FINDING SUCCESS WITH EXTENDED DEPTH OF FOCUS PRESBYOPIA-CORRECTING IOLS

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Not actual patients. For illustrative images only.
Introduction

The needs of today’s cataract patients have evolved considerably. Patients are looking for a solution that keeps up with their increasingly active lifestyles. Fortunately for those of us engaged in providing solutions for these patients, intraocular lens (IOL) technology is evolving as well. The advent of multifocal IOLs heralded a step change in the ability of cataract surgeons to offer good visual acuity at distance and near—a step closer to increased spectacle independence. With earlier generation solutions, however, many patients report a gap in intermediate vision, which is an important need in today’s digital world, or a less than optimal vision experience at night or in dim environments.

A breakthrough in the ability to better meet the evolving needs of our active presbyopic patients was the introduction of the extended depth of focus (EDOF) IOL. In the 2 years after introduction of the TECNIS Symfony® Extended Depth of Focus IOL, refractive cataract surgeons have embraced this advanced technology due to the extended, continuous range of high quality vision the lens provides. Additionally, they have used it with other lenses in the TECNIS® IOL family to achieve more options for personalizing the surgical approach for individual patients.

This supplement presents insights and best practices from a panel of experts that surgeons can use to take their cataract refractive practice to the next level.
— Eric D Donnenfeld, MD

INDICATIONS FOR USE

The TECNIS Symfony® Extended Range of Vision IOL, model ZXR00, is indicated for primary implantation for the visual correction of aphakia, in adult patients with less than 1 diopter of pre-existing corneal astigmatism, in whom a cataractous lens has been removed. The lens mitigates the effects of presbyopia by providing an extended depth of focus. Compared to an aspheric monofocal IOL, the lens provides improved intermediate and near visual acuity, while maintaining comparable distance visual acuity. The model ZXR00 IOL is intended for capsular bag placement only.

The TECNIS Symfony® Toric Extended Range of Vision IOLs, models ZXT150, ZXT225, ZXT300, and ZXT375, are indicated for primary implantation for the visual correction of aphakia and for reduction of residual refractive astigmatism in adult patients with greater than or equal to 1 diopter of preoperative corneal astigmatism, in whom a cataractous lens has been removed. The lens mitigates the effects of presbyopia by providing an extended depth of focus. Compared to an aspheric monofocal IOL, the lens provides improved intermediate and near visual acuity, while maintaining comparable distance visual acuity. The model series ZXT IOLs are intended for capsular bag placement only.

See important safety information at the end of this supplement

**THE PANELISTS**

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*Drs. Donnenfeld, Chang, Clinch, Solomon, Walter and Yeu are paid consultants of Johnson & Johnson Surgical Vision, Inc.

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Dr. Donnenfeld: The TECNIS Symfony® Extended Depth of Focus IOL was introduced 2 years ago and has been enthusiastically embraced by cataract surgeons in the US and overseas. What makes you choose this option for your patients interested in addressing presbyopia?

Dr. Yeu: I recommend the TECNIS Symfony® IOL because it gives a continuous, extended range of quality vision. In the past, I often found myself needing to be convinced by the patient to place a presbyopia-correcting lens because the postoperative patient satisfaction was sometimes unpredictable. Now, with the TECNIS Symfony® IOL, I have to look for reasons not to offer a presbyopia-correcting lens. With careful attention to surgical planning and

**Delivering Elongation of Focus**

- Monofocal IOL
  - Distinct Single Focus

- Multifocal IOL
  - Two Distinct Foci

- TECNIS Symfony® IOL
  - Elongated Focus

Imagery of the light path and concentration for monofocal, multifocal and TECNIS Symfony® EDOF IOLs. (Data on File_Tecnis Symfony Green Light Bundle Bench Test DOF2014CT0805. Johnson & Johnson Surgical Vision, Inc. 2014)
Finding Success with Extended Depth of Focus Presbyopia-Correcting IOLs

Dr. Walter: I like the TECNIS Symfony® IOL because the quality of its distance vision* is comparable to a monofocal lens.1 In addition, the range of vision it provides meets modern needs for intermediate and near vision. I also like that with the toric platform, we can help patients who have significant astigmatism be happy with their vision at distance, intermediate, and near.

Dr. Solomon: I agree. With the TECNIS Symfony® Toric IOL, more patients with significant astigmatism can get the performance benefits of the extended-depth-of-focus technology with the advantages of astigmatism correction with a toric IOL. The TECNIS Symfony® and TECNIS Symfony® Toric IOLs have been valuable additions to my armamentarium for meeting the needs of patients interested in addressing presbyopia. Evidence obtained from prospective clinical trials2,3 confirms my clinical impressions that it provides good refractive and visual outcomes that translate into happy patients.

