A large, stylized oak leaf graphic in a dark blue color, positioned on the left side of the slide, partially overlapping the text.

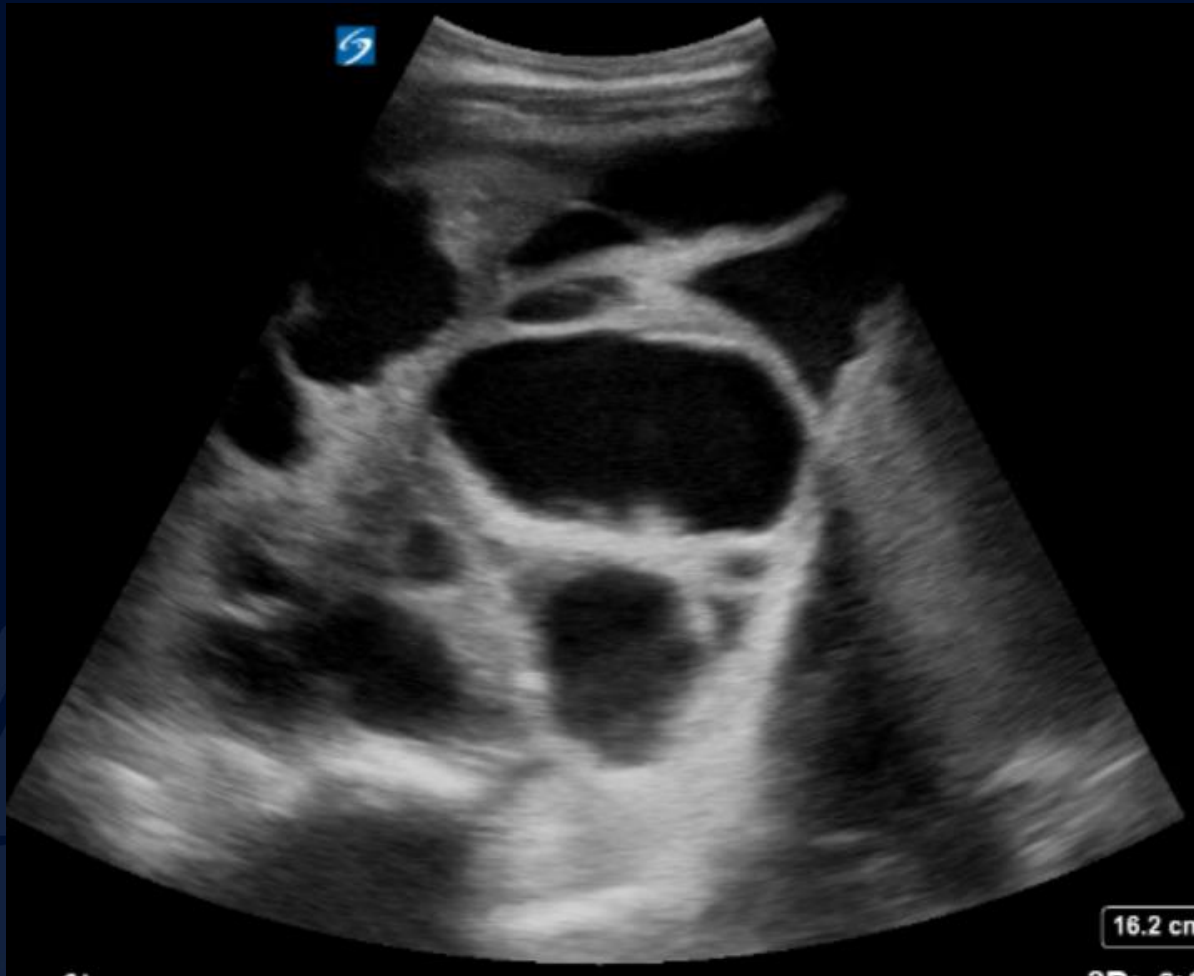
13-year-old male with 2-month history of progressive shortness of breath

