

General data

- ◆ Age: 79.01
- ◆ Sex: 男
- ◆ Residence: 台北市
- ◆ Marital status: 已婚
- ◆ Education: 國中
- ◆ Religion: 佛教

Personal History

- ◆ **Smoking: 1PPD for 50+ years**
- ◆ **Alcohol: social drinking**
- ◆ **Food Allergy: NKA**
- ◆ **Drug Allergy: Aspirin**
- ◆ **Life style: active**
- ◆ **Living arrangement: normal**

General History

- ❖ **Colon cancer with liver metastasis s/p op at VGH 5 years ago**
- ❖ **CAD, hypotension with regular following-up at VGH**
- ❖ **Gouty arthritis**
- ❖ **Microcytic anemia**

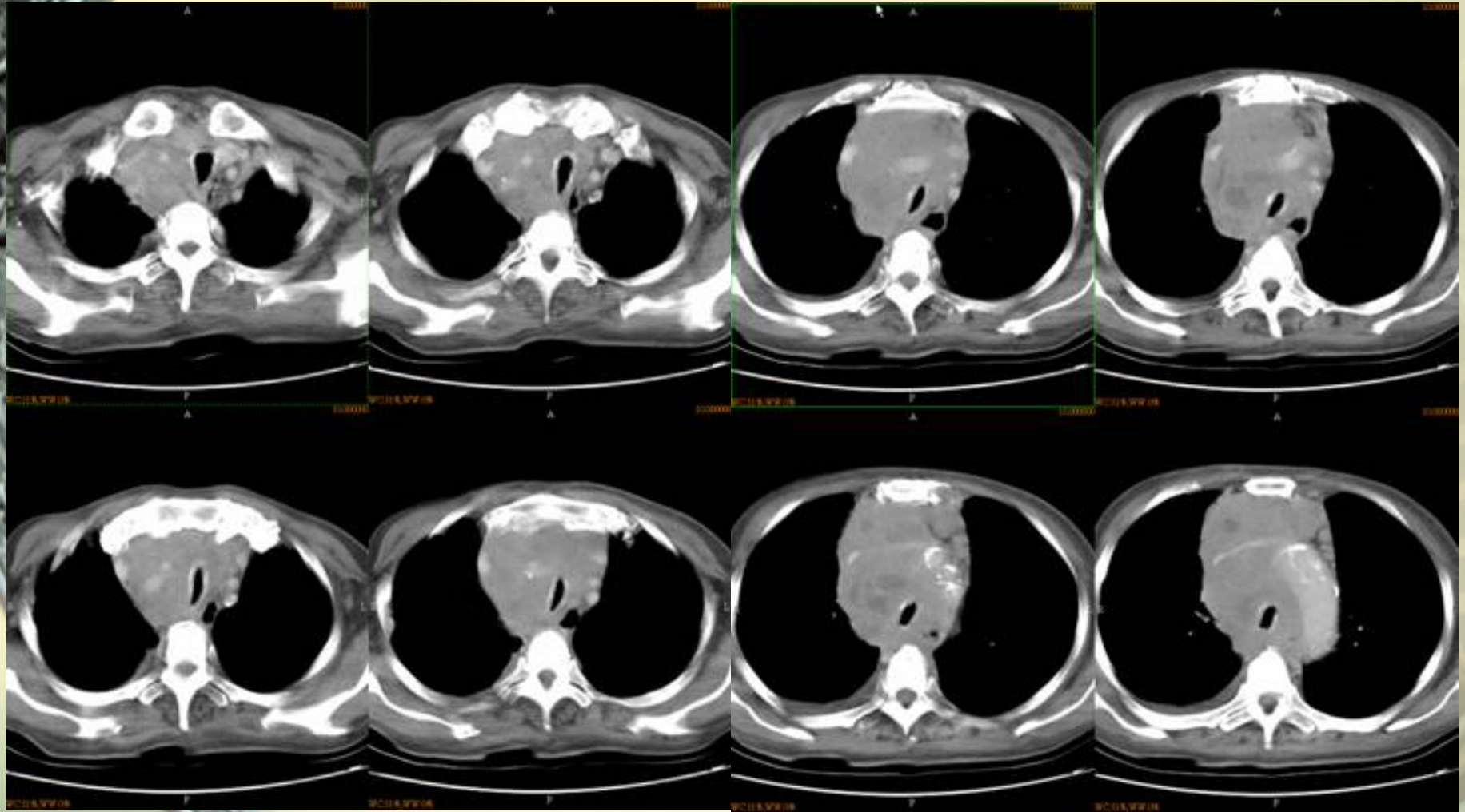
General History

- ◆ **Productive cough with yellowish sputum, shortness of breath for 4 days.**
- ◆ **CXR, CT: a large mediastinum mass**
- ◆ **Refuse tissue biopsy**
- ◆ **Admitted on 93-12-30 and AAD on 93-12-31.**