Dr. Chang: I appreciate the reliably good vision patients get with the TECNIS Symfony® IOL and the toric version’s predictability for correcting astigmatism. The combination of material and optical design not only compensates for spherical aberration of the average cornea, but also provides the lowest level of chromatic aberration of any hydrophobic acrylic IOL† on the market.4 In fact, I was so impressed with the technology, I implanted a TECNIS Symfony® IOL bilaterally in my mother.

Dr. Clinch: The TECNIS Symfony® delivers sharp distance acuity for sports and driving while maintaining a level of contrast sensitivity not clinically significantly different than that of a monofocal, and a very low incidence of visual disturbances. I’m approaching my 1000th TECNIS Symfony® case with outstanding patient satisfaction. It has inspired greater confidence to counsel more patients regarding the opportunity to potentially wear spectacles less often following cataract surgery.

Dr. Donnenfeld: In my opinion, the TECNIS Symfony® IOL is an excellent presbyopia-correcting IOL options for high quality distance vision. I also appreciate that it is well-tolerated by patients. Currently, I offer a presbyopia-correcting IOL to approximately 70% of my cataract surgery patients, and that is 50% more than I did before the TECNIS Symfony® IOL became available.

*image contrast at 5mm aperture
†TECNIS ZA9003 (Johnson & Johnson Surgical Vision, Inc.); AcrySof SA60AT, SN60AT (Alcon); YA60BB (Hoya)

REFERENCES:
1. TECNIS Symfony® IOL DFU
BRINGING **Personalized Vision** TO LIFE

**Dr. Donnenfeld:** We know that every patient is different, and the TECNIS® family of IOLs includes more options than just the TECNIS Symfony® EDOF IOL. Knowing this, how do you approach surgery in order to achieve “personalized vision” for each patient?

**Dr. Solomon:** Astigmatism management is critical to optimize functional outcomes for patients undergoing cataract surgery with a presbyopia-correcting IOL. Having the TECNIS Symfony® Toric IOL option expands my ability to meet the needs of my astigmatic patients. My preference is to use a toric lens for astigmatic correction because compared with an incisional approach, the results with toric IOL implantation are more predictable, more accurate, and more stable.

**Dr. Donnenfeld:** When using multifocal IOLs, in the past I would implant the non-dominant eye first and check if the patient tolerated the lens. Now, because I am confident that patients will be happy with their distance vision with the TECNIS Symfony® IOL, 80% of the time I implant the dominant eye first, aiming for plano. I decide what to do for the second eye based on the patient’s reading vision. If the patient is happy with it, I put a TECNIS Symfony® with a plano target in the non-dominant eye.

If a patient wants better reading vision, I consider using the TECNIS Symfony® and targeting –0.5 D in the second eye. At the 2018 ASCRS Symposium, Dr. Solomon and I presented a multicenter, randomized study where we compared this approach against bilateral TECNIS Symfony® implantation targeting both eyes for emmetropia. The study included 100 patients and found that micro-monovision with the TECNIS Symfony® was very well-tolerated and provided good reading vision without sacrificing distance vision.

Another strategy that has worked well for me when a patient wants better reading vision is to put a +3.25 D TECNIS® Multifocal IOL in the non-dominant eye. I do not like monovision in pseudophakes because I think it jeopardizes their distance vision and depth perception.

The cases where I operate on the non-dominant eye first involve patients who are extremely fastidious, do a fair amount of night driving, or have extraordinary expectations for quality distance vision.

**Dr. Chang:** Unless the cataract in other eye is significantly worse, I like to operate on the dominant eye first because postoperatively, patients can more easily appreciate the quality of distance vision from the TECNIS Symfony® IOL. I aim for plano in the first eye, and if the...
results are good, meaning the patient has good distance vision, appreciates the near vision, and is tolerating any night vision symptoms, I do the second eye with a plano target.

I find that low myopes may be unhappy with the near vision after their first eye, so I tell them I can put a +3.25 TECNIS® multifocal IOL in the second eye to give them the near vision they want. Similarly, patients with dysphotopsia-related complaints receive more counseling, but I have been successful in minimizing dysphotopsia complaints by providing extensive preoperative education. Overall, the large majority of my TECNIS Symfony® IOL patients receive the same lens in the second eye, some receive a TECNIS® +3.25 multifocal, and only on rare occasions has someone not received a presbyopia-correcting lens on the second eye due to night vision symptoms.

