Painting Through New Eyes

“It felt like being in a cage.” This is how Mary Castelnovo, a lifelong painter from Rhode Island described life before her sight-restoring cornea transplants. A 40 year member of the Providence Art Club (the oldest art club in the country after the Salmagundi Club in New York City), Mary first discovered she had corneal disease in the 1970s when her doctor declined to perform cataract surgery for fear of causing excessive damage.

In 2006, Mary’s vision had deteriorated to the point where she had to make a decision on having a transplant. “I had watched friends go through full thickness cornea transplants (known as Penetrating Keratoplasty, or PK) and knew I did not want that. Their surgeries were not very successful and it was difficult to watch them struggle,” Mary explained. She continued, “I went to the best location on the east coast but they were not doing partial thickness transplants and even spoke against it at the time. I continued to look for a better option and that’s when Dr. Price’s name came up. I decided to travel to Indianapolis for a consultation and learned I was a good candidate for the new DSEK (Descemet’s stripping endothelial keratoplasty) on my left eye. The results were immediately remarkable. I went from seeing 20/200 to almost 20/20!

Over the next several years, the sight in her right eye began to worsen though she continued to paint. “By the summer of 2012, it was quite evident that her color vision, ability to see fine detail and depth perception were severely compromised,” according to her daughter, Annie. At that time, being 90 years old she decided to make the difficult decision to travel back to Indianapolis, Indiana for another transplant, this time on her right eye.

The research had progressed and now Dr. Price recommended a DMEK (Descemet’s membrane endothelial dystrophy) cornea transplant, in which a single, ultra-thin cell layer from a donor cornea is implanted through a tiny incision. This newer procedure provides the best possible vision with the lowest risk of transplant rejection. Through the late fall and winter, she abided by her post-surgery instructions and continued to note progressive improvement in the sharpness of her color vision, ability to delineate fine detail and depth of field perception.

In 2013, she decided to have a solo show at the Providence Art Club. “Her painting has been exceptional—now full of color, crispness, detail and variations of light. Her opening reception on October 20th was extremely successful,” Annie said. The Foundation received a collection of images of Mary’s beautiful paintings (a few can be seen below the photo of Mary standing next to another of her works).

Not being able to paint easily prior to the transplants was really bothersome because that is what I did for most of my life. Even when it became difficult, I found a way to paint, but I had to concentrate too much. I felt like being in a cage, it was so freeing to have this done. I’m so glad I came to Dr. Price, she stated. During her stay in Indianapolis, she was able to enjoy many cultural activities. I would encourage patients to take advantage of seeing the city. I also recommend Homewood Suites, it’s a wonderful place to stay.

When asked what she would tell people who think they may be too old for transplants, she said, “If your eyes are unhealthy you should go no matter what the age... I was 90 when I had the second surgery. I am happy to be where I am today, 92 years old and still able to paint. Any hobby you can extend into your later years is a good thing. What can be worse than not to be able to see?”
Happenings

Visit corneaforum.org to share your vision story!

GOLF OUTING
June 3, 2014
Cornea Classic Golf Outing—Please mark your calendar! Call us now at 317-814-2993 to reserve your spot or receive information. Many levels of sponsorship opportunities available!

LUNCHEON
September 26, 2014
Our Annual Luncheon features Sharon Gamble, a master gardener who will be sharing her talk titled “Garden Vision.” Mark your calendar and call our office to reserve your seat!

OPTOMETRIST SEMINAR
November 15, 2014
The Focus on Education seminar will be held at the Ritz Charles in Carmel, Indiana. Offering 7 hours of CE to optometrists with talks from contemporary experts on today’s latest topics in vision care.

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OUR MISSION: TO GIVE PEOPLE BACK THE USE OF THEIR EYES

Cornea Classic—June 3, 2014

We are excited to announce the 17th Annual Cornea Classic Golf Outing will be held on June 3, 2014 at Wood Wind Golf Club in Westfield, Indiana, just north of our office. Harry Scheid (pictured left) is once again serving as our Golf Chairman, and is hoping to raise $50,000 again this year for our research programs!

Highlights of the Cornea Classic include a cookout lunch, shotgun start by Dr. Price, several hole-in-one prizes including the chance to win a Harley Davidson motorcycle, festivities on the course, a tasty dinner from Texas Roadhouse and a great day of golf and appreciating your vision!

New Research Fellows

The Foundation hosts several research fellows annually and this year we welcome Tomas Pena, MD (left) from Argentina and Juan Arbelaez, MD (right) from Columbia, pictured with Dr. Price.

While foreign fellows cannot perform surgery on patients due to medical licensing requirements in the United States, they assist with research projects and assist in writing publications from their findings. In addition, they learn cutting-edge surgical skills through observation and practice on donor corneas in wet lab which they will carry on in their careers. This is one of the ways our research has a global scope of impact. If you see them in the clinic, please help us welcome them to Indianapolis!

