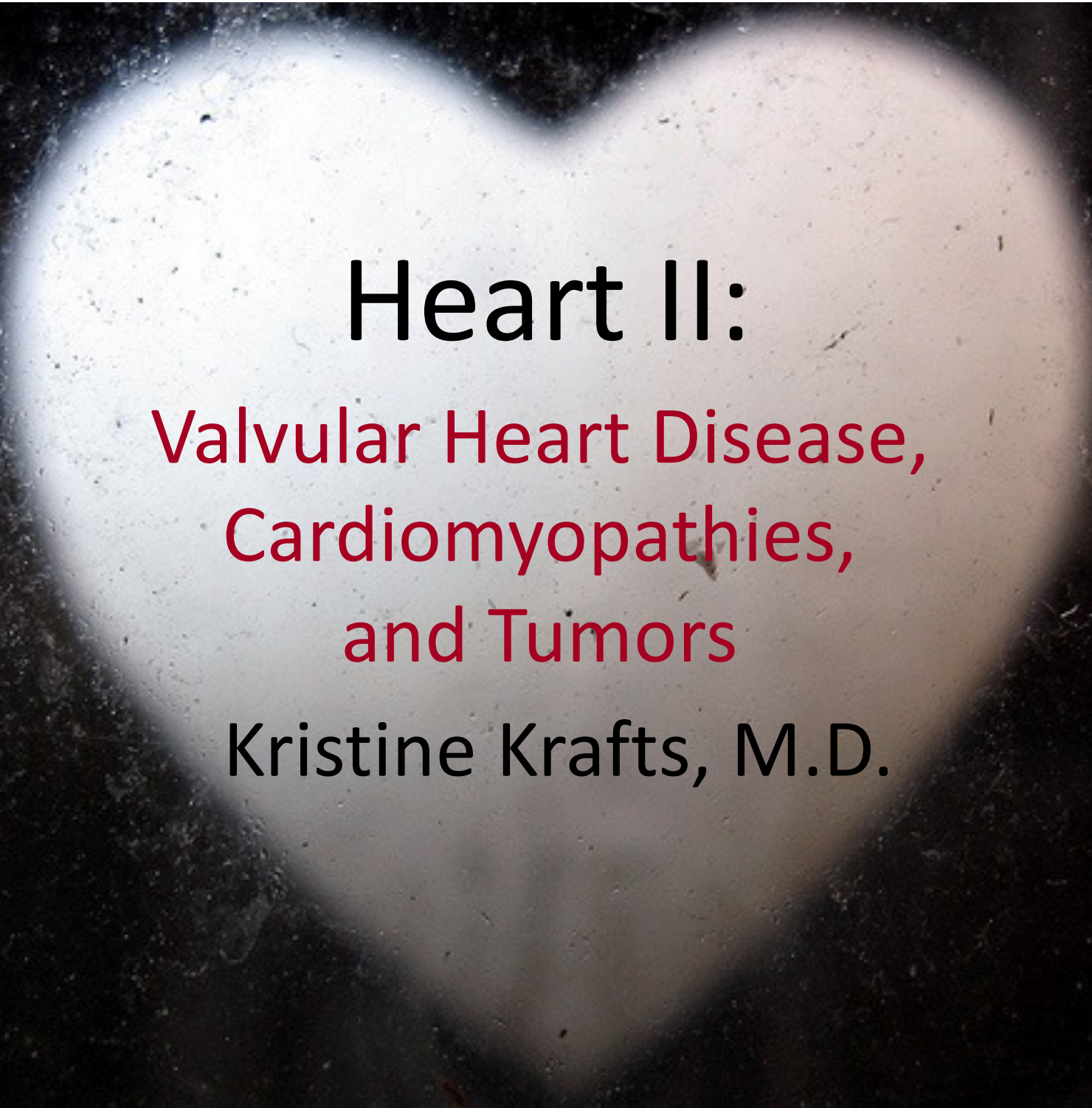




Heart II:

Valvular Heart Disease,
Cardiomyopathies,
and Tumors

Kristine Krafts, M.D.