Hanako Agresta, MS3
Racquel Helsing, MD

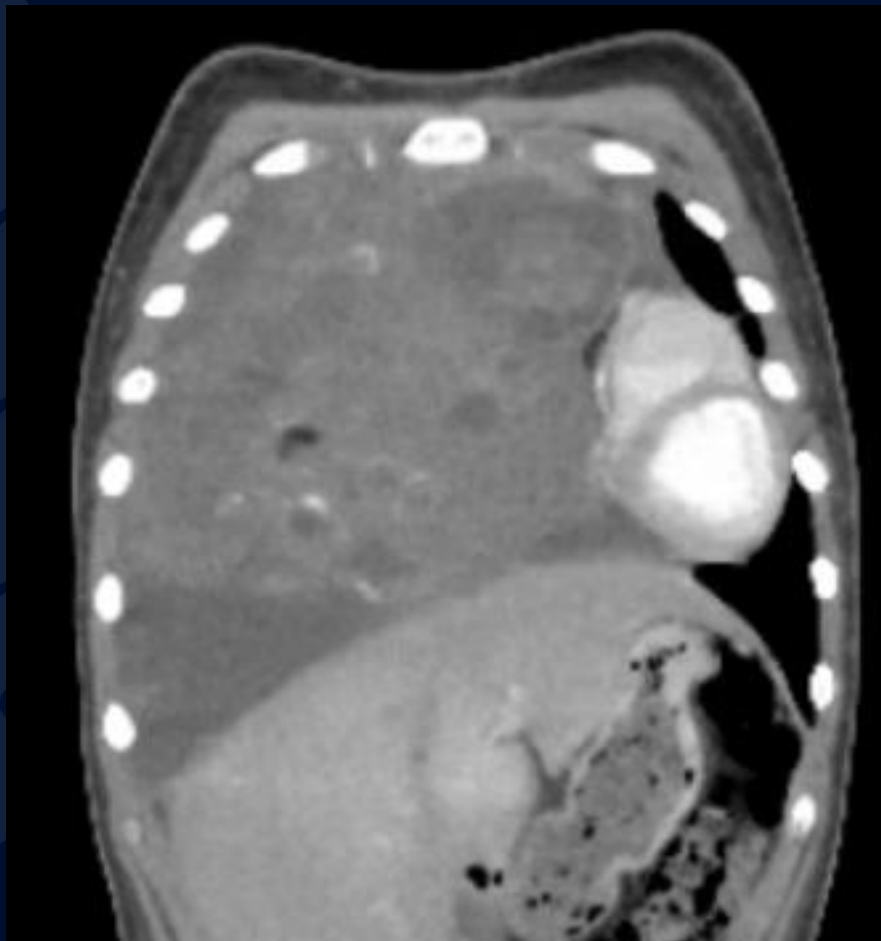
PA Chest Radiograph



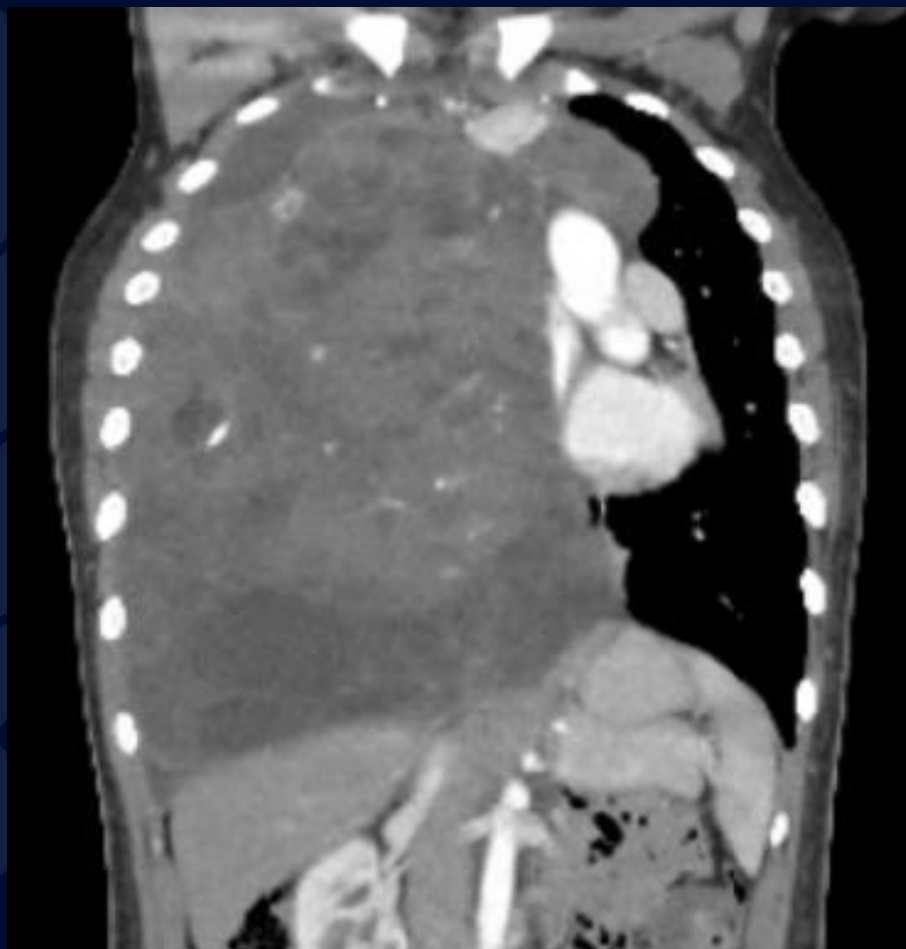
Ultrasound Right Pleural Space



CT Chest with IV contrast



