifted children and two of them are at Harvard. I believe that one of their biggest contributions is to the genetic pool. Their son, John, is starting his residency in opthalmology this coming year. I know that Joan and John are very proud parents.
NEW MEMBERS (FROM LEFT) PETER A. NETLAND, MD, DAVID N. ZACKS, MD, ELISABETH J. COHEN, MD, TERESA C. CHEN, MD, PETER K. KAISER, MD, ERIC R. HOLZ, MD

During our new member session on Thursday, it was very apparent that Mass Eye and Ear has held a very special place in the hearts of 5 of the 6 candidates this year. Truly this is a place where they have received a great deal of mentoring. This is a picture that Joan Miller sent, showing one of her mentors, Evan Gragoudos. This shows the importance many of members placed on the mentors in the educational process. There are many mentors in the room. Joan, we welcome you and thank you for mentoring and all the wonderful things you have done. Joan and John Miller.

CHARLES P. WILKINSON MD: Emily, thank you for a great job. I would like to personally welcome all of our new members. We are proud to have you here and Joan, thank you for coming this year. It is great to have you here, too. Our next committee report will be from the Athletic Committee. Woody Van Meter had to leave this afternoon, it was a family situation, it was a good situation it’s not a bad situation. In his stead Rick Fraunfelder has agreed to present these awards.

(characters)

DOUGLAS D. KOCH MD: Dr. Koch. Resolution for Ralph C. Eagle Jr, MD, Whereas he has been a tireless photographer of the Society since time immemorial, and Whereas he has provided gross and microscopic photographic documentation of members of the Society, places of interest and inanimate objects, and Whereas he has become endeared to the membership of the Society, and Whereas he has graciously agreed to serve in this capacity and perpetuity, we hope. Resolve that the Council and officers, members and staff of the American Ophthalmological Society acknowledge their sincere debt of gratitude to Ralph C. Eagle Jr., MD for service as Official Photographer of the American Ophthalmological Society from 1995 to forever.

CHARLES P. WILKINSON MD: We come now to the highlight of the evening, the report from the Committee of Prizes regarding the Howe Medal. I would like to introduce the Chair of this Committee, a former medal winner himself, Dan Albert.
REPORT OF THE COMMITTEE ON PRIZES

DANIEL ALBERT MD: (This dialogue was originally accompanied by a PowerPoint presentation of pictures of Marilyn Miller’s life, which is not included here.)

These are the eyes of a three-year old child, a child that was destined to have a great career in ophthalmology and to be tonight’s recipient of the Howe Medal. Here is the child at the age of three and here, approximately twelve years later, her eyes have matured and our prize winner is a high school student in Park Ridge, Illinois, where she is on the high school water ballet and swim team. As Marilyn Miller pursues her studies in microbiology at Purdue University, she continues swimming and is on the Varsity Swim Team. Now, she can still swim a mile in a lap pool for exercise. In this photograph, Marilyn is shown playing the concert marimbas in her high school orchestra and has since collected marimbas and primitive percussion instruments in her travels throughout Central America and Africa.

After graduating from Purdue University, Marilyn was a graduate student in microbiology at the University of Wisconsin-Madison and her advisor was Joshua Lederberg, a Nobel laureate. She gathered her courage one day and told him that she was applying to medical school because she wanted to have interaction with patients and to experience the complexities and the challenges of patient care. He told her that was exactly why he left medicine for the laboratory. Marilyn attended the University of Illinois Medical School and became an ophthalmology resident at Illinois Eye and Ear Infirmary. Soon, after beginning her residency, she gave birth to her first child. Here we see Marilyn working in the OR and then hurrying home to feed, bathe, and put her child to bed. Marilyn published her first paper as a resident on congenital defects and won the best presentation award from the Chicago Ophthalmological Society. In that 1963 paper, she included Ronald Fishman as co-author and, knowing Marilyn’s character, he must have worked very hard because she would not have him listed as a guest author otherwise.

After Marilyn completed her residency at the University of Illinois, she became its first fellow in pediatric ophthalmology and joined the faculty there. She became a consultant to the cranio-facial center and developed a special interest in congenital anomalies. She has worked under five former chiefs at the University of Illinois and is currently on her sixth, Dimitri Azar, who is shown here. She served as the Editor of the Journal of the Association for Pediatric Ophthalmology and Strabismus and served as Officer and President of that organization. For several years, Marilyn has also been active in collaboration with a Brazilian ophthalmologist in the study of Mobius Syndrome and other congenital defects. Her interest in congenital eye disease led her to become the sole ophthalmologist in the American Teratology Society where, over twenty years, she has presented many of her studies including her classic work on thalidomide and an induced Duane Syndrome.

One of the most moving and impressive things about Marilyn’s background is the fact that for almost 30 years she has worked as a volunteer in a small rural hospital in southeastern Nigeria. In this photograph, we can see her examining one of her patients. The hospital serves a population of five million and initially the patients had little access to ophthalmic care. In the beginning, she and other volunteer ophthalmologists provided the clinical and surgical care. This is not the pediatric clinic in this photograph, but it is a school near her hospital about ten years ago. Marilyn also took over the directorship of FOCUS, a Chicago based organization founded by Jay MacDonald. Marilyn claims that it is the smallest ophthalmological nongovernmental organization in the world. She has shifted its emphasis from having visiting doctors provide care to supporting the staff with equipment, teaching material, and consultations. The hospital now boasts a new eye clinic, a new building for an eye clinic, and a resident training program, including regional pediatric teaching.
Marilyn speaks regularly on pediatric ophthalmology at meetings of the Nigerian Ophthalmological Society, as well as regional meetings. On the way home from one of her stints at the hospital, Marilyn flew out to Tanzania where she climbed up Mt. Kilimanjaro. For many years, she has worked with a Swedish ophthalmologist on thalidomide and the induced eye and associated defects. This was the basis of her AOS thesis, some twenty years ago. Their findings of a high prevalence of severe autism in these patients aroused great interest among neuroscience researchers. In *Scientific American*, she has been credited with finding the anatomical site of the defect. The University of Gothenburg in Sweden presented her with an honorary degree and you can see her in the regalia of that presentation in 1998. Her list of honors is truly impressive and she states that of all the honors she has received, at least until tonight, the one she appreciates the most is the American Academy of Ophthalmology Humanitarian of the Year Award in 2005. The Prize Committee gives the Howe Medal to Marilyn in recognition of her humanitarian service, among other accomplishments.

For years, Marilyn has traveled internationally to teach in developing countries. Here she is in Pakistan with her friend, Susan Day, on her left. She also visits the Aravind Hospital in India every year where the Director of the Pediatric Ophthalmology Service is a former fellow she had trained with in Chicago. Her work on international committees, teaching programs, and conferences has taken her to Afghanistan, Egypt, China, Burma, South Africa, and Australia. Here we can see her with friends in Vietnam, Cambodia, and Australia.

In 1989, Marilyn married Ron Fishman and here they look very imposing in their “American gothic” pose and here is a more formal picture of the happy couple. Marilyn and Ron now have combined families totaling twelve sons, daughters, and in-laws and eight grandchildren, including the two lovely twins that you see here. Marilyn recently took her eldest grandson on a trip with her to Russia and Lithuania. Marilyn continues to see patients at the Illinois Eye and Ear Infirmary in Chicago and faces the trials and tribulations of her administrative responsibilities by taking a philosophical approach when dealing with them. It is a great pleasure to present the 2010 AOS Howe Medal to Marilyn Miller.

Marilyn Miller MD: “Overwhelmed” is a word that fits my feeling right now. I certainly was surprised until I saw myself at two years of age which was my mother’s favorite picture. I am so appreciative of it and I’m not sure whether I deserve it but I’m very happy and I think I wore my Pakistan outfit just to say I am so pleased with the AOS’ involvement international and I hope to help out in the future. Thank you so much.
CHARLES P. WILKINSON MD: Marilyn, sincere congratulations. It is certainly a richly deserved award for you. In my opening remarks of thanks I forgot to thank my dear wife Alice. You have seen her name. Please stand up, dear. You have seen her name up here winning a few tennis plates and awards for decades and I am very thankful we no longer have to take them home. She won a lot of them. Speaking for myself I thought Woody was going to give me something for hitting the most trees in a round, but that did not happen.

Well, 146 years isn’t that something and isn’t this an amazing organization. Our group is an organization of great historical importance, but it is also genuine contemporary significance. Things go on and things change. My first trip here was to the 105th AOS Annual Meeting at the Homestead. I was asked to be the chauffer and roommate of Ed Maumenee and presented a paper that we co-authored. Now, for those of you are who are trying to figure 105th and 1969, I want to point out that I was a prodigy resident and was only 17 years old when I came to my first AOS meeting. Since that time, and it has been a very wonderful time, I have witnessed great changes in the Society. The majority of these have occurred in the last few years when we have had some genuine shifts in philosophy. I believe you would all agree that this has been a terrific meeting and that the symposia and that the guests and the people who have come in have just been really super. I would like to thank Doug again and the rest of the Council members for continuing to make this meeting better each year.

