Clinical Connection

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Bringing partners together to deliver exceptional patient care

SUMMER 2026

Welcome to the inaugural edition of EyeCare Partners *Clinical Connection*!

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This newsletter is built around a simple idea: When we share knowledge and perspectives, we deliver better care for our patients.

Clinical Connection is designed to help you care for patients locally, efficiently and with access to the latest capabilities. Each issue will feature timely topics in eye care explored by our optometric residents and complemented by insights from local ophthalmology and optometry colleagues, bringing both emerging thinking and real-world application into focus. You'll also find introductions to our newer doctors and updates on educational opportunities, new technologies, clinical research and practical ways to stay connected.

We hope this serves as a meaningful way to stay informed, strengthen connections and support our shared goal of delivering the best possible care to the patients and communities we serve.

We welcome your ideas and suggestions for future issues. Thanks for joining us on the *Clinical Connection* journey.

HOT TOPIC

Life in Focus: The Rise of Premium Intraocular Lens (IOL) Technology

Cataract surgery is among the most commonly performed surgical procedures worldwide, with approximately 3.8 million operations conducted in the U.S. each year.[1,2] Since its origin in 1949, monofocal IOLs served as the undisputed standard of cataract care, reliably restoring distance vision while accepting that patients would remain dependent on spectacles for near and intermediate tasks.[3] Though effective, this approach increasingly fell short of evolving patient expectations.

As the global population ages and active lifestyles become the norm across older demographics, demand for spectacle independence at all distances has grown substantially. Patients presenting for cataract surgery today are better informed, have greater visual demands and are more likely to request functional near vision than ever before. Toric, multifocal and extended depth of focus (EDOF) IOL options now offer clinicians powerful tools to meet individualized patient goals. Optimal patient satisfaction begins

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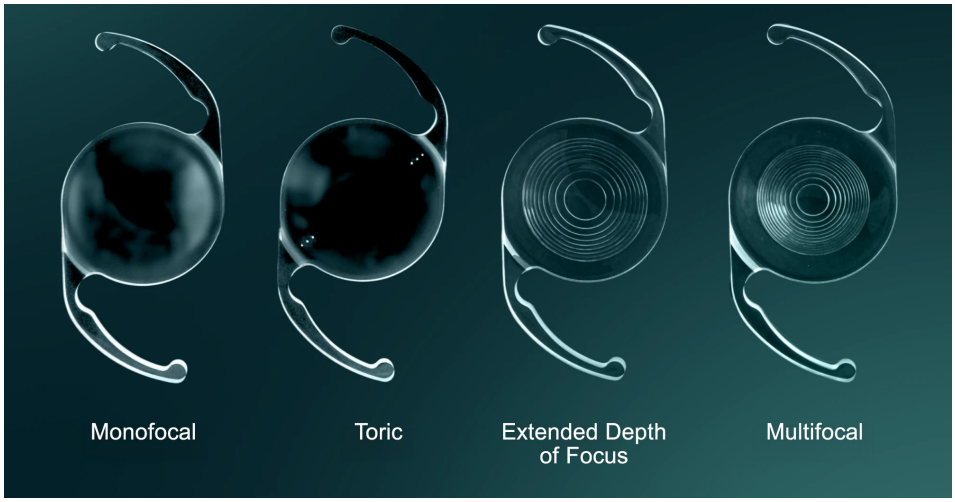
long before the operating room with evidence-based IOL selection tailored to the patient's lifestyle and visual demands.

Lens Categories

Monofocal IOLs represent the foundational design in cataract surgery, featuring a single fixed focal point. The target of this focal point is most commonly set for distance. Unlike premium lens designs, monofocal IOLs do not address pseudo-presbyopia, meaning patients should be counseled preoperatively that reading glasses or bifocals will be required for near and intermediate tasks following surgery. For those patients with the goal of good near vision uncorrected, particularly myopic patients who habitually remove their spectacles to read, it is possible to set the target for near. In this case, spectacle correction would continue to be necessary for clear distance vision. A monovision strategy that targets the dominant eye for distance and the fellow eye for near can be considered in patients who are accustomed to monovision correction prior to cataract surgery. Extensive education regarding binocular vision and intermediate distance limitations is imperative with this methodology.

