

Histopathology

**Third stage
Theory**

**By
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Pathology as a term is derived from two Greek words— **pathos** meaning suffering, and **logos** meaning study. Pathology is, thus, scientific study of structure and function of the body in disease.

Pathology: is the science that study the causes and effect of disease
Or the study of disease process.

Disease: any change in the function and structure of tissue.

Pathology have four components of disease:

- 1) Cause (etiology)
- 2) Mechanisms of development (pathogenesis)
- 3) Structural alterations of cells (morphologic changes)
- 4) Consequences of changes (clinical manifestations).

General pathology: study the change in the tissue in general.

Systemic pathology: study the change in the organ.

Histopathology Study the tissue under light microscope.

Ultrastructure pathology: study the tissue under electron microscope.

Clinical pathology: study (diagnosis) the disease by using laboratory techniques.

Immunopathology: Study the lesion related to immunological disease.

Forensic pathology: (postmortem pathology) Branch of pathology concerned with determining the cause of death .

Pathogen: (infectious agent) Microorganism in the widest sense, such as a virus, bacteria, fungus that causes disease in its host.

Pathogenesis: Mechanism by which the disease is caused.

Pathogenicity: Ability of a pathogen to cause disease.

Autopsy: (postmortem examination, necropsy) Highly specialized surgical procedure that consists of a thorough examination of a corpse to determine the cause and manner of death and to evaluate any disease or injury that may be present.

Lesion: any abnormal change (functional and structural changes) of tissue.

Gross lesion (macroscopic): The vision of lesion depend on the naked eyes.

Microscopic lesion: The vision of lesion under microscope.

Cellular Adaptations: Are reversible changes in the size, number, phenotype, metabolic activity and functions of cells in response to environmental changes.

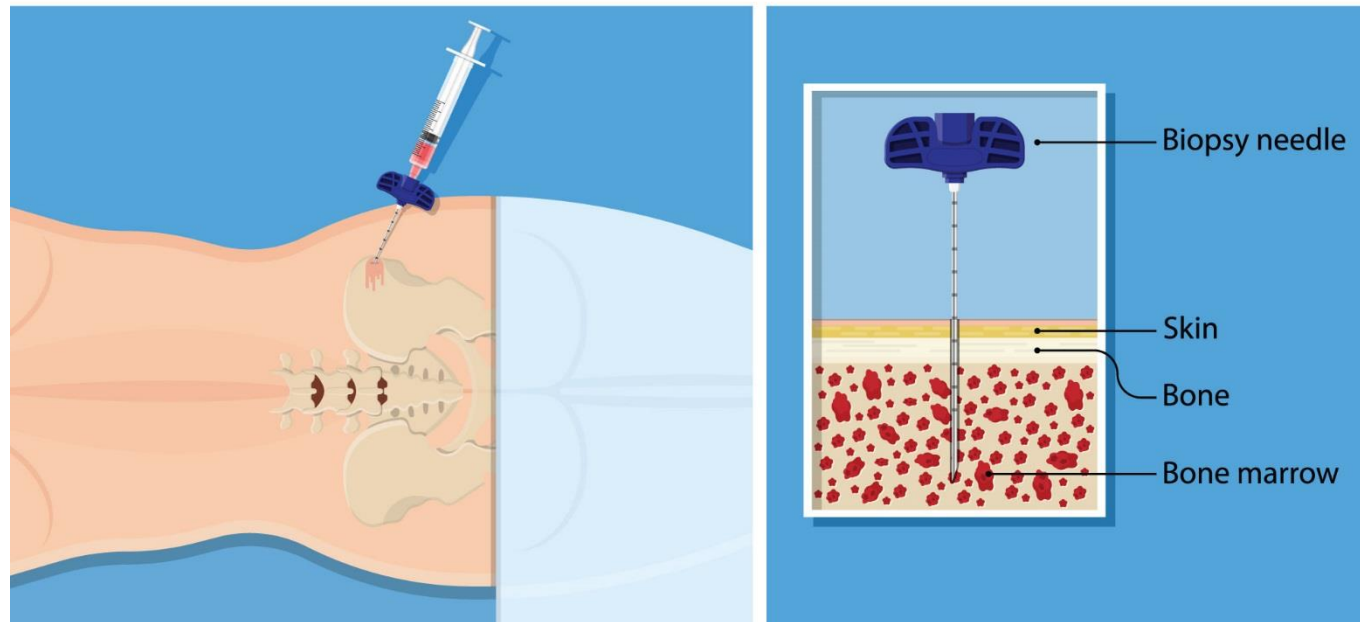
Biopsy: A tissue sample can be taken from almost anywhere from the body, including the skin, organs and other structures.

*Biopsies are usually performed to determine whether tissue or a tumor is malignant (cancerous) or to determine the cause of an unexplained infection or inflammation.

