

Refractive Surgery Quarterly

Spotlight on: Presbyopia

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IOLs redefine refractive surgery

KERRY D. SOLOMON, MD

Historically, refractive surgery referred to corneal refractive procedures such as incisional surgery, radial keratometry (RK) and astigmatic keratometry, and lamellar procedures such as automated lamellar keratectomy, LASIK and PRK. Recently, however, refractive surgery, which reduces dependence on glasses or contact lenses, is expanding to encompass intraocular surgery in the form of phakic IOLs. Also new to the realm of refractive surgery is refractive lens exchange, in which a patient's natural lens is removed and replaced with an artificial IOL. Patients who are not good candidates for corneal refractive surgery, such as patients with high degrees of hyperopia, are increasingly pursuing clear lens extractions or refractive lens exchanges.



Kerry D. Solomon

Refractive lens exchange is evolving to account for patients who are not candidates for corneal refractive surgery, as well as patients choosing lens-based refractive surgery as an alternative to corneal refractive surgery. Most recently, refractive surgery is used to correct presbyopia. Refractive lens exchange attracts patients looking for presbyopic solutions with multifocal IOLs or accommodative IOLs. Patients who are pre-cataract or have incipient cataracts are also turning to intraocular surgery to correct presbyopia. In the past, surgeons may have performed LASIK on patients until cataract removal became a medical necessity. Presently, patients are increasingly opting to have incipient cataracts removed by a clear lens extraction and have a monofocal or presbyopic IOL implanted instead to achieve spectacle freedom or become less dependent on spectacles and contact lenses for near, intermediate and distance vision activities.

[REDEFINING, continued on page 2]

Did you know?

Preliminary data from a feasibility study on aspheric ablations for presbyopia treatment in patients with low hyperopia show that at 6 months, **100%** of eyes achieved near vision of **J1** or better.

See page 4 for more information

Point/Counterpoint: Mixing and Matching vs. Bilateral IOLs

Bilateral IOLs achieve surprising results

FARRELL C. TYSON II, MD, FACS

Ibegan implanting the ReZoom IOL (Advanced Medical Optics [AMO]) and ReSTOR IOL (Alcon) in June 2005. Since then, I have performed bilateral implantation using the ReZoom IOL in more than 250 eyes. Results in my patient population, which consists primarily of Medicare patients with an average age of 70 to 75 years, are surprisingly excellent. The distribution of patients in whom I bilaterally implanted with the ReZoom IOL included patients with mild hyperopia, mild myopia and high myopia.

Surgeons must select patients carefully to achieve success with bilateral ReZoom IOL implantation. Candidates for the procedure should have less than 1.5 D astigmatism and be tested for dry eye, because dry eye reduces the amount of contrast and increases glare in multifocal IOLs.

Surgeons should also select optimistic patients who will enjoy the benefits provided by

[BILATERAL, continued on page 6]



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Patients have option to pay

[REDEFINING, continued from page 1]

CMS ruling on presbyopia-correcting IOLs

The impetus for part of this evolution in refractive surgery was a ruling from Centers for Medicare & Medicaid Services (CMS) on presbyopia-correcting IOLs. Prior to the CMS ruling, physicians were not allowed to implant a presbyopia-correcting IOL in a Medicare patient, even if the patient were to pay for the IOL. Some Medicare patients who wanted a presbyopia-correcting IOL offered to pay for the entire cataract surgery, as well as the IOL, but were not allowed to do so.

The CMS ruling is important for patients because it provides an option to pay for a presbyopia-correcting IOL. The ruling is also beneficial for clinicians because it brings clarity to otherwise confusing issues regarding what services they can and cannot offer patients. The ruling opens up a whole new avenue for practices to perform more presbyopic surgery than in earlier days with IOLs, and this is largely due to better patient outcomes. Patients are motivated and interested in presbyopia-correcting IOLs, and physicians are becoming well-trained in patient selection and how to manage challenging situations. Consulting groups are also taking a lead in advising practices on what they can and cannot do to help streamline the process for all involved.

Return of the 'wow'

With premium pricing for custom LASIK surgery and patients paying out of pocket for presbyopia-correcting IOLs, there is no question that cataract surgery is becoming a larger part of refractive surgery. For example, patients undergoing cataract surgery may elect to have their astigmatism corrected. A vast majority of my cataract practice is now considered a form of refractive surgery. It is rare that I do not try to achieve emmetropia or that I do not reduce astigmatism for cataract patients. I also try to optimize refractive outcomes in patients who may not want presbyopia-correcting IOLs but want more freedom from glasses.

