82 y/o male with chest pain

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Coronal CTA

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Coronal CTA

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Coronal CTA

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Axial CTA

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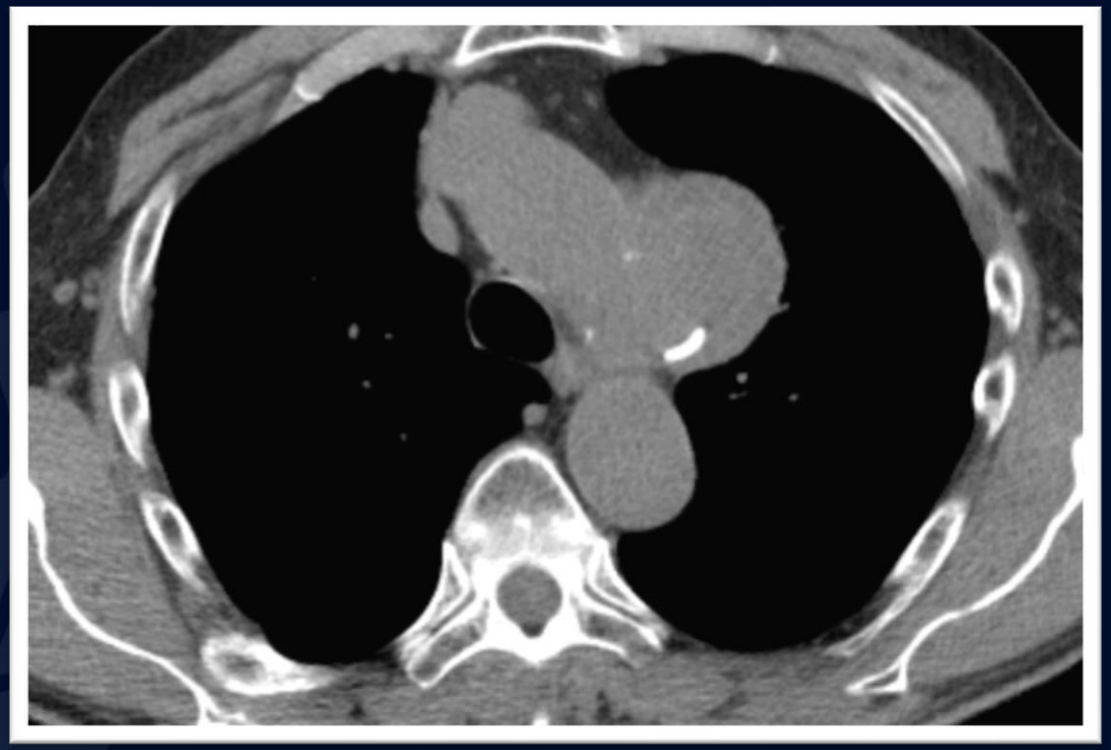

Axial CTA w/o contrast

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Thoracic Aorta aneurysm

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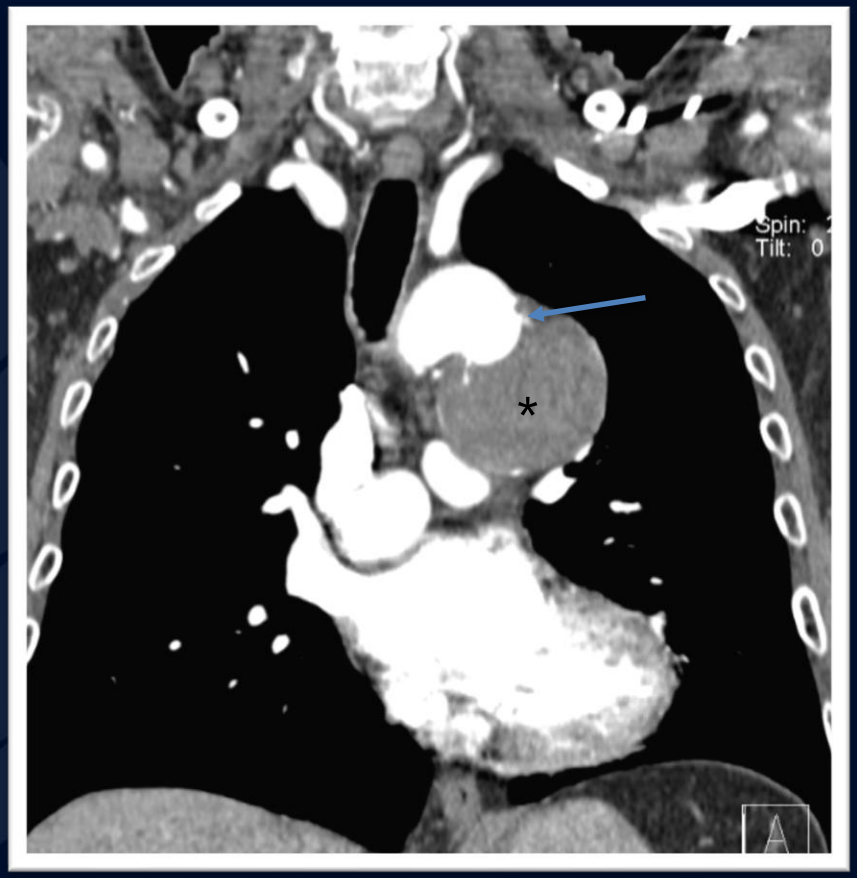

