CompuMed™

The Leaders in **Diagnostic Telemedicine.**

GRUNDIUM OCUS

TUTORIAL

Version 20-09-1

24/7 Technical Support

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1. Setting up and Powering on

Remove the Grundium from the carrying case by firmly grasping the back of scanner and pulling vertically. Be careful to not damage the objective.

On the bottom of the scanner there is a transportation pin that prevents the slide deck from moving in the carrying case. This needs to be removed before use, by turning it counterclockwise. The pin can then be returned to the carrying case.
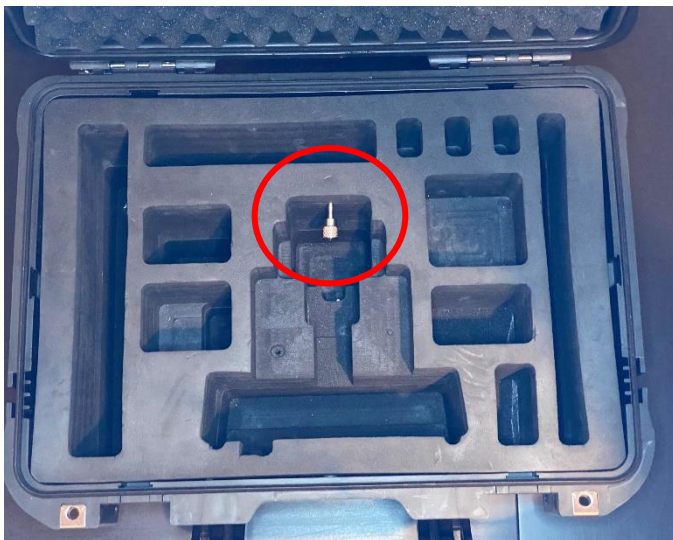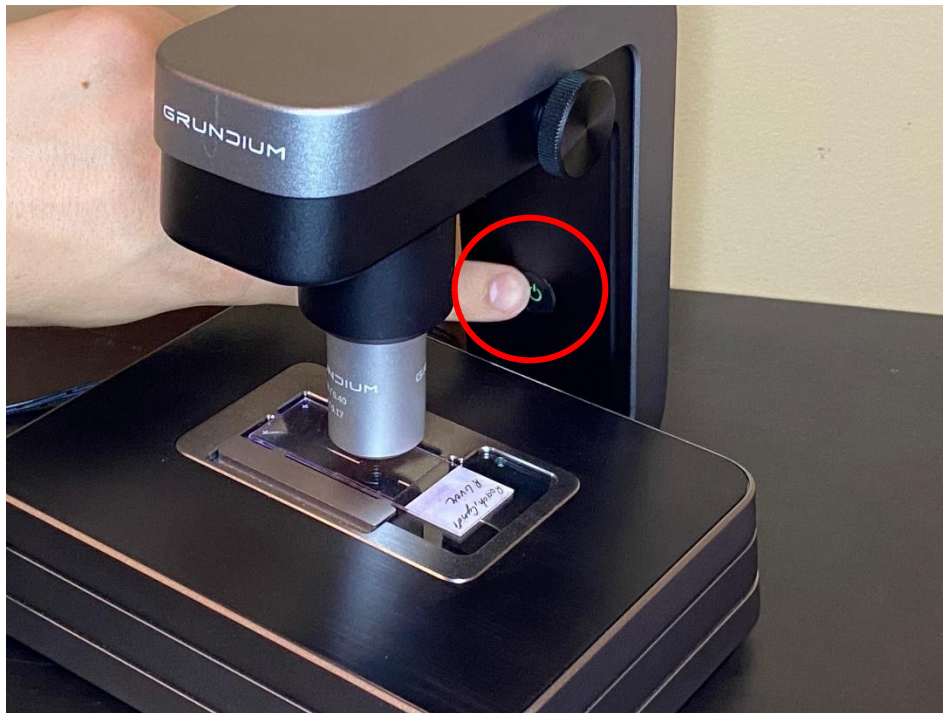
To turn on our microscope, press the power button at the front of the scanner neck. The button should start blinking red, then turn solid green. This means that the scanner has powered on and is connected to the internet.

(The power button can display other patterns and colors, as referenced in the table below)

POWER BUTTON LIGHTS

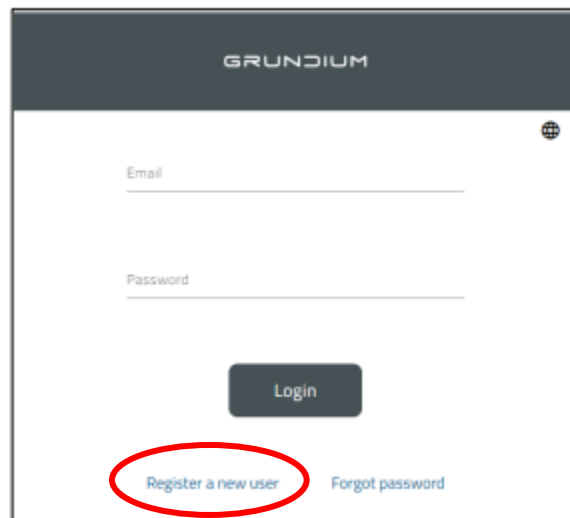| Light	Explanation
Green breathing	Scanner is switched off. Power cable is connected.
Green steady	Scanner is connected to the Internet.
Green blinking	Scanner is in live view mode, scanning or exporting.
Yellow steady	Scanner is connected to the Internet, but remote use is disabled.
Red steady	Scanner is in error state (see Troubleshooting).
Red blinking	Scanner is powering up or shutting down.
Blue steady	Scanner's WLAN access point is on.
Purple steady	Scanner's first start-up is ongoing.
Purple blinking	Scanner's software update is in progress.

