

# Evaluation of femtosecond laser-assisted clear cornea cataract surgery in lens exfoliation syndrome (LES)

Qureshi, Anam, M.D. <sup>1</sup>, and Anastasios John Kanellopoulos, M.D. <sup>1,2</sup>

azq100@gmail.com

ajkmd@mac.com

<sup>1</sup>. Department of Ophthalmology, New York University, New York, NY <sup>2</sup>. Laservision.gr Institute, Athens, Greece

**LaserVision.gr**

**Eye Institute for laser**

www.brilliantvision.com

## : Preface

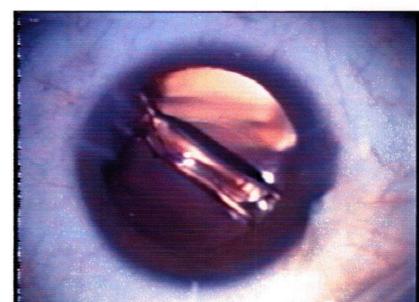
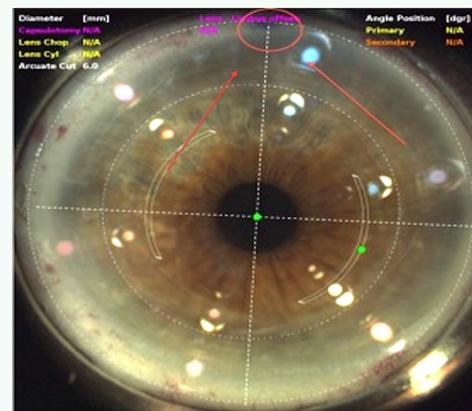
The 2mm barrier was broken in 1999 when we introduced ultra-small incision cataract surgery using the Dodick Photolysis Nd:YAG laser with our publication in the Journal of Ophthalmology [1]. This procedure represents a hallmark improvement in cataract surgery with little astigmatic induction (Figure 1).

Figure 1. Left: surgeon and assistant during a cataract surgery case in 1998, Middle: the probe of the Dodick photolysis Nd:YAG laser device, and Right: image of the first case to break the 2mm barrier.

What is the real goal of laser-assisted cataract surgery? To improve the refractive outcome, safety profile, patient comfort and satisfaction. The answer to how can this be accomplished is with more precise and accurate capsulotomy and cataract incision, more efficient lens disruption removal and in my opinion, more precise and accurate relaxing incisions. The latter point will be addressed in this chapter. Our purpose herein was To evaluate the safety, efficacy and clinical parameters in clear cornea cataract surgery performed with the LenSx femtosecond laser (Alcon, Fort Worth, TX) in high risk eyes with lens exfoliation syndrome.

**Methods:** 65 eyes of 48 consecutive patients with LES, were evaluated pre- and 3 months post-operatively for: age, UCVA, BSCVA, refraction, cylinder (C), capsulorhexis diameter (Cd), topographic cylinder change (TCc), endothelium (ECC), and possible complications.

**Results:** The mean age was 71 years and mean values pre- and post-op were respectively: UDVA: 20/100, 20/25, CDVA: 20/40, 20/22, Spherical equivalent reduction from 3.7 to 0.5 diopters, C: -2.25D to -0.55 D, Cd: 5.0mm, TCc: -0.45D, ECC: 1850, 1650. An endocapsular tension ring was used in 5 cases.



**Conclusions:** This novel bladeless femto-assisted clear cornea cataract surgery appears to be safe and effective in LES, and may hold an intrinsic advantage of less surgical zonular weakening associated with the capsulorhexis and lens fragmentation.

Commercial Relationship(s) Disclosure:

Anam Qureshi : Commercial Relationship: Code N (No Commercial Relationship)

A. John Kanellopoulos: Commercial Relationship(s); Alcon Laboratories, Inc.: Code C (Consultant); Avedro:Code C (Consultant); Bausch and Lomb: Code C (Consultant); Ocular Therapeutix: Code C (Consultant)