

The Crystalens AO: Good Visual Quality Means Never Having to Say You're Sorry

If I were a patient, I would choose the Crystalens IOL for myself.

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There is an old adage in business: every happy customer tells two friends; every unhappy customer tells a dozen friends and anyone else who will listen. I do not like to think of patients as customers, but in a sense, they are. This adage is therefore as true in a medical practice as it is in any other business. The secret to building a thriving practice is to make people happy—so that they will refer their friends—and never to make anyone mad. With premium-channel IOLs, I believe the best way to achieve this goal is to choose the presbyopia-correcting IOL that provides the best possible visual quality, do not use IOLs that tend to reduce visual quality (to avoid making patients really mad), and then work hard to “deliver the goods” with regard to refractive outcome. I therefore use the Crystalens AO (Bausch + Lomb, Rochester, NY) in my practice.

BENEFITS OF THE CRYSTALENS AO

The Crystalens AO provides the highest level of visual quality of all presbyopia-correcting IOLs as well as an improved range of visual acuity without correction. This IOL's greatest strength is that it affords natural, more youthful vision with no downside. Neuroadaptation is not required, patients' dependence on spectacles is reduced, and there is nothing difficult or challenging to which they must become accustomed postoperatively.

Patient selection for the Crystalens AO (Figure 1) is simple and straightforward. Individuals who have visually significant cataracts but good visual potential, levels of corneal astigmatism that are either low or can be corrected reliably with limbal relaxing incisions (LRIs), and no evidence of pseudoexfoliation are generally strong candidates. Unlike multi-

focal IOLs, the Crystalens AO enhances, rather than diminishes, postoperative visual quality for all cataract patients. This makes the Crystalens AO an easy IOL for me to recommend. Every surgeon who implants multifocal IOLs has to live in fear of the words, “I can't stand my vision.” I do not hear this anguished complaint after implanting the Crystalens AO. If the patient selection process is sound, I set realistic expectations for the individual preoperatively, and the refractive target is achieved, patients receiving the Crystalens AO are happy. They require no extra handholding, and they refer their friends.

OPTIMIZING PATIENTS' SATISFACTION

As with any presbyopia-correcting IOL, patients' satisfaction with the Crystalens AO is highly dependent on the surgeon's ability to achieve the desired refractive outcome. Patients who choose a premium-channel IOL would like to reduce their dependency on glasses. The surgeon's job is to do everything within reason to help individuals reach this goal. Achieving a level of uncorrected visual acuity needed to meet or exceed patients' expectations requires careful attention to detail. Following are a few measures I believe help to ensure a high level of satisfaction among patients.

No. 1. Evaluate patients for subtle signs of maculopathy that could diminish their visual potential. It is easy to miss a mild maculopathy such as an early epiretinal membrane, especially in an eye with a dense cataract. A mild maculopathy may reduce postoperative vision to 20/40. Although this outcome might be perfectly acceptable to a routine cataract patient, it is not likely to be met with enthusiasm by a premium-channel patient. I perform opti-

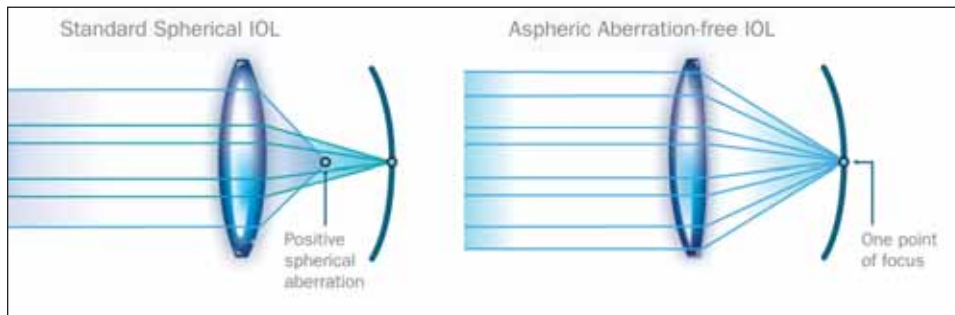


Figure 1. The Crystalens AO, designed to be aberration free and reduce spherical aberration, offers a better quality of vision than standard spherical IOLs and far better visual quality than multifocal IOLs.

cal coherence tomography whenever there is a question about the macula's health or if I have problems visualizing the macula.

No. 2. Use the IOLMaster (Carl Zeiss Meditec, Inc., Dublin, CA) to obtain the best possible biometry. It is my belief, based on a comparative evaluation performed in my office, that the IOLMaster provides more reliable biometric data than even immersion ultrasound. My study showed this is especially true of eyes with an axial length of greater than 25 mm.¹ It is likely the IOLMaster provides better data because this device locates the fovea more precisely and measures the axial length to the fovea more accurately than ultrasonography. To ensure optimal outcomes, surgeons should personalize their lens constants with the IOLMaster.

No. 3. Perform topography to quantify and characterize astigmatic errors. Although the IOLMaster provides reliable biometric information for IOL calculations, it does not tell surgeons everything about corneal curvature. Corneal mapping derived from a high-quality topographer is essential in the management of corneal astigmatic errors. I frequently find significant discrepancies between the magnitude and direction of astigmatic errors between the two systems. It is wise to rely on topography for decisions regarding the management of corneal astigmatism. Topographical analysis allows surgeons to plan the incision's placement with far greater precision than is possible with automated keratometry readings.

No. 4. Before implanting any presbyopia-correcting IOL, develop a plan to achieve postoperative corneal astigmatism of less than 0.75 D. If this target is not achieved, the patient may be unhappy, because he or she will lose about one line of visual acuity for every 0.50 D of astigmatism. Based on topographic findings, I make a diagram describing the surgical plan for the management of astigmatism. It describes the planned location of the primary incision and the size and exact location of LRIs. The plan can be taped to the microscope or on the wall next to the patient

it pertained to the placement of both my primary incision and LRIs.

No. 6. Operate on the steep axis whenever possible.

This is not something most surgeons enjoy doing or even think is necessary, but I believe it is the best way to manage astigmatism. Operating on the steep axis reduces corneal astigmatism and prevents the axis of the astigmatism from rotating unexpectedly.

No. 7. Place LRIs on the steep axis. The precise placement of the LRIs should be directed by topographic findings. Lower levels of astigmatism are seldom associated with significant corneal ectasia, but if any pathologic findings are identified on topography, the plan to place LRIs may have to be reconsidered.

CONCLUSION

I try to base the decisions I make regarding the care of my patients on what I would want for myself. If I were a patient, what would I want in an IOL? I would want an improved range of uncorrected visual acuity so that I could perform most tasks without glasses, and I would want the best possible quality of vision. I cannot imagine a circumstance in which I would select a lens that was likely to reduce the quality of my vision. Therefore, when I consider which presbyopia-correcting IOL I should recommend to my patients, the decision is easy. My experience allows me to recommend the Crystalens AO with confidence and enthusiasm to all of my patients who are good candidates for a presbyopia-correcting IOL. ■

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1. Colvard DM. Predictability of refractive outcomes. Presentation made at: The Crystalens Users Meeting; November 11-14, 2006; Las Vegas, NV.