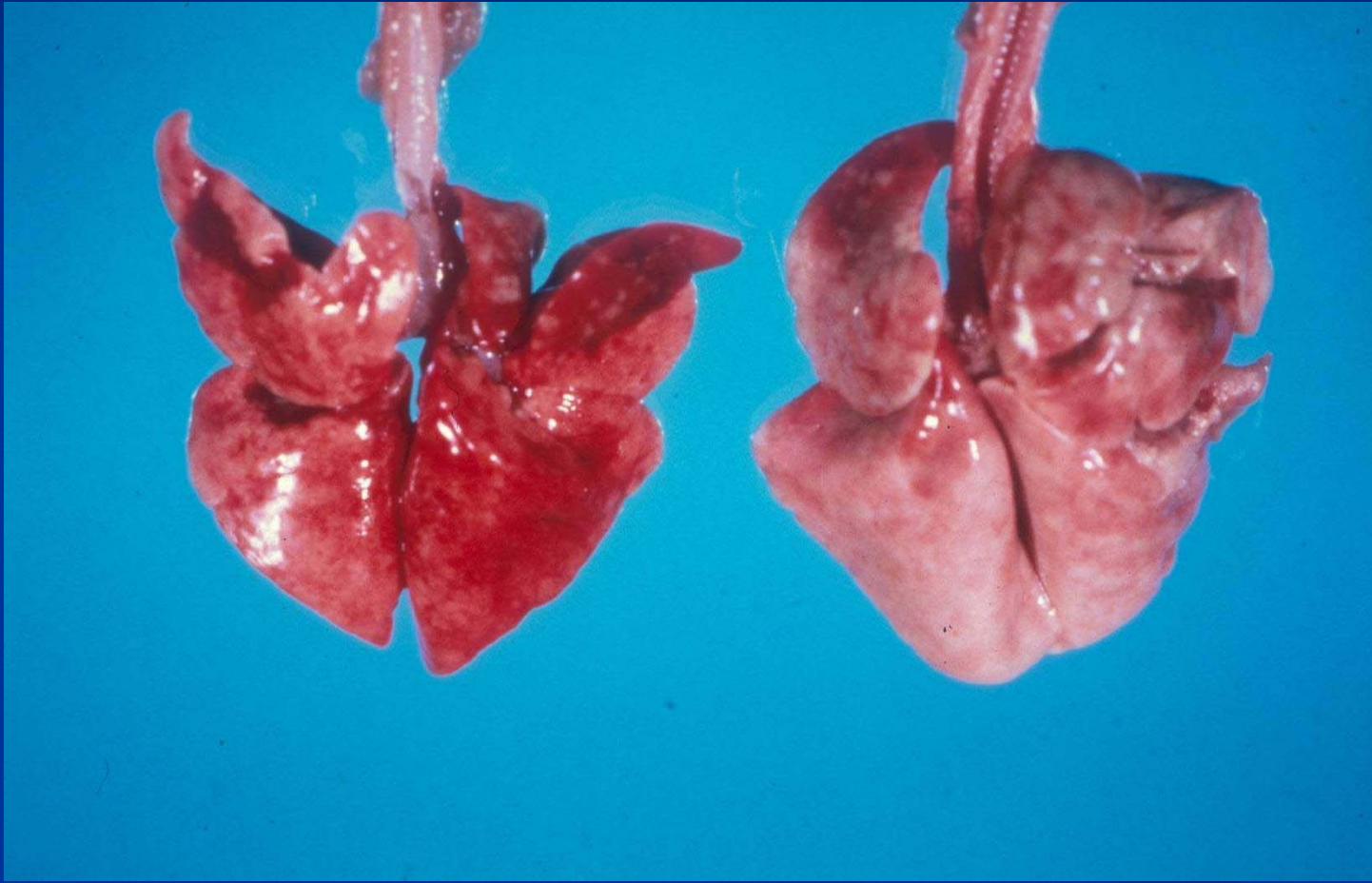


Streptococcal Pneumonia

- *Streptococcus suis* type II – various serotypes
- Worldwide distribution
- Zoonotic
- Diseases
 - Suppurative bronchopneumonia especially with other pathogens
 - Neonatal septicemia with embolic pneumonia
 - Abortion

