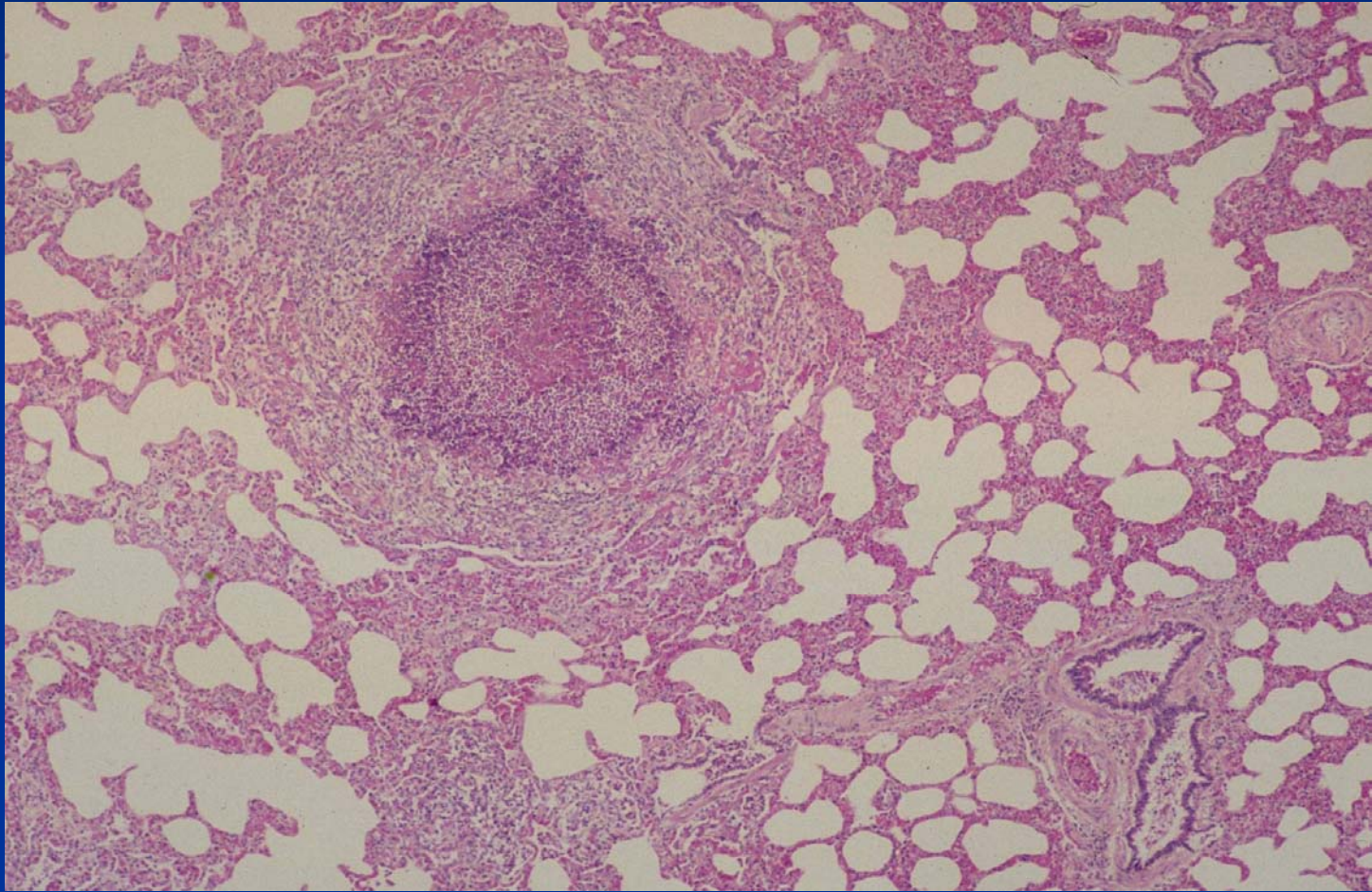