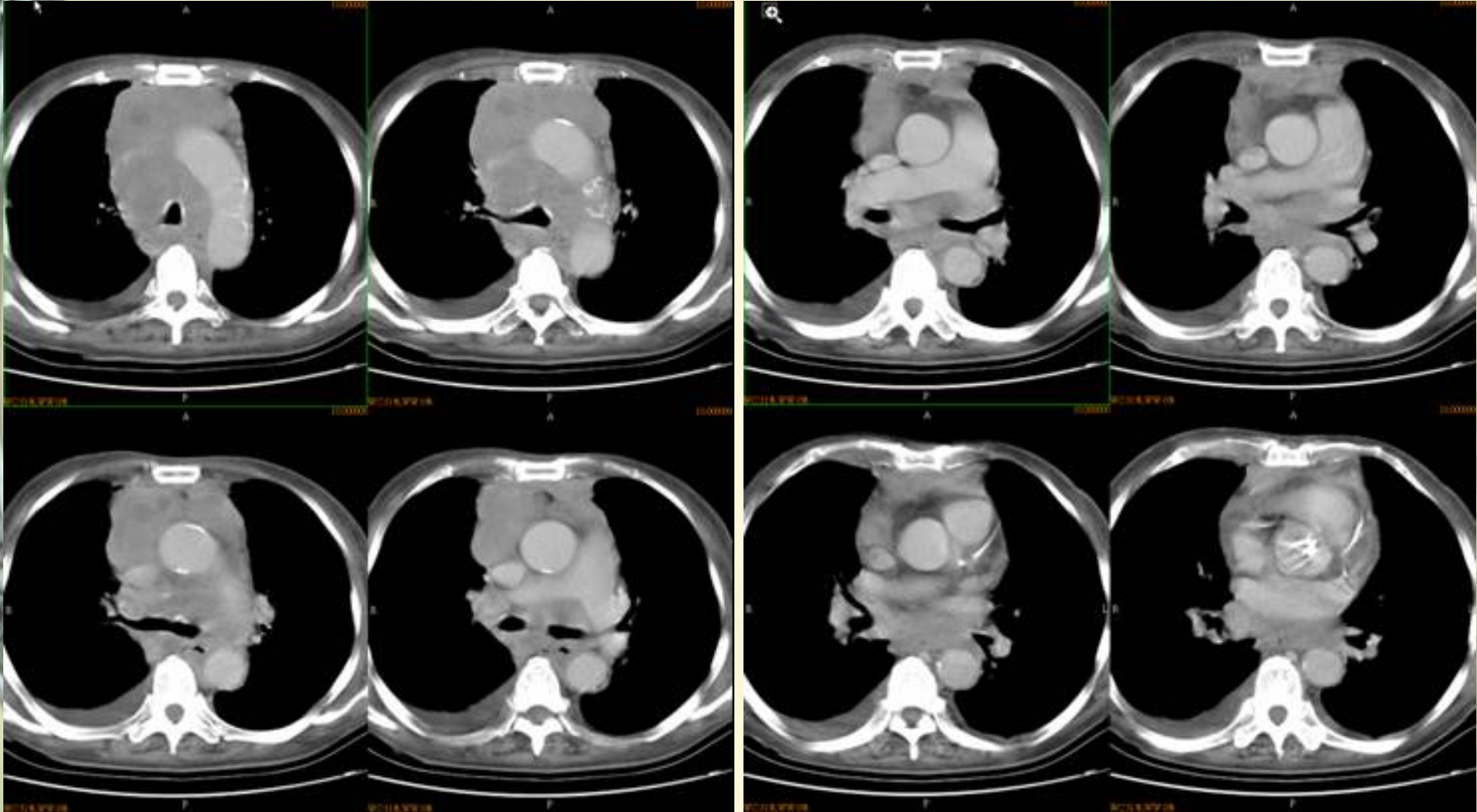
CXR – 2004.12.30



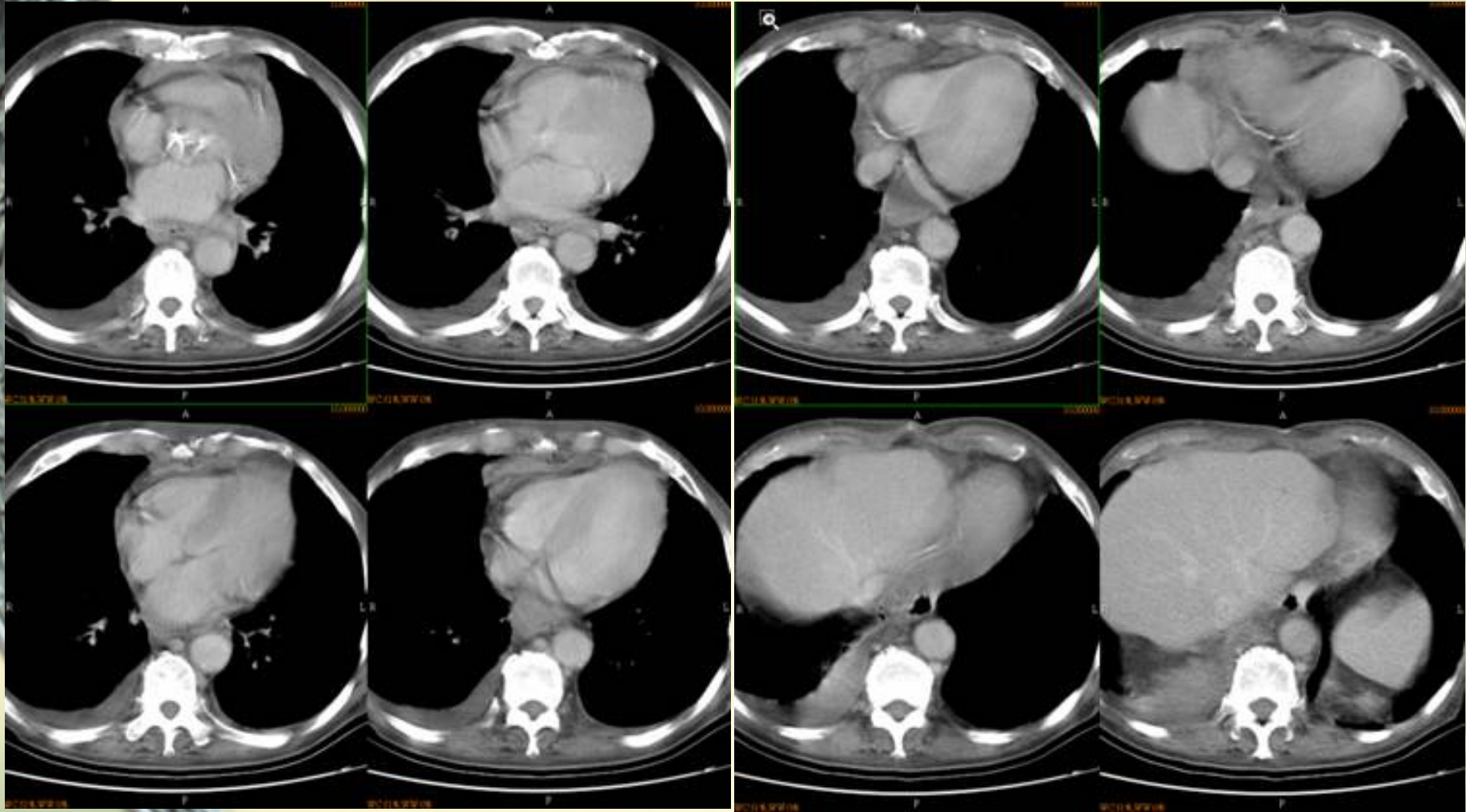
CT



CT



CT



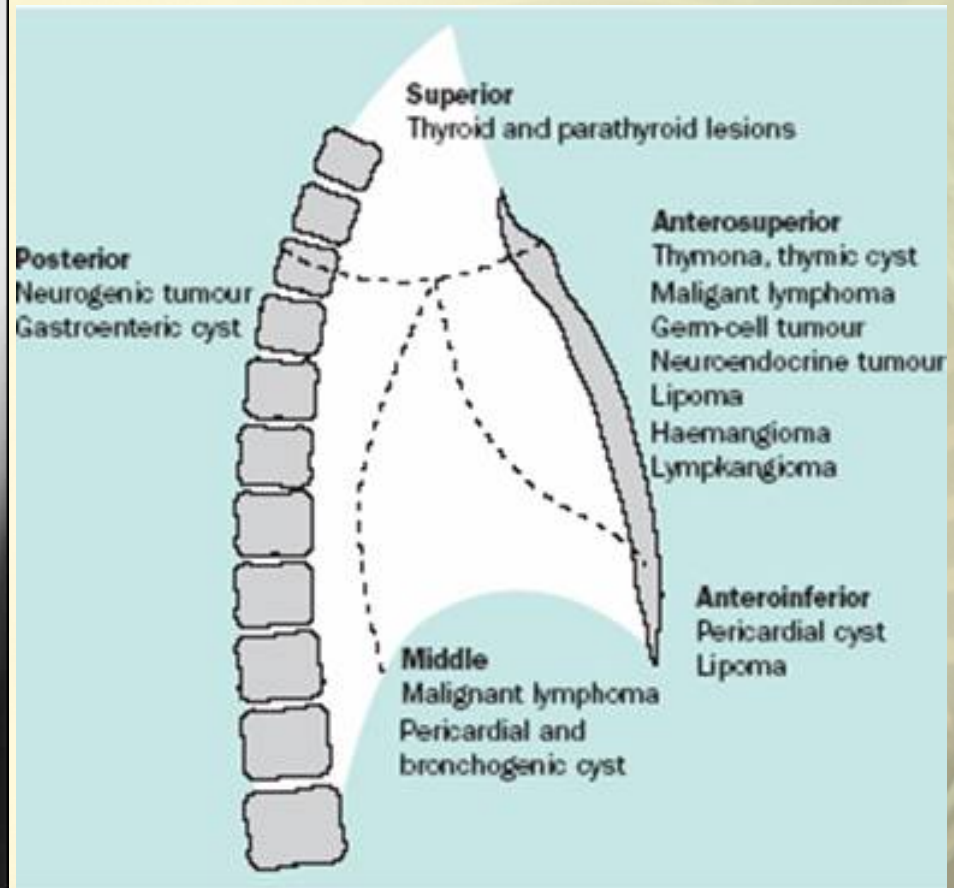
General History -3

- ❖ **Dysphagia, hoarseness, and face swelling for 10 days.**
- ❖ **Productive cough and shortness of breath were still noted.**
- ❖ **Weight loss for 10 Kg in this one year.**
- ❖ **Admitted on 94-01-04**

PE and Lab data

- ◆ **Lymphadenopathy: left, 0.5*0.5cm**
- ◆ **Clear breathing sound**
- ◆ **Regular heart beat**
- ◆ **Jugular vein engorgement, left upper and lower limbs edema**
- ◆ **Hb: 12.7 WBC: 6050 Seg: 77.9%
BUN: 18 Cr: 1.2 Albumin: 3.4**

Mediastinal mass



Mediastinal tumor

Table 1. Mediastinal tumors

	Benign	Malignant
Anterior	Thymoma Thymic cyst Thymolipoma Thymic hyperplasia Thyroid Cystic hygroma Parathyroid adenoma Foramen of morgagni hernia	Thymic carcinoma Thyroid carcinoma Seminoma Mixed germ cell Lymphoma Thymic carcinoid
Middle	Benign adenopathy Cysts Esophageal mass Hiatal hernia Cardiac and vascular structures Lipomatosis Cardiophrenic fat pad Foramen of morgagni hernia	Lymphoma Metastases Esophageal cancer Thyroid carcinoma
Posterior	Ectopic thyroid Neurofibroma Schwannoma Chemodectoma Foramen of bochdalek hernia Meningocele	Neuroblastoma

