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Premium Intraocular Lenses: A Framework for Patient Selection and Expectation Management

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Introduction

Cataract extraction with intraocular lens (IOL) implantation is among the most performed and safest operations in ophthalmology.^{1,2} In Canada, cataract surgery demand is projected to more than double over the next 25 years, driven by population aging.³ As surgical volumes rise, parallel advances in IOL design have expanded the range of postoperative visual outcomes that can be offered.⁴ Modern IOLs vary substantially in optical strategy and performance profile, each offering distinct benefits, compromises, and contraindications.⁵⁻⁷ This expanding landscape has made preoperative counselling more complex. Many patients arrive having prior exposure to information on “premium lenses” from online sources or through friends and family, information that can be helpful, but is often incomplete, inaccurate, or not tailored to their ocular status.⁸ A surgeon-led approach that is standardized yet individualized can improve clarity and help align patient expectations with realistic surgical outcomes.

Many practices further streamline counselling by adopting a team-based approach that incorporates a dedicated surgical coordinator as part of the preoperative pathway.^{9,10} After the surgeon has assessed candidacy and discussed clinically appropriate IOL categories, the coordinator then meets with the patient to reinforce lens education and operationalize the plan. This role typically includes explaining IOL function in practical terms, outlining pricing and any surgeon recommendations, discussing payment options and financing, completing consent and administrative documentation, and coordinating appointments alongside pre- and postoperative instructions. In addition to improving efficiency and reducing repetition across visits,

this structure helps separate the clinical decision (what is safest and most appropriate) from the financial conversation (how elective upgrades are funded), which can reduce perceived pressure and support patient trust. In a pragmatic workflow, the initial visit therefore concludes with the coordinator reviewing consent, confirming waitlist placement and expected timelines, measurement planning for IOL calculations, reinforcing key counselling points (including the importance of ocular surface optimization for accurate biometry), and providing a clear summary of the selected pathway and associated costs.

A Standardized, Patient-centred Framework

A practical comparison of standard versus premium IOL options is provided in **Table 1** to help anchor preoperative discussions. Premium IOL counselling is most effective when delivered through a consistent structure for every patient, while allowing the final recommendation to be guided by three pillars: ocular history, objective examination/testing, and the patient’s functional goals and tolerance for trade-offs. The goal is not to “sell” premium technology, but to ensure that all clinically appropriate options are discussed in a way that is accurate, safe, comprehensible, and aligned with the patient’s priorities.

Indication Determines the Counselling Tone: Cataract Surgery Versus Refractive Lens Exchange

Lens-based surgery is typically undertaken for one of two reasons, and the counselling approach should reflect the patient’s underlying motivation. For medically indicated cataract surgery (cataract extraction with IOL implantation),

	Standard IOL (typically monofocal)	Premium IOLs (broad category: added functional features)
Core purpose	Restore clarity after cataract removal; prioritize a predictable outcome at one focal distance	Address lifestyle goals in addition to cataract removal (e.g., reduce glasses dependence; address astigmatism; extend range of focus)
What does “premium” mean?	Not a “lower quality” lens but rather fewer added optical features	Not necessarily “higher quality material”; typically means added function (range of vision, astigmatism correction, adjustability)
Typical postoperative vision profile	Strong performance at one set distance (often distance vision) but glasses needed for best vision	Broader functional vision (distance ± intermediate ± near depending on design) with potential trade-offs
Glasses dependence	Usually need glasses for near, intermediate, and distance tasks	Designed to reduce glasses dependence; many patients still need glasses for some tasks (especially small print or prolonged near work)
Astigmatism management	Does not inherently correct corneal astigmatism (unless additional strategies are used)	Many premium pathways include astigmatism correction (e.g., toric optics)
Cost and coverage	Usually covered by provincial medical plan when surgery is medically indicated (e.g., visually significant cataracts)	Commonly not covered; out-of-pocket reflects added technology and the diagnostic/planning pathway
Preoperative testing and postoperative course	Standard biometry and routine planning; typical follow-up schedule	Often requires additional diagnostics, tighter measurement quality, more detailed planning, and (in some pathways) additional postoperative visits/adjustments and longer chair time
Bottom-line counselling phrase	“Excellent, reliable lens to restore clarity, glasses will most likely be needed for most tasks”	“Lifestyle-focused options that can reduce glasses dependence but require careful selection and acceptance of trade-offs”

