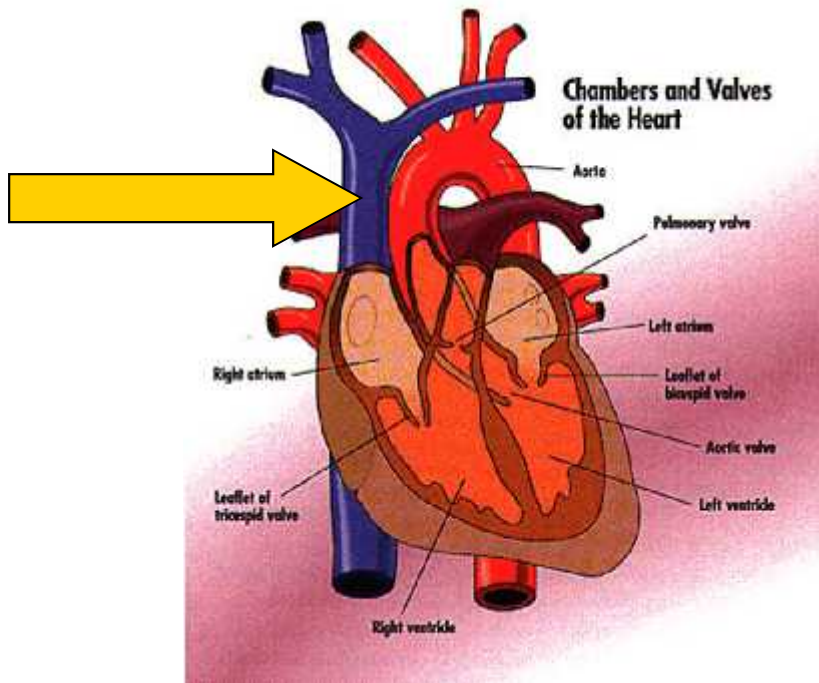
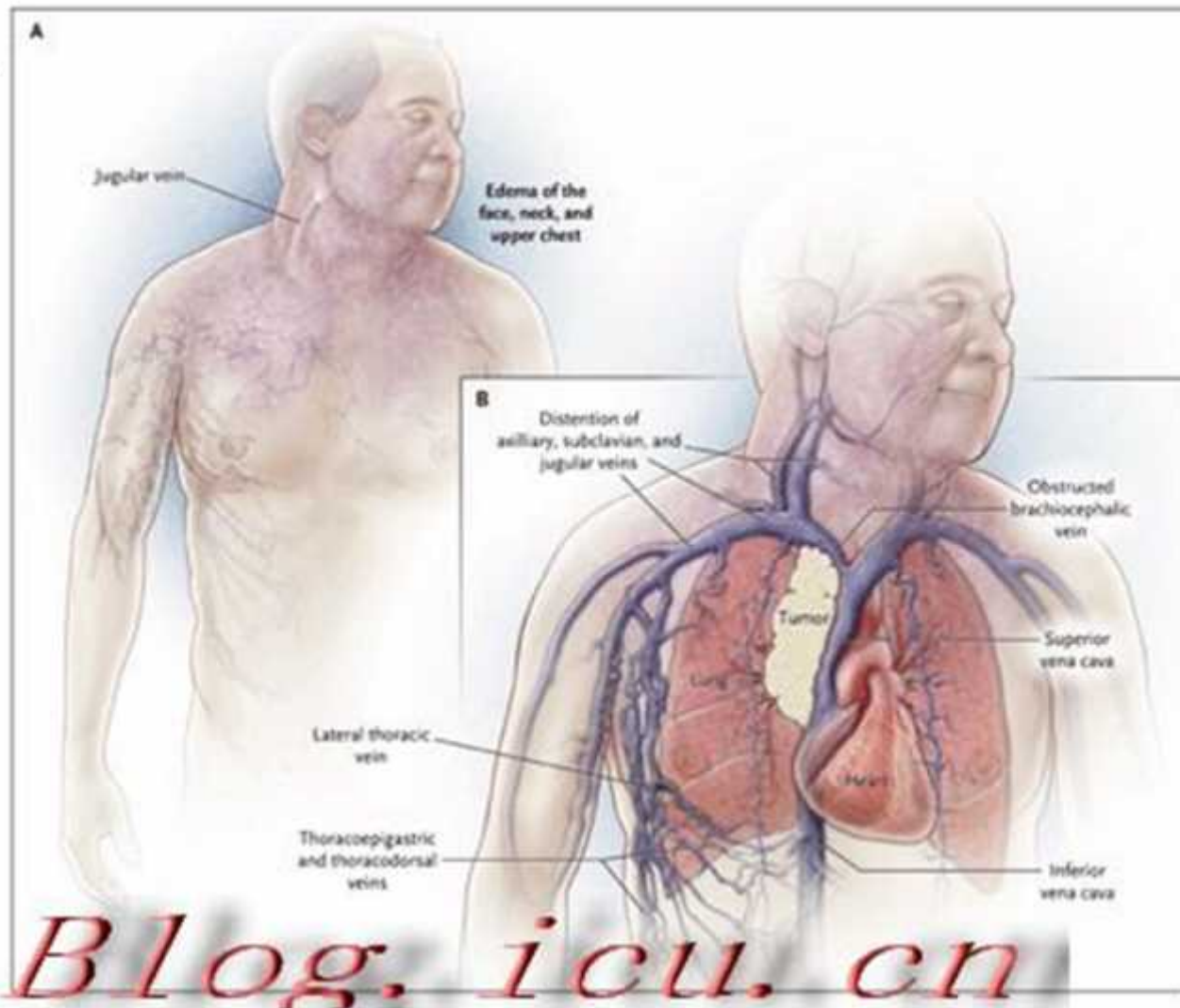