Coronal CTA showing a saccular aneurysm (*) of the inferior aortic arch just distal to the take-off of the left subclavian artery. Small outpouching of contrast into the aneurysm sac (arrow).

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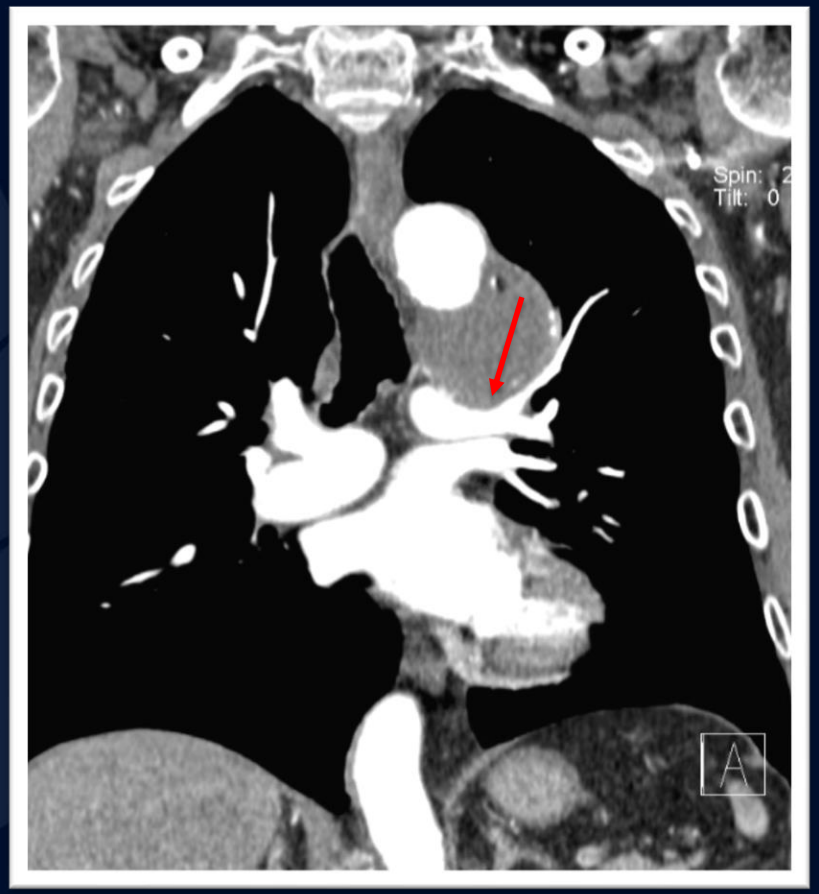

Coronal CTA showing the saccular aneurysm of the inferior aortic arch with some peripheral calcifications. Aneurysm demonstrates mass effect on the left pulmonary artery (arrow)

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Axial CTA demonstrating a saccular outpouching of the inferior aortic arch, with an outpouching of contrast into the aneurysm sac (*).

