

## Where Do Doctors Get Their Answers?

With Rachel Colpitts, Medical Laboratory Technologist from NBCC

### Kahoot Game Questions:

1. Which is the study of blood?
  - a. Hematology
  - b. Microbiology
  - c. Transfusion Science
  - d. Histology
  
2. Which is the study of tissue?
  - a. Hematology
  - b. Microbiology
  - c. Transfusion Science
  - d. Histology
  
3. Which is the study of infectious organisms?
  - a. Hematology
  - b. Microbiology
  - c. Transfusion Science
  - d. Histology
  
4. Which applies to blood transfusions?
  - a. Hematology
  - b. Microbiology
  - c. Transfusion Science
  - d. Histology
  
5. Which is the preparation of tissue?
  - a. Hematology
  - b. Microbiology
  - c. Histotechnology
  - d. Histology
  
6. If a doctor ordered an electrolyte test, which department does it go to?
  - a. Hematology
  - b. Microbiology
  - c. Histotechnology
  - d. Chemistry

7. Which medical profession is responsible for providing lab test results?
  - a. Medical laboratory assistant
  - b. Medical laboratory technologist
  - c. Respiratory therapist
  - d. Nuclear medicine technologist
  
8. How many lab tests are performed every day in Canada?
  - a. 1.2 billion
  - b. 2.4 million
  - c. 1.2 million
  - d. 120 000
  
9. How many decisions made by doctors are based on lab results?
  - a. 10%
  - b. 25%
  - c. 50%
  - d. 70%
  
10. Which medical profession plays a crucial role in the collection and preparation of laboratory specimens?
  - a. Medical laboratory assistant
  - b. Registered nurse
  - c. Respiratory therapist
  - d. Nuclear medicine technologist

## **Answer Key:**

### **1. a. Hematology**

“Hema-“ refers to blood, and “-ology” is the study or science of something. So hematology is “blood study”.

### **2. d. Histology**

“Hist-“ refers to tissue. So histology is “tissue study”.

### **3. b. Microbiology**

In this case, the “micro-“ refers to microorganisms (like bacteria, viruses, parasites, and fungi). “Bio-“ means “life”. Biology is “life study”, so microbiology is “microorganism life study”.

### **4. c. Transfusion Science**

Transfusion science is the area of the lab where blood typing, cross matching, and dispensing of blood and blood products is performed. Also called “blood bank”, this department handles blood, plasma, platelets, coagulation factors (used when a patient has a bleeding condition), and antibodies for transfusion.

### **5. c. Histotechnology**

Histology refers to the study of tissues – histotechnology is the study of tissue preparation. “Histo-“ still refers to tissue, and “-ology” is still a study, but it is now attached to “techno-“. “Tech-“ or “techno-“ originally had a meaning of “art or skill” even though we now most often associate it with electrical and digital technology. In this case, we have the skill of handling tissue.

### **6. d. Chemistry**

Electrolytes are found in humans and are essential for health. Commonly, this is a blood test. The vast majority of blood tests are tested in the chemistry department unless we’re looking at the blood itself (like in hematology).

### **7. b. Medical laboratory technologist**

Only medical laboratory technologists are legally allowed to analyse specimens in the lab and report results.

**8. c. 1.2 million**

In Canada, 1.2 million tests are performed every day, providing valuable information to physicians and other clinical decision makers. These include 500 cases of cancer diagnosed every day, 70,000 heart attacks diagnosed each year, 2000 units of blood transfused every day, and 14,000 trauma victims assisted every day by lab results.

**9. d. 70%**

This number varies depending on what kind of condition is being considered or treated, but overall, it is estimated that ~70% of doctor decisions for treatment and diagnosis

“Without medical laboratory technologists, you’re just guessing” is a common MLT creed!

**10. a. Medical laboratory assistants**

While not licensed to provide test results, MLAs play a critical role in the lab. They often interact with patients more than MLTs (which is much more important than it sounds), collect specimens appropriately, aid in the proper preparation of specimens, prepare chemicals for use, set up some testing, and are also often able to help with a lot of lab maintenance.