CT Chest with IV contrast



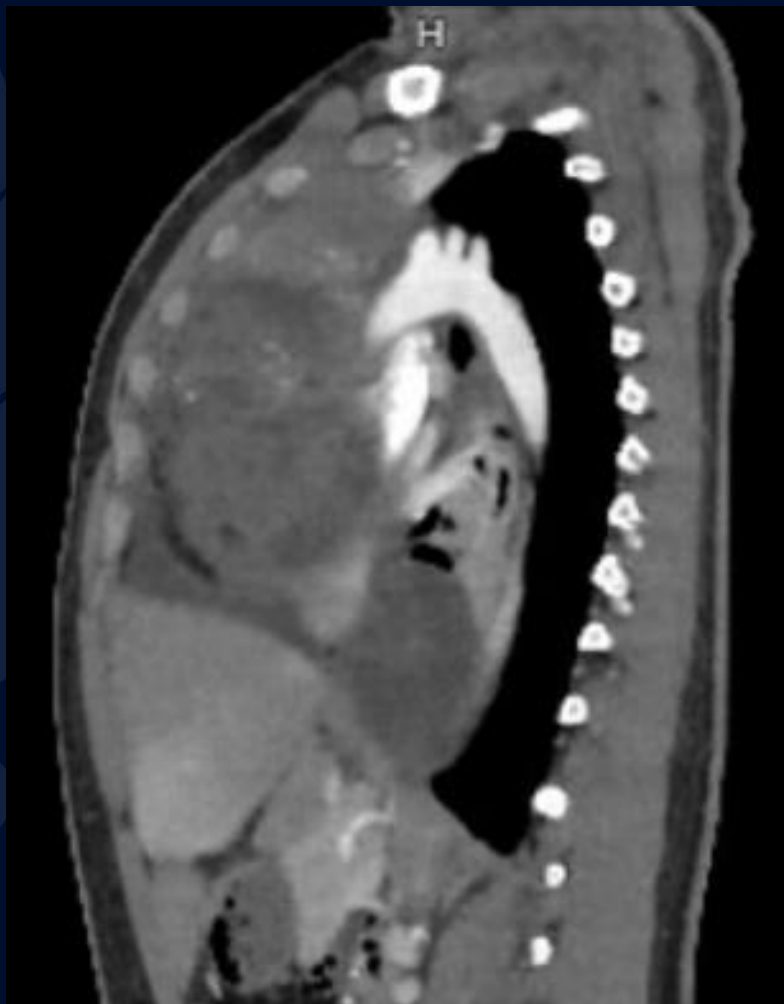
CT Chest with IV contrast



CT Chest with IV contrast



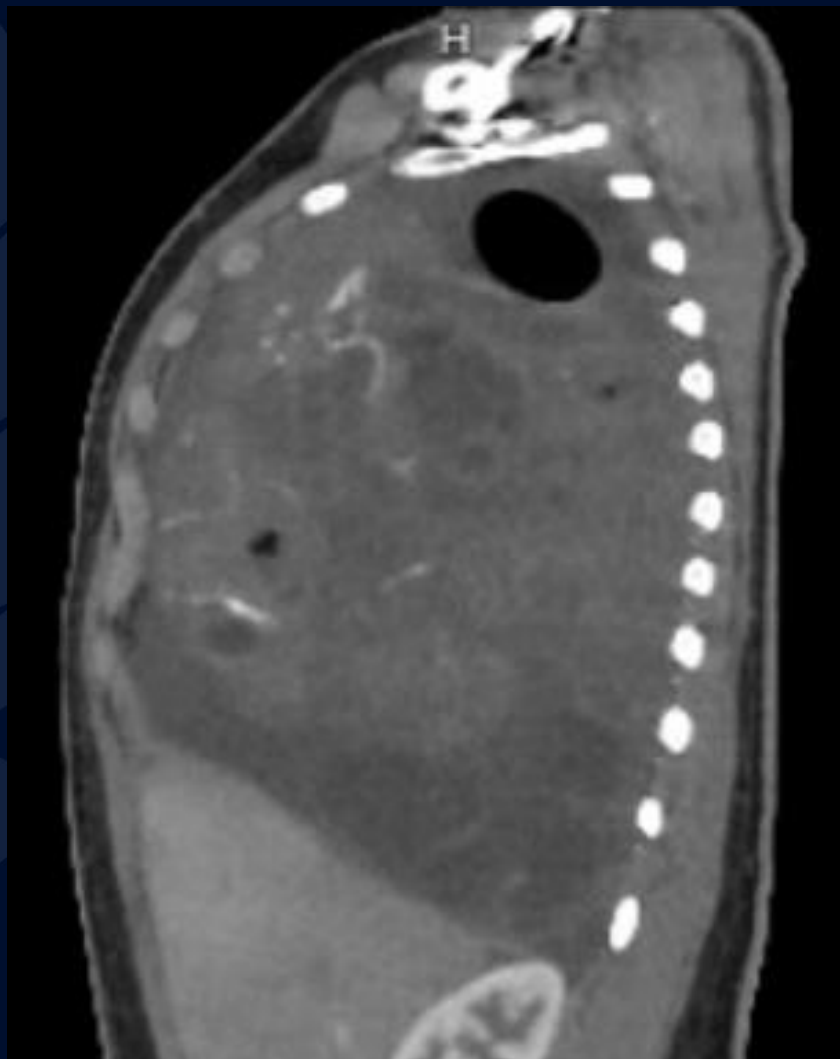
CT Chest with IV contrast



