

Tonometry:

Some steps (Steps 1-10) in the applanation procedure may be done in an order. Some steps (Steps 11-18) be done in a specific order.

- Be sure that the tonometer is calibrated regularly.
- Be sure that the tonometer tip is clean and disinfected between patients. (3% H₂O₂) or 1:10 bleach for 10 minutes. Clean, rinse, dry thoroughly prior to use on a patient's eye.
- Also, can use alcohol pad or swab.

Step 1: Turn on the slit lamp power.

Step 2: Position the cobalt blue filter.

Step 3: Adjust the brightness of the filter. (Adjust to brightest position)

Step 4: Adjust the slit lamp beam intensity to its widest setting.

Step 5: Adjust the slit lamp beam angle. (Adjust to a wide angle, about 45-60°)

Step 6: Adjust for more than 3D of corneal astigmatism by rotating the prism tip so that the **minus** cylinder axis aligns with the red line on the prism tip.

Step 7: Administer anesthetic to the patient. (anesthetic with fluorescein)

Step 8: Instruct the patient.

Ask the patient to:

- Fixate the non-applanated eye on the target that you designate
- Breathe normally
- Keep the chin and the forehead against the rests
- Keep the teeth together and tem ought closed during ht entire procedure
- Keep both eyes wide open
- Assist with keeping the eye open as needed, using finger and thumb, being sure to press only against the orbital bones NOT the eye ball.

Step 9: Set the force adjustment dial (starting around 10mmHg)

Step 10: Set the ocular magnification (lowest magnifying power)

Step 11: Adjust the tonometer to the patient. (Chin rest adjusted so that patient's eye is level with the line on the head rest bar, then also align the patient's with the applanating prism.

Step 12: Position the angle of the slit lamp at ~ 45°.

Step 13: Position the prism. Using slit lamp's joystick, move the prism until it is centered on the cornea and nearly touching it.

Step 14: Applanate the cornea.

(use the joystick to gently move the prism forward until it touches the cornea. Look through the oculars to confirm the tip is touching the cornea. Use care in this step to avoid abrading the cornea.

Step 15: Position the mires.

- Use the joystick to position the mires so that there are 2 equal-sized semi-circles centered on the oculars.
- Note: Be cognizant of too much or too little fluorescein and if you are compressing too hard on the cornea.

Step 16: Take the pressure.

- Slowly move the force adjustment control to adjust the mires.
- Position the mires until the inside edge of each semi-circle are just touching.... NOT overlapping.

Step 17: Observe the pressure reading.

- Gently remove the tonometer from the patient's eye.
- The force adjustment is calibrated in grams. (1g = 10mmHg)
- Each hash mark represents 2/10ths of a gram (or 2mmHg)
 - Example: if the indicator arrow is on the 2 hash mark, that is 20mmHg
 - Example: if the indicator arrow is on the first hash mark past 1, it is 12mmHg.

Step 18: Record the reading.