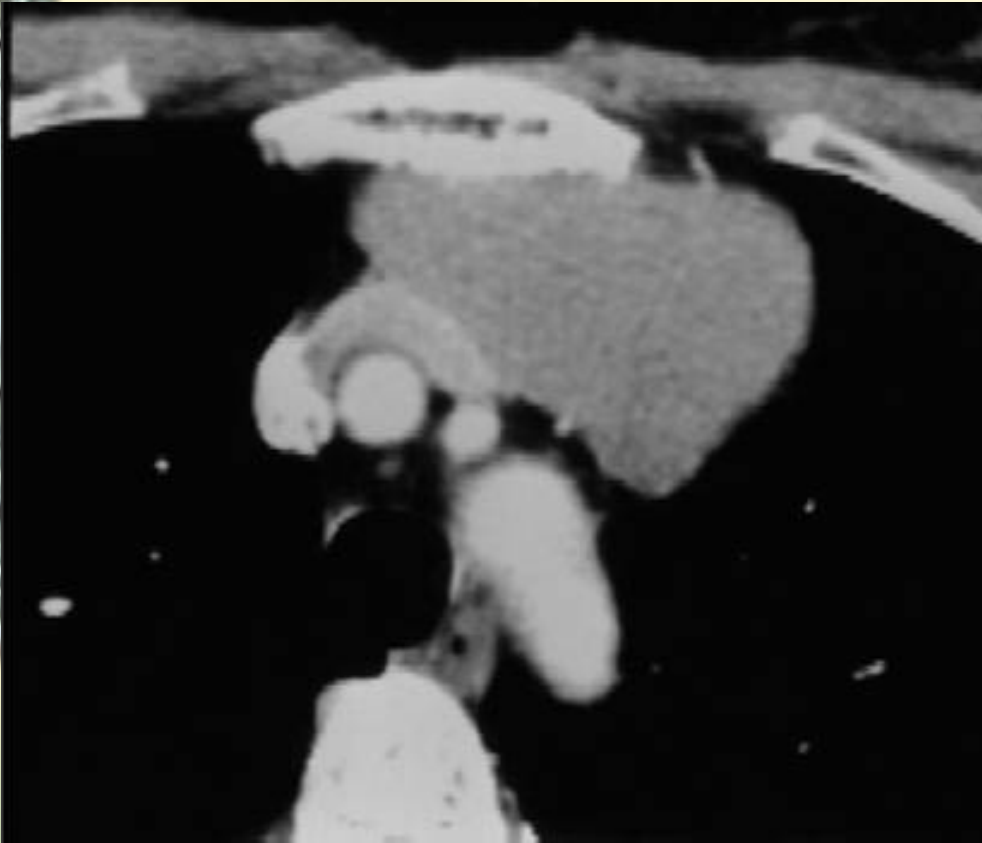
Anterior mediastinal mass

- ◆ Thymoma
- ◆ Teratoma
- ◆ Thyroid mass
- ◆ Terrible lymphoma

Thymoma

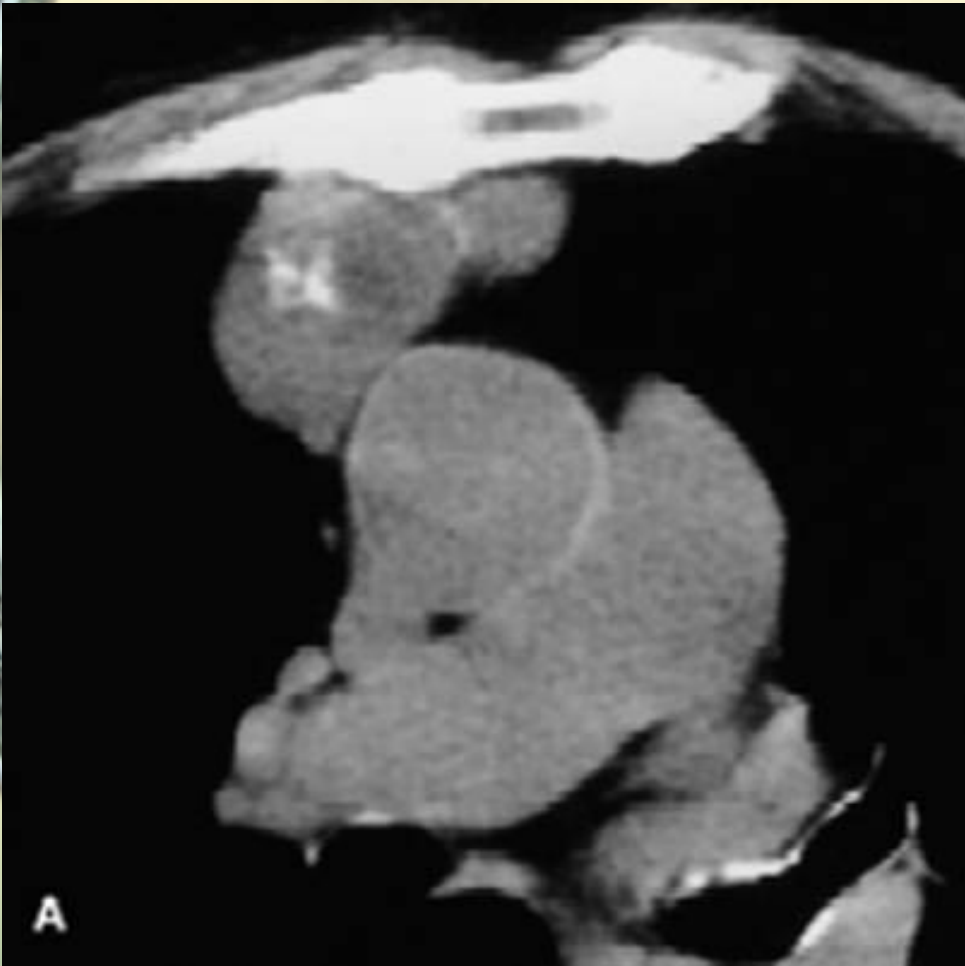
- ◆ **Round, oval, well-circumscribed mass**
- ◆ **Smooth or lobulated, homogenous**
- ◆ **Soft tissue attenuation**
- ◆ **25% calcification**
- ◆ **5% cystic**

