

Tips for Femtosecond Laser Cataract Surgery

Pearls for smoothly integrating a new laser and quickly achieving profitability

By Jared R. Younger, MD, MPH, and Regina Boore, BSN, MS, CASC

A femtosecond laser is a major capital investment for any ASC. After much planning and deliberation, our private ophthalmic ASC in Newport Beach acquired a laser for cataract surgery a little more than a year ago. Since then, we have steadily increased our monthly volume and revenue projections significantly — and learned some lessons along the way that could help others who are just beginning this journey.

Feasibility Planning

Surgeons, ASC administrators, and nursing leaders should collaborate, investing time and resources into projections and planning before implementing any new major technology. It is critical to identify which surgeons will likely adopt the technology. Recently, laser-assisted cataract surgery (LACS) has become established enough that most cataract surgeons know

whether they want to perform it. At our center, about 10 of our cataract surgeons perform 80% of the total cataract procedures. More than half of those surgeons are fully committed to growing a refractive cataract practice. We asked these surgeons to exercise due diligence before making a recommendation to the full partnership regarding a laser purchase.

To ensure LACS made good financial sense for all the partners, we estimated a realistic number of cases per month — based on partner interest — and cost per case, then established financial projections based on usage fees required to cover those costs. We considered total costs to the center for laser financing, laser room build-out, technical support, preventive maintenance (starting in year 2), and additional staffing and supplies, divided by the target number of cases per month to determine the per-case cost.

We also planned to market the laser to external surgeons who might be interested in using the laser on an open-access basis. A femtosecond laser combined with an efficient center flow can be a powerful incentive to attract surgeons to the ASC. As it turned out, our internal utilization has been strong, so recruiting new surgeons hasn't been as high a priority as we originally expected. However, it still remains a part of our next phase of growth.

In the first 6 months after implementation, 14% of the cataract surgeries performed in the ASC were LACS cases. In the most recent 6 months, that rate had more than doubled (Figure 1). We exceeded our target number of

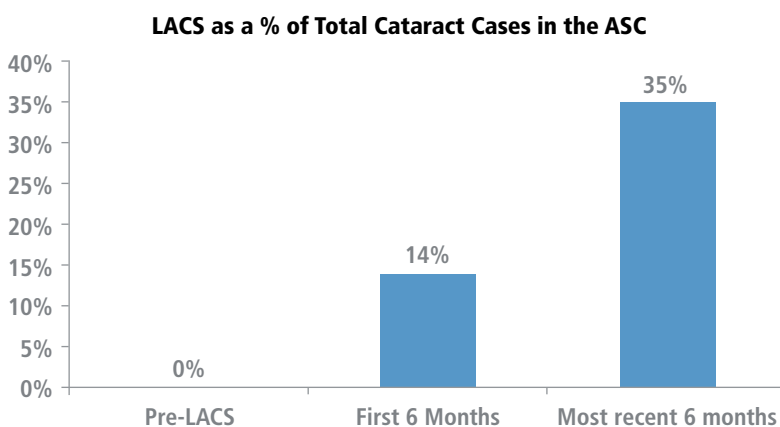


Figure 1. Utilization of the laser has steadily climbed and now accounts for about 35% of all cataract cases performed in Dr. Younger's ASC.



Figure 2. Newport Bay Surgery Center has a fixed-bed laser in a dedicated laser room with an excellent nursing staff controlling the flow to the operating rooms. The laptop computer on top of the laser records every LACS case and a monitor displays the surgery for observers.

cases per month within the first year, which allowed us to lower the user fee for partners while still ensuring that the laser would contribute to the bottom line.

Technology Choices

Once we decided to acquire a femtosecond laser, we established a committee of four surgeons to evaluate different platforms. In the end, we chose the Catalys laser (Abbott Medical Optics). In researching platforms, our top considerations were ease of use, ability to customize the treatment (i.e., easily adjust the laser parameters), and ability to enhance the patient experience. A fast laser with a gentle liquid interface means patients rarely have any discomfort during docking or unsightly postoperative subconjunctival hemorrhage.

Beyond those priorities, we also considered the physical setup of the

laser. There is great value in having a dedicated laser room — as opposed to placing a laser in the operating room — because the flow is more efficient and the laser is accessible to more surgeons without tying up the OR. We built a dedicated laser room (Figure 2) that feeds three ORs.

When building out a laser room, be sure the room can accommodate any one of the laser platforms (including actual footprint, HVAC needs, and electrical requirements), for maximum flexibility. All companies will provide these specifications.

