LD Patho 320A
User Manual

LANDING MED

LD Patho 320A	
Magnification	20X
Objective N.A.	0.5
Slide Capacity	2
Slide Specifications	75mm × 25mm
Light Source	LED
Image Format	JPEG, SVS
Size	253 x 214 x 270 mm
Weight	6KG

LD Patho 320A
Scanner Unboxing

· Utility case × 1
· LD Patho 320A scanner × 1
· Power cord × 1
· Metal slide tray × 1
· SuperDog USB key x 1

1. Place utility case on a flat surface (load-bearing 20KG+)

2. Lock the wheels to secure the utility case

3. Twist the lock latches to unlock the lid

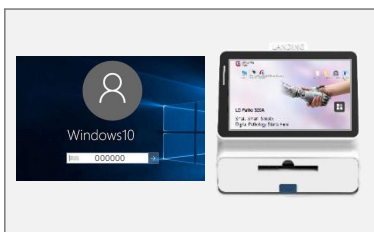4. Open the lid and take out the product manual

5. Lift the scanner handle with both hands and place it on a flat stable surface

6. Connect the power cord to the scanner and plug it into a power outlet

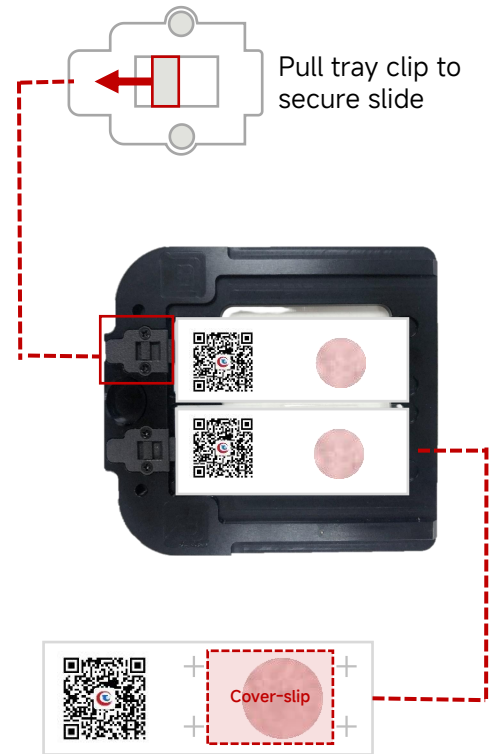7. Turn on the power switch in the back of the instrument

8. Once the scanner is turned on, enter password 000000 to enter into the homescreen

9. Insert the SuperDog Key (USB) into the USB port to enable scanning, The USB must be inserted for scanning!

Considerations

Slide tray and slide direction

- Push slide down and pull clip to secure the slides. The slides must be parallel to the surface of the tray and all four corners are secured to avoid slide tilting.
- Scan two similar specimens within the slide tray; avoid mixing different types of specimens to reduce scan time
- Do not remove the slide tray during scanning to avoid scanner malfunction
- Left slide Preview slot – slide tray faces right
- Bottom slide Scanning slot – slide tray faces up

Pull tray clip to secure slide

Coverslip is facing up and the slide's barcode label is on the same side as the clip
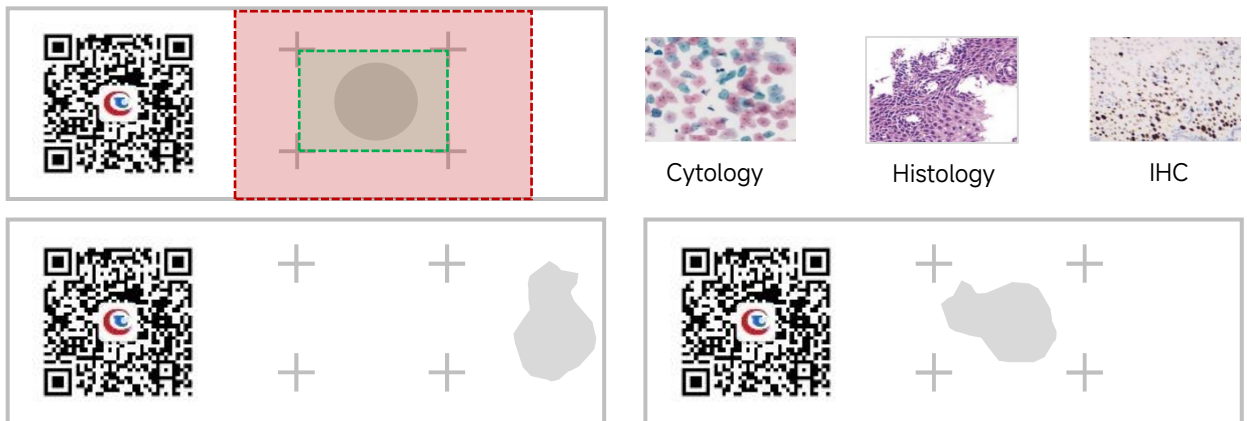
Scanner

- Scanner should be used for scanning and slide review only. Avoid getting computer viruses by not downloading external software or connecting instrument to the internet to perform non-scanning functions
- First turn off the scanner system before switching off the power switch in the back of the scanner
- Ensure the electric source is stable to avoid sudden outages or electricity is cut off while scanning instrument is in operation
- Do not move the scanner while it is in operation, handle the instrument with care
- Place the tray with slides in the scanner only after opening and entering the scanner software on the desktop

Considerations

Slide preparation

① Red Area: Maximum scanning area 35mm×25mm *(see image 1)*

② Green Area: Recommended scanning area 20mm×20mm *(see image 1)*

③ For better results, the specimen is uniform and complete, and thickness is within 10μm

