

# Collaborative Initial Glaucoma Treatment Study (CIGTS) - 2001



## Objective

To compare the long-term outcomes of initial with either medication or a surgical procedure (trabeculectomy +/- 5-fluorouracil) treatment for primary open angle glaucoma (POAG)

## Methods

**Design:** RCT

**Sample Size:** 607

**Treatment Groups:**

- 303 to initial medications group
- 304 to initial surgery group (trabeculectomy +/- 5-FU)

**Outcome Measures:**

- Primary: Visual field loss as measured in visual field score
- Secondary: Visual acuity (VA), intraocular pressure (IOP), and cataract development

## Results

**Point 1:** Visual field outcomes were comparable for both medical and surgical treatments over a 5-year period

- In the short run, there was a small significant difference in visual field outcomes, where surgically treated patients had higher visual field scores (worse visual field outcomes), though this neutralized by year 4
- This same effect was insignificant when adjusting for cataracts, which developed at higher rates in the surgical group

**Point 2:** Secondary outcomes showed differing benefits for medical and surgical interventions

- IOP reduction was greater in the surgical group (14-15 mmHg) than the medication group (17-18 mmHg),  $P < 0.0001$
- Visual acuity results were lower in the surgical group over the first few years (~3 letter loss), but this also neutralized around year 4 of follow up
- A significantly larger percentage of surgery treatment patients required cataract removal (17.3% versus 6.2%)

**TLDR: There were no major differences in glaucomatous visual field loss between patients initially treated with trabeculectomy (surgery) versus those initially treated with medical therapy**