Implementation Pearls

Expecting to maintain your current schedule immediately after introducing a new component to your cataract procedure is unrealistic and will create stress for all. For the first 3 months after implementing the laser, we added 15 minutes to each scheduled laser

cataract case. This gave us time to get comfortable with the new laser and the choreography of staff and surgeon between the laser suite and OR. After the 3 months, we resumed our original block schedule with ease.

We initially cross-trained two nurses from our staff to work as laser technicians, and now have several others cross-trained and laser-certified. This allows our pre- and post-op nurses to “cover” the laser room when in use. We found this to be more efficient and cost effective than hiring a dedicated laser technician, because the RNs can be utilized elsewhere when the laser is not in use. We pull an expediter — a nurse extender — into the laser room to manage the patient and the bed while the laser-certified RN manages the laser. There is no anesthesiologist present.

This staffing model works for our busy center. It allows us to maintain

the economy and efficiency our surgeons expect.

We did not find the fixed bed to be an impediment to our efficiency. The expediter positions the patient and gets everything correctly aligned prior to the surgeon entering the laser room. That has paid off in terms of work flow, reducing total surgeon time in

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the laser room to less than 2 or 3 minutes in most cases. Now that we use the laser for a third of all cataract cases, our staffing has increased by about 0.8 FTE from pre-LACS levels.

Also, in the first few weeks after installing a new laser, ASCs can expect to see some system error codes because minor adjustments will be required as the laser “settles.” We found it helpful to connect a laptop to the laser’s HDMI port and record every case so that any issues or questions that came up could be relayed exactly to the service technicians. We have continued recording cases for the educational value.

The vast majority of laser cases are absolutely seamless. But when there is a unique case, it is beneficial to be able to show a video to other surgeons and staff so they can see how the situation was handled.

Finally, we found that we needed to adjust our plans for sedation. Initially, we gave patients 0.5 mg of alprazolam prior to the laser treatment, but we quickly discovered that this left some patients overly sedated, so we decreased

the dose by half. This ensures that patients are comfortable, but can still maintain fixation under the laser.

Enjoying the Rewards: The Surgeon’s Perspective

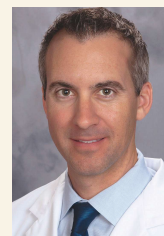
Now that LACS is well integrated into our ASC, we are seeing the rewards of that decision, both in terms of clinical

outcomes and business success. From a business perspective, having a laser has increased my partners’ and my conversion rates and changed the mix of cases in our ASC. Without a laser, conversion rates are largely based on toric and presbyopia-correcting IOLs, with some surgeons offering incisional astigmatism management as a standalone option. With LACS, it is much easier to talk to patients about managing astigmatism as part of a distance vision refractive package. In fact, my practice’s largest increase in refractive cataract surgery conversions has been among patients who have a monofocal lens implant but want astigmatism management to decrease the need for eyeglasses for distance, and the laser has dominated the pre-op conversation.

About two-thirds of my personal cases are now LACS cases. I find these to be much less stressful than manual cases, in large part due to the consistency of the capsulotomies. With LACS, my typical capsulotomy time is 1.1 seconds, with no tears or significant tags. The arcuate incisions are also of con-

siderable value to me clinically. As they are guided by OCT imaging, they are more reproducible and more accurate. I often take post-op slit lamp photos to show the patients or family how precise a laser arc is. Finally, it continues to be a pleasure to “conquer” the lens without really needing to “divide.” The laser essentially eliminates the need to groove and sculpt in most cases. I use a sextant pattern for all cases and then add softening for more dense nuclei. My opinion is that a well-implemented laser takes surgery centers to the next level, and makes great surgeons even better.

My practice trademark is Discover Younger Vision, and we focus on creating a personalized vision plan for each patient. I feel strongly that patients are no longer coming for simple cataract removal. Rather, they want a better visual outcome, typically without needing eyeglasses, and they also want a great patient experience that makes them feel good about their decision. For myself and my ASC partners, laser cataract surgery has been an important part of providing that experience for our patients. ■



Jared R. Younger, MD, MPH, practices at Orange Coast Eye Center in Fountain Valley, Calif. Contact him at youngerjared@gmail.com.



Regina Boore is administrator at Newport Bay Surgery Center and President of Progressive Surgical Solutions, an ASC consulting firm based in San Diego, Calif. Contact her at regina@pss4asc.com.