Ironically after all the changes that have occurred, the role of the President has become one that is genuinely ceremonial, so my primary function and my sole duty was strictly the Woody Allen phenomenon of just showing up. I showed up and here I am. It is my genuine pleasure to introduce the next President of our Society, Lee Jampol. Lee was born in New York, went to college and medical school at Yale University. He was a retina fellow at the University of Illinois with Mort Goldberg. He spent a couple of years in the US Army as many did in those days before returning to the university. He then moved across town or moved at least east to Northwestern University, where he has been the chair for decades. He is still chairman, and apparently is irreplaceable because no replacement has been found to date. He has served notice that he will be retiring. Lee has won numerous awards. He has been Chair of the Heed Foundation, served on the Board of Trustees of ARVO, was an Honor and a Senior Honor Award recipient of the American Academy of Ophthalmology. He has been president of the Chicago Ophthalmological Society and also President of the Macula Society. He serves on numerous editorial boards. His interests outside of his beautiful wife Erma and his family members are athletically inclined, he is a renowned runner, biker, and has always been a hero of mine through the many decades that we have known each other. He is regarded as one of the world’s authorities on medical retina. He is regarded for his candor and for his honesty. Some would say brutal candor and brutal honesty. He served on the Council for five years and was a Chair in 2008. He always took great delight, and still does, in reminding me about the fact that as the new president-elect my term would be over in
about twenty minutes because they changed the bylaws and eliminated the office of President-elect. He has not served as President-elect, but he will serve as the next President. He will be a fantastic president and I think Lee, in wearing this medal, you are going to look just fine. Come on up! Welcome our new president, Lee Jampol.

LEE JAMPO MD: In the early 1980s, Dick Green, who really loved the Society started working to get me to apply to the AOS. The AOS ran in his blood and he kept after me, and finally I applied and then with the encouragement of my mentor, Mort Goldberg and with Arnold Patz, I submitted my thesis. Then, as Pat just told you I moved to Northwestern and Dave Shoch, the former Chair, was my predecessor and he loved this organization, as well. Many of you knew Dave. He was just delighted when I was accepted to the Society. For the first few years, I was maybe not a great fan of this society. I felt it needed to move into the modern era and I served on the Thesis Committee and I served on the Members Committee, but finally I asked for some time with the Council. I spoke with them at length and it turns out that the Council at that time had already held a retreat and they had many of the same ideas about what was needed to bring the AOS into the modern era. The Council at that time and since has been very much aware of the great honor we have of belonging to a society that is 146 years old and we are very aware of the historical precedence. We have been cautious about the changes that we have made, but in the 1990s it wasn’t clear what the relevance of the Society was to modern ophthalmology. Many people of my generation elected not to apply and lose interest. Through the wisdom of the Council a series of changes were gradually instituted and you are all aware of them: the symposium concept, the invited guests, the Transactions going online (with incredible demand online), and permitting multiple authors on theses so people can really recognize the co-authors and the work that they have done. We encouraged the admission of younger people, and we encouraged the admission of women to the Society. We were working very hard to get the very best people to belong to the Society. We felt that if the meeting was exciting, then people would come, not just once every three years to fulfill the obligation. The scientific program at this meeting has shown this is possible. Then we decided that another important role of the AOS was authoring white papers, where we would provide guidance to ophthalmologists. The fact that we do not receive money from pharmaceutical companies made us uniquely prepared to issue ethical guidelines. I was excited when I was asked to lead a team to write the ethical guidelines for ophthalmologists and ophthalmic researchers. The Society appeared in press as the Council of the American Ophthalmologic Society giving recommendations on a very difficult issue, namely our dealings with pharmaceutical companies. That paper came out in the Archives of Ophthalmology last year.

Not everyone agrees with every change that has been put into action, but I can assure you that they have been very thoughtfully dealt with by the Council year after year and meeting after meeting. We have received your input and we have moved ahead. I believe that in most ways the changes we have instituted have been beneficial. Some of them may still need tweaking. I encourage you to talk to the Council in particular to Marilyn Mets, the Chair of the Council, and to me and others who are trying to improve what we have already put into place. I hear the word of the street is that the AOS is an exciting place to be again, and it is an exciting place to meet your colleagues and to learn new scientific information, to deal with people outside your subspecialty, and to intermix with people you would never see or certainly you would never talk to otherwise.

That is what we are all about here. I feel so grateful to have dealt with so many great Council members over the last ten years. You should be proud of your Council. I am very excited about working with Marilyn Mets, the new Council Chair and the Council for the next year. My role is largely ceremonial as Pat just told you, but my role at Northwestern University has become the historical memory for the whole medical center. Whenever the chairs try to do something I say, “Well, we tried that thirteen years ago and it didn’t work.”, so I am proud to play that role also in the AOS. I firmly believe that we have great things ahead of us. The Society is going to be the leader of ophthalmology as it once was. I am very thrilled to be your president. Thank you very much.

CHARLES P. WILKINSON MD: Lee, thank you. It is very obvious to everyone that you will be a most impressive and memorable president. He has played a tremendous role in the evolution that he so nicely described, so good luck. Good luck to the new Council and to the new officers. It has been my genuine pleasure to serve as your president. We are going to adjourn this evening’s session at 7:30 for the presentation of paper number 8 before proceeding with the other papers. Everyone, please enjoy yourselves.

SCIENTIFIC SESSION 3, SUNDAY, MAY 23

The Meeting Concluded with The Following Scientific Program:

15. "Reduction of Anisometropia in Penetrating Keratoplasty", Richard K. Forster*
17. "Effect of Disease Duration and Macular Thickness on the Response to Dexamethasone Intravitreal Implant in Patients with Macular Edema due to BRVO or CRVO", Julia A. Haller*, Francesco Bandello*, Rubens Belfort, Jr., Mark S. Blumenkranz, Mark Gillies, Jeffrey Heier, Anat Loewenstein, Jenny Jiao, Joanne Li, Scott M. Whitcup
AOS ARCHIVIST-PHOTOGRAPHER RALPH C. EAGLE, JR., MD
RECEIVING RESOLUTION OF GRATITUDE FROM AOS PRESIDENT PAT
CHARLES P. “PAT” WILKINSON, MD AND DOUGLAS D. KOCH, MD.

Members registered for the 2010 meeting. Sixteen professional guests are at the end of the list.

Members
Abbott Richard L. Active Member
Albert Daniel M. Emeritus Member
Anderson, Jr. W. Banks Emeritus Member
Archer Steven Active Member
Asbell Penny A. Active Member
Augsburger James J. Active Member
Azar Dimitri T. Active Member
Berger David K. Active Member
Bobrow James C. Active Member
Brown Gary C. Active Member
Buckley Edward G. Active Member
Bullock John D. Emeritus Member
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Chen Teresa Active Member
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Chodosh James Active Member
Cibis Gerhard W. Active Member
Cohen Elisabeth J. Active Member
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Day Susan H. Active Member
Eagle, Jr. Ralph C. Active Member
Elman Michael J. Active Member
Elner Victor M. Active Member
Feldon Steven E. Active Member
Feman Stephen S. Active Member
Ferris Frederick L. Active Member
Fish Gary Edd Active Member
Flach Allan J. Active Member
Flanagan Joseph C. Active Member
Flynn John T. Active Member
Forster Richard K. Active Member
Foster C. Stephen Active Member
France Thomas D. Active Member
Fraunfelder Frederick W. Active Member
Godfrey William A. Active Member
Gottsch John D. Active Member
Gross Ronald L. Active Member
Grossniklaus Hans E. Active Member
Gutman Froncie A. Emeritus Member
Guyton David L. Active Member
Haller Julia A. Active Member

### Minutes of the Proceedings

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CONJUNCTIVAL MELANOMA. ORIGIN DE NOVO IS WORSE PROGNOSIS THAN ORIGIN FROM NEVUS OR PRIMARY ACQUIRED MELANOSIS.

BY Carol L. Shields*, Jeremy Markowitz, Irina Belinsk, Hal Schwartzstein, Nina George, Sara Lally, Arman Mashayekhi, Jerry A. Shields

Purpose: To evaluate prognostic factors based on origin of conjunctival melanoma

Methods: Retrospective chart review

Results: The melanoma arose from primary acquired melanosis (PAM) (n=264, 74%), pre-existing nevus (n=26, 7%), and de novo (n=72, 19%). The mean tumor base was 11 mm for PAM, 6 mm for nevus, and 10 mm for de novo. At 5 and 10 years, melanoma metastasis occurred in 19% and 25% from PAM (p=0.003), 10% and 26% from nevus (p=0.193), and 35% and 49% from de novo. Factors predictive of metastasis by multivariable analysis included tumor origin de novo (p<0.001), palpebral location (p<0.001), thick tumor (p=0.005), and orbital invasion (p=0.022). At 5 and 10 years, melanoma-related death occurred in 9% from PAM (p<0.001), 9% from nevus (p<0.057), and 35% from de novo. Factors predictive of death by multivariable analysis included tumor origin de novo (p<0.001), fornix location (p=0.04), and thick tumor (p=0.001).

Conclusion: Melanoma arising de novo carries a more ominous prognosis compared to those arising from PAM and nevus.

KERATOCONUS AND NORMAL-TENSION GLAUCOMA: A STUDY OF THE POSSIBLE ASSOCIATION WITH ABNORMAL BIOMECHANICAL PROPERTIES AS MEASURED BY CORNEAL HYSTERESIS

By Elisabeth J. Cohen*

Purpose: To test the hypothesis that keratoconus and pellucid patients who have glaucoma or are suspected of having glaucoma have lower corneal hysteresis (CH) and/or corneal resistance factor (CRF) measurements compared to controls.

