

**CARDIAC**

1. Valvular (10-15%)
  - a. Anatomy
  - b. Regurgitation
  - c. Stenosis
  - d. Endocarditis
  - e. Anomaly
  - f. Prosthesis
  
2. Pericardial (10-15%)
  - a. Effusion
  - b. Calcification
  - c. Absence
  - d. Cyst
  - e. Hemorrhage
  - f. Infection
  - g. Pneumopericardium
  - h. Constriction
  
3. Myocardial (10-15%)
  - a. Infarct
  - b. Perfusion
  - c. Aneurysm
  - d. Myocarditis
  - e. Cardiomyopathy
  - f. Dyskinesis
  
4. Great vessels (5-10%)
  - a. Aorta
    - i. Atherosclerosis
    - ii. Aneurysm
    - iii. Dissection/intramural hematoma
    - iv. Penetrating ulcer
    - v. Vasculitis
    - vi. Trauma
  - b. Systemic veins
    - vii. Superior vena cava syndrome
    - viii. Thrombosis
  - c. Pulmonary arteries
    - ix. Pulmonary hypertension

- x. Arteriovenous malformation
    - xi. Aneurysm
    - xii. Vasculitis
  - d. Pulmonary veins
    - xiii. Anatomy
    - xiv. Ablation
- 5. Coronary (10-15%)
  - a. Anatomy
  - b. Calcification
  - c. Stenosis
  - d. Aneurysm
  - e. Bridging
  - f. Anomaly
  - g. Bypass graft
  - h. Stent
  - i. Collateral
- 6. Tumor/mass (including pericardial) (10-15%)
  - a. Thrombus
  - b. Metastasis
  - c. Benign tumor
  - d. Primary malignant tumor
- 7. Congenital (preoperative and postoperative) (5-10%)
  - a. Valvular
  - b. Aortic
  - c. Pulmonary vascular
  - d. Shunt
  - e. Cyanotic disease
  - f. Complex anomaly
- 8. Devices, lines, and tubes (1-5%)
  - a. Central venous catheter
  - b. Pulmonary artery catheter
  - c. Pacemaker
  - d. Defibrillator
  - e. Intra-aortic balloon pump
  - f. Left ventricular assist device
- 9. Physics (15-20%)
- 10. Quality and Safety (5-10%)