Table 1. Patient-Centred Summary of Standard versus Premium Intraocular Lens (IOL) Characteristics; *courtesy of Kelly Ann Hutchinson, MDCM, MSc and Jamie Bhamra, MD, FRCSC.*

the primary objective is to remove the cataract and restore the patient’s visual potential. These patients often prioritize safety and reassurance, and may experience a higher baseline fear about complications, and frequently demonstrate greater tolerance for minor imperfections if they achieve meaningful improvement compared with their preoperative vision. In many publicly funded health systems, a standard monofocal IOL is covered as part of medically necessary cataract surgery, whereas elective upgrades are not. For refractive

lens exchange (RLE), the primary objective is refractive correction and reduced dependence on glasses or contact lenses. Candidates are often older adults (usually over 45 years) who are not well suited for corneal refractive surgery (for example, due to high refractive error or corneal pathology that limits suitability for laser-assisted in situ keratomileusis [LASIK]/photorefractive keratectomy [PRK]) or those with dysfunctional lens syndrome. These patients are pursuing an elective lifestyle-oriented outcome, are commonly

more sensitive to subtle visual symptoms, and tend to have lower tolerance for residual refractive error or optical side effects. Coverage for RLE is typically different from medically indicated cataract surgery and often requires out-of-pocket payment.

Practical Language Can Reflect These Differences:

- **For cataract surgery:** “This is a safe procedure to restore your vision. Once we confirm you are a good candidate, we can also discuss options that may reduce your need for glasses.”
- **For RLE:** “This is an investment in visual freedom. Safety is foremost. Let’s define your priorities, distance, computer, reading, and review what trade-offs may exist with specific lens types.”

Define Success Before Introducing Lens Categories

Premium IOL outcomes are largely determined by expectation alignment. The highest-risk scenario is a mismatch between what the patient believes they are purchasing and what can reliably be delivered by the optical system. Because paying for an upgrade can amplify expectations of a “perfect” result, it is preferable to remain conservative in promises and explicit about compromises.

Premium options can be framed as lifestyle-directed rather than medically required, particularly in cataract surgery. Counselling should translate a patient’s daily visual activities into a realistic visual plan and clarify the costs of that plan in terms of dysphotopsias, contrast, adaptation, and postoperative effort. Key points to address early include:

- Spectacle independence is a goal, not a guarantee.
- Some optical designs increase halos and glare, particularly at night.
- Expanded near performance may come at the expense of contrast or night-time clarity.
- Measurement quality, especially those influenced by tear film stability, are a major determinant of refractive accuracy and satisfaction long term.

Patient Selection and Measurement Reliability: Outcomes are Determined Before the Operating Room

From a surgical perspective, premium IOL candidacy is primarily a function of ocular health and reliability of measurements. A thorough ocular history and examination are essential, and the sequence of care matters: ocular surface disease should be treated before definitive biometry and before the patient commits to a premium pathway.^{11,12}

A pragmatic workflow is to use the first visit to establish candidacy and provide education, reserving final lens selection for the measurement visit once the surface is stable and testing has been reviewed. A routine evaluation commonly includes visual acuity and refraction, intraocular pressure, keratometry, macular assessment (often with optical coherence tomography to screen for occult pathology such as epiretinal membrane or macular degeneration), and a focused corneal and tear film assessment. When available, corneal topography or tomography and wavefront aberrometry are particularly useful for identifying irregular astigmatism and higher-order aberrations that predict dissatisfaction with diffractive optics and from ocular surface irregularities. Surface optimization can be presented as standard preoperative preparation with escalation as needed, using measures such as heat, massage, blinking, preservative-free lubricants, and prescription therapies when indicated.