Methods: A prospective study at a tertiary eye center of keratoconus and pellucid patients with glaucoma or suspected of having glaucoma, and age-matched keratoconus and pellucid controls, was performed. After informed consent was obtained, corneal topography, ocular response analyzer (ORA) measurements, pachymetry, intraocular pressure (IOP), A-scan measurements, Humphrey visual fields (VFs), and disc photos were done. Analyses compared cases to controls on primary (CH and CRF) and secondary variables. Disc photos and VFs were rated in a masked fashion.

Results: The mean CH (8.2, SD=1.6, vs 8.3, SD=.15) and CRF (7.3, SD=2.0, vs 6.9, SD=2.1) were low and did not differ significantly between 20 study patients (29 eyes) and 40 control patients (61 eyes), respectively. CH had a negative, significant correlation with maximum corneal curvature by topography (P < .002) and positive, significant correlation with central corneal thickness (P < .003). The mean cup-disc (C/D) ratio was larger among cases than controls (0.54, SD=0.20, vs 0.38, SD=0.20; P = .003). VFs were suggestive of glaucoma more often among the study eyes than controls (11 of 29, vs 8 of 60, (13.3%) P = .019).

Conclusion: CH was low in study and control patients and was correlated with severity of keratoconus/pellucid, but not with glaucoma/suspected glaucoma or control status. Evidence of glaucoma was more common in study eyes than controls, but was present in both.

AN ECONOMIC EVALUATION OF MEDICAL THERAPY FOR THE REDUCTION OF DIABETIC VISION LOSS IN THE UNITED STATES

By Stephen S. Feman*

Purpose: Diabetes mellitus is the leading cause of new blindness in US adults under age 65. Laser surgery has been shown to slow the rate at which existing diabetic retinopathy progresses to blindness. Medical therapy can slow retinopathy progression also. This study evaluated the economic impact of those interventions.

Methods: Incremental Cost Effectiveness Analysis (ICER) techniques were used to measure results in terms of dollars and Quality Adjusted Life Years (QALY). All dollar values were standardized to the year 2007 and patient data for that year was selected. ICER methods compared populations with differing glucose control levels, and sensitivity analysis techniques were used for data inputs associated with uncertainty. Markov modeling, decision trees, and commercial software examined these features over cohort lifetimes. Similar methods explored relationships between ICER and cost variations, and evaluated ICER responses for different populations.

Results: Reducing glycosylated hemoglobin values towards the physiologic range was associated with benefits in all populations studied. If only 10% of those with new retinopathy had their elevated glycosylated hemoglobin levels reduced, there would have been a benefit of $6.76 and 0.000013 QALY per diabetic retinopathy patient. That would result in 154 fewer blind and a national savings of $5,408,000. If all new retinopathy patients had values reduced to the physiologic range, it would have been possible that year to achieve: 1) benefits of $47.31 and 0.000094 QALY per diabetic retinopathy patient, 2) blindness prevention for 1,075 people and 3) a national health care savings of $37,848,000. If that medical regimen continued over the lifetime of that patient cohort, there would be a gain of 0.058 QALY per retinopathy patient.

Conclusion: Reducing glycosylated hemoglobin levels in the US diabetic retinopathy population is associated with economic benefits and blindness prevention. These values accrue to patients now, and continue over their lifetime.
ANTERIOR ISCHEMIC OPTIC NEUROPATHY ASSOCIATED WITH INTERFERON ALPHA THERAPY

By Frederick W. Fraunfelder*, Frederick T. Fraunfelder

Purpose: To report the association between interferon alfa therapy and anterior ischemic optic neuropathy (AION).

Methods: Case reports from a review of the literature were combined with spontaneous reports from the National Registry of Drug-Induced Ocular Side Effects, the World Health Organization (WHO), and the Food and Drug Administration (FDA) looking for reports on interferon therapy associated with optic neuropathy.

Results: Thirty-six case reports of AION are described in association with interferon alfa therapy. Average age was 54 ½ with 26 males and 10 females. Median duration of therapy to onset of AION was 4 ½ months with 50% of subjects suffering some form of permanent vision loss. AION was bilateral in 67% of subjects. There are 3 positive rechallenge case reports.

Conclusion: Interferon's association with anterior ischemic optic neuropathy can be classified as possible using the World Health Organization classification system. If optic neuropathy is suspected, rapid cessation of interferon therapy may portend a better prognosis as multiple case reports indicate visual defects may be permanent if this possible adverse drug reaction remains unrecognized.

REMOVAL OF LENS EPITHELIAL CELLS WITH A ND:YAG LASER PHOTOLYSIS SYSTEM TO PREVENT CAPSULE OPACITIES

By George O Waring III*, Wolfram Wehner, Nick Mamalis, Hans Grossniklaus, Reinhardt Thyzel, Rudolf Walker

Purpose: To evaluate the safety and efficacy of the A.R.C. Nd:YAG intraocular photolysis system in preventing lens capsule opacities after phacoemulsification.

Methods: Twelve human cadaver eyes were evaluated using the Miayke technique. The photolysis instrument shock wave was used to clean the lens epithelial cells from the anterior capsule and lens fornix under direct visualization. Standard irrigation/aspiration was used as a control. In 17 human eyes operated with phacoemulsification of cataract, the photolysis instrument removed lens epithelial cells under direct visualization from the nasal anterior capsule only; the temporal half was not treated. In 2010, at five European centers, with IRB approval, a prospective controlled trial is underway with right and left eyes of each patient randomized to photolysis versus standard capsule cleaning. Standardized retroillumination photographs are read masked at one reading center as the primary outcome variable.

Results: Histopathologic and immunohistochemical examination of cadaver eyes showed absence of lens epithelial cells and fibronectin and laminin staining in the treated areas. Controls showed absence of lens epithelial cells but persistent laminin and fibronectin. Twelve of 17 clinical eyes were evaluated approximately 2.5 years (838 +/- 29 days) after surgery. The nasal treated capsule remained completely clear in eight eyes and showed slight opacity in four. The temporal untreated capsule developed moderate to severe opacification in ten eyes.

Conclusion: Cleaning the lens epithelial cells from the anterior capsule with the A.R.C Nd:YAG photolysis instrument greatly reduces the appearance of capsule opacities. We hypothesize that the plasma shock wave destroys the lens fornix germinal cells and prevents migration of residual cells by removing laminin and fibronectin attachment molecules. The controlled, randomized, masked clinical trial will determine the technique's effectiveness.

VISUAL ACUITY LOSS DURING EXTENDED DOSING REGIMENS OF RANIBIZUMAB AND BEVACIZUMAB FOR NEOVASCULAR MACULAR DEGENERATION

By John T. Thompson*, Erica A. Conlan

Purpose: To evaluate visual acuity during fixed and extended dosing of ranibizumab and bevacizumab for subfoveal choroidal neovascularization associated with age-related macular degeneration.

Methods: Visual acuity was evaluated in a retrospective case series of 143 consecutive treatment-naive eyes receiving intravitreal bevacizumab or ranibizumab for neovascular age-related macular degeneration. Ranibizumab eyes were treated monthly for 1 year followed by extended dosing while bevacizumab eyes were treated every 6 weeks for 1 year followed by extended dosing. Visual acuity was analyzed using linear regression to evaluate the rate of visual acuity change during induction (first three intravitreal injections), regular dosing and extended dosing.

Results: Mean visual acuity improved from 20/160 -1 at baseline to 20/125 +2 at 3 months, 20/80 -2 at 1 year and decreased to 20/125 +1 at the final exam (P=.008 for baseline to 3 months, P<.001 for baseline to 1 year, P=.021 for baseline to final exam at mean of 1.6 years). Visual acuity improved ≥3 lines at the final exam in 50/143 eyes (35%), remained within 3 lines in 70/143 eyes (49%) and decreased ≥3 lines in 23/143 eyes (16%). There were no significant differences in visual acuity results between eyes treated with ranibizumab versus bevacizumab. Visual acuity improved at a rate of +23.5 letters/year during induction, stabilized at +.8 letters/year during regular dosing and decreased at -2.65 letters/year during extended dosing. Visual acuity declined at -1.98 letters/year in eyes requiring repeat regular dosing (after extended dosing) and -11.25 letters/year when repeat extended dosing was attempted.
Improvements in visual acuity during initiation and regular dosing were significantly better than declines in visual acuity during extended, repeat regular and repeat extended dosing (P<.01).

Conclusion: Visual acuity decreased during extended dosing in some eyes due to recurrences and may not recover with repeat regular dosing.

SPECTRAL DOMAIN OPTICAL COHERENCE TOMOGRAPHY IN GLAUCOMA: QUALITATIVE AND QUANTITATIVE ANALYSIS OF THE OPTIC NERVE HEAD AND RETINAL NERVE FIBER LAYER

By Teresa C. Chen*

Purpose: To demonstrate that video-rate spectral domain optical coherence tomography (SDOCT) can qualitatively and quantitatively evaluate optic nerve head (ONH) and retinal nerve fiber layer (RNFL) glaucomatous structural changes. To correlate quantitative SDOCT parameters with disc photography and visual fields.

Methods: A retrospective case series of the first video-rate SDOCT images ever obtained included 4 glaucoma eyes (4 patients) with varying stages of open angle glaucoma, in order to best depict the full spectrum of classic glaucomatous structural changes. These images were qualitatively contrasted with 2 age-matched normal eyes (2 patients). Of 61 other consecutive patients who were prospectively recruited in an institutional setting, 53 eyes (33 patients) met inclusion/exclusion criteria for ONH and RNFL quantitative evaluation. Images were obtained using two experimental SDOCT systems, one utilizing a superluminescent diode and the other a titanium:sapphire laser source, with axial resolutions of about 6 and 3 microns respectively.

