

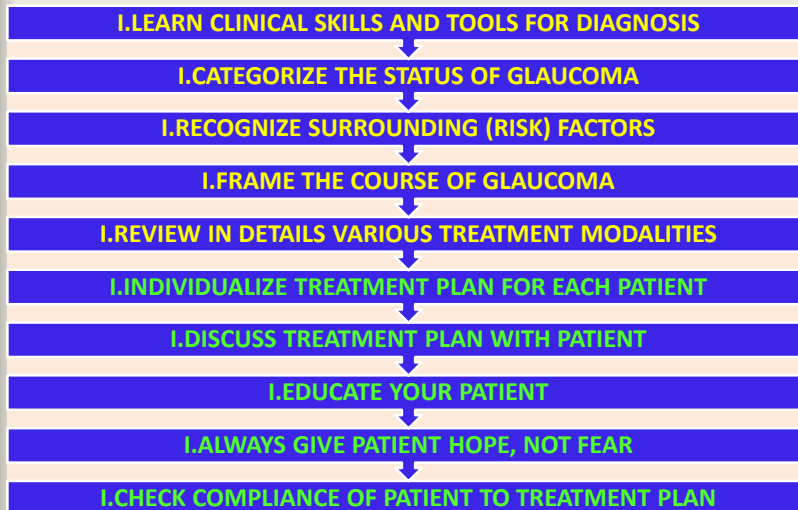
# UPDATES IN GLAUCOMA MANAGEMENT CASCADE

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## GLAUCOMA MANAGEMENT CASCADE



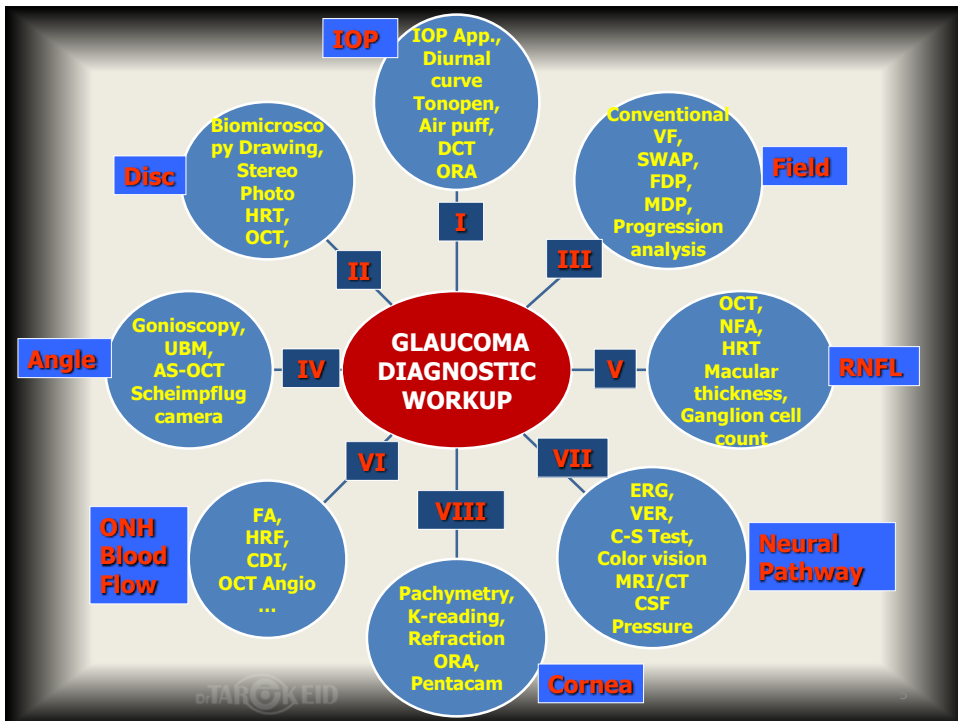
Updates in Glaucoma Management Cascade, Tarek Eid,  
RIO Meeting 2018



