

ECHO CHEAT SHEET

How to get the views: A sequential guide to probe positioning

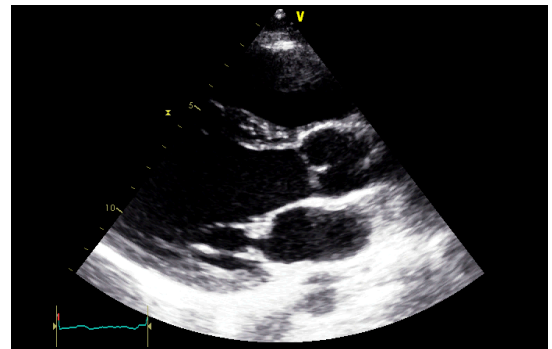


Parasternal long-axis (PLAX) view

Patient position: lying on left side, left arm raised, raise the back of the bed or use pillows under the left shoulder

Probe position: 4th intercostal space, left sternal edge

Probe orientation: notch towards patient's right shoulder



Parasternal long-axis (PLAX) right ventricle (RV) inflow view

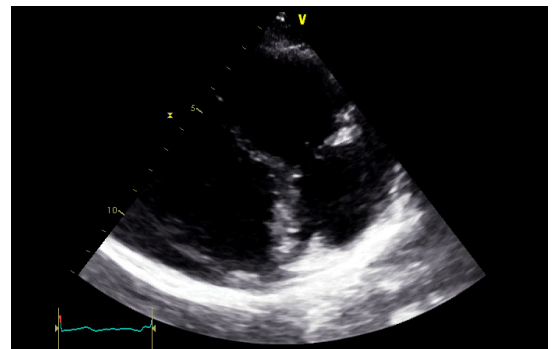
Keep the probe in the same position but angle it medially and towards the patient's right hip.

Patient position: lying on left side, left arm raised, raise the back of the bed or use pillows under the left shoulder

Probe position: 4th intercostal space, left sternal edge

Probe orientation: notch towards patient's right shoulder

Probe angled medially from PLAX view.



Parasternal long-axis (PLAX) right ventricle (RV) outflow view

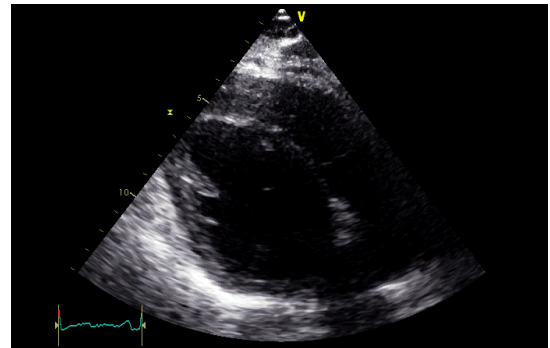
Keep the probe in the same position on the chest but alter the angle so you return to the PLAX view you started with. From there angle the probe superiorly pointing it towards the left clavicle.

Patient position: lying on left side, left arm raised, raise the back of the bed or use pillows under the left shoulder

Probe position: 4th intercostal space, left sternal edge

Probe orientation: notch towards patient's right shoulder

Probe angled superiorly from PLAX view.



Parasternal short-axis (PSAX) view, aortic valve level

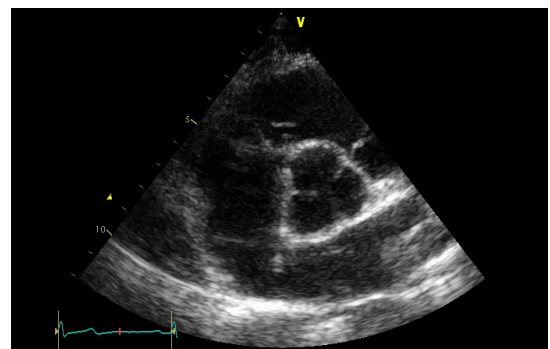
To move into the short-axis views keep the probe in the same place on the chest and angle it to return to the usual PLAX view. From there, rotate the probe 90 degrees clockwise into the short axis so the notch is pointing towards the patient's left shoulder. If you get the left ventricle in the view, tilt upwards very slightly toward the patient's head to bring in the aortic root as a circle.

Patient position: lying on left side, left arm raised, raise the back of the bed or use pillows under the left shoulder

Probe position: 4th intercostal space, left sternal edge

Probe orientation: notch towards patient's left shoulder

Slight probe tilt towards head.



