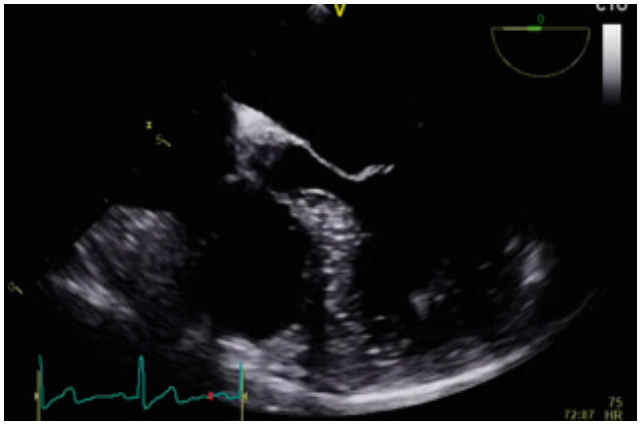
TEE ESSENTIALS

How to get the views: Mid-esophageal views

In their recommendations for performing TEE, the American Society of Echocardiography and the Society of Cardiovascular Anesthesiologists identify fifteen distinct mid-esophageal views:

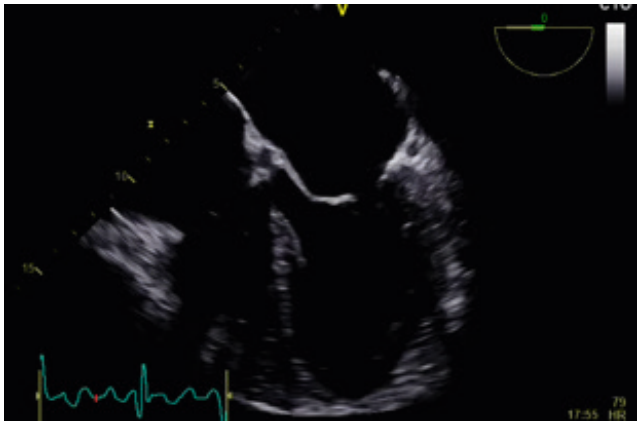
Mid-esophageal five-chamber view

The five-chamber view of the heart, which includes the left ventricular outflow tract, aortic valve, and aortic root, is performed at a transducer angle of 0–10°.



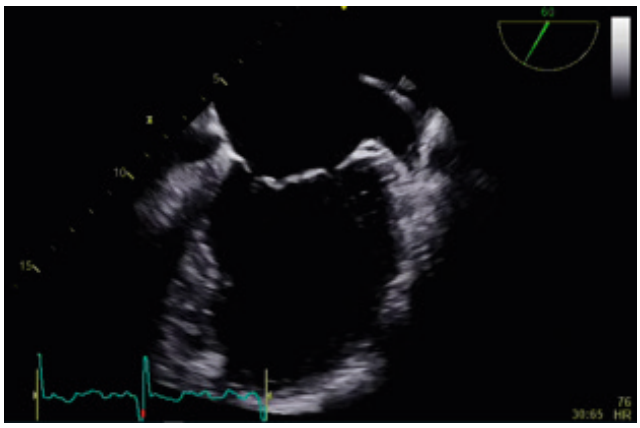
Mid-esophageal four-chamber view

The four-chamber view of the heart is performed at a transducer angle of 0–20°, with advancement/withdrawal of the probe and retroflexion of the probe tip as necessary to exclude the left ventricular outflow tract from the image.



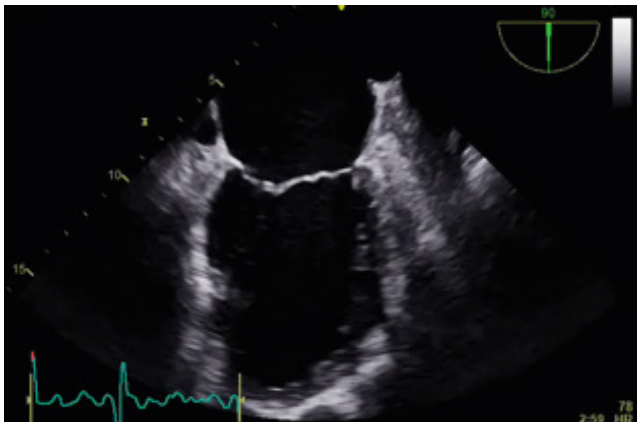
Mid-esophageal mitral commissural view

The mitral commissural view, sometimes called the mitral bicommissural view, is performed at a transducer angle of 50–70°. This view typically shows the P1, A2, and P3 segments of the mitral valve.



