

Enhancement Surgery: Patient Tips

A checklist of questions to help ease patient fears, plus tips and considerations to select the best surgical approach.

BY ARTHUR B. CUMMINGS, MB ChB, FCS(SA), MMed (OPHTH), FRCS(EDIN)

LASIK or surface ablation enhancement surgeries may technically be similar to primary LASIK or surface ablation procedures for the surgeon and the surgical team. For the patient, however, the procedures are fundamentally quite different. For this reason, we have a separate informed consent for enhancement versus primary LASIK or surface ablation patients. Similarly, patients having corneal laser surgery as a top-up to an intraocular procedure also look at the enhancement procedure from a slightly different perspective.

As with all procedures, ideally the patient should understand the consent form for enhancement surgery fully. With a primary procedure, the motivation to undergo surgery is stronger and the risk-reward relationship better. A typical thought process for a patient undergoing surgery for the first time may be: "I can't see well. The risks are low. I have a lot to gain with the surgery." The thought process for an enhancement patient, however, is closer to: "My vision could be a bit better. The risks are low. I potentially have something to lose."

Before enhancement surgery, patients are often less fearful of the unknown. But unlike before the primary procedure, they are now able to look around the prep room and see quite well. This can be unnerving for patients, who may be questioning their decision to undergo a second procedure. Below is a checklist of questions to ask yourself when considering an enhancement procedure and tips I have found helpful in my practice.

QUESTIONS

No. 1: Is the enhancement justified? Ask your patient if he or she is prepared to wear glasses to remedy the residual refractive error. If the answer is: "Yes I would," "Yes I would when driving at night," or something similar to these responses, the patient qualifies for an enhancement because his or her visual condition is bothersome enough to justify

wearing glasses on occasion. If the answer is "Never" or something similar, the residual error is simply not bothering him or her enough to justify surgery. I find it difficult to endorse surgery if the error is not great enough in the patient's mind to warrant the use of glasses.

No. 2: Do I treat one or both eyes at a time? If the residual error is myopic and very small and the patient is approaching the age for presbyopia onset, I often treat one eye at a time. With this strategy, the patient can decide on surgery in the second eye after he or she is happy with the first. When regression is greater and the patient is more myopic (greater than 0.75 D of sphere) or hyperopic, however, I prefer to enhance both eyes simultaneously, provided:

- the initial procedure was LASIK and a LASIK enhancement is planned with flap lift; or
- the initial procedure was surface ablation and enhancement is also planned as a surface ablation.

If the enhancement is done with surface ablation over a previous LASIK procedure, I tend to treat one eye at a time for two reasons:

- the postoperative course can be quite rocky in these cases; and
- the vision and refraction can occasionally fluctuate wildly and can take 3 to 6 months to settle down.

In these cases, I typically treat the second eye once the patient is satisfied with the first eye and vision has improved.

No. 3: How do I treat the enhancement? Is it better to conduct a flap lift and perform LASIK or to use surface ablation? In the April issue of *CRST Europe*, five surgeons discussed their preferences regarding this topic. I will not repeat what was covered in the article; however, considerations include the error to be corrected, method of correction (wavefront-optimized, wavefront-guided, or topography-guided), presence of dry eye disease, residual corneal thickness, and how long ago the initial procedure was performed.

TAKE-HOME MESSAGE

- Separate informed consents for enhancement versus primary LASIK or surface ablation patients are suggested.
- Deliver well thought out answers to your patients' questions.

No. 4: Will the patient need another enhancement in the future? Most of my patients who now require enhancement surgery had their initial surgery many years ago. The current enhancement rate with the WaveLight EX500 laser (Alcon Laboratories, Inc.) is fewer than 1% at the 6-month postoperative interval following the primary treatment (personal data). Simple flap-lift enhancements are not common with today's lasers. For those cases treated years ago, however, it is legitimate to ask whether enhancement will be needed again in the future. I always look at the keratometry (K) readings in any patient undergoing enhancement surgery and compare them to the K's when the patient was seeing perfectly and the refraction was around plano. Nine of 10 times, the K's do not change and the cornea has been stable despite the change in refraction. The refractive shift is therefore due to lenticular changes, axial length changes, or often simply nothing more than dry eyes.

When deciding on an enhancement method, ensure that the ocular surface is in good shape before making the call. It is reassuring for patients to hear that their corneas have been stable throughout the years following surgery.

No. 5: Was the regression of refractive effect following the initial procedure caused by a sinister condition? Further laser surgery should not be performed on someone who has developed ectasia, for example, and therefore it is crucial to exclude sinister causes that may be responsible for the change in refraction. These include ectasia, dry eyes, early-onset cataract, the use of certain medications such as corticosteroids, and diabetes.

TIPS AND CONSIDERATIONS

No. 6: Warn patients about the risks associated with enhancement. Some risks, such as epithelial ingrowth, are far more common with enhancement surgeries than with primary LASIK. Such risks must be explained to the patient in detail. Namely, how often do they occur in your hands, how do you manage the risks, how can they impact the postoperative course, and how do they affect the risk-benefit ratio? Further risks include dry eyes, postoperative infection, and ectasia. Many of these issues finally determine the choice of procedure (under the flap versus on the flap) used for the enhancement.

No. 7: Measure and document corneal flap thickness. Corneal pachymetry is an important consideration,

WEIGH IN ON THIS TOPIC NOW!



Direct link: <https://www.research.net/s/CRST9>

1. When a patient requests surgical enhancement for residual refractive errors, I prefer to:
 - Perform LASIK enhancement
 - Perform surface ablation enhancement
 - Refer the case to another surgeon
 - Depends on the case
2. I have a separate informed consent form for enhancement versus primary LASIK or surface ablation patients.
 - Yes
 - No

and these measurements help with the decision-making process of selecting a procedure. When it comes to making decisions like these at a later date, it is best to know what the flap measurements were on the day of the initial surgery. The residual corneal bed must be at least 250 μm following primary LASIK or LASIK enhancement procedures. In fact, today most surgeons prefer at least 270 μm . If LASIK is chosen for enhancement, the residual cornea will be thinner because the cornea is ablated under the flap. If surface ablation is selected, the flap is lasered and therefore it (and not the corneal bed) becomes thinner.

CONCLUSION

There are certainly more considerations for considering enhancement procedures than described here, but the issues mentioned above are foremost in my mind when helping patients with their decisions. Delivering a well thought out answer when a patient wonders, "Should I or shouldn't I do the enhancement surgery?" leaves the patient feeling confident and leaves me feeling that I have counseled him or her to the best of my abilities. ■

Arthur B. Cummings, MB ChB, FCS(SA), MMed (Ophth), FRCS(Edin), practices at the Wellington Eye Clinic & UPMC Beacon Hospital, Dublin, Ireland. Dr. Cummings is an Associate Chief Medical Editor of CRST Europe. He states that he has no financial interest in the material presented in this article. Dr. Cummings may be reached at tel: +353 1 2930470; fax: +353 1 2935978; e-mail: abc@wellingtoneyeclinic.com.

