The trend toward smaller incision surgery will continue

As cataract surgeons, we have always been moving toward smaller and smaller incision sizes, with most of us now using 2.75- to 3.0-mm incisions and achieving great results for our patients. Even smaller incision sizes are being used by an emerging number of surgeons. These can deliver surgical benefits, especially when used in conjunction with the latest technological advances in phacoemulsification.

Rationale for going smaller: Is smaller always better?

As surgeons, we know smaller corneal incisions induce less astigmatism and can self-seal more easily than their larger counterparts. So in theory, we would be reducing the risk of wound leakage and endophthalmitis. [1] But if the incision size is too small, the surgeon's ability to manipulate the instruments can be hindered, and the potential benefits are offset. Additionally, the smallest of incisions (1.1 to 1.2 mm) can limit the movement of instruments and necessitate the use of unsleeved instruments, thereby increasing mechanical and thermal trauma to the wound.

To address the weaknesses of micro-incisions used in bimanual phaco, some surgeons are suturing their micro-incisions while others are making a third incision for IOL insertion. Both of those options offset any advantages of micro-incision surgery.

An ideal system allows surgeons to perform phacoemulsification through micro-incisions that will capitalize on the benefits of smaller incision sizes without increasing the downside.

We found that the INTREPID Micro-Coaxial System using the INFINITI Vision System and the OZil Torsional handpiece (Alcon, Fort Worth, Texas) provides a fully integrated line of equipment and instruments that has been able to optimize micro-incisional cataract surgery in one overall system.

What the science says

Typical phacoemulsification operates with longitudinal jackhammer motion in conventional ultrasound. With OZil Torsional ultrasound, the handpiece amplifies the side-to-side oscillatory motion to the phaco tip, which helps to minimize the stress to the incision. As a result, the side-to-side shearing motion allows for more efficient emulsification of lens material, greatly reduces repulsion, and increases followability.

Laboratory and clinical studies have validated the theories as well. In one ex vivo study [2], 15 human cadaver eyes were divided into three groups: group 1 received 2.8-mm coaxial incisions, group 2 received 2.2-mm coaxial micro-incisions, and group 3 received 1.2-mm bimanual micro-incisions. All eyes underwent simulated phacoemulsification using longitudinal ultrasound with standard settings. We evaluated the architecture and integrity of the different wound sizes. Spontaneous wound leakage was present in all eyes that underwent the bimanual technique, in one eye in the standard coaxial group, and in none of the eyes in the micro-coaxial group.

Histopathologic examination of the eyes studied revealed India ink penetration in all of the eyes in the bimanual group and no eyes in the micro-coaxial group. The bimanual micro-incisional technique also resulted in more qualitative trauma to Descemet's membrane and the corneal endothelium as demonstrated by scanning electron microscopy (SEM).

As a follow-up to that study,
Advantages of micro-coaxial phaco

by Samuel Masket, M.D.

One surgeon’s rationale for using micro-incisions

In recent years, there has been an increased concern among ophthalmologists about the wound stability of larger incisions, especially as we have increasing evidence that smaller incisions offer greater ocular stability. Additionally, smaller incisions may be more resistant to deformation caused by patients’ rubbing and/or blinking.

When you consider the cataract and IOL implantation incision, the goal is to create a stable, hermetically sealed environment to reduce the likelihood of microbial contamination in order to reduce post-op infection rates. More than a decade ago, Paul Ernest and colleagues proved the benefit of using micro-incisions – the ideal wound construction – the ideal wound configuration.

As a result of that study and others, I prefer to use micro-coaxial phaco in all my cataract surgeries. To make the incision, I prefer to use a diamond blade or steel blades designed to create the perfect 2.2-mm incision, such as ClearCut INTREPID knives (Alcon).

For those surgeons who have not yet tried micro-coaxial incisions, the learning curve is slightly steeper through a 2.2-mm incision than through a larger one. In my opinion, surgical instrumentation and phaco fluidics have improved so dramatically, the transition to micro-coaxial is rather simple.

When you consider using the INTREPID system with the INFINITI and one-piece aspheric AcrySof acrylic IOL (Alcon), you’ve got a 6 mm lens that can go through a 2.2-mm incision using the new D cartridge and deliver the highest quality vision and visual recovery for our patients. In my opinion, there is no doubt that the square incision architecture, combined with the benefits of the micro-incision, offers patients the best possible outcomes in today’s cataract surgery.

