

iMOST-U Hematology Analyzer

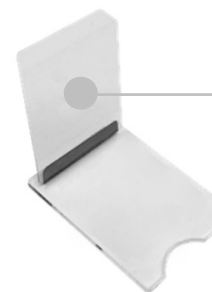
System User Guide

Version 250831

Warning!

Failure to follow instructions could
cause inaccurate results

iMOST-U Hematology Analyzer



iMOST-U
Q-Card

Precautions Before Testing:

- Ensure that the analyzer is used in the proper operating environment (15–30°C).
- Charge the analyzer to greater than 30% battery. System requires 10% battery for the testing.
- Only use the designated Q-Card before its expiration date, and it is intended for single use only.
- Open the Q-Card's sealed pouch only when you are ready to perform the measurement.
- Use the Q-Card immediately after removing it from the pouch.
- Do not touch the surface of the Q-Card.
- Do not attempt to bend, cut, or modify the Q-Card in any way.

Step-1. Open the Analyzer and Login

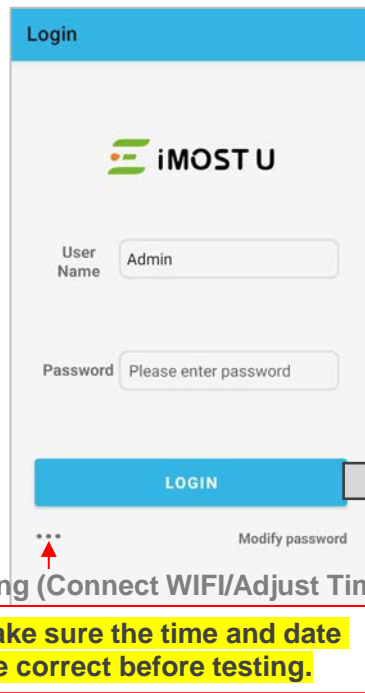
Warning! Place the iMOST on a flat, stable surface and do not move it during testing.

1.A Power on iMOST System



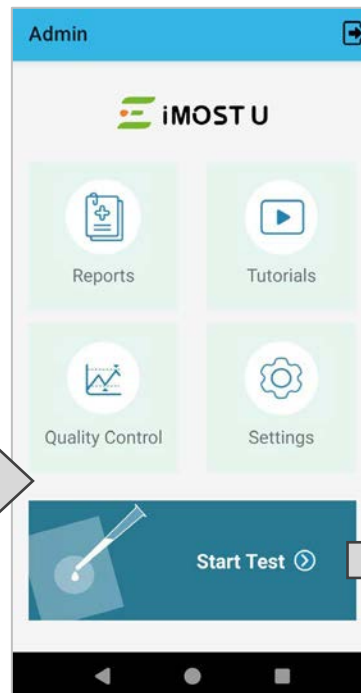
1.B Login and Setup Test Information

1) Select **User**, Input Password, & **LOGIN**



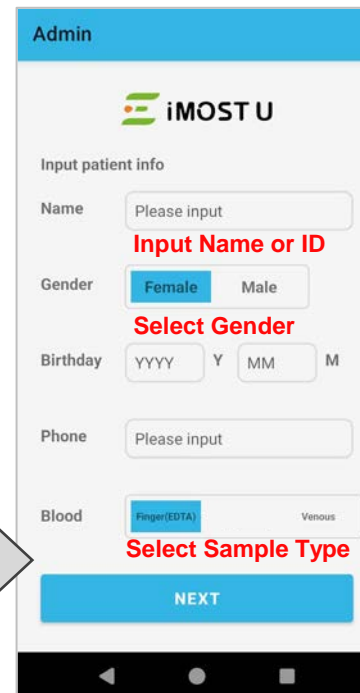
The Login screen displays the iMOST U logo at the top. Below it, there are two input fields: 'User Name' with 'Admin' entered and 'Password' with 'Please enter password'. A blue 'LOGIN' button is at the bottom. A red arrow points to a three-dot menu icon in the bottom left corner, with the text 'Setting (Connect WIFI/Adjust Time)' next to it. A yellow box at the bottom contains the text: 'Make sure the time and date are correct before testing.'