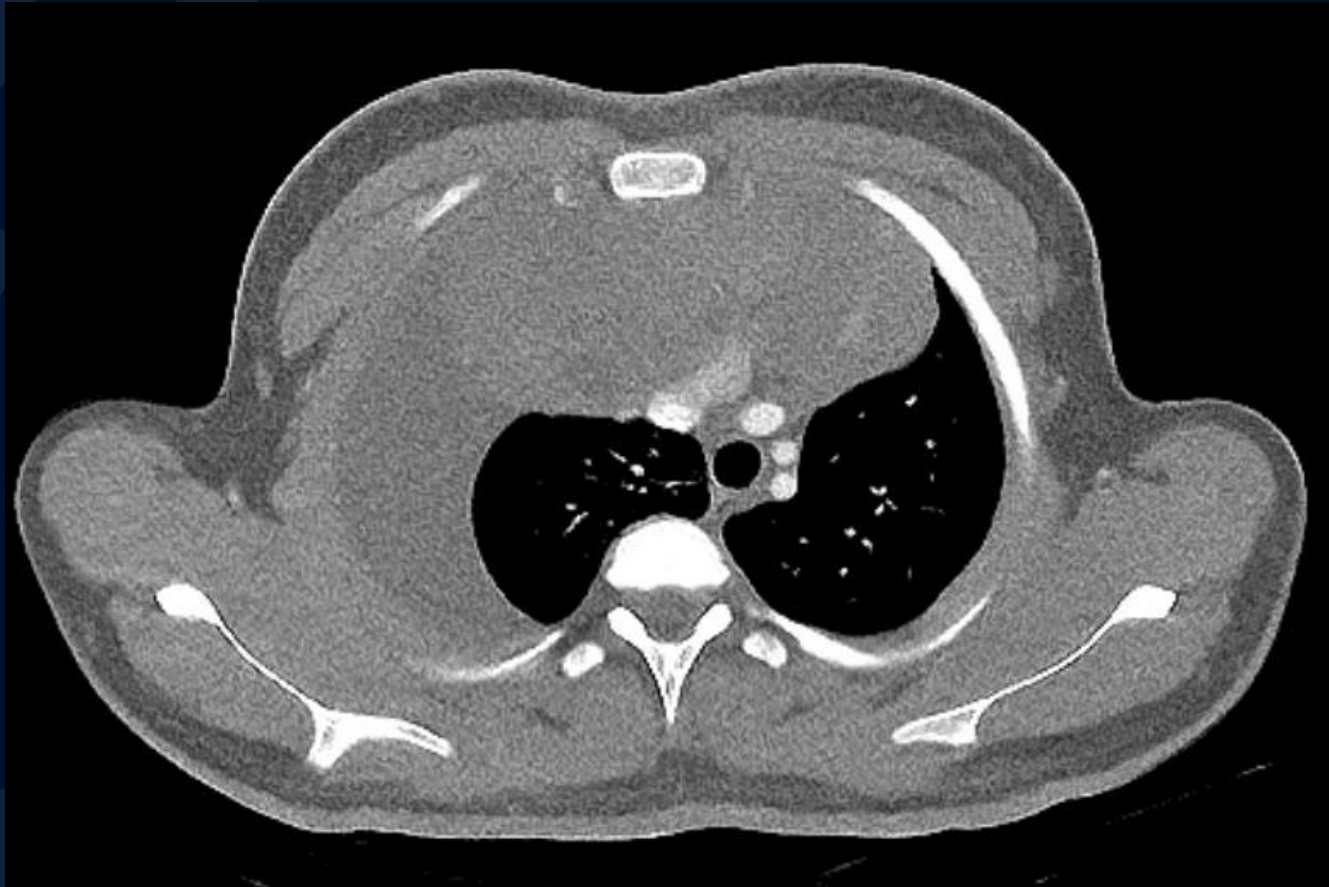
CT Chest with IV contrast



CT Chest with IV contrast



CT Chest with IV contrast



CT Chest with IV contrast



CT Chest with IV contrast

