

# The Early Manifest Glaucoma Trial (EMGT) - 2003



## Objective

To assess factors for disease progression and the effect of the Early Manifest Glaucoma Trial (EMGT) treatment

## Methods

**Design:** Randomized Controlled Trial in Sweden

**Sample Size:** 255 OAG patients

- Follow-up visits q3 months for 4 years

**Treatment Groups:**

- 126 to no immediate treatment
- 129 to topical betaxolol and argon laser trabeculoplasty
- Allowed for shared decision-making to change/begin treatment

**Outcome Measures:**

- Progression based on perimetry or optic disc assessment

## Results

Point 1: Treated patients had half the risk of disease progression

- In a univariate comparison, progression was significantly lower in the treated group than the control group (42% vs. 62%; hazard ratio HR = .60)

Point 2: The magnitude of initial IOP change is related to progression, and treated patients had substantial immediate lowering of IOP

- At the 3-month follow-up, the average IOP lowered by 5.1 mmHg, or 25% from baseline in the treated group; no changes were noted in the control group
- After the 3-month follow-up, IOP between groups had no significant differences
- Each IOP reduction of 1mmHg from baseline decreased risk of progression by ~10%

Point 3: IOP above median at baseline, exfoliation syndrome, bilateral disease, worse baseline median deviation (MD) and age had increased risk of progression

- Progression risk increased by 5% with each mmHg of higher baseline IOP
- Higher progression in patients with worse MD (HR = 1.03 per 1 dB of worse MD)
- Higher progression in older patients (HR = 1.01 per 1 year of age)
- Higher progression in patients with PXF (HR 2.22 if they have PXF)

**TLDR: Initial, immediate IOP reduction is crucial in lowering the risk of progression in early OAG. Additionally, the magnitude of immediate IOP reduction postoperatively predicted disease progression.**