PEDIATRICS STUDY GUIDE

Note: The examination for those who are recertifying their subspecialty certificate (CAQ) in pediatric radiology or for those who choose three or four modules in pediatric radiology will have greater depth and breadth than the examination for those choosing one or two modules.

- Brain, Skull and Spinal Cord, Neck
  - Normal Variants Related to Age (Ultrasound, CT, and MRI)
  - Congenital Anomalies in the Neonatal Brain, Spine, Neck
  - Demyelization Diseases, Dysmyelination Diseases
  - Infections (neonatal, childhood, immunosuppressed child)
  - Masses (common benign and malignant, including supratentorial, infratentorial, and metastatic vs. primary)
  - Hydrocephalus (differential diagnosis)
  - Hemorrhage (neonates)
  - Systemic Disease Affecting the Brain (e.g., sickle cell disease)
  - Stroke
  - Trauma (including nonaccidental)
  - Mitochondrial Diseases/Encephalopathies

- Head/Neck/Orbit
  - Normal Variants Related to Age (Ultrasound, CT, and MRI)
  - Congenital Anomalies
  - Infections
  - Tumors (benign and malignant)
  - Trauma
  - Postoperative Complications

- Chest and Airway
  - Neonatal Common Entities Plus Lines and Catheters
  - Congenital Malformations (diagnosis and treatment options)
  - Infections
  - Appropriate Imaging (high-resolution CT, CT angiography, MRI)
  - Masses (benign, malignant, chest wall)
  - Trauma
  - Pulmonary Edema and Its Causes
  - Foreign Bodies in the Esophagus, Trachea, Lungs
  - Common Causes of Intrinsic and Extrinsic Airway Obstruction (supraglottic and infraglottic)
- Vascular Malformations Causing External Compression of the Airway
- Normal Variants Related to Age (CXR, CT, MRI)

- Cardiovascular
  - Normal Relationships of the Great Vessels and Cardiac Chambers
  - Congenital Heart Disease (imaging with radiography; MRI and CT for common anomalies; common surgical treatments)
  - Cardiomyopathies and Other Acquired Heart Disease
  - Pericardial Disease
  - Normal Variants Related to Age (CXR, CT, MRI)

- Abdomen: GI/GU
  - Differential Diagnoses in Children with Acute or Chronic Abdominal Pain
  - Esophagus and Stomach (esophageal atresia, pyloric stenosis, gastroesophageal reflux)
  - Duodenum and Small Bowel (duodenal atresia, trauma, malrotation with/without volvulus, inflammatory bowel disease)
  - Colon (inflammatory bowel disease, intussusception)
  - Renal Anomalies and Infection (including duplication anomalies)
  - Renal/Adrenal and Liver Tumors at Various Ages
  - Urethra and Bladder (neurogenic bladder; bladder outlet obstruction including posterior urethral valves)
  - Genital Abnormalities (common anomalies including hydrometrocolpos; uterine anomalies; inflammations; trauma; ovarian and testicular torsion)
  - Clinical Diseases Affecting Liver, Spleen, and Pancreas
  - Trauma
  - Normal Variants Related to Age
  - Liver and Kidney Transplants (preoperative and postoperative complications)
  - Fetal Imaging (ultrasound)

- Interventional
  - Liver and Kidney Transplant Imaging and Treatment of Complications
  - Common Procedures (including abscess drainage, biopsy, esophageal stricture dilation, vascular abscess, biliary drainage)
  - Classification and Treatment of Vascular Malformations

- Musculoskeletal Imaging
  - Congenital Malformations
  - Normal Development/Normal Variants
  - Masses (benign and malignant)
  - Infections (osteomyelitis, cellulitis)
  - Trauma (classifications of fractures unique to children; injuries and complications unique to children; appropriateness of imaging)
  - Tumors (osteoid osteoma)

- General
  - Imaging of Nonaccidental Trauma (acute, subacute and chronic; appropriate documentation and communication)
  - Imaging Characteristics of Systemic Disease (including sickle cell disease, cystic fibrosis, lupus erythematosis, immune deficiencies)
  - Life Support Systems
  - National Safety Initiatives and Safety Issues as They Apply to Children

Updated 10/1/2014

NOTE: Study Guides may be updated at any time.
SAMPLE QUESTIONS:

1. A 2-year-old child presents with a sore throat and cough. What is the most likely diagnosis?

   A. Epiglottitis  
   B. Croup  
   C. Tracheomalacia  
   D. Retropharyngeal abscess  
   E. Subglottic hemangioma

   Key = B

2. A 7-week-old infant presents with nonbilious vomiting. What is the most appropriate next imaging study?

   A. CT  
   B. Contrast enema  
   C. MRI  
   D. Ultrasound
E. Upper GI

Key: D. Ultrasound