

## **CHEST RADIOGRAPH INTERPRETATION**

Chest radiographs (CXR) utilize low-level radiation to form images of the chest anatomy. They are non-invasive and readily available. CXRs are an integral part of the initial evaluation of cardiopulmonary pathology. Hospitalists interpret the results of CXRs, often before radiologists, to diagnose disease and develop treatment plans in hospitalized patients.

### **KNOWLEDGE**

*Hospitalists should be able to:*

- Explain the normal anatomy of the thorax with particular attention to spatial relationships.
- Explain the images seen on a CXR, including bone and soft tissue structures, airway, lungs, cardiac structure and silhouette, aorta, and diaphragm.
- List the indications for ordering a CXR.
- Describe evidence based national guidelines for ordering CXRs.
- Compare the diagnostic utility and limitations of portable radiographs to posteroanterior and lateral radiographs.
- Explain the indications for a lateral decubitus CXR.
- Describe the effects of film exposure, inspiratory effort, and patient position on the radiographic image.
- Explain the effect of cardiovascular, systemic, and traumatic processes on the CXR.
- Explain the limitations of various CXR findings.

### **SKILLS**

*Hospitalists should be able to:*

- Review a CXR utilizing a systemic approach.
- Identify normal variants.
- Identify abnormalities shown on a CSR and, when possible, correlate with clinical presentation and/or prior procedures.
- Correlate physical examination findings with CXR abnormalities.
- Synthesize CXR findings with other clinical and diagnostic information to diagnose disease and develop a clinical plan.

### **ATTITUDES**

*Hospitalists should be able to:*

- Communicate with patients and families to explain results of CXRs and how the findings influence the care plan.
- Personally and promptly interpret CXRs and compare them to previously obtained CXRs, when available.
- Review each CXR with a standard and consistent approach.
- Consult and collaborate with radiologists in interpreting complex CXRs and in ordering further diagnostic studies or procedures based on CXR interpretation.
- Utilize evidence based national guidelines to ensure cost efficiency and to minimize unnecessary patient imaging.

### **SYSTEM ORGANIZATION AND IMPROVEMENT**

*To improve quality and efficiency within their organizations, Hospitalists should:*

- Lead, coordinate or participate in efforts to develop protocols to minimize unnecessary CXRs.
- Identify and convey the need for system improvements related to acquisition and interpretation of CXRs for hospitalized patients.