Dr. Jonathan Myers, currently Associate Attending Physician on the Glaucoma Service at Wills Eye Hospital, Assistant Professor of Ophthalmology at Jefferson Medical College, and partner in the Spaeth/Katz/Myers private practice, joined the Wills Eye Hospital Glaucoma Service in 1997. After graduating magna cum laude from Princeton University, Dr. Myers received his medical degree from the University of Pennsylvania School of Medicine, was Co-Chief Resident at Wills Eye Hospital, and, just before joining the Wills Glaucoma Service, served a one-year fellowship in glaucoma at the Duke University Eye Center.

I spoke with him about his approach to helping glaucoma patients, both through his clinical activities and his research.

Q: What factors do you take into account in suggesting a treatment?

Dr. Myers: Choosing the best treatment starts with the patient’s own concerns and needs. Some patients prefer to avoid surgery if at all possible, others wish to minimize daily eye drops. Some patients prefer to concentrate on major issues only, such as a choice between surgery and additional medications.
patient’s medical condition — current medications and general health issues — are important. The ability and willingness of the patient to pay for and reliably use medications is a crucial element. Of course, the exact type of glaucoma and any other ocular conditions have major impacts on treatment choices.

Q: Can you outline the kinds of emotional problems diagnosis and treatment may cause in glaucoma patients?

Dr. Myers: Glaucoma patients experience a range of emotions throughout their treatment. Some are relatively unaffected by the diagnosis and treatment. For others, being told they have glaucoma is extremely troubling. Often these patients have firsthand knowledge of the devastating potential of the disease through experiences with family or friends. For some patients, ongoing treatment and office visits are troubling because of financial burdens or the impact on their job or home life. Some patients fear the impact glaucoma may have on their job performance, family relations, or independence. Rarely, the medications themselves may trigger depression or other problems, especially in predisposed patients.

Q: How do you deal with these problems?

Dr. Myers: The most important action I take is to talk with my patients. Most patients do adjust and cope well, but for many it is crucial that they share their concerns with their doctor. Often, addressing the issues directly resolves much of the potential for fear and depression. Most patients overestimate the risk to their vision once the glaucoma is controlled. Communication between patient and doctor is crucial to this process. Occasionally counseling is helpful to deal with these types of problems.

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**Most patients overestimate the risk to their vision once the glaucoma is controlled.**

Q: Is there such a thing as “the best treatment” for glaucoma?

Dr. Myers: There are many types of glaucoma, and each of these may range dramatically in severity and in the stage at which it is diagnosed. There is tremendous diversity in concerns, needs, and preferences among patients. These factors prevent any one treatment from being “best” across the board. Although some treatments are used more commonly than others, no single treatment is good for every patient or for every type of glaucoma, and certainly none is “best.” Like a good suit, good therapy is tailored to the individual.

Q: What are the general shortcomings of each of the major kinds of treatment?

Dr. Myers: Medications are often effective but require daily, consistent use, are costly, and are often associated with side effects such as blurred vision, discomfort, or non-ocular symptoms such as fatigue, shortness of breath, dry mouth, and many others. Laser treatments also can control glaucoma in many patients but are not applicable to all, fail in some, and create inflammation or pressure spikes in a few. Surgeries such as trabeculectomy and tube-shunt have high success rates but may require additional medications or surgery if the eye fails to heal properly, and can have, though rarely, devastating results such as loss of vision from bleeding or infection.

Q: Can you say what in general is being done to improve each of these kinds of treatments?

Dr. Myers: The major pharmaceutical companies spend billions of dollars each year on research to improve medications. As a result, more medications for glaucoma have been released in the last decade than in the previous 50 years. Newer laser treatments are constantly being developed. Many fail to reach widespread use, but progress is gradually being made. Currently Dr. Katz at Wills is launching a national, multicenter study of the newest laser treatment, selective laser trabeculoplasty, an in-office procedure for certain types of open-angle glaucoma. Trabeculectomy has improved over the last 30 years thanks to the advent of releasable sutures to prevent extremely low pressures and anti-metabolites to reduce scarring. Newer surgeries may become available in the next 5 years which utilize new technologies that may simplify and speed the surgery while reducing the risk of complications.

