

The Cutting Edge

OPHTHALMIC NEWSLETTER

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PRK IS BEST FOR VISION

LASIK and PRK differ a lot, but the public was poorly educated about LASIK. Both procedures surgically treat nearsightedness, farsightedness and astigmatism, however, LASIK is more risky since it uses a cumbersome, sharp knife in combination with the laser. PRK uses no blades and takes about one to two minutes to perform, while most surgeons need at least 20 minutes to perform LASIK.

LASIK requires high pressure on the eye, which could cause blindness from retinal blood vessel obstruction. This high pressure of LASIK may also cause a retinal tear. No pressure is exerted during PRK.

After LASIK the tensile strength of the corneal flap is weak and the flap may dislodge, even years after surgery. Surface epithelial cells can also “ingrow” under the corneal flap, which is a serious complication of LASIK. These cells grow and can obscure vision. Removal of such cells permanently is difficult, if not impossible. There are no flaps required with PRK.

Why did surgeons turn to LASIK as the most common laser procedure for correcting vision? One of the reasons was the patients were interested in a speedy recovery, and not the best vision. LASIK patients appear to recover quicker. Meanwhile, it was believed that PRK takes longer to restore vision, using well planned post-op care, Dr. Norton as well as others do not find this assumption to be correct.

“Although we are offering both PRK and LASIK, we are still doing 75 to 80% PRK. An analysis of our results showed that after one week, the results are identical.”

Bruce Jackson, M.D., FRCSC, Professor and Chairman, Department of Ophthalmology, Eye Institute, Ottawa, Canada

After 10 years Excimer laser experience using a careful follow-up regimen, Dr. Norton’s reported results are some of the best using PRK. Over 80% of her patients achieve 20/15 without glasses from PRK and about one percent of her PRK procedures require a second treatment. LASIK results for vision are generally much lower. So when presented with the true risks and benefits of both procedures, most knowledgeable patients choose PRK, because PRK gives the best vision and is safer (see PRK patient letter).

PRK PATIENT LETTER

Dear Dr. Norton,

You may not remember me, but I was a patient of yours approximately two years ago. I underwent the PRK procedure on both of my eyes with tremendous results.

I just wanted to pass along a quick story I thought may be of interest. Quite a few of my friends were spurred on by my enthusiasm and had their eyes done as well.

Unfortunately, they decided to cut corners and travel to Canada and Niagara Falls for the treatment in order to save a few dollars. All of them have undergone the so-called “flap and zap” procedure (LASIK).

To make a long story short, we all decided to stage a little eye test of our own the other day. They couldn’t even come close to the level of my eyesight. In fact, what I could see clearly at 30 feet they had trouble seeing at 10 feet. All you could see is regret in their eyes for choosing the cheaper option. I guess hindsight is 20/20. No pun intended.

Just so you know, you took me to 20/15 in both eyes, and I’m still there. Some days, I can even read half the 20/10 line as well. Now that’s results.

Best of luck,
Thomas N. Kaufmann, Esq.
Attorney at Law



Patients from around the World-International lawyer Adelaide Whest (left) recently traveled from Sierr Leone to have PRK performed by Dr. Norton. Many international patients came to have PRK surgery with Dr. Norton from Japan, Bahrain, Senegal, Gambia, Sierr Leone and Korea.

MEETING UPDATES

ASCRS 2001

San Diego, CA—This year's American Society of Cataract and Refractive Surgery (ASCRS) meeting saw a proliferation of papers touting alternatives to Laser in Situ Keratomileusis (LASIK). Another new procedure that was discussed was Laser Epithelial Keratomileusis (LASEK), which makes a thinner surface epithelial "flap" using alcohol instead of a blade.

There were also signs that many surgeons are returning to the practice of Photorefractive Keratectomy (PRK), which doesn't use knives or blades. PRK is becoming more popular because of the serious complications associated with LASIK and the recent media backlash (see LASIK complications).

KERATOCONUS

Dr. Norton presented her experiences with Therapeutic PRK as an effective method to treat mild to moderate keratoconus. Keratoconus is a corneal disease in which the shape of the cornea is distorted like a cone. Patients suffering from this disorder have progressive changes in their vision.

Early or mild keratoconus can be corrected with glasses but moderate or advanced eyes can only see when fitted with special contacts or require cornea transplant surgery.

Dr. Norton's results show 80% of the keratoconus eyes undergoing her technique of Therapeutic PRK achieved 20/40 or better vision without glasses or contact lenses (20%

achieved better than 20/20 vision). Another 18% needed glasses or contacts lenses for their best acuity and 2% required cornea transplant. Those results are much better than previously published reports on laser surgery for keratoconus.

Some advanced keratoconus cases are too thin for laser surgery, but to date our work has been highly successful. In the future, Excimer laser surgery might be a good option to restore uncorrected vision in some mild to moderate patients suffering from keratoconus and possibly prevent or delay cornea transplant surgery.

www.nortoneyelaser.com

ENVOY TRAVELS TO WEST AFRICA

Doctors and members of the West African Eye Foundation, Inc. (WAEF) traveled to Senegal this year to assist in the establishment of an eye bank and to donate equipment to ophthalmologists. Dr. Norton is the President and founder of WAEF.

