Preclinical Kaplan Live Online

Campbell University School of Osteopathic Medicine

Agenda

## Immunology

* Day 1, 4/28/25:
  + AM
    - Innate Immunity
    - Adaptive Immunity
    - Immunodiagnostics
    - Immunizations
  + PM
    - Hypersensitivity and Autoimmunity
    - Immunodeficiencies and Transplantation Immunology

## Microbiology

* Day 1, 4/29/25
  + AM
    - Microbes causing pharyngitis
    - Microbes causing meningitis
  + PM
    - Microbes causing pneumonia
* Day 2, 4/30/25:
  + AM
    - Microbes causing gastrointestinal infections
    - Microbes causing cutaneous diseases
  + PM
    - Microbes causing genitourinary infections
    - Microbes causing carditis

## Pharmacology

* Day 1, 5/6/25
  + Section 1 - General Principles
  + Section 2 - Autonomic Pharmacology
  + Section 3 - Cardiac and Renal Pharmacology
* Day 2, 5/7/25
  + Section 4 - CNS Pharmacology
  + Section 5 - Antimicrobial Agents
  + Section 6 - Drugs for Inflammatory and Related Disorders
* Day 3, 5/8/25
  + Section 7 - Drugs Used in Blood Disorders
  + Section 8 - Endocrine Pharmacology
  + Section 9 - Anticancer Drugs, Immunopharmacology, and Toxicology

## Patho-Physiology

* Day 1, 5/12/25
  + AM: General Pathology foundations/mechanisms
    - Chap 2 Cell injury and adaptation (pp 6-13): Cell injury, Necrosis, Apoptosis, Cell adaptation
    - Chap 3 Inflammation (pp 15-21): Acute, chronic, granulomatous inflammation
    - Chap 4 Tissue repair (pp 23-25): Regeneration, Wound healing
    - Chap 8 Amyloidosis (p 63-64)
    - Chap 5 Circulatory Path (pp 27-36):
      * Edema (includes Physio Chap 1 p13)
      * Coagulation, Bleeding disorders,
      * Thrombosis (includes Physio Part IV cardiovascular p79), DIC, Embolism
      * Shock (includes Physio Part IV arterial pressure regulation p93-96)
    - Start Chap 11: Red blood cell pathology (pp 87-96): Anemias (microcytic, normocytic, macrocytic), polycythemias
      * Includes Physio Part V p 163-65: Hb oxygen dissociation curves; High altitudes p 172-73
      * Microcytic anemia Iron deficiency, Anemia of chronic disease, Thalassemia
      * Normocytic anemia: Hemolytic anemia, Sickle cell anemia, Hemoglobin C, Glucose 6-phosphate dehydrogenase, Immune hemolytic anemia, Paroxysmal nocturnal hemoglobinuria
  + PM: Vascular, Cardiac
    - Finish Chap 11
    - Chap 12: Vascular (pp 97-101): Vasculitides, Raynaud, Arteriosclerosis, Aneurysm
    - Physio Part II Chap 3 p 43, 48-59: Electrocardiology & ECG alterations
    - Chap 13: Cardiac (pp 105-96):
      * Ischemic heart disease, Heart failure (includes pulmonary edema (Physio Part I p14) Contractility Part IV p85)
      * Valvular disease (correlate with Physiology Part IV Cardiac cycle and valve disease p 119-129)
      * Myocarditis, Congenital heart disease
      * Cardiomyopathy (includes Physio Part IV p90-92)
* Day 2, 5/13/25
  + AM: Organ systems
    - Chap 14 Respiratory (pp 120-133):
      * Pulmonary infections
      * Obstructive/Restrictive lung disorders (includes Physio Part V p 152-54)
      * Cystic fibrosis (Pathology Genetics Chap 6 p43)
      * Pneumoconiosis, Pulmonary Tumors
    - Chap 15 Renal (pp 139- 153):
      * Review Physio Part VI p 189-93, 196-99, 215-17, 232-33
      * Nephritic/Nephrotic syndromes, Acute kidney injury (Tubular necrosis), Interstitial nephritis,
      * Renal artery stenosis, Renal papillary necrosis,
      * Renal tumors, Hydronephrosis, Bladder tumor
    - Chap 16 GI (pp 155-165):
      * Esophagitis, Acute vs Chronic Gastritis, Gastric tumors, Celiac disease, Whipple disease, Inflammatory bowel disease, Colon neoplasia
    - Correlate with Physio Part VIII p 388--92
  + PM: Organ systems
    - Chap 17 Pancreas (p 167-69):
      * Acute vs chronic pancreatitis, pancreatic cancer, islet cell tumors, diabetes; Correlate with Physio Part VII p 297-311
    - Chap 18 Gallbladder, biliary (pp 171):
      * Gallstones, Cholecystitis
    - Chap 19 Liver (pp 175-181):
      * Jaundice, Cirrhosis, Viral hepatitis (include HepBvirus serology), Alcoholic liver disease, Metabolic conditions (Wilson, Hemochromatosis, Alpha 1-antitrypsin, Reye, Non-alcoholic liver disease), Budd-Chiari syndrome, Liver Tumors
    - Correlate with Physio Part VIII p 393-95
* Day 3, 5/14/25
  + AM: Organ systems
    - Chap 20 Central Nervous system (pp 185- 203):
      * Meningitis, Encephalitis, Prion disease, Cerebrovascular disease, Degenerative disorders (Parkinson, Huntington, Alzheimer, Lewy body dementia), CNS tumors
    - Chap 21 White cell (pp 208-216):
      * Lymphoma, Leukemia
    - Start Chap 25 Endocrine (pp 243-250):
      * Thyroid, Parathyroid, Pituitary, Adrenal endocrine conditions and tumors. Brief mention of congenital adrenal hyperplasia
    - Review Physio Part VII p 258-95, 313-50
  + PM: Organ systems
    - Finish Chap 25
    - Chap 22 Female pathology (p 221-30):
      * HPV & Cervical dysplasia, carcinoma, Menstrual cycle (Physio Part VII p 361-75), Endometrial hyperplasia & carcinoma, Ovarian tumors;
    - Chap 24 Male pathology (p 238-39):
      * Testes non-neoplastic conditions and neoplasms. Brief mention of Kallman syndrome, 5-alpha reductase deficiency
    - (If time permits): Chap 26 & 27 Bone & Joint pathology (pp 253-262); Osteoporosis, Bone tumors; Arthritis

## Biochemistry/Medical Genetics

* Day 1, 5/19/25
  + Enzyme Kinetics
  + Transport Kinetics
  + Hormones (Glucagon and Insulin)
  + Overview of Energy Metabolism
  + Glycolysis
  + Diabetes and Glycolysis
  + Galactose and Fructose Metabolism
  + TCA Cycle and Electron Transport Chain
  + Glycogen
  + Glycogen Storage Diseases
  + Gluconeogenesis
  + Alcohol Metabolism
* Day 2, 5/20/25
  + Hexose Monophosphate Shunt
  + Lipid Synthesis and Storage
  + Hyperlipidemias
  + Lipid Mobilization and Catabolism
  + Nitrogen Metabolism and Urea Cycle
  + Amino Acid Metabolism
  + Bilirubin Metabolism
* Day 3, 5/21/25
  + Single-Gene disorders
  + Autosomal Dominant/Recessive
  + Hardy-Weinberg Mathematics/Population Genetics
  + Cytogenetics/Chromosomal Abnormalities
  + Recombination Frequency
  + Genetic Diagnosis