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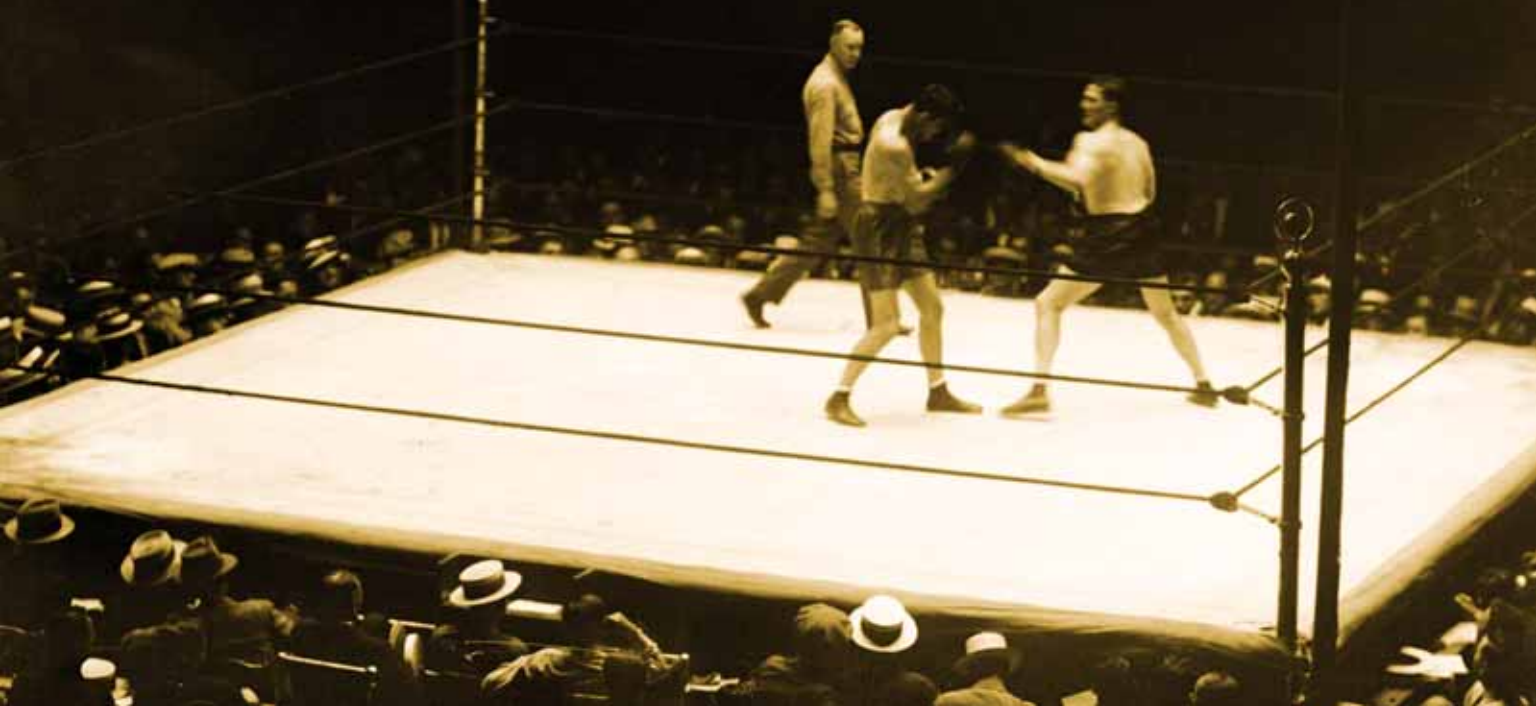
Get Into the Ring

Time to adopt advanced-technology IOLs.



Get Into the Ring

Time to adopt advanced-technology IOLs.

Although elective presbyopia-correcting IOLs continue to gain market share, they are doing so slowly. The latest data from Market Scope LLC show that these lenses still have only approximately 7% of the total IOL market share in the US.[1] With Medicare reimbursements declining and patients' expectations increasing, advanced-technology IOLs offer ophthalmologists a high-quality means by which to meet consumer demands as well as grow their practices. It is time to adopt advanced-technology IOLs, and this monograph is designed to help you jump in the ring. Our panelists—ophthalmic heavyweights with extensive experience implanting advanced-technology IOLs—address the most common concerns practitioners have about using these lenses. Are you ready?

—Kerry D. Solomon, MD

1. Harmon D. Q3 U.S. Cataract Surgeons Survey. St. Louis, MO: Market Scope, LLC; 2010.

Round 1: The Warm-Up

Why you need to be in the advanced-technology IOL segment.

BY STEPHEN S. LANE, MD

If you are considering adopting advanced-technology IOLs, I recommend that you organize your office and make other preparations before focusing on the implants themselves. To get started with these lenses, you have to change your mindset and embrace a different practice model than what you may be used to. The Medicare model forces physicians to treat for pathology; it is a high-volume, low-cost approach to medicine that emphasizes efficiency. The advanced-technology category is elective and demands a more patient-oriented business model where the focus is on quality of life rather than the quantity of patients. In order for consumers to be willing to pay for a procedure out of pocket (and there is nothing wrong with patients paying for medical services), we need to meet their expectations. I think an elective-pay practice model is the only way physicians can survive financially, now and in the future.

