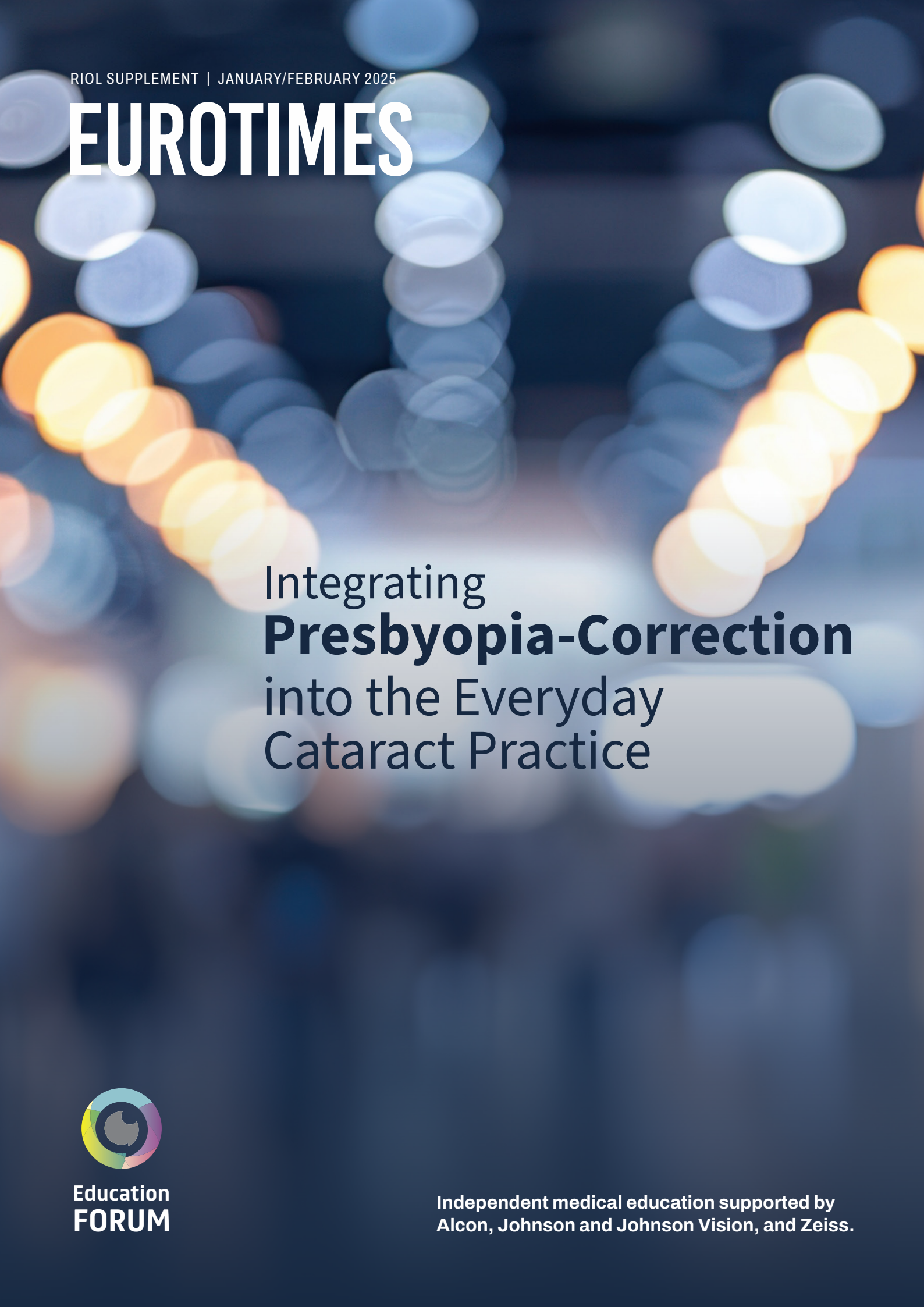
RIOL SUPPLEMENT | JANUARY/FEBRUARY 2025

EUROTIMES



Integrating **Presbyopia-Correction** into the Everyday Cataract Practice

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ESCRS Clinical Trends in Refractive IOLs

BY OLIVER FINDL, MD, MBA, FEBO

For the ninth consecutive year, the European Society of Cataract and Refractive Surgeons (ESCRS) has collected clinical data from thousands of delegates to track emerging trends and identify unmet needs in cataract and refractive surgery[1]. The 2023 ESCRS Clinical Trends Survey, conducted both online and in-person during the 41st Congress of the ESCRS in Vienna, featured 129 questions and garnered responses from over 3,100 delegates. Key findings were published in a EuroTimes supplement in September 2024[2]. Following this, a new survey was launched at the 42nd Congress of the ESCRS in Barcelona.

Usage of Presbyopia-Correcting IOLs in Cataract Surgery

An eight-year analysis of the ESCRS Clinical Survey data revealed a significant and consistent 6%-point increase (p=0.003) in the use of presbyopia-correcting intraocular lenses (IOLs) in cataract surgery since 2016. In 2023, trifocal and extended depth of focus (EDF) IOLs emerged as the most commonly used lens options, representing 42% and 40% of the total presbyopia-correcting IOLs implanted, respectively (Figure 1). By contrast, bifocal IOLs have seen a sharp decline over the last 8 years and are now nearly obsolete.

