

## ULTRASOUND

1. Breast (10-15%)

Relevant and appropriate Diagnostic Ultrasonographic applications and findings in the entities listed in the Breast section of this blueprint

  - a. Normal sonomammographic anatomy
  - b. Cystic versus solid mass
  - c. Mastitis/abscess
  - d. Characterization of cysts
  - e. Lymph node characterization: axillary, supraclavicular, intramammary
  - f. Characterization of solid masses: benign vs. malignant
  - g. Architectural distortion
  - h. Intraductal masses/abnormalities
  - i. Galactocele
  - j. Ultrasound Screening
  - k. Multifocal malignancy
  
2. Cardiac (1-5%)
  - a. Does **NOT** include cardiac echo or transesophageal echo
  - b. Does include findings reflecting cardiac disease that might be observed on a diagnostic radiology US examination
    - i. Pericardial effusion
    - ii. Spectral Doppler waveform changes reflecting cardiac disease (such as tricuspid regurgitation, pulmonary hypertension, pericardial effusion, pulmonary embolus, aortic stenosis, aortic coarctation, aortic regurgitation, low cardiac output)
    - iii. Cardiac masses
  - a. Other
  
3. GI (5-10%)
  - a. Liver
  - b. Biliary tree
  - c. Pancreas
  - d. Bowel
  - e. Spleen
  - f. Peritoneal cavity
  - g. Abdominal wall

- h. Lymph nodes
- i. Other

4. MSK – (1-5%)

Appropriate applications of Diagnostic Ultrasound in the evaluation and diagnosis of common congenital, inflammatory, neoplastic, and post-traumatic abnormalities

- a. Shoulder (biceps tendon, subscapularis, supraspinatus, infraspinatus, labrum)
- b. Elbow (radial head, biceps and brachialis, medial compartment, posterior compartment, ulnar nerve)
- c. Hand and Wrist (carpal tunnel, extensor tendons, flexor tendons)
- d. Hip (common congenital finding)
- e. Knee (patellar ligament, quadriceps ligament, medial and lateral collateral ligaments)
- f. Foot and Ankle (Achilles tendon, plantar fascia and neuromas, medial and lateral ligaments, medial flexor tendons, dorsal tendons, peroneal tendons)

5. Neuro

This area includes material from Peds and OB and Vascular content relevant to the CNS.  
Material relevant to peripheral Neurological structures is included under MSK

6. Pediatrics - (5-15%)

- a. Normal anatomy: Brain, Neck, Abdominal, Urinary, MSK (hip)
- b. Brain (intracranial hemorrhage and complications, including periventricular leukomalacia and hydrocephalus, shunt evaluation, calcifications, TORCH)
- c. Kidneys (hydronephrosis, stones, hydro ureters, anomalies of position and fusion, renal scarring, masses, cystic disease, ureterocele)
- d. Adrenal (hemorrhage, masses, neuroblastoma)
- e. Liver/spleen (choledochal cysts, liver masses, hepatitis, biliary atresia, hepatic Doppler, transplant evaluation, splenomegaly)
- f. Gallbladder (gallstones, biliary stones, hydrops)
- g. Pancreas (acute pancreatitis, pseudocysts)
- h. Bowel: (intussusception, acute appendicitis hypertrophic pyloric stenosis, abscess, ascites)
- i. Scrotal: (torsion, epididymitis, orchitis, masses, undescended testis)
- j. GYN: (Ovarian torsion and masses, imperforate hymen, uterine anomalies)
- k. Neck: (mass, thyroid)  
Deep vein thrombosis of upper and lower extremities
- l. Neonatal spine: (tethered cord, intraspinal mass)
- m. Organ transplants
- n. MSK (congenital hip dislocation, hip effusion, soft tissue abnormalities including cysts, masses, malformations, abscess)
- o. Congenital brain malformations: (agenesis of corpus callosum, vein of Galen aneurysm, Dandy Walker Malformation, aqueductal stenosis)
- p. Chest (pleural effusion)

7. Thoracic (1-5%)

- a. Lung
- b. Pleural space
- c. Mediastinum
- d. Thoracic inlet (including neck)

- e. Chest wall
  - f. Axilla
  - g. Other
8. Repro-Endo (10-15%)
- a. OB - 1<sup>st</sup> trimester
  - b. OB - 2<sup>nd</sup> and 3<sup>rd</sup> trimester
  - c. Uterus (includes saline hysterosonography)
  - d. Cervix
  - e. Ovary
  - f. Fallopian tube
  - g. Para-ovarian structure
  - h. Cul de sac
  - i. Scrotum
  - j. Thyroid (including cervical lymph nodes)
  - k. Parathyroid glands
  - l. Other
9. Urinary (5-10%)
- a. Kidney
  - b. Ureters
  - c. Bladder
  - d. Urethra
  - e. Prostate
  - f. Seminal vesicles
  - g. Retroperitoneum
  - h. Adrenal gland
  - i. Other
10. Vascular (5-10%)
- a. Peripheral venous (upper and lower)
  - b. Peripheral arterial (upper and lower)
  - c. Arterial bypass grafts
  - d. Hemodialysis fistulae/grafts
  - e. Carotid and vertebral
  - f. Transplants (hepatic, renal, pancreas)
  - g. Hepatic Doppler
  - h. Renal Doppler
  - i. Aorta
  - j. Inferior vena cava
  - k. Mesenteric
  - l. Pelvis
  - m. Other
11. Physics (15-20%)
12. Quality and Safety (5-10%)