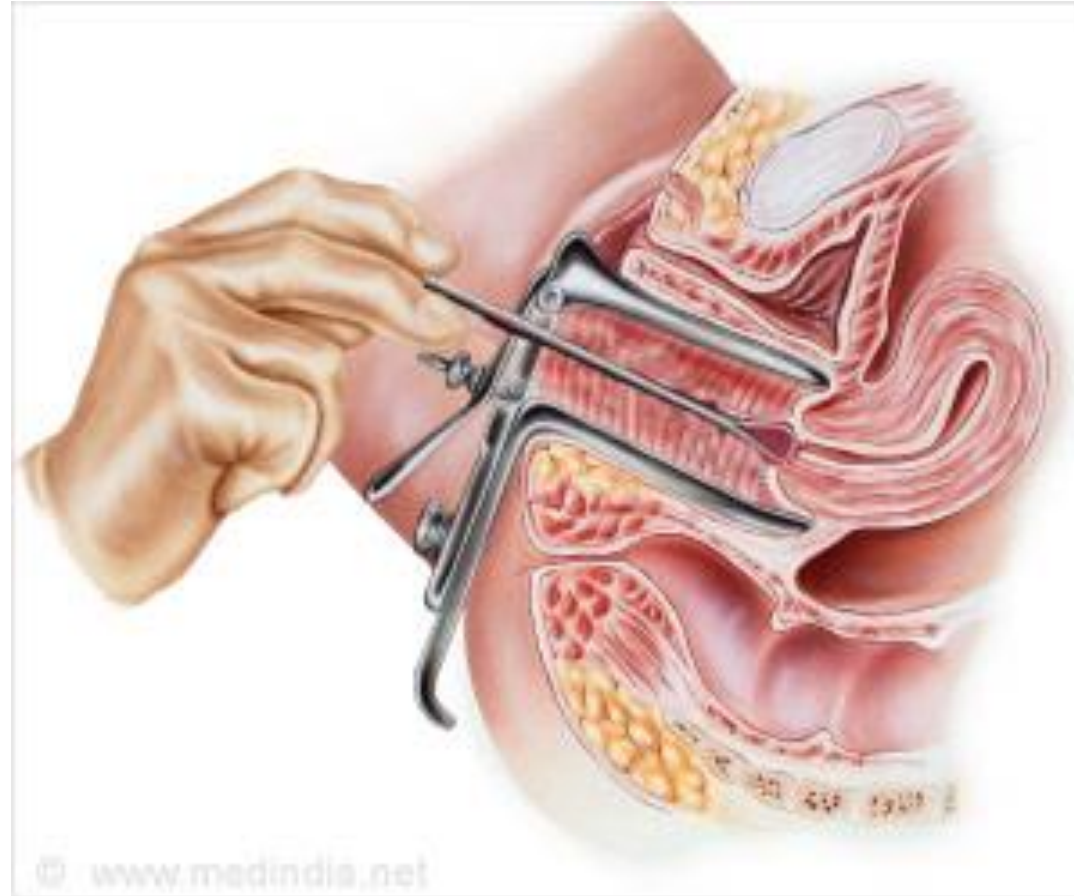
types of biopsies

- Bone marrow aspiration and biopsy

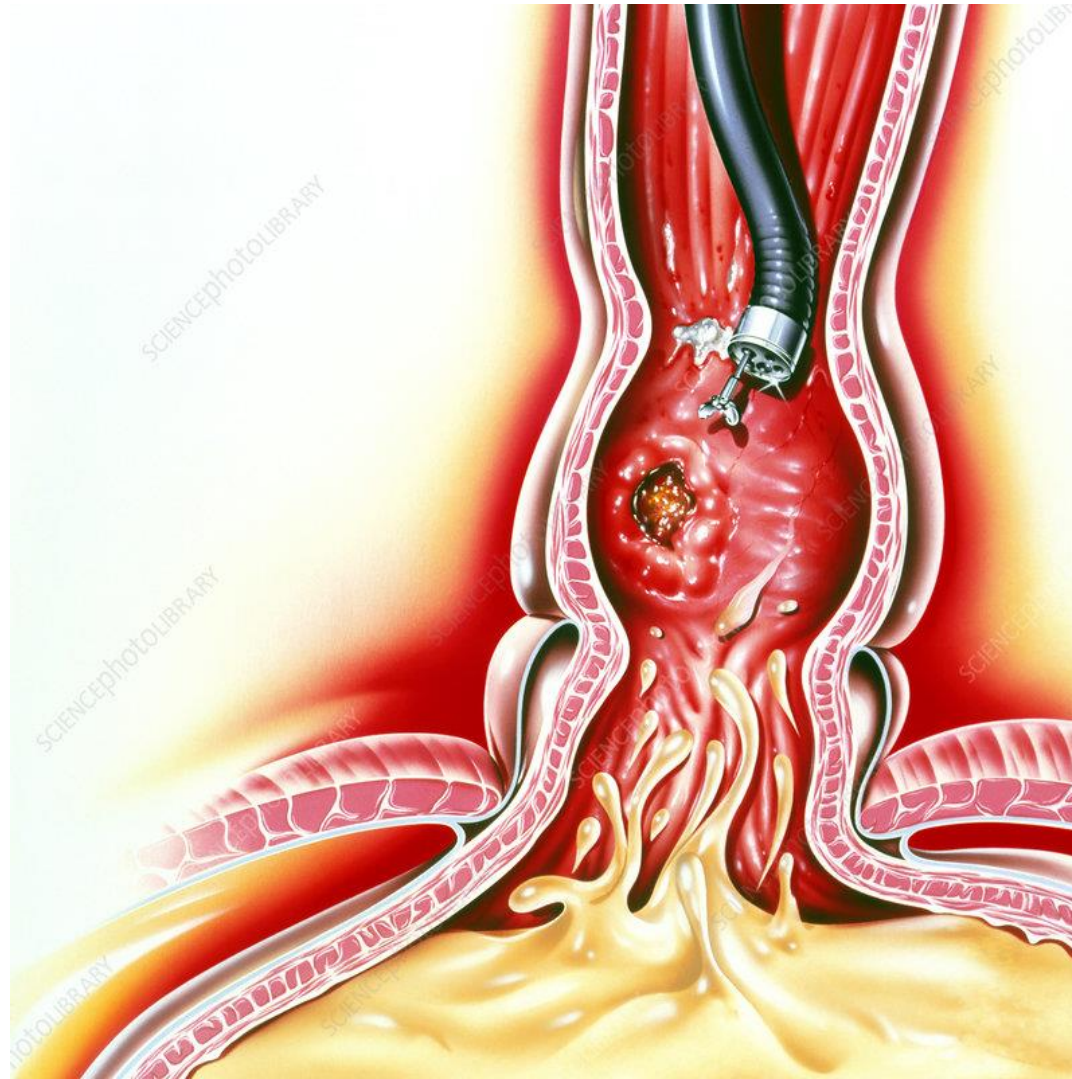
Bone Marrow Aspiration and Biopsy



