

Element 57.00

**Majerus-Berman
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Patient

- 66 y/o female
- Arrhythmias
- Hypertension
- DOE

LV Evaluation

- Regional vs. Global performance
- “eye ball” method
- Biplane Simpson
- Tissue tracking (AQ, CK)
- 3D
- TDI

LV Evaluation-Biplane Simpson

- Apical 4 & Apical 2 Chamber
- Trace LV endocardium
 - End systole*
 - End diastole*
- Exclude papillary muscle

Biplane Simpson-pitfalls

- **Must see endocardium**
Of entire chamber
- **Do not forshorten ventricle**
- **Measure same beat systole and diastole**
- **If sinus, average 3 beats**
- **If arrythmia, average 10 beats**

LV Evaluation-TDI

- **Inter and intra ventricular dyssynchroncy**
- **Delayed time to peak**
- **Contractions after systole**
- **Wall displacement**

Tips for TDI

- **Optimal QRS complex**
- **3 beat acquisition-
Suspend respirations**
- **Avoid foreshortening**
- **Sweep speed 100mm/s**
- **1cm sample size**

TDI-pitfalls

- Time to peak

Which peak?

Sustained peak?

Where QRS start?

Where is mean Doppler?

-don't overgain

Tips for 3D Echo

- **Must learn your landmarks**
- **Suspend respirations**
- **Don't over gain**
- **Can get entire ventricle from parasternal window**

3D-pitfalls

- **Difficult to capture entire LV in remodeled ventricle**
- **Difficult with arrhythmias**

