

✉ | A thin cornea is a risk factor for primary open-angle glaucoma

The Science behind the Tip

Central corneal thickness (CCT) varies among individuals, the average CCT in the general population being approximately 540 μm . Studies using optical pachymetry have reported slightly lower CCT values ($530 \pm 29 \mu\text{m}$, average \pm SD) compared to ultrasonic studies ($544 \pm 34 \mu\text{m}$)¹.

Among the most striking of the *Ocular Hypertension Treatment Study's* (OHTS) findings was that CCT is a powerful predictor of primary open-angle glaucoma risk². It appeared that CCT bears an inverse relation with the risk of **developing glaucoma damage**, i.e. patients with thinner corneas are at higher risk. This observation in ocular hypertensive patients was confirmed in another study³. In addition, *EMGT* has since provided support of a role for CCT in the **progression of glaucoma damage** in patients with early glaucoma⁴. In another study CCT proved to be a powerful clinical factor in determining glaucoma severity at the initial eye examination⁵. Whether a thin cornea is the expression of thin ocular tissues and a weak lamina cribrosa increasing susceptibility to glaucomatous damage, is still under investigation. The possibility can at this time not be excluded that the increased risk is partly or even entirely due to incorrect tonometric readings in eyes with corneas thinner than 520 μm .

References

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