

**MILESTONES IN CATARACT SURGERY? PHACOEMULSIFICATION USING
THE KINETIC ENERGY OF THE FLUID AND RESTORE THE
ACCOMMODATION IN PSEUDOPHAKIC PATIENTS**

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1. We were the first to compare traditional ultrasound and newly-developed Aqualase phacoemulsification techniques regarding surgical parameters and postoperative visual functions. We conclude that Aqualase proved to be an effective method in cataract removal, with surgery time, effective Aqualase / phaco time, and postoperative visual acuities being similar to those of the ultrasound technique.
2. We were the first to demonstrate that postoperative endothelial functions are similar using the Aqualase system compared to the traditional ultrasound technique. The Aqualase method proved to be as safe as conventional ultrasound in cataract surgery.
3. We were the first to apply phaco-chop nuclear fragmentation technique during Aqualase phacoemulsification, and we proved that Aqualase energy used in surgery is significantly lessened by this maneuver.
4. We were the first to prove that the usable pseudoaccommodative amplitude of the investigated monofocal lenses is independent of intraocular lens movement under physiological conditions.
5. We demonstrated that in addition to excellent best corrected distance visual acuity, distance corrected near visual acuity is significantly better with the AcrySof ReSTOR intraocular lens than with standard monofocal lenses.
6. We were the first to prove that anterior shift does not play a role in good near visual functions experienced with the AcrySof ReSTOR intraocular lens.