Q: What areas of research to improve treatments are you involved with?

Dr. Myers: Currently I am assisting Dr. Katz on the Selective Laser Trabeculoplasty Study, which will begin recruiting patients in the next few months. I was fortunate to receive a grant...
Dr. Spaeth “Chats” About The Ocular Hypertension Treatment Study

Dr. George Spaeth was the featured glaucoma specialist in the Foundation’s website “chat room” on October 30, fielding questions about the Ocular Hypertension Treatment Study.

Introduction

Can topical intraocular-pressuring-lowering medications prevent or delay vision loss and optic nerve damage in patients with an intraocular pressure (IOP) above 21 mm Hg (ocular hypertension) who do not appear to have optic nerve damage or visual field loss?

Answering this question was the primary purpose of an ongoing, randomized, multicenter, controlled trial known as the Ocular Hypertension Study (OHTS), the five-year results of which were recently published. Prior studies were conflicting and had not definitely confirmed or negated the efficacy of IOP-lowering medications in preventing or delaying vision loss and optic nerve damage in individuals considered at risk for glaucoma.

The 1,636 patients enrolled in the OHTS (all between the ages of 40 and 80 years, with a mean age of 55 years and a mean baseline IOP of 24.9 mm Hg) were split into two groups: those who received treatments with topical medication for ocular hypertension and those who did not. IOP and visual fields were evaluated every 6 months.

The cumulative probability of developing primary open-angle glaucoma 60 months after beginning treatment was 4.4% in the group receiving medication and 9.5% in the group not receiving medication.

The published study itself concludes, “Although this result does not imply that all patients with borderline or elevated IOP should receive medication, clinicians should consider initiating treatment for individuals with ocular hypertension who are at moderate or high risk for developing primary open-angle glaucoma.”

The OHTS data also were helpful in identifying such individuals. Factors found to increase the risk that an ocular hypertensive individual will develop open-angle glaucoma were advanced age, a thin cornea, and a large cup-to-disc ratio.

Questions and Answers with Dr. Spaeth

Moderator: Did you participate in the Ocular Hypertension Treatment Study?

(Continued on Page 4)

Andrew Medcalf Named New Foundation Board Chair

Andrew Medcalf, PhD, was named Chairman of the Board of Trustees of the Glaucoma Service Foundation at a Board meeting November 11th, as Mr. S. Stoney Simons, the Foundation’s first Board Chairman stepped down after over five years of devoted service. A patient of Dr. Spaeth, Dr. Medcalf has served for over two years as Chair of the Foundation’s Long-Range Planning and Development Committee, a position to which he has brought not only his wisdom gained as a cancer researcher and financial advisor but also his infectious British warmth and humor. While expressing its deep regret and gratitude to Mr. Simons, the Board enthusiastically welcomed Dr. Medcalf as its new leader.
Dr. Spaeth “Chats” About The Ocular Hypertension Treatment Study
(Continued from Page 3)

**Dr. George Spaeth:** I was involved in its design; we were not a participating center. The study was beautifully designed and implemented. I wish I had been a participant.

**Moderator:** In an earlier chat you said, “Ninety percent of those with elevated IOP never get damage. Fifty percent of those with damage never have elevated IOP!” Have the results of the OHTS changed your thinking about that?

**Dr. George Spaeth:** No.

**Moderator:** Do you also still think as you have stated earlier, “The only reason to treat an ocular hypertensive is if the pressure is high enough (say, 50 mm Hg or so) that it may cause rapid damage, or to prevent other damage, such as a retinal vein occlusion?”

**Dr. George Spaeth:** Yes. The OHTS showed that the overwhelming majority (over 90%) of patients with elevated IOP do not get worse.

