

The Integrative Role of the Medical Laboratory Scientist

Kathleen Packer SMLTSA / Nelson Mandela University Port Elizabeth, South Africa

Mission Statement of SMLTSA

SMLTSA is dedicated to:

- The promotion of the aims and ideals of medical laboratory science.
- Providing care and service to the patient
- The entrenchment of a code of ethical conduct for all practitioners of medical technology.
- Maintaining and improving the standard of medical laboratory practice.
- Promoting the application and utilization of medical laboratory technology in health matters affecting persons and their environment.



Mission Statement of SMLTSA

- **Promoting continuing professional development.**
- **Implementation and assistance of national accreditation systems for both personnel and laboratories.**
- **An active role in the selection, education and training of appropriate personnel.**
- **Liaison and communication with all medical laboratory professional bodies**
- **Maintaining an organized, representative body and infrastructure capable of acting and negotiating on all matters related to medical technology, and on behalf of all medical laboratory professionals**

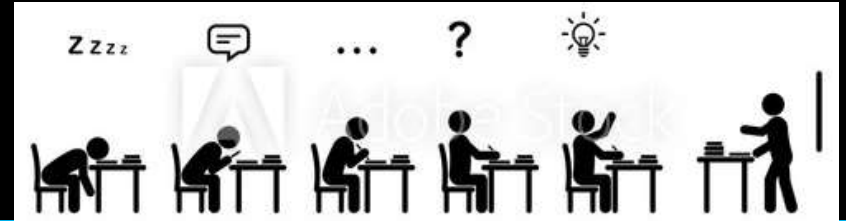


The Profession of Medical Laboratory Science

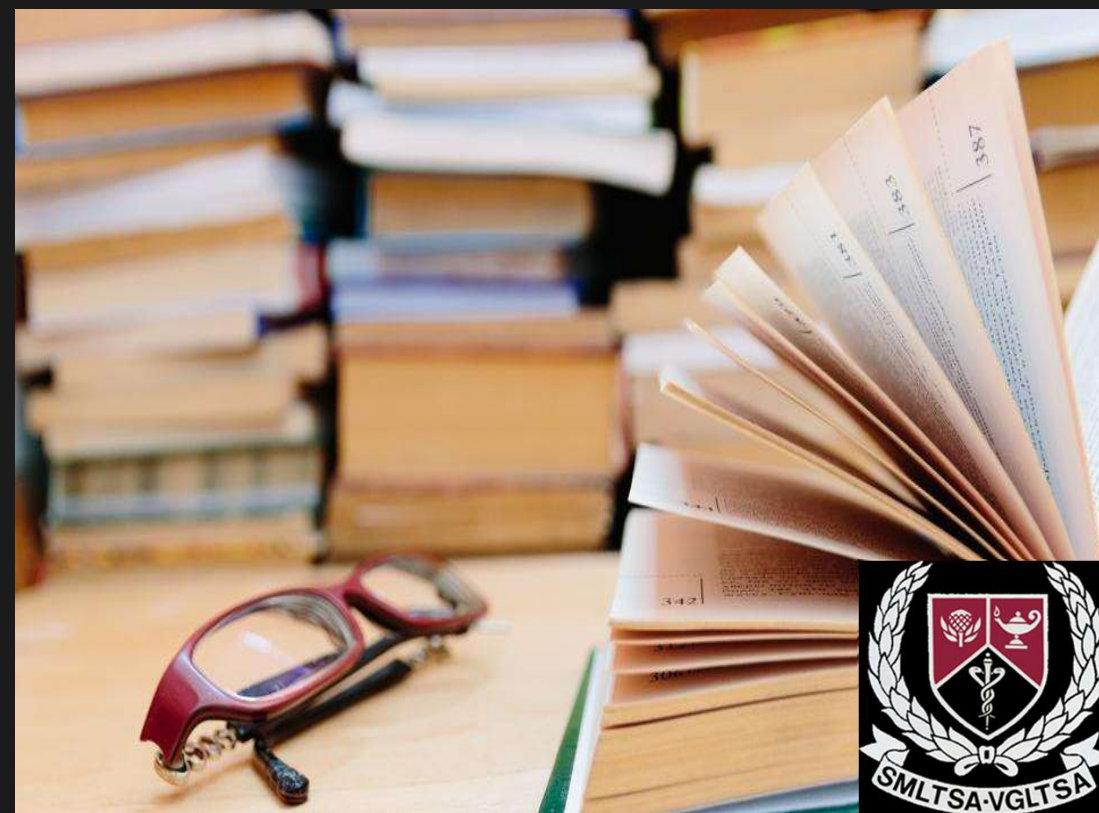


- Qualified medical laboratory scientists are specialized health professionals who play an integral role in the healthcare of society by providing vital information about a patient's state of health. Their input is necessary in the diagnosis, monitoring and treatment of disease. The analytical and diagnostic services provided by medical laboratory scientists require a strong scientific knowledge, as well as trained reasoning ability and empathy for humanity.