Superior vena cava obstruction

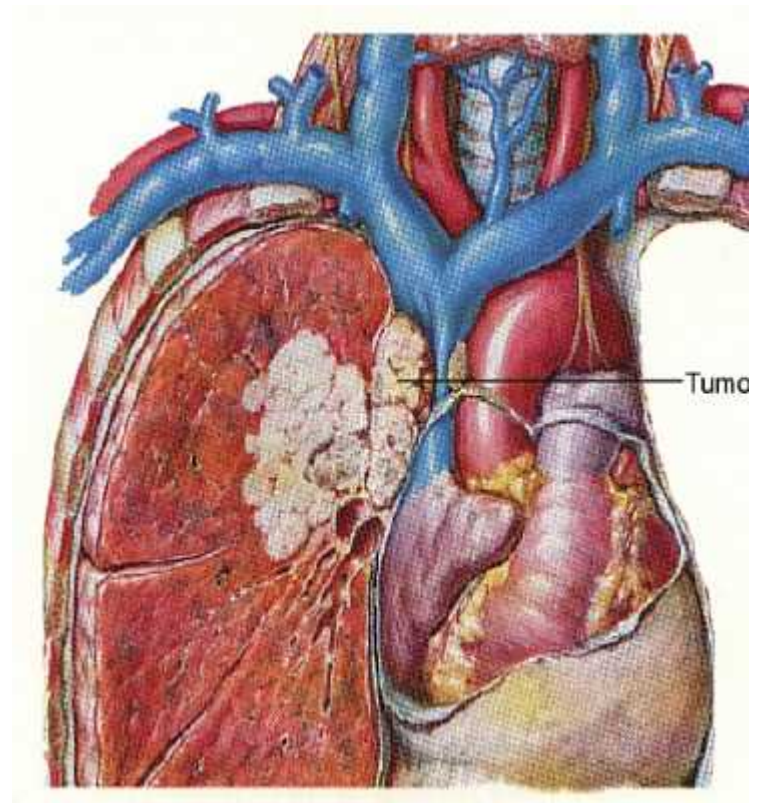


Superior Venacaval Syndrome



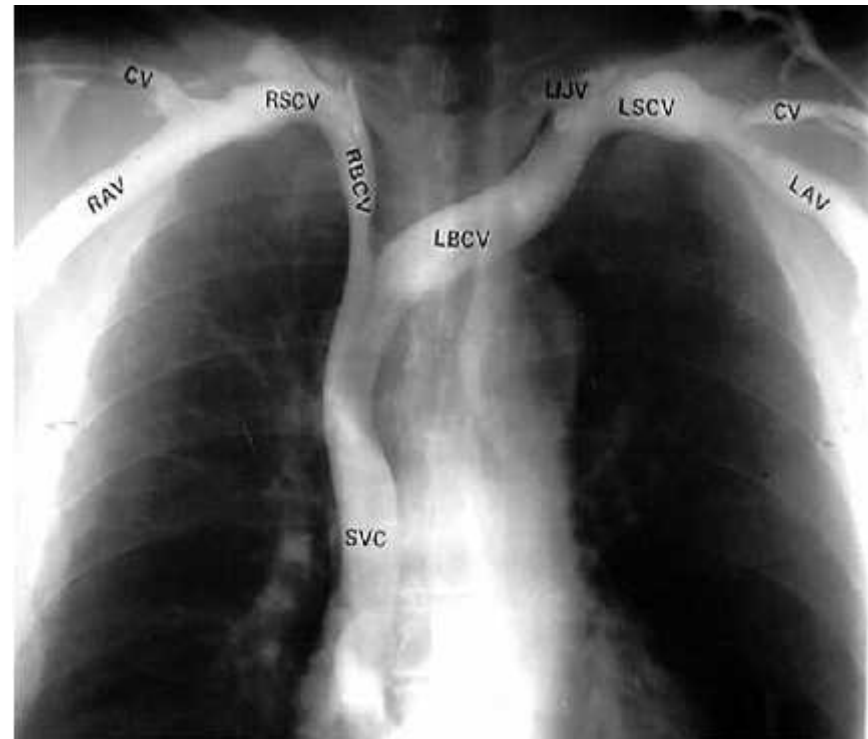
Superior Venacaval Syndrome

- Extrinsic tumour or Node
- Direct Invasion
- Intraluminal Thrombus
 - Complication of Central Line



Definition

- Obstruction of blood flow through the SVC results in signs and symptoms of SVC syndrome



SVC superior vena cava RBCV right brachiocephalic vein
LBCV left brachiocephalic vein RSCV right subclavian vein
LSCV left subclavian vein RAV right axillary vein
LAV left axillary vein CV cephalic vein LIJV left internal jugular vein



Superior Vena Cava Obstruction

CAUSES:

- Lung Cancer* 80%
- Lymphoma 10%
- Other Malignancy 5%
- Benign causes 5%
(e.g. aneurysm, goitre, fibrosis, infection etc.)
- Occurs in 10% SCLC cases and 1.7% of NSCLC cases



Superior Vena Cava Syndrome Presentation

■ Symptoms:

- | | |
|-------------------------------|-----|
| ■ Dyspnea | 63% |
| ■ Facial and neck swelling | 50% |
| ■ Fullness in head (Headache) | 50% |
| ■ Cough | 24% |
| ■ Arm swelling | 18% |
| ■ Chest pain | 15% |
| ■ Dysphagia | 9% |



Superior Vena Cava Obstruction





Patients





Superior Vena Cava Syndrome Presentation

Signs:

- Venous distention of neck 66%
- Venous distention of chest wall 54%
- Facial edema 46%
- Cyanosis 20%
- Edema of the arms 14%
- Plethora of the face 10%
- Vocal cord paralysis 3%
- Horner's syndrome 3%



History

- How long?
- Speed of onset?
- How advanced? If patient is becoming **drowsy** this is an emergency.
- Any symptoms of cancer esp. lung cancer or lymphoma.
- Any other local symptoms e.g. pain, stridor.



Superior Vena Cava Obstruction

- Examination:
 - Extent of problem.
 - Any evidence of malignancy elsewhere
 - Lymphadenopathy.
 - Hepatomegaly.
 - collapse/consolidation of lung.