**Dr. Yeu:** I probably differ from most surgeons because I start with the non-dominant eye in over 90% of my patients, and I target mild myopia of −0.25 to −0.50 D to give better near vision. I find that with a plano target, patients may get J4 to J6 reading vision. With my approach, patients consistently read J3 to J4 and sometimes even J2, and they still have excellent distance vision. Aiming for mild myopia instead of plano also saves me from getting a hyperopic surprise that will leave patients very unhappy with their near vision. I have implanted about 600 TECNIS Symfony® IOLs.

For patients who prioritize near vision for reading materials that have small print and

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**Defocus Curves of TECNIS® IOL Designs**

The wider peak above 20/25 for the TECNIS Symfony® IOL design versus either monofocal or multifocal design represents the extended range of vision experienced by patients.
lower contrast, such as newspapers or paperback books, or in people with short arms, I consider blending the TECNIS Symfony® IOL in the dominant eye with a low to mid-add TECNIS® Multifocal IOL in the non-dominant eye, assuming they are appropriate candidates for a multifocal IOL. Patients operated on with this approach have also been very satisfied with their range of vision.

I do start with the dominant eye in someone who is extremely tall, over 6 feet, or if the cataract in the dominant eye is much worse.

Dr. Clinch: I also almost always do the dominant eye first, aiming for emmetropia. If I miss my emmetropia target, I’d rather land on the hyperopic side in the dominant eye, and the myopic side for the non-dominant eye.

Generally, I do not combine IOL technologies. Greater than 95% of my patients receive the TECNIS Symfony® IOL bilaterally. The infrequent exceptions are patients who were very satisfied with monovision before cataract surgery and have a strong desire for both intermediate and near vision. I agree with Dr. Donnenfeld about avoiding monovision in pseudophakic patients because it is much different than monovision with contact lenses or LASIK. Most of these individuals are not overly visual discriminating and have a higher tolerance of visual disturbances. I will use the +3.25 D TECNIS® Multifocal IOL in the non-dominant eye. I never plan for monovision with bilateral TECNIS Symfony® IOLs, although it has happened inadvertently in some patients who have tolerated it well.

Dr. Walter: I also start with the dominant eye, aiming for plano, but if I happen to miss, I’d rather end up on the hyperopic side for the first eye. Only if patients feel their reading vision is not adequate, I may consider a +3.25 D TECNIS® Multifocal IOL set at plano.

REFERENCES:
4. TECNIS Symfony® DFU
5. TECNIS® Multifocal DFU
Dr. Donnenfeld: Now let’s discuss conversations for counseling patients about IOL options and the TECNIS Symfony IOL.

I tell patients that if they get a conventional monofocal IOL, they will not be able to see clearly anything that is close enough for them to touch. In addition to not being able to read without glasses, they will need glasses to see the car dashboard or food on their plate and for many other daily activities, such as cooking, working at the computer, shaving, or putting on make-up. Many patients do not realize how much they depend on near and intermediate vision.

I describe the TECNIS Symfony IOL as the presbyopia-correcting lens that I believe has excellent patient satisfaction.1 I say it gives very good vision for intermediate and good vision for near. I tell patients they may need to wear glasses for some near vision tasks, particularly things that involve seeing very close or very small print, but I expect they can be wearing glasses less often overall.

Dr. Clinch: Many patients state that they would like “to throw away” their glasses. I discuss the concept of near, intermediate and distance vision and determine which they consider most important. I explain that it is challenging to obtain excellent vision for all 3 types of visual tasks, but that with reasonable certainty, we can succeed in 2 of the 3. The vast majority of patients spend the majority of time using distance vision.
and computer/tablets. For these patients, the TECNIS Symfony® IOL is an excellent choice. I take their hand and show them the expected range of vision. It is very important to explain the benefits and limitations of each type of IOL.

**Dr. Chang:** I warn that bifocal glasses increase the risk of tripping and falling. I then introduce presbyopia-correcting IOL options, including the TECNIS Symfony® IOL. I like to present the convenience of wearing glasses less often that comes with the TECNIS Symfony® IOL.

**Dr. Walter:** We have patients complete the Johnson & Johnson Surgical Vision cataract patient survey tool (page 8) that includes questions about activities, current problems, goals, and personality. It provides an excellent starting point for helping me to understand if a patient might be an appropriate candidate for the TECNIS Symfony® IOL. Sometimes the answer is clear, but other times I need to delve further to understand the patient’s needs, goals, and/or personality. For example, I recently had a patient who marked both “perfectionist” and “organized, but flexible” for the question asking about personality. I asked the woman to explain her response, and she told me she is a perfectionist about some things but less particular with others.

