

Pathology lab 2

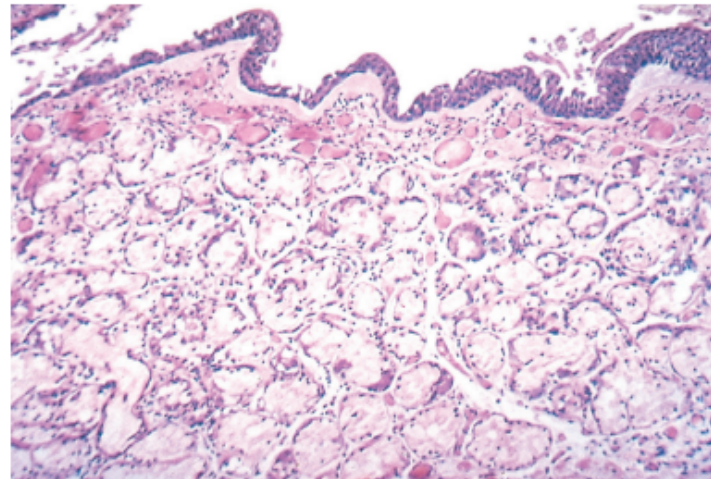
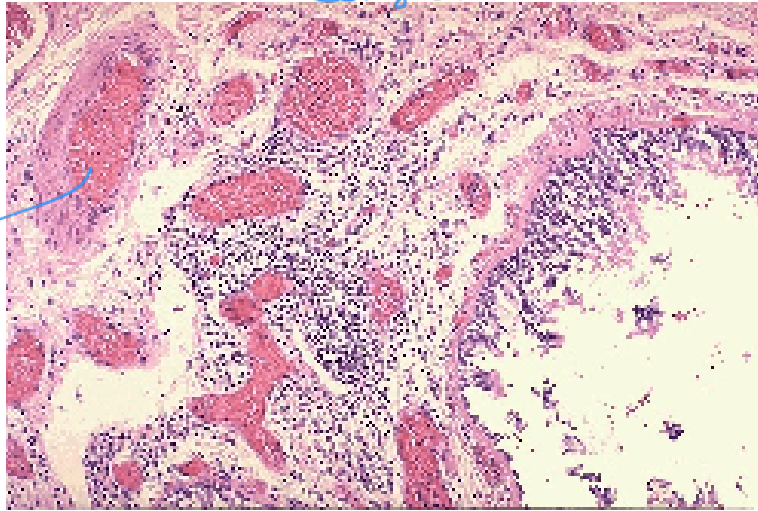
لا تـونـا من هـالـج دـعـانـكـم

25-10-2022

Chronic bronchitis

- Hypersecretion of Mucous.
- Causing chronic inflammation.
- Congestion of BV
- ↑ # of goblet cells
- Mucus plugs

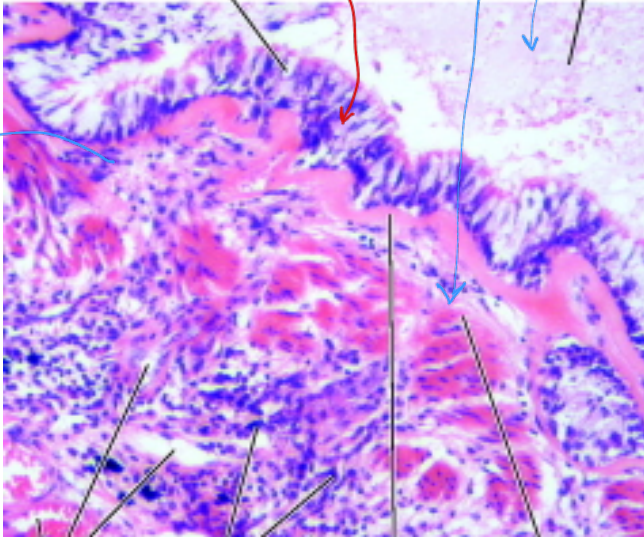
intact
of BV
↓
↑RBC
↓
congested



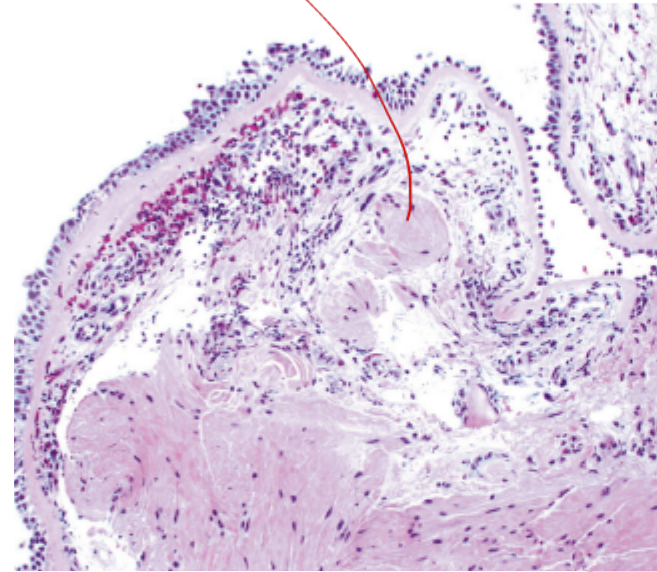
Asthma

- Thick Mucous layer
- ↑ goblet cells
- Hypertrophy of Muscles
- Thickened basement membrane

Inflammatory cells



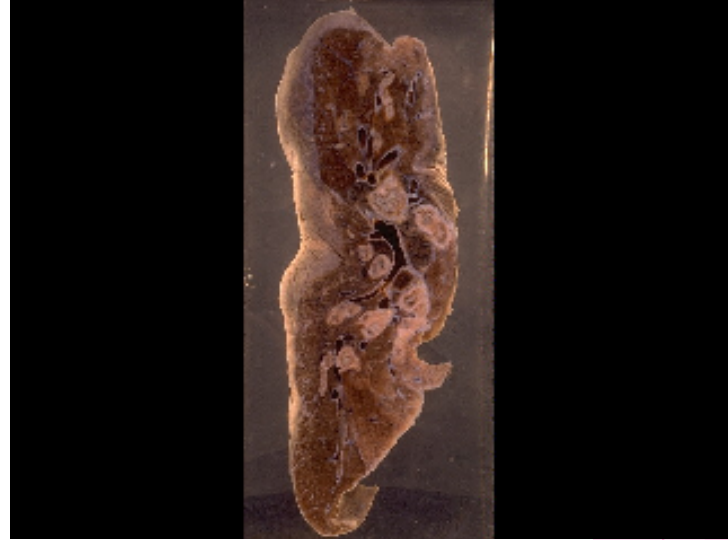
Area of Fibrosis



Mucus plug.