**Moderator:** Were the treated patients in the OHTS better off or worse off than the untreated patients?

**Dr. George Spaeth:** The treated patients all had inconvenience and some side effects from the treatment. Were they any better off than the untreated patients? No, because an early field defect probably doesn’t hurt anybody. Side effects do. If you have an IOP of 28 mm Hg, you may need no treatment or you may need immediate surgery. It all depends on factors other than just the IOP. The point is, it is not the absolute level of IOP alone that determines the need for treatment. The determinant is what the IOP has been doing in the way of producing or not producing damage, and the way you tell that is by looking at the optic disc and measuring the visual field.

**The OHTS showed that the overwhelming majority (over 90%) of patients with elevated IOP do not get worse.**

**P:** Are you saying that the 4.4% on medications who got worse got worse because of the treatment?

**Dr. George Spaeth:** No, they got worse because 1) they were not treated adequately, or 2) they would have gotten worse no matter how well they were treated, or 3) they really did not get worse. Regarding the third point, determining that someone is a little bit worse is very tough. For example, in this study, 88% of the patients who were thought to have gotten worse on the basis of a change in visual field were found not to have gotten worse when the field was repeated!

**A very important question that OHTS has not yet answered, and may not be able to answer in the future, is whether the development of early field damage is of any importance.**

**P:** If only 9.5% of the subjects not receiving medications sustained damage, and 4.4% sustained damage with medication, doesn’t that mean the medication failed to prevent glaucoma half the time? Does the OHTS give any clues to why that is? Is it better to treat some patients differently from the outset, with trabeculectomies, perhaps?

**Dr. George Spaeth:** Good question. But again I ask, did any of the patients, whether they were receiving medications or not, really get worse? As mentioned earlier, some probably really didn’t get worse. Some probably were worse because they already had started to have a serious type of glaucoma that may need very vigorous treatment to prevent it from worsening. The problem is, we can never say definitively that a person does not have glaucoma. We can say only that a person does not appear to have glaucoma, recognizing that our ability to detect glaucomatous changes is limited by the imperfect means at our disposal to detect them.

**P:** Are you saying that glaucoma patients do not benefit from medication?

**Dr. George Spaeth:** No. Glaucoma patients can definitely benefit from medications. Medications can prevent people with glaucoma from going blind, and that is a huge benefit. However, the OHTS did not study whether treatment of elevated IOP can prevent people from going blind. It studied whether treatment can prevent them from developing very early visual field loss. Other studies have shown that treatment can prevent some people with glaucoma from going blind. But that is not what OHTS was looking at. A very important question that OHTS has not yet answered, and may not be able to answer in the

(Continued on Page 9)
Simultaneous with the move to the “new” Wills Eye Hospital in July, three new clinical fellows arrived to begin their training on the Glaucoma Service.

**Dr. Oluwatosin Smith**

Born in Nigeria, Dr. Smith (known affectionately as “Tosie”) received her Bachelor of Medicine and Bachelor of Surgery from the University of Ibadan, where she also completed an internship. Following that, she was a Senior House Officer in General Surgery in Dewsbury, England, a surgical intern at the Washington Hospital Center in Washington, DC, and completed a residency in ophthalmology at Howard University Hospital in Washington, DC, where she was Chief Resident.

Her interest in ophthalmology started while she was growing up in Northern Nigeria, where a significant portion of the population was blind from reversible causes such as trachoma (severe, chronic, contagious conjunctival eyelid and corneal infection, caused by a virus) and cataracts. “As I lived in other southern Saharan African countries, moving around with my family, I found glaucoma was a significant cause of blindness among these people. I decided then that the treatment of glaucoma would be both fulfilling and useful for these people who I will serve some day. I continually look forward to returning at some point to the people who kindled the interest I have had in this profession. Knowing each patient deserves the very best, I apply myself to acquiring as much knowledge as possible so that I will not fall short of their expectations of me.”

**Dr. Audrey Seligsohn**

Dr. Seligsohn received her Doctor of Osteopathy degree from the University of Medicine and Dentistry of New Jersey School of Osteopathic Medicine, and completed an internship at the University of Connecticut in Hartford, and an ophthalmology residency at Albert Einstein College of Medicine/Montefiore Medical Center, Bronx, New York. At Albert Einstein she was Chief Resident and received an award for Outstanding Achievement in Neuro-Ophthalmology.

