Abdominal Vessels

Aorta

- Longitudinal and Transverse
- Inferior vena cava (IVC) - Longitudinal and Transverse

**Essential Images**

Aorta

**Aorta Longitudinal**

- Place patient in the supine position
- Place the probe orientated long axis under xyphoid process
- Obtain an image of the proximal abdominal aorta in the sagittal plane
- Use the left lobe of the liver as an imaging window

Aorta Long Axis
• Patient remains supine
• Turn the probe 90 degrees counter-clockwise to obtain a transverse image of the abdominal aorta proximally
• Obtain an image anterior

Liver

Aorta Transverse

right

left

right

Aorta

posterior

Spine

IVC
Transverse Aorta

TRV

Distal Aorta Long

Long and TRV AO
Normal aortic diameters are under 3 cm in the adult.
Ectasia is present when aortic diameters are between 3 and 4 cm.
An aortic diameter of over 4 cm (AP or ML) is considered aneurysmic.
Any localized increase in diameter that exceeds 1.5 times the normal diameter is considered abnormal.
Aortic Aneurysm

Aortic Pathology

AAA

AAA

Aortic Doppler
Long AO

TRV AO

Dissection
Dissection

Source of Embolism

Aortic Dissection
Aortic Bifurcation

Normal Vena Cava

Inferior Vena Cava

Dilated Vena Cava
**Transverse IVC**

**Dilated IVC**

**IVC with Greenfield Filter**

**IVC Clot**

**Celiac Axis**
- First major arterial branch of aorta
- Branches left to become splenic artery & branches right to form hepatic artery & gastroduodenal artery

**Celiac Axis**
Celiac Axis

Superior Mesenteric Artery

- The Superior Mesenteric Artery is the second major branch of the abdominal aorta. It arises just distal to the celiac trunk and courses anterior to the aorta inferiorly. The SMA provides arterial blood to the proximal small bowel.

Superior Mesenteric Artery

- Second major branch of abdominal aorta
- Arises just distal to the celiac trunk & courses anterior to the aorta
- Provides arterial blood to the proximal small bowel

SMA

SMA Blood Flow
Renal Vessels

- Arise from aorta just below the origin of the SMA
- Left renal artery passes anterior to aorta & posterior to SMA
- Right renal artery passes posterior to the vena cava

Renal Vessels

IVC with Right Renal Artery

Renal Vessels
IVC

Liver / hepatic veins

Hepatic veins

> 6mm

> 10mm

IVC

LIVER
Dilated Hepatics
1 = SMA; 2 = SMV; 3 = Splenic Vein; 4 = LT Renal Art; 5 = AO; 6 = IVC
Portal Vein