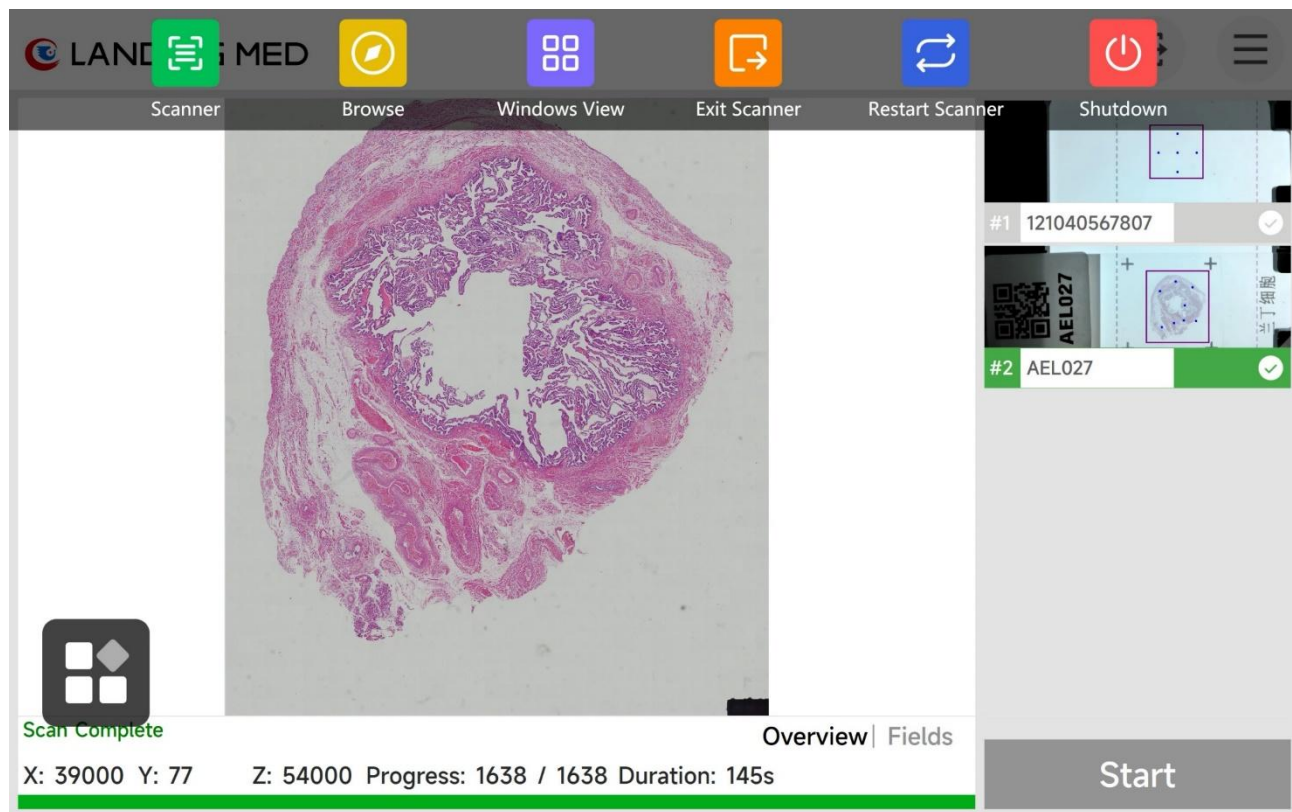④ Glass slide size is 75*25mm (±1mm) and thickness is 1mm (±0.1mm)

Image 1

Cytology   Histology   IHC

Specimen is placed outside of the scan area (✗)

Set specimen in the middle (✓)

Connect scanner to keyboard, mouse and HDMI cable for a better viewing experience.

HDMI

Scanner Menu Bar

Scanner	**Exit Scanner**	
Return to scanner interface	Exit the scanning software	
Browse	**Restart Scanner**	
Browse scanned slide images	Restart the scanning software	
Windows View	**Shutdown**	
Return to desktop view	Turn off the instrument	
Shortcut Menu		
Click for menu bar		

Browse： Interface features
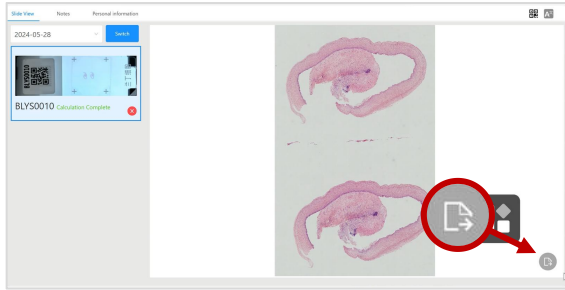
1. Click the Export SVS button
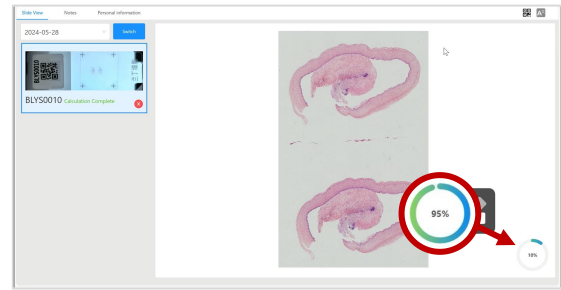
2. Wait for the progress bar to complete
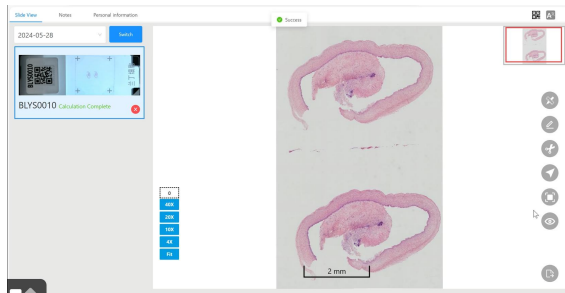
3. The toolbar appears when the SVS export is complete
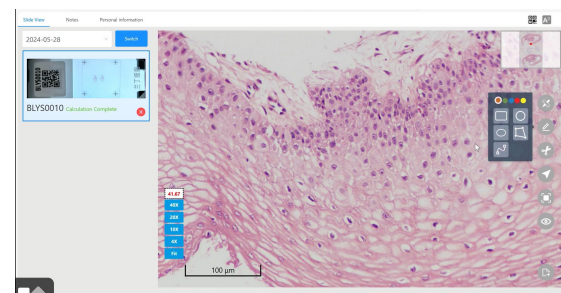
4. Tools are available for annotation