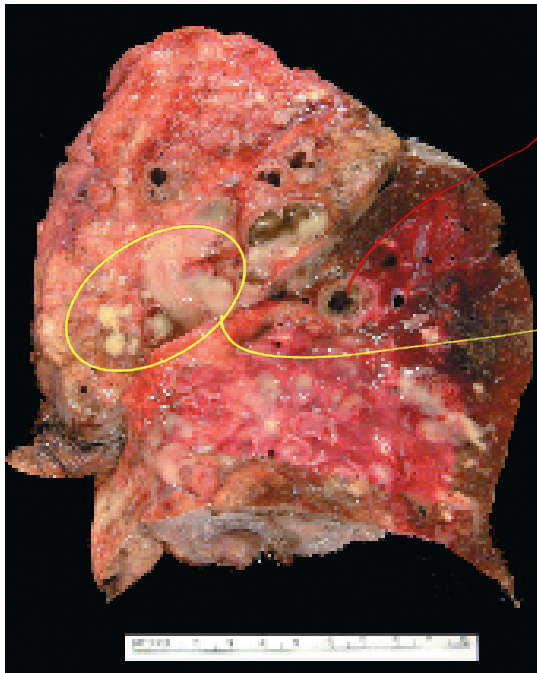


This cast of the bronchial tree is formed of inspissated mucus and was coughed up by a patient during an asthmatic attack. The



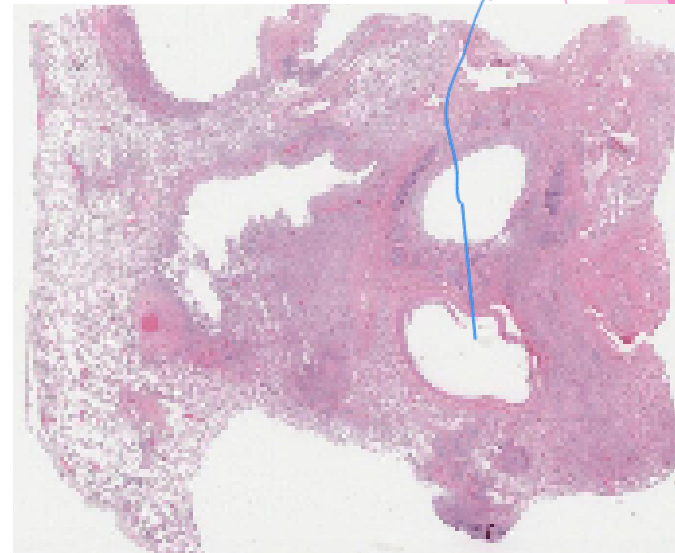
Bronchiectasis

- Permanent dilatation of **bronchiole**
- bronchi filled w/ Mucus plug
- Areas of Fibrosis



Dilated

Area of
Fibrosis



dilatation

Idiopathic Pulmonary Fibrosis



- Gray white Fibrosis.
- Cobble stone Appearance

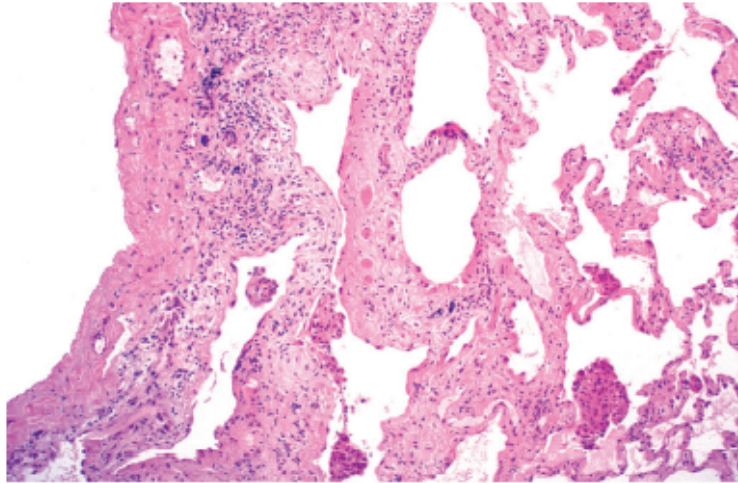
Hyperplastic
type II
Pneumocytes

Dense
Area of Fibroblast

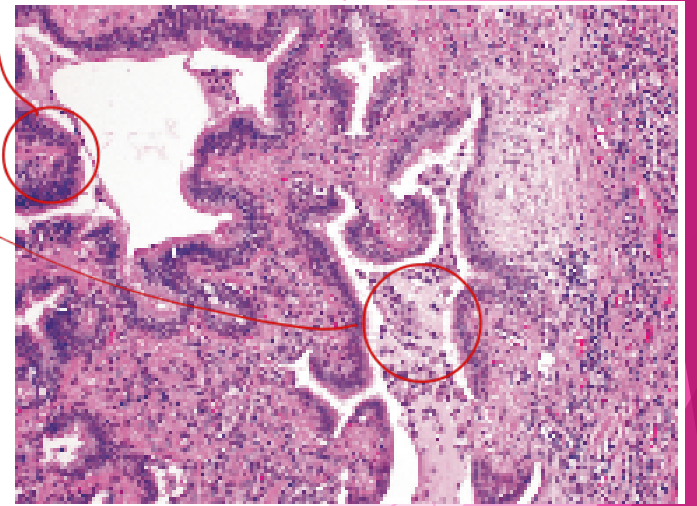
Area of Inflammation

collagen
deposition

patchy appearance
→ lymphocytes
→ occasional
plasma
cells



Honey comb

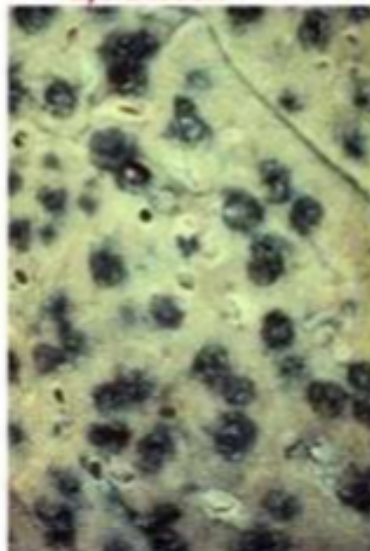


Coal Worker's Pneumoconiosis

Asymptomatic anthracosis



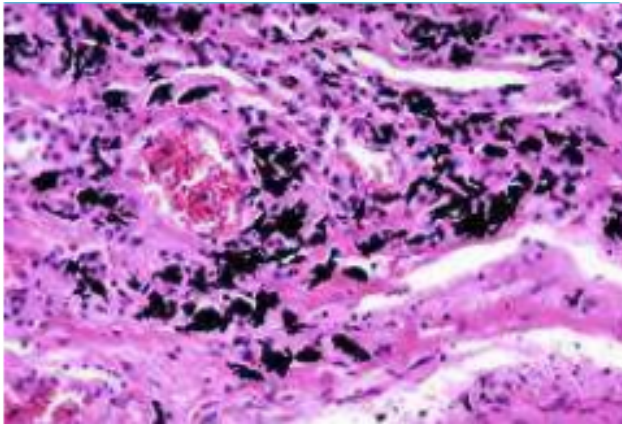
Simple CWP with little to no pulmonary dysfunction



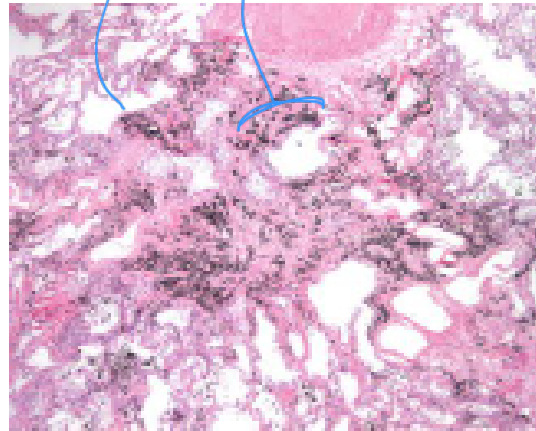
Complicated CWP, or progressive massive fibrosis (PMF), in which lung function is compromised



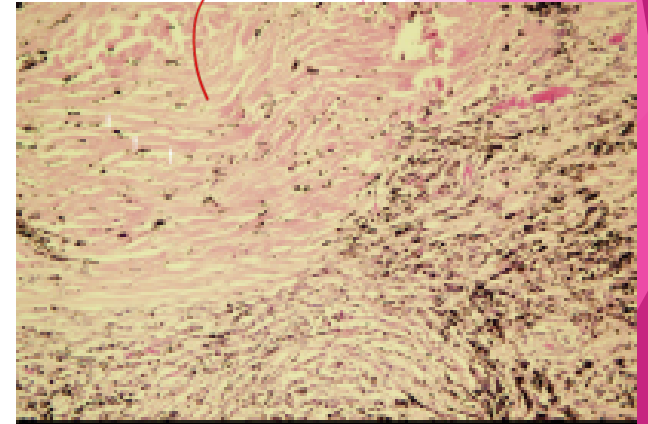
- viable alveoli and intact
- Macrophage engulfed coal dust.



