ABDOMINAL AORTA ULTRASOUND EXAMINATION

POLICY: Abdominal aorta ultrasound will be performed with an order from a physician or other qualified clinical practitioner. The examination will be supervised and interpreted by a radiologist or other licensed practitioner who is qualified by reason of training to understand the normal anatomy, pathophysiology of the abdominal aorta, and integration of ultrasound with other imaging techniques to optimize the probability of detecting disease.

PURPOSE: To assess the anatomy of the abdominal aorta and document normal and abnormal size.

INDICATIONS: Ultrasound of the abdominal aorta is indicated for patients with signs and/or symptoms of abdominal aortic aneurysm. This examination is also an appropriate study for patients with a history of abdominal aortic aneurysm repair. Patients who, for historical reasons, are at risk for an aneurysm, even without signs or symptoms, are also candidates for ultrasound examination.

PATIENT PREPARATION: Whenever possible, patients should be fasting for a minimum of six hours prior to ultrasound examination of the aorta. Patients should be instructed to take prescribed oral medication on their normal schedule with small sips of water.

PROCEDURE:
• The entire length of the abdominal aorta and proximal few centimeters of the common iliac arteries should be visualized to evaluate their contour, size and presence or absence of intraluminal or surrounding masses. The proximal few centimeters of the celiac and superior mesenteric arteries should be visualized.
• When imaging the aorta and proximal iliac arteries, the transducer should be oriented parallel to the vessel in a longitudinal plane, and the aorta should be surveyed from right to left. Transverse images are obtained in an orthogonal plane, and the aorta is surveyed from superior to inferior.
• This examination should first be attempted from an anterior approach with the patient in a supine position. If overlying structures prevent adequate visualization of the aorta, then a lateral decubitus position should be used in an attempt to optimize visualization of the aorta through the liver, kidneys and/or spleen.
• Minimal stored images of the abdominal aorta should include:
  • one longitudinal view of the proximal segment of the aorta between the diaphragmatic hiatus and the superior mesenteric artery, labeled long aorta prox;
  • one longitudinal view of the proximal segment of the aorta between the diaphragmatic hiatus and the superior mesenteric artery, measured
with electronic calipers in its maximal anteroposterior diameter (from adventitia to adventitia), and labeled long aorta prox;

- one transverse view of the proximal segment of the aorta between the diaphragmatic hiatus and the superior mesenteric artery, labeled trans aorta prox;
- one longitudinal view of the mid segment of the aorta just distal to the superior mesenteric artery, labeled long aorta mid;
- one longitudinal view of the mid segment of the aorta just distal to the superior mesenteric artery, measured with electronic calipers in its maximal anteroposterior diameter (from adventitia to adventitia) and labeled long aorta mid;
- one transverse view of the mid segment of the aorta just distal to the superior mesenteric artery, labeled trans aorta mid;
- one longitudinal view of the distal segment of the aorta, labeled long aorta dist;
- one longitudinal view of the distal segment of the aorta, measured with electronic calipers in its maximal anteroposterior diameter (from adventitia to adventitia) and labeled long aorta dist;
- one transverse view of the distal segment of the aorta, labeled trans aorta dist;
- one transverse view of the aortic bifurcation, labeled trans aorta bif;
- one longitudinal view of the right proximal iliac artery, labeled long rt iliac prox;
- one longitudinal view of the right proximal iliac artery, measured with electronic calipers in its maximal anteroposterior diameter (from adventitia to adventitia), labeled long rt iliac prox;
- one transverse view of the right proximal iliac artery, labeled trans rt iliac prox;
- one longitudinal view of the left proximal iliac artery, labeled long lt iliac prox;
- one longitudinal view of the left proximal iliac artery, measured with electronic calipers in its maximal anteroposterior diameter (from adventitia to adventitia), labeled long lt iliac prox;
- one transverse view of the left proximal iliac artery, labeled trans lt iliac prox;

PATHOLOGY: In the event that an aneurysm is detected (anteroposterior diameter of greater than three centimeters), the transverse dimension of the aneurysm should also be obtained. When an aneurysm is present, a cine should be obtained in a longitudinal plane from right to left, labeled long aorta rt-lt. Color Doppler images may be helpful in defining or excluding the presence of intraluminal thrombus.