The new definition of refractive surgery puts the "wow" effect back into surgery. Surgeons can adapt refractive surgery practices and patterns to the cataract realm. They can charge for astigmatism correction performed in a cataract surgery.

Cataract patients are interested in less dependence on glasses and want to learn about the different options available to them. Satisfied patients tell other people, which helps build a practice.

Future of refractive surgery

In the future, multifocal IOLs will improve, accommodative IOLs will become more prevalent with time, and the list of ophthalmology specialties will change.

Refractive surgery will continue to evolve. More young patients will seek refractive surgery, especially for distance vision, and more presbyopia-aged patients will elect to have refractive surgery in the form of presbyopic surgery.

Within this evolution, refractive surgery will move to focus on patients' quality of vision and quality of life. Presbyopia-correcting or accommodative IOLs are already improving the quality of life for patients. Patients can now perform distance, intermediate and near tasks without dependence on glasses. Improving quality of vision with low light and bright light, and minimizing night vision symptoms will be emphasized in refractive surgery. Quality-of-vision results are better today than they were 5 years ago and will further improve with time.

Kerry D. Solomon, MD, is director of the Magill Research Center and medical director at the Magill Laser Center in Charleston, S.C., professor of ophthalmology at the Storm Eye Institute in Charleston, S.C., a member of the OCULAR SURGERY NEWS editorial board and Chief Medical Editor of REFRACTIVE SURGERY QUARTERLY.

Informed OPINIONS

How has the recent CMS ruling on presbyopia-correcting IOLs affected your practice?

It greatly simplifies discussing this option with patients, and makes it obviously much more affordable and attractive, assuming the patient is a good candidate. - *Stephen Brint, MD*

Do you offer financing for patients interested in receiving a multifocal IOL?

Yes, we do, but only on the surgeon's fee portion, not the facility fee portion nor anesthesia fee portions. - *Jean Hausheer, MD*



Editor's Note

This month, REFRACTIVE SURGERY QUARTERLY focuses on presbyopia, a hot topic that is changing the face of refractive surgery.

In this issue, Colman R. Kraff, MD, discusses clinical trial data on aspheric ablations for presbyopia, showing significantly improved vision and increased patient satisfaction.

In addition, Frank A. Bucci, Jr, MD, and Farrell C. Tyson II, MD, explore mixing and matching IOLs vs. bilateral multifocal IOL implantation. Also, readers will learn practice management pearls from Kevin J. Corcoran, COE, CPC, FNAO, for presbyopia correction with IOLs.

Lastly, highlighted throughout the publication in sections called Informed Opinions, readers can review survey responses from colleagues.

We would like to continue to hear from our readers and encourage you to submit challenging cases and story ideas.

*Kerry D. Solomon, MD
Chief Medical Editor*

Wavefront-guided technology achieves positive outcomes

COLMAN R. KRAFF, MD

Preliminary data of a feasibility study on aspheric ablations in patients with low hyperopia for presbyopia illustrate exciting results for refractive surgery. In a clinical trial, my colleagues and I used aspheric ablation profiles generated by variable spot scanning (VSS) technology to create subtle ablation shape changes to a patient's wavefront map.



Colman R. Kraff

Dominant eyes received VISX CustomVue (Advanced Medical Optics, Inc.) hyperopic treatments targeted for emmetropia. Nondominant eyes received CustomVue hyperopic treatments concomitant with the investigational VISX presbyopic shape. The central zone was steepened to provide near vision, and the peripheral zone was targeted for distance vision.

In a typical patient with +2 hyperopia for a distance eye, an ablation profile reveals a change in shape due to aspheric treatment.

Patients treated preoperatively and postoperatively achieve a tight volumetric point spread function through all ranges of vision from a distance of -2 to +2 postoperatively, according to our observations of aspheric, nondominant eyes.

Iris registration

Iris registration is an important component of presbyopia treatment. Proper registration of wavefront-guided ablation and proper placement of the pupil size-dependent central zone relative to the pupil centroid (pupil centroid shift compensation) are also important. The study additionally incorporated variability and the size of the aspheric treatment, or the size of the near adjustment based on pupil size. In the future, as aspheric ablations for presbyopia become commercially available, iris registration will be critical. Optimal results with the treatment will be further achieved with active intraoperative iris registration and re-registration.