(2) Click **Start Test**



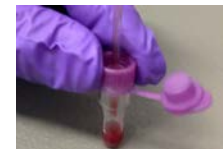
The Admin menu screen shows the iMOST U logo and four icons: Reports, Tutorials, Quality Control, and Settings. At the bottom, there is a 'Start Test' button with a play icon.

(3) Input Name, Gender, Birthday, Blood Type, Click **NEXT**



The Admin patient info screen displays the iMOST U logo and a form for inputting patient information. The form includes fields for Name, Gender (Female/Male), Birthday (YYYY, Y, MM, M), Phone, and Blood type (Finger(EDTA)/Venous). A blue 'NEXT' button is at the bottom. Red text annotations highlight 'Input Name or ID', 'Select Gender', and 'Select Sample Type'.

Finger (EDTA)



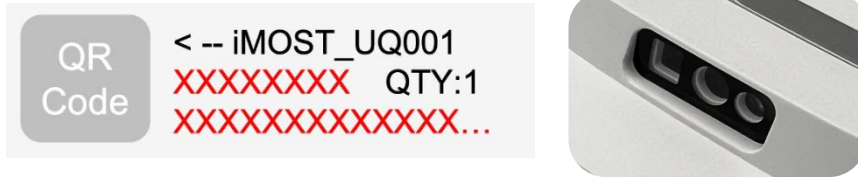
Venous



Selecting an inappropriate sample type can lead to errors.

Step-2. Scan the Q-Card QR Code on Pouch

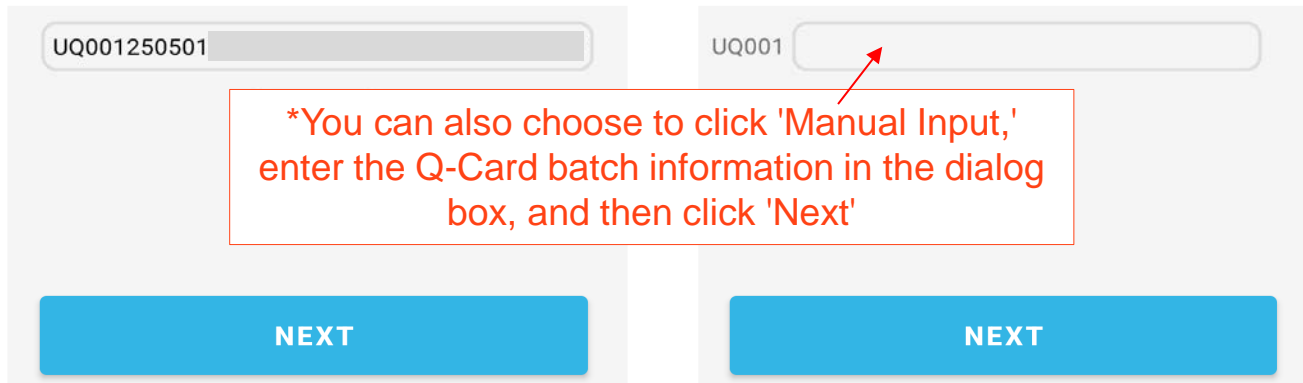
- (1) Align the scanner at the front of the analyzer with the QR code on the Q-Card pouch



- (2) Tap **the scan icon** on the screen or **the scan button** on the top right of the analyzer

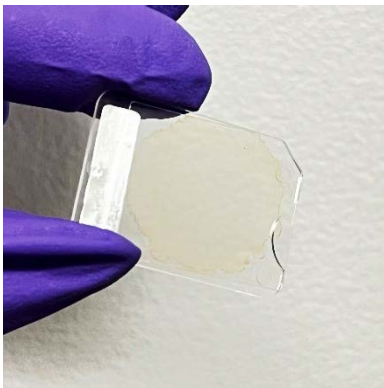


- (3) After the scan is complete, click "Next"

