**POSTER SESSION 2: Glaucoma, Lens and Cataract, Molecular Biology / Genetics / Epidemiology, Pathology / Oncology**

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### 313 Diagnostic value of the Stratus OCT Optical Coherence Tomograph, Heidelberg Retina Tomograph (HRT II) and GDx VCC Scanning Laser Polarimeter to detect structural damage in glaucomatous eyes

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**Purpose** To compare the diagnostic capacity to discriminate between normal and glaucomatous eyes of different optical imaging devices, Optical Coherence Tomography (OCT), Heidelberg Retina Tomograph (HRT), and GDx Nerve Fiber Analyzer (GDx VCC).

**Methods** A total of 66 normal subjects and 74 glaucomatous patients were included in the study. Subject eyes were classified into the diagnostic groups based on intraocular pressure and standard automated perimetry. Every patient underwent complete ophthalmic examination including GDx VCC, HRT II and Stratus OCT 3000 evaluation. The receiver operating characteristic curves (ROC) were plotted to obtain the diagnostic value (sensitivities at fixed specificities: 85% and 95%) and the area under curves (AUC) of the different structural parameters assessed by the optical imaging devices.

**Results** In glaucomatous eyes the best parameters from each device were the GDx VCC Nerve Fiber Index -NFI- (AUC=0.879), the OCT retinal nerve fiber layer global average thickness (AUC=0.945) and the HRT linear discriminant function FSM (AUC=0.898). No statistically significant differences were found between the AUCs for these parameters. Nevertheless, at a fixed specificity of 85% and 95% OCT showed better sensitivity than HRT and GDx (p<0.05).

**Conclusion** Several structural parameters measured by the optical imaging devices of this study are useful to discriminate glaucomatous damage with high diagnostic abilities. Nevertheless, the best OCT and HRT parameters showed higher sensitivities than the best GDx VCC parameters.

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### 314 Dynamic Contour Tonometry after intraocular surgery

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**Purpose** Postoperative intraocular pressure measurement is prone to error due to temporary alteration of bulbar and corneal properties, like corneal edema, incisions and gas tamponades. This study compares pressure readings of dynamic contour tonometry as a new method for intraocular pressure measurement with Goldmann applanation tonometry.

**Methods** The study included 31 eyes of 31 subjects (10 eyes after standard pars plana vitrectomy with C3F8 gas tamponade and 21 eyes after clear cornea incision phakoemulsification). All measurements were performed one day postoperatively. The dynamic contour tonometric measurements were compared with Goldmann applanation tonometric values obtained at the same examination. Altogether 93 dynamic contour tonometric measurements and 62 Goldmann tonometer measurements were analyzed. Additionally, corneal pachymetry was performed.

**Results** Mean dynamic contour tonometric measurements after cataract surgery (22.07 ± 7.21 mm Hg) did not show significant differences compared to mean applanation tonometric values (21.10 ± 8.39 mm Hg). Pressure measurements after surgery with gas tamponade were 21.52 ± 6.22 mm Hg for dynamic contour tonometry and 21.01 ± 7.63 mm Hg for applanation tonometry. Differences were not significant (p=0.83). No significant correlation between tonometric values and central corneal thickness were found.

**Conclusion** Dynamic contour tonometry and applanation tonometry pressure readings did not show significant differences in eyes after intraocular surgery. Compared to literature data, pressure values measured by dynamic contour tonometry seem to be slightly lower when compared to applanation tonometry.