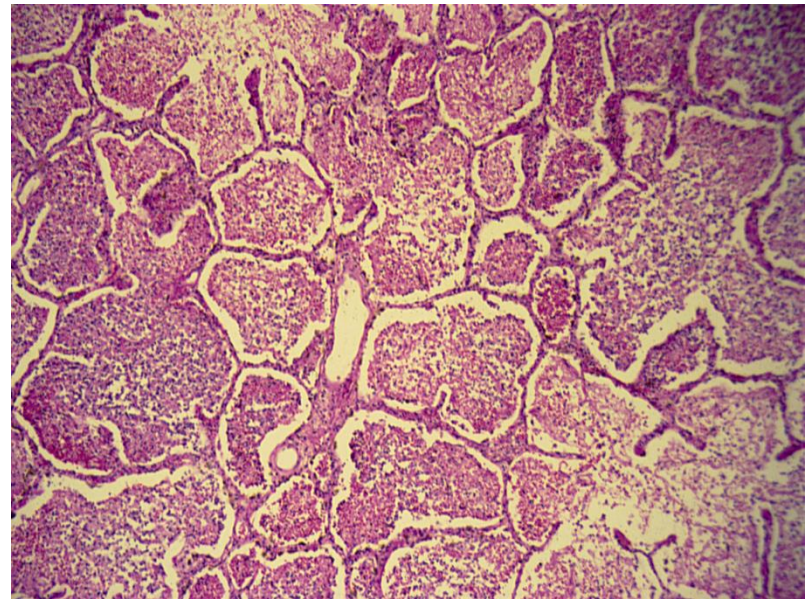
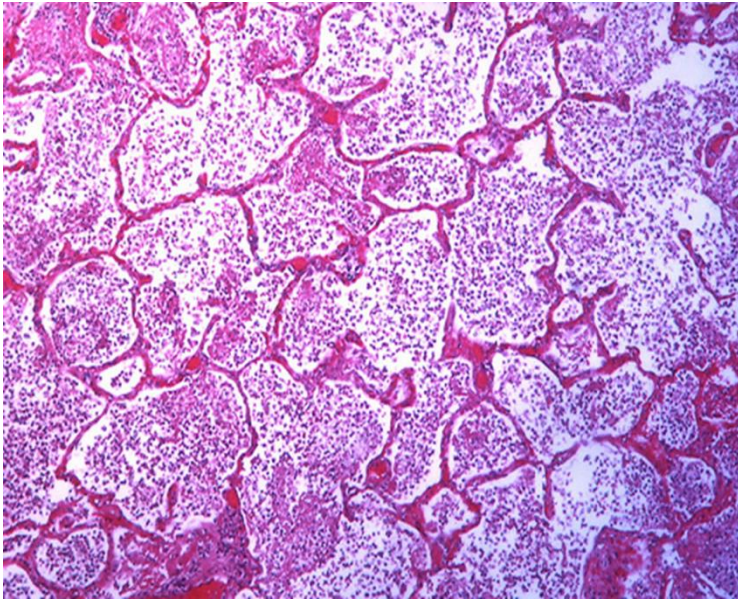


# 1-Lobar Pneumonia



© Elsevier, Kumar et al: Robbins Basic Pathology 8e - www.studentconsult.com

-The lower lobe is solid and pale  
-gray\red hepatization



Section of the lung shows *diffuse consolidation*

1-alveoli are filled with fibrinous exudate containing fibrin, macrophages, polymorphs.

