Fromer Eye Centers 50 Year Anniversary Summer 2003 (953 - 2003)

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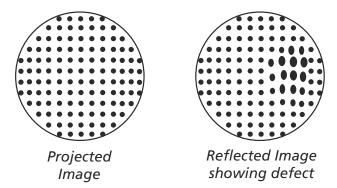
# **NEW ADVANCED LASIK TECHNOLOGIES**

### LASIK UPDATE

# Wavefront Analysis, Eye Tracking and New Precision Lasers

New advances in state of the art LASIK, that everyone's been waiting for... By combining three advanced technologies, ophthalmic surgeons have available a new refractive laser system. Using a variable spot size or scanning beam laser, combined with eye tracking, and wavefront analysis, doctors are able to perform highly accurate and smooth sculpting of the cornea. These techniques provide the basis for more accurate, precise and predictable vision correction for a wider range of patients. In fact, in many patients, vision can be corrected to better than 20/20.

**Welcome** – We are sending this newsletter to patients and others to keep the community abreast of technological advancements in eye care. We hope by providing this information people will better understand eye problems, some of the treatments available and help them maintain the health of their eyes. Your questions and comments are always welcome as they will help us to bring you the best in general, medical and surgical eye care. For whatever reason you call or visit Fromer Eye Centers, we are dedicated to providing personal and courteous service. **Simplified Simulated Analysis** 



### Wavefront Analysis

Using a sophisticated computer and mapping software, wavefront analysis essentially involves projecting a grid pattern into the eye and analyzing the integrity of its reflected image for areas of displacement, distortion and incomplete or fuzzy images. As the projected image moves through the eye, it must pass through the cornea, the lens of the eye and be reflected back off the retina. Theoretically, if the reflection of the grid pattern is returned exactly the same as the pattern sent, and in the predicted position, all aspects of the eyes refractive apparatus are functioning perfectly. However, if there is an aberration affecting refraction anywhere in the eyes refractive system, it will show up in the reflected image.

Every small area of the reflected grid pattern is analyzed. If areas are found where the pattern is out of position, distorted, incomplete or fuzzy, specific correction can be targeted to that corresponding location on the surface of the cornea.

### Tracking Eye Movement

With early laser systems, eye movement was not a factor. Patients could hold their eye still during the procedure by starring at a fixation

light on the laser. With the advent of precision lasers however, small, visually undetectable eye movements, called saccadic eye movement,



became very important. These tiny, involuntary eye movements are impossible to predict or prevent. Systems like Laser Radar Tracking, developed during NASA's Strategic Defense Initiative, have been adapted to track this eye movement. Using special cameras, laser beams or radar,



movement is detected in "real time" (thousands of measurements each second) and transmitted instantly, directing the scanning laser to move

in sync with the eye. The result is very accurate placement, smooth ablation (removal) of tissue and improved visual outcomes.

### New Precision Lasers

Early refractive lasers used a single, broad laser beam, controlled by a shutter system similar to a camera. This broad beam application created a concave disc on the surface of the cornea to treat myopia. Vision improvement resulted from a general correction and reshaping of the cornea.

A small spot/scanning beam excimer laser has the ability to correct one area of the cornea slightly different than another area of the cornea. In effect this new laser system can provide a vision correction pattern that is custom designed for the individual.

Where previous excimer laser systems were only concerned with correcting refractive irregu-



If you are interested in finding out if LASIK is right for you or if you just want more information on these new techniques please contact **Ladan Anavim**, *Certified Optician*, *Certified Ophthalmic Technician*. *Certified Laser Technician* at (212) 832-9228.

larities caused by a generally misshaped corneal surface, the new small spot/scanning beam laser systems can take into consideration aberrations in the eyes entire refractive system, including the lens, retina and cornea.

### What Results can be Expected

- performed on an outpatient basis.
- *Improves vision and in many cases eliminates the need for corrective lenses.*
- LASIK enables most people to pass a drivers license test without corrective lenses.
- *Requires few restrictions on activities during post-op healing.*
- *Rapid return to a normal lifestyle.*



A scanning beam laser has the ability to correct one area of the cornea slightly different than another area of the cornea, essentially providing a custom ablation pattern.

Not everyone should expect to achieve full visual correction. People with high to severe levels of myopia or astigmatism may require another procedure to achieve the desired results. People with extremely strong glasses for example, may end up with significant correction, but still need mild to moderate strength lenses part of the time for some activities.

#### **Queens Optical Location**

We accept the optical insurance plans for most unions. For more information or to find out if your specific plan is accepted contact **Yelena** in our optical department.

