

Outline for PHAS 5116 (EKG)

Course Goals:

This basic course in image interpretation of most common images seen in primary care. The course will cover basic radiology techniques, common terms used in radiology, differential diagnosis of common findings, common pitfalls in interpretations and take home points in each section covered. Sections covered will include Cardiology, Pulmonary, GI, Bone and Joints. Students are expected to know their anatomy as it applies to identification of structures of images being reviewed.

Objectives:

Cognitive Objectives:

- The student will explain the pathophysiological mechanism of the presenting condition. The student will state the patient's presenting signs and symptoms.
- Recognize the indications, contraindications and value of the performing diagnostic testing.
- Recognize when to refer patients for appropriate medical care when services are beyond those you can provide.

Affective Objectives:

- Be able to justify studies, diagnostic test and procedures ordered.
- Exhibit ethical behavior in all professional activities.
- Take responsibility for quality of care and health outcomes.
- Provide culturally sensitive care.
- Continue to learn and help others.

Psychomotor Objectives:

- The aptitude to order or recommend appropriate radiological or other necessary diagnostic studies.
- The competence to recognize radiology patterns and come to a diagnostic conclusion and develop a management plan for patient care.
- Follow patient progress by recording review and periodic reevaluation as needed.

Learning Objectives:

The student is expected to attend all lectures, read all assignments and complete all formative and summative exams with 80% or better to:

- Use proper terminology based on anatomical terms in describing imaging interpretation.
- Develop a differential diagnosis of presenting findings on images.
- Justify medical necessity on ordering imaging diagnostics.
- Identify legal obligations and consequences when interpreting imaging.
- Follow up as required by interpretation.

Course Outline & Schedule:

Online review to be completed before Class.

Basic Radiology Chapters 1 and 2 (Scope of Diagnostic Imaging and Physical Basis of Diagnostic Imaging)

- Introduction to Imaging Modalities
- Computed Tomography: Understanding the Basics and Recognizing Normal Anatomy
- Magnetic Resonance Imaging: Understanding the Principles and Recognizing the Basics
- Recognizing Normal Chest Anatomy and a Technically Adequate CXR
- Recognizing the Normal Abdomen Conventional Radiographs
- Recognizing Normal Head and Neck Anatomy with Conventional Radiographs, CT and MRI and Angiography.
- Recognizing Normal Bone Anatomy

Monday June 5, 2017

Basic Radiology Chapter 3 (Imaging of the Heart and Great Vessels)

- Evaluate the contours of the heart, mediastinum and great vessels on PA and lateral views of chest using conventional radiography.
- Appraise chest radiograph for pericardial effusion, pulmonary edema and cardiac enlargement.
- Evaluate the findings on the imaging exam and formulate a differential diagnosis.
- Compare the wide range of imaging modalities used, and appreciate the potential yield from these examinations.
- Describe normal placement of catheters and be familiar with commonly related complications.
- Select the appropriate study based on history and physical findings.

Wednesday June 7, 2017

Basic Radiology Chapter 4 (Radiology of the Chest)

- Evaluate the chest radiograph for diseases involving the lungs, heart, pleurae, tracheobronchial tree, esophagus, thoracic lymph nodes, thoracic skeleton, chest wall and upper abdomen and formulate a differential diagnosis.
- Compare and contrast other imaging methods, CT, PET, MR and US and their clinical uses to complement the conventional chest radiograph.
- Select the appropriate study based on history and physical findings.

Monday June 12, 2017

Test over chapters 1-4

Wednesday June 14, 2017

Basic Radiology Chapters 6 &7 (Musculoskeletal Imaging and Imaging of Joints)

- Examine conventional radiographs of the musculoskeletal system and surrounding soft tissue for evaluation of trauma, bone tumors and soft tissue tumors, Metastatic tumors and infection.
- Select the appropriate study based on history and physical findings.
- Compare other imaging methods, CT, MR, PET, US and their clinical uses to complement conventional radiography.
- Discuss Salter-Harris classification of physeal injuries.
- Identify acute fractures, dislocations and subluxations.

Monday June 19, 2017

Basic Radiology Chapters 12,13 (Brain and Its Coverings and Imaging of the Spine)

- Select among the major radiologic techniques currently used to evaluate the brain and its coverings.
- Evaluate the strengths and weaknesses of differing imaging technique ie; CT, MR, Plain X-rays.
- Recognize craniocerebral trauma, intracranial hemorrhage, brain tumors, stroke and intracranial infections.
- Evaluate the different techniques employed in spine imaging.
- Evaluate the relative advantages and disadvantages of the different techniques used in spine.
- Select the appropriate test for a given clinical situation.
- Recognize Spinal trauma, congenital spine lesions, Metastatic disease, degenerative disease.

Wednesday June21, 2017

Test over chapters 6, 7, 12, 13

Monday June 26, 2017

Basic Radiology Chapters 8 & 9 (Plain film of the Abdomen and Radiology of the Urinary Tract)

- Evaluate plain films of the abdomen to assess soft tissues, fat shadow, gas patterns, bony structure or calcifications.
- Discuss other imaging modalities and their role in further evaluation of the abdomen ie; MR, CT, US.
- Distinguish normal and abnormal gas pattern, pneumoperitoneum, small and large bowel obstruction, ascites.
- Recognize renal calcifications.
- Discuss other imaging modalities and their role in the further evaluation of the urinary tract ie; MR, CT, US
- Select appropriate study based on history and physical findings.

Wednesday June 28, 2017

Basic Radiology Chapters 10 & 11 (GI tract & Liver, Biliary tract, and Pancreas)

- Discuss the strengths and weaknesses of contrast radiographs, CT, MR and abdominal ultrasound.
- Select the proper radiologic technique to assess dysphagia, upper GI bleeding, small bowel bleeding, colonic bleeding, small bowel obstruction and large bowel obstruction.
- Select the proper radiologic technique to assess hepatocellular disease, abdominal trauma, biliary inflammation, and pancreatic disease.
- Understand the proper use of clinical and radiologic data to order the appropriate radiologic studies.

Monday July 3, 2017

Test over chapters 8, 9, 10, 11

Wednesday July 5, 2017

Comprehensive review

Monday July 10, 2017

Study day

Wednesday July 11, 2017

Comprehensive Final Exam

