



# Advantages of the Aladdin Biometer



**T**he advent of premium intraocular lens surgery has revolutionized ophthalmology, optometry, and eye care in general. Concomitant to this sea of change there is increased expectation by our

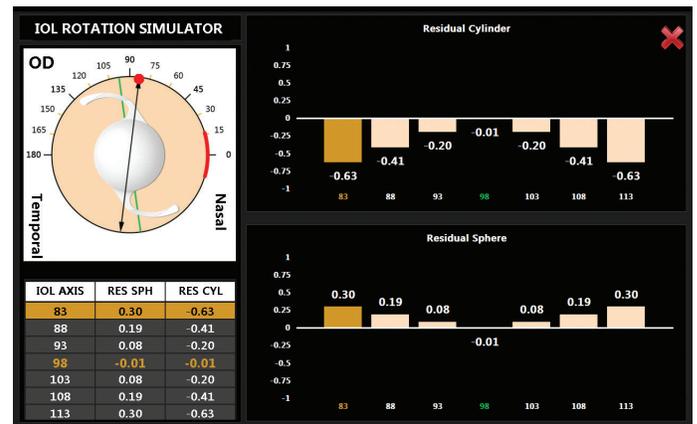
patients, who demand the very best in outcomes, and they are often intolerant of even the smallest amount residual refractive error, minor complications, dysphotopsias or visual instabilities caused by intraocular lens implants. Thus, we must under-promise and over-perform with a very high standard. Excellence in topography and biometry is central to this goal. The Topcon Aladdin Biometer with corneal topography is the multi-function instrument that steps forward to meet this requirement.

## A Corneal Topographer and Biometer Combined into One Unit

The low-coherence interferometry method of measurement and the Placido disc topography combined in one unit is clearly time-saving. Outstanding optics and robust data analysis software that incorporates some of the most advanced intra ocular lens calculation formulae complete the equation for an instrument that delivers the complete picture of the patient's eye condition fast and accurately. Not only does the Aladdin combine two work stations into one unit, saving time, and improving the practitioner's image with patients, but it also incorporates a wide variety of intraocular lens calculation formulas, including the entire suite of Barrett calculations into the device. Additionally, data from new intraocular lenses can be entered at any time, including their A-constants to add to the calculation portfolio.

## The Benefits of An Onboard Toric IOL Calculator

Having an on-board generic Toric IOL calculator, built into the software where the data is readily available, precludes the technician re-entering the data into another computer to perform the calculations.

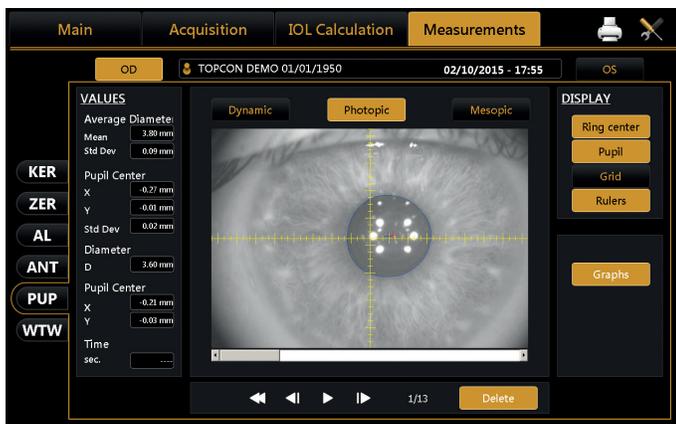


This saves time, but more importantly, it prevents errors. We know that for every diopter incorrectly measured and entered into the computer algorithm for an IOL calculation, we lose one diopter of spherical accuracy, affecting the power of the ultimate intraocular lens that will be implanted into the patient's eye. So keratometry measurements and Toric measurements are absolutely critical to the success of every cataract surgery, particularly premium lenses.

## The Advantages of Pupillometry

Static and dynamic pupillometry are also amongst the several functions of the Aladdin.

Clearly, every patient isn't the same, and not all pupils are the same. Many pupils are eccentric or fluctuate from a circular shape at different



stages of dilation. In the operating room, we will often center an intraocular lens within a pupil, not realizing that this is not necessarily concentric with the visual axis or the optical axis.

Some patients have a high angle kappa, which precludes the use of certain types of intraocular lenses, particularly multi-focal IOLs. Having a dynamic pupillometry function where you can actually see the pupil moving in real time on the screen and record the different ranges of motion comparing it to the corneal diameter provides a consistent and repeatable method to best ascertain the centricity of a pupil and calibrate that to the particular patient's needs. Our certified technicians can perform this review on each patient, bringing the rare eccentric patient to the surgeon's attention preoperatively.

With an aspheric lens, perfect centration is not as important. With other lens designs, such as some toric lens models, certainly extended depth-of-focus lenses, and multi-focal lenses, this measurement becomes critical to outcomes, patient satisfaction, and practice growth. DICOM (Digital Imaging and Communications in Medicine) connectivity makes it possible to automatically transfer the measurement data to remote servers or electronic medical records software.

## The Aladdin vs. Other Biometers – A Comparative Study

Agreement with existing biometers that are trusted by the ophthalmological community provides the level of confidence that a surgeon needs to use the Aladdin as a primary or main source of biometric and topographic data.

In a recent in house clinical study comparison of 150 patient between the Aladdin and a traditional Lenstar biometer we were pleased to see that the Aladdin was technician and patient-friendly. The Aladdin provides not only interferometry-based biometry, but also Placido-disc-based topography. In fact, it performs nine different tests in five seconds. And because of this efficiency, we could favorably compare not only the data obtained, but also had some improvement in patient flow after a brief technician adaptation period.

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*—John Sheppard, MD*

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Normally, we obtain three different topographic measurements of our patients, plus the axial length measurements necessary for a full biometric analysis. We combined capabilities of this Aladdin unit, allowed one less station for patient care. When we evaluate over 5,000 patients annually for cataract surgery in our practice, every small step in the process that saves time is highly valuable for patient flow and overall practice efficiency.

By comparing the results, we were able to discern that the instruments' measurements were comparable. If there is not a perfect, undisturbed corneal surface, our patient will not get perfect, premium intraocular lens surgery. So, these measurements are critical, and if we don't have three correspondent cylinders, axial lengths, topographic analyses, regular and irregular astigmatism analysis, and the cylinder axis, we don't have a fix ready for final calculations. If those measurements are non-concordant, something is wrong with the surface of the patient, and they need to be repeated after therapeutic intervention, necessitating yet another round of surface testing.

Every step in efficiency is time saved and valuable to our practice. The Aladdin reduces technician time and frankly, with the usual two-hour evaluation process for the cataract candidate, this time saving is welcomed by our patients as well.



## The Aladdin Biometer with Corneal Topography:

A step ahead of traditional biometry



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