SVS — Export image to SVS format		**Annotation: Circle** — Circular shape
Position — Return to the default image view		**Annotation: Square** — Square box
Full-screen view — The screen is enlarged to full screen		**Annotation: Ellipse** — Ellipse shape
Screenshot — Take a screenshot		**Annotation: Irregular** — Irregular line
Annotation — Select shape to annotate		**Annotation: Polygons** — Polygon shape
Measurement — Line feature		**Magnification** — Switch between different field magnifications
AI View* — Turn on or disable the AI function		**Color Selection** — Select the preferred color for annotation
Language — Switch instrument language		**Multi-Layer Preview** — Upper Layer, Preset Layer, Lower Layer (only if Z-Stack is used)

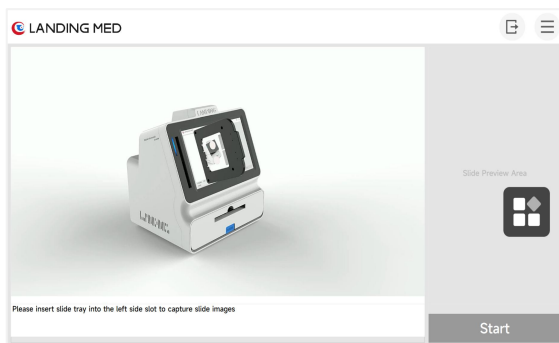***If available; used for Landing Med AI-assisted cervical cytology (LBC) screening**
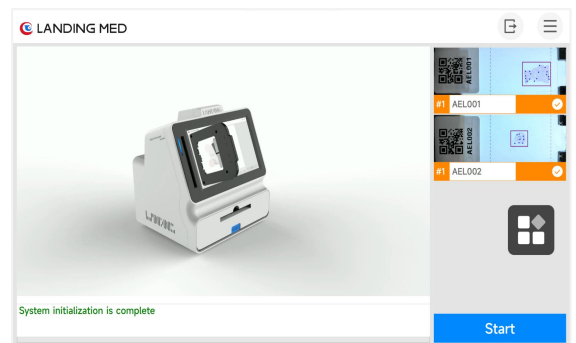
Slide Scanner Overview

1. Double-click LD Scanner icon to open the scanner software
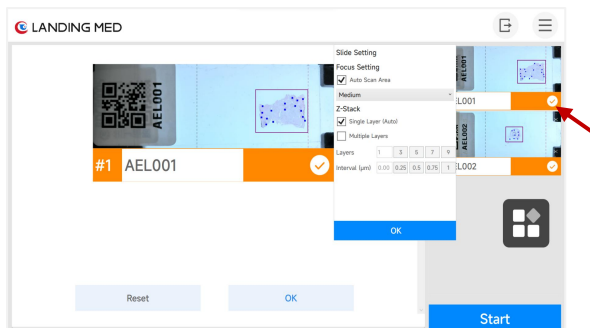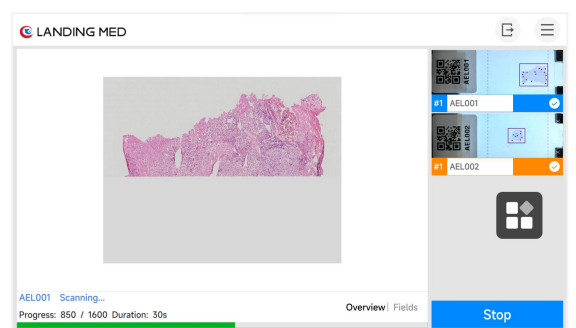

2. Click "Click To Enter"

3. Insert the slide tray in the Preview slot on the left side of the instrument

4. After taking a photo of the slide(s), check if the slide label and scan area are automatically detected
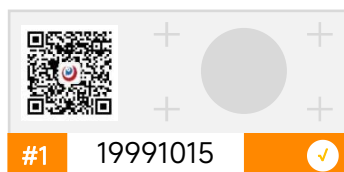

5. If needed, click on the slide and manually change the slide name and adjust the slide settings (focus, Z-stack)
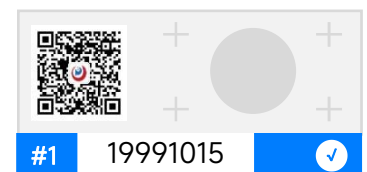

6. Preview the scanning progress directly on the scanner. When the scan is complete, the slide bar turns green
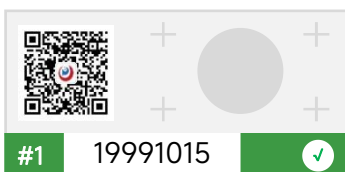
Green: Scan complete

Orange: Not scanned

Blue: Scan in progress

Manual Slide Settings
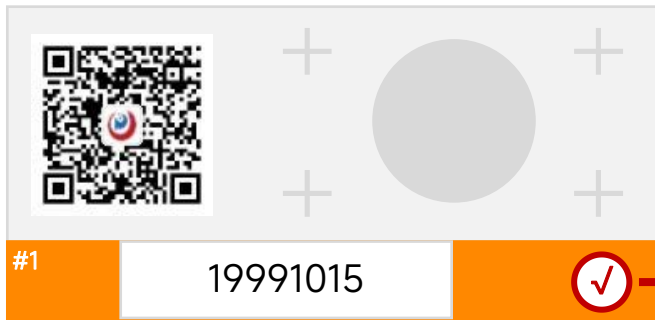
Slide Setting	
Focus Setting	
☑ Auto Scan Area	
Medium ⌄	
Z-Stack	

