

# Contemporary Cataract Care: Clinician, Counselor and Caregiver

*The optometrist's guide to cataract patient education.*

Supplement to

**REVIEW**<sup>®</sup>  
OF OPTOMETRY

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**Advanced technology intraocular lenses (IOLs), femtosecond laser technology,** and new pharmaceutical advancements are changing the landscape of cataract surgery. Practitioners need to be up-to-date and know how the current technology works. They also need to know how to present it, how to prepare the patient, and how to provide postoperative care (when applicable). In the following pages, you will receive a thorough look inside contemporary cataract surgery care and detailed advice and instruction on how best to help your patients navigate the process. Here's what you'll find:

1. **Advances in IOL Technology and Cataract Surgery.** *Walter Whitley, OD*, discusses lens options, astigmatism, the premium lens difference and the use of lasers.
2. **Cataract Counseling: Be an Expert.** *David I. Geffen, OD*, explains how to effectively communicate with patients. He also discusses helpful chairside tools, setting expectations and broaching cost.
3. **Contemporary Postoperative Cataract Care.** *Marc Bloomenstein, OD*, talks about how cataract surgery has evolved and how to make sure everything runs smoothly postoperatively by stressing the importance of eradicating postoperative inflammation as quickly as possible, offering detailed advice on postop evaluations and managing complications.
4. **Your Role in Cataract Care.** *Kenneth Lebow, OD*, discusses how to give patients the help they need. Specifically, he talks about how to get properly trained to work with technologies, how to advocate for the patient, and how to help guide the patient to select the appropriate treatments.

Cataract surgery is changing every day, and optometry is changing along with it. We hope this supplement helps guide you on a path toward strong patient connections and excellent delivery of care.

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## Advances in IOL Technology and Cataract Surgery

*ATIOLs and femtosecond laser technology are changing the landscape of cataract surgery.*

By **Walter Whitley, OD, MBA, FFAO**

**W**ith the introduction of advanced technology intraocular lenses (ATIOLs) almost a decade ago, coupled with the increase in the aging baby boomer population, the demand for optimal quality and quantity of vision continues to grow. On a daily basis, we hear about the different ATIOL implants, such as Alcon's AcrySof IQ ReSTOR and AcrySof IQ Toric IOL (Alcon Laboratories, Inc.), and the positive impact that they have on many patients' vision. Since

Alcon's femtosecond laser was FDA-cleared for cataract surgery, the LenSx Laser has been well received by both surgeons and patients alike. This brings a new level of excitement, precision and accuracy to the cataract procedure. The purpose of this article is to provide a better understanding of the advances in IOL technology and cataract surgery as well as treatment options available to your patients.

### Available IOLs

Patients have several options when it comes to cataract surgery and it is important to consider and discuss all of them. We must remember that cataract surgery is a refractive procedure

and patients and practitioners have higher expectations than they once did. The goal of cataract surgery is to improve quality of life for our cataract patients by increasing their freedom from spectacle wear and providing a quality range of vision.

Current IOL treatment options include:

- Monofocal IOL for distance (glasses for near)
- Toric IOLs (glasses for near)
- Multifocal IOL for near and distance vision correction

Patients need to understand the advantages and disadvantages of their options. The key for optometrists is to have this frank discussion. Many patients opt for the standard monofo-

cal for distance simply because they didn't know any other technologies were available.

### Addressing Astigmatism

As doctors, we understand the importance of treating astigmatism and frequently do so with glasses, contact lenses and recommending laser vision correction. But cataract patients can also benefit from astigmatism correction with toric IOLs. According to Ferrer-Blasco et al, up to 34.8% of patients have corneal astigmatism equal to or higher than 1.00D.<sup>1</sup>

Candidates for IOL astigmatism correction are patients with regular astigmatism and keratometry measurements  $>0.75D$ . It is important to differentiate the corneal cylinder from total refractive cylinder because, after the cataract is removed, the only source of astigmatism will come from the cornea itself.

As for contraindications to the surgical correction of astigmatism, there are few because the goal is to optimize our patients' vision. An example would be a patient with moderate to advanced macular degeneration with 1.25D of astigmatism who needed a new pair of glasses. However, the surgeon will determine the best course of action for any patient with such physiologies.

Just as we would prescribe glasses with astigmatism correction to offer the best vision, the same goes for a toric IOL—this is a unique opportunity that these patients have to correct their astigmatism.

