

GONIOSCOPY

Hani M. Gharieb

Lecturer, Ainshams university

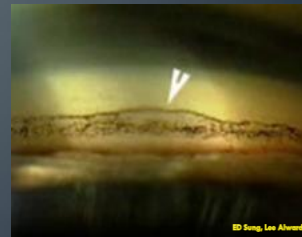
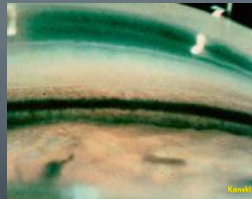
Indications

- 1- In all glaucoma patients.
- 2- Suspicion of angle closure.



3- Causes of secondary glaucomas e.g.:

- a- Neovascular glaucoma.
- b- Pigment dispersion syndrome.
- c- Pseudoexfoliation syndrome.

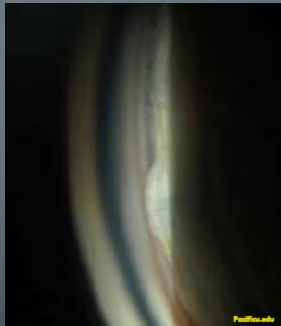


4- Post traumatic:

- a- Angle recession.
- b- IOFB (if suspected in angle).



5- Evaluation of iris lesions e.g. iris cysts, small peripheral melanoma.



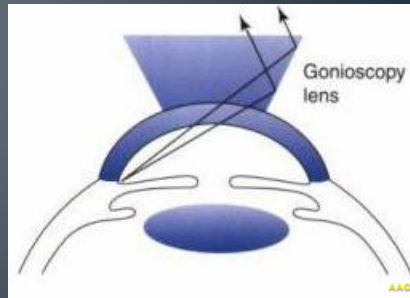
6- Visualization during angle procedures e.g. :

a- Goniotomy.

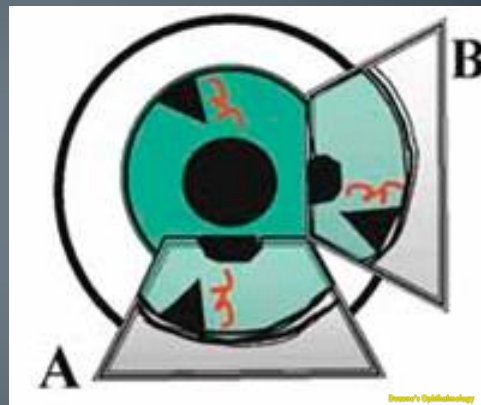
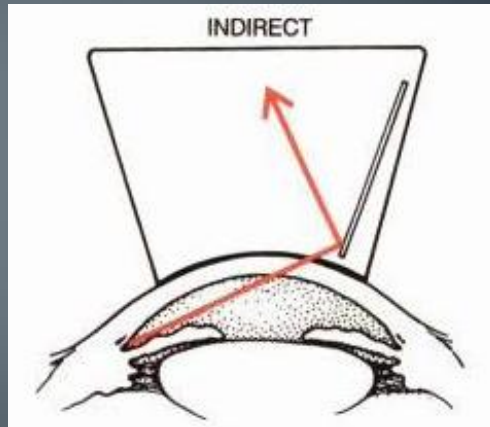
b- Laser trabeculoplasty.