2. Setting up an Account

Open a new browser, but make sure to use Chrome, Firefox, or Safari. Windows browsers are not compatible.

Navigate to www.grundium.net
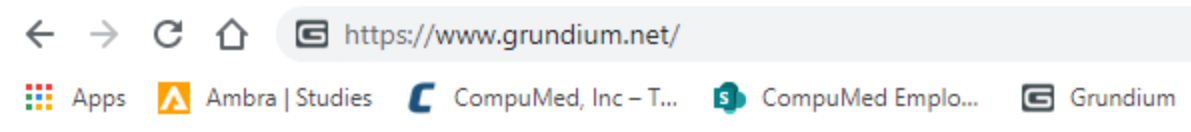
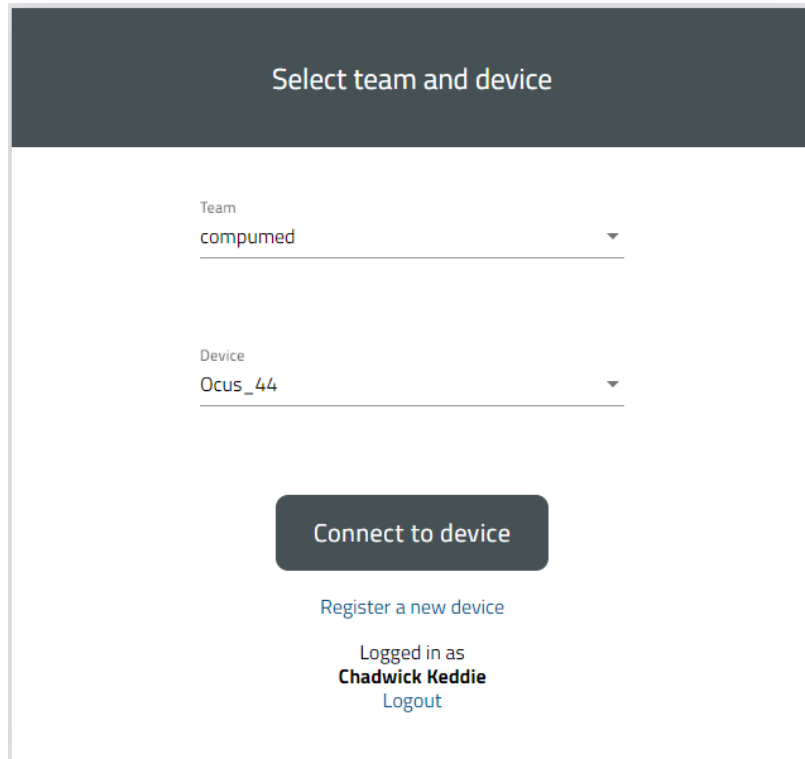You will then be presented with this screen:

Click on the register account button to register a new user (make sure you have access to your email, as there is verification required).

After entering your email and password, click "login" to sign into your Grundium software, you need to connect to a device, which is done on the next page.

The "select team and device" page has two dropdown menus: Teams and Devices. A "Team" is the way of classifying what group you are a part of.

To join a Team, you must be invited by someone already in the Team. You should receive an invite email, just follow the steps to join a team. Once you have joined your team, navigate back to the dropdown menu and select your team.

"Device" is the dropdown that lets you choose which device to connect to. If you have multiple devices registered to your "Team", this is the place they will appear.

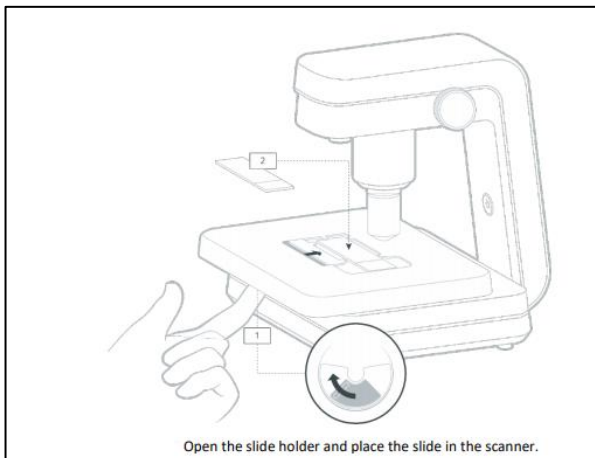Select "connect to device" to connect to the Grundium scanner.