A GROWING MARKET

As we enter the second decade of this century, the cataract population will continue to grow. Currently, approximately 3 million cataract procedures are performed per year in the United States[1] (about 2.3 million excluding Medicare patients). Individuals who underwent LASIK surgery in their 40s will likely be willing to pay out of pocket to maintain their independence from glasses as they begin to develop presbyopia and cataracts. According to research performed by Warren Hill, MD, and others, approximately 25% of the cataract population has between 1.00 and 2.00 D of astigmatism, and 10% has more than 2.00 D of error.[2] These figures represent a large population who may be candidates for toric IOLs due to their pre-existing corneal astigmatism.

CHANGING EXPECTATIONS

Presbyopic refractive patients have a different mindset than traditional cataract patients. Many presbyopes are baby boomers who are more interested in their lifestyle than their pathology. They are happy to pay for an enhanced quality of life, just as they did for LASIK previously. In this new paradigm, when these patients develop cataracts, they do not want better vision than they had with a cataract, but better vision than they had before they developed cataracts. Presbyopia-correcting IOLs now enable us to deliver on that desire.

CHANGE YOUR MINDSET

We physicians must embrace changes to our practice model:

- From the Medicare model of "treating for pathology"
  - High-volume, efficient, low-cost care
- To a patient-oriented model of "treating for quality of life"
  - High quality; personalized to patients' needs, expectations, and desires; patients pay

HOW TO MAKE THE SWITCH

Refocus on the Patient

How do we convert our practices to serve this new high-quality paradigm? We get there by shifting the doctor-patient relationship to increase our focus on and commitment to the patient (see *Change Your Mindset*). One concern I routinely hear from practitioners in response to discussions about advanced-technology IOLs is that these lenses require too much chair time with patients. In an elective-services practice model, we can afford to spend the time, because these lenses typically bring in three to four times the revenue as the average Medicare-covered procedure.

Furthermore, I believe we need to stop providing services for free. For example, I believe we are justified in charging for limbal relaxing incisions (LRIs). These procedures involve testing and staff time, not to mention physician skills, and it is fair to ask to be compensated for our time and expertise.

Enlist Your Staff's Cooperation

You have to get your staff to buy into the concept of creating a premium-services practice (see *How to Get There*). Teamwork is critical, because such a makeover may require you to change certain office practices and even hire new

HOW TO GET THERE

1. Requires a shift in the doctor-patient relationship to increase the physician's commitment to the patient.
2. Staff buy-in: teamwork is critical
   - Only possible if the physician leads/endorses the process
3. Commitment to change: establish new office processes for
   - Marketing
   - Reception/front desk
   - Pre- and postoperative areas
   - Technical screening procedures
   - Consultation services
   - Billing procedures

staff. You may need different marketing, consultative, and billing protocols. Your staff will only accept these changes if you endorse them with enthusiasm. Show your staff that you believe these changes will benefit the practice, and they will not resist the process. In turn, you must support your staff with the necessary training and education they will need to work with these IOLs and elective surgery patients.

WELCOME THE OPPORTUNITY

Consider all these steps as you move toward offering these opportunities to your patients (and do present them as opportunities!). If patients ask you why advanced-technology IOLs cost more than the Medicare standard, simply explain that insurance does not cover devices that get patients out of glasses. Again, many consumers today are willing to pay for elective procedures that improve their quality of life. Now, we have IOLs that can give them what they want. ●

Stephen S. Lane, MD, is Medical Director of Associated Eye Care in St. Paul, Minnesota, and an adjunct clinical professor for the University of Minnesota in Minneapolis. He is a consultant to and receives lecture fees from Alcon Laboratories, Inc. Dr. Lane may be reached at (651) 275-3000; sslane@associatedeyecare.com.

1. Lane SS. The state of the elective iol market and its dynamics. *Cataract & Refractive Surgery Today*. 2010;10(5):59-60. http://bmctoday.net/crstoday/2010/05/article.asp?f=the-state-of-the-elective-iol-market-and-its-dynamics. Accessed November 16, 2010.
2. Ferrer-Blasco T, Montes-Mico R , Peixoto-de-Matos SC, et al. Prevalence of corneal astigmatism before cataract surgery. *J Cataract Refract Surg.* 2009;35(1):70-75.

Round 2: Step Over the Ropes

Testing and technology for success with advanced-technology IOLs.

BY ERIC D. DONNENFELD, MD

Now that presbyopia-correcting IOL technology is a few years old, we know that success with these lenses is predicated on a healthy cornea and exact biometry. Following are a few key strategies to optimize the ocular surface and ensure accurate biometry with advanced-technology IOL patients.

BEGIN WITH THE TEAR FILM

Vision starts with the tear film. A poor-quality tear film will compromise the surgical outcome no matter what technology you use (Figure 1). Therefore, it is paramount to diagnose and treat dry eye syndrome before implanting elective IOLs. I use staining dyes to evaluate the tear film and everything from punctal plugs such as the Parasol Punctal Occluder System (Odyssey Medical, Inc., Memphis, TN), to oral omega-3 fatty acid supplements, to cyclosporine A drops to treat the tear film. I will delay a patient's surgery until the corneal surface is healthy.