When someone marks “perfectionist”, it raises a red flag that a patient may be too demanding, intolerant of dysphotopsias, or dissatisfied with less than perfect reading vision. I talked more to this particular patient about the potential for night vision symptoms and after asking some additional questions about her lifestyle and vision goals, I found out that she was wearing multifocal contact lenses and liked them, despite having some blur. Based on the bigger picture, I decided she was a good candidate for the TECNIS Symfony® IOL. She recently had her first eye done and was incredibly satisfied.

**REFERENCES:**
1. TECNIS Symfony® DFU

**WARNING:** Some visual effects associated with the TECNIS Symfony® IOL may be expected due to the lens design that delivers elongation of focus. These may include a perception of halos, glare, or starbursts around lights under nighttime conditions. The experience of these phenomena will be bothersome or very bothersome in some people, particularly in low-illumination conditions. On rare occasions, these visual effects may be significant enough that the patient may request removal of the IOL.
Dr Donnenfeld: How do you decide who is a good candidate for a TECNIS Symfony® IOL?

Dr. Yeu: Before seeing the patient in the exam lane, I review the objective information available to me from diagnostic testing, patient-completed questionnaires, and referring providers to understand ocular health, personality, vision goals, and vision needs. I consider hobbies, profession, and height to assess vision needs, and I don’t take it at face value when patients describe themselves as extremely easygoing.

Dr. Walter: I work to make sure that my referral sources identify and manage dry eye in cataract patients before they are sent to me because a healthy ocular surface is important. This avoids the awkward situation of telling patients they need to go back to their primary provider because they are not ready for surgery.

Dr. Clinch: Appropriate preoperative care and education is fundamental for success. In my practice, we start all cataract surgery patients on ocular surface management including artificial tears and for some patients lid scrubs and warm compresses. I instruct patients to use the drops no less than 4 times a day for at least 1 week before they come in for the preoperative biometry evaluation, and I ask them to continue after surgery for at least several months.

I inform patients that using the artificial tears at least 4 times per day has 3 attributes. First, artificial tears make the eyes healthier and more comfortable, reducing the risk of postoperative discomfort. In addition, creating a healthy ocular surface makes the measurements needed to plan the surgery more accurate. Third, regular use of artificial tears makes patients more proficient at instilling drops in their eyes, thereby minimizing the potential for wastage of the more expensive topical medications. In other words, “practice makes you more perfect”.

Corneal staining pattern seen within the central and infero-central cornea secondary to use of topical anesthetic and mydriatic drops, with and without fluorescein. Corneal topography mires were also unstable in the area of the staining. Photos courtesy of Elizabeth Yeu, MD. Used by permission.
Dr. Donnenfeld: We know some patients experience dysphotopsia with multifocal and EDOF IOL designs. What are some of your tips for managing this?

Dr. Walter: No IOL is perfect. The TECNIS Symfony® IOL does not eliminate the risk for dysphotopsia, but proper patient selection, education, and preparation can help minimize dissatisfaction relating to these symptoms.

My advice is as follows.

- Inform all patients who are potential candidates for the TECNIS Symfony® IOL about dysphotopsia so that they know what to expect
- Identify patients who seem likely to be intolerant of these symptoms
- Make sure the ocular surface is regularized
- Aim for plano in the dominant eye
- Hit the refractive target using accurate biometry and advanced IOL formulas.

Dr. Chang: It is important to discuss the possibility of dysphotopsia with patients preoperatively. I tell patients that their night vision will generally be better after surgery, but it will be different than it was before they developed cataracts.1 In particular, when looking at oncoming car headlights, they may see starbursts and several fine halos (see simulations below). I do warn all my patients that some people initially do not tolerate these symptoms, simply because they are different and new. Nevertheless, I do reassure them that people typically adapt to them.

Dr. Donnenfeld: Several of you have mentioned the importance of hitting your refractive target to achieve maximum success. What is your approach to biometry?

Dr. Yeu: Obtaining accurate preoperative measurements to use for the IOL power calculations is fundamental for refractive outcome predictability.

I use the latest generation optical biometers (both the IOLMaster 700 and Lenstar LS 900), and I get the measurements before putting dilating drops in the eye. I want the measurements taken with the corneal surface as pristine as possible, and anecdotally, anesthetic and dilating drops can cause corneal epitheliopathy.

The modern optical biometers provide accurate axial length values along with reliable keratometry readings, but I also obtain topography/tomography in all patients because it provides valuable qualitative information about the corneal surface.