This will open the Grundium web controller where we can remotely operate the scanner.
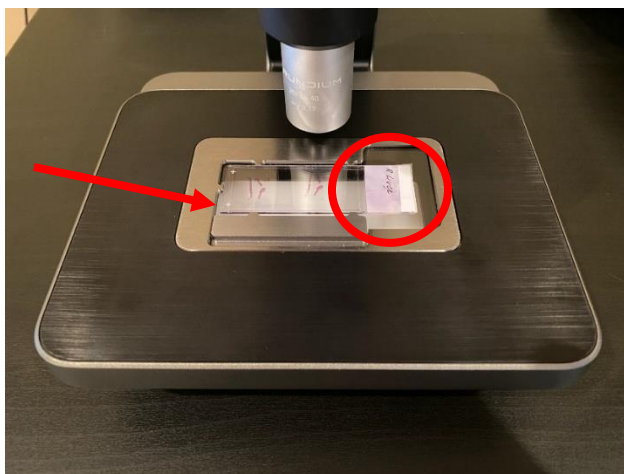
3. Inserting a Slide
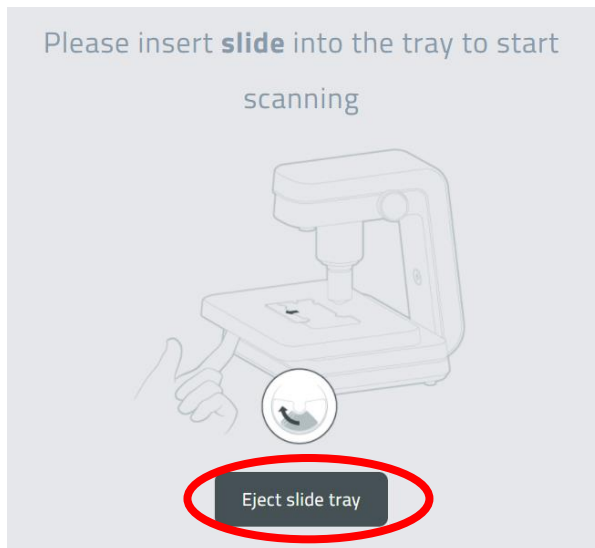

Click on the "Microscope" Tab on Left top corner.

Click on "Eject slide tray" to insert our slide.

Open the slide holder and place the slide in the scanner.

To insert our slide, we need to feel under the open slide tray for a switch that will open and close the tab that secures our slides.

Open this tab, insert the slide with the label to the right (label should be in the more open end) and close the tab again to secure it in place
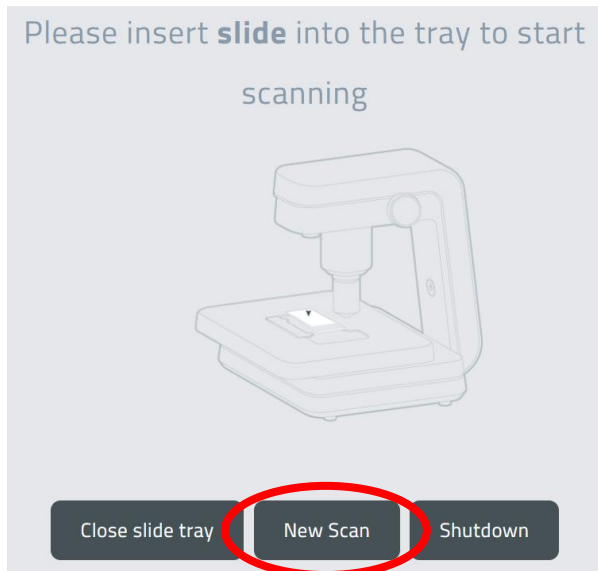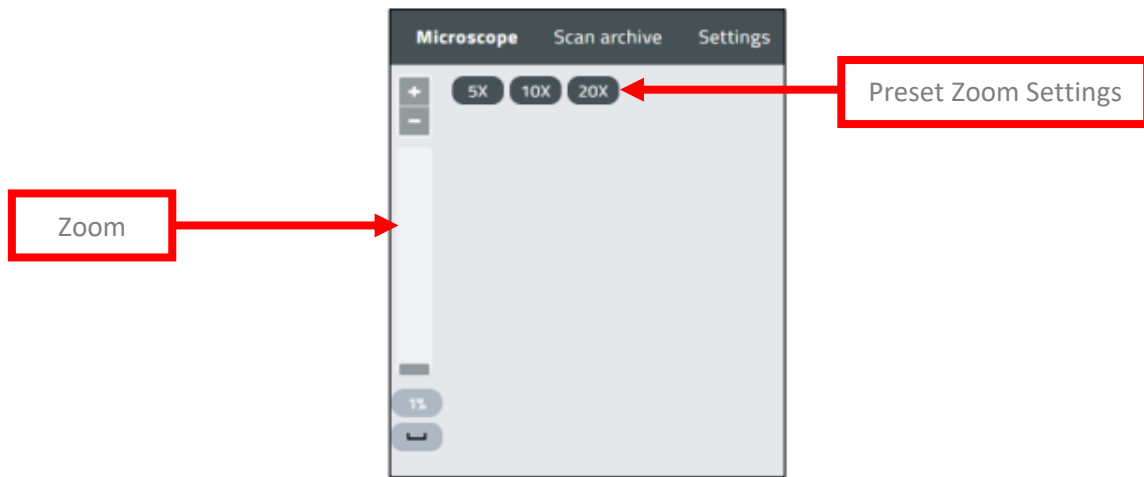

Click on "New Scan" to start scanning. On Microscope, there will be two lights, a red and a blue flashing one, which is the microscope taking a birds eye view of the slide, and a short white burst which is a photo of the label (on the right side).

Now we should see a picture of our slide appear on the main screen, and we can further prepare for a scan.

4. Preparing to Scan

Our next step in preparation of our slide requires us to navigate through the image. If you click and drag with your mouse, you can pan the image. The scroll wheel on your mouse or pinch zoom with the track pad on a laptop can be used like on any touch screen. (There is also a zoom bar on the left side that you can use to zoom in if pinching the track pad is not working).

There are also 3 preset zoom settings by the zoom bar, which are helpful when navigating to a certain zoom level.

There will be green lines around the areas the Grundium automatically detects as samples, so if it is very close, just click and drag those lines to expand the area over the entire sample.

(It is advised that not too much time is spent trim very small areas, because eventually the time saved scanning is less then the time it takes to trim them in the first place)
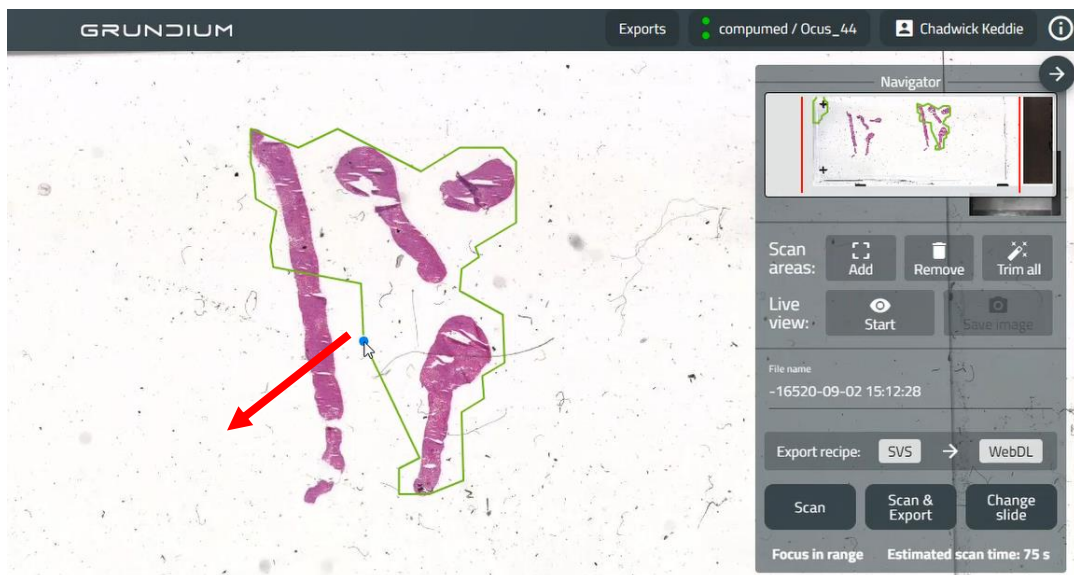
If the automatically generated lines do not fully cover the sample, select the border, once selected it will turn BLUE then click on "remove" tool to delete the lines, and then use the "add" tool to click and drag a box around the sample(s).
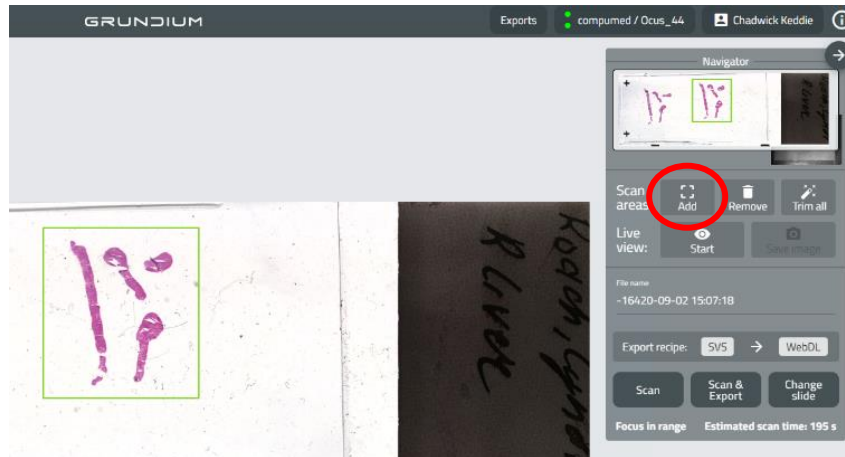
Then click the "Trim all" tool to trim the white space around each sample (too much white space makes each scan considerably longer) and make sure that no parts of the sample are cut off. If they appear to be cut off, click and drag the edge of the green lines to cover the sample.
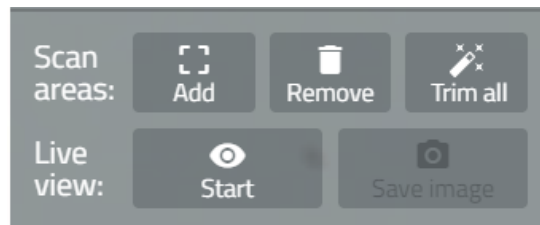

Clicking on the "Remove" button deletes all green selectlines.