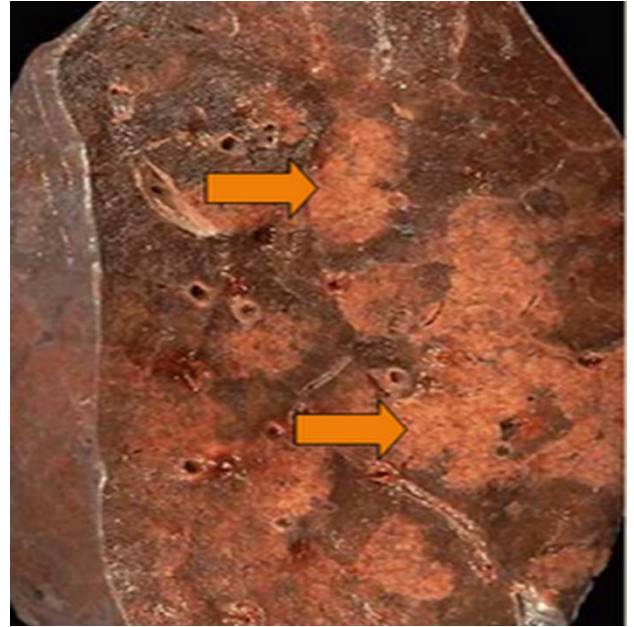
2-Alveolar walls are congested

3-destruction of the alveolar wall

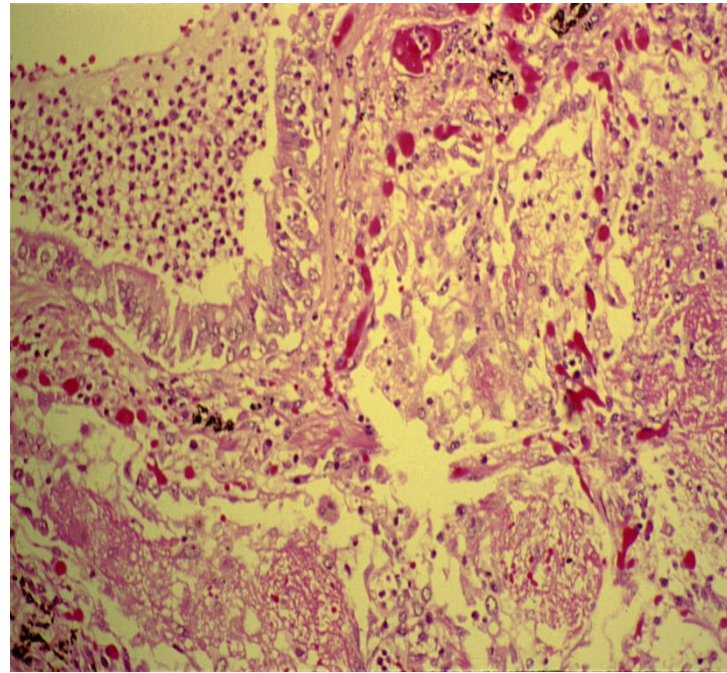
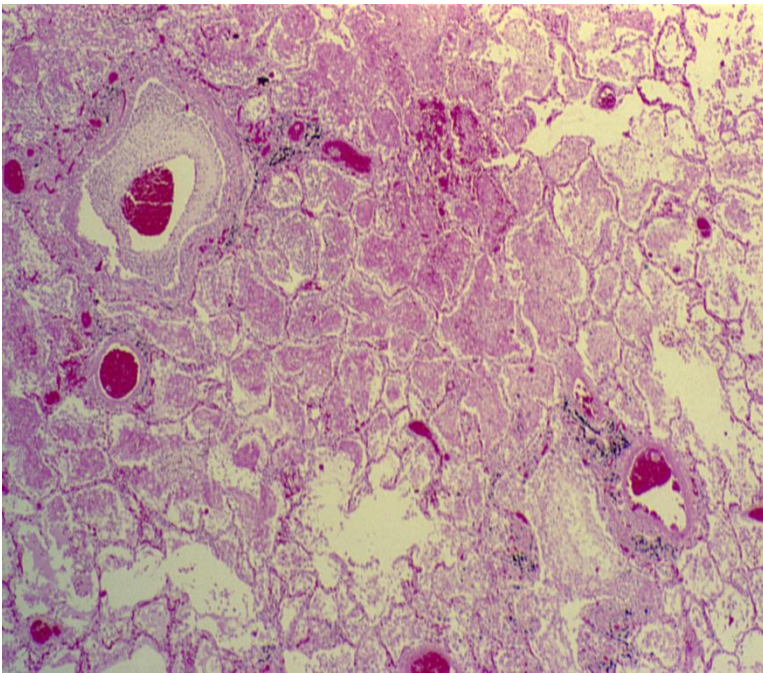
## 2-Bronchopneumonia