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References:
Post-op incision size is the true measure of micro-surgery

by Alan S. Crandall, M.D.

Cartridge and tip sizes
My colleagues and I here at the Moran Eye Center, Salt Lake City, Utah, have compared intra-operative and surgical outcome parameters of various angled tips with torsional ultrasound. [1] In this study, we randomized three phaco tips – the mini-flared Kelman tip, the reversed mini-flared Kelman tip, and an angled tip – through a 2.8-mm and a 2.2-mm incision to determine wound integrity. We used the Visante Optical Coherence Tomography (OCT) (Carl Zeiss Meditec, Dublin, Calif.) to look at the wounds on the first day after cataract surgery and at one month out. We then compared the Monarch III system with the D cartridge (Alcon, Fort Worth, Texas) to the C cartridge (Alcon).

We found that with the 2.2-mm incision, the internal lip of the wound is absolutely sealed with the D cartridge. It doesn’t enlarge the wound. We randomized the tips, and whether we used the 1.1 flared or 0.9 flared, regardless of tip size, the D cartridge does not enlarge the wound. If the wound has enlarged, it’s because I have inadvertently stretched it during surgery.

The point is that you’re not stretching or enlarging the incision when properly utilizing the Monarch III system. I’ve delivered all types and sizes of IOLs – from the AcrySof ReSTOR Aspheric (Alcon), to the AcrySof Toric lens (Alcon), to the AcrySof IQ. So far the highest implantation is 27 D but I could go higher. What Alcon has done with the new D cartridge is to change the thickness of the walls and architecture just slightly so it can better withstand the forces of a rolled-up lens. There’s a lot of technology that’s involved in what we tend to take for granted.

Many surgeons have been led to attempt to insert IOLs that are not AcrySof Foldable IOLs through the Monarch C and D cartridges. The implantation of IOLs that are not designed for their respective delivery systems could result in damage to the IOL and/or patient complications. We might use several different types of IOLs in one day – IOLs from Bausch & Lomb, Alcon, Advanced Medical Optics, etc., and our techs have to make sure we are using the right cartridge with the right lens, but ultimately any off-label or non-qualified use of a company’s products is at the surgeon’s risk and liability. We don’t think about the cartridge until something goes wrong and the lens is split or there is a complication.

Compared to the C cartridge, the diameter of the D cartridge’s rear opening has increased from 5.5 mm to 6.0 mm (allowing for easier IOL loading with virtually no resistance), and the nozzle tip area is 33% smaller, respectively (resulting in less stress on the corneal incision). As a result, there is better wound sealing with a reduced need for stromal hydration and suture placement.

The technique used with the D cartridge is to engage the entire nozzle tip of the cartridge into the lip of the incision while maintaining much gentler pressure on the incision and inserting the IOL into the anterior chamber. The AcrySof single-piece aspheric lenses have been approved up to 27 D through the D cartridge, and in my hands, can be implanted without wound enlargement into a 2.2-mm incision that seals beautifully.

The Monarch III delivery system with the new D cartridge has enabled easier and safer implantation of the AcrySof single-piece aspheric lens models through micro-incisions.

We know when we moved from intracap it was a huge improvement in terms of reducing astigmatism and endophthalmitis. So if you’re performing clear corneal surgery through a 2.8-mm incision and your patients are doing well, what’s the motivation to go smaller? My friend and colleague Sam Masket, M.D., points out that micro-coaxial surgery should be less about incision size and more about the benefits of a “square” incision. A 2.2-mm or 2.4-mm blade allows surgeons to make a square incision that seals well and reduces the potential for endophthalmitis. The reduced surgically induced astigmatism gives us even better outcomes for our patients.

Alan S. Crandall, M.D., is professor of clinical ophthalmology, vice chair of clinical services, and director of glaucoma and cataract at the John A. Moran Eye Center, University of Utah Health Sciences Center, Salt Lake City.

References:
1 Crandall AS. Comparison of various angled tips with torsional ultrasound. Presented at: American Society of Cataract and Refractive Surgery: April 6, 2008; Chicago, IL.
Visual advantages using aspheric IOLs in micro-coaxial cases

by Satish Modi, M.D.

