

THE FUTURE OF REFRACTIVE SURGERY INCLUDES LENS-BASED OPTIONS

Expanding your repertoire, meeting a broad range of patient demands, and achieving excellent postoperative outcomes all involve the incorporation of lens technologies.

BY NEDA SHAMIE, MD



Most recently, interest in refractive surgery is increasing. In this COVID-19 era, patients want to rid themselves

of their foggy glasses, avoid frequent eye-touching, and reduce contact lens irritation with increased computer use and screen time. We have many surgical options for these patients, and among the most compelling is lens-based refractive surgery. Implanting a phakic IOL preserves the cornea, does not induce dry eye syndrome,¹ has a wide range of indications, and can be used in many broad patient groups.

PERSONAL EXPERIENCE

During training and early in my career, I did not seek out opportunities to perform phakic IOL surgery. This changed about 3 years ago, when I joined Maloney

Vision Institute (now Maloney-Shamie Vision Institute). At that time, I was able to expand my repertoire to include the Visian ICL (STAAR Surgical). Looking back, I regret not having ventured into performing this lens-based procedure earlier in my career (Figure).

To truly position yourself as a refractive surgeon, you need to have the whole spectrum of options available to your patients, and that includes lens-based technology. Many patients have a really enthusiastic response to the option of the Visian ICL.

As refractive surgeons, our mindset has changed with the advent of premium lenses for cataract surgery. We now finally understand what it means to matchmake our patients to the right option for them so that they reap the full benefits of the surgical procedure. We spend time educating patients and advising them

on their best options, and we take into account their lifestyle needs, the health of their eyes, and the physiology of their eyes.

PRESERVING THE CORNEA

Implanting the Visian ICL is not a challenging surgery, and it is absolutely life-changing for patients. As a cornea specialist, I appreciate that the Visian ICL preserves the cornea.

In patients with -10.00 D myopia who have adequate corneal thickness, for example, LASIK is possible but it can also cause significant visual aberrations, nighttime glare, and halos. Alternatively, these patients could do very well with the Visian ICL. In my hands, within a few days of surgery, they typically see 20/20 or 20/15, which is an amazing result.

I also suggest the Visian ICL in patients with moderate to severe dry eye. As a cornea specialist and a dry eye specialist,



Figure. Dr. Shamie prepares the ICL (A). The ICL is implanted into the eye (B). The lens in situ (C).

“As a corneal specialist, I appreciate that the Visian ICL preserves the cornea.”

I’ve been really excited about the ability to offer the Visian ICL to patients who have dry eyes that are refractory.

When patients’ motivation to get out of their contact lenses is because of dryness, irritation, and lack of tolerance, that is immediately a red flag. I’ve trained our technicians to start the discussion about the Visian ICL right off the bat. These are patients whose corneas have already been traumatized. In patients who have been long-time contact lens users, have had chronic inflammation, have had contact lens-related neurotrophic keratopathy, and have had signs of dryness that are persistent even after they take out their contact lenses, I don’t want to touch the cornea. I commonly say to these patients, “Your cornea is screaming for help. Why not go behind it and fool it with a lens-based solution that does not involve the cornea?”

Another patient group that generally does well with phakic IOLs is those with astigmatism, and the availability of the Visian Toric ICL simplifies the process for them. Previously, when ICL patients had more than 1.00 D astigmatism, an enhancement with LASIK, for example, was required for astigmatism. Now with

the Toric ICL, we can treat patients with astigmatism safely and effectively in one simple procedure.

The ICL is also an option in patients with stable keratoconus after CXL. These patients are contraindicated for LASIK, but they do rather well with phakic IOLs.

ENTRY POINT WITH THE ICL

Historically, for most surgeons, the entry point with the Visian ICL was -10.00 to -12.00 D myopes who otherwise wouldn’t have surgery in the hands of that surgeon. The excellent postoperative results and miraculous quality of vision that patients have postoperatively would help the novice ICL surgeon to expand the scope of the procedure to a broader range of patients, including offering it to patients with lower levels of myopia.

The technique of lens-based surgery in the form of refractive lens exchange is very similar to that of cataract surgery. For cataract surgeons who also perform refractive surgery, it’s very easy to jump right into performing refractive lens exchange. There is a learning curve with the Visian ICL, albeit very quick. Visian ICL surgery is something I believe all refractive surgeons should take the time to learn

and perform because offering the Visian ICL completes the circle the same way that cataract surgery with premium lens offerings and femtosecond laser completes the circle for cataract surgery.

EDUCATING PATIENTS

The Visian ICL is not just an option for the highest levels of myopia or for patients who are not LASIK candidates. Its indications include lower levels of correction for a variety of patient groups. That said, LASIK is an amazing option for the lower corrections as well. We evaluate patients’ lifestyle needs, health of their eyes, and physiology of their eyes when discussing procedure options with our patients. Patient education is paramount to the success of any refractive surgery procedure. Therefore, I educate patients about the potential advantages and disadvantages of both procedures. I feel like it is my job to educate them on all of their options.

CONCLUSION

When we offer the full range of refractive surgery procedures including lens-based surgery, we can better look out for our patients’ interests. I think that incorporating the Visian ICL into my practice gives me the opportunity to be the best and the most thoughtful refractive surgeon I can be. ■

1. Navas JS, Carracedo G, Cacho-Babillo I. Diadenosine nucleotide measurements as dry-eye score in patients after LASIK and ICL surgery. Paper presented at the: American Society of Cataract and Refractive Surgery 2012 Symposium on Cataract, IOL, and Refractive Surgery; April 20-24, 2012; Chicago.

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Important Safety Information for the Visian ICL Product Family:

The Visian ICL is indicated for phakic patients 21 to 45 years of age to correct/reduce myopia with up to 4.00 D of astigmatism with a spherical equivalent ranging from -3.00 to -20.00 D and with an anterior chamber depth (ACD) 3.0 mm or greater.

The Visian ICL is contraindicated in patients with a true ACD of <3.0 mm; with anterior chamber angle less than Grade III; who are pregnant or nursing; less than 21 years of age; and who do not meet the minimum endothelial cell density listed in the Directions For Use (DFU).

Summary of the relevant warnings, precautions and side effects: Endothelial cell loss, corneal edema, cataract, narrowing of the anterior chamber angle, pupillary block, increased intraocular pressure, glaucoma, secondary surgery to reposition, replace or remove the ICL, loss of BCVA, increase in refractive astigmatism, glare and/or halos, pigment dispersion, iris transillumination defects, endophthalmitis, hypopyon, corneal endothelial damage, ICL dislocation, cystoid macular edema, iritis, retinal detachment, vitritis, and iris prolapse. Please review the DFU for complete safety and other information before performing the clinical procedure.