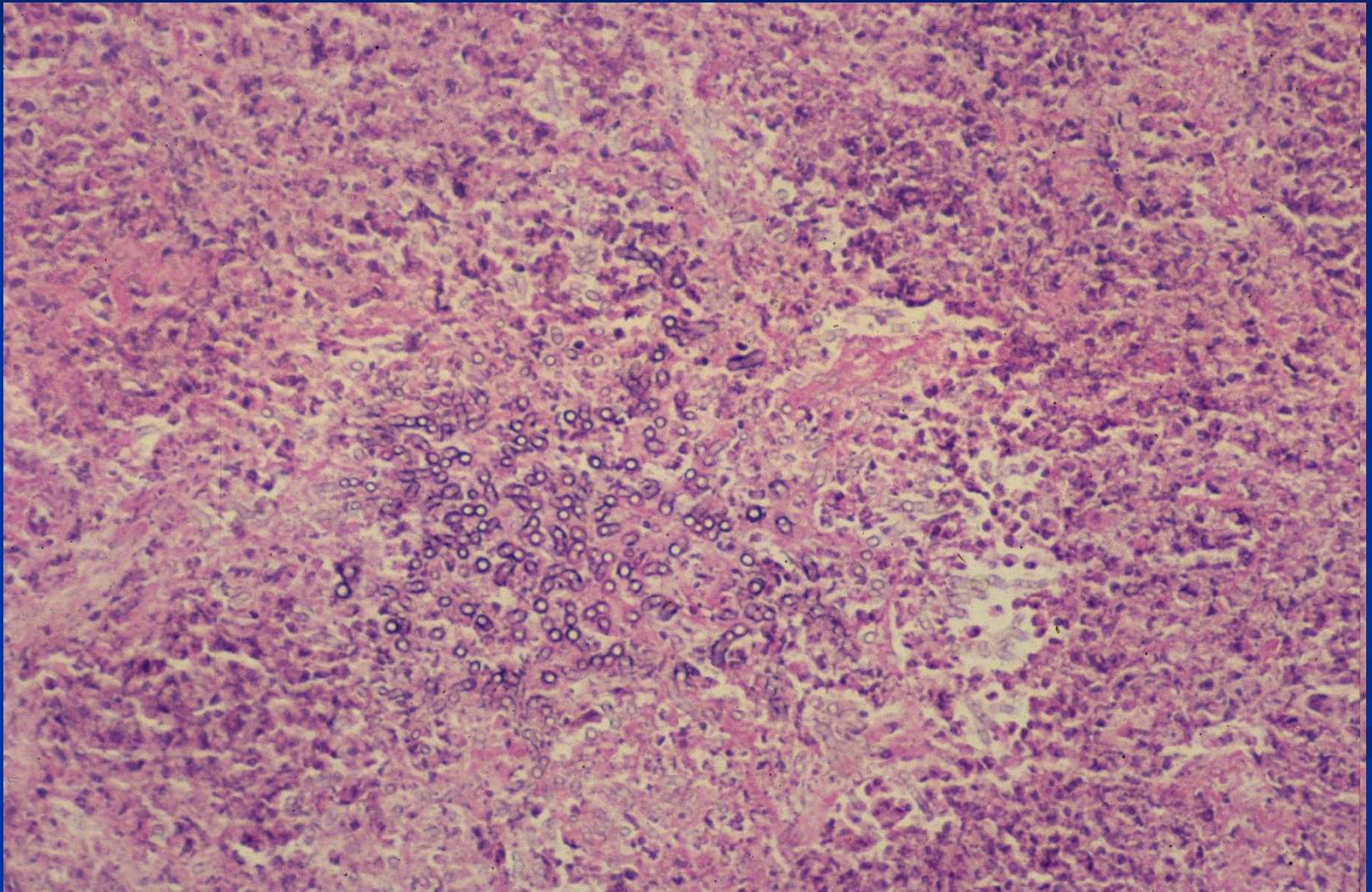


