

Clemson Eye News

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Quarterly Report for Health Care Professionals Delivering Eye Care

Updates from Recent National Meetings

Major Government Regulations and Audits for practices who participate in Medicare were big topics at the recent healthcare forums we've attended. Here are some highlights.

HIPAA data breaches are an area of increasing focus. It's more important than ever to double down on data security in your office!

- Remember to ensure all laptops, CPUs, and mobile phones used to process protected health information (PHI) are password protected.
- Health Information Technology for Economic and Clinical Health Act requires every practice to have Business Associate Agreements and a Security & Breach Policy on PHI.

EHR record authenticity is being targeted by CMS Centers for Medicare and Medicaid.

- Be careful not to copy and paste records. They must have differentiating input with careful review. Do not delete any parts of a medical record, rather add an addendum to it.

Co-management between Optometrists and Ophthalmologists.

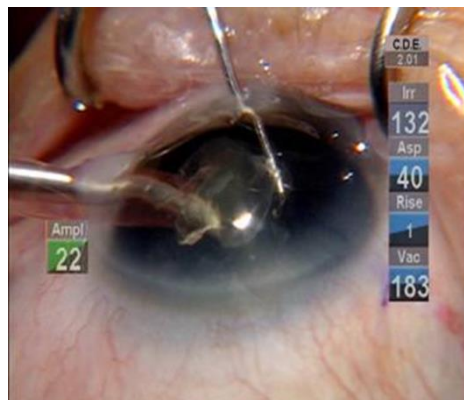
- Must be demonstrated as the patient's choice, so documentation with the patient's and their co-managing doctor's signature is critical.

Laser Assisted Cataract Surgery



By Dr. Brian Johnson

A cataract is a clouding of the normally clear lens of the eye. Changes in the lens proteins and increased water content cause the lens to become cloudy and take on a darker yellow color, so that light can no longer be easily transmitted to the retina. This results in a painless, often insidious blurring of vision as well as glare and washed-out colors.



Phaco ultrasound probe in the eye.

Cataracts are usually the natural result of aging, but may also be caused by trauma, medications, systemic or ocular disease or genetic factors. The appearance and symptoms of cataracts can vary depending on their cause. A comprehensive eye exam is required for a definitive diagnosis and to determine if any other ocular disorders are contributing to the blurred vision. Left untreated, cataracts can lead to blindness. They are the leading cause of vision loss worldwide.

To date there are no proven non-surgical treatments. When cataracts cause enough visual disturbance to interfere with a person's work, hobbies or lifestyle (particularly driving), it is probably time to remove them. Depending on individual needs, the patient and doctor decide when removal is necessary.

Cataract surgery is one of the safest and most commonly performed ophthalmologic procedures in the United States. In fact, it has been performed for over 100 years. The surgery involves removing the clouded lens and replacing it with a permanent artificial one.

Today, phacoemulsification is the most common cataract procedure. It is an outpatient procedure that takes five to 15 minutes. Patients usually return to their normal activities 24 hours after surgery, but may require help immediately following their surgery and during those first 24 hours as they recover.



Femtosecond laser screen image showing corneal incisions and lens fragmentation pattern as well as OCT image of the cornea and lens.

Clemson Eye News continued

During phacoemulsification, the surgeon puts drops in the eye to dilate the pupil and topical anesthetic drops to numb the eye. He or she makes a tiny manual incision in the cornea and inserts a small probe that vibrates with high-frequency ultrasound (sound waves) to break the cataract into tiny pieces and removes them through a central aspiration port. After the ultrasound probe is removed, a new probe is inserted to suck out any remaining lens particles. The surgeon then inserts a small foldable acrylic lens through the incision in the cornea. The lens slowly unfolds in the eye and is gently maneuvered into position.

Today, patients can choose the intraocular lens (IOL) that best suits their life-style. For instance, a multifocal IOL, like the ReSTOR® lens, provides a range of vision. A full 85% of Clemson Eye patients never wear glasses again after their ReSTOR® lens implant.⁴

Along with improved IOL technology, cataract surgery has advanced to include the femtosecond laser. The benefits to patients are substantial.

Laser Assisted Cataract Surgery

Approved for use in cataract surgery by the FDA in 2010, and introduced in 2011, the femtosecond laser is now used by a small number of select surgeons to assist or replace several aspects of manual cataract surgery. It is used to make the initial incisions in the cornea, to create the capsulotomy, to soften and break up the clouded lens, and to make incisions within the peripheral cornea to correct pre-existing astigmatism.

The patient benefits include more reproducibly consistent and stable incisions, which facilitate faster healing, are more secure and have less risk of leaks and infection.¹ The femtosecond laser is also able to create a near perfect, round opening in the anterior capsule.² This has several benefits over a manually created capsulotomy. The primary benefit is the ability to recreate the exact same size capsule opening every single time, which improves the estimation of the final position of the lens implant in the eye – the Effective Lens Position (ELP). This improves the surgeon's ability to accurately calculate lens implant power.



ReSTOR®: An advanced multifocal intraocular lens.

Also, the ability to perform the capsulorhexis (removing part of the capsule that the lens sits inside) in a controlled fashion before making an incision into the eye adds a margin of safety, especially in higher risk

cases such as traumatic cataracts, mature white lenses, and in pseudo-exfoliation. Using the invisible light of the femtosecond laser to help break up the cataract decreases the amount of ultrasound energy and ultrasound time required for the procedure. This causes less stress and collateral damage to eye tissue,³ particularly the corneal endothelium, allowing more rapid healing and better visual acuity post-surgery

In addition, the femtosecond laser is used to create corneal relaxing incisions to correct pre-existing astigmatism. The precision of the laser-created incisions gives us greater control over the refractive correction, leading to improved visual outcomes.⁴

These laser-created incisions combined with advanced technology IOLs, which

include multi-focal and astigmatism-correcting lenses, mean many cataract patients no longer require glasses or are considerably less dependent on them after their Laser Assisted Cataract Surgery (LACS), regardless of their age. According to recent data from Market Scope, 5.3% of cataract patients in the United States had LACS in 2013.

The use of femtosecond lasers and advanced IOLs are exciting developments. They offer a safer, more accurate outcome for cataract patients. The surgeons at Clemson Eye were among the first in the country to perform Laser Assisted Cataract Surgery with advanced IOLs. We use the most advanced suite of laser-guided surgery systems available today.

Dr. Brian Johnson is a Clemson Eye ophthalmologist specializing in cataract surgery and comprehensive medical eye care

1. Nagy Z, Takacs A, Filkorn T, Sarayba M. Initial clinical evaluation of an intraocular femtosecond laser in cataract surgery. *J Refract Surg.* 2009; 25(12):1053-1060.
2. Palanker DV, Blumenkranz MS, Andersen D, et al. Femtosecond laser-assisted cataract surgery with integrated optical coherence tomography. *Sci Transl Med* 2010; 2:58ra85.
3. "Laser Pretreatment Softens Cataracts, Allows for Safer, Easier Removal, Researchers Say", Charlene Laino, WebMD Health News, (Reviewed by Laura J. Martin, MD), Oct. 25, 2011.
4. Clemson Eye Laser Cataract with Advanced Intraocular Lens Replacement Results, 2013.

What's New

New Call Center for Referrals

Clemson Eye now has four dedicated call specialists to make MD and OD referrals a cinch. They specialize in providing you and your staff with the highest level of service. Your calls will be answered promptly with no "on hold" message. This also allows our front staff to be fully focused on patients when they arrive for their consultation.