Pulmonary anthracosis



Simple CWP



Complicated CWP (PMF)

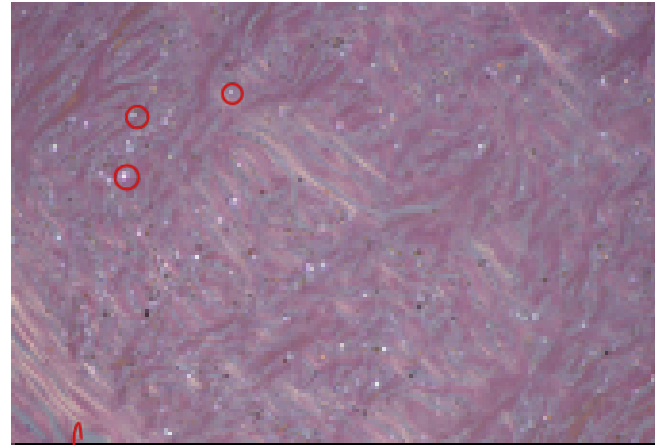
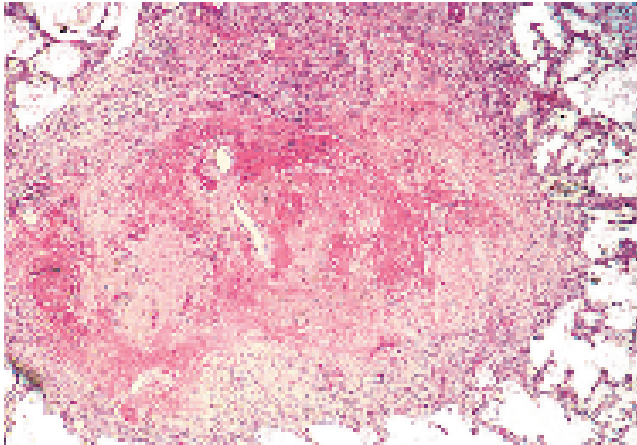
Silicosis

crystals → body can't get rid of.

↳ so the body starts stacking layers around the crystal / silica

↳ characteristic?

concentric collagen

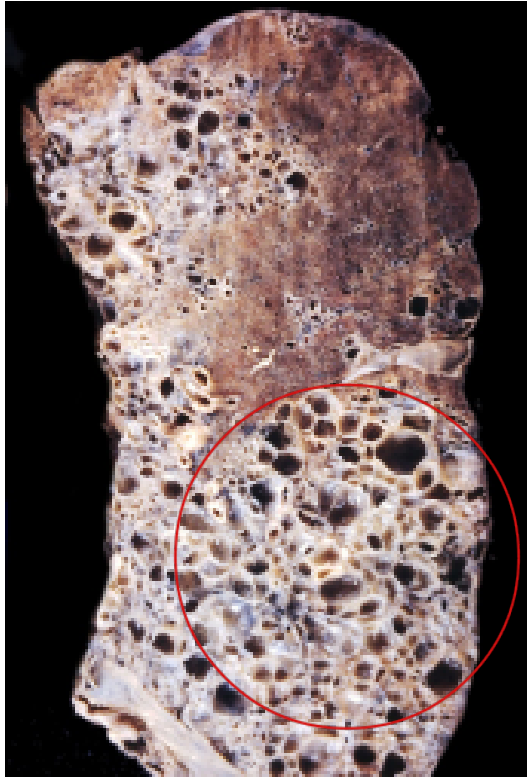


↳ This image been taken by polarized Microscope

Asbestosis

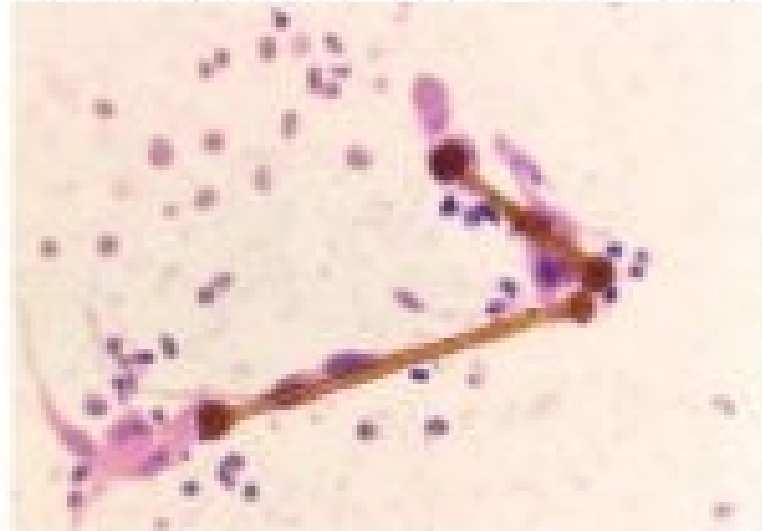
- Honey combing
- Continuous interstitial fibrosis.

- golden brown
- Fusiform or beaded rods w/ translucent center.



Asbestos Bodies

- Asbestos **fibers** accumulate in the interstitium of the lung and are coated by **iron** and **hemosiderin** in a **beaded**, clubbed fashion referred to as ferruginous or asbestos bodies.

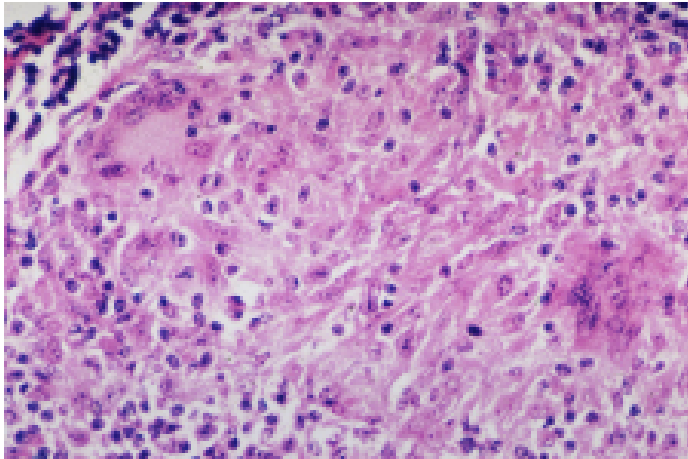


Sarcoidosis

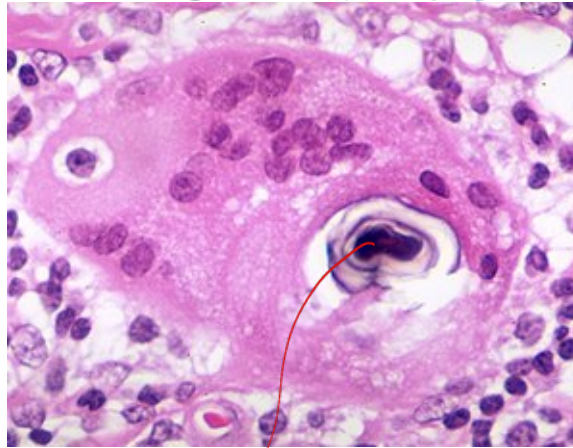
Content:- - Non - Caseating granuloma

- Epithelioid cells (Macrophage)
- Giant cells
- T-cells

NO Fibrosis!