Noninvasive thymoma



- ◆ Homogeneously
- ◆ Smoothly
- ◆ Rare calcification

Invasive thymoma

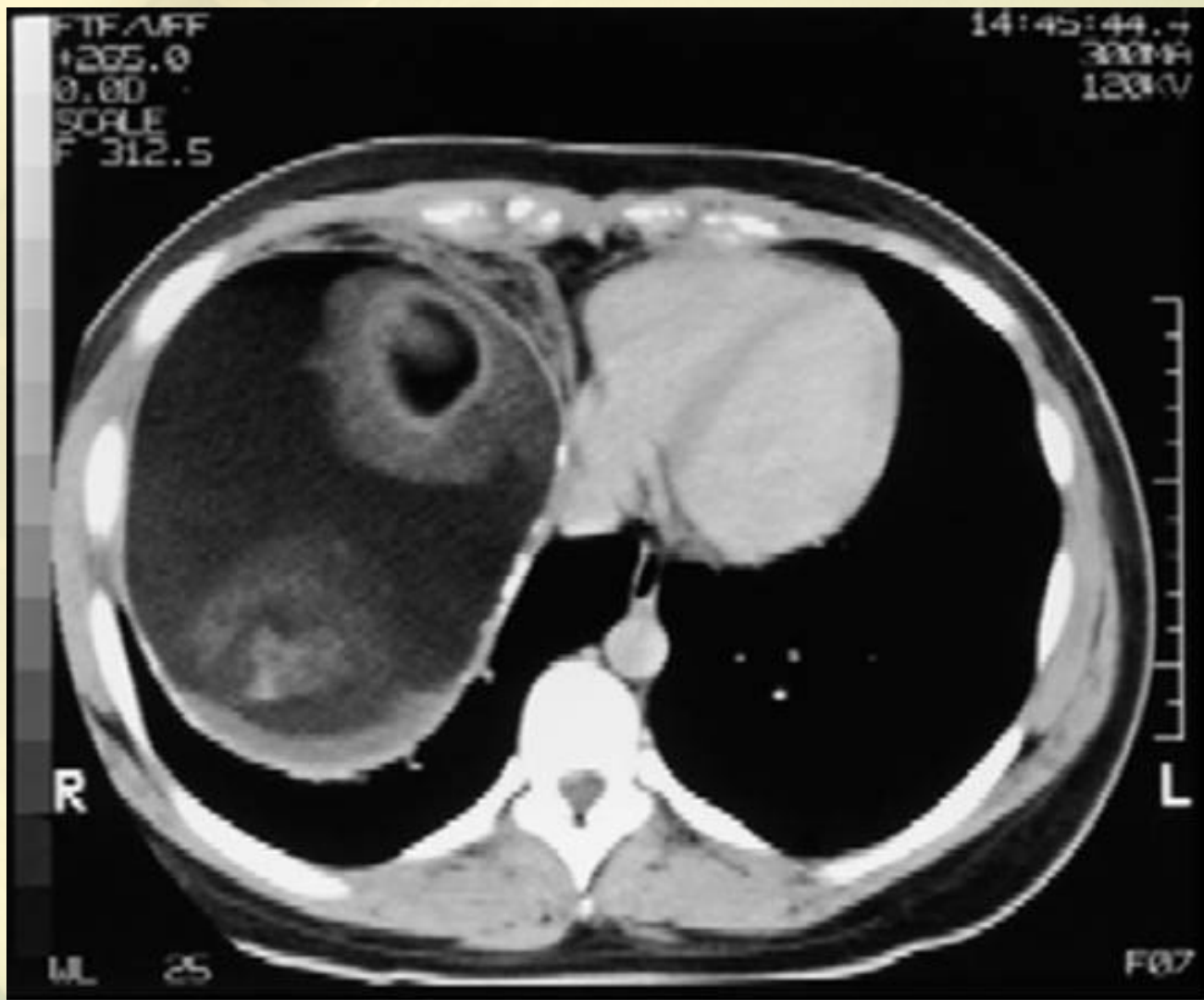


- ❖ Lobulated or irregular contour
- ❖ Cystic or necrotic portion
- ❖ Multifocal calcification

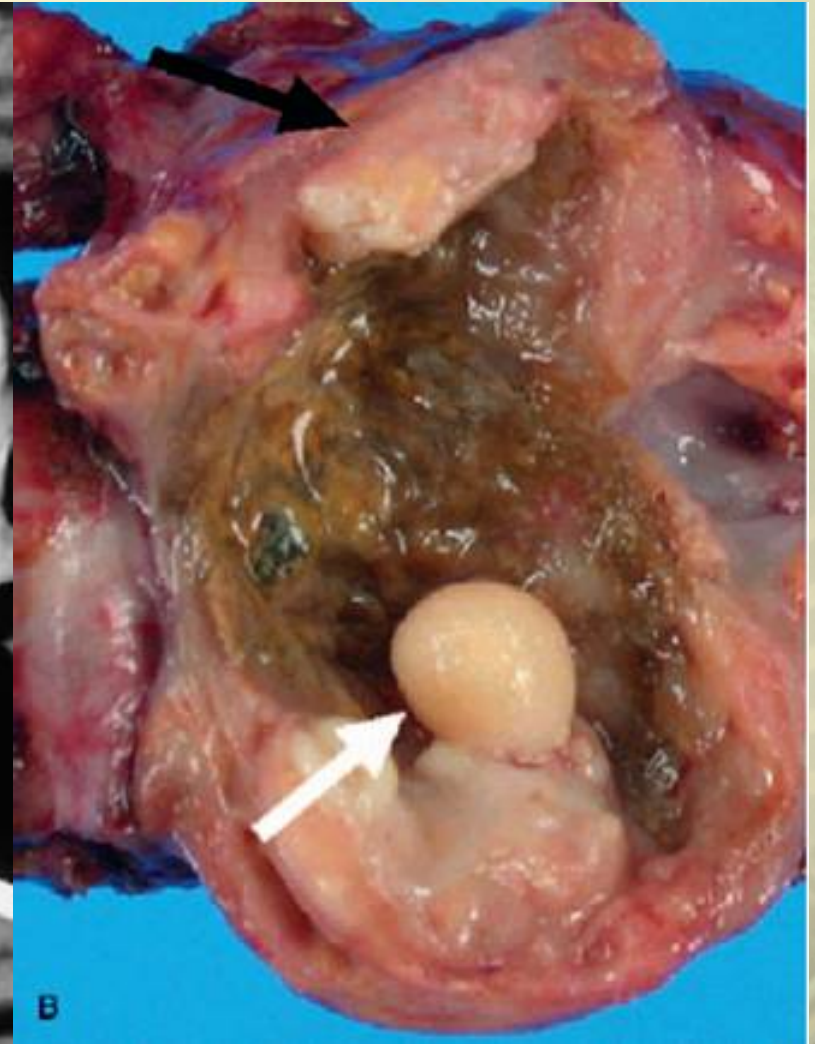
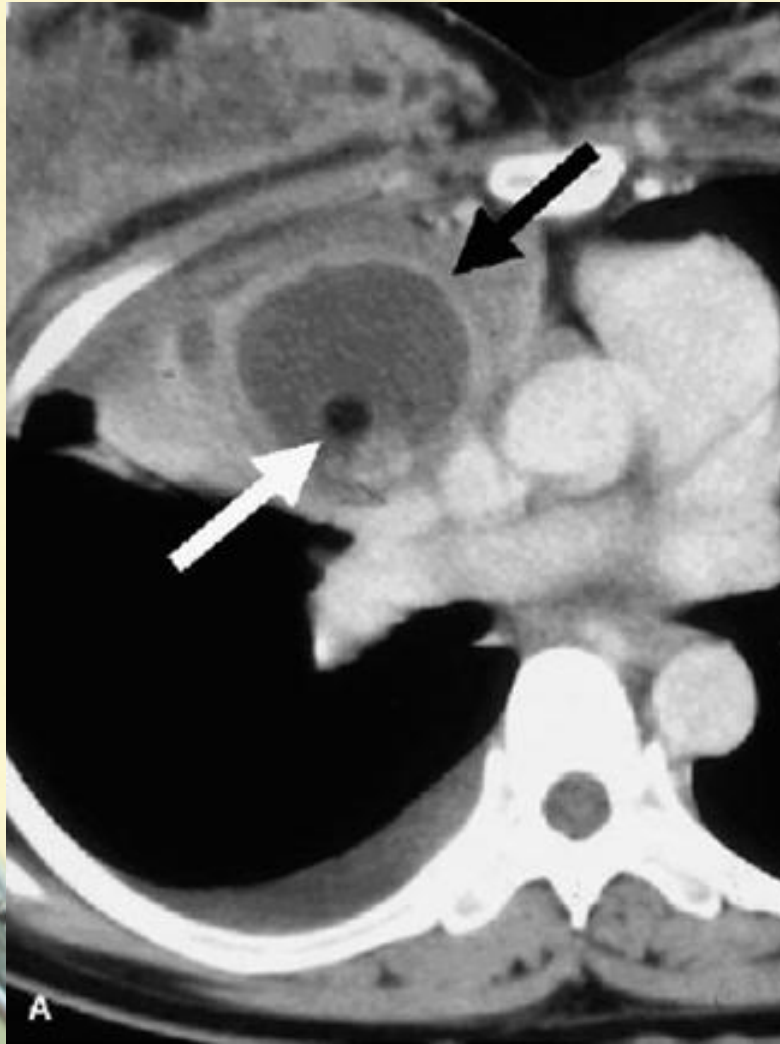
Teratoma