The trip represented collaboration between WAEF, local and international Rotary clubs, religious leaders, the Senegalese Ophthalmological Society and the Department of Ophthalmology in Dakar.

Alcon, Allergan, Bausch & Lomb, Eagle Vision, Merck, Micra, Pharmacia and Welch Allyn companies donated \$70,000 worth of equipment and supplies for treating eye diseases. Since power failures are quite common in Dakar, Dr. Norton's PRK patient, Neil Delay also donated a diesel generator.

Information about WAEF, Inc. is now available on the Internet at www.westafricaneye.org



Members of the West African Eye Foundation, Inc. met with Islamic leaders, medical professionals, eye surgeons and the Health Minister of Senegal about the establishment of an eye bank in West Africa. The trip was also a reunion with three Senegalese eye surgeons who received training in Syracuse sponsored by WAEF.

PATIENT'S EXPECTATIONS OF LASER VISION CORRECTION SURGERY

Most of our patients who desire laser vision correction are busy people between the ages 18 and 70 (mean age 40) and about 90% have worn or are wearing contact lenses (CL). Many of these patients expect the laser surgery to correct their vision similar to what they see with CL. About 80% of CL wearers see 20/15 (better than 20/20). Thus, when laser vision correction results in 20/40 uncorrected vision, the patient's vision will be less than what they expect to see. We've also found that at least half of patients requesting laser vision correction at our center suffer from dry eye syndrome (DES). DES is often masked by the CL, which covers the center of the dry cornea. DES must be treated in order to achieve the best vision from laser surgery similar to vision obtained with CL.

Dr. Norton has been able to better match her patient's expectations of laser vision correction by performing multiple pre-op measurements, especially the day of surgery, delicate PRK laser surgery, as well as closely monitored months of post-op use of steroids and moisture to achieve maximum results. Following these techniques she's been able to help 82% of our patients achieve 20/15 vision without CL or glasses.

WAVEFRONT ANALYSIS

Several companies that manufacture Excimer lasers are developing computer systems to help the laser measure surface irregularities of the cornea. This computer image is transmitted to the Excimer laser so the surgery can be performed to correct such aberrations. It is thought that this Wavefront analysis technique will give better visual outcomes from surface Photorefractive Keratectomy (PRK). Wavefront can measure the irregularity of the corneal surface, but cannot predict the irregularities that can be caused by dry eye syndrome during healing. Early clinical trial reports by Dr. David Hardten (Minneapolis, MN) using Wavefront-assisted surgery showed 80% of the eyes achieving 20/15 uncorrected vision. Dr. Norton's results using PRK without Wavefront analysis shows 82% achieve 20/15 uncorrected vision. Thus, Wavefront may not improve the final outcomes of carefully executed PRK surgery and follow up.

LASIK PUBLISHED NEWS REPORTS AND LETTERS 2001

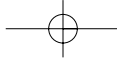
- ◆ **Consumer Learning Risks Behind Rosy Picture of Laser Eye Surgery,**
by Julia Malone,
Cox News Service

This article quoted the Medical Director of Emory Vision Correction Center as saying "I've gotten e-mails from 1,300 disasters from LASIK surgery."

- ◆ **Dark Side of LASIK Surgery,** by Carol Ann Campbell, Newhouse News Service

This article quoted a Washington attorney who commented on LASIK as follows: "There is over-promotion, under-reporting of risks and under-qualified facilities."

- ◆ LASIK problems were also reported in a special report in the NY Daily News titled: **Patients are Blindsided- \$2.5 billion eye surgery industry plagued by slipshod work,** by Susan Ferraro.
- ◆ In a public note to his patients and colleagues, a local area cardiologist wrote: "With regret I must take a prolonged leave of absence from my cardiology practice. My eyesight has been impaired as a complication of recent eye surgery" (LASIK).



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LASER SURGERY DONATION ASSISTS PUBLIC TELEVISION

The Jerva Eye Laser Center has donated a laser operation for the support of local public TEL-AUC television since 1997. The project has met with success for both WCNY and our center. Thus far all five patients participating in the auction have achieved 20/15 or better vision without glasses. Pictured above is the 6th patient to win Mrs. Vicki Huntley, who is 20/20 and still healing.



The Onondaga Medical Society named Jerva Eye Laser Center Medical Director Dr. Sylvia Norton a 2001 Physician Service Award-winner for her international work helping supply modern eye equipment and training for African doctors to treat blindness as well as for her work in other communities.

Office manager Jody Bigley underwent PRK with Dr. Norton this year. Since her surgery Jody has become an award-winning race walker in tournaments in Onondaga and Oswego counties. We wish her continued success with her racing and her uncorrected 20/15 vision.



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