



# Blood Banking & Transfusion Medicine 101

## Roles of Players & Groups

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## Learning Objectives

After watching this video you should be able to....

- Identify the different professionals in laboratory medicine.
- Identify the credentialing bodies for the clinical laboratory.
- Describe the future state of the clinical laboratory medicine field.
- Explain the requirements for laboratory personnel found in the US Federal Regulations.




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What do all those initials mean after your name???



A word cloud centered on the slide. The most prominent word is 'pathologist' in large red letters. Other words include 'medical', 'laboratory', 'scientist', 'certified', 'and', 'MLS (ASCP)', 'SBB', 'board', 'technologist', 'MLT', 'CLS', 'phlebotomist', 'technician', 'anatomical', 'Medical', 'clinical', and 'Laboratory'.




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### Who's who in laboratory medicine?

- Pathologist (MD)
- Medical Laboratory Technologist /Medical Laboratory Scientist (MT or MLS)
- Medical Laboratory Technician (MLT)
- Phlebotomist or Phlebotomy Technician (PBT)



A circular illustration of a young girl with brown hair and glasses, wearing a white lab coat, sitting at a desk and looking through a microscope. There are small white circles around her head, suggesting thought or focus.





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# Pathologist


- Physician
- A pathologist is a doctor who studies tissues, cells and body fluids in order to help other physicians make a diagnosis




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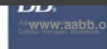
## Clinical and Anatomical Pathology



Anatomical pathology involves examining tissue specimens taken from the human body



A clinical pathologist is involved in conducting and overseeing laboratory tests on body fluids, such as blood.



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**Residency**


- After completing medical school, a four to five-year pathology residency is next. Additional training in the form of a fellowship may be needed for certain subspecialties of pathology such as immunohematology. The length of a pathology fellowship varies according to the subspecialty chosen.

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**Becoming a Pathologist**

- Medical pathologists must be licensed by their state to practice medicine and must be certified by the American Board of Pathology.



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## Medical Laboratory Technologist /Medical Laboratory Scientist (MT or MLS)

- **Medical Technologist (MT)**
- **Medical Laboratory Scientist (MLS)**

In the hospital, the medical technologists are like the producers and directors in a play. Patients don't often see them, but they are vital members of the healthcare team.



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## Medical Laboratory Technologist /Medical Laboratory Scientist (MT or MLS)

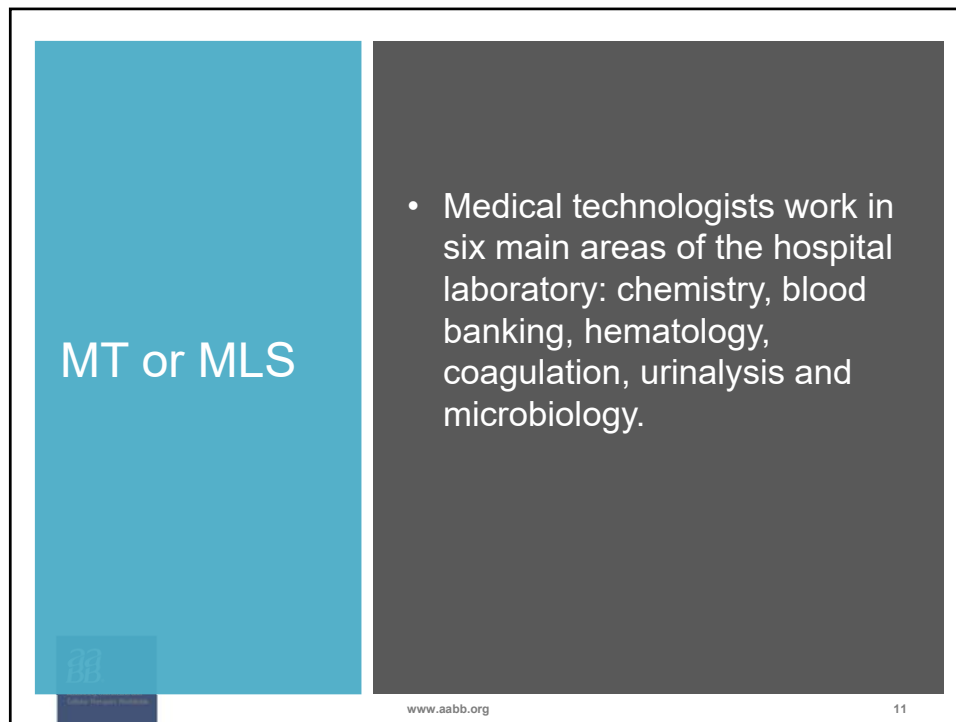
- A **medical technologist** is a highly skilled health professional who tests and analyzes blood, other body fluids, and tissue samples.
- **Medical technologists** are responsible for operating and maintaining the equipment used to analyze specimens and ensuring that tests are completed in a correct and timely manner



