2011 Highlights

In 2011, Cole Eye Institute surgeons continued to be at the forefront of corneal surgery and research. Team members performed 208 corneal transplants at Cleveland Clinic’s main campus and our Lorain, Ohio, ambulatory surgery center. Cole Eye Institute transplant surgeons also have implanted the Boston Keratoprosthesis (artificial cornea) as a mode of restoring vision in patients with end-stage corneal disease, including those with corneal blindness from severe chemical trauma.

In 2011, Jeff Goshe, MD, joined the corneal transplant team.

Research and Innovations

Cole Eye Institute corneal surgeons were among the first in the country to perform a new transplant procedure, Descemet stripping automated endothelial keratoplasty (DSAEK). This procedure involves transplanting only the posterior side of the cornea in eyes with endothelial dysfunction, which greatly accelerates visual recovery, reduces surgically induced astigmatism and entails a smaller wound with less risk of complications from an “open-sky” penetrating keratoplasty. Cole Eye Institute surgeons have introduced several technique modifications to improve surgical outcomes, and a clinical study is exploring the optimal tissue preparation techniques for visual outcomes and graft survival. Fuchs’ endothelial disease is among the leading indications in the United States for corneal transplantation.

Additional research efforts include a prospective study of intraoperative optical coherence tomography (OCT) for image-guided corneal surgery being conducted by Drs. Dupps, Meisler, Goshe, Srivitava and Ehlers.
**Expertise**

Cole Eye Institute surgeons are experts in performing all types of transplantation procedures to treat anterior segment diseases. These procedures include:

**Corneal transplantation**
- Penetrating keratoplasty
- Anterior lamellar keratoplasty
- Intracorneal ring segments for keratoconus
- Descemet stripping automated endothelial keratoplasty (DSAEK)

**Limbal stem cell transplantation**

Amniotic membrane grafting

**Artificial corneas**

Approximately 35,000 corneal transplants are performed in the United States every year. Medical histories of all corneal tissue donors are reviewed carefully, and blood tests are performed to check for infections. Corneal tissue is scrutinized by specular microscopy to ascertain viability. Corneal transplant success rates are high and rejection rates are low (with the use of only topical immunosuppressive medications).

**Awards and Achievements**

William J. Dupps, MD, PhD, was recognized as one of Cleveland's Top Doctors in *Cleveland Magazine* in 2011. He also received an Achievement Award from the American Academy of Ophthalmology.

Steven Wilson, MD, received a “Best of Show” Video Award at the American Academy of Ophthalmology’s 2011 Annual Meeting as one of the submitters of “Mitomycin C in Refractive Surgery: Why, When, and for How Long? The Quest for Optimal Parameters” (Marcony R. Santhiago, Marcelo Netto, Brian K. Armstrong, Beatriz De Abreu Fiouza Gomes, David Smadja, Steven E. Wilson).

Dr. Wilson also was listed as a *U.S. News & World Report* Top Doctor, which recognizes him as one of the top 1 percent of clinicians in ophthalmology in the United States in 2011.

**Selected Publications**


**Staff**

William J. Dupps, MD, PhD
Jeff Goshe, MD
Roger H.S. Langston, MD
David M. Meisler, MD
Allen Roth, MD
Elias Traboulsi, MD
Steven Wilson, MD

**Phone number**

216.444.2030

**Fast facts**

In 2011, 208 corneal transplants were performed at Cleveland Clinic.