



SEARCHLIGHT ON GLAUCOMA

The Glaucoma Service Foundation to Prevent Blindness

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A Tribute to Wills Eye Hospital Glaucoma Service Doctors

The Glaucoma Service Foundation hosted a spectacular evening at Evviva Restaurant in Narberth, PA on September 9, 2017 to honor the Wills Eye Hospital Glaucoma Service physicians.

We were so pleased that over 85 people attended this wonderful event that included Dr. Julia Haller (Ophthalmologist-in-Chief at Wills Eye Hospital), representatives from Allergan, Glaukos, Aerie Pharmaceuticals, U.S. Army Medical Recruiting Command, past and current fellows, staff, medical students, patients, doctors from the Glaucoma Service, and Board of Trustees from the Glaucoma Service Foundation. The proceeds from this event support the Glaucoma Service including the Glaucoma Service Clinical

Fellowship Program.

Dr. Katz's Statement

Our greatest contribution as faculty in the Glaucoma Department at Wills Eye Hospital is the creation



Ken Wong, (Foundation Trustee), Dr. Leonard Rosenfeld (Foundation Vice President), and Dr. Shey Shing Shue, of Jefferson Medical College.



Dr. Jay Metz, Dr. Ryan McGuire, Dr. Jason Flamendorf, Dr. Daniel Lee (Glaucoma Service Physician), Cathy Jeong.

and nurturing of future generations of caring, well trained glaucoma experts through the Fellowship Program.

Dr. George Spaeth through his brilliant work, extraordinary dedication, and unbridled passion has placed the Wills Glaucoma Fellowship at an elite level that is highly sought after with an admirable record of achievements with gifted researchers, acclaimed teachers and highly skilled, acknowledged physicians and surgeons. Our faculty strives to continue to be the backbone of the Fellowship through their research, education and clinical practice. Through your generosity important contributions to our field that help patients throughout

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A Message From Our President



The Fall edition of the "Searchlight" underscores the activities of our Foundation and especially that of our

Glaucoma Service physicians who work tirelessly to make a difference in the well-being of those at risk of

blindness because of untreated glaucoma. To do this requires funding that ensures that we can continue the vital work of our physicians. Simply put, your contribution – large or small – can make the difference in assuring that those who need care can be assisted in obtaining it.

Your generosity will help ensure that the research work of our physicians goes forward without interruption

and that the Foundation can continue its outreach efforts in the Greater Philadelphia area.

I thank you in advance for your fiscal support. It will make a difference in the fight to eradicate blindness caused by glaucoma.

Sincerely,

Maxine Colm, EdD, President
Glaucoma Service Foundation

A Tribute to Wills Eye Hospital Glaucoma Service Doctors

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the world will continue with the help of our fellows during their time at Wills but also after their training has been completed. With the aid of the Glaucoma Service Foundation at Wills Eye Hospital the relationship with our fellows remains a lifelong bond. I am deeply appreciative and cannot sing the praises of the Glaucoma Service faculty enough for their dedication, collegiality, skills, and willingness to devote their time which maintains our reputation as a premier program to receive care, obtain cutting edge research, and attract fantastic fellows. I have been and remain justifiably very proud of my colleagues. What a wonderful group of physicians.

Thank you all for your generous support!

L. Jay Katz.



Dr. Qianqian Wang, Dr. Elizabeth Dale, and Andrew Dugery



Dr. Iga Gray, Danny Beigel, and Dr. Scott Fudemberg

It is not too late to contribute to the Foundation to ensure its future success.

Please contact Rita Stern, Program Director at (484) 678-4535 for any questions.



Dr. Anand Mantravadi, Craig Wright, Danny Beigel, and Dr. Scott Fudemberg



Jamie Richman, Dr. Jesse Richman, Sarah Amanullah, Stephen Silva

All photos taken by Bill Romano



10th Annual CARES Conference - April 29, 2017

Following our mission of community outreach and medical education, the Glaucoma Service Foundation (GSF), has hosted a series of public patient directive conferences which aim to explain exactly what glaucoma is, encourage screening for this devastating disease, and if identified, stress the importance of medical follow through and treatment. April 29, 2017 we held our 10th Annual CARES Conference. CARES stands for Committed to Awareness through Research, Education, and Support.

