



# Branches of Pathology

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Microtechniques



# Overview of the lecture

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- Surgical Pathology
- Cytopathology
- Hematopathology
- Molecular Pathology
- Forensic Pathology
- Anatomical Pathology





# ...Continued

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- Clinical Pathology
- Experimental Pathology



# Surgical Pathology

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- Studies tissue removed during surgery/biopsy
- Finds type and stage of disease
- Looks at tissue structure and cell features



# Cytopathology

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- Looks at individual cells from body sites
- Examples: Pap smear, FNAs, fluid samples
- Helps find cancer, infections, inflammation





# Hematopathology

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- Studies blood and bone marrow
- Bone marrow aspiration/biopsy
- Blood smear
- Flow cytometry
- Molecular tests for blood disorders



# Molecular Pathology

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- Connects pathology with genetics
- Studies DNA, RNA, proteins
- Detects genetic diseases
- Guides personalized treatment



# Forensic Pathology

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- Used in criminal and legal cases
- Examines tissues after death (autopsy)
- Finds cause of death and injuries
- Provides evidence for legal reports





# Anatomical Pathology

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- Studies tissue and organ structures
- Includes surgical pathology, cytopathology, autopsy, molecular pathology
- All rely on microtechniques



# Clinical Pathology

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- Lab tests of body fluids, tissues, cells
- Includes hematology, chemistry, microbiology, immunology, transfusion medicine
- Microtechniques help in each test



# Experimental Pathology

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- Used in research and experiments
- Studies diseases using lab animals, cells, tissue cultures
- **Techniques:** Tissue culture, special staining, molecular tests
- **Goal:** New treatments and disease understanding





# Next Lecture

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- Tissues
- Types of tissues



Any Questions?





THANK  
YOU