Cardiac Pathology Outline

- Blood Vessels
- Heart I
- Heart II
 - Valvular Heart Disease
 - Cardiomyopathies
 - Tumors

Heart II Lecture Objectives

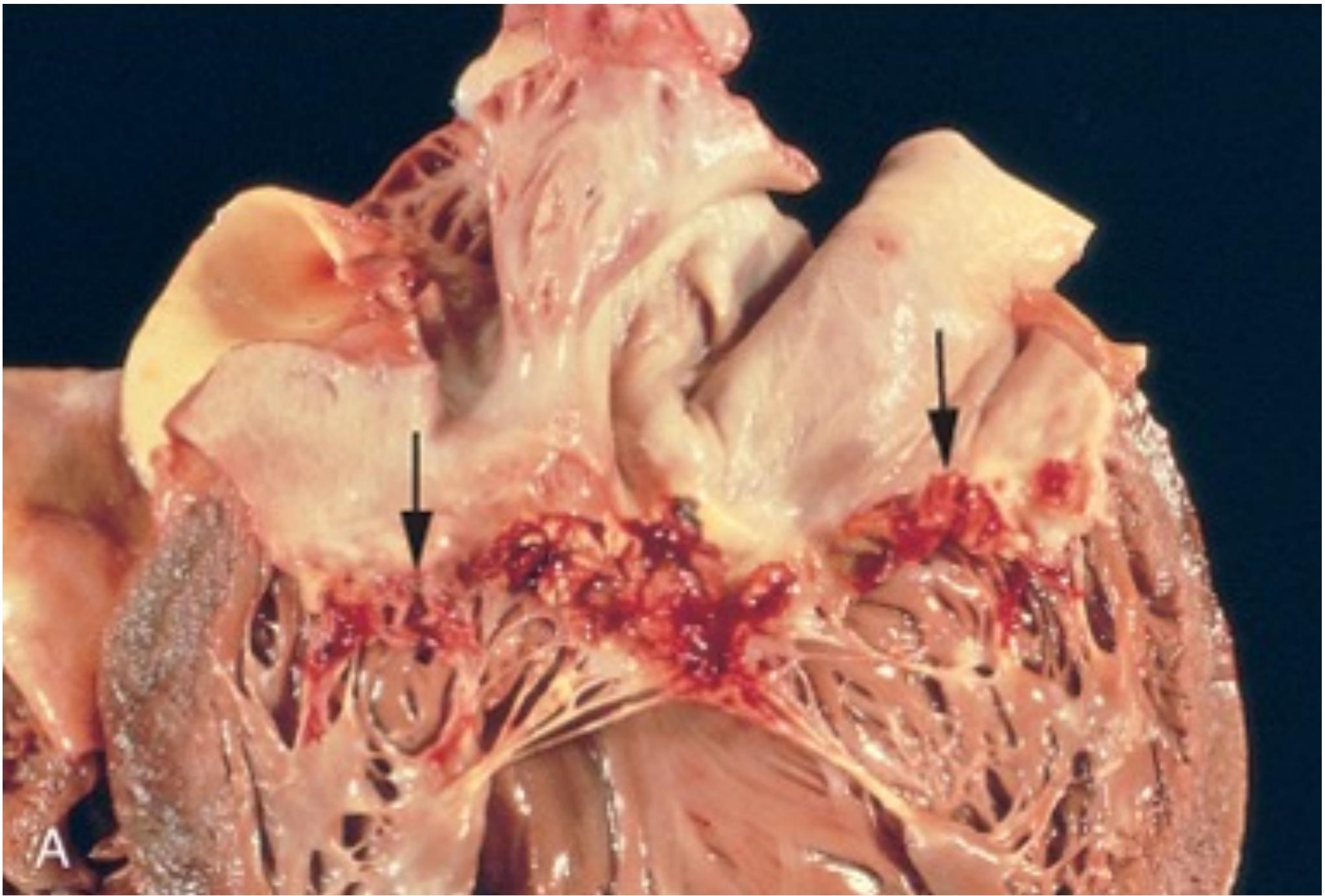
- Compare and contrast the causes and symptoms of aortic stenosis, mitral insufficiency, and mitral stenosis.
- Compare and contrast the cause, symptoms, and mortality of acute vs. subacute infective endocarditis.
- Compare and contrast the cause, main physiologic problem, clinical symptoms/potential outcomes, and mortality of the three types of cardiomyopathy.
- Describe the most common primary heart tumor.