Spherical monofocal IOLs are the lens of choice for patients looking for a lens design fully covered by medical insurance. Spherical monofocal IOLs do not correct for astigmatism, meaning patients will likely require spectacle correction for best vision at all distances following surgery. The exception to this rule is patients with minimal corneal astigmatism, who can expect good distance vision uncorrected. Toric multifocal IOLs are a premium lens option for patients with greater than or equal to 0.75D to 1.00D of corneal astigmatism who wish for spectacle independence at distance. Limbal relaxing incisions (LRIs), small arc-shaped peripheral corneal incisions, can be performed to correct for mild corneal toricity not meeting the threshold for a toric IOL.[4]



Re:Vision. (n.d.). Premium lenses. https://www.revision.nz/premium-lenses

Despite their limitations, monofocal lenses remain an excellent choice for many candidates, including those with coexisting ocular pathology such as macular degeneration, diabetic retinopathy or significant dry eye disease that would preclude reliable outcomes with premium IOLs. Monofocal lenses are also well-suited for patients who prioritize the highest possible optical quality at distance, such as those who drive frequently or work in visually demanding environments, and for whom spectacle dependence for near tasks is an acceptable trade-off to pristine distance vision.

Multifocal IOLs represent a significant advancement in IOL technology, designed to provide functional vision across a range of distances by dividing incoming light into two or more discrete focal points. This is achieved through either diffractive or refractive optical designs. Diffractive multifocal lenses use a series of concentric rings etched onto the lens surface to split light between distance and near focal points, while refractive designs rely on alternating optical zones of differing power. Trifocal IOLs represent the current standard among premium multifocal designs, adding a dedicated intermediate focal point to address computer and arm's length tasks that bifocal multifocals historically underserved.[5] The primary advantage of multifocal IOLs is the potential for meaningful spectacle independence across all distances, which carries high appeal for active, visually demanding patients. However, clinicians must engage in thorough preoperative counseling regarding the inherent optical trade-offs of multifocal designs, most notably the increased incidence of photic phenomena including halos, glare and starbursts, particularly under mesopic conditions. Contrast sensitivity may also be modestly reduced compared to monofocal IOLs. Ideal candidates are highly motivated patients with healthy macular function, minimal corneal irregularity and realistic expectations. Patients with significant ocular comorbidities, pupillary abnormalities or a history of prior refractive surgery should be approached with caution or steered toward alternative lens platforms.[6]

Overview of Lens Categories

	Insurance Coverage	Spectacle Dependence	Ideal Candidate
Spherical Monofocal IOLs	Typically fully covered	Expect spectacle correction for best vision at all distances	• Distance target: anyone • Near target: myopes preferring to continue to read without spectacles • Monovision target: established monovision contact lens wearers
Toric Monofocal IOLs/Limbal Relaxing Incisions	Out-of-pocket cost	Good distance (or near) vision without glasses, will need spectacle correction for all tasks arm's length or closer	
Multifocal IOLs	Out-of-pocket cost	Greatest independence from spectacles, may need small reading prescription for fine print	• Patients wanting the greatest independence from spectacles • Established multifocal contact lens wearers • Absence of ocular pathology
Extended Depth of Focus (EDOF) IOLs	Out-of-pocket cost	Moderate independence from spectacles, good distance and intermediate vision, some functional near vision, expect small reading prescription for near work	• Patients wanting moderate independence from spectacles • Concern for difficulty adapting to multifocal design • Absence of ocular pathology

Extended depth of focus (EDOF) IOLs represent a compelling middle ground between monofocal and multifocal designs, engineered to elongate the eye's focal range into a continuous corridor of vision rather than creating discrete, separate focal points. This is achieved through a variety of optical strategies depending on the platform, including wavefront manipulation, pinhole optics and non-diffractive refractive technologies.[6] The primary clinical advantage of EDOF IOLs is a significantly reduced incidence of halos and glare compared to multifocal lenses, making them particularly attractive for patients who are concerned about nighttime driving or work in low-light environments. Ideal candidates include patients seeking meaningful reduction in spectacle dependence for distance and intermediate tasks, and who are unwilling to accept the dysphotopsia risk associated with multifocal IOLs. EDOF lenses are also well-suited for patients with mild macular changes or modestly reduced contrast sensitivity in whom a multifocal IOL would be contraindicated, as well as those with active lifestyles who prioritize visual quality over complete near spectacle independence. Patients should nonetheless be counseled that reading glasses will likely still be required for prolonged or demanding near tasks.

