**CT Interpretation Series**

### AORTA

**Vacuum Window**
- Axial Plane

**Circulation**

Look For:
- Aortic syndromes
  - Dissection
  - Intramural Hematoma (Refractory atherosclerotic ulcer)
  - Central PE

Assess Quality:
- >40 HU

**Dissection**

Evaluate:
- Origin and extent: Stanford classification
  - A: Ascending Aorta
  - B: Beyond Brachiocephalic

- True lumen: smaller, more dense, originates at aortic root
- Complications: hematoma, active extravasation

**Intramural Hematoma**

Look For:
- Crescent-shaped, low-attenuation relative to post-contrast aorta
- Precurser to aortic dissection

Aortic Root Dilation:
- Extends >3 cm
- Aneurysms: >4 cm
- Rupture risk: >5 cm

### CT PE

**PULMONARY ANGIOGRAPHY**

**Vacuum Window**
- Axial and Oblique Planes

**Circulation**

Look For:
- Filling defects
  - Commonly occur at branch origins

Assess Quality:
- PA: >40 HU
- RV: >20 HU
- Contrast extends to subsegmental level

**Complications**

Look For:
- PA root dilation >3 cm
- Compare to prior imaging if available (chronic dilation suggests pulmonary hypertension)

- RV > LV
- Septal flattening/bowing
- Contrast reflux into hepatic veins

These findings correlate with POCUS evaluation (RV dilation, D-sign, dilated IVC)

- Aortic syndromes
  - Dissection
  - Intramural Hematoma
  - Penetrating atherosclerotic ulcer

- Central PE

Assess Quality:
- >40 HU

**Dissection**

Origin and extent: Stanford classification
- A: Ascending Aorta
- B: Beyond Brachiocephalic

- True lumen: smaller, more dense, originates at aortic root
- Complications: hematoma, active extravasation

**Intramural Hematoma**

Crescent-shaped, low-attenuation relative to post-contrast aorta

- Precursor to aortic dissection

Ectasia: 3.5-4.0 cm
Aneurysm: >4 cm
Rupture risk: >5 cm

**Aortic Root Dilation:**

- Penetrating atherosclerotic ulcer

Contrast-filled outpouching
May progress to perforation or dissection

- Shared across aortic syndromes, impulse control and surgical evaluation

**Management:**

- Shared across aortic syndromes, impulse control and surgical evaluation

**Lung Window**
- Axial Plane

**Circulation**

Look For:
- Pleural effusion
- Pleural potential space
- Pneumothorax
- Pleural fluid

- <20 HU simple fluid
- >20 HU complex
- >Hct HU blood

**Pleura:**

- Atelectasis: Enhancing (densely vascularized, not aerated)
- Volume loss, tightly-packed vessels and bronchioles

**Parenchyma:**

- Consolidation: Non-enhancing (vascular shunting)
- Normal architecture

**BREATHING**

**AIRWAY**

Look For:
- Patency of bronchi and branches

**MEDIASTINUM**

**SOFT-TISSUE**

**BONE**

**VISUALIZED UPPER ABDOMEN**