

# OPTOMED AURORA<sup>®</sup> IQ

## Advanced Photography Guide



Obtaining good retinal images allows for thorough examination, precise diagnoses, effective treatment planning, and ongoing monitoring of retinal conditions. By following these tips and tricks, it is possible to improve fundus photography skills and achieve high-quality retinal images.

## Environment

- Dim the ambient room lighting to promote pupil dilation, with patient not facing any windows or computer screens.
- For external eye photography with the anterior lens, recommend a single bright light source from above to aid with camera illumination.

## Patient Preparation

- Explain the procedure to the patient, making them aware of the flash and the need to maintain fixation during the imaging process, addressing any concerns they may have.
- Consider using dilating agents to achieve an optimal pupil size for better image quality on patients with pupils 2 mm or less.
- Allow time for patients to adjust to the bright lights and discomfort of the dilating agents and proceed at their pace.
- Keep your instructions clear and simple.
  - “I’m going to start by imaging your right eye. Cover your left eye loosely with your hand. Keep both eyes open.”
  - “Blink a few times, open wide, and focus on the red dot”
- Include gestures mirroring what you want the patient to do such as covering your right eye during initial explanation.
- Adapt your approach for patients with physical limitations or disabilities to ensure their comfort and cooperation.

## Positioning and Alignment

- Be aware of potential artifacts like eyelashes, reflections, or media opacities, and employ techniques to minimize their impact on images.
- White reflections and artifacts can be a common alignment problem
  - Artifact on bottom - move closer
  - Artifact on top - back up
  - Ideal imaging distance of retina lens is 2 CM from patient eye
  - See user manual, training video, or quick guide for examples
- For eyelashes, monolids, and droopy lids – remind the patient to open their eyes wide – consciously using their levator muscles.
- If lids continue to get in the way, there’s a few options from least invasive to most:
  - Come from a slightly elevated angle so the patient gaze is elevated.
  - Have the patient close their eyes. Gently pull up the lid and pin it against the upper orbital bone with a finger from the hand supporting the front lens.
  - Use a long cotton tipped applicator instead of your finger to gently trap the eyelid against the upper orbital bone.

- Use medical tape on the skin of the eyelid to tape the eyelid open.
- For prominent brows or deep-set eyes, consider changing the angle of approach of the camera – slightly nasal, temporal, superior, etc. Patient gaze will continue to focus on fixation target.
- Remind your patient to blink often during the photography session – especially right before you're about to image.
  - Keep the patient's corneal media clear with fresh tear film.
  - Instill lubricating eye drops if the patient has very dry eyes.
  - Note the longer you take imaging, the drier the patient's eyes will become.
- Cornea opacity, cataract, nystagmus, or conditions that cause body movement will complicate or prevent imaging.

## Focusing

- Familiarize yourself with the settings on the Aurora. Practice using different settings to optimize image quality.
- Stability is very important when focusing – try to eliminate any movement or shaking.
  - Have both feet on the ground and your core muscles engaged.
  - The front support hand should be well anchored to the patient's forehead.
  - Miniscule adjustments should be made with the thumb of this support hand.
- If you've completely lost the retina, it's okay to back out completely and reapproach. If you're only slightly off center, it may be worth trying to adjust from here, and only back out slightly while staying anchored to the patient's forehead to re find the pupil and recenter your image.
- Fully fill frame with retina, chase away shadows in the image by moving toward them, or slightly forward if necessary.
- Recommend half pressing the shutter button to control when autofocus activates.
- If autofocus not engaging, can hold shutter to take a picture as soon as retina fills frame
- If needed, switch to manual focus to eliminate the need to wait for autofocus.
- If not using auto-brightness, customize the flash intensity based on the patient's eye pigmentation to achieve optimal image contrast.
- Image Capture
- Remind yourself of proper technique
  - Travel through pupil
  - Stable base, anchored on patient
  - Fill frame to turn help circles green
  - Half press trigger to start autofocus box
  - Final adjustments with thumb
  - Squeeze trigger
- Check the image quality on the Aurora's screen immediately after capturing to ensure all necessary details are captured.
- If an image is blurry or has significant artifacts, retake it to maintain a high standard of image quality.
- Don't be too hasty to delete an average image. Sometimes that may be the best quality you can capture from a given patient.
- Developing an Efficient Workflow
- Plan the imaging process to minimize patient waiting time and streamline your practice's efficiency.
- Keep the patient in the exam room and take the camera to them – eliminating patient steps and movement.

- Upload to patient chart immediately following image capture to minimize mistakes in EMR image attachment process.
- Consider utilizing the Aurora's wireless capabilities to transfer images to a computer or EMR system quickly.

## **Continuous Learning**

- Study the anatomy of the retina and become proficient in identifying key landmarks to ensure accurate positioning during imaging.
- Maintenance
  - Regularly clean the camera body surfaces to ensure reliability of the device.
  - Wipe silicone eye cup with alcohol swab when patient first arrives – so they see you disinfect for them, and cleansing agent can dry before image acquisition.
  - Refrain from drying with tissue, as fibers can stick to ocular lens.
  - Only clean the ocular lens if there is a spot or smudge that shows up in multiple photos, not just on the screen.
- Regularly review your fundus images to identify areas for improvement and track your progress as a fundus photographer.
- Regularly seek feedback from colleagues or supervisors to identify areas for improvement and enhance your photography skills.

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