• Role of SMLTSA in Education



- Convener of the HPCSA Board examinations-conducts Board exams on behalf of PBMT
- The Scientific Advisory Committees within the Society draws knowledge from experts in the various disciplines to maintain updated syllabi and nominate examiners and moderators which are approved by the Professional Board of Medical Technology (HPCSA)
- SMLTSA plays an important role in logistics of the National Examinations including exam venues , marking panels and distribution of results



Role of SMLTSA in Education

- This is a dynamic process where experts in the various disciplines are continually invited to join these education bodies where their wealth of knowledge may be utilised
- This includes those involved in training in the various pathology laboratories and areas of research in all disciplines of medical technology.



CPD: Continuous Professional Development

The MLS professional abides by the standard of ethics required by the HPCSA in order to continually update their professional knowledge and skills for the end benefit of the patient.



SMLTSA assists in this manner by overseeing and accrediting CPD activities in the form of journal clubs, ward discussions, congresses and other forms of continuing education

Medical Laboratory Professionals are required to accumulate a set number of CEU's to maintain licensure under the HPCSA

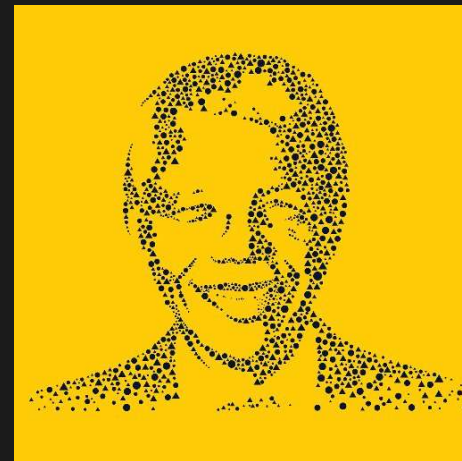
Knowledge
is
power!