# I. LEARN CLINICAL SKILLS AND TOOLS FOR DIAGNOSIS



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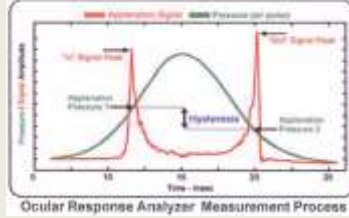
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# UPDATS FOR GLAUCOMA DIAGNOSTIC WORKUP: IOP MEASUREMENT

## Dynamic Contour Tonometry



## Ocular Response Analyzer

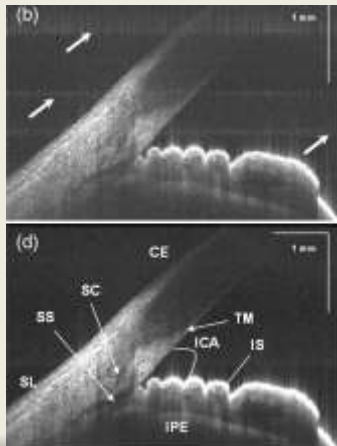


## Home Eye Tonometry

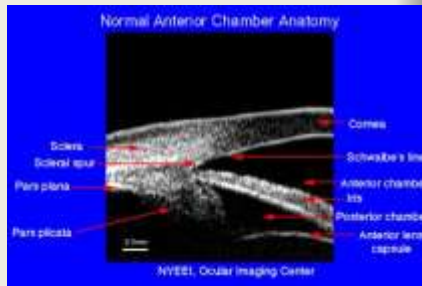


# UPDATS FOR GLAUCOMA DIAGNOSTIC WORKUP: ANGLE ASSESSMENT

## Anterior segment OCT



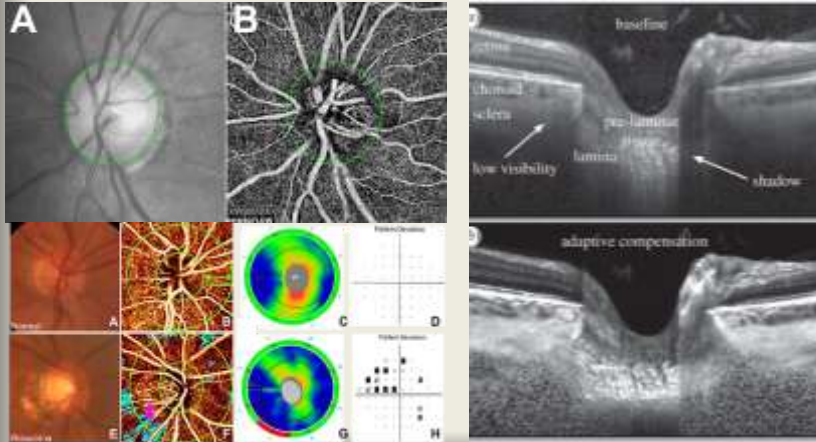