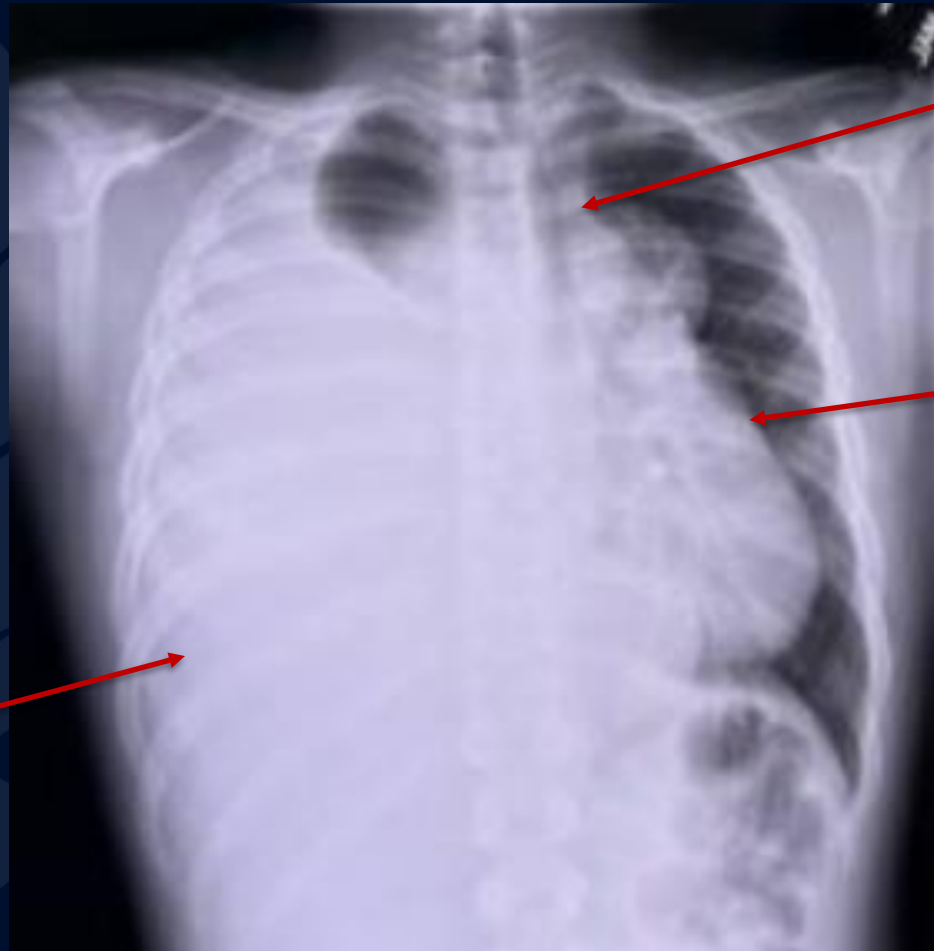


A large, stylized oak leaf graphic in a dark blue color, positioned on the left side of the slide. It features detailed vein patterns and a lobed edge.

?

