Target Intra Ocular Pressure

by

Prof. Dr. ALI KHALIFA

Al Azhar University

EGYPTIAN SOCIETY FOR THE GLAUCOMAS

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Definition of Glaucoma Today

- Optic neuropathy
  - Optic cupping and VF loss.
  - Loss of Ganglion Cell.
- IOP risk factor.

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Other Glaucoma Risk Factors

- Elevated IOP
- Family history
- Advanced age
- Stage of glaucoma
- Race
- Genetic factors
- Microvascular disease - Diabetes - arteriosclerosis
- High myopia

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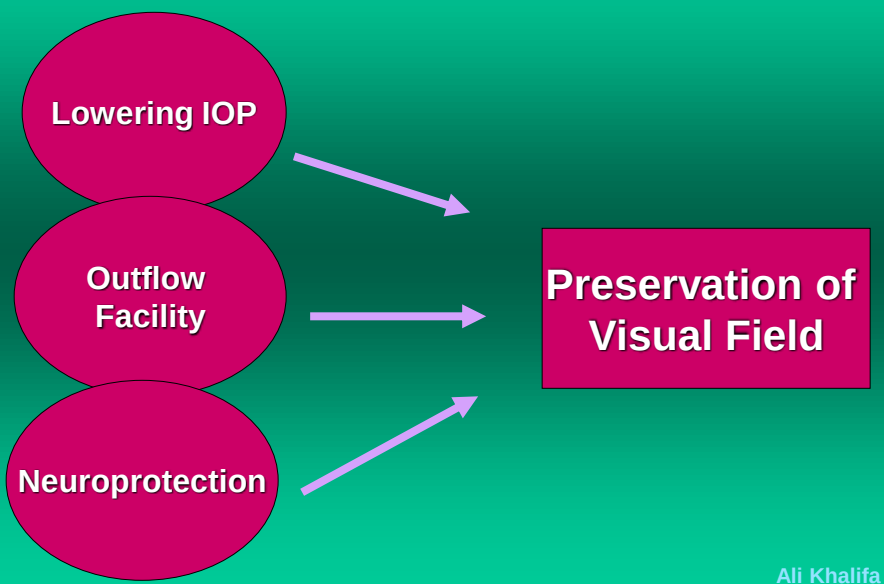
Strategies in Glaucoma



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What is IOP?

- Morning IOP
- Afternoon IOP
- Diurnal IOP
- Nocturnal IOP
- Peaks & troughs (morning vs afternoon; waking up)
- IOP in relation to blood pressure
- Corneal thickness

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What made us think of target IOP.

- Progression of VF inspite reaching physiological press.
- L.T.G.

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What is Target IOP?

- IOP obtained with treatment that prevents progression of glaucomatous V.F damage.
- Target IOP should be selected following individual patient assessment.
- Target IOP readjusted in course of events.

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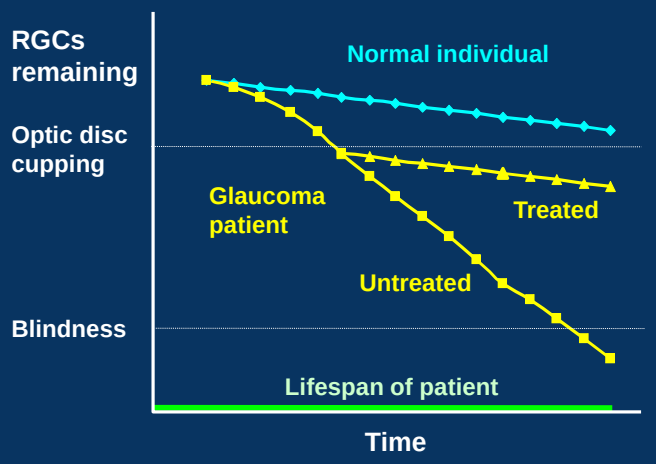
Fundamental Goal: Slow the Rate of RGC Loss to the Age-Dependent Rate