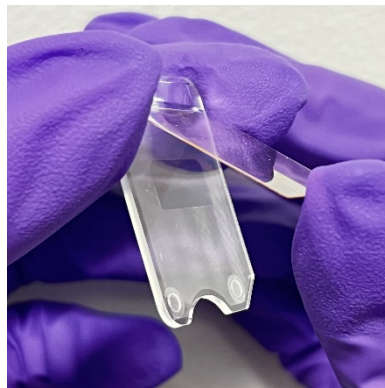


Step-3. Open and Place the Q-Card

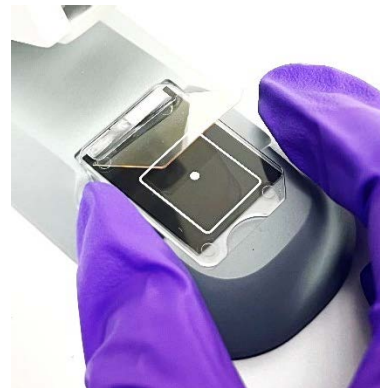
- It is recommended to use the Q-Card immediately after opening.
- The entire process—from blood collection, to preparing the card, to inserting it for testing—should be carried out **continuously**, without pausing or waiting in between. This helps prevent sample evaporation or blood cell coagulation or changes, which could lead to inaccurate or failed test results.



(a) Hold the Q-Card by its sides with two fingers.



(b) Open Q-Card by lifting the thin film of the top plate at the notch.



(c) Hold Q-Card by its sides.



(d) Put Q-Card on and secure it in the “Card Slot” of Presser.

**Blood
Landing Zone
(White Spot)**

Warning!

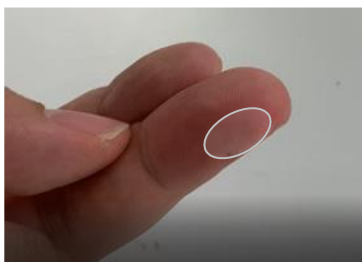
Never touch the inside surfaces of Q-Cards.

Step-4. Finger Capillary or Venous Blood

4.A Finger Prick

(1)

Use middle finger or ring finger. Clean with disinfectant (allow it to dry).



Warning!

Warm the hand, if it is cold

(2)

Apply light pressure on the fingertip. Puncture the finger using the **lancet**.



(3)

Wipe away first **2** blood drops with gauze.



(4)

Re-apply light pressure. Collect the blood drop with transfer tube. Do not milk the finger.



Ensure a smooth blood flow during blood collection, avoiding excessive squeezing that could expel interstitial fluid and lead to inaccurate results.

Before collecting the sample, wipe away the first 2–3 drops of blood with gauze or a dry cotton ball. This helps avoid contamination from residual alcohol or other substances on the fingertip.

Step-4. Finger Capillary or Venous Blood

Finger (EDTA) Using Capillary Collection Tube recommended by Essenlix
Here is one example

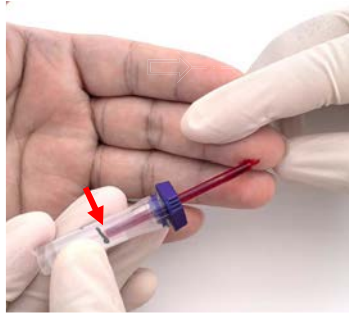
(1)

Keep **Capillary “straw”** horizontal while collecting blood from fingertips (Do not lift it in the middle to avoid air bubbles)



(2)

Fill the **Capillary “straw”** completely.



