
FOR IMMEDIATE RELEASE**Monday, Mar. 6, 2017****USC Roski Eye Institute treats first patient in Los Angeles with FDA-approved corneal cross-linking procedure****Contact:** Sherri Snelling sherri.snelling@med.usc.edu or 949-887-1903Watch the video: https://www.youtube.com/watch?v=a_WGiavUj-o&t=2s

LOS ANGELES – The first patient in Los Angeles to receive the recently FDA-approved corneal cross-linking (CXL) procedure to help prevent blindness from keratoconus, was recently treated by experts at the [University of Southern California \(USC\) Roski Eye Institute](#).

Keratoconus is a progressive disease where the thinning of the cornea (the clear, dome-shaped surface of the eye) produces warping and bulging which leads to severe visual distortion. It affects more than one in 2,000 people in the U.S. and before the CXL procedure could only be treated with advanced contacts lenses. As the disease progressed, treatments included more invasive procedures such as corneal transplant.

Approved by the FDA in 2016, CXL is a minimally-invasive, outpatient procedure where the ophthalmologist removes the epithelium (tissue on the outer layer of the cornea) and then uses a combination of ultraviolet A-light irradiation and application of riboflavin (vitamin B12) eye drops to stabilize the cornea. CXL does not cure keratoconus but in most cases, stops the progression of the disease to preserve the patient's sight and in many cases partially reverses the damage done to the cornea. USC treated the first patient in Los Angeles after FDA approval a couple of months ago. The patient's follow-up exams are showing continued improvement in his condition.

USC Roski Eye Institute patient, Adam Lyons, a U.S. Navy veteran, originally had LASIK in 1997 while living in Chicago. After moving to Southern California, he developed keratoconus as a result of that procedure. Referred to USC Roski Eye Institute before CXL trials began, [Jonathon Song](#), MD, performed a corneal transplant on Lyons' left eye but the patient had to continue to wear glasses for his right eye. As that eye progressed with the disease, Lyons returned to USC in late 2016, where [J. Bradley Randleman](#), MD, had joined the department as professor of ophthalmology and director of the Cornea, External Disease and Refractive Surgery Service. Randleman, a corneal surgeon and CXL expert who was a principal investigator for both of the U.S. clinical trials that led to FDA approval, performed the new procedure on Lyons.

"Keratoconus, as in Adam's case, can be a contraindication for LASIK which is why it is important to get an expert ophthalmologist to perform an initial exam," says Randleman.

USC Roski Eye Institute First to Perform FDA-Approved Corneal Cross-Linking in L.A.
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“Our LASIK exam procedure at USC is designed to catch any subtle curvature abnormalities that could be an issue, and in these cases we recommend avoiding LASIK based on possible adverse outcomes.”

Randleman, along with USC Roski Eye Institute colleague, [Farhad Hafezi](#), MD, PhD, adjunct clinical professor of ophthalmology at the University of Geneva, Switzerland, are two of the most renowned international experts on CXL. They were among the earliest investigators in Europe and the U.S. to study and utilize CXL in both laboratory and clinical settings with patients who had progressive keratoconus and post-LASIK ectasia.

On a global level, keratoconus is a leading cause of severe visual impairment in children and adolescents and research has shown those with Down Syndrome (DS) are at a much higher risk than the general population to develop the disease.

In addition to their ongoing research in Europe, the U.S. and the Middle East, Randleman and Hafezi have also co-authored the first textbook on CXL, [Corneal Collagen Cross-linking](#), originally published in 2013 with an updated version due out in 2017.

About the USC Roski Eye Institute (usceye.org)

The USC Roski Eye Institute, part of the Keck Medicine of USC university-based medical enterprise, has been a leader in scientific research and innovative clinical treatments for more than 40 years. Ranked No. 2 in National Eye Institute (NEI) research grants for academically-based ophthalmology departments and nationally ranked in *U.S. News & World Report's* annual “Best Hospitals” issue for more than 22 years, the USC Roski Eye Institute is headquartered in Los Angeles with clinics in Arcadia, Beverly Hills and Pasadena. Faculty physicians are also the exclusive ophthalmic doctors affiliated with L.A. County + USC Medical Center (LAC+USC) and Children’s Hospital Los Angeles (CHLA).

Patients from across the country come to see the USC Roski Eye Institute experts who treat a comprehensive array of eye diseases across the life spectrum from infants to aging seniors. The USC Roski Eye Institute is known for its scientific research and clinical innovation including:

- Creator of the FDA approved Argus retinal prosthesis implant (also known as the “bionic eye”) for retinitis pigmentosa patients
- Leader in NEI eye disease research among multi-ethnic populations
- Developer of stem cell therapies for those who have age-related macular degeneration
- Discovered the gene that is the cause of the most common eye cancer in children
- Treatment for eye infections for AIDS patients
- Inventors of the FDA approved XEN stent, the most widely used glaucoma implant in the world
- Pioneers of a device for long-term intraocular drug delivery
- Creator 25 years ago and ongoing leader in OCT research
- Leading researchers of eye disease prevention and treatment as part of the Human Connectome brain mapping research

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