Her interest in glaucoma stems from her view of the field as “the perfect combination of medicine and surgery.” “I enjoy educating patients about their disease, discussing medical treatment options, and when appropriate, performing laser procedures and surgery. Additionally, because glaucoma is often chronic, I know that I will have the chance to develop long-lasting relationships with my patients. I recall diagnosing my first case of blebitis (infection of the bleb created by glaucoma filtering surgery) while on call as a first-year resident. Though at that time I was not well acquainted with glaucoma filtering surgery, I was thankful that I had cajoled the mother of a three-year-old to bring her child in immediately for an examination. She had initially wanted to dismiss what she called her daughter’s ‘pink eye’. After this experience, I realized that close post-surgical follow-up is essential and equally as important as the technical skills required of the surgery itself.”

**Dr. Shawn Khan**

Dr. Khan, a Canadian citizen and Permanent Resident of the United States, received his MD from McGill University. He began his ophthalmology residency training at McGill University, where he was Assistant Chief Resident, and completed his training at Albany Medical College, where he served as Chief Resident.

His interest in glaucoma comes partly from the intellectual chal-
Dr. L. Jay Katz recently received a major grant from Lumenis, the largest therapeutic laser company in the world, to lead a multi-center study involving the use of the Company’s Selective Laser in glaucoma patients. This study is being coordinated through the Wills Eye Hospital and a team at the Tulane University Medical School, headed by Dr. William C. Steinmann, Research Director of the Glaucoma Research Center here at Wills. Presently, 15 other sites are slated to participate. In the following interview, Dr. Katz talks about this study in the context of the general use of lasers to treat glaucoma.

The laser provides a wonderful way of helping glaucoma patients, both diagnostically and therapeutically.

Q: In a nutshell, what is a laser?
Dr. Katz: Basically, a laser is a device that amplifies light by producing light that, unlike light from ordinary sources, is all one wavelength, that is to say, it is all exactly one color. Different types of lasers, for example the argon, diode, and Neodymium:YAG, use different wavelengths of light.

Also, the waves or photons of laser light are said to be “coherent.” Unlike ordinary light, these don’t work at cross purposes with each other. The result is that laser light is extremely intense, highly directional, and very pure in color (frequency). In a laser procedure, then, intense light is delivered to a very small, defined area for a very short, specific time — durations such as a tenth of a second to less than a billionth of a second. By varying the duration and the wavelength of the light that is used in the laser system, vastly differently objectives can be achieved in the treatment of glaucoma.

Q: Specifically, how are lasers used to help glaucoma patients?
Dr. Katz: The laser provides a wonderful way of helping glaucoma patients, both diagnostically and therapeutically. For example, laser scans have been developed that can examine in minute detail the structure of the optic nerve and the surrounding retinal tissue. Even more importantly, we have been able to use lasers to treat various problems we encounter with glaucoma patients.

In order to understand how lasers are used to treat glaucoma, please recall the following basics: Glaucoma is a disorder in which the pressure in the eye rises to a level that is damaging to the eye structure, specifically the optic nerve. We can lower the intraocular pressure by either helping the fluid exit the eye or by decreasing how much fluid the eye makes.

The laser trabeculoplasty is done with an argon, diode, or more recently, a selective laser, the laser we will be studying. “Trabeculoplasty” means “changing the shape of the trabecular meshwork,” the outflow or drainage system of the eye, also referred to as the “angle” of the eye. In this procedure, then, the laser is used to change the shape of this tiny (less than half a millimeter wide) part of the eye in a way that improves the outflow of fluid from the eye, decreasing the intraocular pressure.

The laser can also be used to lower eye pressure by decreasing the amount of fluid produced. Doing this is useful in some types of glaucoma, for example neovascular glaucoma, often seen with diabetes, in which there is no satisfactory way to increase the outflow of fluid in the eye. We can decrease the production of fluid by aiming a powerful laser system at the ciliary body, which resides behind the iris and produces the fluid in the eye. By directing the laser toward this area we can partially destroy the ciliary body, thereby decreasing the amount of fluid the eye makes, lowering the intraocular pressure.

