When your doctor orders “lab tests” do you know…”

Who prepares, cuts, and stains tissue samples and biopsies for diagnosis by pathologist?

**Histotechnology**

(Hiss Tall-o-je)

Histotechnicians (HT) and Histotechnologists (HTL)

Histotechnicians and Histotechnologists are experienced laboratory personnel that prepare human, plant or animal tissue samples for microscopic examination. These samples are used for diagnosing disease, conducting research and teaching medical personnel. The analysis of a variety of body tissues and organs to detect the presence or absence of disease is performed in the medical laboratory commonly known as Anatomic Pathology.

**SPECIMEN PROCESSING**

The patient information is typed into the Pathology computer. The Pathologist’s Assistant or the Histotechnologist describes and dissects tissue for analysis. The resulting specimens placed in cassettes and are preserved by placing them in solutions designed to prevent decomposition. This is known as Fixation.

**PROCESSING, EMBEDDING AND SECTIONING**

Specimens or portion of specimens can be immediately frozen, sectioned, mounted on a slide, stained and diagnosed. However, most of the time specimens are processed to remove the water and replace it with paraffin. The processed specimens are embedded in paraffin blocks. The blocks are then cut into very thin slices using a microtome. The thin slices are floated on a waterbath and section(s) are picked up on a slide.

**STAINING AND COVERSLIPPING**

The paper thin slices on the slides are then stained with Hematoxylin & Eosin to emphasize the cellular structure. Further specific details (different tissue components, mucin, muscle, bacteria, fungus, etc.) can be highlighted by staining with one of over 50 specific stains. There are another 1000+ antibody specific stains that can be used to help with diagnosis and treatment.

**DIAGNOSIS**

The stained slides are then read under a microscope by a pathologist to look for abnormalities and determine a diagnosis.

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**Education and Certification**

**HISTOTECHNICIAN (HT)**

Associate Degree or 60 semester hours of college
Minimum 12 semester hours chemistry and biology
Clinical internship in NAACLS accredited Histotechnician program
National certification: HT

**HISTOTECHNOLOGIST (HTL)**

Baccalaureate Degree
Minimum 30 semester hours chemistry and biology
Clinical internship in NAACLS accredited Histotechnology program
National certification: HTL
**Job Opportunities**

- Hospital/ Reference Laboratories
- Research Laboratories
- Physician Office Laboratories (Dermatology)
- State or Federal Laboratories
- Fisheries Laboratories
- Pharmaceutical / Biotech Industry Laboratories
- Veterinary Laboratories
- Forensic/ Law Enforcement Laboratories

**Career Opportunities**

- **Supervisor/Manager** – Senior technologists with an interest in management who coordinates laboratory operations, staffing and finances.
- **Educator** - Senior technologists with an interest in education share their knowledge with the next generation of professionals.
- **Pathologists’ Assistant** – Many are former histotechnologists, medical technologists/clinical scientists and cytotechnologists.

**If You...**

- are fascinated by science
- like to solve problems
- like challenge and responsibility
- are accurate and reliable
- like variety in your work
- work well under pressure
- communicate well and
- set high standards for yourself…

**consider a career in HISTOLOGY!**

**Resources**

**National Society for Histotechnology**

www.NSH.org

For information on Schools of Histotechnology and how to get started in histology visit our website today.