

PROTOCOL: HYPERTROPHIC CARDIOMYOPATHY

Inclusion Criteria

- Any patient with referral of HCM/HOCM or suspected HCM/HOCM

EIMS Data

Procedure Components: 2-D, Color Flow, Doppler +/- Strain Imaging, Amyl Nitrite, IV Contrast Agent

Serial Study: General, HOCM

Findings: Comment if obstructive/non-obstructive, thickest segment & measurement, septal contour

AI: Select 'Run HCM' report

Billing Diagnosis: Cardiomyopathy Hypertrophic; if no findings bill for symptoms, etc.

Procedure: (TTE) 2D Echo Doppler Color +/- Contrast

Charge capture: +/- Myocardial Strain – Hospital

Obtain the following if the last echo was:

≥ 2 years → full echo + following

< 2 years → LV Function Protocol + following

2D	CFI	Doppler	Measurement
Parasternal			
LV wall thickness (LAX, SAX) SAM (LAX, SAX)	MR jet direction (LAX)	CW - MR velocity (posterior jets)	LV <u>max</u> wall thickness
Apical			
SAM Apical HCM: look for pouch	†LV obstruction MR jet direction (LAX)	CW - MR velocity *CW - LVOT MIG: rest, Vals, & squat- to-stand, Amyl	LV <u>max</u> wall thickness LV strain (see tips) LA strain
Apical w/ Valsalva, Squat to stand, and/or Amyl Nitrite (if < 50 mmHg)			
SAM	LV obstruction MR	CW - MR velocity CW - LV Obstruction	

Caveats and Tips

- LV max wall thickness:** any segment in any view. Contrast can improve endocardial border definition.
- †CFI for LV Obstruction:** use full length CFI box (LV apex to full LA) to assess LV obstruction & MR; **consider color M-mode for obstruction assessment.**
- * LVOT MIG:** If resting gradient is <50 mmHg proceed with Valsalva, **if the Valsalva gradient is <50 mmHg proceed with squat-to-stand (S2S), if S2S is not possible or gradient is <50 mmHg, consider Amyl.**
- Apical HCM pouch:** try off-axis views. Contrast is recommended.
- Evaluate for **aberrant muscle bundles** or **abnormal papillary muscles**.
- LV strain not required for Mayo confirmed HCM patients that had prior echo with strain.** Do LV strain for:
 - ✓ HCM patient having first Mayo echo
 - ✓ Echo ordered for HCM screening or positive family history of HCM
 - ✓ Echo suggestive of HCM but not yet diagnosed
 - ✓ Echo suggests athletes heart vs. HCM