Superior Vena Cava Obstruction

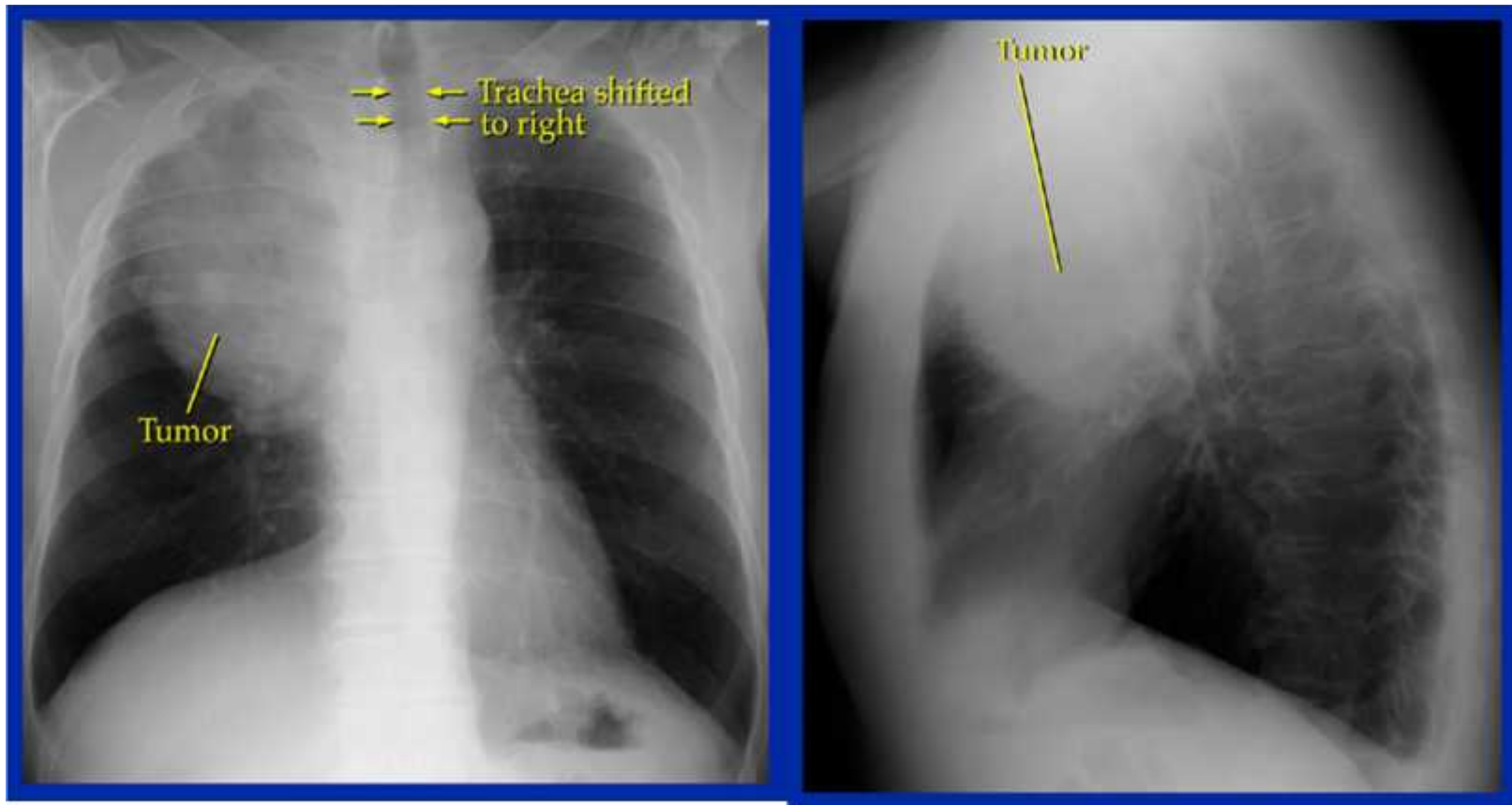
- Initial Investigations:
 - CXR – is there a mass?
 - Venogram – is there a clot?
- If extrinsic compression from mass try and obtain tissue (SCLC, lymphoma treated with chemo)
 - FNA node.
 - Mediastinoscopy.



Radiographic Studies

- Most patients have an abnormal chest x-ray at presentation
- Most common findings are
 - Mediastinal widening
 - Pleural effusion

Superior Vena Cava Obstruction





CT Chest

- Preferred choice
- IV contrast
 - defines the level of obstruction
 - Maps out collateral pathways
 - Can identify underlying cause of obstruction



