

## **POSTERIOR CORNEAL ASTIGMATISM MEASURED WITH THE IOLMASTER700**

**Purpose:** Current lens formulae and calculators incorporating an estimate of the posterior cornea assume it is steepest vertically in all cases. The IOL- Master 700 is a widely used biometry device that uses swept source optical coherence tomography (OCT). We present the first description of its ability to measure the posterior cornea.

**Methods:** 1098 eyes were analysed from two sites over a period of 8 months including eyes that had undergone various surgeries and those with pathologies including keratoconus. The anterior or posterior cornea could not be accurately measured in 88 eyes.

**Results:** The majority of eyes (73.32%) had vertically steep posterior corneas with oblique (16.79%) and horizontal (9.89%) less common. In anterior 'with-the-rule' (WTR) eyes, the posterior cornea was steep vertically in 91.75%. Mean  $\pm$  Standard Deviation (SD) posterior corneal astigmatism was 0.24D  $\pm$  0.15D. There was a positive correlation between magnitude of anterior and posterior corneal astigmatism (Pearson  $r(1096) = 0.45$ ) which was statistically significant ( $p$