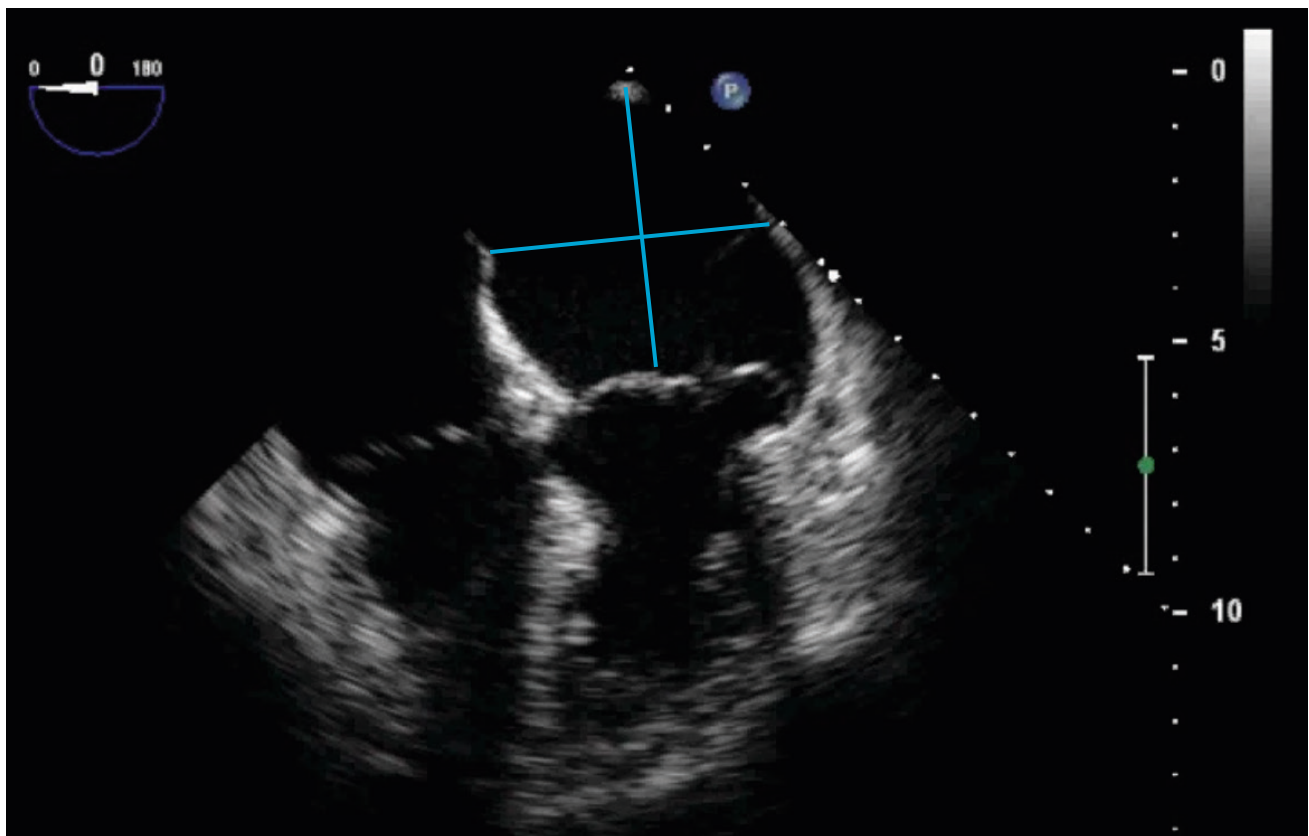


TEE ESSENTIALS

Assessment of the left atrium and appendage: Anatomy of the left atrium

The left atrium and left atrial appendage (LAA) are frequent targets for TEE imaging in order to screen for a cardiac source of embolus. Because the left atrium lies immediately anterior to the esophagus, the mid-esophageal TEE views place the left atrium in the near field and therefore provide excellent spatial resolution.