Venography

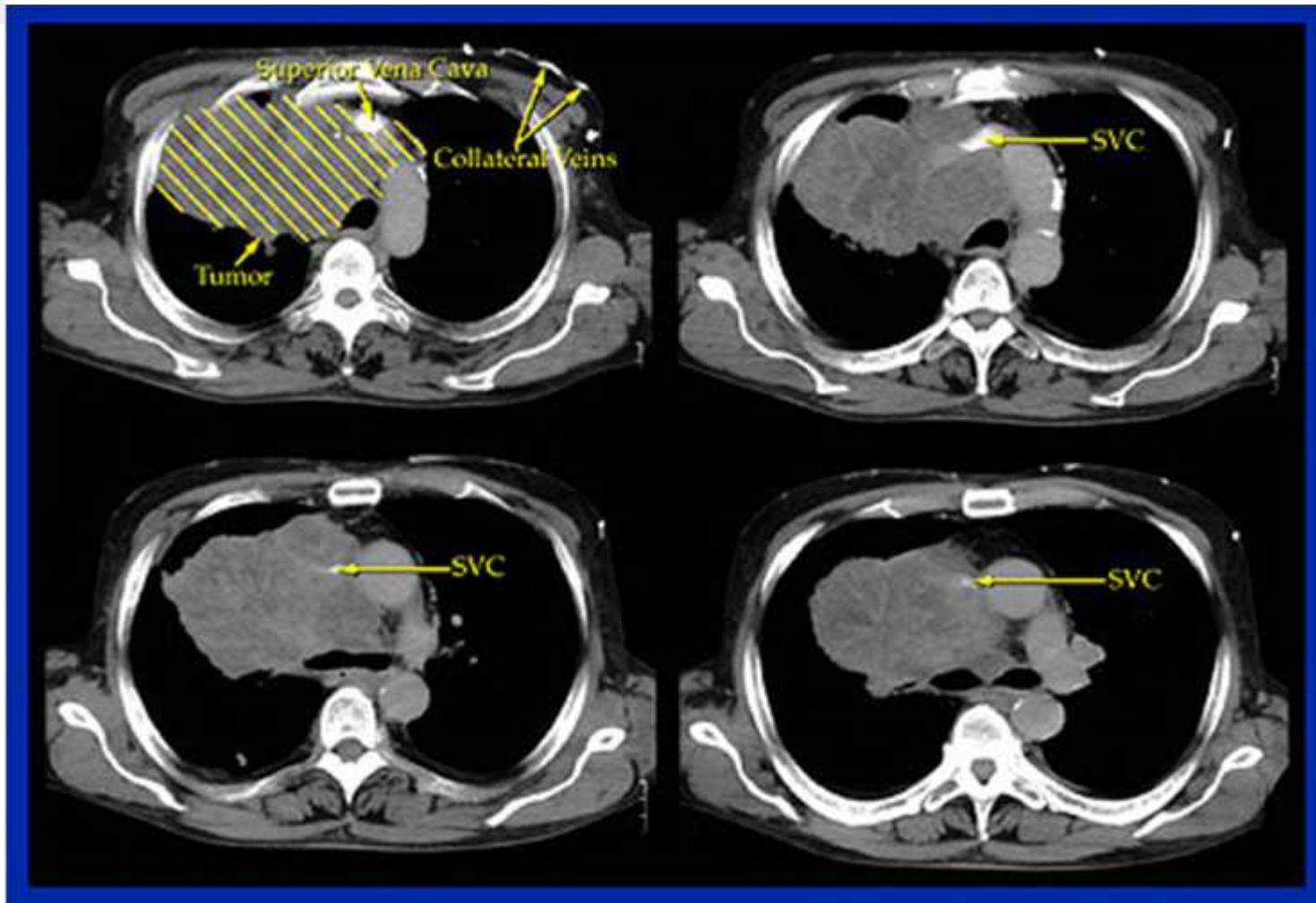
- Bilateral upper arm venography
 - superior to CT to define site of obstruction
 - Does not define cause unless thrombosis is solely responsible



MRI

- Can be useful in patients with IV contrast allergies

Superior Vena Cava Obstruction





Histologic Diagnosis

- Essential
- Guides treatment
- Aids in defining prognosis



Histologic Diagnosis

- Sputum cytology, pleural fluid cytology, biopsy of enlarged peripheral nodes
- Bone marrow biopsy for NHL
- Bronchoscopy, mediastinoscopy, or thoracotomy are more invasive but sometimes necessary