Anterior Mediastinal Mature Teratoma

PA Chest Radiograph



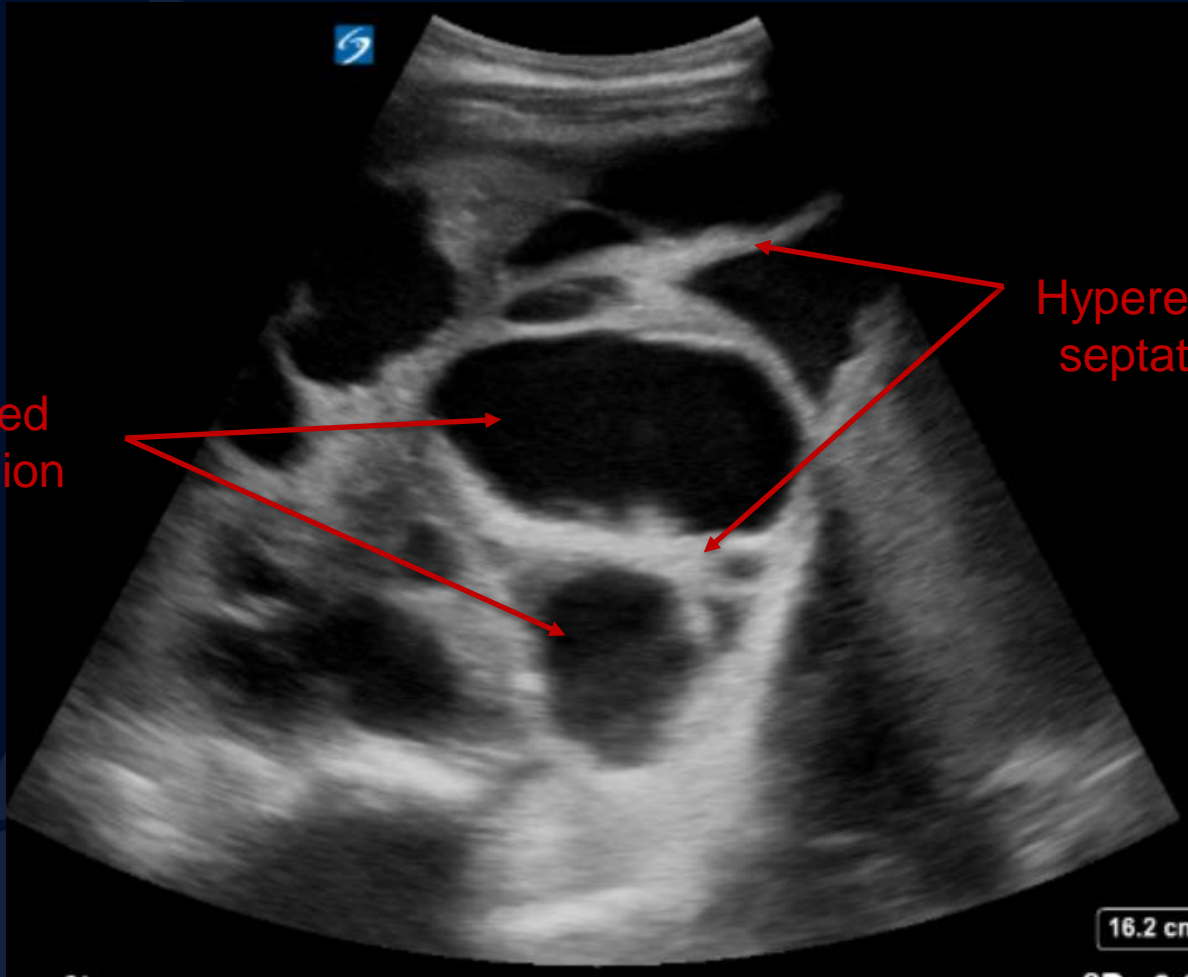
Near complete opacification of the right hemithorax with some apical aeration

