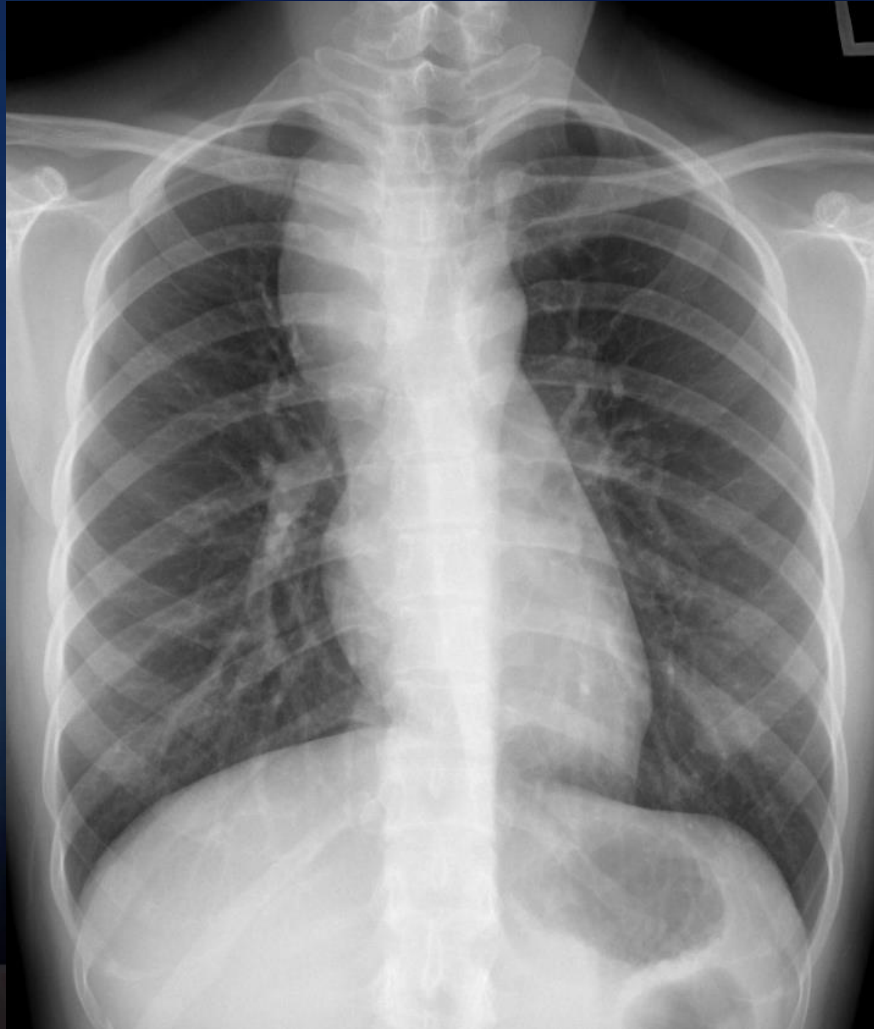


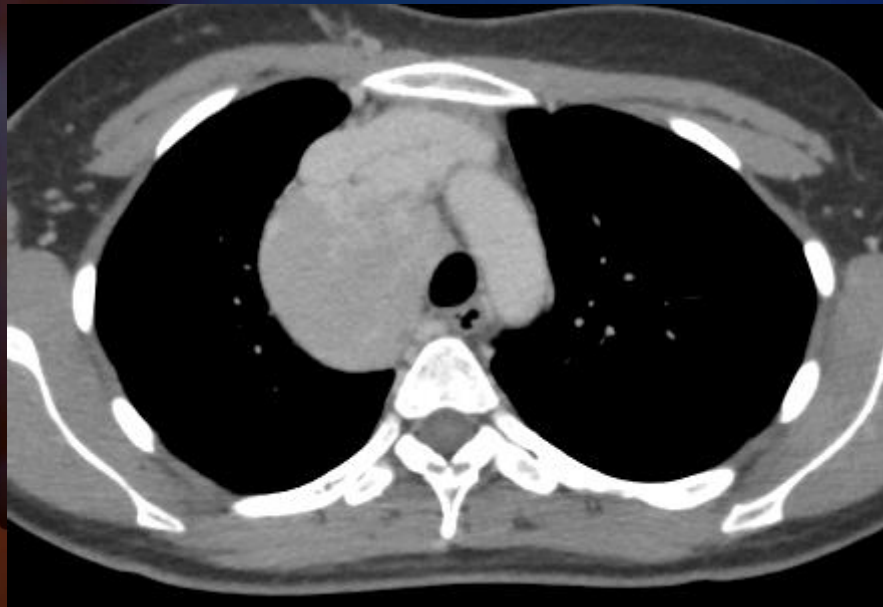
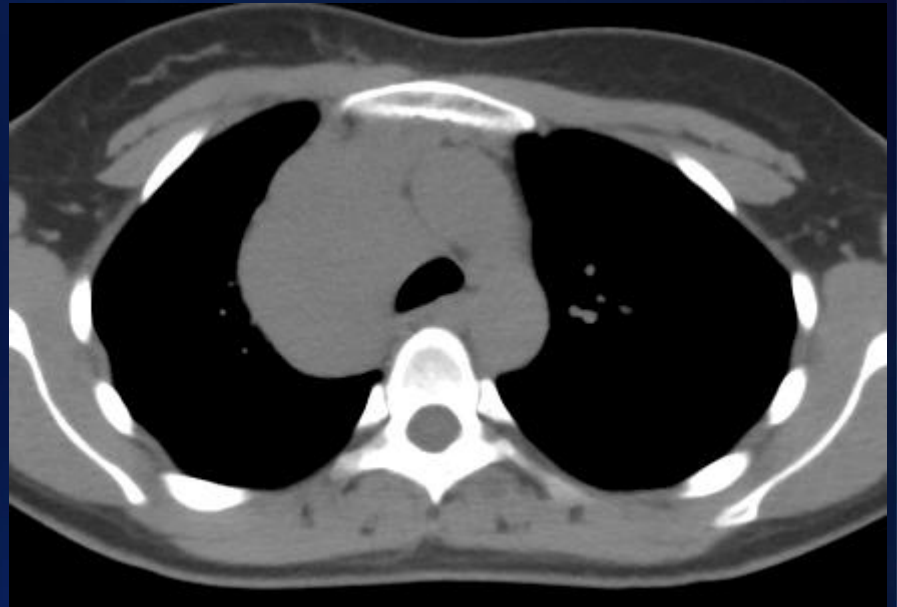
Case of the day : Case 1 - CHEST