The lens design allows implantation through unenlarged micro-incisions

The AcrySof IQ aspheric lens (Alcon, Fort Worth, Texas) has easily become our lens of choice when we are implanting monofocal intraocular lenses. Now the correction for increased aberrations and the improvements in image quality are available on the AcrySof ReSTOR (Alcon). Spherical aberrations (SAs) are the principal HOA that cause a degraded image quality, glare, and bad night vision.

Uncorrected Distance

Best Corrected Distance

Biocompatibility

IQ and ReSTOR lenses in micro-coaxial phaco

Before the advent of micro-coaxial phacoemulsification, I would need to use a B cartridge (Alcon) and a 3.2-mm incision to put in anything above a +25 D lens. But now, with the thinner aspheric optic, we can easily implant up to a +27 D IOL using the D cartridge (Alcon) on the INFINITI (Alcon) through a 2.2-mm incision.

Using micro-coaxial phaco, we’re able to implant almost every lens through an unenlarged 2.2-mm incision. These smaller incisions tackle concerns about SIA, and reduce post-op wound leakage and potential for infection.

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Satish Modi, M.D.
Traditional longitudinal ultrasound requires surgeons to use high aspiration flow and vacuum settings to overcome the repulsive effect of the phaco tip’s forward strokes.

With micro-incisional phaco, however, fluidics settings have to be decreased to compensate the reduced irrigation flow. This decreases the efficiency and speed of the procedure.

Irrigation/aspiration flows

This decrease in irrigation flow has to be compensated by a similar decrease of aspiration flow. A simple general rule in fluidics management is that one has to balance the total fluid inflow and outflow. Roughly, there is a 30% decrease of irrigation flow if surgeons switch from a Micro sleeve/2.6- to 2.8-mm incision to an Ultra sleeve/2.2- to 2.4-mm incision.

A significant decrease of aspiration flow results in a significant decrease of the process of nuclear pieces being attracted to the phaco tip. The speed of the fluid stream (aspiration flow) determines how fast a nuclear fragment is transported to the phaco tip opening. This is particularly important when one realizes that traditional longitudinal ultrasound does not only emulsify the nuclear material by the forward stroke of the metal phaco tip, but also repels the nucleus at the same time. This paradox is in fact the greatest drawback of longitudinal ultrasound. Longitudinal ultrasound depends on high attractive forces – high aspiration flow and high vacuum – to compensate for its intrinsic repulsive forces.

**Efficient micro-torsional phacoemulsification**

"The introduction of OZil and its side-to-side shearing motion of the phaco tip has led to a paradigm shift in fluidics management during micro-coaxial surgery."

Khiun Tjia, M.D.

Reducing post-occlusion surge response

A high vacuum setting has the potential of increasing the incidence of posterior capsule rup- tures. When occlusion of the phaco tip is broken with a high vacuum by the emulsification of lens material on or in the phaco tip, the immediate return of peristaltic pump tubing into its original dimension after being con- tracted by a high vacuum results in a sudden outflow of fluid from the fluid paths and potentially the anterior chamber. This can lead to a sudden shallowing of the anterior chamber and potentially rupture the posterior capsule. The severity of this surge flow is determined by the height of the vacuum and the compliance or ‘softness’ of the tubing. With softer tubing, more contraction occurs and surge flow is worse.

The new INTREPID FMS (Alcon, Fort Worth, Texas) increases the rigidity of the aspiration tubing which reduces the occlusion break surge response significantly. This will help to further reduce tubing contraction, which should increase anterior chamber stability.

The introduction of OZil and its side-to-side shearing motion of the phaco tip has led to a para- digm shift in fluidics management during micro-coaxial surgery. High vacuum and aspiration flow appeared to no longer be necessary to obtain efficient and effective emulsification, as there is no repulsion the system needs to overcome.

Torsional ultrasound with moderate vacuum and flow settings is still extremely efficient in emulsifying nuclear material of all densities because material is more effectively cut by each shearing movement of the oscillating torsional tip. Formerly, there was a trend toward higher and higher settings to improve the performance of the phaco machines. As mentioned above, the reason to do this is no longer valid with the absence of significant repulsion of torsional ultrasound.

In surgical challenges such as...
Beginning micro-coaxial surgery

by James A. Davison, M.D.

Oscillatory torsional amplitude creates a lateral tip movement that shears lens material and has proven more efficient in its cutting, thereby reducing the amount of amplitude and thermal energy needed. In traditional phaco, you first impale and cut into the nucleus, then aspirate the emulsified material. The phaco tip will break the impacted nucleus into fragments, but the other nuclear material itself is not really emulsified.

