

# Pathology lab-1



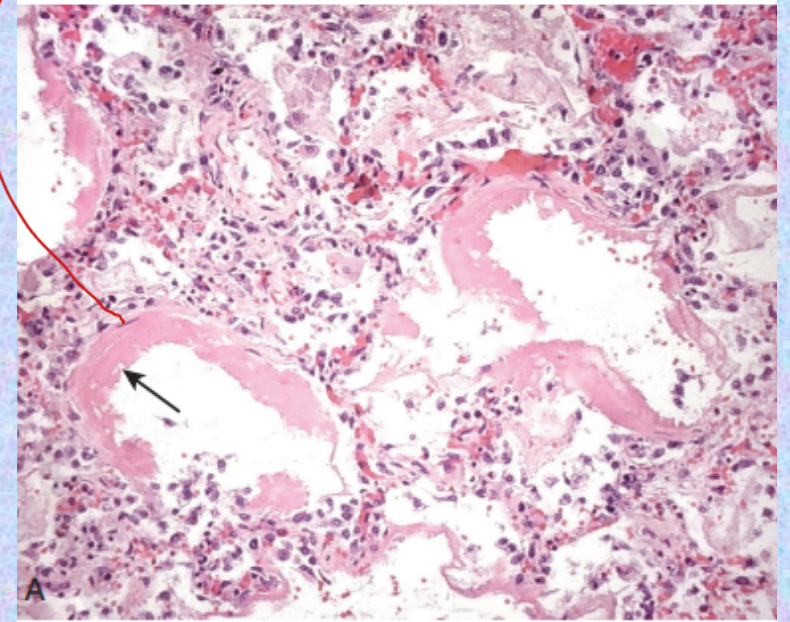
# Acute ARDS

- Dark red
- Heavy? → alveoli filled w/ fluid



DAD:-  
diffuse alveolar damage

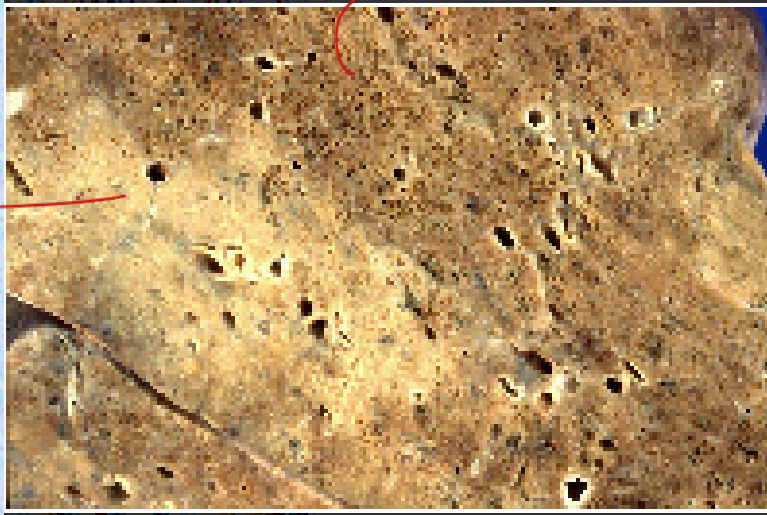
- Hyaline membrane
- bilateral alveolar damage



# ARDS-organizing stage

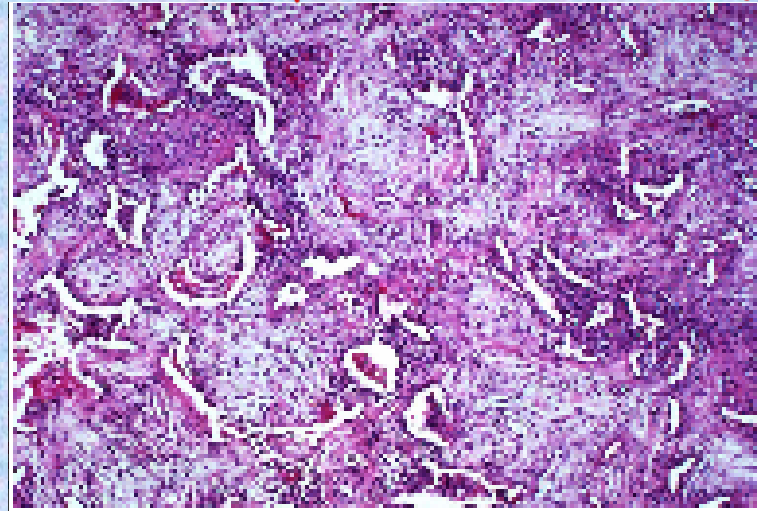
Healing by Fibrosis

Healthy



Not Healthy  
Fibrosis  
Shiney

- No Normal spaces
- Alveoli spaces should be wider
- Alveolar septae thickened due to collagen deposition of fibrosis

