Where Do I Put This Laser?

The unit's location requires careful consideration.

BY WILLIAM W. CULBERTSON, MD

arefully planning the installation of your femtosecond laser for cataract surgery can increase your rate of successful treatment and minimize disruptions to your workflow. A number of facility-specific and system-specific considerations must be addressed.

IMPORTANT CONSIDERATIONS

The four important considerations with regard to the unit's placement are timing (ie, the interval between laser treatment and the actual cataract procedure), logistics (ie, the movement and roles of your patients, your staff, and yourself), the physical space needed to accommodate and operate the laser, and the extra expense involved in providing this laser space. Each issue affects the others. Your practice's successful offering of laser cataract surgery depends on optimization of the laser's setting and operation. Because none of the current platforms is readily movable from case to case, your laser will be permanently positioned wherever it is installed.

TIMING

After the laser opens the anterior capsule and exposes the lenticular material to the anterior chamber, there appears to be a period—perhaps 30 minutes—after which the pupil may begin to constrict. If the laser is located in a refractive surgery center off site or on another floor of the hospital, for instance, it will become logistically difficult to move the patient to the OR in a timely fashion. Ideally, the laser should be located near the OR so that a minimal amount of time elapses between the laser treatment and cataract surgery. Close spatial and temporal proximity will also interfere less with your workflow.

LOGISTICS

Overall, you will spend an additional 5 to 8 minutes per case for laser cataract surgery versus your usual manual cataract procedure. Again, the existing platforms are large and heavy, so the patient first must undergo laser pretreatment and then be moved to the OR for cataract surgery. Maintaining efficiency—your own and in the OR—requires optimizing the movement of your patients, your staff, and yourself.

The three possible physical locations of the laser depend on the specific surgical setting in which you operate (Table). They are inside the OR, outside but adjacent to the OR, or at a location remote from the OR suite, perhaps on another floor of the same building or in another building. The first of these locations minimizes the patient's movement from the laser to the operating microscope, but laser cataract surgery would probably then be limited to that room alone. If you use only that OR and no other surgeons will be using the laser on the same day, this arrangement could be possible. An advantage of this setup is it does not require an additional "build out" or outside space.

If positioned outside but in close proximity to the ORs, the laser may be used for any patients undergoing laser pre-

TABLE. THE PROS AND CONS OF TWO LOCATIONS FOR THE FEMTOSECOND LASER		
	INSIDE THE OR	JUST OUTSIDE THE OR
Advantages	 Minimal movement of the patient Short time between laser surgery and the cataract procedure No special "build out" required 	 More options for the flow of patients Multiple surgeons can use one laser One laser can "feed" multiple ORs Laser does not tie up an OR
Disadvantages	 This OR is the only room in which laser surgery can be performed Limited options for the flow of patients No access to the laser when cataract surgery is being performed in the OR 	 Special build out may be required Greater movement of the patient required

treatment, no matter the OR in which they will have cataract surgery. An OR will not be tied up, as it would be in the first scenario. If you have two or more ORs at your disposal, then you could pretreat a patient with the laser and then proceed with an already pretreated (or untreated) patient's surgery while the other patient is moved to the OR. This strategy would optimize the use of the laser and ORs as well as your time. It would also allow another surgeon to have access to the laser while you are in the OR with your patient.

As touched on earlier, performing the laser pretreatment in a location distant from where the cataract surgery is to be performed will present significant logistical difficulties and delays. The patient must be moved from the laser area to the OR, and you will be similarly slowed.

SPATIAL REQUIREMENTS AND COSTS

Current laser units require a working area of approximately 10 by 10 feet and a dedicated power supply. There should be space around the laser in which to move the patient or surgical gurney and surrounding access for you and your staff. Local and national medical facility requirements for the laser's use may apply as well. The stretcher or integrated table must be stable to prevent movement of the patient's head or detachment of the eye from the laser during treatment.

There are obvious costs to providing space for the laser. They may include office design, permits, and construction expenses. If space is available near the ORs, then you will not need to pay for a build out.

CONCLUSION

The opportunity to offer laser cataract surgery is exciting, but first, you must figure out where to physically locate the system. Logistical planning involves the detailed coordination of your facility's capacity (eg, type of facility, laser's location, number of ORs), equipment, people (you, your staff, your patients), and timing. Careful consideration will maximize your successful integration of this technology.

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