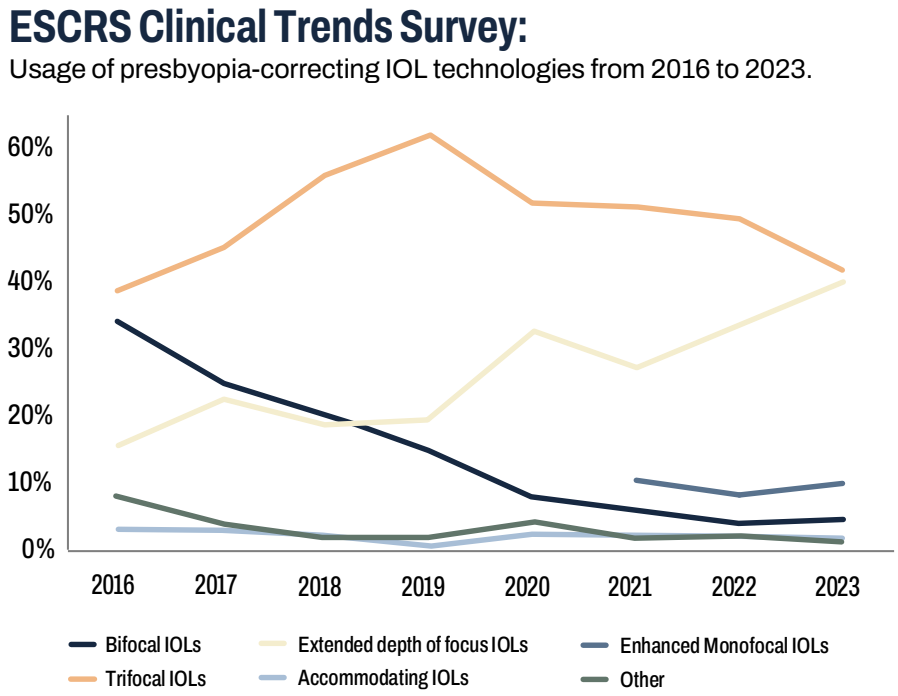

Figure 1. According to the 2023 Clinical Trends Survey, trifocal IOLs were the most used presbyopia-correcting lenses (42%), followed closely by EDF IOLs at 40%.

Barriers to Wider Adoption

Despite the growing popularity of presbyopia-correcting IOLs, concerns persist. According to the 2023 ESCRS Clinical Trends Survey, 62% of delegates reported patient costs as a major obstacle, while 52% were concerned about the potential impact of these lenses on nighttime quality of vision.

Visual aberrations are a critical factor in assessing IOL technologies. When asked about the frequency of such issues among their patients, survey respondents reported an average incidence of 5.1% for trifocal IOLs, 3.8% for EDF IOLs, and 3.2% for enhanced monofocals.

There is quite a big group who will talk to all patients about these lenses.

Proactive Patient Communication

The survey also explored how often surgeons discuss presbyopia-correcting IOL options with qualified cataract patients seeking spectacle independence. Most respondents proactively engage in these conversations with either some (38%) or all (37%) qualified patients. However, 17% only bring this topic up if the patient inquires, and yet a smaller percentage either do not mention it at all (4%) or recommend against it (4%).

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FINANCIAL DISCLOSURES:
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Key Considerations to Avoid Refractive Surprise

BY JOAQUÍN FERNÁNDEZ, MD, MSC, PHD

Patient satisfaction among individuals receiving presbyopia-correcting IOLs is influenced by several critical factors. To minimize postoperative refractive errors and significantly enhance overall satisfaction, precise diagnostic measurements and accurate IOL calculations are essential. Even minimal residual spherical error can substantially decrease the chances of achieving 20/20 uncorrected visual acuity (UCVA), negatively affecting patient satisfaction. Recent research indicates that eyes with -1.00 D of residual sphere experience a reduction in mean uncorrected distance visual acuity (UDVA) by 0.36 logMAR for monofocal IOLs and 0.32 logMAR (equivalent to more than 3 Snellen lines) for multifocal IOLs, compared to eyes with 0.00 D residual sphere[1]. Furthermore, patient satisfaction rates are notably affected by even minimal residual spherical errors[1].

Mastering Preoperative Diagnostics

To ensure accurate corneal power measurements, it is advisable to use multiple diagnostic devices, including keratometry, topography, biometry, and optical coherence tomography. The key is to ensure thorough data validation. Watch for red flags such as: a) a difference of more than 1 D in average keratometry between eyes; b) average keratometry greater than 47 D or less than 41 D; c) more than 2.5 D of cylinder; d) anterior chamber depth greater than 4.2 mm or less than 2.0 mm; and e) axial length greater than 30 mm or less than 22 mm. Using more than one device, ideally with different technologies, such as elevation-based tomography and Placido disc topography, could help detection of inconsistency in the data. Data validation is crucial, arguably more important that the IOL power calculation formula itself, as most modern formulas perform reliably.

