

Cardiomyopathy	
Hypertrophic Cardiomyopathy (HCM)	
Presentation	Often discovered incidentally on EKG (LVH, T-wave abnormalities). If symptomatic: dyspnea, exertional chest pain, fatigue, presyncope, syncope, palpitations, ventricular arrhythmias and sudden death; Exam w/ left-sided heave and lateral displacement of the PMI; audible S4 and a harsh mid to late systolic murmur at the mid to lower left sternal border that is louder while standing as well as w/ the Valsalva maneuver as decreased LV volume worsens the obstruction
Pathophys	Usually AD. Myofibrillar disarray and hypertrophy of the LV, most commonly the interventricular septum→ LVOT obstruction and diastolic dysfunction
Workup	EKG may show left axis deviation, LVH w/ or w/o strain and pathologic septal Q waves in the inferior and lateral leads +/- LA enlargement; Echo w/ diagnostic LV and septal hypertrophy; +/- cardiac MRI (to assess tissue characteristics and risk stratify), catheterization, EP studies, genetic testing (AD)
Treatment	ICD if high-risk features of history of arrhythmia. Beta-blockers or calcium channel blockers reduce obstruction and have antiarrhythmic properties; septal or left ventricular myomectomy and septal alcohol ablation are sometimes utilized
Dilated Cardiomyopathy	
Presentation	Signs of right-sided heart failure (peripheral edema, hepatomegaly, JVD) and left-sided heart failure (pulmonary crackles, cold extremities and weak pulses), plus often tachycardic, tachypneic, DOE. On exam a systolic murmur representing AV valve regurgitation may be present w/ an audible S3 or S4
Pathophys	Systolic dysfunction w/ enlargement of ventricles, usually idiopathic but can be secondary to myocarditis, ischemia or scarring processes, valvular disease, thyroid disease, nutrient deficiencies (selenium, carnitine, thiamine), drugs (especially anthracyclines), toxins, radiation, infiltrative processes, muscular dystrophies, familial DCM syndromes
Workup	CXR w/ cardiomegaly, pulmonary vascular congestion/edema; EKG w/ sinus tachycardia and may show LVH and non-specific ST-T changes; may be low voltages and atrial enlargement; arrhythmias may be present; Echo w/ LV chamber dilation and poor contractility
Treatment	Diuretics, ACE inhibitors, digoxin
Arrhythmogenic Right Ventricular Cardiomyopathy (ARVC)	
Presentation	Lightheadedness, palpitations, chest pain and syncope as well as signs of right-sided heart failure
Pathophys	Fibrofatty replacement of the right ventricular myocardium leading dangerous ventricular dysrhythmias (and less often SVT) and ventricular dysfunction
Workup	EKG, echocardiogram, EP studies, MRI and genetic testing
Treatment	Beta-blockers plus restriction from sports; if history of VT or VF or have certain high-risk features should have an ICD placed
Restrictive Cardiomyopathy	
Presentation	Signs and symptoms of heart failure (see CHF section)
Pathophys	Non-compliant ventricular tissue→ diastolic dysfunction and atrial enlargement w/ relatively normal ventricular dimensions
Workup	Echo
Treatment	Heart failure management (see CHF section)