Optical principle

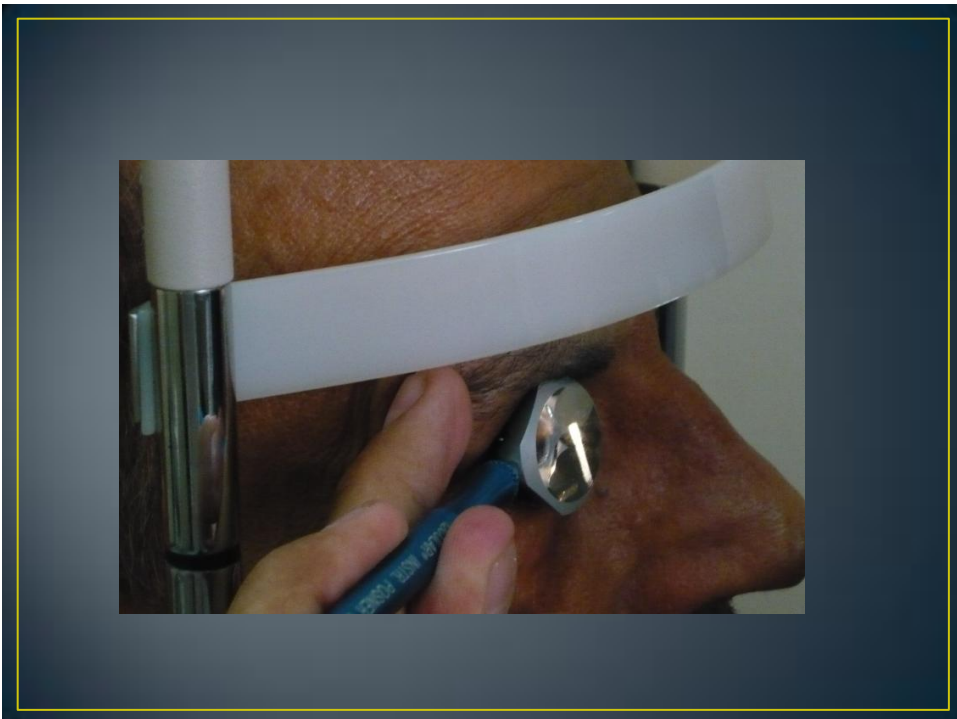
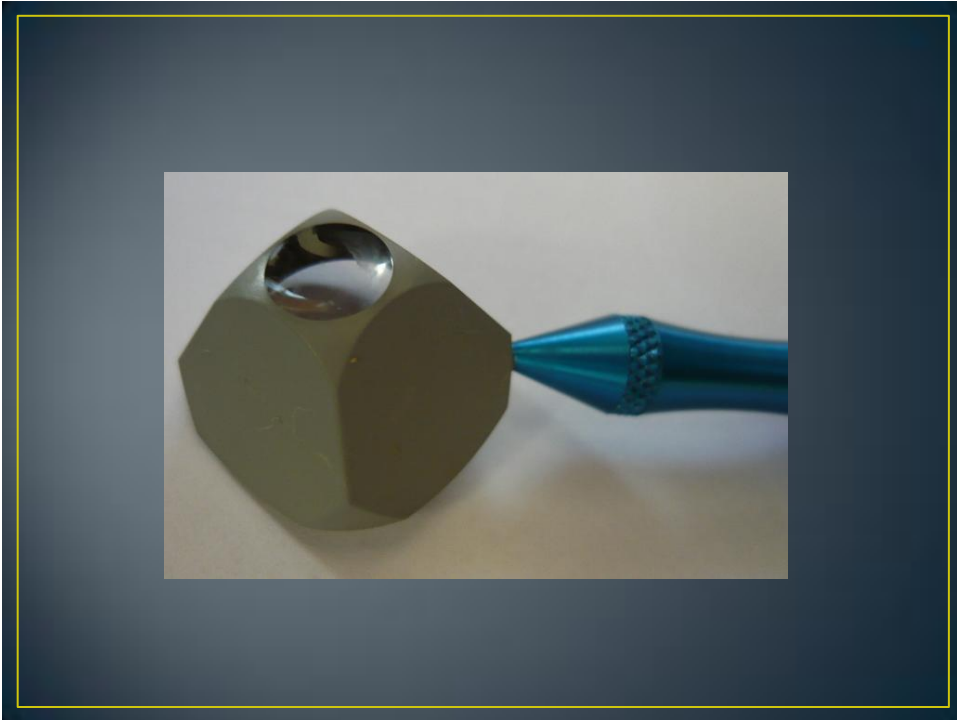


Indirect gonioscopes









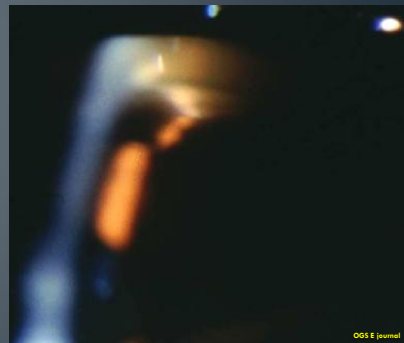
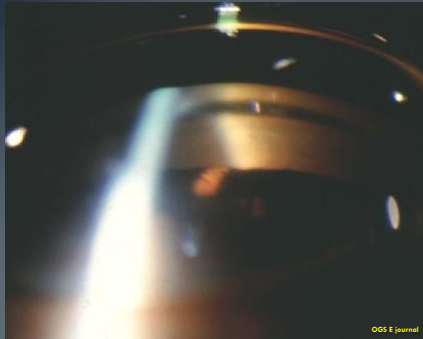
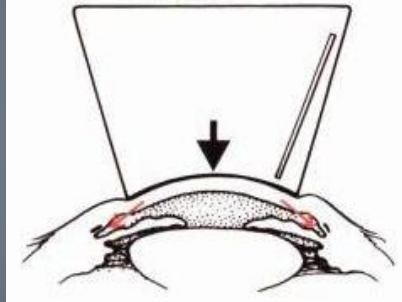
- **Advantages:**

- 1- Quick and convenient.
- 2- Slit lamp: provides variable illumination and magnification, Can create corneal wedge.
- 3- Indentation gonioscopy (e.g. Zeiss and Posner lenses): can differentiate appositional from synechial angle closure.