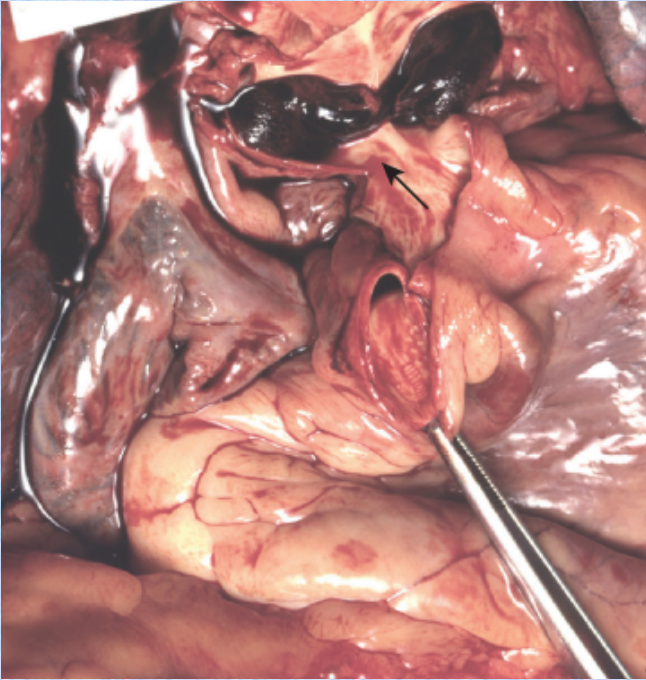




## saddle embolus.

Emboli present on the bifurcation

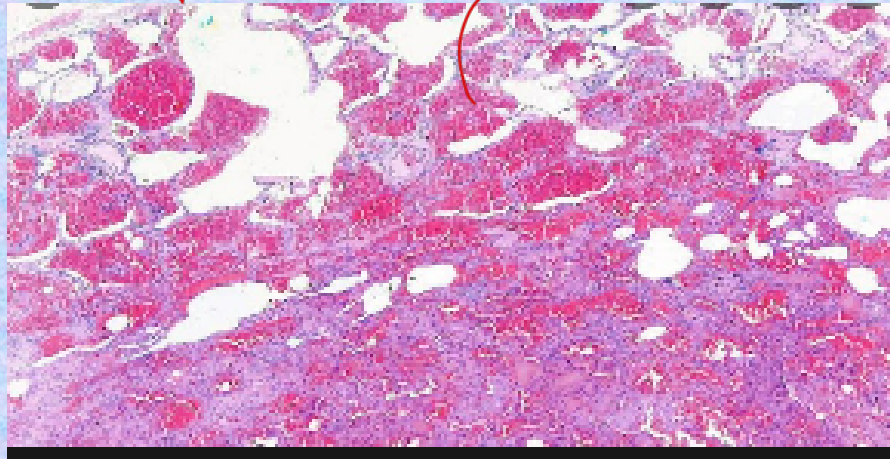
Source ⇒ DVT



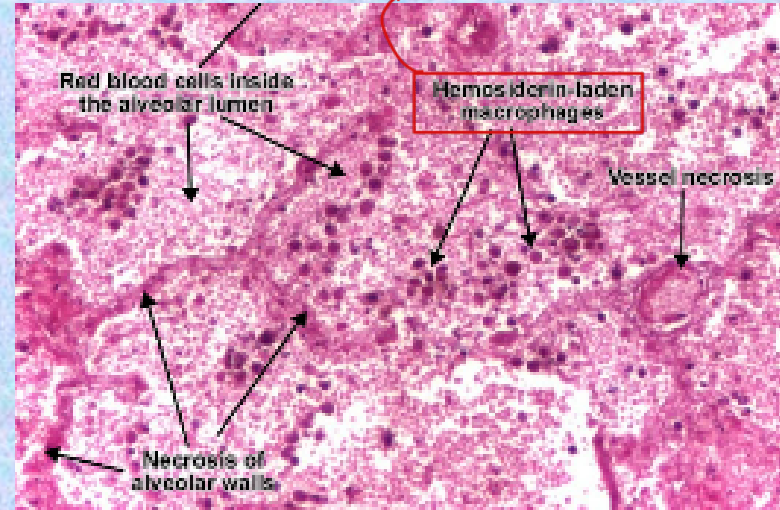


# pulmonary embolism

depends on  $\left\{ \begin{array}{l} \text{size of embolus} \\ \text{state of circulation} \end{array} \right.$   
⇒ Small emboli, good circulation



- small emboli, Bad circulation ⇒ Infarction



Bat ⇒ When large emboli?

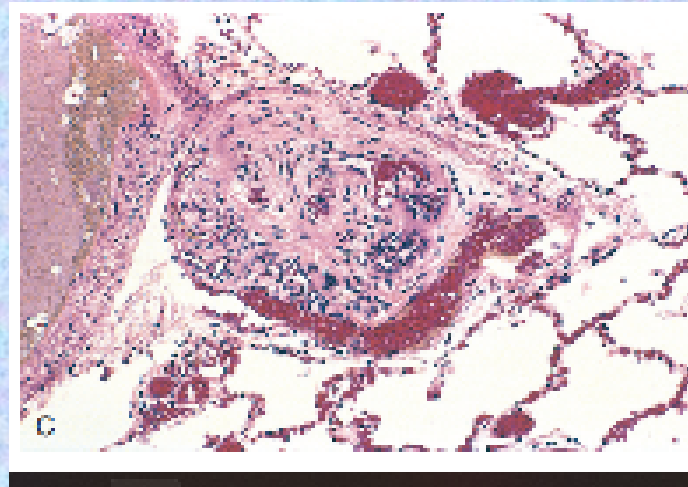
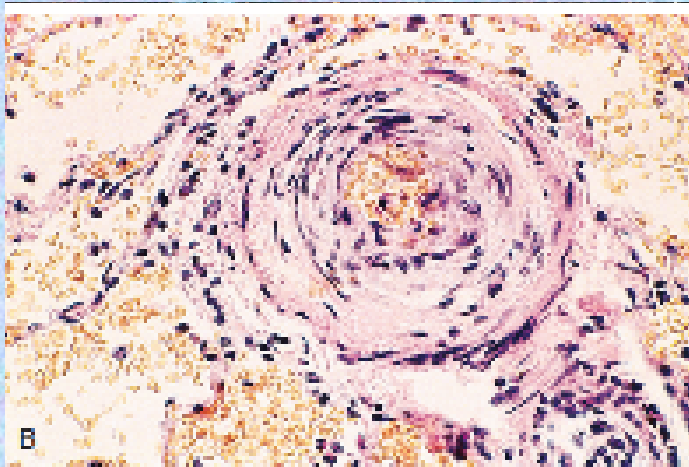
No time for histological change, why? The patient is DEAD!

