Candidacy for Multifocal IOLs

BY ELIZABETH A. DAVIS, MD; RICHARD TIPPERMAN, MD; AND R. BRUCE WALLACE III, MD

Besides affordability, what criteria do you find help determine a cataract patient's candidacy for multifocal IOLs?

—Topic prepared by R. Bruce Wallace III, MD.

ELIZABETH A. DAVIS, MD

Whether a patient will benefit from a multifocal IOL requires first and foremost that he or she desire less dependence on glasses and contact lenses. This point seems obvious, but it is the sine qua non of determining a patient's candidacy for this treatment modality. If he or she does not mind wearing glasses, prefers how he or she looks with glasses, or needs to wear glasses for protective purposes or prismatic correction, then the conversation typically goes no further.

If the patient is interested in maximizing his or her freedom from corrective eyewear, however, the surgeon should rule out any ocular or medical condition that would contribute a high risk of an unsatisfactory outcome (significant or progressive macular disease, an unstable capsular bag, advanced endothelial cell disease, poorly controlled ocular surface disease, significant visual field defects, significant untreatable irregular astigmatism, etc.).

Next, the patient must understand and accept the limitations and side effects inherent to a multifocal IOL. Specifically, surgeons must explain to the patient that he or she may see glare and halos, may still need glasses for some activities, and may experience a reduced quality of vision in certain lighting conditions.

Importantly, in the United States, ophthalmologists do not yet have access to toric multifocal IOLs. The patient must therefore be a candidate for and amenable to the treatment of any significant astigmatism or residual refractive error via astigmatic keratotomy, limbal relaxing incisions, or laser vision correction.

RICHARD TIPPERMAN, MD

Once I determine that a patient has a healthy eye except for a cataract, then, assuming that the patient is interested in a presbyopia-correcting IOL, the primary factors I consider are all biometric. I prefer to place multifocal IOLs in patients who have less than 1.00 D of astigmatism, resting photopic pupils that are smaller than 3.6 mm, and a low level of angle kappa.

If a patient has a low level of native astigmatism, then it is usually easy to make the eye spherical and plano at the time of cataract surgery. I find that patients with smaller resting pupils tend to have better functional near vision, because they get the benefits of the multifocal portion of the IOL and also enhanced depth of field from the small entrance pupil.

Assuming the patient's ocular health and biometric measurements fall into the range I have described, the next thing I like to ensure is that the patient and I have similar expectations. On occasion, a patient will state, "I want this lens so that I never have to wear glasses again." I explain that, although some patients achieve this outcome, there is no way to guarantee this result. I add that, if the patient will only be happy if his or her result is "perfect" or if he or she never has to wear glasses again, then I would not recommend a multifocal IOL.

Lastly, I explain to patients that, with a multifocal IOL, they will have much more functional vision at all distances than they would achieve with a monofocal IOL but that they still may wear spectacles postoperatively.

R. BRUCE WALLACE III, MD

Determining patients' candidacy for multifocal IOLs continues to be challenging for my refractive cataract surgery team. Fortunately, we are seeing improvements in preoperative examination techniques and IOL technology to help us avoid unhappy postoperative surprises. Here are the major criteria we consider when

counseling patients prior to their procedures.

In a patient, the following are positives for a multifocal IOL:

- a strong desire to be spectacle independent
- lack of success with monovision contact lenses
- less than 1.50 D of regular astigmatism
- a healthy tear film and corneal surface
- excellent macular function
- normal aberrometry

Characteristics that suggest a multifocal lens is not the best choice for a patient include

- ambivalence about a multifocal option during discussion
- a history of ocular surface disease
- a high refractive error, especially astigmatism
- unusually large pupils in dim light
- documented macular dysfunction
- a demanding personality and unusually high expectations

My technicians are very aware of "red flags" when evaluating these patients, and I depend on a team effort to select the best candidates for multifocal IOLs. ■

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