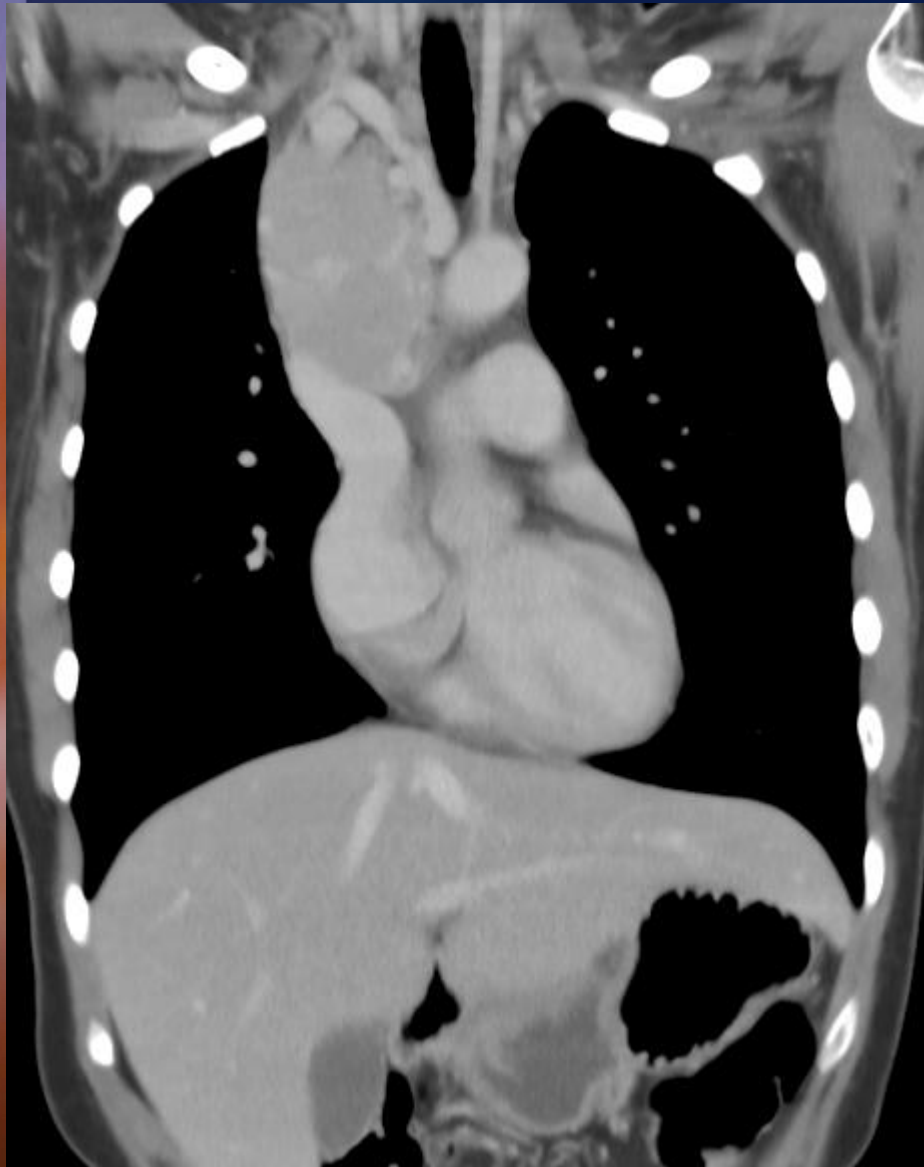
Courtesy Wariya Chintanakdee, MD
Radiology department, King Chulalongkorn
Memorial hospital, Thailand