Introduction of the Bachelor of Health Science in Medical Laboratory Science

NELSON MANDELA
UNIVERSITY

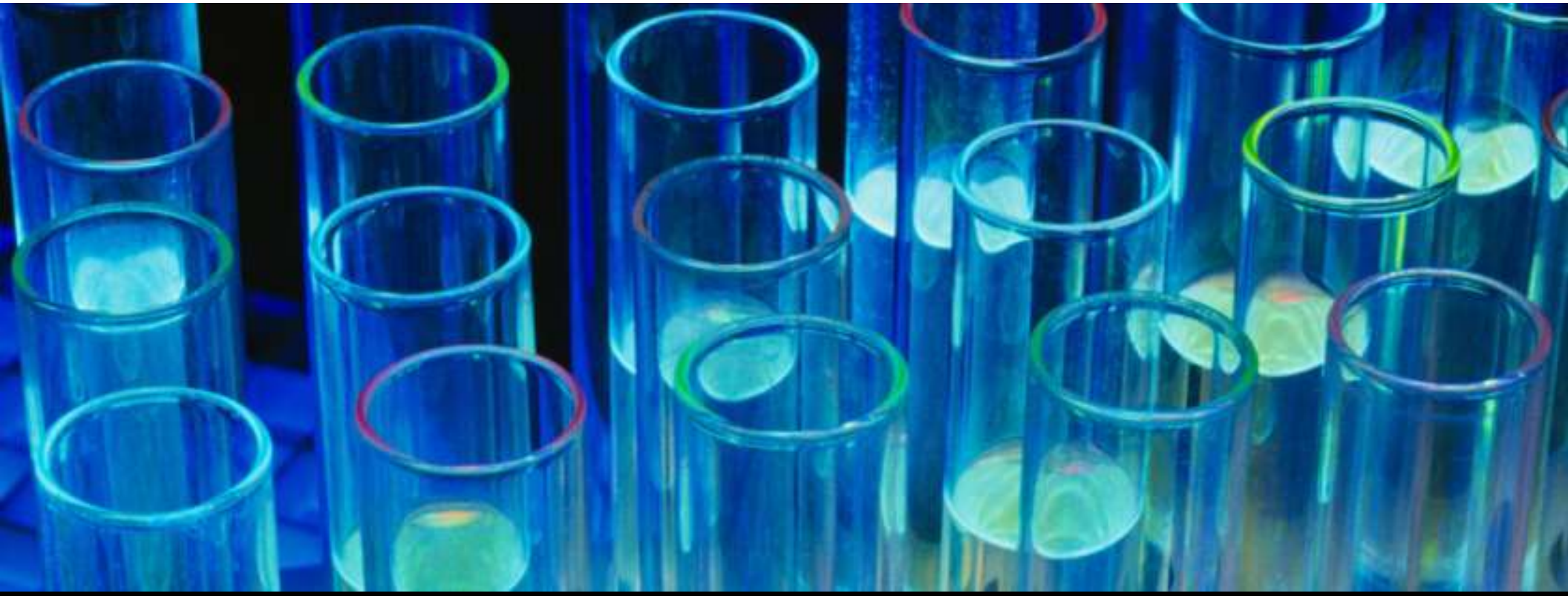
- In 2010 the BHS in MLS was approved and is currently offered at CPUT, NMU and DUT and soon to be followed by more of the universities in SA





The field of medical laboratory science includes various disciplines ...





Clinical Pathology



Microbiology

- Aspirate for AFB
- Blood culture & sensitivity
- Chlamydia
