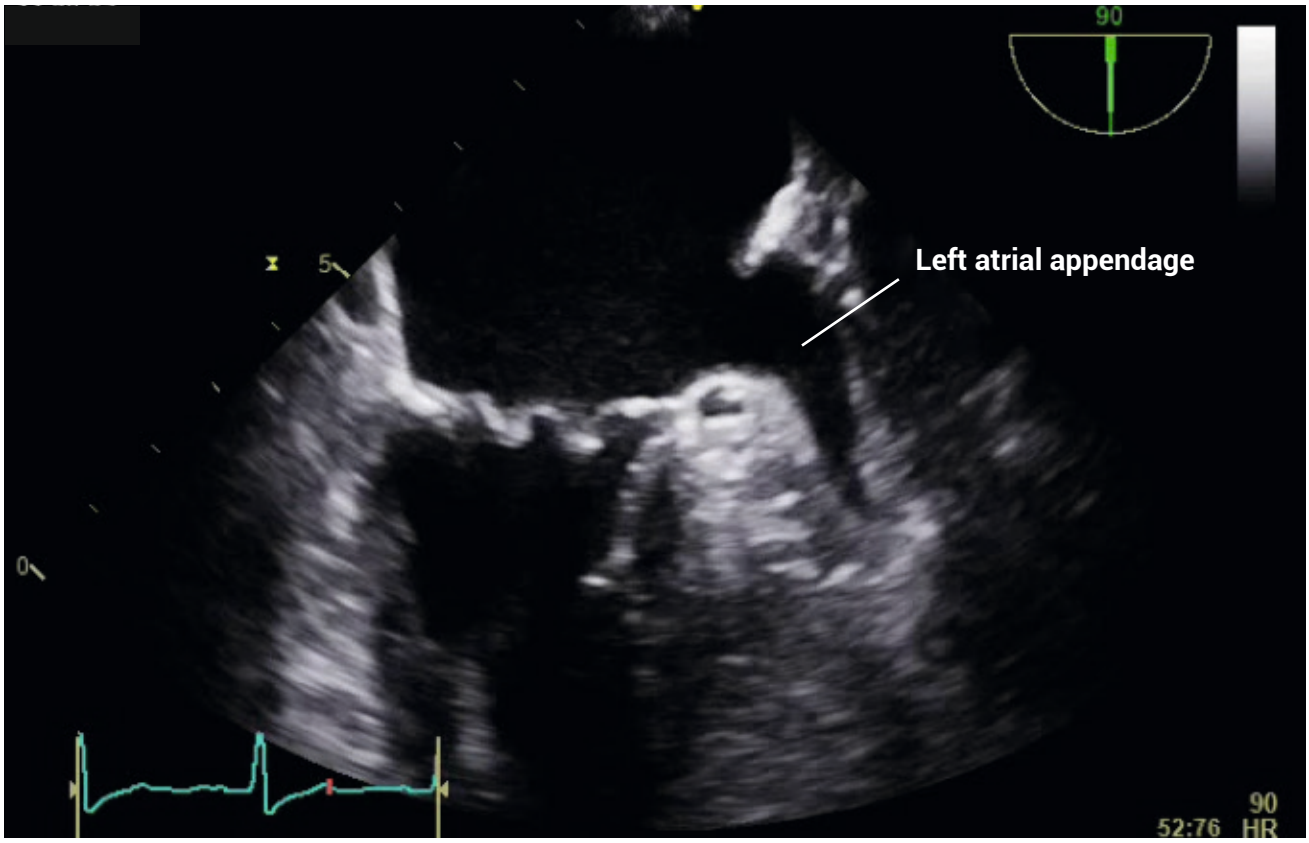
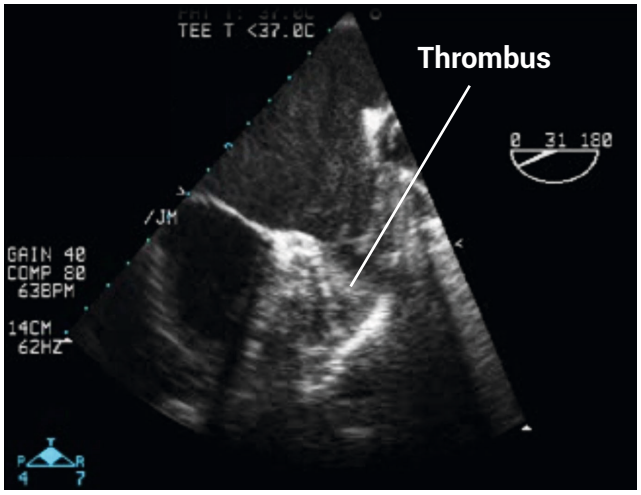
TEE ESSENTIALS

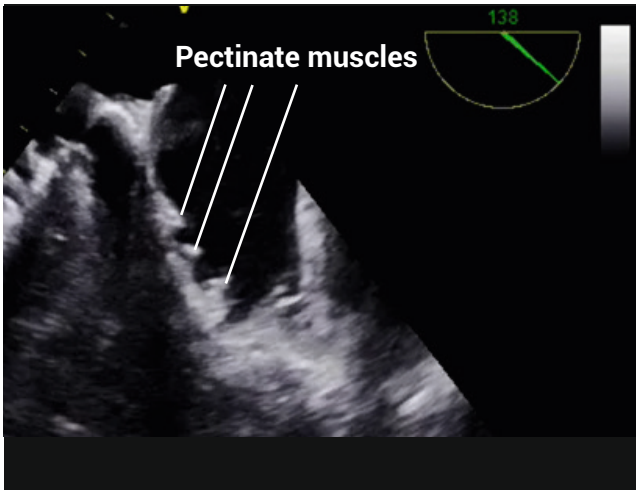
Assessment of the left atrium and appendage: Mid-esophageal left atrial appendage view

The anatomy of the left atrial appendage (LAA) is variable, and so the transducer angle at which it is best seen can be variable too. We would suggest starting your search at the mid-esophageal position, at an imaging plane angle of around 90–110°. Adjust the transducer angle and the flexion of the probe tip to optimize your view of the LAA. Center the LAA in the field of view, and then rotate the angle backwards down to 0° to examine the appendage in multiple planes—aim to obtain two orthogonal views.



It's important to look out for any evidence of LAA thrombus, being careful not to mistake pectinate muscles for thrombus.





Measurements

Use color Doppler to help assess the extent of the LAA cavity. Use pulsed wave Doppler (place the sample volume approximately 1 cm inside the LAA orifice) to measure emptying velocities. Low LAA emptying velocities (<20 cm/s) are associated with an increased risk of thrombus and embolism, whereas emptying velocities >40 cm/s indicate a higher chance of sustaining sinus rhythm after cardioversion for atrial fibrillation.

Further reading

Hahn RT, Abraham T, Adams MS, et al. 2013. Guidelines for performing a comprehensive transesophageal echocardiographic examination: Recommendations from the American Society of Echocardiography and the Society of Cardiovascular Anesthesiologists. *J Am Soc Echocardiogr*. **26**: 921–964.