AcrySof IQ Toric IOLs are refractive monofocal IOLs that can correct up to 4.00D of corneal astigmatism. Patients with at least 0.75D of corneal astigmatism are candidates for

this technology, which means a significant percentage of our patient population. The advantages of toric IOL technology include good refractive outcomes and more predictability for higher amounts of astigmatism. Additionally, toric IOLs correct for astigmatism closer to the nodal point of the eye, which will improve vision quality. According to the Alcon AcrySof

**Although the majority of cataract patients opt for standard intraocular lenses, ATIOLs represent increasingly popular treatment options, which are designed to maximize visual outcomes.**

IQ Toric IOL Directions For Use, 94% of patients implanted achieved uncorrected distance visual acuity of 20/40 or better.<sup>2</sup>

### The ATIOL Difference

Advanced technology intraocular lenses (ATIOLs) represent increasingly popular treatment options, which are designed to maximize visual outcomes. Through advancements in IOL technology and the Centers for Medicare and Medicaid Services ruling to allow patients to elect ATIOLs, patients have their one opportunity to choose the IOL which best addresses their visual and lifestyle needs. Understanding the differences in ATIOLs and matching them to each individual patient and their vision needs will optimize surgical outcomes.

Multifocal IOL options such as the AcrySof IQ ReSTOR have an optical surface that contains physical steps that divide light waves into wavelets that form a distance and near image on the retina.

The AcrySof IQ ReSTOR IOL is the only multifocal that utilizes both aspheric, apodized diffractive and refractive optics.

The central 3.6-mm apodized diffractive surface distributes light waves to both a distance and near object with varying step heights. The outer zone of the ReSTOR IOL technology includes an outer refractive portion that maximizes patients' distance vision when the pupil increases in scotopic conditions. The apodized design helps to improve image quality and

energy balance. Candidates well suited for these IOLs are patients who are motivated for a fuller range of vision but understand that some patients may experience occasional glare/halos.

### The Role of Laser Cataract Surgery

Cataract surgery continues to be one of the most commonly performed surgical procedures today. Each year, approximately 3.3 million cataract surgeries are performed and that number is expected to rise dramatically by 2020.<sup>3</sup> Surgical outcomes have been great and patients have benefitted from the advances in IOL technology. The question that remains is, "Why laser cataract surgery?"

The femtosecond laser has revolutionized cataract surgery and has taken it to the next level. The first FDA-cleared femtosecond laser for cataract surgery was Alcon's LenSx in 2010. The increased precision and accuracy of the laser as compared to manual cataract surgery is used in several steps of the cataract procedure from making the corneal incisions

(main incision, side port and arcuate incisions), creating the capsulorhexis, and fragmenting the lens. Phacoemulsification (phaco) is still required for most cases, as is IOL insertion. The end result is a more consistent procedure using less phaco energy and less phaco time, which results in less inflammation.<sup>4</sup>

Questions that MDs must contemplate when considering laser cataract surgery include:

• **What benefits does a femtosecond laser offer compared to traditional cataract surgery?** A key benefit of the femtosecond laser for cataract surgery include improved IOL position predictability.<sup>5</sup>

• **Will the technology improve patient outcomes and safety?** Most users of this technology would agree that the femtosecond laser has improved outcomes because of the consistency of the procedure. The capsulorhexis is well-centered in addition to the precise diameter, which improves the effective lens position of the IOL. This leads to more consistent outcomes.<sup>5</sup> Additionally, the size of the capsulorhexis can impact

the development of posterior capsular opacification, which can lead to decreased vision.<sup>6</sup> As for safety, the femtosecond laser can help minimize surgical complications in several areas. First, the precision of the laser can allow the surgeon to create a multiplanar incision to minimize wound leaks. Second, the consistency may lead to less IOL decentration, IOL tilt and capsular rupture. Lastly, the femtosecond laser can fragment the lens, which allows the surgeon to use less phaco and overall energy in the eye.<sup>7</sup>

• **Will patients be interested in this elective femtosecond laser technology?** The answer is yes. Just as the femtosecond laser was adopted within laser vision correction, the same will likely be true for femtosecond laser cataract surgery. Patients are interested in the reduced dependency on glasses and contact lenses that can be achieved with astigmatism treatment and ATIOLs. To maximize outcomes, the femtosecond laser is combined with these elective procedures.

Cataract surgery is a once-in-a-lifetime decision and it is our

responsibility to educate our patients on all of the options available. Just like laser vision correction, these technologies are generally elective procedures and are not covered by medical insurance. For patients to be candidates for femtosecond laser cataract surgery, they must elect to have astigmatism treatment or ATIOLs to reduce their dependency on glasses. At the end of the day, IOL selection is the patient's choice, which further underscores the need for thorough education by the primary eye care physician.