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MT or MLS

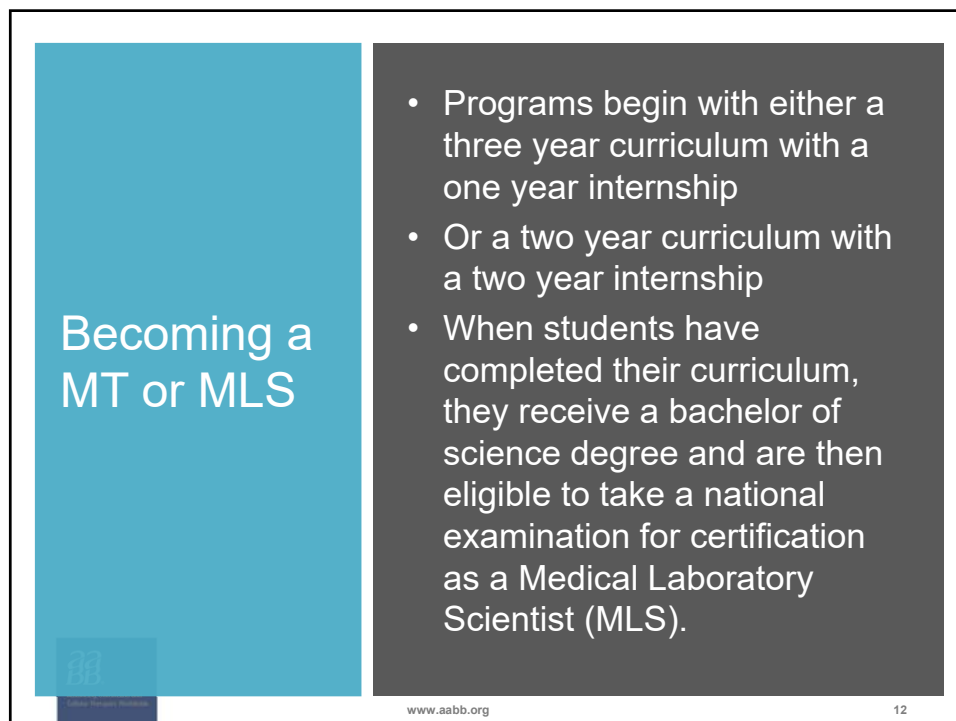
- Medical technologists work in six main areas of the hospital laboratory: chemistry, blood banking, hematology, coagulation, urinalysis and microbiology.

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This slide features a teal background on the left with the text 'MT or MLS' in white. The right side has a dark grey background with a white bullet point. A small AABB logo is in the bottom left, and the website 'www.aabb.org' and the number '11' are in the bottom right.

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Becoming a MT or MLS

- Programs begin with either a three year curriculum with a one year internship
- Or a two year curriculum with a two year internship
- When students have completed their curriculum, they receive a bachelor of science degree and are then eligible to take a national examination for certification as a Medical Laboratory Scientist (MLS).

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Board of Certification

- MT or MLS graduates must take a board exam given by the American Society for Clinical Pathologists to qualify as a Medical Technologist or Medical Laboratory Scientist

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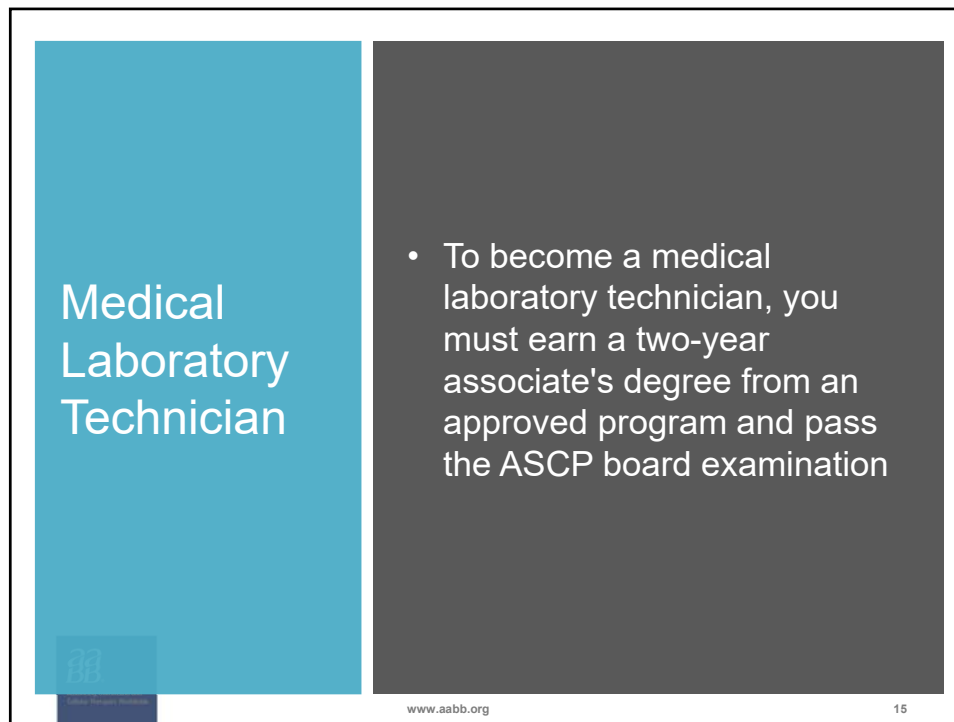
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Specialties