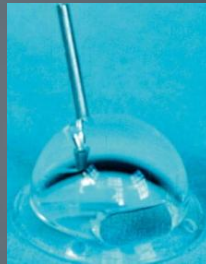
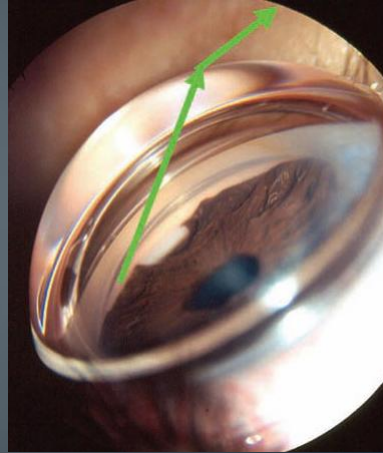
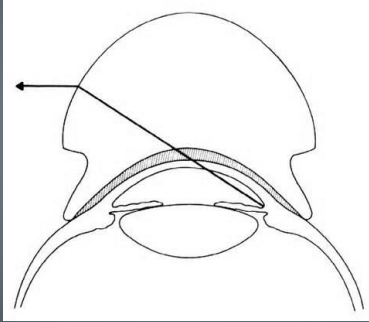
- **Disadvantages:**

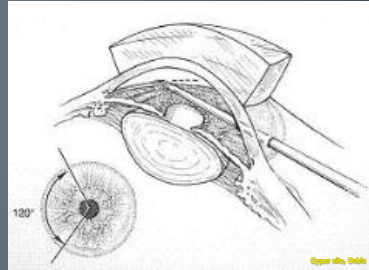
- 1- Mirror image can be difficult for some.
- 2- Excess pressure on the cornea:
 - a- Can increase the degree of angle narrowing in Goldmann lens.
 - b- Can open the angle in four mirror lens.

Indentation gonioscopy



Direct goniolescopes





- **Advantages:**

- 1- Direct view of angle.
- 2- More panoramic view.

- **Disadvantages:**

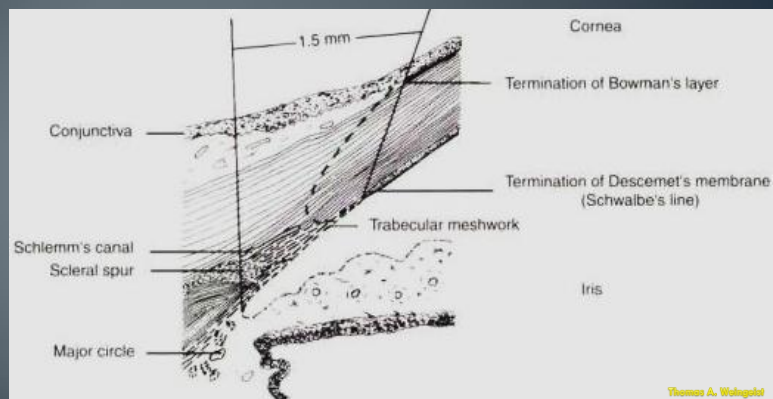
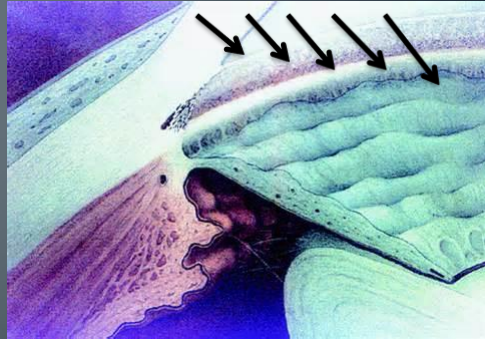
Needs special instruments.

Gonioscopy technique

- 1- Explain the procedure to the patient.
- 2- Do slit lamp examination and tonometry first.
- 3- Use topical anesthesia.
- 4- Moderately dark room.
- 5- Use fairly short and narrow beam perpendicular to the part of angle to be examined.
- 6- Examine part of the angle then rotate the lens gently and examine another part till examining the whole 360 degrees.