This is the fourth year our CARES venue was in the Dorrance Hamilton Building of Thomas Jefferson University, located at 1001 Locust Street, one block from Wills Eye Hospital. Dr. Daniel Lee from Wills Eye Hospital Glaucoma Service gave the opening remarks. Guest

speakers included Philadelphia Councilman David Oh, Mary Sue Boyle, Community Outreach and Services Liaison (VisionCorps), and Deb Robinson, MSW, LSW, Wills Eye Social Worker.



George Strimel, trustee and Councilman David Oh presenting Citation to Foundation

A select group of medical students gave a special power point presentation to the attendees from the Chinese Senior Center in Mandarin. After the one hour presentation, there was a Q & A session and participants were encouraged to get a free

glaucoma screening on site. This year we had approximately 400 attendees due to a more aggressive marketing and communication strategy in place.

Will Harley, our sponsor, engaged the PR firm, Parlee Stumpf, for a third year to handle the marketing and communication. We also attended outreach meetings throughout the city to capture and encourage more attendees. This effort continues to be fully funded by a generous grant from the Harley Research Foundation for Glaucoma Education and Support.

We anticipate continuing support from the Harley Foundation for the 2018 CARES Conference. The next CARES Conference is scheduled for May 12, 2018. We anticipate over 400 attendees and encourage you to consider joining us. ■

From the Glaucoma Research Center Research Abounds

by Sheryl S. Wizov

Research is an everyday activity in life.

Whether searching for college, an exciting travel destination, switching out a light fixture, wall color for the bath room, changing careers, buying a new car, purchasing stock, choosing a political candidate or finding a glaucoma doctor, a bit of research is often required to get the right answer for your satisfaction. Finding the right electrical equip-

ment or electrician takes time and resources to research what's available in your price range and accessible in your area. Deciding it's time to trade in the old car for a new one, you don't want to buy the first car you see as you might come away with a lemon that is uncomfortable and costly. And you probably don't want to invest your hard-earned money on trendy stocks with inflated prices and high fees. Everything we do in our busy lives

takes time to plan, learn, design, adjust, test and compare before making the final decision.

In the Glaucoma Research Center, we follow these rules every day. We create protocols to answer important questions regarding management and treatment of glaucoma. Sometimes we are invited to join in studies conducted by other institutions to broaden the participating population while hoping to gain answers to their questions. We look to match up patients

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Water Drinking Test and Eye Pressure Fluctuation in Glaucoma

by M. Reza Razeghinejad

Glaucoma is a group of eye diseases that damage the optic nerve and is one of the leading causes of vision loss and blindness. Elevated eye pressure is a well-recognized risk factor for the development and progression of glaucoma. The range of average eye pressure is between 10 and 21 mm Hg (millimeters of mercury, which is a pressure measurement scale). Many people with glaucoma have an eye pressure of greater than 21 mm Hg before treatment.

The eye continuously produces a fluid, called the aqueous, that drains from the eye in order to maintain healthy eye pressure. Aqueous humor is a clear, watery fluid that flows continuously into the front part of the eye, which is the fluid-filled space between the iris and the cornea. It is the aqueous that helps to bring nutrients to the various parts of the eye. The aqueous drains from the front part through a filtering meshwork of spongy tissue along the outer edge of the iris, where the iris and cornea meet. Problems with the flow of aqueous fluid can lead to elevated pressure within the eye. Controlling the eye pressure is the only available and primary goal in glaucoma treatment.

The eye pressure similar to blood pressure, does not remain constant and has fluctuation (ups and downs)

throughout the day, depending on the time, body position, fluid intake, exercise level, medication intake, and other unknown factors. There is accumulated and increasing evidence that a single measurement of eye pressure, which varies throughout the day, does not adequately reflect pressure's importance in the disease. A 24-h eye pressure monitoring in patients with glaucoma may be impractical in clinical practice because the process is time consuming for both the patient and the clinician and is highly demanding with regard to professional resources. Having the patient in a sleep lab, checking the eye pressures at home by patient, wearing a special contact lens with embedded pressure sensor for 24 hours to record the eye pressure, checking the eye pressure every 2-3 hours during the daytime, and water drinking tests (WDT) are methods to determine the eye pressure fluctuation. Among the aforementioned methods the water drinking test is a cheap, feasible, and easy to do test compared to others. After checking to make sure there are no contraindications to fluid overload, patients are asked to drink a liter of water in 5 minutes and then have their eye pressure checked every 15 minutes for four times. More than 5 points increase in eye pressure may indicate that the eye's drainage channels are not functioning well.