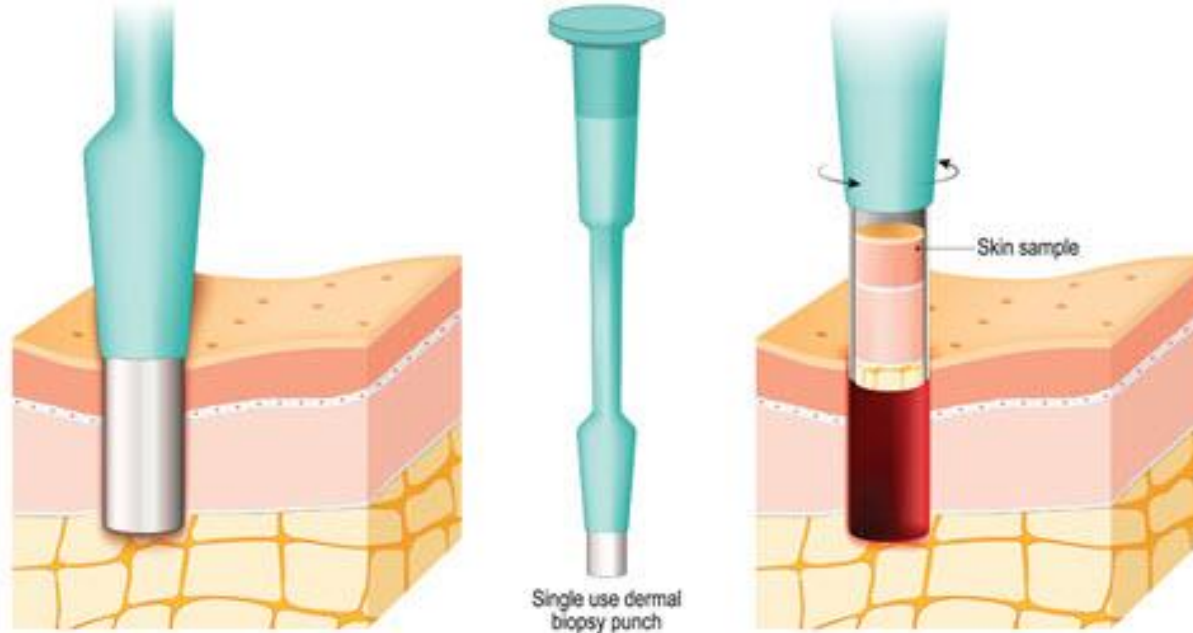
- Endometrial biopsy



- Endoscopic biopsy



- Excisional and incisional biopsy
- Fine-needle aspiration biopsy
 - Open biopsy
 - Punch biopsy



- Shave biopsy

