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Optometry's Emerging Role in Cataract Surgery and IOL Selection



Before the development of premium intraocular lenses (IOLs), the refractive options for patients undergoing

cataract surgery depended on the surgeon's preference and the availability of monofocal IOLs in inventory at an ambulatory surgery center. Optometric management was focused on patient visual acuity expectations, while co-management primarily was concerned with post-operative refraction and clinical monitoring of the ocular surface.

Spectacle lenses and/or contact lenses corrected the residual refractive error of the IOL and compensated for the loss of accommodation following removal of the crystalline lens. The procedure was considered finished.

Over time, advances in surgical technologies, such as tissue protective instrumentation and a wide variety of viscoelastic agents for ocular protection, gave rise to improved surgical techniques. Advances in refractive technologies, such as premium IOLs (multifocal and accommodating IOLs) provided more refractive choices.

The primary care optometrist, who sees the patient routinely and usually knows the patient's lifestyle and visual needs, began to educate the patient about premium IOLs while

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Patient Selection, Co-management With Premium IOLs

Kerry K. Assil, MD, Assil Eye Institute, Santa Monica and Beverly Hills, CA.



Kerry K. Assil, MD, is medical director and CEO of the Assil Eye Institute in Santa Monica and Beverly Hills, CA. One of the world's foremost experts in cataract and refractive surgery, Dr. Assil was honored with the prestigious Jules Stein Living Tribute Award in 2005. He has written more than 100 books, textbooks and articles on refractive surgery and is an editor or reviewer for numerous scientific journals. His educational forums include featured lectures at Harvard University, Johns Hopkins University and Tokyo University. Dr. Assil received his undergraduate degree from the University of California, Los Angeles, and his medical degree from the University of California in San Diego.

Our practice is a multispecialty group of two MDs and three ODs in southern California. We provide consulting and co-management services for a wide range of MDs and ODs. Our mission is to offer the best refractive solution for the lifestyle of the patient.

When I'm considering the candidacy of a patient for a premium IOL rather than a monofocal lens, I look for an otherwise healthy eye. Upon determining this, I think through which premium IOL would best suit that patient, taking into account the referring optometrist's recommendation based on the lifestyle, work habits and visual needs of the patient.

Unless the patient has had previous corneal refractive surgery for hyperopia and has a steep central cornea (similar in topographic shape to early keratoconus) — or an extremely small pupil (a photopic pupil smaller than 2.3 mm or 2.4 mm), most likely I'll select a **Tecnis®** multifocal lens (Abbott Medical Optics, Inc., Santa Ana, CA.).

Conversely, if the patient is post-hyperopic LASIK and/or has an exceptionally small pupil, or has any mild macular pathology, such as mild epiretinal membrane or macular drusen or

mild diabetic retinopathy, then I may select the Crystalens® accommodating IOL (Bausch & Lomb, Rochester, NY).

In patients of all pupil sizes (except those that are very small) and in those who have flat or average corneal curvatures and a healthy macula, I prefer the **Tecnis®** multifocal lens, which isn't pupil dependent.

On occasion, if I have a patient who's averse to halos and glare, but insists on being able to read without eyeglasses, then I might place a Crystalens® in the distance-dominant eye, aiming for plano, and the **Tecnis®** multifocal in the nondominant eye.

When co-managing patients, I often rely on the experience and degree of comfort the co-managing optometrist has during the early postoperative period. I know some optometrists who prefer I see the patient for 3 months post-op and then return the patient to the practice, while others assume the post-op care after the initial post-op exam.

The choice of follow-up depends on both the enthusiasm of the referring optometrist and the degree to which I'm comfortable with the optometrist's capabilities for diagnosing and recognizing certain conditions. Of course, I perform the first post-op exam, looking for inflammation and making sure everything else looks good for the expected surgical outcome.

At the 1-week visit, I expect the co-managing optometrist to be comfortable with establishing and determining if the patient has achieved best-corrected visual acuity (BCVA). Thereafter,

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Optometry's Emerging Role in Cataract Surgery And IOL Selection (continued)

consulting with the surgeon to determine the best IOL for the individual patient. This altered and strengthened the co-management relationship. The standard of care evolved as well.

As primary care practitioners, we need to recognize premium IOLs and refractive procedures as state-of-the-art refractive considerations for patients, similar to the selection of contact lenses, eyeglasses and treatment for ocular abnormalities. The primary care practitioner who regularly examines the patient is extremely important in the referral process and in the selection of refractive technologies for providing optimal patient outcomes.

Be proactive, educate your patient and develop your co-management skills. It's in the best interest of the patient!

Sincerely,



David W. Hansen, OD, FAAO (DipCL)
Global Professional Services
Abbott Medical Optics

Patient Selection, Co-management With Premium IOLs (continued)

the OD should monitor the BCVA, so it remains at that level and rule out any early cystoid macular edema (CME).

During the first month, the co-managing optometrist performs a dilated fundus exam, again to ensure the absence of CME, but more importantly, to examine the peripheral retina for small tears or other pathology. The optometrist should be comfortable monitoring and possibly managing intraocular pressure.

