Supplement to

March 2020

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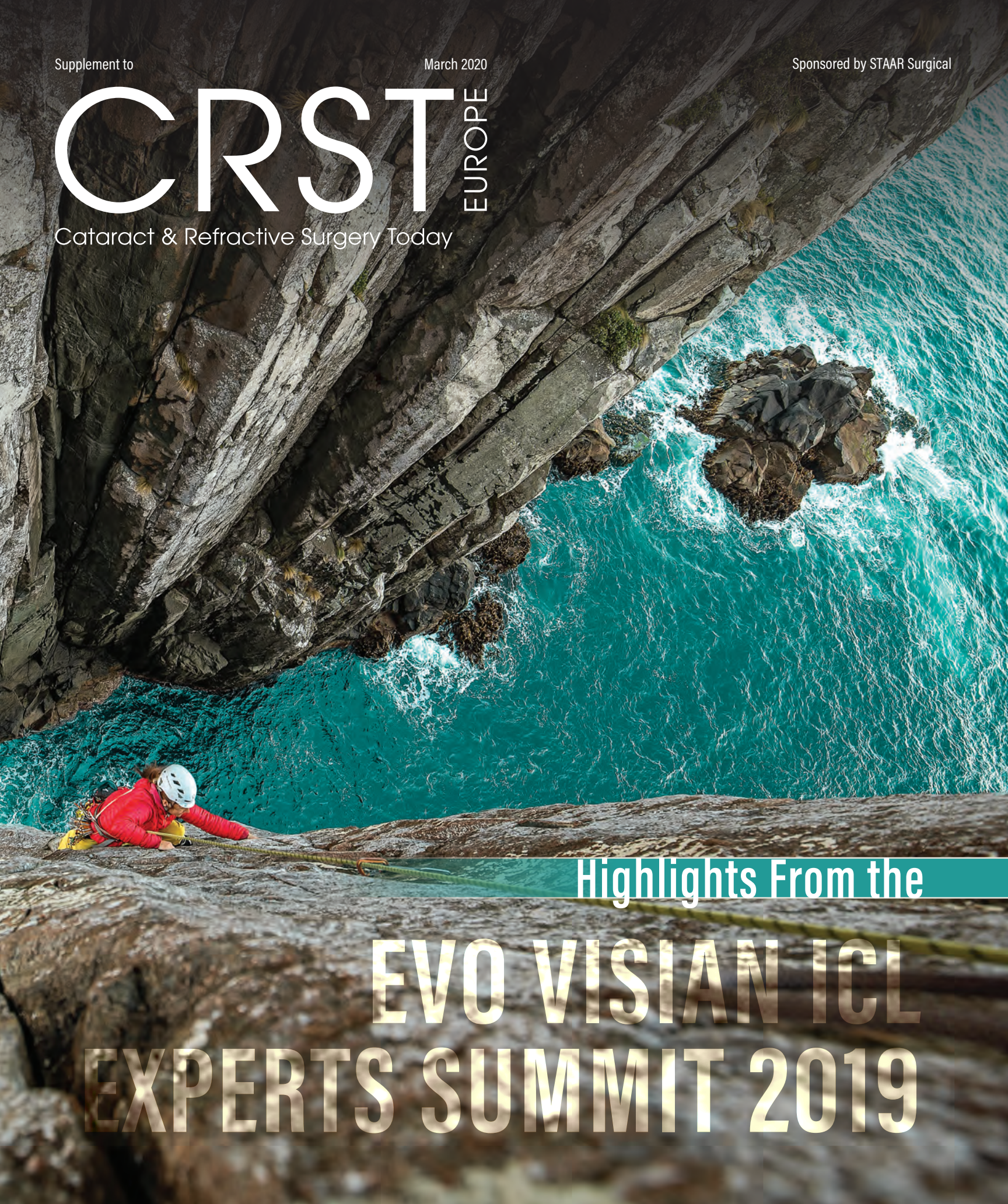
CRST EUROPE

Cataract & Refractive Surgery Today



Highlights From the

EVO VISIAN ICL EXPERTS SUMMIT 2019

20 Years of Visual Freedom With the Visian ICL

The advantages of this phakic IOL can last for 20 years or more.