- ❖ **Sharply defined, smooth, ovoid mass**
- ❖ **Cystic and solid component**
- ❖ **Soft tissue (hair, sebaceous material)**
- ❖ **Calcification (bone, teeth)**
- ❖ **Closer density to fat (fat-fluid level)**

Teratoma



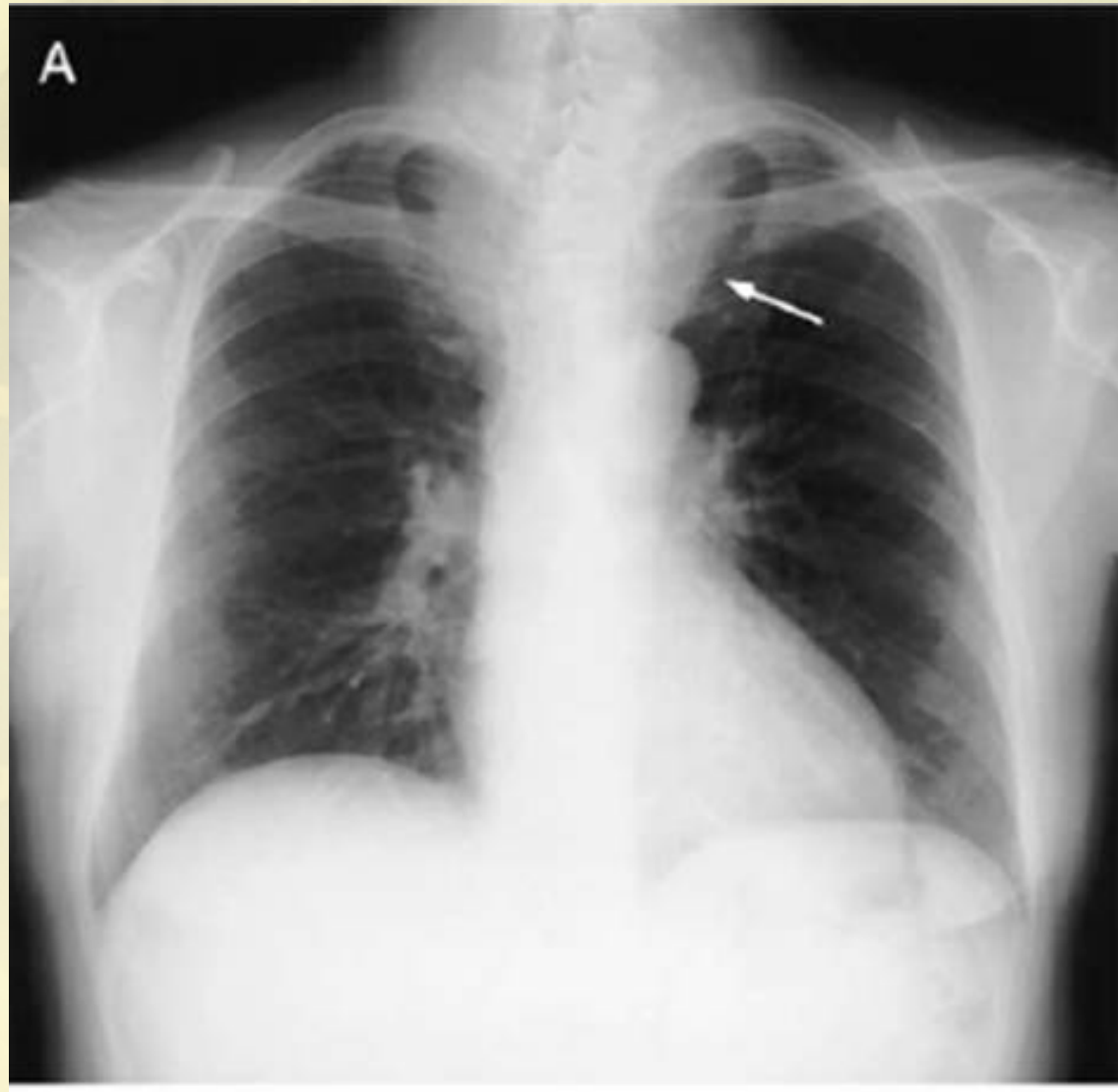
Ruptured teratoma



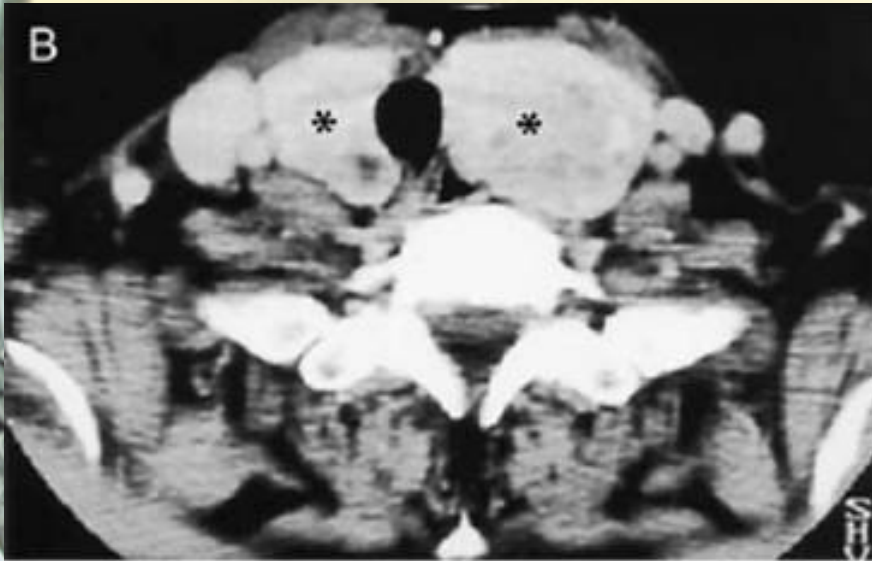
Thyroid mass

- ❖ **Well-defined, inhomogeneous mass**
- ❖ **Continuity with the thyroid gland**
- ❖ **Trachea deviation**
- ❖ **Coarse, ring-like calcification**
- ❖ **High attenuation**

