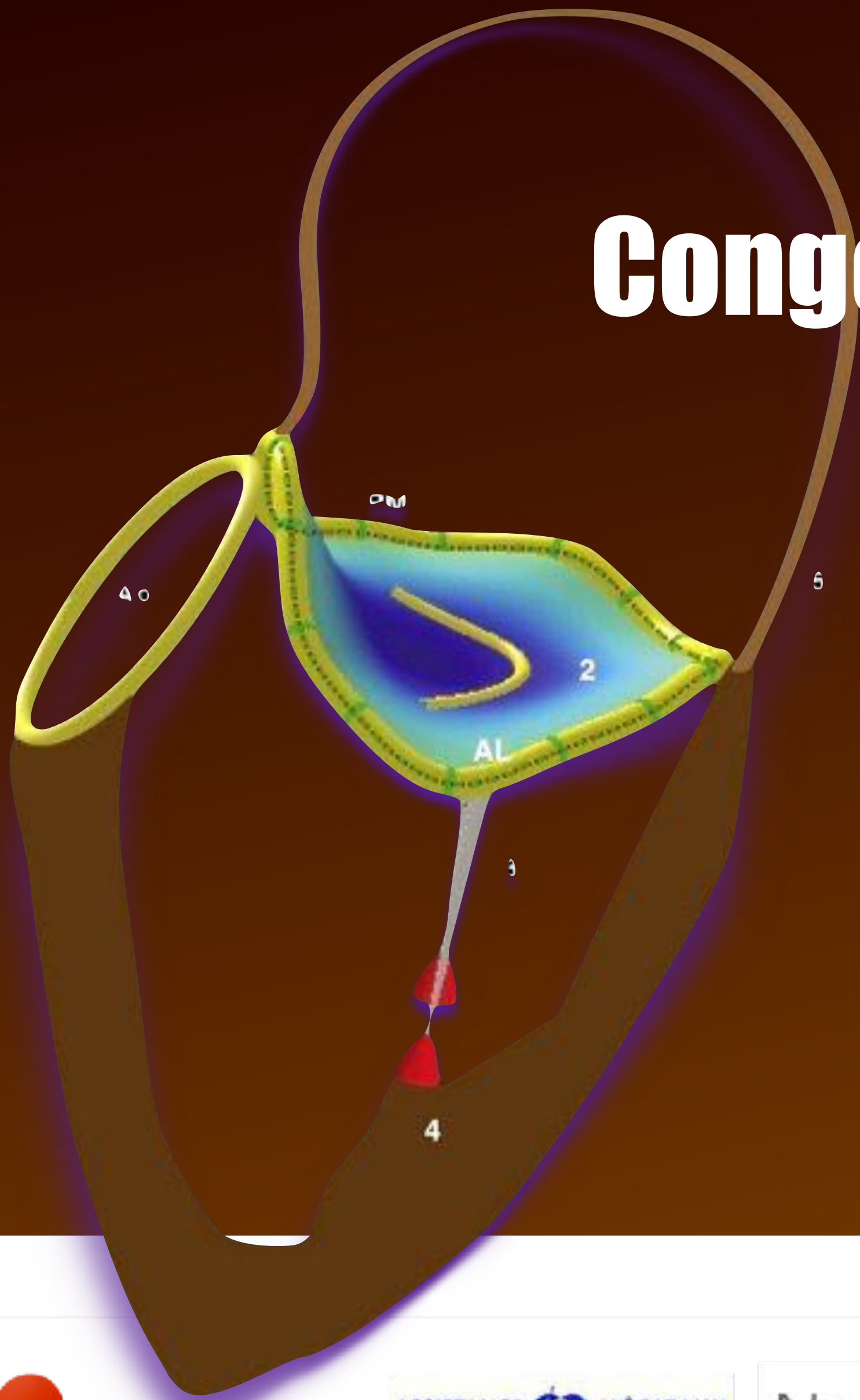


Congenital anomalies of the mitral valve



Damien Bonnet

**Service de Cardiologie Congénitale et Pédiatrique
Hôpital Universitaire Necker Enfants malades – APHP**

Université de Paris

INSERM-U781 - Institut Hospitalo-Universitaire IMAGINE

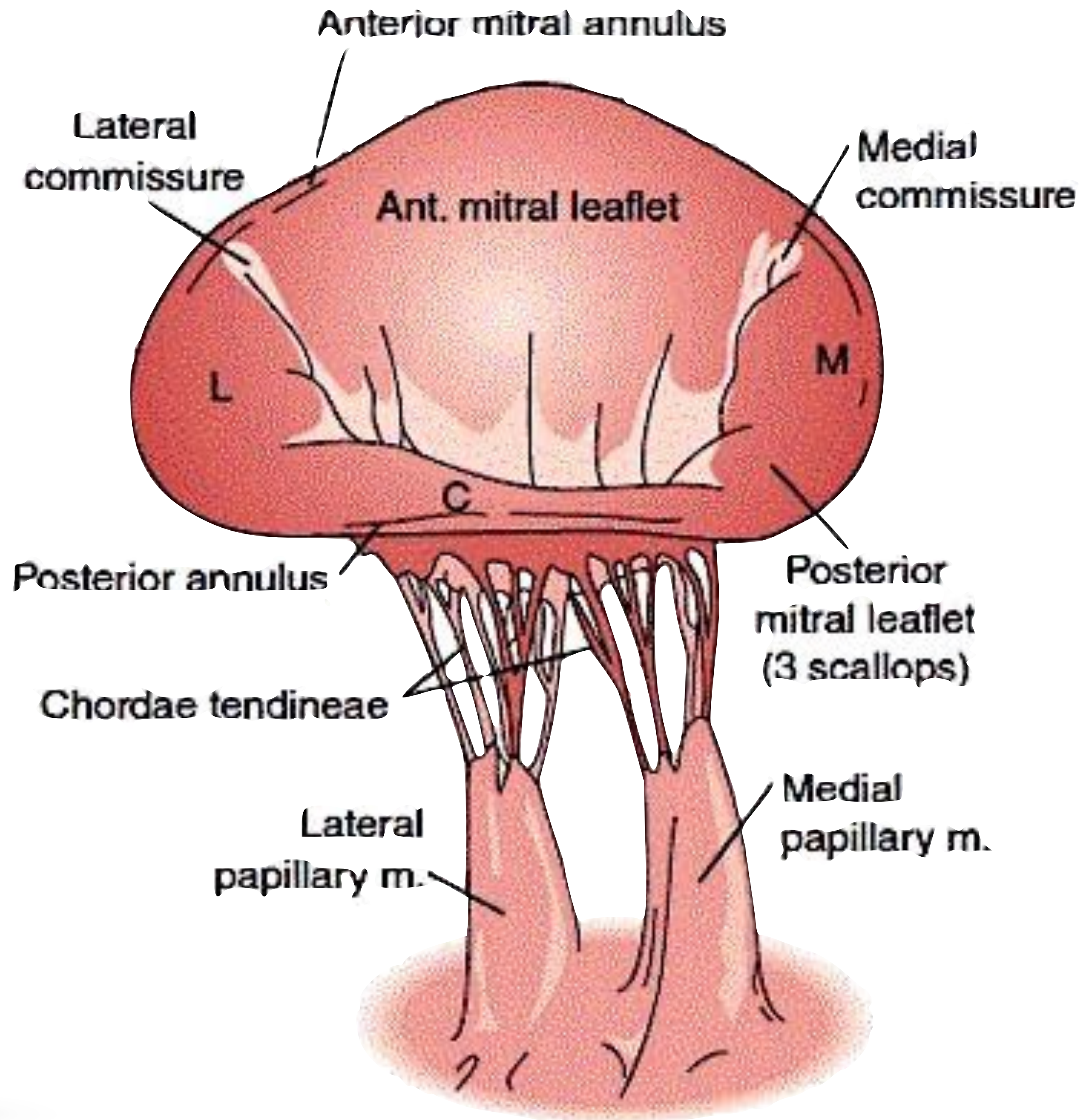
Centre de Référence Maladies Rares

Malformations Cardiaques Congénitales Complexes-M3C

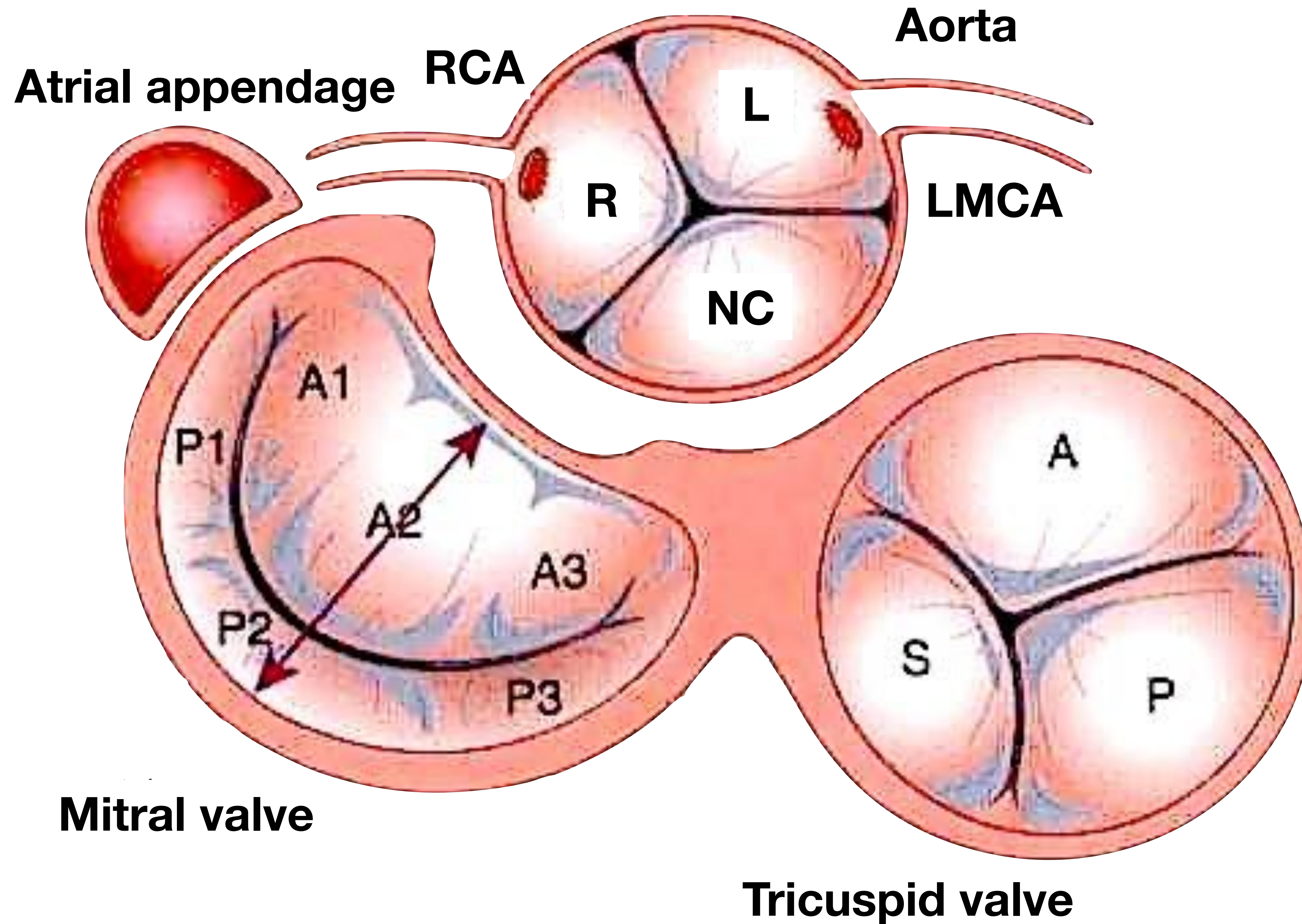
Centre de Référence Maladies Rares

Maladies Cardiaques Héritaires- CARDIOGEN





Mitral valve anatomy



Atrial appendage

RCA

Aorta

L

R

LMCA

NC

A1

P1

A2

A3

P2

P3

A

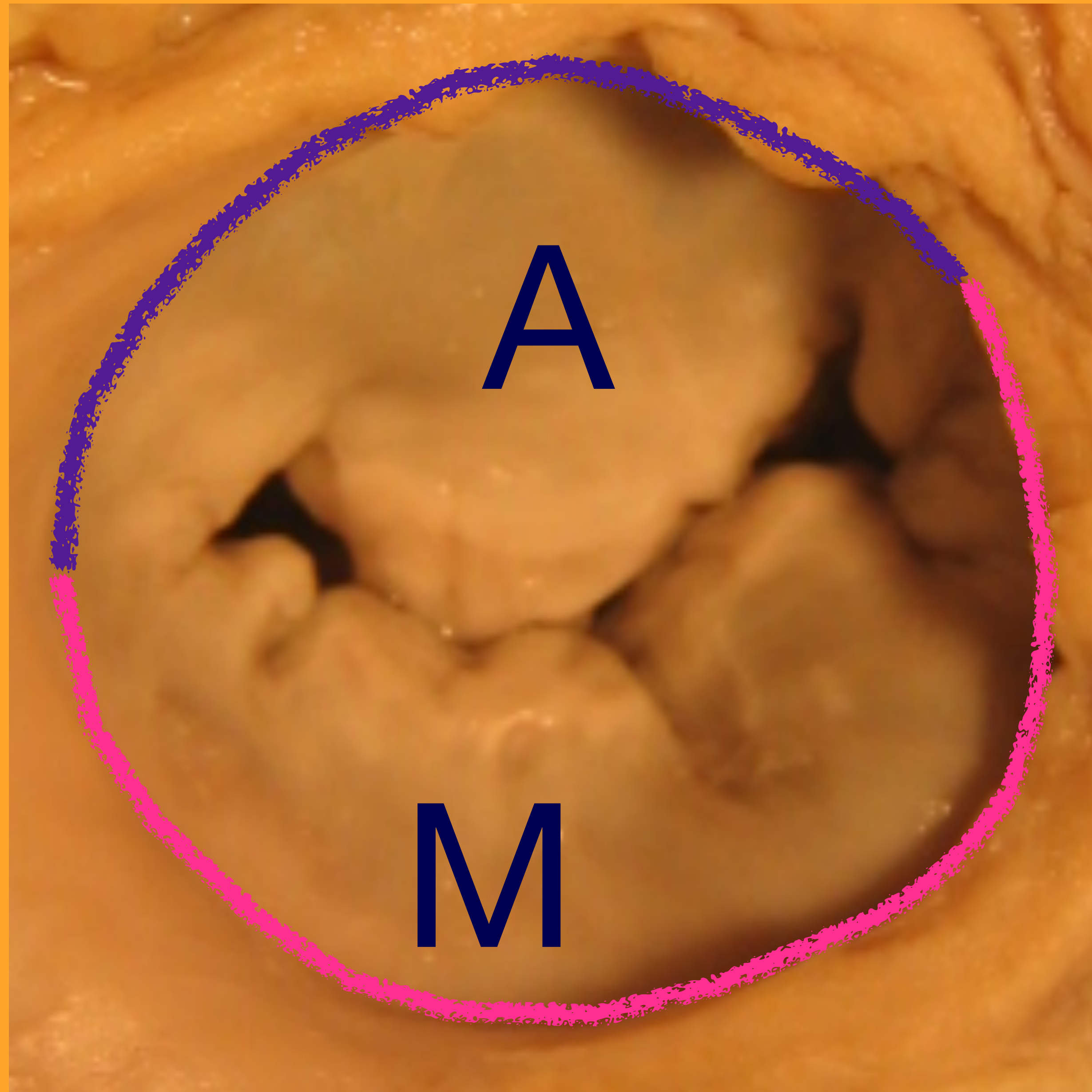
S

P

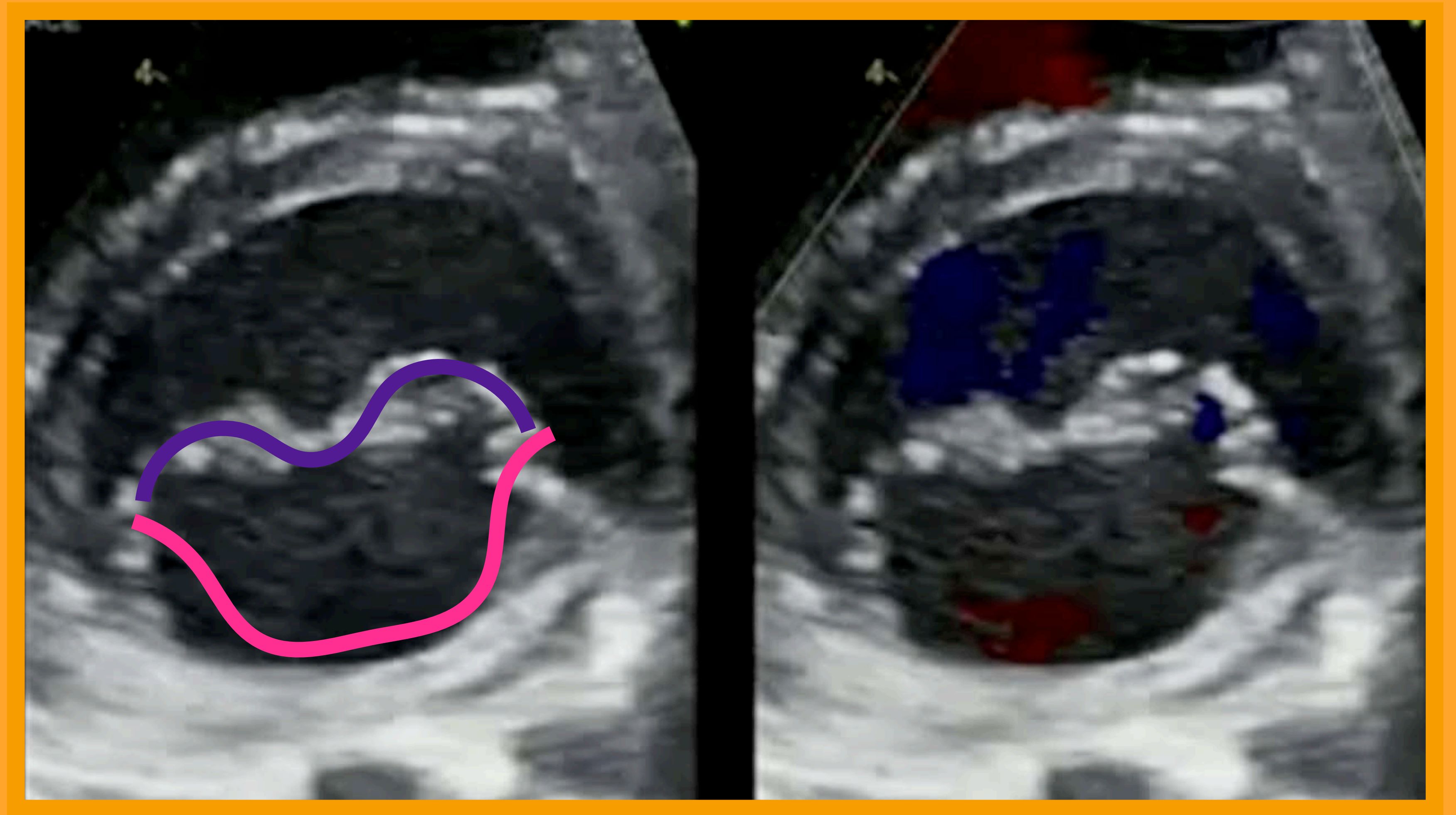
Mitral valve

Tricuspid valve

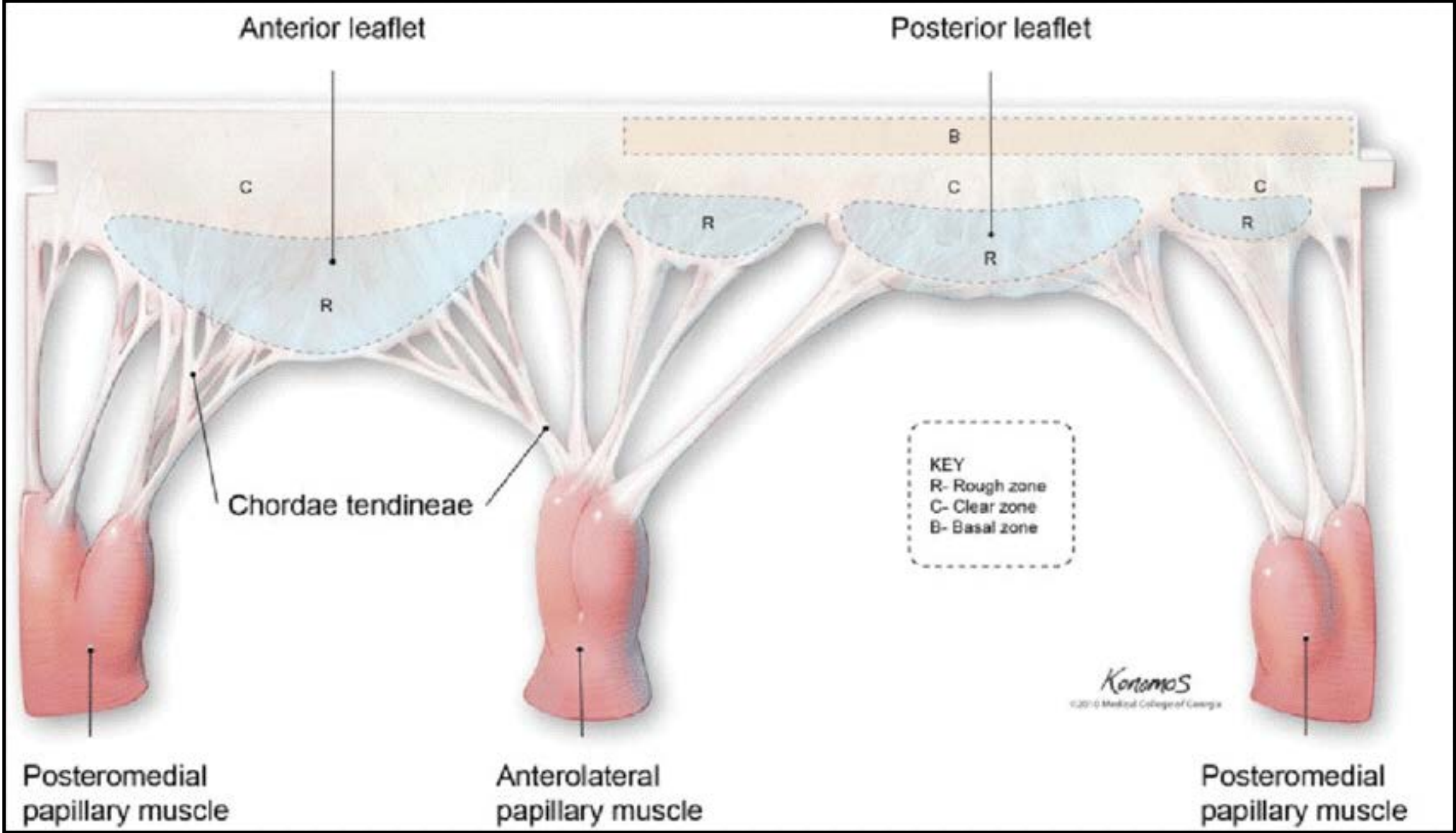
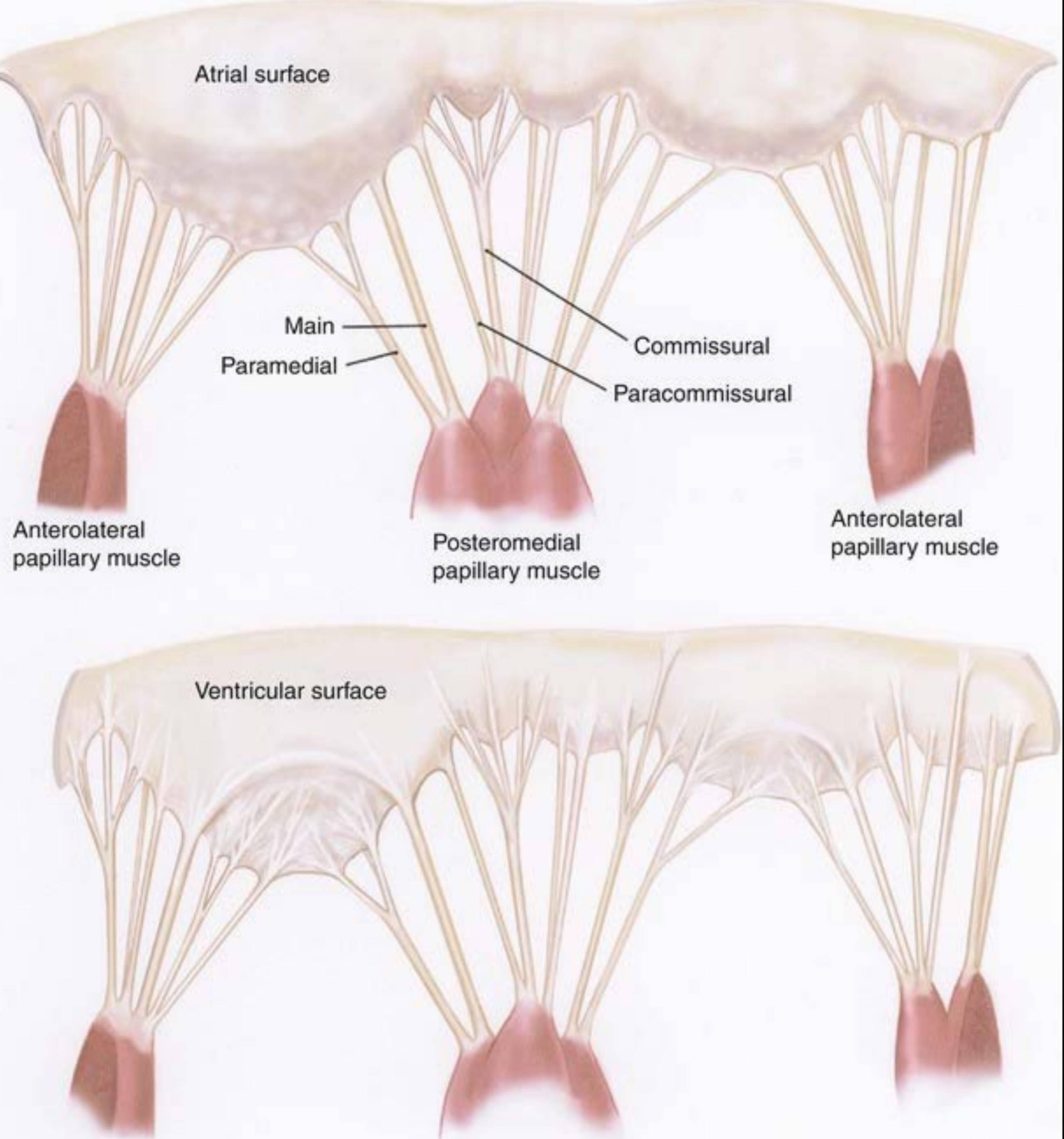
Mitral valve leaflets