Results: In the retrospective qualitative case series, SDOCT images demonstrated ONH cupping, beanpot cupping, ONH blood vessel bayoneting, ONH circumlinear blood vessel baring, RNFL thinning, and second order blood vessel exposure above the surface of a thinned RNFL. In the prospective quantitative studies, an SDOCT reference plane 139 microns above the retinal pigment epithelium yielded cup-disc ratios that best correlated with masked physician disc photography cup-disc ratio assessments. The minimum distance band, a novel 3-dimensional SDOCT neuroretinal rim parameter, showed good correlation with physician cup-disc ratio assessments, visual field mean deviation, and pattern standard deviation (P values range, .0003-.024). RNFL and retinal thickness maps correlated well with disc photography and visual field testing.

Conclusion: This study presents the first comprehensive qualitative and quantitative SDOCT evaluation of the ONH and RNFL in glaucoma. Further studies are needed to better determine how SDOCT data can be used in glaucoma patient care.

CHANGES SIMILAR TO WET AGE-RELATED MACULAR DEGENERATION (AMD) ARE INDUCED IN RATS BY LIGHT EXPOSURE

By Daniel M. Albert*, Richard R. Dubielzig, Christine M. Sorenson, Nader Sheibani

Purpose: Albino rats and mice spontaneously develop photoreceptor cell degeneration in the central retina with aging. We recently discovered that choroidal neovascularization (CNV) also occurs in aged untreated albino rats. In this study, we tested our hypothesis that these same changes can be induced in young animals by intense cyclic light exposure (ICLE).

Methods: Albino and pigmented 3 month-old rats were exposed to 12 hours of 3000 lux cyclic light (the intensity used to treat depression in humans) for periods ranging from 1 week to one year. The retinal changes were studied by clinical and histopathologic examination, including immunofluorescence staining for oxidative stress-related products (OSRP).

Results: Within the first month of ICLE, albino rats developed reduction of the outer nuclear layer (ONL), choroidal inflammation, and early CNV. By the third month, the choroidal neovascularization penetrated Bruchs membrane and extended into the outer retina. By the sixth month, the CNV anastomosed with the retinal vessels, the ONL was absent, and PAS-positive intraretinal exudates were noted. Positive staining for OSRP, as occurs in human AMD, was observed. At one year, there was increased retinal neovascularization with thinning of the ONL and reduced numbers of ganglion cells. The choroid was atrophic, and there was some loss of RPE.

Conclusion: Our results suggest that old albino rats spontaneously develop wet AMD-like changes that can be induced by ICLE in young animals. We believe this may provide a useful model for the detailed study of the pathogenesis and treatment of AMD.

EN FACE VISUALIZATION AND QUANTIFICATION OF PHOTORECEPTOR INNER SEGMENT/OUTER SEGMENT COMPLEX USING CIRRUS SPECTRAL DOMAIN OPTICAL COHERENCE TOMOGRAPHY AND ASSOCIATION WITH VISUAL ACUTY

By Daniel F. Kiernan*, Ruth U. Zelkha, Jennifer I. Lim, Seenu M. Hariprasad, William F. Mieler

Purpose: To describe a novel method of en face visualization of inner segment/outer segment photoreceptor junction (IS/OS) using spectral domain Cirrus optical coherence tomography (SD-OCT), quantification of the central macula IS/OS area and its association with visual acuity.

Methods: Case control study of fifty eyes of 44 patients using Cirrus SD-OCT en face visualization and IS/OS-RPE mode. The central 1 mm and 400 micron IS/OS foveal zones were analyzed with Metamorph computer software, set to the same threshold value for all images.
RESULTS: Twenty-five eyes (23 patients) had retinal disease (group 1) with mean logMAR visual acuity (VA) = 0.235, whereas twenty-five eyes (21 patients) served as healthy, age-matched controls with mean VA = 0.081. In group 1, mean central 1 mm and 400 micron zone IS/OS areas were 59.2% (+/- 12.7%) and 56.7% (+/-14.7%), which correlated significantly greater with VA (Pearson coefficient= 0.56 and 0.62) than did mean central subfoveal thickness, macular volume or average macular thickness (= 0.16, 0.22, 0.05). In the control group, mean central 1 mm and 400 micron zone IS/OS areas were 76.1% (+/- 13.9%) and 69.8% (+/-13.1%), which correlated significantly greater with VA (= 0.63 and 0.64) than did other macular thickness measurements (= 0.12, 0.06, 0.05.) There was no significant differences between the two IS/OS zone measurements in each group (p>0.05). 68% of group 1 and 52% of controls had cataracts.

CONCLUSION: Central IS/OS area measurement correlates with VA in both healthy and eyes with retinal disease. It may be a better predictor of VA than other routine SD-OCT values, including central subfoveal thickness. The presence of cataract may affect this correlation, and it should be used with caution in patients with significant media opacity. Advancements in SD-OCT software may allow for the routine analysis of en face IS/OS visualization and analysis.

VARIABILITY IN TEAR OSMOLARITY REVISITED

By Michael A. Lemp*, Benjamin D. Sullivan

Purpose: To evaluate the relationship between tear osmolarity and its variability over time and, between eyes, Greater variability of results in patients with dry eye disease (DED) than in normals was reported at this meeting over 20 years ago. But no clinical implications were drawn.

Methods: In a prospective study for inter-eye variability assessment, 50 nL of tear fluid from the inferior lateral meniscus was obtained from both eyes of 299 subjects chosen from the general patient population and qualified as normal or DED based on a composite index of signs (n = 82 Normal, n = 217 Dry Eye) across 11 sites in the EU and US. The first eye tested was randomly varied. In a subsequent study the change in osmolarity with time was evaluated over 960 tear collections, across 20 subjects (n = 10 Normal, n = 10 Dry Eye) on 3 separate days, with four samples from each eye collected in 15 minute and then 1 minute intervals for a total of eight tear collections per eye, per day.

Results: The average inter-eye difference of Normal subjects was 6.9+-/5.9 mOsms/L while Dry Eye patients averaged 16.67+-/17.26 mOsms/L. Over time, the standard deviation of Normal subjects was 6.27+-/1.23 mOsms/L, whereas Dry Eye patients exhibited deviations of 10.78+-/4.60 mOsms/L. Both of these differences were significant (p<0.000002, p<0.008). In each case, tear osmolarity was a dominant predictor of tear variability, with a Pearson correlation coefficient r2=0.680 over time and r2=0.495 between eyes.

Conclusion: Inter-eye and longitudinal osmotic variability > 10 mOsms/L are hallmarks of dry eye disease, and can be used as additional diagnostic aides. Presence of hyperosmolarity in either eye is also indicative of the disease, and the higher value of the two eyes should be used in diagnosis, severity assessment and in clinical trial design.

ENDOTHELIAL KERATOPLASTY FOR FAILED PENETRATING KERATOPLASTY GRAFTS: SURGICAL STRATEGIES TO MINIMIZE COMPLICATIONS

By Mark A. Terry*, Michael D. Straiko

Purpose: Descemet's Stripping Endothelial Keratoplasty (DSAEK) can be used to restore clarity to failed penetrating keratoplasty (PK) grafts. However, prior series have shown a high rate of donor tissue dislocation (>40%) and failure (>40%) in this setting. Intra-operative dehiscence of the PK wound during the DSAEK surgery has also been reported. We describe our results in the largest series of DSAEK in failed PK cases yet reported and our strategy for avoiding these and other complications.

Methods: The records of 800 consecutive DSAEK procedures were reviewed and all eyes with a pre-operative diagnosis of failed PK were identified. Pre-operative anterior segment OCT was performed to show posterior PK graft contour for determination of donor diameter for the DSAEK lenticule. Descemet's stripping and recipient bed scraping were carefully performed central to the posterior PK graft edge to avoid dehiscence of the healed edge. The remainder of the procedure was performed in our standard fashion.

Results: There were 17 eyes with failed PK that received DSAEK surgery. Six of the eyes had undergone prior glaucoma filtration surgery (2 trabeculectomies, 4 tubes) and one with an anterior chamber IOL. DSAEK graft diameters (7.0 to 8.0 mm) were < the failed PK diameter to avoid lenticule edge lift from posterior protuberance of the PK edge as imaged pre-operatively by the OCT. Mean follow-up was 16 months (range 2 to 38 months). Post-operatively, all PK grafts regained clarity and vision improved in all patients. The dislocation rate was 5.9% (1/17), the graft failure rate was 0%, the pupillary block rate was 0%, and the PK dehiscence rate was 0%.

Conclusion: Use of same size or undersized donor lenticules in DSAEK for failed PK eyes can minimize complications. Descemet's stripping and peripheral bed scraping can safely be done to avoid PK wound dehiscence and reduce dislocation events.
DOES SURVEILLANCE TESTING FOR METASTASIS IN PATIENTS WITH PRIMARY UVEAL MELANOMA AFTER INTRAOCULAR TUMOR TREATMENT IMPROVE SURVIVAL PROGNOSIS?