Intrathoracic goiter



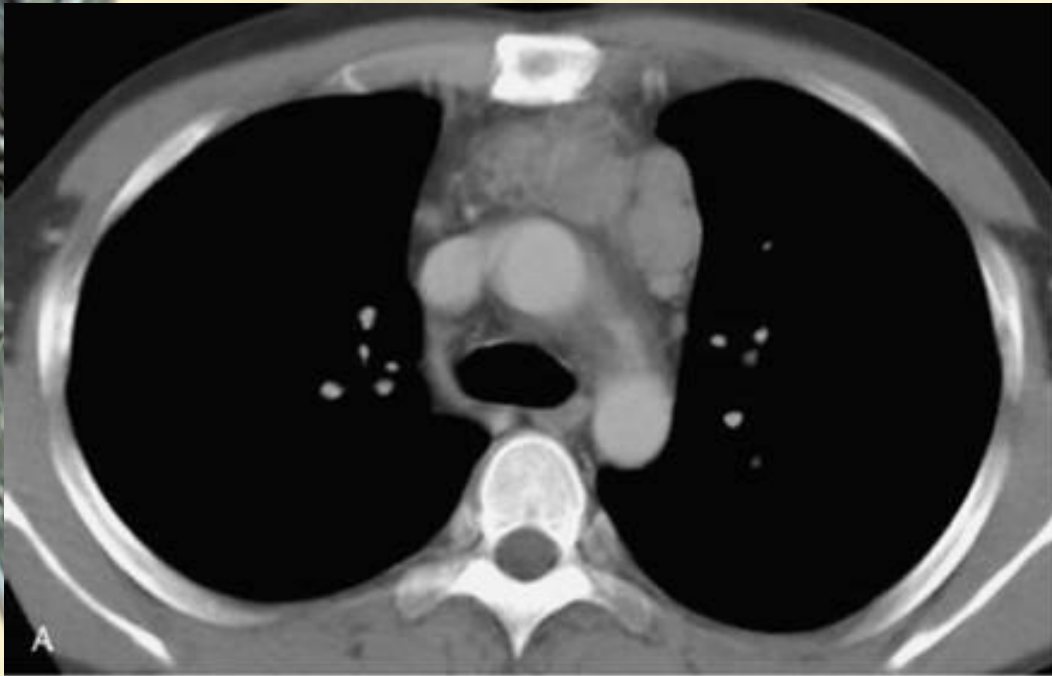
Intrathoracic goiter



Terrible lymphoma

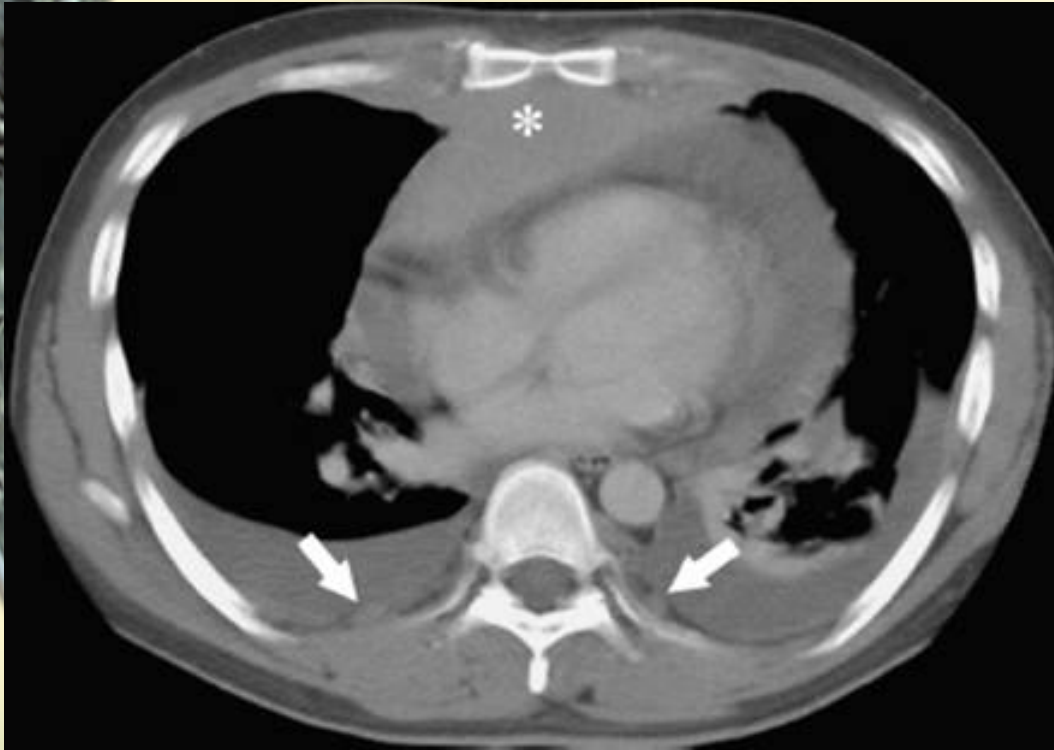
- ❖ **Large mass appears well-defined on PA view, but ill-defined on lateral view**
- ❖ **Secondary signs:**
 - ❖ **Pleural effusion**
 - ❖ **Erosion of the sternum**
 - ❖ **Lymph node involvement**
 - ❖ **Vessel involvement**
- ❖ **Calcification is rare, may calcify after treatment (radiotherapy)**

Hodgkin lymphoma



- ◆ Presence of surface lobulation
- ◆ Absence of vascular involvement
- ◆ Absence of pleural effusion

Precursor T-cell lymphoblastic lymphoma



- ◆ Presence of cervical or inguinal lymph node
- ◆ Presence of pericardial effusion
- ◆ Absence of surface lobulation

