

# Under the Knife

A surgeon's experience undergoing PresbyMax  $\mu$ -Monovision.

BY MICHAEL STADE, MD

**N**o one wants to admit that they are not aging gracefully. When I entered my 50s, however, I had to face the reality that my vision—along with my youth—was declining. In addition to my existing 0.75 D of hyperopia and -0.25 D of astigmatism, I was battling the onset of presbyopia and required a near addition of 1.75 D. I tolerated spectacles for a few years, but after a while I wanted a more permanent solution and decided to undergo PresbyMax  $\mu$ -Monovision (Figure 1) with the Amaris 750S (Schwind-eye-tech-solutions). Below I recount this experience.

## CHANGES IN NEAR VISION

As presbyopia set in, I needed to wear glasses not only in the clinic for reading but also when setting up and operating our diagnostic equipment and lasers. In my personal life, I started wearing glasses more regularly, most notably when paying at the cash register, reading menus at restaurants, and making calls on my cell phone. At first, the transition to wearing glasses more often was barely noticeable, but as time went on it became more bothersome to take the glasses on and off when needed. This was especially inconvenient in the operating room under sterile conditions.

I considered multifocal contact lenses briefly, as they allowed me to see well at distance and near; however, I found that I was intolerant to contact lenses, and they were especially difficult to use in the office and operating room. Therefore, I started to research my options for surgical correction. I wanted to select a procedure that would not only be the best possible solution for treating presbyopia but would also achieve an optimal ratio between distance and near visual acuity. A procedure that could eliminate my long-standing hyperopia and astigmatism would be a bonus.

I decided I was not interested in a lens-based solution and opted instead for laser vision correction. After researching various platforms, I decided to undergo PresbyMax  $\mu$ -Monovision, because I was impressed by the sound scientific basis of PresbyMax as well as the

## TAKE-HOME MESSAGE

- PresbyMax's biaspheric, multifocal ablation profile is designed to provide good vision at all distances, optimizing the central cornea for near vision and the paracentral cornea for distance.
- With  $\mu$ -Monovision, the dominant eye is focused slightly more for distance and the nondominant eye slightly more for near.

recent study results for the  $\mu$ -Monovision treatment.<sup>1-4</sup>

According to these reports, the biaspheric, multifocal ablation profile used in PresbyMax provides good vision at all distances by creating several focal points in the eye. The mechanism of action is said to be similar to a refractive multifocal IOL or contact lens. In PresbyMax, the central region of the cornea is optimized for near vision and the paracentral region for distance vision. This treatment can be accomplished with any type of laser refractive surgical procedure, including LASIK, LASEK, and PRK. With the addition of  $\mu$ -Monovision, the dominant eye is focused slightly more for distance and the nondominant eye slightly more for near vision.



Figure 1. Dr. Stade after surgery.

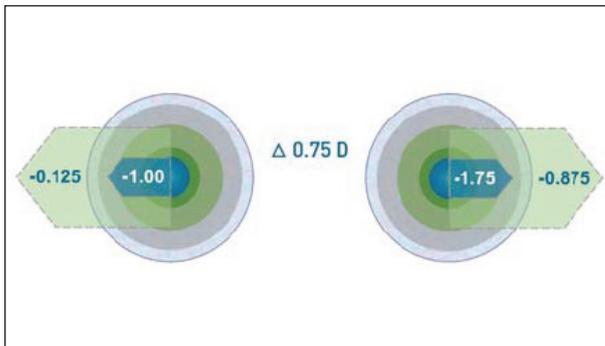


Figure 2. Dr. Stade's planned refractive outcome after surgery.

The combination of these two strategies makes the procedure particularly effective in addressing presbyopia.

### SURGERY AND RESULTS

For the PresbyMax treatment, my surgeon, Detlef Uthoff, MD, of the Eye Clinic Bellevue in Kieh, Germany, and I decided the laser ablation should be performed with femtosecond LASIK. During the treatment (Figure 2), my dominant eye was corrected for distance (laser setting:  $+1.25 -0.25 \times 107^\circ$ ; addition: 1.75 D) and my nondominant eye for near vision (laser setting:  $2.00 -0.50 \times 95^\circ$ ; addition 1.75 D). By 3 weeks, my quality of vision recovered quickly at all distances. I had lost no lines of Snellen visual acuity and enjoyed excellent near visual acuity without correction. Additionally, my distance BCVA was 20/12.5, and I experienced no complications or side effects after the procedure.

If I had to do it all over again, I would still choose PresbyMax  $\mu$ -Monovision, because I believe it to be the most sophisticated laser procedure available for the simultaneous treatment of presbyopia and other visual deficiencies. In addition to presbyopia correction, PresbyMax can be performed either as an aberration-free or customized treatment based on corneal or ocular wavefront data, such as LASIK, LASEK, or PRK. ■

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1. Luger MHA, Ewering T, Arba-Mosquera S. Three-month experience in presbyopic correction with bi-aspheric multifocal central presbyLASIK treatments for hyperopia and myopia with or without astigmatism. *J Optom.* 2012;5:9-23.
2. Uthoff D, Pölzl M, Hepper D, Holland D. A new method of cornea modulation with excimer laser for simultaneous correction of presbyopia and ametropia [published online ahead of print February 22, 2012]. *Graefes Arch Clin Exp Ophthalmol.*
3. Iribarne Y, Juárez E, Orbegozo J, et al. Bi-aspheric ablation profile for presbyopic hyperopic corneal treatments using AMARIS with PresbyMAX module: Multicentric Study in Spain. *J Emmetropia.* 2012;3:5-16.
4. Holland D, Uthoff D, Pölzl M. First results with PresbyMAX  $\mu$ -Monovision. Paper presented at: the Baltic Congress 2011.