### Predisposing factors

Diabetes Mellitus , old age , immune deficiency and chronic illness



patchy lung consolidation



**Section of the lung shows *patchy consolidation* surrounding bronchioles:**

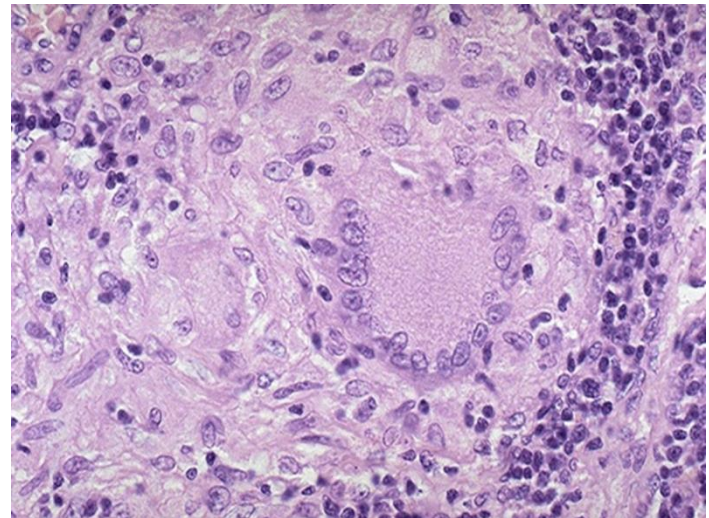
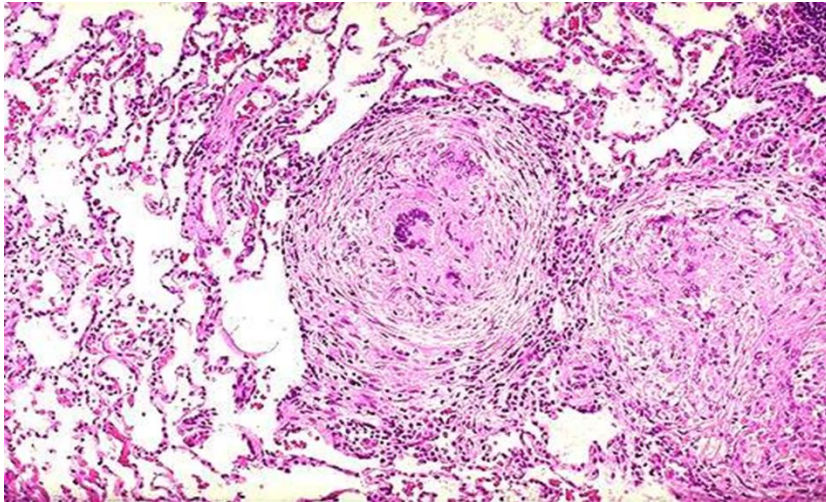
- 1- alveoli are filled with fibrinous exudate containing fibrin, macrophages, polymorphs.
- 2- Alveolar walls are congested
- 3- Ulceration and necrosis of the bronchiole.
- 4- Patchy and focal distribution of the exudate

# 3-Tuberculosis of the lung



-Caseous necrosis

-cavitation 

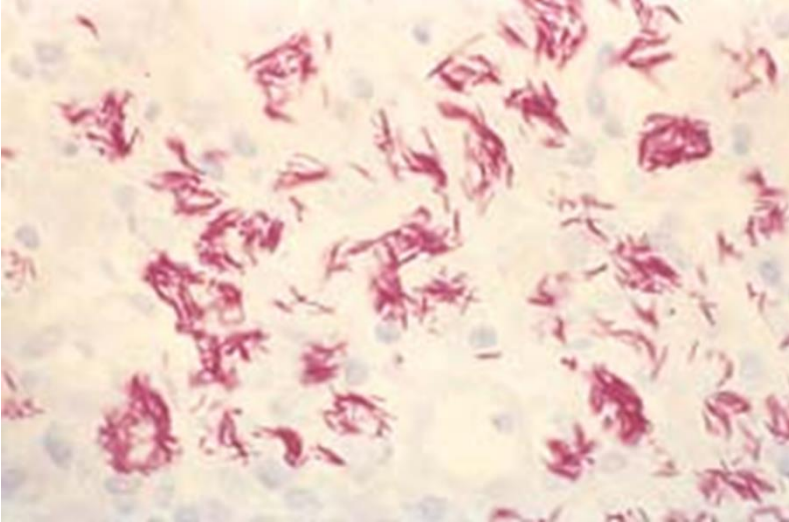


1-The alveolar septae contain many tubercles/granulomas

2-Granuloma consist of: central necrosis, epithelioid cells , langhan's giant cells, rim of lymphocytes.

