

Pathology of Specific Organ Systems

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1. Cardiovascular System:

- Common diseases: Coronary artery disease, hypertension, heart failure.
- Causes: Atherosclerosis, high blood pressure, valve disorders.
- Pathological features: Myocardial infarction, hypertrophy, fibrosis.
- Diagnostic tests: ECG, echocardiogram, cardiac catheterization.

2. Respiratory System:

- Common diseases: Asthma, chronic obstructive pulmonary disease (COPD), lung cancer.
- Causes: Smoking, pollution, genetic factors.
- Pathological features: Airway inflammation, bronchospasm, tumor growth.
- Diagnostic tests: Pulmonary function tests, chest X-ray, CT scan.

3. Gastrointestinal System:

- Common diseases: Gastric ulcers, inflammatory bowel disease (IBD), liver cirrhosis.
- Causes: Helicobacter pylori infection, autoimmune reactions, alcohol abuse.
- Pathological features: Ulceration, inflammation, fibrosis.
- Diagnostic tests: Endoscopy, biopsy, liver function tests.

4. Renal System:

- Common diseases: Acute kidney injury, chronic kidney disease, urinary tract infections.
- Causes: Dehydration, diabetes, bacterial infections.
- Pathological features: Tubular necrosis, glomerular damage, scarring.
- Diagnostic tests: Urinalysis, serum creatinine, renal ultrasound.

5. Nervous System:

- Common diseases: Stroke, Alzheimer's disease, multiple sclerosis.
- Causes: Ischemia, neurodegeneration, autoimmune reactions.
- Pathological features: Infarction, beta-amyloid plaques, demyelination.
- Diagnostic tests: MRI, CT scan, lumbar puncture.

6. Musculoskeletal System:

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- Common diseases: Osteoarthritis, osteoporosis, muscular dystrophy.
- Causes: Wear and tear, hormonal changes, genetic mutations.
- Pathological features: Joint degeneration, bone loss, muscle weakness.
- Diagnostic tests: X-ray, bone density scan, muscle biopsy.

Understanding the pathology of specific organ systems is crucial for diagnosing and managing various diseases effectively. Regular screenings, early detection, and prompt treatment are essential for maintaining optimal organ function and overall health.