

## University of Utah Basic TEE Exam

### Image Optimization

- 1.) Good ECG signal
- 2.) Patient information entered correctly
- 3.) Focus – just distal to structure of interest
- 4.) Gain – blood just black, random color just disappears
- 5.) Nyquist – set at 50-60 cm/s
- 6.) Review study to be sure images captured well

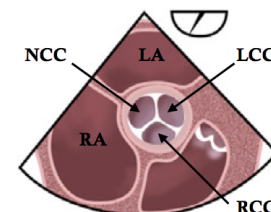
### Midesophageal AV Short Axis: ~45°, depth ~8 cm

Goal: Rule out AS, evaluate structural abnormalities of AV

Center valve, advance/withdraw to see coaptation, multiplane for symmetrical cusps

Check bi/tri-leaflet, normal excursion and coaptation, sclerocalcific changes

Add ~90° to multiplane for next view



### Midesophageal AV Long Axis: 130°-140°, depth ~8cm

Goal: Rule out AS, AI, type A dissection, dynamic LVOT obstruction

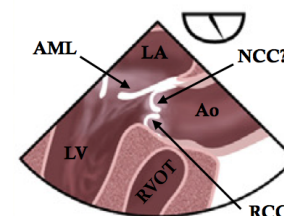
Keep LA-MV-LV “open” with rotation, find AV with multiplane

Rotate R/L until leaflet excursion is clear & central, sinuses symmetric

Check for normal coaptation, degree of calcification, normal Ao size

CFD to look for AI, Y-sign suggesting LVOT obstruction

Slight decrease in multiplane, slight right turn, increase depth for next view



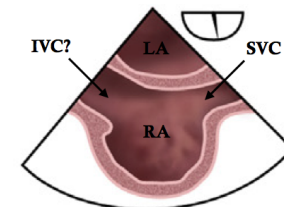
### Midesophageal Bicaval: 90°-110° with right turn, depth ~12 cm

Goal: Evaluate for ASD, SVC collapse, watch wire advancement; may not see IVC

Rotate to visualize fossa ovalis clearly; withdraw for SVC, advance for IVC/CS

CFD on fossa ovalis to look for ASD, scan through septum, don't reduce Nyquist

Turn left and decrease multiplane for next view



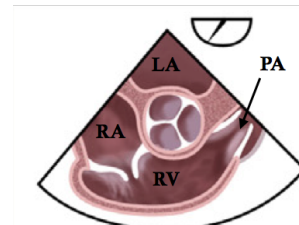
### Midesophageal RV Inflow/Outflow: 55°-75°, depth ~12 cm

Goal: Evaluate RV structure/function, TV, PV; follow PA catheter

Should see RA/RV/PV/PA simultaneously

CFD of PV (not TV)

Decrease multiplane, advance slightly, increase depth, don't rotate for next view

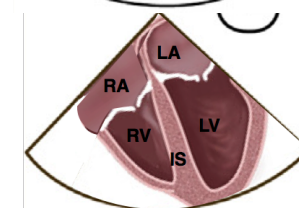


### Midesophageal RV-Focused 4 Chamber: 0-20°, depth 16 cm (to just see apex)

Goal: RV size and function, RA size, TR; normal TAPSE > 1.6 cm

CFD on TV, advance and withdraw slightly to scan valve

Rotate to the left, center LV in screen for next view



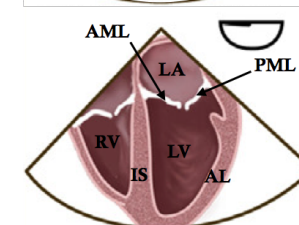
### Midesophageal LV-Focused 4 Chamber: 0-20°, depth 16 cm (to just see apex)

Goal: LV inferoseptal and anterolateral wall, global LV function, LV/LA size, MR

Advance, retroflex, increase angle to eliminate LVOT and foreshortening

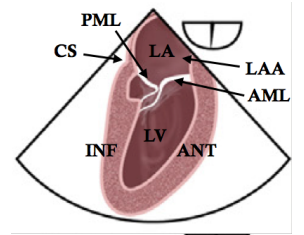
CFD on MV, advance and withdraw to scan valve

Position LV in center of screen, increase multiplane for next view



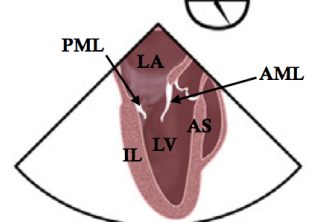
**Midesophageal 2 Chamber:** 80°-90°, depth ~16 cm

Goal: Assess anterior and inferior walls (AAA rule), apex, look for LAA thrombus  
See SAX coronary sinus on L (can check for cannula) and LAA on R  
LV "lengthening" or excessive apical motion suggests foreshortening  
Increase multiplane for next view



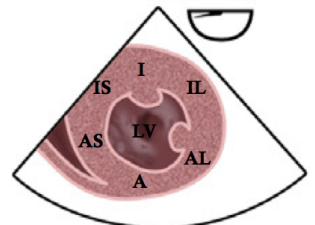
**Midesophageal Long Axis:** 130°-140°, depth 16 cm

Goal: Assess anteroseptal and inferolateral walls  
Should see LVOT, MV, AV, typically no papillary muscles  
Decrease multiplane, advance into stomach, gentle anteflexion for next view



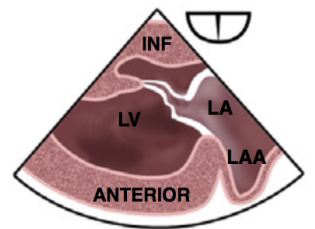
**Transgastric Mid Short Axis:** 0° (always at 12 cm depth)

Goal: Evaluate global and regional LV systolic function, preload, afterload  
Advance and anteflex gently to contact stomach wall, should see both papillary muscles  
Evaluate *thickening* of each segment, representing all coronary distributions  
Center LV, increase multiplane for next view (can be done as x-plane)



**Transgastric 2 Chamber:** 90°, depth ~10 cm

Goal: Evaluate LV size and thickness, anterior and inferior walls  
Rotate to ensure maximal LV diameter, minimize foreshortening with multiplane  
Return to 0°, rotate left, and withdraw for next image



**Descending Aorta Short Axis:** 0° (decrease depth, max MHz)

Screen for plaque (severe = mobile or diameter = 0.5+ cm), dissection, pleural effusion  
Don't decrease depth so much that a left effusion will be missed  
Withdraw probe until you reach arch, rotate back to right, advance back to midesophageal window