Leftward tracheal deviation

Leftward mediastinal shift

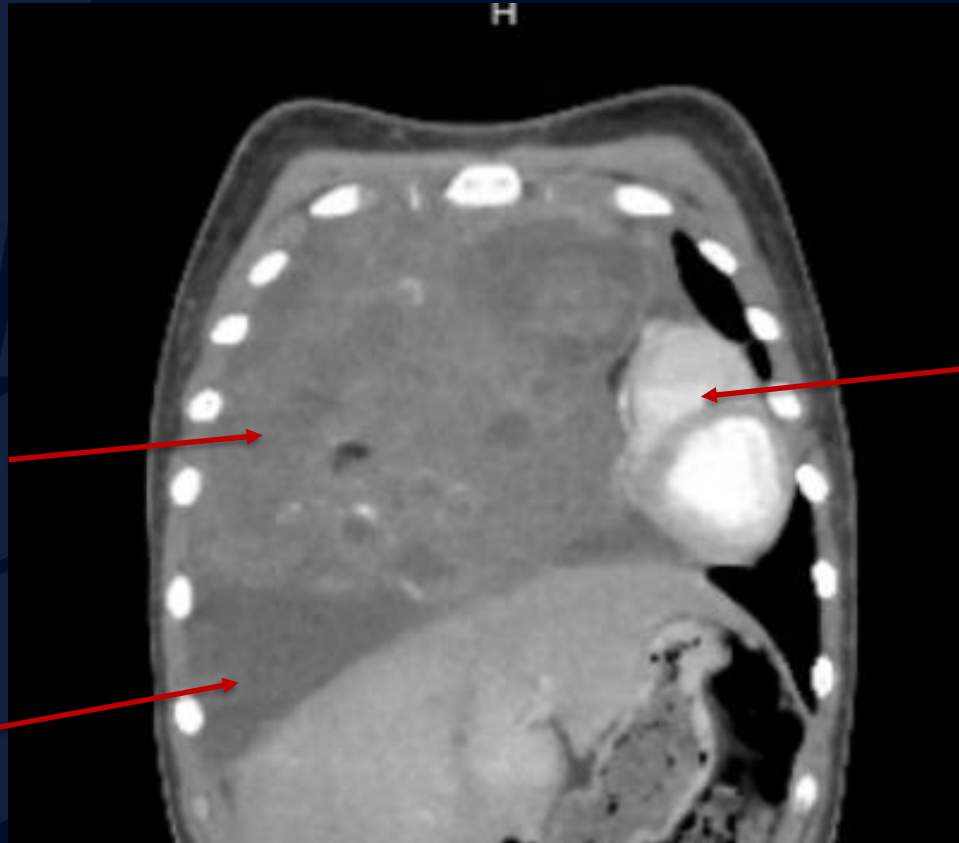
Ultrasound Right Pleural Space

Multiloculated
pleural effusion



Hyperechoic
septations

CT Chest with IV contrast



Large heterogeneous mass

Right pleural effusion

Left mediastinal shift

CT Chest with IV contrast

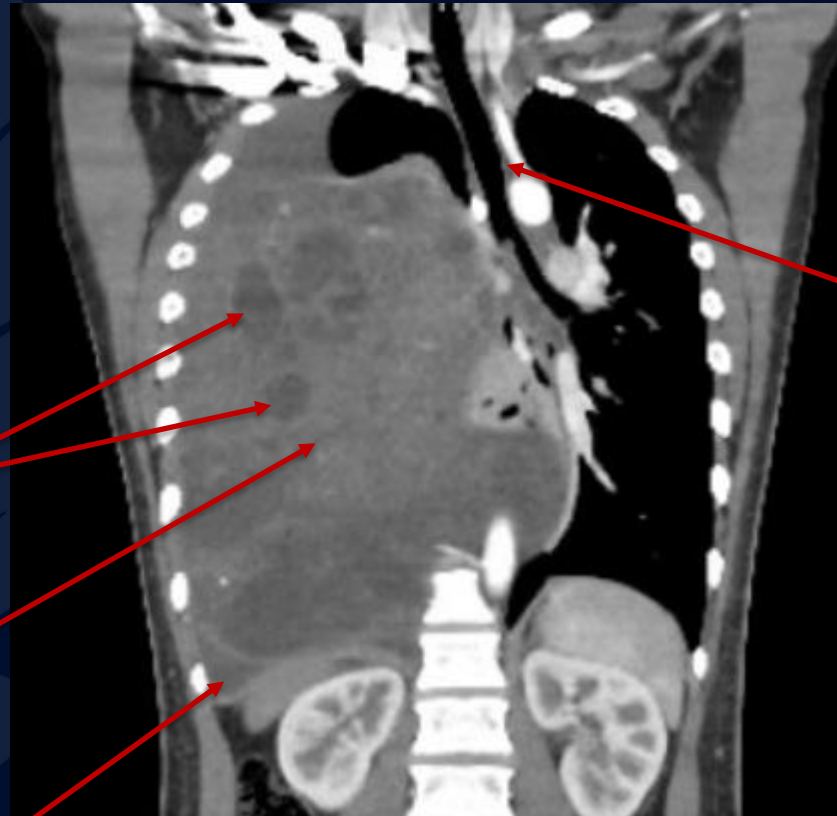


Calcifications

Left mediastinal shift

Complex right pleural effusion with septations

CT Chest with IV contrast



Leftward tracheal deviation

Cystic components

Large heterogeneous mass

Right pleural effusion

CT Chest with IV contrast



Heterogeneous
anterior mediastinal
mass crossing
midline

Pleural effusion

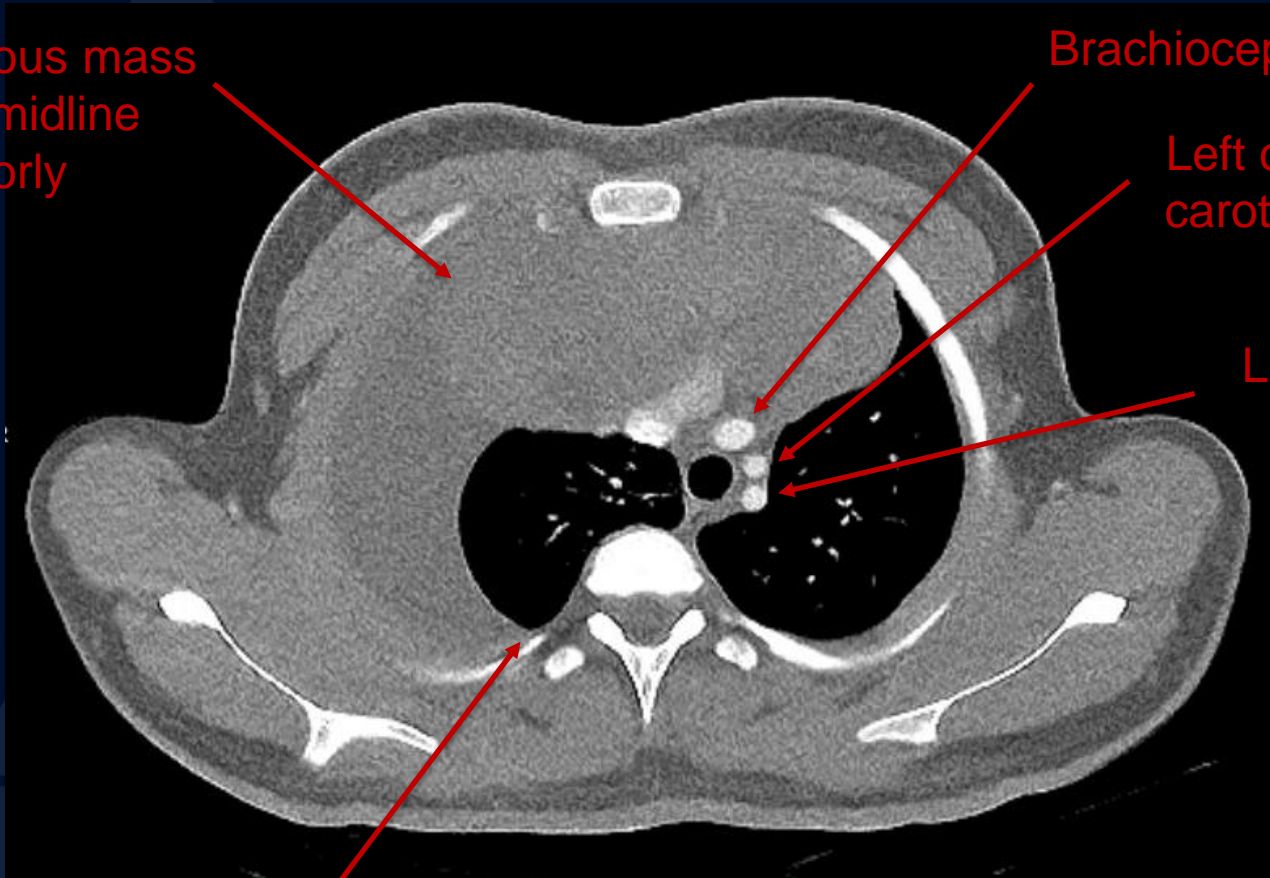
CT Chest with IV contrast

Heterogeneous mass
crossing midline
anteriorly

Brachiocephalic trunk

Left common
carotid artery

Left subclavian
artery



Aerated right apex

CT Chest with IV contrast



Heterogeneous mediastinal mass with calcifications

Leftward deviation of the heart and mediastinal structures

Mature Mediastinal Teratoma

Epidemiology

- Constitute 8-13% of anterior mediastinal masses
- 1-10% of germ cell tumors are in the mediastinum
- Risk factor: Klinefelter syndrome

Pathology

- Formed from well-differentiated tissues derived from greater than one of three embryonic germ cell layers (ectoderm, mesoderm, endoderm)

Clinical Presentation

- Usually slow growing, often found incidentally on imaging
