

# Progression of Primary Open-Angle Glaucoma in Diabetic and Nondiabetic Patients

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**PURPOSE:** To compare the rates of visual field (VF) loss and retinal nerve fiber layer (RNFL) thinning in primary open-angle glaucoma (POAG) patients with or without type 2 diabetes mellitus (DM) .

**DESIGN:** Cohort study.

**METHODS:** A total of 197 eyes (55 eyes of 32 POAG patients with DM in POAG/DM group and 142 eyes of 111 age-matched POAG patients without DM in POAG/DM- group) were included from the Diagnostic Innovations in Glaucoma Study (DIGS) . Type 2 DM participants were defined by self-report of DM history and use of antidiabetic medication. The rates of VF loss and RNFL loss were compared in POAG eyes with and without DM using univariate and multivariable mixed-effects models.

**RESULTS:** The median (interquartile range) follow-up was 5.7 years (4.0, 6.4) . The mean rate of global RNFL loss in the POAG/DM group was 2-fold slower than in the POAG/DM- group overall (-0.40  $\mu\text{m}/\text{year}$  vs -0.83  $\mu\text{m}/\text{year}$ ) .

**CONCLUSIONS:** POAG patients with treated type 2 DM, who had no detectable diabetic retinopathy, had significantly slower rates of RNFL thinning compared to those without diagnosed DM.

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