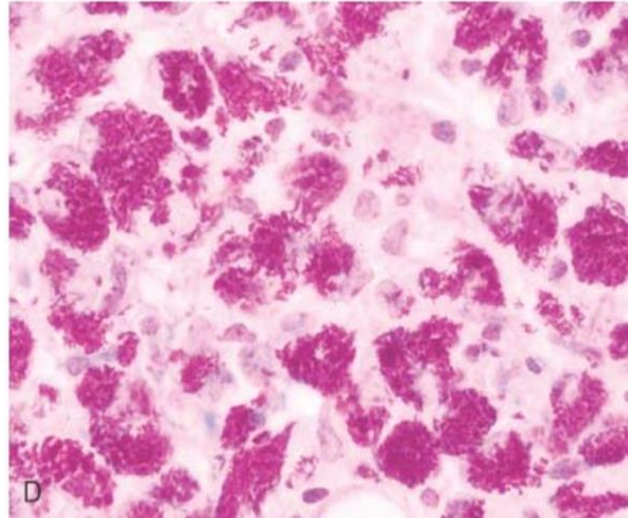
Epithelioid and giant cell Granuloma

## Cont. TB



### Ziel-Neilseon stain

The acid fast stain for acid fast bacteria is also called the Ziel-Neilseon stain, or simply AFB stain

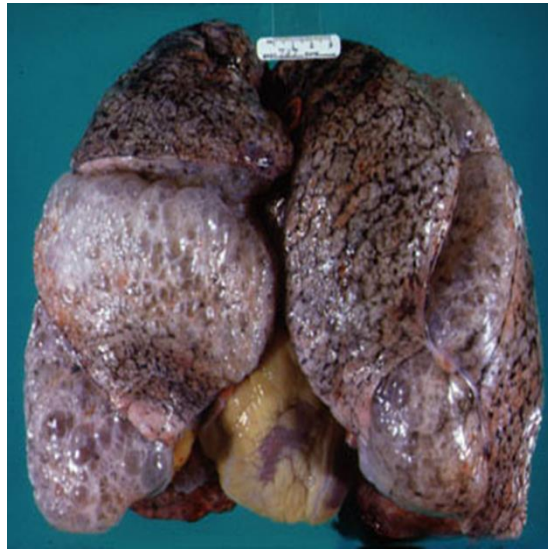


granulomas filled with acid fast bacilli. This is CLASSIC for TB

Complications of TB are:

Amyloidosis , tuberculous pneumonia  
, miliary tuberculosis , tuberculous  
meningitis and Addison disease

# 4-Emphysema



Panacinar emphysema



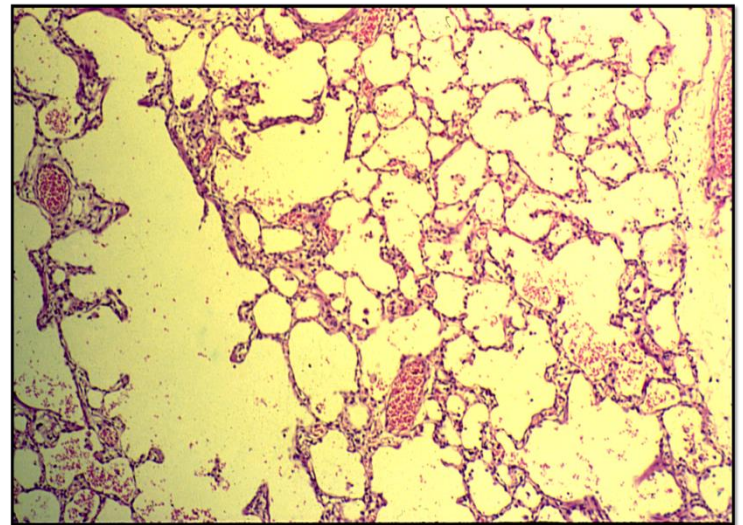
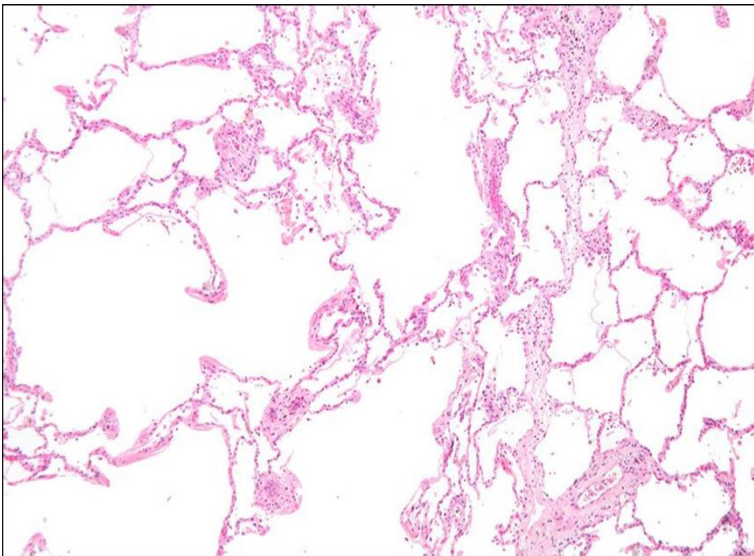
## Emphysema