During the first 3 months, the co-managing optometrist should be comfortable with assessing the patient. If the Crystalens® was implanted, the optometrist should determine if any fibrosis is pushing the lens anteriorly and creating a myopic shift. In the case of the **Tecnis®** multifocal IOL, the assessment should include ruling out posterior capsular opacification, which would cause blur or glare. If the co-managing optometrist recognizes any of these conditions, he should be prepared to promptly refer the patient back for Nd:YAG laser capsulotomy in either case.

Lastly, I want optometrists to assess patient satisfaction with the new IOL and call our office if the patient is less than superbly satisfied. Optometrists also should be comfortable with tapering the

post-op medications, recognizing that the antibiotics should be discontinued at the end of 1 week, the steroids tapered over the course of 1 month and the non-steroidal anti-inflammatory drugs continued for 1 month in low-risk patients and for 2 months in high-risk patients.

I'm familiar with my network of co-managing optometrists and their comfort levels in diagnosing and treating pathology. I relinquish patient monitoring after the first post-op exam to those who are most comfortable serving in this role. Most optometrists prefer to have me follow up with patients for a slightly longer period of time.

After the third month, if all is well, patients return to the referring doctor with the recommendation that they have annual exams to monitor their ocular health. In all cases, doctors should alert patients to all of the signs and symptoms of an early retinal tear: floaters, flashing lights, showers of floaters, a cobweb over their vision, or a curtain or veil over any part of their vision.

Co-management covers a broad spectrum of comfort. Some optometrists prefer I see the patient for the entire global period. Some take over immediately, while others are somewhere in between.

Ask Dr. Nick Tarantino: Premium IOL and Refractive Technology Options



Q: *The Tecnis® multifocal IOL is relatively new to the market. How soon will we know how well it functions under real world, rather than clinical trial, conditions?*

A: Since late 2007, **Tecnis®** multifocal IOLs have been distributed outside the United States in more than 50 countries requiring regulatory approval, including Japan, China, Korea, Taiwan, the European Union and Canada. More have been distributed in countries without regulatory requirements. As of March 2008, approximately 60,000

Tecnis® multifocal lenses have been sold outside the United States.¹ The **Tecnis®** multifocal IOL has a good track record in all of the countries in which it has been launched, with high rates of patient satisfaction.

Q: *What is a premium IOL and how does that differ from a monofocal IOL?*

A: The term "premium IOL" refers to IOLs that provide visual function over and above standard monofocal IOLs. In this case, the term is applied to multifocal intraocular lenses because of the extended range of vision available compared to monofocal IOLs.

Q: *A recent report came out on LASIK and patient satisfaction. What was the outcome?*

A: A research team from Storm Eye Institute did a comprehensive search of the worldwide clinical literature and identified 19 peer-reviewed, well-designed studies specific to patient quality of life and satisfaction after primary (original) LASIK.² All were randomized, controlled clinical trials, or cohort or case-controlled studies. The studies covered the period from 1995 to 2003 and included 2,198 subjects. The review found an overall patient satisfaction rate of 95.4% (2,097 of 2,198 subjects), ranging from 87.2% to 100%. This is an elective procedure, so

Ask Dr. Nick Tarantino: Premium IOL and Refractive Technology Options (continued)

patient satisfaction is an important measurement of whether the patients' physical, emotional and financial expectations were met.

Q: Is the cost of multifocal IOLs really worth it?

A: Yes, according to research reported in the November 2008 issue of the *Journal of Cataract and Refractive Surgery*.³ A total of 495 patients participated in a cost-benefit study, 339 with multifocal IOLs and 156 with monofocal IOLs. The net benefit for the multifocal group, after

the cost of two multifocal IOLs, was \$11,670 compared to \$155 for the monofocal group. Eighty percent of the 495 participants were willing to pay at least \$5 a day to be spectacle independent, although multifocal vision was considered not medically necessary by third-party payers. As fair-balance, the researchers didn't include any postsurgical complications, which would be expected to be similar with multifocal and monofocal lenses, or a comparison with monovision, which approximates depth of vision but isn't multifocal vision.

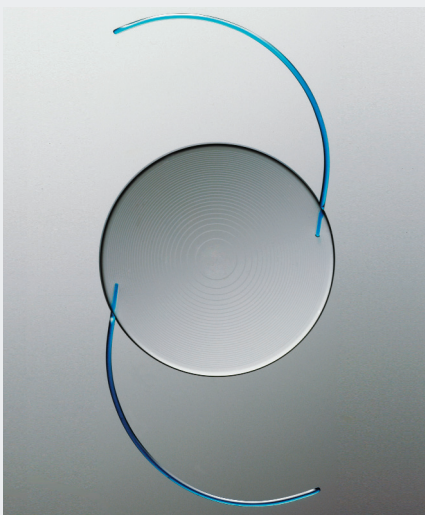
Nicholas Tarantino, OD, FAAO, is head of global clinical research & development at Abbott Medical Optics, Inc.