Lasers also can be used to help patients who have, or are in danger of developing glaucoma because the drainage system of their eye is narrow, or threatening to close. In these patients, a laser iridotomy can be done, in which a hole is made in the iris or color portion of the eye. This does not lower the intraocular pressure. Rather, it redistributes the proportion of fluid in the different compartments in the front of the eye, in such a way that a narrow angle opens up. By doing this, acute or chronic angle-closure can be relieved or prevented.

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If you have been reading recent issues of *Searchlight on Glaucoma* you may be aware that the Glaucoma Service Foundation is planning a scientific symposium and celebration of 40 years of fellowship training on the Glaucoma Service at Wills Eye Hospital October 3–5, 2003.

Each year the Glaucoma Service receives many applications from highly talented individuals from around the world seeking to learn from the best. Many of the fellows who have trained at Wills are now leaders in worldwide glaucoma societies and medical schools, as well as chairs of departments of ophthalmology and chiefs of glaucoma units. Our fellows are practicing, teaching and involved in research on every continent except Antarctica.

The first glaucoma fellow was appointed by the Ophthalmologist-in-Chief, Dr. Irving Leopold, 40 years ago. Dr. Leopold had a deep interest in glaucoma and profound knowledge of pharmacology, especially as it relates to glaucoma. Originally one fellow trained each year, but the program has grown to include yearly appointments of three clinical fellows and as many as six research fellows. Others come from far and wide for shorter periods to observe and learn.

**The International Society of Spaeth Fellows**

The International Society of Spaeth Fellows was established in the mid 1980’s by ex-fellows who wanted to share their experiences with each other, to build a support system, and to continue to educate one another about the latest techniques for glaucoma diagnosis and treatment. Every year, ex-fellows from around the world meet at the two major national ophthalmology conferences. Although informal at first, these meetings are now well organized programs, including named lectures by Society members. Further extending its reach, the Society recently agreed to welcome “Grand Fellows” into their group. These are physicians who received their glaucoma training from the core Wills-trained members.

In a recent note to Dr. Spaeth, Society member Dr. Silvia Orengo-Nania, Associate Professor in the Ophthalmology Department at Baylor College of Medicine in Houston, no doubt speaks for the other members of this illustrious group, when she writes: “Thanks for your thorough teaching. Every time I do a complicated case or have a good result, I think of the positive experience I had at Wills as a fellow. All of you taught me so much!”

Thanks in large part to the fellowship program on the Glaucoma Service at Wills Eye Hospital, glaucoma patients here and around the world are receiving the best care possible. NOW THAT’S WORTH CELEBRATING!

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**Celebrating the Glaucoma Service Fellowship Program**

By Nancy Petrongolo and Lisa Lewis

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**Former Glaucoma Fellow Speaks At Wills Opening Celebration**

Dr. Roger Hitchings, Fellow on the Glaucoma Service from 1973 to 1975, and presently Professor of Glaucoma and Allied Studies at the Institute of Ophthalmology, Moorfields Eye Hospital, in London, England, received an award of honor as one of Wills Eye Hospital’s most outstanding alumni at the Hospital’s Opening Celebration, November 1st. Dr. Hitchings spoke at the Scientific Conference of the Celebration about his experiences in setting up what is widely acknowledged to be one of the most productive glaucoma research units in the world. His words were an inspiration to those on the Glaucoma Service at Wills who are striving to achieve the same excellence with the Wills Glaucoma Research Center.

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Dr. Roger Hitchings speaks at the Wills Eye Hospital Scientific Conference celebrating the opening of the “new” Wills Eye Hospital.

Photo by Roger Barone
Glaucoma Research Center Studies Actively Recruiting Patients

The Wills Eye Hospital Glaucoma Service is actively involved in clinical trials that are attempting to improve treatment strategies for people with glaucoma. If you are interested in participating in one of the following studies, please call the Research Center at (215) 928-3123.