## Ultrasound Biomicroscopy



# UPDATS FOR GLAUCOMA DIAGNOSTIC WORKUP: ONH EXAMINATION

## OCT ANGIOGRAPHY

## SS OCT with adaptive optics for LAMINA CRIBROSA IMAGING

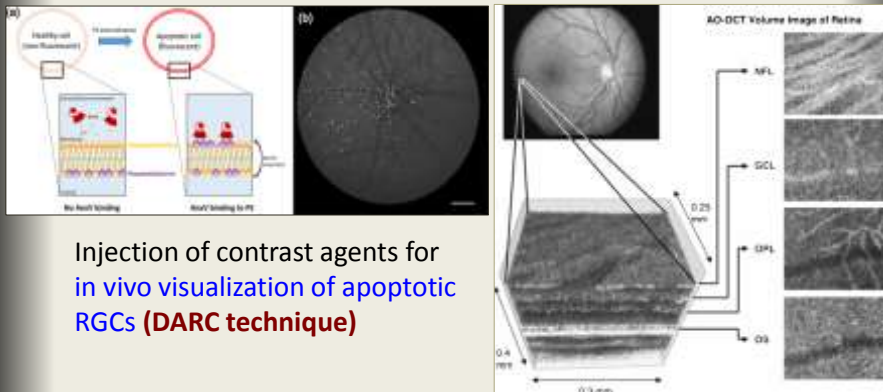


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# UPDATS FOR GLAUCOMA DIAGNOSTIC WORKUP: ONH EXAMINATION

## IMAGING OF APOPTOTIC GANGLION CELLS

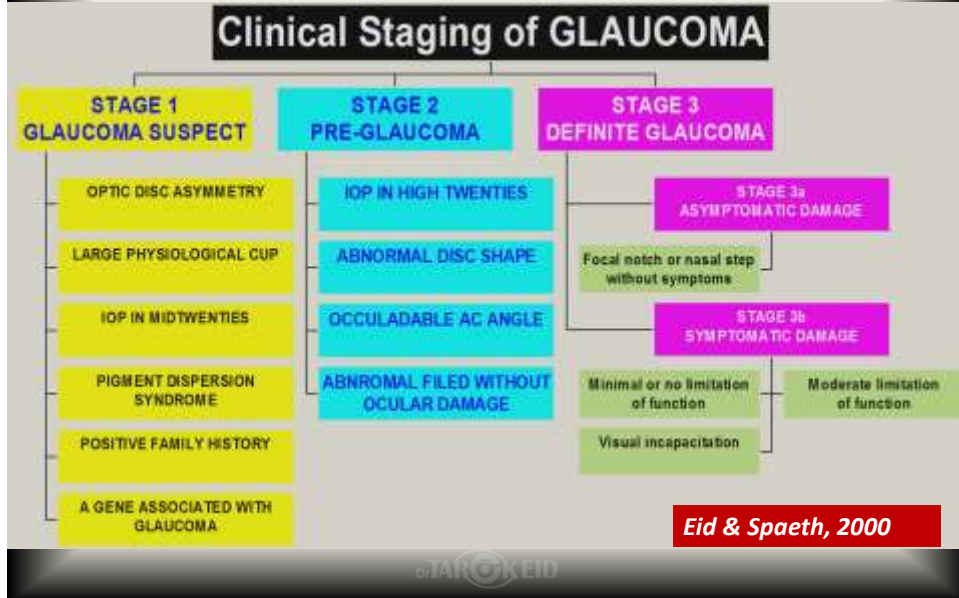
## SS OCT with adaptive optics for RETINAL GANGLION CELL IMAGING



Injection of contrast agents for **in vivo** visualization of apoptotic RGCs (DARC technique)

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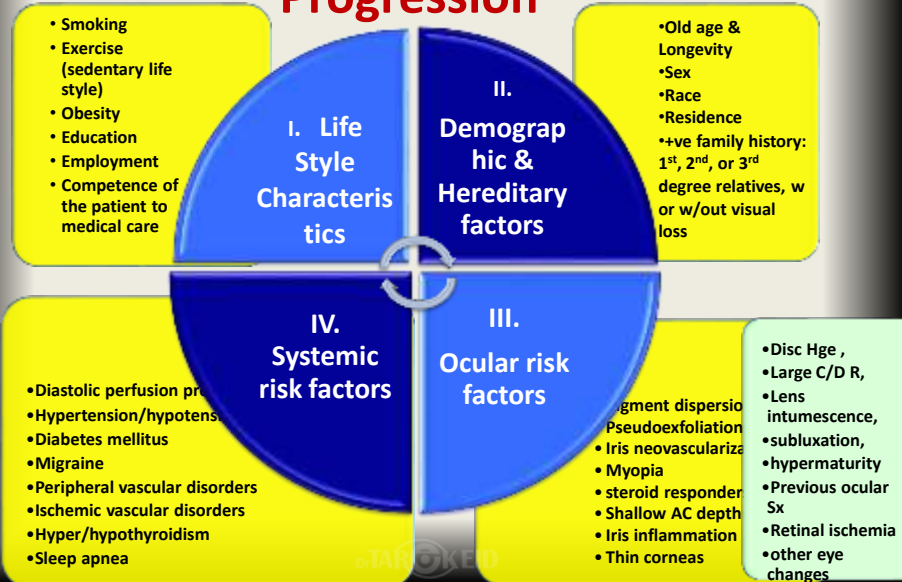
## II. CATEGORIZE GLAUCOMA STATUS



