Guidelines for Keratoconus Data Collection

Instructions to the Patient

1. Ask the patient to **close** one-eye with their **hand**.
2. Ask the patient to **blink a few times** and **keep the other eye wide open**.
3. Ask the patient to **look at the camera (center of the rings)**.

Instructions to the Operator

During data collection, please ensure:

1. Correctly enter the **patient id**, **age** and **gender**.
2. Ensure that the **LED lights are ON** (blue color will appear on the screen).
3. Place the attachment around the patient's eye orbit.

4. Both the **top and bottom part of the attachment should touch the face.**

5. The ring reflections should be **centered**.
6. The camera is **in focus**. Please tap to focus, if not.
7. Reflection image (mires) should cover **limbus to limbus**.
    a. NO minified images.
8. The two side **supports should be horizontal**.

To **select an image (out of the three clicked images)**:

1. The image is **in focus, with no blur**.
2. The two side **supports are horizontal**.
3. The ring reflections are **centered**.
4. Good **limbus to limbus** coverage.

Note:

- At the end of each day, upload the reports (mire image, axial image, and/or tangential image) from Keratron and/or Occulyzer device.
- Note: Internet connection is required for SmartKC App to upload data.

For each patient, perform the following steps:

1. Optikon Keratron or Occulyzer Test.
2. Collect data from the phone app with placido attachment.

Good and Bad Image Examples

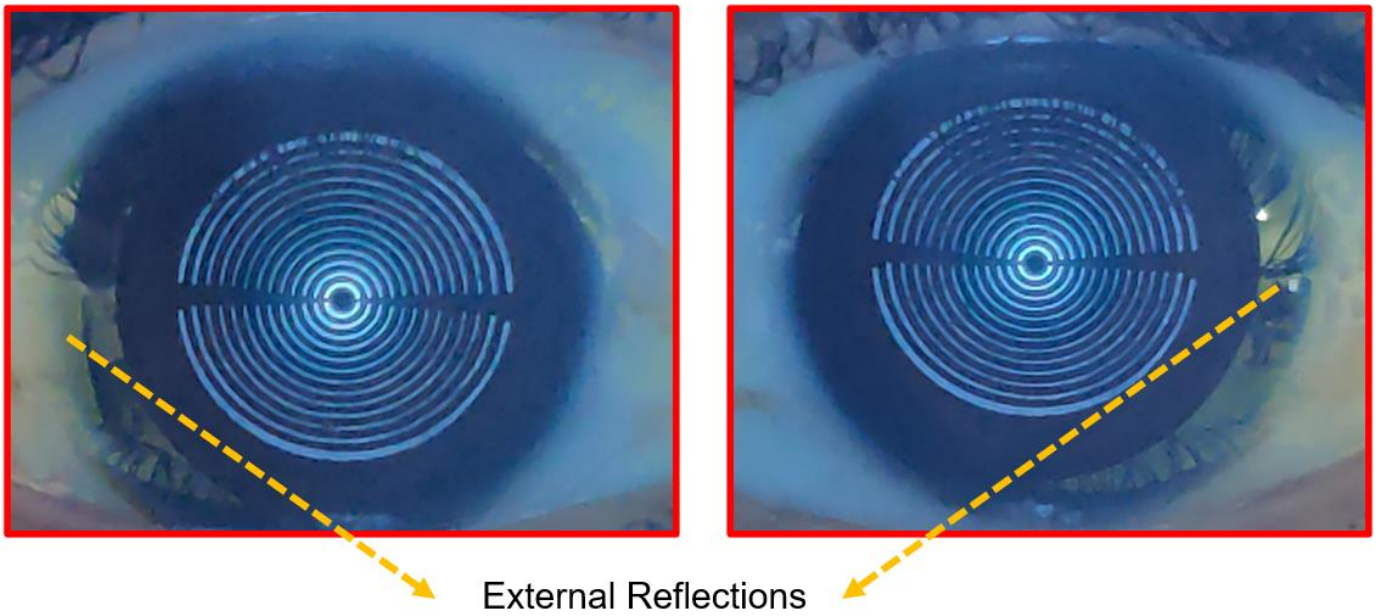
If the above guidelines are not followed properly, it may result in a bad image capture that can lead to incorrectly generated topography maps and a misleading diagnosis. Hence, it is of utmost importance to follow guidelines properly at all times. Below are examples of good and bad image scenarios, that can act as a reference when training an operator to use the SmartKC device to capture perfect images:

Good Image Examples

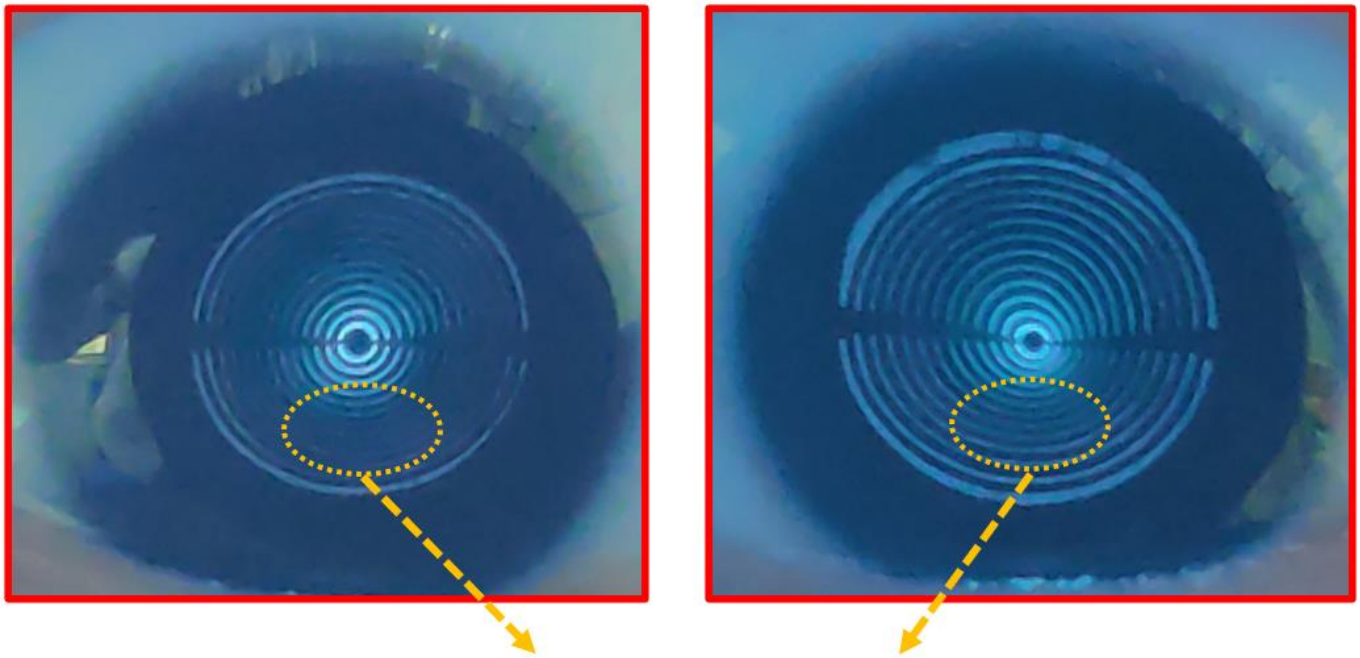
1.Mires sharp and in-focus, limbus-to-limbus coverage, support horizontal, no offset

Bad Image Examples

1. Bad limbus-to-limbus coverage (minified image), outside reflections visible (placido head not touching area around eye orbital well)

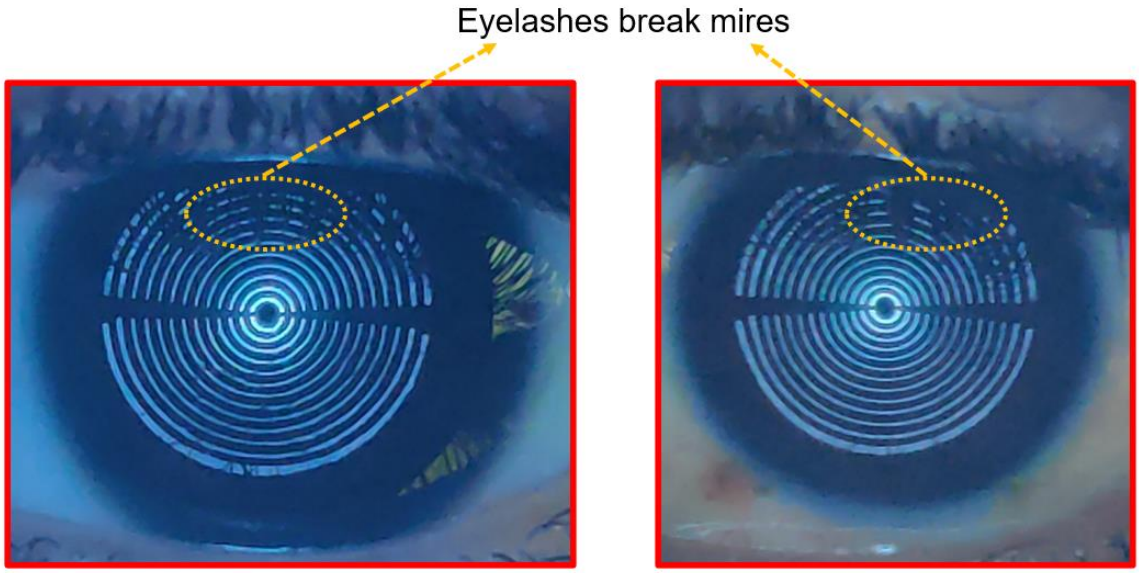


2. Mires blurred, bad limbus-to-limbus coverage, external reflections visible.



3. Mires blurred due to **tear-film** breaking, and also has bad limbus-to-limbus coverage.

4. Mires broken due to eye-lashes



5. Mires bleeding out of iris region into the sclera.