If specific lines need to be deleted, click on the green line you want to delete, and it will turn blue. This means it is selected. (Clicking anywhere off of the screen deselects) Now click "Remove" and it will delete those lines you have selected.
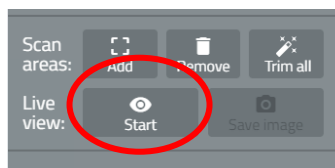

(if you are having trouble selecting lines, try refreshing the page)

Now we need to make sure the focus is correct on our sample. Make sure the piece of sample is in the center of the screen, then zoom into 20x using the zoom presets in the top left corner.
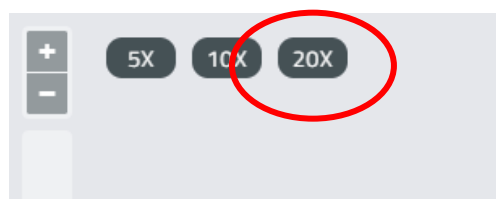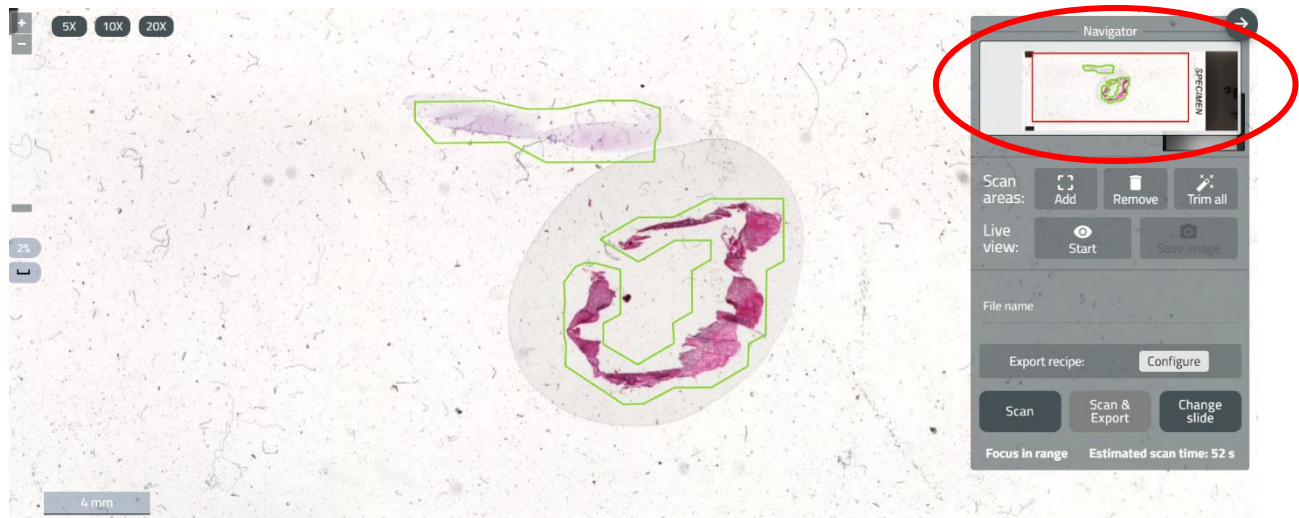

Click the button "start" next to "live view" This will bring up a live view of the sample.

To focus properly on our sample, Turn the knobs on the side of the microscope and adjust our coarse focus.