- **A study comparing medication therapy to laser therapy with the new selective laser as an early treatment for patients with glaucoma.** Needed are patients diagnosed with primary open-angle glaucoma who have not been previously treated with glaucoma medications for more than 14 days.  
  **Sponsor:** Lumenis  
  **Principal Investigator:** Dr. Katz

- **A study to test how well the medication Cosopt lowers eye pressure in glaucoma or ocular hypertension patients.** Patients who have an eye pressure of 30 mm Hg or higher and who have not been treated in the last 4 weeks are needed.  
  **Sponsor:** Merck  
  **Principal Investigator:** Dr. Wilson

- **A study to evaluate which of the two medication combinations, Cosopt (Trusopt + Timoptic) or Xalatan/Timoptic increases blood flow in the eye more.**  
  **Sponsor:** Merck  
  **Principal Investigator:** Dr. Katz

- **A pilot study to learn if there is a genetic basis for angle-closure glaucoma.** We are looking for patients with primary angle-closure glaucoma who have about 10 blood relatives who would be willing to come into Wills for genetic testing (a blood test). The relatives do not have to be diagnosed or suspected to have glaucoma.  
  **Funding being sought**  
  **Principal Investigator:** Dr. Spaeth

- **A study investigating if the substance Healon 5 1) can increase a patient’s eye pressure after it has fallen to below-normal levels following eye surgery, and 2) when used during glaucoma surgery, its effect on a patient’s long- and short-term eye pressure.**  
  **Sponsor:** Pharmacia  
  **Principal Investigator:** Dr. Moster

- **A study to see how much of the drug Lumigan stays in the eye’s fluid if it is given for 21 days prior to cataract surgery.** Glaucoma patients about to undergo cataract surgery or a combined cataract/glaucoma surgery are needed.  
  **Sponsor:** Alcon  
  **Principal Investigator:** Dr. Moster

- **A study comparing the IOP-lowering of either Xalatan or Lumigan alone with a combination of the two medications.**  
  **Sponsor:** Allergan  
  **Principal Investigator:** Dr. Katz

- **A study to determine if a type of glue (Tisseel Fibrin Sealant) can be used effectively and safely to seal bleb leaks following glaucoma surgery.**  
  **Sponsor:** Seeking support from the manufacturer, Baxter  
  **Principal Investigator:** Dr. Moster

- **Measuring the thickness of corneas of children with glaucoma to see how it compares with that of children without glaucoma.**  
  **Unfunded**  
  **Principal Investigator:** Dr. Wilson

You Can Still Make A Difference!

By now you should have received our year-end mailing for the Foundation’s 2002 Annual Fund. If you have already made a donation, many thanks for your support! If you haven’t yet, we hope you will take a moment and contribute today. Your gift will truly make a difference.
One Glaucoma Patient’s Outstanding Contribution

Romana Zbura, known affectionately to the folks around Wills Eye Hospital, including those on the Glaucoma Service, as “Aunt Roe” is a volunteer extraordinaire. The aunt of Spaeth/Katz/Myers’ technician Rosemarie Verlengia, Aunt Roe was the Director of the Pharmacy at St. Mary’s Hospital for 43 years, until her retirement at the age of 72. Now, at the age of 86, she demonstrates her devotion to the Hospital every day, helping out in many places, especially in Day Surgery, the Glaucoma Service Foundation, and the Glaucoma Research Center. We cannot help but marvel at a woman who, despite her glaucoma, seals each letter she lovingly stuffs with a little prayer for the doctor who has signed the letter inside. Her role may be minor in the larger scheme of things, but her spirit is vital to the operation of Wills Eye Hospital.

Dr. Spaeth “Chats” About The Ocular Hypertension Treatment Study

(Continued from Page 4)

future, is whether the development of early field damage is of any importance. That is, does early field damage facilitate development of further damage? Does it lead to blindness later on? Some say yes; some say no.

**Moderator:** In his editorial accompanying the publication of the 5-year results of the OHTS, “Answers from the Ocular Hypertension Treatment Study,” Dr. Paul Palmberg says that “up to 20% to 50% of the optic nerve fibers may be lost focally before damage is recognized by conventional perimetry (visual field testing).” Do you know of any studies other than the two he cites that support that or similar statements?

