CRITICAL CARE COURSE
LEVEL II

HEMODYNAMIC MONITORING

WAVEFORM INTERPRETATION
Figure 2-2. Components of the atrial waves.
PRACTICE WAVEFORM 2–1. Analysis: The A wave is located in the P–R interval. Find the end of the P–R interval to locate most A waves.
PRACTICE WAVEFORM 2–3. Locate and determine the mean of the A wave on this CVP tracing.
Figure 3–2. When both P and A waves are absent, end QRS most closely approximates ventricular end-diastolic pressure.
PRACTICE WAVEFORM 3-2. Analysis: This is a CVP tracing with large V waves. The value is obtained by finding the A wave in the P–R interval and determining the mean of the A wave.
Waveform 4-5. RV waveform.

RV pressure = $\frac{24}{10}$ mm Hg
Waveform 4–3. Dicrotic notch in the PA waveform.
Waveform 4-1. Normal pulmonary artery waveform.
**PRACTICE WAVEFORM 4-5.** What is the value associated with this PA waveform?

8235 04 MAR 90 1725 P1 WAVE:0-100 HR:99 P1:50/26 (39) P2:275/278 (278)
PRACTICE WAVEFORM 2-5. Analysis: Under normal circumstances, the A and V waves are frequently of similar size. In this case, the A and V waves are similar in size. They can be differentiated by noting the ECG intervals. The A wave is located near the end of the QRS complex, whereas the V wave is located late in the T-P interval.

A wave is located after the QRS due to delay in feedback.

V wave is after T wave.
PRACTICE WAVEFORM 2–4. Find the A and V waves in this PCWP tracing.

\[ \frac{15}{8} = 11.5 \text{ mm Hg} \]
PRACTICE WAVEFORM 3–6. Analysis: A giant V wave exists in this tracing as noted by the large wave in the T–P interval. The smaller A wave is near the end QRS. Read this smaller A wave for the PCWP value.

This is a wedge reading with balloon inflated. The we are measuring the average of both P–waves.
Waveform 6-6. CVP tracing with inspiratory artifact.

Inspiration pulls the waveform down at lower pressure when compared to the lower chest pressure to inhaled air.

\[ \text{Mean CVP} = \frac{24}{20} \text{, or 22 mm Hg} \]
PRACTICE WAVEFORM 8–1. In this waveform obtained from the distal port, the patient was receiving IMV ventilation without spontaneous breathing. What is the tracing and the value associated with the waveform?

Measure Here

Mechanical Ventilation
Due to increase in pressure from the vent.