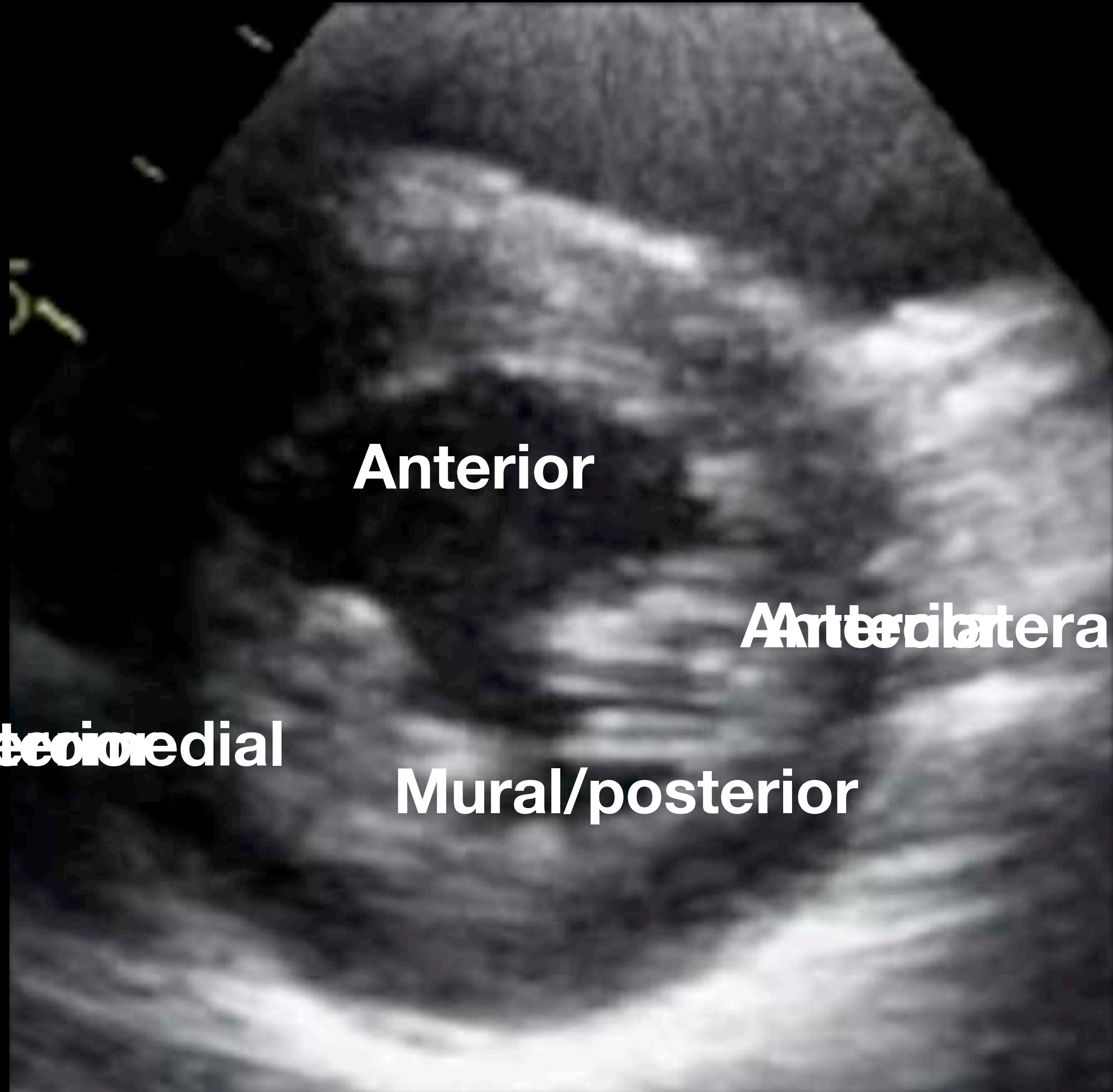


Mitral valve leaflets



Papillary muscles





Anterior

Anterolateral

Posterior

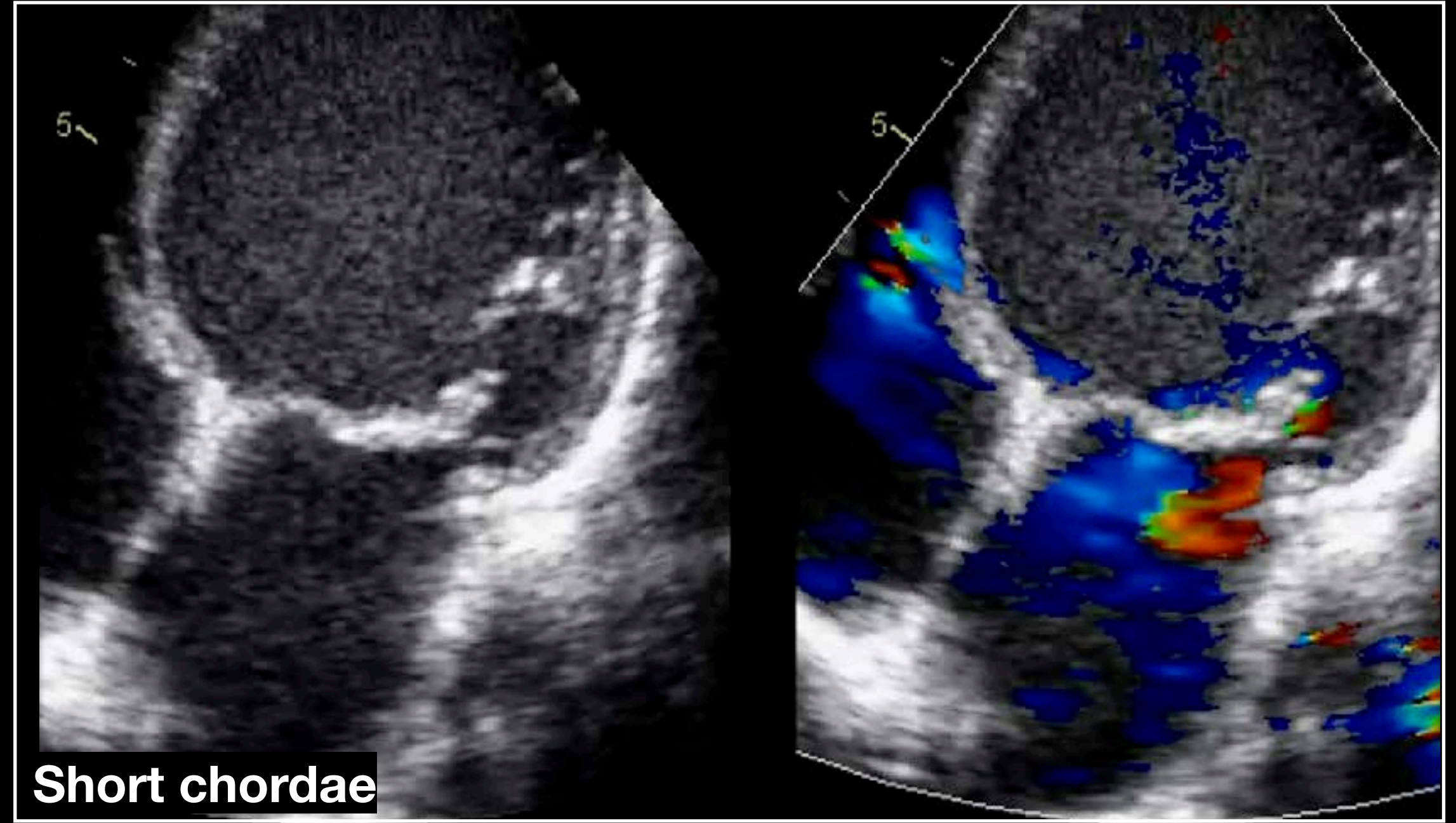
Mural/posterior

Capillary muscles





**Normal
with elongated chordae**



Short chordae



Hammock

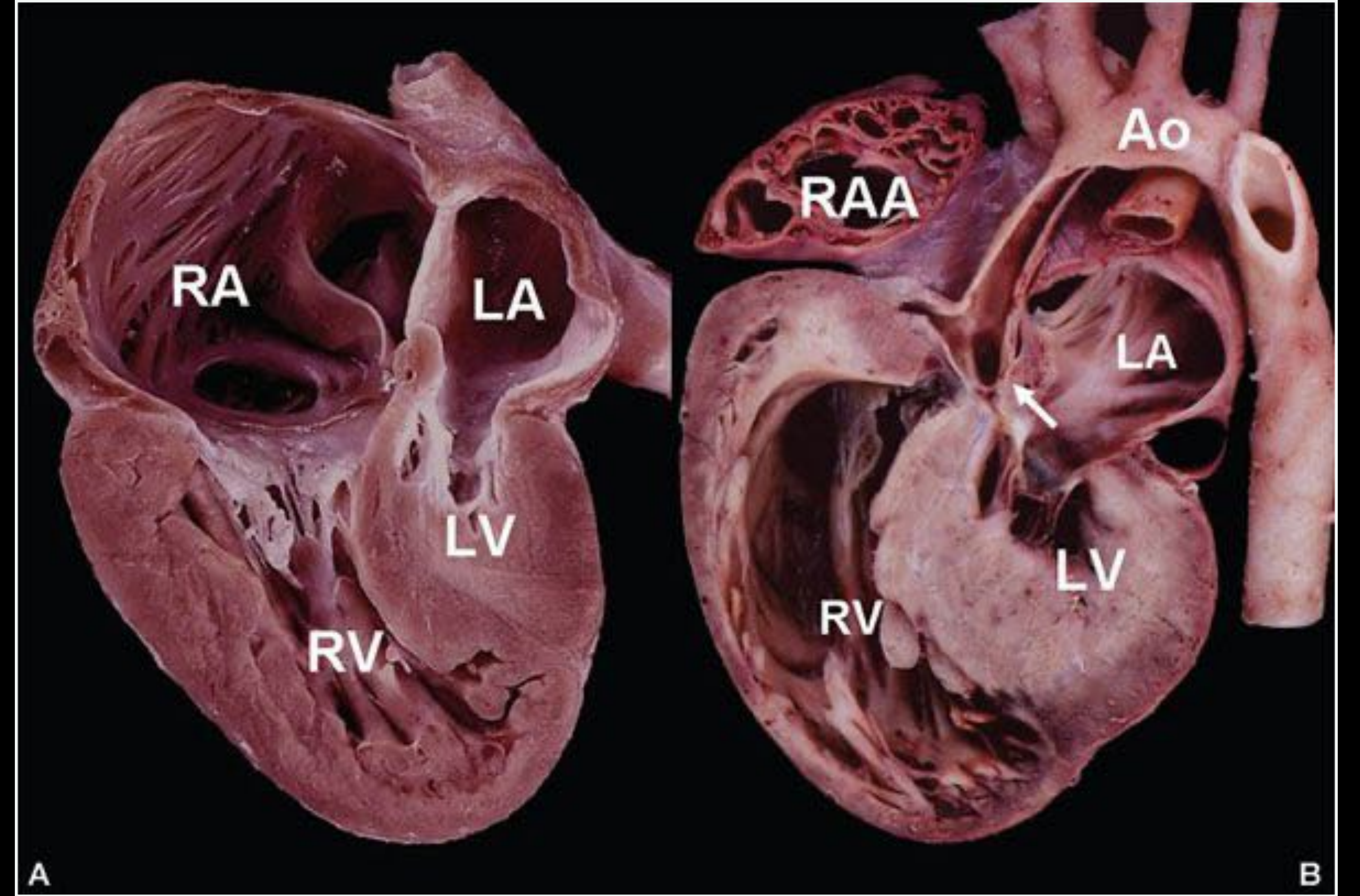
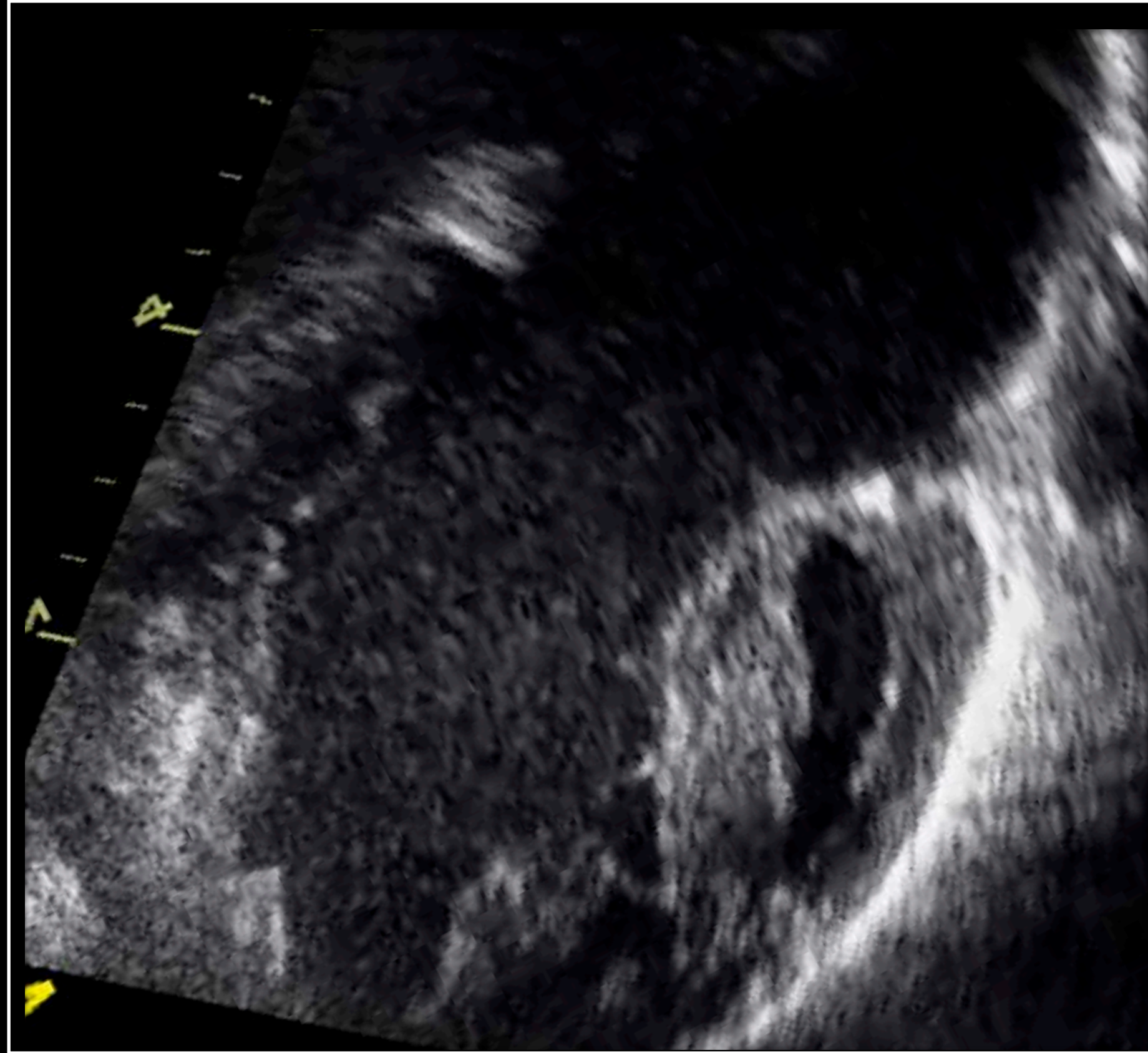


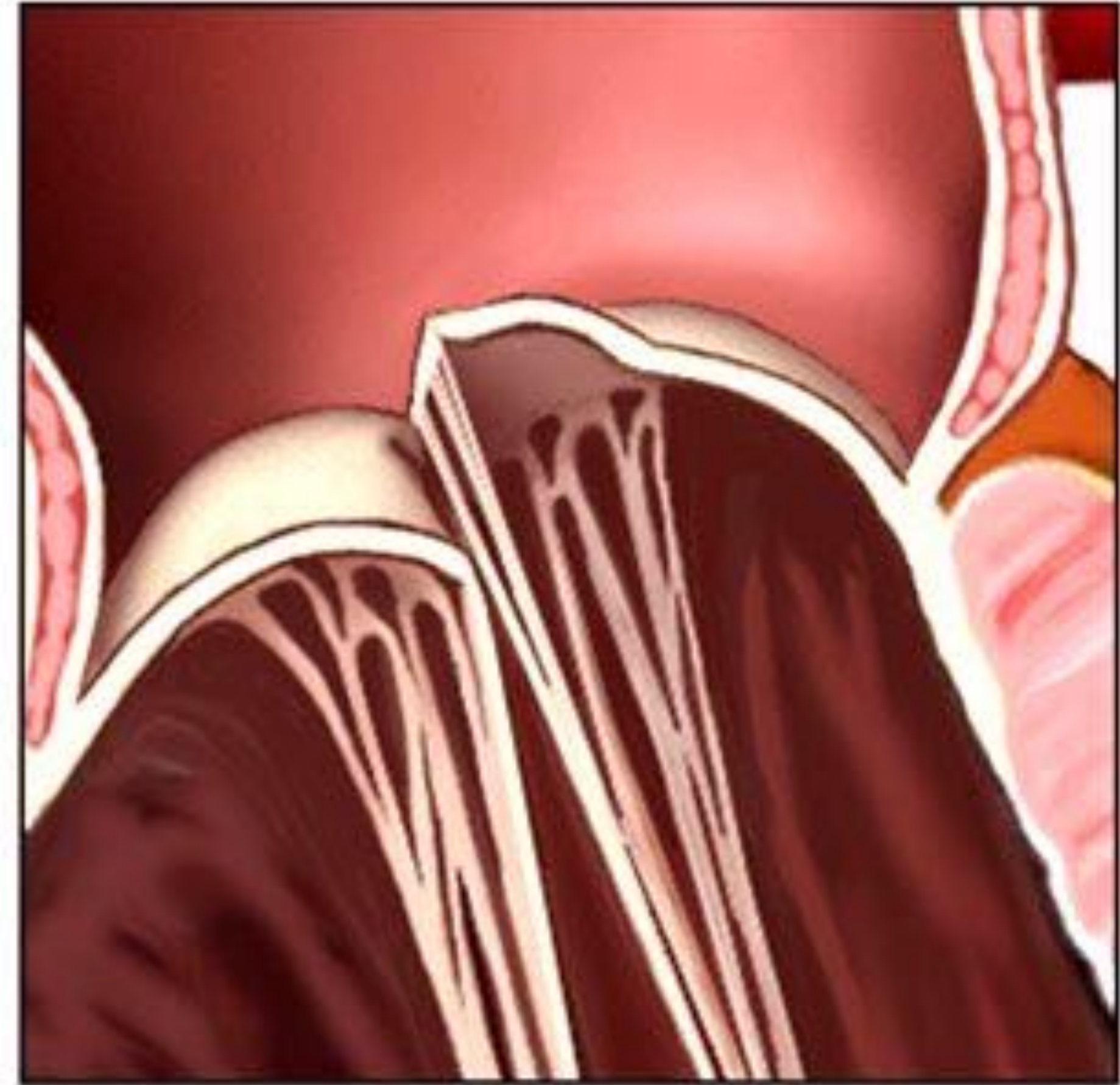
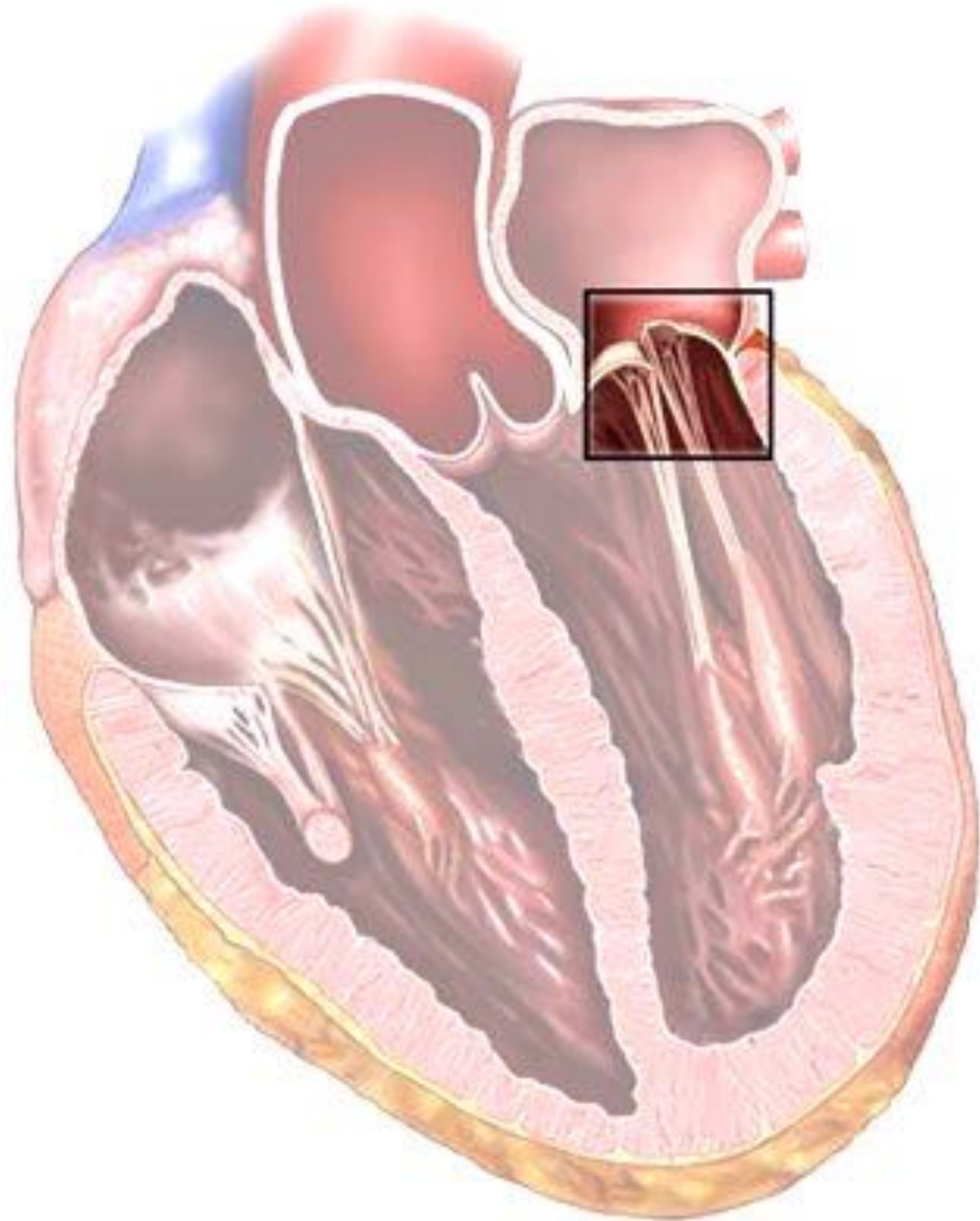
Arcade

Congenital anomalies of mitral leaflets

- Atresia and hypoplasia
- Prolapse
- Clefts
- Double orifice
- Supravalvar and intravalvar ring

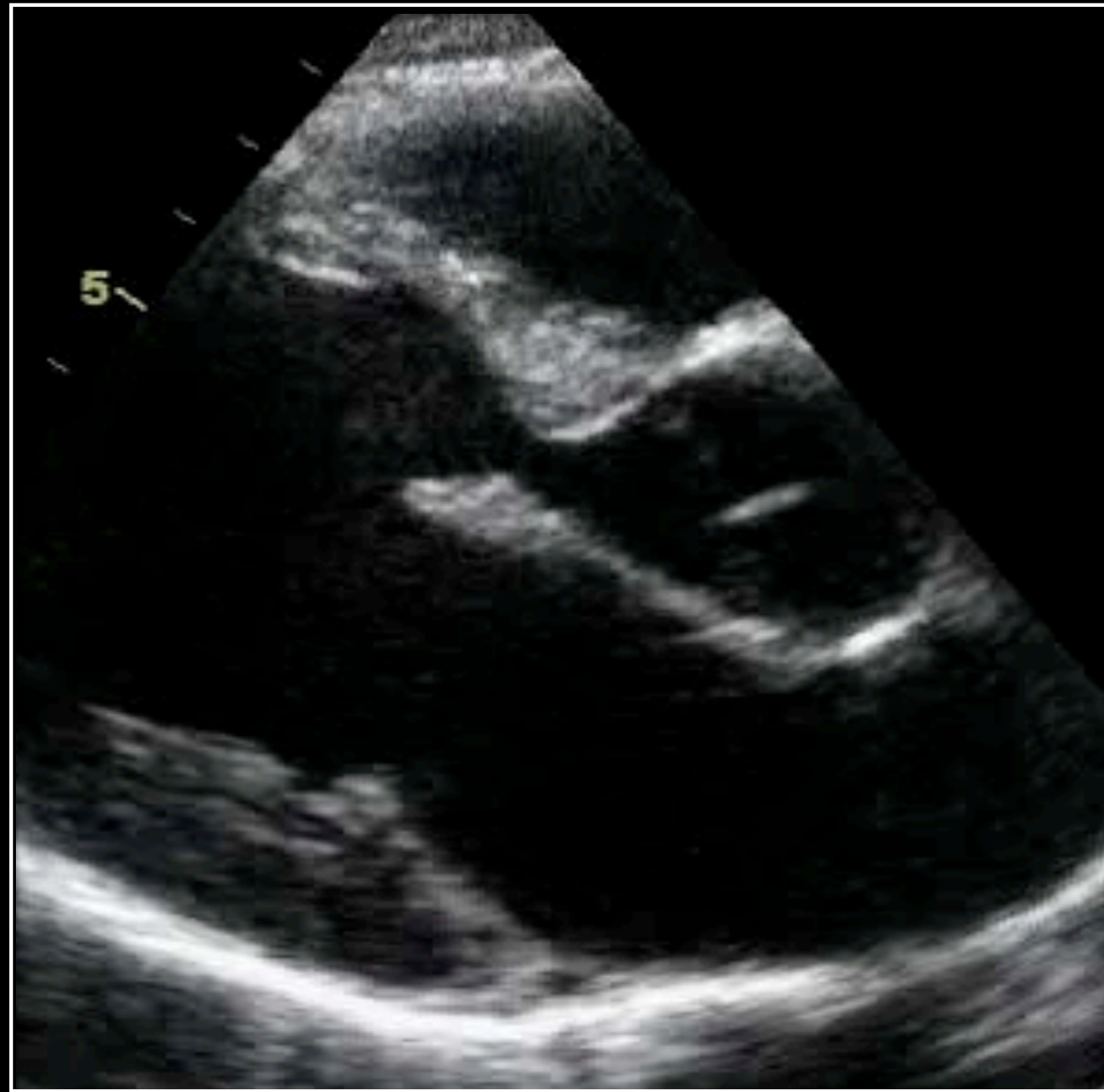
Mitral atresia



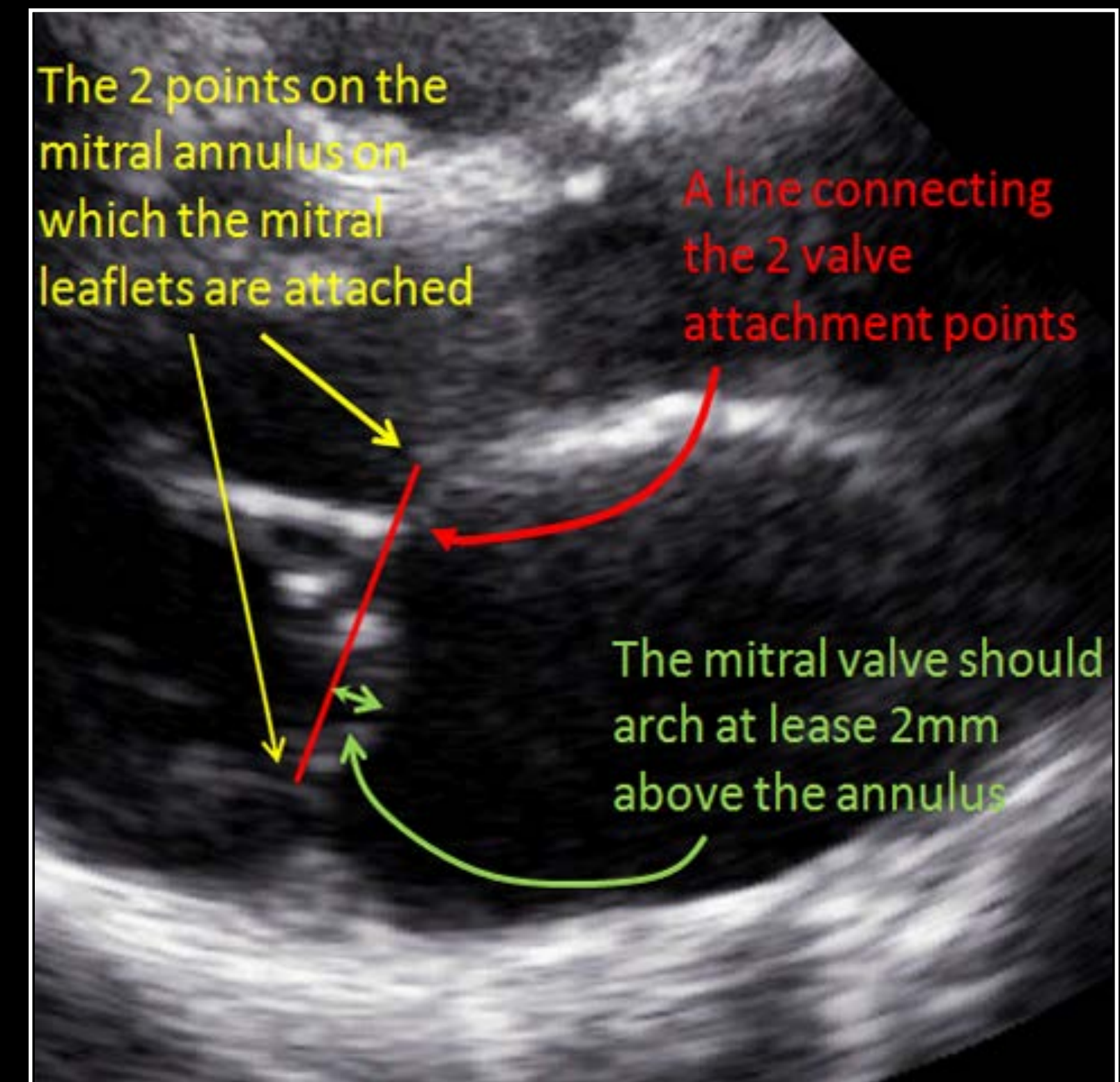
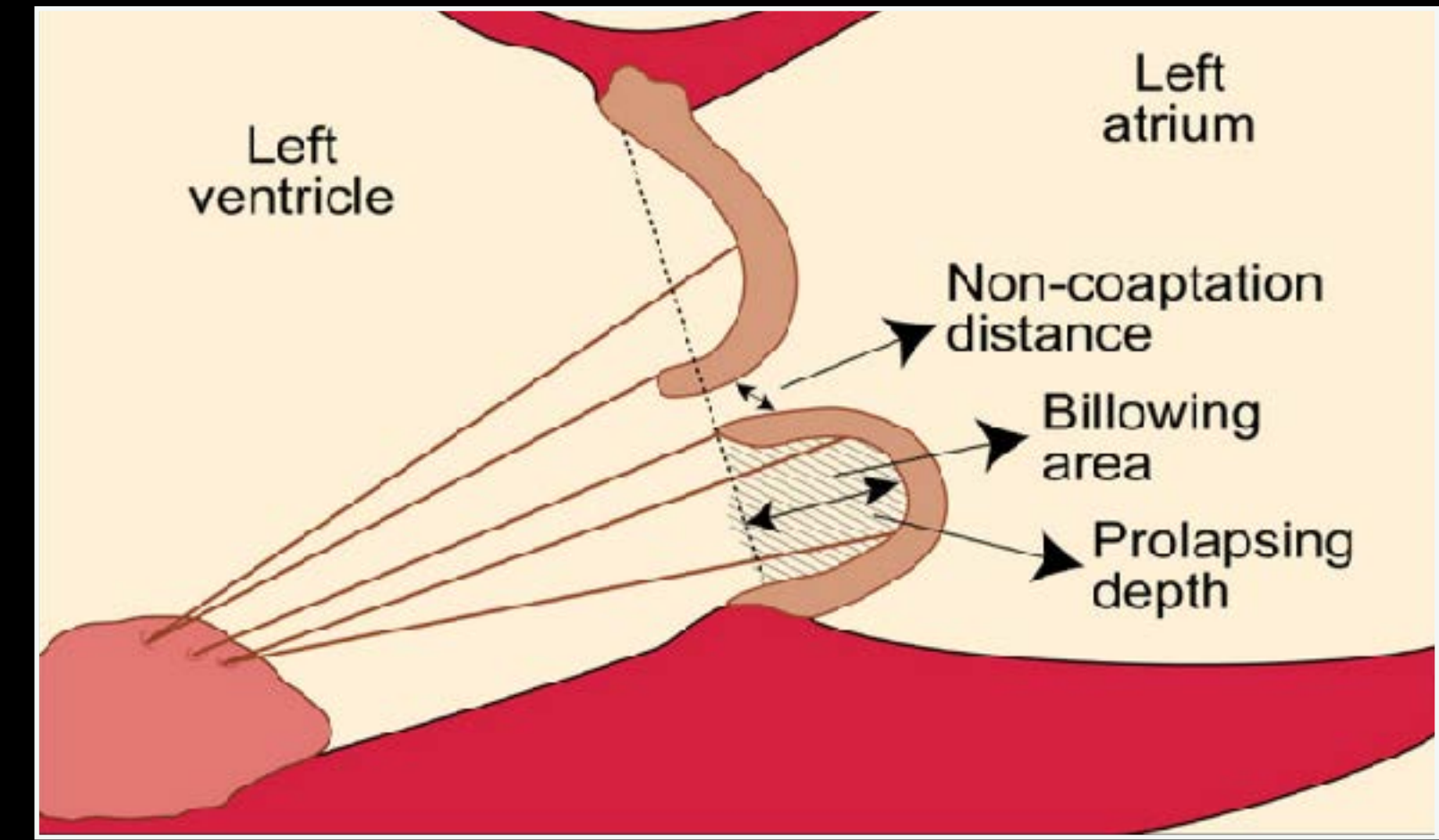
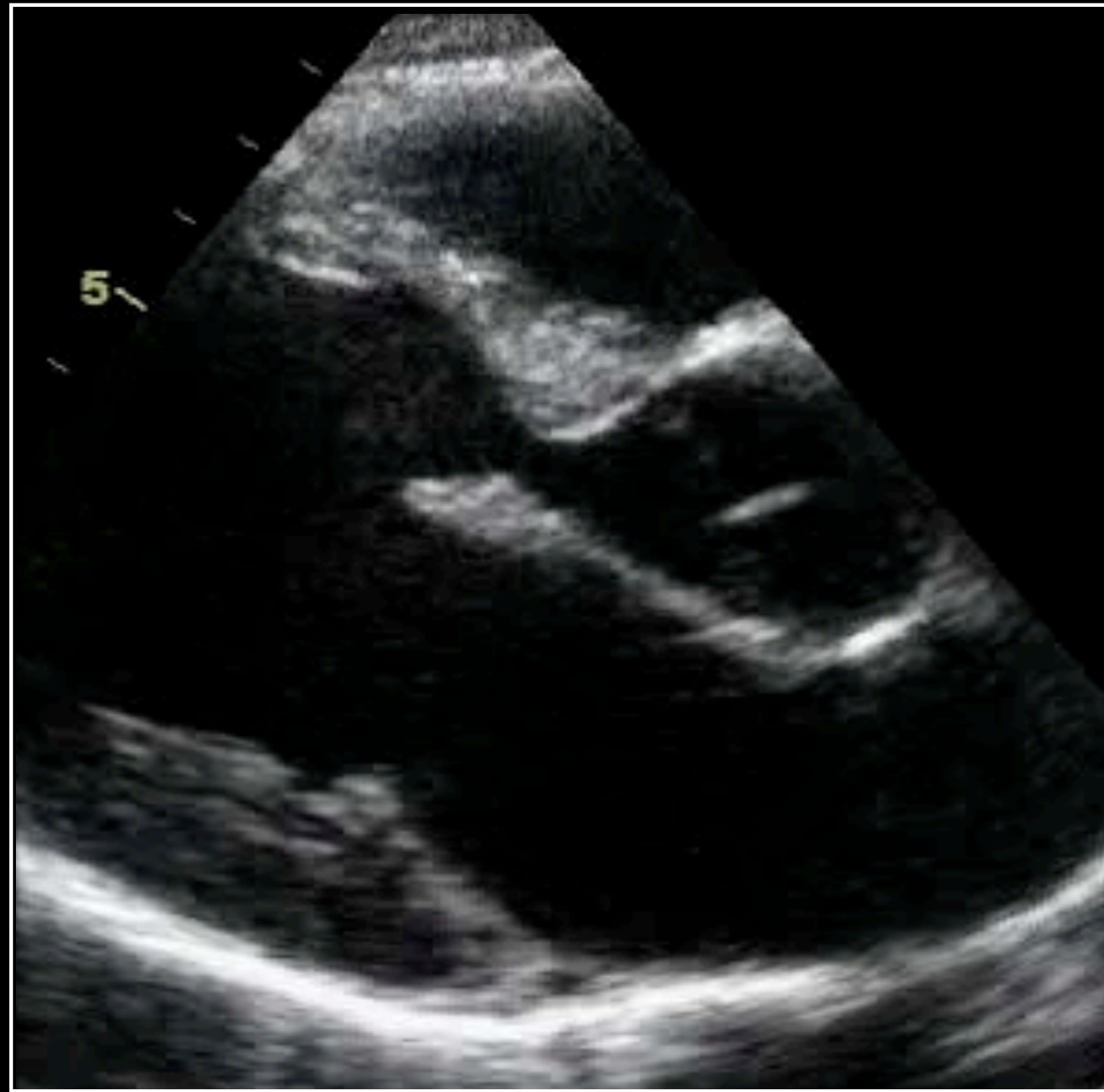


Prolapsed mitral valve

Mitral valve prolapse

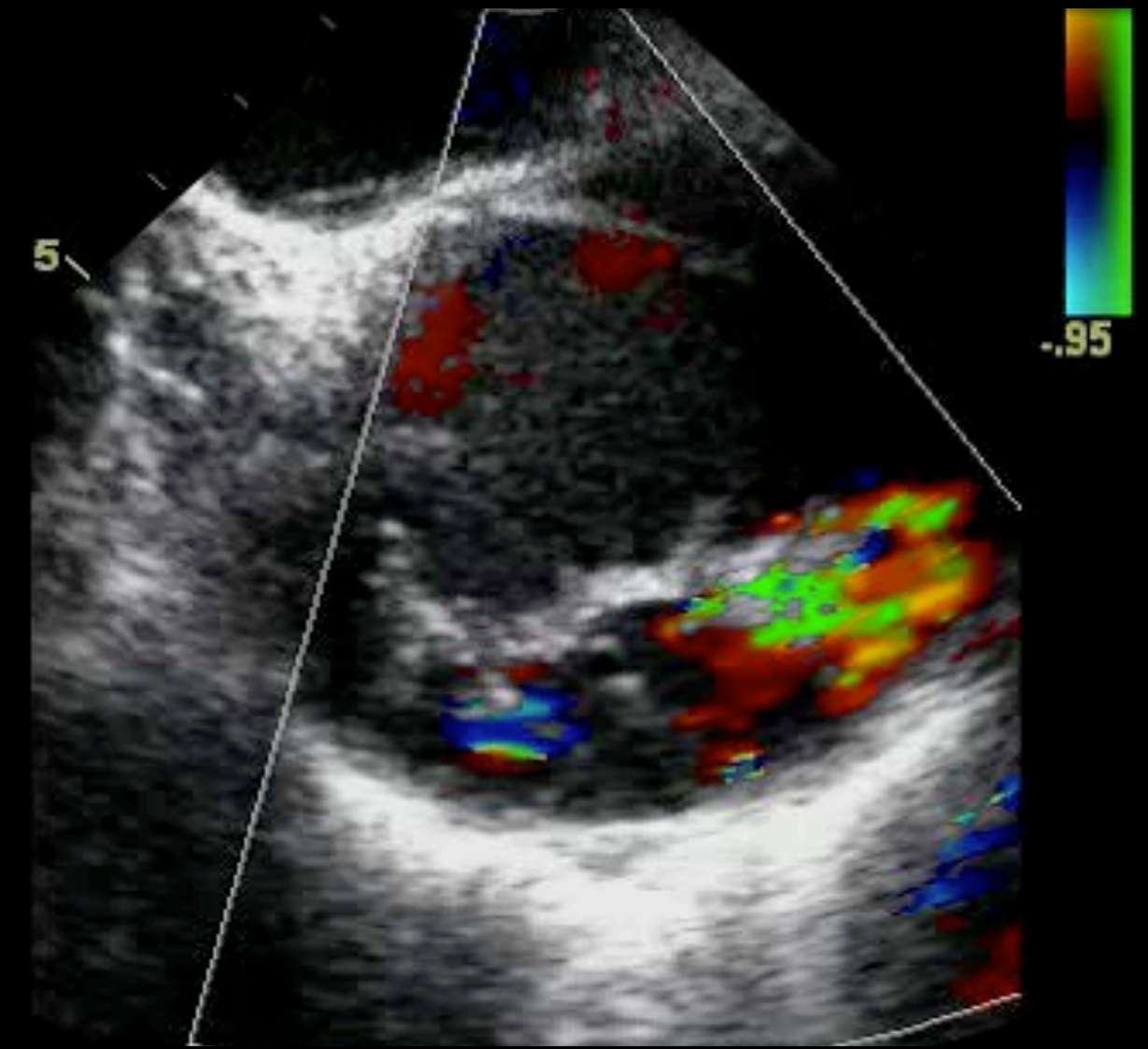
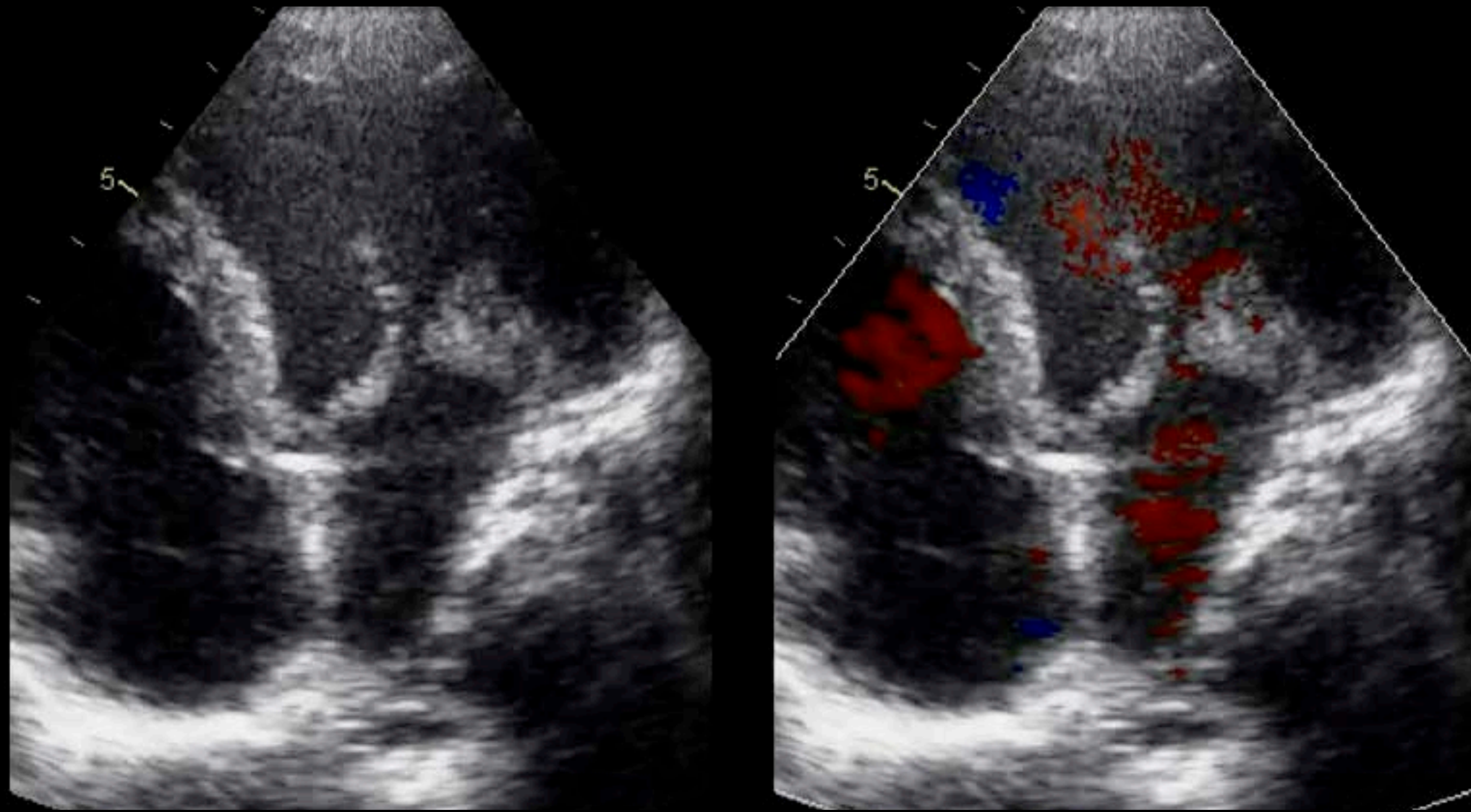