BY TOBIAS H. NEUHANN, MD, FEBOS-CR

I was the first surgeon worldwide to implant both the toric Visian ICL (STAAR Surgical) and the toric EVO+ Visian ICL, in 1999 and 2016, respectively. But I began using the Visian ICL in 1995 before I had the distinguished honor of implanting that first toric Visian ICL. In this article, I share my long-term experience with the ICL, and I recount the case of one patient in whom I had implanted the lens bilaterally more than 20 years ago. This patient was happy with her decision in 1999, when the procedure was performed, and she was happy with her decision in 2019, when she had the implants removed to undergo laser cataract surgery performed by my son, Raphaël.

BACKGROUND

Toward the end of 1998, a 49-year-old* woman came to my clinic and inquired about refractive surgery. She was intolerant of contact lenses and wanted freedom from her spectacles. Upon routine examination, the refraction was -8.00 D in her right eye and -8.50 D in her left. BCVA in both eyes was 20/20. Endothelial cell count in her right and left eyes was 2,800 and 2,900 cells/mm^2, respectively, and pachymetry readings were 580 and 577 µm, respectively, in those same eyes. The white-to-white measurements were 12.1 and 12.0 mm in her right and left eyes. She had no other ocular pathologies.

At that time, I determined that the patient was a potential candidate for excimer laser surgery, which is what she had come in seeking, but I explained to her that she was also a good candidate for the Visian ICL. After sharing with the patient the benefits of both procedures, she decided to proceed with Visian ICL implantation. The target in this case was slight myopia.

In January 1999, I implanted a -10.00 D IC2020- ICL in her right eye, followed by implantation of a -9.00 D ICM125V2 Visian ICL in her left eye in a separate procedure 1 week later. Postoperative refraction in the patient's right and left eyes was -0.75 -0.25 @ 165° and -0.50 -0.25 @ 200°, respectively. BCVA in both eyes was 20/15. She was spectacle independent.

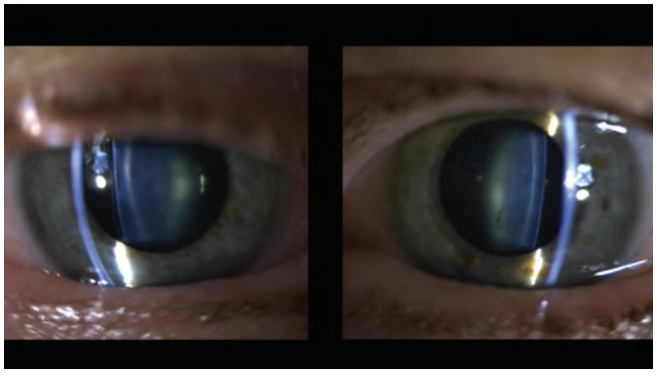


Figure 1. The patient's eyes at the slit lamp in 2019.

At all of her follow-up appointments, the patient relayed that she was extremely happy with her results. She always told me that it was the best decision and investment that she made. Her last visit with me was in 2006.

IN NEED OF CATARACT SURGERY

Fast forward 20 years, in 2019, when this same patient returned to inquire about the possibility of gaining improvement in her vision, which had recently started to deteriorate. She was now 70 years old, and she had a cataract in both eyes (Figure 1). She was hoping to restore the same vision that the Visian ICL implants had given her for the past 20 years.

Figure 2 depicts that nothing uncommon was found during the diagnostic examinations in 2019. Of note, endothelial cell density at 20 years after Visian ICL implantation was minimally decreased. Refraction was -1.00 -0.75 @ 081° in her right eye and -1.50 -0.25 @ 122° in her left. UCVA was 20/40 in both eyes.

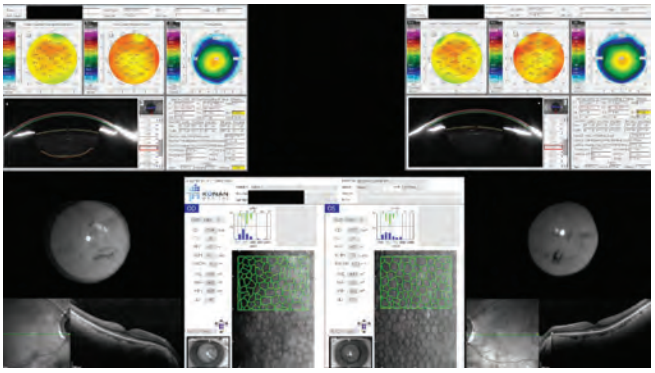


Figure 2. Diagnostic examinations prior to the patient's cataract surgery procedure.

