

All Mixed Up

Do patients want their presbyopia IOLs mixed or matched, or are they too mixed up to know? This was how I subtitled a symposium that I moderated at the 2007 ASCRS Annual Meeting. Indeed, as if ophthalmologists and patients weren't already confused enough by our menu of refractive IOL options, when and how to mix presbyopia-correcting IOLs has become one of the most intriguing topics of the year in cataract and refractive surgery.

When we began to implant the Array multifocal IOL (Advanced Medical Optics, Inc.) in 1997, the conventional wisdom was that its unique optics necessitated the lens' prompt bilateral implantation. The reasoning was that, the sooner the two eyes were matched and patients could no longer compare dissimilar eyes, the less noticeable the halos would be. Another common strategy was to avoid forewarning patients about halos, with the thought that the phenomenon was more likely to go unnoticed if we didn't call attention to it.

In stark contrast, increasing numbers of us are now following the pioneering footsteps of Richard Lindstrom, MD; Frank Bucci, Jr, MD; John Doane, MD; and others by mixing dissimilar optical designs. We are learning that many patients tolerate these combinations quite well and achieve functional advantages with them. The growing interest in a mixing approach affirms that no available IOL is perfect but that our current options have complementary strengths and weaknesses.

Presently, the biggest impetus for mixing IOLs seems to be patients undergoing refractive lens exchange. They certainly have much higher refractive expectations than senior citizens with cataracts. The latter group is usually thrilled with any IOL, and attaining good pseudoaccommodation is a surprising bonus for someone who lost accommodation 2 decades ago. My older cataract surgery patients are usually so happy after receiving their first presbyopia-correcting IOL that they would question the notion of doing anything different for their second eye.



In contrast, patients undergoing refractive lens exchange already have excellent spectacle-corrected vision and will be less forgiving of new optical aberrations and halos. They wouldn't be considering expensive refractive surgery if they didn't expect to be free of spectacles for most activities afterward. Younger cataract surgery patients also have a different concept of presbyopia than 75-year-olds, and their refractive expectations are more similar to those of individuals undergoing refractive lens exchange. Baby boomers are accustomed to having technology solve most problems and like to research which

technology is the best. Those who spend many hours researching on the Internet which cell phone to buy will feel that their decision on IOLs deserves the same careful analysis. They are more open to a mixing strategy in order to attain the complementary benefits that no single lens can provide.

Finally, implanting a different monofocal or accommodating IOL in a patient's second eye can be an excellent fallback strategy for individuals having trouble adapting to the halos or aberrations induced by a

multifocal IOL in their first eye. Such a contingency plan helps ease the minds of patients preoperatively who are worried about being "locked in" to a multifocal lens that they may not tolerate well.

For this issue of *Cataract & Refractive Surgery Today*, we asked leading experts to explain and debate the merits of mixing dissimilar optics and focal ranges, including monofocal monovision. As William Maloney, MD, and Pablo Artal, PhD, point out, we have much still to learn about neuroadaptation. Meanwhile, we needn't think of mixing IOLs or focal ranges as an all-or-none strategy but rather as an additional powerful option that may better satisfy certain patients. ■

A handwritten signature in cursive script that reads "David F. Chang".

David F. Chang, MD, Chief Medical Editor