Iris images from WaveScan and the VISX Star S4 laser show the pupil centroid shifts with different lighting conditions, as the pupil changes size. Iris registration ensures proper placement of add zone rotationally and with respect to pupil centroid shifts.

Clinical trial

Two United States centers participated in the clinical trial, and 20 patients were treated. Three-month follow-up data are available on 16 patients; 6-month follow-up data are available

[WAVEFRONT, continued on page 4]

Iris images from WaveScan and the VISX Star S4 laser show the pupil centroid shifts with different lighting conditions, as the pupil changes size.

Patient satisfaction increases

[WAVEFRONT, continued from page 3]

on 11 patients; and 9-month follow-up data is available on eight patients.

Patient age ranged from 41 to 57 years. The patients had low degrees of hyperopia, and 70% of the participants were men.

vision, 100% had 20/25 or better and 100% had 20/40 or better vision.

Results were similar with intermediate vision. No patients had 20/20 or better uncorrected intermediate vision preoperatively. At 6 months, 64% of patients had 20/20 or better vision, 100% had 20/25 or better and 100% had 20/40 or better vision.

Near vision data on the eyes treated with aspheric ablations were also encouraging. Preoperatively, 5% of patients had uncorrected near vision of J1 or better. At 6 months follow-up, 100% of eyes achieved near vision of J1 or better.

Binocular vision data

Significant vision improvement was observed in binocular vision, as well. Preoperatively, no patients had uncorrected binocular distance vision of 20/20 or better; however, at 6 months, 100% of patients had 20/20 or better vision.

Patients with 20/20 or better uncorrected binocular intermediate vision rose from 5% preoperatively to 73% at six months postoperatively.

Results also showed binocular near vision improvement. At 6 months follow-up, 100% of eyes achieved 20/20 or better vision.

In addition, at 3- and 6-month follow-ups, no eyes lost more than two lines of best corrected visual acuity at distance, intermediate or near in the aspheric or monofocal eye, as expected.

Patient satisfaction

Data also revealed improved patient satisfaction. At 3 and 6 months, patient satisfaction with distance vision was 75% and 73%, respectively, and satisfaction with near vision was 63% and 73%, respectively. Patient satisfaction would possibly further improve with bilateral treatment.

In conclusion, early postoperative results at 3 and 6 months show positive outcomes with uncorrected distance, intermediate and near visual acuity in all eyes treated with aspheric ablation. The aspheric eyes achieved J1 or better in uncorrected near vision in 100% of patients at six months. Binocular uncorrected near visual acuity was excellent, with 100% of patients achieving J1 or better vision (Figure). Treatment appears to be safe, and further follow-up is ongoing.

Colman R. Kraff, MD, practices at Kraff Eye Institute in Chicago, is a faculty member at Northwestern University in Chicago and is a member of the Refractive Surgery Quarterly editorial board.

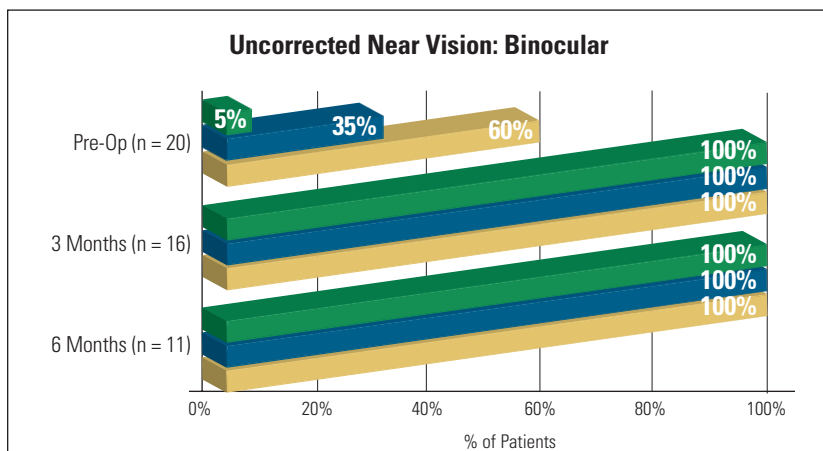


Figure: Preoperatively, 5% of patients had binocular uncorrected near vision of J1 or better compared with 100% of patients with J1 or better vision at 6 months. *Source: Kraff CR*

Patients had low levels of cylinder in nondominant eyes, and the mean sphere of nondominant eyes was 1.5 D, with a range of +0.25 D to +2.5 D.