Screening and Preparing Patients

Careful patient screening is essential prior to premium IOL implantation. Significant macular pathology including age-related macular degeneration, diabetic macular edema and epiretinal membrane formation represents a primary contraindication to multifocal and EDOF lenses, as compromised retinal function will limit visual

potential and amplify dissatisfaction. Irregular corneal astigmatism, as seen in keratoconus, is another contraindication for premium IOL designs. While not an outright contraindication, ocular surface disruption secondary to dry eye disease will limit visual quality, especially in patients with premium lens options. Optimization of the ocular surface will allow for best vision potential following surgery. Dry eye disease should be aggressively managed prior to surgical planning, as it can destabilize preoperative measurements and reduce postoperative outcomes. A history of refractive surgery can also affect the quality of preoperative measurements and has the potential to limit the accuracy of hitting a specific postoperative target.

Clinical outcomes data for premium IOLs are encouraging, though the importance of appropriate patient selection and preoperative counseling is critical. Spectacle independence confers benefits that extend well beyond the exam lane. Patients consistently report improved quality of life, greater freedom in daily activities and a reduced burden of corrective eyewear that many describe as transformative.

James McHale, M.D., Director of Cataract Surgery at Columbus Ophthalmology Associates, captures this sentiment well, noting: "The revolution of lens implant development has been critical in providing patients with the best possible vision they can obtain given their visual potential through cataract surgery. Astigmatism correction is a given today and can be achieved through toric IOL implantation or limbal relaxing incisions for lower amounts of astigmatism. I have been infinitely impressed with patients' acuities and focusing capabilities regarding modern day, multifocal lens implants. We try to provide patients with a complete and improved range of focus, which reduces or completely absolves a patient's dependence on glasses."

U.S. FDA clinical trial data echoes this optimism, demonstrating that 99% of patients who received multifocal IOLs would choose the same lens again — although those same data reveal that 12.6% of multifocal IOL patients reported severe difficulty with halos, compared to just 0.9% of monofocal IOL patients.[5] This contrast is not a contradiction; rather, it reflects the reality that when patients are appropriately selected and thoroughly counseled, even lenses with inherent optical trade-offs can deliver outstanding satisfaction. Ultimately, these figures reinforce a central theme in premium IOL practice: Exceptional outcomes are achievable, but remain contingent upon matching the right lens to the right patient and anchoring expectations in clinical reality.

Setting Patients up for Success

The expanding landscape of IOL technology has transformed cataract surgery into an opportunity to meaningfully optimize a patient's lifelong visual function. As available IOL design options continue to grow, so too does the responsibility of every clinician involved. By initiating identifying conditions that may influence candidacy, managing ocular surface disease preoperatively and calibrating patient expectations well in advance of the surgical consultation, the referring clinician can dramatically streamline the process and set both the patient and surgeon up for success. In an era of rapidly advancing IOL technology, the clinicians who invest in staying current with the evidence will be best positioned to guide their patients toward the visual outcomes they deserve.

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Life in Focus: The Rise of Premium Intraocular Lens (IOL) Technology

The Surgical Perspective

Jeffrey Shaver, M.D.

Kayla Unsell, M.D.

Which advanced technology intraocular lenses (ATIOLs) do you most commonly use and what drives your selection?

Jeffrey Shaver M.D.: I offer the PanOptix for binocular glasses independence because it is consistent, has toric options and works well. I use the RayOne toric for straight astigmatism for extended depth of focus (EDOF) function as an added benefit.

I also offer the Light Adjustable Lens (LAL) and the RayOne EMV for EDOF options. I recommend LALs for patients who are post-refractive of any type since they allow excellent modified monovision and work well with irregular corneas. I don't often place the multifocal in patients after refractive surgery, but will consider this option with few higher order aberrations.

Kayla Unsell, M.D.: I use toric IOLs, multifocal IOLs and LALs often. My selection is driven by individual patient's needs, lifestyle and visual goals. Each option offers unique advantages. That is why it is so important to take the time to truly understand each patient: how they live, what their expectations are, and which outcomes matter most to them.

I view lens selection as a highly customized decision tailored specifically to each patient to achieve the best possible result.

How do you match a patient's lifestyle and expectations to a specific IOL?

Kayla Unsell, M.D.: This is one of the most important parts of the cataract surgery consultation process. I ask every patient about their hobbies, daily activities and what they hope to gain from surgery.

Lifestyle and visual expectations can vary greatly from one person to another person. For example, an avid golfer or hunter may have very different visual priorities than someone who enjoys needlepoint or other detailed near work. I may recommend different lens options based on those needs. Understanding how a patient lives their life allows me to tailor my recommendations to the lens that will best support their goals.

