

Refractive Surgery Council Marks a 'Year of Innovation' as New Technologies Expand Access to Vision Correction

Latest FDA clearances and next-generation devices broaden options for adults of all ages seeking freedom from glasses and contacts

DALLAS, TX, UNITED STATES, November 13, 2025 /EINPresswire.com/ -- The Refractive Surgery Council (RSC), the leading voice in refractive surgery education and advocacy, today reflects on 2025 as a "Year of Innovation" in vision correction, citing a wave of FDA approvals and technological advances that make excellent vision possible for more people than ever.



REFRACTIVE
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The Refractive Surgery Council helps consumers make informed choices about their vision correction options.

This year's innovations include ray-tracing guidance in [LASIK](#) treatments, next-generation excimer laser systems, and the wider availability of implantable and light-adjustable intraocular lenses (IOLs). Together, these advances significantly expand the range of safe and effective treatment options for patients across various stages of life.



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RSC Chairman Jim Wachtman

"We're in a transformative period where complementary vision correction technologies deliver impressive customization and precision," said Jim Wachtman, RSC Chairman. "Combined, these innovations give millions more Americans the option to enjoy life with clear vision without relying on glasses and contacts."

2025 Technologies Transforming Vision Correction

Ray tracing for advanced personalization in laser vision correction.

For the first time in the U.S., surgeons can offer personalized LASIK treatments using ray tracing technology. By modelling the eye's entire optical system from cornea to retina, ray tracing gives surgeons the ability to create a high-fidelity "digital twin" to optimize treatments before surgery. Early clinical(1,2), on the safety and effectiveness of LASIK enhanced with ray tracing technology reports outstanding visual outcomes:

- 100% of patients achieved 20/20 vision at three months
- 89% of patients resulted in 20/16 or better vision

1. He G, Bala C. Ray-tracing-guided myopic LASIK: real-world clinical outcomes. J Cataract Refract Surg. 2023;49(11):1140-1146.

2. Kanellopoulos AJ, Maus M, Bala C, et al. International multicenter, myopic and myopic

Next-generation Excimer Lasers Expand Candidacy

Newly cleared platforms treat myopia, hyperopia, and astigmatism with faster ablation, finer tracking, and advanced profiles that enhance precision and safety. When combined with modern diagnostics, more patients who previously were not ideal laser vision correction candidates may now be eligible.

Visual freedom for a broad range of prescriptions via implantable lenses ([ICL](#)).

Biocompatible implantable collamer lenses placed behind the iris preserve corneal tissue and are well-suited for prescriptions ranging from -3.0 to -20.0 diopters . ICLs are removable, offering flexibility as vision needs change and expanding options for those not suited to corneal laser procedures such as LASIK, SMILE, or PRK.

Premium IOLs Reach New Milestones.

Breakthrough multifocal and Extended Depth of Focus (EDOF) designs deliver high light utilization, enhanced contrast in day and night conditions, improved tolerance to minor refractive error, and a continuous range of vision, setting a new standard for premium cataract surgery.

[Light Adjustable Lens](#) (LAL) Technology Modernizes Cataract Surgery

The FDA-approved Light Adjustable Lens allows post-operative, UV-light fine-tuning so patients can evaluate their vision in real-world settings before locking in a prescription. Recent studies show 70% of nearsighted LAL patients achieve 20/20 or better without glasses, with more than 99% seeing 20/40 or better.

Comprehensive Solutions Across the Lifespan

- Young Adulthood (20s–30s): Personalized LASIK, SMILE, PRK, and ICLs

□ Middle Age (40s–50s): Presbyopia options including monovision laser vision correction and refractive lens exchange

□ Mature Years (60+): Advanced cataract surgery with LAL, EDOF, and multifocal premium lenses

"As a refractive surgeon who started his career with incisional corneal surgery, progressing to an FDA investigator with the excimer laser over the last 20 years, participating in multiple investigational trials with new advanced technologies, I have been an eyewitness to the evolution of refractive surgery in ophthalmology," notes Eric Donnenfeld, M.D. a leading refractive surgeon and RSC Advisory Board member. "Refractive surgery improves patients' vision and their lives safely and effectively. The previous gold standard was to have patients see as well as with their glasses and contact lenses. Today, our goal with advanced technology is to have our patients see better than they did with glasses and to have the surgery be even safer than a lifetime of contact lens wear."

Take Action: Consult a Refractive Surgeon

RSC encourages consumers to seek evaluation from a refractive surgeon, an ophthalmologist specializing in surgical correction of myopia, hyperopia, astigmatism, presbyopia, and cataracts, to identify the procedure that best fits their eye anatomy, lifestyle, and visual goals.

Learn more and find a surgeon:

□ RSC Vision Correction Guides: americanrefrativesurgerycouncil.org/

□ RSC Find-a-Surgeon Directory: americanrefrativesurgerycouncil.org/find-a-surgeon

About the Refractive Surgery Council

Formed in 2010, the Refractive Surgery Council (RSC) is a leading voice in refractive surgery. Members include industry leaders Alcon, Bausch + Lomb, Johnson & Johnson Vision Surgical, RxSight, STAAR Surgical, and ZEISS, as well as medical organizations including the American Society of Cataract and Refractive Surgery (ASCRS), the American-European Congress of Ophthalmic Surgery (AECOS), and the Refractive Surgery Alliance Society. Through research-based education, RSC helps people make informed choices about laser vision correction. Learn more at americanrefrativesurgerycouncil.org.

FAQ

Q1: What are the innovations in vision correction this year (2025)?

Ray-tracing enhanced laser vision correction planning, new excimer platforms, and advanced implantable and light-adjustable lenses. Combined with modern diagnostics, these innovations have broadened candidacy and improved personalization across refractive procedures.

Q2: How does ray tracing impact LASIK treatments?

Using detailed tomography and biometry measurements from high powered diagnostic devices, a digital model ("digital twin") of the patient's optical system is created. Then ray tracing is used to simulate how light travels through the patient's unique eye model. Surgeons use this to plan and optimize the treatment before the procedure, supporting excellent outcomes and personalization.

Q3: How do newer excimer lasers affect safety and outcomes?

Modern lasers offer faster ablation, precise eye-tracking, and refined treatment profiles. Combined with today's diagnostics, this enhances accuracy and may extend eligibility to patients previously considered borderline candidates.

Q4: Who should consider implantable collamer lenses (ICLs)?

ICLs are a strong option for people with a broad range of myopia (approximately -3.0 to -20.0 D) and astigmatism, thin or irregular corneas, or those seeking a reversible, lens-based alternative to corneal laser surgery.

Q5: What makes the Light Adjustable Lens (LAL) different?

LAL IOLs can be adjusted after cataract surgery using targeted UV light. Patients can experience their vision in daily life and fine-tune it to their preferences before the prescription is finalized.

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