Preoperatively, no patients had 20/20 or better uncorrected distance vision in nondominant eyes. Six months after receiving Custom-Vue hyperopic treatments concomitant with the investigational VISX presbyopic shape, however, 73% of patients had 20/20 or better

Informed OPINIONS

When the US FDA approves aspheric corneal ablation for presbyopia correction, how will this approval affect your practice?

Too early to tell; however, if the data is good, we will likely incorporate it into our practice. - *Leslie P. Fox, MD*

It would greatly enhance my refractive practice. - *Jenn Wang, MD*

I may try to work on a machine that has this technology because I have many patients waiting for this treatment. - *Prof. Dr. Samiha Aboulmagd, Doha, Qatar*

Practice MANAGEMENT

Consultant outlines Dos and Don'ts of presbyopia correction with IOLs

The recent ruling from the Centers for Medicare and Medicaid Services (CMS) on Medicare coverage for presbyopia-correcting IOLs expands refractive treatment options for patients already seeking treatment for cataracts. The ruling separates presbyopia-correcting IOL procedures for Medicare patients with cataracts into non-covered and covered portions. Non-covered services include those related to implanting a presbyopia-correcting IOL, which would otherwise not be provided if a traditional IOL were used, such as wavefront aberration testing to assess refractive error or corneal topography associated with refractive surgery.

Reimbursement tool kit

With emerging technologies and evolving regulations, ophthalmologists must strive to maintain clear practice and billing protocols. In an attempt to reduce reimbursement confusion with presbyopia-correcting IOLs, such as the ReZoom IOL (Advanced Medical Optics), Corcoran Consulting Group developed a tool kit for physicians, including, among other documents, notices of exclusion from Medicare benefits and letters to the health plan.

To further assist ophthalmologists, Kevin J. Corcoran, COE, CPC, FNAO, president of Corcoran Consulting Group, recently offered pearls for presbyopia correction with IOLs at the annual meeting of the American Society of Cataract and Refractive Surgery in San Francisco.

Do

- Select patients carefully. Not all Medicare patients undergoing treatment for cataract are good candidates for presbyopia-correcting IOLs.
- Establish reasonable fees and billing protocol. Surgeons should ask themselves what would work in this market. Set fees that are neither too low nor too high, Mr. Corcoran suggested. Appropriate fees may, in fact, increase volume. "Billing protocols must be meticulous," Mr.

Corcoran said. Also, surgeons and staff must understand the billing protocols.

- Develop a robust informed consent. "Be clear with patients as to what they can expect and how problems may arise," Mr. Corcoran said. Inform patients of all possible outcomes, and explain how any adverse events will be handled. Doing so should prevent patient confusion and possible dissatisfaction.
- Educate all staff prior to using any presbyopia-correcting IOLs. Surgeons should inform staff of plans to implement presbyopia-correction with IOLs. Avoid a disconnection between surgeons, practice staff and facility staff, Mr. Corcoran advised.

Don't

- Advertise off-label use of presbyopia-correcting IOLs. The United States Food and Drug Administration restricts promotion of off-label procedures. Mr. Corcoran suggested limiting advertising to conversations with patients about available options.
- Engage in balance billing. If a surgeon signs a contract stating that the surgeon will not charge a patient beyond the allowed amount for that service, then the surgeon must keep the promise and avoid balance billing, stressed Mr. Corcoran. Balance billing is illegal in some states. Surgeons can, however, charge patients for non-covered services.
- Purchase presbyopia-correcting IOLs in the surgeon's name. Although manufacturers may sell presbyopia-correcting IOLs to physicians, Mr. Corcoran advised against such practice. Leave the purchasing to the teams at the hospitals or surgery centers, Mr. Corcoran said.
- Oversimplify pricing. Surgeons should be straightforward with patients, staff and all others involved, yet avoid using an oversimplified system. The surgeon and facility should itemize and separate fees for covered and non-covered services.

Select patients carefully. Not all Medicare patients undergoing treatment for cataract are good candidates for presbyopia-correcting IOLs.

Call for Cases!

