

# SMILE Sparks Renewed Enthusiasm for Refractive Surgery

Surgeons, patients, and referring doctors appreciate the benefits of small incision lenticule extraction.

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Refractive surgeons and optometrists who co-manage their patients' care report that offering small incision lenticule extraction (SMILE) with the VisuMax femtosecond laser (ZEISS) is creating renewed enthusiasm for laser vision correction in their practices. Now approved to treat myopia from -1.00 D to -10.00 D and cylinder up to 3.00 D, SMILE has effectively expanded the pool of candidates eligible for laser vision correction.

"Since introducing SMILE with the VisuMax laser in our practice, we've seen a 30% increase in volume of our laser vision correction services, not only because SMILE is an excellent procedure but also because more patients are asking for it," says Y. Ralph Chu, MD, Bloomington, Minnesota. "We've come to realize that some of our patients have been sitting on the sidelines, so to speak, waiting for a new laser vision correction option. They know about LASIK and surface treatments, but they've been hoping for something new and different. For many patients, SMILE is what they've been waiting for."

## Why Patients Like SMILE

"As surgeons, we know how safe LASIK and PRK are, but fear can be a barrier for some patients when deciding if they want refractive surgery," says D. Rex Hamilton, MD, MS, FACS, Santa Monica, California. "They may be concerned that a flap will move after surgery. They may be fearful of the sound of the laser or uncomfortable with the odor emitted during the excimer

ablation. SMILE has a huge advantage in terms of addressing these concerns."

John F. Doane, MD, FACS, Kansas City, Missouri, notes, "Being less invasive than LASIK and having a shorter recovery time than PRK, SMILE causes less discomfort—an advantage that resonates with patients. Over the last 18 months, I've converted most of my patients seeking refractive surgery to SMILE, because I believe I can deliver a great result. I would not be performing SMILE if I didn't feel I was achieving the same quality of refractive outcomes while also providing the benefits of SMILE."

Surgeons report that adding the VisuMax laser to their refractive surgery suite improves the overall patient experience, even when they are performing LASIK.

"The gentle nature of surgery with the VisuMax laser is not exclusive to SMILE, as creating a LASIK flap with it is just as gentle," says Shamik Bafna, MD, Cleveland. "Thus, we can offer patients a more comfortable experience, whether they are best suited for femto-LASIK or SMILE."

Dr. Hamilton agrees. "I've found the overall LASIK patient experience much more comfortable with the VisuMax laser compared with other femtosecond lasers I've used."

## Clinical Advantages

SMILE is a minimally invasive procedure in which the surgeon creates a 60° or 90° incision through which a lenticule of a precise refractive error is removed, effectively flattening the cornea. While

there may be some concern about a learning curve for the surgeon, Kathryn M. Hatch, MD, Waltham, Massachusetts, says mastering the SMILE procedure with the VisuMax laser is similar to learning any new surgical procedure. She recommends studying the medical literature, attending wet labs and trainings, and talking to colleagues who are performing the procedure.

"Surgeons should create a certain number of LASIK flaps to become comfortable using the VisuMax laser," Dr. Hatch says. "The key steps of SMILE, including laser centration, docking, and lenticule dissection, must be done with repetition and consistency in order to develop the surgeon's technique for a seamless procedure."

Noting that the same diagnostic equipment is used whether a patient chooses SMILE, LASIK, or PRK, Jeffrey M. Augustine, OD, Cleveland, notes, "The most important parameters of the preoperative refractive analysis for SMILE are the amount of sphere, the amount of astigmatism, and the location of the axis. A meticulous refraction helps ensure a great result. To put a refractive surgeon's spin on the old carpenter's rule: Refract twice, laser once."

Importantly, SMILE has been found to be an effective, stable, and safe procedure for treating myopia and myopic astigmatism.<sup>1</sup> This consistency is a definite advantage for surgeons. "With the SMILE procedure, my enhancement rate is very low," Dr. Hamilton says. "I believe part of the reason for this is because SMILE is not dose-dependent or affected by the cosine effect that we see with many excimer laser

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ablations. To date, having performed more than 300 SMILE procedures, I've needed to enhance only one eye."

People considering refractive surgery are typically researching their options through various sources, paying particular attention to reports about new techniques and technologies. "Over time, you will find that many people, through word of mouth, will seek you out to learn about SMILE," Dr. Bafna says.

## Enhanced Collaborative Care

Like most surgeons, Dr. Chu works closely with optometrists in the community. "I think one of the reasons why they like SMILE is because it gives their patients a comfortable postoperative course," he says. "The safety of the procedure, which is essentially a flapless technique, provides peace of mind not just for the surgeon, but also for the co-managing doctor and the patient."

Bobby Saenz, OD, MS, FFAO, San Antonio, adds that patients recover quickly after SMILE. "On postoperative day 1, you can expect patients to be comfortable and happy with their vision," he says. "At first glance, the cornea will likely appear as if nothing has happened to it. You will have to lift the upper lid to examine the superior small incision."

In addition, Dr. Hamilton notes, "Because the VisuMax interface doesn't touch the conjunctiva, there's no subconjunctival hemorrhage following SMILE. The eye looks as if nothing was done."

Familiarizing referring and co-managing doctors with SMILE is essential to enable them to educate patients and manage pre- and postoperative care. Surgeon Konrad W. Filutowski, MD, Lake Mary, Florida, works with more than 200 optometrists in his area. His co-management development managers help keep the professional community apprised of new developments in ocular surgery such as SMILE. "To further advance our educational efforts, we recently hosted a group of local optometrists in our office for a lecture, dinner, and a demonstration of live SMILE surgery," he says.

Dr. Doane finds that sharing his experiences with local optometrists keeps them involved and enthusiastic. "I usually discuss SMILE with them and emphasize how motivated and optimistic I am by the outcomes I have achieved, not only for the short term but also for the long term," he says.

Maintaining strong professional relationships within the ophthalmic community creates an environment for collaborative care, which benefits surgeons and optometrists alike. "Vision correction surgery is an exciting time in a patient's life," Dr. Chu says. "Sharing the perioperative care and excitement of refractive surgery further solidifies the long-term relationship with these patients for co-managing doctors."

## New Opportunity to Customize Laser Vision Correction

While LASIK and PRK are established refractive surgery options, top surgeons have quickly integrated SMILE into their offerings, as they recognize this unique procedure fills a need. "We have incredible technology to perform LASIK and PRK, but for certain patients in certain situations, SMILE appears to have some advantages," Dr. Hamilton says. "I feel it's important to have the full line of equipment available to customize treatments for different types of patients."

Dr. Augustine notes, "Overall, the concept of a minimally invasive surgery is appealing to patients. A one-step, one-laser process is easy to understand."

Dr. Doane considers SMILE the first true competitor to LASIK. "With 12-month data equivalent to the best data we have for LASIK to date,<sup>2</sup> I believe SMILE has the potential to change our approach to refractive surgery," he says. ■

1. Blum M, Täubig K, Gruhn C, et al. Five-year results of small incision lenticule extraction (ReLEx SMILE). *Br J Ophthalmol*. 2016;100(9):1192-1195.  
2. Data on file.

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