# pulmonary hypertension

→ one of the causes is lower the cross sectional space.

- Abnormal BT
- Thick, Hypertrophy, Layering

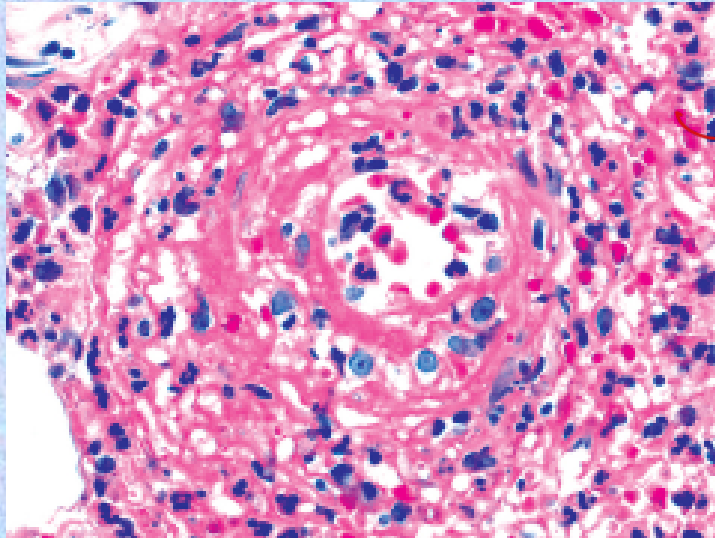
- Plexiform lesion
- Perforated BT



$\uparrow D = \frac{T}{r}$   
 $\downarrow$   
Volume

# Pseudomonas vasculitis

- BT, proof? RBC's inside
- Neutrophil inside the wall of the BT.



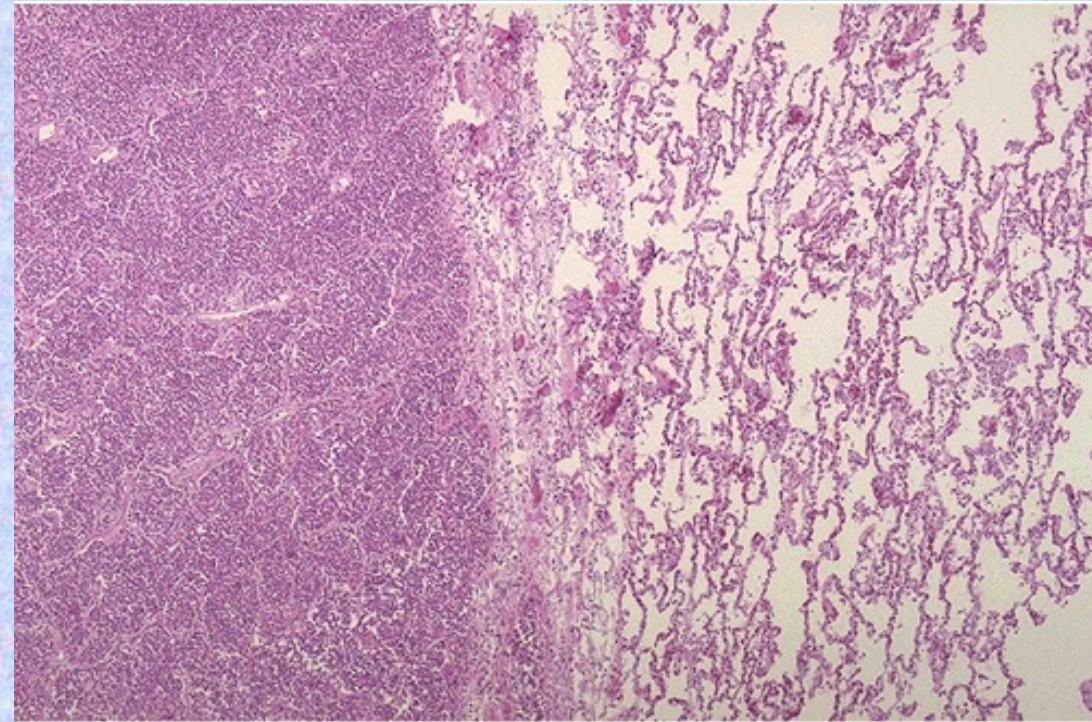
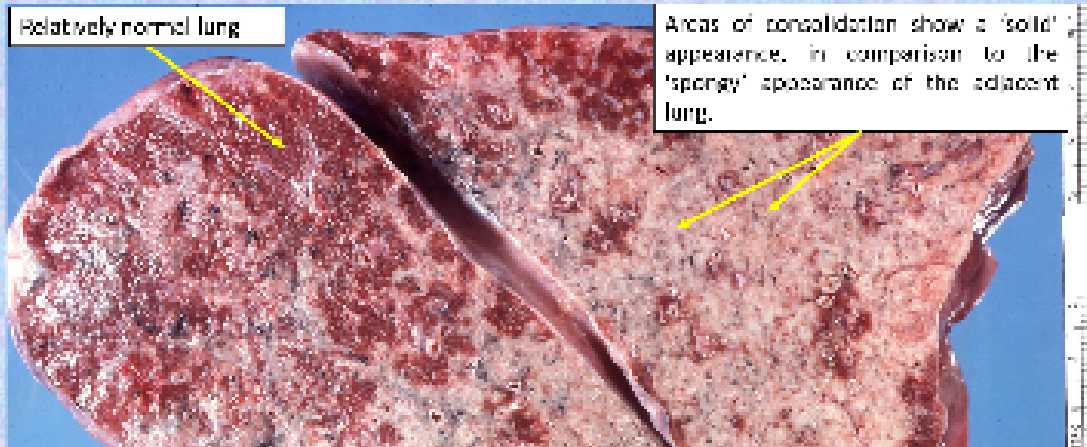
→ w/ special stain  
we would see the Pseudomonas  
bacteria inside the wall of BT



