

# An Economic Approach to Innovation

The demand for laser-assisted cataract surgery in this practice is growing.

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AND MASSIMO GUALDI, MD**

Our experience with laser-assisted cataract surgery (LACS) began in March 2012. Not knowing exactly where it would lead us financially was unsettling; we believed in the technique but were fearful of the significant investment required. Today, we can confidently say that we are pleased with our place in the market and with our patients' results.

In Italy, there are many barriers to adopting new technologies and techniques, but we strive to be on the forefront of innovation. Just as we were pioneers in the transition from extracapsular cataract extraction to phacoemulsification in our country, we are now pioneers in the transition to LACS (Figure 1). Despite initial criticisms regarding the increased surgical time, learning curve, and cost associated with this technique, we could not resist a bladeless lens-based surgical technique that promised better accuracy and standardization of results than manual techniques. We purchased the LenSx Laser System (Alcon) because we felt that, with this widely used platform, we would have opportunities to share our experiences with other international surgeons.

## AN ANSWER TO PATIENT NEEDS

As patients become better informed of their treatment options and more demanding regarding postoperative outcomes, the refractive elements of cataract surgery become more important to achieving economic success. A perfect capsulotomy and reproducible incision construction, both obtainable with a femtosecond laser, allow us to maximize outcomes with premium IOLs. Additionally, we can now execute safer and more precise



Figure 1. The laser-assisted cataract surgical staff of Studio Oculistico Gualdi (D.O.M.A srl).

arcuate incisions thanks to new nomograms, making cataract surgery more reproducible.<sup>1,2</sup>

The popularity of the bladeless cataract surgery concept has intensified through patient use of social media, and we are now treating more patients who desire a customized surgical strategy. We are also better equipped to treat challenging cases, such as patients with cornea guttata or corneal or macular edema, with the femtosecond laser.<sup>3,4</sup>

## INCREASE IN DEMAND, INCREASE IN PRICE

After initial difficulties during the learning curve, we are finally enjoying the benefits of LACS. Thanks to our presence on the Internet, word-of-mouth referrals, favorable results, and the rarity of complications, the demand for this

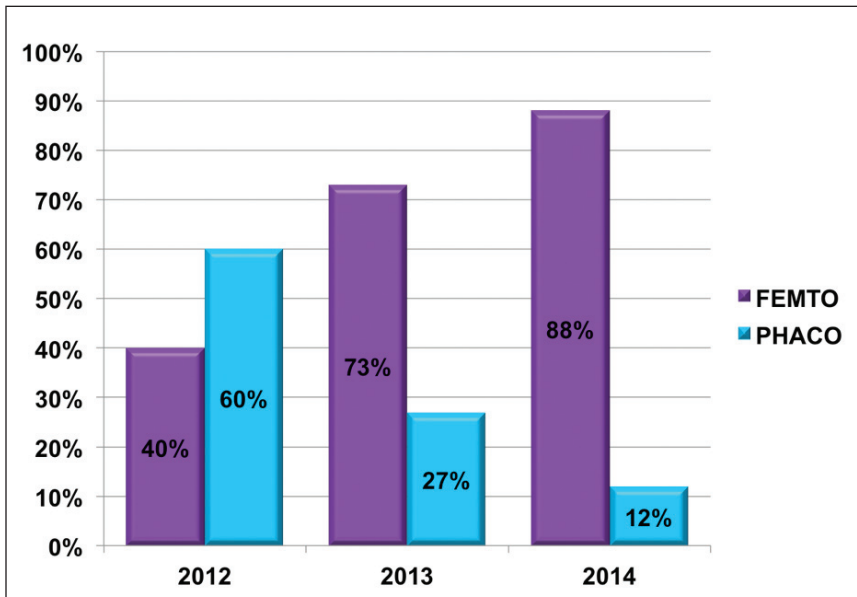


Figure 2. The growth of LACS at Studio Oculistico Gualdi since 2012.

bladeless procedure has increased. Likewise, our technique has evolved thanks to recent software updates and the advice of fellow surgeons who have shared their experiences and enthusiasm through published literature and research.<sup>5-11</sup>

To overcome the economic cost associated with the laser system, its patient interface, maintenance contracts, and our additional staffing needs, we have increased the price of cataract surgery. We offer a premium cataract surgery package to all patients, in that we propose the appropriate type of surgery and IOL according to the characteristics of the eye (eg, pupil size, astigmatism, macular status) and the patient's lifestyle and needs.

This package includes the cost of the operating room; the IOL; the staff; anesthesia and nursing care; a postoperative kit with antibiotic-steroid eye drops, artificial tears, protective cup with plaster, and disposable sterile gauze to clean the eyes; and postoperative follow-up on days 1, 7, and 30. In the event that a patient complains of nuisance or disorders related to the intervention in the first few months postoperatively, we schedule a free consultation. Also, instead of paying for individual preoperative tests (eg, endothelial microscopy, optical coherence tomography, topography, pupillometry), patients pay a one-time fee for an overall eye exam that includes all diagnostic testing. This seems to have a positive impact on our practice's image, as demand for surgery and word-of-mouth referrals have both increased.

We do not offer multiple packages or tiered pricing because we believe over-promising is a risky business. Even

LACS can produce intraoperative complications and unexpected postoperative results such as biometric errors, residual astigmatism, halos and glare, and disorders of the ocular surface. As we see it, a tiered pricing strategy with LACS at the top can cause patients to have higher expectations for this procedure, which, especially during the learning curve, may not be achievable. Therefore, we convey the same attitude for LACS as we do for routine phacoemulsification and for the choice of premium IOLs that we do for standard IOLs. Because the charge for these surgeries is the same, there is less financial gain and increased costs for the practice, but the trade-off is greater patient satisfaction.

We would like for 100% of procedures to be performed as LACS, but not all patients are good candidates for the procedure; for example, those with small pupils, corneal opacities, deep-set eyes, or difficulty cooperating are better off with routine cataract surgery. Our goal is to meet patient expectations, and we can achieve this only by suggesting the safest and most effective procedure for each individual. We are confident in both procedures, as our traditional phaco technique can still achieve great results.

## CONCLUSION

We have offset the initial high costs associated with LACS by increasing our pricing strategy for cataract surgery. Even during our learning curve, our economic situation had a favorable outlook, thanks to our presence on the Internet (social media) and at domestic and international conventions. Moreover, the addition of this innovative technique at our practice has been accompanied by increased patient satisfaction and word-of-mouth referrals. It has brought a greater influx of patients, not only for LACS but also for other treatments including LASIK, phakic IOL implantation, corneal collagen crosslinking, intrastromal corneal ring implantation for keratoconus, outpatient care, glaucoma management, and intravitreal injections.

It is expected that the introduction of any innovative technique, especially in a country such as Italy, can be met with skepticism. In our experience, the same phenomenon that occurred with the transition from LASIK flap creation with a microkeratome to femtosecond LASIK is taking place with the transition from routine phacoemulsifica-

## TAKE-HOME MESSAGE

- To overcome the economic cost associated with the femtosecond laser system, its patient interface, maintenance contracts, and additional staffing needs, one can increase the price of all cataract surgeries.
- New technologies can be accompanied by increased patient satisfaction and word-of-mouth referrals.
- Aim to convey the same attitude for laser-assisted cataract surgery as for routine phacoemulsification—without differentiating the two techniques—and for the choice of premium IOLs as for standard IOLs.

tion to LACS (Figure 2). Initial difficulties attributed to the learning curve, the slight prolongation of surgical time, and the increase in costs are offset by a greater level of safety and precision in cataract surgery. ■

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