There has been some variability in response to WDT in different studies which may have been a barrier to widespread use of this test in clinical practice. In one study, the water-drinking test was administered to subjects with glaucoma in both eyes with a symmetrical eye pressure level but with markedly asymmetric peripheral vision loss. The eye with worse glaucoma and more peripheral vision loss manifested a higher eye pressure rise than the better eye, and the worse eye also took longer to recover to pre-test eye pressure than the better eye. Also, the water drinking test has been used to assess the effectiveness of treatments in controlling eye pressure including medications and patency and function of the glaucoma surgeries (trabeculectomy and shunt surgery). Patients who had trabeculectomy or shunt surgery had similar response to WDT. In a recent study, greater eye pressure changes were detected in females <50 years old, and those on greater numbers of medications, while those who were on latanoprost (a glaucoma drop used once a day) experienced less fluctuation. We need more information on the potential role of the water drinking test for determining the eye pressure fluctuation and hope that grant funding will allow further research here at Wills.

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Meet the 2017-2018 Glaucoma Service Fellows



**Dr. Natasha
Nayak
Kolomeyer**

Natasha graduated from a combined 7-year

BS/MD program at The College of New Jersey and Rutgers-New Jersey Medical School where she was inducted into the Alpha Omega Alpha honor society. Upon completion of a one-year Doris Duke Clinical Research Fellowship at Yale University and defense of a thesis,

she was awarded an MD degree with Distinction in Research. In 2013, Natasha graduated from ophthalmology residency at the New York Eye and Ear Infirmary of Mount Sinai, where she was also co-chief-resident. She received several awards during residency including the ASCRS Foundation Resident Excellence Award, the Chairman's Award for Academic Honors and Distinction, the Research Day Award, and the Austen T. Gray Memorial Scholarship. Natasha has co-authored 19 peer-

reviewed publications, and is a member of several ARVO and AAO committees. She has volunteered at an ophthalmic mission in Dominican Republic, and hopes to return again soon. Outside of medicine, Natasha enjoys urban exploration (also known as "brunching" or "yelp-ing"), dancing, dog-sitting, and traveling. She is grateful for the support of her family, husband, friends, mentors, and, of course, the Glaucoma Service Foundation to Prevent Blindness. ■



**Dr. Alicia
Menezes**

Alicia Menezes grew up in Staten Island, New York and

graduated from Amherst College where she met her husband. She received her medical degree from

Robert Wood Johnson Medical School where the Wills Eye Hospital faculty and residents staffing clinics at Cooper Hospital first inspired her interest in ophthalmology. She moved back to New York and completed her ophthalmology residency at New York Eye and Ear Infirmary. She is very excited and honored to join

the Wills Eye Hospital family for a Glaucoma Fellowship and is looking forward to serving the community. While outside of work, she enjoys playing tennis, yoga, cooking and spending time with her family and two precious cats. ■



**Dr. Qianqian
Wang, MD**

Qianqian Wang was born in China and moved to Montreal, Canada as a teenager.

She graduated from Health Science at Marianopolis College, and completed her medical school at McGill University and her Ophthalmology residency training at University of

Montreal. In addition to her passion for clinical ophthalmology, Qianqian also has a strong interest in research. During residency alone, she first authored/co-authored eight peer-reviewed research articles and presented at multiple national and international conferences. Now starting her clinical glaucoma fellowship, she is thrilled to work with the leaders in glaucoma at the renowned Wills Eye Hospital and

she hopes to continue her research involvement. She will be joining faculty at University of Montreal upon completion of her training and she is excited to take cutting-edge technologies and up-to-date knowledge back home to better serve patients in Montreal. In her spare time, Qianqian enjoys dancing, skiing and she is also an avid karaoke singer. ■



Patient Empowerment and How to Prepare for Your Glaucoma Appointment

by Marlene R. Moster MD and Alicia Menezes MD

Glaucoma is the leading cause of irreversible blindness in the world, but with early detection and treatment, blindness can be prevented. The following are a few tips on how to prepare and get the most out of your glaucoma doctor's appointment.

Appointment time

The first step to making the most of your appointment is arriving to your appointment. Be sure to confirm your appointment date and time with the office and plan ahead. There are unfortunately many barriers to keeping your appointment including time, travel and cost. If the barriers seem to be too great, make your doctor aware as there may be services available to help.

Testing

Visual field testing is often a patient's least favorite part of glaucoma monitoring but it is important for detecting changes in the disease. Things you can do to prepare for visual field testing include getting a good night's sleep prior to the day of testing, and be sure to eat a healthy breakfast the morning of your appointment to ensure that you



are alert and ready. Do not forget to bring your glasses. An incorrect glasses prescription may affect the results of your visual field testing.

