Case Study
A 76-year-old patient on Tamulosin who underwent 8-incision radial keratotomy for his myopia 22 years ago presented with a cataract in his left eye. Femtosecond Laser Assisted Cataract Surgery (FLACS) was performed under topical anesthesia using the Z8 laser (Ziemer Ophthalmic Systems AG, Switzerland) in the operating room under the surgical microscope. The laser was set to make a capsulotomy of 5.1mm and nucleus fragmentation into 8 pieces. Despite the history of Tamulosin use, the preoperative pupil size was enough to program a 5.1mm capsulotomy. The already free capsulotomy was gently removed with a capsulorhexis forceps following the picture was taken. The previously free capsulotomy was well-centered and fragmentation immediately after the laser procedure in eye with radial keratotomy (Figure 1).

Discussion
FLACS is the most recent application of femtosecond laser technology in ophthalmic surgery and appears to be a safe, efficient, and reproducible procedure.1 The benefits of FLACS have been presented elsewhere.2,3,5 The Z8 laser utilizes a fluid-filled patient interface which provides a relaxed, non-deformed cornea without posterior corneal folds.6 This avoids degradation of the laser beam’s focus, assuring an optimal resection with complete capsulotomies. The liquid interface produces a minimal increase in intracocular pressure, which is especially important for elderly patients and patients with prior cataract surgery. It is known that precise femtosecond laser application is difficult to achieve in the presence of corneal scars. However, this case proves that in cases with faint scars, like in radial keratotomies, femtosecond laser application with the Z8 is not an issue.

Reference:

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Sponsored by Ziemer Ophthalmic Systems AG

The Z8 Femtosecond Laser:

- Is compact and pending FDA approval for the use in the United States. For other countries, availability may be restricted due to regulatory requirements; please contact Ziemer for details.

Figures:
1. Appearance of the capsulotomy and fragmentation immediately after the laser procedure in eye with radial keratotomy.
2. Application of 2% Fluorescein and compression of the sclera showing no evidence of leakage through the radial keratotomy incisions.