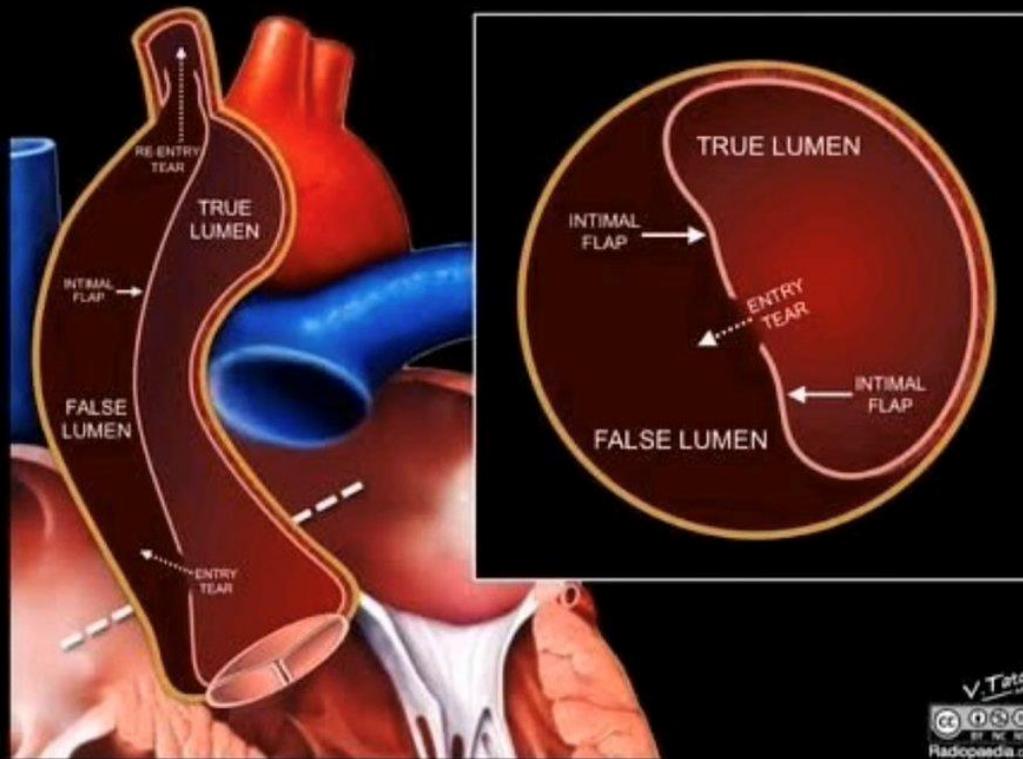


# AORTIC DISSECTION





DR. ROBERT  
MARIASI

Radiology and Diagnostic  
Imaging

# RADIOLOGICAL DIAGNOSTICS OF AORTIC DISSECTION

A RADIOLOGICAL OVERVIEW OF AORTIC PATHOLOGY



A group of injuries in which blood enters the medial layer of the aortic wall and dissects the wall longitudinally.

Acute: first 14 days  
Subacute: 14 days - 3 months  
Chronic: >3 months

## CT Findings

- Intimal Flap



- Double Lumen



- Slow Flow False Lume



- Aortic Dilatation



## Plain Chest Radiography

- Widened Mediastinum
- Irregular Aortic Contour
- Pleural Effusion
- 25% Normal



## True Lumen

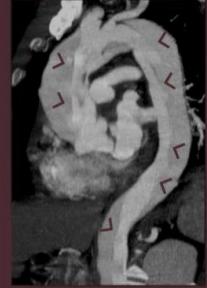
- Frequently compressed
- Wall calcifications
- Coeliac Trunk, SMA and Right renal artery arises from the true lumen



## False Lumen

- Frequently larger
- Delayed opacification
- Beak sign (acute angle of the false lumen).