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*Dr. Walter Whitley is a paid consultant to Alcon.*

## Pre-Surgery Cataract Counseling: Be an Expert

*Your patients depend on the expertise and trust you have developed over the many years that they have been seeing you for their eye care.*

**By David I. Geffen, OD, FFAO**

At some point in almost every patient's lifetime, he or she will turn to a primary eye care provider to help determine whether a surgical procedure is needed. Most likely, this will be for cataract surgery

and that patient will depend on you for guidance to let him or her know if, indeed, the time for surgery has come. This has always been a big moment for patients and optometrists alike. Not so long ago, we provided very little education to help prepare them for what their future had in store.

Fortunately, times have changed and optometrists now play a critical role in patient education for this important procedure.

### Doctor to Doctor

In today's healthcare environment, it is the optometrist's responsibility to help educate the patient. As primary eye care providers, we have long-standing relationships with our patients and are very familiar with their histories. This is central when it comes to making choices for cataract surgery care. We know if the patient has been wearing glasses or contact lenses and

are aware of their successes and failures with monovision and/or multifocal contact lenses. We need to share this information with the operating physician. For example, if the patient was wearing multifocal contact lenses, they may be an excellent candidate for a multifocal IOL like Alcon's AcrySof IQ ReSTOR lens.

### Doctor to Patient

Patients, likewise, need information prior to surgery and those details should also come from you. Patients become apprehensive when we mention cataracts and the possibility of surgery. Educate them on the process, explaining what they will go through. Postoperative success is greatly determined by knowing what to expect.

Our discussion with the patient should center on lifestyle needs. Cataract surgery today is "refractive surgery" and we need to let the patient know this. When appropriate, inform the patient with astigmatism about the risks and benefits of a toric intraocular lens (IOL) like the AcrySof IQ Toric (Alcon Laboratories, Inc.) and how it would be similar, if not better than, the contact lens modality to which they have grown accustomed.

The education process is largely about setting appropriate expectations, so talk about visual needs and determine whether the demand is highly distance- or near-oriented. Also, make sure you educate the patient about the possibility of needing glasses for certain functions.

If your surgeon uses the LenSx laser (Alcon Laboratories, Inc.), make sure you understand how it works. Patients like it when their surgeon is cutting-edge and using the latest and greatest technology. They also love the

word "laser." There is a general feeling—in lay and in medical communities—that it is more accurate and safer than using blades. In our practice, we have found this to be true.

If a patient wants only what is "covered" by their insurance, make sure you educate him or her about possible residual astigmatism and the need for reading glasses. Occasionally, patients go into surgery thinking they will come out with the vision of a 20-year-old and end up disappointed, pointing fingers at the doctors involved.

the range of vision at near that the patient should expect.

The patient also has choices when it comes to their post-surgical treatment. If appropriate with their surgeon, you may have the ability to discuss the topical pharmaceutical options with them so that they are educated and know what to expect after surgery. This will help them prepare, make informed choices and build a relationship with you.

In addition to talking about the procedure, talk about the surgeons' successes as well as your own. Give them the

### Understanding Astigmatism

Discussing astigmatism is very straightforward. Remember, it is the corneal cylinder that will determine the amount of postoperative astigmatism—not the overall preoperative amount of refractive cylinder. Therefore, perform keratometry and/or topography to determine the amount of cylinder on the cornea. If there is more than 0.75D, talk to the patient about the decrease in vision that will occur, unless it is corrected in surgery. Patients know they have astigmatism and that it affects vision; they also know they don't want it! Many patients will elect to pay the additional out-of-pocket expense to correct astigmatism.

Multifocal IOLs require a more extensive discussion than other options. Keep in mind that you do not need to go into all of the details—that is for their surgeon to discuss with them. However, optometrists do need to make the patient comfortable with proceeding and must also have a good idea of which options to consider. For instance, you might talk about the freedom that multifocal IOLs can provide. Patients will have the ability to see well at distance and near, which is a great benefit. That being said, don't gloss over the potential for halos and glare. Talk about how this may affect their night vision and discuss

lowdown on your combined experience in working with these lenses. You can also use this as an opportunity to talk about other patients' successes; how they love the vision and the ability to function without glasses for most activities.

### Doctor's Toolkit

Give the patient the appropriate information to take to the surgeon. For example, give him some questions to ask, to help ensure he makes the right choice for his visual goals.

Have available chairside tools to help with this education process. The manufacturers have great resources available. One

great site is [myAlcon.com](http://myAlcon.com), which can provide the office with handouts for your patients as well as educational tools that will help you better understand the procedure and devices. Giving the patient a handout to take home and show their family is a great practice builder too. Alcon representatives are willing to come to your office and help educate the entire staff so they can assist with patient questions and care about Alcon products.