Move to sample using "Navigator" view to monitor coarse focus, When the microscope says, "focus in range", click the "AF" (auto focus) button in the bottom right corner of the live view window.
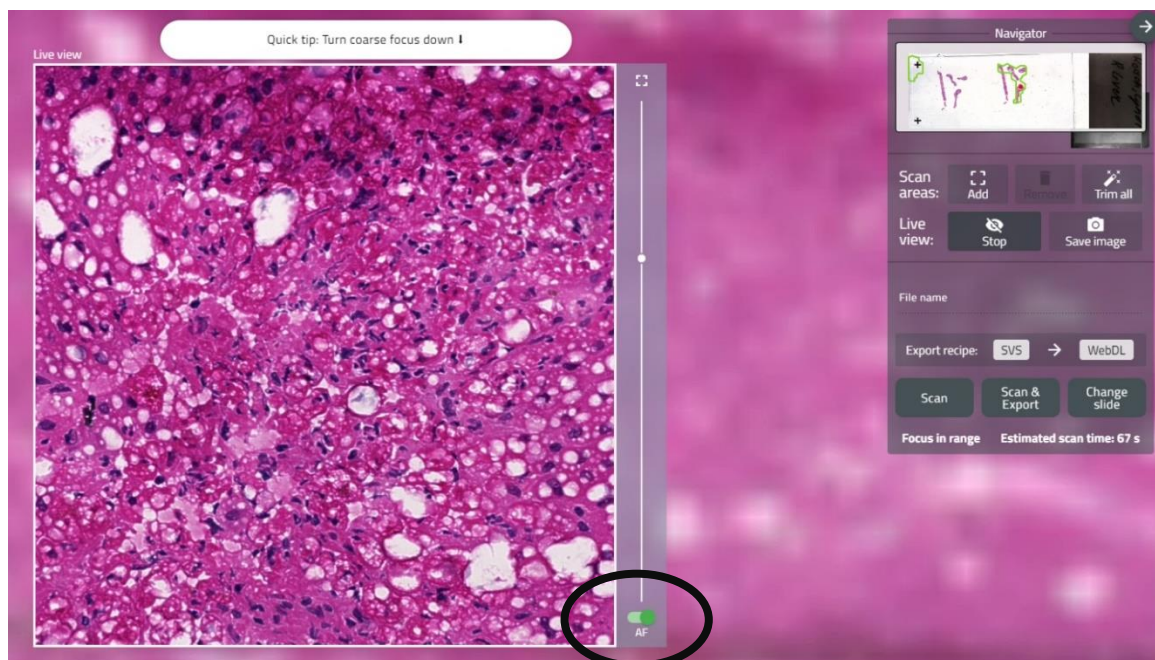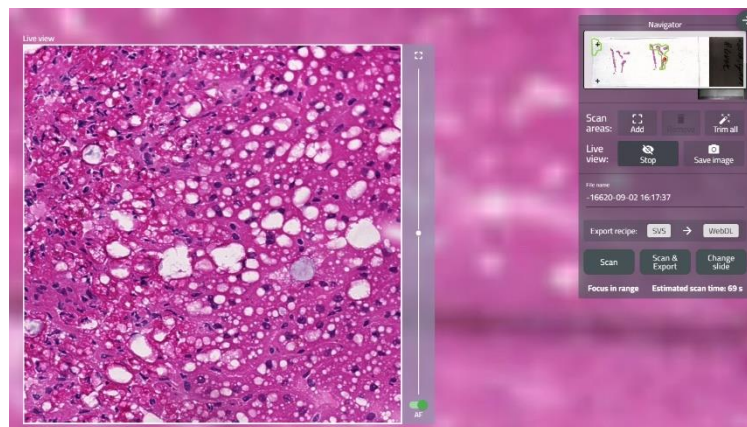

Once we have the sample in focus, we are now ready to scan.

NOTE: Make sure you are in range of the actual SAMPLE, and not the cover slide or glass backing slide. You need to be very careful when focusing, the Grundium will say "focus in range" when it thinks it is in focus, but this can be in 3 zones
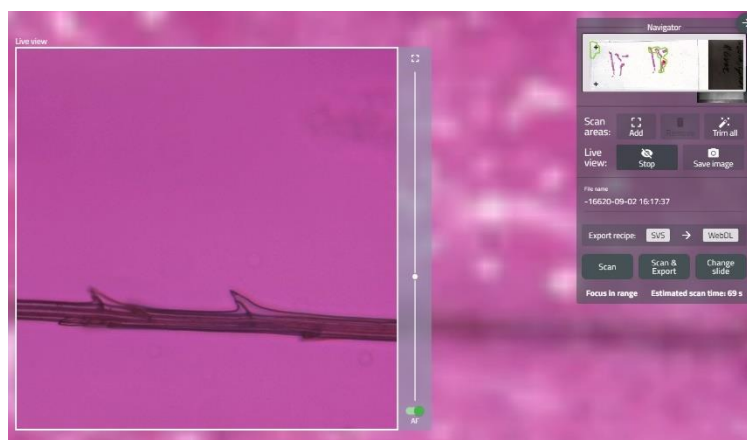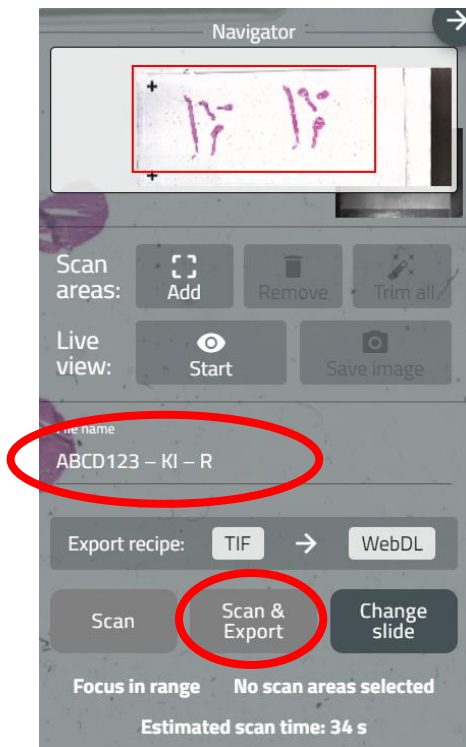
1. **Cover slide**
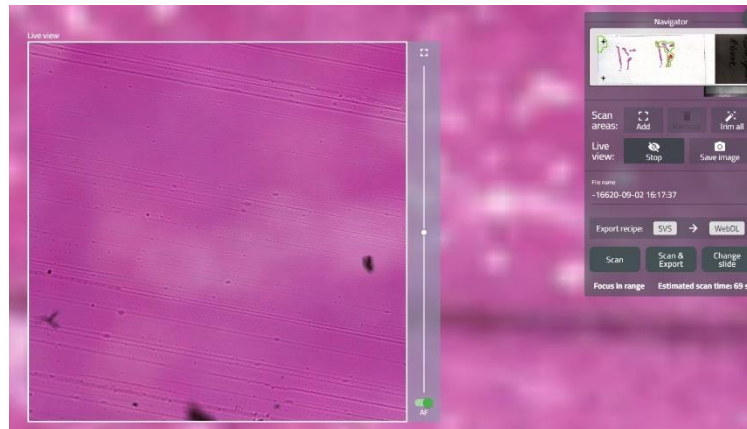
2. **Sample**

