

Kahoot: Parasternal Long Axis (PLAX)

Dr. Alice Matthews

CVSG1240 Echocardiography Scanning Lab I • Concorde Career College Portland

A 15-question Kahoot covering acquisition, optimization, and measurement of the parasternal long-axis view. Correct answer marked in bold and listed at the end of each item.

1. Where do you place the probe to acquire a standard PLAX view?

- A. 5th LICS, midclavicular line
- B. 3rd or 4th LICS, just left of the sternum (**correct**)
- C. Subxiphoid, just below the rib margin
- D. Right sternal border, 2nd LICS

Answer: B.

2. Which way does the probe notch point in PLAX?

- A. Patient's left shoulder
- B. Patient's left hip
- C. Patient's right shoulder (**correct**)
- D. Patient's right hip

Answer: C.

3. In what position do you place the patient for PLAX?

- A. Supine, arms at sides
- B. Left lateral decubitus, left arm tucked behind the head (**correct**)
- C. Right lateral decubitus
- D. Sitting upright

Answer: B.

4. On a properly acquired PLAX, what is the round anechoic structure posterior to the left atrium?

- A. Coronary sinus
- B. Pulmonary vein
- C. Descending thoracic aorta (**correct**)
- D. Inferior vena cava

Answer: C.

5. Which five linear measurements are taken on PLAX at end-diastole (ASE 2015)?

- A. RVIDd, IVSd, LVIDd, LVPWd, Ao root (**correct**)
- B. LVIDd, LVIDs, EF, FS, LA
- C. Septum, RV, LA, MV, AV
- D. RVOT, MPA, RPA, LPA, Ao

Answer: A.

6. By ASE convention, linear chamber dimensions on PLAX are measured:

- A. Outer-edge to outer-edge
- B. Inner-edge to inner-edge (**correct**)
- C. Leading-edge to leading-edge
- D. Trailing-edge to trailing-edge

Answer: B.

7. End-diastole on the ECG corresponds to which event?

- A. Peak of the T-wave
- B. R-wave (**correct**)
- C. P-wave onset
- D. QRS offset

Answer: B.

8. The LA AP diameter on PLAX is measured at:

- A. Mid-diastole, parallel to the aortic root
- B. End-systole, perpendicular to the posterior aortic wall (**correct**)
- C. End-diastole, at the mitral hinge points
- D. Mid-systole, at the level of the LVOT

Answer: B.

9. A normal LVIDd in a healthy adult male is approximately:

- A. 2.0 to 3.0 cm
- B. 3.0 to 4.0 cm
- C. 4.0 to 5.5 cm (**correct**)
- D. 6.0 to 7.5 cm

Answer: C.

10. The aortic root is measured on PLAX at which anatomic landmark?

- A. Sinuses of Valsalva (**correct**)
- B. Sinotubular junction
- C. Aortic arch
- D. Aortic annulus

Answer: A.

11. The LVOT diameter is measured:

- A. At the aortic annulus, mid-diastole
- B. Just proximal to the aortic valve, mid-systole, inner-to-inner (**correct**)
- C. At the level of the mitral leaflet tips
- D. At the descending aorta

Answer: B.

12. If the LV looks “stubby” and short in PLAX, your most likely error is:

- A. Foreshortening the apex by sliding too cranial (**correct**)
- B. Gain set too high
- C. Probe rotated 90 degrees too far
- D. Patient inhaled instead of holding breath

Answer: A.

13. Linear PLAX measurements should be placed at what level of the LV?

- A. At the mitral annulus
- B. Just below the mitral leaflet tips, perpendicular to the long axis (**correct**)
- C. At the apex
- D. At the papillary muscle midpoint

Answer: B.

14. A normal aortic root diameter at the sinuses of Valsalva in adults is:

- A. 1.0 to 1.5 cm
- B. 2.0 to 3.4 cm (**correct**)
- C. 4.0 to 5.0 cm
- D. 5.5 to 6.5 cm

Answer: B.

15. The single best ECG event to set true end-diastole is:

- A. Eyeballing the largest LV cavity
- B. P-wave onset
- C. The R-wave on the ECG (**correct**)
- D. The end of the T-wave

Answer: C.

Suggested Kahoot settings: 20 seconds per question; 30 seconds for #5, #8, #11.

Source: CVSG1240 Module 1 Lab 1 Protocol (PLAX and Apical Fundamentals); ASE 2015 Chamber Quantification (Lang et al., JASE 28(1)); Reynolds, *The Echocardiographer's Pocket Reference*, 5th ed.

Dr. Alice Matthews · amatthews@concorde.edu · alice@deepneuro.ai · Concorde Career College Portland