Mitral valve prolapse



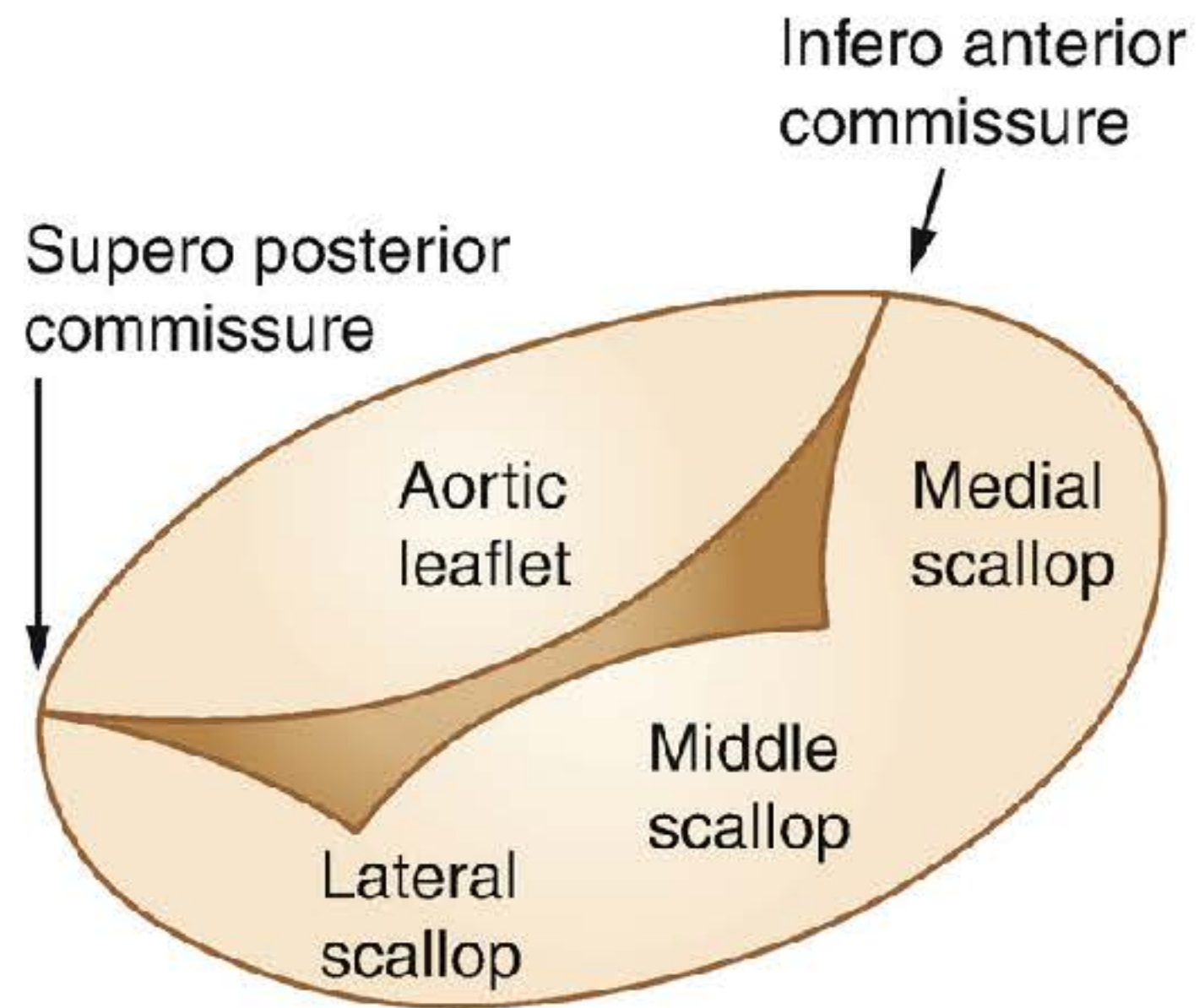


Mitral valve- Marfan syndrome

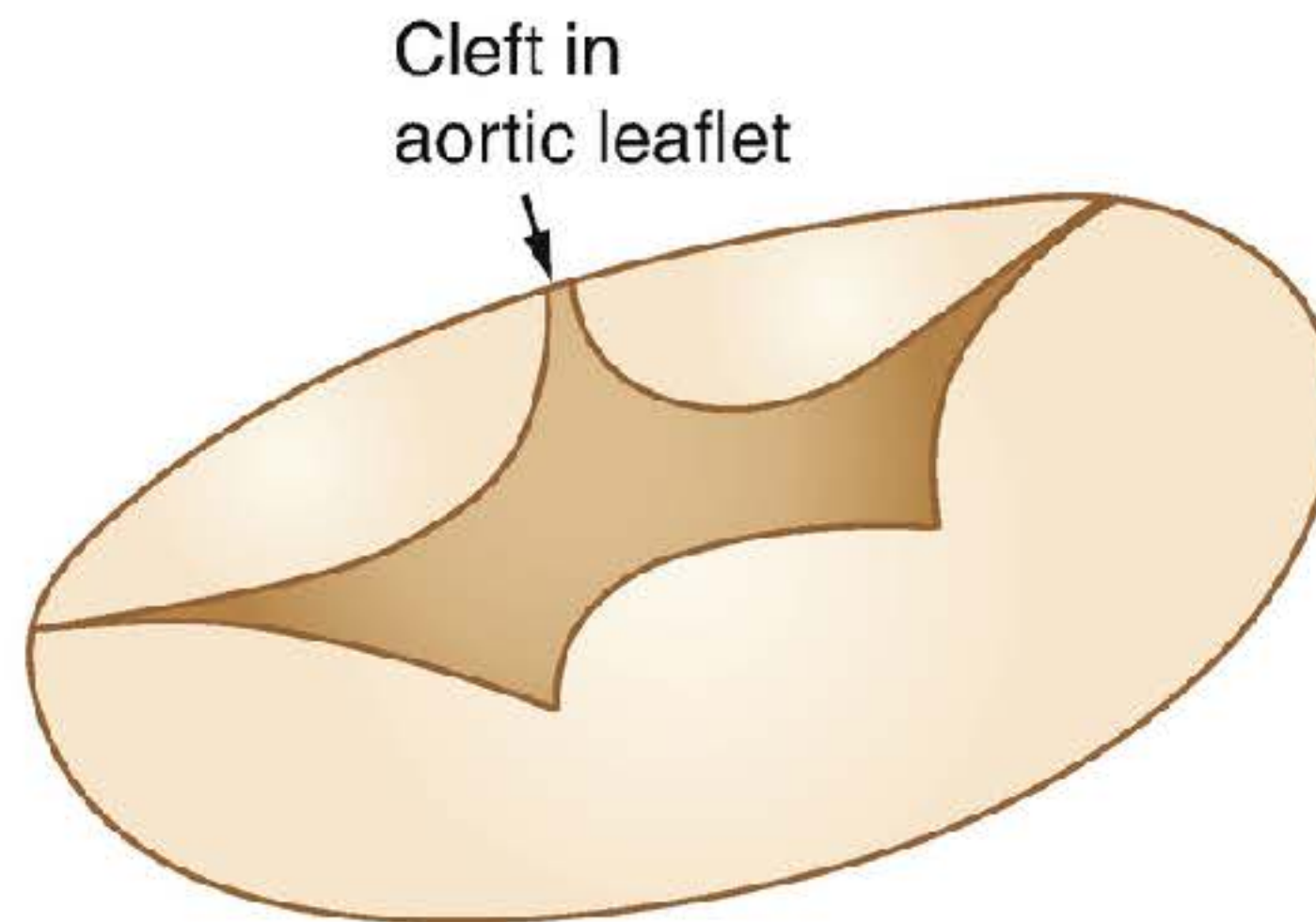


Isolated mitral cleft

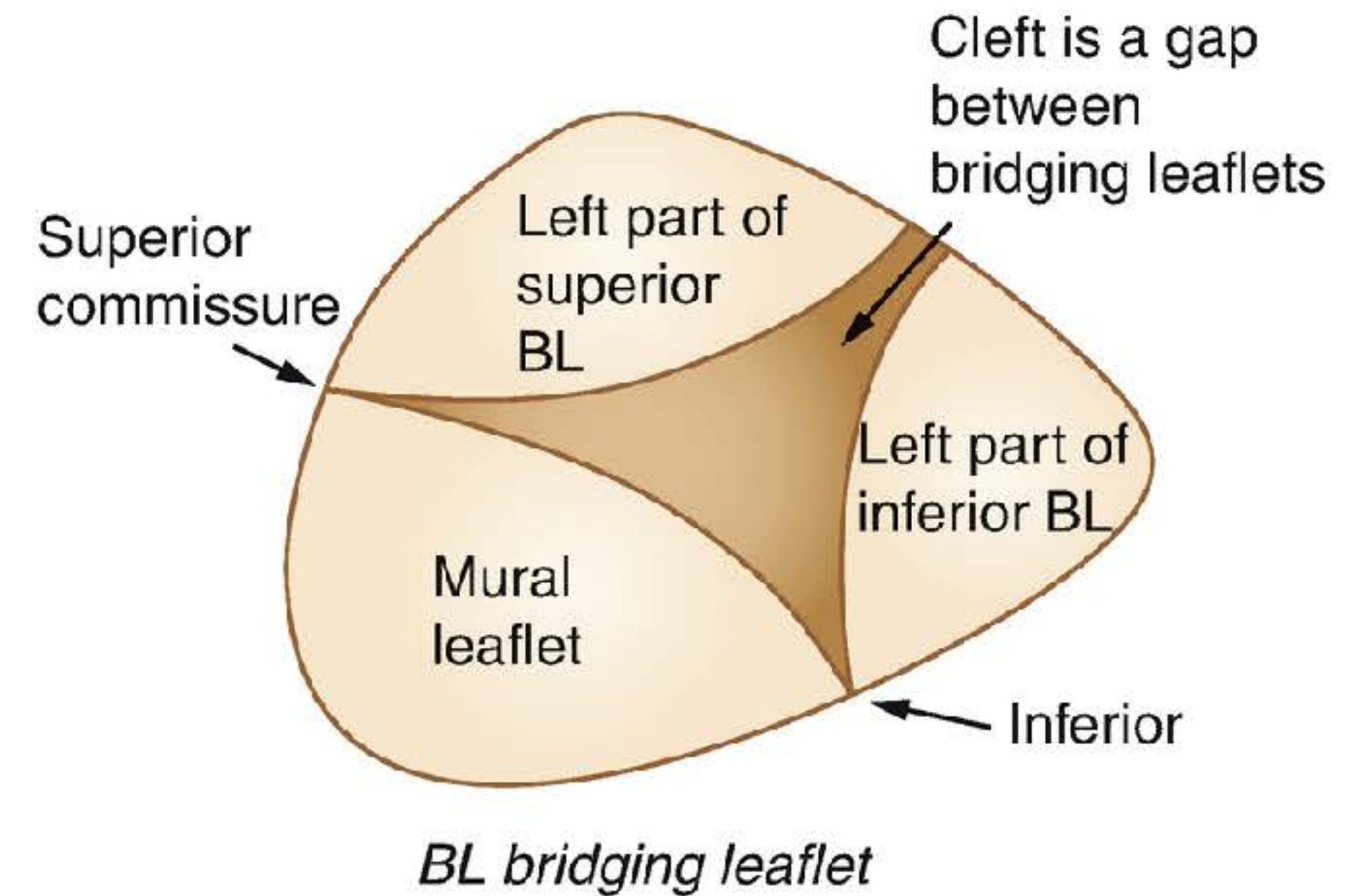
a Normal Mitral Valve

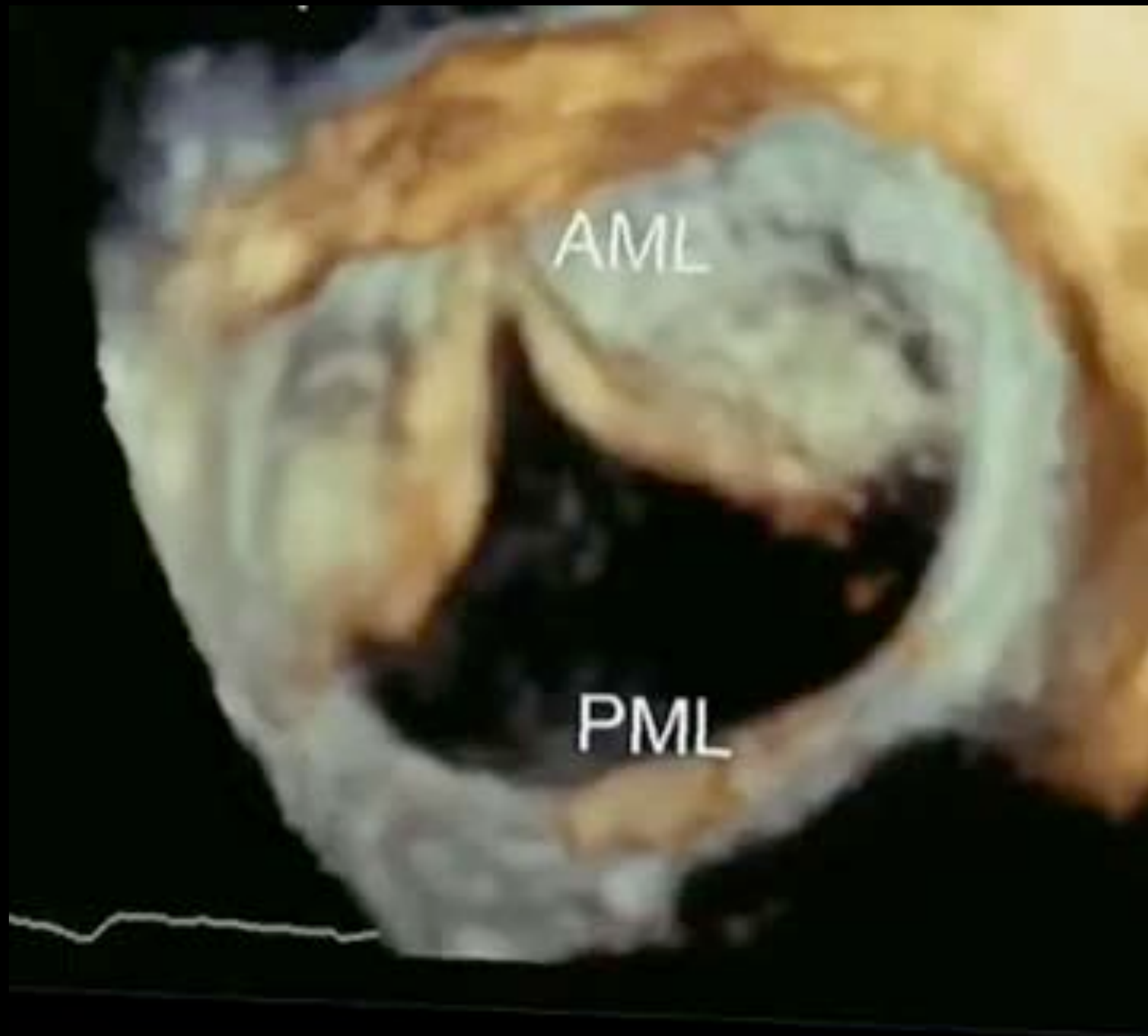


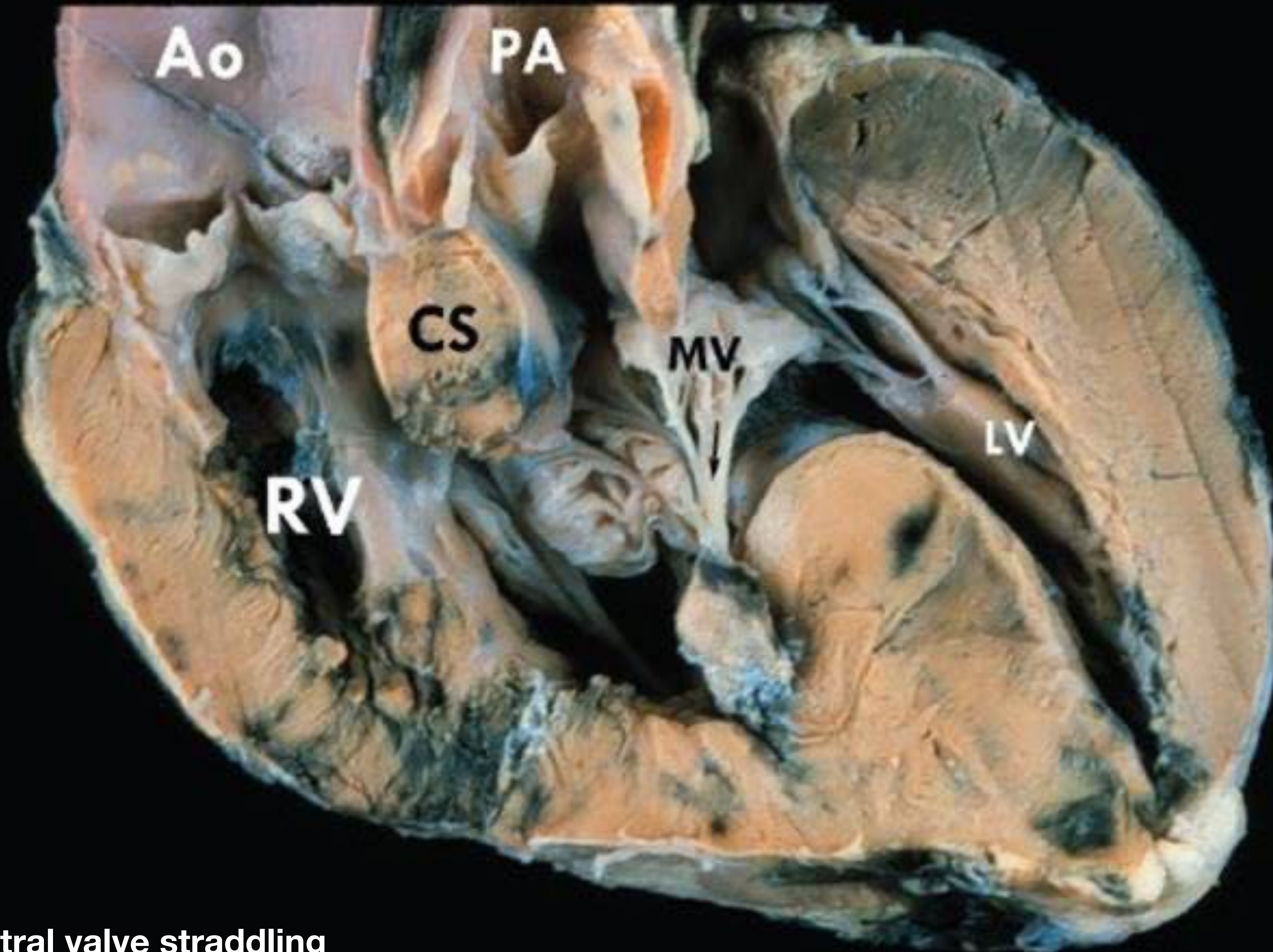
b Cleft of the Anterior Mitral Leaflet



c Cleft in AVSD







Ao

PA

CS

MV

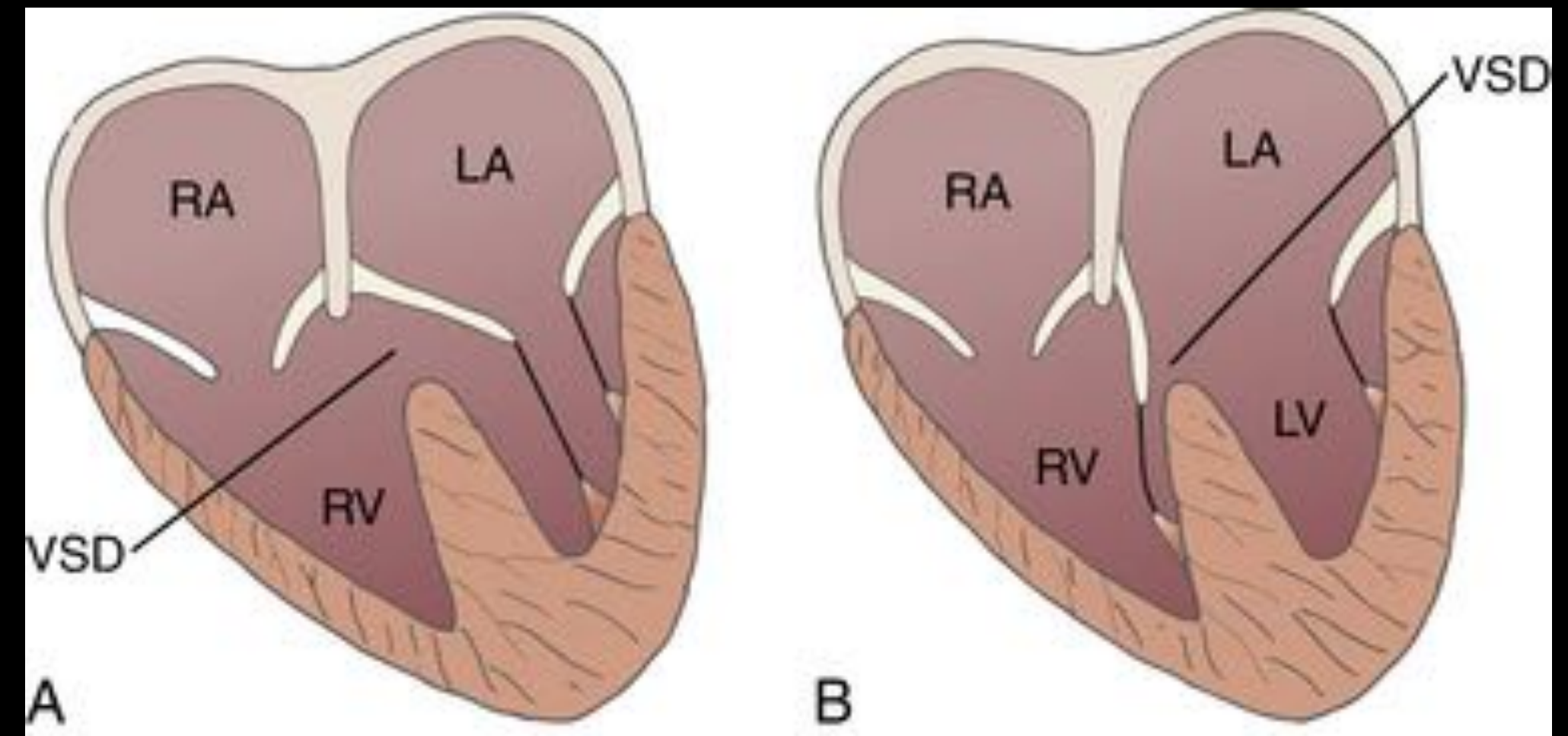
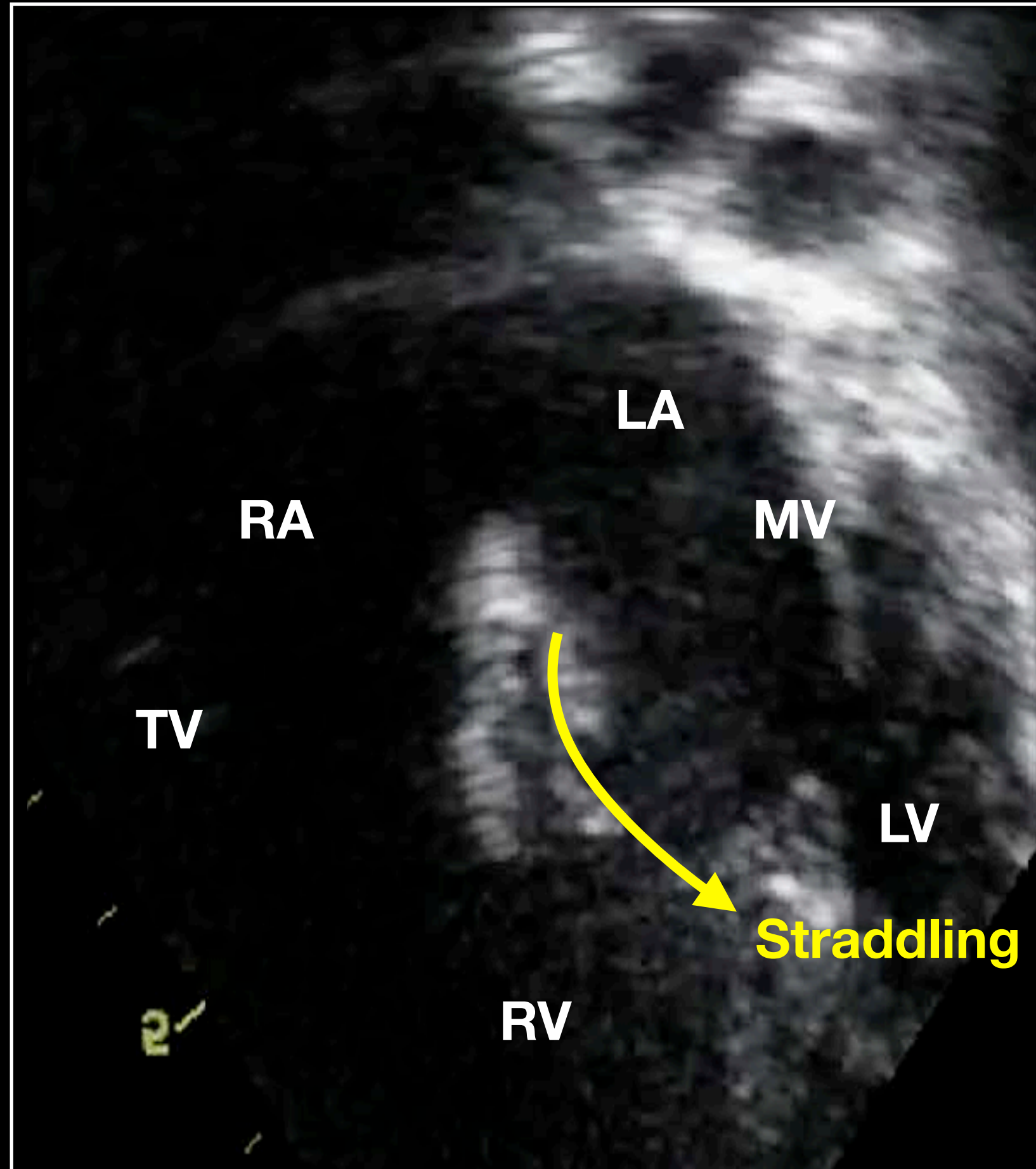
LV

RV

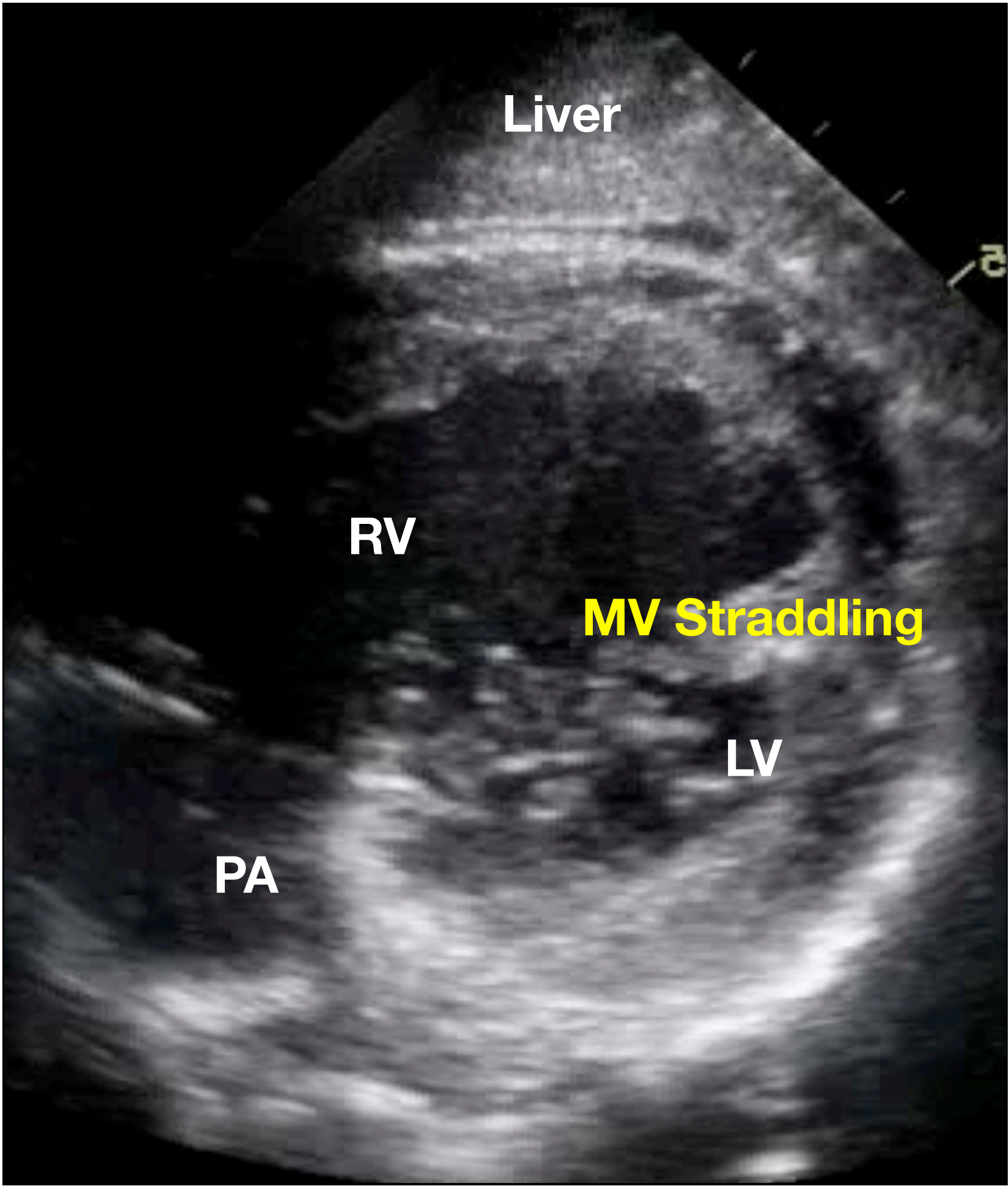
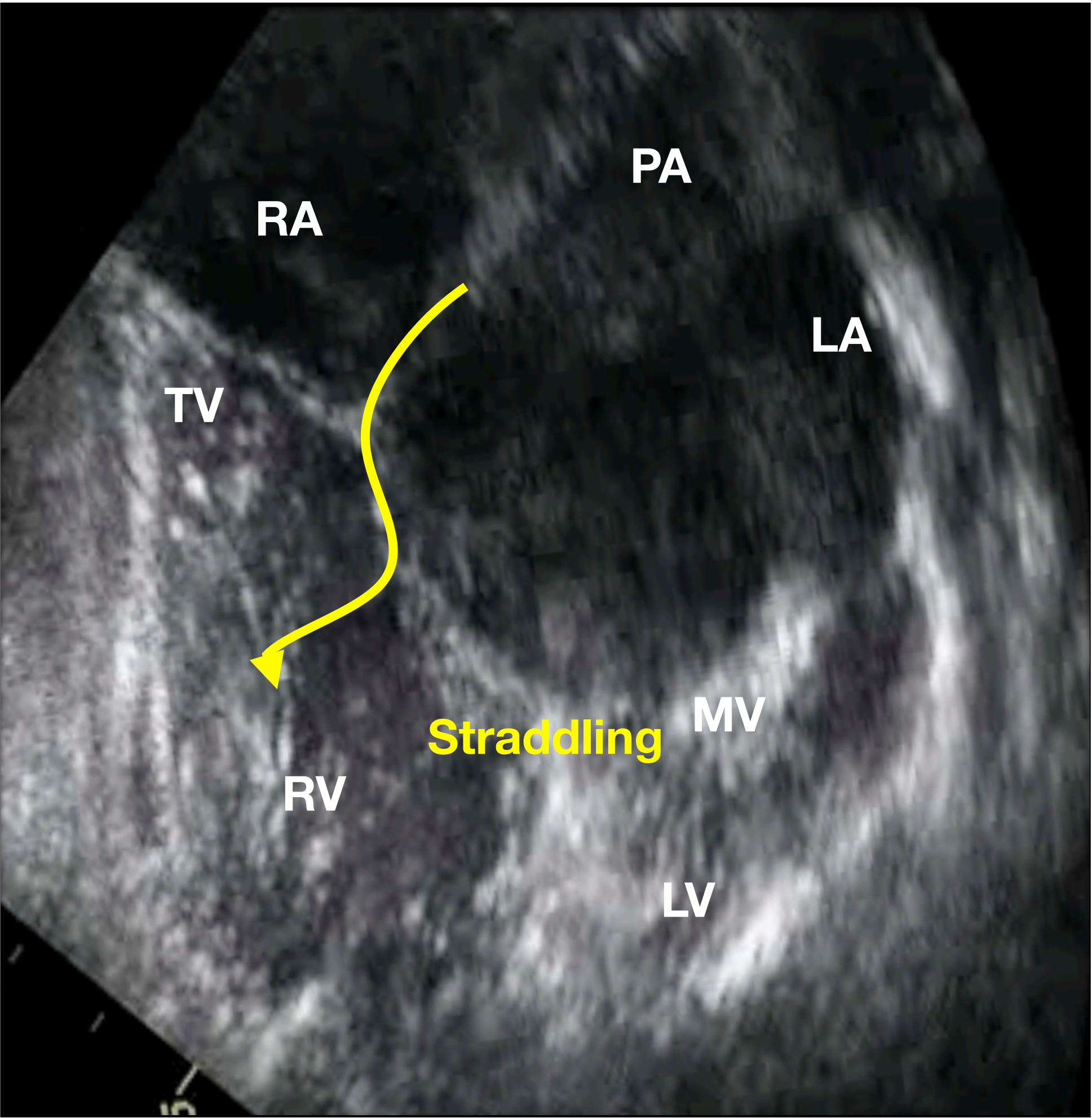