Valvular Heart Disease

- **Aortic stenosis**: from wear and tear over time, can cause angina, fainting, CHF
- **Mitral insufficiency**: caused by valve prolapse, usually asymptomatic
- **Mitral stenosis**: caused by rheumatic fever (multisystem immune-mediated disease following untreated strep throat infection)

Infective Endocarditis

- Bacterial form “vegetations” on heart valves
- Fever, flu-like symptoms
- Acute endocarditis
 - highly virulent bug attacks normal valve
 - abrupt onset, 50% mortality rate (sepsis, emboli)
- Subacute endocarditis
 - low virulence bug colonizes abnormal valve
 - slow onset, most patients recover



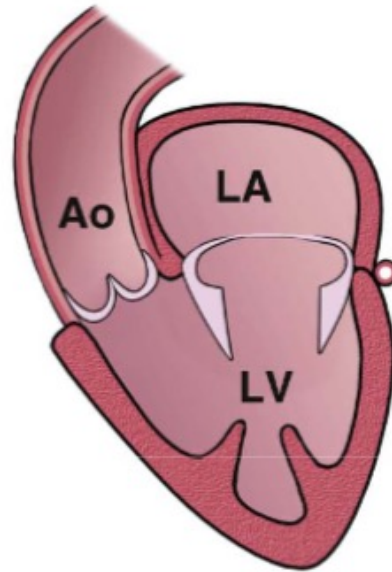
Infective endocarditis: vegetations on valve



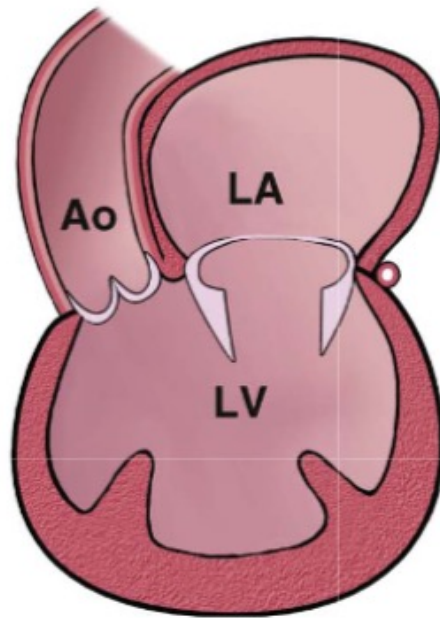
Infective endocarditis: splinter hemorrhage of nail bed

Cardiac Pathology Outline

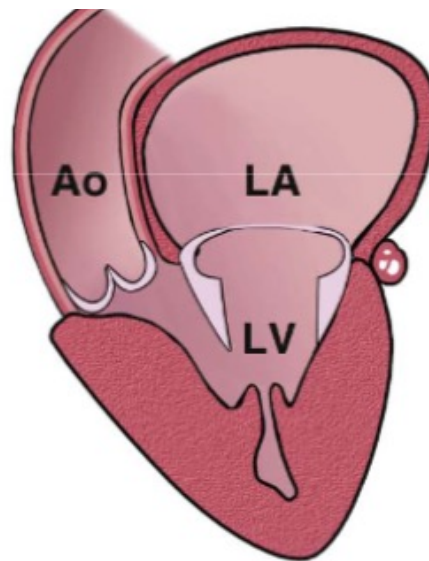
- Blood Vessels
- Heart I
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 - Cardiomyopathies