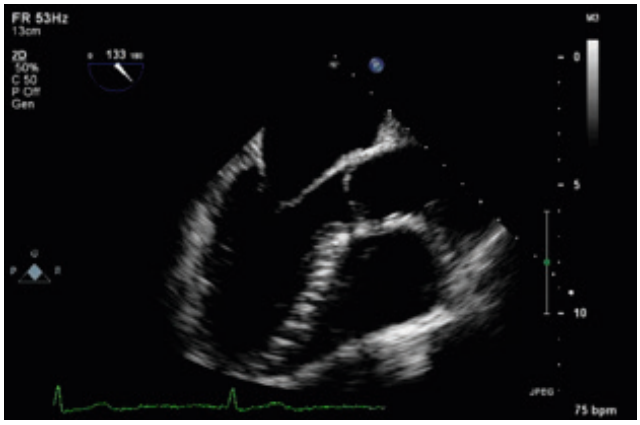
Mid-esophageal two-chamber view

The mid-esophageal two-chamber view is performed at a transducer angle of 80–100° and typically shows the A1 and P3 mitral valve segments.



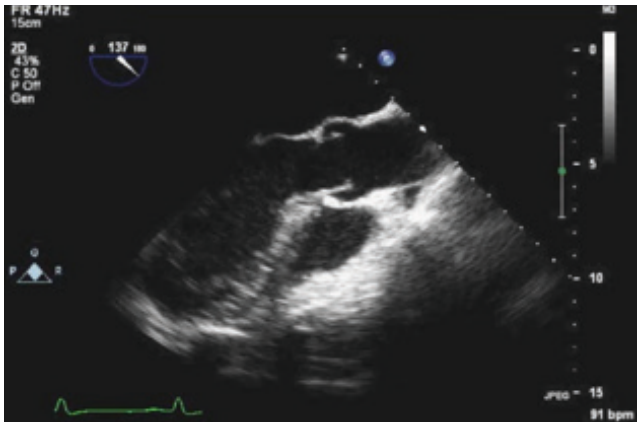
Mid-esophageal long-axis view

The mid-esophageal long-axis view is performed at a transducer angle of 120–140° and typically shows the A2 and P2 mitral valve segments. This view also shows the left ventricular outflow tract, aortic valve, and aortic root.



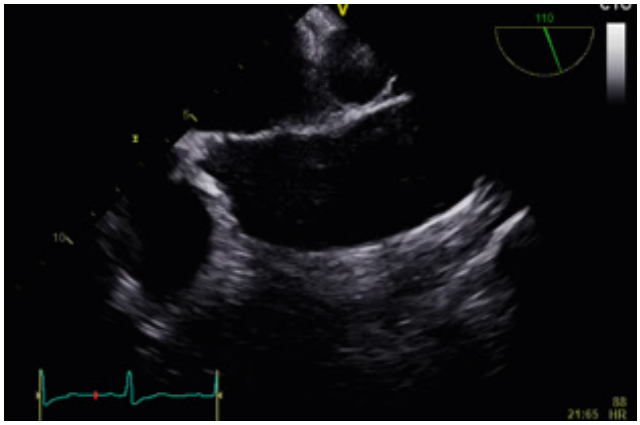
Mid-esophageal aortic valve long-axis view

The mid-esophageal aortic valve long-axis view is performed at a transducer angle of 120–140° and centers the aortic valve in the sector. This view is useful for assessing the aortic valve and also for taking measurements of the left ventricular outflow tract and aortic root.



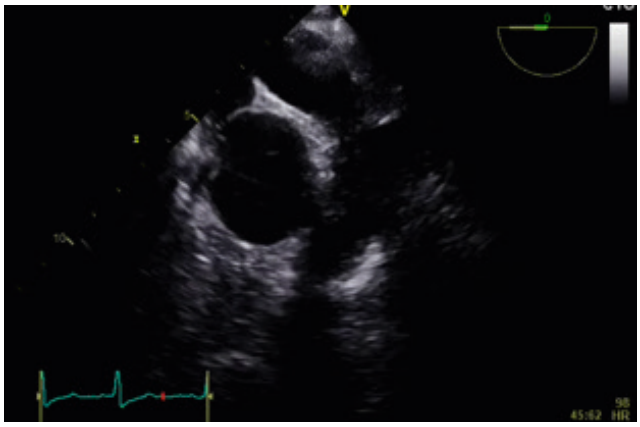
Mid-esophageal ascending aorta long-axis view

The mid-esophageal ascending aorta long-axis view is performed at a transducer angle of 90–110° and shows the proximal portion of the tubular ascending aorta.