Schumann bodies

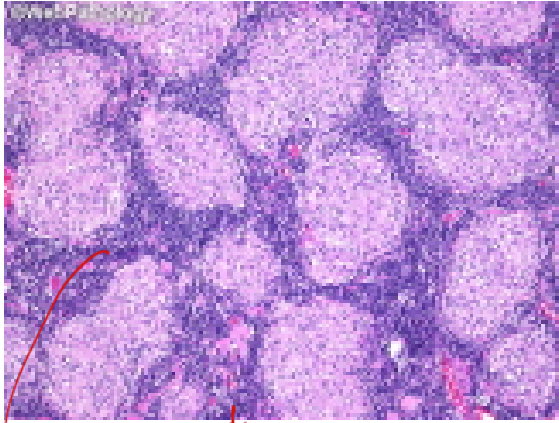


Laminated concretions
composed of calcium and proteins.

inside the
Giant cell.

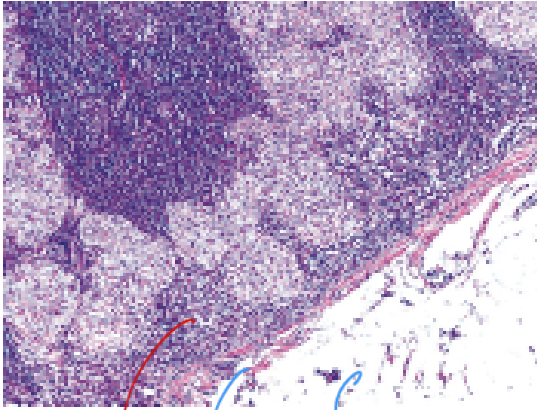
Asteroid bodies.





non-caseating
Granuloma

T-cells



Lymphocytes

Capsule

Fat

L.N

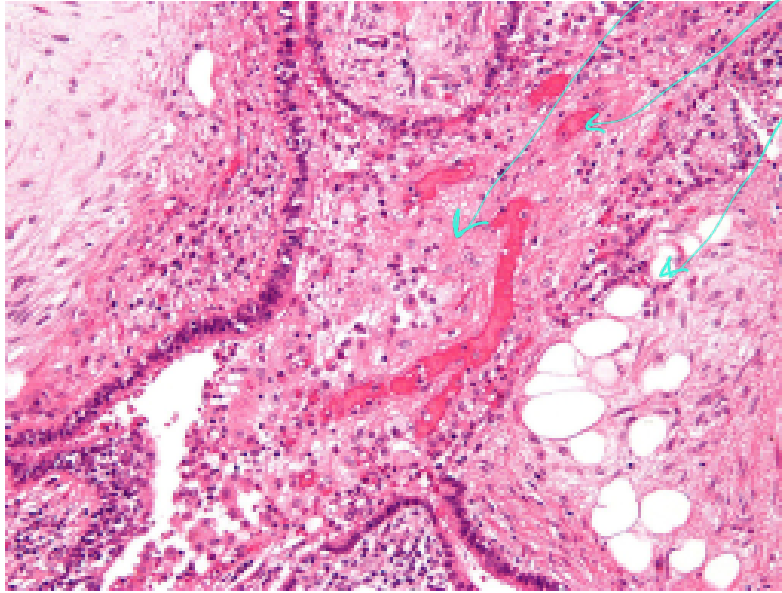


Erythema
Nodosum

Hall mark of
Sarcidosis

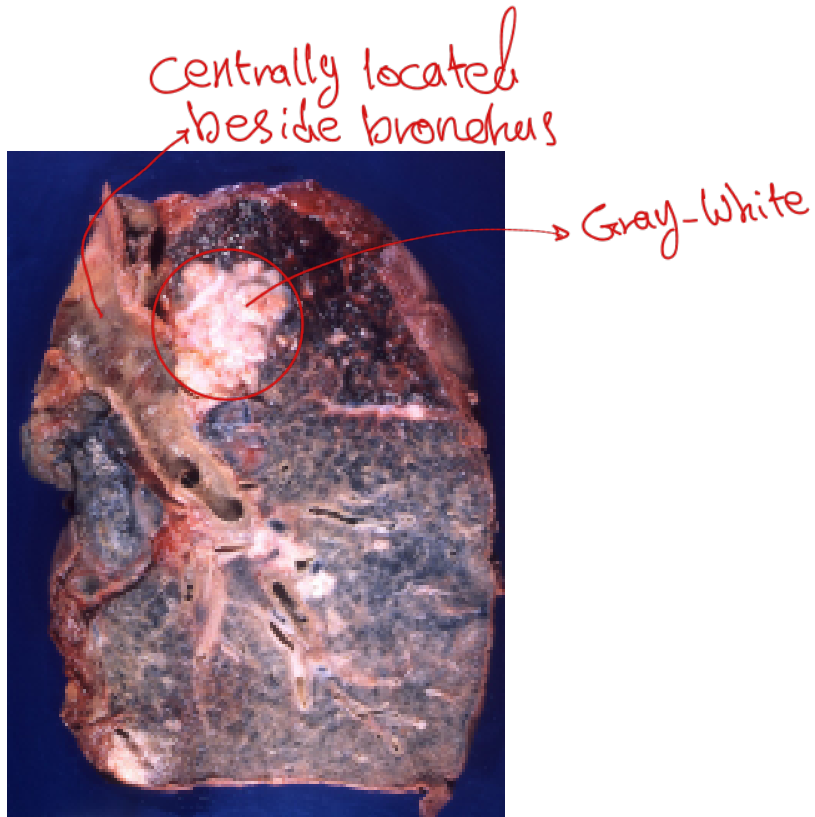
hamartoma. ⇒ mixture of mature tissues.

- Spherical tumor
1-4 cm



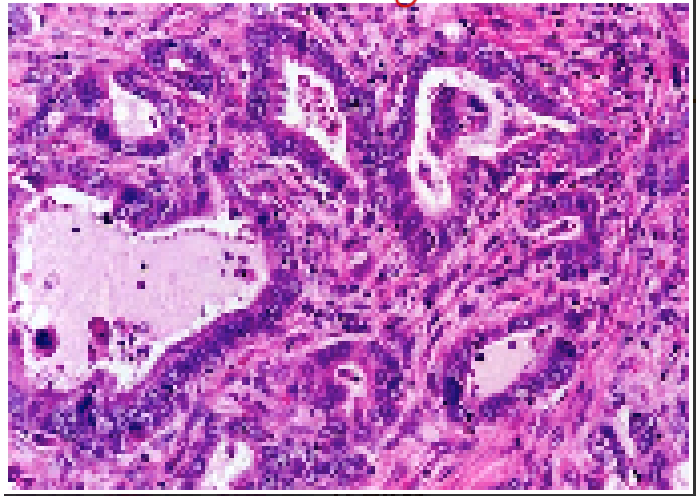
- Cartilage
- BV
- Fat
- Fibrous tissues.

Squamous cell carcinoma



Mostly Adeno carcinoma

Acinar gland

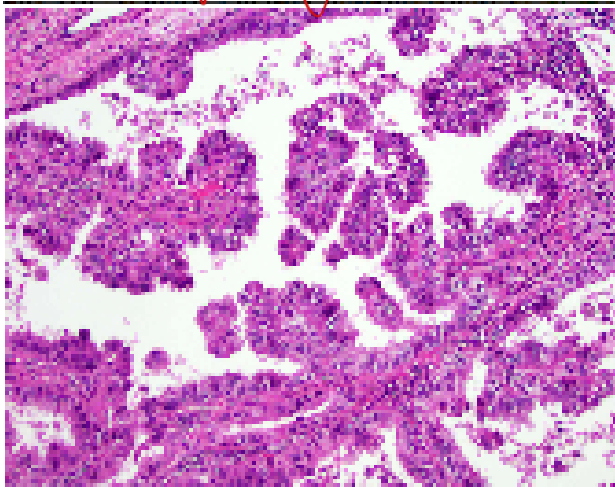


Morphology
Pattern
of
Adenocarcinoma
(Growth
Pattern)

