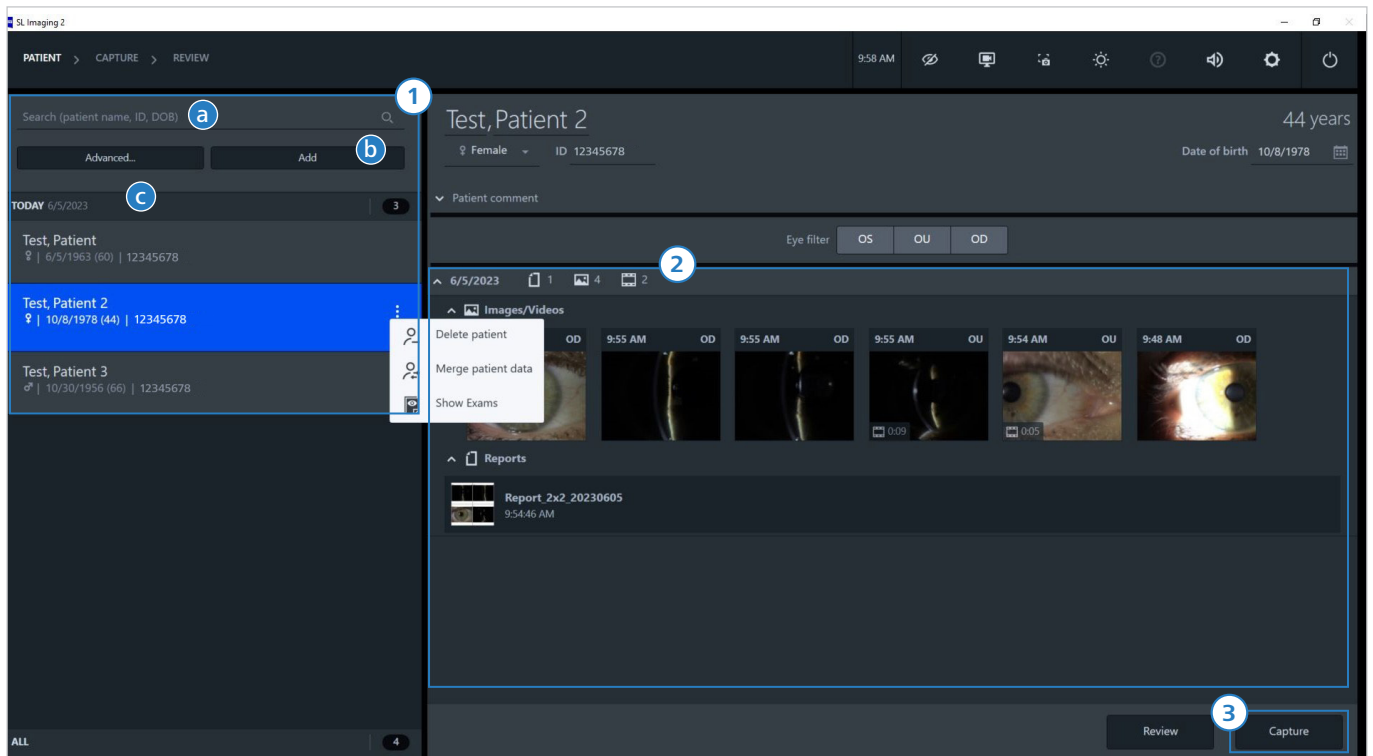# ZEISS SL Imaging Solution
Capturing and editing quality images and video

ZEISS

Seeing beyond

ZEISS SL Imaging Solution screen overview

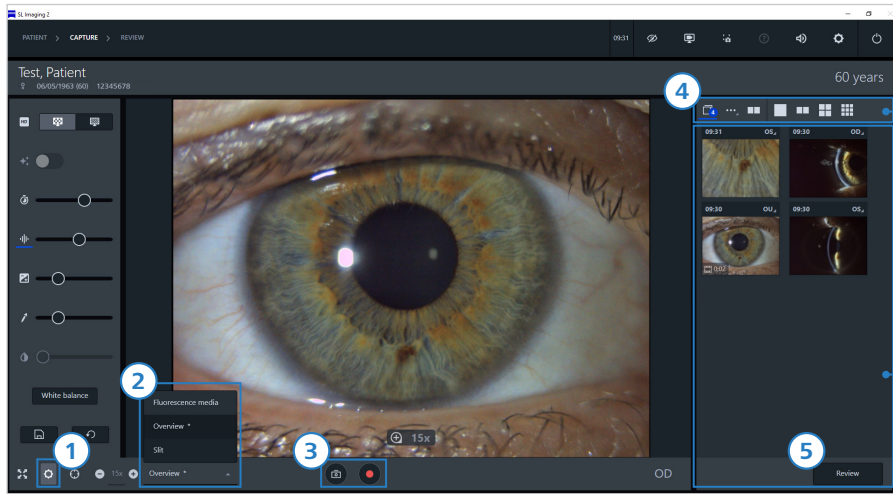## Patient screen

Patient screen

1. **Access patient data**
   a. Search for existing patient
   b. Enter new patient data
   c. Choose from FORUM® modality worklist