- CSF- culture & sensitivity
- Ear culture & sensitivity
- Eye culture & sensitivity
- Faecal occult blood
- HVS culture & sensitivity
- Nasal swab

Haematology



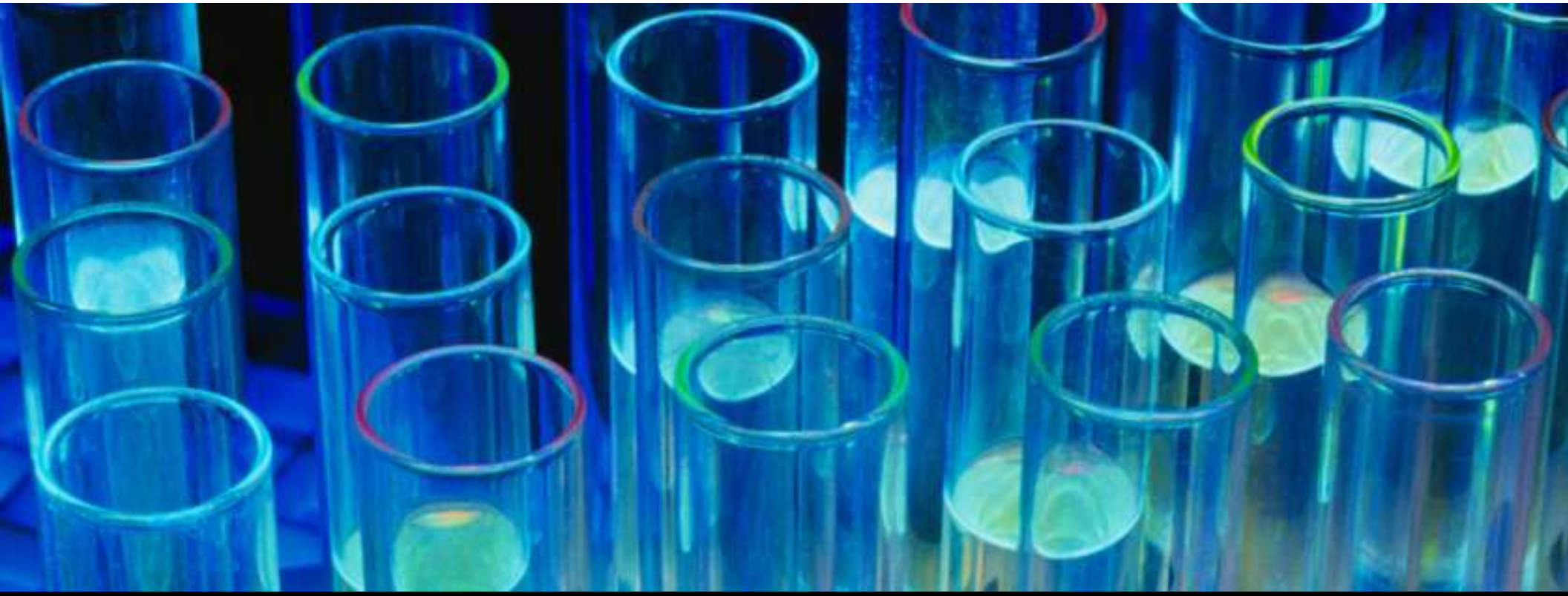
- White blood cell count (WBC)
- Red blood cell count (RBC)
- Platelet count.
- Hematocrit red blood cell volume (HCT)
- Hemoglobin concentration (HB). This is the oxygen-carrying protein in red blood cells.
- Differential white blood count.
- Red blood cell indices (measurements)



