P200/200DX Patient Imaging Techniques
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Imaging should be performed in a dimly lit room. Before beginning, check the amount of air in the eye pillow and set it so that when the pillow is touched, you can feel the scanhead.

Patient should be sitting straight ahead with knees facing the device. Have the patient move close to the instrument. Observe that they are sitting up straight and tall with the chair close to the unit. Hand the patient the hand switch button and explain that when instructed to do so, they will click the button to capture an image.

Position the instrument using the up and down switch so that the patient’s pupil is in the center of the image aperture (Example 1). Patients will lean forward if the table height is too low, causing lash and lid on the image. Leaning into the instrument will prevent the eye from getting closer to the eye pillow.

While the patient is about 2 inches away from the eyehole, position the patient’s right/left eye by rotating the head to a 45° angle; and ensure that their nose is outside the pillow (Example 2).
Adjust their position until the green light is in the center of their view. Tell the patient to move in slowly, keeping the green ball in view, until they see a thin red ring (Example 3). Support the patient’s head to help guide the patient. The iris should fill the alignment ring (Example 4).

Ask the patient to open **both eyes** wide and not to blink during the flash. Have the patient click the hand switch button. You may control the hand switch button if necessary. While the patient is still against the eye pillow, review the image quality. Particularly note the optic disk saturation and adjust if necessary and re-image.

**Well Positioned Eye**

When the iris aligns with the eye camera ring, the patient should be looking directly at the green dot and see a full fine red halo in their peripheral vision.

![External Camera View](image1.png)

**Patient Sees This**

(Patient Alignment System)

Example 4

![Image Looks Like This](image2.png)

Example 3
Too Far Out

Iris does not fill the eye camera ring

Patient sees a very faint red halo.

Black-green color on the periphery. The green borders are the areas of the skin.

Solution: Ensure the eyepiece is deflated and with patient compliance, move the patient into position by applying gentle pressure to the back of the patient’s head to secure against the eyepiece. Have them confirm verbally that they can see more of the red halo and re-image.
Extremely Too Far Out

Full eye including lids appear on the eye camera ring  
Patient sees no red halo.

Image looks extremely distorted. Black-green color on the periphery. The green borders are the areas of the skin. The eyelashes are clearly seen around the eye.

Solution: Ensure the eyepiece is deflated and with patient compliance, move the patient into position by applying gentle pressure to the back of the patient’s head to secure against the eyepiece. Have them confirm verbally that they can see more of the red halo and re-image.
**Minimally Too Far In**

Iris exceeds eye camera ring  
Patient sees thick red halo

Image has a neon-green color on the periphery. The periphery definition is lost. 
Amount of eye lashes seen is increased.

**Solution:** With patient’s compliance move the patient back from the instrument and increase inflation in eyepiece. Have them confirm verbally that they can see a normal amount of the red halo and re-image.
Too Far In

Iris exceeds camera eye ring

Patient sees thick red halo

Image obscured by eyelids and is excessively green

**Solution:** With patient’s compliance move the patient back from the instrument and increase inflation in eyepiece. Have them confirm verbally that they can see a normal amount of the red halo and re-image.
Patient Too High

Iris appears too high in eye camera ring  
Patient sees lower part of the red halo

Solution: Increase the height of the table or patient chair.
Patient Too Low

Iris appears low in eye camera ring

Patient sees upper part of the red halo

Image may appear as below

Solution: Lower the height of the table or patient chair.
Patient Too Far Right

Iris appears to the right of eye camera ring

Patient sees left part of the red halo

Solution:

Move patient’s chair to the left or guide patient's head position
Too Far Left

Iris appears to the left of eye camera ring  
Patient sees right part of the red halo

Image may appear as below. Notice the green border to the left of the image.

Solution: Move Patient’s chair to the right or guide patient’s head position
**Blink**

Blinks appear as spikes on the image due to image capture speed. Some patients may blink automatically as they press the capture button.

**Solution:** Allow patient to correctly align and operator presses capture button.

**Eye Closed**

Patient has eye completely closed.

**Solution:** Use eye camera to guide patient and operator presses capture button using eye camera to check eye is open.
Minimizing Lids and Lashes

In some patients, images may be obscured by the patient's lids and lashes. You should follow your practice procedures to minimize lids and lashes in images. In some cases the amount of lid and lash can be minimized by gently lifting the patient's eyebrow. With clean hands, place your thumb below the patient's eye and your forefinger on the brow line. Gently open the eye a little further. Just lifting the upper lid may pull the lower lid further into the image.

Eye Steering Techniques

Look at the location of the pathology on the image itself, regardless of which eye it is (OD or OS), and then direct the patient's gaze accordingly. Up and Down are in the same direction as the pathology, but Right and Left are opposite of what is seen on the monitor screen.

For example, pathology located directly Up (12 o'clock) or Down (6 o'clock), the patient’s gaze is directed in the same direction as the pathology (see locations A and C on the Eye Steering Guides).

Due to the ultra-widefield view of an optomap® image, eye steering may cause obscuration of a different area of the image, but the location of interest will probably be obtained.

First, center the patient’s fixation on the central green ball (as though a “normal” on-axis image is being taken).

Direct the patient’s gaze to capture the area of interest by having the patient look at the red ring using the Eye Steering Guide. It is easiest to explain this gaze direction to the patient in terms of clock hours on the red ring. Have the patient move their eyes in small increments so that the cross hair is at the edge of the pupil but still within the pupil (Example 5). If the patient moves their eye so that the cross hairs are outside the pupil, then direct them to not look as far in that direction until the cross hairs come back to within the pupil, close to the pupillary margin. Capture the image.
Eye Steering Guide: Peripheral Pathology

For Pathology at A, B, C, D

Have the patient look here at A, B, C, D

Example Eye Steering at 6:00

Have Patient look here
Example Eye Steering at 12:00
Have patient look here

Example Eye Steering at 3:00
Have patient look here

Example Eye Steering at 9:00
Have patient look here