The INFINITI Vision System with the INTREPID Fluid Management System (FMS) (Alcon) maximizes the safety of these techniques through a design that utilizes more rigid aspiration tubing that reduces post-occlusion surge.

How micro-coaxial phaco differs The INFINITI with torsional ultrasound uses a more efficient fluidics system in which fluidic turbulence by the vibrating tip is almost completely eliminated. The OZil 12 tip does not “kick” the nucleus material and, therefore, results in less repulsion, increased holding power, and more contact between the nucleus material and the phaco tip.

Compared to traditional phaco, torsional itself cuts very efficiently. There is less heat, less thermal damage to the wound, and it is very quiet. In essence, we are delivering less energy into the eye, which allows surgeons to effectively use smaller and more pristine incisions. That, in turn, means almost no surgically induced astigmatism and faster healing.

Fragment control

The ability to control fragments better is a significant advantage of using the INFINITI system. Compartmentalizing the quadrants allows surgeons to organize their removal, minimizing fragment endothelial abrasion.

The torsional tip is able to penetrate deeply into the nucleus and keep the nucleus at the tip for emulsification.

Also, because you have much less fluid surrounding the phaco tip there is a small clean reservoir, so the thermal cuts become more significant to micro-coaxial surgery. Having a low energy, high efficiency modality like OZil makes it a very good fit with micro-coaxial surgery.

Wound integrity and construction

Wound integrity continues to be an integral part of advanced phacoemulsification, and micro-coaxial phaco offers the opportunity for better wound integrity. The OZil 12 tip geometry translates to 50% reduction of stroke within the incision compared to traditional phaco, and there is a two-thirds reduction in thermal energy compared to longitudinal ultrasound.

Torsional tip motion uses quadrant aspiration. Advantages to that include a sweeping effect, less fragment repulsion, greater fragment adherence, improved fragment control, improved followability of nuclear material, and improved efficiency ratio of internal work action compared to incisional friction.

As we’ve discussed, a traditional phaco handpiece delivers less than 50% effective longitudinal ultrasound energy. Torsional phaco allows us to use 100% effective energy delivery, with more cutting power.

If we’re going to stay with larger incisions and high infusion sleeves, we can go to a higher flow rate. With torsional, vacuum levels and flow rates can be raised without affecting efficacy.

If we use micro-coaxial incisions, there’s no need to lower the fluidic parameters; they can remain where they would for the incision sizes. In my experience, a 2.2-mm incision made with the ClearCut INTREPID blade (Alcon) feels no different than a 3.2-mm incision with a high infusion sleeve. It’s a seamless transition.

Summary

The combination of torsional tip motion, more rigid cassette design, and angled tip design creates the most efficient contemporary phacoemulsification process that enables more surgeons to embrace micro-incisional phacoemulsification.

James A. Davison, M.D., is in private practice at the Wolfe Eye Clinic in Marshalltown, Iowa.

Learning curves are almost non-existent, making the transition easy and safe

Technical advances in phacoemulsification have helped us improve patient outcomes by making the surgery safer while compromising none of our desired visual outcomes.

For years, surgeons have looked for various methods to reduce ultrasonic energy used during phaco. We have learned that ultrasonic energy correlates with corneal endothelial cell density loss, so using less energy would therefore be safer.

Reduced energy was first introduced in the Legacy and INFINITI pulse and burst modes (Alcon, Fort Worth, Texas), and later with the WhiteStar system (Advanced Medical Optics, AMO, Santa Ana, Calif.). Other methods, such as NeoSoniX (Alcon), AquaLase (Alcon), and Nd:YAG laser all had slight improvements as well.

Torsional phaco using the mini-flared tip with the Ultra sleeve, the latest technological advances, combines stable fluidics with a limited irrigation flow while maintaining a secure wound construction and allows IOL insertion through a 2.2-mm incision.
The modified Kelman tip offers the most intraocular versatility

The best way to take full surgical advantage of torsional technology, by far, is to use a 2.2-mm microcoaxial approach. At that incision size, it’s easy to maneuver the tip into and out of the eye, and once the tip is in the eye, a 2.2-mm incision gives us the most versatility in how to interact with the cataract.