Mitral valve straddling

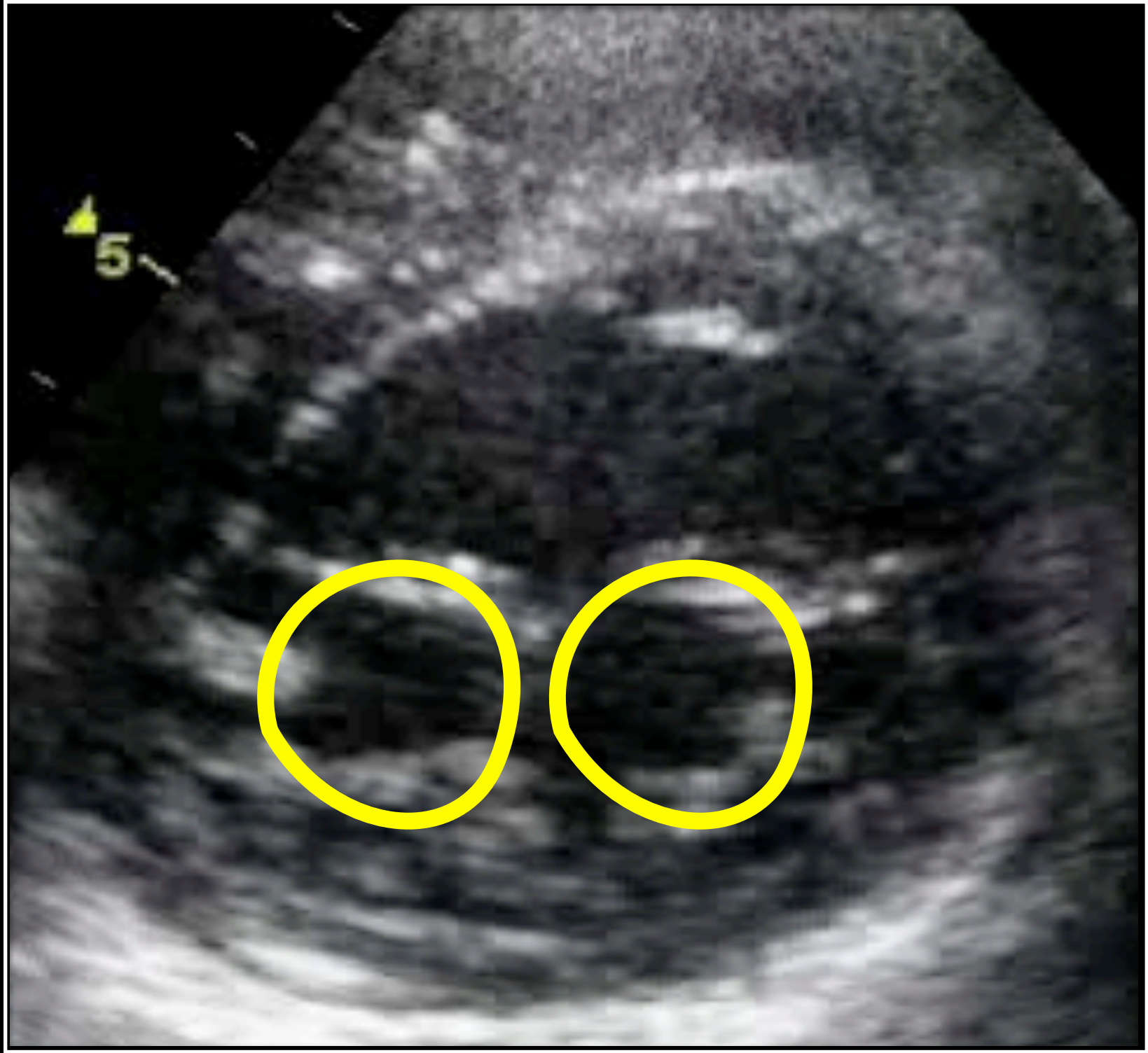
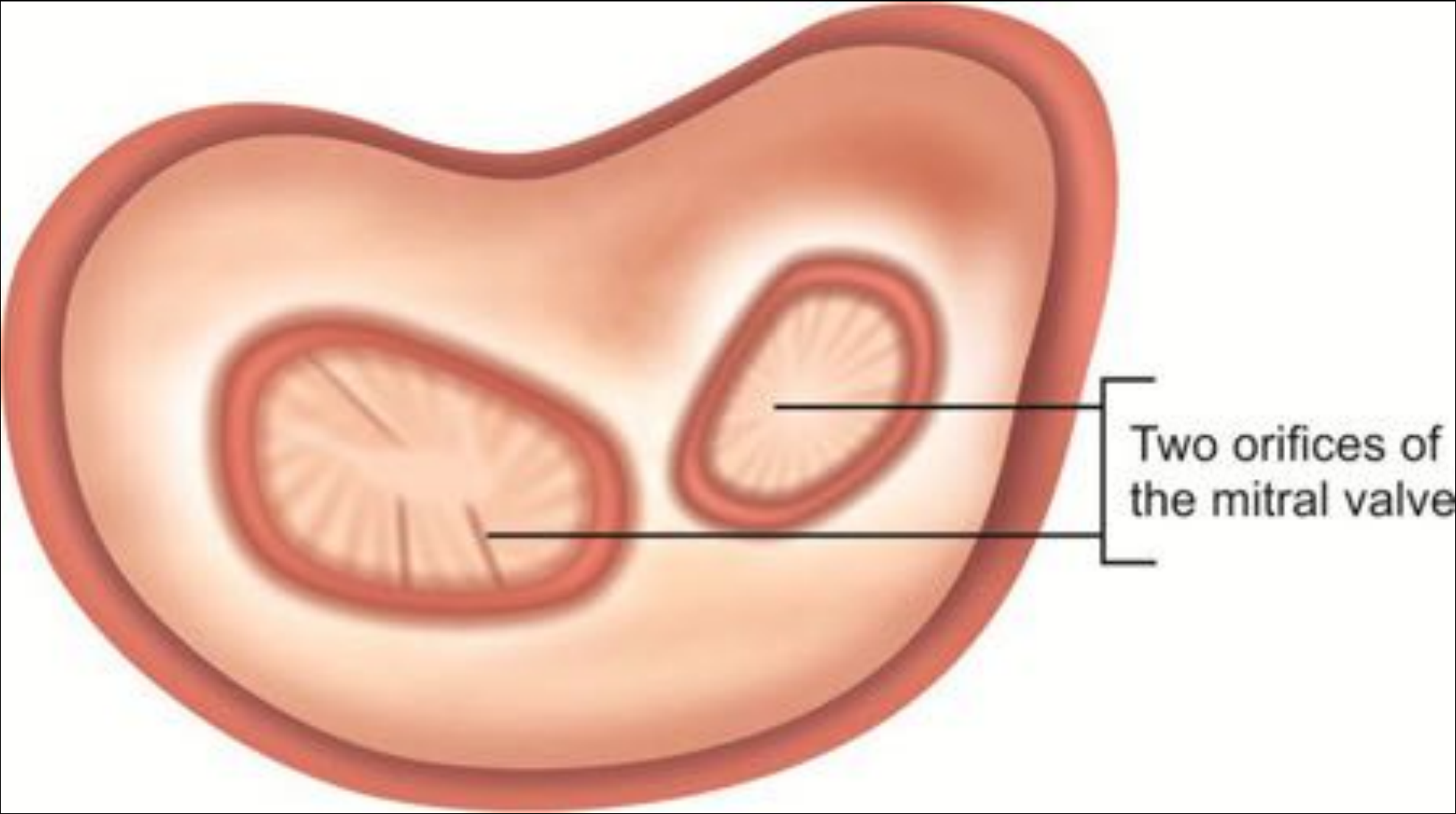
Mitral valve straddling

