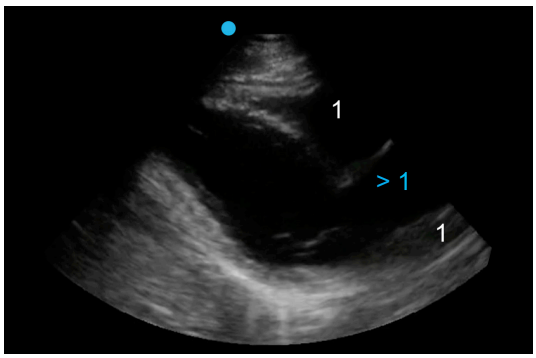
Vascular ultrasound

IDENTIFYING A THORACIC AORTIC ANEURYSM

Evaluation for abdominal aortic aneurysm is a core point-of-care ultrasound application. We can also identify thoracic aortic aneurysms. This can be used as a targeted test in a symptomatic patient or in a patient with an abnormal chest x-ray, or may be detected as an incidental finding during a point-of-care echo.

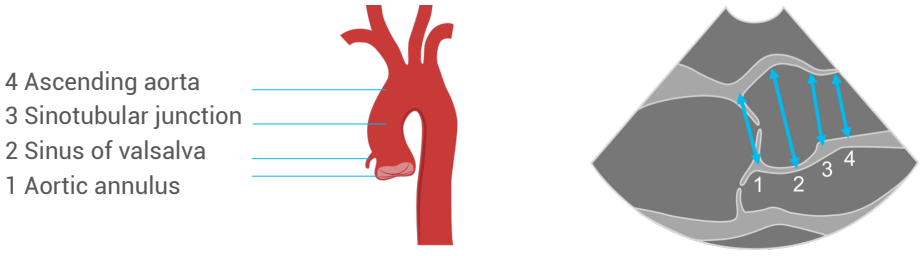
Qualitative assessment of the aortic root

In a parasternal long-axis window, the size of the right ventricle, aorta, and left atrium are all approximately the same. If this 1:1:1 ratio seems abnormal, consider the possibility of a thoracic aortic aneurysm, and obtain measurements.



Quantitative assessment of the aortic root

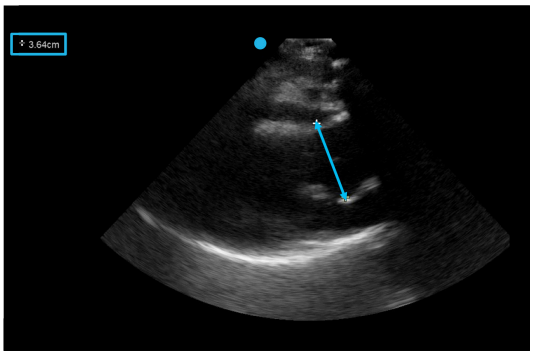
The aortic root can be measured at different points, using the parasternal long-axis view.



The criteria for diagnosing a thoracic aortic aneurysm vary with sex and body size. In general, measurements > 4 cm are consistent with dilation, and > 4.5 cm is consistent with aneurysm.

Measurement technique

Measure the thoracic aorta by using a leading edge to leading edge approach.



Inspect the descending aorta in the parasternal long-axis window; some aneurysms may be isolated to the descending thoracic aorta.