Ocular Surface Problems

Postoperative dissatisfaction in cataract surgery patients often stems from unresolved ocular surface issues, which are prevalent in this population. In the PHACO study, nearly 60% of patients screened for cataract surgery were asymptomatic for dry eye disease, yet 50% still exhibited central corneal fluorescein staining[2]. Another study found that abnormal testing (MMP-9, tear osmolarity, or corneal staining) also commonly appears in asymptomatic patients suggestive of ocular surface dysfunction. These findings highlight the critical importance of ensuring a healthy ocular surface to achieve optimal postoperative outcomes.

Higher-order aberrations at 4-mm pupil diameter can provide valuable insights into dry eye conditions and other complications that may require closer attention. Careful assessment of corneal irregularities can reflect measurement quality and identify potential device-related biases. Extra caution is needed when using specular reflection devices for measuring corneal power. If inconsistencies arise, validate with multiple measurements and consider repeating or double-checking the measurement while optimizing the ocular surface.

The 2023 ESCRS Clinical Trends Survey underscores the importance of managing dry eye in cataract surgery planning. According to the survey, 63% of respondents indicated they would likely or very likely postpone surgery in patients with moderate dry eye until the condition is better controlled (Figure 1). Proper dry eye management is critical for improving the accuracy of IOL calculations.

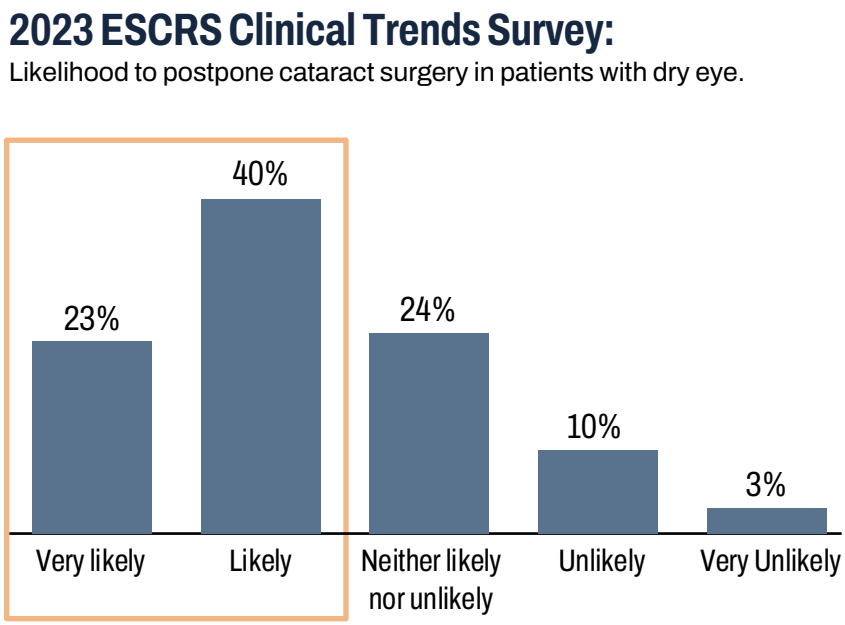

Figure 1. 2023 ESCRS Clinical Trends Survey results show that 63% of respondents are likely or very likely to postpone surgery in a patient with moderate dry eye.

Formula Optimization

Currently, IOL power calculation formulas can be broadly classified into two categories: empirical and theoretical (Figure 2).

All new-generation formulas demonstrate equivalent accuracy, with no clinically or statistically significant differences among them[3]. The question is whether predictability can be improved. A thick lens formula has been developed, specifically tailored for a particular trifocal IOL[4], which could improve outcomes when compared to the traditional thin lens formula. However, the thick formula optimized by Surgeon, Biometer, and the IOL Model, achieved similar outcomes to the latest generation formulas, such as Barrett, EVO, Kane, and Qvision, practically within the limit of repeatability and reproducibility of current biometers[5].

Classification of Intraocular Lens formulas

A) EMPIRICAL FORMULAS:
- Formulas Based on Refraction
- Formulas Based on Linear Regression Models: SRK, SRK II
- Formulas Based on Artificial Intelligence: Hill-RBF, Karmona, Clarke neural network, Pearl DGS, Nallasamy, Zeiss AI IOL calculator

B) THEORETICAL FORMULAS:

B.1) FORMULAS BASED ON GEOMETRICAL OPTICS:

⊙ Paraxial geometrical optics (Gaussian or Ray Tracing):
- VergenceFormulas (Thin Lens):
  - ▶ 2 variables: Holladay 1, SRK/T, Hoffer Q, T2
  - ▶ 3 variables: Haigis, Ladas Super Formula (AI)
  - ▶ 4 variables: VRF, 3c Calculator, Hoffer QST, Castrop
  - ▶ 5 variables: Barret Universal II, Kane (AI), K6, VRF-G
  - ▶ 7 variables: Holladay 2, Panacea
- Thick Lens Formulas: EVO 2, Naeser 2, O formula, Qvision, Z-Calc

⊙ Exact geometrical optics (not paraxial):
- Ray Tracing Formulas: Okulix, Phacooptics (Olsen), CSO

B.2) FORMULAS BASED ON PHYSICAL OPTICS

Figure 2. Classification overview of current IOL formulas. [Courtesy of Dr. Fernández]

One optimized formula is sufficient to achieve high eye rates within ±0.50 D and is preferable to using multiple formulas without constant optimization. The issue is not the formula itself but rather the need to optimize it. Manufacturer formulas are optimized for a particular biometer, so if a different device is used, it is critical to understand the parameters the formula utilizes and optimize it accordingly[6]. Different optimization methods are available, including individualized calculations[7] and mathematical approaches[8].