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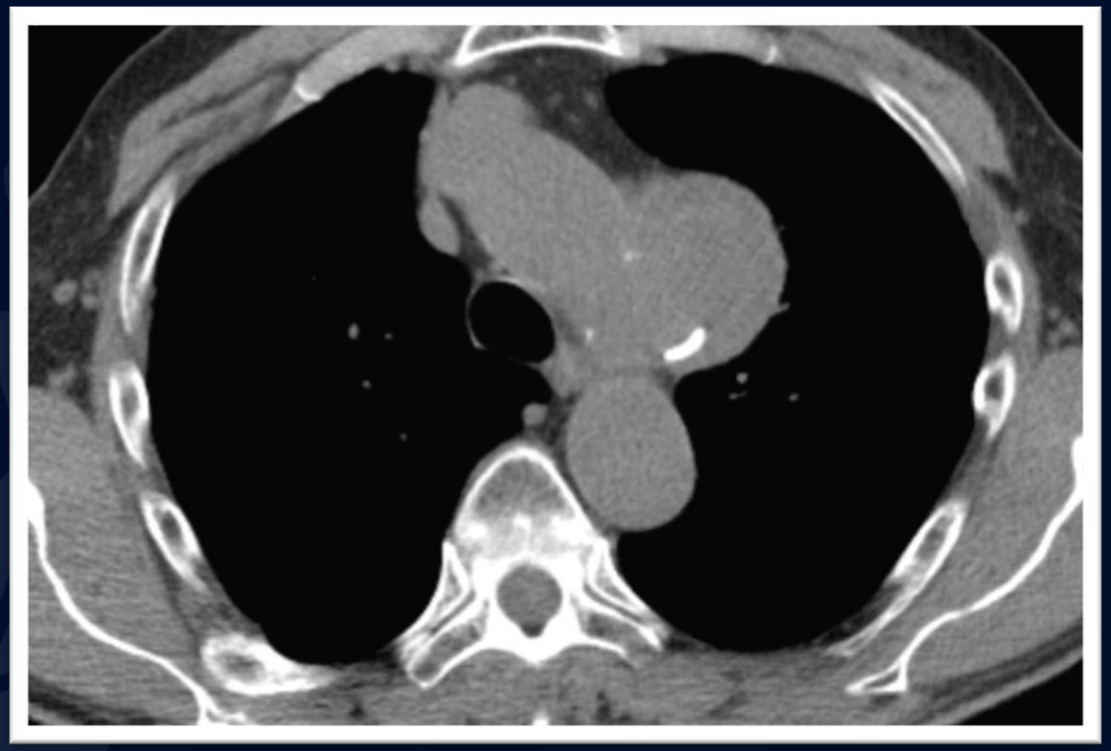

Axial CTA w/o contrast shows no hyperdense material within the aneurysmal sac to indicate acute thrombus.

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Thoracic Aortic Pseudoaneurysm

Imaging Features

- Saccular dilatation of the aorta.
- Narrow neck at the origin in the aorta.
- Wide neck in a saccular aneurysm suggests mycotic origin
- Hyperdense material in the aneurysmal sac suggests acute thrombus
- +/- Atherosclerosis

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Thoracic Aorta Aneurysm

General Features

- True Aneurysm
  - All 3 layers of the aortic wall involved without disruption
  - Generally associated with fusiform dilatation of the aorta
  - Usually involves entire circumference of the aorta
  - Often extends over a large segment of the vessel
  - Most commonly due to atherosclerosis

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Thoracic Aorta Aneurysm

General Features

- False Aneurysm – “Pseudoaneurysm”
  - Intimal disruption (often media too)
  - Blood products contained by adventitia or periadventitial tissues
  - Saccular in shape
  - Narrow neck at the origin
  - Most commonly due to trauma, penetrating atherosclerotic ulcers, and mycotic aneurysm (wide neck saccular aneurysm).
    - Trauma – MC location for aneurysm is the aortic isthmus
    - Atherosclerosis – Diffuse process and can occur anywhere along the aorta
    - Mycotic – Tendency to involve ascending aorta likely due to proximity to regions affected by endocarditis

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References

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2. Litmanovich, D., Bankier, A. A., Cantin, L., Raptopoulos, V., & Boiselle, P. M. (2009). CT and MRI in Diseases of the Aorta. *American Journal of Roentgenology, 193*(4), 928-940. doi:10.2214/ajr.08.2166

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