By James J. Augsburger*, Zelia M. Correa, Camila C. Simoes, Nicholas Trichopoulos

Purpose: To evaluate the quality of evidence about effectiveness of regular periodic surveillance testing for metastasis in patients with primary uveal melanoma following treatment of the primary intraocular tumor in prolonging survival.

Methods: Identification and analysis of peer reviewed articles on human primary uveal melanoma published between 1980 and 2009 that reported on some aspect of screening, surveillance, or systemic follow-up evaluation for metastasis in patients with primary uveal melanoma following treatment of the primary tumor.

Results: Of 4222 identified articles, only 31 contained original clinical data about screening, surveillance, or systemic follow-up evaluation for metastasis. Patients whose metastasis was detected by surveillance tended to be younger, less symptomatic, more likely to have a single detected metastasis and fewer and smaller measurable metastatic tumors, and less likely to have massive hepatic replacement, substantial elevation of serum liver enzymes and bilirubin, and gross hepatomegaly and jaundice than were patients whose metastasis was detected by symptom-prompted evaluation. Patients whose metastatic disease was detected by surveillance were also much more likely to undergo treatment by surgical metastectomy or regional perfusion chemotherapy than were patients whose metastasis was detected by symptom-prompted evaluation. Patients whose metastatic disease was detected by surveillance tended to have substantially longer survival than did those whose metastasis was detected by symptom-prompted evaluation; however, none of the identified articles reported survival times of comparable subgroups of patients in which regular periodic surveillance for metastasis versus no surveillance was performed.

Conclusion: Available evidence from the peer reviewed literature does not provide any compelling evidence of a survival benefit of any regimen or frequency of surveillance for metastasis relative to no such testing. In view of this, the advisability of periodic surveillance for metastasis in routine clinical practice should be questioned.

RETINAL NERVE FIBER LAYER AND VISUAL FUNCTION LOSS IN GLAUCOMA: THE TIPPING POINT

By Gadi Wollstein, Larry Kagemann, Richard A. Bilonick, Hiroshi Ishikawa, Lindsey S. Folio, Michelle L. Gabriele, Allison K. Ungar, Jay S. Duker, James G. Fujimoto, Joel S. Schuman*

Purpose: Cumulative evidence indicates that the relationship between structure and function in glaucoma is complex. However, it would be of clinical use to identify the structural threshold value where change in structure and function are closely related. The purpose of this study was to determine the retinal nerve fiber layer (RNFL) thickness at which visual field (VF) damage becomes associated with structural loss for global and sectoral measures.

Methods: VFs and spectral domain optical coherence tomography (SD-OCT) optic disc 200x200 cube scans (Humphrey field analyzer and Cirrus HD-OCT respectively; Carl Zeiss Meditec, Dublin, CA) were obtained from 72 healthy and 40 glaucoma subjects. Average, quadrant and clock-hour RNFL thickness measurements and corresponding VF threshold total deviation values were analyzed using the "broken stick" method. This method determines the change point as a knot between the two straight-line segments of slow and fast VF slopes.

Results: In most locations, global and sectoral analysis showed a plateau of VF threshold values at high RNFL thicknesses and a sharp decrease at thin RNFL thickness. The inflection point for global RNFL and VF threshold was 73 microns, 20% below the healthy population. Above the tipping point, VF threshold value was 0.03 dB lower per micron RNFL thinner (95% confidence interval 0.01-0.07). Below the tipping point, the threshold level was 0.25 dB lower per micron RNFL thinner (0.14-0.35). Temporal, superior, nasal and inferior RNFL tipping point thicknesses were 51, 82, 70, and 87 microns respectively. Clock-hour analysis showed similar results.

Conclusion: Substantial structural damage appears to be necessary for functional loss to be detectable, and this value can be quantitated. The RNFL thickness at which acceleration in detectable VF threshold value reduction can be expected is provided overall, by quadrant and by clock-hour.

ENDOSCOPIC SUTURED POSTERIOR CHAMBER INTRACULAR LENSES IN CHILDREN AND ADULTS

By Timothy W. Olsen*, Jonathan T. Pribila, Jorge Fortun

Purpose: To demonstrate a novel method of suturing a posterior chamber lens (SPCIOI) in to the ciliary sulcus in both adult and pediatric cases with a lack of zonular support or uveitis.

Methods: This series represents a retrospective review of 23 pediatric (<18 yo) and 71 adult patients at the University of Minnesota and Emory University that received pars plana vitrectomy with placement of a SPCIOI using the assistance of endoscope for visualization of the ciliary sulcus. A schematic diagram of the surgical procedure and a video of the technique will be presented. Key surgical objectives were to include at least 2 mm of full-thickness sclera, bury the knots completely, shave the vitreous, remove all capsular remnants, and use a large optic. Care was taken to avoid 1) exposed suture ends, 2) exposed knots, 3) scleral flaps, 4) excess hemorrhage, 5) excessive manipulation of the suture material, 6) suture entanglement at the haptic, and 7) ciliary body or iris root suture passes.
Results: The average age of the pediatric cases was 9 years old (3 to 18) while the adult group's average age was 50 years old (range 19-87). Most involved trauma (38%), lack of zonular support (21%), Congenital cataract and aphakia (12%), Marfans (10%), Uveitis (10%), and other (9%). Average operating times were initially 100 minutes (±30 min). Later case times decreased to 65 (±20 min). Complications included exposed suture (5), transient vitreous hemorrhage (20), low or high IOP (22), epiretinal membranes (6), some lens decentration (6) and corneal decompensation (7).

Conclusion: A novel technique for placement of an PC-IOL's in both children and adults using endoscopic guided placement is a viable surgical option for the management of patients with insufficient capsular support, uveitis, or in patients with traumatic disruption of anterior segment support structures.

REDUCTION OF ANISOMETROPIA IN PENETRATING KERATOPLASTY

By Richard K. Forster*

Purpose: To confirm the hypothesis that based on refraction of the fellow eye at the time of surgery, using a same size donor/host graft will result in less myopia than a 0.25 mm oversized donor/host graft.

Methods: Used 0.25 mm oversized donor tissue when the intended correction was to be -1.00 diopters or more myopic. If the desired final refraction was to be less than -1.00 diopters, plano or hyperopic, used same size donor/host trephination. Exclusion criteria included keratoconus, therapeutic grafts, eyes with only interrupted sutures and all lamellar grafts. Intra-study exclusion criteria included less than six months follow up and inability to obtain refractive data in first six months. Surgical technique: 12 interrupted and a 12 bite 10-0 nylon running suture. Refraction, keratometry, and corneal topography obtained at regular post op intervals.

Results: 75 eyes in 72 patients, 29% oversize, 71% same size, average follow up 21.5 months. Spherical equivalent results at 12 months: oversize - 1.35 diopters (2.25), same size -0.14 diopters (2.42). In comparing operated eyes to fellow eyes, 58% of eyes had an absolute value of 0 to -0.5 diopters of anisometropia with oversized grafts, and 44% of eyes had less than 0.5 diopters of anisometropia for same sized donor/host grafts.

Conclusion: Anisometropia following penetrating keratoplasty can be minimized by using same size donor/host trephination if the desired final refraction is to be less than -1.00 diopters, and by using 0.25 mm oversize donor/host trephination if the intended correction is to be -1.00 diopters or more myopic.

NATURAL HISTORY OF POSTERIOR POLE VASCULAR CHANGES IN RETINOPATHY OF PREMATURITY

By David K. Wallace*, Mays El-Dairi, Sharon F. Freedman, M.E. Hartnett

Purpose: Plus disease is the most important sign of acute phase retinopathy of prematurity (ROP). There is controversy regarding the natural history of retinal vascular changes leading to plus disease. Our purpose was to describe the evolution of retinal vascular changes captured by video indirect ophthalmoscopy in a large cohort of premature infants.

Methods: Retinal video recordings were obtained during indirect ophthalmoscopy in a cohort of premature infants followed over 5 years. Infants were included (one eye per infant) if they had a complete set of video images from the first examination through 38 weeks postmenstrual age (PMA) or if they had laser treatment. Two masked experts reviewed a short video clip of each examination and judged whether there was plus, pre-plus, or neither for dilation and tortuosity separately.

Results: Of 401 total images from 87 eyes of 87 infants, 223 (56%) had normal vessel width and tortuosity, 108 (27%) had pre-plus dilation with normal tortuosity, 55 (14%) had pre-plus dilation and tortuosity, and 15 (4%) had other combinations. At the first examination demonstrating any vascular abnormality, 52 infants had pre-plus dilation with normal tortuosity (mean PMA = 36.3 weeks), 4 infants had pre-plus tortuosity with normal vessel width (mean PMA = 35.9 weeks), 15 infants had pre-plus dilation and tortuosity (mean PMA = 35.8 weeks), and 2 infants had dilation and tortuosity sufficient for plus disease.

Conclusion: The first sign that pre-plus or plus disease is developing is usually mild (pre-plus) vascular dilation, followed by an increase in tortuosity until both dilation and tortuosity are sufficient for pre-plus disease. Pre-plus tortuosity in the absence of pre-plus dilation is relatively uncommon. These findings will aid in the development of computer-assisted, quantitative measures of plus disease progression that are consistent with the natural history of vascular changes in ROP.

