

2D Measurements, M-Mode, and Color: Parasternal Long Axis

ASK YOURSELF:

1. What steps can a sonographer take to ensure that the measurements they take correlate accurately with the images they see? For example: does the estimated ejection fraction make sense with what the left ventricular function looks like qualitatively?
2. What are typical points in the cardiac cycle during which measurements are taken, and why? Consider why a measurement must be taken both at end-diastole and end-systole versus when a measurement is only taken at a single point in time. Catalog (either mentally noting or on paper) which measurements are taken at end-diastole, which at end-systole, which are taken at both timeframes, and which are taken during the middle of a cycle (think valve leaflet excursion!) or simply at the largest diameter.

9 CINE loops, 7 still images

- **PLAX**

- 2D increased depth (**CINE**)
- 2D standard depth (**CINE**)
- FREEZE: Teicholz in measurement package
 - End-diastolic dimensions (**image**)
 - Interventricular septum (IVSd)
 - Left ventricular internal dimensions (LVIDd)
 - Posterior wall (PWd)
 - End-systolic dimensions (**image**)
 - Interventricular septum (IVSs)
 - Left ventricular internal dimensions (LVIDs)
 - Posterior wall (PWs)
- M-mode (**images**)
 - Aortic valve
 - Mitral valve
 - Left ventricle
- 2D Zoom AV / LVOT (**CINE**)
 - FREEZE: Measure aortic root at end-diastole
 - Scroll to mid-excursion/AV open: measure LVOT diameter
- Color MV (**CINE**)
- Color AV (**CINE**)

- **RVIT inferior/posterior tilt**

- 2D (**CINE**)
- Color TV (**CINE**)

- **RVOT superior/anterior tilt**

- 2D (**CINE**)
- Color PV (**CINE**)