Mediastinal diffuse large B-cell lymphoma



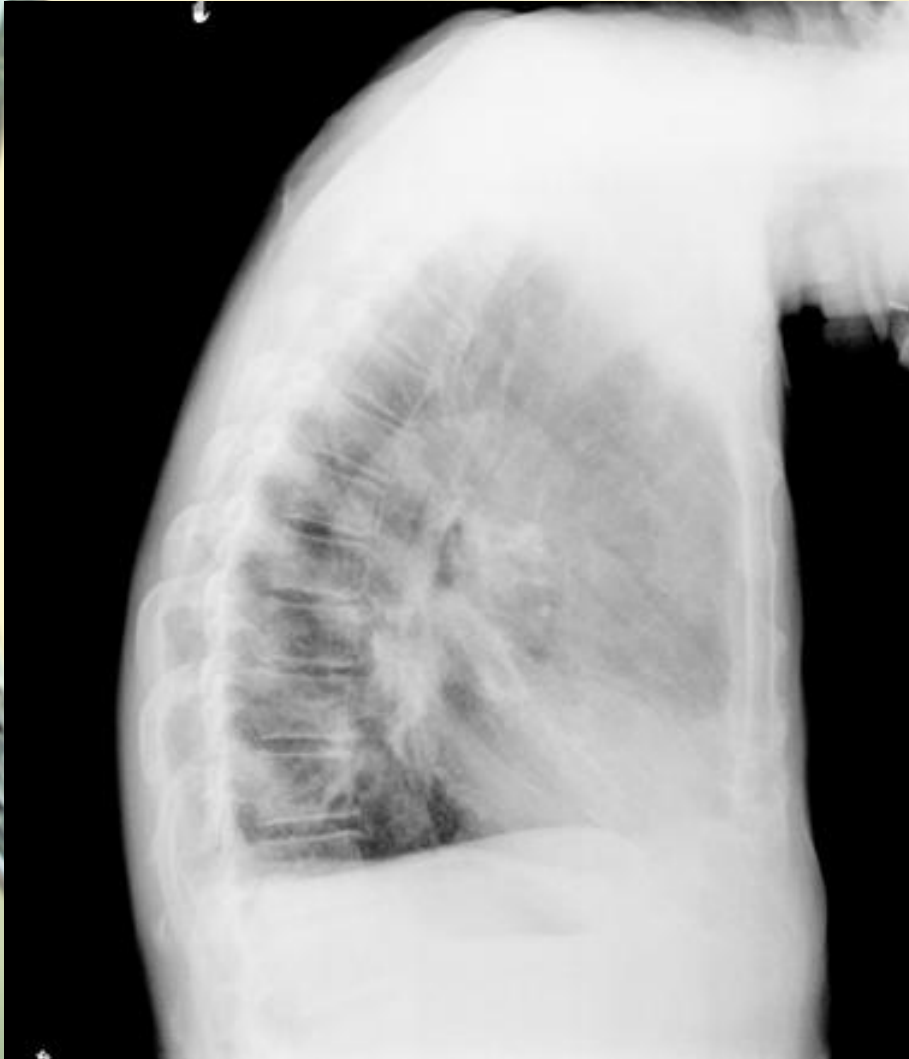
- ◆ Presence of vascular involvement

CXR – PA view



- ❖ **Widening of upper mediastinum**
- ❖ **Ill-defined, patchy infiltration at RLL**
- ❖ **Right CP angle blunting**

CXR – lateral view



- ❖ Faint radiopaque soft tissue density occupying the ant. sup. Mediastinum
- ❖ Ill-defined, patchy infiltration lower lung field
- ❖ CP angle blunting

CT with contrast



- Compresses the trachea to the left side
- Upward extension to the right lower neck region

CT with contrast



- ❖ Large, lobulated, heterogeneous mass occupying the ant. mediastinum
- ❖ Aortic arch involvement and SVC encasement

CT with contrast



- ❖ Pericardium involvement
 - ❖ Moderate amount of right pleural effusion
- lymphoma

Management

- ❖ **Mediastinoscopy with biopsy: several enlarged LN over R't deep neck and paratracheal lesion were sampled for frozen section**
- ❖ **Pathology: Malignant lymphoma, B cell, large atypical lymphoid cells diffusely infiltrating the fibrous stroma.**

Treatment

- ❖ **Port-A insertion for chemotherapy**
- ❖ **Radiotherapy 8 times for SVC syndrome**
- ❖ **AAD to VGH for chemotherapy on 2005.01.15.**

Mediastinal lymphoma

- ❖ **Non-Hodgkin's lymphoma – diffuse large B cell lymphoma**
- ❖ **Hodgkin's lymphoma – nodular sclerosing type**
- ❖ **5% of the lymphoma**
- ❖ **Young adults**
- ❖ **Females more than males**

Symptoms and Signs

- ❖ **No symptoms and found accidentally**
- ❖ **Respiratory tract symptoms:**
 - ❖ **Cough**
 - ❖ **Shortness of breath**
 - ❖ **chest pain**
- ❖ **Systemic symptoms:**
 - ❖ **Fever**
 - ❖ **Weight loss**
 - ❖ **General malaise**

Symptoms and Signs

◆ Nerve invasion:

- ◆ Hoarseness (recurrent laryngeal n.)

- ◆ Diaphragmatic paralysis (phrenic n.)

- ◆ Horner syndrome (autonomic n.)

◆ SVC obstruction:

- ◆ Face, neck, limbs edema

- ◆ Stridor, dysphagia

- ◆ Hypoxia, cyanosis

Diagnosis - image

- ◆ Chest X ray: PA view and lateral view
- ◆ CT
- ◆ MRI
- ◆ Gallium 67 scan
- ◆ PET

Diagnosis - Lab

- ❖ **TSH, T4: Thyroid**
- ❖ **AFP, HCG: germ cell tumor**
- ❖ **Ca, P, PTH: Parathyroid**

Diagnosis - biopsy

- ❖ **CT-guide fine-needle aspiration (FNA)**
- ❖ **Mediastinoscopy**
- ❖ **Video-assisted thoracoscopy (VATS)**
- ❖ **Mediastinotomy**

Treatment

- ❖ **Surgical procedure for diagnostic biopsy or symptoms relieve**
- ❖ **Chemotherapy: CHOP – Cyclophosphamide, Adriamycin, Vincristine, Prednisone**
- ❖ **Radiotherapy**
- ❖ **Steroid**

Prognosis

- ❖ **40% - 80% are cured with the initial treatment.**
- ❖ **Recurrence occur in the first year. 2 years remission is likely to be cured.**
- ❖ **10-year-survival rate: 70%**

Reference

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- ❖ **Cystic tumor in the anterior medastinum:
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- ❖ **<http://www.emedicine.com/med/topic1366.htm>**



Thanks for your listening!