**Dr. George Spaeth:** Yes. There are many. In 1974 I published an article showing that disc damage preceded visual field loss. In fact, a major part of the nerve must be damaged before visual field loss develops. But that should not be frightening; rather it is reassuring. What that says is that we were made with many more fibers than we need. If we lose a lot, it doesn’t matter. Or better, it doesn’t matter at that time. The person doesn’t really care how many nerve fibers he or she has but rather, does he or she have a problem? Is there any symptom? Is there any limitation to function?

**P:** You say that 88% of those who initially seemed to get worse did not, in fact, get worse. Does that mean that instead of 9.5% of untreated ocular hypertensives developing glaucoma, actually only 1% or 2% did?

**Dr. George Spaeth:** No, because they tightened up the definition of “getting worse” and required confirmatory visual field exams before saying a person was worse. Also, most people were judged to have gotten worse because their optic nerve showed deterioration, even though their visual field remained stable.

**Moderator:** Isn’t the interpretation of the results of the study the most important thing? Shouldn’t there be one clear result?

**Dr. George Spaeth:** No, there can’t be one clear result in terms of interpretation. The goals of treatment vary, the goals of patients vary, the goals of researchers vary. The clear result was that few people with ocular hypertension develop glaucoma, and that that number can be decreased by treatment. The real problem is, so what?

**Moderator:** Did the study change the way you treat patients?

**Dr. George Spaeth:** Not yet, but it will, especially with regard to what I believe is a hugely important finding of the OHTS, namely that patients with thinner corneas are more likely to get worse. We will definitely begin to get corneal thickness measure-

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ments. We will pay even more attention to the nature of the optic disc, because the nature of the optic disc, even when supposedly normal, was the second-best predictor of who would get worse.

**P:** As a result of the OHTS, will all new glaucoma patients now have their central corneal thickness measured?

**Dr. George Spaeth:** Probably not now. But my hunch is that in about five years the answer will be yes. And not just new patients. Measuring corneal thickness may give a clue as to whether a person will get worse. That is what we really need to know.

**P:** Are you saying that even after visual field damage is sustained, further damage can be identified by examining the optic nerve even before the visual field gets any worse?

**Dr. George Spaeth:** Even after field damage has occurred, the optic disc may still be the best predictor of who will get worse. Once the optic disc has become very severely damaged, then it is hard to see a change, however. But, before field damage has occurred, the nature of the optic disc can be a good predictor of who will get field damage in the future.

**P:** Few people have ocular hypertension, but the consequences of developing glaucoma are a large concern for those of us who may progress to that point.

**Dr. George Spaeth:** In fact, the number of people with ocular hypertension is relatively large — probably around 2 million or more in the U.S. But of those, only about 5% actually will get glaucoma. For that 5%, it is of course terribly important.

**Moderator:** Thank you for helping us understand the results of OHTS.

**Dr. George Spaeth:** Thank you all for being here. The interpretation of the OHTS study is a really important issue. I would like to leave you all with some simple but important thoughts.

Glaucosa is important only because it can decrease the quality of people’s lives. It does that by causing pain in some people or decreased vision. It also does that as a result of the inconvenience and side effects caused by taking medications. Furthermore, merely telling a person that he or she has glaucoma is likely to cause a decrease in that person’s quality of life.

The proper goal of treatment is to try to keep people healthy. It is to try to prevent any functional damage from occurring, or to repair any damage that has occurred. Very early visual field defects are not associated with a decrease in ability to function. However, those very early visual field defects may well be a sign that the affected person is going to get worse and will in the future lose the ability to function because of loss of vision. Thus, those very early visual field defects are tremendously important to detect. However, whether there is any importance at all in preventing those early defects is a totally different story.