Cases are now being accepted for the Case of the Quarter in future issues. Topics should include surface ablation, customized ablation and presbyopia. Submit your patient cases you feel will benefit your refractive colleagues. Each case will be reviewed by Chief Medical Editor, Kerry D. Solomon, MD, and the Editorial Board, and one case will be chosen to appear in an upcoming issue of REFRACTIVE SURGERY QUARTERLY. For more information or to submit your case entry, e-mail Norma Hanna at nhanna@slackinc.com. The author of the chosen case will receive a gift valued at \$500.

Point/Counterpoint: Mixing and Matching vs. Bilateral IOLs

Near outcomes are excellent

[BILATERAL, continued from page 1]
 the IOLs. In addition, surgeons must determine patient needs, including nighttime driving needs. I avoid implanting multifocal IOLs in patients with extensive nighttime driving needs.

Conducting a thorough preoperative discussion with patients is important. Underselling and overdelivering multifocal IOLs will often lead to success. Also, surgeons should not be afraid to turn down patients who are not good candidates for the procedure. Additionally, surgeons must warn patients of possible glare and halos, which occurred in about 20% of my patients in the first 3 months. Patients should also know that 4% may experience glare and halos after the initial 3 months, but making adjustments to daily living, such as by turning on the dome light when in the car, may help reduce glare.

Biometry

Biometry is important for bilateral multifocal IOL implantation. I use an IOL Master (Zeiss) or an Accusonic (Accutome) immersion A-scan to optimize measurements. Surgeons should aim for plano or slightly on the minus side, leaving some room for error in case a limbal relaxing incision is necessary later. Target refractions should not be staggered, because, in my experience, patients gain about 1 to 1.5 lines of acuity when the two eyes are matched. Finally, corneal topography should also be obtained.

IOL design and results

The ReZoom IOL has stiffer haptics and achieves good centration, avoiding dislocations with capsular shrinkage. The square-edge design reduces posterior capsule opacification, and the rounded anterior edge decreases perceived edge shadow. The three-ring design enhances near vision results and reduces glare and halos.

Of my bilateral ReZoom IOL patients, 98% achieved excellent uncorrected near vision of J3 or better, 82% achieved J2 or better vision, 54% achieved J1 or better vision and 16% achieved J1+.

All patients achieved 20/40 or better uncorrected monocular distance vision, and 37% achieved 20/20 or better vision.

In addition, all patients achieved 20/30 or better postoperative uncorrected binocular distance vision, 94% achieved 20/25 or better vision, 67% achieved 20/20 or better vision and 4% achieved 20/15 or better vision.

Postoperatively, surgeons should accentuate the positives, treat small amounts of PCO and cylinder, recheck for dry eye and offer polarized sunglasses to patients who are often in the sun.

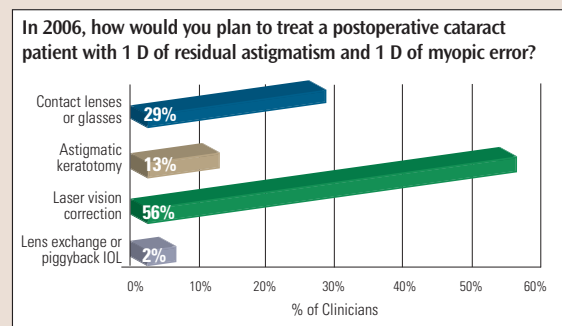
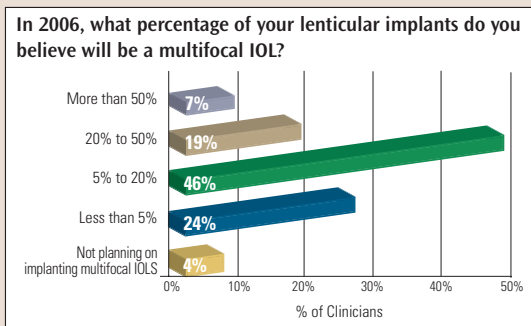
Careful patient selection, preoperative discussion and thorough postoperative follow-up can lead to excellent near-vision results with bilateral multifocal IOL implantation.

Farrell C. Tyson II, MD, is medical director of the Cape Coral Eye Center in Cape Coral, Fla.

Underselling and overdelivering multifocal IOLs will often lead to success.