# MORPHOLOGY OF PNEUMONIA

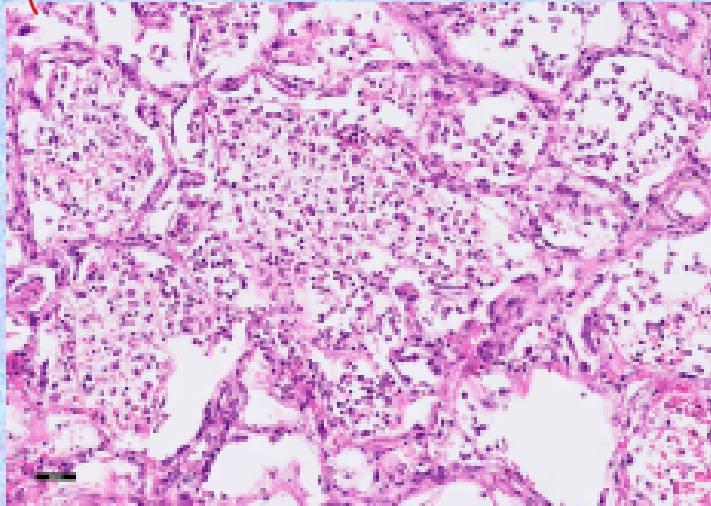
Most characteristic finding of pneumonia is  $\Rightarrow$  Areas of consolidation

caused by:  
Instead of Air inside Alveoli  
we would see exudate.



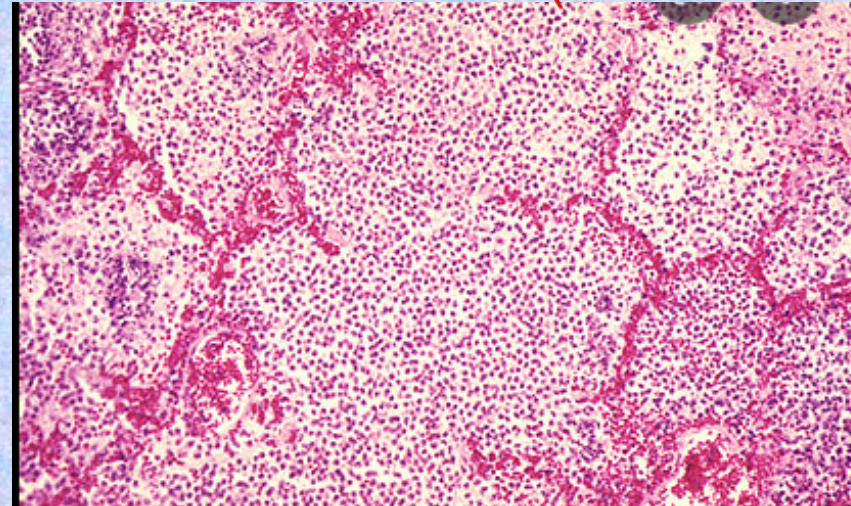
# lobar pneumonia

- 1<sup>st</sup> stage: Congestion
- some Neutrophils
  - " congested BV



## 2<sup>nd</sup> stage: Red Hepatization

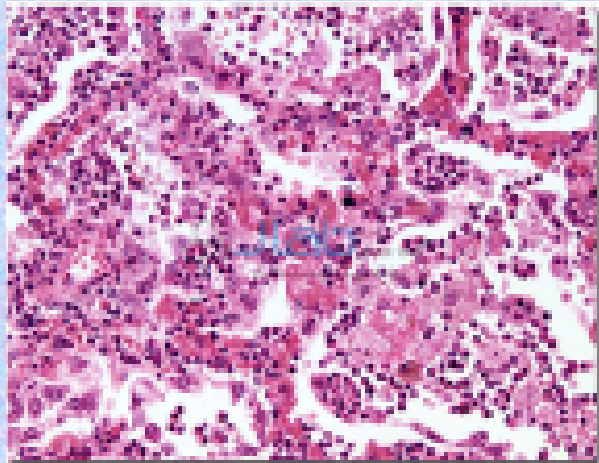
- looks like the liver
- Solid instead of spongy appearance
- Numerous Neutrophils.