Solid types

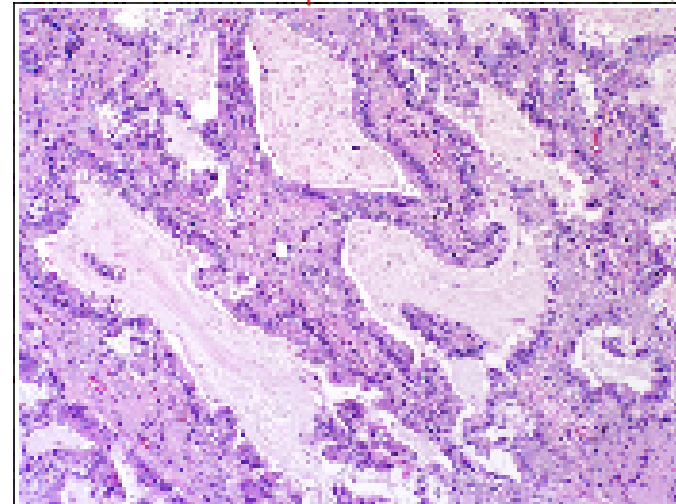


Papillary



Adenocarcinomas

Mucinous



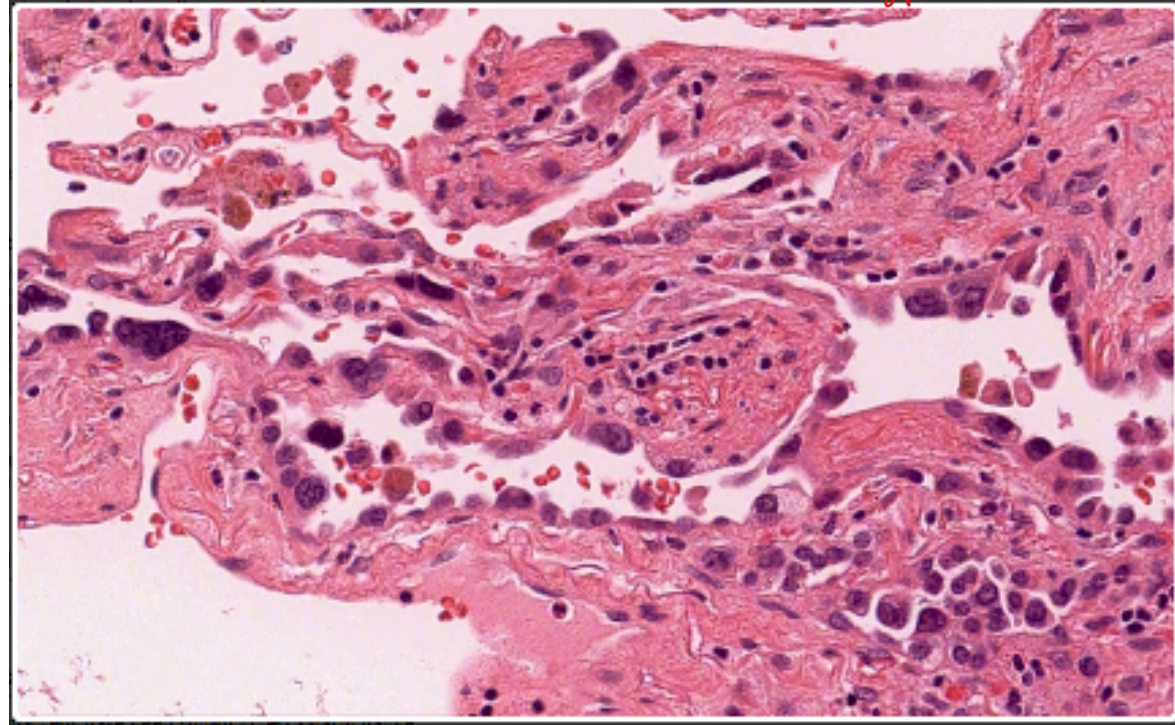
Atypical adenomatous hyperplasia (AAH)