☑ Single Layer (Auto)

☐ Multiple Layers

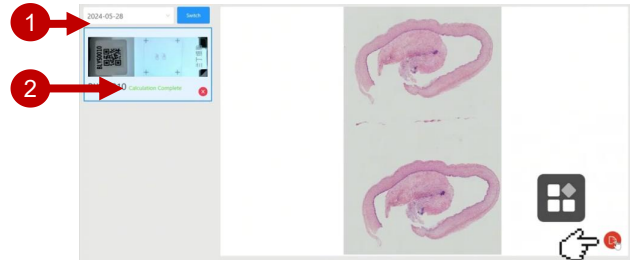| Layers	1	3	5	7	9
Interval (µm)	0.00	0.25	0.5	0.75	1

OK

#1   19991015 ✓

Overview of features

- Z-stack scanning and interval spacing provides default and customizable figures
- Focus setting (default Medium)
- Automatic scan area recognition
- Note: Settings are only valid for the selected slide

Click on the selected slide to scan (gray unchecked, orange checked)

Drag to modify the scan area

#1   19991015   ✓

Double-click to modify the slide name

Browse： Slide Review
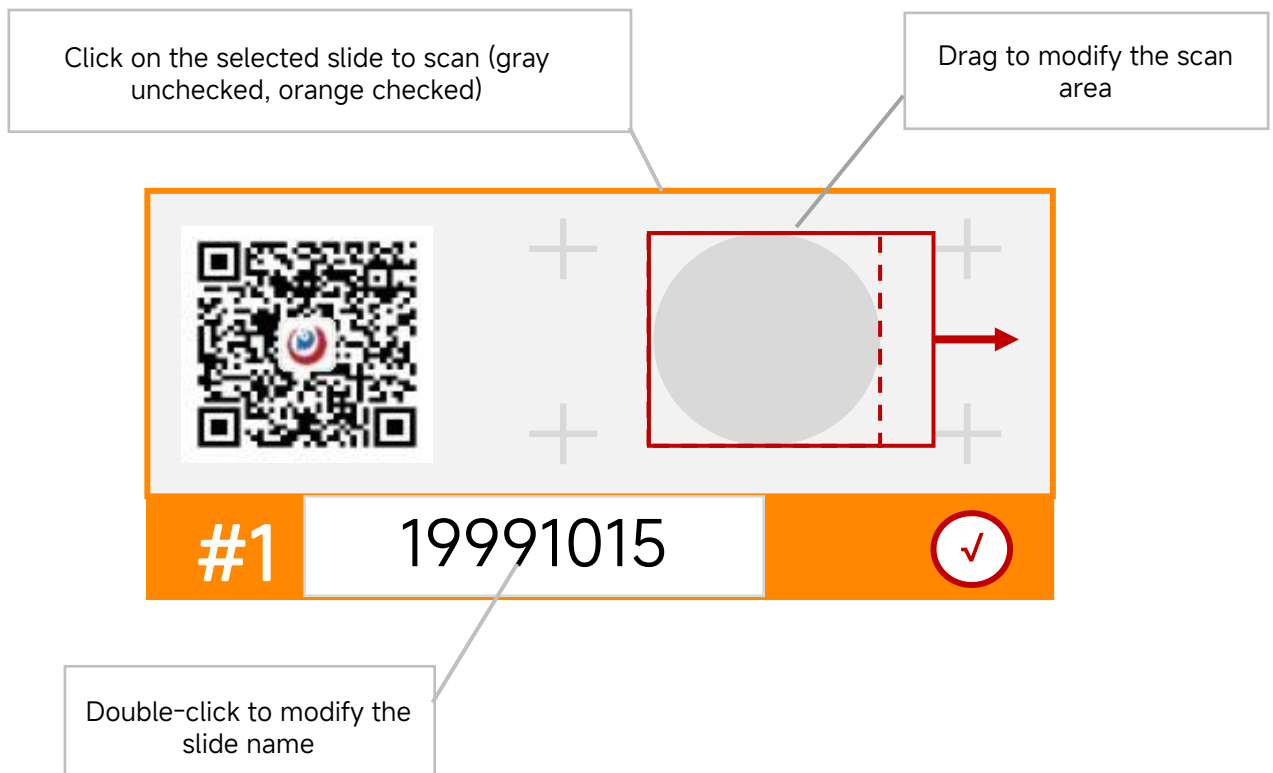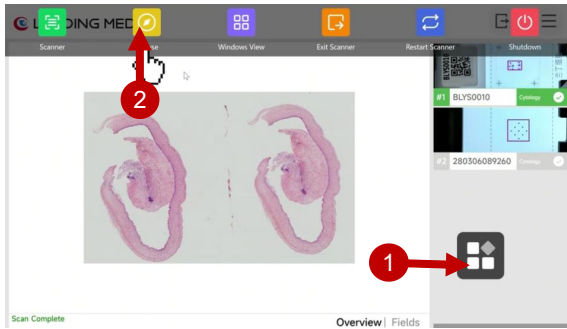
1. Click the shortcut menu then click the Browse icon to review scanned slide image(s)