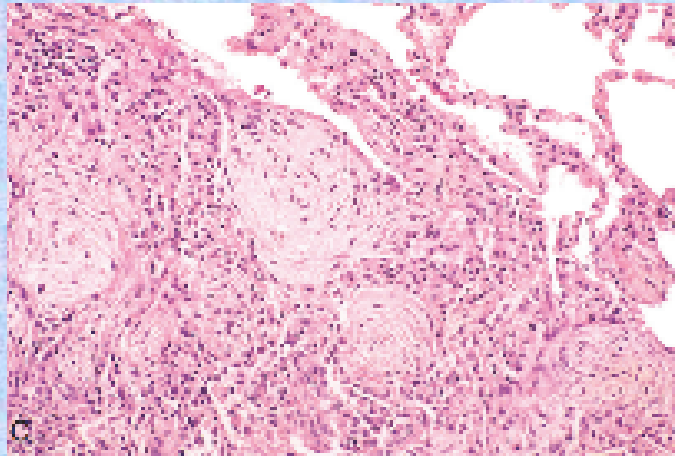
3rd stage: Gray hepatization

- RBC's disintegrated



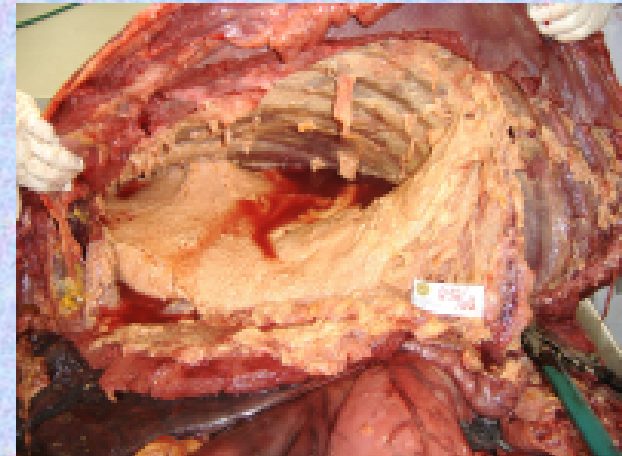
4th stage: Resolution

- healing by fibrosis  
w/ collagen deposition.



Pleuritis

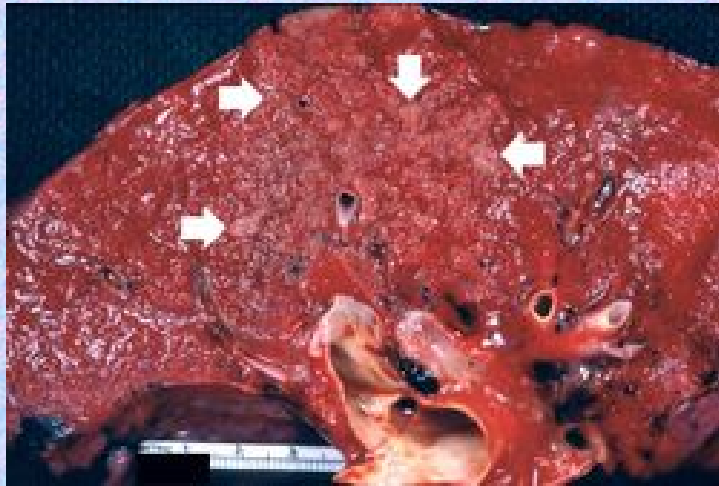
- Reached the pleura.