Every IOL has its own advantages and trade-offs, so selecting the right lens for the individual ultimately leads to the best outcomes and the happiest patients.

What are the most common reasons a patient is not a good candidate for ATIOLS?

Jeffrey Shaver, M.D.: If a patient has existing eye health problems that are likely to decrease the ATIOL effectiveness, I don't recommend the PanOptix lens. I may still recommend a toric lens as this will be an improvement in most cases.

The Hippocratic Oath requires us to "do no harm." Patient expectations need to be realistic. This is an area where the co-managing optometrist can help set appropriate expectations by educating patients on available options with the caveat that the surgeon will determine what is most appropriate.

How important is ocular surface optimization in your outcomes and what steps make the biggest difference?

Kayla Unsell, M.D.: Ocular surface optimization is one of the most important factors in achieving the best possible outcomes with ATIOLs. These lenses cannot perform to their full potential if the ocular surface is compromised, so identifying and treating surface disease before surgery is critical to improve measurements, visual quality and ultimately, patient satisfaction.

Equally important is educating patients on the role the ocular surface plays in their long-term visual outcomes. I make sure patients understand maintaining a healthy ocular surface is an ongoing process, even following cataract surgery, to continue getting the most out of their lenses.

Patient expectations and willingness to participate in that maintenance are also important considerations, as some individuals may not be ideal candidates for certain premium IOLs

if they are unable or unwilling to appropriately manage ocular surface health.

What should patients realistically expect in terms of outcomes, adaptation and potential trade-offs with ATIOLs?

Kayla Unsell, M.D.: ATIOLs can provide outstanding visual outcomes, and I truly believe in the value they offer to patients. It is important for patients to understand that no lens is perfect. Every IOL comes with its own strengths, limitations and potential trade-offs, whether related to nighttime visual symptoms, the need for glasses with certain activities or the adaptation process.

Having honest and thorough conversations with patients is essential. The goal is not to discourage patients from a particular lens, but rather to set realistic expectations and help them understand the unique qualities each option provides.

When patients are well informed and matched with the right lens for their lifestyle and visual goals, they tend to have the best experience and highest level of satisfaction.

If you needed cataract surgery yourself, what would you choose and how has that changed over time?

Jeffrey Shaver, M.D. : I would choose a PanOptix lens in my non-dominant eye. I would likely want the same in the other eye, with the possible option to place a RayOne EMV IOL in the dominant eye for optimal distance vision. I'm not worried about halos as these will diminish to background noise in about three months.

NEW FACES: BEYOND THE BIO

Parker Cain, M.D.

precisionvisionok.com/doctors/parker-cain-md

Q&A

Why did you join Precision Vision?
I chose a career in ophthalmology after working at Precision Vision as a medical scribe before medical school. The community at Precision Vision and level of care shown to patients were inspiring. I was thrilled when I realized there was an opportunity to rejoin the organization as a physician.

What's something happening in eye care right now that you find really exciting?
The huge growth in minimally invasive treatment options for glaucoma, including selective laser trabeculoplasty (SLT) and minimally invasive glaucoma surgery (MIGS), is exciting. These innovations profoundly impact my daily decision-making. The ability to lessen the burden of eye drops in managing glaucoma leads to better outcomes and greater patient satisfaction.

What is the best part of your job?
The best part of my job is treating patients whose independence has been severely limited by cataracts. Being able to restore someone's ability to work, drive and live independently through a low-risk surgery is an incredible blessing.

When you're not in the clinic, how do you like to unwind?
I am an avid reader of many genres. I typically have a physical book and an audiobook in progress at any given time. I also love to bake and frequently bring treats to the clinic for our team.

If you weren't working in eye care, what would you do?
For many years, I wanted to be a high school science teacher. I have loved teaching and working with children. One of the aspects of medicine that most appealed to me was the ability to educate my patients about their ocular health.

Tell us about your family and any pets.
I met my wife, Leanne, in show choir during high school. We have a 3-year-old son named Tommy. We also have two dogs, Jasper and Winnie.

MARK YOUR CALENDAR

Be on the lookout for **open house** details this summer/fall at Precision Vision North OKC, 6525 N. Meridian Ave., Suite 130, Oklahoma City. **Gemini Bogie, M.D.** offers in-office YAG and SLT lasers in this upgraded accessible location with great parking and no stairs.

precisionvisionok.com/doctors/gemini-bogie-m-d

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