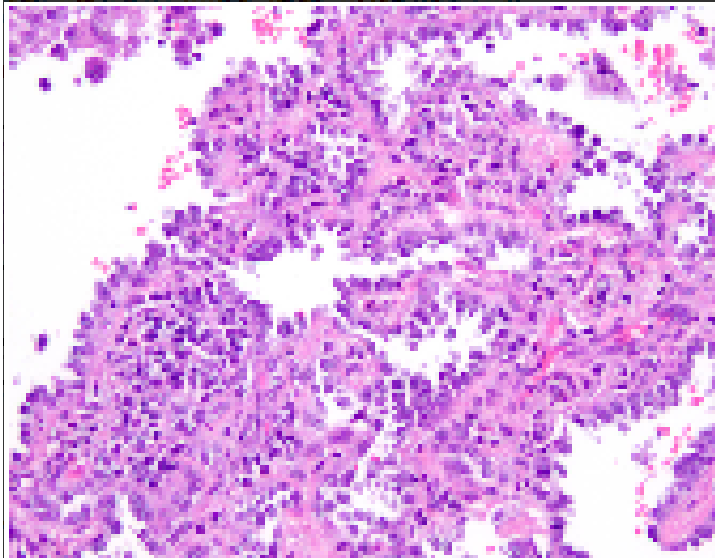
< 5mm

No Fibrosis

- pleomorphism
- prominent Nuclei
- Nuclear Hyperchromasia

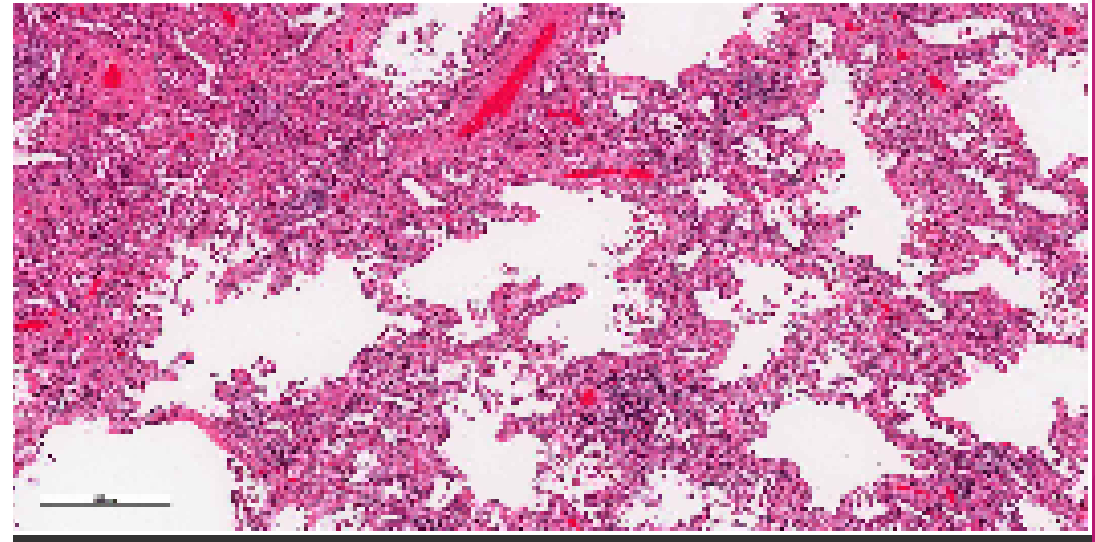
KRAS mutation





adenocarcinoma in situ

5mm - 3cm



invasive adenocarcinoma

Minimally
5mm >

Invasive
5mm <

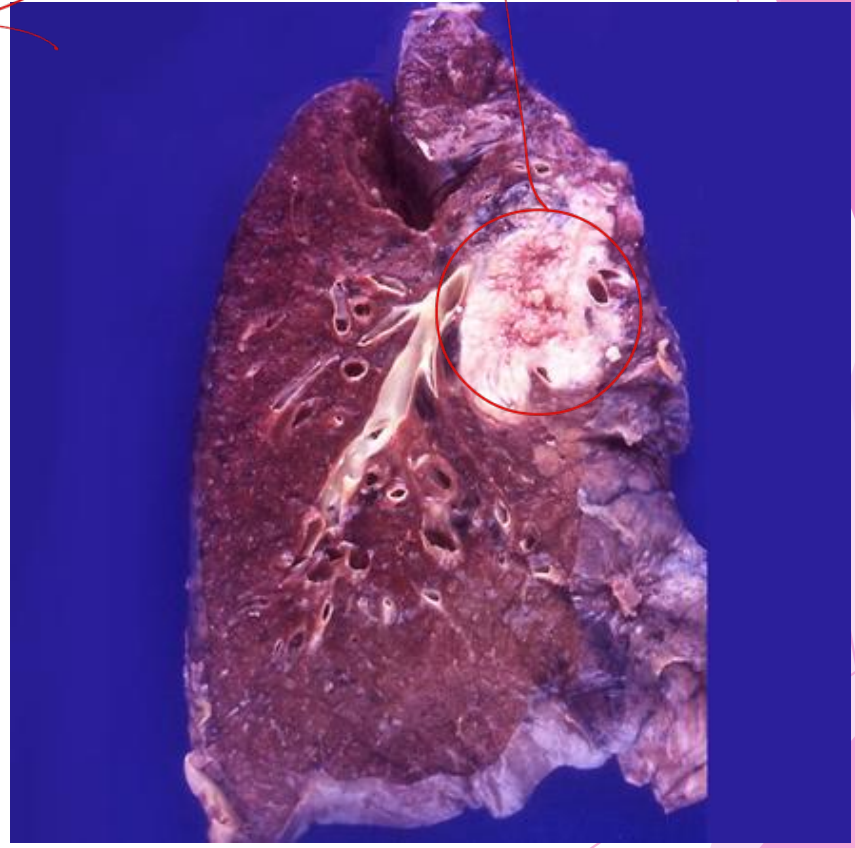
centrally located masses

- happens in
- 1) Squamous
 - 2) Small cell
 - 3) Carcinoid.

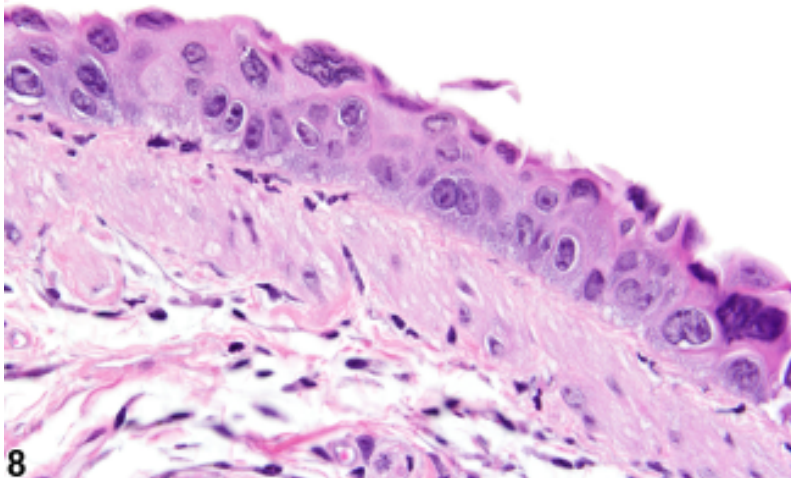
we don't know by image which!

May cause
Distal
Atelectasis

Area of
a
cavitation

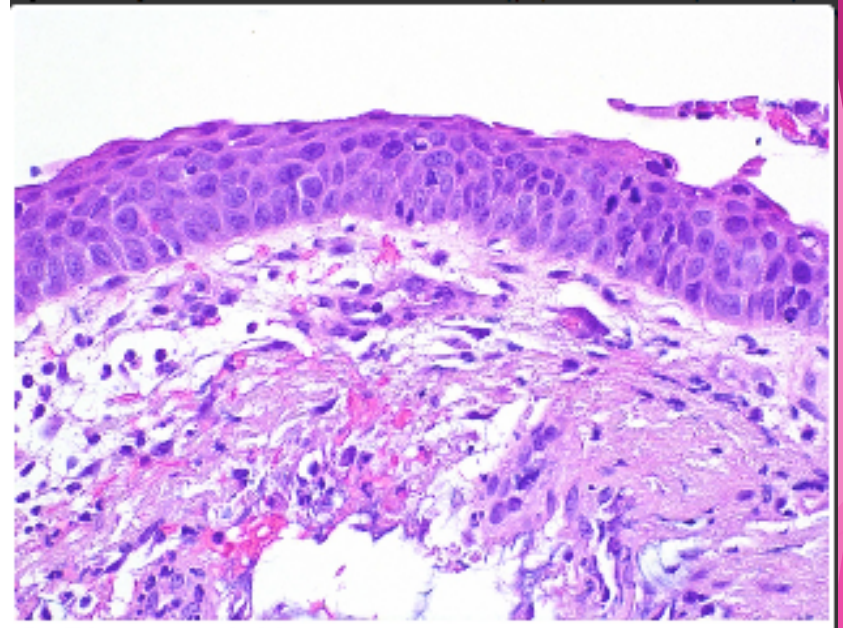


Precursors of
Squamous c.c.



Squamous metaplasia

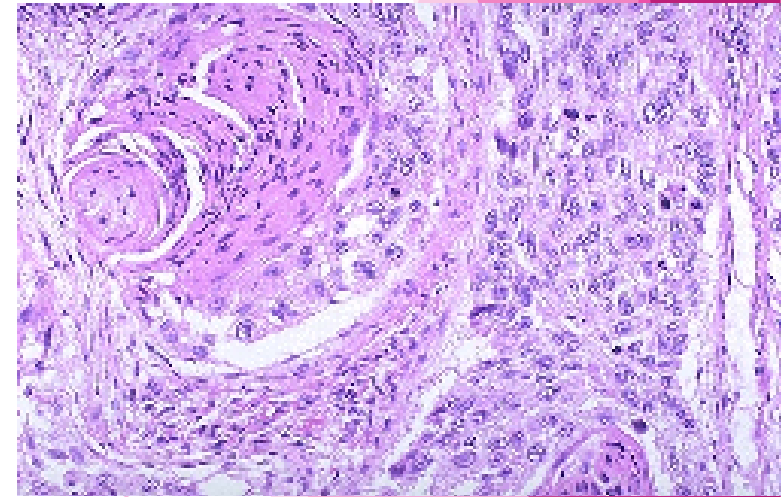
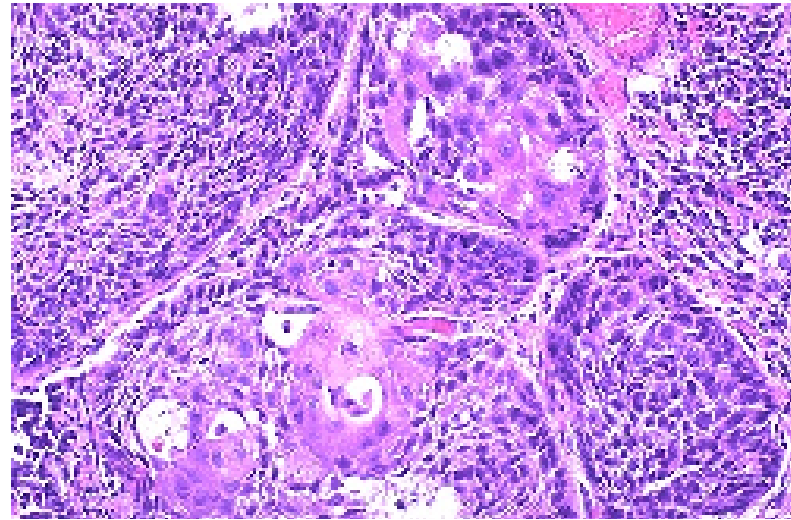
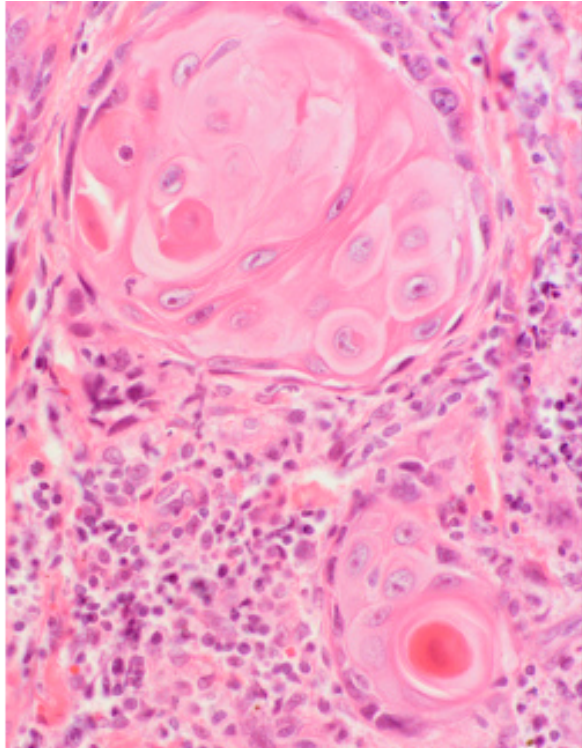
columnar → Squamous.