Data validation is crucial, arguably more important that the IOL power calculation formula itself, as most modern formulas perform reliably.

Conclusions

Even minimal residual refractive errors significantly impact patient satisfaction and uncorrected visual acuity. Therefore, optimizing ocular surface and validating the data are critical. There are no clinically relevant differences between the current calculation formulas in normal eyes, so this is not the issue. It is more important to improve data collection and work with an optimized constant formula rather than averaging formulas without prior adjustments.

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Addressing Barriers to Incorporating Presbyopia IOLs in Cataract Surgery

BY RAMZA DIAMANTI, MD, MRCOPHTH, FEBO

Concerns with Presbyopia-Correcting IOL Procedures

The 2023 ESCRS Clinical Trends Survey identifies the top three concerns for surgeons performing presbyopia-correcting IOL procedures as patient cost (62%), nighttime quality of vision (52%), and potential loss of contrast visual acuity (39%). A cross-analysis based on surgical volume shows that while patient cost is the primary concern for both surgeons performing fewer than 400 procedures annually and those performing more, high-volume surgeons express slightly less concern about nighttime quality of vision and loss of contrast visual acuity compared to their lower-volume peers.

Surgeons with over 10 years of experience tend to be more concerned about patient cost, nighttime quality of vision, and loss of contrast visual acuity than their younger counterparts. Additionally, a regional comparison reveals that Western European surgeons are less concerned about patient cost but place greater emphasis on nighttime quality of vision and loss of contrast visual acuity, compared to their Eastern European colleagues.

Overcoming Barriers for Doctors

Access to advanced technology remains a significant challenge for many surgeons. Solutions such as investor funding and strategic partnerships can assist in procuring the necessary equipment. Additionally, attending courses, wet labs, and conferences are important for gaining the surgical training and expertise needed to perform these procedures effectively.

Once the technology is in place, integrating these procedures into routine practice requires a structured approach. This includes staff training, developing comprehensive patient education materials, creating pre-consultation medical history forms, and utilizing remote data acquisition tools to enhance the patient experience.

For those who are skeptical of new technologies, reviewing evidence-based data, patient satisfaction surveys, engaging in peer discussions, and attending conferences can help build trust and confidence in presbyopia-correcting IOL procedures.

Addressing regulatory and safety concerns is also critical. Staying up to date with guidelines and participating in clinical trials are key to ensuring compliance and maintaining high safety standards.

Overcoming Barriers for Patients

For patients, cost is often a major barrier to accessing presbyopia-correcting IOLs. Raising awareness and providing comprehensive education is essential in addressing this challenge. Digital tools such as vision simulators, informative leaflets, and thorough consultations can help patients understand their options better.

It's essential to consider patient demographics, particularly for those in rural or remote areas. Establishing strategically located clinics can improve access to care, while offering bilateral surgeries when appropriate can reduce multiple visits, lowering the financial burden for patients.