3. **Glass Backing Slide**
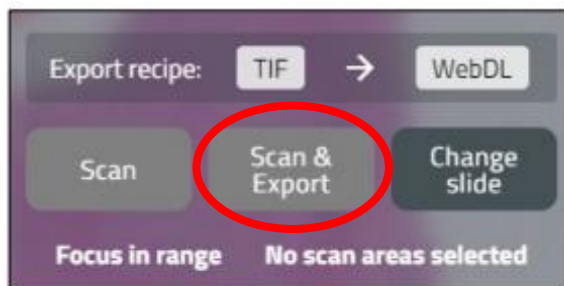
5. Completing a Scan

Once we have the sample in focus, we are now ready to scan.

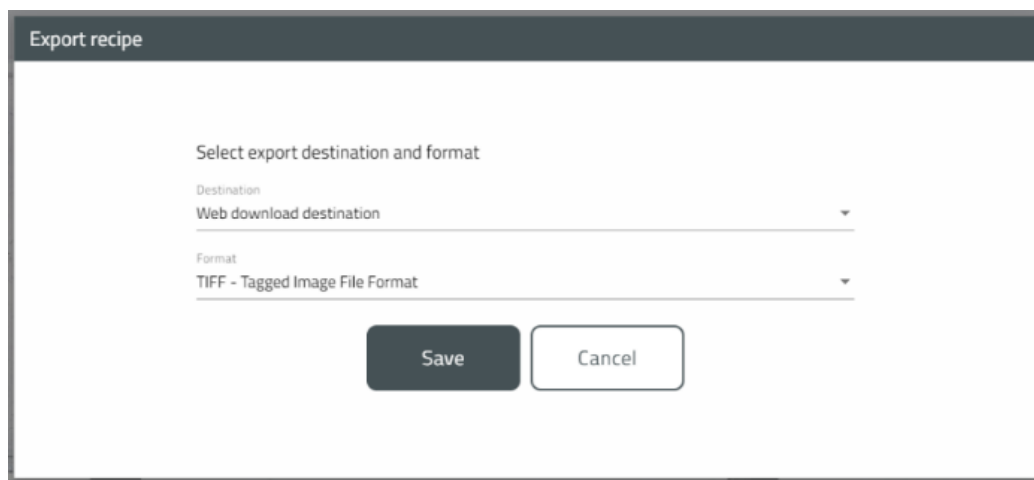Before starting scan , properly name the file using below format.
"UNOS ID" – "Organ" – "Left or Right" (if applicable)
EX: "AHFL854 – KI – R"

Make sure Export recipe has destination "web download" and Format "TIFF"

Click on "Scan and export". Microscope automatically scans the slide's selected areas, sends it to the internal memory, and exports it according to the export recipe.

This works offline, as the computer simply needs to connect to the Grundium scanner, and the scan is downloaded to the computer's default "download" location in the browser.

(This is usually in the "downloads" folder under "This PC" in file explorer)
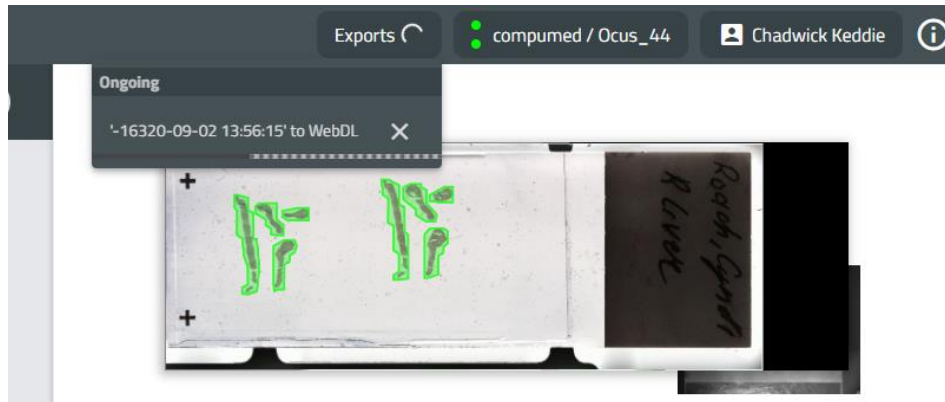
Once scan is completed, you can click on the "Export" to review the export progress bar.

Now that our scan has finished, we can see that the light green lines around our samples have changed to dark grey lines. This means that we have successfully scanned our sample.