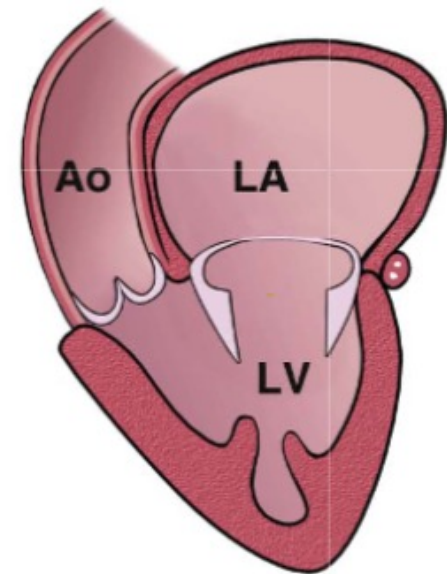
Normal



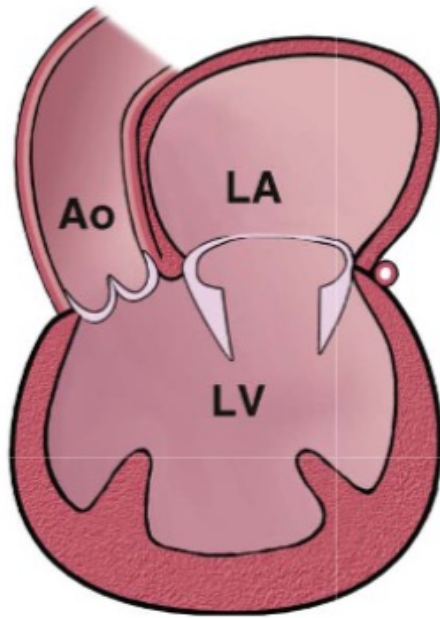
Dilated
cardiomyopathy



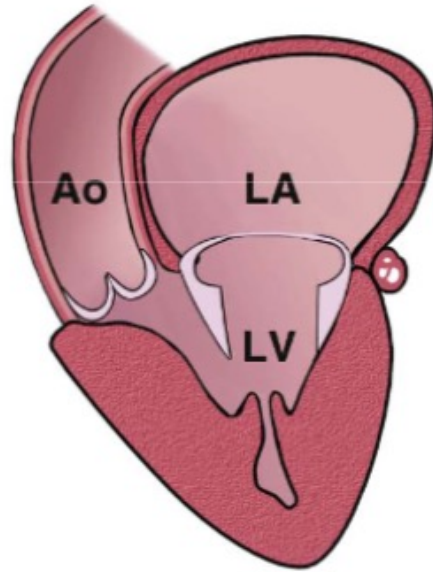
Hypertrophic
cardiomyopathy



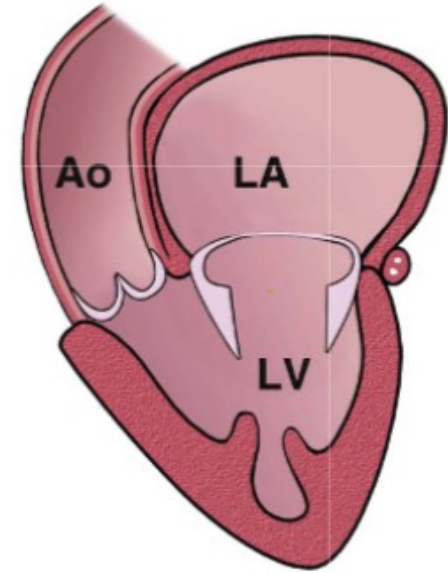
Restrictive
cardiomyopathy



Dilated
cardiomyopathy

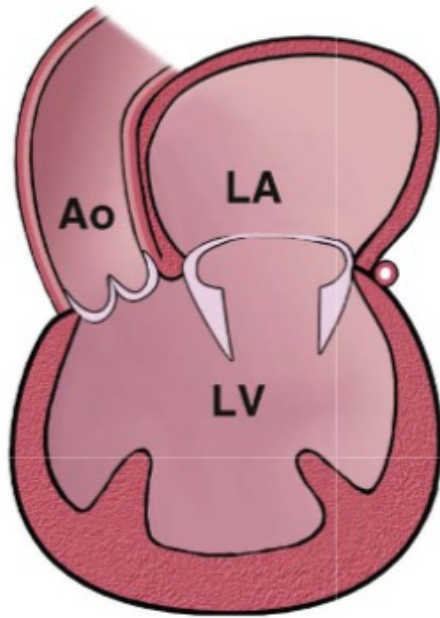


Hypertrophic
cardiomyopathy

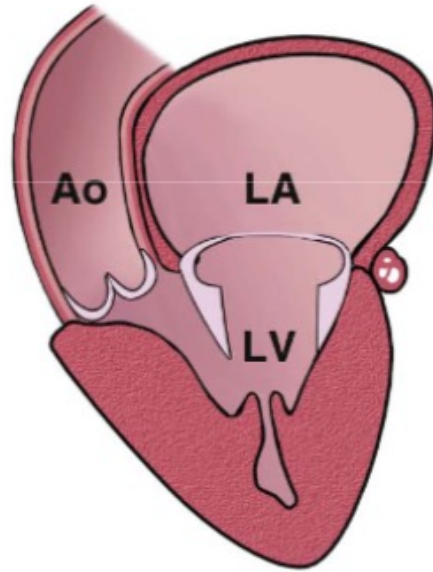


Restrictive
cardiomyopathy

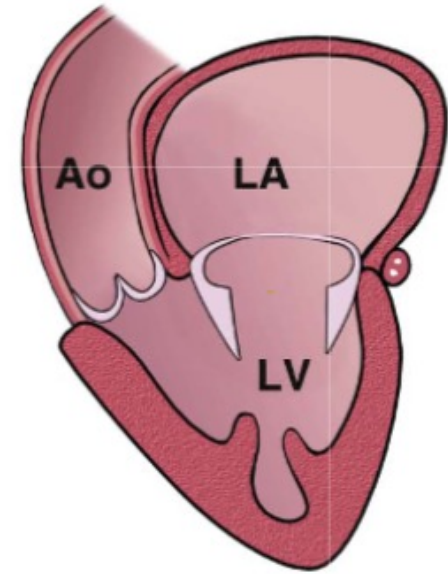
- Genetic, infectious, toxic (esp. alcohol)
- Heart is dilated and can't contract well
- Progressive CHF
- Relatively high mortality