If surgeons are going to take advantage of torsional phacoemulsification technology, it has to be in conjunction with using a Kelman or angled tip. When we think about which Kelman mini-flared tip to use, we must think about the fluidics offered to us by this combination.

Using ‘WIN’

In torsional phaco, there is a shearing effect, as the tip moves to the right and left. In other words, 100% of the cycle is devoted to the emulsification process. WIN, or “what’s important now,” simply means at each stage of the cataract surgery, use the tools available to perform the safest and most efficient procedure. For example, a dense lens is going to require some form of cutting/sculpting. Previous versions of the Kelman tip in traditional anterior/posterior orientation have been phenomenal at aiding in the cutting.

Angulation will aid greatly in visualizing the tip. The main reason for this is that unlike longitudinal phaco, where movement is forward/backward, in torsional, movement is side-to-side.

The interesting thing about torsional is what’s taking place at the actual phaco tip. The oscillation at the hub is combined with the frequency of 32,000 cycles per second. With a standard Kelman-style tip, this translates into an actual horizontal excursion as opposed to a longitudinal excursion. The maximum horizontal excursion is 3.5 mills or 90 microns, which is almost exactly the maximum excursion with longitudinal phaco.

In my practice, I primarily do phaco pre-chopping. If I cannot do a pre-chop, I’ll perform a quick chop.

In pre-chop I prefer to go through a 2.2-mm incision using the rose colored 0.9 mm Ultra sleeve. With torsional phaco, the tip is easily inserted without additional instrumentation needed. In longitudinal phaco, I often had to use a second instrument. I tend to have an aspiration setting of 40 cc/min with a vacuum of 400 and torsional amplitude set at 100. I also prefer to use the 45-degree mini-flared Kelman tip.

Once the four quadrants are loose and free, the goal is to get them out as efficiently and safely as possible. I can place the Kelman tip on its side and slide it in between two quadrants, get a good hold on the one and pull it into the middle, using torsional to move it. The key here is that rather than the cutting phase, the 45-degree tip is never in the anterior/posterior orientation; it’s always on its side. Depending on the depth, there are many different orientations you can use to interact with the quadrant you’re trying to move. The 45-degree bevel of the tip more effectively repositions lens material so the shearing effect of torsional ultrasound is more efficient than with 30-degree bevel tips.

Pearls for achieving better outcomes

I’m a proponent of keeping a second instrument out of the eye whenever possible. I do this to avoid the potential leakage from the side port; incisonal leakage is the enemy of fluids.

I find I can bury the tip easily using torsional for the whole process rather than having to start with longitudinal and switching to torsional. The key to that is keeping the angled phaco tip on its side, not in an anterior or posterior position. This helps avoid potential complications of inadvertent contact with the posterior capsule.

In torsional, you really want to work at a higher amplitude that delivers the most effective shearing because there is no repulsion at the tip caused by fluidic repulsion of the vibrating tip. We can now set and utilize amplitude at 100%. Newcomers to the torsional technology need to remember amplitude is not the same as phaco power.

I have found a very short learning curve with torsional. The biggest paradigm shift for me has been that in longitudinal phaco, I was always cognizant of the repulsive force and the need to have a very low stroke length, low phaco power. In torsional, you want to maximize the side-to-side movement and increase the use of power in order to try to bring lens material back to the oscillating tip.

You can be more “aggressive” in your settings, and I’ve found I am actually safer with these than I was in longitudinal.

A difficult surgery will always be difficult. Because I feel like I am safer and more efficient with torsional, the difficult cases aren’t quite so hard. Flomax patients are a good example. The really ultra dense brunescent cataracts are still challenging for everyone, but the safety of microcoaxial phaco has made them a little less challenging.

You can perform torsional phaco with a 2.8-mm incision and use more traditional Kelman tip designs, but at that larger size, you would be severely compromising the abilities of the torsional component.

David Dillman, M.D., is in private practice at Dillman Eye Care Associates in Danville, Ill.
we examined the effects of different OZl settings on post-op wound architecture. [3] We evaluated 100% fixed OZl and 70% OZl/30% longitudinal settings using either 2.8-mm or 2.2-mm incisions on human cadaver eyes. Gross, histopathologic, OCT, and SEM examination demonstrated no noticeable differences in corneal wound architecture or integrity in the four groups. When compared to the longitudinal phaco results, neither torsional nor the mixed torsional/longitudinal settings induced any additional adverse effects to these incisions.