EFFECT OF DISEASE DURATION AND MACULAR THICKNESS ON THE RESPONSE TODEXAMETHASONE INTRAVITREAL IMPLANT IN PATIENTS WITH MACULAR EDEMA DUE TO BRVO OR CRVO

By Julia A. Haller*, Francesco Bandello, Rubens Belfort, Jr., Mark S. Blumenkranz, Mark Gillies, Jeffrey Heier, Anat Loewenstein, Jenny Jiao, Joanne Li, Scott M. Whitcup

Purpose: To evaluate effect of duration of macular edema (ME) and macular thickness on response to treatment with OZURDEX™ (dexamethasone intravitreal implant) 0.7mg in eyes with ME due to branch or central retinal vein occlusion (RVO).
**Methods:** In 2 identical, double-masked studies, eyes with ME due to BRVO or CRVO were randomized to receive DEX Implant 0.7mg (n=427), DEX Implant 0.35mg (n=414) or sham (n=426). Outcome measures included best-corrected visual acuity (BCVA) and macular thickness (by optical coherence tomography). An exploratory analysis was performed retrospectively evaluating the impact of ME duration and macular thickness on response.

**Results:** Among eyes with ME duration ≤90 days, the percentage in the DEX Implant 0.7mg group gaining ≥15 letters of BCVA at day 60 (peak response) was 42% (95% CI: 28%, 57%) for BRVO (n=50); 30% (95% CI: 13%, 53%) for CRVO (n=23); among eyes with ME duration >90 days: 27% (95% CI: 22%, 33%) for BRVO (n=241) and 28% (95% CI: 20%, 38%) for CRVO (n=113). Mean change from baseline BCVA with DEX Implant 0.7mg in eyes with ME duration ≤90 days was 13 letters for BRVO; 9 letters for CRVO; for eyes with ME duration >90 days: 10 letters for BRVO; 9 letters for CRVO. Among eyes with macular thickness >500μm, the percentage in the DEX Implant 0.7mg group gaining ≥15 letters of BCVA at day 60 was 37% (95% CI: 29%, 46%) for BRVO; 30% (95% CI: 22%, 40%) for CRVO; among eyes with macular thickness ≤500μm: 22% (95% CI: 16%, 30%) for BRVO; 23% (95% CI: 10%, 41%) for CRVO.

**Conclusion:** Although this study was not powered for statistical significance, data analysis suggests that in eyes with ME due to BRVO or CRVO, shorter ME duration and greater macular thickness at baseline may predict a better response to treatment with DEX Implant 0.7 mg.

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**EVOLUTION OF THE VASCULAR LESION IN GIANT CELL ARTERITIS: A PILOT STUDY**

By Brian R Younge*, Cornelia M. Weyand, Jorg J. Goronzy, Gene Hunder, Kevin L. Rieck, George G. Bartley, Lester E. Wold

**Purpose:** Patients with biopsy proven giant cell arteritis were prospectively studied in a pilot study to determine when the pathology became normal. No such prior studies exist.

**Methods:** From 300 patients recruited into the study, 40 were selected for analysis after having a positive temporal artery biopsy. Patients were divided randomly into 4 groups of 10 patients each. A second biopsy was done on the opposite side in each patient within the groups, at 3, 6, 9 and 12 months after the initial biopsy. Patients with negative biopsies initially were used as controls, and did not have a second procedure. No attempt was made to modify treatment in this study. Additional studies were done for cytokines, and part of each specimen, whether positive or negative was used in Chimera mouse models for growth factors and chemokines. Additional inflammatory markers were analyzed to compare with the cytokine information. Mayo Clinic IRB approved this study.

**Results:** Reversal of the pathology showed a trend towards resolution between 9 and 12 months from the time of the first biopsy. At 3 months 7 of 10 second biopsies were positive, at 6 months 9 of 10, at 9 months 4 of 10, and at 12 months only 1 of 10. Because of the small number of patients in each group, this pilot study has low statistical significance. Cytokine and correlating clinical studies will follow in subsequent publications.

**Conclusion:** Giant cell arteritis takes between 9 and 12 months to heal under current treatment modalities. It must be treated for nearly a year, sometimes longer. Few patients have negative pathology at six months or less, and only a few went beyond a year with positive pathology.
POSTER ABSTRACTS
LUCIEN HOWE, HEREDITARY BLINDNESS, AND THE EUGENICS MOVEMENT

By James G. Ravin, Alexandra M. Stern

Purpose: To understand the work of Lucien Howe, MD (1848-1928), a past president of the AOS. Howe's influence has been felt for more than a century. Little known is his leadership role in the eugenics movement.

Methods: Historical research including Howe's correspondence with leaders in the eugenics movement.

Results: Howe's correspondence as a leader of the AOS, the American Medical Association, the Medical Society of the State of New York and the Eugenics Research Association reveals his strong opinions on social reform.

Conclusion: Howe was a pioneer in ophthalmology who advanced the field in both clinical care and research. He paved the way for important research on the hereditary components of eye disease and raised awareness of the role of inheritance in certain ophthalmological conditions. Howe's perspicacious intellect also drew him into eugenic concepts that were cutting edge of thought at the time but today would be considered faulty science and biased against the disabled, immigrants and ethnic minorities.

ELECTRONIC HEALTH RECORDS: ARE THEY WORTH THE EFFORT?

By James C. Bobrow

Purpose: Physicians have been asked to begin the process of converting to electronic health records (EHR), to submit claims and prescriptions electronically, and to provide documentation for specific portions of the medical record. To induce participation and help to defray costs, we have been offered financial incentives. Are the costs of providing this information balanced by the incentives offered? This study is an attempt to quantify the effect of this process on an individual practice.

Methods: Data were collected from the financial records of a solo practice in which EHR has been used for 25 years. The data were then analyzed to determine percentages of practice income spent on personnel time and equipment for each of the inducements offered by regulatory agencies. These amounts were then compared to prospective and actual amounts received under these plans. Calculations were made for: EHR, providing documentation of 8 mandated components of examinations, and prospectively, for the potential cost of electronic prescribing.

Results: Although the initial cost of purchasing and installing an EHR is significant, maintaining the EHR is effective in optimizing physician time, increasing number of patients seen, and in increasing access to and reducing storage space for medical records. Even with an EHR, the costs of providing the mandated reporting of examination components and the potential cost of electronic prescribing are not defrayed by the financial incentives provided or proposed by governmental agencies.

Conclusion: Preparing for the mandated changes in recording and transmitting medical data will require time, effort and financial outlay. Although maintenance of an EHR may be cost-effective, other components of the conversion to federally-regulated requirements will be expensive and burdensome in a time of declining practice income.

COMMA DEFECTS: GLAUCOMATOUS ARCUATE SCOTOMAS IN THE CENTRAL 10 DEGREE FIELD

By Carlos Gustavo V. De Moraes, Ali S. Raza, Donald C. Hood, Jeffrey M. Liebmann, Robert Ritch

Purpose: To describe a pattern of glaucomatous visual field loss in eyes with defects confined to the central 10 degrees.

Methods: We examined the Humphrey visual fields (HVF) of 241 consecutive patients referred for multifocal visual evoked potential testing over two years. Both 10-2 and 24-2 HVFs had been performed in 160 eyes (97 patients). We eliminated eyes with defects outside the central 10 degrees except for mild nasal steps. The 10-2 HVFs of the final 22 eyes (18 patients) were classified as: Normal (MD p>0.05 and without a significant cluster as defined above); Arcuate (an arcuate defect); and Other (diffuse or a non-descript pattern of field loss).

Results: Of the 22 eyes, the 10-2 HVF was normal in 9 eyes (9 patients), showed a clear arcuate defect in 11 eyes (9 patients), and had nondescript loss in 2 eyes (2 patients). The arcuate defects, seen in 85% of the eyes with an abnormal 10-2 test, had the appearance of a "comma" occurring in the nasal field, beginning 1 degree to 5 degrees from the fovea, and being 2 degrees to 6 degrees wide. The earliest detectable "comma" defect spared the central 2 degrees of field and involved the area 2 degrees to 4 degrees nasal to fixation. The 10 test points associated with the papillomacular bundle (+ or - 1 degree vertically from center to disc; rectangle in figure) were spared in the "comma" defects. Ten of the 11 "comma" defects occurred in the superior field.

Conclusion: Defects in the central visual field in patients with otherwise essentially normal 24-2 tests are typically small arcuate "comma defects" sparing the papillomacular bundle. Why the weakest and most resistant points in the visual field occur immediately adjacent to each other requires further investigation.
INTRAOPERATIVE FLASH PULMONARY EDEMA AND THE IMPORTANCE OF LIGHT SEDATION DURING PHACOEMULSIFICATION SURGERY

By Allan J. Flach

Purpose: To report the first case of flash pulmonary edema (FPE) during phacoemulsification cataract extraction (PCE) and compare it to an identical, uncomplicated PCE performed upon the same patient one month previously in an effort to identify the etiology and elucidate the pathophysiology of the FPE.

Methods: This is a retrospective, parallel case review involving a 66-year-old man with chronic congestive heart failure (CHF) who underwent two identical PCE procedures one month apart. A comparison of these surgeries is made with special attention to preoperative, intraoperative and postoperative treatments.

Results: In both surgeries, the patient had poor cardiac medication adherence prior to surgery. However, preoperative alpha-blockers were used only prior to the complicated surgery. This resulted in less mydriasis during the surgery requiring additional intracameral epinephrine and a 15-minute increase in surgery time. The relationship of these differences to other variables is considered in an effort to understand the etiology of the FPE.