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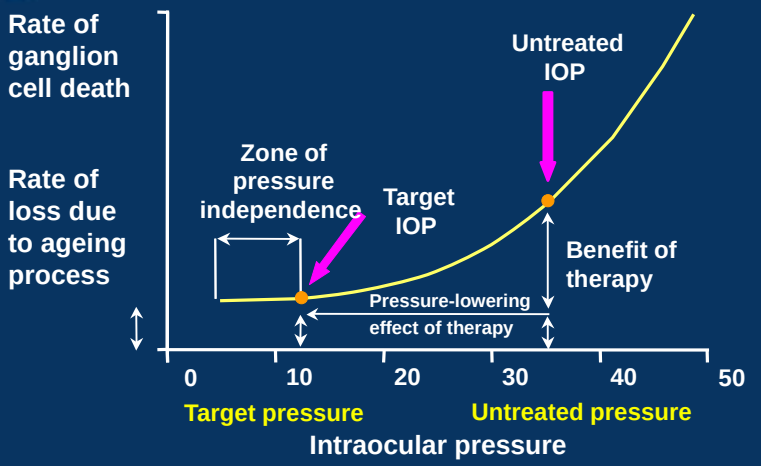
Ideal Target Pressure



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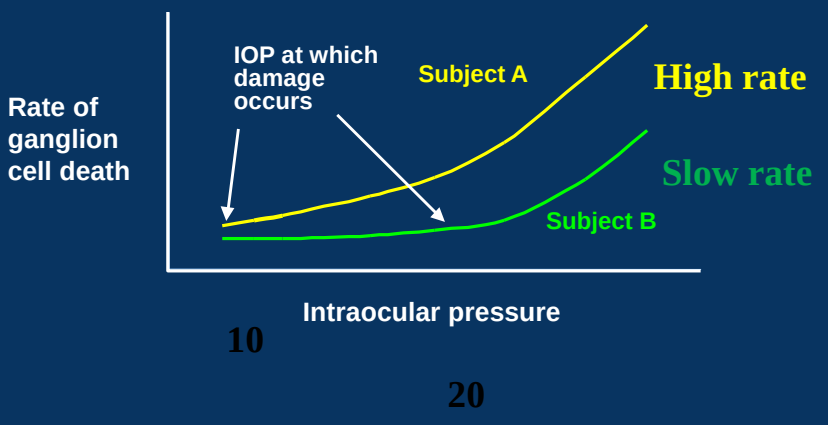
Individuals Vary in Susceptibility to Pressure-Dependent Damage



- No single target pressure level is appropriate for all patients

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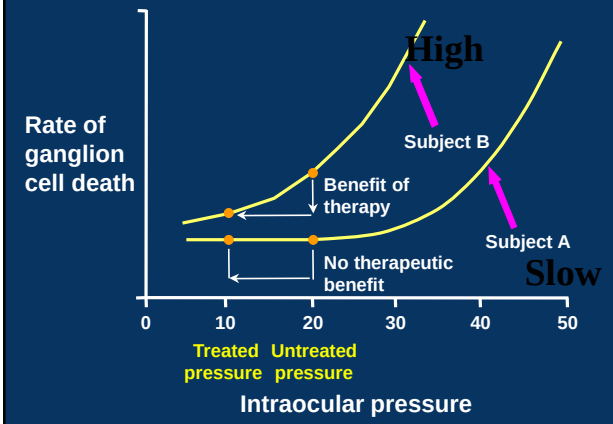
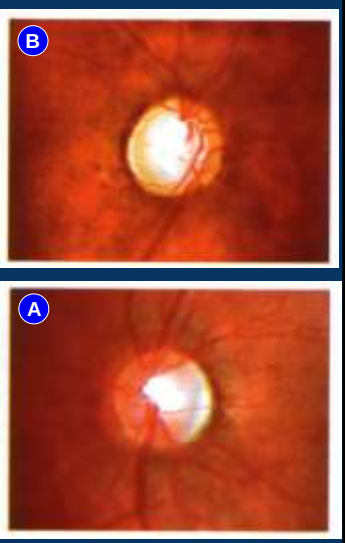
Target IOP is Not the Same for All





Slide kindly provided by Dr. Stefano Gandolfi, University of Parma, Italy.