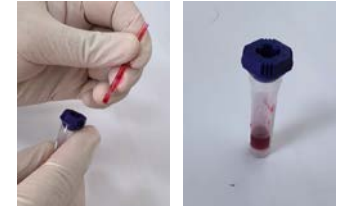
(3)

Tap downward to allow the blood in **Capillary “straw”** to enter the **Microtube**



(4)

Discard **Capillary “straw”**



**Flick bottom 10-15 times.
Shake tube 10 times.
Before Adding to Q-Cards!**

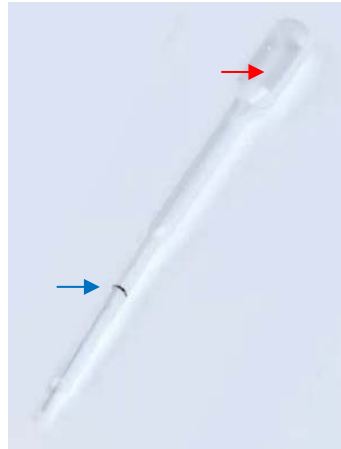


When using Finger (EDTA) samples: Use the transfer pipette with an attached pipette tip to draw 10 μ L of the sample and add it to the Q-Card.

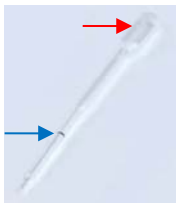
Step-4. Finger Capillary or Venous Blood

Finger (EDTA) uses a pipet or disposable micro-tube (10 μ L, without anticoagulant)

- (1) Ensure that **the top opening** remains open during the collection process. Collect the blood up to **the indicated line**.



- (2) Dispense the blood onto the **"blood landing zone"** by slowly pressing the plunger of the transfer tube or pipette.



Ensure that **the top opening** is closed during the pressing process.



**Blood
Landing Zone
(White Spot)**

If the sample is not applied at the white spot, it may lead to measurement errors.



Leave last bit of blood inside the tube.
Stop pushing before all sample is dispensed out.



Do not push air bubble into droplet.

Step 5



Step-4. Finger Capillary or Venous Blood

4.B Venous Blood

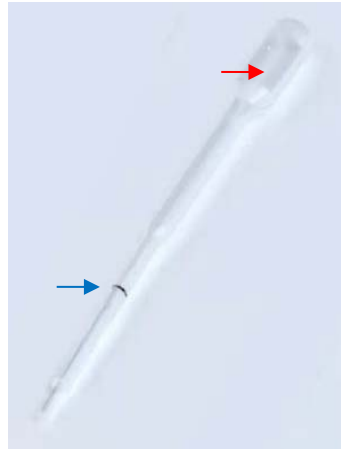
- (1) **Draw the venous blood** into a standard K₂EDTA tube. (Collected within 8 hours)
- (2) **If the sample was stored in the refrigerator**, leave the samples undisturbed at room temperature for at least 30 min.
- (3) **Mix thoroughly before dropping on Q-Card by:**
 - 3.a Manually and gently inverting the tube 10 - 15 times, **or**
 - 3.b Mixing it using a tube rocker for at least two minutes.

When using Venous samples: Use the transfer pipette with an attached pipette tip to draw 10 µL of the sample and add it to the Q-Card.

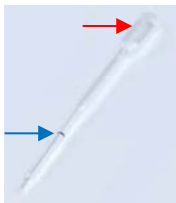
Step-4. Finger Capillary or Venous Blood

Venous uses a pipet or disposable micro-tube (10 μ L, without anticoagulant)

- (1) Ensure that **the top opening** remains open during the collection process. Collect the blood up to **the indicated line**.



- (2) Dispense the blood onto the **"blood landing zone"** by slowly pressing the plunger of the transfer tube or pipette.



Ensure that **the top opening** is closed during the pressing process.



**Blood
Landing Zone
(White Spot)**

If the sample is not applied at the white spot, it may lead to measurement errors.



Leave last bit of blood inside the tube.
Stop pushing before all sample is dispensed out.