WARNINGs: Some visual effects associated with the TECNIS Symfony® IOL may be expected due to the lens design that delivers elongation of focus. These may include a perception of halos, glare, or starbursts around lights under nighttime conditions. The experience of these phenomena will be bothersome or very bothersome in some people, particularly in low-illumination conditions. On rare occasions, these visual effects may be significant enough that the patient may request removal of the IOL.
nea and ocular surface, as well as a second check of the biometer's keratometry measurements. I look for congruency between the two devices in their measurements of average corneal power, astigmatism magnitude, and steep meridian. If I see a difference exceeding 0.3 D in the amount of astigmatism or 5° to 10° in the steep meridian, I look for a reason to explain the discrepancy. Most often, the cause is ocular surface irregularity from dry eye disease that will need to be managed in order to obtain reliable data for surgical planning. The LED topography unit (Cassini) that I use also gives me information about posterior corneal curvature that is helpful for getting the best refractive results in total refractive astigmatism management, particularly for toric IOL cases.

**Dr. Solomon:** When planning for implantation of the TECNIS Symfony® Toric IOL, I actually use four different instruments—two optical biometers (Lenstar LS 900, IOLMaster 700), a topographer (Atlas, Pentacam, or Galilei), and an autorefractor. Because they use different methodology to measure the cornea, these devices can generate slightly different results, but I look for consistency between the readings from at least 3 of the 4 systems. Anything more than minimal inter-device variation is a sign of ocular surface disease that needs to be addressed to get reliable keratometry data with repeat measurements.

I have access to 2 different image-guided systems (Callisto, Verion) that I use to assist with toric IOL alignment. Using these technologies eliminates the need to place manual reference marks, but carefully performed preoperative marking can also be reliable.

With respect to implanting a TECNIS Symfony® toric IOL, I do not have an exact cutoff for magnitude of astigmatism that dictates the method I use for correcting astigmatism. Instead, I approach each case individually by determining the approach that will leave the patient with <0.5 D of astigmatism and ideally with approximately 0.25 D of with-the-rule (WTR) astigmatism that allows for future age-related against-the-rule (ATR) shift.

**Dr. Donnenfeld:** What formula do you use to calculate IOL power for the TECNIS Symfony® or TECNIS Symfony® Toric IOL?

**Dr. Chang:** I routinely look at multiple formulas, but if I were to use one formula, it would be the Barrett Universal II. The Barrett Universal II is great for eyes over a wide range of axial lengths.

**Dr. Yeu:** I have also been very impressed by the performance of the Barrett Universal II and of the latest version of the Hill-RBF in shorter and longer eyes. Using those formulas without intraoperative aberrometry, my achieved prediction error within 0.5 D of target occurs in 94% of eyes. That is testament to the accuracy of both our preoperative diagnostics and advanced IOL formulas.

**Dr. Clinch:** I also rely on the Barrett Universal II.

**Dr. Solomon:** I use the Veracity software program for IOL power calculations, plugging in the preoperative biometry and keratometry data and the desired postoperative refraction. Veracity accounts for posterior corneal astigmatism, which is important for reducing the systematic ATR error that occurs when only anterior corneal data are used for toric IOL power calculation. The web-based toric calculator from Johnson & Johnson Surgical Vision is excellent as well.

**REFERENCES:**
2. TECNIS Symfony® DFU
**Dr. Donnenfeld:** Do you have any tips for during or after the surgery to ensure the best outcomes?

**Dr. Yeu:** Good contact between the posterior optic surface and the posterior capsular bag is important for IOL stability. Therefore, I make sure that the IOL is fully opened before I move it into position. At the end of the case, I reinflate the eye so that it is at normal tension or slightly soft, avoiding hyperinflation of the capsular bag, which can then lead to loss of contact with the posterior face of the optic, thus potentially leading to IOL rotation or malposition.

**Dr. Solomon:** All toric IOLs have the potential to rotate postoperatively. To guard against significant rotation, it is important to thoroughly remove all viscoelastic from behind the optic. After removing viscoelastic, I reinflate the eye, hydrate the roof of the incision, and reconfirm that the lens is aligned on axis.

**Dr. Clinch:** Because binocular implantation facilitates neuroadaptation, I perform surgery on both eyes a week apart. I wait longer, at least 2 to 3 weeks, to operate on the second eye in patients for whom accurate IOL power calculation may be more challenging or the visual recovery may be slower (dense cataract or high spherical or astigmatic correction).

Managing residual refractive error is important to achieve the best visual performance with any IOL. Although the TECNIS Symfony® IOL has tolerance to some post-operative astigmatism, residual astigmatism will reduce intermediate and near vision.