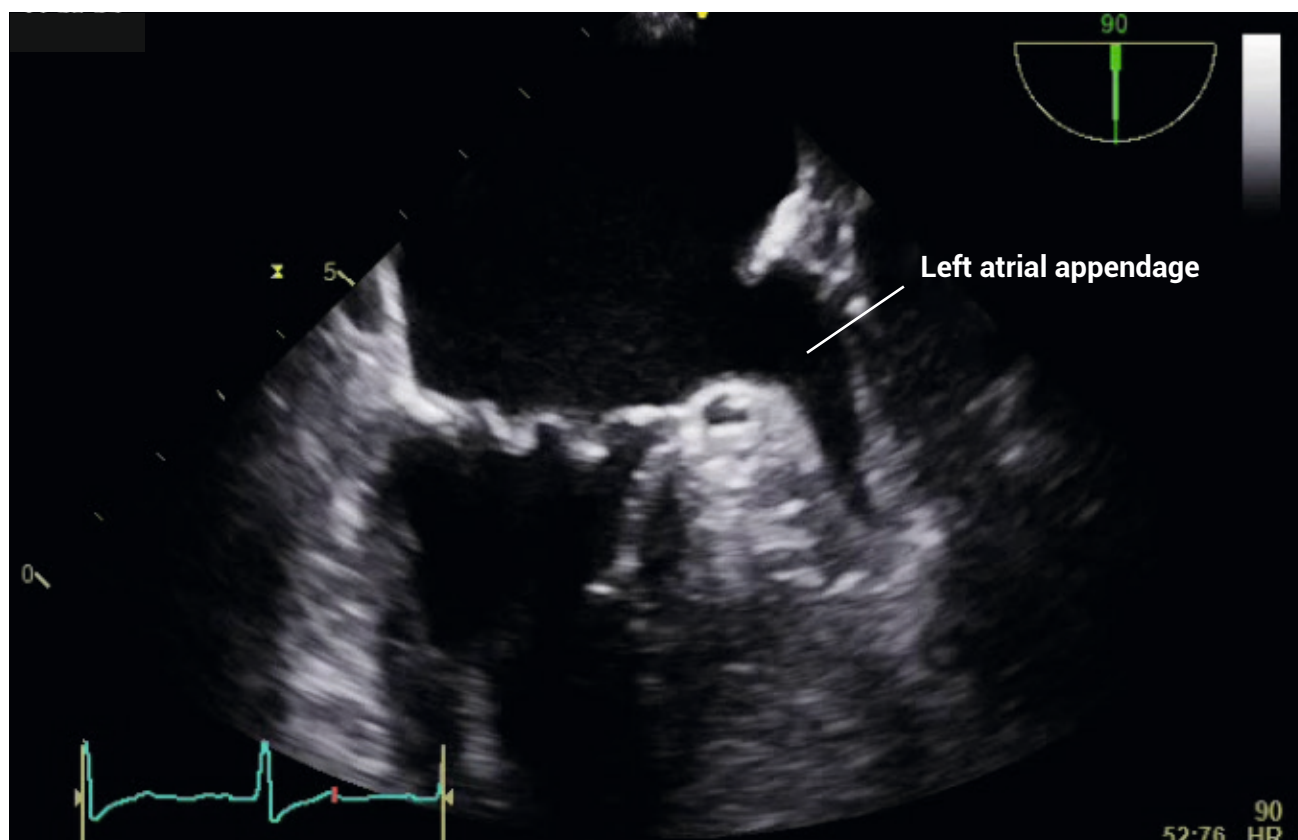
Measure the left atrial internal diameter in two axes in systole in the mid-esophageal four-chamber view.

Normal anteroposterior diameter 38 ± 6 mm
Normal mediolateral diameter 39 ± 7 mm

Left atrial appendage

The LAA arises from the lateral aspect of the left atrium, and can be a multi-lobed structure (1–5 lobes). During TEE it's important to assess the LAA in multiple views to ensure that all of its lobes have been inspected.

Check carefully for the presence of LAA thrombus, but be careful not to mistake the normal pectinate muscles within the appendage for thrombus. Also, beware of mistaking the posterolateral ridge (aka the ligament of Marshall or the "Q-Tip" sign), which lies between the LAA and left upper pulmonary vein, for thrombus.



Pulmonary veins

The left atrium receives blood from the lungs via the four pulmonary veins that connect to its posterior aspect. These should be inspected as part of your left atrial imaging (see the lessons on pulmonary veins for more information).

Interatrial septum

The interatrial septum forms the medial border of the left atrium (for more information on how to assess this structure, see the lessons on the interatrial septum).

Further reading

Ho SY, McCarthy KP, and Faletra FF. 2011. Anatomy of the left atrium for interventional echocardiography. *Eur J Echocardiogr.* 12: i11–i15.