2. Select the date the slide was scanned. Once the slide image is successfully uploaded to the scanner, a green *Calculation Complete* text will appear at the bottom of the slide. To annotate the slide, click on the icon on the bottom right. Wait a few moments for the upload button to be completed.
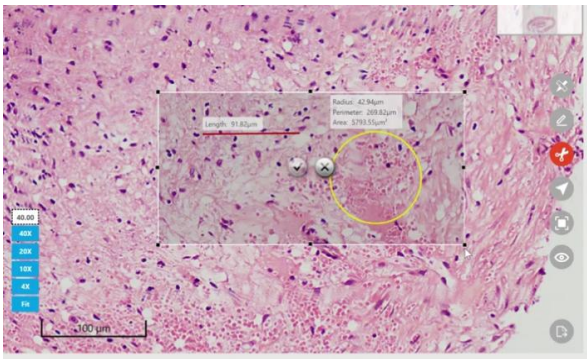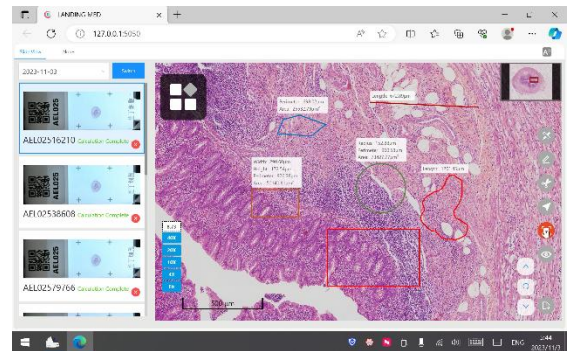

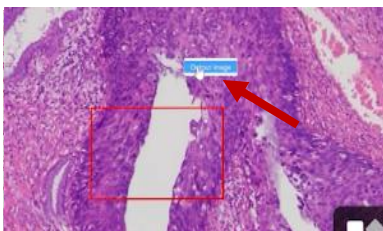3. Select the Screenshot tool to take screenshots
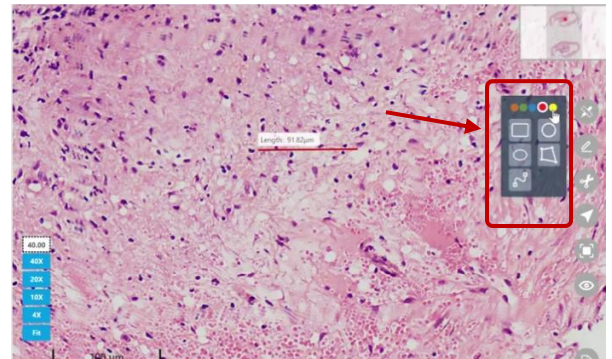
4. Select the color and annotation shape to make annotation
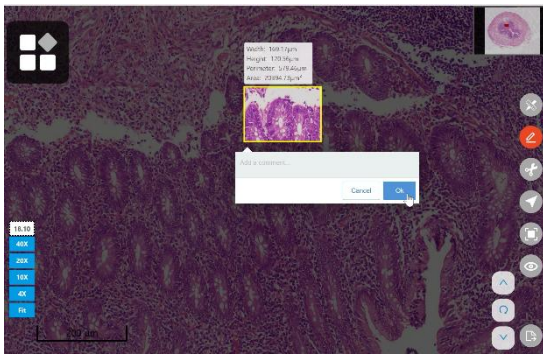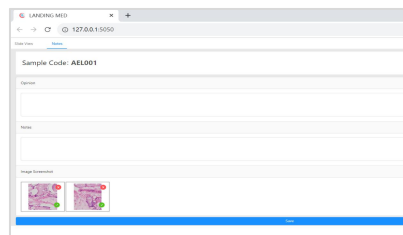
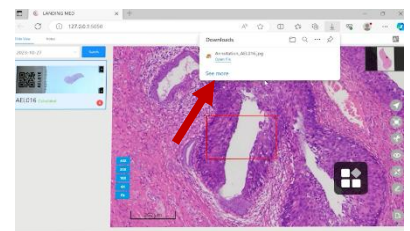

5. Insert annotation notes and press OK

6. The measurements are automatically displayed with the annotation notes

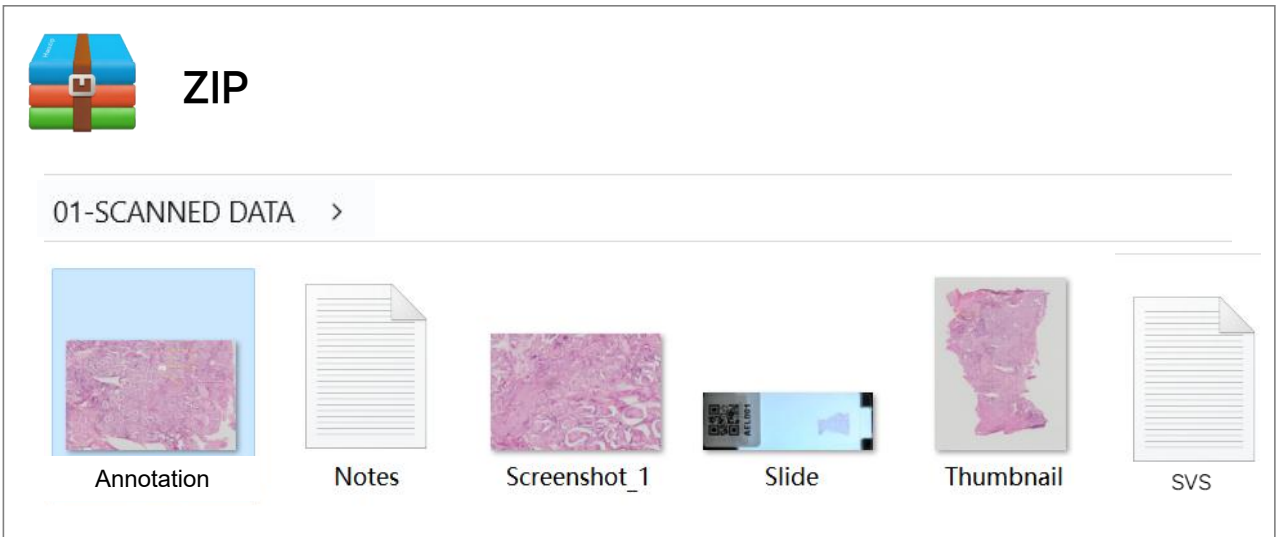7. Right-click and click "Output image" to export the annotated image