- With spherical TECNIS Symfony® IOLs, I address mild residual astigmatism with relaxing incisions.
- With TECNIS Symfony® Toric IOLs, I make sure that the lens has not rotated off-axis postoperatively.

**Dr. Walter:** Understanding the design principles of the TECNIS Symfony® EDOP IOL is very important when performing post-op refractions. Due to the extended depth of focus, it is imperative that you push plus when assessing post-op results. Adding minus will not necessarily degrade distance vision but will dramatically impact the near and intermediate performance. Also make sure the ocular surface is clear when performing post-op refractive testing.
INDICATIONS AND IMPORTANT SAFETY INFORMATION FOR THE TECNIS SYMfony® AND TECNIS SYMfony® TORIC EXTENDED RANGE OF VISION IOLs

Rx Only

INDICATIONS FOR USE

The TECNIS Symfony® Extended Range of Vision IOLs, models ZXT150, ZXT225, ZXT300, and ZXT375, are indicated for primary implantation for the visual correction of aphakia and for reduction of residual refractive astigmatism in adult patients with greater than or equal to 1 diopter of preoperative corneal astigmatism, in whom a cataractous lens has been removed. The lens mitigates the effects of presbyopia by providing an extended depth of focus. Compared to an aspheric monofocal IOL, the lens provides improved intermediate and near visual acuity, while maintaining comparable distance visual acuity. The model series ZXT IOLs are intended for capsular bag placement only.

EXPERT PEARLS from our Panelists

Dr. Donnenfeld: What are your 1 or 2 top tips for getting started and achieving success with the TECNIS Symfony® IOL?

Start in low hyperopes or plano presbyopes and avoid at first patients with low to moderate myopia who may be less satisfied with their near vision.

Do at least 10 bilateral cases in well-selected patients to give the TECNIS Symfony® IOL a fair trial. Do not give up if your first patient is dissatisfied. He or she may be the rare individual who is more sensitive to night vision issues or unhappy because of difficulty reading 6-point font.

Understand your patients to determine if they are a good candidate. Someone with realistic expectations, of average height, and who prioritizes good intermediate and distance vision is ideal.

Take time preoperatively to thoroughly describe night vision symptoms because patients who know what to expect tend to tolerate dysphotopsias better.

Dr. Chang:

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WARNINGS

Physicians considering lens implantation under any of the following circumstances should weigh the potential risk/benefit ratio. Patients with any of the following conditions may not be suitable candidates for an intraocular lens because the lens may exacerbate an existing condition, may interfere with diagnosis or treatment of a condition, or may pose an unreasonable risk to the patient’s eyesight: patients with recurrent severe anterior or posterior segment inflammation or uveitis of unknown etiology, or any disease producing an inflammatory reaction in the eye, patients in whom the intraocular lens may affect the ability to observe, diagnose or treat posterior segment diseases,
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Under promise so that you can over deliver. I inform patients they will achieve distance vision very quickly, but it may take some time to get functional computer vision. The reality is that many patients obtain this goal more quickly.

Patients are very happy when they have exceeded expectations. By setting the bar where patients can easily cross it, they are “over achievers”, and that makes their experience more rewarding for everyone!

Getting good measurements preoperatively, performing meticulous surgery, and optimizing surgeon factors/A-constants by tracking outcomes are critical for achieving consistently good results. I follow the adage “measure twice, cut once” when obtaining keratometry data preoperatively.

Don’t let your previous experience prevent you from trying the TECNIS Symfony® IOL. If you are a surgeon who tried earlier multifocal or accommodating IOLs but abandoned presbyopia-correcting technologies because your patients were not happy with the results, try the TECNIS Symfony® IOL. As a cataract surgeon, there is nothing more gratifying than having patients who are happy because of wearing glasses less often overall, and these are the patients I am seeing using the TECNIS Symfony® IOL.

Be aware of the reasons for patient dissatisfaction so that they can be avoided or addressed.
✔ Manage the ocular surface pre- and postoperatively
✔ Be prepared to treat residual refractive error or have a relationship with a surgeon who can do it for you.