Informed OPINIONS

Survey results of Internet use among the aging population were published in AARP's The State of 50+ America 2006. Between 1998 and 2005, Internet use among people 50 to 64 years old increased from 31% to 65%. At the same time, Internet use among people 65 to 74 years old increased from 12% to 45%, and from 4% to 25% in people older than 75. In light of the shift in how the aging population uses vision, 600 clinicians were surveyed at the annual meeting of the American Society of Cataract and Refractive Surgery on patient selection for multifocal IOLs. The results are below.



Combine multifocal IOLs, resolve deficiencies

FRANK A. BUCCI, JR, MD

The release of two new multifocal implants in 2005 represents a significant improvement in the multifocal technology available to surgeons in the United States. In this article, I will present and discuss the results of a study where cataract surgery and lensectomy patients received either bilateral ReSTOR IOLs (Alcon) or a ReZoom multifocal IOL (Advanced Medical Optics [AMO]) in the nondominant eye and a ReSTOR multifocal



Frank A. Bucci, Jr

IOL in the dominant eye. A cohort of 56 bilateral ReSTOR (RS/RS) patients was made up of 22 cataract surgery patients and 34 lensectomy patients. The ReZoom/ReSTOR (RZ/RS) cohort of patients has grown to almost 95 at the time of this writing (June 2006), but the data in this article will be limited to 39 patients who have at least 21 weeks follow-up.

The combination approach of using ReZoom and ReSTOR was the result of a growing number of complaints related to intermediate vision in patients who received bilateral ReSTOR IOLs. Fifteen of the 55 ReSTOR/ReSTOR (RS/RS) patients offered voluntary complaints related to their intermediate vision. Of the first 39 ReZoom/ReSTOR (RZ/RS) patients, none offered voluntary complaints related to their intermediate vision. The idea of using ReZoom in combination with ReSTOR was conceived from results achieved in five unilateral, multifocal Array (AMO) patients who subsequently received ReSTOR in their second eye. These patients were extremely happy with their increased ability to read without the introduction of additional halos.

Unsatisfying results with RS/RS

A 48-year-old female executive assistant with high myopia had bilateral lensectomies with ReSTOR multifocal IOLs. She achieved 20/20 uncorrected distance vision and also had uncorrected near vision of Jaeger (J) 1 in both eyes with focal points at about 11.5 inches. Her bilateral intermediate uncorrected visual acuity was J6 5 months post-operatively. The patient complained she could not see her computer at arm's length to her right and

was unable to see a special low-lying desk that was arm's length to her left. After surgery, she is currently using +1.25 spectacles 8 hours a day.

In contrast, a 58-year-old administrative Marine officer with 4.50 D of myopia first received a ReSTOR multifocal IOL in his left eye. Following this surgery, he had 20/20 uncorrected distance vision and J1 at 12 inches. His uncorrected intermediate vision was J6 and he reported he "would be unable to tolerate two eyes like this." Two weeks following the implantation of a ReZoom multifocal IOL in his right eye, he had 20/20 uncorrected

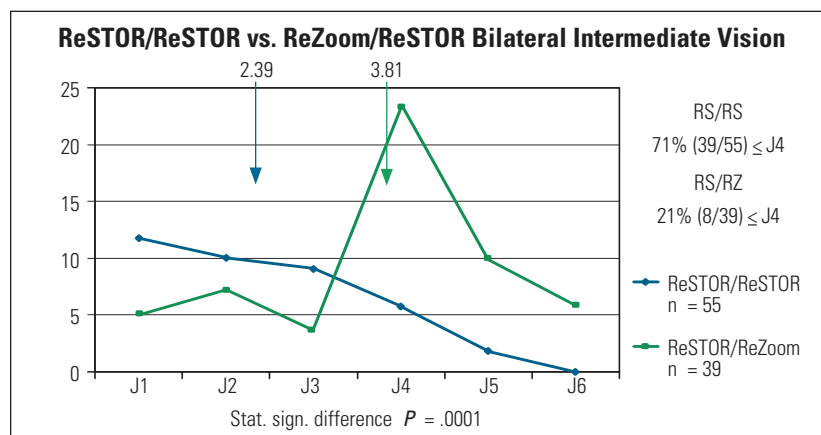


Figure: The mean bilateral Jaeger uncorrected intermediate vision in the RS/RS patients was J 3.81 and was significantly less ($P = 0.0001$) than the mean intermediate bilateral Jaeger vision in the RZ/RS, of J 2.39.