8. Under the "Notes" tab, select screenshot(s) to save image data. Optional to enter notes and opinion.

9. Open the zip file under Downloads or in the 01-SCANNED DATA folder on the scanner's desktop
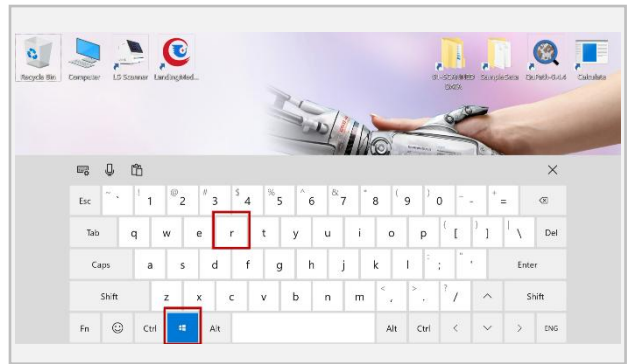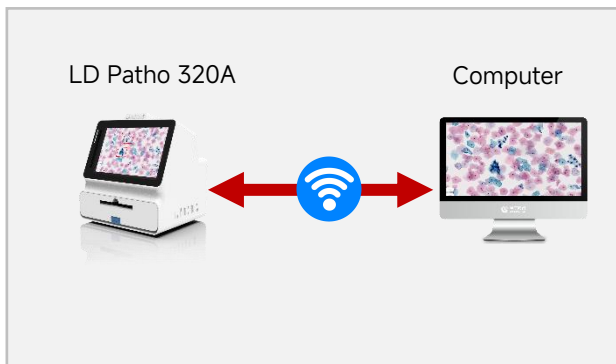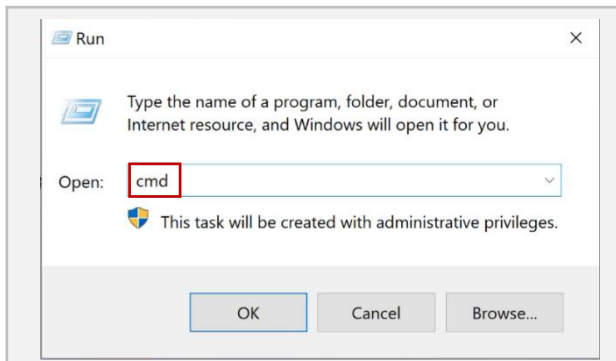
Save Image File

Saved files：

1. Screenshot.JPG

2. Notes.TXT

3. Slide panorama.JPG

4. Thumbnail.JPG

5. Annotation.PNG

6. SVS image file

Share Images

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Local Area Network
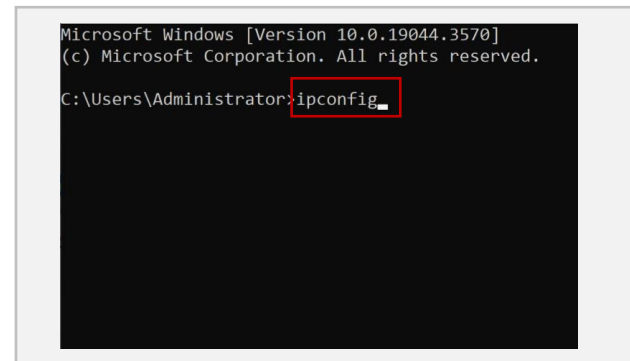

LD Patho 320A   Computer

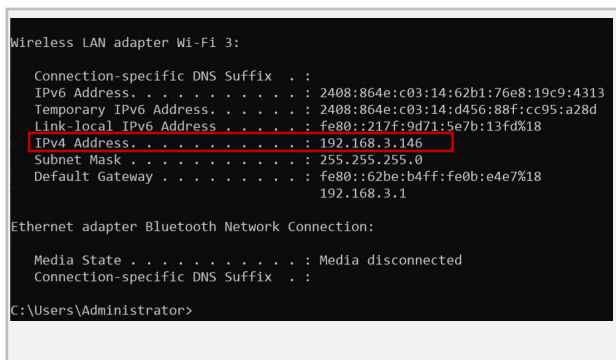1. Configure local area network and connect instrument with computer
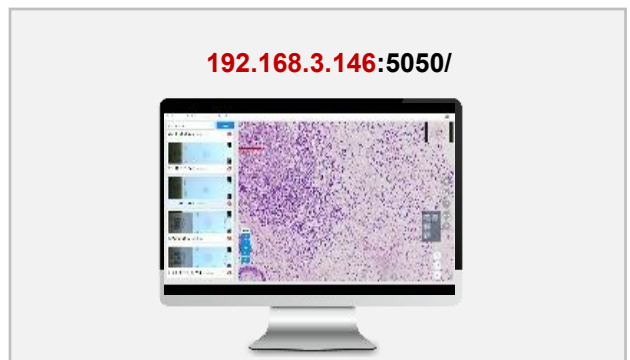

2. Input " ▣ + R" keys

3. Input "cmd" in the textbox, then press OK



4. Input "ipconfig" after "Administrator:"

5. Find the IPv4 address then copy and send it to the recipient

192.168.3.146:5050/

6. In the recipient's internet browser, input the copied
IP4 address and ":5050/" to remotely review the scanned slide(s)

Landing Med Cloud Remote Slide Review (If Available)

