Gonioscopy and Advanced Retinal Evaluation including Scleral Indentation Workshop

(2 Hour OD Workshop)

Caroline B. Pate, OD, FAAO
The University of Alabama at Birmingham School of Optometry
1716 University Boulevard
Birmingham, AL 35294
205-996-6635
cbeesley@uab.edu

Co-instructor: Robert Wooldridge, OD, FAAO

Abstract
This hands-on workshop will present a systematic approach for completing a gonioscopy exam including advanced and standard techniques using a 3-Mirror or 4-Mirror lens. Attendees will also learn how to examine the retina using the 3-Mirror lens and various other fundus lenses, and will have the opportunity to compare several varieties of these lenses. The workshop will conclude with instruction and hands-on instruction on scleral indentation. Visual aids will be utilized to emphasize interpretation of various findings. Attendees will also sit as patients for this workshop.

Learning Objectives

1) Effectively perform evaluation of the anterior segment angle using a 3-Mirror or 4-Mirror gonioscopy lens.
2) Perform the corneal wedge, and become familiar with its clinical applications in gonioscopy and laser treatment of the angle.
3) Evaluate the posterior pole and peripheral retina using the 3-Mirror lens and various other contact and non-contact fundus lenses.
4) Learn and perform the recommend disinfection procedure for contact fundus and gonioscopy lenses.
5) To perform scleral indentation successfully, using the proper technique and gaining sufficient information.
6) To accurately interpret the results of a peripheral retinal examination and scleral indentation.

Workshop Overview:

10 minutes: Introductions, overview of gonioscopy procedure and image interpretation
25 minutes: Hands-on with gonioscopy using 3-mirror and 4-mirror lenses
15 minutes: Attendees dilate eyes, presenters will review Advanced Retinal Techniques including use of the Retinal 3-mirror and Scleral Indentation

Attendees will then rotate through each of the following 2 stations:
25 minutes: Hands-on retinal 3 mirror evaluation and fundus lens comparison
25 minutes: Hands-on with scleral Indentation

Diagnostic lenses, BIO’s and various scleral indentors will be provided. Attendees will sit as patients for each other.
OUTLINE:

Gonioscopy

I. Introduction

Gonioscopy is used to evaluate a patient’s anterior chamber angle. In comparison to the 4-mirror gonioscopy lens, which has four mirrors to view the anterior chamber angle, the 3-Mirror lens has only one, requiring that the lens be rotated on the eye during the procedure. The other two mirrors on the 3-Mirror lens can be used to examine the retina, as discussed below.

Most 3-Mirror lenses have a large, concave footplate, or corneal contact surface. This feature provides stability and high quality images, but also demands the use of a corneal buffering solution during the procedure, as opposed to the 4-Mirror lens.

In comparison to the 3-mirror gonioscopy lens, which only has one mirror to view the anterior chamber angle, the 4-Mirror lens has four, eliminating the need to rotate the lens on the eye during the procedure.

Most 4-Mirror lenses have a small footplate, or corneal contact surface. This feature provides efficiency and does not require the use of a corneal buffering solution. In addition, compression gonioscopy, in which the gonioscopy lens is pushed against the cornea to confirm a narrow angle’s openness, can only be performed using a 4-Mirror lens, or one with a small footplate. As seen below, some 4-Mirror lenses have a handle (in some cases, which are removable), and some do not.

II. Instrumentation

D-shaped mirror of 3-Mirror Lens

4-Mirror Lenses
III. Contraindications
   a. Hyphema
   b. penetrating ocular injury
   c. severe corneal trauma
   d. ocular surface infection (infectious red eye)

IV. Preparation for the Examination
   a. Prepare the lens
      i. After each use, the lens should be disinfected with a high-level disinfectant which is non-destructive to ophthalmic lenses and other instruments. 2.6% glutaraldehyde is classified by the FDA as a high-level disinfectance and is non-corrosive to metals/lenses. See lens disinfection below.
      ii. When using a 3-Mirror lens, place approximately 3 drops of buffering solution onto the lens surface. Buffering solution is generally not required with 4-Mirror gonioscopy however it can be used if desired.
         1. Celluvisc is a non-preserved solution and is stored in individual unit-dose dispensers. Once opened, each dispenser should be discarded at the end of the day.
         2. Goniosol or Gonak should be avoided in patients having undergone LASIK surgery as the suction provided is stronger than with Celluvisc and may provide a risk to the integrity of the flap.
         3. Genteal gel is also an acceptable buffering solution.
   b. Prepare patient
      i. Anesthetize both corneas with 1 drop of 0.5% proparacaine.
      ii. Position the patient properly in the slit lamp, making sure that the outer canthus is aligned with the canthus markings.
      iii. Turn the slit lamp on moderate light intensity, with approximately a 2mm wide slit at full height and low magnification. The angle of your light beam should be 0-15°.
      iv. Pull the microscope and light housing out of the way so that both hands can get to the patient’s eye—one for lid control and the other for insertion of the lens.