Dilated
cardiomyopathy

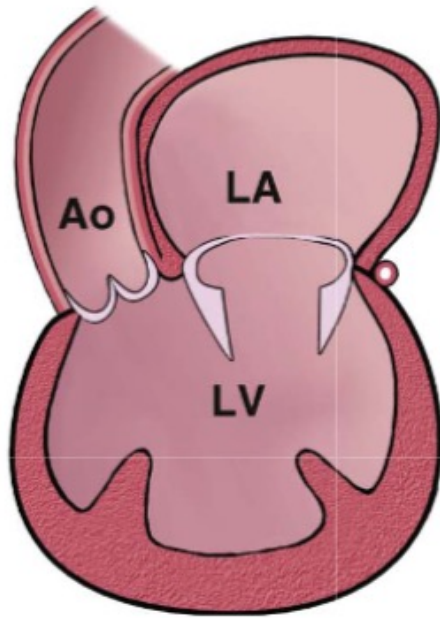


Hypertrophic
cardiomyopathy

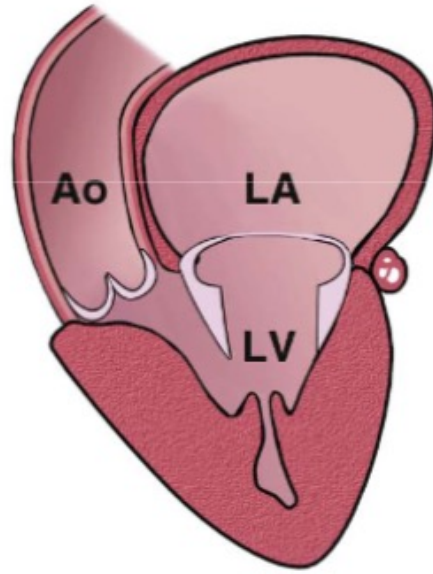


Restrictive
cardiomyopathy

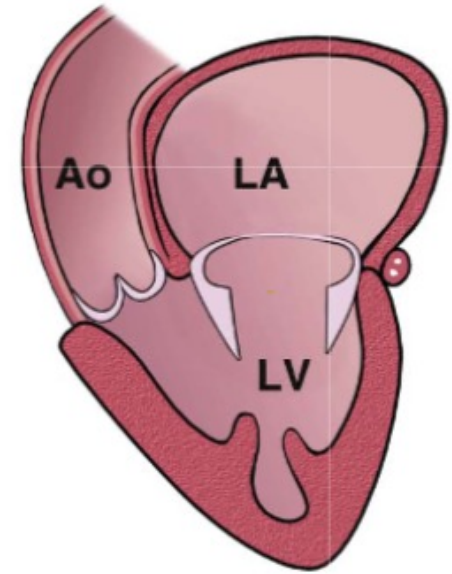
- Mutation in sarcomere protein gene
- Heart is hypertrophic and can't fill well
- Atrial fib, arrhythmia, sudden death
- Variable mortality



