NUCLEAR RADIOLOGY

1. Breast (5-10%)
   a. Benign neoplasm
   b. Malignant neoplasm, primary
   c. Malignant neoplasm, metastatic
   d. Lymphatic mapping/sentinel lymph node (SLN)
   e. Infection and Inflammation
   f. Normal and other
   g. Artifacts and quality control

2. Cardiac (5-10%)
   a. Perfusion – coronary artery disease (CAD)
   b. Perfusion – Non-coronary artery disease (CAD)
   c. Metabolism and viability
   d. Function (multigated acquisition (MUGA) and first pass)
   e. Shunts
   f. Infection and inflammation
   g. Normal and other
   h. Artifacts and quality control

3. Gastrointestinal (5-10%)
   a. Liver and spleen
   b. Biliary
   c. Bowel – GI bleed
   d. Bowel – GI motility
   e. Benign neoplasm
   f. Malignant neoplasm, primary
   g. Malignant neoplasm, metastatic
   h. Infection and inflammation
   i. Normal and other
   j. Artifacts and quality control

4. Musculoskeletal (15-20%)
   a. Benign neoplasm
   b. Malignant neoplasm, primary
   c. Malignant neoplasm, metastatic
   d. Therapy
   e. Tumor-like conditions
   f. Metabolic/vascular abnormalities
   g. Trauma
   h. Infection and Inflammation
   i. Extra-skeletal processes
j. Bone mineral density (dual-energy X-ray absorptiometry (DEXA))

k. Normal and other

l. Artifacts and quality control

5. Neuro (5-10%)
   a. Brain death
   b. Dementia and behavioral disorders
   c. Seizure
   d. Stroke/cerebrovascular disease/vascular reserve
   e. Benign neoplasm
   f. Malignant neoplasm, primary
   g. Malignant neoplasm, metastatic
   h. Infection and Inflammation
   i. Cerebrospinal fluid (CSF)
   j. Normal and other
   k. Artifacts and quality control

6. Pediatrics (5-10%)
   a. Brain and cerebrospinal fluid (CSF)
   b. Cardiac
   c. Thoracic
   d. Endocrine
   e. GI tract and hepatobiliary system
   f. Musculoskeletal
   g. Infection and inflammation
   h. Neoplasm
   i. Urinary tract
   j. Normal and other
   k. Artifacts and quality control

7. Reproductive/Endocrine (15-20%)
   a. Thyroid gland
   b. Thyroid cancer
   c. Therapy
   d. Adrenal
   e. Neuroendocrine
   f. Parathyroid gland
   g. Female reproductive system neoplasms
   h. Pregnancy
   i. Male reproductive system neoplasms
   j. Normal and other
   k. Artifacts and quality control

8. Thoracic (5-10%)
   a. Thrombo-embolic disease
   b. Non-thrombotic embolic disease
   c. Chronic obstructive pulmonary disease (COPD) and airways disease
   d. Benign neoplasm/mass
   e. Malignant neoplasm, primary
   f. Malignant neoplasm, metastatic
   g. Trauma
   h. Infection and inflammation
   i. Normal and other
j. Artifacts and quality control

9. Urinary (5-10%)
   a. Perfusion and function
   b. Diuretic studies
   c. Angiotensin converting enzyme inhibitor (ACE-I) studies
   d. Cortical
   e. Transplant
   f. Leak
   g. Benign neoplasm
   h. Malignant neoplasm, primary
   i. Malignant neoplasm, metastatic
   j. Infection and inflammation
   k. Normal and other
   l. Artifacts and quality control

10. Vascular (1-5%)
    a. Patency
    b. Malignant neoplasm, primary
    c. Malignant neoplasm, metastatic; sentinel lymph node (SLN)
    d. Infection and inflammation
    e. Normal and other
    f. Artifacts and quality control

11. Physics (15-20%)

12. Quality and Safety (5-10%)