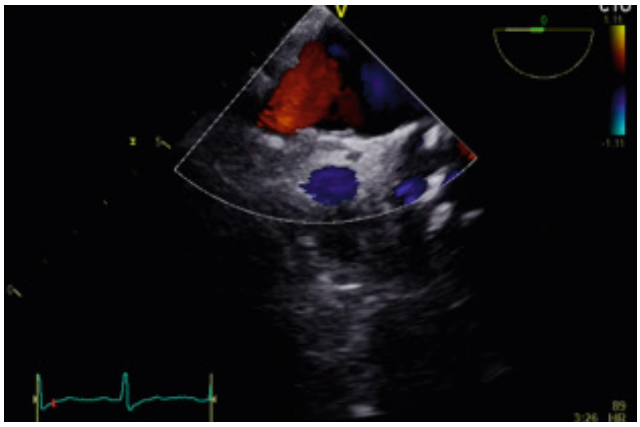
Mid-esophageal ascending aorta short-axis view

The mid-esophageal ascending aorta short-axis view is performed at a transducer angle of 0–30° and shows the tubular ascending aorta in short axis, with the main pulmonary artery and its right branch wrapping around the aorta. It is also possible to see the superior vena cava adjacent to the aorta.



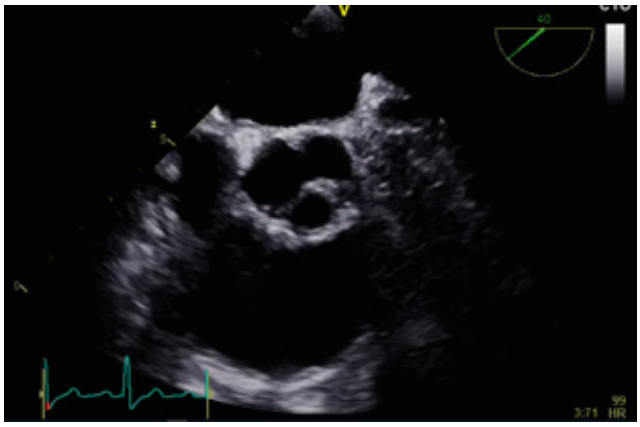
Mid-esophageal right pulmonary vein view

The mid-esophageal right pulmonary vein view is performed at a transducer angle of 0–30° and shows the right-sided pulmonary veins.



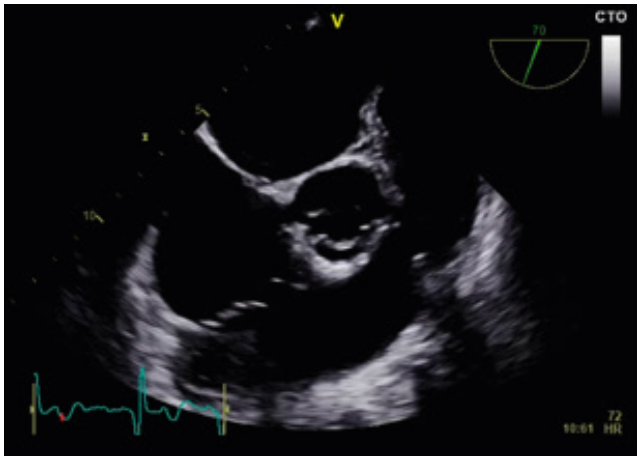
Mid-esophageal aortic valve short-axis view

The mid-esophageal aortic valve short-axis view is performed at a transducer angle of 25–45°. This is the ideal view for assessing aortic valve morphology and performing planimetry of the aortic valve orifice area.