Parasternal short-axis (PSAX) view, mitral valve level

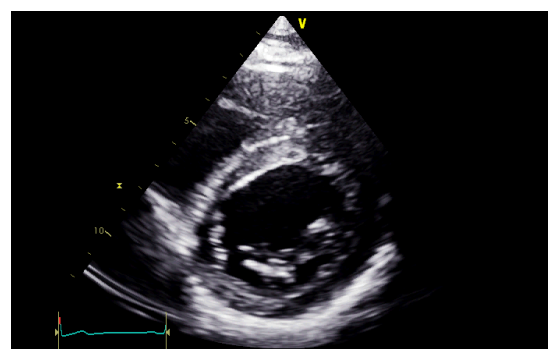
Keep the probe in the same position but tilt the probe downwards, towards the spine, to bring in the left ventricle as a circle.

Patient position: lying on left side, left arm raised, raise the back of the bed or use pillows under the left shoulder

Probe position: 4th intercostal space, left sternal edge

Probe orientation: notch towards patient's left shoulder

Slight probe tilt towards spine.



Parasternal short-axis (PSAX) view, papillary muscle level

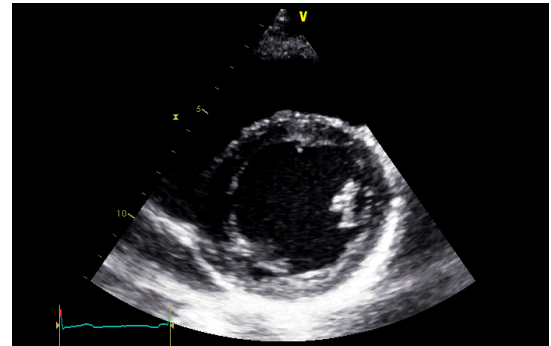
Keep the probe in the same position, but tilt the probe slightly further towards the spine. The mitral valve leaflets will disappear from view and be replaced by the papillary muscles.

Patient position: lying on left side, left arm raised, raise the back of the bed or use pillows under the left shoulder

Probe position: 4th intercostal space, left sternal edge

Probe orientation: notch towards patient's left shoulder

Further slight probe tilt towards spine.



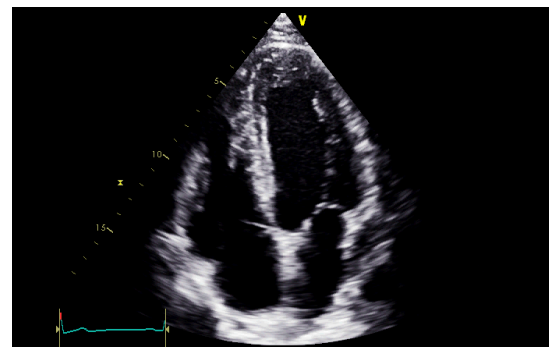
Apical four-chamber view

To image in the apical views move the probe to the position of the apex beat. For the four-chamber view, the notch on probe points towards the left shoulder.

Patient position: lying on left side, left arm raised, raise the back of the bed or use pillows under the left shoulder

Probe position: over the apex beat, or V5 of ECG

Probe orientation: notch towards patient's left shoulder



Apical five-chamber view

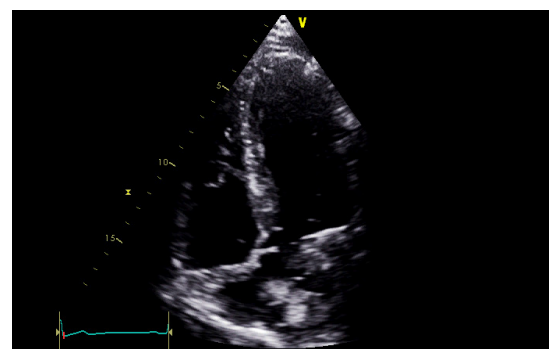
This is a modification of the four-chamber view: just tilt the probe upwards slightly towards the patient's head to bring the left ventricular outflow tract (LVOT) and aortic valve into view.

Patient position: lying on left side, left arm raised, raise the back of the bed or use pillows under the left shoulder

Probe position: over the apex beat, or V5 of ECG

Probe orientation: notch towards patient's left shoulder

Slight probe tilt towards head.



Apical three-chamber view (apical long-axis view)

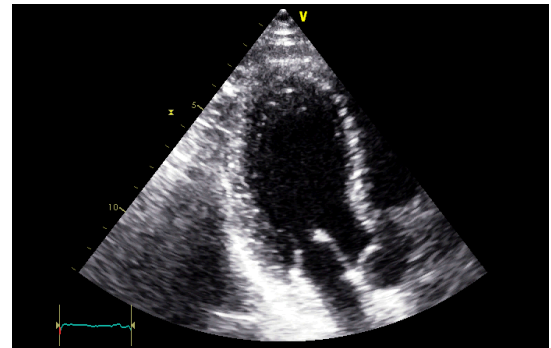
Start in the same position as for the apical four-chamber view, and rotate the probe about 90 degrees counterclockwise and angle it up very slightly. The notch will point towards the patient's right shoulder.