Conclusion: The specific etiology for this patient's FPE remains unclear and includes excessive intraoperative intracameral epinephrine, increased duration of surgery, small pulmonary embolus and progression of patient's cardiac disease. It is clear that the light sedation during surgery allowing the surgeons to communicate with the patient throughout the procedure provided an opportunity to treat the respiratory distress prior to the need for resuscitation. Furthermore, discontinuing preoperative alpha-blockers may be beneficial in an effort to improve intraoperative mydriasis even if intraoperative floppy iris syndrome (IFIS) is not prevented.

APPLICATION OF THE REVISED 2009 AJCC CLASSIFICATION SYSTEM FOR IRIS MELANOMA

By Isabella T. Phan, David J. Wilson

Purpose: The management of iris melanomas is less standardized than that of posterior uveal melanomas. There are no clear evidence-based criteria for the application of iridocyclectomy, radiation therapy, or enucleation to the treatment of these patients. The purpose of this study is to apply the AJCC classification system to a series of iris melanomas to establish a baseline for evaluating treatment outcomes.

Methods: A review of iris melanoma patients treated at the Casey Eye Institute was performed utilizing an electronic medical record, photography files and billing database. Only patients undergoing surgery were included. Diffuse iris and ciliary body melanomas were excluded. This yielded sixteen patients who had undergone treatment for melanoma clinically classified as confined to the iris and ciliary body.

Results: After re-classification according to the revised AJCC guidelines, tumors were categorized as follows: five (31%) T1a, nine (56%) T2, and two (13%) T2a. Tumor excision (either with iridectomy or iridocyclectomy) was performed in 15 patients and one patient was treated with plaque brachytherapy. Persistent tumor was suspected in three (19%) of the surgically treated patients with positive posterior surgical margin. There were no cases of recurrence, metastasis, or death.

Conclusion: The current AJCC classification system could be improved by using angle involvement and iris seeding as independent qualifiers.

CASE-CONTROL INVESTIGATION OF LONG ANTERIOR LENS ZONULE (LAZ) PHENOTYPE IN AFRICAN-AMERICANS

By Jacob Wilensky, Daniel Roberts

Purpose: The long anterior zonule (LAZ) trait, which could have a prevalence >2% in some populations, causes an anterior segment pigment dispersion variant, and could have association with open angle and/or angle-closure glaucoma. Clinical investigation is needed to better characterize the LAZ clinical phenotype and to determine its overall significance.

Methods: African-American LAZ subjects and their first-degree relatives were examined. A detailed medical history, comprehensive ophthalmic examination, ocular biometry, perimeter, HRT imaging of the optic nerve, and pedigree analysis were performed. Blood sample were collected and high resolution biomicroscopy was also performed in a subset of subjects. Age, race, and gender-matched control subjects were similarly examined.

Results: LAZ subjects (N=66) in this sample had a mean age=70.6 years and mostly female gender (N= 61, 92%). They were typically hyperopic (mean= +1.78 D) and had more hyperopia than the control subjects (P<0.001). LAZ subjects also had shorter axial lengths than controls (P<0.001). In addition to pigmentation of their long zonules, 50% of the LAZ subjects were noted to have Krukenberg spindles. A possible association of LAZ with angle closure and plateau iris configuration remains inconclusive at the present time.

Conclusion: LAZ subjects in this dataset were more hyperopic and had shorter axial lengths than matched controls. Further investigation is required to determine whether LAZ have association with plateau iris configuration and/or angle-closure glaucoma.
PROSPECTIVE EVALUATION OF VISUAL ACUITY ASSESSMENT: A COMPARISON OF SNELEN VERSUS ETDRS CHARTS IN CLINICAL PRACTICE

By Peter Kaiser

Purpose: The purpose of this study is two fold. First, to prospectively compare visual acuity scores obtained with Snellen charts versus Early Treatment Diabetic Retinopathy Study (ETDRS) charts in a real world retinal practice. Second, to see if there was a difference in visual acuity measurements obtained with ETDRS charts starting at 4 or 2 meters.

Methods: Prospective, consecutive, evaluation of patients who underwent best corrected visual acuity testing of their right eye performed at a single seating by the same experienced, certified vision examiner in the same room with standardized low light conditions using a projected Snellen chart at 20 feet, and 2 different back-illuminated ETDRS charts placed 4 and 2 meters from the patient.

Results: One hundred sixty three eyes were included in the study. The mean Snellen VA was 0.67 logMAR (20/94), ETDRS VA at 4 meters was 0.54 logMAR (~20/69), and ETDRS VA at 2 meters was 0.51 logMAR (~20/65). The mean difference was 6.5 letters better on the ETDRS chart (P=.00000001). As the VA worsened, there was increased variability between the charts and the mean discrepancy between charts also increased. Subgroup analysis revealed the greatest difference between charts was in the poor vision subgroup (<20/200) with a difference of 0.2 logMAR (10 letters; P=.0000002). Patients with exudative age-related macular degeneration (AMD) had the greatest disparity on vision testing, but dry AMD and diabetic retinopathy patients also exhibited significant differences.

Conclusion: Visual acuity scores were significantly better on ETDRS charts compared to Snellen charts. The difference was greatest with poor visual acuity (<20/200) and in patients with exudative age-related macular degeneration. Thus, caution should be exercised when comparing data using the different charts.

VASCULAR TUMORS OF THE IRIS. THEY DO EXIST.

By Jerry A. Shields, Carlos Biancotto, Brad E. Kligman, Carol L. Shields

Purpose: Background/Objective: In 1972, Ferry reviewed reported cases of histopathologically proven iris hemangiomas and concluded that all had probably been misdiagnosed. He challenged the existence of iris hemangioma and proposed that they may not exist. However, there have subsequently been well-documented examples of several types of iris hemangioma. The purpose of this communication is to report a series of iris vascular tumors.

Methods: Methods: A review was conducted on all patients with diagnosis of iris vascular tumor including referring diagnosis, demographics, and clinical features.

Results: Results: There were 53 eyes in 45 patients with iris vascular tumor The diagnoses included racemose hemangioma in 41 eyes (29 simple ; 12 complex), cavernous hemangioma in 4 eyes (3 solitary and 1 multifocal), capillary hemangioma in 1 eye, varix in 3 eyes, microhemangiomatosis in 6 eyes of 3 patients. Histopathologic confirmation of the diagnosis was available in one eye with cavernous hemangioma and one eye with varix both after removal by iridectomy. Racemose hemangioma remained stable in all cases and posed no complications. Solitary cavernous hemangioma was associated with recurrent hyphema and had no systemic implications. One case of iris cavernous hemangioma was part of a systemic syndrome with similar visceral, brain, and cutaneous cavernous hemangiomas There were 3 patients with microhemangiomatosis, each of whom had bilateral pupillary margin involvement and recurrent hyphemas.

Conclusion: Conclusions: Although the existence of iris vascular tumors has been challenged, there are now well documented examples of iris racemose hemangioma, cavernous hemangioma, capillary hemangioma, varix, and microhemangiomatosis. Each type has characteristic clinical features and some can cause spontaneous hyphema. Although most are solitary lesions confined to the iris, some (cavernous hemangioma and microhemangiomatosis) may have associated systemic findings.

BRUECKNER PUPIL RED REFLEX TESTING IN DETECTING AND DOCUMENTING MICROTROPIA

By Gerhard W. Cibis

Purpose: Strabismus therapy attempts to align the eyes to achieve best possible binocularity. Microtropia is often the best alignment that can be achieved. Traditional tests for microtropia such as Bagolini striate lenses require a high level of patient cooperation not present in the young. Brueckner red reflex testing will show the fixing and microtropic eye.

Methods: Consecutive patients treated for accommodative esotropia or post surgery for strabismus were photographed with an Video system 30 frames per second documenting the Brueckner red reflex.

Results: Based on difference in the Hirschberg reflex and Brueckner reflex from the two eyes nearly 50% of esotropes and 25% of exotropes were positive for microtropia.
Conclusion: Brueckner red reflex testing with photographic documentation indicates an higher percent of treated strabismics end up microtropic than is reflected in the current literature. Knowing if young patients are microtropic or not is useful to guide further glasses and patching therapy.

**THE DIVERSITY OF TRACTION MECHANISMS IN MYOPIC TRACTION MACULOPATHY**

By Brian L. VanderBeek, Mark W. Johnson

Purpose: There is growing consensus that myopic traction maculopathy is caused by a relative stiffness of the inner compared with the outer retina in the concavity of a posterior staphyloma in highly myopic eyes. The precise cause of the inner retinal stiffness remains uncertain, but is unlikely to be the same in all eyes. The purpose of this report is to illustrate that a variety of distinct traction mechanisms can lead to myopic traction maculopathy, and that surgery can be successfully tailored to the specific mechanism involved.

Methods: We performed a retrospective chart review of consecutive patients that underwent vitreoretinal surgery for myopic traction maculopathy by a single surgeon at a tertiary referral center. Traction mechanisms were identified based on pre- and intra-operative findings, as well as post-operative response to a tailored surgical approach.

Results: Six eyes of 6 patients aged 46 to 81 years were included. In addition to schisis-like retinal thickening throughout the macular area, one patient had a macular hole and one had macular detachment. Major pathogenic traction mechanisms included perifoveal PVD with vitreomacular traction in 3 eyes, internal limiting membrane nondistensibility in 2 eyes, epiretinal membrane in 1 eye, and remnant cortical vitreous following PVD in 1 eye. One eye exhibited 2 traction mechanisms. The surgical approach addressed only the major traction mechanism(s) identified in each eye. In 5 of 6 (83%) eyes, visual acuity improved by 2 or more lines and retinal thickening resolved postoperatively, with an average follow-up of 21 months. Gas tamponade appeared helpful only in eyes with macular hole and/or macular detachment.