Source: Bucci FA

distance vision in both eyes and J1 uncorrected near vision bilaterally. His uncorrected intermediate vision was J2 in the ReZoom eye and J6 in the ReSTOR eye. The uncorrected bilateral intermediate vision was J1. The patient is now satisfied with the functional visual result achieved with the ReZoom/ReSTOR combination.

The mean bilateral Jaeger near vision in the RS/RS patients was 1.00; in the RZ/RS patients, it was 1.07, which was not significantly different. The mean bilateral Jaeger uncorrected intermediate vision in the RS/RS patients was J 3.81, however, and this was significantly less ($P = 0.0001$) than the mean intermediate bilateral Jaeger vision in the RZ/RS, of J 2.39 (Figure). The mean unilateral Jaeger intermediate vision for the 110 ReSTOR eyes in Cohort I was J 4.49. The mean unilateral intermediate Jaeger vision in Cohort II (RZ/RS) for the 39 ReZoom eyes was J 3.81.

[COMBINE, continued on page 8]

Point/Counterpoint: Mixing and Matching vs. Bilateral IOLs

Complaints are eliminated

[COMBINE, continued from page 7]

This was statistically significantly better than the J 4.19 observed in the individual ReSTOR eyes.

Age, culture and patient expectations greatly influence the incidence of visual complaints related to intermediate vision. Analysis of the 15 patients in the RS/RS cohort who offered voluntary intermediate complaints revealed that 11 were lensectomy patients. Furthermore, 11 of the 12 (92%) lensectomy patients with intermediate complaints were younger than 60 years. One-third of all patients younger than or equal to 60 years of age had an intermediate complaint and all were lensectomy patients.

It is my observation that the use of bilateral ReSTOR multifocal IOLs in the lensectomy patients is significantly understudied. The 457 ReSTOR patients in the FDA trial were cataract patients with an average age of above 68 years. Current users of the ReSTOR multifocal IOL have a cataract surgery/lensectomy patient type ratio of greater than 10 to 1. Cataract patients in the FDA study paid nothing for their surgery, while current post-FDA cataract patients pay one-third to one-half less than lensectomy patients. Cataract surgery patients from "the greatest generation" are less likely to complain, less likely to use computers, less active and are less litigious. Cataract surgery patients already have significantly improved vision from the removal of their cataract. The ReSTOR IOL gives them uncorrected near vision that they never had before and, under these circumstances, they are less likely to complain about difficulties with intermediate vision.

This is not the case for lensectomy patients younger than 60 years who have paid for two multifocal implants. These patients are likely to be baby boomers who use computers frequently and are demanding, active, outspoken and litigious members of society. They will complain, and ironically enough, these precataract patients

with presbyopia are the target population for which these new multifocal implants were developed. In our study, 71% (39/55) of RS/RS patients had bilateral intermediate vision of $\leq J4$ while only 21% of patients in the RZ/RS group had bilateral intermediate vision of $\leq J4$.

Placing a ReZoom multifocal IOL in the non-dominant eye essentially eliminated intermediate complaints without inducing intolerable increases in nighttime light phenomena. Other synergies were achieved. Although the ReSTOR IOL has exceptional reading capabilities in bright light, the ReZoom IOL has outstanding reading capabilities in moderate and dim light. The ReZoom IOL has excellent distance vision in bright daylight, and the ReSTOR IOL contributes to distance vision while driving at night without significantly adding to the amount of halos.

In conclusion, my colleagues and I observed that the bilateral uncorrected intermediate vision with the RZ/RS combination (J 2.38) was statistically and clinically superior to the RS/RS combination (J 3.64). We saw improved intermediate vision achieved without sacrificing any bilateral near vision, while likely improving the quality of the distance vision. Also, the study found that 23.2% of the RS/RS patients volunteered complaints regarding their intermediate vision. With the RZ/RS combination of multifocal IOLs, complaints related to intermediate vision were essentially eliminated. Lastly, intermediate visual complaints in the RS/RS patients were much more frequent in younger patients with elective lensectomy compared with the incidence observed in cataract surgery patients. The relative risk of an intermediate visual complaint from patients who received bilateral ReSTOR multifocal IOLs increases with decreasing patient age.

Frank A. Bucci, Jr, MD, is founder of Bucci Cataract and Laser vision Institute in Wilkes-Barre, Pa.

Placing a ReZoom multifocal IOL in the nondominant eye essentially eliminated intermediate complaints without inducing intolerable increases in nighttime light phenomena.