### Doctors on Dollars

Don't prejudge a patient's ability to pay for premium devices and procedures. Doctors and staff make this mistake all the time with glasses and contact lenses by assuming a patient can't afford the best. It is not our job to prejudice or give financial advice. Our job is to present the patient with all of the suitable options and then help provide education as to which choices they may consider and discuss with their surgeon.

I can't tell you how many times I've been surprised by my patients who opt for these premium products at significant costs. They have chosen what will be best for them and find a

way to make it happen. The last thing you want to hear is that your postop patient was playing bridge with her friends (who no longer wear glasses for near) and everyone at the table is appalled to learn that you never educated their good friend about multifocal IOLs. They will conclude that you're behind the times and share that with everyone in town.

### Doctor to Happy

If you do see the patient after surgery, you need to make the patient comfortable with the postoperative recovery process. Tell him or her how common cataract surgery is and how successful it usually turns out to be.

Let your patient know about the time frame for visual recovery. While typically the patient can expect good vision even on day one, it will take a few weeks to get to the best-corrected acuity. Optimal multifocal vision usually is not achieved until the second eye is done. Make sure patients understand that.

Also, set realistic expectations regarding possible minor discomfort the first couple of days. Discuss the light sensitivity that the patient should expect right

away. I like to make the analogy that the cataract has been like wearing sunglasses that filter 30% to 40% or more of the light. Suddenly, we remove the cataract, and now we are letting more light into the back of the eye. Explain that just as when they take off their sunglasses on a bright day and have glare and sensitivity, the same will be true the first few weeks after surgery. But reassure them that there is adaptation to this and the glare will subside over time.

Talk about neuroadaptation as well, mentioning how the brain adapts and will adjust to the new way of seeing. Tell your patient how much crisper and brighter the world could be. Colors may be more vivid and their grandkids' pictures may look crisper. All of this will improve their quality of vision.

It is a wonderful time to recommend cataract surgery! The technology has never been better and the results are truly changing our patients' vision. It is up to us to help guide our patients through the maze of options and come up with solutions to benefit their lifestyle for years to come.

*Dr. David I. Geffen is a paid consultant to Alcon.*

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## Contemporary Postoperative Cataract Care

*Cataract surgery has evolved into an amazing opportunity for patients and optometrists alike. Here's how to make sure everything runs smoothly postoperatively.*

**By Marc Bloomenstein, OD**

**B**ecause patients may sometimes interpret our enthusiasm for them to have cataract surgery as a guarantee, our preop discussion on the advantages of the

new lens options must also detail their limitations. Each of the new lens options can provoke some sequelae to which patients must adapt. This can be a postop challenge; however, it is my personal opinion that the referring OD knows very well what his or her patient can and will tolerate. Thus, the surgeon may turn to you to help assist the patient through the postop period.

### Postop Evaluations

The postoperative treatment of a cataract patient is simplified by the phenomenal surgical technological advancements and by topical pharmaceuticals. Traditionally, a patient is seen on day one by the surgeon. So, if there is to be transfer of care back to the optometrist (depends on patient needs and the relationship with the surgeon), it could be at the

week or month visit.

When evaluating a patient during the postoperative recovery, you should ask yourself whether these symptoms and findings are typical at this point in the postoperative period. The lens choice at this stage is superfluous; the focus should be more about how the patient is doing. It is common for the patient to see a red hue from the anesthesia, experience foreign body sensation and mild discomfort at the incision, as well as hazy vision and reduced near vision. Within the first month, it is also common to see some cells in the anterior chamber, mild injection, microcystic edema at the wound and a slight increase in the intraocular pressure (IOP). Anticipate complaints about glare and halos in multifocal lens recipients who have some subclinical corneal edema. These mild symptoms can take days to weeks to completely resolve, so make sure to accurately record this so you can note improvement at the next visit.

### Postop Conversations

Patients should be alerted that, although this is a one-eyed surgery, they will ultimately get the best acuity when both eyes are complementing each other. Whereas some mild symptoms take days to weeks to improve with the appropriate topical pharmaceutical treatment, if they opted for a multifocal lens, it may take months for neural adaptation to occur. I tell my patients that the healing process takes a minimum of six months to a year and that the sooner both eyes are working together, the faster recovery can take place.

Postoperative treatment of

## An Evolutionary Refractive Process

Advances in cataract surgery and new lens technology are textbook examples of sociological evolution. What's most striking, however, is that cataract surgery has evolved in less than a few decades. Removing a lens from the capsular bag and replacing it with an implant represents a substantial paradigm shift.

