

## Ultrasound Protocol: Abdominal Aorta

Review by: Daniel Van Roekel, MD; Melinda Martinez, RDMS; Candice Baujan-Carr, RDMS; Maggie Roberts, MHL, RDMS  
Last Reviewed: 10/8/2024      Link to: [General Imaging Requirements and Pathology Protocol PDF](#)

### List of Required Images

#### **Aorta**

- **Proximal** (superior to celiac trunk)
  - Sagittal with and without AP measurement
  - Transverse with and without width measurement
- **Mid**
  - Sagittal with and without AP measurement
  - Transverse with and without width measurement
- **Distal**
  - Sagittal with and without AP measurement
  - Transverse with and without width measurement

#### **Common Iliac Arteries** All images to be included on both right and left

- **Transverse** Bifurcation with and without color Doppler
- **Sagittal** - Complete documentation to include:
  - Proximal with and without AP measurement
  - Proximal with color Doppler
- **Transverse** - Complete documentation to include:
  - Proximal with and without width measurement

### Additional Images for Aneurysms

#### **Aneurysm Documentation:** For aneurysms, include the following complete documentation:

- Measurements of the aneurysm AP, width, and length at the widest visualized portion.
- Document relationship of aneurysm to the renal arteries and the aortic bifurcation
- Color Doppler of the aneurysm to show filling defects and/or turbulent flow
- CINE of the aneurysm in sagittal and transverse
- For patients with history of endovascular stent placement, a Vascular Duplex Aorta study should be ordered instead. If the history is unknown at time of scheduling, only color images (or power Doppler) are required to document patency.

### Common Indications for Aorta Ultrasound

Indications for ultrasound of the abdominal aorta include, but are not limited to:

- Diagnostic Evaluation for Abdominal Aortic Aneurysm
  1. Palpable or pulsatile abdominal mass.
  2. Unexplained lower back pain, flank pain, or abdominal pain.
  3. Follow-up of a previously demonstrated abdominal aortic aneurysm.

- Screening Evaluation for Abdominal Aortic Aneurysm: Patient history and exam necessity are to be determined by the referring provider.
  1. Men age 65 or older who have ever smoked.
  2. Women age 65 or older with cardiovascular risk factors.
  3. Patients age 50 or older with a family history of aortic and/or peripheral vascular aneurysmal disease.
  4. Patients with a personal history of peripheral vascular aneurysmal disease.
- Groups with additional risk include patients with a history of hypertension or certain connective tissue diseases (e.g., Marfan's syndrome).

NOTE: For follow-up of abdominal aortic or iliac **endoluminal stent**, a **Vascular Duplex Aorta Study** should be ordered instead. If aortic rupture or dissection is clinically suspected, ultrasound is usually not the examination of choice, then CTA Abdomen should be performed.