My second step in evaluating the ocular surface is to look for meibomian gland disease, which is a common yet underdiagnosed problem. Many practitioners do not look at this part of the eyelid, but it is important. Again, I use hot compresses and oral supplements to treat this syndrome. A new drug called TobraDex ST (tobramycin/dexamethasone ophthalmic suspension 0.3%/0.05%; Alcon Laboratories, Inc., Fort Worth, TX) effectively manages these acute patients. The drop sticks to the eyelids and is effective for treating patients with meibomian gland disease preoperatively. For long-term maintenance of meibomian gland disease, I generally use topical azithromycin.

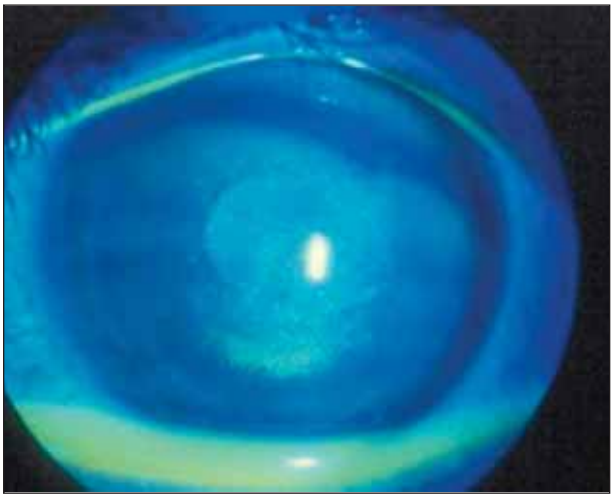


Figure 1. Technological advances are compromised by even minimal disruption of the ocular surface, such as the corneal dryness seen here.

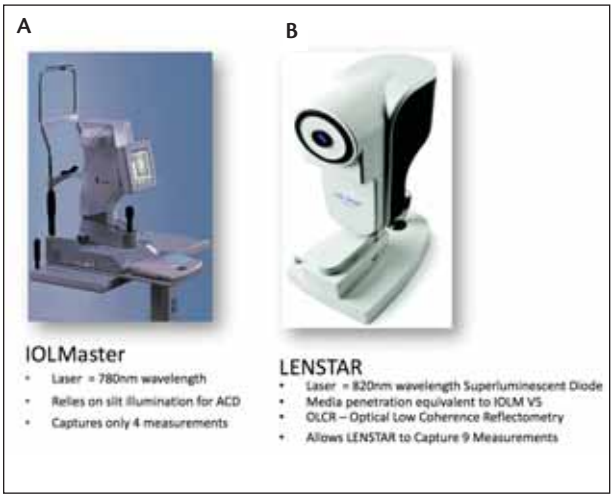


Figure 2. Dr. Donnenfeld prefers the precision of automated biometry, such as with an IOLMaster (A) or a Lenstar LS900 biometer (B), with advanced-technology IOLs.

FINISH WITH THE RETINA

Although vision starts with the tear film, it ends with the retina. Thankfully, optical coherence tomography (OCT) helps us see the retina accurately. I recommend performing an OCT on every advanced-technology IOL candidate if you have one of these devices available. I regularly diagnose epiretinal membranes, macular holes, and other retinal pathology with OCT. Therefore, I not only can provide a better level of service to the patient by identifying a pre-existing condition, but I know to treat these eyes more aggressively with a topical steroid. I am currently using the new ophthalmic steroid DUREZOL Emulsion (difluprednate ophthalmic emulsion 0.05%; Alcon Laboratories, Inc.), which I feel is the most effective therapy to reduce inflammation, prevent CME, and manage retinal problems. This drop effectively reduces retinal edema and clears these patients' corneas more rapidly than less potent steroids and provides a faster return of visual acuity.

INVEST IN TECHNOLOGY

Investing in high-quality screening technology to diagnose surface and intraocular conditions will improve the accuracy of your results with presbyopia-correcting IOLs dramatically. I have stopped using A-scans and even immersion A-scans for very dense cataracts in favor of automated biometry. I think that having an IOLMaster (Carl Zeiss Meditec, Inc., Dublin, CA) or a Lenstar LS900 biometer (Haag-Streit AG, Köniz, Switzerland; distributed in the United States by Alcon Laboratories, Inc.) makes a huge difference in outcomes with advanced-technology IOLs (Figure 2).

I also recommend investing in a quality IOL formula. The Holladay II formula (Holladay Consulting, Inc., Bellaire, TX) is a small investment that will pay large dividends in terms of more accurate IOL outcomes. If you get the IOL formula wrong, the patient will blame you for his or her poor vision.

CORRECT RESIDUAL ASTIGMATISM

Astigmatism is common in patients who undergo cataract surgery. Preoperatively, 70% of patients have 0.50 D or more of cylinder, and 38% have 1.00 D or more. Residual cylinder is the number-one reason why cataract patients are unhappy with their surgical result, because it produces glare or halo. If a patient achieves 20/25 UCVA and is happy, but has 0.50 D of cylinder, why not improve his or her vision a little more? With a limbal relaxing incision (LRI), you can take their vision closer to zero cylinder and make them ecstatic. Doing so would exceed their expectations instead of just meeting them, which is a sure way to excel in the refractive IOL business. ●

Eric D. Donnenfeld, MD, is a clinical professor of ophthalmology at NYU and a trustee of Dartmouth Medical School in Hanover, New Hampshire. Dr. Donnenfeld is in private practice with Ophthalmic Consultants of Long Island in Rockville Centre, New York. He is a consultant to Abbott Medical Optics Inc., Alcon Laboratories, Inc., Inspire, and Bausch + Lomb. Dr. Donnenfeld may be reached at (516) 766-2519; eddoph@aol.com.

