

The AcrySof IQ IOL Portfolio

Three IOLs share a set of unique characteristics, while meeting a wide range of visual goals.

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We have so many choices in cataract surgery today, and every surgeon has preferences. For me, that means a mix of niche and workhorse IOLs. My workhorse is the **AcrySof IQ** platform. The science and design behind these monofocal, toric, and multifocal lenses help deliver exceptional outcomes for my patients every day, and they allow me to perform smooth, elegant, and highly predictable procedures.

ASPHERIC MONOFOCAL LENS

The **AcrySof IQ** aspheric monofocal lens (Alcon) showed improved functional vision versus a spherical monofocal IOL,¹ in large part due to its unique BioMaterial, BioMechanics and BioOptics. Its asphericity is designed to deliver the same total spherical aberration as found in the youthful eye, which helps give patients good contrast sensitivity.² The **AcrySof IQ** design and the blue light chromophore has also been reported to help reduce glare during night-time driving.³⁻⁵

The crystalline lens increases in sphericity as the eye ages. The spherical aberration of the **AcrySof IQ** lens combined with the aberration of the cornea returns the eye to its youthful aberration state. The goal for optimal vision is for the total spherical aberrations to be slightly positive at 0.1 μm .^{2,6}

The **AcrySof IQ** IOL has a haptic design that enables conformation to the shape of the capsular bag with consistent compression force. The results are precise centration, predictable refraction, and stable positioning over the long term.

I consider the **AcrySof IQ** monofocal the top-of-the-line option in its category, and it is my standard lens of choice. I want a lens that is consistently straightforward to implant in the capsular bag, centers well, and delivers the quality of vision that patients desire. That is exactly what the **AcrySof IQ** lens does. It makes my patients happy. I've used the lens on photographers, painters, and designers, all of whom require a high degree of color appreciation, precision, and sharpness, and I have received positive reviews from these patients.

TORIC AND ReSTOR MULTIFOCAL LENSES

With the same BioMaterial, BioMechanics, and BioOptics benefits as the **AcrySof IQ** monofocal lens, two other excellent lenses in this line are the **AcrySof IQ** toric IOL (Alcon) and **AcrySof IQ ReSTOR** multifocals (Alcon).

For patients with astigmatism who want to rely less on glasses for their distance vision, I choose the **AcrySof IQ** toric lens above other torics because of its stability. Like the **AcrySof IQ** monofocal, the toric lens does not rotate. It remains in its optimal position long term (Figure 1). The **AcrySof BioMaterial**, a hydrophobic acrylic polymer

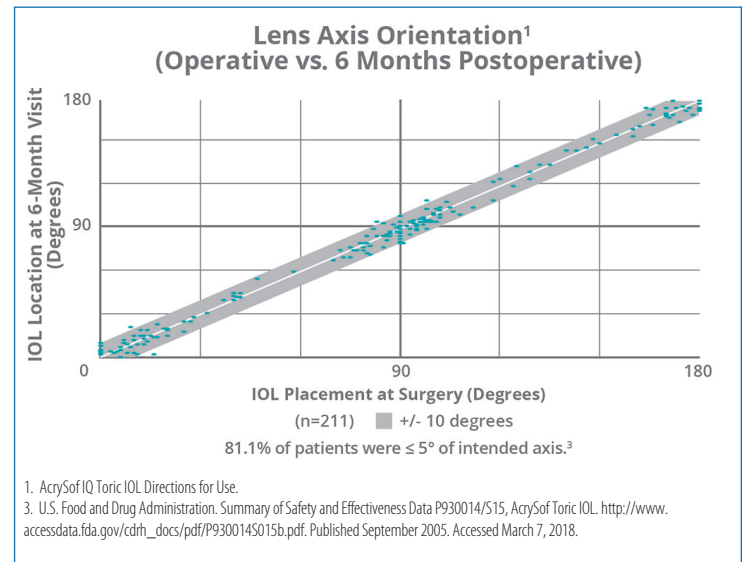


Figure 1. Mean lens axis orientation from operative visit to 120 to 180 days postoperatively.

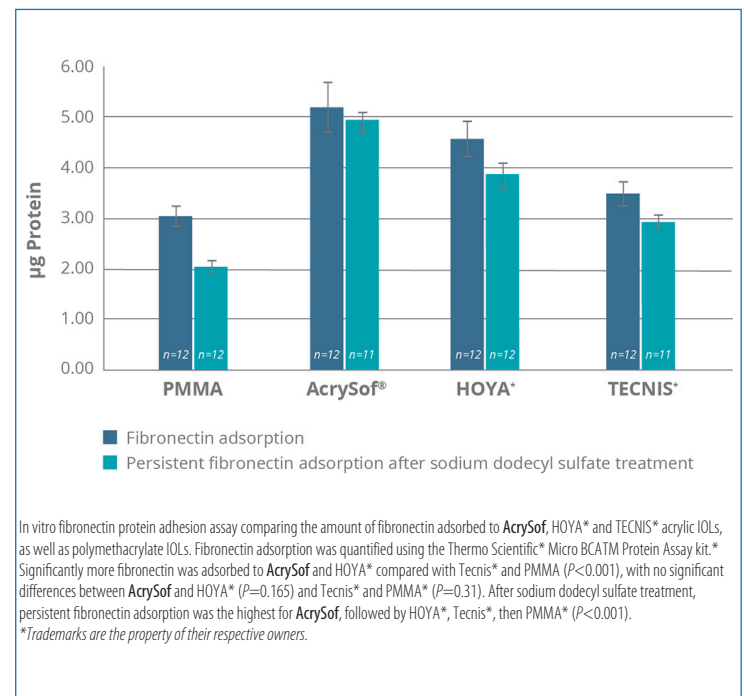


Figure 2. In vitro fibronectin absorption.