### Panacinar emphysema

- dilatation of air spaces
- destruction of alveolar wall

### centrilobular emphysema

- multiple cavities lined by heavy black carbon deposits
- characteristic of smoking



- dilatation of air spaces
- destruction of alveolar wall

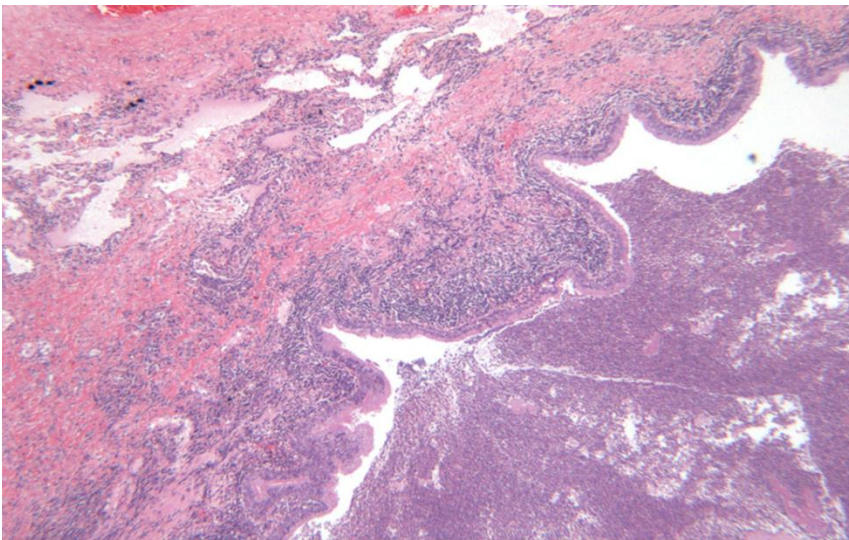
#complication: Pneumothorax

# 5-Bronchiectasis



**-Permanent dilatation of bronchi and bronchioles caused by destruction of muscle and elastic tissue resulting from or associated with chronic necrotizing infection**

**-Markedly distended peripheral bronchi.**



**-dilatation of the bronchi**

**-interstitial fibrosis**

**Causes of Bronchiactasis:** - congenital and hereditary conditions like cystic fibrosis, immunodeficiency states, Kartagener syndrome, Post infectious, bronchial obstruction.

# 6-Pulmonary embolus and infarction



-wedge shaped peripheral hemorrhagic infarction

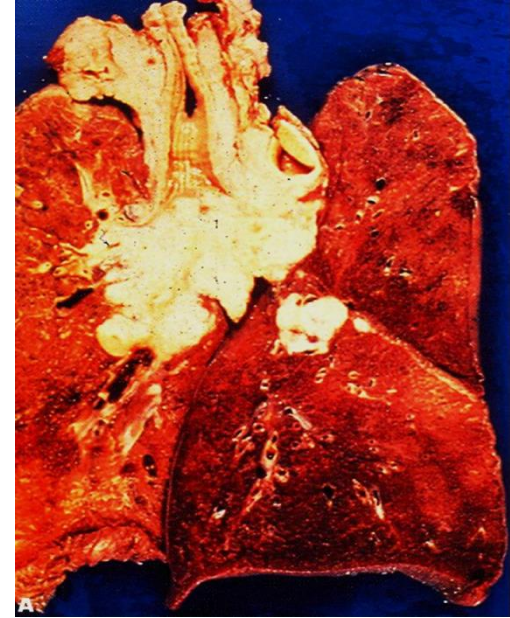
-A thrombus is seen in a major branch of pulmonary artery ( arrow head )