History: A 24-year-old female with abnormality on check-up chest radiograph.









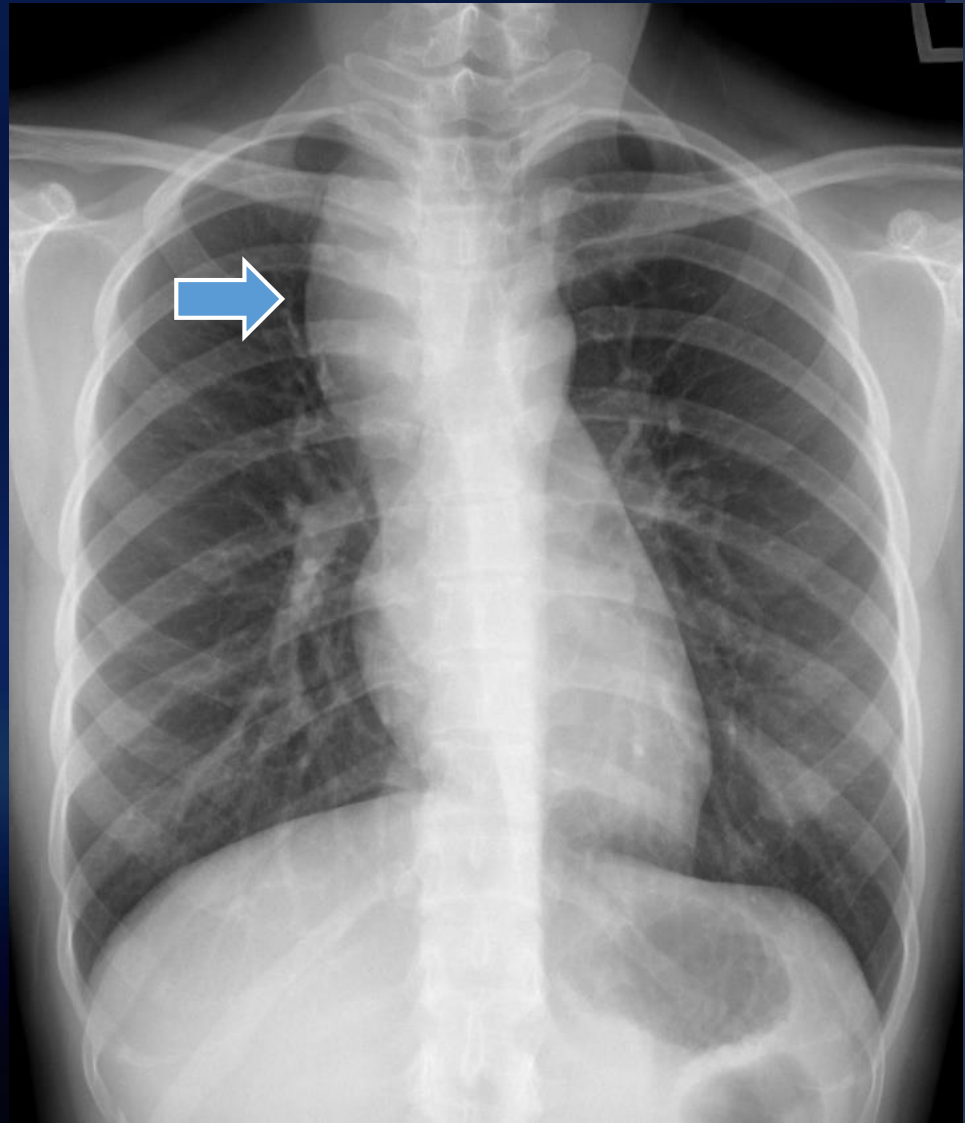
Which of the following disease is the **most likely** diagnosis?

