

STABLE STEPS FORWARD

The Tango Reflex™ Neo YAG laser provides a simpler, more consistent method of performing capsulotomies with the PROcap™ technique



Image courtesy of Karl Brasse, MD

The advent of premium IOLs, advanced laser technologies, precise diagnostics, and evolving techniques have all shaped cataract surgery, making it more akin to elective refractive surgery, with high-quality outcome expectations from both surgeons and patients. Before the introduction of premium IOLs, YAG capsulotomies were delayed until the capsule had significant opacification or the patient voiced strong complaints. But because modern patients are more aware of vision quality and are more sensitive to the impact of even mild posterior capsule opacification (PCO) in eyes implanted with a multifocal or EDOF lens, there is a growing need to perform more precise YAG capsulotomies. After all, these patients have higher post-procedure expectations than ever.

However, despite all the progress, there are still no standardized techniques for precise Nd:YAG laser capsulotomies. Now, Lumibird Medical's Tango Reflex™ Neo YAG laser with PROcap™ (Premium Refractive Outcome

Capsulotomy) capabilities overcomes the obstacles befalling YAG lasers of the past, offering clinicians a simpler and more consistent way of performing capsulotomies.

Nd:YAG capsulotomies should be performed with the same level of precision and predictability as cataract surgery. Clinicians need to ensure that they do not pit or shift the IOL, that the capsule's edges are perfectly positioned, and that the capsulotomy is symmetric, leaving an overlapping edge around the optic. Capsulotomies must also be perfectly sized. A capsulotomy that is too small may induce glare, halos, and other dysphotopsia; one that is too large may allow vitreous to escape or the lens to move, inducing refractive error, such as hyperopia. Premium IOLs may be impacted even more by the variability in technique of the procedure. As a result, the previous generation of YAG lasers, which had less predictable energy delivery, were less reliable tools that delivered variable results between procedures – even those done consecutively.

Consistent control

The first issue that the Tango Reflex Neo laser resolves is that of energy delivery, which is characterized by a sharper rise and fall relative to other lasers, reducing the size of the plasma convergence zone and creating more efficient energy delivery without causing significant disruption to the vitreous or surrounding tissues. Additionally, the Tango Reflex Neo laser's combination of second generation true-coaxial illumination tower, efficient energy profile and its degree of up to 2 mm posterior offset enables standardization of the disruption of the posterior capsule and the creation of a more precise, predictable, and perfectly round and well sized capsulotomy. Alongside this, PROcap uses the jet-effect from a collapsing cavitation bubble formed by the laser to cleanly dissect tissue, allowing careful construction of the capsule opening (which occurs symmetrically, outwards from the center), which adequately exposes the properties of premium IOL optical zones. The efficiency of the laser means that capsulotomies can be performed using fewer shots and with little risk of pitting the IOL.

Energy delivery is further aided and stabilized by the Tango Reflex™ Neo's internal fan-cooled laser cavity that mediates the inherent inefficiency of YAG lasers which lose large amounts of energy to heat resulting in less predictable energy delivery and,

if not properly managed or with sustained use, overheating and shutdown. Less variability in the laser's energy delivery gives clinicians assurance that it will stay the same between cases, regardless of how many capsulotomy procedures are performed consecutively within their practice. (1) The Tango Reflex Neo laser also comes with the Imprint™ discrete heads-up display within the oculars, which provides real-time feedback of current energy levels. Coupled with a switch mechanism on the joystick for increasing and decreasing laser energy, surgeons are allowed to focus on the procedure rather than looking away to view settings on the touch screen interface.

Although Nd:YAG capsulotomy is a common procedure, every part of cataract surgery is undergoing constant evolution. Everything practitioners do can always be incrementally improved, and the accumulation of those improvements is how Lumibird Medical achieves pristine outcomes. Nd:YAG laser capsulotomies can have a significant impact on patients' quality of life. Whether they are paying more for a premium IOL or not, patients' expectations are on the rise, and clinicians need to raise their game to deliver the most precise capsulotomies possible.

Reference

1. ASCRS, 2019.

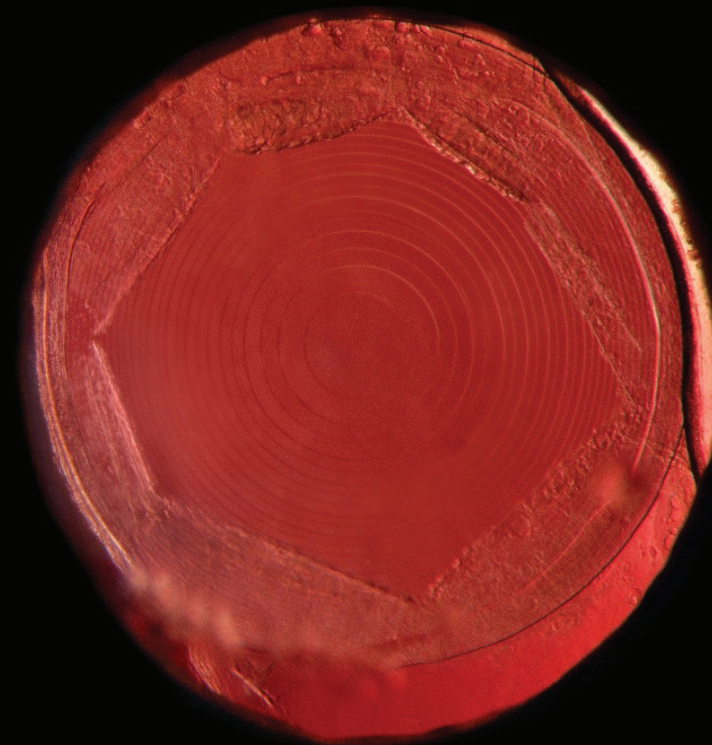


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