Las Vegas Eye Institute Introduces Ray-Traced LASIK: A New Era of Personalized Vision Correction

January 16, 2026

Henderson, NV - January 16, 2026 -
Las Vegas Eye Institute announces the integration of Ray-Traced LASIK into its vision correction offerings, marking a significant advancement in LASIK technology in the United States. The technique, FDA-approved under the name Alcon WaveLight Plus in Spring 2025, represents a major shift in how refractive surgeons approach customized LASIK. The newly published article, Ray-Traced LASIK: What It Is, How It Works, and Who It?s For, explains how this next-generation technology leverages precise light modeling to enhance visual outcomes beyond what was previously achievable.

Ray-Traced LASIK utilizes a combination of high-resolution corneal imaging, wavefront measurements down to 1/100th of a diopter, axial length measurements, and exact visual axis alignment to generate an individualized laser treatment plan for each eye. The approach allows surgeons to more accurately direct light to the exact center of the patient?s vision, addressing a limitation of earlier techniques that centered treatments based on the pupil, which often differs from the actual visual axis. The integration of multiple biometric data points into a single ray-traced profile has resulted in a higher percentage of patients achieving vision sharper than 20/20.

Clinical data from the FDA trial supports the efficacy of the technology. At one year post-procedure, 94.4% of eyes treated with WaveLight Plus achieved 20/20 vision, while 70.2% reached 20/16 and 20.6% achieved 20/12.5. These results are considered notable improvements over earlier generations of LASIK, which relied on wavefront-guided or topography-guided systems with less data integration and lower capture resolution. The article further cites data from European studies?where the technology was introduced earlier?indicating that real-world outcomes often exceed clinical trial benchmarks.

According to Dr. Swanic, Medical Director of Las Vegas Eye Institute and a fellowship-trained refractive surgeon from the Jules Stein Eye Institute at UCLA, Ray-Traced LASIK represents the culmination of years of technological progress in refractive surgery. He emphasizes that while previous platforms like Contoura and wavefront-optimized LASIK remain valuable for specific use cases, Ray-Traced LASIK adds a new level of personalization. The practice has already adopted the Sightmap capture device, which plays a key role in collecting the multidimensional data required for treatment planning.

Candidate selection remains an important consideration. Ray-Traced LASIK is currently FDA-approved for myopic (nearsighted) patients with up to 9 diopters of myopia and up to 3 diopters of astigmatism. This encompasses the vast majority of those seeking LASIK, as over 80% of LASIK candidates at Las Vegas Eye Institute present with nearsightedness within this range. Patients with extreme prescriptions outside the approved range may still be better suited for alternative procedures such as EVO ICL. The clinic continues to perform extensive diagnostics including epithelial mapping, pachymetry, and tomography to determine the safest and most effective treatment path for each individual.

The article also offers historical context, detailing the evolution of LASIK customization platforms?from the now-outdated Visx CustomVue to the iDesign system and Contoura topography-guided treatments. While each generation brought improvements, none had previously integrated all major data points into one comprehensive treatment plan. Ray tracing, a method originally used in computer graphics and optical physics, is now being applied in refractive surgery to optimize the delivery of laser energy and focus light more precisely on the retina.

Las Vegas Eye Institute has been at the forefront of advanced LASIK technologies for more than a decade. The adoption of Ray-Traced LASIK further demonstrates the practice?s commitment to offering scientifically validated, evidence-based solutions tailored to each patient?s unique ocular anatomy. The integration of this technology is part of the Institute?s ongoing effort to deliver high-quality outcomes while maintaining safety as the top priority.

For more information, visit Las Vegas Eye Institute or read the full article, Ray-Traced LASIK: What It Is, How

It Works, and Who It?s For. Reporters interested in interviews or clinical insight into the evolution of customized LASIK are encouraged to contact the clinic for further information or to speak with Dr. Swanic.

###

For more information about Las Vegas Eye Institute, contact the company here:Las Vegas Eye InstituteDr. Matthew Swanic(702) 816-2525lasik@lasvegaseyeinstitute.com10521 Jeffreys St STE 101Henderson NV 89052

Las Vegas Eye Institute

Website: https://lasvegaseyeinstitute.com/

Email: lasik@lasvegaseyeinstitute.com

Phone: (702) 816-2525