The optometrist who still uses visual acuity changes as a primary indicator for the need for cataract surgery is not recognizing that patients experience glare, color reduction and increasing vicissitudes in refractive errors, leading to a gradual degradation in quality of life. The earlier you prepare your patient, the more excited they will be about wanting to venture into the next and last visual journey. This educational process should begin early on and be as commonplace as discussing contact lenses.

patients with toric intraocular lenses (IOLs) is similar to those who have a standard lens, with the exception being potential lens rotation. There needs to be a significant rotation to induce a clinically significant change. Theoretical calculations show that approximately one-third of the correction is lost if the lens is rotated 10° off axis. Two-thirds of the effect is lost with 20° of rotation, and a net increase in astigmatism will result if the lens is rotated more than 30° off axis.

Luckily, lens rotation, specifically with the AcrySof IQ Toric IOL (Alcon Laboratories, Inc.), is very unlikely. In fact, the single-piece platform ensures exceptional rotational stability, with less than 5° average rotation six months after implantation.<sup>1</sup> At the one-week to one-month follow-up visit, it is important to ensure that best-corrected acuity is achievable. Dilation will most likely be necessary to visualize the lens markings.

Whereas a toric lens can have a patient seeing the targeted distance almost imme-

diately, there is an adaptation process for multifocal lenses. Most notable is the glare and halos that patients may have at night. As a patient advocate, you have to alert them that there will be some shadowing or glare around lights so that they anticipate the light show and feel comforted that this is a normal postoperative course.

Postoperatively, I do not address the glare and halos unless a patient makes it a priority. I look at the surgery and ensure that they are on a normal postoperative course. That being said, if the patient perceives this as debilitating or reports an unexpected magnitude of visual discomfort, they deserve your attention and sincere effort to resolve the issue.

Know what to expect and be well versed in what is outside the normal postoperative course. Different surgeons have different comfort levels and unique ways of treating potential scenarios. Patients are not aware of what is or is not an expected effect, so don't create more discomfort or anxiety. The sooner a complication is identified and a proper

course of action is initiated, the sooner it can be resolved. Any outcome that is questionable should be communicated with your surgeon in a timely manner.

## Incisions and Wounds

When following cataract patients, be aware of the incision location and whether your surgeon used a laser. In most cases, modern cataract surgery now involves a sutureless clear corneal incision, in which tunnels with an internal corneal valve are formed.

Postoperative abnormalities in the wound structure are due to abnormalities in the tunnel architecture, trauma, and poor healing due to systemic disease, abnormal wound tissue, or incarceration of ocular tissue (such as iris, lens or vitreous). The use of a laser, such as the LenSx laser (Alcon Laboratories, Inc.), is designed to reduce these potential complications. Yet, wound abnormalities are best identified by careful examination of the incision and surrounding tissues. The appearance of a positive Seidel is a clear indication that the wound has not properly healed. Wound abnormalities are an open invitation for the development of endophthalmitis, along with other severe consequences, hence the necessity for prompt intervention.

## Complications

Increased IOP is a common finding in the first one to three days following cataract surgery. Patients who experience IOP spikes may report nausea and vomiting and often have significant corneal edema due to corneal endothelial dysfunction. The pressure spike is often secondary to retained visco-

## Communicate with Your Surgeon

Communicate with your surgeon before surgery so you are both on the same page for the follow-up and whether or not you will be assisting with postoperative care. It also helps both doctors in using the same verbiage with the patient. Importance should be placed on knowing what surgery is being performed and what anticipated refractive error the patient may experience. This is best illustrated when following a toric intraocular lens patient. Because the surgeon may use a calculator or *in-vivo* measuring device for the axis alignment, the lens may not always follow the steep axis of the patient's cornea. The markings on the anterior surface of the IOL give you the exact location of the lens in the bag postoperatively, yet not where it was implanted. Although toric lenses have a tremendous power range, we may not be able to treat all of the error. Surgeons and optometrists have to be in sync with respect to time frames, procedures and costs needed to alleviate this residual correction.

elastic substances used during the surgery or debris obstructing the trabecular meshwork. Spikes that present early in the postoperative course are often treated by tapping the poster lip of the paracentesis incision, allowing a small amount of aqueous to escape from the anterior chamber. This can be followed with a topical medication, and therefore, when you see the patient, they may still be on the pressure drops. Although patients are only on the medication for a short time, you should be informed as to the extra treatment that may be needed for the patient and be prepared to taper the drop accordingly.

Aside from some slight residual refractive error, cystoid macular edema (CME) is the most common etiology of reduced vision following cataract surgery. The onset of CME is typically three to four weeks postoperatively. Patients who have intraoperative complications, such as retained lens particles, vitreous loss, severe iris trauma or vitreous to the incision site,

are at greater risk. Subclinical CME may have a mild decrease on the quality of vision and is generally treated with topical steroids and/or NSAIDs.