- MT or MLS may take additional board exams in different areas of the laboratory to become a specialist
- For example you may take additional studies and a board exam to become a specialist in blood banking or SBB

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Medical Laboratory Technician

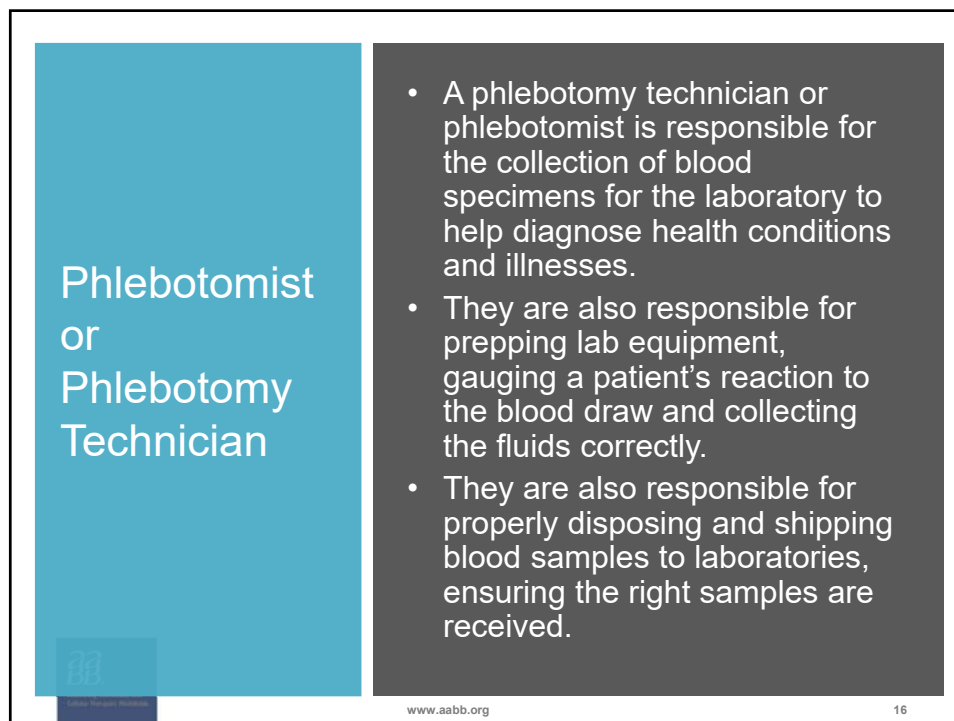
- To become a medical laboratory technician, you must earn a two-year associate's degree from an approved program and pass the ASCP board examination

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Phlebotomist or Phlebotomy Technician

- A phlebotomy technician or phlebotomist is responsible for the collection of blood specimens for the laboratory to help diagnose health conditions and illnesses.
- They are also responsible for prepping lab equipment, gauging a patient's reaction to the blood draw and collecting the fluids correctly.
- They are also responsible for properly disposing and shipping blood samples to laboratories, ensuring the right samples are received.