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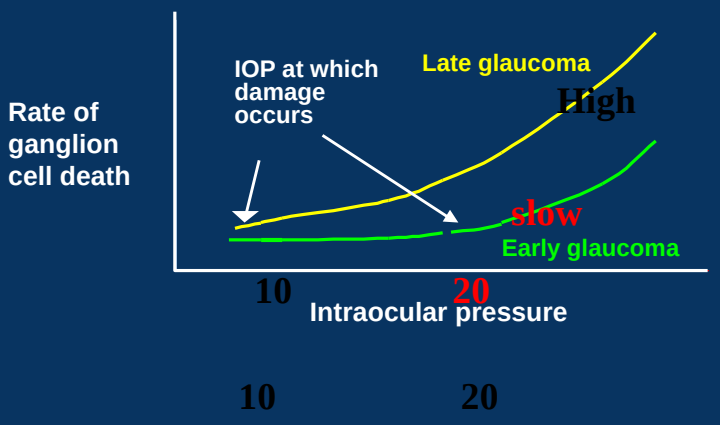
Change in the Susceptibility of Patients During the Course of Glaucoma



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Brubaker. *Am J Ophthalmol*. 1996; 121: 473-483.

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What to Think of during setting target press.

- Severity of existing ON damage.
- Severity of IOP.
- Rapidity with which the damage occurred (rate of progression).
- Patient age and expected life span.
- Family history.
- Race.
- Cost and risk of treatment (and lack of treatment).

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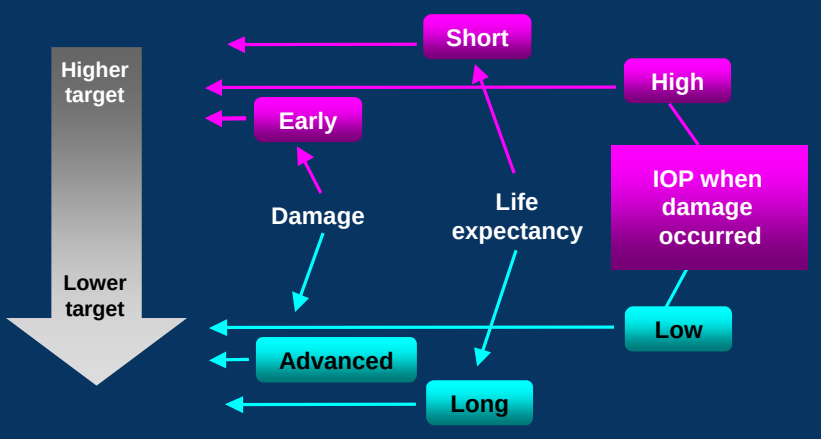
Target IOP



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Adapted from EGS Guidelines 1998.

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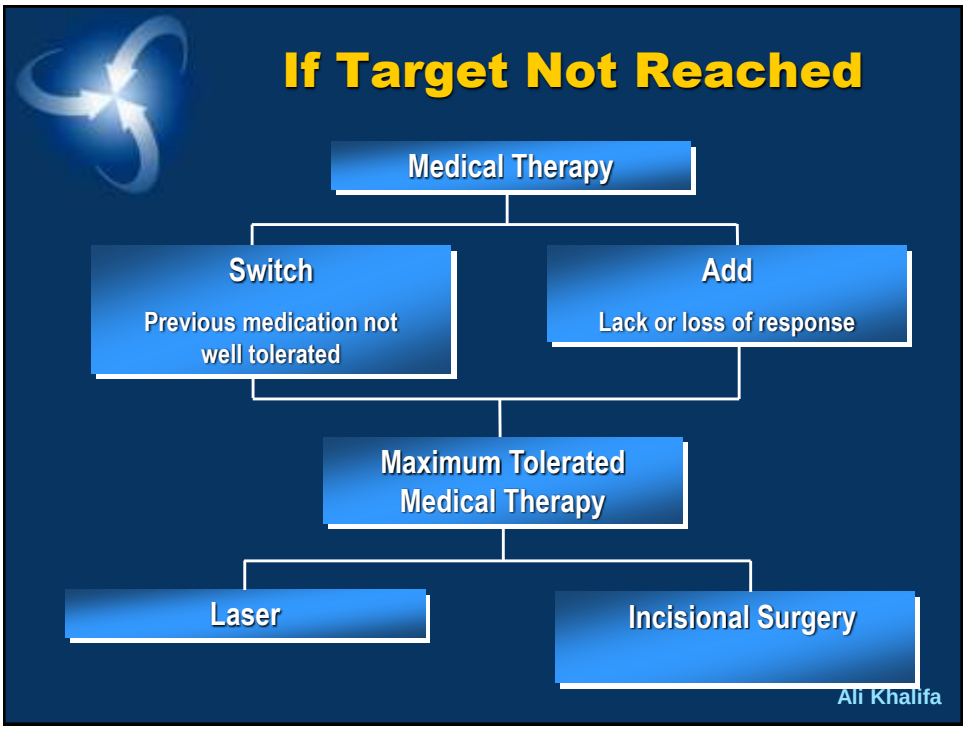

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Go to Lower target Pressure

- Less initial pretreatment IOP.
- More advanced ON damage.
- Vasculopathy
  - Diabetes.
  - Arterio sclerotic cvs.dse.

