



COMMENTARY

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Anatomical Pathology and its Subspecialties

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Description

Anatomical pathology, often known as pathology of the body, is a branch of medicine that focuses on illness diagnosis through the macroscopic, microscopic, biochemical, immunologic, and molecular study of organs and tissues. The other being clinical pathology that deals with identifying disease through the laboratory examination of body fluids or tissues is anatomical pathology. Pathologists work in the discipline of general pathology, which often combines anatomical pathology with clinical pathology. Veterinary pathology has subspecialties that are related to one another.

Subspecialties

Surgical pathology is where most anatomical pathologists spend the majority of their time. Surgical pathology includes the gross and microscopic examination of surgical specimens as well as the microscopic examination of biopsies taken by non-surgeons such as general internists, medical subspecialists, dermatologists, and interventional radiologists. Technology and expertise usually connected to clinical pathology, such as molecular diagnostics, are increasingly needed in surgical pathology.

A professional board in the United States can certify dentists with specialty training to practice oral and maxillofacial pathology rather than medical doctors. Cytopathology, a subspecialty of anatomical pathology, focuses on the microscopic examination of entire, individual cells isolated from exfoliation or fine-needle aspirates. Cytopathologists are adept at performing fine-needle aspirations of organs, tumours, or cysts that are located close to the surface, and they frequently possess the capacity to provide a prompt diagnosis in front of the patient and a consulting phy-

sician.

For screening tests like the Papanicolaou smear, non-physicians are routinely utilized to perform initial evaluations; only positive or dubious cases are subsequently evaluated by a pathologist. Cytopathology is a subspecialty that can be board certified in the United States.

A developing field within anatomical and clinical pathology called “molecular pathology” is dedicated to the specialized study of disease in tissues and cells using nucleic acid-based methods including in-situ hybridization, reverse-transcriptase polymerase chain reaction, and nucleic acid microarrays. Molecular pathology is commonly referred to as a “crossover” field because it practices some parts of both anatomical pathology and clinical pathology. To determine the cause of death and other legally significant information from the remains of people who passed away suddenly without a known medical condition, people who pass away from non-natural causes, people who pass away from homicide, or people whose deaths are otherwise criminally suspicious, forensic pathologists are specially trained.

The majority of cases handled by forensic pathologists have natural origins. The pathologist will frequently employ additional tests, such as toxicology, histology, and genetic testing, to assist in determining the cause of death. In homicide and suspicious death situations, forensic pathologists frequently provide testimony in court about their conclusions. They also play a big part in public health by looking into sudden and unexpected child fatalities, as well as deaths at work and in prison. Forensic pathologists usually focus on certain areas of their line of work, including sudden cardiac death, drug-related deaths, Sudden Infant Death (SIDS), and a number of other areas.

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Differences with clinical pathology

Anatomic pathology deals with how a doctor skilled in pathological diagnosis handles, examines, and diagnoses surgical specimens. The department that handles test requests that are more widely known to the public, such as blood cell counts, coagulation tests, urinalyses,

blood glucose level estimates, and throat cultures, is clinical pathology. Its subfields include blood banks, chemistry, hematology, microbiology, immunology, and urinalysis. Surgical pathology, neuropathology, hematopathology, cytopathology, and forensic pathology are the four primary subspecialties of anatomical pathology.