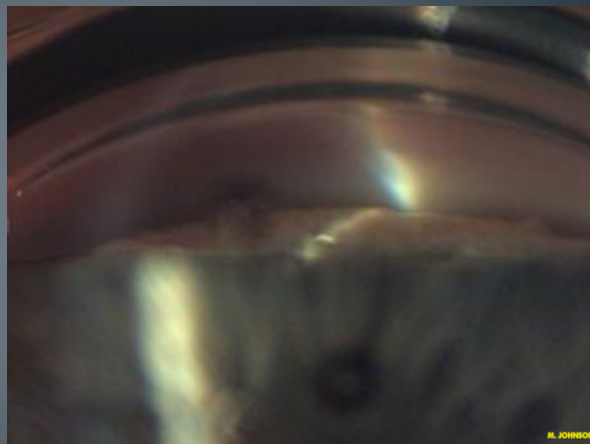
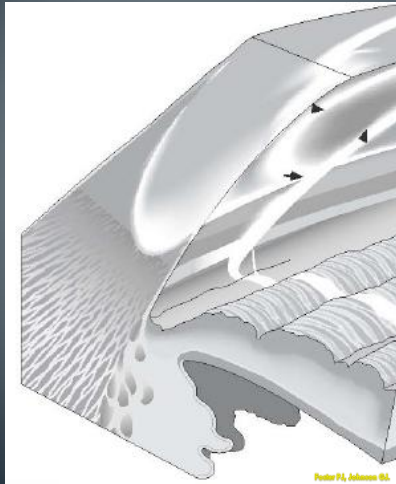
Normal angle structures

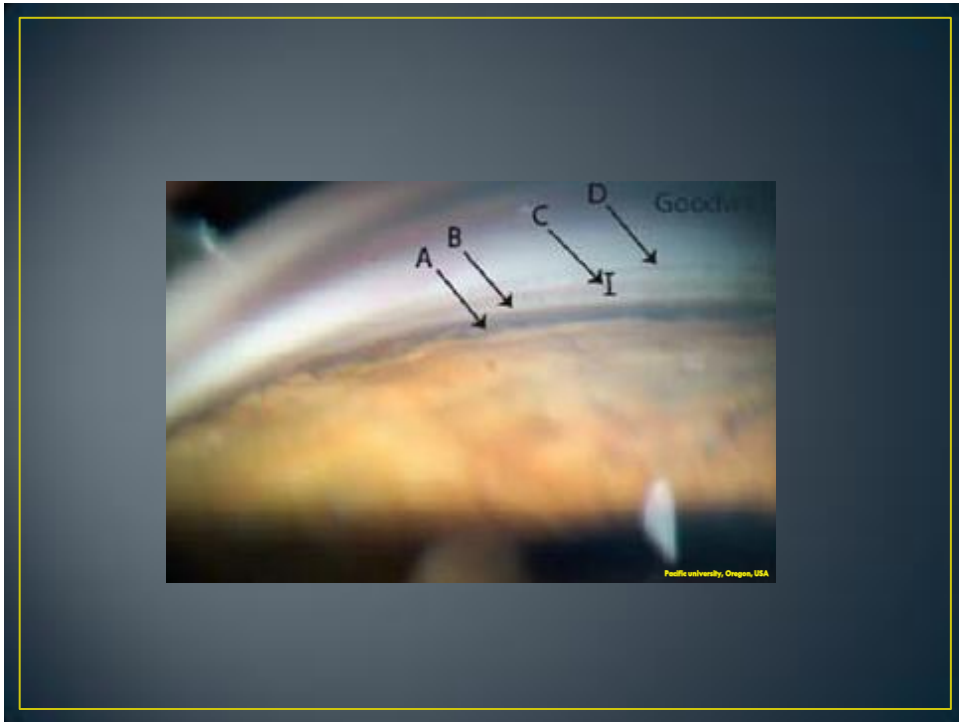
- 1- Schwalbe's line.
- 2- Trabecular meshwork.
- 3- Scleral spur.
- 4- Ciliary body.
- 5- Iris root.