Dry Eye Studies Currently Enrolling

Do you or someone you know suffer from irritating dry eyes? CRFA is currently enrolling patients in several dry eye studies. In addition, Price Vision Group offers treatments for the following dry eye conditions:

- Dry Eye Syndrome
- Sjögren’s Syndrome
- Blepharitis
- Meibomian gland dysfunction
- Filamentary Keratitis
- Demodex
- Dry Eye associated with other Autoimmune Conditions

Study participants will be compensated for time and travel. To learn more and see if you qualify, contact Clorissa at 317-814-2996.
With the help of people like you we’ve made enormous strides in giving cornea transplant recipients 20/20 vision with their glasses or contacts lenses. Hopefully you or someone you know has experienced these great results first hand. This issue, we wanted to ask your help to fund a special project with a device called the Avanti. You see, we are striving for an even more audacious goal - to minimize or even eliminate the need for corrective lenses after a cornea transplant!

This initiative could particularly benefit those with Fuchs’ dystrophy. As you know, in Fuchs’ dystrophy, the cornea, or clear window on the front of the eye, becomes cloudy as the cell layer lining the inside of the cornea deteriorates with age. Dr. Price has helped pioneer a procedure called DMEK, in which the diseased cell layer is replaced with healthy cells from a donor cornea through a tiny incision.

As you may know, DMEK provides the best possible vision, in many cases 20/20 vision, to Fuchs’ dystrophy patients. Our patients often choose to have cataract surgery performed with DMEK. (A cataract is a clouding of the natural lens inside the eye that everyone experiences with age.) Combining cataract surgery with DMEK is more convenient, cost-effective and, most importantly, safer than undergoing two separate eye surgeries.

Before cataract surgery, detailed measurements of the eye are taken so that the surgeon can select the best replacement lens that will minimize the need for glasses afterwards. In patients with Fuchs’ dystrophy, the corneal changes can throw off the measurements in unpredictable ways, making it harder to hit the target and eliminate the need for glasses.

Therefore, the Cornea Research Foundation has purchased a sophisticated imaging device, called the Avanti, to precisely track and document the changes that occur in each layer of the cornea so that we can start factoring those changes into our calculations and give Fuchs’ dystrophy patients better results and the best possible vision without glasses.

In addition, the Avanti will provide detailed information about any changes occurring with Fuchs’ dystrophy in the front part of the cornea, the part that is not replaced with our minimally invasive transplant technique. We are undertaking a study to evaluate treatments that may restore exquisite clarity to the front of the cornea when changes have occurred. The Avanti will provide invaluable information for this study.

The Avanti also will provide key information in our studies with corneal cross linking, a treatment that can help stabilize the cornea in adolescents and young adults with keratoconus, as we seek better ways to customize the treatment for each individual.

The total investment of the Avanti is $55,000. This is a special price for the Foundation because of the important research we are doing. While this is a significant investment for the Foundation, we truly believe it will assist in some remarkable breakthroughs in the coming years. We would be most appreciative of a gift at any level you can make to support this new project. Remember, donations are also tax-deductible. We are confident that the use of this device will help us develop even better treatments for those affected by Fuchs’ dystrophy or keratoconus.

A SAMPLE OF SOME OF THE HIGH RESOLUTION DIAGNOSTIC IMAGES FROM THE AVANTI
Ask Your Doctor  By Dr. Francis Price, Jr.

Q: From my research on transplant techniques prior to arriving to Price Vision Group, it is obvious there have been many advancements in the ophthalmology field in the past decade. Where do you see the field in 10-15 years? Are there any significant breakthroughs on the horizon?

A: Ophthalmology is always on the forefront of technology and will continue to be in the future. We have seen significant advancements in the diagnostic tools available, like Marianne explained in her article. These tools allow surgeons to better assess what's going on inside the eye and customize treatment options for our patients. In addition, there are many exciting studies currently underway where excellent diagnostic testing is critical. These studies will help lead to improved patient care and better visual outcomes for people currently experiencing vision problems. Cornea transplants in particular have seen dramatic and rapid advances in the last 15 years culminating at this point in time with the DMEK technique for diseases like Fuchs' dystrophy or DALK for scars and conditions like keratoconus. Current research for transplants in other parts of the world is centering around cultured endothelial cells that may be injected into the eyes or topical treatments to encourage a patient's own corneal cells to regenerate. But don't hold your breath for these new breakthroughs as it may take years to prove their safety and get necessary FDA approvals. At CRFA, we have been documenting the first ever prospective studies to optimize the dosing of cortisone steroid eye drops to prevent and treat transplant rejections. Our goal is to minimize complications and perhaps even develop ways other than topical drops to treat people with transplants—perhaps just getting an injection around the eye every 3 to 4 months or perhaps just one placement of the medication at the time of surgery that would be time released. For ophthalmology in general, I hope we can either prevent the need for people even needing to wear glasses or to suffer from visual loss from glaucoma. These may well be available in the next 10 to 15 years.

Thank you for your continued interest and support!
All donations to the Foundation are tax-deductible and support our sight-restoring research.