

Pathology is the medical specialty that studies the cause and effect of disease.

- The pathologist is a physician who specializes in the diagnosis and management of disease by laboratory methods.
- Pathology has a special appeal to those who enjoy solving disease-related problems using multiple technologies.

The Pathologist in Patient Care

- The pathologist uses diagnostic and screening tests to identify and interpret the changes that characterize different diseases in the cells, tissues, and fluids of the body.
- Because of the many new tests, other physicians rely on the pathologist for guidance and direction in use of the clinical laboratory and interpretation of test results.
- When unusual or unexpected abnormal results are identified the pathologist communicates directly with the patient's physician.
- Some pathologists have direct patient contact on a frequent basis as they perform fine-needle aspiration of lumps and other biopsies, supervision of apheresis therapy (a process that removes harmful substances from the blood stream), and direct communication with patients about a new diagnosis of cancer and the implications for treatment and prognosis.

Surgical Pathology

- The surgical pathologist plays a central role in the diagnosis of biopsies or of surgically removed tissues, particularly when a tumor is suspected, and works closely with surgeons, oncologists, and other physicians in such cases.

Cytopathology

- The cytopathologist is specially trained to examine and interpret the microscopic appearance of cells shed into fluids, scraped from the uterine cervix, or aspirated from tumors with a fine needle.

Autopsy

- The autopsy pathologist provides insights into the natural history of disease and the influence of therapy on disease processes, gives information to the patient's family about potential genetic disorders or evidence of a contagious infection and provides feedback to the physicians involved in the patient's care.

Clinical Pathology

- The clinical pathology specialty laboratories include hematology, microbiology, immunology, clinical chemistry (including toxicology), and the blood bank (transfusion medicine).

- In these areas, the pathologist acts as a clinical consultant and upholds the highest standards of laboratory quality and patient safety.

Molecular Pathology

- Molecular testing, involving analysis of DNA and/or RNA, is used in the evaluation and management of tumors and inherited diseases, determination of what medications are most effective, and diagnosis of infectious diseases.



Digital Pathology and Artificial Intelligence

- Artificial intelligence technology to analyze digital microscopic images and compile complex laboratory and clinical data to guide patient care is increasingly becoming part of anatomic and clinical pathology practice, with the pathologist overseeing and using this technology to improve patient outcomes.

The Pathologist as a Consultant

- The pathologist has long been considered the "doctor's doctor," consulted by fellow physicians for selection of diagnostic tests, interpretation of laboratory results, and determination of diagnoses on cells and tissues removed from the body. More recently, because of the complexity of many laboratory tests, other physicians have emerged for the pathologist in explaining laboratory tests and their results directly to patients.



The Pathologist as a Teacher

- Pathologists teach medical students, residents in pathology and other clinical training programs, graduate students in basic science departments, and students in related medical disciplines.

The Pathologist in Research

- Pathologists have a unique advantage in biomedical research because of their close ties to clinical medicine, their familiarity with laboratory technology, and their recognition of and insight into the significance of diseased tissue changes.

Sources of Information

Contact with pathologists in hospitals, independent laboratories, academic medical centers, and other settings is the best way to learn about the profession and its personal rewards. For additional information about pathology as a career, contact local, state or national pathology organizations, including the:



ICPI is a consortium of five pathology societies (APC, ASCP, ASIP, CAP, and USCAP) created specifically to promote pathology as a career through its publications and information activities. Their website is www.pathologytraining.org



American Society for Clinical Pathology (ASCP)
www.ascp.org



American Society for Investigative Pathology (ASIP)
www.asip.org



Association of Pathology Chairs (APC)
www.apcprods.org



College of American Pathologists (CAP)
www.cap.org



United States and Canadian Academy of Pathology (USCAP)
www.uscap.org