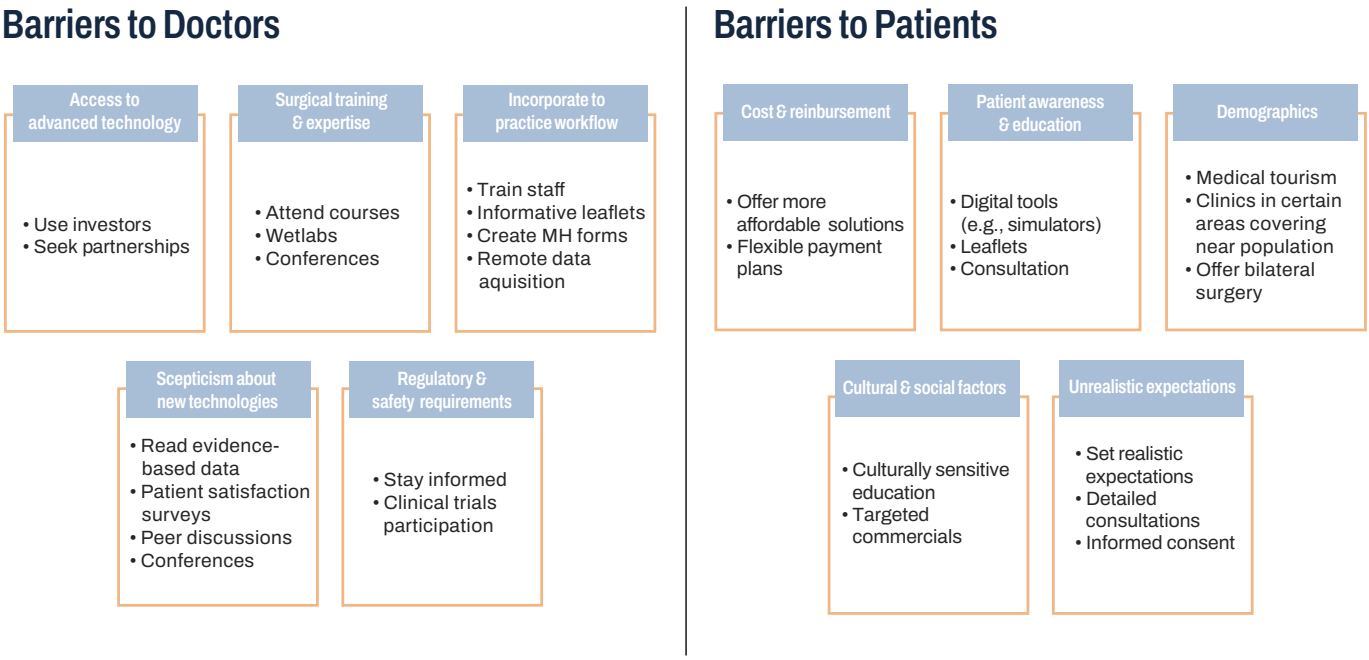

Figure 1. Strategies to overcome barriers to presbyopia-correcting IOL procedures from the perspectives of doctors (left) and patients (right). [Courtesy of Dr. Diamanti]

Cultural and social factors also play a role in patient engagement. Educational materials must be culturally sensitive and tailored to the specific needs of the target patient group. Furthermore, managing patient expectations is crucial. Clear communication about realistic outcomes, combined with informed consent is important to ensure patient satisfaction and prevent misunderstandings.

Key Recommendations

Selecting the most appropriate IOL for each patient requires balancing three key factors: dysphotopsia, depth of field, and visual quality. Achieving an optimal balance is essential. While reducing visual aberrations maximizes visual quality, increasing multifocality may compromise it and elevate the risk of dysphotopsia. Extensive preoperative discussions about these trade-offs help patients make informed decisions. Ensure to ask patients tailored questionnaires to aid in this process.

Addressing cost concerns is equally important. Conducting a comprehensive discussion about the cost-benefit analysis with patients, clearly communicating potential benefits, such as enhanced quality of life, improved visual acuity, greater range of focus, and spectacle independence, can help patients appreciate the value of these procedures.

In countries like Greece, for example, private insurance typically does not cover multifocal or EDF lenses, leaving patients to bear these expenses out-of-pocket. Exploring alternatives can mitigate this financial burden (Figure 2).

How to overcome the cost barrier

- Extensive preoperative discussion
- Private insurance covers monofocal IOL and the difference for presbyopia-correcting IOL out of pocket
- When it is all out of pocket, patient needs to understand the cost-effectiveness
- Offer more affordable but reliable presbyopia-correcting IOL or sometimes mix and match alternatives
- Give alternative to be paid in instalments

Figure 2. Recommended approaches to overcoming cost barriers. [Courtesy of Dr. Diamanti]

In addition to costs, surgeons must address compromises related to vision quality and potential residual spectacle dependence. Some surgeons may also factor in patients' life expectancy, independence, and the broader societal impact of their recommendations.

Conclusions

Incorporating presbyopia correction in routine cataract practice may seem ambitious, however correcting presbyopia extends beyond restoring vision; it aims to enhance patients' quality of life. The ultimate goal is to ensure their satisfaction and happiness with the outcome.

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Matching Patient Needs with Evolving Presbyopia-Correcting IOL Technologies

BY RAMIN KHORAMNIA, MD, FEBO

Advancements in Presbyopia Correction Technologies

Historically, presbyopia correction options were limited (Figure 1). Monofocal IOLs used in a monovision approach provided a full range of vision but compromised depth perception and intermediate visual acuity. Multifocal IOLs expanded the range of vision through multiple focal planes but increased the risk of visual disturbances and reduced contrast sensitivity. However, recent advancements in enhanced monofocal and EDF (Extended Depth of Focus) IOLs have addressed many of these challenges, providing improved intermediate vision, fewer visual disturbances, and better contrast sensitivity.

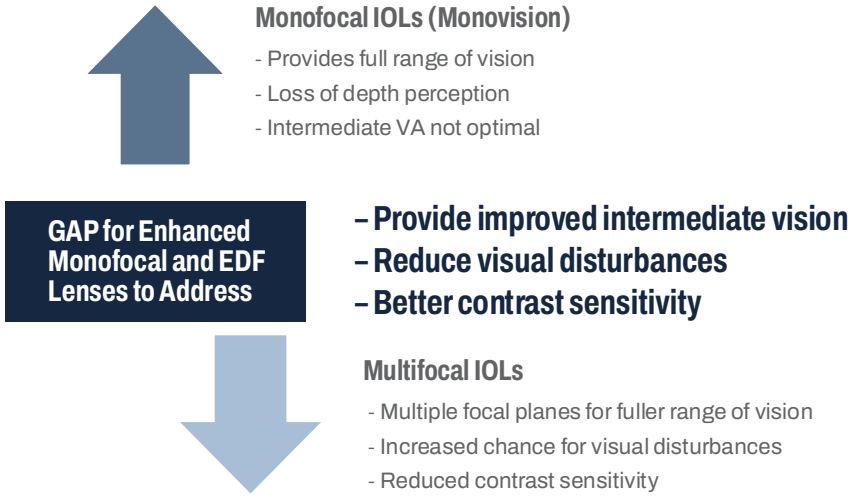

Figure 1. Enhanced monofocal and EDF lenses were developed to improve intermediate vision and contrast sensitivity while reducing visual disturbances. [Courtesy of Prof. Khoramnia]

According to the 2023 ESCRS Clinical Trends Survey, trifocal lenses remain the leading choice for presbyopia correction, with 42% of surgeons preferring them. However, EDF lenses are favored by 40% of surgeons and around 10% opt for monofocal-plus (or enhanced monofocals) IOLs as a solution for presbyopia correction.