**Predisposing factors are-**

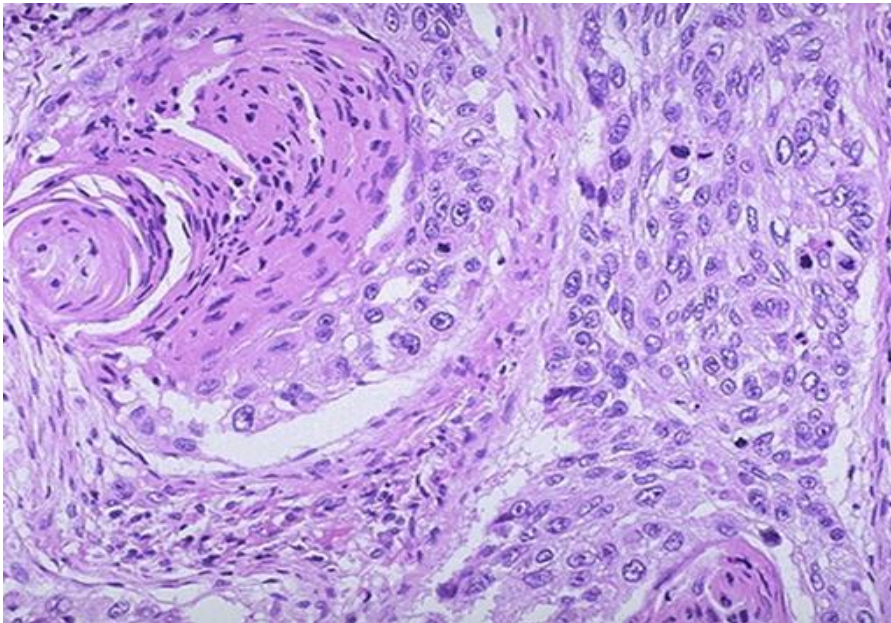
Prolonged bed rest ,  
surgery , severe trauma ,  
congestive heart failure ,  
contraceptive pills and  
postpartum period

# Lung Tumors

## 7-Squamous cell carcinoma of the lung



1. Central (hilar) mass.
2. bronchial obstruction



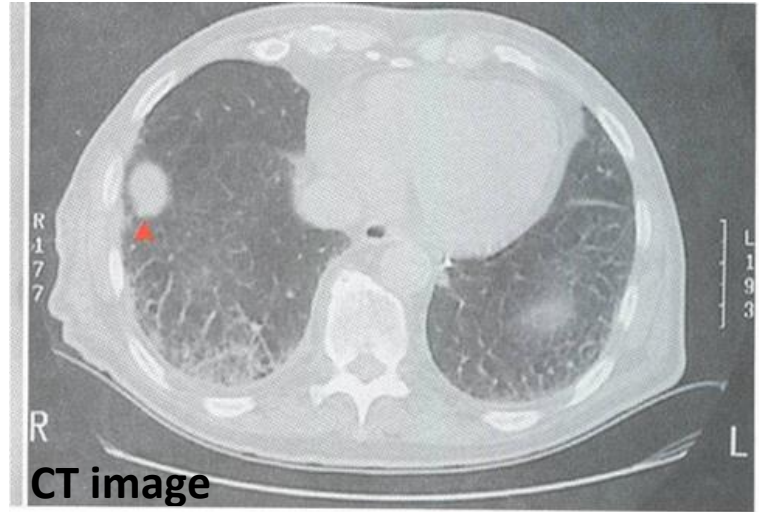
- Malignant squamous cells.
- Pleomorphism.
- mitoses and areas of necrosis.
- Stroma C.T