V. Procedure
   a. 3-Mirror Lens insertion
      i. Make note of where the angle or D-shaped (aka "thumb-nail") mirror is on your lens and in what position it will be when the lens is placed onto the eye.
      ii. Direct the patient to look up while the lower lid is retracted (generally using the thumb or a finger from the opposite hand).
iii. Tilt the lens in a way that positions the bottom edge of the lens within the inferior cul-de-sac.

iv. Quickly, yet gently, rotate the lens forward onto the patient’s eye. Be prepared to obtain control of the upper lid if needed. Both upper and lower lid margins must be outside of the rim of the gonioscopy lens.

v. While maintaining good control of the lens, have the patient slowly look straight ahead (give him/her a fixation target like a knob on the
slit lamp). Release any lid control at this point, while maintaining gentle but firm pressure on the lens.

vi. Position and align lens to allow for examination of the area of interest. Generally, you will position the lens so that the D-shaped mirror is positioned superiorly first (viewing the inferior angle first). The center lens should be centered over the patient’s pupil.

vii. Reinstruct the patient to maintain head against forehead rest and fixation straight ahead.

viii. Remind the patient to blink the non-tested eye on occasion to prevent drying of the fellow cornea.

b. 4-Mirror Lens Insertion
i. Place the lens straight onto the cornea so that the mirrors are at 12:00, 3:00, 6:00, and 9:00.
ii. If the patient blinks while trying to place the lens onto the eye, lid control may be required or in some cases a speculum may be used.

b. Examination techniques
i. Direct your light beam towards the center of the appropriate mirror.
ii. Move the base of the microscope in towards the patient until the area of interest comes into focus.
iii. Increase the magnification and rheostat if necessary.
iv. Keep the center lens centered over the pupil to maintain optimum view of your angle.
v. Tilt the lens toward the angle you are examining (away from the position of the angle/mirror) to “open” your view of the angle if necessary. You can also do this by having the patient look slightly away from the angle you are examining.
vi. Turn the mirror gently between your forefinger and thumb to evaluate different quadrants of the anterior chamber angle. Some clinicians use both hands to rotate the mirror.

vii. When examining the inferior and superior angles the light beam should be vertically oriented. When examining the nasal and temporal angles the light beam should be horizontally oriented (rotate the beam to accomplish this).

viii. Scan each quadrant in its entirety and grade the angle using the technique described in the recording section below. During a gonioscopy exam using a 4-Mirror lens, the lens is held steadily against the cornea as the superior, nasal, inferior, and temporal angles are evaluated. Rotate the beam so that it is horizontally oriented for the
nasal and temporal angles. It is not necessary to rotate the lens on the eye to view each quadrant, however the lens can be rotated slightly to view the areas in between each quadrant that were examined initially. Stabilization and centralization of the lens over the cornea throughout the procedure is extremely important and considered to be more difficult than with the 3-mirror lens. This is due to the smaller surface area of the lens that comes into contact with the cornea.

In order to obtain an optimal view of the angle, the patient’s pupil must remain visibly centered within the central lens of the 4-mirror lens.

ix. There are two indications that you are applying too much pressure with your gonio lens:
1. Schlemm’s Canal will fill with blood and will cause the Trabecular Meshwork to be pink in color.
2. The cornea will wrinkle and cause your image to be blurry. You can appreciate these wrinkles if you direct your attention to the cornea.

d. Removal of the lens
i. Depending on the patient’s corneal curvature, various degrees of suction will be present between the lens and the surface of the eye. In order to safely remove the lens, you must carefully break the seal between the two surfaces. A number of techniques can be utilized.
1. Instruct the patient look in towards his/her nose while you turn the lens towards his/her temporal side
2. Rock the lens until the seal is broken, then remove
3. Push on the patient’s lid margin directly under the lens in order to break the seal (see figure below)
4. Do not apply force or pull the lens away from the eye without breaking the suction—corneal trauma is likely to occur.
5. Once the lens has been safely removed, stain the patient’s cornea with a fluorescein strip to check for any epithelial defect
ii. The 4-Mirror lens can be removed simply by pulling it away from the cornea. No suction will be created at the tear-lens interface.

