



The answers to questions below are based on seven peer-reviewed journal articles. Please refer to www.catsiop.com/events for a listing of the articles.

Q. What advancement does the CATS Tonometer Reusable Prism™ (CATS) bring to intraocular pressure (IOP) measurement?

A. The CATS prism reduces IOP measurement errors for at risk patients by 94 percent by factoring in central corneal thickness (CCT), rigidity, tear film and curvature data into its measurement. The CATS prism features an optimized concave-convex prism surface that captures the critical data needed to provide a significantly improved IOP measurement.

Q. When the clinician uses the CATS prism, does s/he still need to perform CCT and CH (hysteresis) error correction?

A. Usually No. CATS measures “true” IOP to within +/-2mmHg in 97% of the population. However, in cases of extremely abnormal corneas or those with corneal pathological conditions, the clinician should consider performing CCT and CH to gather additional data and insights into the condition.

Q. What design elements enable the CATS to produce improved intraocular pressure (IOP) measurement over the Goldmann Tonometer Prism (GAT)?

A. The CATS applanation surface design “cups” the cornea while the GAT’s surface “flattens” it. The CATS surface virtually negates the force due to factors associated with central corneal thickness (CCT) and corneal hysteresis (CH). Therefore, the new surface measures almost exclusively the force due to intraocular pressure (IOP) as opposed to the corneal force with the GAT.

Q. How does the clinician have confidence that the CATS produces accurate, improved IOP accuracy when the IOP is different from the GAT IOP measurement?

A. First, the clinician can reference seven peer reviewed journal articles. However, the simplest method is to compare the GAT IOP to the CATS IOP measurement on a patient with a thin cornea or one who has undergone LASIK surgery. The CATS IOP measurement will approximate the expected CCT corrected GAT IOP. However, the CATS also simultaneously corrects for 3 other corneal related errors in addition to CCT, so there will be some variation in its correction. Also, the CATS prism demonstrated improved IOP accuracy over GAT in studies comparing both prisms to true intracameral pressure on live patient eyes.

Q. Is there any reinterpretation of the IOP measured with CATS compared to historical patient IOP data measured with the GAT prism?

A. No. CATS and GAT IOP measurements are identical for nominal corneas. The difference between CATS and GAT IOP relates to GAT corneal biomechanical and tear film errors which are corrected by CATS. Most clinicians will already correct for CCT related GAT errors, so s/he will not be surprised by the different measurement using the CATS vs. the GAT.

Q. Why do the mires appear distorted until the clinician centers the prism's position?

A. CATS was designed to indicate prism alignment and centration with the corneal surface, whereas the GAT prism is subjectively centered. Only when the prism is centered on the cornea is a measurement possible allowing the mires to intersect. At that point, the visualization appears like the normal hemicircular mires familiar to clinicians. With an objective centration indicator, the CATS prism improves accuracy and repeatability.

Q. Does the clinician need to be concerned about the mire thickness affecting IOP measurement?

A. No. The CATS design (where the surface curves away from the cornea) minimizes the tear film error. The clinician will visualize very consistent mire thickness using the CATS for every measurement regardless of the amount of tears in the patient's eye.

Q. Why do the CATS Prism mires appear brighter and easier to visualize?

A. The clear flange at the base of the CATS prism tip works as a light pipe concentrating the cobalt blue filtered light to the prism's applanation surface illuminating the mires.

Q. Will clinicians need to buy additional equipment and/or change their current IOP measurement protocol if they use the CATS Prism?

A. No. The CATS prism integrates seamlessly with existing applanation tonometers and is designed for easier and more sterile prism installation. Additionally, there is no need to recalibrate an existing tonometer, alter measurement techniques or the interpretation of results.

Q. What is the significance of curved external appearance of the CATS prism's body?

A. The curved finger/thumb hold of the CATS disposable prism body allows for true single hand, no touch sterile operation using the disposable version of CATS. The CATS prism body engages the sterile prism tip in the tray with a tactile "click." After IOP measurement, the tip is then thumb released into the trash, and the process is repeated.

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