Round 3: The Tale of the Tape

Patient-selection strategies for advanced-technology IOLs.

BY ROBERT J. CIONNI, MD

Choosing the appropriate patients to receive advanced-technology IOLs requires a certain degree of art, and the criteria are different for presbyopic and toric implants. It is safe to assume that almost all cataract patients wish to decrease their dependence on spectacles. Whenever we plan to remove a cataract, we should ask the patient if he or she would also like to use glasses less. If the answer is "yes," then we must do our best to achieve a good refractive result. This article briefly describes my strategies for achieving such results.

TORIC CANDIDATES

I believe any patient for whom we would prescribe glasses after cataract surgery to correct 1.00 D or more of astigmatism is a candidate for a toric IOL. This group includes patients with ocular pathology (eg, dry eye, macular degeneration, glaucoma), unless the condition is so severe that he or she will not be able to see a difference with a toric IOL. I tell toric candidates that this type of implant will give them the best quality of vision and that it is the lens I would recommend if they were my family member. I do recommend personalizing your recommendation to the patient.

PRESBYOPIA-CORRECTING CANDIDATES

Presbyopia-correcting IOLs require us to get to know the patient a little better. Patients must have realistic expectations for their postoperative result, but their eyes must have the potential for good vision to benefit from a presbyopia-correcting IOL. For example, a patient who is amblyopic may only achieve 20/60 acuity. Furthermore, the candidate must not have significant ocular pathology, such as significant glaucoma, epiretinal membrane, or diabetic macular edema, because these patients' visual potential is limited. Additionally, guttata can interfere with the light coming through the cornea, which is then disrupted further as it passes through a multifocal lens. I may consider implanting a presbyopic lens in patients who have moderate dry eye that can be improved with treatment, as well as those with mild glaucoma. I may also consider a presbyopia-correcting IOL in post-LASIK patients, as long as the ablation is large, free of significant corneal aberrations, and well centered.

IOLs' NEAR AND READING VISION

Stephen Lane, MD, presented the results of a masked study at the recent AAO meeting that compared the near-vision performance of the AcrySof IQ ReSTOR IOL

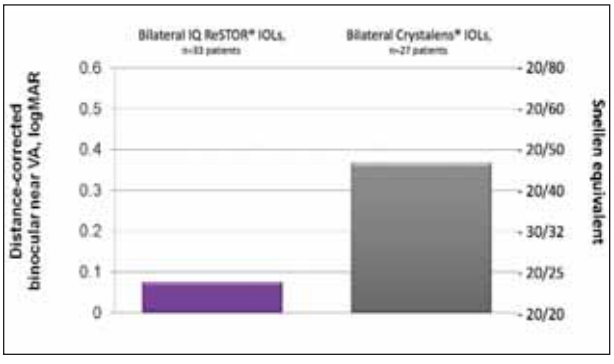


Figure 1. Binocular, best distance-corrected near visual acuity at 3 months postoperatively. With near visual acuity defined as 40 cm, Crystalens HD patients achieved between 20/40 and 20/50 BCVA, whereas the AcrySof IQ ReSTOR IOL +3.0 D patients achieved between 20/20 and 20/25 BCVA. Thus, the ReSTOR IOL group had an advantage of approximately three Snellen lines of vision versus the Crystalens group.

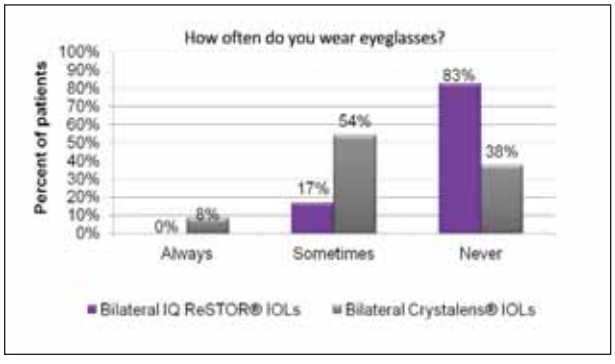


Figure 2. Spectacle independence at 3 months postoperatively. When asked at 3 months after surgery how often they wore glasses, 83% of the patients bilaterally implanted with the AcrySof IQ ReSTOR IOL +3.0 D versus 38% of the subjects bilaterally implanted with the Crystalens HD IOL reported that they never had to wear glasses. Likewise, only 17% of the AcrySof IQ ReSTOR IOL patients reported wearing glasses sometimes.

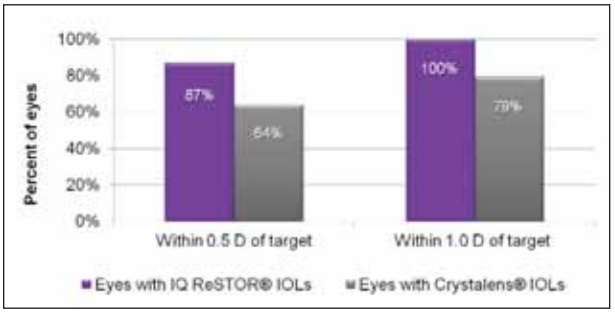


Figure 3. Manifest refraction spherical equivalent. At 3 months postoperatively, approximately 87% of the patients implanted bilaterally with the AcrySof IQ ReSTOR IOL +3.0 D were within 0.50 D of their target correction versus 64% of those implanted with the Crystalens HD. All of the ReSTOR IOL patients versus 79% of the Crystalens patients achieved within 1.00 D of their target refraction.

+3.0 D (Alcon Laboratories, Inc., Fort Worth, TX) and the Crystalens HD Accommodating IOL (Bausch + Lomb, Rochester, NY).[1] In terms of these results, the study showed that the AcrySof IQ ReSTOR IOL +3.0 D knocks the Crystalens HD right out of the ring (Figure 1). The subjects in both groups were told to hold reading material wherever they could best view it. The AcrySof IQ ReSTOR IOL +3.0 D group held the materials at a more natural reading distance and demonstrated better vision at that reading distance. When the subjects were asked when they wore glasses (the response choices being always, sometimes, or never), again, the AcrySof IQ ReSTOR IOL +3.0 D outperformed the Crystalens HD IOL: 54% of Crystalens recipients reporting that they wore glasses sometimes, compared with only 17% in the AcrySof IQ ReSTOR IOL group (Figure 2).

I believe the reason for such outcomes has to do with the ease of achieving the targeted refraction with these IOLs. Having implanted almost every IOL technology up

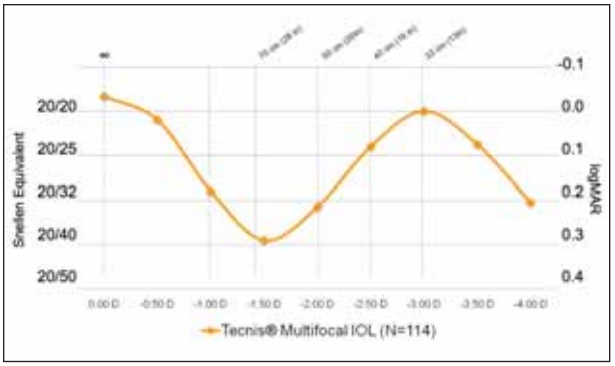


Figure 4. The mean defocus curve for the Tecnis Multifocal IOL (*Source: the Tecnis Multifocal IOL package insert*).

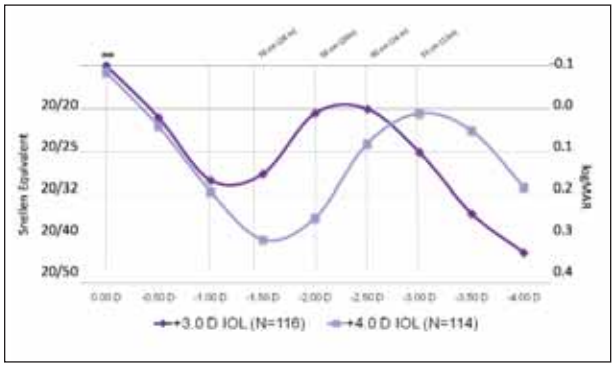


Figure 5. Mean defocus curves for the AcrySof IQ ReSTOR +3.0 and +4.0 D lenses, 6 months after binocular implantation. (*Source: the AcrySof ReSTOR IOL package insert*.)

to the advent of the AcrySof IQ ReSTOR IOL +3.0 D, I have found it much easier to hit the target refraction with a single-piece acrylic platform than with the hinged-haptic design of the Crystalens that makes the optic a moving target (Figure 3).

I have not tried implanting the Tecnis Multifocal IOL (Abbott Medical Optics Inc., Santa Ana, CA), for two reasons: one, because studies have shown that full-optic diffractive IOLs increase glare, even at 12 months (see the package insert for the Tecnis Multifocal IOL), and second, because I think the lens' reading distance is too close (Figure 4). Most surgeons who implant the AcrySof IQ ReSTOR IOLs have switched from the +4.0 add to the +3.0 D add as their primary lens because the reading distance is more comfortable with the latter model. Figure 5 compares the binocular defocus curves between the AcrySof IQ ReSTOR IOL +4.0 and +3.0 D adds and shows better performance for the +3.0 D version. The reading distance for the Tecnis Multifocal IOL mirrors that for the AcrySof IQ ReSTOR IOL +4.0 D. The Tecnis Multifocal IOL's defocus curve shows that it offers a near vision that is too close, and that its intermediate vision is lacking. Keep in mind that the defocus curves are clinical, not bench study results. My patients have definitely shown a preference for the +3.00 D reading add. ●

Robert J. Cionni, MD, is Medical Director of The Eye Institute of Utah in Salt Lake City, and he is an adjunct clinical professor at the Moran Eye Center of the University of Utah in Salt Lake City. He is a consultant to Alcon Laboratories, Inc. Dr. Cionni may be reached at (801) 266-2283.

