

# Twenty-year outcomes in patients with newly diagnosed glaucoma: mortality and visual function

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**BACKGROUND/AIMS:** To determine the mortality within 20 years of diagnosis of chronic open-angle glaucoma (COAG) and visual acuity and visual field progression of a cohort followed for 20 years.

**METHODS:** Twenty years following the diagnosis of COAG in 68 of 436 (16%) patients seen in a glaucoma case-finding clinic, visual and mortality outcomes were audited from medical records. Causes of death were obtained from general practitioner records and death certificates. Probability of death was calculated using a Kaplan-Meier survival curve. The visual field of each eye of survivors was graded using a nine-stage severity scale. Visual outcome was analysed at the 20-year follow-up visit.

**RESULTS:** From 68, 14 (21%) were lost to follow-up. In the remaining 54, 20 (37%) were alive 20 years after diagnosis. Of 63% who died, mean age of death was 84 years, most commonly due to vascular disease. Mean age at presentation of those who died was 73.7 years versus 63.2 years for survivors ( $P=0.001$ ). The median time to death was 16 years. On visual field analysis, nearly half (48.9%) of eyes did not deteriorate, but 28.3% eyes deteriorated by more than two stages. Those who died had worse final visual acuity than survivors ( $P<0.001$ ).  
**CONCLUSION:** In this cohort, approximately two-thirds of patients with glaucoma died within 20 years of diagnosis. In most older patients with glaucoma, the overall goal of preventing visual handicap and blindness is achievable 20 years after diagnosis.

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