2. **Review data from previous visits**
3. **Click "Capture" to switch to the capture screen**
   (for exam documentation)

Capture screen / Documentation examination

Capture screen

Review screen

1. **Camera settings**
2. **Camera profiles:** Use predefined camera profiles for different illumination conditions
3. **Camera and record buttons**
4. **Layout templates:** Choose a layout template to automatically create reports during image acquisition for easy, streamlined documentation
   a. Counter for captured images and videos
   b. Create a new layout by selecting boxes
   c. Last created layout
   d. Quick access for favorite layouts with drag-and-drop placement feature
5. **Review:** Automatically creates a report using the selected layout
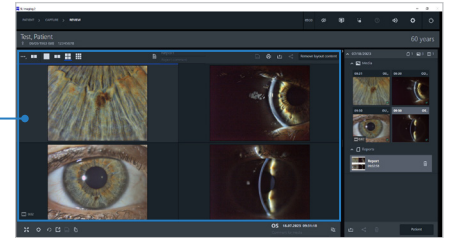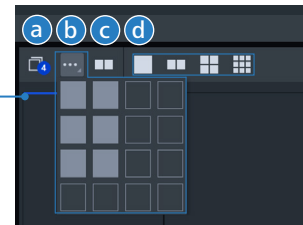
Capture images and videos using:
- **ZEISS SL800 joystick trigger**
  - Short press to capture images (likewise during recording)
  - Long press (>1s) to start and stop the video recording
  - Rotate to change the predefined camera parameter
- **Other ZEISS slit lamps**
  - Capture images using the footswitch or keyboard spacebar, or click the camera button (3)
  - Click the record button (3) to start and stop the video recording

# Review screen
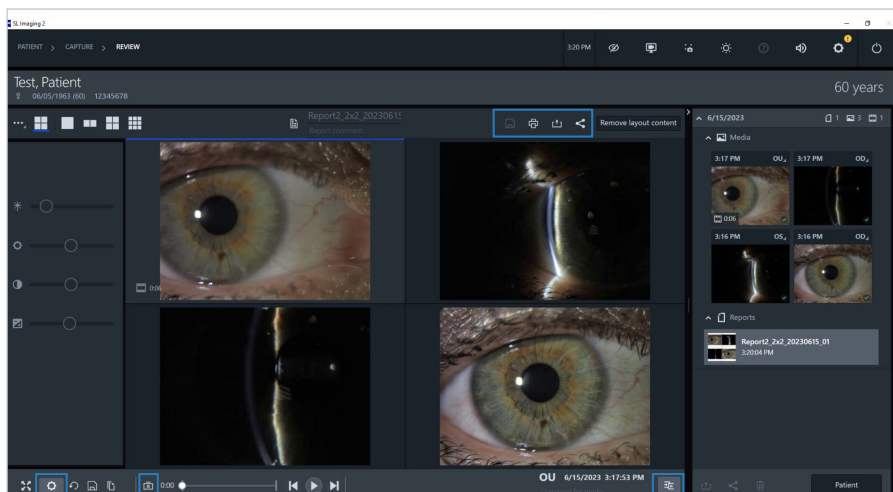
Review screen

Control mechanism for image
- Zoom: Use the mouse wheel
- Rotation: CTRL + mouse wheel
- Movement: CTRL + hold left mouse bar

Tools
- ⚙ Edit images and videos
- ⯐ Use Flicker to observe differences
- ⬆ Export reports, videos and images to
- ⦉ FORUM/DICOM archive or share on a predefined network drive
- 🖫 Save data locally
- 🖾 Create a single image from a video

How to get quality images using the software

Camera settings
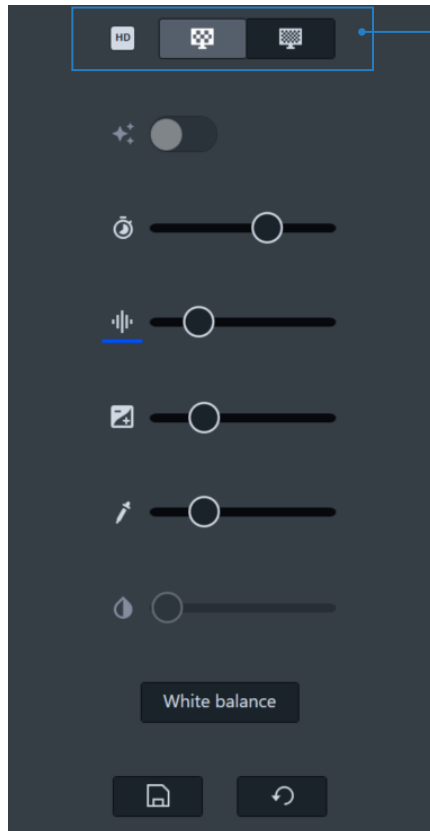
Image quality – Best: lower resolution, but higher frame rate

Automatic adaption of gain and exposure time – Increase illumination on SL (may cause noise)

**Exposure time –** Dependent upon the movement of patient and SL; low exposure time for videos and moving patients

Gain – Electronic amplification of the signal. The darker the output signal, the higher the basic noise. Keep Gain as low as possible. Instead, increase illumination at the SL.