1. Lane SS. Visual acuity and spectacle wear with presbyopia-correcting IOLs. Poster presented at: The AAO Annual Meeting; October 15, 2010; Chicago, IL.

Round 4: The One–Two Punch

How to nail the refraction with presbyopia-correcting IOLs.

BY WARREN E. HILL, MD

Achieving the target refraction is one area that looms large when implanting presbyopia-correcting IOLs. Ophthalmologists frequently tell me they are sometimes nervous about missing the refractive target when implanting these lenses. This article describes a few steps for getting it right.

REQUIREMENTS FOR HITTING THE TARGET

There are a few necessary steps we must take in order to reach a patient's refractive target. First, we need to measure the central corneal power in a precise and consistent way. Second, I recommend using optical biometry rather than ultrasound. Third, we need to pay particular attention to what I feel is the defining portion of cataract surgery in terms of the refractive outcome—the capsulorhexis. And fourth, we need to track our outcomes.

PREOPERATIVE TESTING

Keratometry and Biometry

For preoperative keratometry, I recommend using a single instrument. Do not expect to get correlating readings from simulated Ks, manual Ks, automated Ks, slit-image Ks, and Placido imaging—these all use different algorithms and may measure different zones, and as a result they will not give the same answer. If you have an IOLMaster (Carl Zeiss Meditec Inc., Dublin, CA), use the autokeratometry readings for the spherical power of the IOL. If you have a Lenstar LS900 (Haag-Streit AG, Köniz, Switzerland; distributed in the United States by Alcon Laboratories, Inc.), use the autokeratometry feature of that instrument. It is generally not a good idea to switch between instruments, as doing so will result in a significant amount of variability.

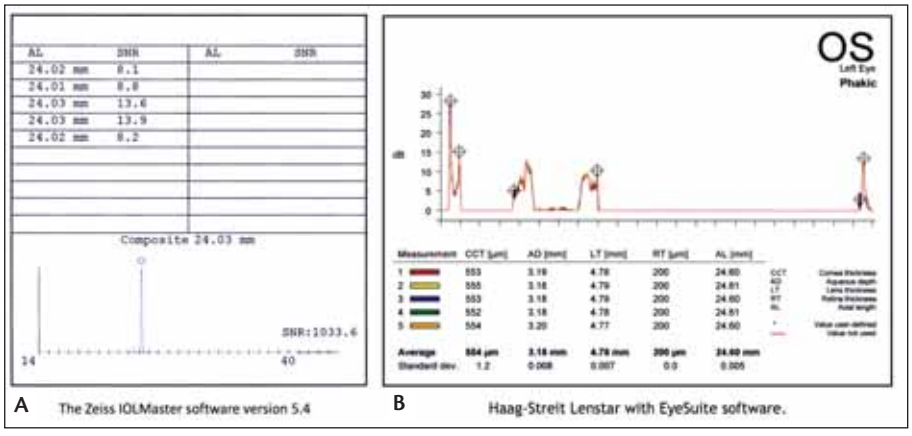
As refractive cataract surgeons, ocular biometry is preferred (Figure 1). It is both consistent and close to being operator-independent. The Lenstar provides both anterior chamber depth and lens thickness by optical biometry, and it opens up new possibilities for existing as well as new formulas.

IOL FORMULAS

Two-variable formulas (Holladay I, Hoffer Q, and SRK/T) may be old and trusted friends, but they lack accuracy in all situations, as they must make a lot of assumptions with very little information. Most of the time, if the calculation is for an eye that has close to schematic eye parameters, you will hit the refractive target just fine. If, however, the eye has an unusual anterior segment, these formulas will often make the wrong assumptions. I favor newer-generation formulas (Figure 2) such as the Haigis and Holladay II. These formulas, when fully optimized, perform quite well for a wide range of eyes. The Holladay II formula is probably what most upper-tier surgeons use, and I have found that it does the best job with unusual anterior segments.

THE DEFINING PORTION OF CATARACT SURGERY

I feel the most important aspect of the surgical procedure itself is the capsulorhexis. It needs to be round and centered to lessen the likelihood of decentration and tilt, and it should be smaller than the optic to confine it within the capsular bag, which in turn controls the effective lens position. However, it is not always easy to make the



A The Zeiss IOLMaster software version 5.4 B Haag-Streit Lenstar with EyeSuite software.

Figure 1. Ultrasound (A) is less accurate and more operator-dependent than optical biometry (B) for measuring the central corneal power.

capsulorhexis the exact same size. I have found that if the pupil is big, I tend to make the capsulorhexis a little larger. Therefore, I prefer to use a corneal marker, of which there are several on the market to choose from. I center the marker on the visual axis rather than on the center of the cornea, providing a template for creating a capsulorhexis of the same size for every case. Although this step may take a little bit more time, I believe that, as the capsulorhexis goes, so goes the refractive outcome. If the capsulotomy is larger than the optic, as the forces of capsular bag contraction are brought to bear, the lens may shift anteriorly, producing a myopic refractive surprise.