Do not push air bubble into droplet.

Step 5



Step-5. Close the Q-Card

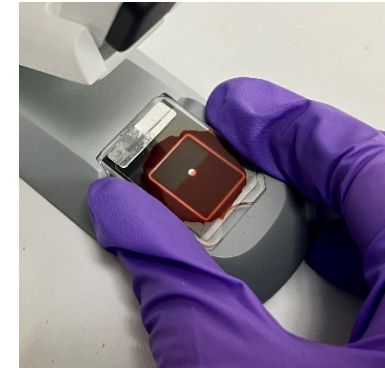
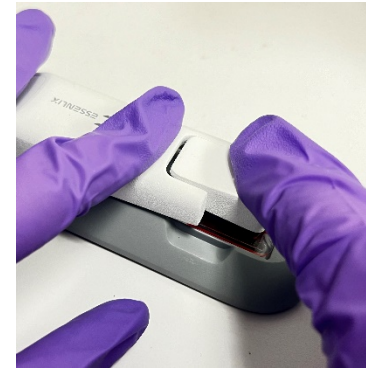
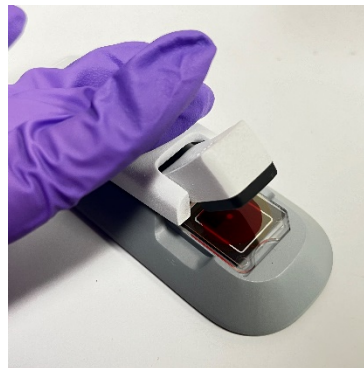


Immediately (within 15 sec), smoothly close the card by pressing the arm at (A).

Press the arm at (A) gently and smoothly at a rate of ~4 sec from beginning to end until the blood stops spreading (wait ~2 sec).

Press the front head (B) against the Q-Card ~3 sec to make sure the Q-card is tightly closed.

Lift by holding sides of Q-Card

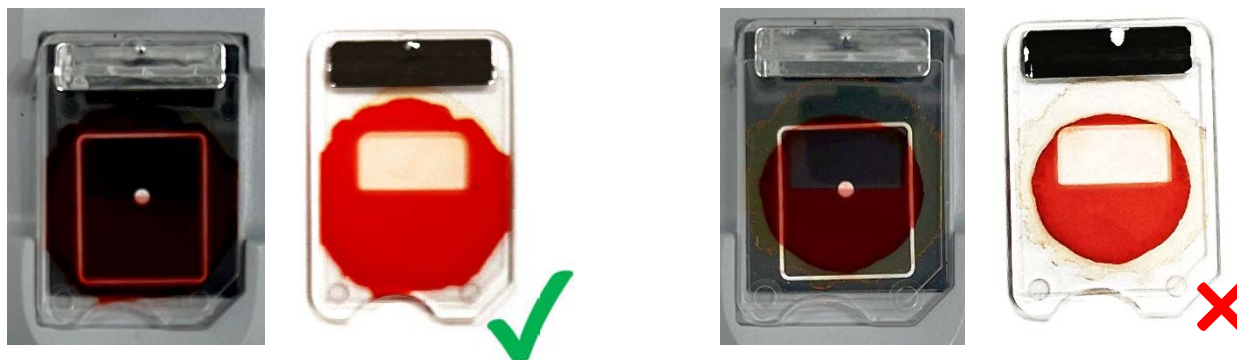


Warning!

Never reopen the Q-Card before testing. If the Q-Card is accidentally opened, discard the Q-Card and make a new one.

Step-6. Inspect the Sample in Q-Card

- 1) The blood must cover the white reference square, otherwise discard the Q-Card and make a new one.

