

FATE

Focused Assessment Transthoracic Echo in Perioperative Anesthesia

FATE is a focused transthoracic echo protocol that can be applied to all clinical scenarios within perioperative medicine to aid in the assessment of cardiac function. This guide will demonstrate transducer placement, ultrasound views, and tips on how to perform this exam.

RECOMMENDED TRANSDUCERS:

- Phased array P21 or P19 Transducer using the cardiac exam type

CLINICAL APPLICATIONS:

- Assess cardiac activity during cardiac arrest
- Identify pericardial effusion or tamponade
- Estimate left ventricular function and/or contractility
- Hemodynamic assessment and monitoring
- Identify unknown cardiopulmonary pathology



FATE EXAM: PERIOPERATIVE

Using the FATE exam, the contractility of the heart is assessed by visualizing the left ventricular (LV) muscle and chamber during both systole and diastole. During systole, the LV muscle thickens and the chamber size decreases. While in diastole, the muscle thins and the chamber size increases. M-Mode (motion mode), allows for a more detailed assessment of cardiac function, and the ability to efficiently calculate ejection fraction.

Probe placements

Clinical images



CARDIAC SUBCOSTAL VIEW

Identify the liver and cardiac structures, including RV, LV, RA, LA, and pericardial sac. Aim the transducer towards the patient's left shoulder, keeping the orientation marker at the 3 o'clock position. Look for any free fluid in the pericardial space. Best view for quick assessment of cardiac activity during CPR.



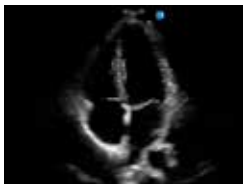
PARASTERNAL LONG AXIS VIEW

Identify the RV, LV and LA. Aim the transducer perpendicular to the left side of the chest, at the 4-6 parasternal space. Keep the transducer orientation towards the patient's right shoulder and the orientation marker at the 9-11 o'clock position. Best view for LV function, size, and visualization of effusions.



PARASTERNAL SHORT AXIS VIEW

Identify the RV and LV at papillary muscle level. Rotate the transducer from the LAX view 90 degrees, clockwise, aiming the transducer towards the patient's left shoulder keeping the orientation marker at the 1-2 o'clock position. Best view to see global wall motion and contractility of the LV size and wall thickness.



APICAL 4 CHAMBER

Identify all chambers with the transducer aimed towards the patient's left axilla, keeping the orientation marker towards the 3 o'clock position. Best view to see chamber size and valves.