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STUDIES

What was said previously came from the following studies:

- OHTS : Ocular Hypertensive Treatment Study.
- EMGTS : Early Manifest Glaucoma Treatment Study.
- CIGTS :Collaborative Initial Glaucoma Treatment Study.
- AGIS : Advanced Glaucoma Intervention Study.
- CNTGS :Collaborative Normal Tension Glaucoma Study

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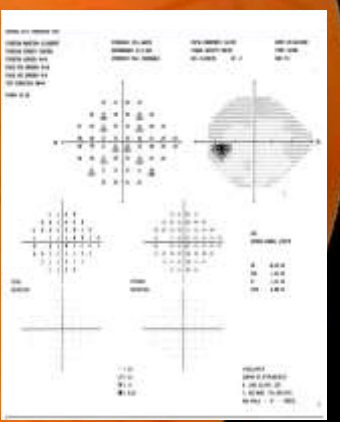
Ocular Hypertensives

- OHTS: (24 to 32 mm Hg) 20% IOP reduction resulted in 54% reduction of the progression rate compared with the untreated group (4.4% vs 9.5%)
- High risk: CCT <555µ
- Low risk: CCT >585µ



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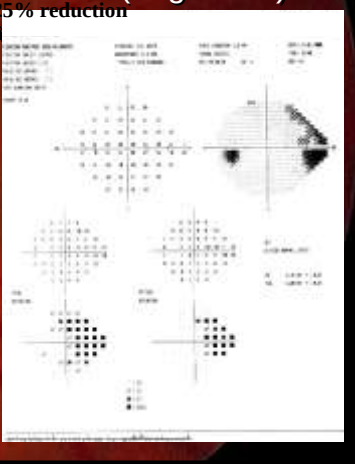
Early Glaucoma

1mm reduction = 10% less progression of VF

- EMGT - IOP reduction of 25%
  - 45% less progression
- CIGTS - IOP reduction from 35% to 48% (target IOP)
  - No progression when no field change, 25% reduction when minor VF , 30% reducti
- Predictive baseline risk factors for progression of visual field
  - Higher baseline intraocular pressure (IOP)
  - Exfoliation (double risk)
  - Having both eyes eligible (double risk)
  - Worse mean deviation
  - Older age



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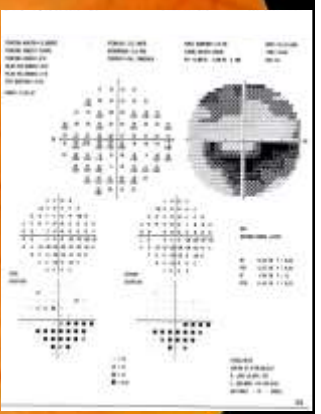
Moderate Glaucoma

- IOP <17 mmHg
  - No progression



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Mao LK, et al. *Am J Ophthalmol*. 1991.

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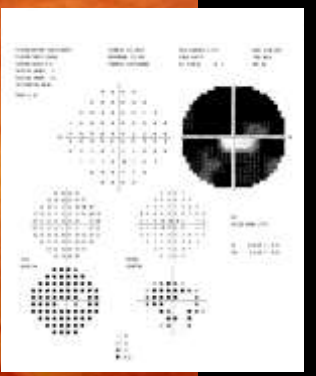
Advanced Glaucoma

- AGIS – mean IOP of 12.3 mm Hg and IOP always <18 mm Hg
  - No progression



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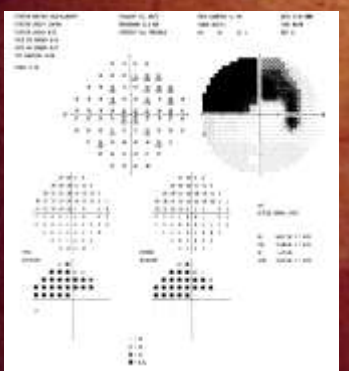
Normal Tension Glaucoma

- CNTGS – IOP reduction of 30% - 3 times less progression (from 60% to 20%)



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