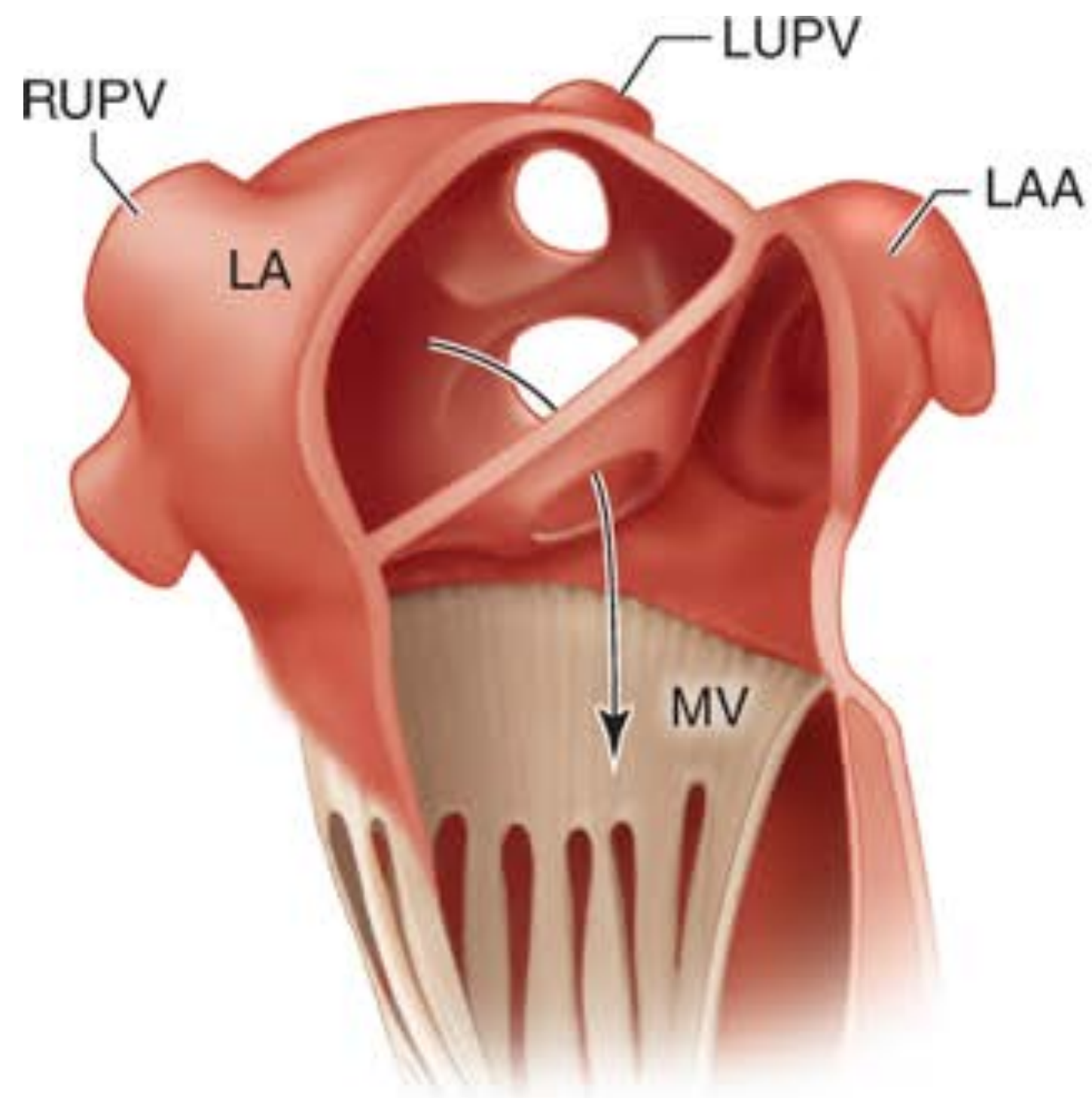


Mitral valve straddling

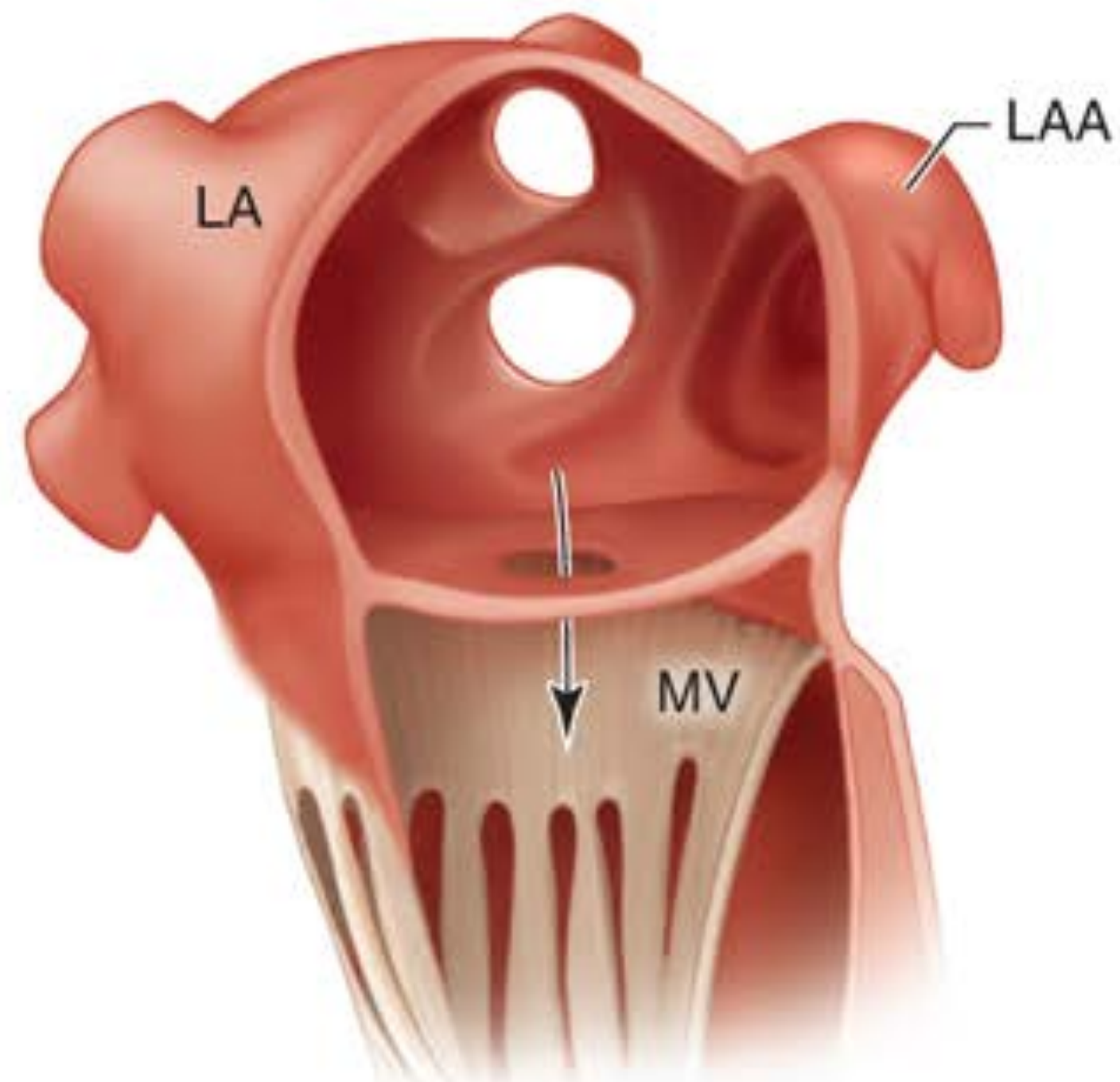


Double orifice

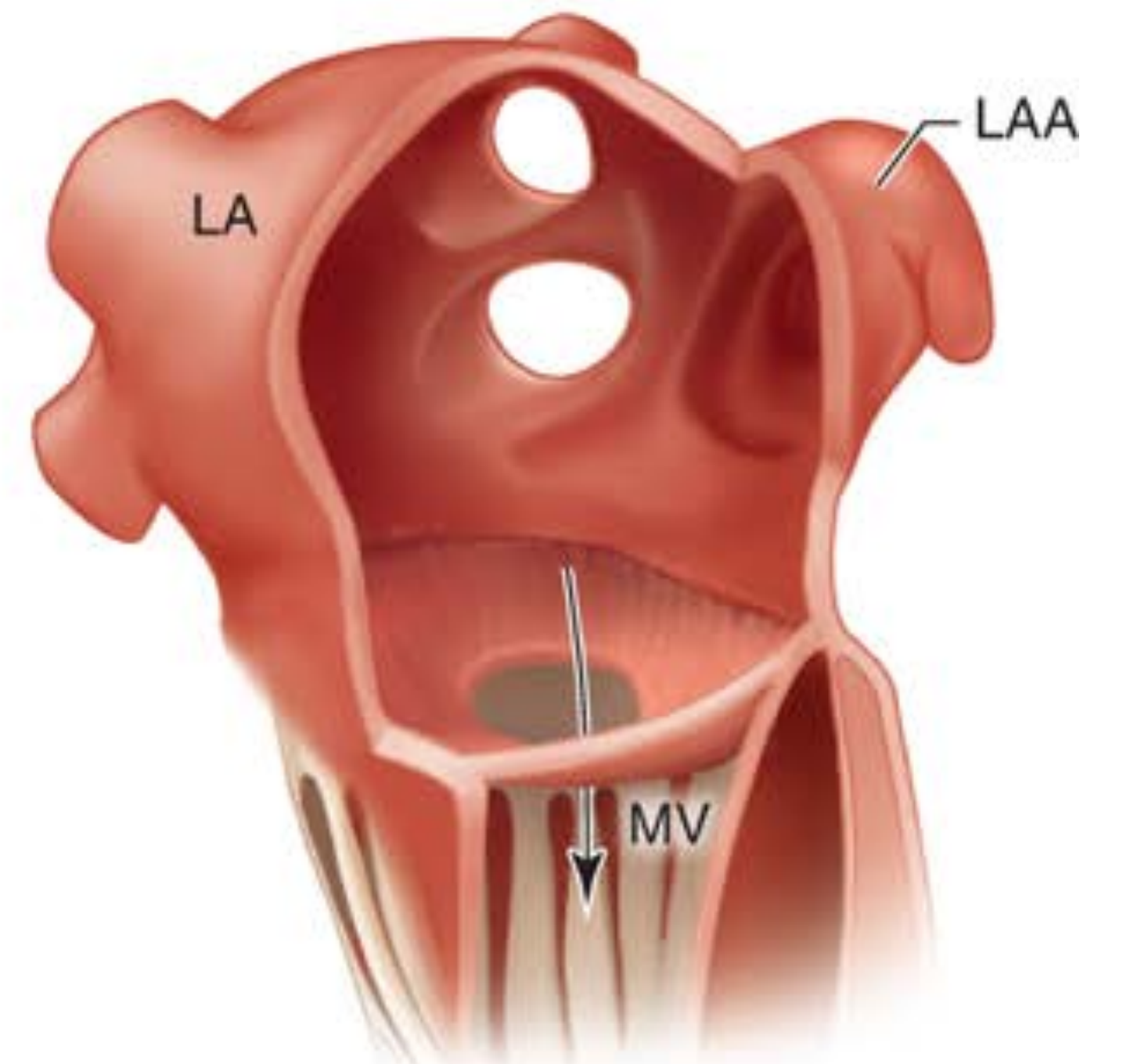




Cor triatriatum

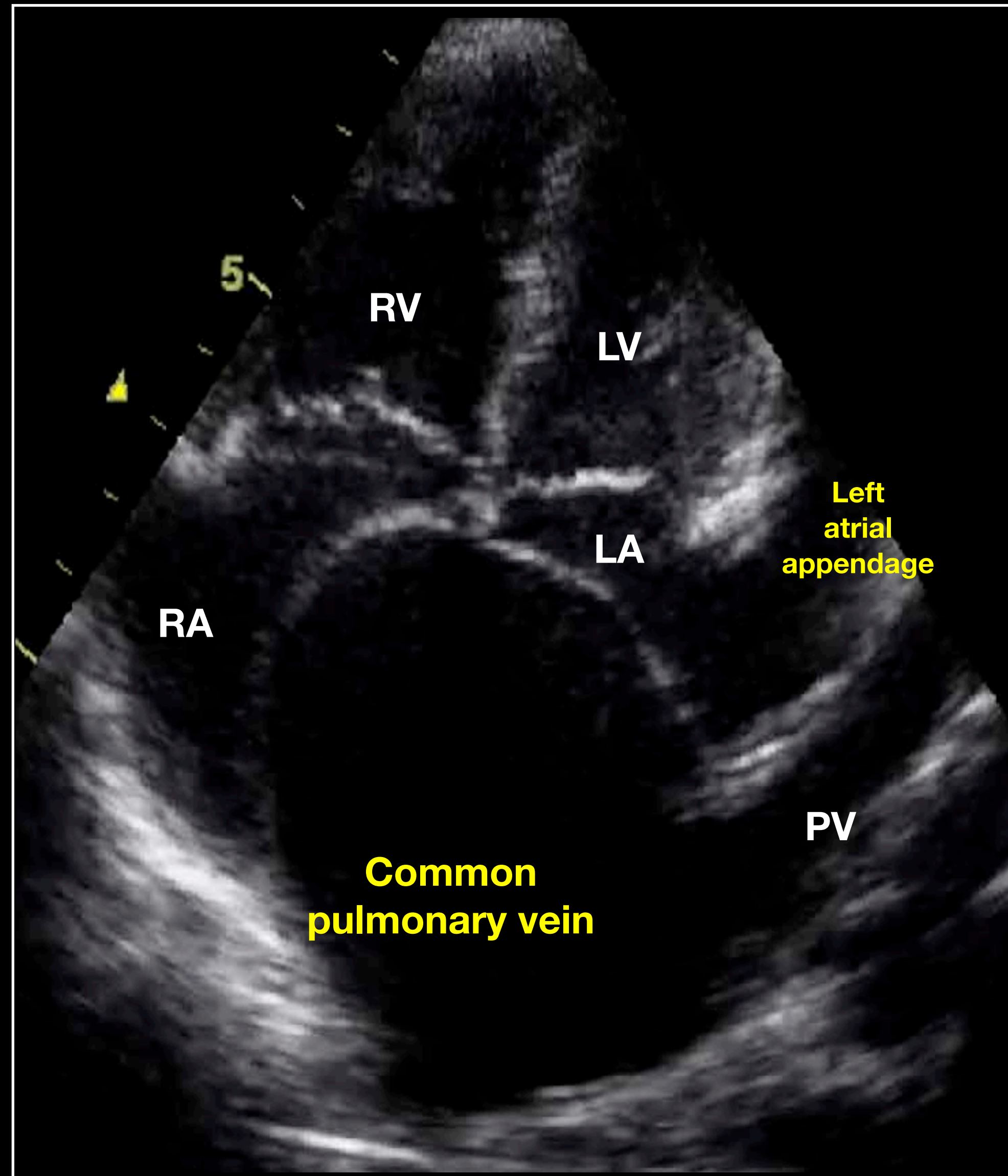


Supramitral ring

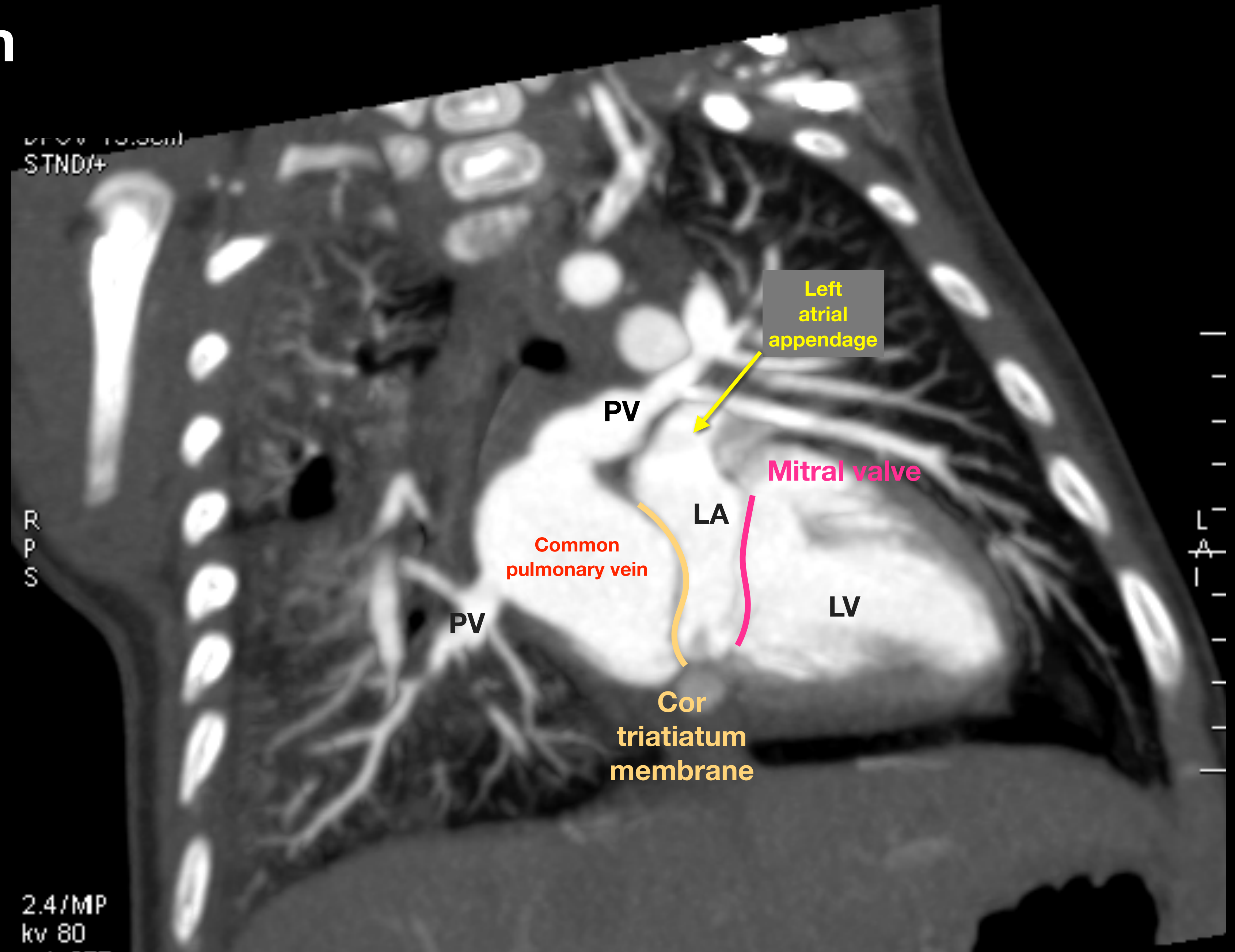


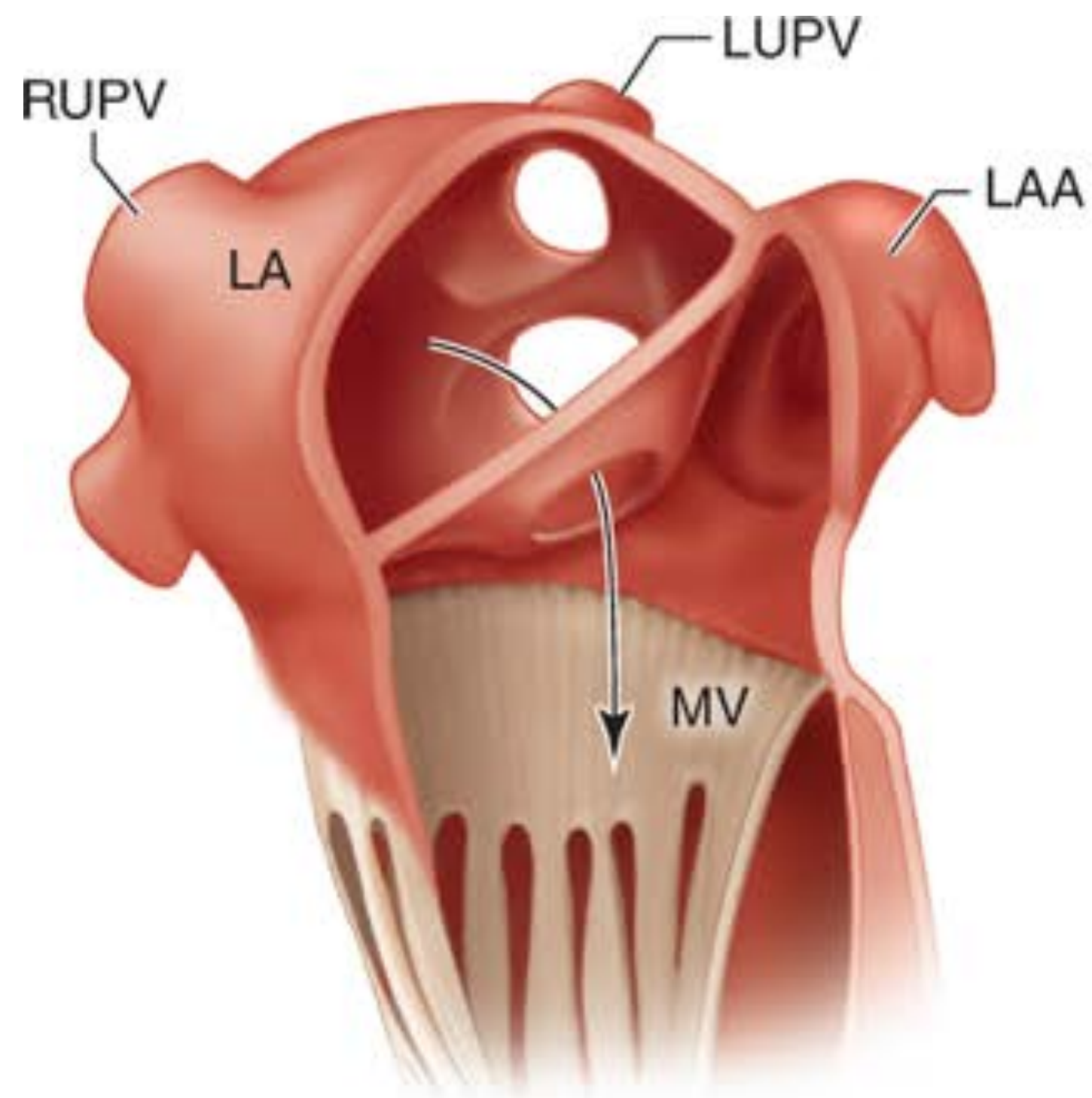
Intramitral ring

Cor triatriatum

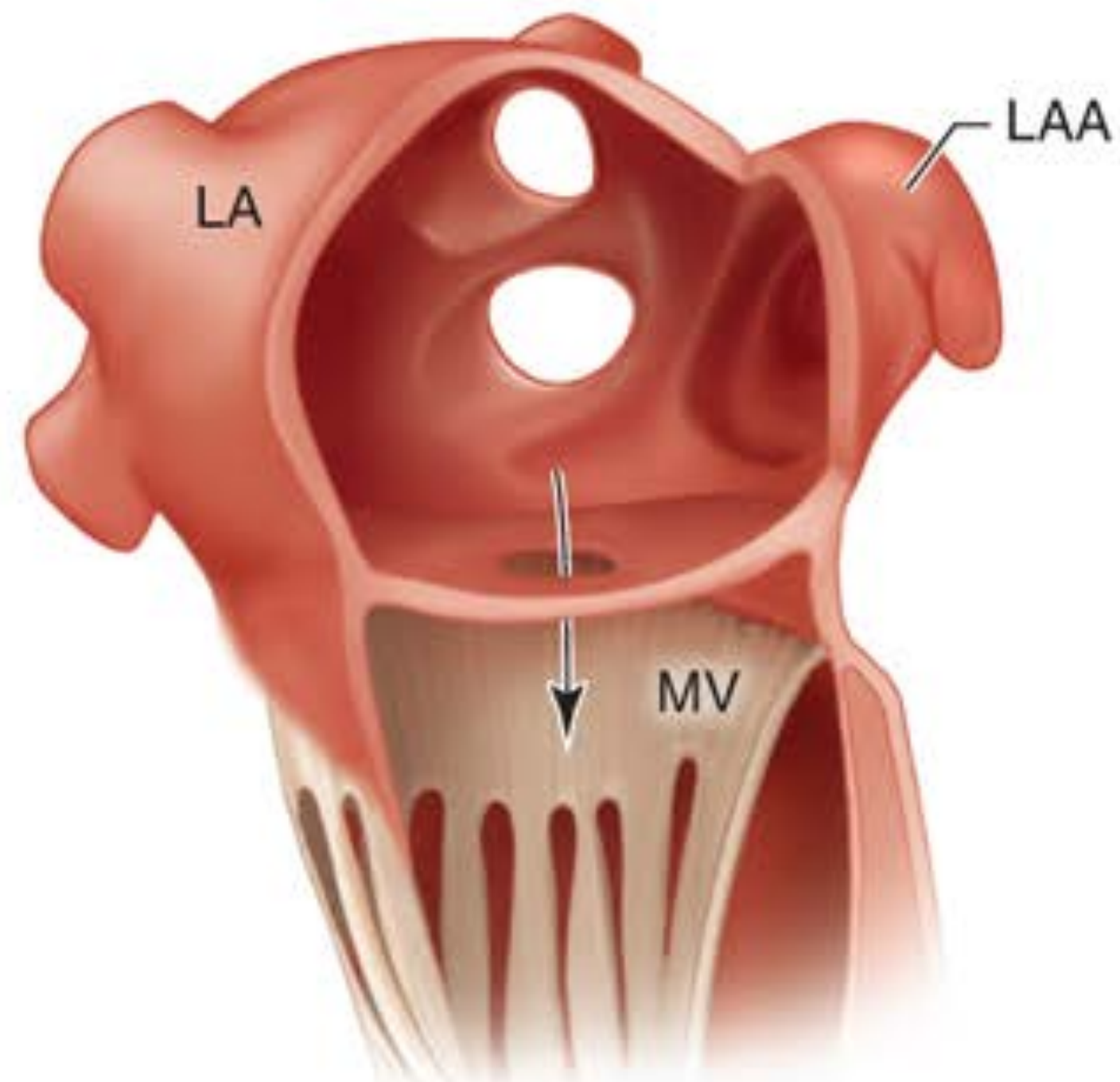


Cor triatriatum

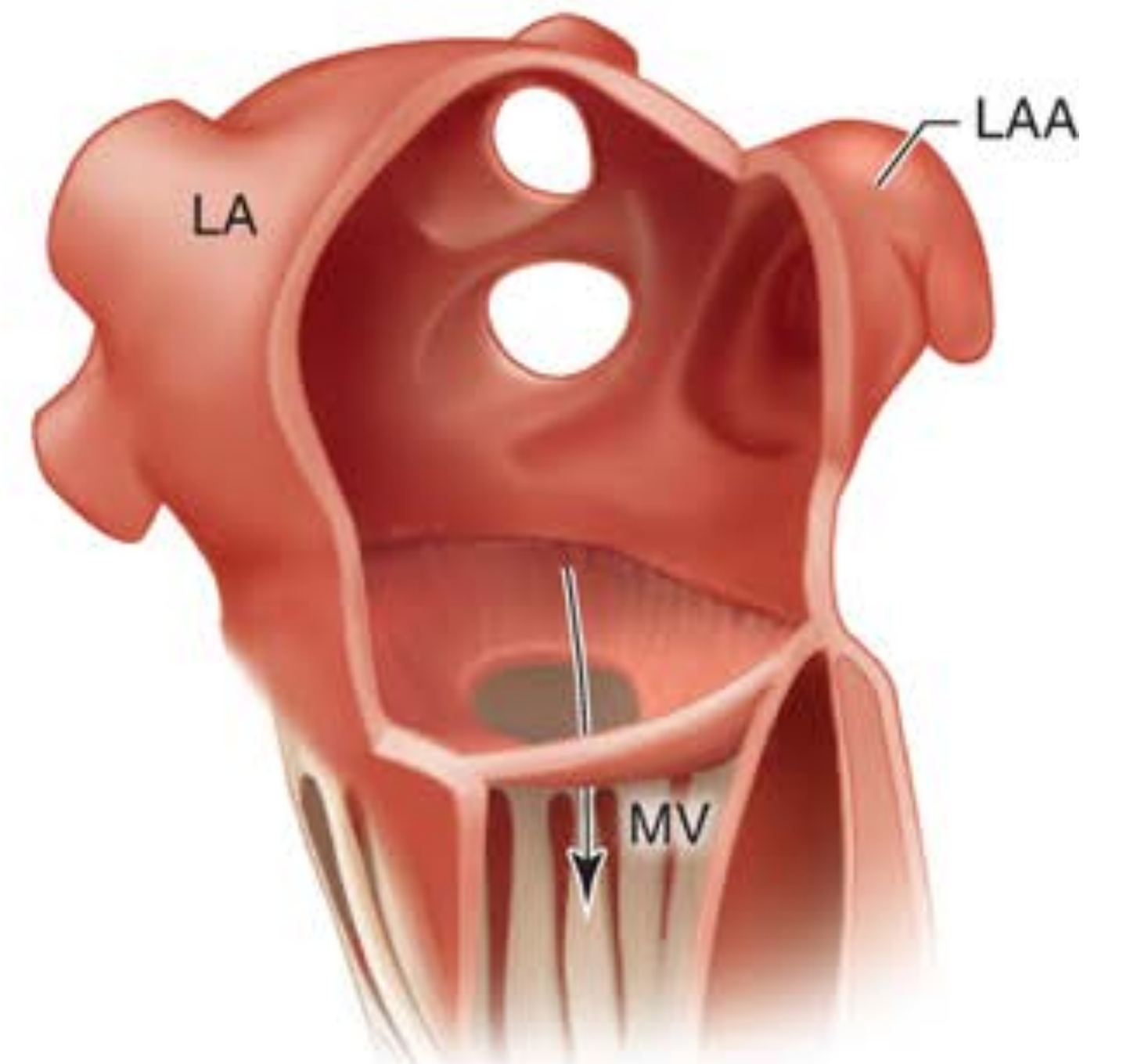




Cor triatriatum

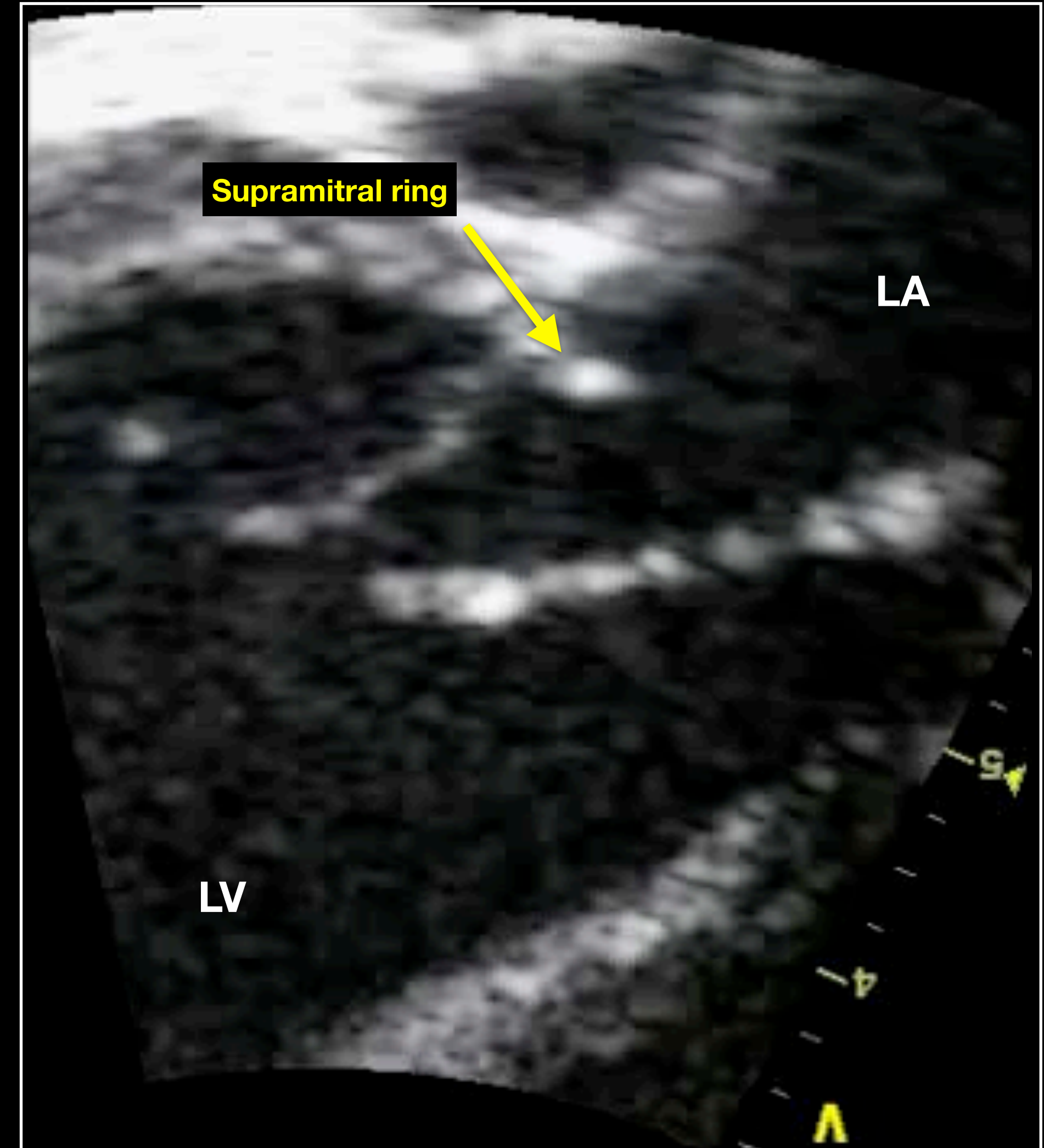
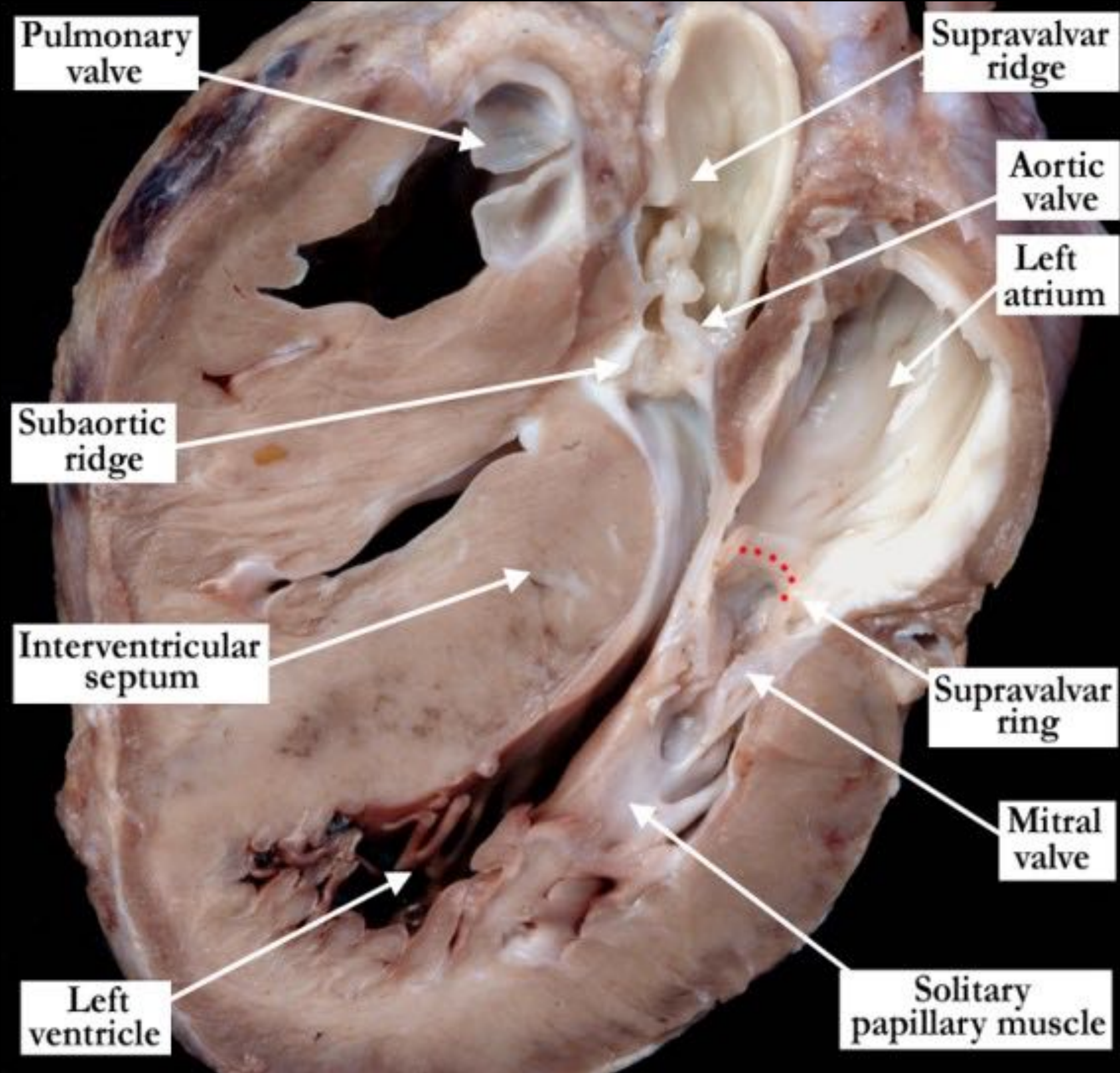


Supramitral ring

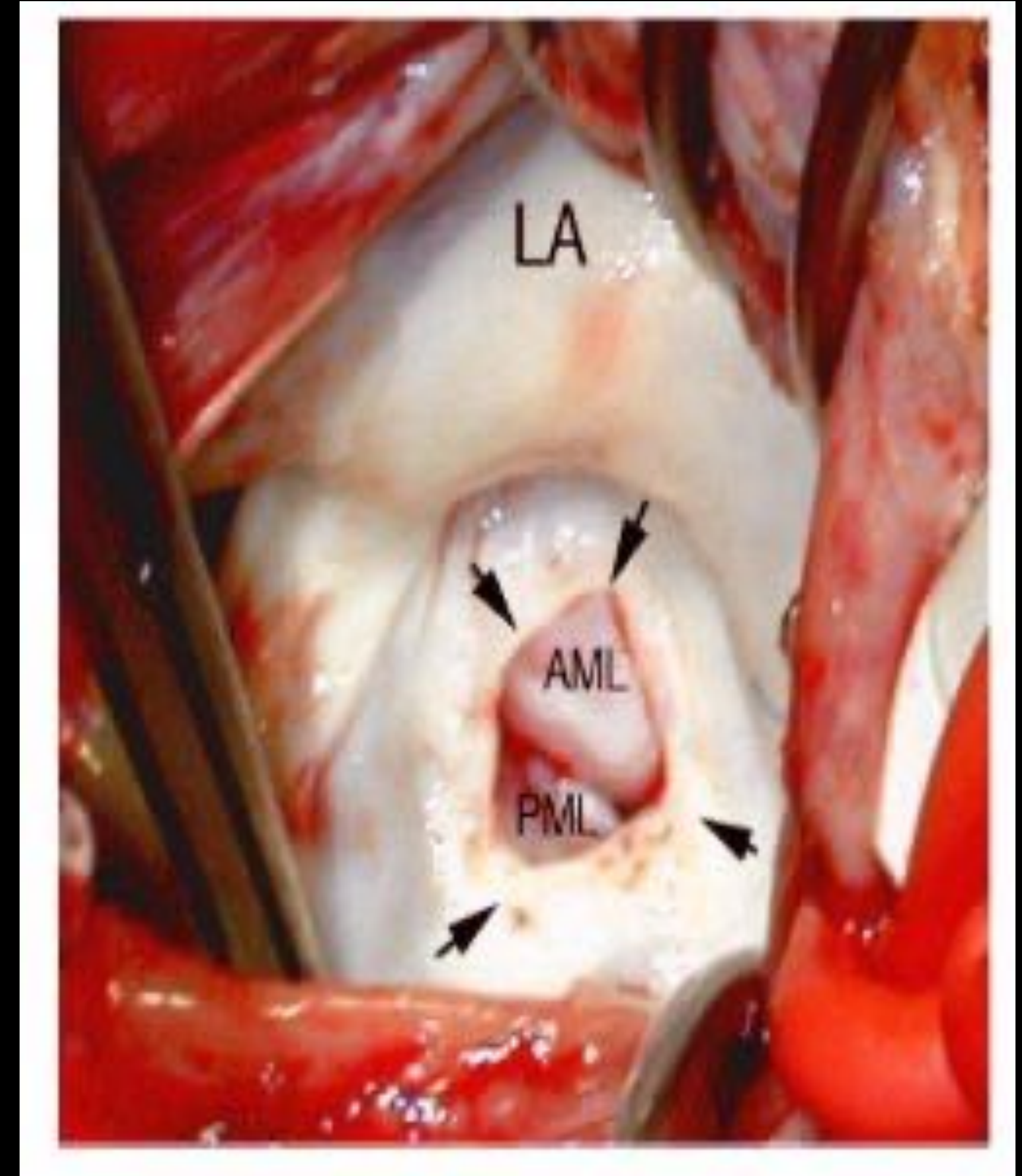


Intramitral ring

Supramitral ring



Supramitral ring



Anomalies of the subvalvar apparatus

- Parachute
- Arcade
- Hammock
- *Straddling*



Normal

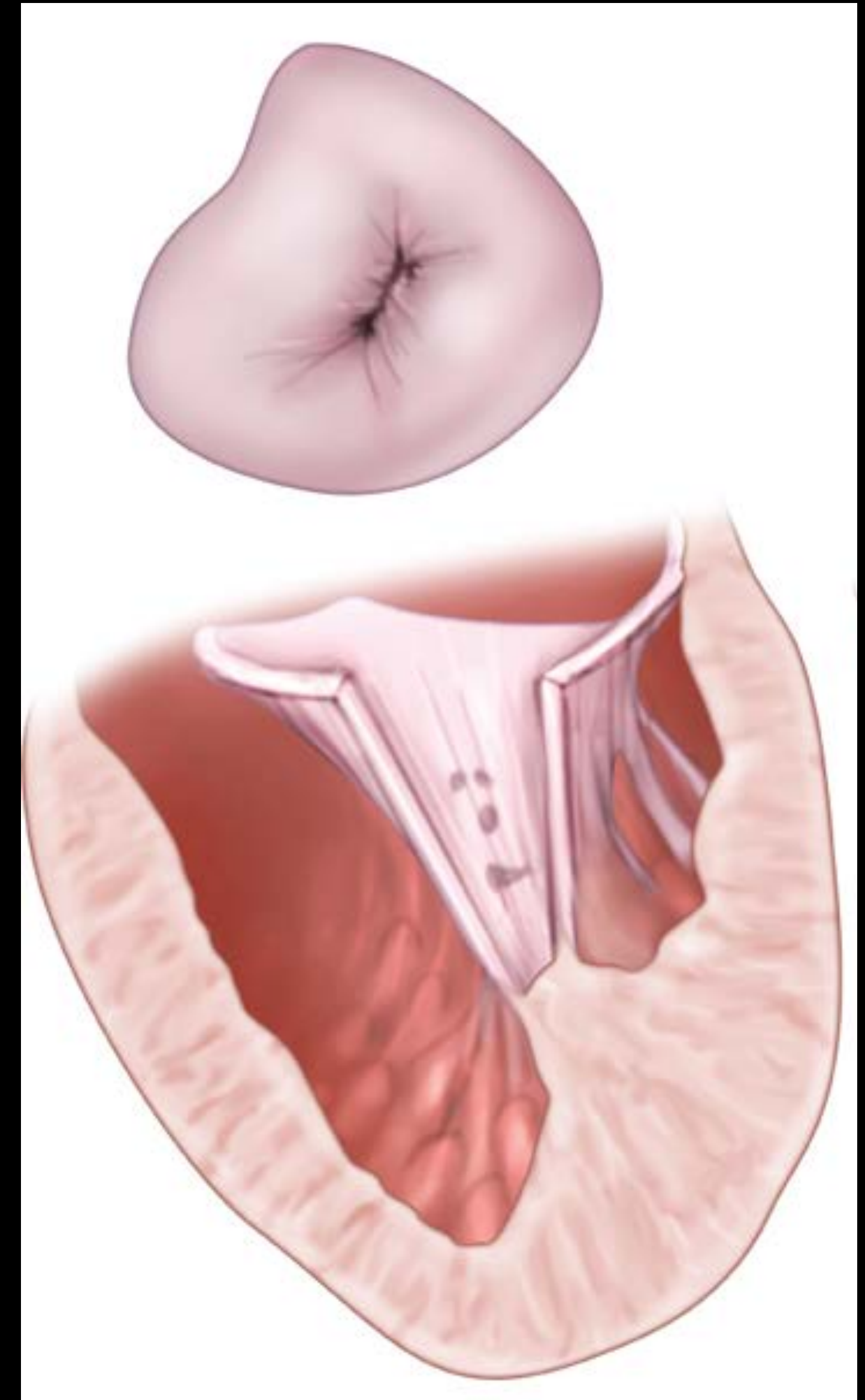


"Typical"



Parachute

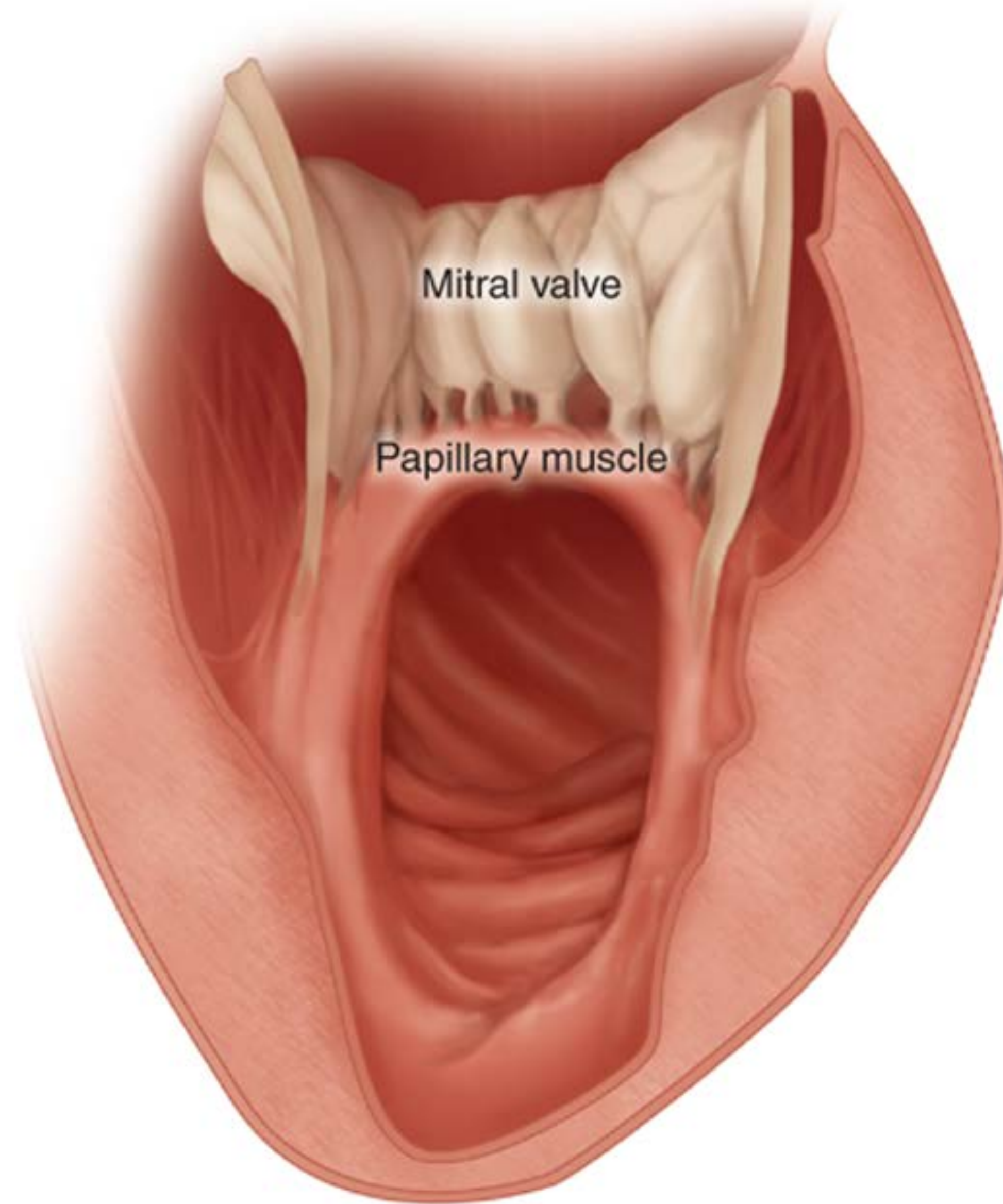
Parachute



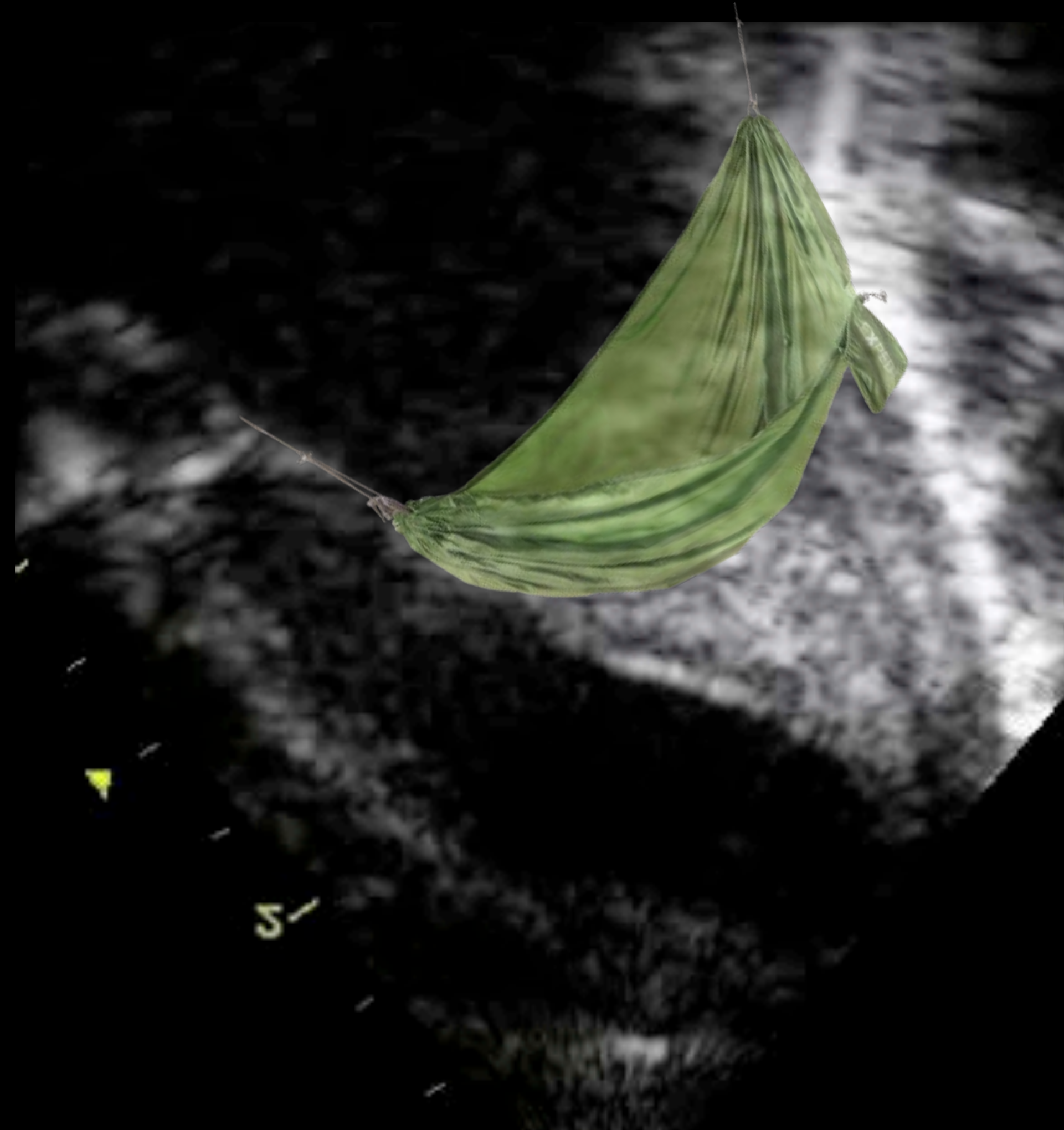
Parachute



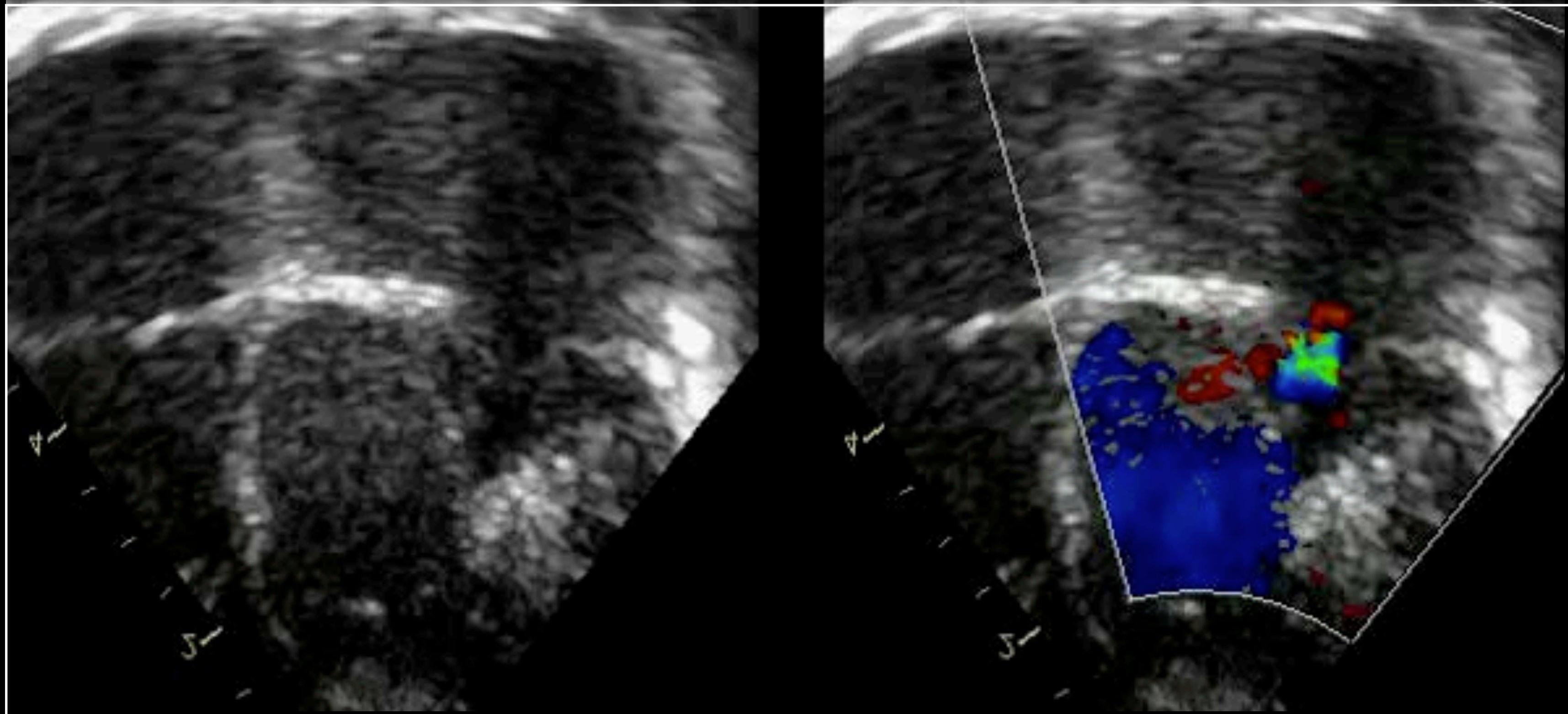
Arcade/hammock



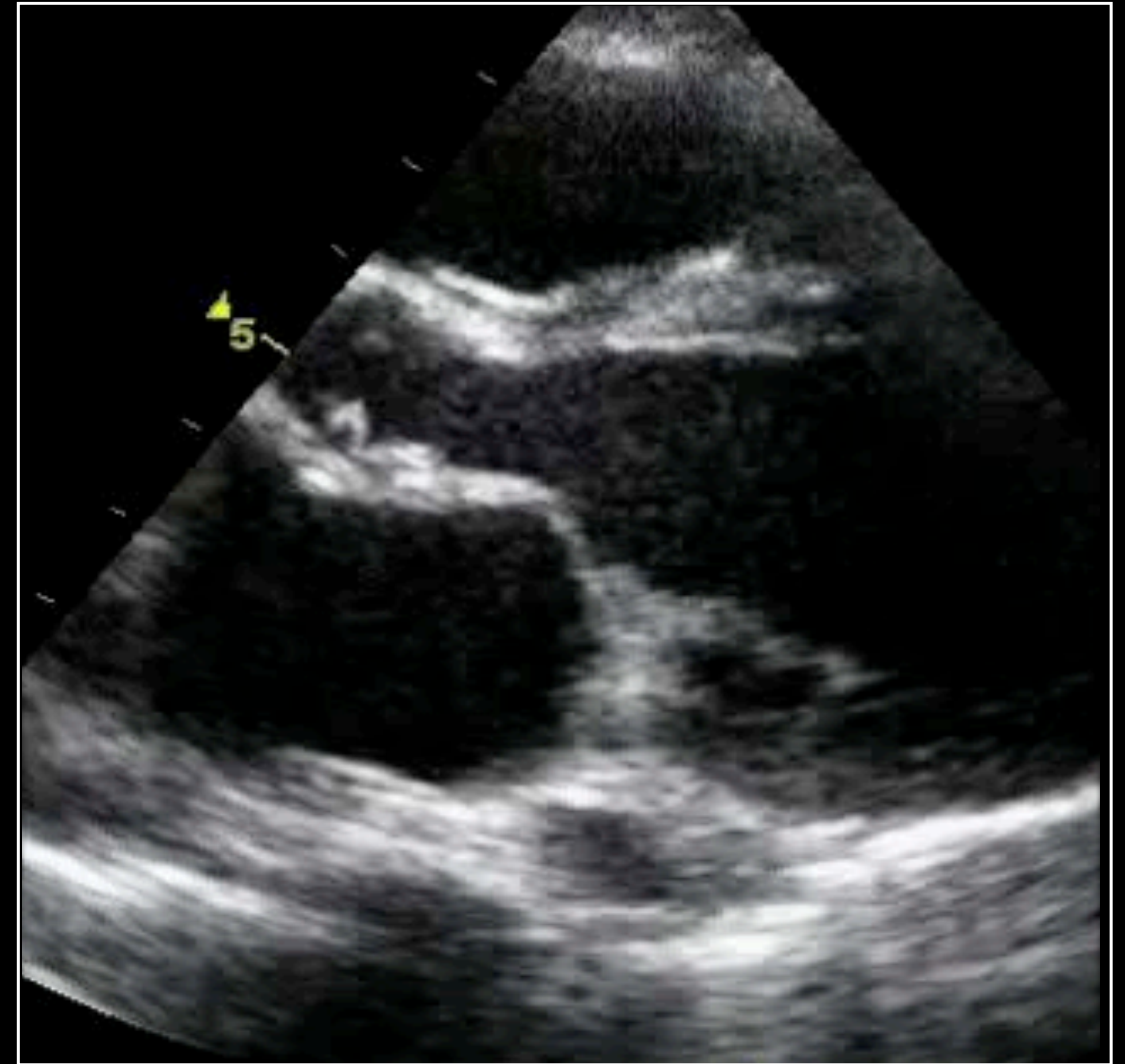
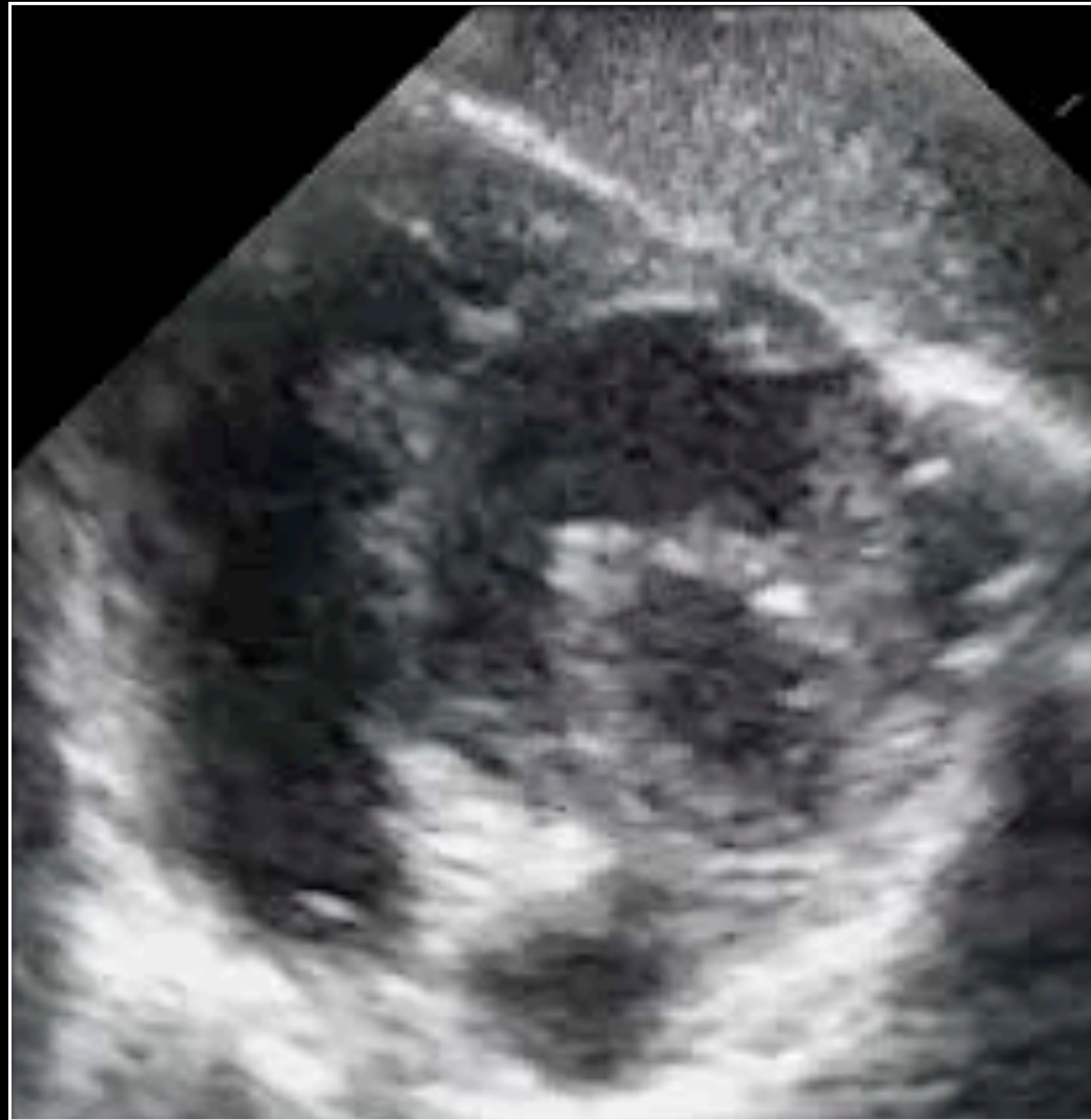
Hammock