In the first few months following surgery, patients who present with complaints of haze in their central vision or an overall feeling of reduced visual acuity may have mild CME. Resuming the anti-inflammatory medications may be the only treatment necessary to improve their symptoms. Unresponsive patients are often treated with sub-Tenon's injection of steroids or surgical correction of the precipitating factor (i.e., epiretinal membrane).

Often, you will hear patients describe that they have some flashes and mild floaters following the implantation of their lenses. This can be attributed to the increase in brightness and the appearance of the floaters that already existed, the disruption of the vitreous, or the incision healing. You must be able to differentiate what is a normal degree of symptoms versus



abnormal. Dilating the eye will give you and the patient the confidence you need; however, if you are not 100% sure that a symptomatic patient does not have a tear or detachment, refer for a second opinion.

The days of waiting for the cataract to “ripen” have been

replaced with “let’s do it when it is fresh.” The excitement I experience from my cataract patient outcomes is tantamount to that of the refractive surgical experience. Thus, being diligent about diagnosing the early cataract can only improve your patient’s quality of vision sooner. More-

over, when you help educate and engage them in the decision process, it makes the post-operative course much easier.

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*Dr. Marc Bloomenstein is a paid consultant to Alcon.*

## Your Role in Cataract Care

*How to give patients and surgeons the help they need.*

By **Kenneth Lebow, OD**

**T**he role of the optometrist in caring for cataract surgery patients has changed dramatically in recent years. Optometrists now have the opportunity to become truly engaged in the education process. This benefits all parties involved—you, the surgeon and, most importantly, the patient. There is a lot more to contemporary cataract care today than there was back when I started practicing. It must begin with a genuine desire on the part of the primary eye care practitioner to be involved in medical eye care.

### Where to Start

Most of the recent graduates in optometry are well trained in the medical management of the postoperative cataract patient, but they too should participate in additional education. Become fully aware of the technologies available today, any potential adverse reactions or complications that may occur and be sure to have an appropriate plan of action in place. It is a big benefit when you and the surgeon align expectations.

### Optometry’s Great Value

Simply put, most patients are afraid of any type of eye surgery. As the primary care optometrist, you have most likely worked with your cataract patient for many years. This longevity demonstrates the trust the patient has in you. Having a trusted relationship with an optometrist gives patients much more comfort when they go for their cataract consultation, especially when the surgeon

**Dry eye treatment should be initiated prior to surgery and continued after as well, especially when ATIOLs are selected.**

follows through with additional information and an optometrist’s recommendation to best suit the patient’s visual goals.

The optometrist can also provide the patient with insight regarding the type of lens that may best meet these goals. These discussions often take place over a series of visits, which enables patients to think about and investigate their choices before having to rapidly make a decision. Remember, there is typically no emergency reason to perform cataract surgery—it is an elective procedure. By taking

time with your patient to explain the surgery, you not only develop their trust, but you also put them more at ease when it’s time to have surgery.

In addition to the emotional preparation that’s involved, cataract patients must also be physically prepared prior to being referred for surgery. For example, you should resolve any signs of eyelid disease or dry eye issues prior to scheduling their procedure. These aspects of care are the responsibility of the OD.

### How to Strengthen Your Connection

It’s not enough to simply refer a patient with a note stating that he has a healthy ocular surface and is therefore ready for cataract surgery. To truly step up care, you need to determine the patient’s lifestyle and help educate him or her on the proper correction for their needs. For example, what is the optimum distance vision for the truck driver who needs reading glasses for near vision? And how can you provide near vision for the accountant, attorney or ‘little old lady’ who prefers to read without glasses, but is okay with distance glasses for driving? You are well-suited to advise the surgeon on the near power required in the patient’s nondominant eye. And all of this

is just for starters. As patients become increasingly aware of the benefits of advanced technology intraocular lenses (ATIOLs), your educational role becomes even more critical to their ultimate satisfaction.

The optometrist's role is extremely important to the success and satisfaction of ATIOL patients. With proper instruction by the OD, patient goals are far more likely to be realistic. The optometrist builds on the existing relationship to help the patient understand that there are no guarantees and that some form of correction may be needed after surgery. You are also instrumental in setting expectations, which leads to patient satisfaction.

Great candidates for multifocal IOLs are those who are strongly motivated not to wear spectacles, yet realize that there are no guarantees. That said, don't limit your discussion of multifocal IOLs to only the ideal candidates—it is wise to talk about multifocal IOLs to *all* of your patients. Some may have already heard about ATIOLs, but you need to be an educator for others—someone who introduces the latest and greatest designs that may help them experience the freedom of being rid of glasses as well as cataracts. The patient simply needs to know that the technology exists and that you know all about it.