There's really a huge variety of lenses on the market today, which can create a lot of confusion amongst surgeons.

Broad Selection in Monofocal-Plus and EDF Lenses

Within the monofocal-plus and EDF categories, several options are available. Enhanced monofocal lenses provide modest improvements in depth of focus, with little to no impact on near vision and about one line of improvement in intermediate vision. EDF lenses, by contrast, offer a more extended depth of focus, delivering an expanded range of vision.

Monofocal-plus IOLs are now widely available, with various models offered by different manufacturers. However, it's important to recognize that most of the time no two monofocal or monofocal-plus IOLs are fully identical. A closer look at their modes of action reveals notable differences.

In the EDF category, various technologies exist to achieve elongated focus, with diffractive technology being the first introduced[1]. It is of note that conditions like dry eye or corneal irregularities can still contribute to visual disturbances, even with nondiffractive IOLs.

In a clinical study involving 60 eyes from 30 patients implanted with AT Lara IOLs (Carl Zeiss Meditec) all eyes achieved a CDVA of 20/20 or better and 83% of patients attained UDVA of 20/20 or better[2]. Furthermore, all patients were fully spectacle independent for intermediate distance, with only 13% requiring glasses for near distance[2]. Moreover, most patients reported minimal photic phenomena, which is an important advantage of EDF lenses[2].

The Vivity lens (Alcon) is an EDF IOL that uses wavefront-shaping technology to stretch and shift light rather than splitting it. In a real-world registry study[3], the lens achieved excellent results, with an UDVA of 0.009 logMAR (equivalent to 20/20 Snellen) for distance, 0.08 logMAR for intermediate, and 0.25 logMAR for near distance. Additionally, over 91% of patients reported no halos, glare, or starbursts.

Another promising nondiffractive EDF IOL is the PureSee lens (Johnson and Johnson Vision), which is designed to maintain a dysphotopsia profile comparable to that of a monofocal lens. Early results from an ongoing clinical study have been encouraging, with patients achieving an UDVA of 0.02 logMAR, UIVA of 0.10 logMAR, and UNVA of 0.30 logMAR three months post-surgery*.

An innovative approach to spectacle independence with an EDF lens is the pinhole principle, utilized in small-aperture lenses. These lenses feature a small central aperture surrounded by an annular opaque mask, which blocks defocused paracentral light while allowing paraxial light to enter. This design

* Data on file: International Vision Correction Research Center (IVCRC), University Eye Clinic Heidelberg.

is a great choice for patients with prior monovision and is particularly beneficial for those with iris trauma, irregular cornea, scarring, or keratoconus.

Best Practices for IOL Selection

The key question should always be, "Which IOL is the best choice for the patient? (Figure 2). While I typically do not use monofocal-plus lenses for full presbyopia correction, I find them preferable to many standard monofocal lenses because they oftentimes provide about one additional line of intermediate distance.

For patients who are not particularly concerned about achieving complete spectacle independence, I consider opting for an enhanced monofocal lens. However, for patients who seek spectacle independence, I assess their tolerance to photic phenomena first. If they are not bothered by these effects, I recommend a trifocal lens. Conversely, for patients who are particularly sensitive to photic effects, I suggest an EDF lens, with the understanding that they may still need reading glasses for near distance.

	Monofocal +	EDF/ERV
Risk tolerance	Low tolerance for dysphotopsias Pilot, truck driver, night driver	Low to moderate tolerance of dysphotopsias
Lifestyle	Active patients who would benefit from slightly extended depth of focus	Active lifestyle (golf, scuba, skiing, running)
Visual demands	Significant intermediate demands: Computer work, phone/tablet, sports; High demand for distance vision; Understands will wear spectacles	Seeking reduced spectacle dependence, especially for intermediate (cards, computer, playing music, shopping); willing to wear glasses sometimes
Personality	Any	Relaxed personality
Patient factors or ocular health considerations	Not a candidate for diffractive IOLs due to retinal disease, dry eye, etc. Tall patient / long arms	May not be suitable for severe dry eye, irregular astigmatism, moderate to severe glaucoma

Figure 2. Key factors to consider when selecting an IOL to match a patient's needs. [ERV=Extended Range of Vision) [Courtesy of Prof. Khoramnia]

Conclusions

A wide range of monofocal-plus and EDF presbyopia-correcting IOLs is now available for patients looking to reduce their dependence on spectacles while minimizing dysphotopsia. However, for patients seeking a maximum of independence from glasses, particularly for near distance, trifocal lens technology may be a more suitable option. Understanding these various technologies and matching them to each patient's specific needs is essential for achieving optimal outcomes.