Clinical Chemistry

Clinical chemistry uses chemical processes to measure levels of chemical components in body fluids and tissues. Common specimens are blood and urine.

Tests include blood glucose, electrolytes, enzymes, hormones, lipids (fats), other metabolic substances, and proteins.

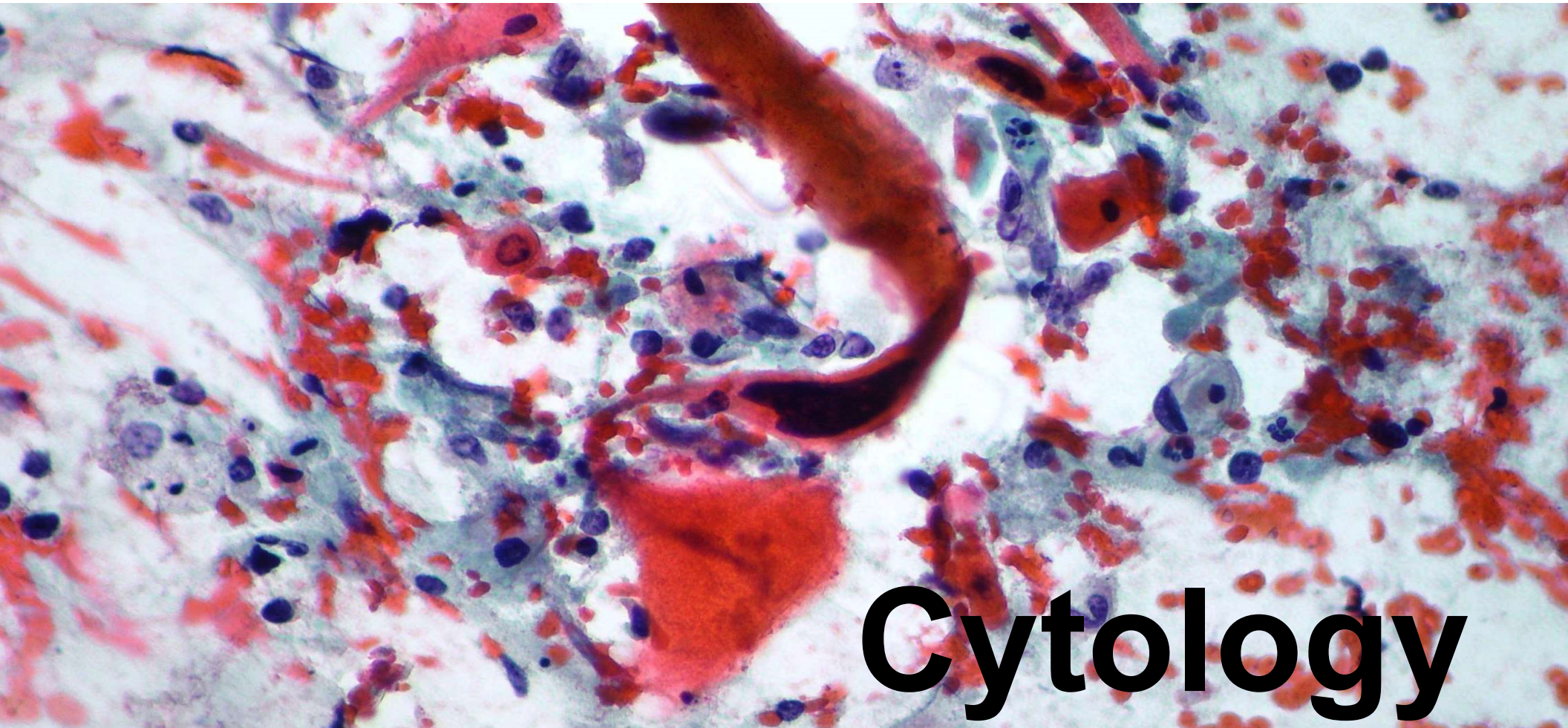


Cellular Pathology

Histology



- **Histology involves the examination of sampled whole tissues that have been stained. Microscopically one can see the tissue growth and identify the abnormalities including malignancies.**



Cytology