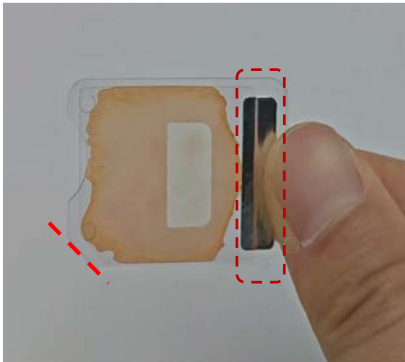


- 2) No large visible air bubble or dust, otherwise discard the Q-Card and make a new one.



Step-7. Insert the Card into the Analyzer

Hold the card on silver strip, with the **front side** facing you



Immediately, gently insert the Q-Card into the analyzer until a **physical stop is reached**.



Close the cap.



Warning!

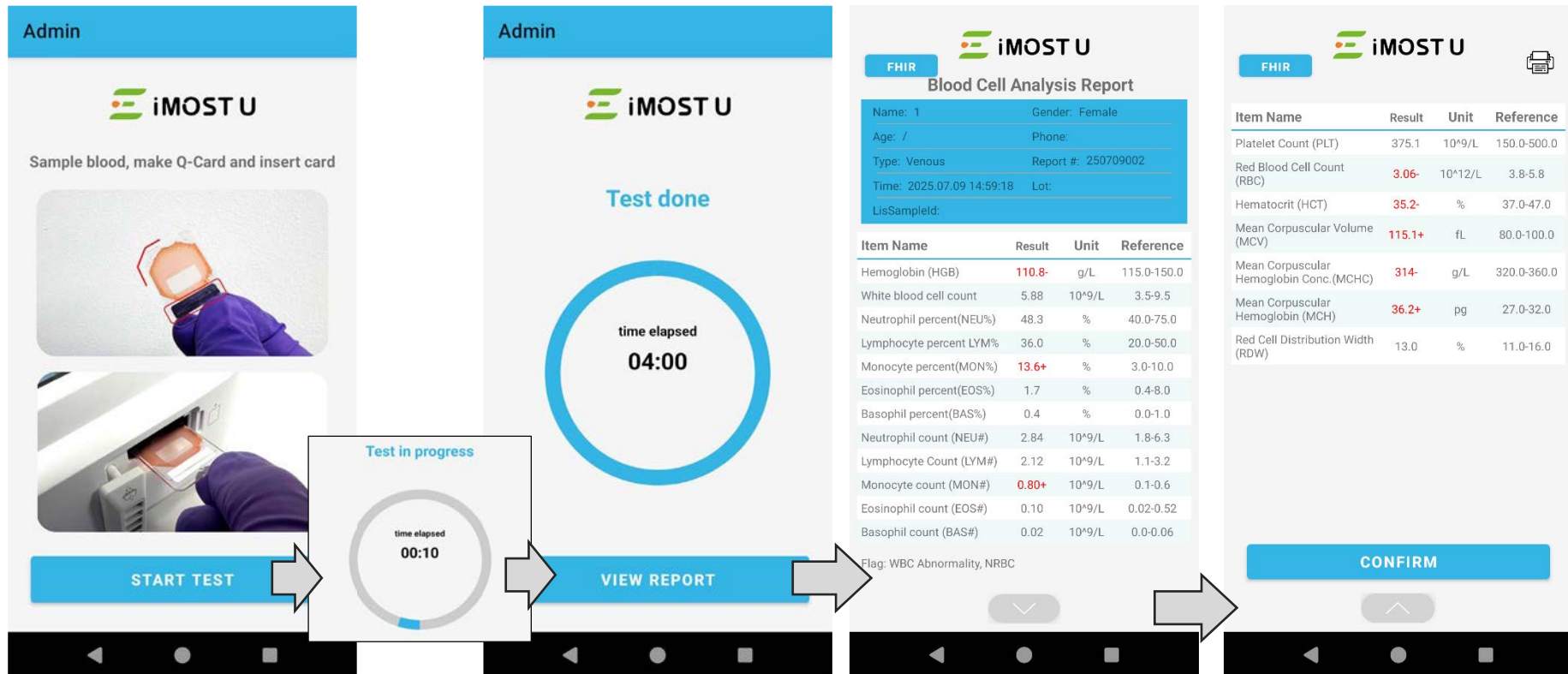
If the card is accidentally opened during insertion, discard it and prepare a new one.