## III. RECOGNZE SURROUNDING RISK FACTORS

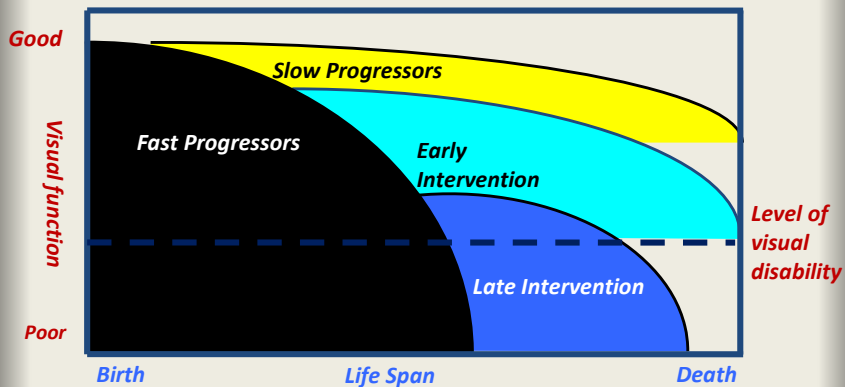


# Risk Factors for Glaucoma Disease & Progression



# IV. FRAME COURSE OF GLAUCOMA

VISUAL FUNCTION OVER THE LIFE SPAN



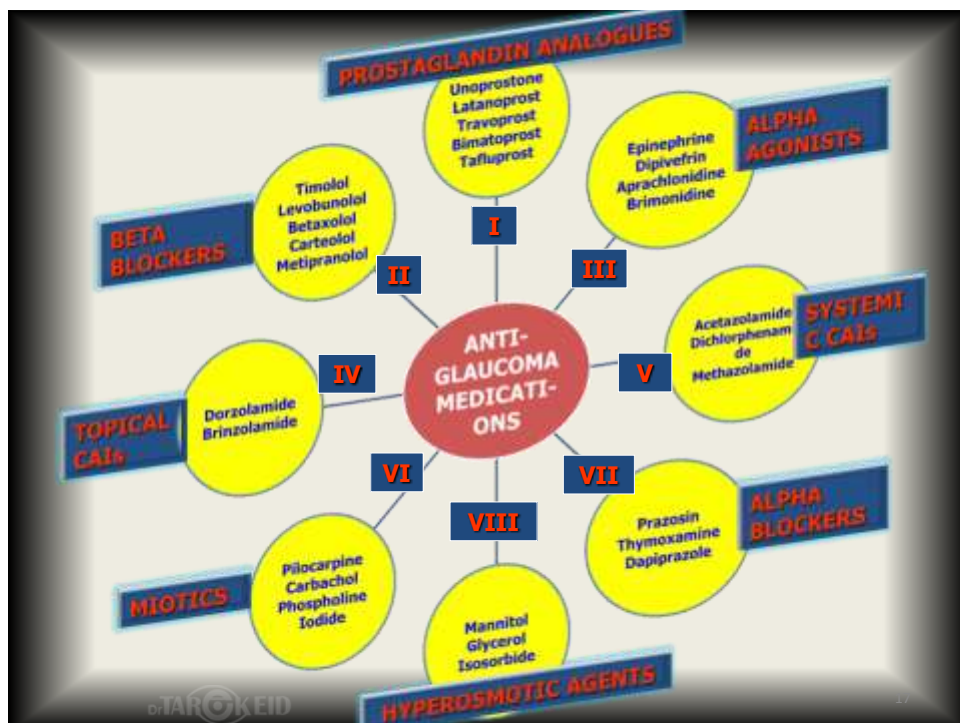
□ Spaeth GL, In Caprioli J, Zeyen T. A critical discussion of the rates of progression and causes of optic nerve damage in glaucoma: International Glaucoma Think Tank II July 25-26, 2008, Florence, Italy. J Glaucoma 2009;18 (6): S1-S21