Please note the cloud platform enables remote whole slide image review but currently does not support annotation, measurement and screenshot functions.
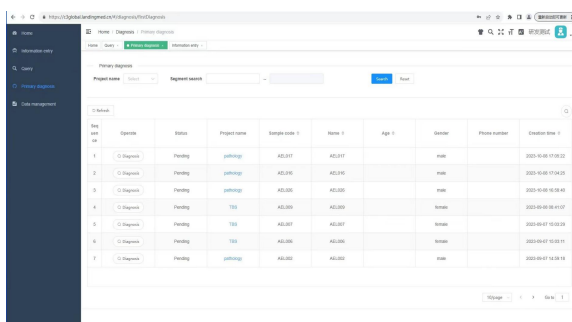
For more in-depth instructions, please watch the "Landing Med Cloud Remote Review" video
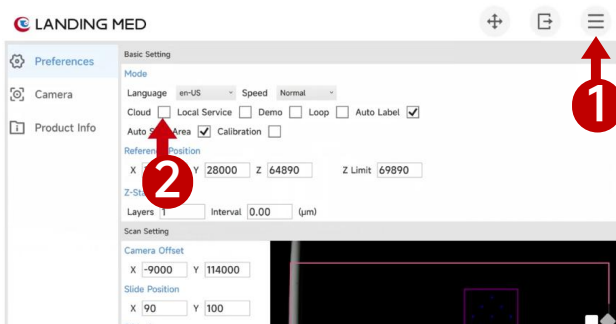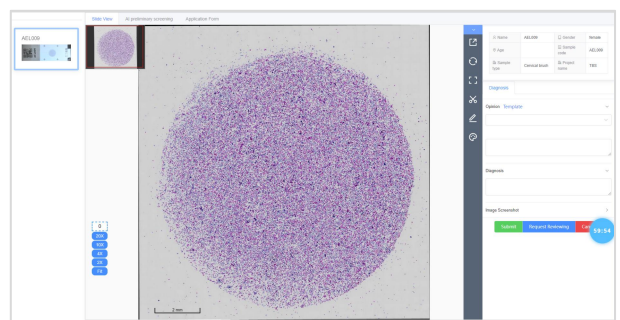

1. Under Settings, select the "Cloud" box before scanning images. Close all the pop-up windows once they finish loading then scan slides.
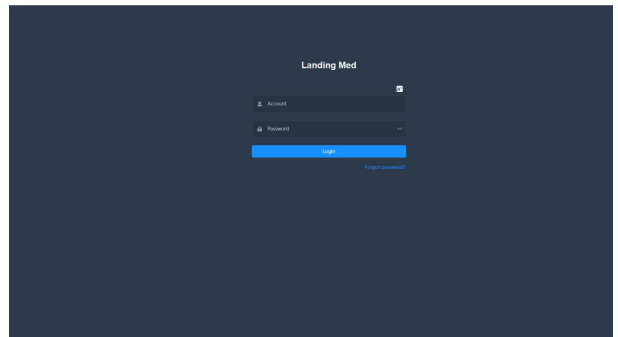
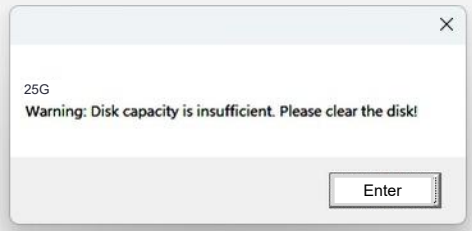2. Once slides are successfully scanned, login to the Landing Med Cloud Platform http://c3global.landingmed.cn

3. Select the sample under the "Primary diagnosis" tab and double-click to open it
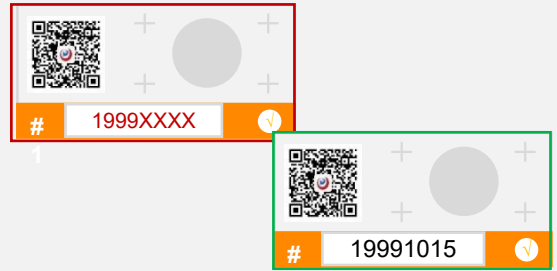

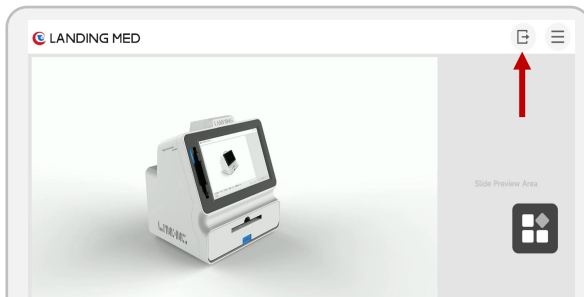4. Review scanned whole slide images

Troubleshooting

Indicates insufficient memory space

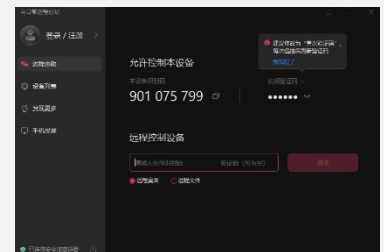Save data files and delete them from the instrument.

Label ID is inaccurate
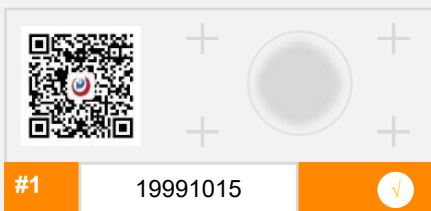
Manually change the sample name.

The slide tray is stuck

Please turn off the scanner and power supply switch on the back of the instrument and unplug the scanner. Then replug and restart the scanner.

Remote software

To enable remote support, open the software icon in the Windows menu. Provide the Device ID and passcode to Landing Med for remote support.

Focus failure or blurry image

Ensure the slide is well secured and flat on the slide tray. Re-scan the slide.
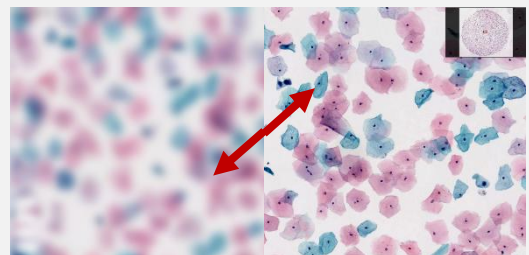
Part of image is blurry while previewing on scanner

Expand or minimize the image then drag the screen for a clearer image.

