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**Course Title**

Surgical Management of Mild to Moderate Glaucoma

**Course Description**

Recent studies have improved our treatment of early glaucoma. Specifically, we have more knowledge about the ideal timing of laser treatment in the form of SLT or LPI. Additionally, updated MIGS devices have provided myriad treatment options for glaucoma at the time of cataract surgery.

**Course Objectives**

Review determination of disease severity  
Discuss options for initiating treatment for glaucoma based on severity  
Discuss use of SLT as first-line treatment for open-angle glaucoma  
Discuss options for treating primary angle-closure disease  
Updates regarding MIGS procedures +/- Cataract surgery

## Course Outline

1. Determining disease severity and rate of progression
  - a. Degree of damage determined by visual field testing
    - i. Multiple visual fields to confirm stage
  - b. Optic nerve appearance and OCT-nerve findings
  - c. Progression of visual field changes and rate of change
  - d. Progression of OCT changes and rate of change
  - e. At what pressure did progression occur?
    - i. What is the target pressure?
    - ii. Are there signs of IOP fluctuations?
2. Initiating treatment for mild to moderate glaucoma
  - a. Drops vs. SLT
    - i. See LIGHT study
  - b. If starting with drops – strongly consider PGA as first-line
3. Primary angle-closure disease
  - a. Definitions:
    - i. Primary Angle-Closure Suspect (PACS):
      1. >180 degrees iridotrabecular contact (ITC), normal intraocular pressure (IOP), and no optic nerve damage
      2. Angle opens to at least scleral spur on compression (i.e. no PAS)
    - ii. Primary Angle-Closure (PAC):
      1.  $\geq 180$  degrees ITC with peripheral anterior synechiae (PAS) or elevated IOP but no optic neuropathy
    - iii. Primary Angle-Closure Glaucoma (PACG):
      1.  $\geq 180$  degrees ITC with PAS, elevated IOP, and optic neuropathy
    - iv. Acute angle-closure crisis (AACC):
      1. occluded angle with symptomatic high IOP
    - v. Plateau iris configuration:

1. narrow angle due to an anteriorly positioned ciliary body, with deep central anterior chamber
    - vi. Plateau iris syndrome:
      1. narrow angle due to an anteriorly positioned ciliary body, with deep central anterior chamber, and any ITC persisting after patent peripheral iridotomy
  - b. PACS treatment
    - i. LPI vs. observation
    - ii. See ZAP study
  - c. Other angle-closure disease
  - d. EAGLE Study:
    - i. PAC disease with GON or elevated IOP    cataract surgery
4. MIGS at the time of cataract surgery for mild to moderate glaucoma
  - a. Angle-based
    - i. iStent
    - ii. Goniotomy with KDB
    - iii. Hydrus
    - iv. Canaloplasty/trabeculotomy (OMNI, GATT)
  - b. Ciliary Body targeting
    - i. ECP
    - ii. MP-CPC
5. Conclusion
  - a. Always determine class and disease severity when treating glaucoma
  - b. Initiate customized treatment based on these factors
  - c. SLT is a proven first-line treatment for mild to moderate glaucoma
  - d. Angle-closure disease is a diverse set of conditions that may or may not require laser treatment and other treatment options may exist, including cataract surgery
  - e. MIGS procedures at the time of cataract surgery can benefit almost any glaucoma patient with visually significant cataracts