Myocardial diseases

- **Hypertrophic cardiomyopathy:**
  - high EF
  - it can contract but can’t relax
    - Results in diastolic dysfunction.
  - it’s a marked hypertrophy to the left ventricle +/- right ventricle, disproportionate hypertrophy of the septum
  - causes:
    - HTN
      - most common cause
    - Concentric hypertrophy
    - S4 gallop present (since we have a left ventricular hypertrophy)
  - Hypertrophic obstructive cardiomyopathy
    - mitral aortic stenosis murmur
    - S4 Gallop not present & have fewer sign of backward heart failure like pulmonary edema, right heart failure, and hepatomegaly.
    - It is the main cause of sudden death in a healthy playing child

- **Symptoms:**
  - Dyspnea is the most common presentation
  - Angina, palpitations, syncope
  - factors that increase obstruction: (decrease the size of the ventricle)
    - Increase contractility:
      - Digoxin (empties more)
      - Beta agonist (goes faster)
      - Tachycardia
        - since ventricle fills during diastole and no more time to fill
    - Decreases preload:
      - valsala or standing
      - decrease intravascular volume
      - nitrates and vasodilators
      - tachycardia
    - Decreases afterload: