

Magda Rau, MD

Dr. Rau is the Head of the Augenklinik Cham and Refractive Privatlinik-Dr.Rau, in Cham, Germany, and Eye Centre Prag, in Prague, Czech Republic.



1. What is unique about the way you run your facilities in Germany and the Czech Republic?

I think it is unique that the eye clinics in Cham and the refractive center in Prague are located in two different countries, each with its own language, development, and

history. I suppose the way I run the centers is also unique. I am the owner and manager, but I also perform nearly all of the surgeries. Sometimes the Czech patients travel to Germany for surgery and vice versa, because technical equipment best suited for patients' needs is at the other clinic. This is a new development with unimpeded passage between countries in the European Union, and it is also slowly developing in other fields. In this case, it is only possible because I speak both languages.

2. In what ways do you think IOL technology will evolve in coming years?

For about 16 years, I have been implanting multifocal IOLs. The first multifocal IOLs I used, the Array IOL (Abbott Medical Optics Inc.) and MF4 (Carl Zeiss Meditec), provided most patients with spectacle independence. I started implanting these lenses in young patients with cataracts; the loss of accommodation was eminently bothersome for these patients. Newer multifocal IOLs such as the Tecnis (Abbott Medical Optics Inc.), FineVision Micro F IOL (PhysIOL), and especially the rotationally asymmetric Lentis Mplus (Oculentis GmbH) reduce optical side effects and decrease the risk of dissatisfied patients compared with earlier models.

In future developments, multifocal IOL technologies will be further improved, but the ultimate solution will be a truly working accommodating IOL that does not strain the capsular bag or cause capsular fibrosis. My vision for the ideal accommodative IOL would include a technique that allows complete lens removal through a stitch while preserving the capsular bag, and then injecting a filling into the bag with the ability to restore accommodative function.

3. How have recent studies influenced your surgical technique or the technology that you use?

I perform audits for new multifocal IOLs. In my most recent studies, I have examined the OptiVis, (Aaren Scientific), the FineVision Micro F IOL, the rotationally asymmetric Lentis Mplus, and the Lentis Mplus Toric. Through these studies, we learn about the optical and functional advantages and disadvantages of these different

multifocal IOLs, namely distance, near, and intermediate vision; best reading distance; glare and halos; and how each of the multifocal IOLs are able to satisfy the individual visual demands of patients.

I have also performed a gender study exploring the differences in acceptance of multifocal IOLs between 1,200 men and women; this showed that women tend to be satisfied with lenses that offer better near vision, and men are more demanding for perfect distance vision and are unsatisfied with experiencing glare and halos. I take this information into account when choosing multifocal IOLs for patients.

The COMBO and CyCLE studies, sponsored by Transcend Medical, Inc., are evaluating the safety and efficacy of its CyPass Microstent implant for lowering intraocular pressure (IOP) in patients with glaucoma and patients with glaucoma and cataract. In COMBO, the suprachoroidal device is implanted during routine cataract surgery. In CyCLE, implantation of the device is a standalone procedure. The safety data and the fact that the device eliminates some postoperative complications have convinced me to replace trabeculectomy with this procedure at our clinics. Now I operate earlier on glaucoma patients with visual field and optic nerve changes because the COMBO study showed that the CyPass Microstent stabilized or reduced IOP, avoiding progression of visual field defects and optic nerve atrophy. In some cases, we have even observed slight recovery of the retinal nerve fiber layer on optical coherence tomography after CyPass implantation at cataract surgery.

4. Since you first entered practice, what surgical technique has had the biggest impact on vision?

In my opinion, excimer laser surgery has had the biggest impact on vision. For patients, excimer laser surgery provides immediate improvement in their vision and quality of life. After surgery, these patients are the happiest ones.

5. What is something most people would be surprised to learn about you?

This is a question that I can hardly answer myself. I asked my colleagues, and the most common answer was my enthusiasm and interest for new innovations and scientific work despite how many responsibilities I already have to manage. Other responses to this question were that I can effectively communicate complex ophthalmic surgical facts in several languages; that I combine my passion for surgery with a strong commitment to civic duty; and that I have a great appreciation for visual arts, music, nature, and horse-back riding. ■