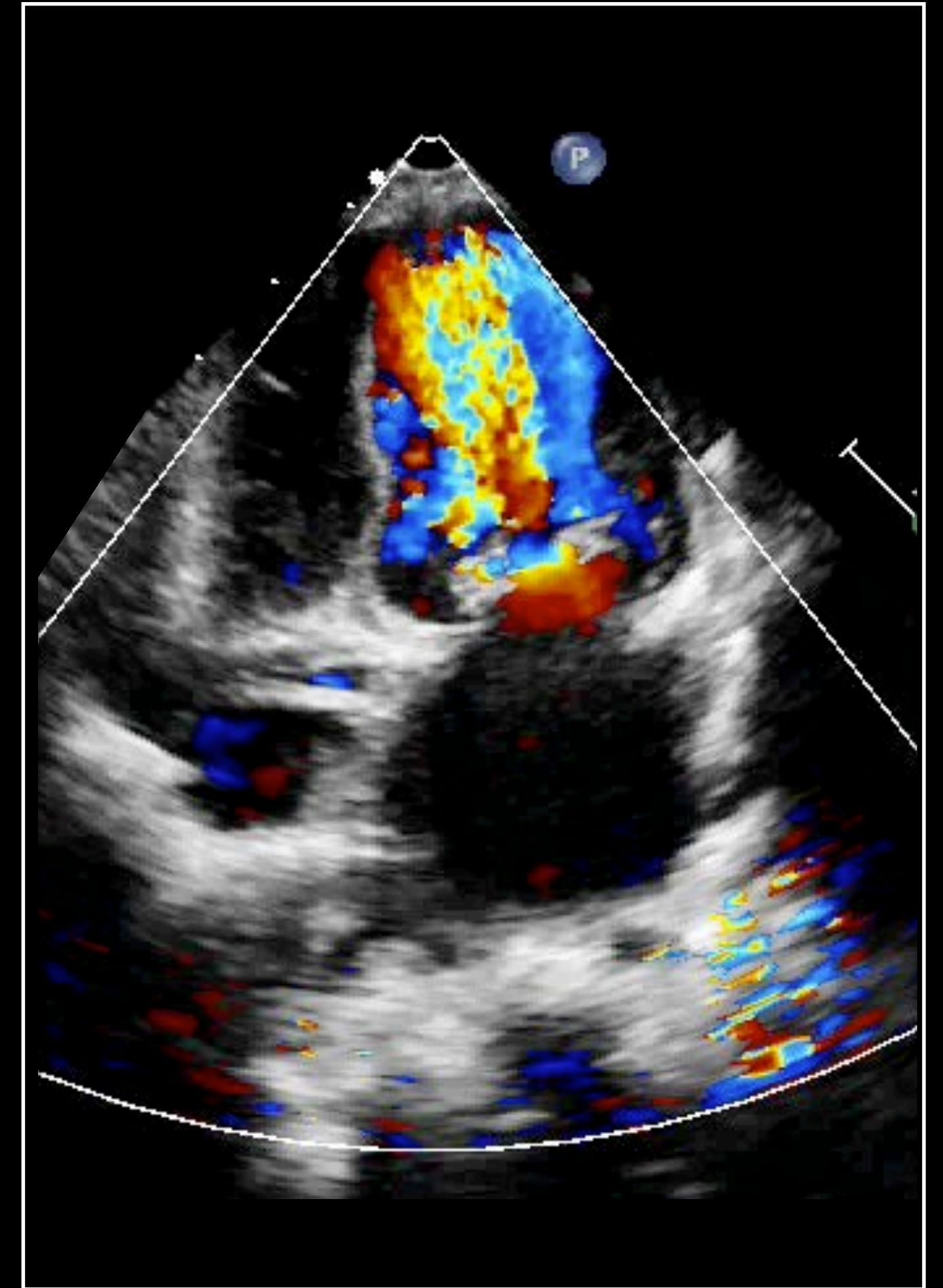
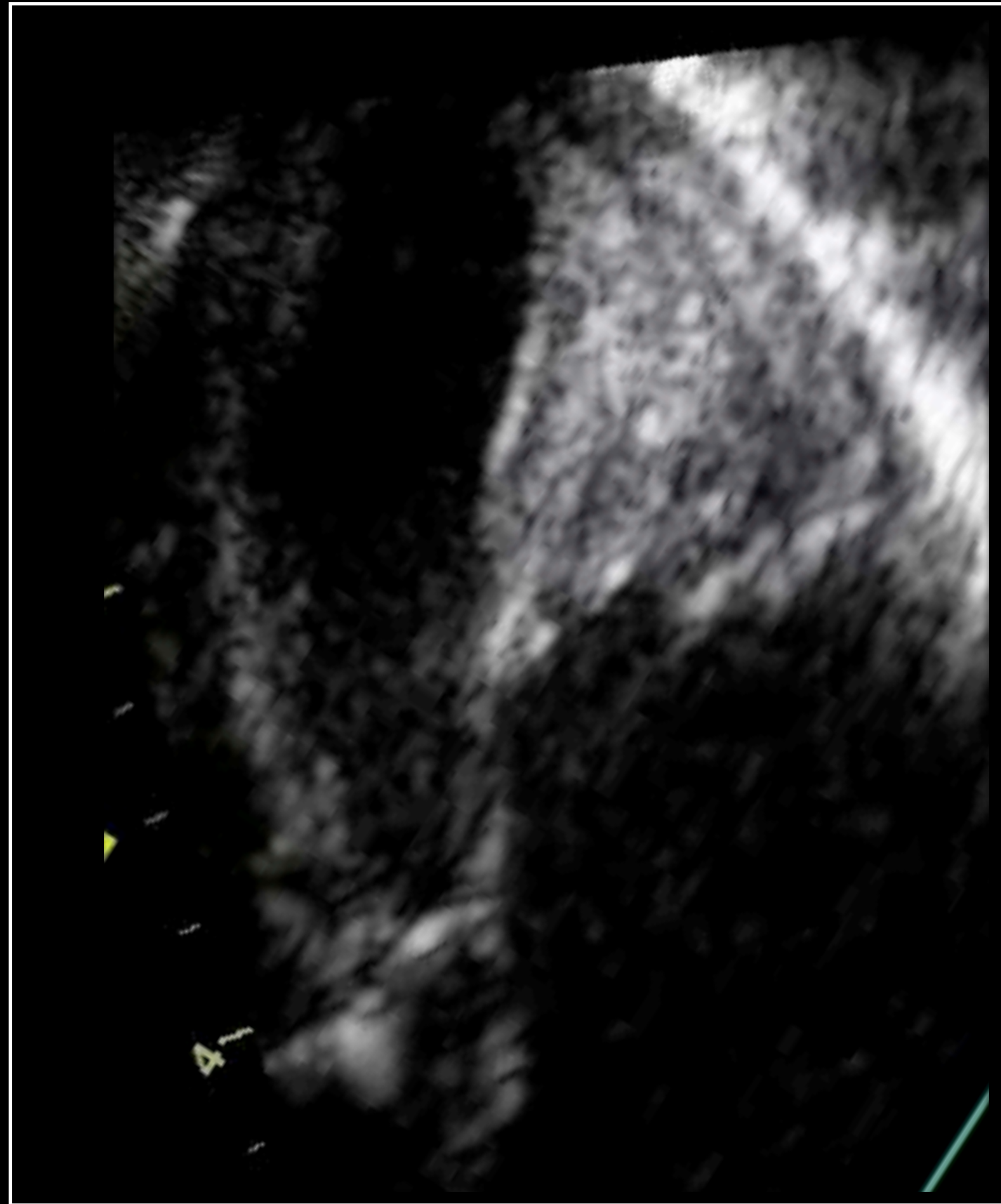
Hammock

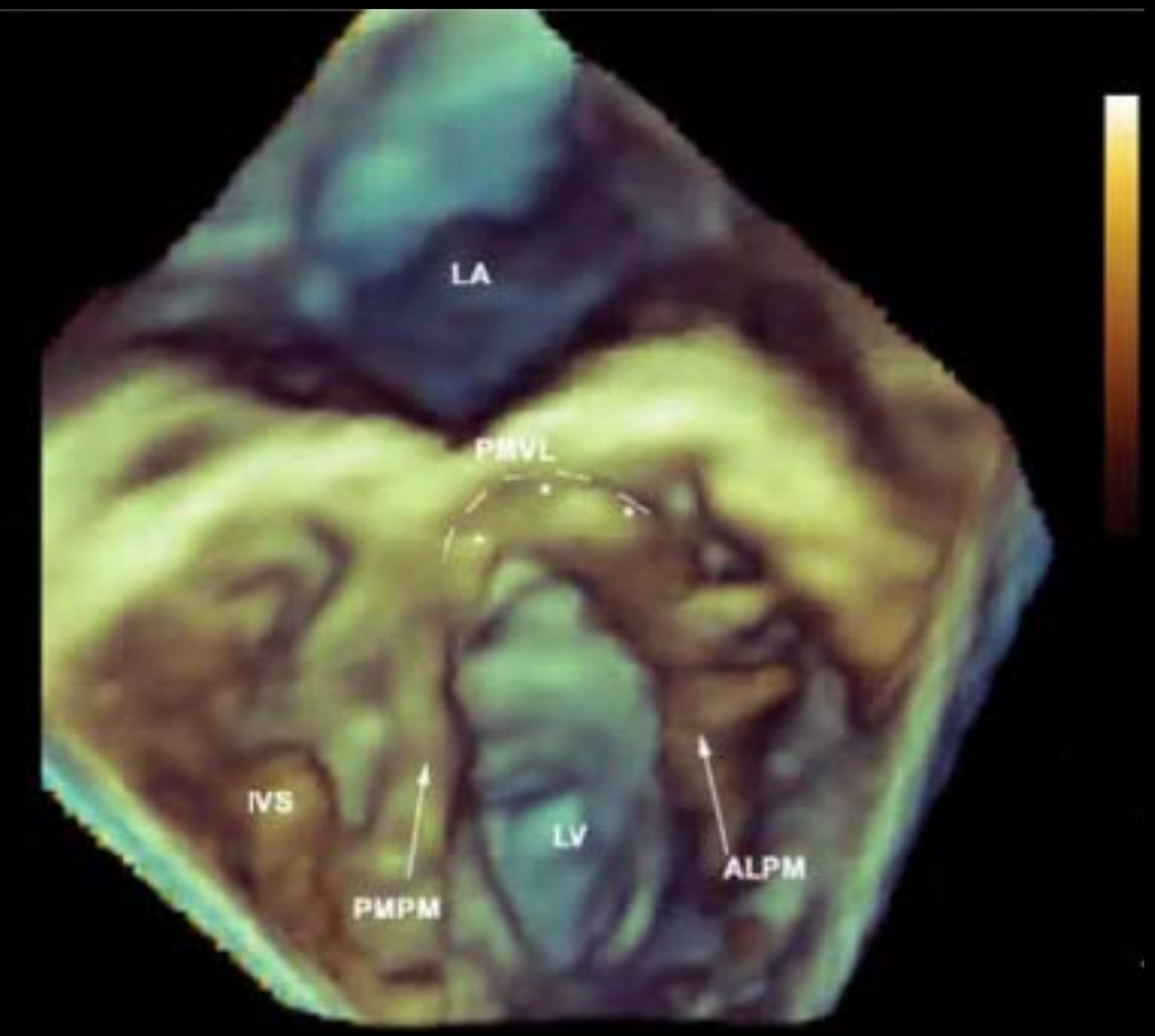
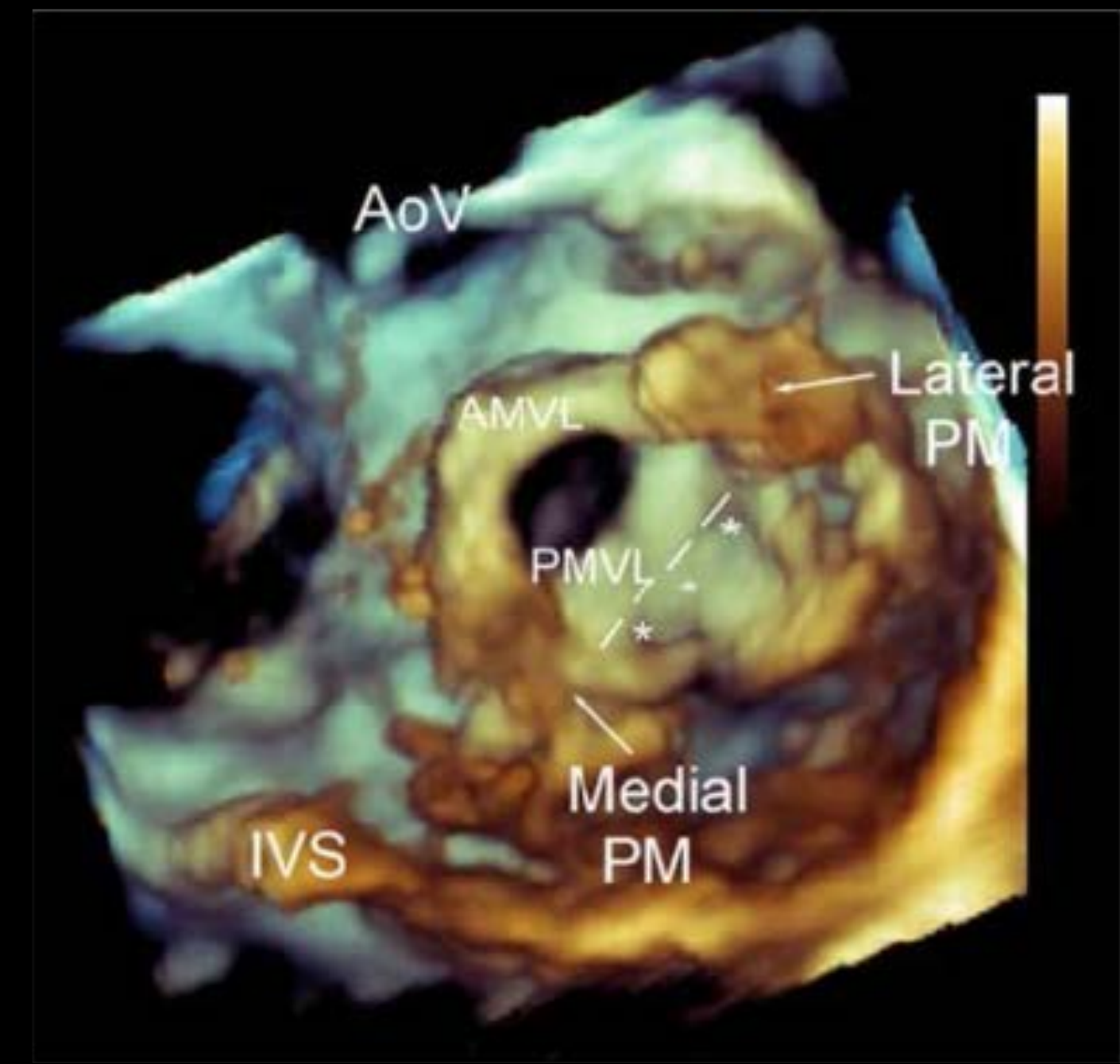
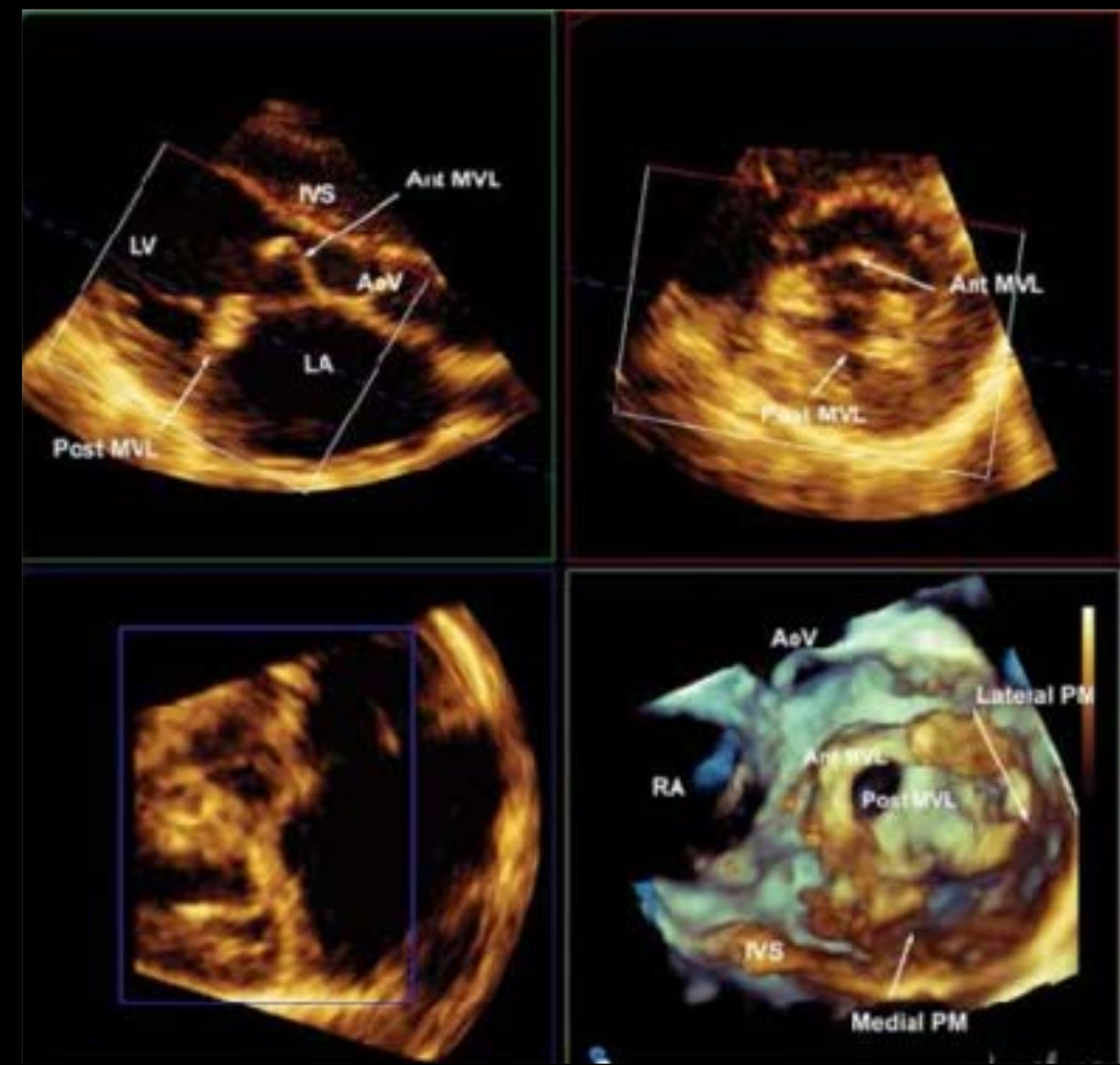
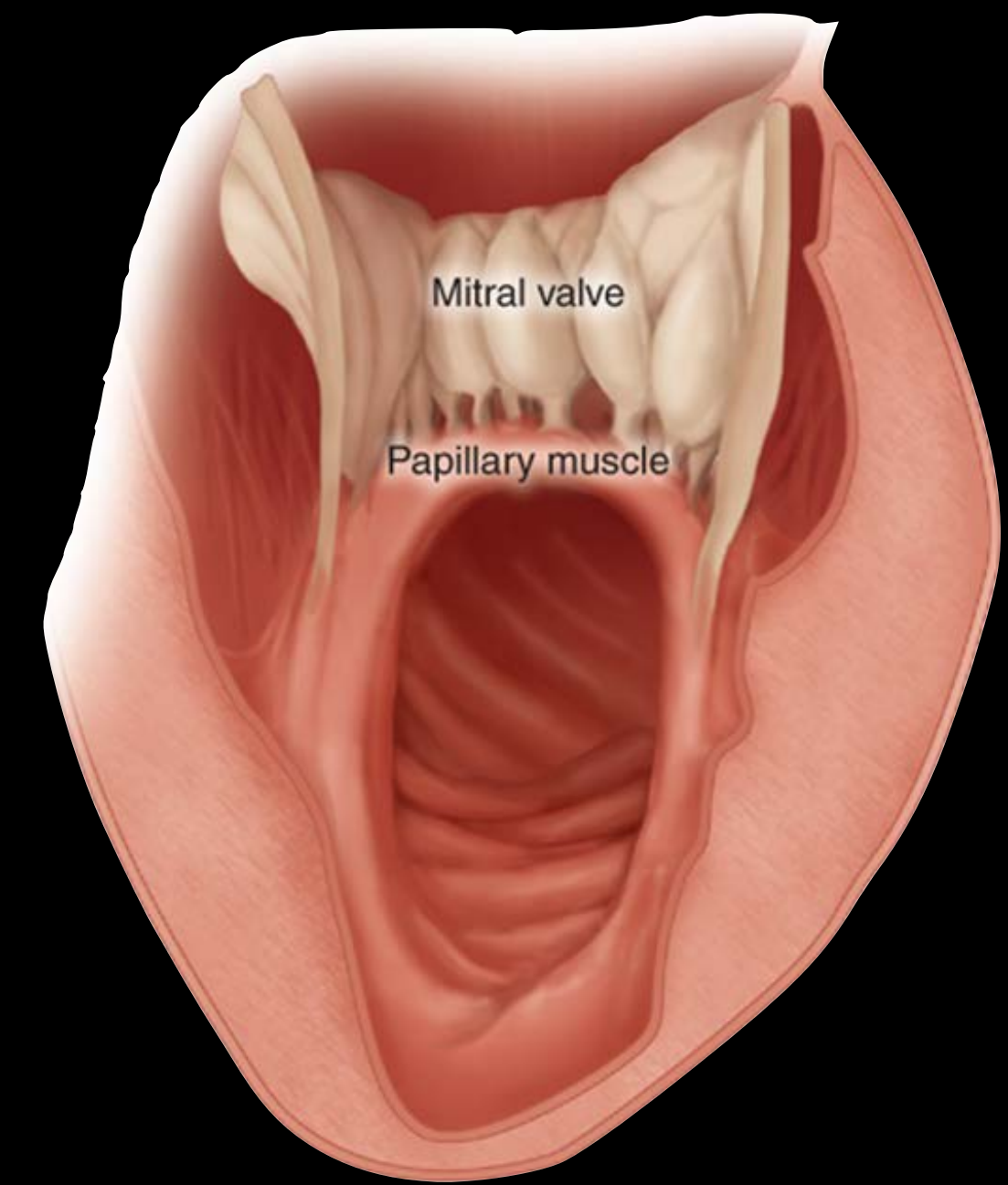


Hammock

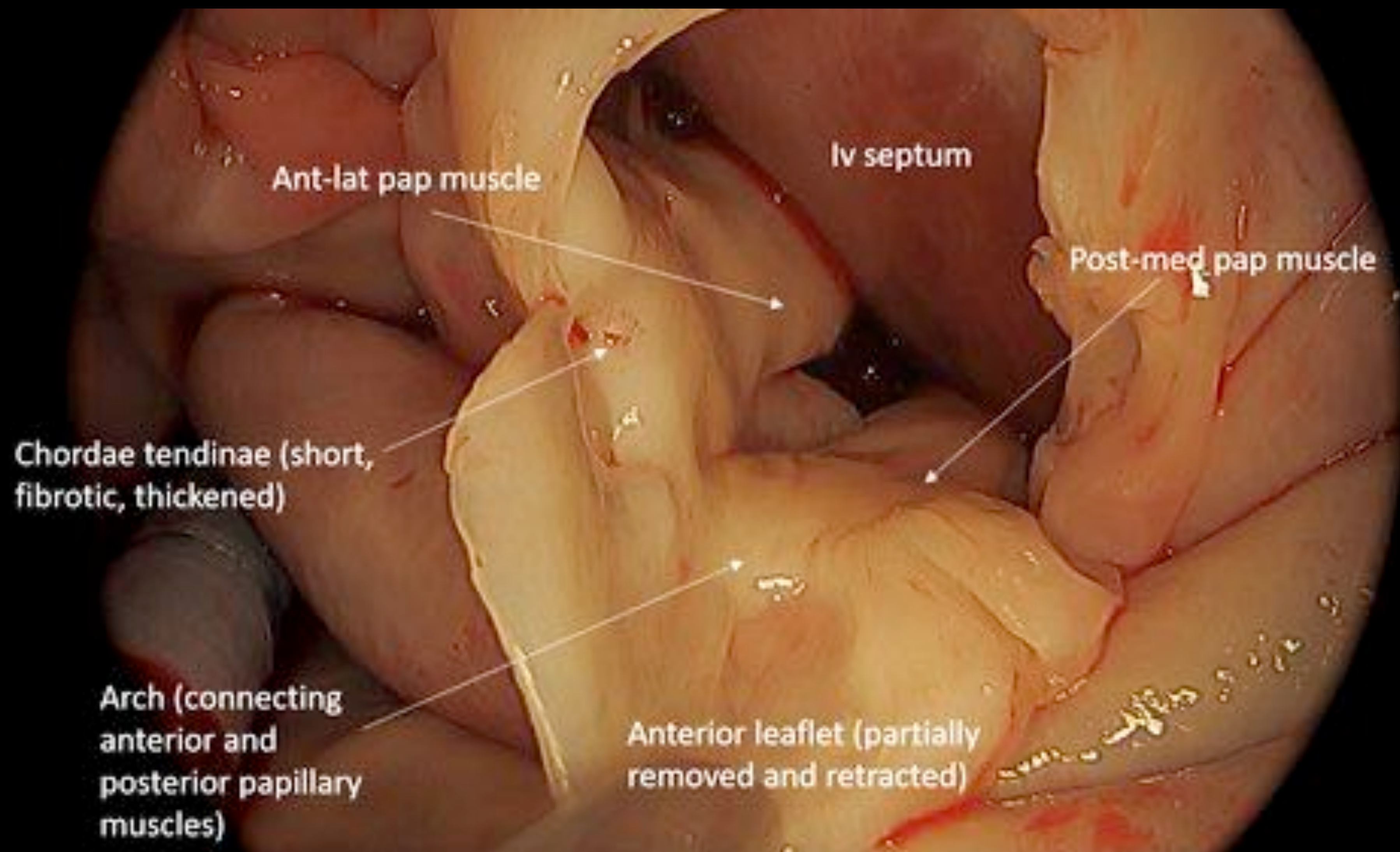


Arcade/hammock

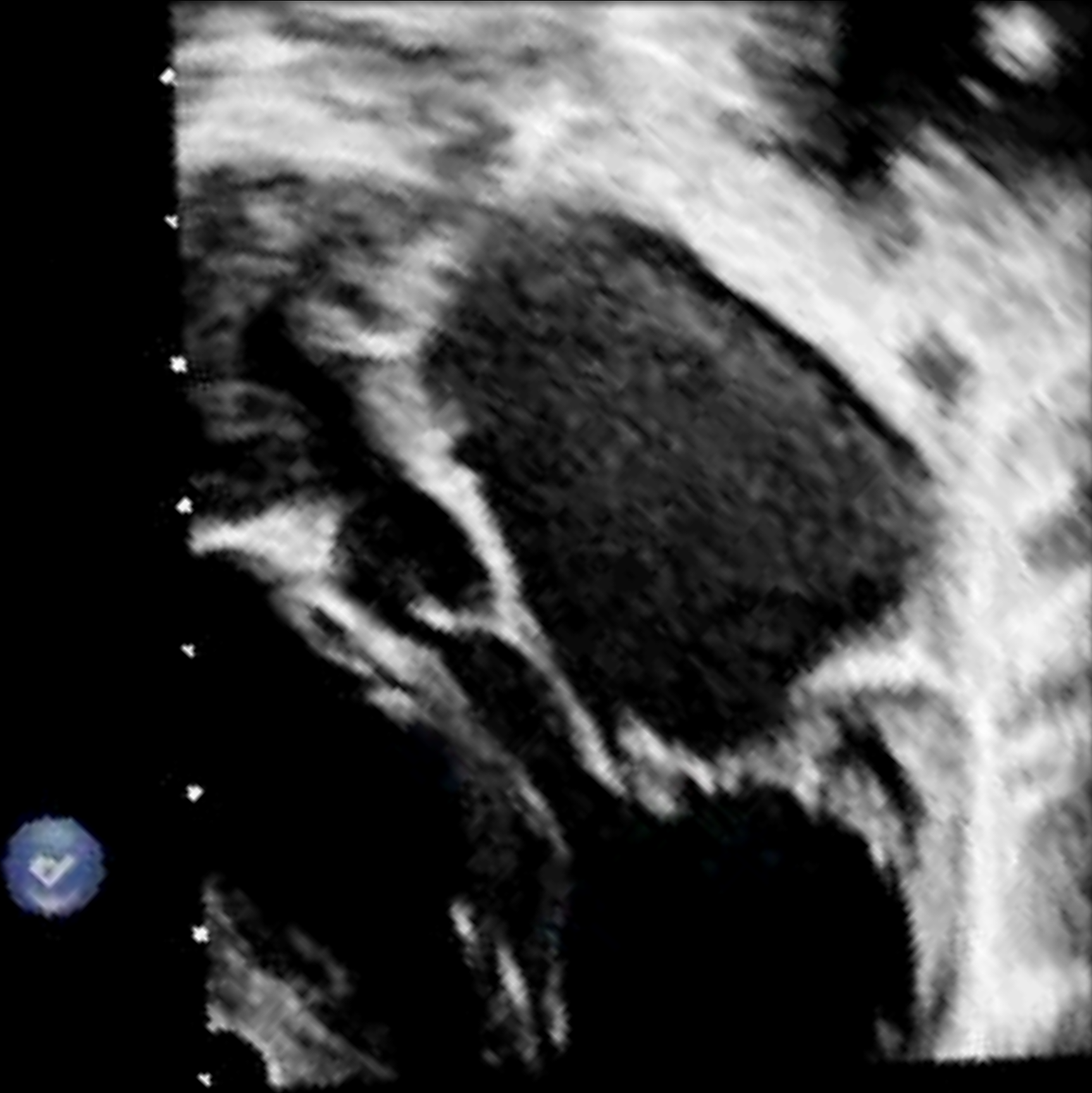
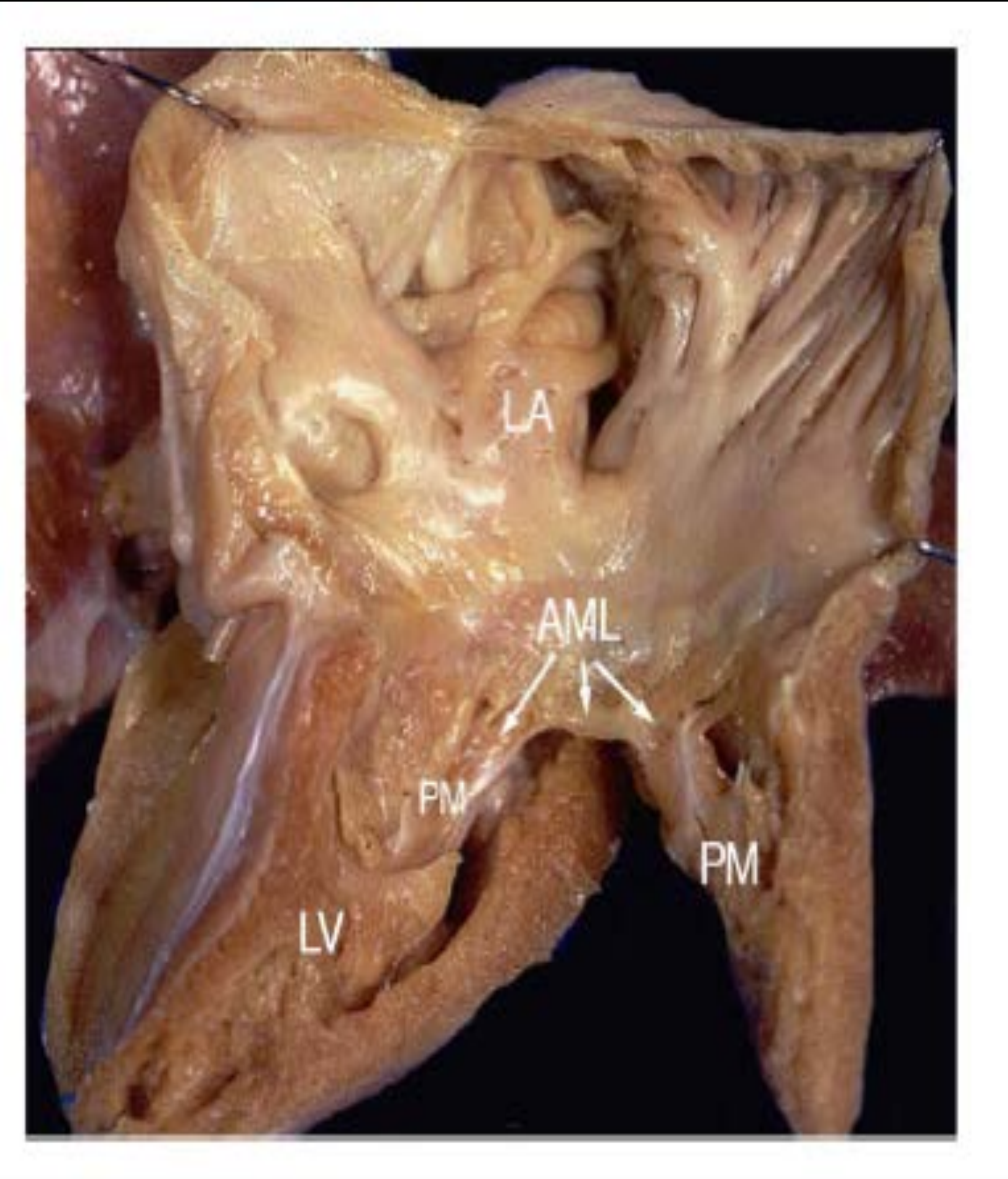




