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Service (sector) Glaucoma N° CEP

### **Comparison of Goldmann Applanation Tonometry with Dynamic Contour Tonometry**

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Purpose: To compare the Goldmann applanation tonometry (GAT), which is the Standard for routine measurement of intraocular pressure (IOP), with the dynamic contour tonometry (DCT) in healthy subjects

Methods: A total of 102 volunteers with normal eyes on slit-lamp examination, were prospectively evaluated. IOP measurements were first taken with DCT followed by the GAT in a single session. IOP data of the right eye were analysed using linear regression analysis.

Results: The mean of IOP readings by the GAT was  $13,8 \pm 3,5$  mmHg and by the DCT was  $16,4 \pm 2,4$  mmHg. The IOP readings with the two tonometers were equivalent at 15,9 mmHg. Above 15,9 mmHg the DCT underestimated the GAT in 0,5mmHg for each 1-mmHg increase in IOP. In contrast, below 15,9 mmHg the DCT overestimated the GAT in 0,5 mmHg for each 1-mmHg decrease in IOP.

Conclusion: DCT underestimates the GAT at high IOPs and overestimates the GAT at low pressures.