e. Compression Gonioscopy
  i. Performed using a 4-mirror lens only, in order to determine if appositional closure vs. peripheral anterior synechia is present.
  ii. Apply firm pressure to push the goniolens directly back onto the cornea. Enough pressure has been applied when you can see wrinkles on the cornea.
  iii. While pressing observe the angle to see if more structures become visible or if peripheral anterior synechia become apparent.

VI. Instrument disinfection:
Instruments such as gonioscopy lenses that come into contact with mucous membranes require high-level disinfection, as defined and recommended by the CDC.

1. Before soaking, clean instrument with mild soap (or non-abrasive RGP cleaning solution) and water. Dry instrument thoroughly but carefully with a soft, lint-free cloth or non-linting instrument wipe. Place clean, dry instrument into soaking tray. Lenses should be laid on their side to ensure full coverage of lens surface by solution.
2. Close tray and allow instrument to soak for 20 minutes. To avoid damage to the instrument, do not exceed recommended exposure time.
3. Remove instrument from soaking tray and rinse thoroughly to remove disinfection solution. Three cycles of a one-minute rinse with cool or tepid tap is recommended. A final, brief rinse with distilled water or sterile saline is recommended.
4. Dry instrument thoroughly but carefully with a soft, lint-free cloth or non-linting instrument wipe.
5. Store disinfected lens in case ready for the next use.
6. Immediately prior to use, wash the contact surface of a previously disinfected goniolens again with mild soap or a drop of non-abrasive RGP cleaning solution in order to remove fingerprints and debris. Rinse the goniolens thoroughly in tap water and follow with a brief saline rinse. Dry
the goniolens by wicking up moisture with a delicate Kim wipe or soft cloth.

7. The solution in the soaking tray must be changed every 14 days

VII. Interpretation

a. Imagine standing on the optic nerve head and peeking your head out through the pupil with the cornea on top of your head....this is the view that you will obtain with a gonioscopy lens.

b. Your lens position is always opposite the angle you are examining (i.e. when the lens is positioned superiorly you are examining the inferior angle.)
   i. Your view is not laterally reversed, however (i.e. if your lens is positioned temporally on the right eye you observe a lesion at 10:00 in your mirror, the lesion is actually located at 2:00 in the eye).
   ii. In the following example with the mirror positioned superiorly on the right eye, an iris process is seen at approximately 11:00 within the mirror. The iris process is actually located within the inferotemporal area of the right eye, at the 7:00 position.

The image within the D-shaped mirror shows an iris process located at the 11:00 position.

When examining each quadrant, you are looking for the following:

“openness” of the angle?
1. Most posterior angle structure visible
2. Approximate degree of the angle itself (usually ~10-45˚)
   i. The iris contour, or approach to the angle (i.e. flat, convex or concave)
   ii. The level of pigmentation in the TM
   iii. Is there anything unusual about the angle structures (pigmentation, vascularization, debris, neoplasms etc)

d. The corneal wedge can assist in interpretation of angle structures
   i. Best performed using a 3-mirror lens
   ii. After obtaining a clear view of the angle with a parallelpiped beam, reduce beam width to an optic section and move the light source out to an angle of ~20˚.
   iii. As you move your light source out to this angle, watch for the two different bands of light to come together at the cornea (one beam on the endothelium, one beam on the epithelium). The point where these two beams come together is Schwalbe’s Line.
   iv. After note the location where the beams come together and open the beam width to identify the structures below Schwalbe’s line.
e. Gonioscopy.org is an excellent resource for images and videos of clinical examples.