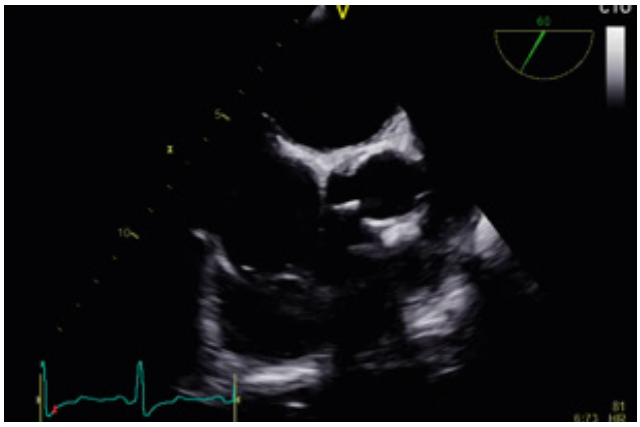
Mid-esophageal right ventricular inflow-outflow view

The mid-esophageal right ventricular inflow-outflow view is performed at a transducer angle of 60–80° and shows the right atrium, tricuspid valve, right ventricle and right ventricular outflow tract, pulmonary valve, and main pulmonary artery.



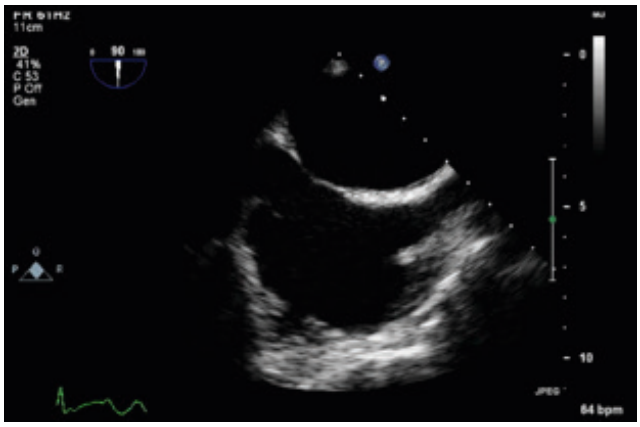
Mid-esophageal modified bicaval tricuspid valve view

The mid-esophageal modified bicaval tricuspid valve view is performed at a transducer angle of 50–70°. This can be a useful view for performing Doppler assessment of tricuspid valve flow.



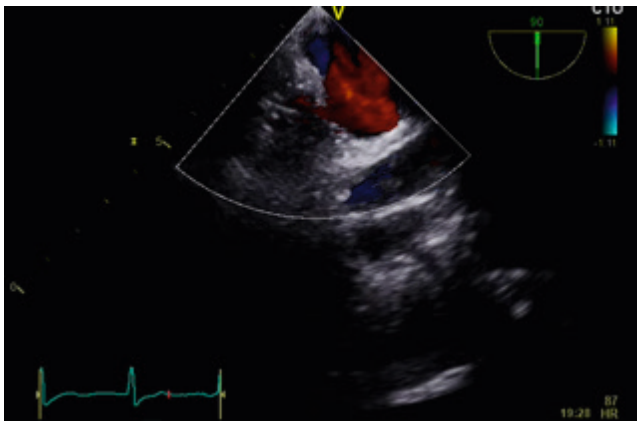
Mid-esophageal bicaval view

The mid-esophageal bicaval view is performed at a transducer angle of 90–110°. This can be a useful view for assessing the interatrial septum, and also the right atrium and superior/inferior vena cavae.



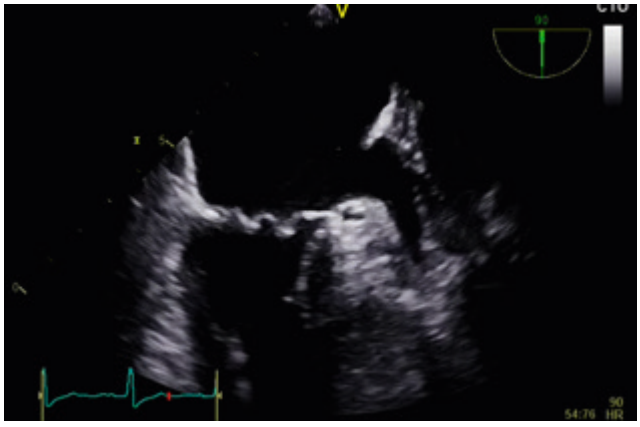
Mid-esophageal right and left pulmonary veins view

This mid-esophageal view is performed at a transducer angle of 90–110°, although further adjustment of the angle may be required depending upon the orientation of each pulmonary vein as it connects to the left atrium.



Mid-esophageal left atrial appendage view

This view of the left atrial appendage is performed at a transducer angle of 90–110° in the mid-esophageal position. It's often possible to visualize the left upper pulmonary vein in this view too.



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.