References

1. Tecnis® multifocal intraocular lens, package insert, 2009.
2. Solomon KD, Fernández de Castro LE, Sandoval HP, et al. LASIK world literature review: quality of life and patient satisfaction. *Ophthalmology*. 2009;116:691-670.
3. Maxwell WA, Waycaster CR, D'Souza AO, Meissner BL, Hileman K. A United States cost-benefit comparison of an apodized, diffractive, presbyopia-correcting, multifocal intraocular lens and a conventional monofocal lens. *J Cataract Refract Surg*. 2008;34:1855-1861.

PRODUCT SPOTLIGHT:

Tecnis® Multifocal IOL and Blink® Tears — Premium Technologies



The **Tecnis®** multifocal IOL is the first and only pupil independent, non-apodized fully diffractive aspheric lens designed to correct the two highest-order aberrations, spherical and chromatic. Reducing these aberrations improves image quality and restores youthful vision.

- Superior near vision and reading speed compared to other presbyopia-correcting IOLs.
- Exceptionally high spectacle independence, with nearly 9 out of 10 patients reporting that they never wear eyeglasses after surgery

■ High-quality vision for near, far and intermediate distances, day or night.

■ High patient satisfaction — Over 94% of study patients would choose the **Tecnis®** multifocal lens again.¹

■ Delivers a predictable and consistent full range of vision.

Reference

1. Tecnis® multifocal foldable acrylic intraocular lens, package insert; Santa Ana, CA., Advanced Medical Optics, Inc.

Three visco-adaptive formulas from the company that brings you Healon®

■ **Blink® Tears** Lubricating Eye Drops clinically proven to improve tear film stability and provide longer-lasting relief. More effective than Systane® Drops when



used concomitantly with Restasis® Drops and has significantly less blur and ocular burning. Patients significantly preferred Blink® Tears vs. Systane® Drops with greater than 60-minute retention time.



greater than 70-minute retention time — for day and nighttime use. Clinically proven to show superior comfort vs. Refresh Liquigel® Lubricant Eye Drops.

■ **Blink GelTears®** Lubricating Eye Drops provides all the advantages of Blink® Tears in a more viscous formula. This formula provides enhanced comfort for moderate-to-severe dry eye with

■ **Blink® Tears Preservative-Free** Lubricating Eye Drops ideal for the pre- and postcataract and refractive surgery patient and for those patients with sensitive eyes.



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Clinical Pearls

Compliance With Medical Treatment

The more doctors explain to patients about why they need a particular medication, the more likely patients will be compliant. Patients are far less compliant when doctors don't explain why they should take a certain medicine and how the medicine works. Compliance is probably linearly proportional to the patient's understanding of how a medicine works and what can happen if they don't take it as prescribed.

— **Kerry K. Assil, MD, Assil Eye Institute,**
Santa Monica, CA.

Assessment of Systemic Medications

As part of the patient assessment, be sure to ask for the patient's systemic medications. Does the patient keep a list of multiple medications? Does he or she understand why a drug was prescribed? When was the drug started? What are recent changes? Who prescribed the medication? Who's monitoring the patient's various drugs — oncologist, internist, family physician, other allied physicians or multiple practitioners? This is important for assessing the patient's health, level of compliance with medical therapy and possible visual needs for reading the drug labels.

— **David W. Hansen, OD, FAAO (DipCL)**



American Optometric Association

Optometry's Meeting Wednesday, June 24, 2009 Course #1004 3 pm – 5 pm

Redefining Quality of Vision: New Technologies Influencing Vision Care
Lecturers: T. Kislán, OD
P. Karpecki, OD
W. Trattler, MD
T. Varnell, OD
Reception to follow: 5:00 – 6:30 pm
(Event is free to course attendees.)

Free Courses in the new Complete Refractive Solution Theater Thursday, June 25, 2009 Course #T133 4:30 pm – 6:30 pm

Challenging Cases in Presbyopic IOL Surgery
Lecturers: M. Bloomenstein, OD
D. Geffen, OD
J. Owen, OD, MBA

Friday, June 26, 2009 Course #T236 10:30 am – 11:30 am

Keeping Your Patients and Practice Current in Refractive Surgery
Lecturer: J. Owen, OD, MBA
Sponsored by: AMO and TLC

Course #T237 12 noon – 1 pm Advancements in Dry Eye: Pre- and Post-Surgical Management Lecturer: S. Morris, OD

Course #T238 1:30 pm – 2:30 pm Contacts in 2009: Cutting Through the Confusion Lecturers: B. Gaddie, OD S. Schatz, OD

Course #T239 3 pm – 4 pm Redefining Customized Laser Vision Correction Lecturer: A. Morganstern, OD Sponsored by: AMO and TLC

Course #T240 4:30 pm – 5:30 pm Laser Vision Correction Today: New Femtosecond Applications Lecturer: P. Karpecki, OD

Saturday, June 27, 2009 Course #T334 12:30 pm – 1:30 pm New Technologies in Cataract Surgery Lecturers: M. Bloomenstein, OD J. Owen, OD, MBA

Visit AMO at Booth #1601
or www.AbbottMedicalOptics.com

Please check the on-site directory for function locations.

Take advantage of the FREE courses in the new Complete Refractive Solution Theater!

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