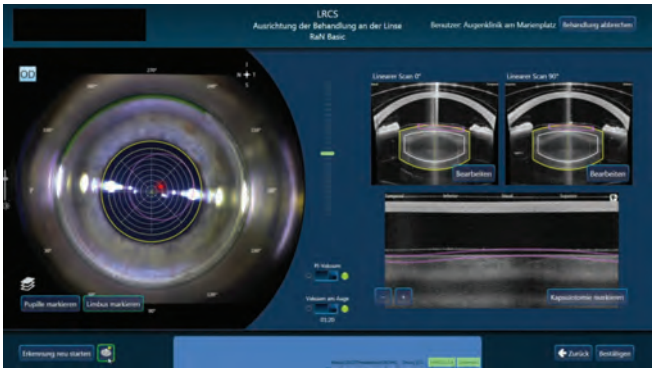


Figure 3. Laser cataract surgery is performed.

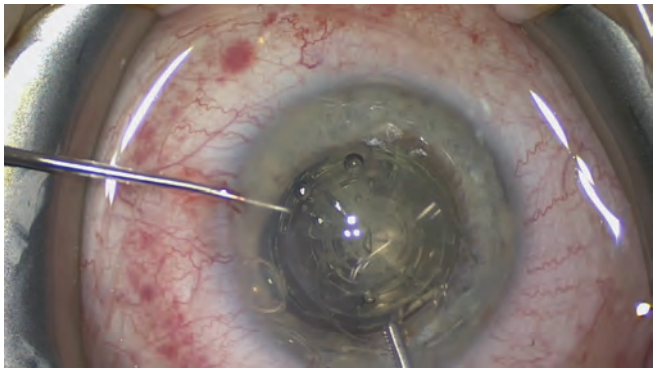


Figure 4. The Visian ICL is explanted.

Figure 5. The explanted Visian ICL.

It was decided that the best procedure to perform was femtosecond laser-assisted cataract extraction with Vision ICL explantation. The goal was now to aim for monovision (Figure 3).

We used the Barrett Universal II formula to determine a target of -1.50 D in her nondominant right eye while calculating the left eye for distance.

First, the Victus femtosecond laser (Bausch + Lomb) was used to create the 4.5-mm capsulotomy on the lens apex and fragment the nucleus. The Visian ICL had full contact with the lens surface; however, it did not alter the detection of the laser. Further, there was no excess gas formation between the human lens and the Visian ICL, meaning that the fragmentation of the lens was not altered.

ICL EXPLANTATION

After the laser portion of the procedure, the Visian ICL was carefully explanted (Figure 4). First, OVD was injected between the human lens and the ICL. Bubbles from the femtosecond laser also assisted in producing space between these two surfaces, which made it easier to inject OVD between the lenses. With slow and careful manoeuvres, the Visian ICL was moved in front of the iris and then explanted with a pair of forceps. After low power phaco and subsequent steps of the cataract surgery procedure were performed, a +14.50 D EyeCee One IOL (Bausch + Lomb) was then successfully implanted in the right eye.

On postoperative day 1, refraction was -1.25 -0.25 @ 65°.

After surgery, we took a close look at the explanted ICL. It was interesting to see that the end of the haptics were slightly bent upward (Figure 5). The lens was perfectly clear, with no pigment, blood, or fibrosis on the surface of the lens to disturb the clarity of the material.

CONCLUSION

The Visian ICL has many competitive advantages over laser vision correction,[1] and these advantages can last 20 years or more. Further, even after 20 years of implantation in the human eye, this patient's Visian ICL remained clear and free from surface debris that could disturb the clarity. ■

1. Igarashi A. Posterior chamber phakic IOL vs. LASIK: benefits and complications. *Exp Rev Ophthalmol.* 2019;14(1):43-52.

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** This information represents data from the author's medical practice. The Directions for Use during that time indicated an age range of 21-45 years. This age range has since been approved for patients 21-60 years within the EU.*