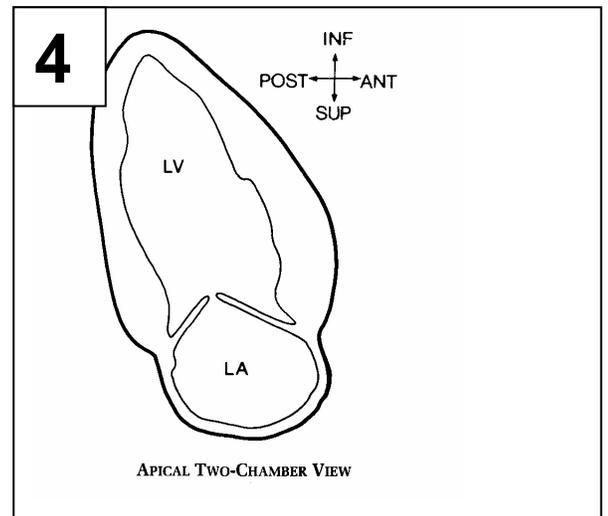
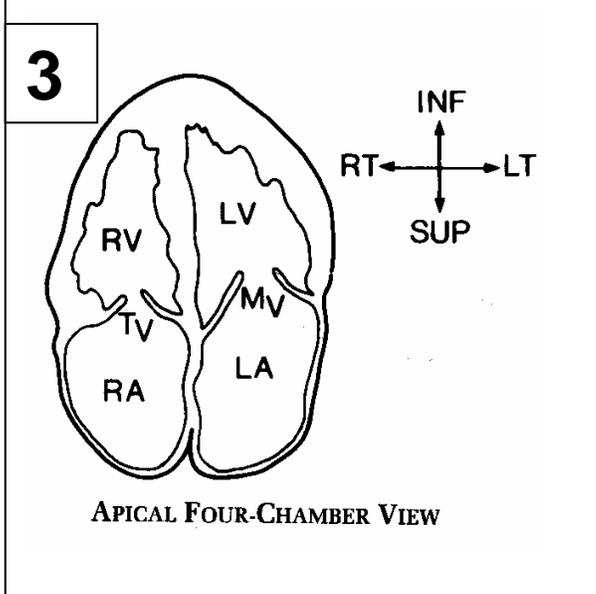
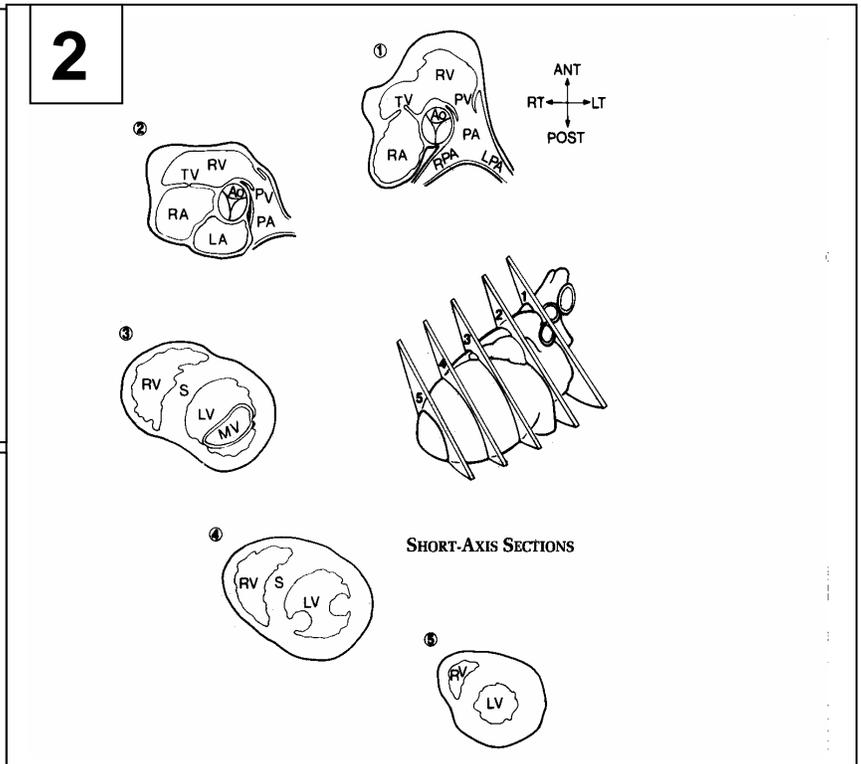
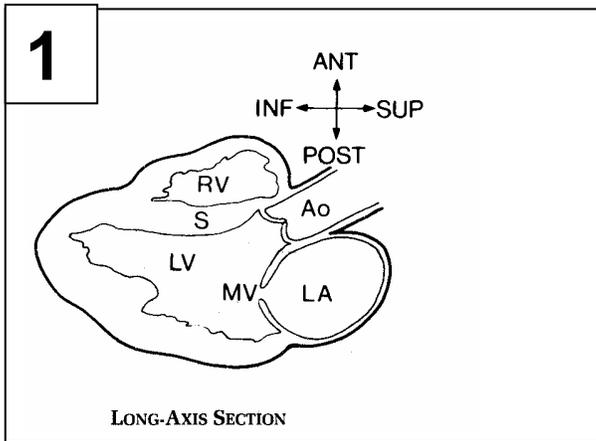


15. Echocardiogram



1. Velocity into Blood Pressure
 - Modified Bernoulli Equation $P = 4V^2$
 - Pressure drop (mmHg) = $4 (\text{Velocity})^2$ (m/s)
2. Calculate Valve Area
 - Continuity Equation
 - Area x Velocity = Area x Velocity
 - Aortic Valve Area = $\frac{\text{LVOT Area} \times \text{LVOT Velocity}}{\text{Aortic Velocity}}$
3. Color Doppler
 - Red- Towards Transducer
 - Blue- Away from Transducer
 - Green- Turbulance
4. Left Venticular EF (Teich)
 - $EF (\%) = 1 - \frac{[(LVd)^3 - (LVs)^3]}{(LVd)^3}$