# Mycotic Granulomas





# Mycotic Granulomas





Sheep - *Corynebacterium pseudotuberculosis* (Caseous  
Lymphadenitis - CLA) - Pulmonary Abscesses



# Bovine Parasitic (Verminous) Pneumonia

- *Dictyocaulus viviparus* in cattle
  - Interstitial pneumonia (larval migration)
  - Bronchitis and airway obstruction (adults)
  - Multifocal atelectasis and emphysema
  - Granulomatous pneumonia (dead larvae, eggs)
  - Secondary bronchopneumonia
  - Hypersensitivity interstitial pneumonia on re-exposure (“reinfection syndrome”)



*Dictyocaulus viviparus* (Verminous)  
Pneumonia



# Bovine Parasitic (Verminous) Diseases

- *Echinococcus granulosus*
  - Hydatid cysts (lung, liver, etc)
  - Especially sheep
  - 5-15 cm diameter
  - Intermediate stage of canine tapeworm
  - Zoonosis

# Parasitic (Verminous) Diseases in Sheep and Goats

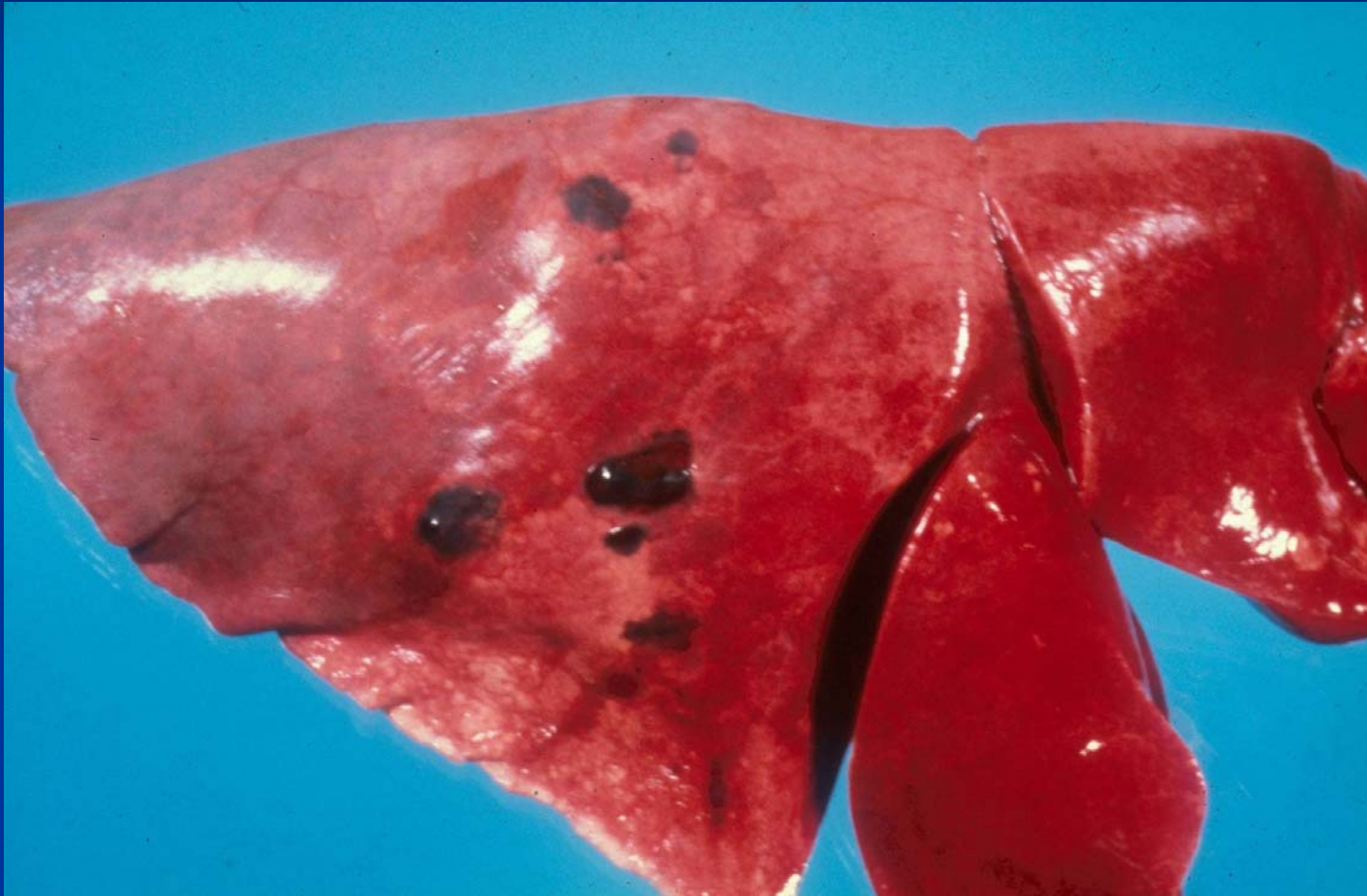
- *Dictyocaulus filaria*
  - Mainly in lambs and kids, but also adults
  - Disease similar to that in bovids plus anemia
- *Muellerius capillaris* (“nodular lung worm”)
  - Snails and slugs are intermediate hosts
  - Sheep: multifocal subpleural granulomas in caudal lobes
  - Goats: diffuse interstitial pneumonia
- *Protostrongylus rufescens*
  - Especially young
  - Adults live in airways
  - Nodules in lung

# *Muellerius spp* - Sheep





*Fasciola hepatica* -  
**Fluke Migration in Sheep**



# Bovine Respiratory Pathology

- **Noninfectious Pulmonary Disease**
  - Aspiration Pneumonia
  - Emphysema
  - Immune Mediated Interstitial Pneumonia
  - Toxic Interstitial Pneumonias