Squamous dysplasia

Atypical squamous cell
confined to the basement
membrane

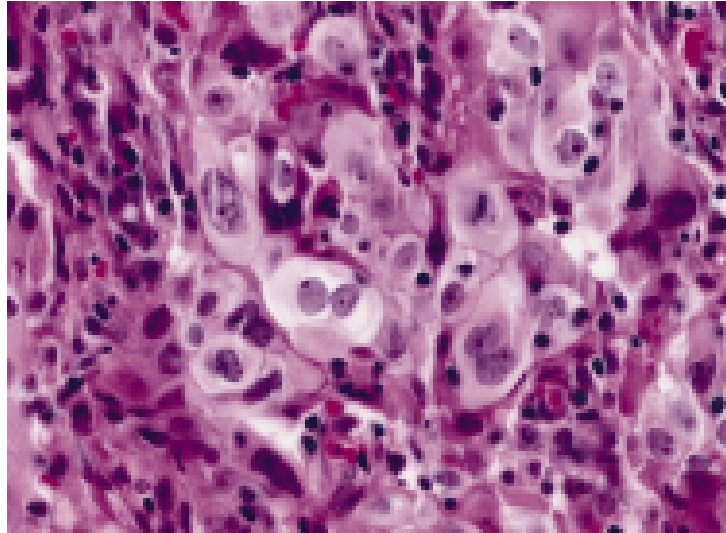
- well-differentiated, moderately, poorly differentiated squamous cell neoplasms



3. Large cell carcinomas

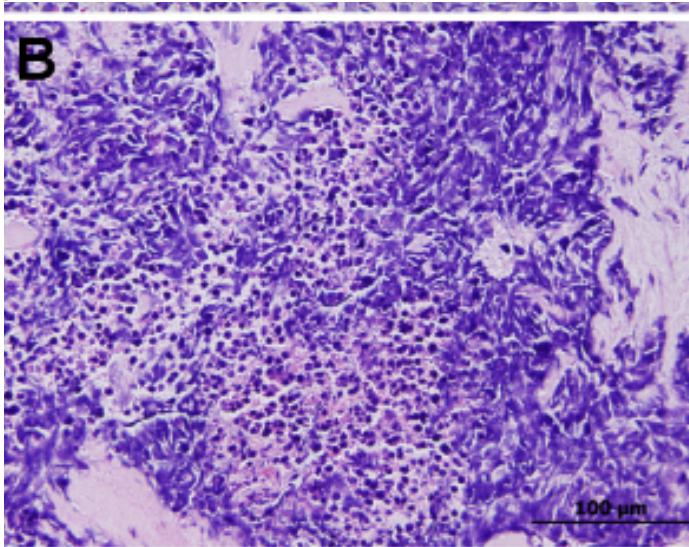
- Undifferentiated malignant epithelial tumors