Note: If you encounter other problems, please contact Landing Med's technical team

Scanner Focus and Light Intensity Settings
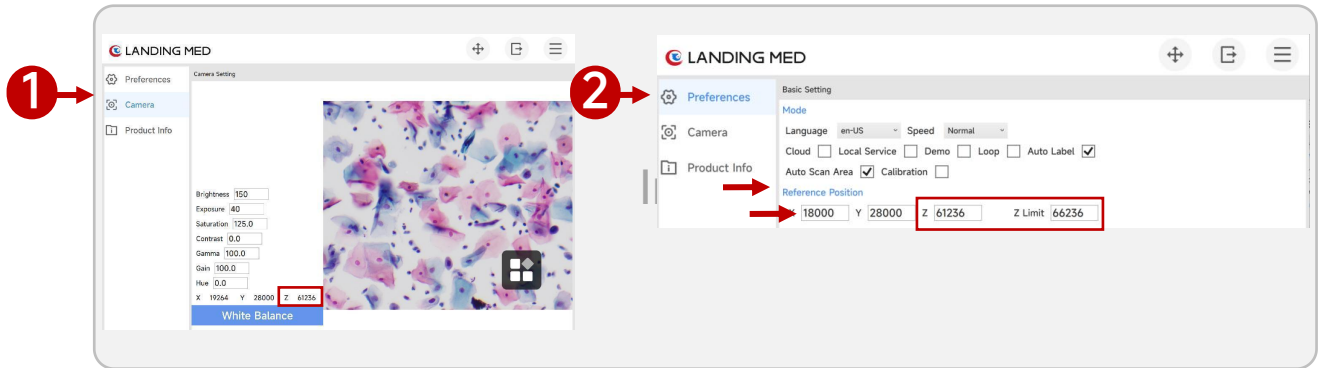
⚠️ Only change settings if scanned images are repeatedly unclear. Avoid regularly changing settings.


Manual focusing method:

In the **Camera** settings, control the platform operation through this icon ⊕ adjust the field of view to a position with clear focus. Remember the Z value. Go to **Preferences > Reference Position** and fill in the Z value. In the Z Limit box, add 5000 to the Z value.

⚠️ Only change settings if the scanned image is too bright or too dark. Avoid regularly changing settings.
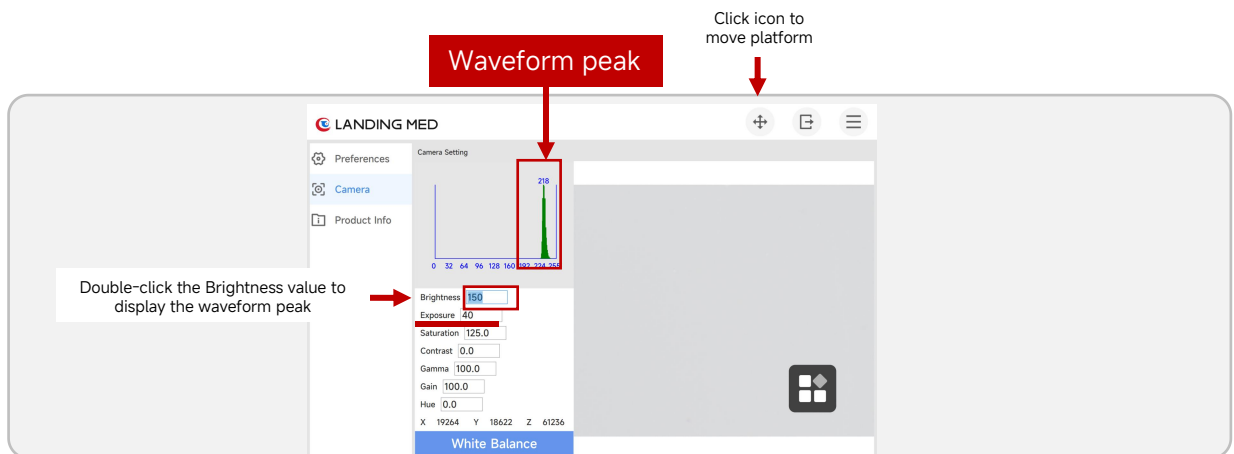
Light intensity setting method:

In the **Camera** settings, when the specimen/cells are at their clearest position, move the platform so that the blank area is in the camera's field of view, adjust the light source intensity and **Exposure** time (**no more than 60**), so that the waveform peak is at 210-220.

LD Patho 320A Maintenance Guide

Transportation Maintenance

- Shipping temperature -10°C-40°C
- Humidity: ≤85%
- The outer packaging is firm and scanner is well protected with shock resistant material.
- Do not place the scanner upside down. Do not roll or shake scanner.

Daily Maintenance

- Power supply voltage: 220V AC. Power supply ground input 220V AC, output 19V 7.9A DC
- Working temperature 10°C-30°C
- Room humidity: ≤70%
- Scanner to be placed on a flat and stable surface that can hold at least 20KG without vibrating.
- The room is well ventilated and cool.
- Scanner is not exposed to direct sunlight for extended periods of time.
- No obstruction within 10cm on all sides of the scanner.
- The touchscreen is coated to make it easier to clean. Clean the dust on the surface of the instrument with a soft, dry, lint-free cloth. Do not use instrument in a dusty environment.
- Clean the slide tray so that the surface is free of impurities, glue and other foreign matter

Special Attention

- Non-manufacturer or non-designated technical personnel are prohibited from disassembling and repairing the scanner.
- Do not modify the software and hardware of the equipment, otherwise the warranty will be invalid.

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