Patients benefit from explicit explanation of why surface optimization is part of the surgical plan:

- “Your cornea is the windshield. If the windshield is smeared, even the best internal lens cannot produce crisp vision.”
- “Surgery will temporarily worsen dryness, which can last chronically, if not addressed. We need the surface optimized to obtain accurate measurements and deliver your best postoperative vision.”

Contraindications and High-risk Features for Premium Optics

Although candidacy is lens-specific, several findings consistently predict a higher risk of dissatisfaction, reduced performance, or refractive inaccuracy. Organizing these risk factors by mechanism improves the clarity of counselling for patients.

Unreliable measurements or degraded optical quality often stem from ocular surface instability (dry eye disease, blepharitis/meibomian gland dysfunction, Salzmann nodules, epithelial irregularity) until these issues are adequately treated. Irregular corneal astigmatism or corneal irregularity often reduces confidence in the use of diffractive optics.⁷ Reduced visual potential and contrast sensitivity limitations include macular disease (such as age-related macular degeneration or epiretinal membrane), significant optic nerve disease, or glaucoma, where contrast reduction may be poorly tolerated.¹³ Anatomic or intraoperative stability concerns include small pupils in scenarios where dysphotopsias risk is increased or optical performance may be limited, and significant zonular weakness that threatens centration and lens stability.⁷ Behavioural and expectation-based risks include unrealistic expectations, perfectionistic traits, and cognitive limitations that affect compliance, and misalignment between a patient's goals and their willingness to participate in pre- and postoperative care.

A practical principle of surgical maturity is recognizing when to recommend against a premium pathway. Declining an inappropriate premium option protects outcomes and patient experience.

Communicating Options: Prioritize Experience Over Optics

Effective counselling avoids technical language and focuses on what the patient will be able to do after surgery. Describing vision in functional zones: distance, intermediate, and near, helps link IOL categories to real-world tasks patients immediately recognize. Distance vision is most relevant for activities such as driving, recognizing faces across a room, watching television, and reading street signs. Intermediate vision aligns with "arm's-length" activities including computer work, using a tablet, cooking and meal preparation, viewing a car dashboard, shopping,

and many household tasks. Near vision pertains to close-work activities such as reading print, texting, sewing or knitting, threading a needle, medication labels, and other fine-detail tasks. Framing expected postoperative vision in these functional zones helps patients understand the trade-offs between lens designs and sets practical expectations for spectacle needs in daily life. Visual aids including diagrams, clinic-approved videos, defocus curves, and dysphotopsias simulations, used selectively to complement the surgeon's narrative, can support comprehension and reduce later disappointment.

A consistent message that reduces confusion is to distinguish "quality" from "function." Both standard and premium lenses are high-quality implants; "premium" typically denotes added functional features and the diagnostic and planning pathway required to support them, rather than a universal guarantee of superior performance in all conditions.

Premium IOL Categories and Counselling Framework

Premium IOLs encompass a heterogeneous group of non-standard implants intended to address functional goals beyond restoration of clarity after cataract removal. For routine patient counselling, it is practical to present premium options by category rather than by brand, emphasizing the expected range of vision and the trade-offs inherent to each design. In Canadian practice, the major categories include toric lenses for astigmatism correction, extended depth-of-focus (EDOF) or enhanced monofocal platforms to expand distance-intermediate function with variable near performance, diffractive multifocal/trifocal lenses to maximize spectacle independence, and postoperative-adjustable technology such as the light adjustable lens, which allow refinement of refractive accuracy after surgery. A comparative summary of these categories, typical spectacle expectations, and key counselling points is provided in **Table 2**.

Patients may also inquire about "tinted" or blue-light-filtering optics. These lenses typically provide an optional filtering feature rather than a presbyopia-correcting strategy and, when included in a standard monofocal supplied by a given centre, are not associated with additional out-of-pocket cost. Similar filters may also be incorporated within premium platforms (e.g., toric,

Lens type (premium options)	What it improves	Vision tasks that may still benefit from glasses	Key things to know (common trade-offs)
Toric <i>(astigmatism-correcting; usually monofocal)</i>	Distance vision (and often sharper overall clarity) by correcting astigmatism	Computer and near (reading)	Does not create near focus; best for patients with regular astigmatism who prioritize distance vision
EDOF <i>(extended depth-of-focus)</i>	Distance + computer and some near	Near/reading (especially small print)	Usually fewer night-vision symptoms than multifocal/trifocal, but near may be incomplete
Multifocal / Trifocal	Distance + computer + near	Some patients still need glasses for fine print , prolonged reading, or very low light	Higher chance of halos/glare and contrast trade-offs; requires careful screening
LAL <i>(light adjustable lens)</i>	Typically, excellent distance/computer range; can be fine-tuned after surgery for higher accuracy	Depends on target plan; still need glasses for fine print and prolonged reading	Requires multiple post-op adjustment visits and strong compliance with ultraviolet light protection; major value is customization/accuracy

Table 2. Simplified Premium Intraocular Lens Categories in Canada; *courtesy of Kelly Ann Hutchinson, MDCM, MSc and Jamie Bhamra, MD, FRCSC.*

EDOF, or multifocal families), in which case the lens remains “premium” based on its functional optics rather than the presence of tint alone. Tinted optics may be discussed when patients have a strong preference for ultraviolet light/blue-light-filtering IOLs or those reporting glare sensitivity, and should be explained thoroughly to inquisitive patients. In particular, they should be avoided when precise colour discrimination is central to the patient’s occupation or quality of life (e.g., dentists matching tooth shades, artists, photographers, graphic designers), where even subtle shifts in colour perception may be unacceptable or a previous clear IOL has been placed in the other eye.

Visit Structure to Reduce Repetition and Support Decision-making

A structured multi-visit pathway keeps counselling coherent and prevents information overload.

1) Initial Visit (Qualification and Education, with Surgeon and Surgical Coordinator)

- Confirm diagnosis and surgical candidacy
- Identify ocular comorbidities that may limit premium options
- Introduce standard versus premium pathways using functional language
- Initiate ocular surface optimization when indicated
- Provide clinic-approved IOL pricing and resources (hand-outs and online videos) for at home review to reinforce consistent messaging

2) Measurement Visit (Biometry and Commitment, with Surgical Coordinator and Ophthalmic Technician)

- Confirm ocular surface stability; repeat key measurements as needed
- Finalize functional goals (distance/intermediate/near priorities)

- Select the most appropriate IOL category and refractive target
- Reiterate the trade-offs most relevant to the chosen pathway (e.g., halos/glare, contrast, near performance, likelihood of readers)

3) Additional Visit (Selective, as Needed with Surgeon)

- Reserve for unresolved ocular surface disease, complex findings (e.g., irregular cornea, borderline macula/optic nerve head), or patients requiring further discussion before commitment

Conclusion

Counselling patients on premium intraocular lenses is most effective when it is structured, surgeon-led, and explicitly anchored to ocular candidacy and realistic functional goals. A standardized framework, beginning with clarification of indication and alignment of expectations, followed by rigorous assessment of measurement reliability and ocular comorbidities, helps reduce refractive surprise and dissatisfaction, while ensuring patients are neither steered toward, nor inadvertently deprived of, appropriate premium options. Presenting lenses by category and emphasizing the experiential trade-offs of each design improves patient comprehension and supports shared decision-making. Ultimately, consistent communication across visits, early ocular surface optimization, and a willingness to recommend against premium technology when risk factors are present are central to achieving predictable outcomes and durable patient trust.

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