Warnings (continued from previous page)
surgical difficulties at the time of cataract extraction, which may increase the potential for complications (e.g., persistent bleeding, significant iris damage, uncontrolled positive pressure or significant vitreous prolapse or loss), a compromised eye due to previous trauma or developmental defects in which appropriate support of the IOL is not possible, circumstances that would result in damage to the endothelium during implantation, suspected microbial infection, patients in whom neither the posterior capsule nor the zonules are intact enough to provide support for the IOL, children under the age of 2 years are not suitable candidates for intraocular lenses, congenital bilateral cataracts, previous history of, or a predisposition to, retinal detachment, patients with only one good eye with potentially good vision, medically uncontrollable glaucoma, corneal endothelial dystrophy or proliferative diabetic retinopathy. The TECNIS Symfony® IOL should be placed entirely in the capsular bag and should not be placed in the ciliary sulcus. The TECNIS Symfony® IOL may cause a reduction in contrast sensitivity under certain conditions, compared to an aspheric multifocal IOL. The physician should carefully weigh the potential risks and benefits for each patient, and should fully inform the patient of the potential for reduced contrast sensitivity before implanting the lens in patients. Special consideration of potential visual problems should be made before implanting the lens in patients with macular disease, amblyopia, corneal irregularities, or other ocular disease which may cause present or future reduction in acuity or contrast sensitivity. Because the TECNIS Symfony® IOL may cause a reduction in contrast sensitivity compared to a multifocal IOL, patients implanted with the lens should be informed to exercise special caution when driving at night or in poor visibility conditions. Some visual effects associated with the TECNIS Symfony® IOL may be expected due to the lens design that delivers elongation of focus. These may include a perception of halos, glare, or starbursts around lights under nighttime conditions. The experience of these phenomena will be bothersome or very bothersome in some people, particularly in low-illumination conditions. On rare occasions, these visual effects may be significant enough that the patient may request removal of the IOL. Patients with a predicted postoperative astigmatism greater than 1.0 diopter may not be suitable candidates for implantation with the TECNIS Symfony® and TECNIS Symfony® Toric IOLs, models ZXR00, ZXT150, ZXT225, ZXT300, and ZXT375, as they may not obtain the benefits of reduced spectacle wear or improved intermediate and continued next page
near vision seen in patients with lower astigmatism. The effectiveness of TECNIS Symfony® Toric IOLs in reducing postoperative residual astigmatism in patients with pre-operative corneal astigmatism less than 1.0 diopter has not been demonstrated. Rotation of TECNIS Symfony® Toric IOLs away from their intended axis can reduce their astigmatic correction. Mismalignment greater than 30° may increase postoperative refractive cylinder. If necessary, lens repositioning should occur as early as possible prior to lens encapsulation. AMO IOLs are single-use devices only. Do not reuse this IOL.

PRECAUTIONS
Prior to surgery, the surgeon must inform prospective patients of the possible risks and benefits associated with the use of this device and provide a copy of the patient information brochure to the patient. When performing refraction in patients implanted with the TECNIS Symfony® IOL, interpret results with caution when using autorefractors or wavefront aberrometers that utilize infrared light, or when performing a duchromstere examination. Confirmation of refraction with maximum plus manifest refraction technique is recommended. The ability to perform some eye treatments (e.g. retinal photocoagulation) may be affected by TECNIS Symfony® IOL optical design. Recent contact lens usage may affect the patient’s refraction; therefore, in contact lens wearers, surgeons should establish corneal stability without contact lenses prior to determining IOL power. Do not reinitialize the lens. Most sterilizers are not equipped to sterilize the soft acrylic material without producing undesirable side effects. Do not soak or rinse the intraocular lens with any solution other than sterile balanced salt solution or sterile normal saline. Do not store the lens in direct sunlight or at a temperature greater than 113°F (45°C). Do not autoclave the intraocular lens. The surgeon should target emmetropia as this lens is designed for optimum visual performance when emmetropia is achieved. Care should be taken to achieve IOL centration, as lens decenteration may result in a patient experiencing visual disturbances under certain lighting conditions. When the insertion system is used improperly, TECNIS Symfony™ IOLs may not be delivered properly (i.e., haptics may be broken). Please refer to the specific instructions for use provided with the insertion instrument or system. The safety and effectiveness of TECNIS Symfony® IOLs have not been substantiated in patients with pre-existing ocular conditions and conditions requiring ocular surgery. Intraocular lens implantation may increase postoperative refractive cylinder, if necessary, lens repositioning should occur as early as possible prior to lens encapsulation. AMO IOLs are single-use devices only. Do not reuse this IOL.

TECNIS Symfony® Toric IOLs have not been demonstrated in patients with pre-existing ocular conditions and conditions requiring ocular surgery. Intraocular lens implantation may increase postoperative refractive cylinder, if necessary, lens repositioning should occur as early as possible prior to lens encapsulation. AMO IOLs are single-use devices only. Do not reuse this IOL.