**PARA-NEOPLASTIC SYNDROME:-**

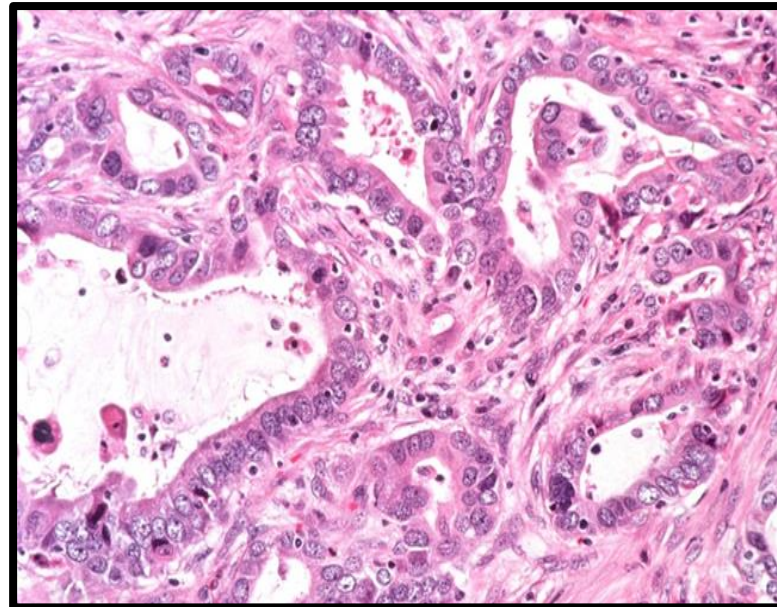
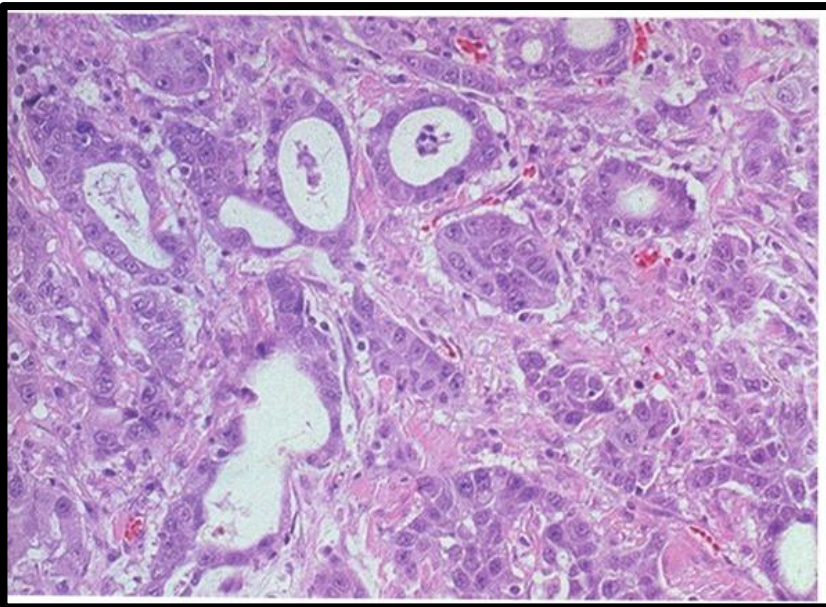
Inappropriate secretion of PTH → (Hypercalcemia)