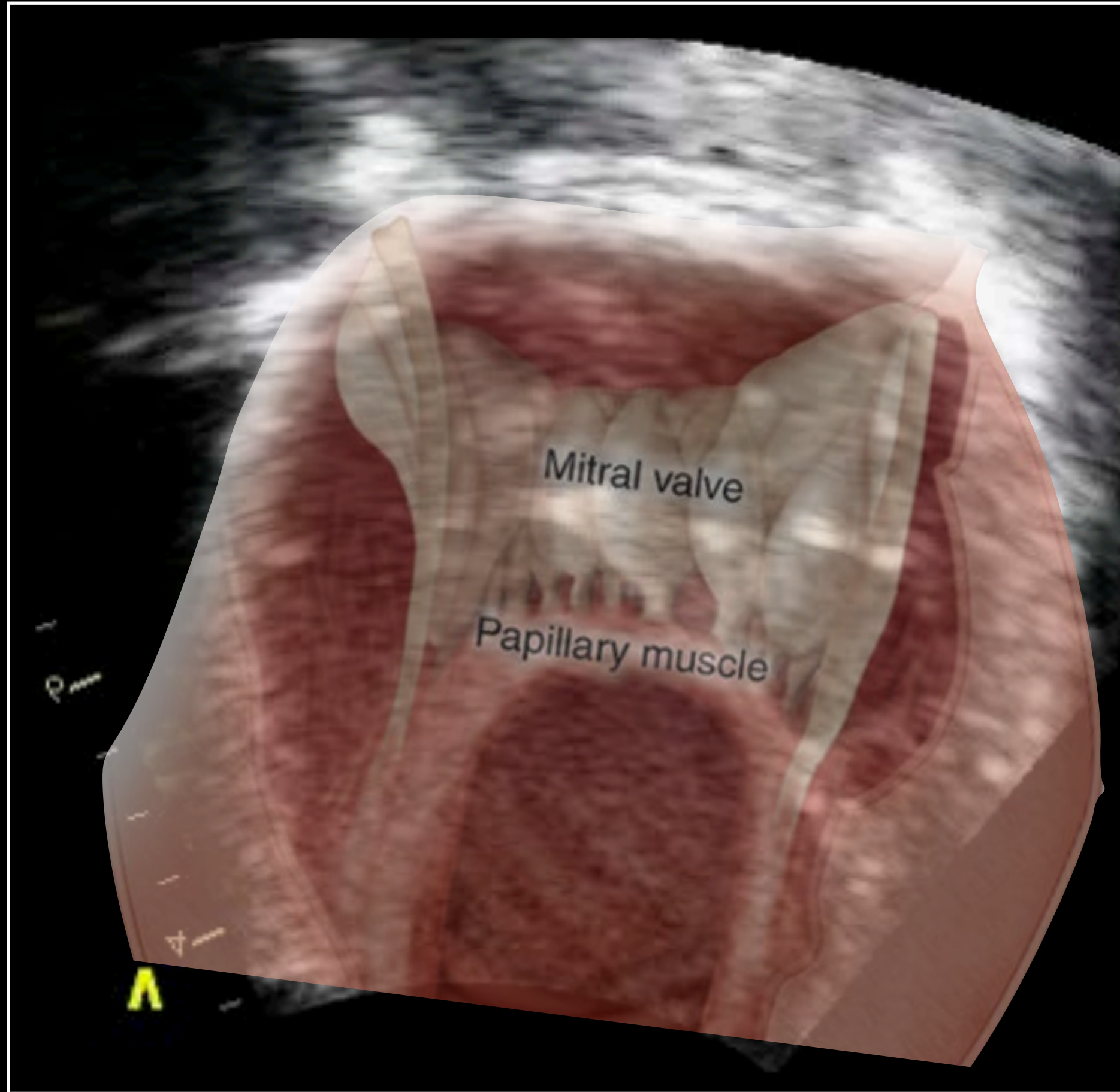
Arcade/hammock



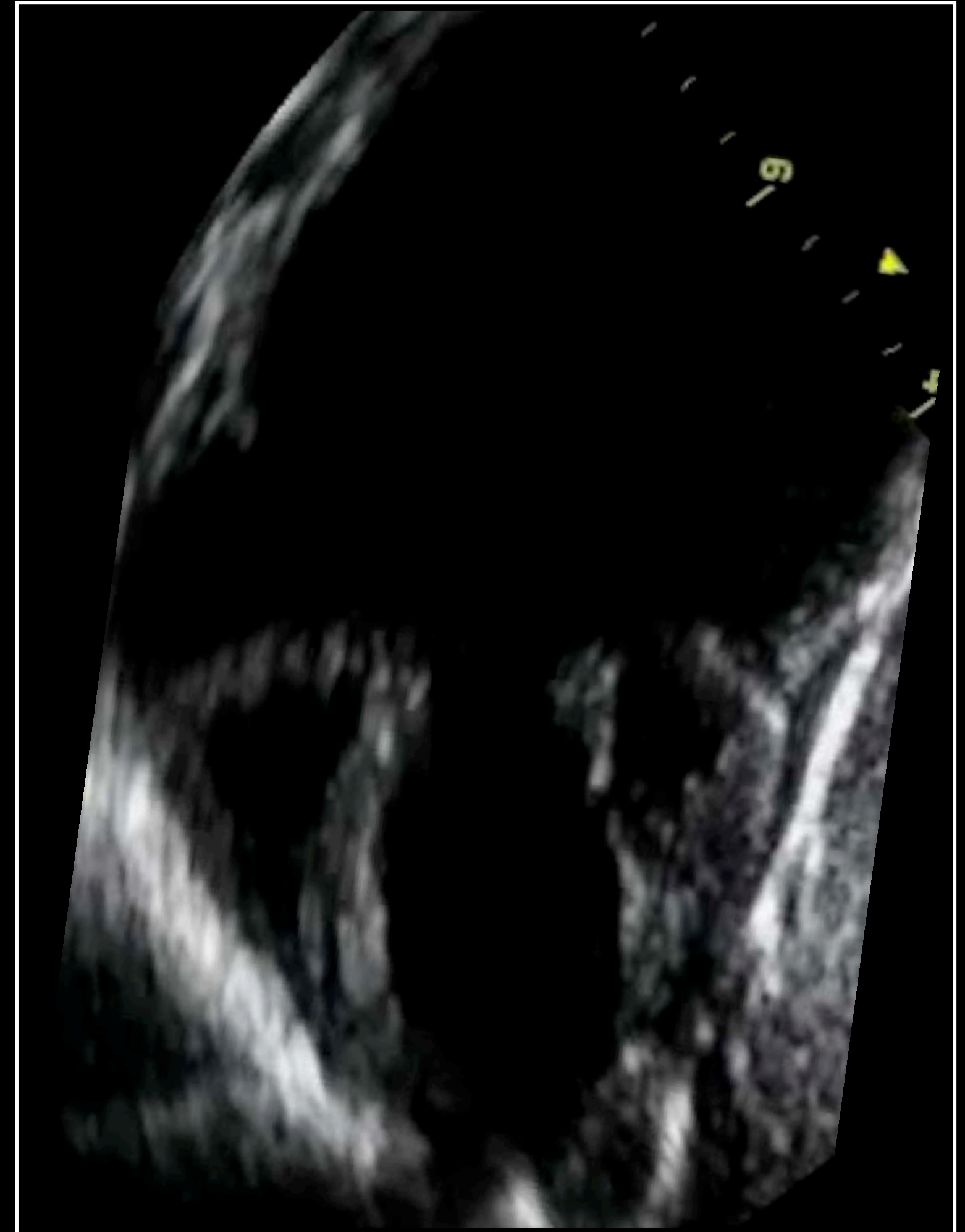
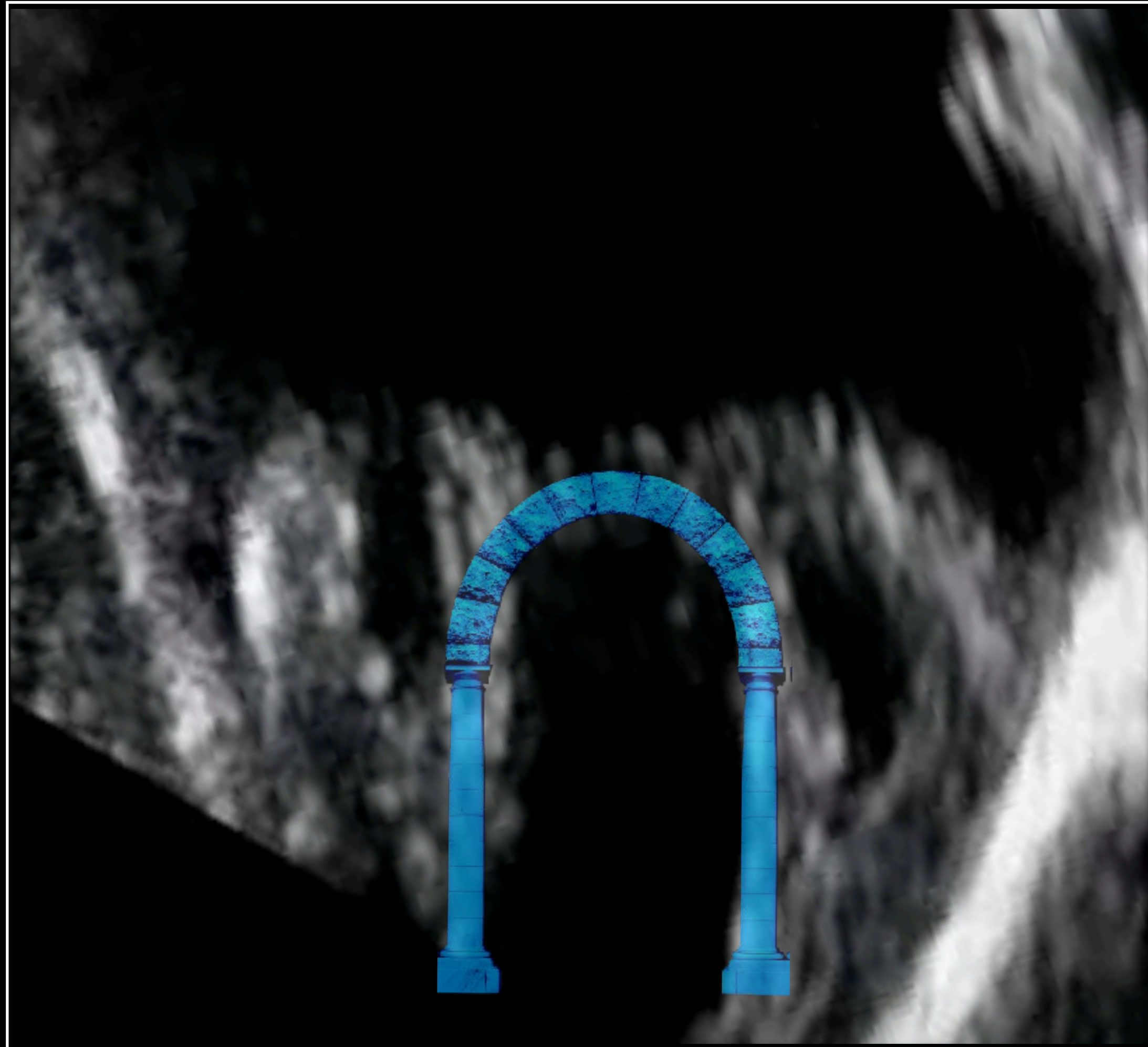
Arcade/hammock



Arcade/hammock

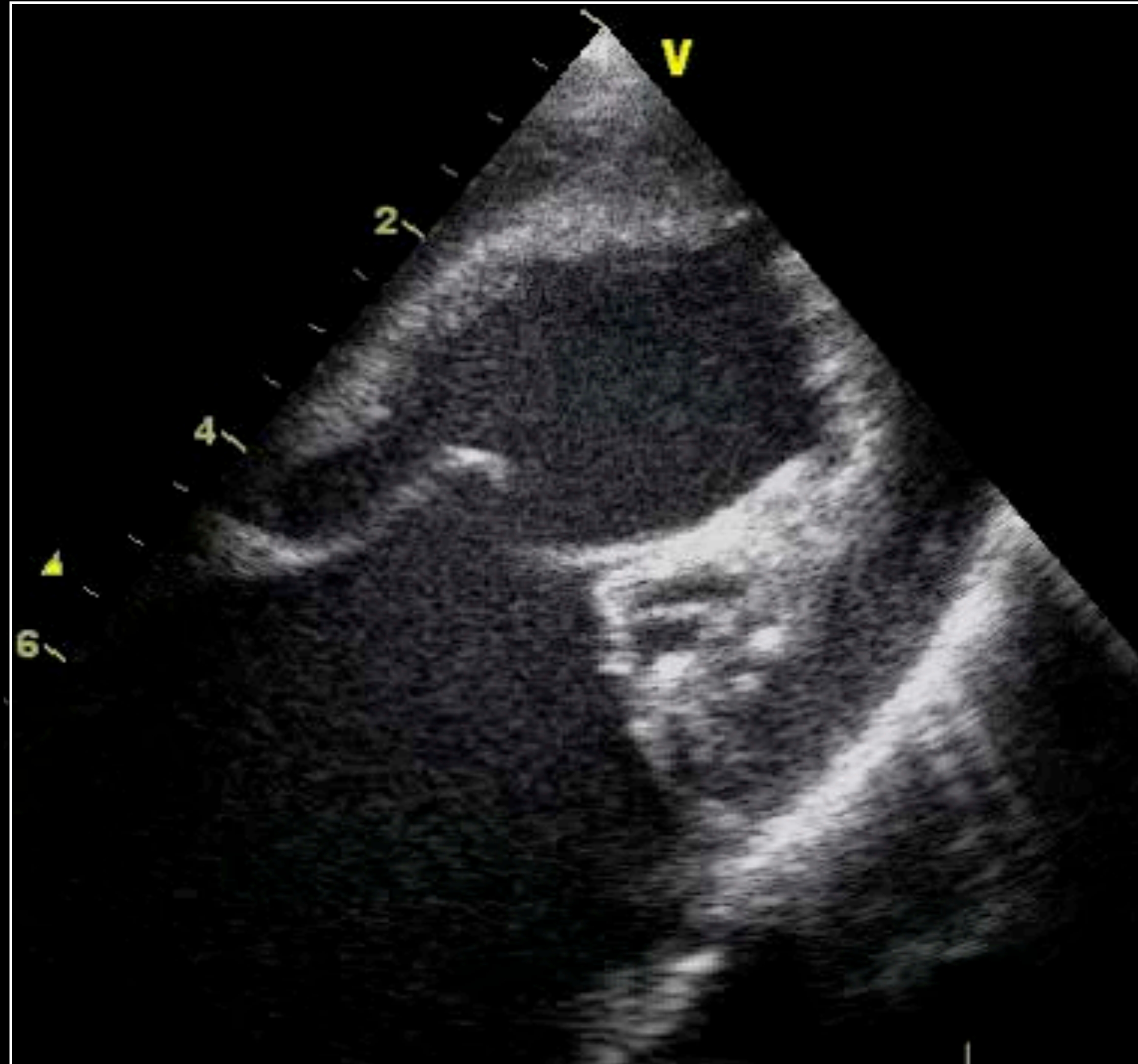


Arcade

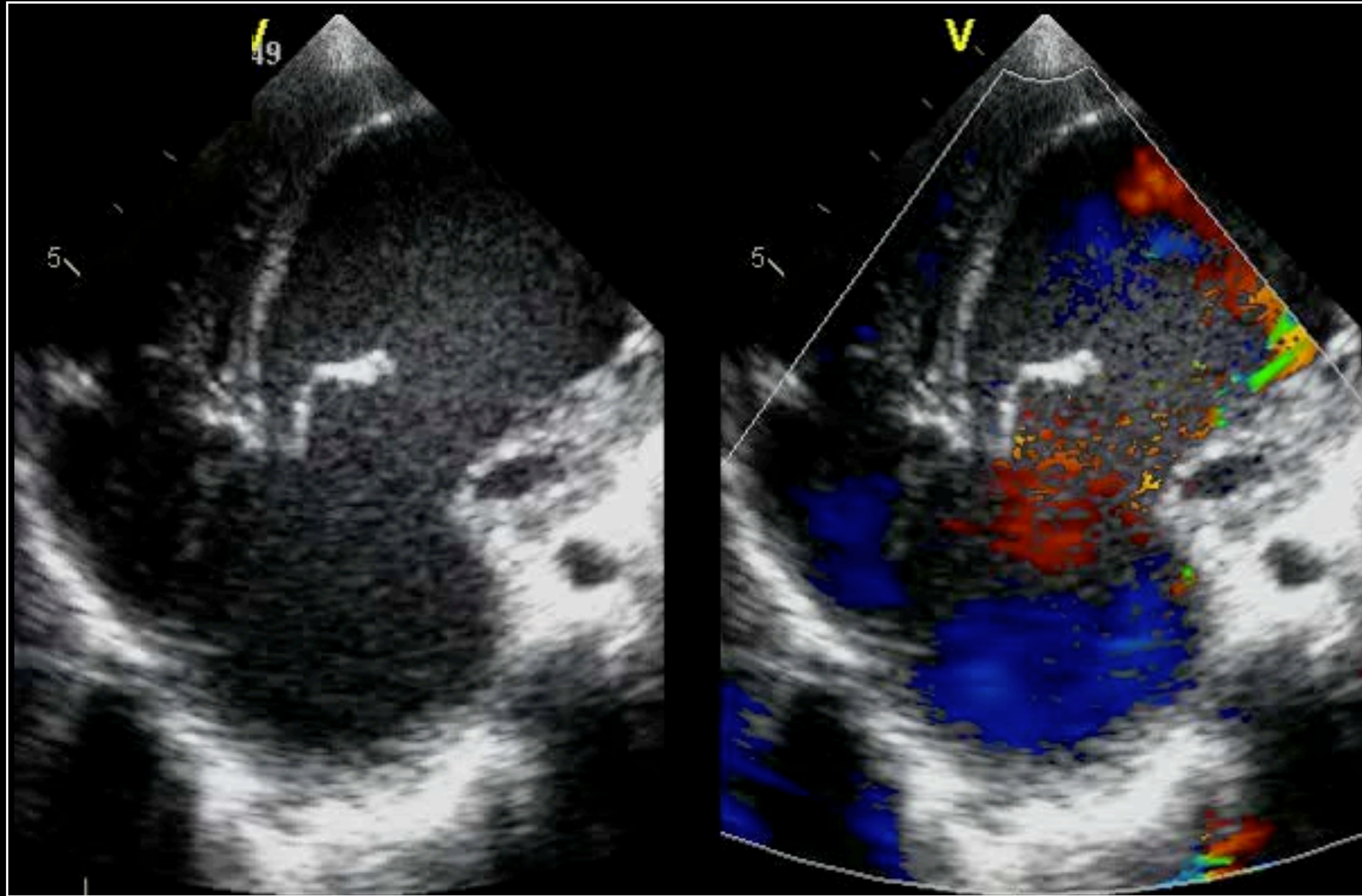


Anomalies of the mitral valve in CHD

ALCAPA – Mitral regurgitation - ischemic

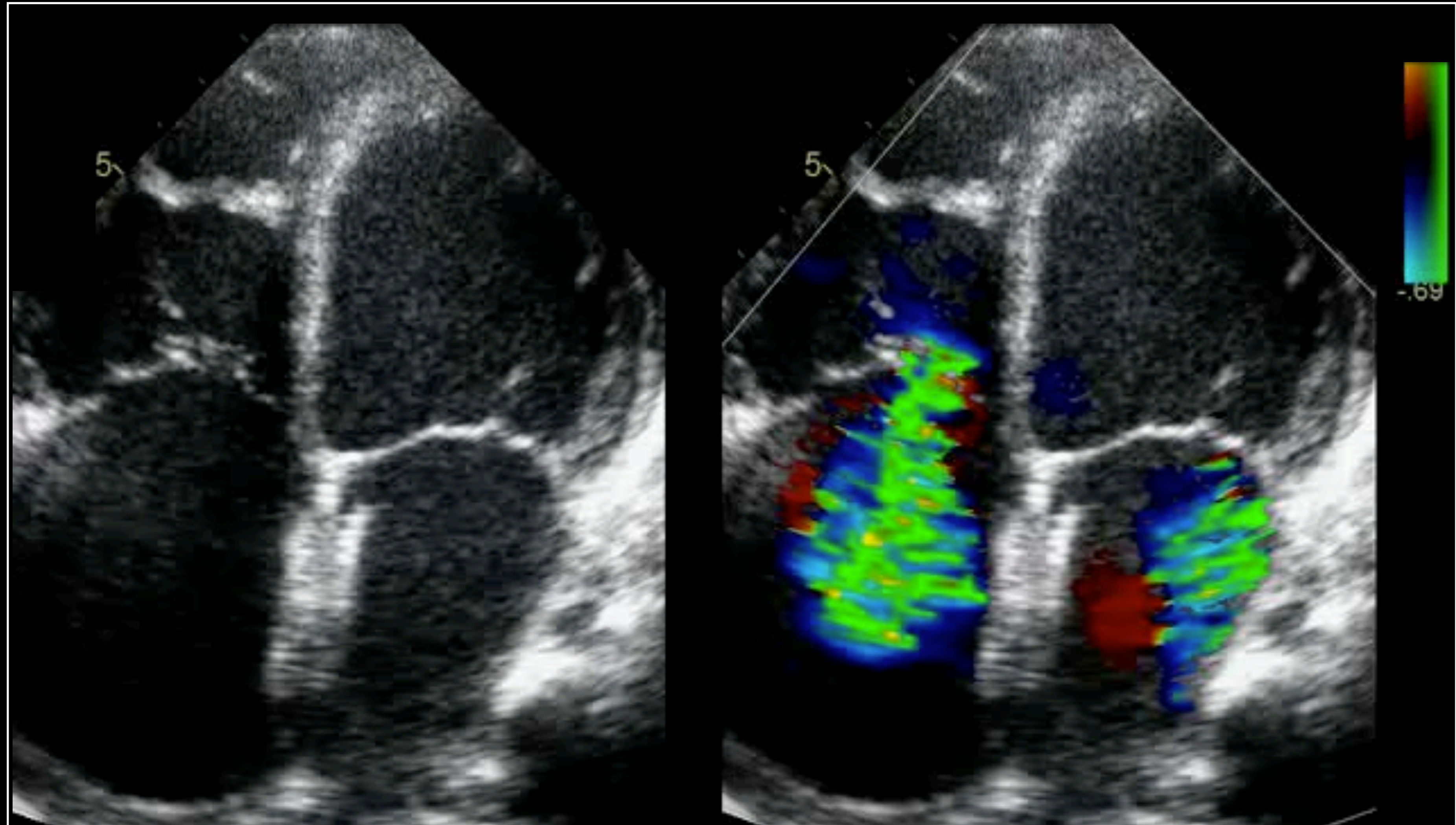


ALCAPA – Mitral regurgitation - ischemic

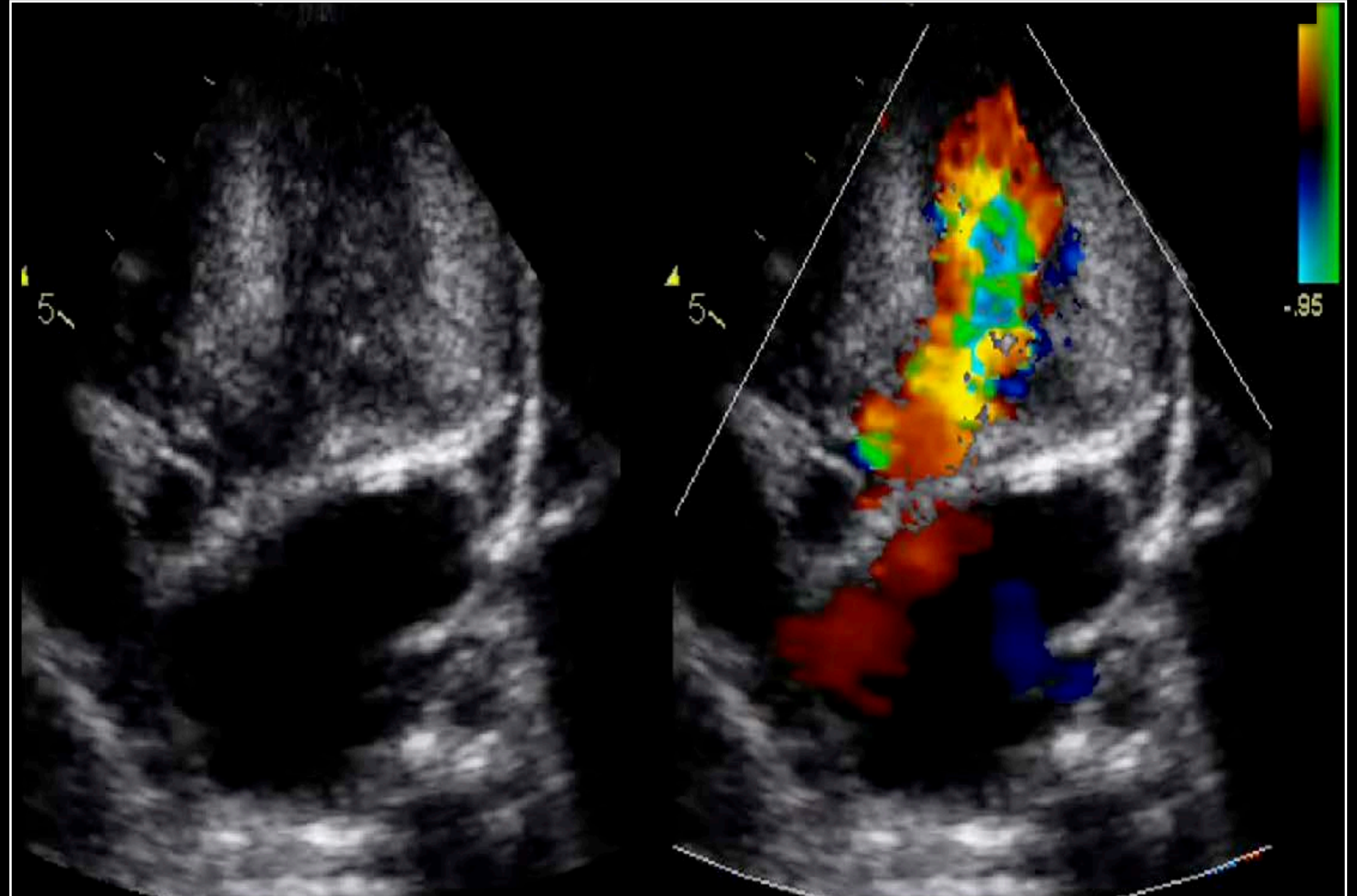
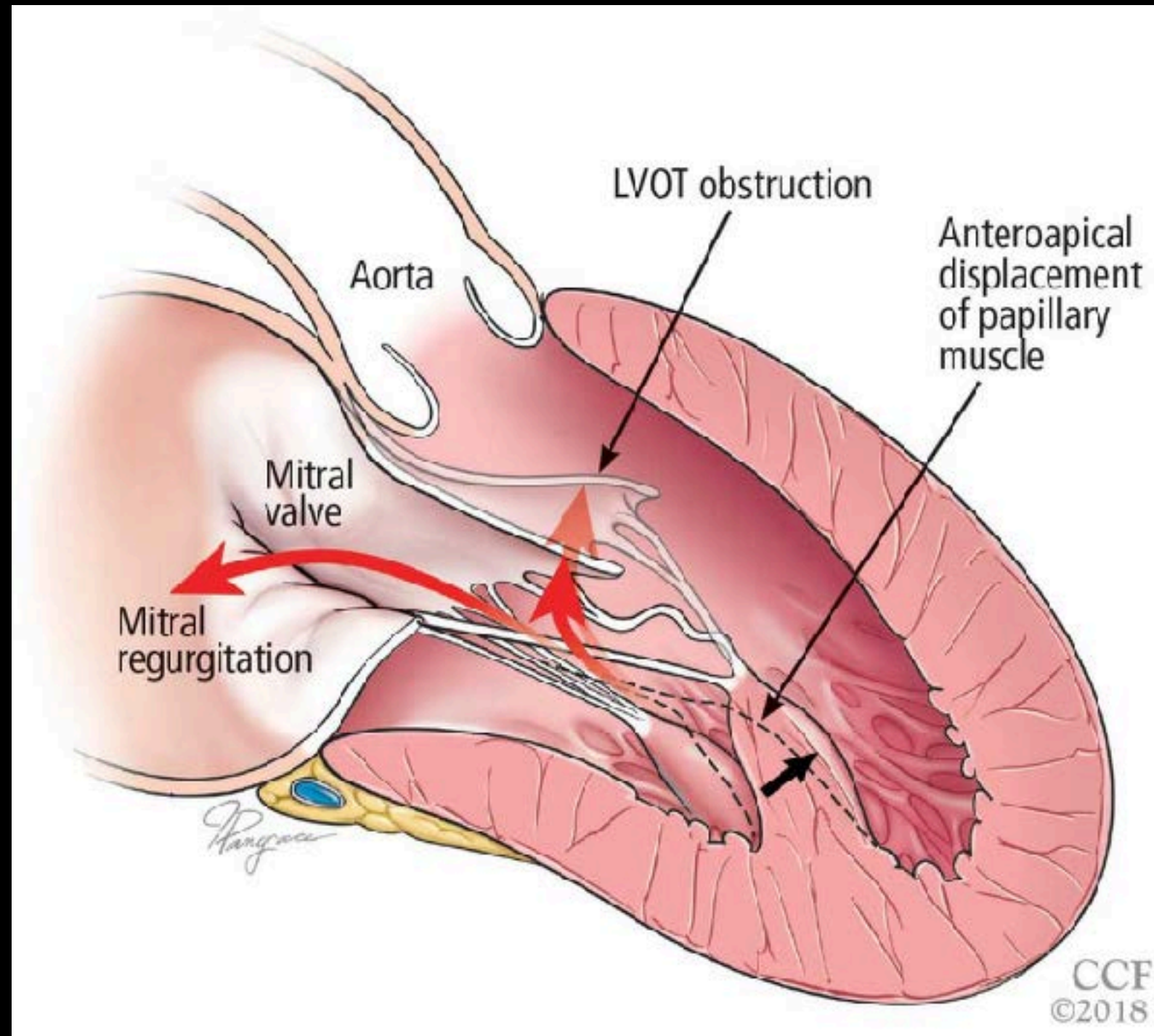


Acquired anomalies of the mitral valve

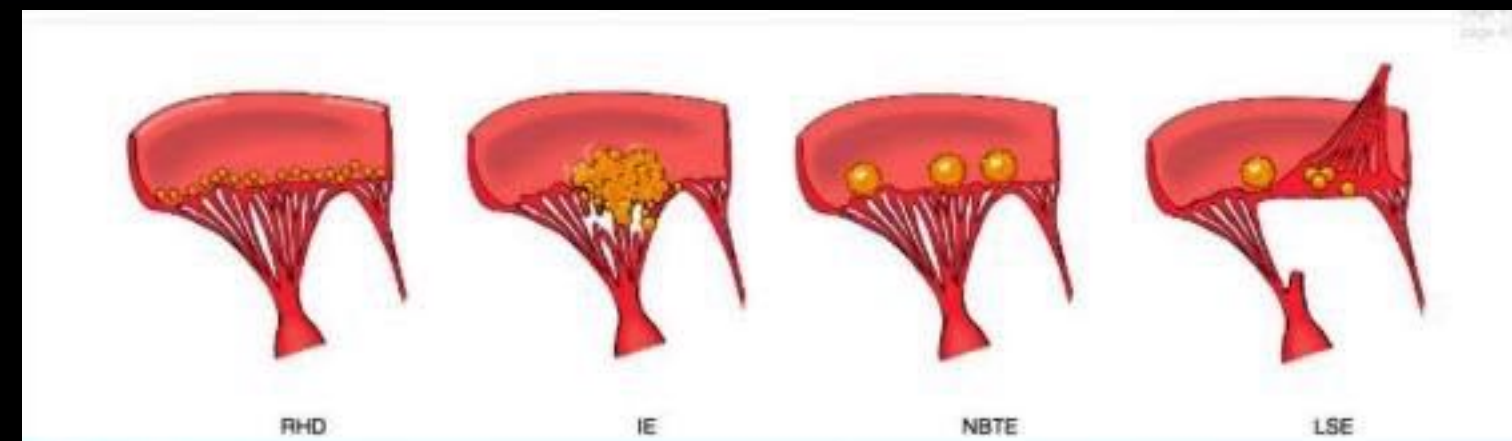
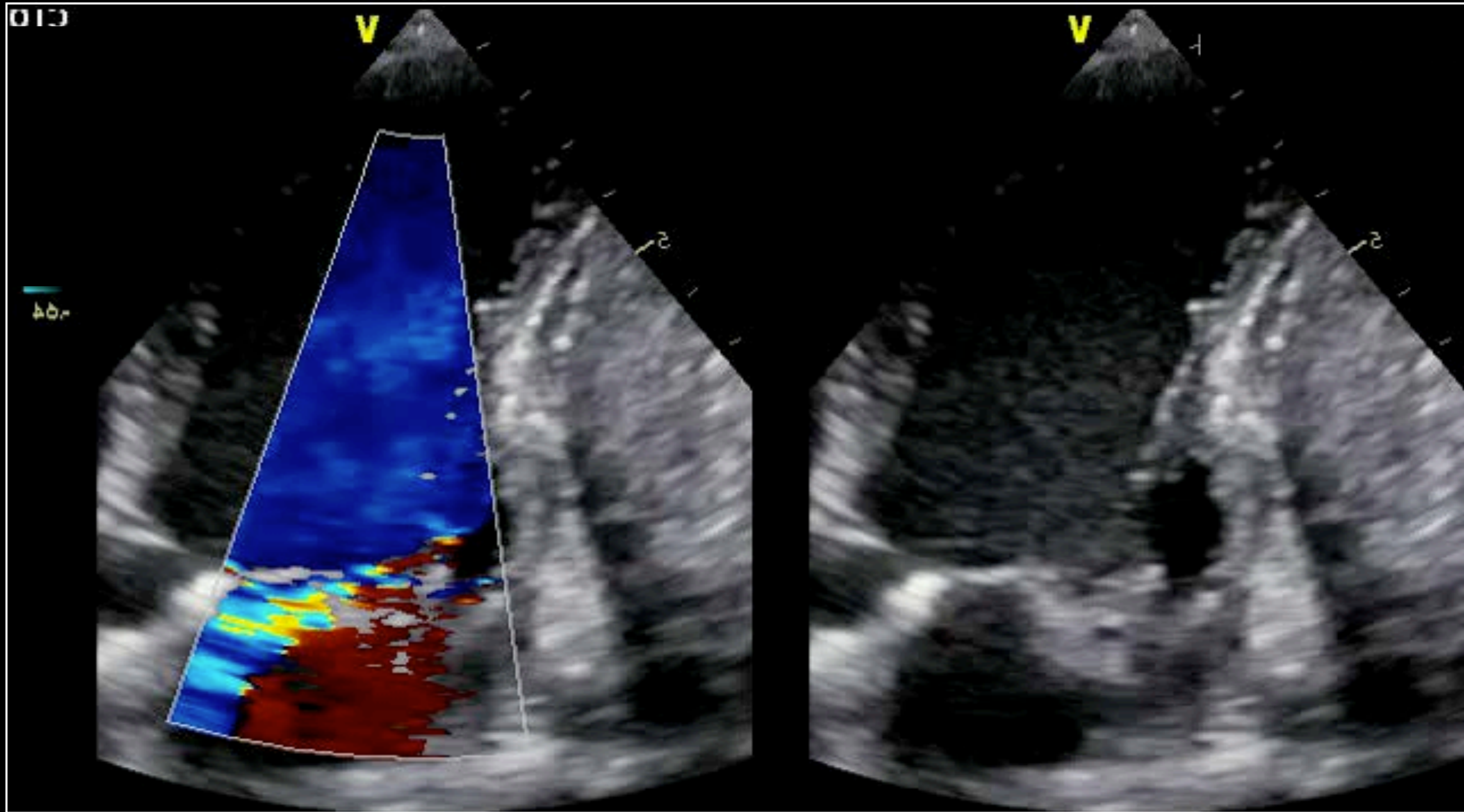
Dilated cardiomyopathy