Step-8. Measure

(1) Click **NEXT**
and Wait **4-5 min**

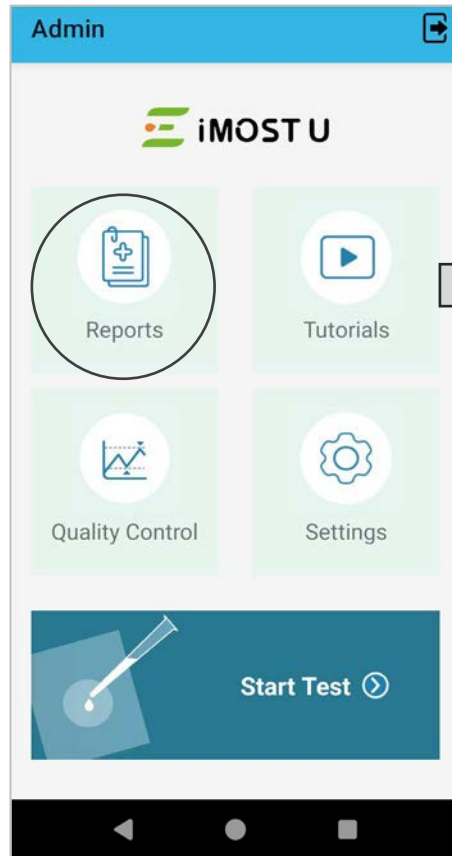
(2) Click **VIEW REPORT**

(3) **CONFIRM**

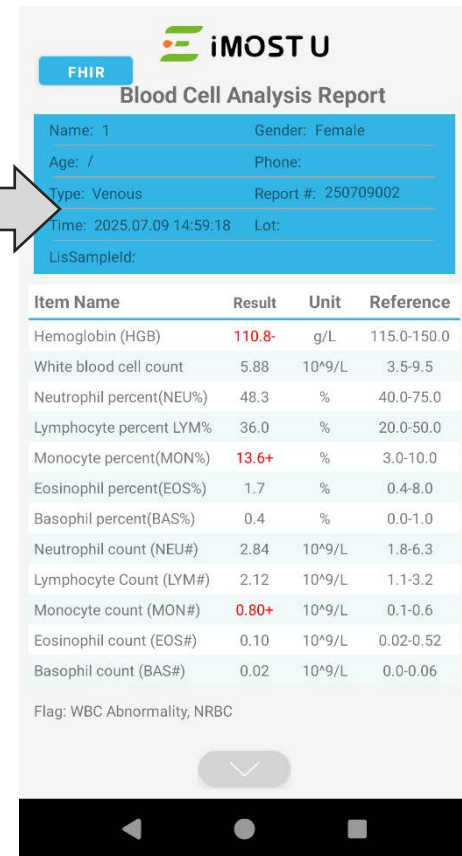


Step-9. Observe Results

(1) Click **REPORTS**



(2) CLICK **Individual Results**



The screenshot shows the iMOST U Blood Cell Analysis Report. At the top is the iMOST U logo and a blue button labeled 'FHIR'. Below is the report title 'Blood Cell Analysis Report'. The patient information section includes: Name: 1, Gender: Female, Age: /, Phone: /, Type: Venous, Report #: 250709002, Time: 2025.07.09 14:59:18, Lot: /, and LisSampleId: /.