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that is highly biocompatible, offers greater fibronectin bioadhesion than other monofocal lens materials in vitro (Figure 2).⁷ Fibronectin bioadhesion, combined with other key design features, contributes to the excellent adhesion of this IOL to the capsular bag.

At 6 months, 62% of patients with the **AcrySof IQ** toric lens had ≤ 0.50 D residual refractive cylinder, while 88% had ≤ 1.00 D.⁸ In the same period, the lens was within 5° of the intended axis in 81.1% of patients.⁸ I am confident that the lens will not move. It stays where I place it, and it works. Because the **AcrySof IQ** toric IOL offers a range of spherical powers (+6.00 D to +34.00 D in half-diopter increments) and cylinder powers (seven, ranging from 0.75 D to 4.11 D), I can use the lens to achieve excellent outcomes for many of my astigmatic patients.

The **AcrySof IQ** ReSTOR +2.5 IOL with the ACTIVEFOCUS optical design is my lens of choice for patients who want presbyopia correction. The lens has a lot of options, which make it ideal for tailoring treatment to patients' activities and visual goals. I like to combine the ReSTOR +2.5 with ACTIVEFOCUS design lens and the ReSTOR +3.0 lens for maximum patient benefit. I typically implant the ReSTOR +2.5 with ACTIVEFOCUS design lens in the dominant eye and the ReSTOR +3.0 lens in the nondominant eye. I believe that by using the ReSTOR +2.5 with ACTIVEFOCUS design lens, which is predominantly for distance, in the dominant eye that glare and halo are likely to be reduced due to the aspheric IOL design and excellent contrast sensitivity demonstrated with ReSTOR +2.5 with ACTIVEFOCUS design lens. Anecdotally, I have seen patients complain of less glare and halos with this approach, compared to other IOLs. This will need more rigorous study in the future.

I appreciate the unique ACTIVEFOCUS design used in the ReSTOR +2.5 IOL. Like prior ReSTOR models, the lens has apodized segment heights that change the percentage of light focused on near and far across the lens, allowing more light to be concentrated on the distance image and near image depending on the pupil size. This is a proven platform. I routinely get patients now with 20/15 distance vision with this lens. This is one of countless examples why Alcon's IOL platform remains my long-standing workhorse.

BLUE LIGHT FILTRATION AND ULTRAVIOLET BLOCKING

The **AcrySof IQ** platform is available in two separate options, a blue light-filtration lens and a ultraviolet blocking-only lens. The blue light-filtration lens features a natural chromophore that mimics the healthy, natural crystalline lens' transmission of light.⁴ Complementing the lens' spherical aberration, blue light filtration also enhances contrast, helps reduce glare, and assists the eye in recovering from photostress.⁴

A study comparing the effects of blue light-filtering lenses with those that do not filter blue light found that this feature significantly reduced glare disability.⁴ Contrast sensitivity was much better in the blue light-filtering eyes, and eyes recovered from photostress much faster.^{4,9} For patients or surgeons who prefer ultraviolet blocking, the **AcrySof IQ** is also available in an ultraviolet blocking-only lens.

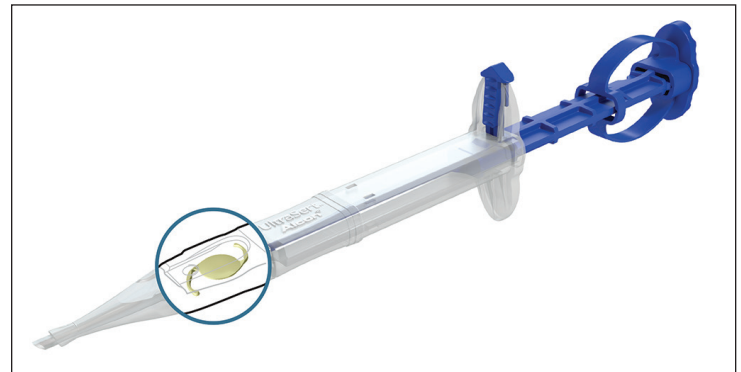


Figure 3. UltraSert Pre-Loaded Delivery System with the AcrySof IQ monofocal IOL.

SMOOTH, EFFICIENT IMPLANTATION

I have used the lenses in the **AcrySof IQ** platform for years, and it is by far my favorite go-to lens platform. Outcomes factor most heavily in that choice, and the ease and efficiency of the surgical procedures are compelling as well. In my experience, most of the **AcrySof IQ** IOLs (monofocal, toric, and multifocal) can be inserted through a small 2.2-mm incision if desired.

I have implanted the **AcrySof IQ** monofocal with the **UltraSert** Pre-loaded Delivery System (Alcon) for several years. The delivery system is intuitive, and my staff and I do not need to handle and load the lenses, so the IOL remains pristine and untouched (Figure 3). In my experience with **UltraSert**, the **AcrySof IQ** lenses are delivered into the eye beautifully. Occasionally, I will have to reposition a haptic during delivery when using **UltraSert**. This repositioning takes seconds and simply entails rotating the lens into the bag. Overall, surgery with the **UltraSert** Pre-loaded Delivery System mirrors the lenses themselves, with an elegant design and comforting predictability that ultimately provide excellent outcomes for my patients.

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