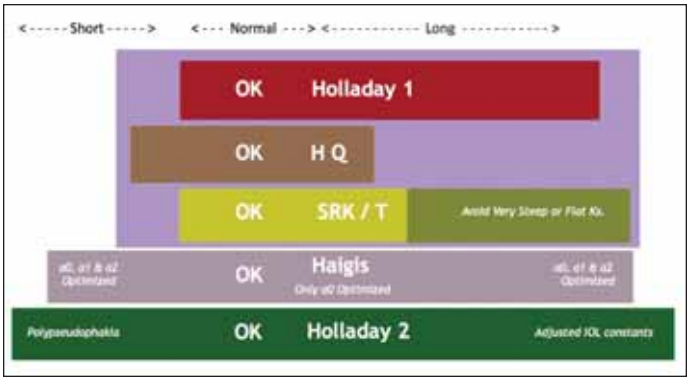


Figure 2. A list of the newer-generation IOL power calculation formulas. The author suggests using the Haigis or Holladay 2 formulas with presbyopia-correcting IOLs.

ALL STEPS MATTER

As surgeons, we need to pay close attention to each of the component parts of cataract surgery. Just getting one part right is not enough to generate the desired outcome. We need to optimize each part of the IOL power calculation process in order to achieve the best refractive results. ●

Warren E. Hill, MD, is in private practice at East Valley Ophthalmology in Mesa, Arizona. He is a consultant for Alcon Laboratories, Inc. Dr. Hill may be reached at (480) 981-6130; hill@doctor-hill.com.

Round 5: The Right Hook

Correcting pre-existing corneal astigmatism with toric IOLs.

BY BONNIE A. HENDERSON, MD

We know that we must minimize residual astigmatism as much as possible to ensure a happy postoperative result for our cataract patients. We also know there are many ways to correct these errors. Here, I describe the options for astigmatic correction and consider the pros and cons of each one (see *Options for Correcting Astigmatism*).

INTRAOPERATIVELY

Although it is possible to operate on a steep axis, doing so will only reduce astigmatism by approximately 0.25 to 0.50 D, depending on the size of the main incision. Bilateral corneal or peripheral incisions are of course an option, but these solutions are imprecise, and the effect can regress. Although these incisions may have a good effect immediately postoperatively, that may change over time.

Fortunately, we have toric IOLs, which I feel are the most predictable choice for correcting pre-existing corneal astigmatism at the time of surgery. If you implant a toric IOL properly, you know exactly what outcome to expect, and the refraction will not change.

OPTIONS FOR CORRECTING ASTIGMATISM

Intraoperative
- Operate on the steep axis → only 0.25 to 0.50 D of benefit
- Corneal incisions (limbal or corneal) → imprecise, regression
- Toric IOLs → most precise option

Postoperative
- Laser corneal refractive surgery → cost, access
- Corneal incisions → limbal or corneal, second procedure
- Glasses or contact lenses → patient dissatisfaction

THE ACRYSOF IQ TORIC IOL

- Excellent long-term rotational and centration stability
- Average lens rotation 4° or less; 97% spectacle freedom for distance visual acuity[2]
- Mean rotation of the AcrySof IQ Toric IOL after 6 months was 0.7° [3]

The first toric IOLs were made of silicone and had plate haptics, and they were subject to intraocular rotation and capsular fibrosis. Acrylic toric IOLs are clearly a superior option. The AcrySof IQ Toric IOL (Alcon Laboratories, Inc., Fort Worth, TX) has years' worth of excellent outcomes, and it continues to improve with each new upgrade (see *The AcrySof IQ Toric IOL* and Figure 1). Stephen Lane, MD, and colleagues conducted a randomized, subject-masked, multicenter, 1-year study that found that the AcrySof Toric IOL has a mean rotation of 4° or less once implanted.[1,2] Another study[3] showed that mean rotation with this lens was 0.7°.

The effectiveness of limbal relaxing incisions (LRIs) depends on the placement, length, and depth of the incision. An improperly placed incision can induce irregular astigmatism and increase aberration. Properly placed toric IOLs correct astigmatism more precisely than LRIs.

POSTOPERATIVELY

There are several options for correcting residual astigmatism postoperatively. LASIK is one option, although complications such as suction loss during flap creation can occur. I also worry that applying a suction ring to a pseudophakic eye may shift the IOL, especially in the early postoperative period. Therefore, I prefer PRK for corneal laser astigmatic correction. Contact lenses or spectacles can be prescribed after surgery, but the goal is to achieve the best uncorrected vision as possible.

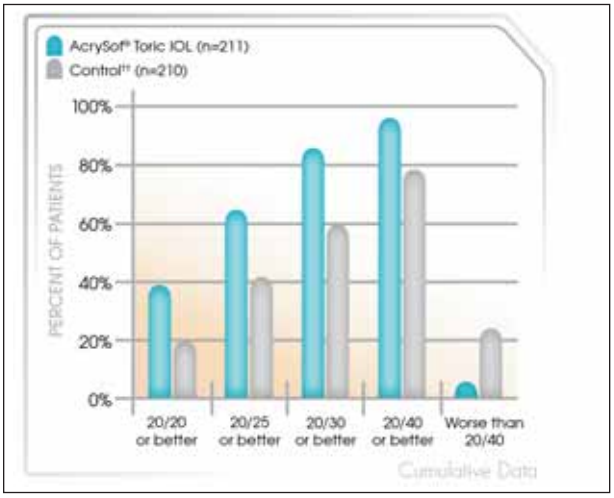


Figure 1. Improved uncorrected distance visual acuity with the AcrySof IQ Toric IOL. More than 94% of patients implanted with the AcrySof IQ Toric IOL achieved a distance UCVA of 20/40 or better compared to the control lens (the AcrySof single-piece IOL SA60AT). (*Source: The AcrySof IQ Toric IOL package insert.*)