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FINANCIAL DISCLOSURES:

Acufocus[1], Alcon[1,2,3,4], Alimera[1,2,3], AMO/Johnson&Johnson[1,2,3,4], Bausch+Lomb[1,3], Bayer[1,2,3], Biotech[1,3], Carl Zeiss Meditec[1,2,3], Chengdu Kanghong[1], Cristalens[1], Hanita[1], Heidelberg Engineering[2], Hoya[1,2,3], Kowa[1,2,3], Teleon[1,2,3], Novartis[1,2,3,4], Oculus[1,3], Ophtec[1], Physiol[1], Presbia[2,3,4], Rayner[1], Roche[1,2,3], Santen[1,2,3], SIFI[1,2,3], Ursapharmc[1,2,3]
1 = Research Grants; 2 = Travel Expenses; 3 = Lecture Fees; 4 = Consulting

Trifocal Advancements to Minimize Dysphotopsia

BY FLORIAN T. A. KRETZ, MD, FEBO, FWCRS

Trifocal IOLs are currently the most widely implanted lenses for presbyopia correction in Europe, providing patients with a broad and continuous range of vision. According to the 2023 ESCRS Clinical Trends Survey, patient satisfaction with trifocal IOLs is high, with approximately 90% of patients expressing satisfaction with their near, intermediate, and distance vision one year after implantation (Figure 1).

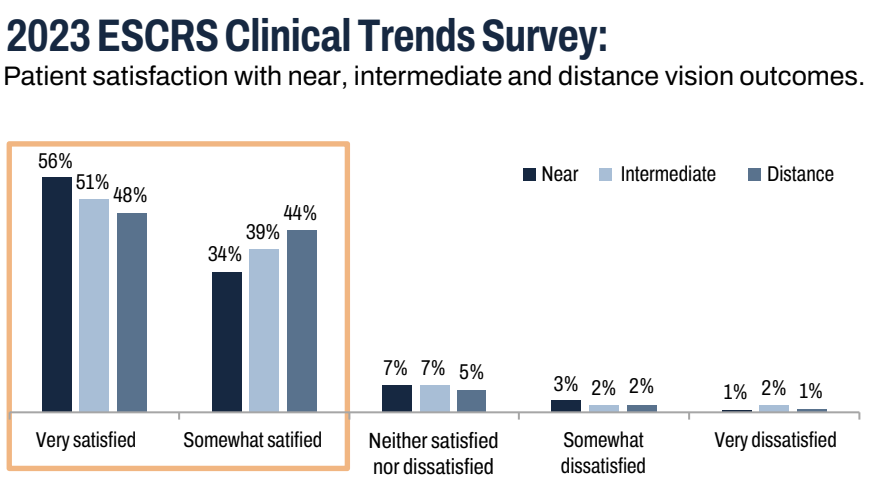

Figure 1. 2023 ESCRS Clinical Trends Survey highlight that around 90% of patients report they are very satisfied or somewhat satisfied with near/intermediate/distance vision one year after trifocal IOL implantation.

When to Opt for a Trifocal IOL?

Ideal candidates for trifocal IOLs are individuals seeking complete spectacle independence across all distances and who frequently engage in near-vision activities like reading, writing, cooking, crafts, and sewing. Importantly, candidates must be willing to accept potential visual compromises, such as dysphotopsia, as a trade-off for enhanced near functionality.

Certain conditions may limit a patient's suitability for trifocal IOLs. Retinal diseases, severe dry eye, corneal dystrophies, and unstable glaucoma are among the more common exclusion criteria.

Various Trifocal IOL Technologies

A broad selection of trifocal IOLs is now available, each differing in platform, material, and design. Selecting the ideal IOL requires careful consideration of the patient's unique visual needs and lifestyle, as well as the surgeon's familiarity with the IOL.

Selecting the ideal IOL requires careful consideration of the patient's unique visual needs and lifestyle.

The diffractive trifocal AT Lisa trifocal IOL (Carl Zeiss Meditec) is a hydrophilic lens with an add of +3.33D for near and +1.66D for intermediate vision. In a prospective study of 100 eyes, 96% reported being able to perform daily activities without difficulty[1]. At three months post-implantation, 91% of eyes achieved monocular, uncorrected acuity of 0.1 logMAR or better for distance, 79% for intermediate, and 87% for near vision.

A recent advancement in diffractive technology, the hydrophobic acrylic AT Elana trifocal IOL (Carl Zeiss Meditec), is designed without bifocality in the periphery and features a C-loop haptic. Optical bench testing has shown promising simulated visual acuities[2]; comprehensive clinical outcomes are expected soon.

The Panoptix trifocal IOL (Alcon) is a well-known hydrophobic lens with a blue light filter. It provides zero-order distance, first-order intermediate at 120cm, second-order intermediate at 60cm, and third-order near at 40cm. This optic design differs from other trifocal IOLs, which typically have an intermediate focal point of 80cm. The Panoptix demonstrates good visual acuity across distance, intermediate and near ranges[3].

The Intensity trifocal IOL (Hanita Lenses) features symmetrical focal distribution around zero-order, enabling continuous vision. This lens is designed to reduce light loss, with 12 steps and 3 zones, maintaining focal points at 80cm for distance and 40cm for near vision, but with a smoother transition between focal points.

The Tecnis Synergy IOL (Johnson and Johnson Vision) combines the Tecnis +4D multifocal with the Symfony Echelette EDF IOL, offering a very smooth transition from distance to near vision. Its closer near focal point, due to the add power of +4D, enables patients to read at closer distances.

