Differential
- Hypertrophic cardiomyopathy.
- Dilated cardiomyopathy.
- Constrictive pericarditis: Clinical presentation and physical exam may be identical to those of restrictive cardiomyopathy. MRI shows pericardial thickening (> 5 mm), and right heart catheterization demonstrates equalization of diastolic pressures in constrictive pericarditis.

Diagnosis
- ECG: Conduction system disease, low QRS voltage, nonspecific ST-T-wave changes.
- Echocardiogram: Restrictive filling pattern with preserved systolic function and biatrial enlargement. Infiltrative causes can present with the characteristic granular appearance of myocardium.
- Right heart catheterization: Dip-and-plateau ventricular filling pressure ("square root sign"), pulmonary hypertension, respiratory concordance of the right and left ventricles.
- Myocardial biopsy: Detects infiltrative diseases such as amyloidosis and sarcoidosis.

Treatment
- Treat the underlying disease process (e.g., amyloidosis, sarcoidosis).
- Diuretics: Reduce symptoms from venous congestion, but overdiuresis leads to decreased cardiac output due to preload dependence.
- β-blockers/calcium channel blockers: Improve diastolic function by slowing heart rate and increasing ventricular filling time. Caution should be used in administration, as this may result in a fall in cardiac output. Avoid use of calcium channel blockers in amyloid heart disease.
- Cardiac transplantation: Remains an option for patients with intractable heart failure without severe systemic disease.

Hypertrophic Cardiomyopathy
An autosomal-dominant disorder of myocardial structural proteins that causes premature, severe LVH. A subset of hypertrophic cardiomyopathy cases may have asymmetric septal hypertrophy and dynamic outflow tract obstruction.

Symptoms
Dyspnea, chest pain, syncope.

Exam
The obstructive form presents with a systolic crescendo-decrescendo murmur that intensifies with reduction in left ventricular volume (e.g., standing upright, Valsalva maneuver) and decreases with increase in left ventricular volume (e.g., hand grip, raising legs when the patient is in a supine position). An S4 and a sustained apical impulse are characteristic. Carotid upstrokes are bifid owing to midsystolic obstruction.

Differential
- Valvular aortic stenosis: The murmur of aortic stenosis radiates to the neck. Aortic stenosis also has weak and delayed carotid upstrokes (parvus et tardus).