Involves ascending and descending aorta



Involves only the ascending aorta



Involves descending aorta only, after the origin of the left subclavian artery



Type I

Type II

Type III

## DeBakey Classification

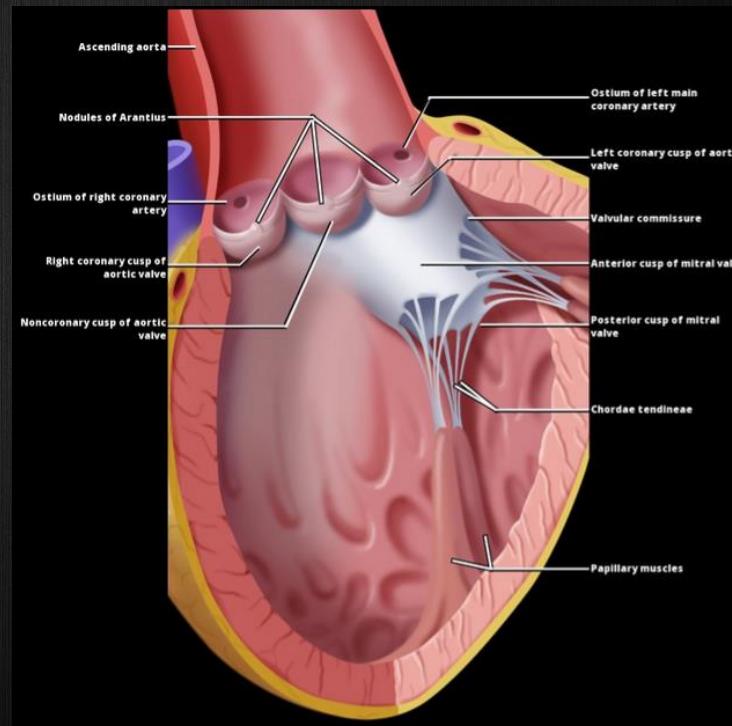
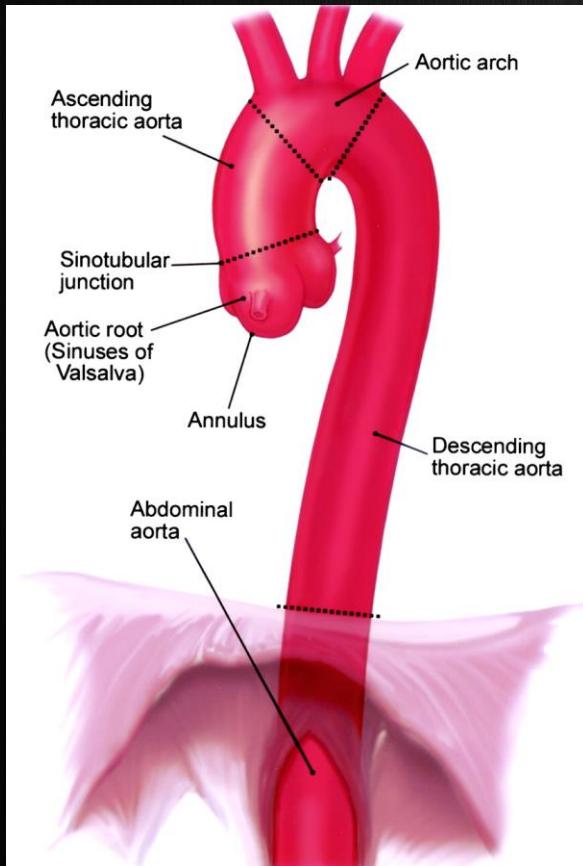
Type A

## Stanford classification

Type B

## REFERENCES

- Gaillard, F. (2023). Aortic dissection | Radiology Reference Article | Radiopaedia.org. Radiopaedia. <https://doi.org/10.53347/rID-918>
- Levy, D., Goyal, A., Grigorova, Y., Farci, F., & Le, J. K. (2024). Aortic Dissection. In StatPearls. StatPearls Publishing. <http://www.ncbi.nlm.nih.gov/books/NBK441963/>



# Sinuses of Valsalva

- Also known as **aortic sinuses**
  - Anatomic spaces at the aortic root bounded internally by the aortic valve leaflets and externally by outward bulges of the aortic wall.
- The normal sinus diameter upper limit is usually taken as 40 mm (with some publications suggesting 36 mm for females) .
- Three sinuses
  - Right coronary or anterior
    - » gives rise to right coronary artery
  - Left coronary or left posterior
    - » gives rise to left main coronary artery
  - Noncoronary/posterior or right posterior

# Aorta

## ■ Sinuses of Valsalva

- Anatomic dilatations of the ascending aorta, which occurs just above the aortic valve.

## ■ Sinotubular junction

- Region of the ascending aorta between the aortic sinuses (of Valsalva) and where the normal tubular configuration of the aorta is attained.
- The superior attachments of the aortic valvar leaflets demarcate the level of the sinotubular junction.