Putting all the pieces together
At this ASCRS meeting [4], we presented a clinical study comparing various intra-op and clinical parameters during torsional phacoemulsification. Using the INFINITI system and the OZl Torsional handpiece through a 2.8-mm incision in right eyes and a 2.2-mm incision in left eyes, we performed phacoemulsification using only 100% torsional in 30 patients with bilaterally similar cataracts.

In the 2.8-mm incision eyes, we used a 0.9-mm tapered Kelman tip with a 30-degree bevel, and in the 2.2-mm incision eyes, we used a 0.9-mm mini-flared Kelman tip with a 45-degree bevel. We chose these tips to maximize the fluidic performance for the corresponding incision sizes. We analyzed accumulated ultrasound energy usage, BSS usage, change in central corneal thickness (one day post-op), and change in endothelial cell count (six months post-op).

The two parameters that showed a statistically significant difference between the two groups were: 1) the amount of energy used (cumulative dissipat-ed energy or CDE), which was found to be higher in the 2.8-mm incision eyes, and 2) change in endothelial cell count, which also showed a higher percentage loss in the larger 2.8-mm incision eyes. We concluded that 2.2-mm micro-coaxial phacoemulsification with continuous torsional ultrasonic sound and the 45-degree bevel mini-flared tip was as safe and effective as standard coaxial techniques, but may also provide more favorable clinical and intra-op characteristics that may bene-fit patients post-op.

In my opinion, surgeons have now been given a fully integrated phacoemulsification system to perform micro-incision cataract surgery that will inevitably improve patient outcomes as a result.

Terry Kim, M.D., is associate professor of ophthalmology, Duke University School of Medicine, Cornea and Refractive Surgery, Duke Eye Center, Durham, N.C.

References:

Using aspheric IOLs– page 4
We’ve been implanting premium lenses since December 2003. The single most important thing we’ve found with patients who invest in premium lenses is that they all want to be able to read without glasses. They brag to their friends and family about it. We have found that only the ReSTOR implant consistently provides this ability.

The ReSTOR is an apodized diffractive lens. When using it, there are only two caveats that have to be discussed pre-op – rings and reading distance. Multifocal IOLs are pupil-depend-ent and the patients who complain about rings around lights are those with small scotopic pupils. Because the ReSTOR has an outer refractive distance zone, those patients with larger pupils don’t seem to complain about rings or halos. More importantly, with the ReSTOR, you’re giving them an effective +3 D add. So they’re reading at 12 to 15 inches, but they’ve been used to reading things day to day as they became more presbyopic. We tell our patients that they will have to “act younger” and start holding things closer! For those who require acute inter-media vision (using a computer, playing bridge, or looking at a musical score), we suggest an OTC +1.50 pair of readers; most do not need them after several months.

Aspheric ReSTOR
We conducted a prospective Phase IV study on 25 patients implanted bilaterally with the ReSTOR aspheric and compared them to patients implanted with the regular ReSTOR. We had a lot of exclusionary criteria – no sig-nificant astigmatism, presumed BCVA was good, no planned LRLs, etc.

Among other things, we looked at LogMAR at one and three months, monocularly and binocularly. At month one, monocular LogMAR was 0.02. At three months, monocular vision was 0.01. There was an additive effect with binocular vision – most patients saw 20/15 at month one and -0.09 LogMAR by month three.

We also did aberrometry on the patients using a 3.5-mm and 5-mm pupil aperture. With both the regular and aspheric ReSTOR at 3.5 mm, there was 0.01 microns – no appreciable differ-ence or benefit. But SA is NOT a function of photopic vision or a small pupil – it comes into play with an enlarged pupil, in mesopic or scotopic conditions. When we looked at the 5-mm pupil, SA increased to 0.15 with the regular ReSTOR, but was only 0.06 with the ReSTOR aspheric lens. That translates directly into results. At post-op day one, only 6% of the regular ReSTOR patients saw 20/20; 43% of the aspheric ReSTOR saw 20/20, with 85% of the aspheric eyes seeing 20/30. By day 90, 100% of the aspheric eyes were 20/30 or better.

Right now, we’re using 100% aspheric ReSTOR. It’s been a huge step forward in design, and we now have reached a critical mass where potential patients are coming in to the office asking for this lens by name.

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