# 8-Adenocarcinoma of The Lung

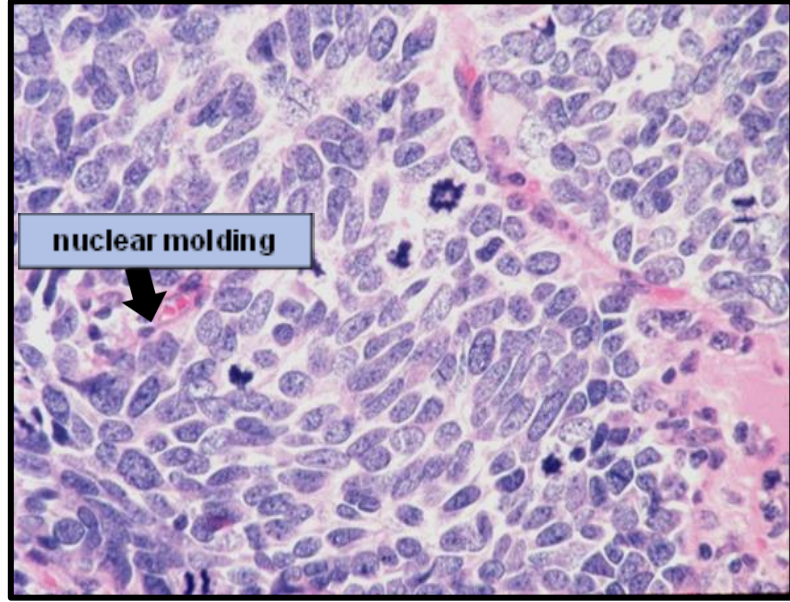
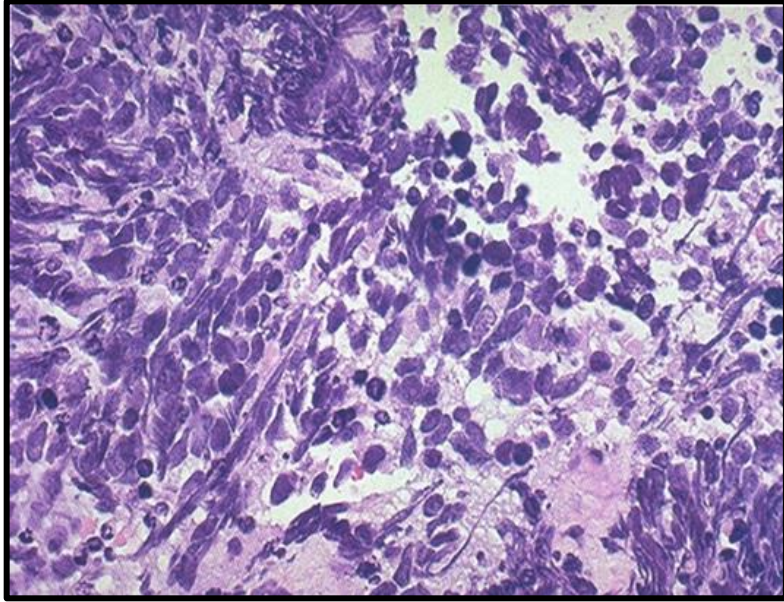


- peripheral
- areas of cavitation



- malignant glands lined by pleomorphic malignant cells.
- desmoplasia around the neoplastic glands.
- mitosis

# 9-Small cell carcinoma of the lung

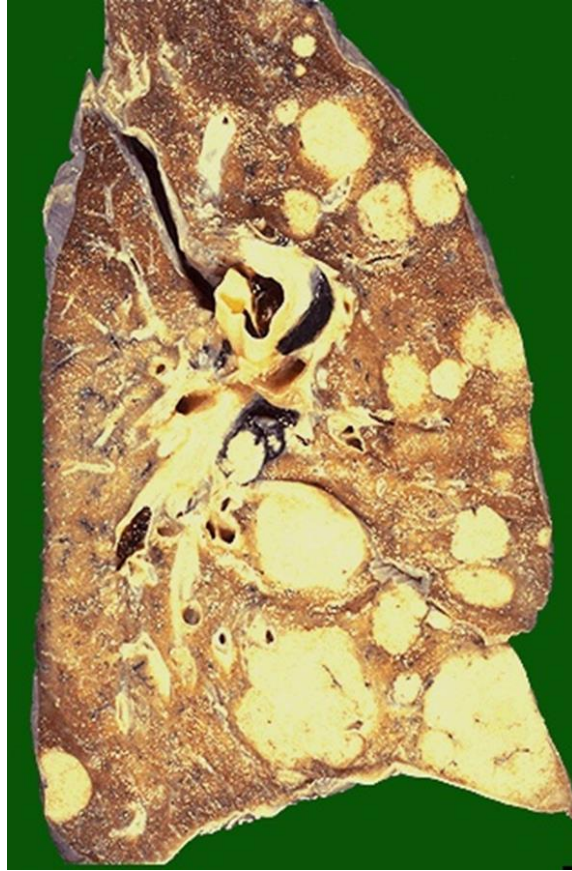


- clusters of small, blue, round malignant cells, oval or spindle shaped.
- nuclear molding = changing the shape of the nucleus according to the other nucleus = like a puzzle
- granular nuclear chromatin with (salt and pepper pattern)
- mitosis = high mitotic count >> same meaning

**PARA-NEOPLASTIC SYNDROME:-**

**Inappropriate secretion of ACTH → (Cushing's syndrome)**

## 10-Metastatic tumors of the lung



**Multiple nodules of metastatic carcinoma in lung**