VIII. Recording
a. Use a goniogram (the “X”) which represents the main quadrants of the anterior chamber angle (superior, nasal, temporal, and inferior)

b. In each quadrant, record
   i. the most posterior structure
   ii. the grade assigned based on the Shaffer system (implies the estimated angle openness/angle approach)
   iii. iris contour (flat, convex or concave)
   iv. degree of TM pigmentation (0 to trace to 4+)
   v. any abnormalities seen in the angle

c. Following the procedure, also record (-) or (+) corneal NaFl staining and include a labeled drawing if staining is present.

d. Use clock hours (superior at 12:00) to describe where exactly a lesion or area of interest is located.

e. Use the table below to reference estimated angle openness and likely visible structures:

<table>
<thead>
<tr>
<th>Shaffer Grade Assigned based on estimated angle openness</th>
<th>Estimated Angle Openness: Determines Grade assigned</th>
<th>Structure that is likely visible</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV</td>
<td>45-35°</td>
<td>CBB</td>
<td>Wide open</td>
</tr>
<tr>
<td>III</td>
<td>35-20°</td>
<td>Scleral Spur</td>
<td>Wide open</td>
</tr>
<tr>
<td>II</td>
<td>20°</td>
<td>TM/Schwalbe’s Line</td>
<td>Narrow</td>
</tr>
<tr>
<td>I</td>
<td>≤10°</td>
<td>Schwalbe’s Line</td>
<td>Extremely narrow</td>
</tr>
<tr>
<td>0 (zero)</td>
<td>0°</td>
<td>No structures visible</td>
<td>Narrowed to slit/Closed</td>
</tr>
</tbody>
</table>

*note: Corneal wedge not visible

f. The following abbreviations may be used:
   i. Closed = no visible structures
   ii. SL = Schwalbe’s line
   iii. ATM = Anterior Trabecular Meshwork
   iv. PTM = Posterior Trabecular Meshwork
   v. SS = Scleral Spur
   vi. CBB = Ciliary Body Band
Advanced Retinal Examination Using the 3-Mirror Lens

I. Introduction
The 3 mirrors and the center lens of the Goldman 3-Mirror lens as well as the center lens of some 4-Mirror gonioscopy lenses can also be used to examine the retina. Several additional options for fundus contact lenses exist. Options vary based on material, size, number of mirrors (1-4) and the presence of a flange. These contact lenses offer a stable, high-quality, stereoscopic image of the area of interest. These techniques are often utilized following a BIO or precorneal fundus examination to more closely examine a retinal finding.

II. Anatomy of the 3-Mirror Lens

Central lens:
- Direct, magnified view of posterior pole (central 30°)
- High minus lens: -64D

Rectangular/Cylindrical lens:
- medium sized
- used to examine retina from the equator out to ora serrata
- requires dilation

D-shaped lens:
- Smallest
- Used for gonioscopy if pupils are undilated
- Use to view pars plana if pupils are dilated

Trapezoid-shaped lens:
- Largest
- used to examine retina adjacent to the posterior pole out to approximately equator
- requires dilation
III. **Clinical Indications**

a. Lesion noted during BIO or precorneal that requires confirmation with a more thorough examination
   
i. Peripheral retina
   1. retinal hole or tear
   2. lattice degeneration and other peripheral retinal degenerations
   3. suspicious choroidal nevus or other growth
   4. angle or peripheral retinal tumor

ii. Central retina/posterior pole
   1. macular hole
   2. macular edema from diabetes, ARMD or after cataract surgery
   3. central serous retinopathy (CSR, or ICSC)

b. Uncooperative patient unable to sit well for precorneal examination, especially when a thorough exam is absolutely necessary
   
i. Diabetic patient
   ii. ARMD patient
   iii. Decreased vision with no other cause

IV. **Recording and Interpretation**

a. Central lens of gonioscopy lenses or most other fundus contact lenses: view of retina is direct, not laterally reversed or upside down.

b. Interpreting the image with all other mirrors is much like with gonioscopy. The position of the mirror indicates that the opposite section of the retina is being examined (e.g., mirror located at 3:00, so area of retina at 9:00 is being examined), and the actual view is reversed in the anterior-posterior direction only and additional example below. This is in comparison to BIO and precorneal, in which the view is laterally and anterior-posteriorly reversed (i.e. upside-down and backwards)

c. Example: If using the large, trapezoid-shaped mirror at the 9:00 position on the patient’s right eye, you are examining the nasal area of the retina, and the image is reversed as shown below:
**Advanced Retinal Examination Using Scleral Indentation**

I. **Introduction and Principals of scleral indentation (or scleral depression):**
   a. Scleral indentation is an important procedure that is necessary in many cases to obtain a more thorough view of some areas of the peripheral retina. Scleral indentation is often considered standard of care, therefore all clinicians should be proficient with the procedure.

   b. Several varieties of scleral indentors/depressors exist:

   - **Schocket double ended scleral indentor:** Use the larger end for most situations. Rotate the indentor so that the thickest part of the bulb on the end of the indentor will be directly adjacent to the globe. This will occupy more under the globe, making it easier to see the indented retina.