718-261-3366

### **SPOTLIGHT**

### Dr. Mark D. Fromer



Mark D. Fromer, M.D., is a board certified ophthalmologist in surgery and treatment of eye diseases. He specializes in laser vision correction procedures including LASIK (laser assisted in-situ keratomileusis) and PRK (photo-refractive keratectomy). Dr. Fromer performs no-stitch

cataract surgery, and has been performing laser surgery for glaucoma, diabetic retinal disease and age related diseases of the retina since 1988.

Dr. Fromer received his undergraduate degree from Michigan State University in East Lansing, MI in 1980, his medical degree from Rutgers Medical School in Piscataway, NJ in 1984 and served his internship at St. Vincent's Hospital and Medical Center in New York City.

He completed his residency in ophthalmology at St. Vincent's Hospital and Medical Center of New York. Dr. Fromer went on to complete a vitreoretinal fellowship at Manhattan Eye, Ear, Nose & Throat Hospital in New York City.

With more than 10 years in private practice, Dr. Fromer offers the most technologically advanced treatment for correction of eye diseases. Dr. Fromer has three off locations; New York City, Queens and Bronx. Thru his affiliation with major medical centers in the New York area; and as Director of Fromer Eye Centers, Dr. Fromer maintains a very active role in teaching advanced surgical techniques and laser vision correction surgery to fellow ophthalmologists. He has also lectured extensively throughout the United States.

His professional memberships include the American Academy of Ophthalmology, the American Medical Association, the American Society of Refractive Surgeons and the Medical Society of the State of New York.



*Open angle glaucoma progresses slowly. There is no associated pain or other noticeable symptoms until much of the outside area of the field of vision is lost.* 

# Glaucoma

Glaucoma is a series of diseases that if left untreated can cause damage to the optic nerve resulting in gradual vision loss and eventual blindness. Damage to the optic nerve, due to glaucoma, is usually caused by an elevated intraocular pressure (IOP).

A clear fluid, called aqueous humor, fills the front of the eye (anterior chamber) and provides nourishment to the tissues. Like the air in a balloon, the aqueous also provides pressure to help maintain the shape of the eye.



**Damaged Optic Nerve** 

#### Prevention is the best medicine

Vision loss from glaucoma is permanent but can usually be prevented with early detection and treatment. Glaucoma management is usually a lifelong process that requires frequent monitoring and constant treatment. Since there is no way to determine if glaucoma is under control based on how a person feels, a person with glaucoma generally should be examined every 3 to 4 months.

#### Maurice H. Luntz, M.D.

Dr. Maurice H. Luntz joined our practice in May of 2002. He has extensive sub-specialty training in glaucoma and is the Chief of Glaucoma at Manhattan Eye Ear & Throat Hospital. 50 Year Anniversary (1953 – 2003)

### MAKING EXCELLENCE IN EYE CARE A FAMILY TRADITION.

Over 50 years ago, Dr. Mark Fromer's stepfather, Dr. Alfred Mamelok, first opened the 115 E. 61st Street office in New York, NY. In 1988 Mark Fromer, M.D. joined the practice, followed by his sister, Dr. Susan Fromer in 2000. Over the years many advances in Ophthalmology have taken place and Dr. Mark Fromer has taken an active roll in bringing excellence in eye care to the New York area. He has been recognized 2 years in a row by Castle Connolly as being the top Ophthalmologist in the Metro area. Recipients of this honor are elected by fellow physicians and hospital administrators. Dr. Fromer has been named as team eye surgeon to the New York Rangers for the last two years.

Dr. Fromer feels that being involved with new products, surgery procedures and continuing education is essential to providing excellent eye care. Recently, he was invited to participate with a panel of doctors to discuss advances in New 4th generation antibiotics and just a few weeks ago he returned from the American Academy of Ophthalmology annual meeting in San Francisco.

"Ophthalmology is a wonderful field of medicine with amazing advances being made every day. Wavefront analysis combined with eye tracking and new precision lasers have advanced LASIK further than most people thought possible just a few short years ago. These new technologies allow us to be more precise with better predictability and with fewer side effects during the healing period. I am very excited and proud to bring these advances to our patients."

Mark Fromer, M.D. & Susan Fromer, M.D.

Dedicated to diseases and surgery of the eye

Laser Vision Correction • LASIK • PRK • Sutureless Cataract Surgery • Glaucoma Retinal Disease • Age Related Diseases of the Retina • Macular Degeneration

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