Treatment

- Aimed at underlying cause
- Evolution of thought has occurred in recent years



Treatment options: Clot

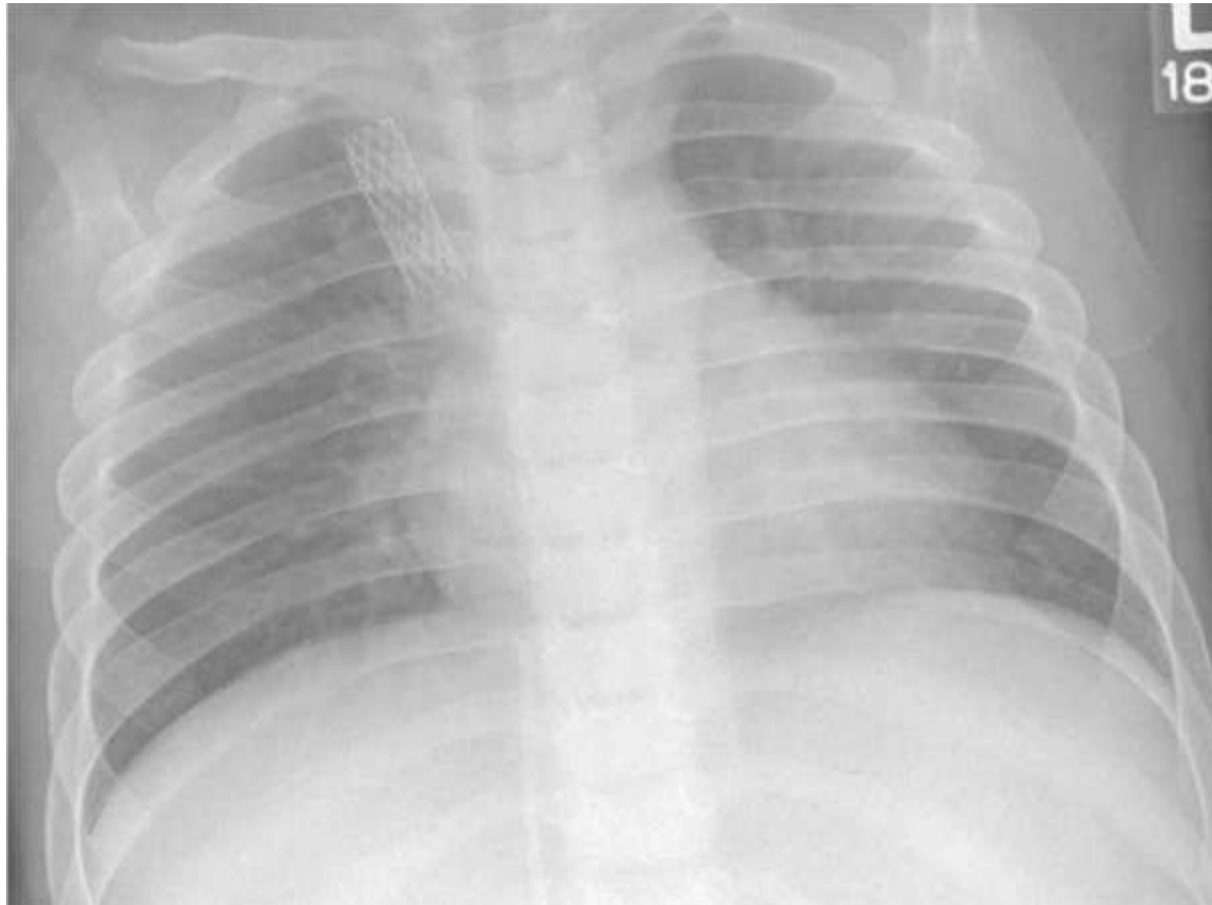
- Local thrombolysis with streptokinase.
- Anti-coagulation – heparin (IV or LMWH) for at 5/7 whilst starting warfarin.

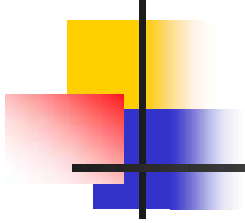


Treatment Options: Extrinsic compression

- Steroids:
 - frequently prescribed but no evidence to support their use (Cochrane review)
- Chemotherapy:
 - used for SCLC, lymphoma and teratoma
response rate >70%.
- Radiotherapy:
 - used for other malignant causes
response rate ~60%.
- Stent:
 - 95% response rate. Rapid relief of symptoms
but doesn't treat the cause.

Superior Vena Cava Syndrome- stented





TERIMA KASIH