Patient position: lying on left side, left arm raised, raise the back of the bed or use pillows under the left shoulder

Probe position: over the apex beat, or V5 of ECG

Probe orientation: notch towards patient's right shoulder

Slight probe tilt towards head.



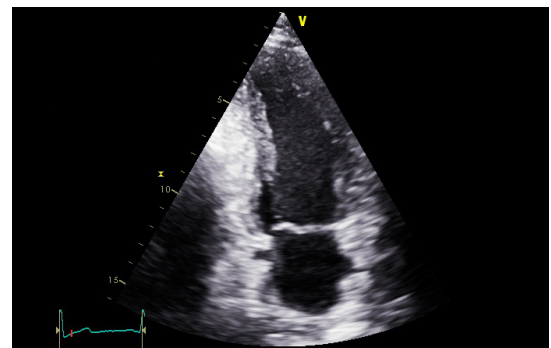
Apical two-chamber view

Start by going back to the apical four-chamber view and then rotate counterclockwise carefully as if you are going to find the three-chamber view, but don't rotate as far and don't tilt upwards. It's usually about 50–60 degrees from the four-chamber view, but as a rough guide rotate about half way and then adjust the probe rotation with small movements until you see two chambers (the left atrium and left ventricle) without the aortic valve or aorta in the image.

Patient position: lying on left side, left arm raised, raise the back of the bed or use pillows under the left shoulder

Probe position: over the apex beat, or V5 of ECG

Probe orientation: notch just right of patient's head but not as far as right shoulder



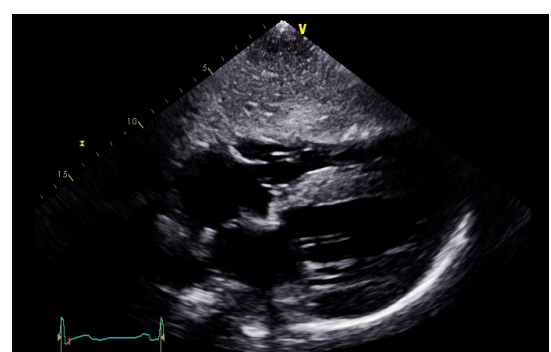
Subcostal four-chamber view

To image in the subcostal views reposition the patient so that they are lying flat. For the subcostal four-chamber view, position the probe below the sternum, almost flat against the skin with the notch towards the patient's left shoulder.

Patient position: lying supine

Probe position: below sternum, almost flat against skin

Probe orientation: notch towards patient's left shoulder



Subcostal IVC view

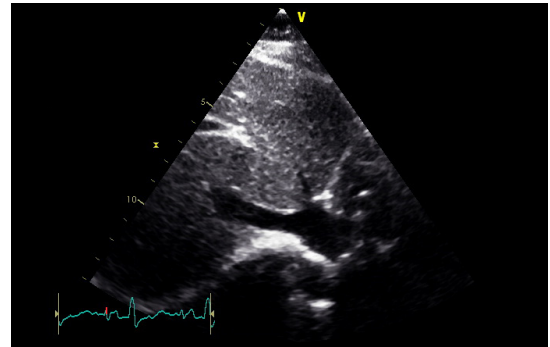
This view is a modification of the subcostal four-chamber view. Keep the patient and probe in the same position but rotate slightly in an counterclockwise direction and angle slightly upwards.

Patient position: lying supine

Probe position: below sternum, almost flat against skin

Probe orientation: notch rotated counterclockwise, starting from patient's left shoulder

Slight probe tilt towards head.



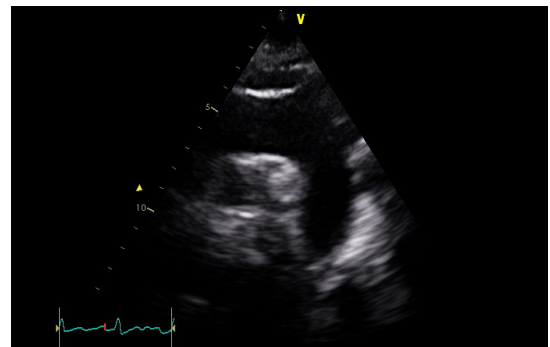
Suprasternal view

To image in the suprasternal view, ask the patient to extend their neck so that you can scan from the suprasternal notch with the probe's notch pointing towards their left shoulder.

Patient position: lying supine with neck extended

Probe position: in suprasternal notch

Probe orientation: notch towards patient's left shoulder



IMPORTANT CAVEAT

The suggested probe positions should only be used as a guide for where to start looking for each view. Expect to have to move from these to get the best images for individual patients. You might have to move up or down a rib space or move laterally across the chest. You might want to angle the probe differently or ask the patient to reposition.