Cytology is the study of cells that are either naturally exfoliated or forcefully removed from a tissue surface. Tests are done to identify malignancies or infections or premalignant conditions or lesions

A microscopic image showing numerous chromosomes stained in shades of blue and purple against a dark background. The chromosomes are in various stages of condensation and are scattered across the frame. Some are clearly visible as X-shaped structures, while others are more elongated and less distinct.

The study of inheritance in relation to the structure and function of chromosomes.

Cytogenetics

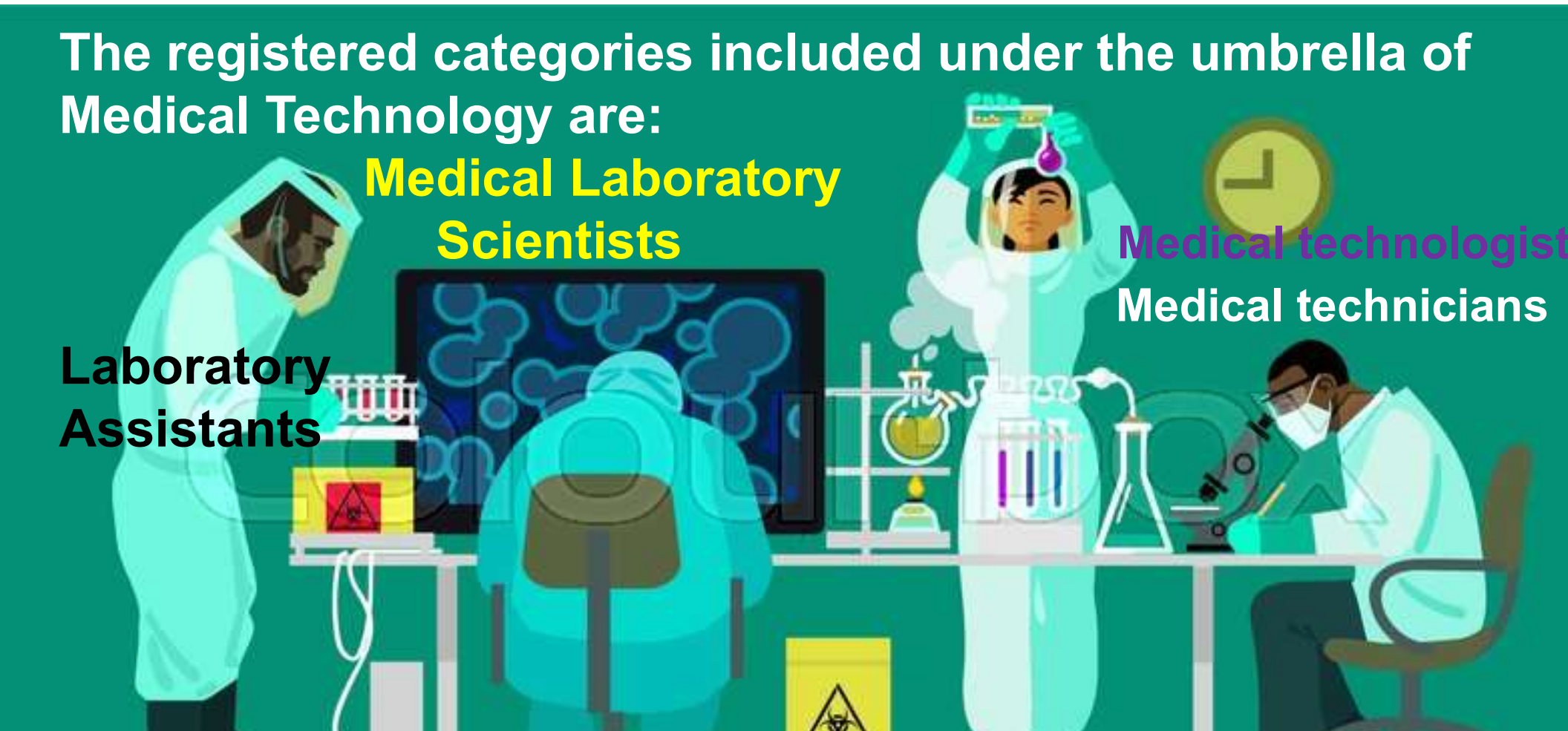
The registered categories included under the umbrella of Medical Technology are:

Medical Laboratory Scientists

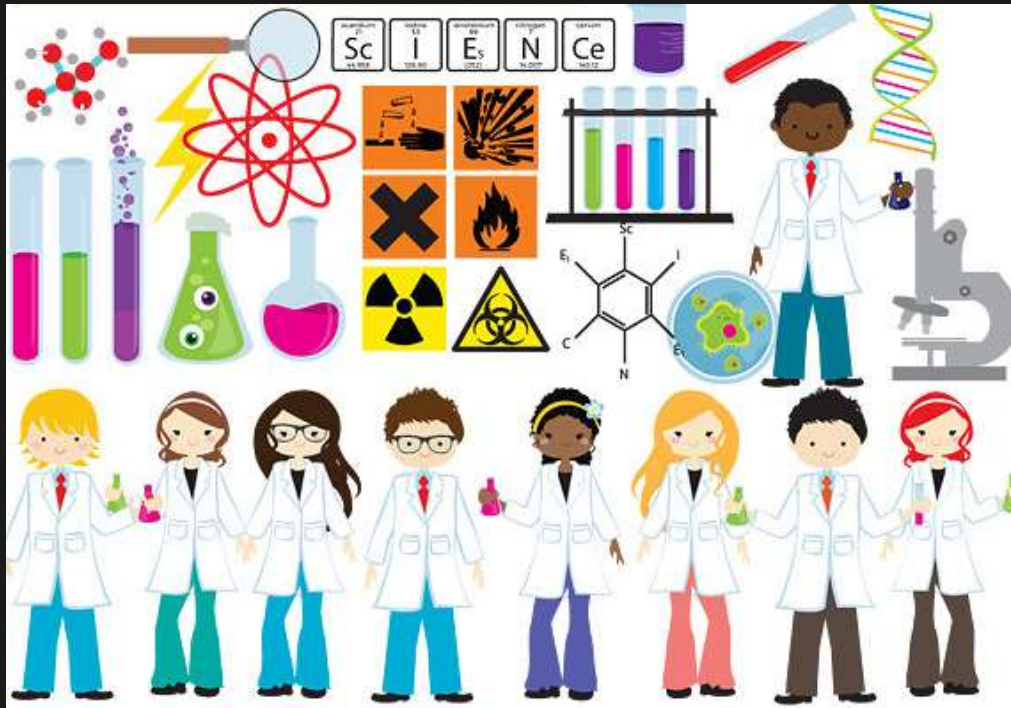
Laboratory Assistants

Medical technologists
Medical technicians

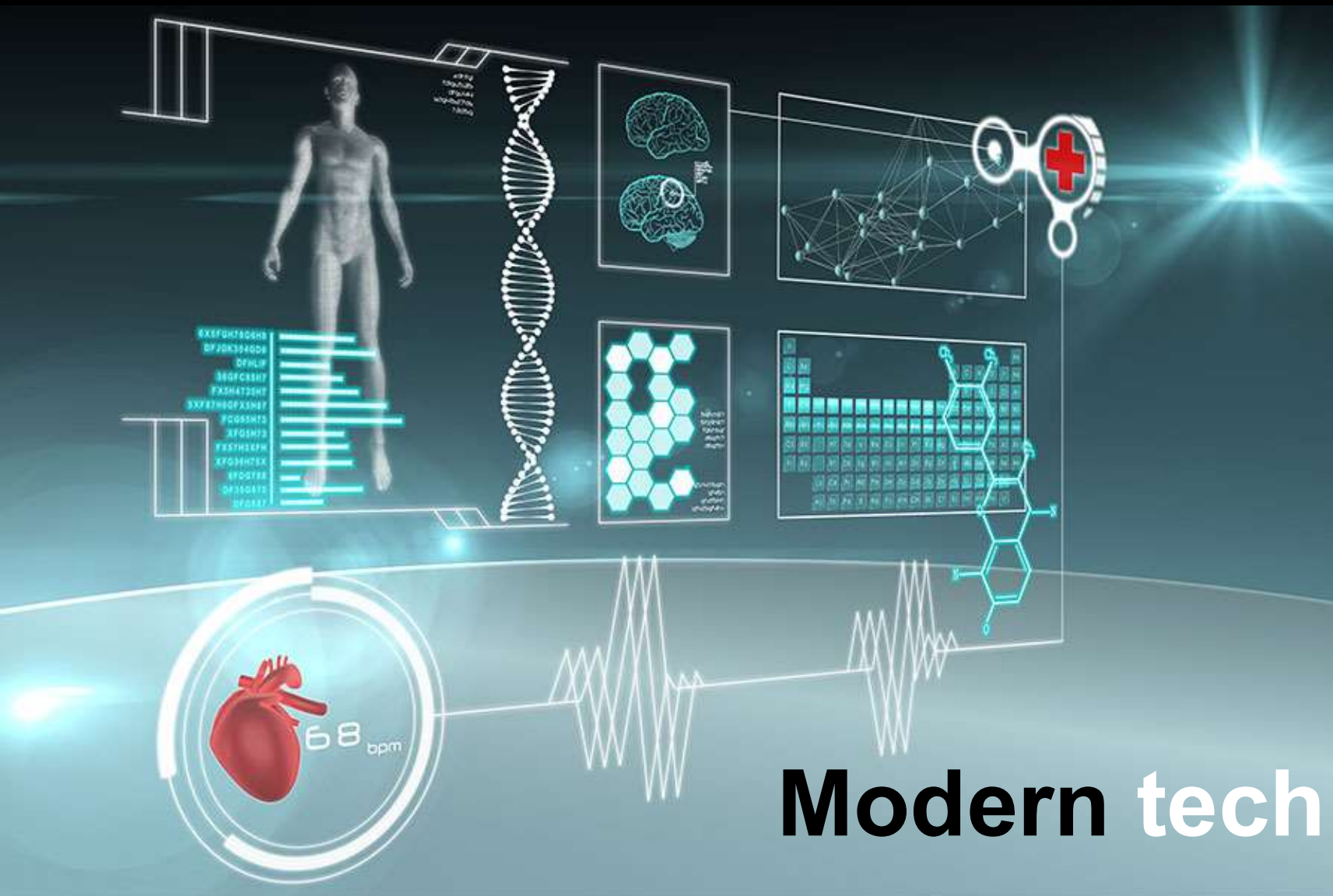
These are all registered qualifications approved by the HPCSA which include theoretical and practical training
Each registered category has its unique Scope of Practice