- When symptomatic symptoms include chest pain, cough, dyspnea, bronchial obstruction, superior vena cava syndrome, and Horner syndrome secondary to compression/obstruction of surrounding organs
- If tumor erodes into bronchus, patients may present with expectoration of hair (trychoptysis) or sebaceous material

Mature Mediastinal Teratoma

Diagnosis

- Imaging
 - Chest CT or MRI show evidence of heterogeneous anterior mediastinal mass with soft-tissue, fluid, fat, and/or calcium attenuation
 - Diagnosis confirmed with biopsy during surgical excision
- Differential
 - Thymolipoma, thymic tumor, cyst, lymphoma, choriocarcinoma, seminoma, yolk sac tumor, endodermal sinus tumor, mixed germ cell tumor, neuroendocrine tumor

Treatment

- Surgical excision is nearly always curative
- Generally unresponsive to chemotherapy or radiation therapy

References

Anushree, C. N., & Shanti, V. (2015). Mature mediastinal teratoma. *Journal of Clinical and Diagnostic Research: JCDR*, 9(6), ED05.

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Juanpere, S., Cañete, N., Ortuño, P., Martínez, S., Sanchez, G., & Bernado, L. (2013). A diagnostic approach to the mediastinal masses. *Insights into imaging*, 4, 29-52.

Moeller, K. H., Rosado-de-Christenson, M. L., & Templeton, P. A. (1997). Mediastinal mature teratoma: imaging features. *AJR. American journal of roentgenology*, 169(4), 985-990.