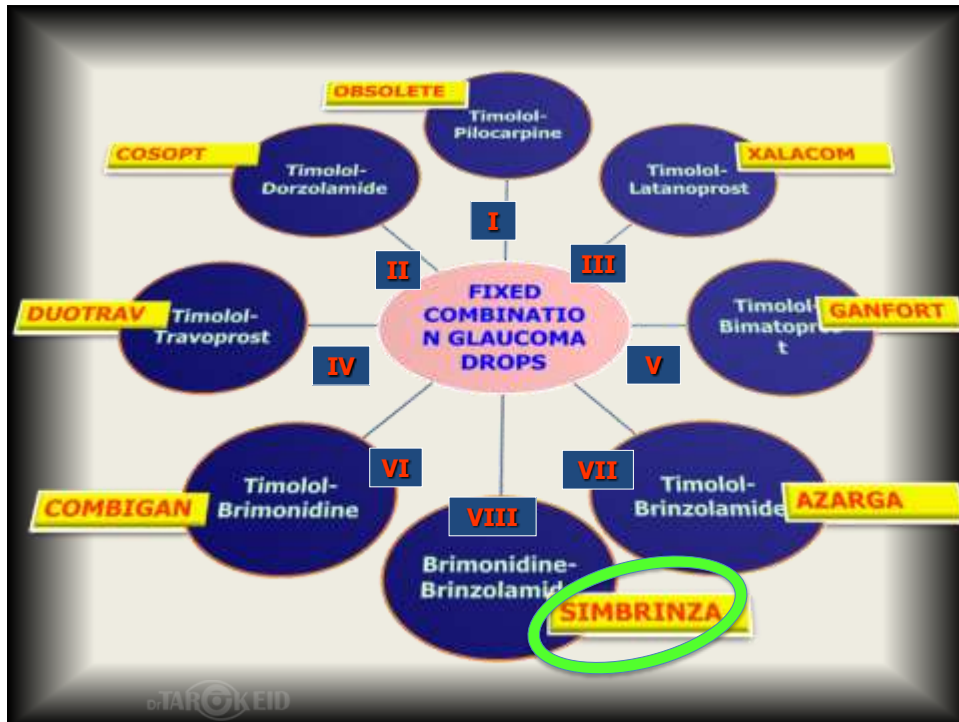
## V. KNOW UPDATES IN VARIOUS TREATMENT MODALITIES

- **OBSERVATION & FOLLOW-UP**
- **MEDICINAL TREATMENT**
- **LASER TREATMENT**
- **SURGICAL TREATMENT**
- **PALLIATIVE TREATMENT**



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## New Advances in Antiglaucoma Medications

### Rho kinase (ROCK) INHIBITORS

- phase 3 clinical trial
- **Target TM, enhancing aqueous outflow**
- Enhance RGC survival
- Increase ocular blood flow

