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IOL**[print now](#)**Tecnis today: A key part of the arsenal****by Maxine Lipner Senior EyeWorld Contributing Editor***Why practitioners continue to value this lens*

In the past year since the Tecnis multifocal lens (Abbott Medical Optics, AMO, Santa Ana, Calif.) joined the armamentarium, practitioners have been reaching for the lens in a variety of circumstances. EyeWorld asked some leading practitioners to share their experiences with this unique lens and tell where it fits in their arsenal.

Y. Ralph Chu, M.D., clinical professor of ophthalmology, Hohn A. Moran Eye Center, University of Utah, Salt Lake City, adjunct associate professor of ophthalmology, University of Minnesota, Minneapolis, and medical director, Chu Vision Institute, Bloomington, Minn., finds that there are several factors that make the Tecnis multifocal lens unique. "The first is that it's on the Tecnis platform so it has that patented modified anterior prolate surface," he said. "That surface leads to the excellent quality of vision that patients get from the Tecnis."



The Tecnis Multifocal IOL
Source: Abbott Medical Optics

Fully diffractive surface

The fact that the lens has a fully diffractive posterior surface is also of importance, Dr. Chu finds. "It helps with pupil independence so that patients can see well up close in all lighting conditions," Dr. Chu said. "I think that it also helps patients adapt better to the lens because it's not a partially diffractive, partially refractive surface."

In Dr. Chu's experience not all diffractive surfaces are equal. "The central clear zone in the Tecnis lens is larger than in the other diffractive lenses," he said. "I think that adds to the depth of focus of the lens." As a result, Dr. Chu finds patients tend to have a bit stronger intermediate vision than would typically be expected from a diffractive lens.

Kevin L. Waltz, M.D., Eye Surgeons of Indiana, Bloomington, agrees that the fully diffractive surface makes a difference. The fact that this is situated on the posterior of the lens is helpful to patients, he said. "... when the back surface of the lens creates the multifocal images, all the images see are the retina so there are fewer reflections," he said.

The Tecnis experience

As with any premium lens, choosing the right patient for the IOL is essential. Farrell (Toby) Tyson, M.D., medical director of the Cape Coral

Eye Center, Cape Coral, Fla., finds that the Tecnis multifocal lens is ideal for patients looking for minimal dependence on spectacles. "It's going to give them distance and near vision and very good intermediate," he said. "It's especially good for hyperopes, and surprisingly, mild- to mid-myopes do extremely well with the lens."

Dr. Tyson, who was one of the FDA investigators for the lens, has been using it for the last three years. "I have found it to be one of the most forgiving and easiest to implement of the multifocal lenses out there," Dr. Tyson said. He attributes some of this to the design of the lens. "It has a bigger central sweet spot so it's more likely to be on the optical axis," he said. "Since it's a three-piece IOL it centers well in the bag." Also, since it corrects the most amount of spherical aberration he finds he has more leeway with the lens. "It cuts down on glare and halos but also gives a bit more fudge factor when it comes to residual cylinder or sphere," he said. The results in Dr. Tyson's experience have been excellent. "For 26% of my patients, binocular uncorrected vision is 20/15 or better at distance and 28% are J1+ or better binocularly without needing glasses," he said. Dr. Tyson finds that he uses the Tecnis for the majority of his premium IOL patients. "I'm finding that about 95% of the lenses that I'm implanting for presbyopia correction are Tecnis multifocal ..." Dr. Tyson said.

Likewise, Dr. Chu says that his experience with the lens has been great. "I tell patients that this is the lens that gives them the best possible reading vision up close," he said. "For patients who really want to be free of glasses, this is the one that gives them the best chance of that."

Dr. Waltz likes the fact that the Tecnis lens tends to be very forgiving. "What's nice about the Tecnis is that it's relatively insensitive (to residual error)," he said. "With a ReSTOR (Alcon, Forth Worth, Texas) or a ReZoom (AMO) or a Crystalens (Bausch & Lomb, Rochester, N.Y.), if you're off more than .5 D the patient really starts to notice things going wrong." However, with the Tecnis he finds that patients have plus or minus 1 D for near vision. "That extra .5 D on each side is a big deal," Dr. Waltz said.

Even so, he stresses that as with other premium lenses it's important to have an enhancement plan in place to address astigmatism. While it is pretty much agreed that for premium lenses to work well there needs to be .75 D of astigmatism or less, too often levels exceed this. Dr. Waltz cites the Surgivision website (www.iolsurgeon.surgivision.net), which boasts 50,000 premium lenses in which 60% of the lenses have more than .75 of a diopter of astigmatism. "It is critical to either not operate on people with astigmatism or to have a plan to deal with it, either pre-operatively or post-operatively," he said.

Overall, Dr. Tyson sees the Tecnis lens as one that has a very forgiving platform that makes multifocal use much easier for practitioners. "In the past doctors have been hesitant to jump into the pool because they were scared of the chair time and the down sides of these lenses," Dr. Tyson said. "This one is not perfect because there is no perfect lens but it has gotten a lot better. Happy patients are much easier to come by with this lens."

Editors' note: Dr. Chu is has financial interests with Abbott Medical Optics (AMO, Santa Ana, Calif.) and Bausch & Lomb (Rochester, N.Y.). Dr. Waltz has financial interests with AMO, Allergan (Irvine, Calif.), Bausch &

Lomb, and Hoya Surgical Optics (Chino Hills, Calif.).

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