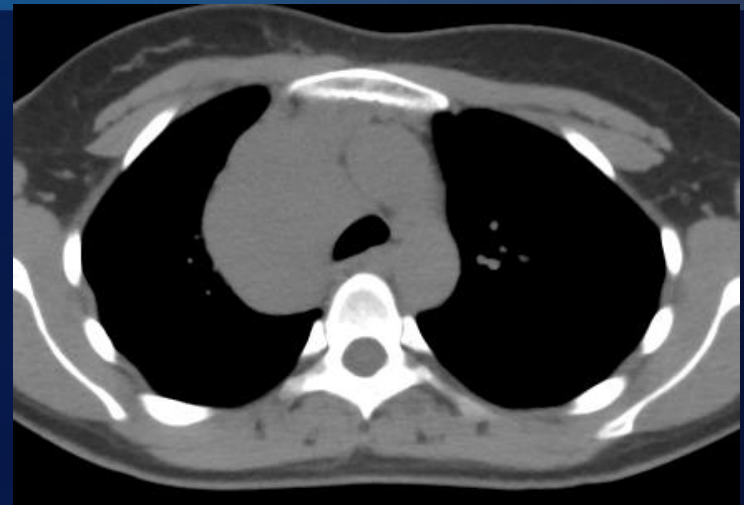
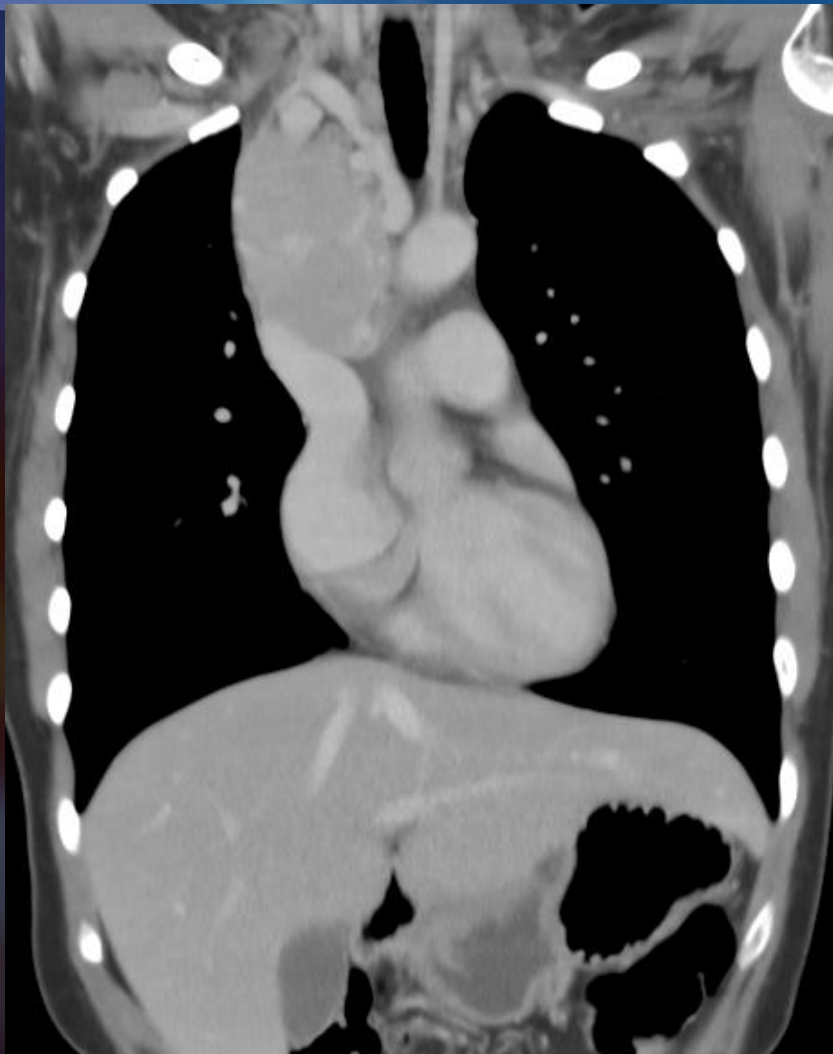
- A. Thymoma
- B. Paraganglioma
- C. Carcinoid tumor
- D. Nodal metastasis
- E. Castleman disease