6. Uploading a Scan and Requesting a Read

Exported scan is usually in the "downloads" folder under "This PC" in file explorer.
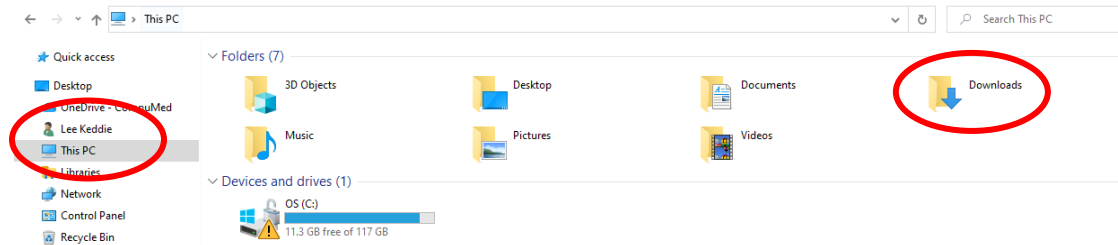
After locating our file, we need to manually upload this to the portal. We NEED to create a new donor before upload if the case does not already have one. If the case already has exams uploaded, skip to the next page.

Login to Compumed Website

In the top left corner of the portal, select the human icon, "donors"
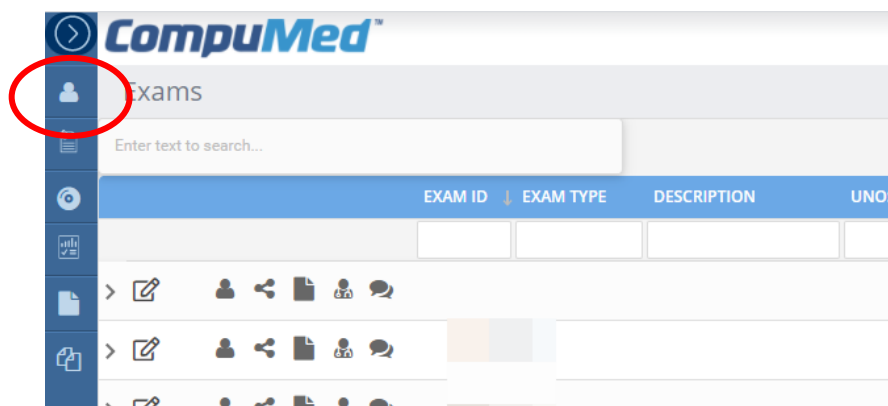
On the "donors" page, select "Add donor" in the top right corner

After inputting all required information, click "save" to create a new donor.

Once we have created/found our donor page, we select the "Upload File" button.

A window will open, and after selecting our study, click "save changes" and the study will be uploaded to the portal.
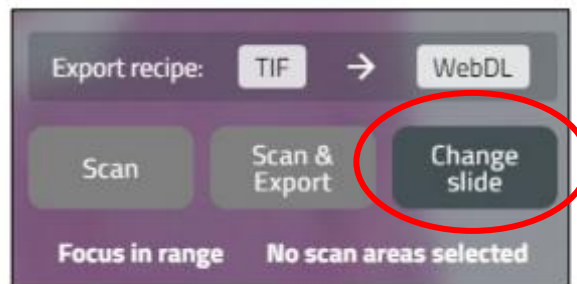
7. Preparing for Transport
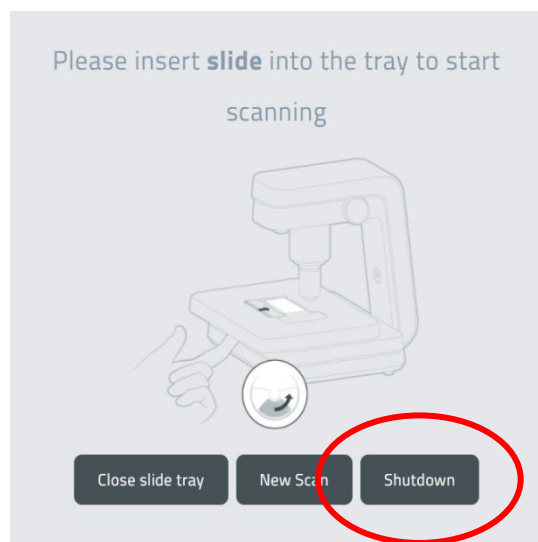
The two ways to power down our grundium are:

1.) Press the power button on the microscope
2.) a.) Navigate to "microscope" on our Grundium browser and click "Shutdown"
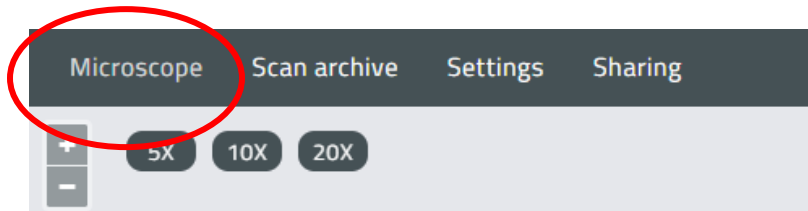
b.) Click "change slide" (on the right side, next to "scan and export")

c.) Remove the slide from the slide tray by reversing the insertion process, and click "shutdown"

If the setup steps were properly followed, the travel pin should be in the transportation case. Simply screw it back in where it was taken out, and the scanner can be placed back in the case. (see Page 1)