I tell prospective cataract patients that today's surgical procedures not only remove the cloudy crystalline lens that has been blurring their vision, but also provide a refractive solution to their vision prob-

lems. Just as LASIK refractive surgery was designed to minimize a patient's reliance on glasses or contact lenses, contemporary cataract procedures can offer vision improvement with fantastic results. I also share with them that there will be some adaptation to the vision they achieve initially, but that once both lenses are implanted, vision improves dramatically. I also let them know that they will need to get accustomed to seeing clearly again, because the cataract had affected their vision for quite a while. Finally, I add that distance vision should be excellent, but initially there may be some adjustment to night driving, which settles quickly.

### Full-Circle Care

While contemporary cataract surgery appears a safe procedure, it is nonetheless surgery on one of the most delicate organs of the body. Even without major complications, the trauma and associated inflammation to the eye needs to be controlled, necessitating careful follow-up as well as patient compliance with the postoperative medication schedule. The routine postoperative global period for cataract surgery is 90 days following the surgery. For uncomplicated cases, routine postoperative visits typically are performed at one day, one week, one month, two months and three months after the surgery.

Tests for dry eye such as tear breakup time, fluorescein, rose bengal and lissamine green staining are critical to evaluating ocular surface conditions

that will affect vision with ATIOLs. Specifically for ATIOLs, dry eye disease can reduce the patient's vision, and therefore aggressive treatment for ocular surface lubrication is extremely important to achieving excellent vision. Dry eye treatment should be initiated prior to surgery and continued after as well, especially when ATIOLs are selected.

### Prepare and Rehearse

If you want to take part in educating cataract surgery patients, you have to know your stuff and know it well. It is crucial to understand and be able to explain the science behind the implants—all for the patient and their surgeon to finalize on what will best suit their visual goals. For example, if a toric implant is not used to correct corneal astigmatism, the patient will need to rely on glasses for better vision. It is often ideal to demonstrate the difference in these two corrections to the patient before surgery, if possible. Patients really can't appreciate the difference in vision unless they are shown and can see for themselves.

There are many opportunities for the OD to learn about IOL options and advanced technologies as well. Some excellent sources of information include continuing education meetings and online resources such as [myAlcon.com](http://myAlcon.com), which offers educational materials for patients that practitioners can obtain as well as giving patient specific education about cataract surgery. ■

*Dr. Kenneth Lebow is a paid consultant to Alcon.*

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## AcrySof® IQ ReSTOR® Intraocular Lenses – Important Safety Information

### CAUTION:

Federal (USA) law restricts this device to the sale by or on the order of a physician.

### INDICATIONS:

The AcrySof® IQ ReSTOR® Posterior Chamber Intraocular Lens (IOL) is intended for primary implantation for the visual correction of aphakia secondary to removal of a cataractous lens in adult patients with and without presbyopia, who desire near, intermediate and distance vision with increased spectacle independence. The lens is intended to be placed in the capsular bag.

### WARNING/PRECAUTION:

Careful preoperative evaluation and sound clinical judgment should be used by the surgeon to decide the risk/benefit ratio before implanting a lens in a patient with any of the conditions described in the Directions for Use labeling. Physicians should target emmetropia, and ensure that IOL centration is achieved. Care should be taken to remove viscoelastic from the eye at the close of surgery.

Some patients may experience visual disturbances and/or discomfort due to multifocality, especially under dim light conditions. Clinical studies with the AcrySof® ReSTOR® lens indicated that posterior capsule opacification (PCO), when present, developed earlier into clinically significant PCO. Prior to surgery, physicians should provide prospective patients with a copy of the Patient Information Brochure available from Alcon for this product informing them of possible risks and benefits associated with the AcrySof® IQ ReSTOR® IOLs.

Studies have shown that color vision discrimination is not adversely affected in individuals with the AcrySof® Natural IOL and normal color vision. The effect on vision of the AcrySof® Natural IOL in subjects with hereditary color vision defects and acquired color vision defects secondary to ocular disease (e.g., glaucoma, diabetic retinopathy, chronic uveitis, and other retinal or optic nerve diseases) has not been studied. Do not resterilize; do not store over 45° C; use only sterile irrigating solutions such as BSS® or BSS PLUS® Sterile Intraocular Irrigating Solutions.

### ATTENTION:

Reference the Directions for Use labeling for a complete listing of indications, warnings and precautions.

## AcrySof® IQ Toric Intraocular Lenses – Important Safety Information

### CAUTION:

Federal (USA) law restricts this device to the sale by or on the order of a physician.