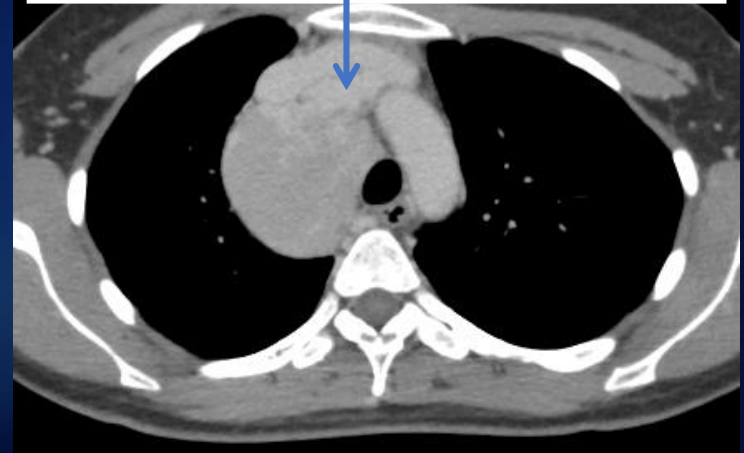
Findings

A large well-margined right paratracheal mass causing tracheal deviation to the left side.





Enlarged feeding/draining vessels



A large well-margined intense enhancing mass at middle mediastinum (right paratracheal region).

No other lymphadenopathy.

DDx • Hypervascular mediastinal mass

- **Castleman disease**
- **Thyroid mass** → Continuity with thyroid gland
- **Paragangliomas** → Location: AP window or posterior mediastinum, Hx hypertension, ↑urine catecholamine
- **Hemangioma** → Location: anywhere in mediastinum, heterogeneous appearance: fat/fluid/soft tissue
- **Carcinoid tumor** → Location: anterior mediastinum or endobronchial
- **Ectopic parathyroid adenoma** → Location: anterior mediastinum, small size, clinical Hx of ↑PTH, ↑serum calcium
- **Hypervascular nodal metastasis** → Multiple lymphadenopathy, underlying RCC, thyroid cancer, melanoma, sarcoma



Which of the following disease is the **most likely** diagnosis?

- A. **Thymoma** → nearly all thymomas occur in prevascular space
- B. **Paraganglioma** → locates in AP window or posterior mediastinum
- C. **Carcinoid tumor** → locates in anterior mediastinum or endobronchial
- D. **Nodal metastasis** → multiple lymphadenopathy
- E. **Castleman disease**



Final diagnosis

- **Castleman disease**: Localized form
 - Pathology: Hyaline-vascular type



Tx: Right thoracotomy with tumor removal

Castleman disease

- A nonclonal lymphoproliferative disorder
- Terms:
 - Angiogliollicular lymph node hyperplasia
 - Giant lymph node hyperplasia
 - Angiomatous lymphoid hamartoma
- Nonneoplastic lymphadenopathy
- Etiology: unknown