   - **Keeler scleral indentor:** For superior indentation, the curvature should match the contour of the brow bone. For inferior indentation, the instrument can be rotated so that the curvature matches that of the globe. The bulb on the end of this indentor is small, causing it to occupy less space and making it more difficult to detect

   - **Heine Josephberg scleral indentor:** Use the larger end for most situations. Ergonomically curved tip is designed to follow contour of globe to help maximize patient comfort. Position the indentor so that the convex side is towards the eye.
c. Scleral indentation:
   i. causes a change in the angle of the reflectance of the light exiting the patient’s eye. This results in increased contrast between the choroid/RPE and the sensory retina (see figure below).
   ii. decreases retinal translucency which increases contrast between a retinal hole or tear and the surrounding retinal tissue.
   iii. allows the examiner to more easily view and identify retinal flaps or tags extending into the vitreous because you can see lesions in profile.

d. Clinical Indications
   i. Situations requiring scleral indentation of 360° of peripheral retina
      1. Unable to view anterior (very peripheral) retina, due to poor dilation or anteriorly displaced ora serrata
      2. Symptoms of flashes or floaters (this could indicate a retinal break or detachment)
3. Recent history of blunt trauma, in order to rule out a retinal break or detachment. Note: scleral indentation is contraindicated if a hyphema is present.

4. High axial myopia (myopia caused primarily by axial length), which increases the risk of retinal tears and breaks

ii. Situations requiring scleral indentation only of the specific area in question, unless accompanied by one of the 4 scenarios above
   1. Previously diagnosed peripheral retinal anomaly
   2. Lattice degeneration (in many cases, such as if there are questionable breaks or symptoms): breaks will be easier to evaluate and any holes will appear darker and surrounding tissue lighter if there is an edematous cuff of subretinal fluid (these findings may make the lesion a bigger risk for retinal detachment and so more likely to require treatment).

3. Peripheral retinal holes or breaks: if fluid is present you will notice white with pressure and breaks will open up in a gaping manner (“fish mouth”)

4. White without pressure with areas of possible breaks (White without pressure, however, is a generally benign peripheral retinal finding)

5. Questionable hemorrhages versus holes: hemorrhages will just become elevated with indentation and holes will either gape open, look larger and/or darker with a surrounding edematous (white) cuff.

6. Questionable areas of possible retinal detachment or flat retinoschisis.

e. Contraindications
   i. Recent intraocular surgery (previous 6 weeks)
   ii. Suspected penetrating injury
   iii. Hyphema
   iv. Ruptured globe

f. Other points to note
   i. Glaucoma patients should be examined very gently. Scleral indentation can briefly increase IOP by about 10mmHg. Glaucoma patients with significantly elevated IOP should have their IOP lowered with topical and or oral medications in office prior to scleral indentation – mandatory if the glaucoma is advanced.

   ii. Patients will experience some discomfort during scleral indentation. However, with proper technique the discomfort is minimized. Advise the patient it will feel like pressure and demonstrate by pressing with your finger on the closed globe.

   iii. Indentation does not enlarge existing retinal holes, tears, or detachments, nor has it been documented to cause retinal holes, tears, or detachments.

   iv. If you press too far anteriorly you will put pressure on an EOM or the ciliary body and it will be painful for the patient.
II. Procedure (Trans-lid technique)

a. Educate and fully dilate your patient with one or more mydriatic agents.
b. Recline the patient if desired and not contraindicated
c. Clean scleral indentor with an alcohol swab before each use (if indentor was in contact with mucous membrane, it will require high level disinfection after use).
d. To examine superior fundus (as seen in image below):

![Diagram of superior fundus examination](image)

Figure 5. A. With the patient looking downward, the depressor is placed at the superior lid fold. B. As the patient looks backward, the depressor is allowed to follow the eye into the orbit tangential to the globe. C. Gentle pressure is applied to the globe with the tip of the depressor.


i. Instruct patient to look down (always start by having the patient look in the opposite direction of the area of retina you will be examining).

ii. Position the blunt indentor tip slightly above the primary skin fold of the upper lid. This will ensure that pressure is not exerted on the tarsal plate. Position the indentor tip at 12:00 (superior limbus is always 12:00) and your light will enter the pupil at 6:00.
iii. As the patient slowly looks up to mid-peripheral to peripheral gaze, gently guide the indentor back into the orbit following the eyelid. Always ensure that the indentor is tangential (NOT perpendicular) to the globe. Do not use the eyebrow as a fulcrum for the indentor, as this can be painful to the patient.

iv. The indentor must be buried, so that the tip is not visible. It must be bisecting the pupil, so that the area of retina elevated by the indentor will be visible.

v. Once the indentor is in position and your patient is looking in the direction of interest, insert your lens and BIO light into position in order to create the optical system.