**Unfortunately, due to a computer software glitch, some of you may have received duplicate Annual Fund letters. We apologize for the error and have taken steps to correct it. Thank you for your continuing support of the Glaucoma Service of Wills Eye Hospital.**

**Support Group Talks Scheduled**

The following talks are scheduled for the Glaucoma Patient Support Group in 2003. All the meetings will take place in the Wills Eye Hospital auditorium, on the 8th floor of the new Hospital, on Sundays from 1:30 to 3:00 pm. Please double-check with the Foundation about a week before to confirm that the meeting you are planning to attend will take place as scheduled.

**January 12th**

*Dr. Elliot Werner — Can Eye Drops Prevent Glaucoma Damage?*  
The Ocular Hypertension Treatment Study (OHTS)

**February 16th**

*Dr. Jonathan Myers — When Things Don’t Go as Planned*

**April 27th**

*Dr. Courtland Schmidt — Glaucoma, The Big Picture: Glaucoma Treatment in General*

**May 18th**

*Dr. L. Jay Katz — Normal-Tension Glaucoma*
last year allowing us to study the efficacy of some of the newer glaucoma medications in 700 patients. The first part of this research should be submitted for publication later this year. This year I also worked to complete a study of how doctors evaluate visual field data to decide if patients are getting worse.

Another important focus for me has been the training of the next generation of ophthalmologists. I am fortunate to be able to work with the residents in their training and care of patients. I also serve on the Wills Residency Education Committee, the American Academy of Ophthalmology’s Online Education Committee, the American Academy of Ophthalmology’s Basic and Clinical Science Course Glaucoma Section (which is now re-writing the glaucoma textbook given to all American ophthalmology residents each year), and the American Board of Ophthalmology, which tests and certifies American ophthalmologists. These activities present the opportunity to help make sure that the best possible care is given to all patients.

Q: In what ways is the laser you are using in your research, the selective laser, theoretically more helpful to glaucoma patients than lasers currently used?

Q: Dr. Katz: The selective laser trabeculoplasty technique, developed in Boston by Dr. Mark Latina, lowers intraocular pressure as did its predecessors, the argon or diode laser, by altering the shape of the trabecular meshwork. The difference is that with the selective laser there is minimal if any thermal effect in the eye as a result of this laser. Even with the older lasers, the thermal effect is very minimal and is localized to a very small region within the drainage system of the eye. But in some individuals the thermal effect with these lasers causes some destruction of the outflow system, and with repeated applications, instead of helping, they actually have the paradoxical effect of raising intraocular pressure. This is a situation in which too much of a good thing may be detrimental.

On the other hand, the selective laser technique does not involve any thermal injury and no melting of the trabecular structures. This may make the procedure safer in the long term. Even potentially more exciting is that we may be able successfully to reapply the laser if the intraocular pressure drifts back upward years after the initial laser was performed, a common tendency in patients who have been treated with lasers.

Also, as the name “selective” implies, another potential advantage of the selective laser is that it can hone in much more directly on specific pigmented structures, thereby altering precisely the part of the eye that needs to be altered, without damaging nearby structures.

Q: How exactly are you studying the selective laser?

Dr. Katz: We are involved with studies at many different levels with researchers around the country as well as doctors here at Wills, specifically, Drs. Carol and Jerry Shields of the Oncology Service. On a much larger scale, we are involved with coordinating a multicenter trial looking at selective laser trabeculoplasty and comparing it with medications as a first step in therapy for open-angle glaucoma. Our concerns with medications are many, including their side effects, cost, and the difficulty many patients have in using them on a regular basis. The laser trabeculoplasty as a first step may circumvent a lot of these problems and allow for better long-term control of glaucoma patients.
More specifically, we will have 150 open-angle glaucoma patients try medication as a first treatment for glaucoma and another 150 have a laser procedure with the selective laser as a first treatment. Then we will see which works best. Also, as part of the study, we are looking at the success of repeat applications once the trabeculoplasty is no longer effective.

Q: Are you seeking patients to participate in this study?

Dr. Katz: Yes, specifically patients diagnosed with open-angle glaucoma who have not previously been treated with glaucoma medications for more than 14 days.

Three New Clinical Fellows Assume Responsibilities

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