Gamma – Changes black/white appearance without changing color temperature (keep at 100%)

Fine setting – Color information; 100% = maximum color information, 0% = black/white image

Coarse setting saturation – Leave at 0% for the most natural impression. Higher value will amplify the given color information.

Adjust the white balance for more natural looking images
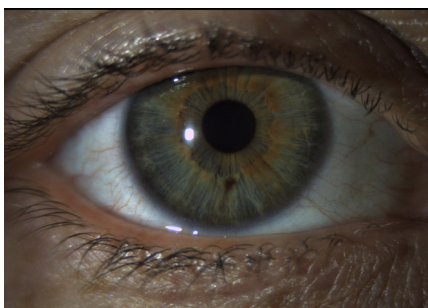
Without white balance adjustment

With white balance adjustment

Override the default white balance by following the steps below:

- Hold a white sheet of paper in front of the slit lamp
- Swivel in the diffuser for a homogeneous illumination
- Reduce illumination to a minimum (the test paper should appear grey on the screen)
- Make sure there is no glare
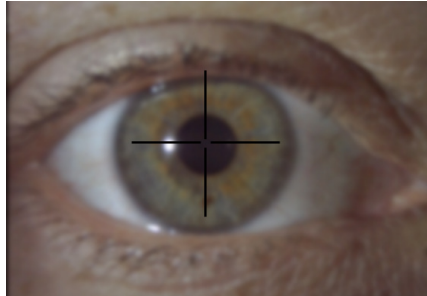- Click the White balance button (each profile requires a separate white balance)

How to align the slit lamp and camera correctly

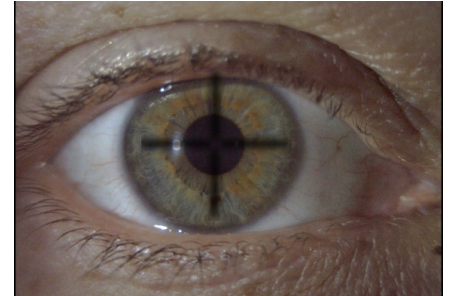## Issue: Observer can compensate a misalignment of the instrument, the camera cannot
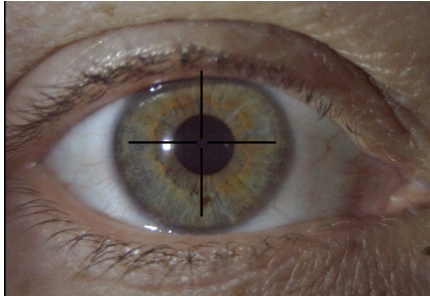
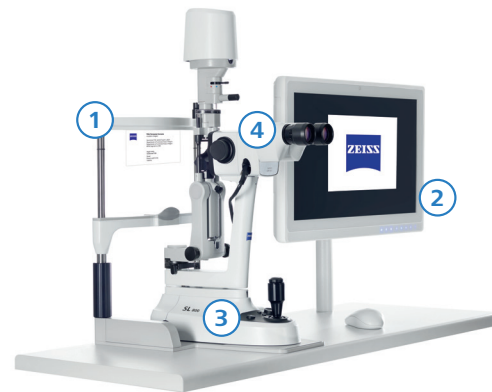✓ **Good image**
Crosshair and image in focus

✗ **Poor image**
Crosshair in focus, but view out of focus » **Focus slit lamp**

✗ **Poor image**
View in focus, but crosshair out of focus » **Focus eyepieces**

Option 1: Eyepiece with crosshair (recommended)
This method applies to all types of slit lamps

1. Insert the eyepiece with crosshair into the right side of the binocular tube (this is where the camera is located).
2. Close the left eye and turn the diopter ring of the eyepiece until the crosshair appears sharp. Start from maximum "+" to avoid accommodation.
3. Ensure the crosshair and observed object are both in focus.
4. Check the monitor image; it should now be in focus.

Option 2: Monitor focus (no crosshair eyepiece or focus rod)
This method applies to all types of slit lamps

1. Attach an object (e.g., a business card) to the headrest.
2. Focus on that object using the highest magnification while looking only at the monitor.
3. Block the slit lamp by activating the quick action break.
4. Looking through the microscope, without moving the slit lamp, adjust your eyepieces (monocular).

Tips:

- Keep in mind which beam path is recorded to avoid shadows and reflexes
- Use the aperture to increase the depth of field
- Use the optimal type of illumination
- Big illumination angle for 3D information

- For people who wear glasses, it is necessary to slide in eyecups
- Reduce ambient light for better results
- Accommodation is more pronounced among younger people (that's why adjusting correctly, and Option 1, is important)

CE

SL Imaging Solution

Carl Zeiss Meditec AG
Goeschwitzer Strasse 51–52
07745 Jena
Germany
www.zeiss.com/SLImaging

Carl Zeiss Meditec, Inc.
5300 Central Parkway
Dublin, CA 94568
USA
www.zeiss.com/us/med