- Irregular Membrane
- Large cell
- Hyperchromasia
- Prominent nuclei

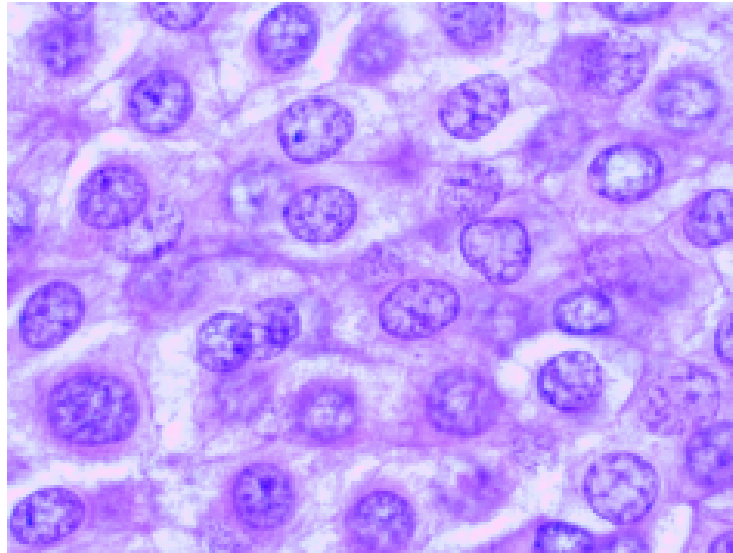


4. Small cell lung carcinomas (SCLCs)

Extensive mitosis + Necrosis

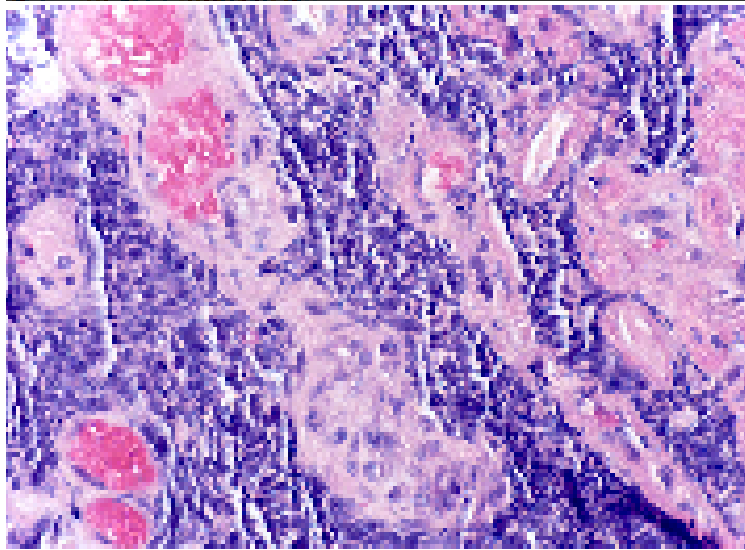


Salt + Pepper pattern



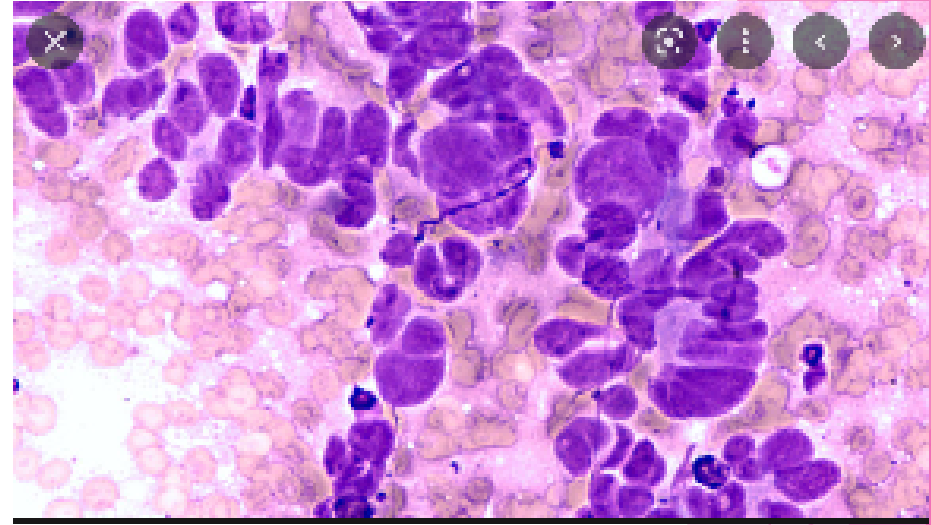
→ Fragile tumor
show fragmentation

Crushing artifact



→ Scant cytoplasm

Nuclear Molding



Virchow node

characteristic for
Occult Malignancy
↳ lung + GI



Pancoast tumor

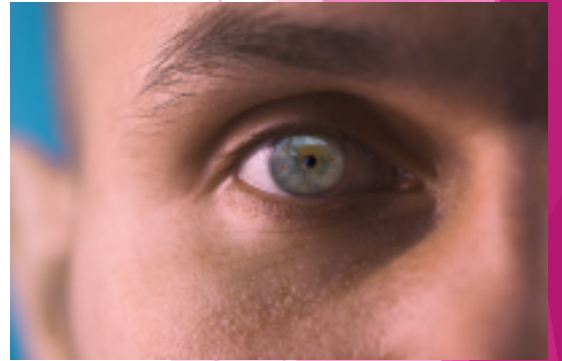
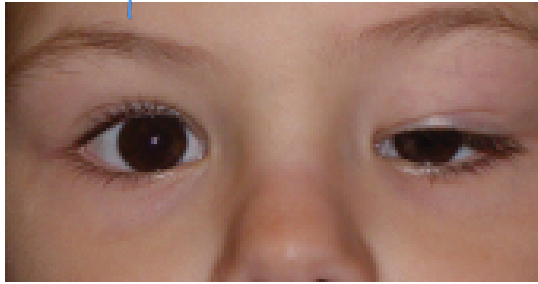
→ invade Brachial or Cervical plexus

Severe pain in Ulnar N.

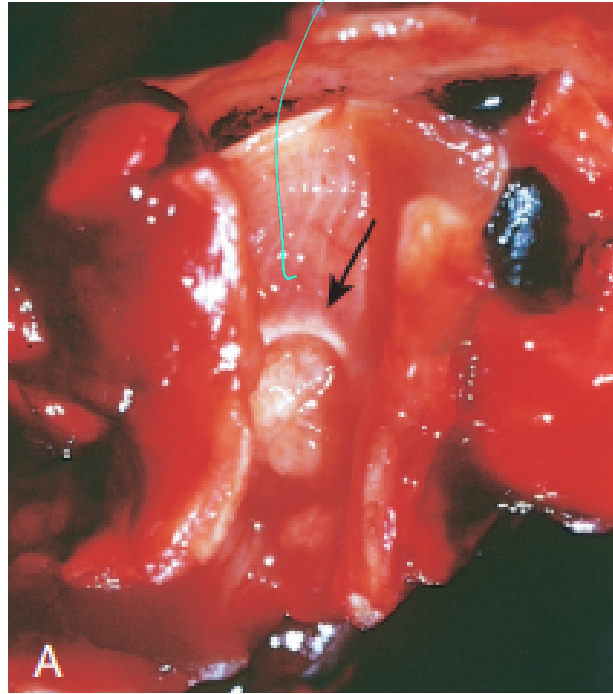
Horner syndrome

Ptosis :-

→ lung cancer on apex
↳ Compressing ⇒ brachial + sympathetic

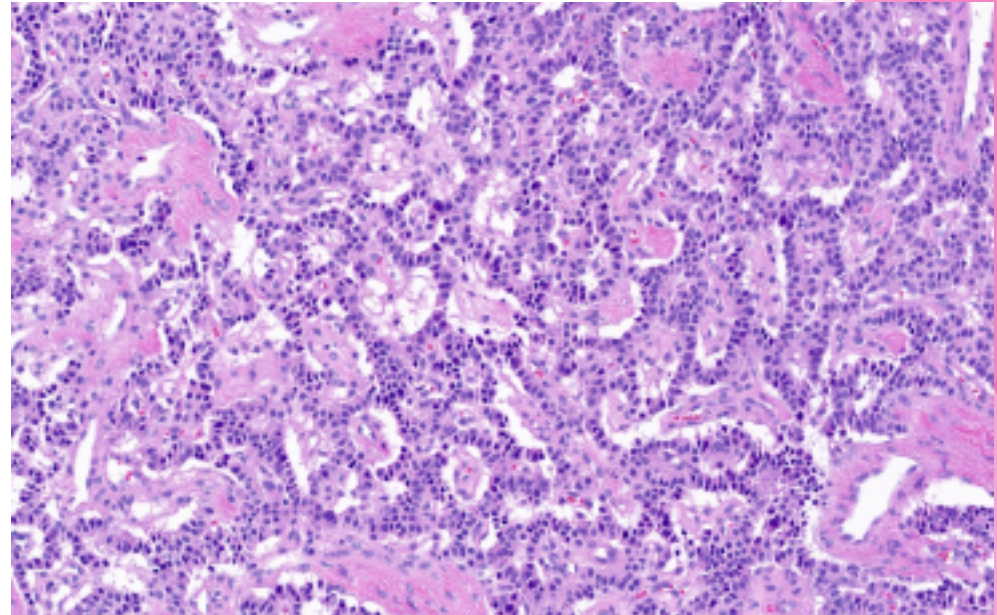


carcinoids



in main bronchi
- obstructing
- polypoid,
- spherical,
- intra luminal

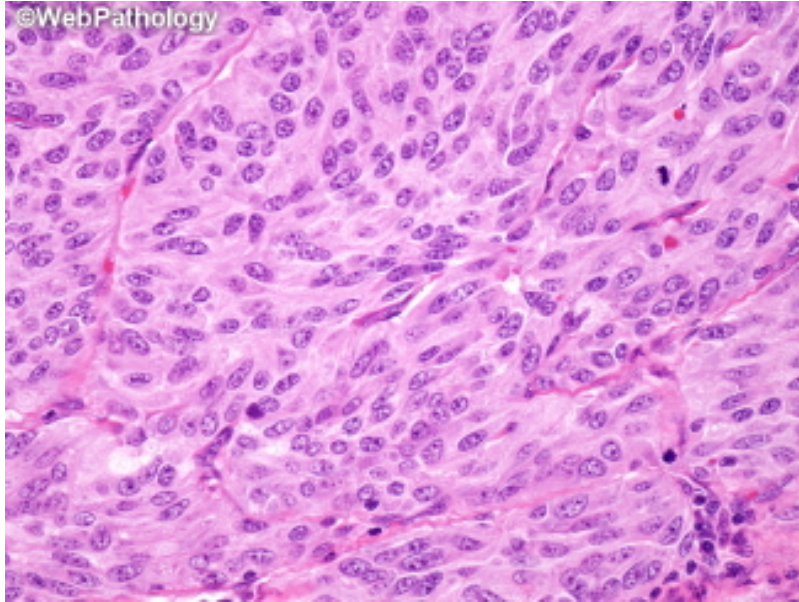
- Uniform cells
- Absent mitosis, little
pleomorphism



typical carcinoids

Atypical carcinoid tumors

- Higher mitotic rate
- Small foci of Necrosis



may present w/

- Cough, Hemoptysis
- recurrent bronchial and pulmonary infections.
- intermittent attacks of diarrhea
- cyanosis + flushing.