In addition to the use of the TECNIS Toric Calculator (www.TecnisToricCalc.com), are recommended to achieve optimal visual outcomes for the TECNIS Symfony® Toric IOL. All preoperative surgical parameters are important when choosing a TECNIS Symfony® Toric IOL for implantation, including preoperative keratometric cylinder (magnitude and axis), incision location, surgeon’s estimated surgically induced astigmatism (SIA) and biometry. Variability in any of the preoperative measurements can influence patient outcomes, and the effectiveness of treating eyes with lower amounts of preoperative corneal astigmatism. All corneal incisions were placed temporally in the parent TECNIS® Toric IOL U.S. IDE study. If the surgeon chooses to place the incision at a different location, outcomes may be different from those obtained in the clinical study for the parent TECNIS® Toric IOL. Note that the TECNIS Toric Calculator incorporates the surgeon’s estimated SIA and incision location when providing IOL options. Potential adverse effects (e.g., complications) associated with the use of the device include the following: infection (endophthalmitis), hypopyon, iol dislocation, cystoid macular edema, corneal edema, pupillary block, iritis, retinal detachment/tear, raised iop requiring treatment visual symptoms requiring lens removal, tilt and decentration requiring repositioning, and residual refractive error resulting in secondary inter- vention. Secondary surgical interventions include, but are not limited to: lens repositioning (due to decentration, rotation, subluxation, etc.), lens replacement, vitreous aspirations or iridectomy for pupillary block, wound leak repair, retinal detachment repair, corneal transplant, lens replacement due to refractive error, unacceptable optical/ visual symptoms and severe inflammation.

SERIOUS ADVERSE EVENTS
The most frequently reported serious adverse events that occurred during the clinical trial of the TECNIS Symfony® Lens were cystoid macular edema (2 eyes, 0.7%) and surgical reintervention (treatment interventions for cystoid macular edema and endophthalmitis, 2 eyes, 0.7%). One eye was reported with pupillary capture and the eye that had endophthalmitis also had a small hypopyon. No other serious adverse events and no lens-related adverse events occurred during the trial.

INDICATIONS AND IMPORTANT SAFETY INFORMATION for the TECNIS® 1-piece IOLs

Rx ONLY

INDICATIONS
The TECNIS® 1-Piece Lens is indicated for the visual correction of aphakia in adult patients in whom a cata- ractous lens has been removed by extracapsular cataract extraction. These devices are intended to be placed in the capsular bag.

WARNINGS
Physicians considering lens implantation weigh the poten- tial risk/benefit ratio for any conditions described in the TECNIS 1-Piece IOL Directions for Use that could increase complications or impact patient outcomes. The TECNIS 1-Piece IOL should not be placed in the ciliary sulcus.

PRECAUTIONS
Do not reuse, reinitialize or autoclave.

INDICATIONS AND IMPORTANT SAFETY INFORMATION for the TECNIS® Multifocal FAMILY of 1-piece IOLs

Rx ONLY

INDICATIONS
The TECNIS® Multifocal 1-Piece Intraocular Lenses are indicated for primary implantation for the visual correction of aphakia in adult patients in whom a cata- ractous lens has been removed by phacoemul- sification and who desire near, intermediate, and distance vision with increased spectacle independence. The intra- ocular lenses are intended to be placed in the capsular bag.

WARNINGS
Physicians considering lens implantation should weigh the potential risk/benefit ratio for any conditions described in the Directions for Use that could increase complications or impact patient outcomes. Multifocal IOL implants may be inadvisable in patients where central visual field reduction may not be tolerated, such as macular degeneration, retinal pigment epithelium changes, and glaucoma. The lens should not be placed in the ciliary sulcus. Inform patients about the possibility that a decrease in contrast sensitivity and an increase in visual disturbances may affect their ability to drive a car under certain environmental conditions, such as driving at night or in poor visibility conditions.

PRECAUTIONS
Prior to surgery, inform prospective patients of the possible risks and benefits associated with the use of this device and provide a copy of the patient information brochure to the patient. The long-term effects of intraocular lens implantation have not been determined. Secondary glaucoma has been reported occasionally in patients with controlled glaucoma who received lens implants. Do not reuse, reinitialize or autoclave.

ADVERSE EVENTS
The rates of surgical re-interventions, most of which were non-lens related, were statistically higher than the FDA grid rate for both the ZMB00 (+4.00) and ZKB00 (+3.25) lens models. For the ZMB00, the surgical re-intervention rates were 3.2% for first eyes and 3.3% for second eyes. The surgical re-intervention rate was 3.3% for both the first and second eyes in the ZLBO0 group.

ATTENTION
Reference the Directions for Use for a complete listing of Indications and Important Safety Information.

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A PROMOTIONAL SUPPLEMENT BROUGHT TO YOU BY OPHTHALMOLOGY TIMES