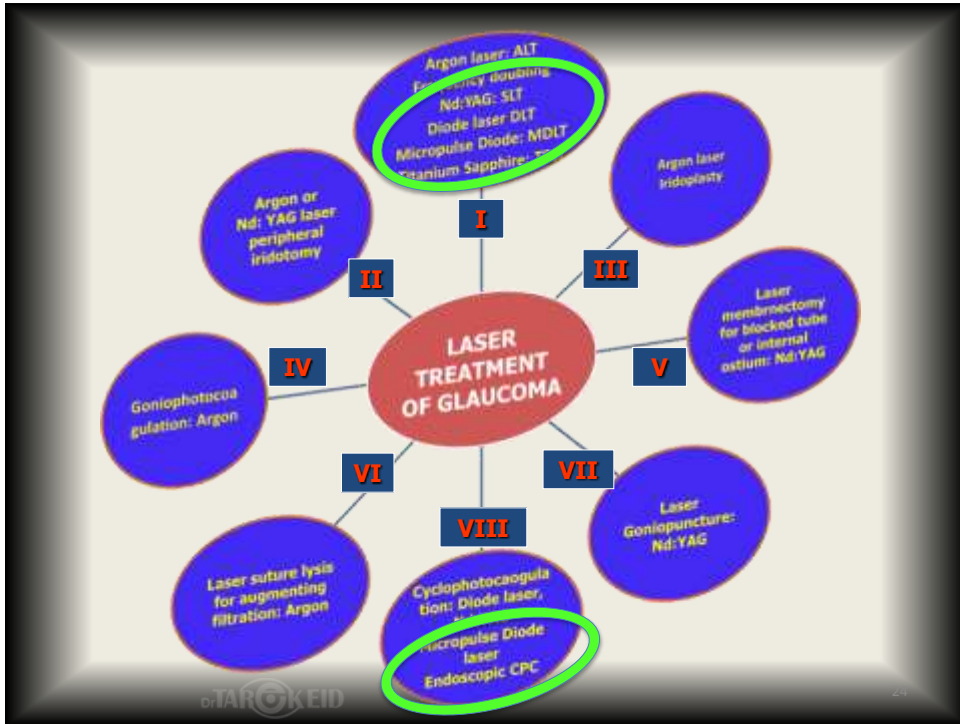
### Stem cell Therapy for Glaucoma

- **Neuroprotection:** Mesenchymal stem cells secrete neurotrophic factors which is impaired with axoplasmic transport blockade
- **RGC regeneration:** unable yet to Regenerate long axons to the brain & develop efferent synapses for higher order visual processing

### Gene Therapy for Glaucoma

- Gene Editing For POAG Proves Successful in Mice
- It has implications for persons with **mutations in the myocilin gene** which have been reported in 4% of POAG patients, most notably juvenile



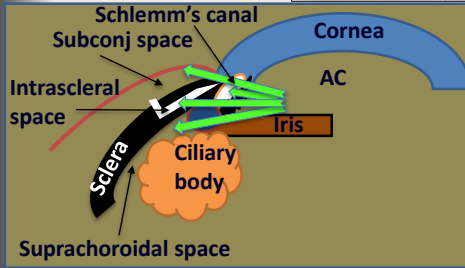
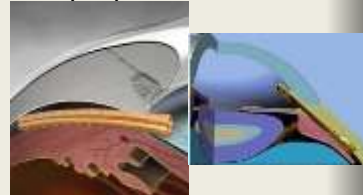


## MINIATURE AQUEOUS SHUNTING DEVICES WITHOUT EXTERNAL RESERVOIR TO:

**Schlemm's canal**  
(iStent, Hydrus)



**Suprachoroidal space**  
(Solex, CyPass, iStent Supra)



**Subconjunctival space**  
(Xen gel stent)



**Intrascleral space**  
(Express shunting device)



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PROS	CONS

**VI. INDIVIDUALIZE TREATMENT PLAN  
(WEIGH UP RISKS VS BENEFITS  
FOR EVERY PATIENT)**

## VII. DISCUSS TREATMENT PLAN WITH PATIENT

- Let patient **actively share in the decision making** of his treatment plan by explaining to him his disease in simple words and the advantages and disadvantages of each treatment modality and **why we need to apply this treatment to suite his particular needs and circumstances**



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## VIII. Educate your patient



- About the disease
- About his condition in particular
- About treatment instructions
- About course of the disease & expectations

**Patients always hope for further visual improvement  
Doctors always hope to do no further harm to patients**

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## IX. GIVE YOUR PATIENT HOPE, NOT FEAR

- Glaucoma for most patients is
  - Bad disease
  - Incurable
  - Blinding
- And for most eye care providers is
  - Frustrating
  - No cure whatever you do
  - No appreciation while you do your best



**No patient should ever leave a visit with a physician without a sense of HOPE**

Harris JC, DeAngelis CD. The power of hope. JAMA 2008;300(24):2919

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## X. CHECK COMPLIANCE TO TREATMENT PLAN & FOLLOW-UP

- Both physician and patient should be competent, actively involved in management plan and properly stick to this plan all the time
- Good doctor-patient relationship is a key to enhance compliance, so please remember to

**SMILE,**



**LISTEN,**



**& CARE** to your glaucoma patient



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