

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

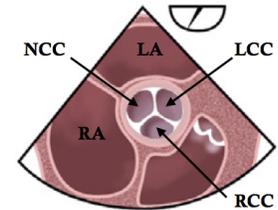
Midesophageal AV Short Axis: ~45°, depth ~8 cm

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

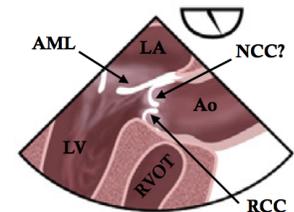
Keep LA-MV-LV “open” with rotation, find AV with multiplane

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



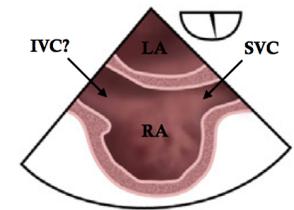
Midesophageal Bicaval: 90°-110° with right turn, depth ~12 cm

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



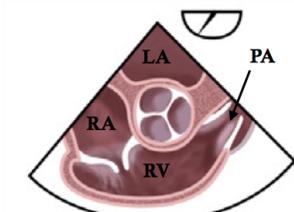
Midesophageal RV Inflow/Outflow: 55°-75°, depth ~12 cm

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

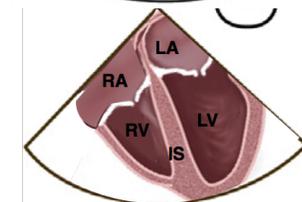


Midesophageal RV-Focused 4 Chamber: 0-20°, depth 16 cm (to just see apex)

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



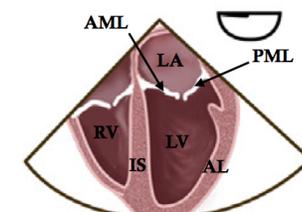
Midesophageal LV-Focused 4 Chamber: 0-20°, depth 16 cm (to just see apex)

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

Advance, retroflex, increase angle to eliminate LVOT and foreshortening

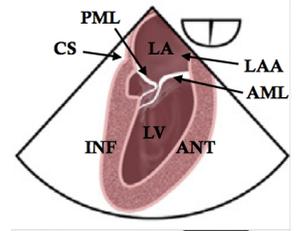
CFD on MV, advance and withdraw to scan valve

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



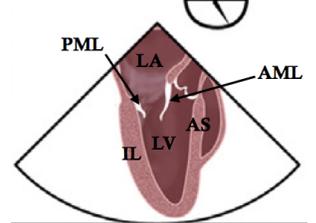
Midesophageal 2 Chamber: 80°-90°, depth ~16 cm

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



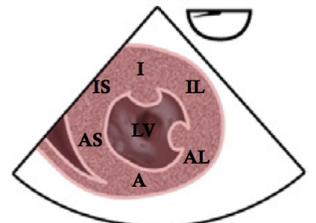
Midesophageal Long Axis: 130°-140°, depth 16 cm

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



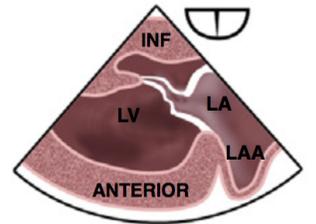
Transgastric Mid Short Axis: 0° (always at 12 cm depth)

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

