



LASIK Refractive surgery thought leaders, part 1

by Leslie B. Sabbagh News Editor

LASIK enjoys growing use around the world. The debate now centers on the range of errors that ought to be corrected.

There are those refractive surgeons who remain cautious when it comes to adopting new technology, specifically laser in situ keratomileusis, taking a wait-and-see attitude. The reticence of some, however, hasn't stopped converts from swelling the ranks of those who describe flap-and-zap as their procedure of choice.

With reported 1-year postoperative data looking at least as good as those for photorefractive keratectomy, the number of U.S. and international refractive surgeons adding LASIK to their armamentarium continues to grow. Driven by improved microkeratome technology, increasing consumer demand, and a core of well-trained teachers, general ophthalmologists as well as established refractive surgeons say they are discovering the joys of delivering good, quick uncorrected acuity to appreciative patients.

Few question PRK's ability to achieve good results in simple myopia of up to 7 D. After that, however, visual outcomes are less predictable. In general, high myopes can expect an increase in significant anterior stromal haze, a greater incidence of retreatment (10% to 20%), and optical aberrations.

These concerns with PRK, along with LASIK's lower postoperative pain and quicker visual rehabilitation, have driven refractive surgeons to learn LASIK and promote it in their practices.

Ophthalmologists have also been quick to point out that LASIK, unlike surface PRK, is one refractive area unlikely to become available to optometrists.

The wow factor

Although opinions vary, it is generally accepted that acquiring the surgical skills for LASIK is certainly within the reach of experienced corneal surgeons. Surprisingly,

many refractive surgeons we polled who were initially hesitant about the surgery found learning LASIK and dealing with intraoperative hitches less troublesome than anticipated.

"I was skeptical of the relative merits of LASIK versus PRK, having refined my nomograms and zonal distribution for PRK," said Noel A. Alpines, MD, of Melbourne, Australia. "I didn't want to 'rejig' the system after hearing of other surgeons' initial LASIK experiences and their learning curves." But he was pleasantly surprised to find his learning curve and conversion to LASIK shorter than expected: "I became convinced of its benefits after 6 days."

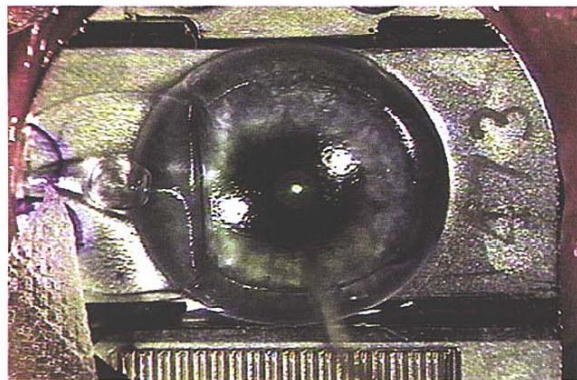


Alpines: The return of the "wow" factor.

The return of the "wow" factor and the elimination of haze swayed him to use LASIK in 80% of cases, recommending it for myopia greater than -6 D and up to -18 D and for more than 3 D of hyperopia in patients less than 55 years old. "I have successfully corrected hyperopia up to 9 D with hyperopic LASIK," he said.

Some surgeons use LASIK to correct virtually all degrees of myopia. Jose L. Güell, MD, of Barcelona, Spain, uses LASIK as "the only procedure for myopia and astigmatic corrections from -0.5 D to -14 D." His main reasons for embracing LASIK include quick recovery of useful vision, non-intraocular approach and the ability to use the same procedure for a wide variety of clinical situations, including low hyperopia, and ametropia after another corneal or intraocular surgery.

Robert K. Maloney, MD, of Los Angeles, prefers LASIK for all



Intraoperative photo of LASIK pretreatment to counteract central islands.

patients with myopia and myopic astigmatism from -0.5 D to -15 D. "Above 15 D," he said, "LASIK seems relatively ineffective with significant regression that is resistant to enhancement."

He believes PRK is a reasonable procedure for less than -4 D, "for those patients and physicians willing to tolerate the postoperative pain."

While each surgeon has his own reasons for choosing a procedure, those proposed by Marc A. Mullie, MD, of Montreal, are intriguing. He believes the corneal epithelium was not meant to touch the corneal stroma, and that Bowman's membrane, in addition to separating the two layers, also enhances the optical clarity of the image formed by the cornea.

"The main reason we abandoned PRK after 4,000 cases is that 5% of PRK patients developed corneal scarring and/or marked regression," he said. "A corneal scar in the visual axis is a significant complication and one that is very difficult to re-treat."

While 9% of Mullie's PRK patients refused treatment on the second eye, none of his LASIK patients refused.

In Paris, Joseph A. Hagège, MD, agrees with Mullie that conservation of Bowman's membrane is important. He prefers LASIK starting at -4 D for its better predictability and healing intrastromally.

This is the first in a three-part series based on interviews with refractive surgery thought leaders around the world. Next issue will focus on PRK, followed by RK in November.