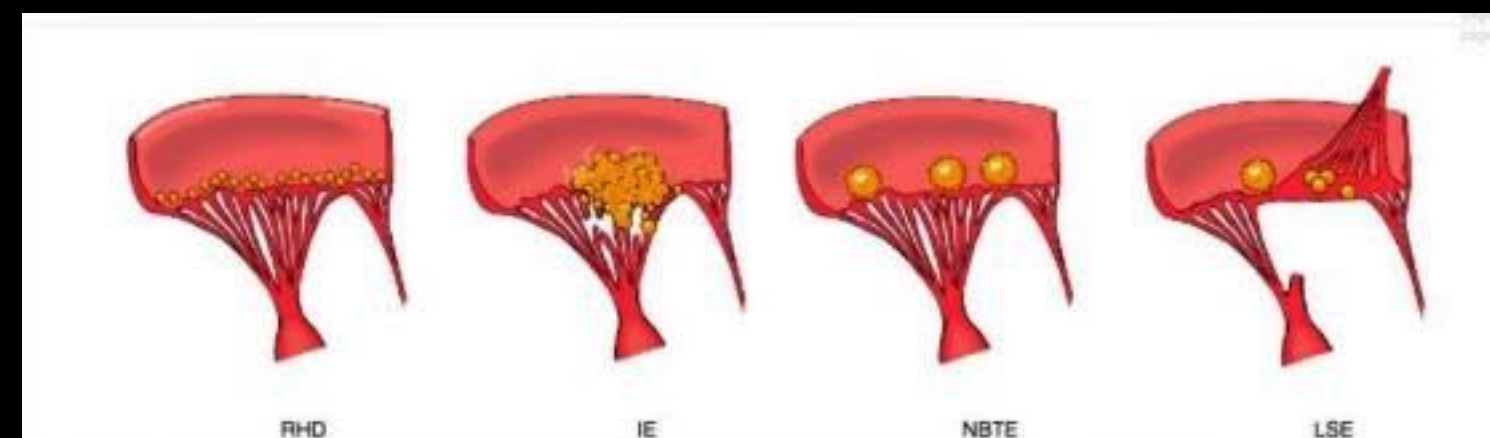
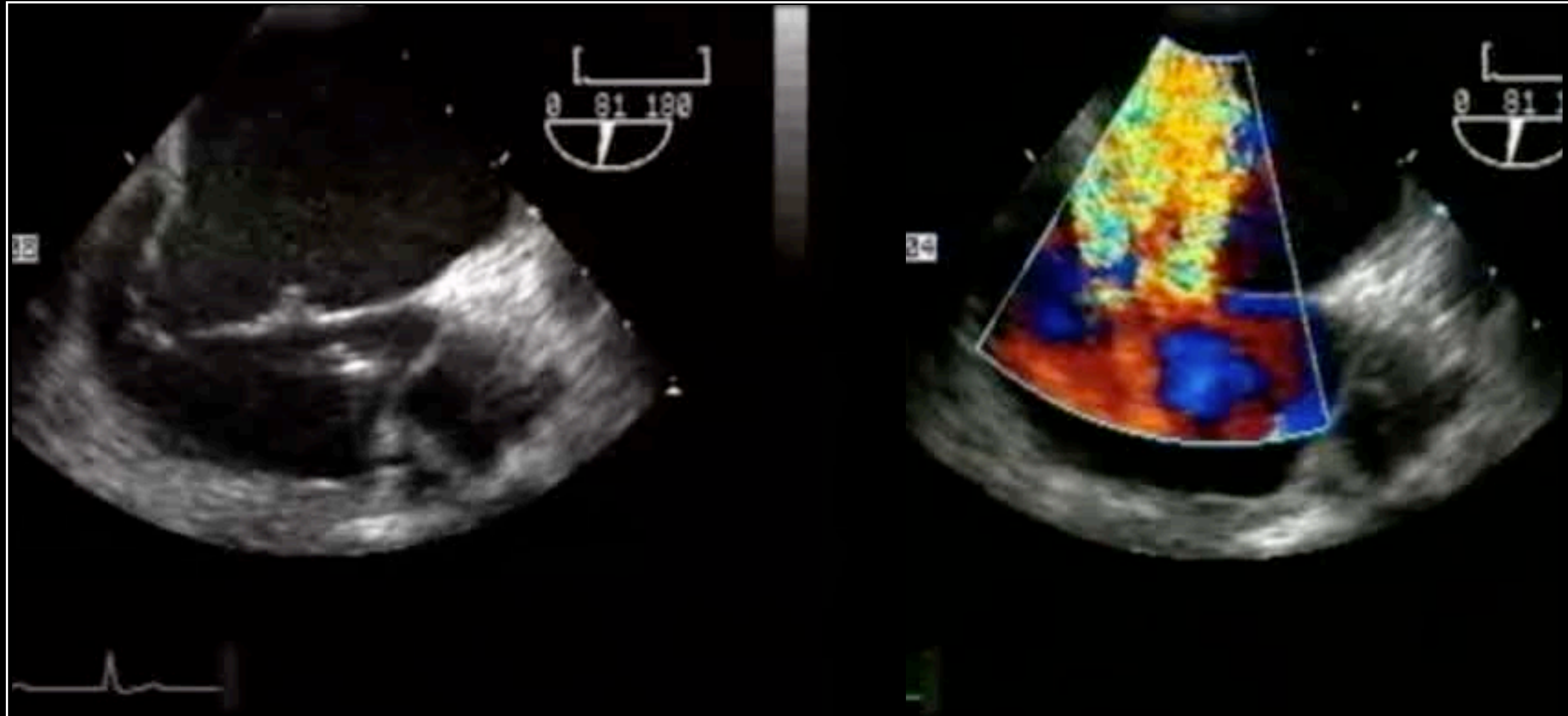
Hypertrophic cardiomyopathy



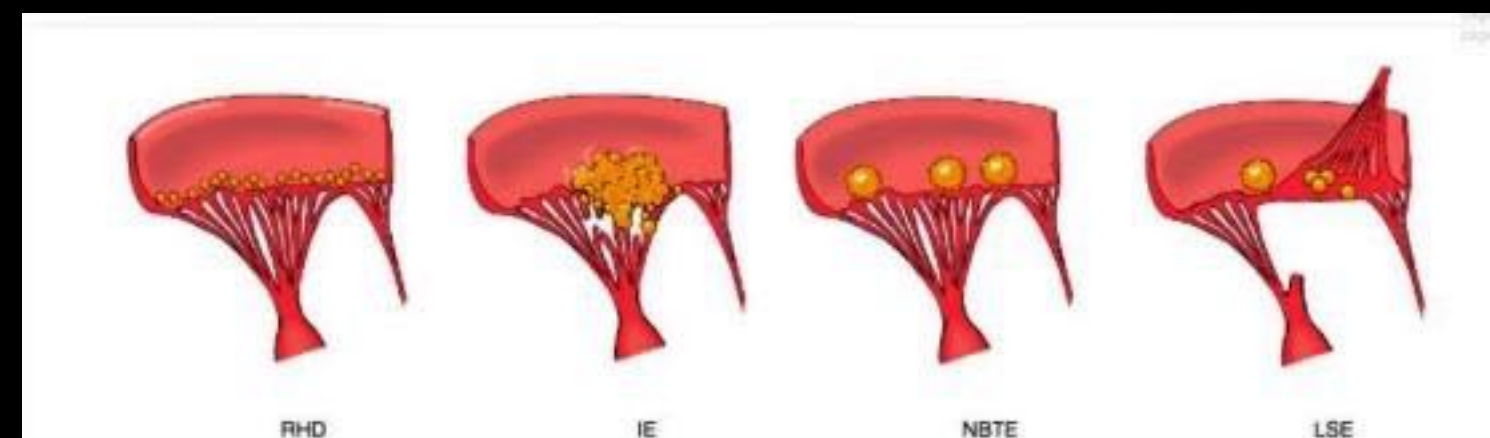
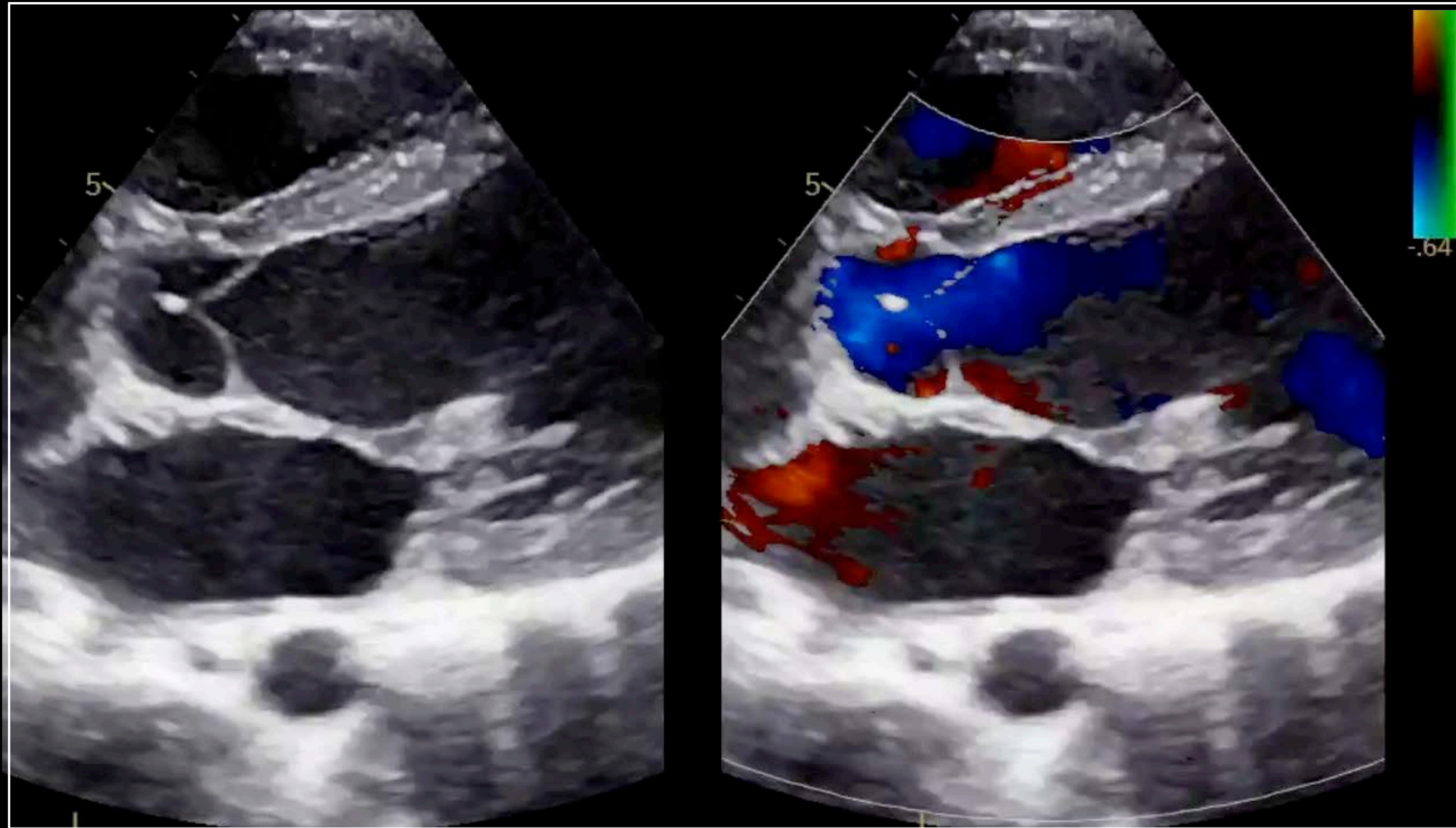
Mitral valve endocarditis



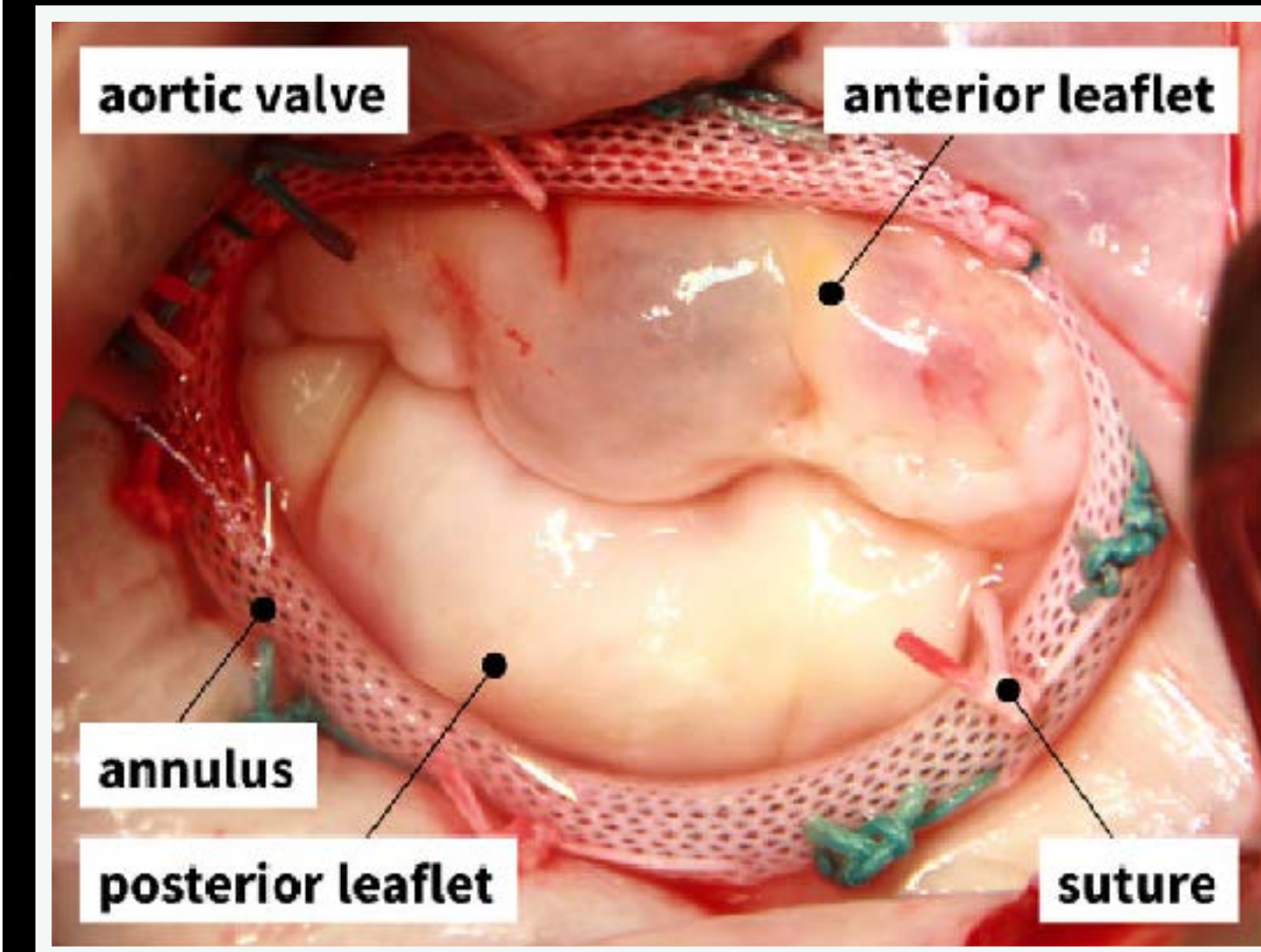
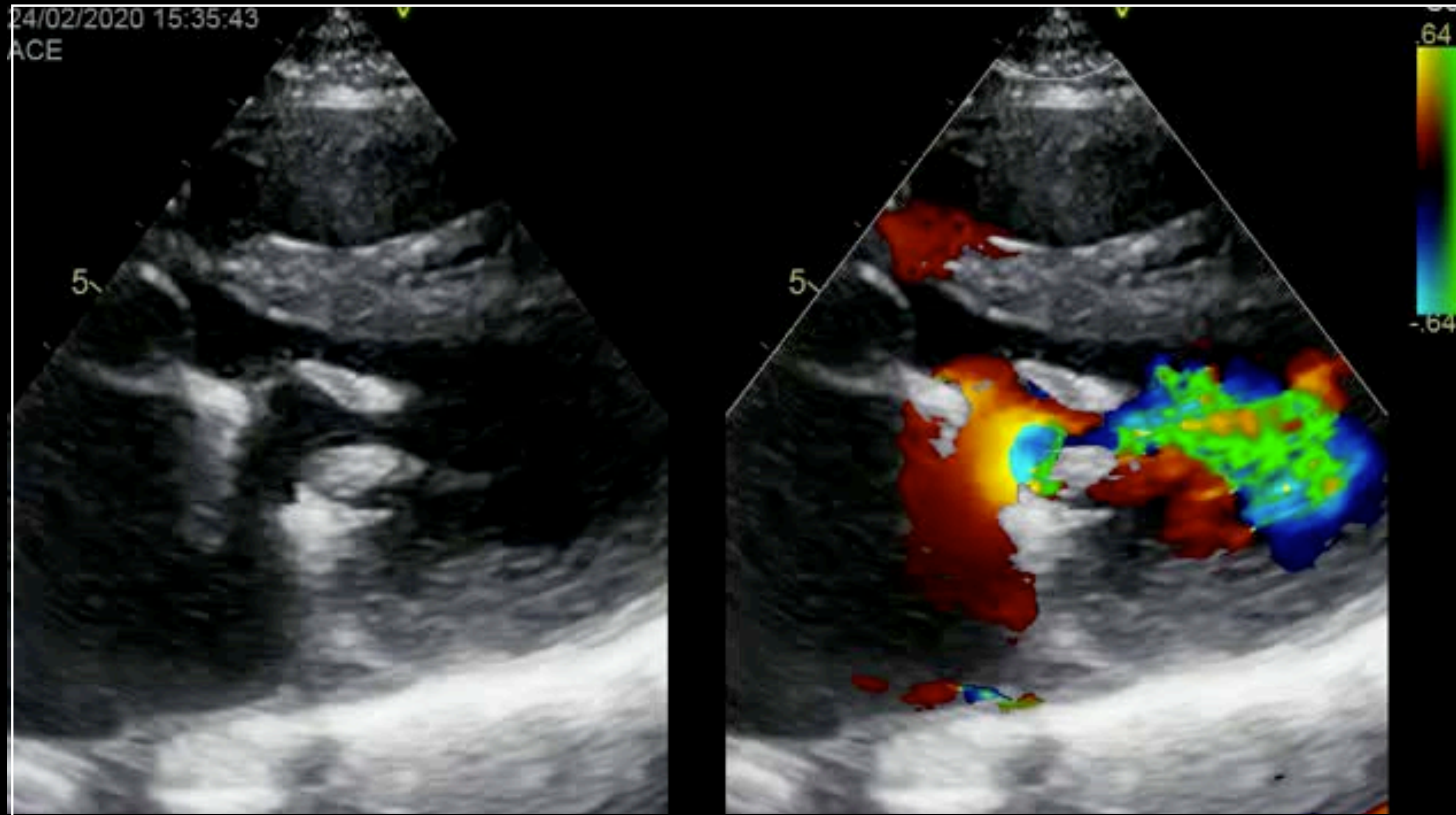
Mitral valve endocarditis



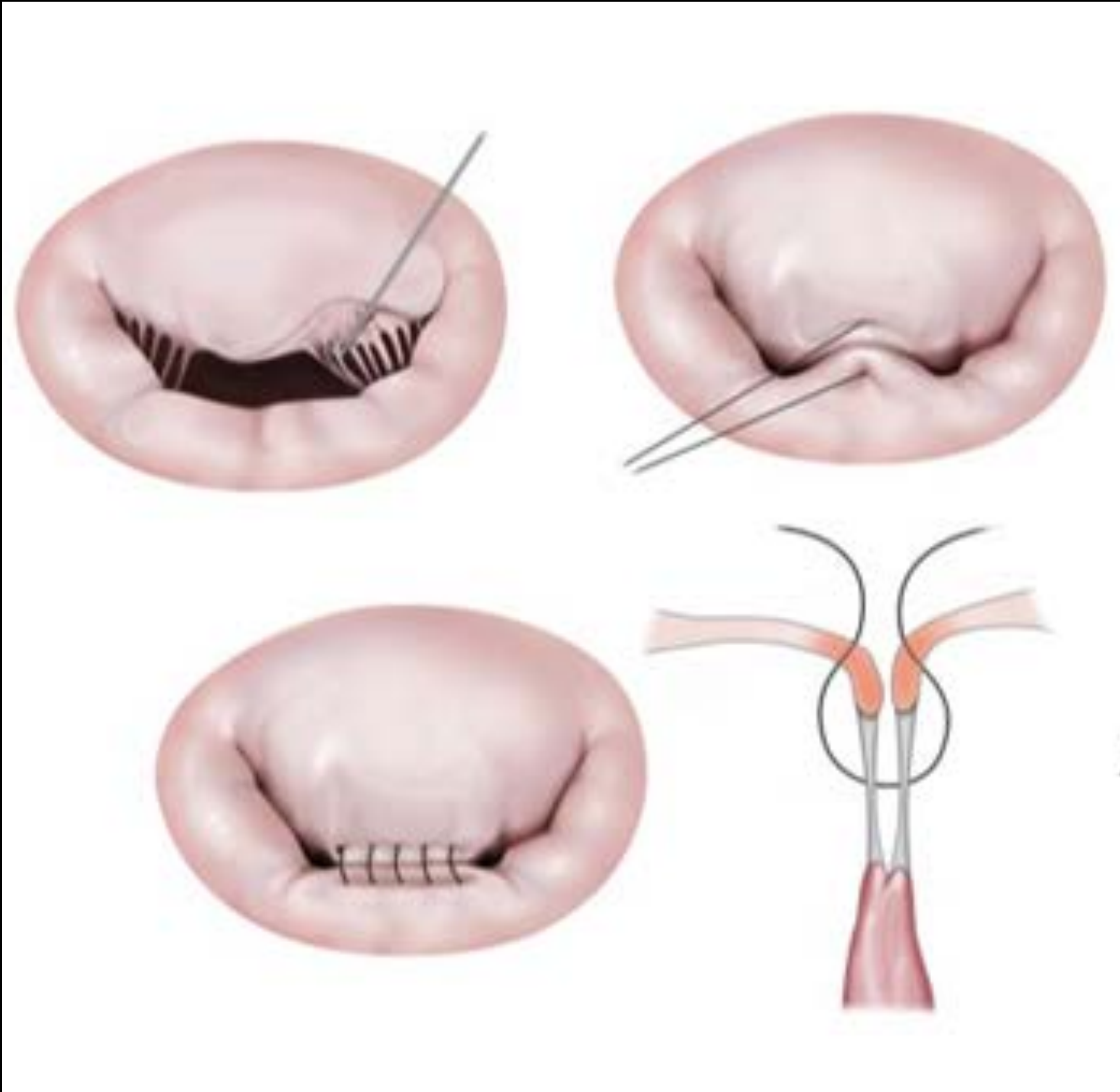
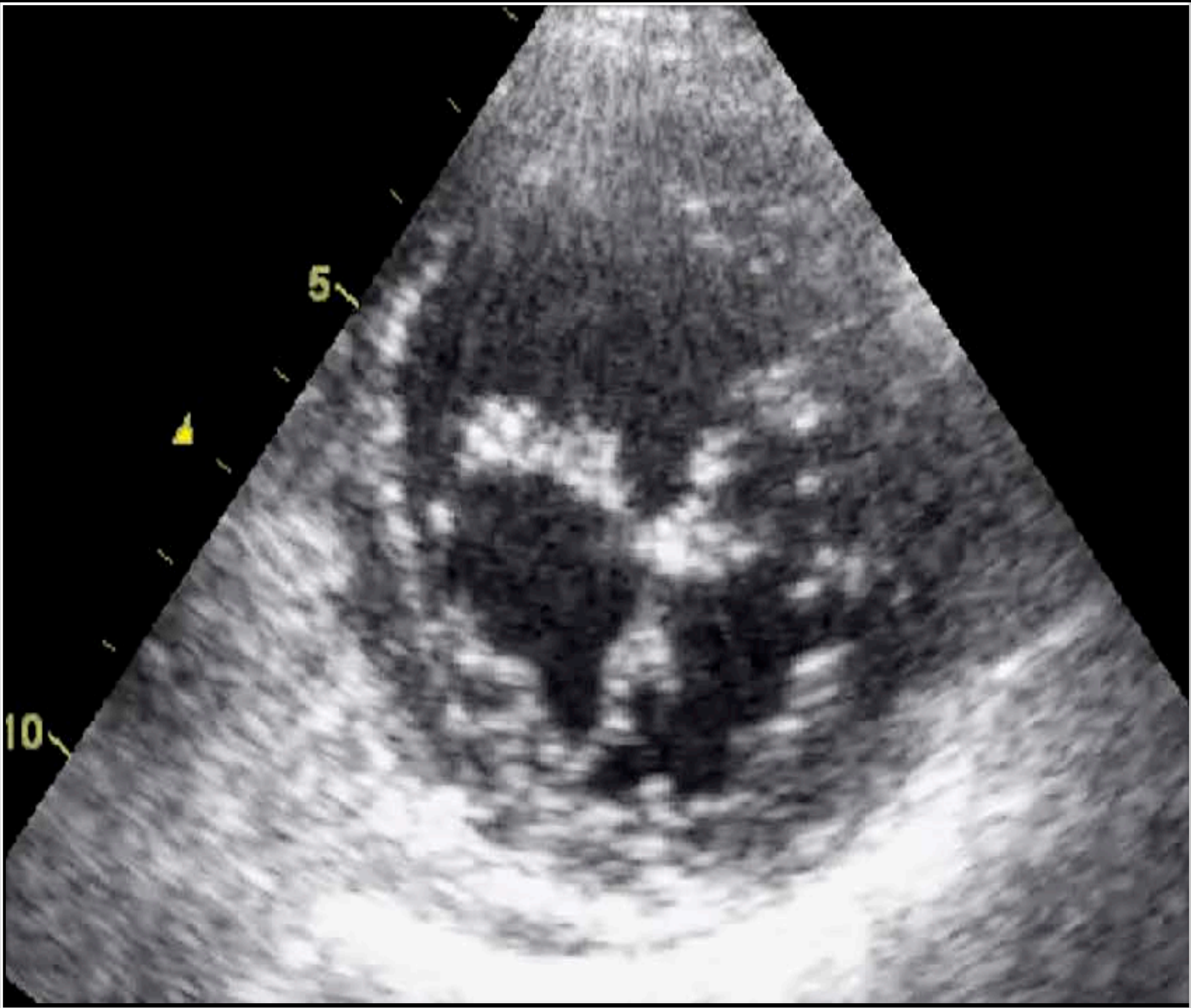
Rhumatism



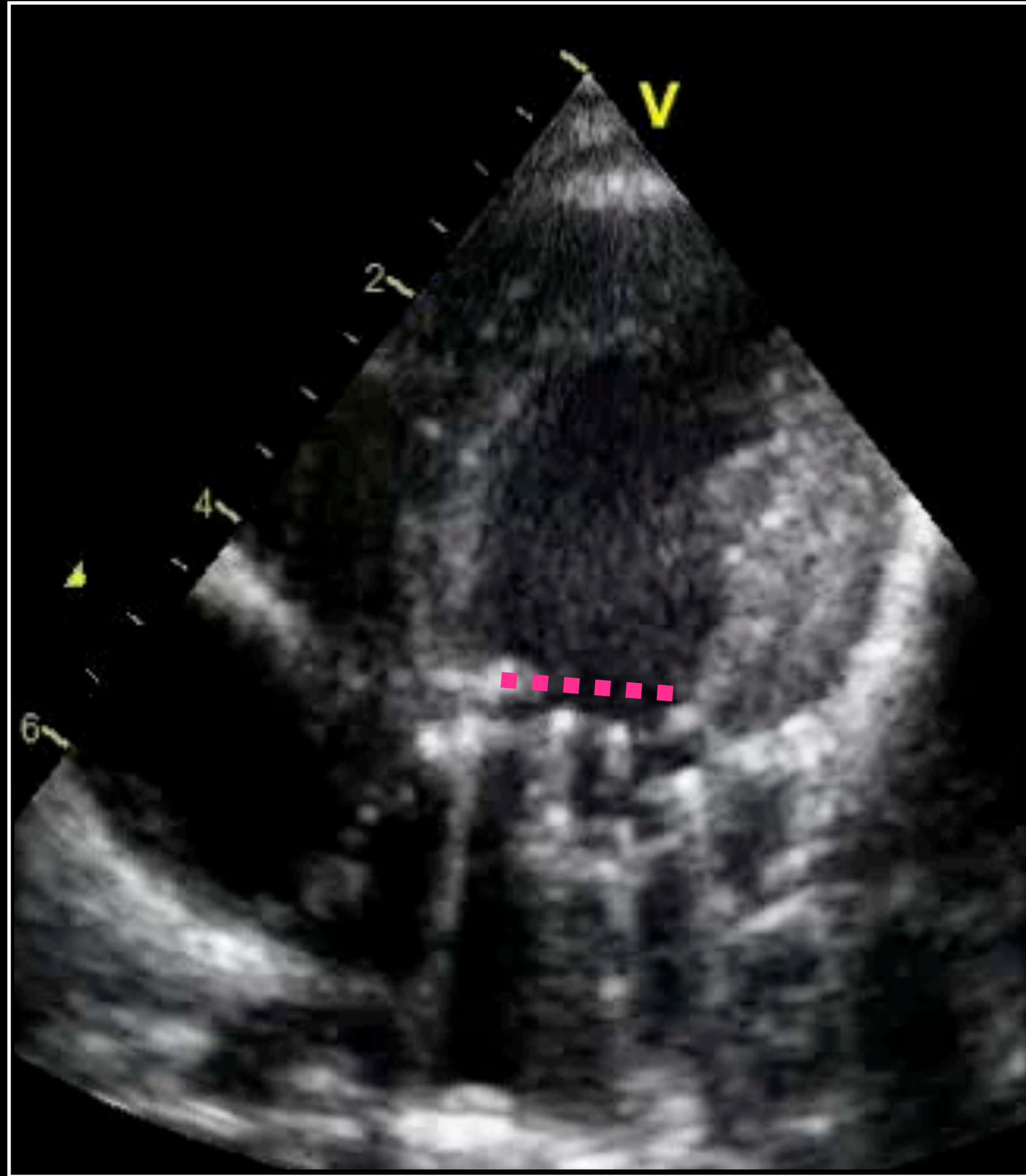
Mitral ring



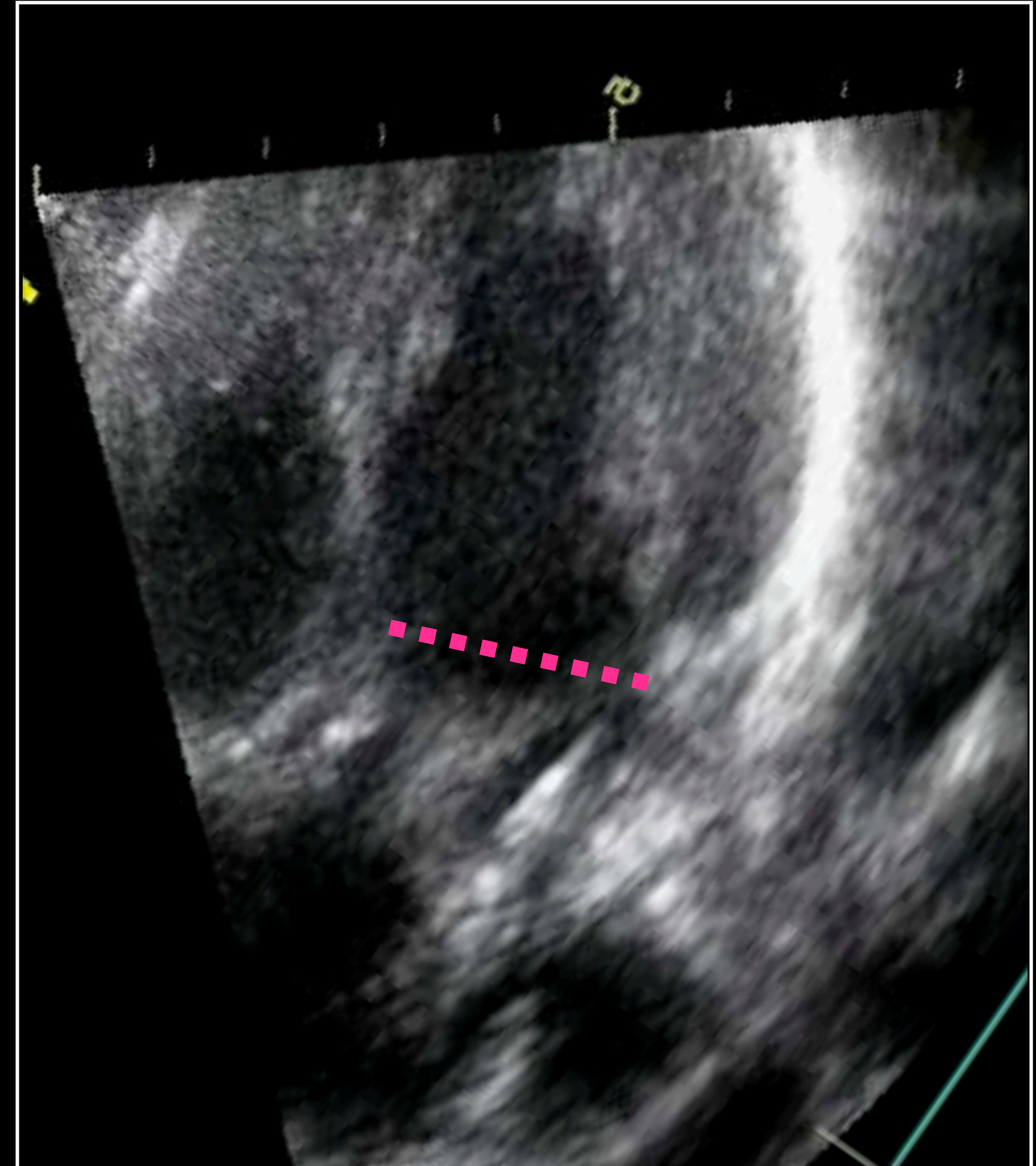
Alfieri repair



Mitral prosthesis



In left atrium



In left atrium



CPC
Cardiomyopathies
Paris
Centre



Collective ignorance is our motivation
Curiosity is our strength
Research is our path

Individual experience is the brake
Indifference is the weakness
Argument from authority is the threat