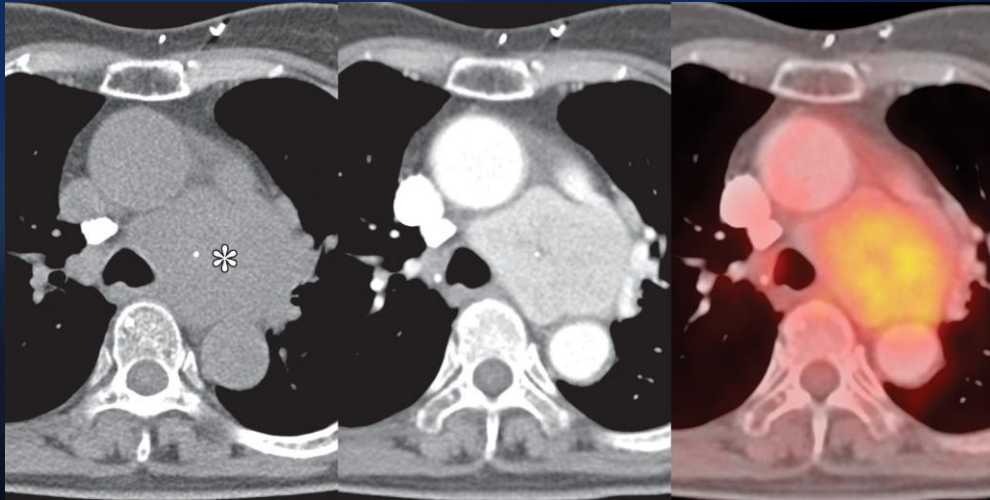
Castleman disease

- Histopathologic classifications
 1. Hyaline-vascular type: 80-90% (most common)
 2. Plasma cell type: 10%
 3. Mixed hyaline-vascular and plasma cell types
- Clinical classifications
 1. Localized
 2. Multifocal
 3. HIV-associated disease



Castleman disease

- 1. Localized
 - Hyaline vascular type (90%)
 - Age: 4th decade
 - Large solitary well-defined mass
 - Usually asymptomatic



A well-defined mass with a punctate calcification

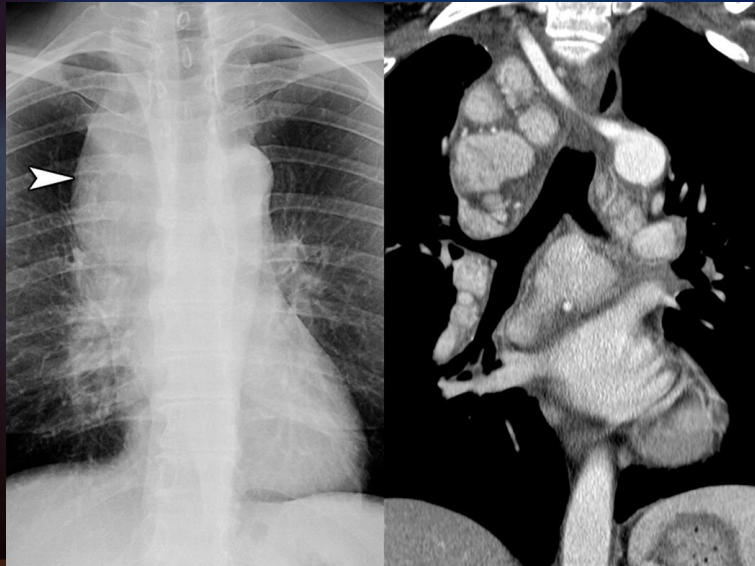
Marked enhancement

Intense FDG avidity

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Castleman disease

- 2. Multifocal
 - Plasma cell or mixed types (80%)
 - Age: 6th decade
 - Generalized lymphadenopathy + hepatosplenomegaly
 - Systemic symptoms:
 - fever, night sweats, weight loss, peripheral neuropathy, anemia, malignancy



Numerous enlarged hyperenhancing lymph nodes

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Castleman disease

- 3. HIV-associated disease
 - HHV-8 association
 - Always multifocal
 - Very aggressive course
 - Associated with Kaposi sarcoma and lymphoma



Castleman disease

- **Imaging**

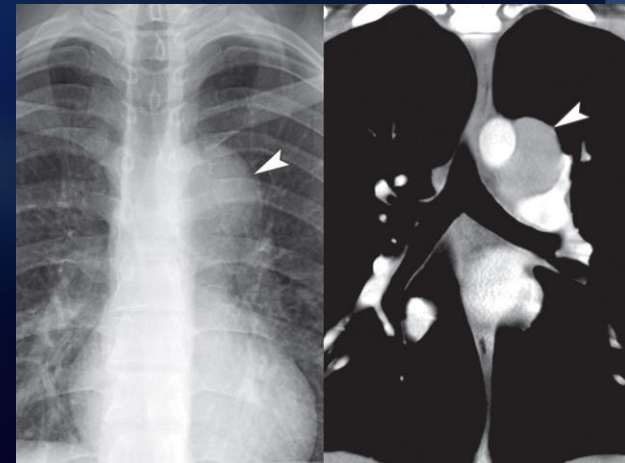
- Focal mass – localized
- Diffuse lymphadenopathy – multifocal



Difference in
distribution

Location

- Mediastinum: subcarinal or paratracheal
- Hila
- Axillae, pleural space, chest wall, lung



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Castleman disease

- **Imaging**

- **Intense contrast enhancement**
- Enlarged feeding arteries and draining veins
- Areas of necrosis, edema, fibrosis
- Uncommon calcification
- \pm pleural effusion

A large middle mediastinal mass with central arborizing calcification

Intense enhancement



European Journal of Radiology 81 (2012) 123–131