Thomas A. Wiegand

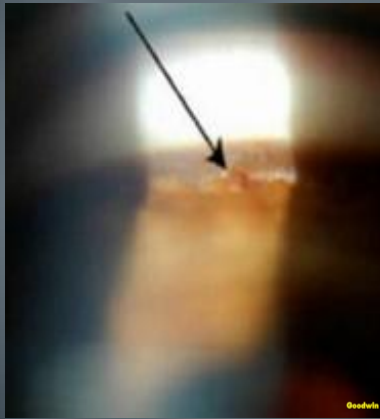
Identification of Schwalbe's line (Corneal wedge)







Normal angle blood vessels	Neovessels
Thick	Fine
Non-arborizing, appear in short segment	Arborizing
Don't cross scleral spur	Cross scleral spur
Radially oriented	



Iris processes

Peripheral anterior synechia

Fine

Broad

Extend into scleral spur

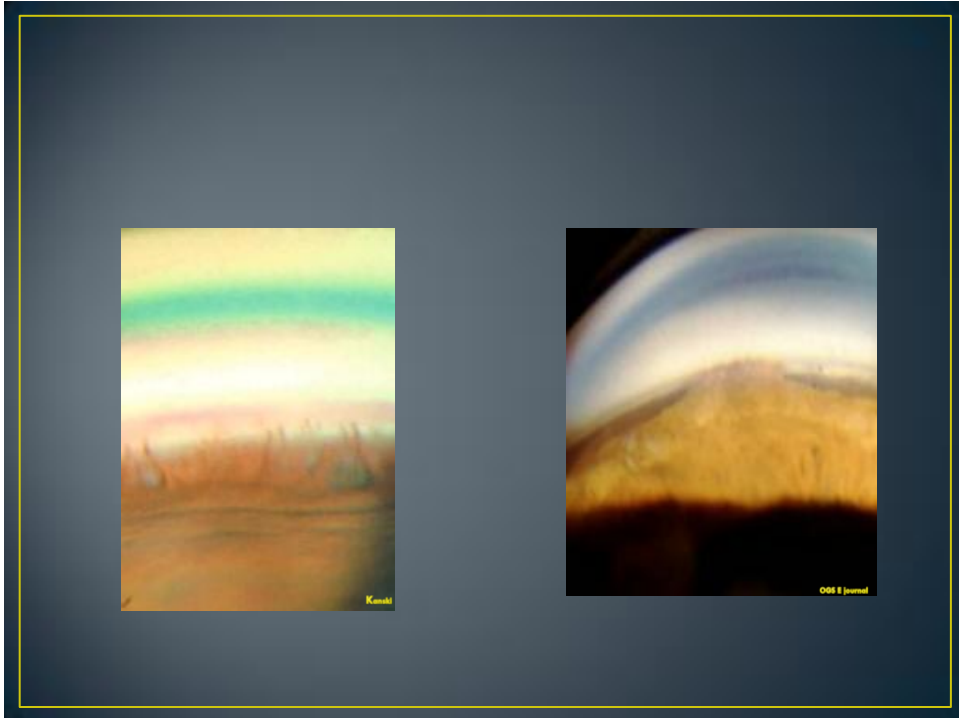
Extend beyond scleral spur

Underlying structures seen

Obscure underlying structures

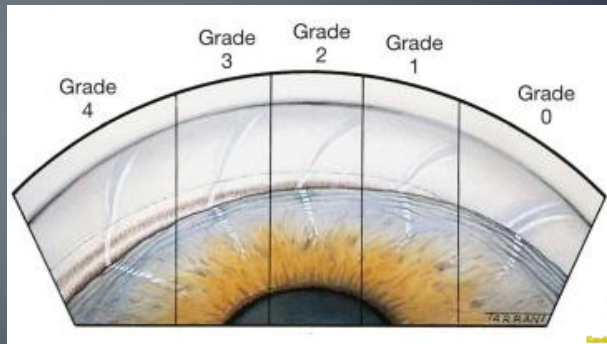
Iris moves with indentation

Resists movement

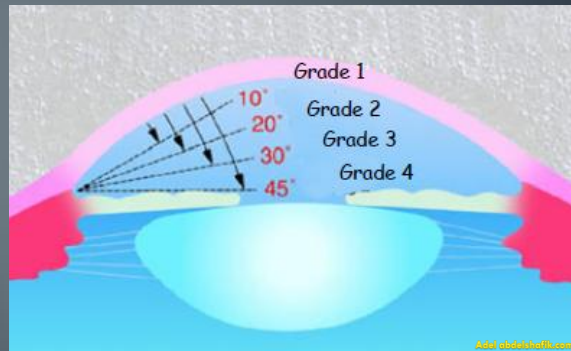


Comment on angle

1- Structures visible.



2- Angle width.



3- Iris contour.