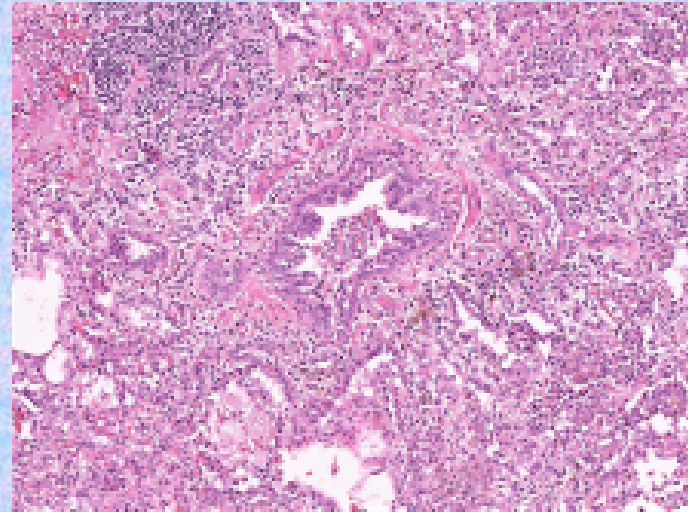


# bronchopneumonia

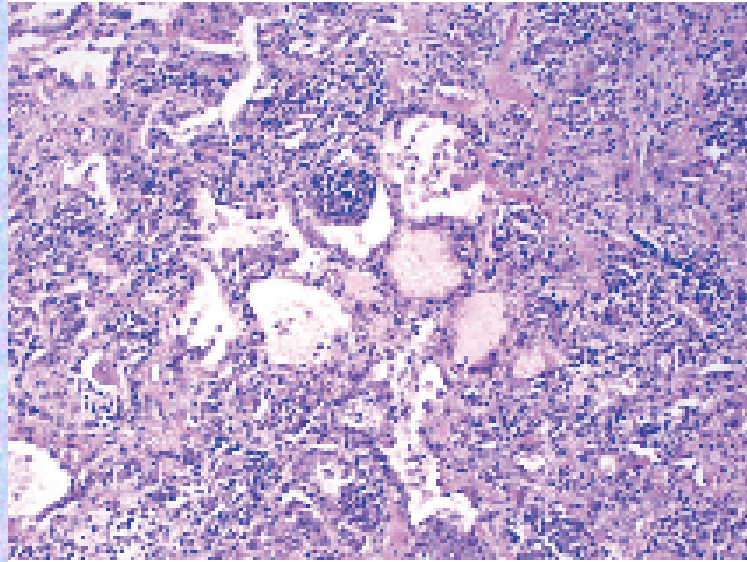
- Patchy scattered foci



- Exudate  
- Inflammation



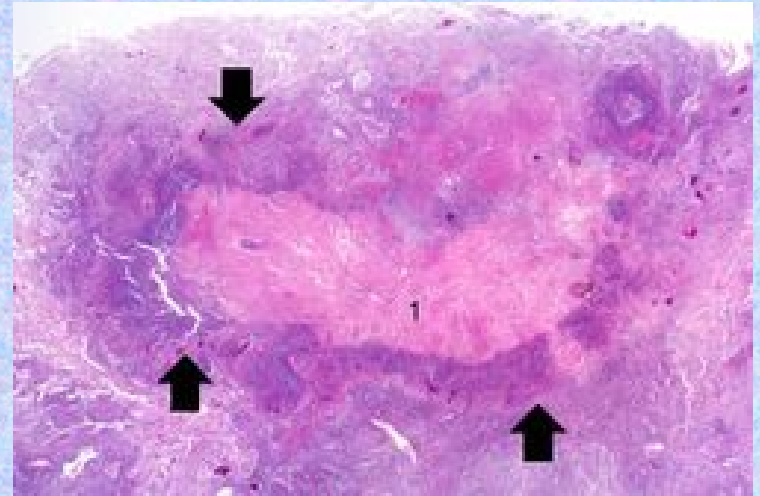
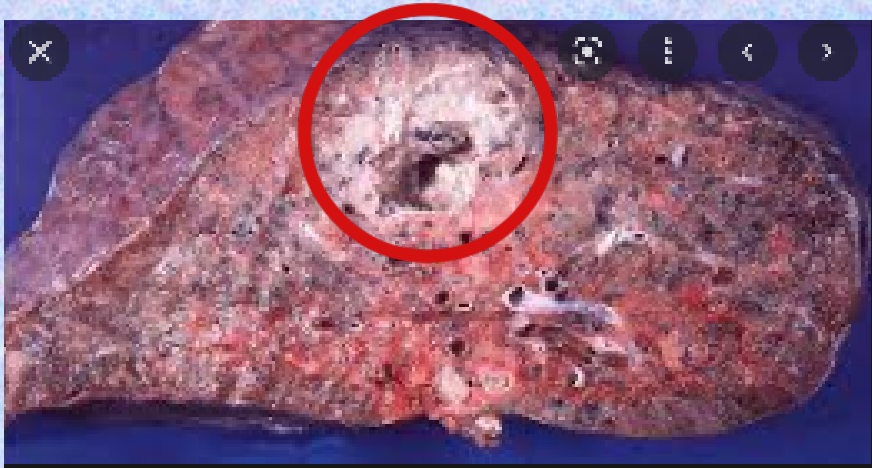
# Viral pneumonia



- localized
- Attacks the walls of Alveoli
- Main type of inf. cells:
  - lymphocytes
  - Macrophages
  - plasma cells +/-

# LUNG ABSCESS

- Central area of Necrosis
- Inf. cells around it.





# fibrocalcific nodule at the site of the infection

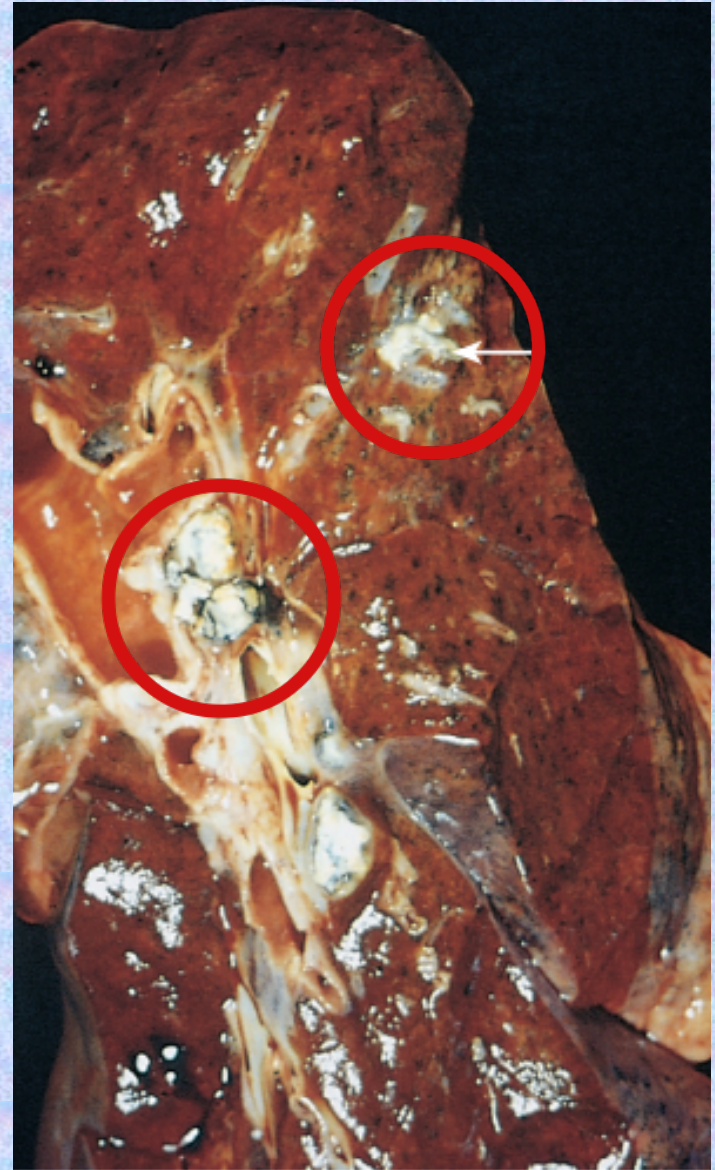
- Primary infection
- Healed by fibrosis

- No viable bacilli
- But !! viable bacilli → latent infection  
NOT primary.