Conclusion: The traction mechanisms causing myopic traction maculopathy are diverse and vary from one eye to another. Vitreoretnal surgical repair of this condition is successful when the major traction mechanisms are identified and relieved.

**DOES DERRICK VAIL SR. DESERVE THE ACCOLADE OF ORIGINATOR OF THE CONCEPTS OF THE BOARD SYSTEM FOR SPECIALTY CERTIFICATION? RE-EVALUATION**

By Denis M. O'Day, Mary R.Ladden

Purpose: In recent years, Dr Derrick Vail Sr. has been recognized as proposing the concepts behind the formation of the American Board of Ophthalmology (ABO) and the board system for certifying specialists in the United States. This paper examines the validity of that claim.

Methods: The claim is based on interpretation of several passages in his address as president of the American Academy of Ophthalmology and Otalaryngology(AAOO) delivered in 1908. We have analyzed the text in terms of stated purpose of the address, audience, context, issues of concern to members, conclusions and logic of the argument brought forth by the speaker. We also analyzed one other statement in another context made the same day by Vail that appears to clarifies his intent. Finally, we review the opinion of his peers and other evidence supportive or otherwise of his role.

Results: The presidential address was directed primarily at quieting competitive financial strains among members of the AAOO from the two different specialties. Creation of a new approach to quality in specialty care does not appear to be the principal purpose. The faulty interpretation of the passages was based on a misunderstanding of the context and intent of the address. Analysis of Vail's comments reveal a flawed attitude towards education and the public to protect financial rewards for the specialty. The historical record, fails to reveal that his peers recognized the contribution later attributed to him. We discuss several other figures from the period. Among them Edward Jackson stands out as most deserving of this honor.

Conclusion: Based on available evidence, the nomination of Derrick Vail Sr. as originator of the concepts of the Board system and the ABO appears unwarranted.

**A CASE OF BILATERAL DIFFUSE UVEAL MELANOCYTIC PROLIFERATION (BDUMP) WITH A POSITIVE OPHTHALMOSCOPIC AND VISUAL RESPONSE TO PLASMAPHERESIS**

By Rebecca B. Mets, Pamela Golchet, Grazyna Adamus, Roberto Anitori, John Shaw, David J. Wilson, Lee Jampol

Purpose: To present a case of bilateral diffuse uveal melanocytic proliferation (BDUMP) associated with metastatic pulmonary carcinoma, with an excellent visual response to plasmapheresis. Other treatment for this rare paraneoplastic condition has been largely unsuccessful or shown only transient visual improvement.

Methods: We studied the case of a 72 year-old Caucasian male with a recent diagnosis of pulmonary carcinoma, metastatic within his lungs and elsewhere, and gradual onset of blurred vision in both eyes. Fundus findings were consistent with BDUMP. The patient was treated with plasmapheresis. Serum obtained prior to plasmapheresis during active plasmapheresis treatments was tested for anti-retinal autoantibody by Western blotting. The globes were sectioned and examined with hematoxylin and eosin.
Results: Both vision and fundus findings improved with plasmapheresis. There was loss of serous detachments, thinning of the choroid, decrease in giraffe type pigmentation, and increased visibility of underlying pigmented tumors. Sera obtained prior to and during plasmapheresis were positive for autoantibodies against 33-kDa and 34-kDa retinal proteins. Histopathologic specimens of the globes demonstrated diffuse thickening of the choroid with increased uveal melanocytic cells, and areas of hyperplastic RPE and normal RPE.

Conclusion: Plasmapheresis should be considered as a treatment methodology in patients with visual loss from bilateral diffuse uveal melanocytic proliferation.

OCULAR AND SYSTEMIC ABNORMALITIES ASSOCIATED WITH ANIRIDIA

By Peter A. Netland, Michele Scott, John W. Boyle, IV, James D. Lauderdale

Purpose: Our purpose was to identify ocular and systemic abnormalities associated with aniridia in members of Aniridia Foundation International.

Methods: We retrospectively reviewed data from 83 aniridia patients from a survey of aniridia patients and their physicians, and from examinations of the same patients performed at the Aniridia Foundation International Medical Conference. At the conference, blood samples were drawn for DNA sequencing and analysis.

Results: The mean age was 25.4 ±18.4 yrs, with 28 males (34%) and 55 (66%) females, and 54 sporadic (65%) and 29 familial (35%) cases. Ocular abnormalities included nystagmus (69.83%), cataract (59.71%), dry eye (44.53%), glaucoma (38.46%), corneal pannus (37.45%), foveal hypoplasia (34.41%), strabismus (26.31%), and retinal disease (4.5%). The mean age at diagnosis of aniridia was 22.1 (median 1.5) months and glaucoma was 13.6 (median 8.5) years. In patients with aniridia and glaucoma (n=38), 29 were treated with glaucoma medications and 22 had history of surgical treatment. In treated patients, the mean ±SD number of glaucoma medications was 1.8±1.3 and number of surgical procedures was 1.7±2.0. Systemic abnormalities included dental abnormalities (29.35%), developmental delay (14.17%), musculoskeletal abnormalities (11.13%), asthma (10.12%), depression (10.12%), infertility (9.11%), gallbladder disease (7.8%), hypertension (7.8%), diabetes (6.7%), hyposmia (4.5%), and pancreatitis (1.1%). The mean±SD body mass index (BMI) in adults was 29.0±7.4. PAX6 gene sequencing data was analyzed.

Conclusion: In this study, aniridia was associated with ocular abnormalities, including nystagmus and other motility problems, cataract, glaucoma, ocular surface disease, and foveal hypoplasia. In addition, systemic abnormalities were common, including increased body mass index. Clinicians should be aware of the potential for occurrence of these problems in aniridia patients.

THE USE OF THE HESS SCREEN IN THE EVALUATION OF DIPLOPIA

By Steven A. Newman

Purpose: In 1909 Walter Rudolph Hess published an article describing the ability to assess relative movement of the two eyes on a tangent screen. Subsequent iterations of this concept include the Lancaster red green, Lee’s test, etc have been used for the last 100 years for assessing relative ocular motility.

Methods: A retrospective review was undertaken of patients presenting with diplopia or with orbital pathology or other cranial nerve pathology expected to produce ocular motility problems seen at the University of Virginia. The use of the Hess screen was analyzed for pattern recognition, quantitative assessment, the use of follow up, and planning for surgery.

Results: A total of 2,000 patients seen over the last 10 years were retrospectively reviewed. Since patients were not reviewed if they were unable to do a Hess screen we were not able to generate data on those patients where this was not possible. The vast majority of patients however with double vision were capable of doing Hess screen analysis. It was not possible based on the Hess screen to distinguish restrictive from paretic deviations. The pattern of deviation however allowed rapid confirmation of suspicions of individual cranial nerve palsies. Additional patterns that were particularly useful included those of restrictive strabismus and thyroid orbitopathy and skew deviation and paretic changes seen in skew deviation.

Conclusion: Hess screen is extremely useful in four settings. 1. Pattern recognition of ocular deviation. 2. Pseudo-quantitative assessment of ocular motility. 3. Directing surgical interventions. 4. The Hess screen in particular emphasizes the advantages of operating on the secondary deviation on the contralateral eye. This is true in both paretic and restrictive syndromes.

WHY DID WE EVER THINK MULTIFOCAL INTRAOCULAR LENS IMPLANTS WOULD WORK WELL IN THE FIRST PLACE?

By Woodford S. Van Meter

Purpose: To evaluate performance and patient satisfaction data with multifocal contact lenses and compare limitations of multifocal contact lenses to limitations of multifocal intraocular lenses. Early studies of multifocal soft contact lenses reported only 53% wore their lenses after six months and 7.5% were still using their lenses after 14 months. It is easier to remove a contact lens than an intraocular lens implant.
Methods: Ten different clinical evaluations of multifocal contact lenses were reviewed in which patients received their lenses free and were fit by an experienced fitter. Subjective satisfaction data and objective data from distance (D) and near (N) visual acuity (VA) and contrast sensitivity testing (CT) were reviewed. Five lenses were translating CL and five had simultaneous optics. Nine of ten clinical studies were under the direction of one physician (WV). Five lenses were translating lenses and five were simultaneous design.

Results: Lenses were fit comfortably in all study patients as an entrance requirement. Poor distance vision was the main reason for discontinuing the lenses; patients unhappy with distance acuity ranged from 0 to 50% and those unhappy with near acuity ranged from 13 to 33%. Contrast sensitivity testing showed loss of sensitivity at high spatial frequencies that was worse in simultaneous vision lenses than translating design, and worse in particular in diffractive contact lenses. Among simultaneous vision designs, there was more spherical aberration with diffractive lenses than segmented or aspheric designs.

Conclusion: IOLs optically function essentially the same way contact lenses work, and optical problems observed in comfortable hard and soft lenses would be expected to manifest themselves in similar design IOLs. Diffractive multifocal IOLs have the same optical limitations of diffractive multifocal CL, and should be expected to limit contrast sensitivity and reduce BCVA. Prudent patient selection and objective marketing data are warranted.
Theses