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**STRONGERTOGETHER**

**Board certifications**


- Physicians – The American Board of Pathology
- MT, MLT, Phlebotomist – The American Society for Clinical Pathology (ASCP)

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**Clinical Laboratory Improvement Amendments 1988**

- The Centers for Medicare & Medicaid Services (CMS) regulates all laboratory testing (except research) performed on humans in the U.S. through the Clinical Laboratory Improvement Amendments (CLIA)




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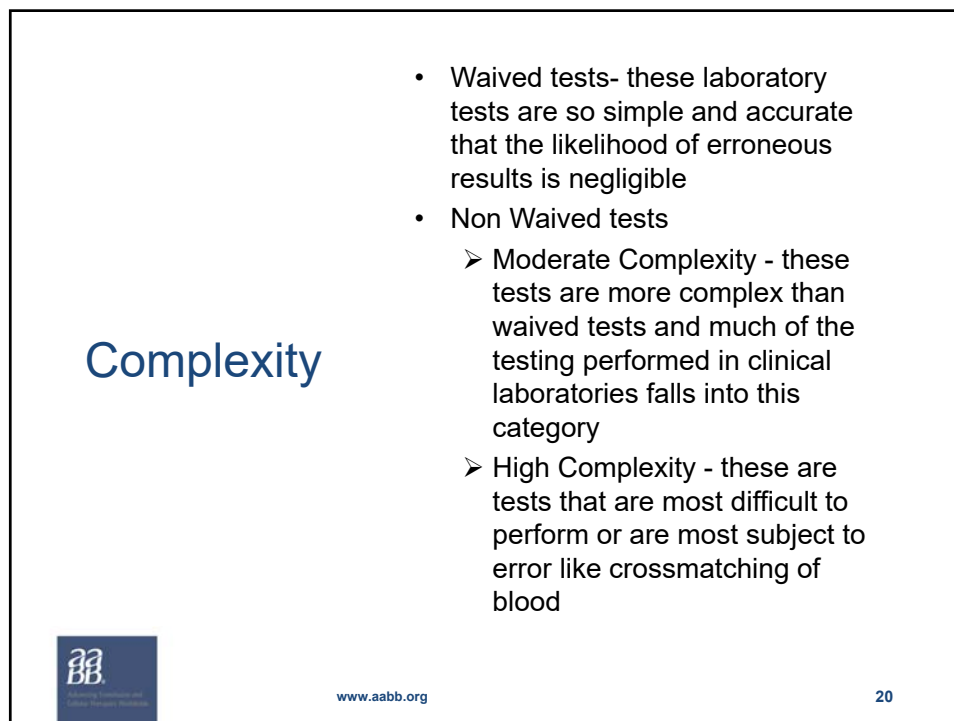


## Categorization of Tests

- Since November 13, 2003, the Food and Drug Administration (FDA) has had the authority to implement the Clinical Laboratory Improvement Amendments (CLIA) test complexity categorization provisions


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## Complexity

- Waived tests- these laboratory tests are so simple and accurate that the likelihood of erroneous results is negligible
- Non Waived tests
  - Moderate Complexity - these tests are more complex than waived tests and much of the testing performed in clinical laboratories falls into this category
  - High Complexity - these are tests that are most difficult to perform or are most subject to error like crossmatching of blood

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Personnel Qualifications


- Waived testing
  - simple test that are non-technical

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Personnel Qualifications

- Moderate Complexity
  - Possess a current license issued by the State if needed
  - Have earned a doctoral, master's, or bachelor's degree in a chemical, physical, biological or clinical laboratory science, or medical technology from an accredited institution
  - or
  - Have earned an associate degree in a chemical, physical or biological science or medical laboratory technology from an accredited institution
  - or
  - Be a high school graduate or equivalent and have successfully completed an official military medical laboratory procedures course



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## Personnel Qualifications

- High Complexity
  - Possess a current license issued by the State if needed
  - Have earned a doctoral, master's, or bachelor's degree in a chemical, physical, biological or clinical laboratory science, or medical technology from an accredited institution
    - or
  - Be a high school graduate or equivalent and have successfully completed an official military medical laboratory procedures course
    - or
  - Education AND training equivalent to an associate degree in laboratory science or medical laboratory technology with the following
    - Education - 60 semester hours including either 24 semester hours of medical laboratory technology courses or 24 semester hours of science courses (6 hours of chemistry; 6 hours of biology, and 12 ours in chemistry, biology or medical laboratory technology, or any combination
    - Training – either completion of an approved/accredited clinical laboratory training program, which may be included in the 60 semester hours specified above or at least three months of documented laboratory training in each specialty in which the individual performs high complexity testing



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A large, dark blue, textured graphic resembling a splash or a cloud of paint, centered on the page. The text 'The Future' is written in white, sans-serif font across the middle of this graphic.

# The Future

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## Laboratory Medicine

- More complicated
- More automated
- More information to process
- **Need more people !!!**



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## Questions?

Contact  
AABB eLearning Team  
[eLearning@aabb.org](mailto:eLearning@aabb.org)



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