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Using GDx scanning laser polarimetry and optical coherence tomography clinical print-outs to detect glaucoma. C.A. Sanchez-Galeana, C. Bowd, E.Z. Blumenthal, P. Gokhale, L.M. Zangwill, R.N. Weinreb. Glaucoma Center and Diagnostic Imaging Laboratories. University of California, San Diego, La Jolla, CA.

Purpose: To compare the sensitivity and specificity for discriminating between glaucomatous and normal eyes using the clinical printouts from the GDx scanning laser polarimeter and OCT optical coherence tomograph. **Methods:** We obtained GDx and OCT printouts from one eye from each of 39 glaucomatous and 50 normal subjects. Eyes were classified as glaucoma with IOP greater than 21mmHg and repeatable abnormal standard automated perimetry (SAP) results. These glaucoma eyes had early to moderate visual field damage (MD (mean + SD) = -5.04 + 3.32, range: -0.85 to 13.2). Normal eyes had normal appearing optic discs and normal SAP results. Two experienced graders masked to patient identity and diagnosis, evaluated each printout independently and classified each eye as either glaucomatous or normal. **Results:** For GDx, sensitivity and specificity were 73% and 71%, respectively for grader one and 71% and 80%, respectively for grader two. Agreement between observers was substantial (Kappa = 0.66). 25 (65%) glaucomatous eyes and 30 (68%) normal eyes were diagnosed correctly by both observers. For OCT, sensitivity and specificity were 76% and 81%, respectively for grader one, and 79% and 68%, respectively for grader two. Agreement between observers was substantial (Kappa = 0.73). 28 (73%) glaucomatous eyes and 29 (65%) normal eyes were diagnosed correctly by both observers. **Conclusions:** The GDx and OCT printouts can be used to differentiate normal from glaucomatous eyes.

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