SCOPE OF PROFESSION

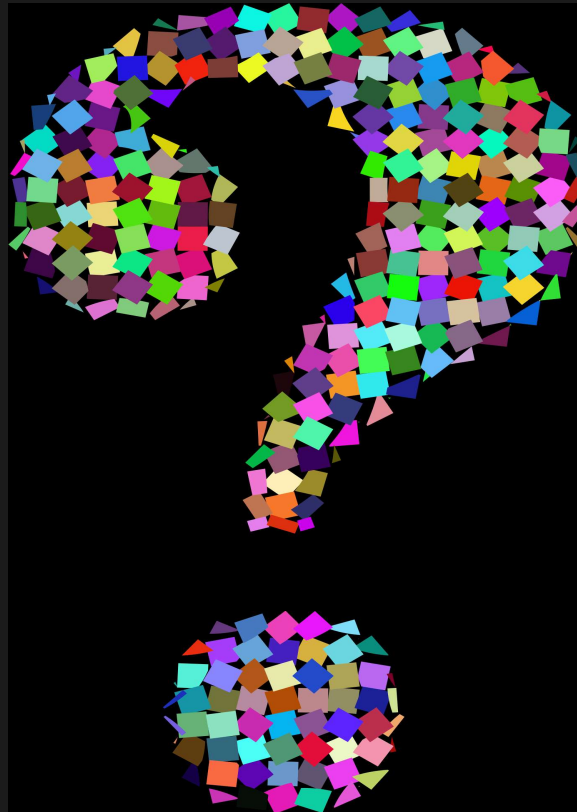


- It relates to all acts related to the analysis of human tissue where such analysis is carried out to enable a medical practitioner to make a diagnosis or institute medical treatment from the result of such analysis shall be deemed to be acts pertaining to the profession of medical technology.
- It includes interpretation, consultation or advice regarding information obtained as a result of such acts.
- This involves teaching, training and research
- This covers all disciplines



Modern technology

Our Role in Health Care and Treating Patients

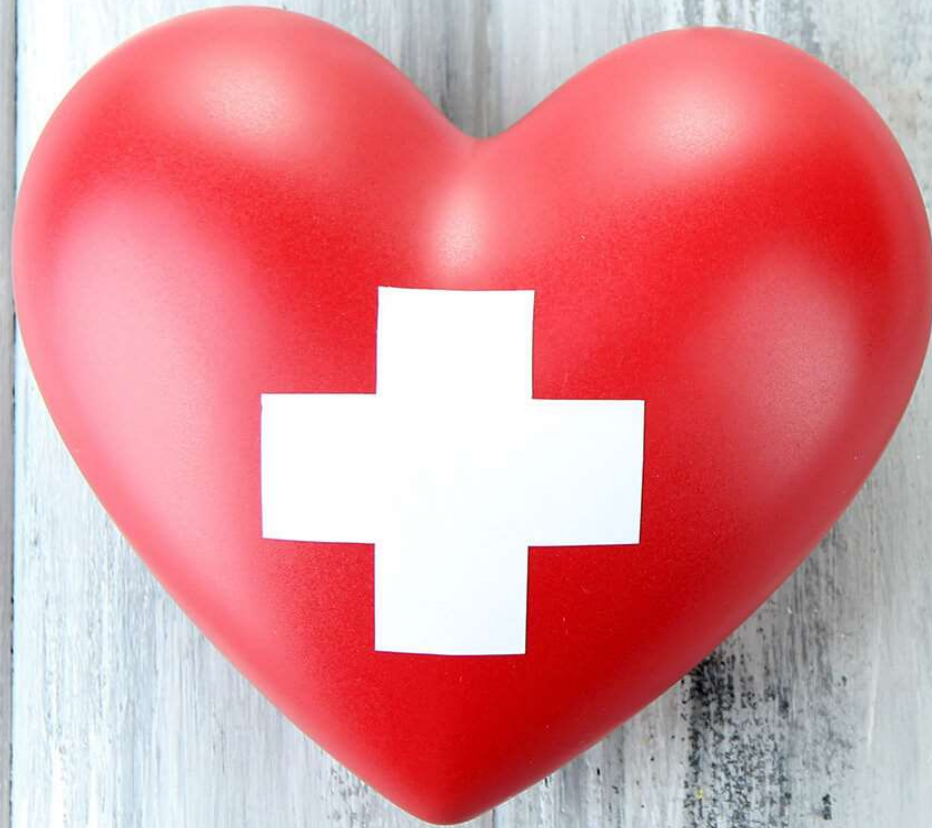


Team work/Integrative role in diagnosing



MLS carry the heart of the diagnosis





***Saving lives
one specimen
at a time***



THANK YOU!

*Go out there and make a difference
living fully right where you are*