BEST OPTION

In my opinion, toric IOLs provide an easy, effective solution for pre-existing corneal astigmatism that is highly successful. These implants are precise, predictable, and easy to use. I feel they belong in every cataract surgeon's armamentarium. In addition, there is only a short learning curve to master implanting toric IOLs. One or two surgeries is sufficient to feel comfortable working with this technology. ●

Bonnie An Henderson, MD, is a partner in Ophthalmic Consultants of Boston and an assistant clinical professor at Harvard Medical School. She is a consultant for Alcon Laboratories, Inc. Dr. Henderson may be reached at (781) 487-2200 ext. 3321; bahenderson@eyeboston.com.

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Round 6: The Knockout

Phacoemulsification and lens implantation.

BY RICHARD MACKOOL, MD

Although implanting multifocal IOLs does not differ greatly from implanting standard monofocal lenses, there are a few strategies I have learned over the years to optimize my results with the multifocal option.

PHACOEMULSIFICATION

There are two ways in which I alter my standard implantation technique for multifocal IOLs. First, I perform standard phacoemulsification, but I remove the epithelium from underneath the anterior capsule for at least 180º. This maneuver is made easier by holding the eye still with a spatula inserted through a sideport incision. Removing the epithelium in this manner greatly delays the optic's adhesion to the anterior capsule and thereby makes an IOL exchange easier should it become necessary for any reason.

PENETRATING LIMBAL RELAXING INCISIONS

Most patients will not be happy with their distance and near vision postoperatively if they have more than 0.50 D of cylinder. I use what I call *penetrating limbal relaxing incisions* (PLRIs), because they are quicker to perform and every bit as accurate as traditional LRIs. PLRIs are essentially full-thickness phaco-type incisions made on the steep axis. With the foot pedal in position one, I make one or two incisions at the appropriate axis with the desired keratome.

COMPARISON STUDY: ACRYSOF IQ RESTOR IOL +3.0 AND +4.0 D

I conducted a comparison study of the first 30 patients I implanted with the AcrySof IQ ReSTOR IOL +3.0 D and 30 consecutive patients I implanted with the +4.0 D model (Alcon Laboratories, Inc., Fort Worth, TX) (see *Comparison Study Parameters*). I performed all of the surgeries. Twice as many of the AcrySof IQ ReSTOR IOL +3.0 D patients achieved a distance-corrected intermediate visual acuity of 20/32 or better (Figure 1). Patient satisfaction was also higher in the AcrySof IQ ReSTOR IOL +3.0 D group.

I have found that if patients' intermediate vision is improved, they are more tolerant of any other issues such as a little glare at night. If their intermediate vision is poor and they have glare, they are much more likely to be unhappy. Not a single one of my first 30 patients implanted with the AcrySof IQ ReSTOR IOL +3.0 D needed spectacles for any purpose at 3 months after surgery. Although these results may be a bit higher than average, I believe that by nailing the refraction and applying proper patient-selection criteria, we can keep approximately 95% of our patients out of glasses. My staff and I inform our prospective multifocal IOL candidates that about 95% of our patients implanted with this lens never use glasses after surgery. ●

COMPARISON STUDY PARAMETERS

- Bilateral CE (28) or RLE (2) = 60 eyes of 30 patients
- Minimum postoperative follow-up: 3 months
- No pre-existing corneal/retinal/optic nerve disease
- All procedures performed by Dr. Mackool
- Target refraction: plano

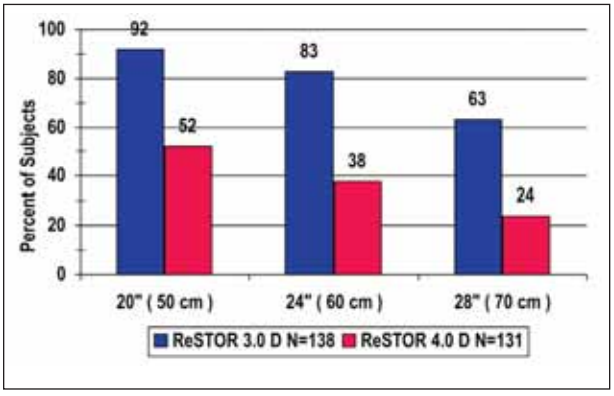

Figure 1. Distance-corrected intermediate visual acuity between patients implanted with the AcrySof IQ ReSTOR +3.0 and +4.0 D lenses. ***(Clinical data on file with Alcon Laboratories, Inc.)***

Richard J. Mackool, MD, is Director of The Mackool Eye Institute and Laser Center in Astoria, New York. He is a consultant for Alcon Laboratories, Inc. Dr. Mackool may be reached at (718) 728-3400, ext. 256; mackooleye@aol.com.

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