Bring your medications

Although medications may be listed in the chart, it is still very important to communicate to your doctor what medications you are taking, how often you are using them and in which eye. The names of glaucoma medications can be very difficult to remember or even pronounce. Instead, you can bring the bottles of your medications to the appointment or keep a written list. In addition to your glaucoma medications, it is important to bring all other medications and vitamins you may be taking. Certain prescribed or even over the counter medications may affect the pressure in your eye. Be sure to update your doctor with any changes in your medication or health.

Monitor your symptoms

Even with all of the best current and up to date technology, you the patient know your body better than any doctor ever will. In between appointments, monitor your central and peripheral vision. If you feel your vision has changed you should alert the doctor and describe the changes in detail. Monitor changes other than your vision. Redness, itching, burning, changes in your breathing or alertness may be side effects of certain glaucoma medications. Keep a log of your symptoms and when they occur.

Glaucoma is a chronic disease requiring frequent doctor's visits, but with these helpful tips hopefully you can take matters into your own hands and make the most of your glaucoma doctor's appointments. ■



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From the Glaucoma Research Center Research Abounds

to different studies according to pre-determined sets of inclusion/exclusion criteria after the study design passes ethics review by the Wills Eye Hospital Institutional Review Board. Not everyone fits into the same mold. Just like not every color will work well in a given room. The study design might require that both eyes have similar eye pressure, a certain level of vision, an optic nerve with little to no damage, minimal visual field loss, or all of the above. Occasionally we need healthy individuals with no eye problems at all to build banks of normative data or for comparisons to our glaucoma patient population. Some qualifying features may apply only to those needing glaucoma surgery. It's rare that a study would include everyone because to begin with you need a set of similarities to obtain accurate comparisons. You can't compare apples to oranges but you could compare pumpkins to squash, depending on the protocol.

If you or someone you know is being asked to participate in a Clinical Research study, you may not benefit directly by your participation. Society, in general benefits when studies are designed, conducted, completed, analyzed and reported to the public. You should understand what is expected of you during your participation, what the

risks are versus the benefits to your participation, and the potential benefits to other patients that follow.

Study participants build the background to support the issue at hand and help lay the ground work to achieve a viable solution- whether it's new treatment, or eliminating treatment that no longer works, or discovering new, more efficient tests to safely and effectively manage and treat our patients.

Current research studies being conducted in the Glaucoma Research Center at Wills Eye Hospital include:

- 1) Allergan multicenter study (Athena), testing a sustained released medication placed inside the eye by the doctor as an alternative to daily eye drops. This one-year study compares the sustained release medication to Selective Laser Trabeculoplasty also known as SLT, a treatment for lowering eye pressure.
- 2) "Neighborhood" is a multicenter genetic study. This one visit study is drawing 2 tubes of blood from people with advanced glaucoma for advanced genetic analysis.
- 3) Heidelberg Study is building a multicenter normative database from African American and Hispanic communities. This one visit study uses the Heidelberg Spectralis optical coherence tomography (OCT) to evaluate the optic nerve in healthy adults.
- 4) Assists Study is a multicenter sur-

gical study comparing the Baerveldt tube shunt to cyclophotocoagulation using a diode laser in patients with uncontrolled pressure despite a prior tube shunt surgery.

- 5) Visco360 Study is comparing canaloplasty, a micro-incisional glaucoma surgery (MIGS) to Selective Laser Trabeculoplasty (SLT).
- 6) SLT education is an observational intervention to study the adoption of Selective Laser Trabeculoplasty as first line treatment in lowering eye pressure. Prior studies have shown that SLT is as safe and effective as initial treatment with eye drops, yet most patients elect eye drops first, despite the potential side effects, costs, and issues with drop usage.
- 7) Optovue is a multicenter study looking at changes in peripapillary blood flow after anti-glaucoma medications with Optovue OCT angiography.
- 8) Shire is a multicenter study looking at a new eye drop (from Shire) to lower eye pressure in open angle glaucoma and ocular hypertension. This FDA Phase I study will take place during December, January and February.

For more information contact the Glaucoma Research Center at 215-928-3123, 215-928-3221 or 215-825-4713. ■



**GLAUCOMA SERVICE
FOUNDATION TO PREVENT
BLINDNESS**

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Water drinking test and eye pressure fluctuation in glaucoma

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