1. Scanning the retinal reflex without the condensing lens may be helpful to indicate proper position of the indentor. The indented area of retina will usually give a darker reflex than the rest of the retina.
2. Continue to keep the stalk of the indentor so that it bisects the visible pupil, placing the foot of the indentor directly in alignment with the area of peripheral retina you are examining.
3. Your BIO light should enter the pupil exactly opposite (180° away from) the indentor.
4. If you are not directly opposite the indentor and the indentor is not exactly bisecting the pupil, your indented retina will not be visible in the condensing lens.
5. The indentor is now an essential part of the optical system you have created. It must be exactly in line with your BIO light source and the clinician’s visual axes.
6. Lid control is extremely important, as with any BIO examination of the peripheral retina. One lid is often being controlled by the indentor, however.

vi. Once you have your area of indented retina in view, translate the indentor, move indentor side to side and then up and down, looking at the lesion in question in different profiles when applicable.

1. Does it have a flap or any loose tissue moving around?
2. Are there adhesions in the vitreous that become evident with motion?
3. Is the area darker or lighter with indentation?
4. Does the area become elevated only, or does it have appreciable edges?

e. To examine the inferior fundus:

i. Instruct the patient to look up.

ii. Place the indentor 3 to 4mm below the lower lid, just below the fold in the eyelid. Position the indentor tip at 6:00 and your light will enter the pupil at 12:00.
iii. As the patient slowly looks down to mid-peripheral to peripheral gaze, guide the indentor back into the orbit following the eyelid. Always ensure that the indentor is tangential (NOT perpendicular) to the globe.
iv. As mentioned above for superior indentation, once the indentor is in position (i.e. buried, and bisecting the pupil) and your patient is looking in the direction of interest, insert your lens and BIO light into position in order to create the optical system.

![Image of gonioscopy procedure](image)

f. Temporal and nasal examinations
   i. Trans-lid technique: Position indentor at the canthus and have patient look opposite where you want to examine, as with superior and inferior views
   ii. Trans-conjunctival technique often must be utilized
      1. Requires topical anesthetic
      2. Requires high-level disinfection of scleral indentor
      3. Procedure: Carefully position the indentor on the bulbar conjunctiva at the medial or lateral canthus and proceed as with the trans-lid technique.

g. The equatorial retina may also be depressed simply by changing the patient’s gaze. Instruct the patient to leave the extreme gaze and move to a more primary gaze (like when examining the midperipheral retina). This will allow indentation of the equatorial retina.

h. With proper technique, the scleral indentation procedure will be uncomfortable but very rarely painful to the patient. The patient should feel pressure NOT pain. If pain or extreme discomfort is evident, the examiner must re-evaluate his or her technique. Extreme discomfort often is the result from depressing an EOM or from using the brow bone as a fulcrum.

III. **Additional points to note**
   a. The indentor allows for viewing approximately 1 1/2 clock hours. The need to reposition the depressor depends on the flaccidity of the patient’s eyelids.
The indentor can often be easily slid/moved from side to side without repositioning.

b. If you are right-handed, examine the superior fundus from the patient’s right side and the inferior areas from the left side (in both cases with the indentor in left hand and condensing lens in right). In this scenario, the right hand will also be controlling the lid not controlled by the scleral indentor.

c. Examine the temporal fundus of the left eye and the nasal area of the right eye from the patient’s right side and the right temporal and left nasal areas from the patient’s left.

d. If you are left-handed you may be more comfortable reversing the above procedures listed in “b” and “c”.

e. The equatorial retina may also be depressed simply by changing the patient’s gaze. Instruct the patient to leave the extreme gaze and move to a more primary gaze.

IV. **Recording**

a. Because scleral indentation is not traditionally performed during every single patient encounter, it is important to document in the record when indentation was performed, and in which quadrants. This documents that you are practicing to the highest standard of care when using this method to examine retinal breaks or lesions.