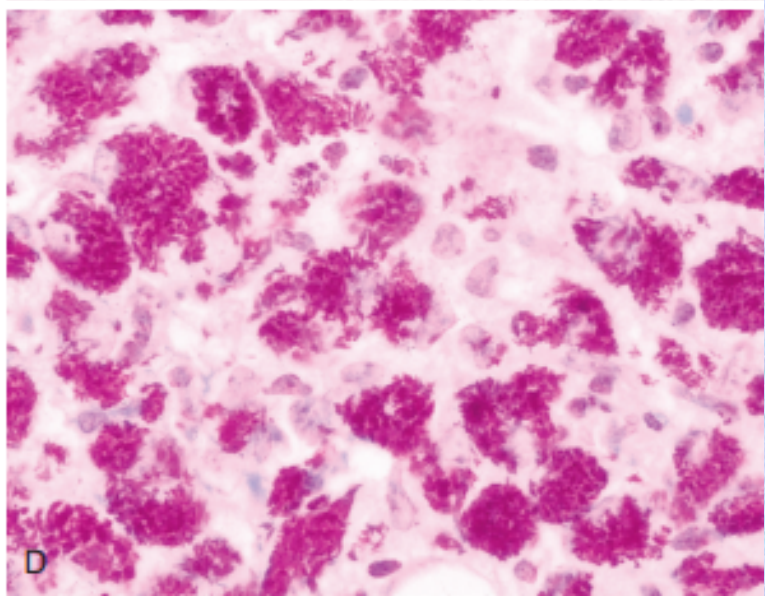
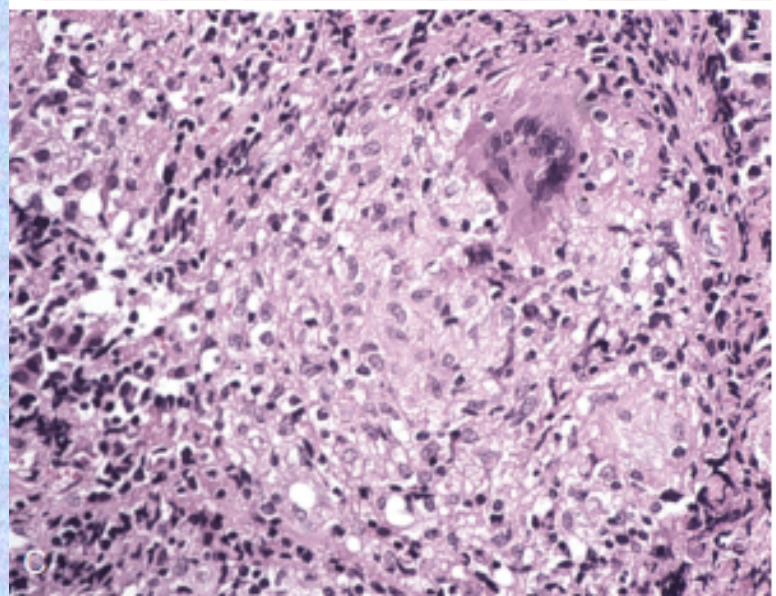
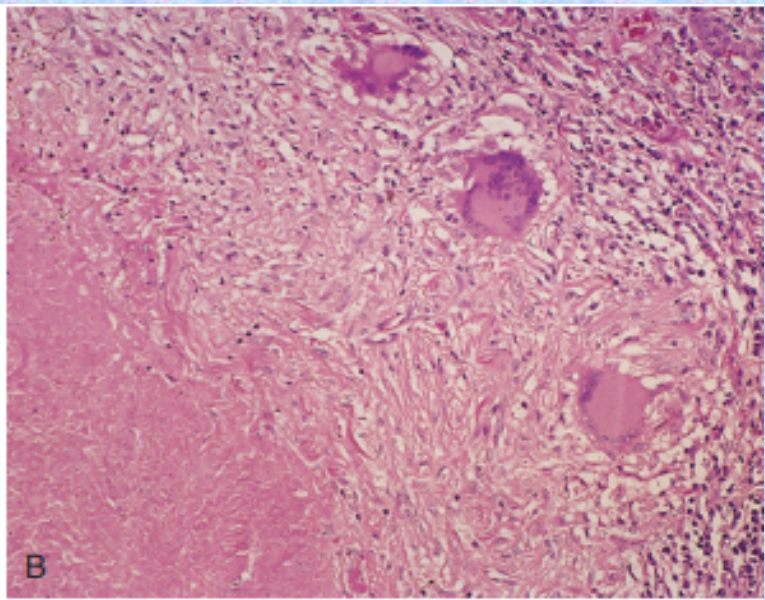
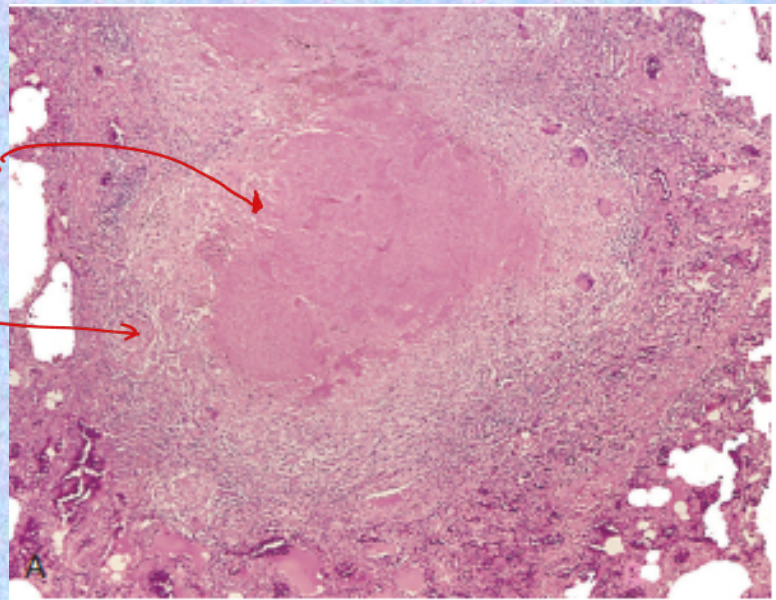
## Ghon complex:

Combination of  
Ghon focus  
Hilar  
L. N  
+  
Necrosis





- Granuloma
- Central Necrosis
- Epithelioid Macrophage
- Multi-nucleated giant cell.

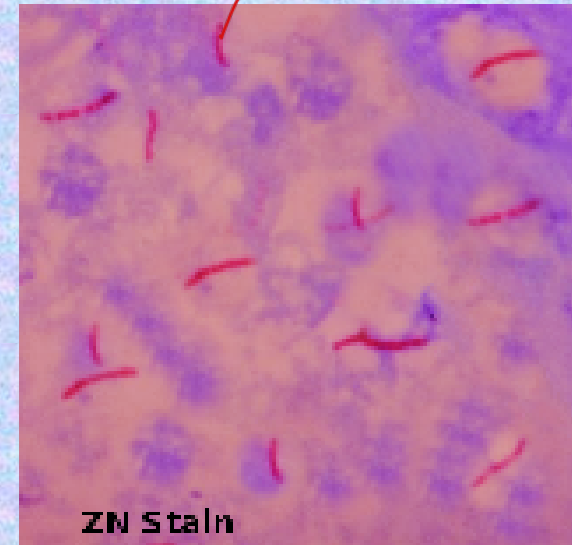
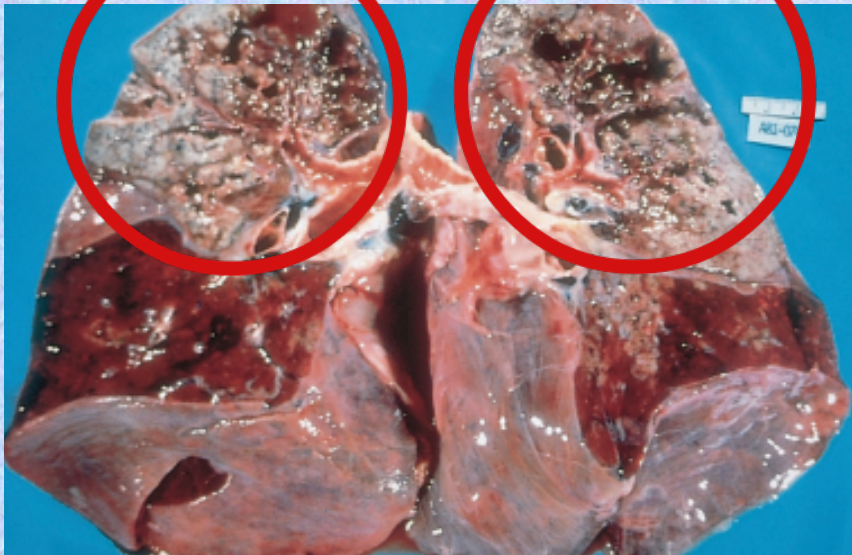


→ Ziehl  
Neelsen  
stain



# Secondary TB

→ Apical cavitation

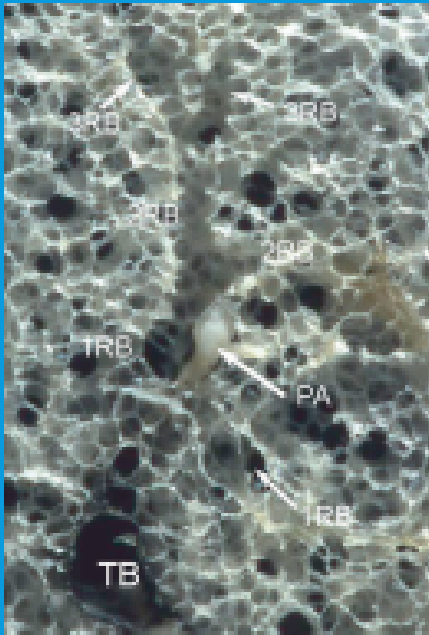


→ Acid Fast Bacilli  
w/  
Ziehl  
Neelsen  
stain

# MORPHOLOGY Emphysema

Gross:

Hyperinflation or ballooning due to entrapment of the air from airway obstruction



Histology

marked enlargement of the air spaces, with destruction of alveolar septa but without fibrosis