Item Name	Result	Unit	Reference
Hemoglobin (HGB)	110.8-	g/L	115.0-150.0
White blood cell count	5.88	10 ⁹ /L	3.5-9.5
Neutrophil percent(NEU%)	48.3	%	40.0-75.0
Lymphocyte percent LYM%	36.0	%	20.0-50.0
Monocyte percent(MON%)	13.6+	%	3.0-10.0
Eosinophil percent(EOS%)	1.7	%	0.4-8.0
Basophil percent(BAS%)	0.4	%	0.0-1.0
Neutrophil count (NEU#)	2.84	10 ⁹ /L	1.8-6.3
Lymphocyte Count (LYM#)	2.12	10 ⁹ /L	1.1-3.2
Monocyte count (MON#)	0.80+	10 ⁹ /L	0.1-0.6
Eosinophil count (EOS#)	0.10	10 ⁹ /L	0.02-0.52
Basophil count (BAS#)	0.02	10 ⁹ /L	0.0-0.06

Flag: WBC Abnormality, NRBC

Long press to delete specific results

Maintenance

Before Test	Charge the system to greater than 30% battery. System requires 10% battery for the testing.
After Test	You may choose to clean the exterior surface of the iMOST-L with a disinfectant reagent, as needed. Note: After wiping, remove any residual liquid with a tissue.

Troubleshooting – Error Messaging and Action Required

Warning/Symbol	Possible Cause	Action
Warning: Q-Card not detected or incorrect Q-Card used.	No Q-Card inserted, incorrect Q-Card inserted, or Q-Card inserted incorrectly.	Please verify that you are using the correct Q-Card and retest.
Warning: Q-Card is not fully inserted.	The Q-Card is not fully inserted into the slot.	Please remove and reinsert the Q-Card until it reaches the physical stop position.
Warning: Insufficient blood sample.	Insufficient blood sample in the Q-Card.	Please refer to the user guide and ensure that the Q-Card contains enough blood.
N/A in certain parameter in “Results”	Certain parameters are rejected due to improper samples, incorrect Q-Cards, or defects on the card.	Use a new Q-Card, repeat the measurement
N/A in certain parameter in “Results” <u>again</u>	This sample’s parameter is improper to be tested in iMOST system.	This sample’s parameter is improper to be tested in iMOST system.
Abnormal noise from inside the device	Foreign matter is present inside the device.	Please turn off the power and unplug the device. Check the Q-Card compartment and heat dissipation holes, then remove any foreign matter.
Hardware Error	Hardware Error.	Please retest or use a new Q-Card. If the same error persists, contact customer support.
Warning: Over Temperature Protection	The internal temperature of the iMOST system is exceeding acceptable levels.	Please check the surrounding environment, as well as whether the Q-Card cover and the vent at the bottom of the instrument are blocked.
Long test duration warning	The duration of a single test is longer than usual.	Please retest or use a new Q-Card. If the same error persists, contact customer support.



- The entire process—from blood collection, to preparing the card, to inserting it for testing—should be carried out **continuously**, without pausing or waiting in between.
- Place the analyzer on a **flat, stable surface** and do not move it during testing.
- Use the Q-Card **immediately** after removing it from the pouch. Do not put used Q-Card back to box.
- **Finger (EDTA) mode** uses **capillary collection tube recommended by Essenlix**.
- **Mix the blood well** before adding to Q-Card.
- Drop blood on **Blood Landing Zone (White Spot)**.
- Leave last bit of blood inside the tube. **Do not push air bubble** into droplet.
- Press the arm at (A) **gently and smoothly** at a rate of ~4 sec from beginning to end until the **blood stops spreading (wait ~2 sec)**. Press the front head (B) against the Q-Card ~3 sec
- **Inspect** the Q-Card
- Insert the Q-Card - Hold the card on silver strip, with **the front side facing you**

Account and Password Record

Please ensure accurate recording of your account and password information and store it in a secure place.

Date: _____
Account: _____
Password: _____

Date: _____
Account: _____
Password: _____

Date: _____
Account: _____
Password: _____

Date: _____
Account: _____
Password: _____

Date: _____
Account: _____
Password: _____

Date: _____
Account: _____
Password: _____