Dilated
cardiomyopathy



Hypertrophic
cardiomyopathy



Restrictive
cardiomyopathy

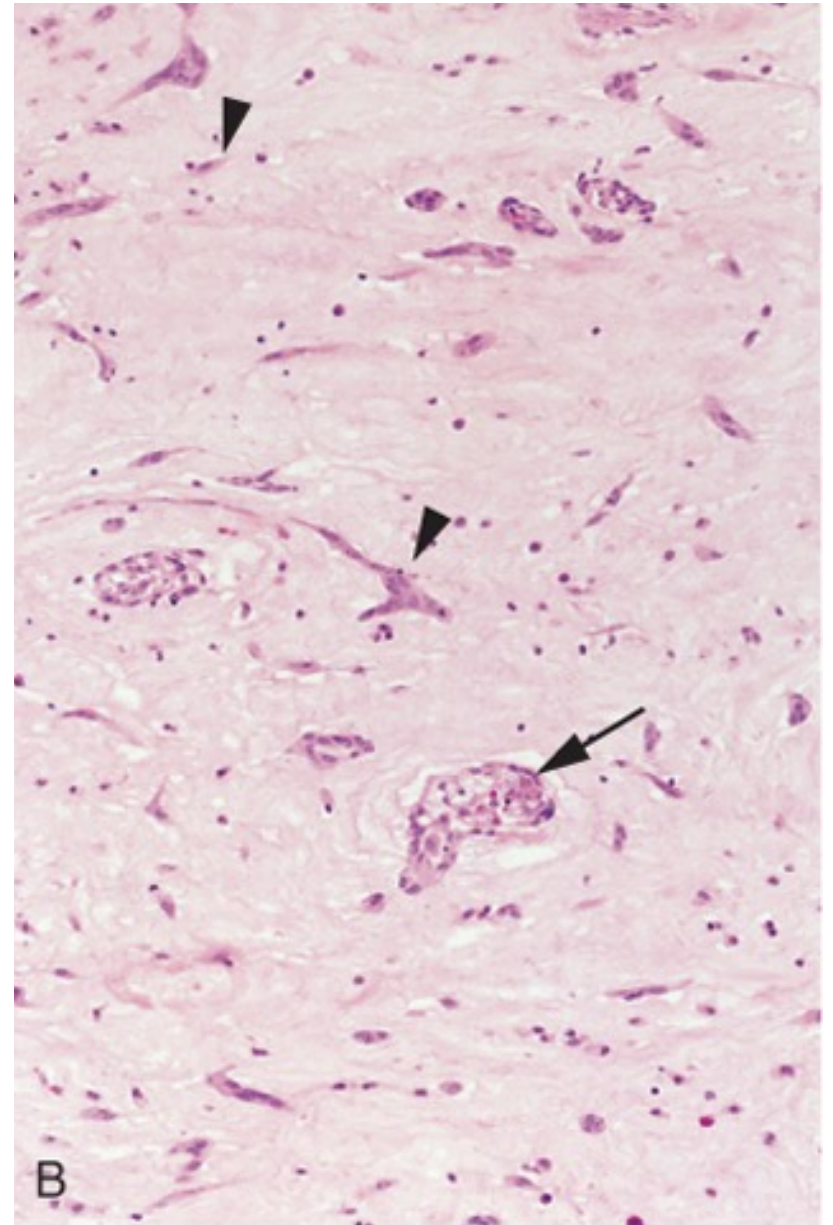
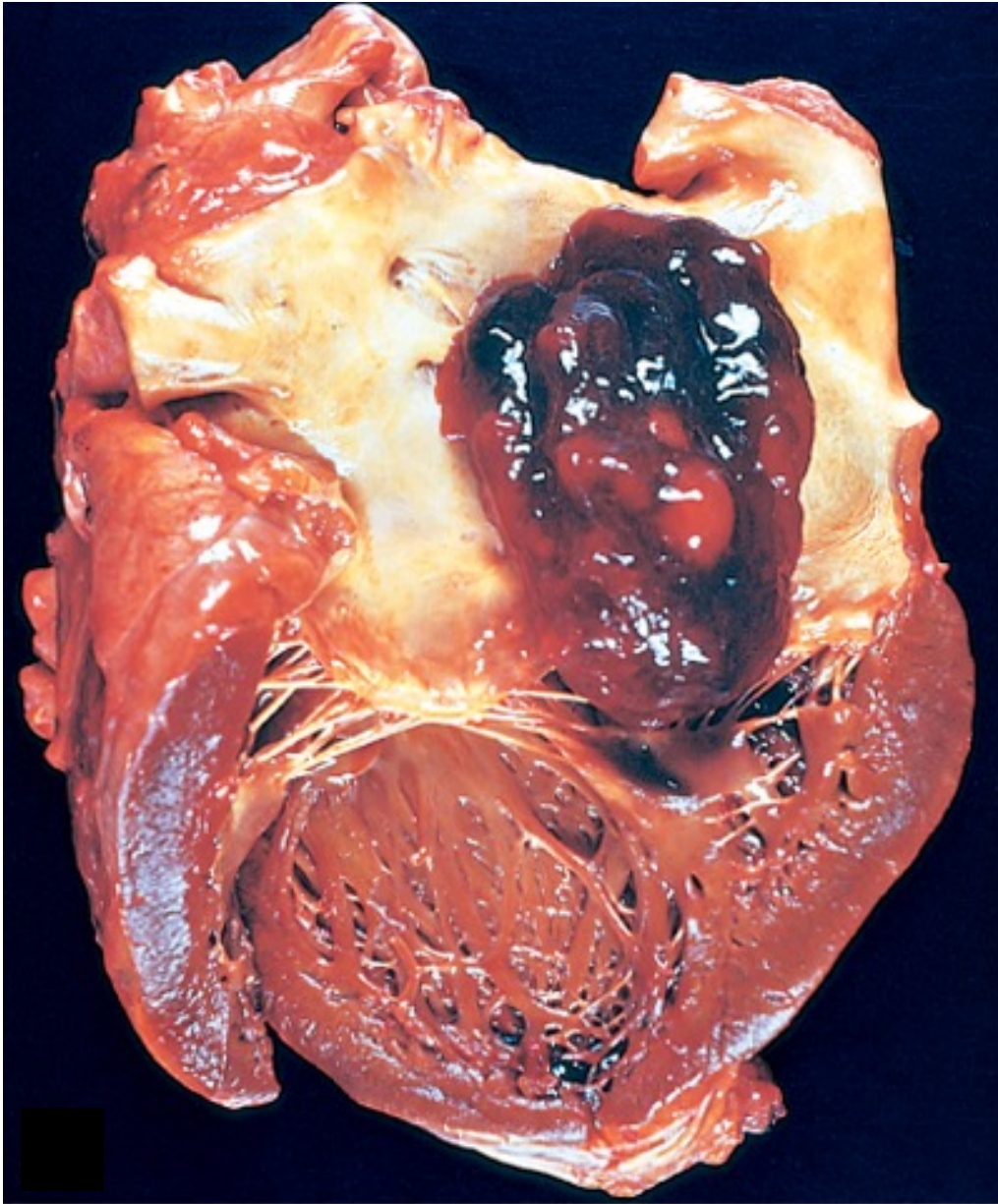
- Secondary to radiation, amyloidosis, sarcoidosis
- Heart is stiff and can't fill well
- Shortness of breath, edema
- Relatively high mortality

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Cardiac Tumors

- Heart tumors are rare!
- Metastatic tumors are more common than primary tumors.
- Most common primary tumor: myxoma



Cardiac myxoma