### INDICATIONS:

The AcrySof® IQ Toric posterior chamber intraocular lenses are intended for primary implantation in the capsular bag of the eye for visual correction of aphakia and pre-existing corneal astigmatism secondary to removal of a cataractous lens in adult patients with or

without presbyopia, who desire improved uncorrected distance vision, reduction of residual refractive cylinder and increased spectacle independence for distance vision.

### WARNING/PRECAUTION:

Careful preoperative evaluation and sound clinical judgment should be used by the surgeon to decide the risk/benefit ratio before implanting a lens in a patient with any of the conditions described in the Directions for Use labeling. Toric IOLs should not be implanted if the posterior capsule is ruptured, if the zonules are damaged, or if a primary posterior capsulotomy is planned. Rotation can reduce astigmatic correction; if necessary lens repositioning should occur as early as possible prior to lens encapsulation. All viscoelastics should be removed from both the anterior and posterior sides of the lens; residual viscoelastics may allow the lens to rotate.

Optical theory suggest, that, high astigmatic patients (i.e. > 2.5 D) may experience spatial distortions. Possible toric IOL related factors may include residual cylindrical error or axis misalignments. Prior to surgery, physicians should provide prospective patients with a copy of the Patient Information Brochure available from Alcon for this product informing them of possible risks and benefits associated with the AcrySof® IQ Toric Cylinder Power IOLs.

Studies have shown that color vision discrimination is not adversely affected in individuals with the AcrySof® Natural IOL and normal color vision. The effect on vision of the AcrySof® Natural IOL in subjects with hereditary color vision defects and acquired color vision defects secondary to ocular disease (e.g., glaucoma, diabetic retinopathy, chronic uveitis, and other retinal or optic nerve diseases) has not been studied. Do not resterilize; do not store over 45° C; use only sterile irrigating solutions such as BSS® or BSS PLUS® Sterile Intraocular Irrigating Solutions.

### ATTENTION:

Reference the Directions for Use labeling for a complete listing of indications, warnings and precautions.

## LenSx® Laser Important Safety Information

### Caution

United States Federal Law restricts this device to sale and use by or on the order of a physician or licensed eye care practitioner.

### Indication

The LenSx® Laser is indicated for use in patients undergoing cataract surgery for removal of the crystalline lens. Intended uses in cataract surgery include anterior capsulotomy, phaco-fragmentation, and the creation of single plane and multi-plane arc cuts/incisions in the cornea, each of which may be performed either individually or consecutively during the same procedure.

### Restrictions

- Patients must be able to lie flat and motionless in a supine position.
- Patient must be able to understand and give an informed consent.
- Patients must be able to tolerate local or topical anesthesia.
- Patients with elevated IOP should use topical

steroids only under close medical supervision.

- Contraindications
- Corneal disease that precludes appplanation of the cornea or transmission of laser light at 1030 nm wavelength
- Descemetocoele with impending corneal rupture
- Presence of blood or other material in the anterior chamber
- Poorly dilating pupil, such that the iris is not peripheral to the intended diameter for the capsulotomy
- Conditions which would cause inadequate clearance between the intended capsulotomy depth and the endothelium (applicable to capsulotomy only)
- Previous corneal incisions that might provide a potential space into which the gas produced by the procedure can escape
- Corneal thickness requirements that are beyond the range of the system
- Corneal opacity that would interfere with the laser beam
- Hypotony or the presence of a corneal implant
- Residual, recurrent, active ocular or eyelid disease, including any corneal abnormality (for example, recurrent corneal erosion, severe basement membrane disease)
- History of lens or zonular instability
- Any contraindication to cataract or keratoplasty
- This device is not intended for use in pediatric surgery.

### Warnings

The LenSx® Laser System should only be operated by a physician trained in its use. The LenSx® Laser delivery system employs one sterile disposable LenSx® Laser Patient Interface consisting of an appplanation lens and suction ring. The Patient Interface is intended for single use only. The disposables used in conjunction with ALCON® instrument products constitute a complete surgical system. Use of disposables other than those manufactured by Alcon may affect system performance and create potential hazards. The physician should base patient selection criteria on professional experience, published literature, and educational courses. Adult patients should be scheduled to undergo cataract extraction.

### Precautions

- Do not use cell phones or pagers of any kind in the same room as the LenSx® Laser.
- Discard used Patient Interfaces as medical waste.

### AEs/Complications

- Capsulotomy, phaco-fragmentation, or cut or incision decentration
- Incomplete or interrupted capsulotomy, fragmentation, or corneal incision procedure
- Capsular tear
- Corneal abrasion or defect
- Pain
- Infection
- Bleeding
- Damage to intraocular structures
- Anterior chamber fluid leakage, anterior chamber collapse
- Elevated pressure to the eye

### Attention

Refer to the LenSx® Laser Operator's Manual for a complete listing of indications, warnings and precautions.