The Tecnis Odyssey (Johnson & Johnson Vision) is a non-parabolic diffractive trifocal IOL that also provides a smooth transition from distance to near vision. A prospective open-label study at four U.S. sites has demonstrated that visual acuity is comparable to that of other trifocal IOLs, resulting in high patient satisfaction and spectacle independence.

Finevision Triumf (BVI) offers a hybrid solution that combines trifocal technology with EDF optics. A key feature of this design is the gradual decrease in step height from the center to the periphery, an apodization effect that minimizes halo intensity by directing more light toward the far focal point.

The Trinova trifocal IOL (VSY Biotechnology) features a sinusoidal curve with stepless zones, creating a distinct optical profile that sets the zero-order focal point for intermediate vision. This design requires fewer rings; a single ring can provide three focal points, leading to a slight reduction in dysphotopsia.

Despite the wide variety of available lenses, the overall performance and visual outcomes of all trifocals are comparable.

Conclusions

When selecting an IOL, it's essential to assess the patient's lifestyle and hobbies to determine the trifocal lens best suited to their specific visual tasks (Figure 2). While many patients seek spectacle independence, it is important to discuss potential photic phenomena to set realistic expectations. Involving a trained counselor to explain and navigate these considerations can greatly benefit patients. Furthermore, a comprehensive evaluation of any comorbidities is vital for recommending a tailored solution.

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Figure 2. Key considerations when selecting a trifocal IOL. [Courtesy of Dr. Kretz]

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Bausch & Lomb[2,3], Biotech[1,3], BVI[1,3], Carl Zeiss Meditec[1,2,3,4], Device Technologies[2], Eyesight and Vision[1], IOLExpert[1,3], iSTAR medical[1], Centricity Vision[4], Teleon[1,2,3,4], and VSY[1,3].

1= Research, 2= Travel Cost, 3= Honorary; 4= Consulting

The Importance of Managing Presbyopia Patient Expectations

BY FRANCESCO CARONES, MD, PCEO, FWCRS

Effectively managing the expectations of patients undergoing presbyopia correction is essential, particularly when there is a potential gap between their expectations and reality. Addressing any concerns they may have upfront can help foster a more informed and positive experience.

Common Preoperative Concerns

Often patients are seeking to eliminate the need for reading glasses, but they do not want to have night vision symptoms. For these patients a refractive EDF lens is often a suitable choice. In contrast, trifocal or diffractive EDF lenses may be less ideal due to their increased potential for night vision disturbances. Some patients may even demand a guarantee that they won't need to wear glasses after cataract surgery. While surgical options provide a high likelihood of reducing or even eliminating the need for glasses, outcomes are never guaranteed. Thorough consultations are crucial for setting realistic expectations and guiding patients toward options that align with their lifestyle needs.

Thorough consultations are crucial for setting realistic expectations.

Another key consideration is whether patients are comfortable using reading glasses at home. For some, this is acceptable, as their main concern is to avoid glasses in social settings, like shopping or dining out. However, certain situations, like reading a menu in dim lighting, may still present challenges. Clarifying the distinction between "spectacle independence" and "spectacle freedom" is essential. Understanding these nuances can help patients prepare for realistic outcomes and avoid potential disappointment.

Many patients feel overwhelmed by the variety of presbyopia-correcting IOLs. Each lens comes with its own advantages and drawbacks, making it difficult to feel confident in selecting the right option. In these situations, open communication and a shared decision-making approach are key. Instead of simply recommending a specific lens, actively engaging patients in the decision-making process fosters trust and reassures them, ultimately increasing confidence in their final choice.

For these patients, an unhurried approach is often most effective, without pressure to make an immediate decision. Allowing one or two weeks for reflection before scheduling a follow-up discussion gives patients the opportunity to carefully consider their options. Practical tools such as vision simulators or contact lens trials can offer additional support in the decision-making process.

Addressing Postoperative Complaints

Despite extensive preoperative evaluations and counseling some patients end up dissatisfied with their vision postoperatively. However, complaints are often linked to factors like dry eye, residual refractive error, or mismanaged expectations.

If patients end up being unhappy with their vision it's crucial to first identify the specific cause of the patient's dissatisfaction, whether it's related to distance, intermediate, or near vision. In some cases, the solution may not involve replacing the IOL but instead adding a corrective measure or addressing residual refractive error. If no residual refractive error is found, and the issue is directly related to the presbyopia-correcting profile of the IOL, an IOL exchange may be necessary.

Complaints are often linked to factors like dry eye, residual refractive error, or mismanaged expectations.

Some patients may be satisfied with their visual quality and spectacle independence during the day but complain about blurry vision with starburst and glare at night. The most common cause of these symptoms is dry eye, so the first step is always to assess for this condition. Residual refractive error may also contribute and should also be evaluated as well. If any issues are detected, treatment may be necessary. However, it's generally advisable to wait at least three months, as it can take time to achieve refractive stability.

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FINANCIAL DISCLOSURES:
Consults for the following companies involved with these topics: Johnson & Johnson Vision, Hoya Surgical Optics, Rayner Intraocular Lenses.

Figure 1. Best practices to maximize patient satisfaction with presbyopia-correcting IOLs. [Courtesy of Dr. Carones]