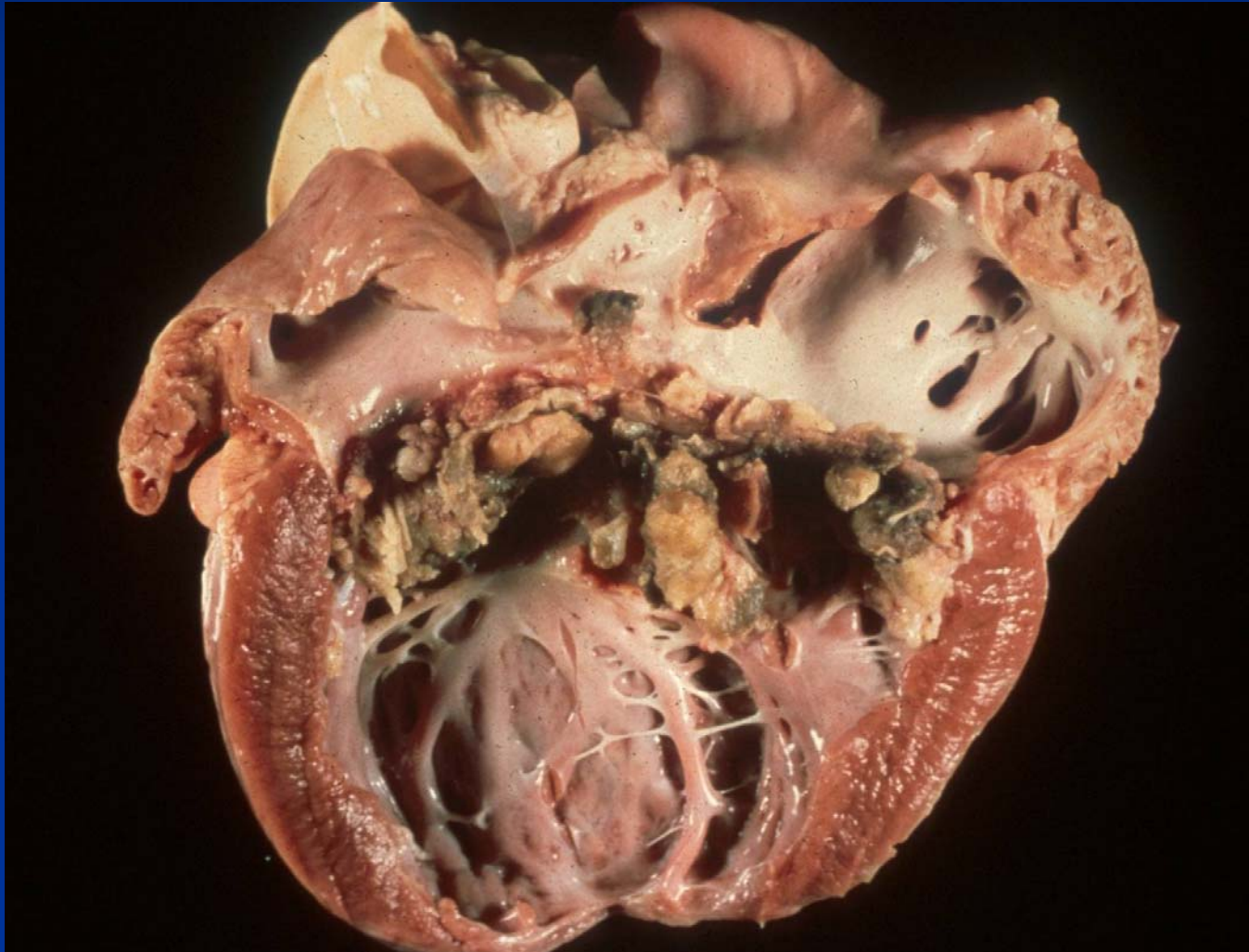
Pasteurella/Bordetella—Pig



Mycobacterial Infection

- Still occurring in USA
- *M. avium-intracellulare* complex
- Exposure by ingestion, hematogenous spread
- Lung rarely involved
 - Pulmonary granulomas

Embolic Pneumonia - Vegetative Endocarditis—Porcine

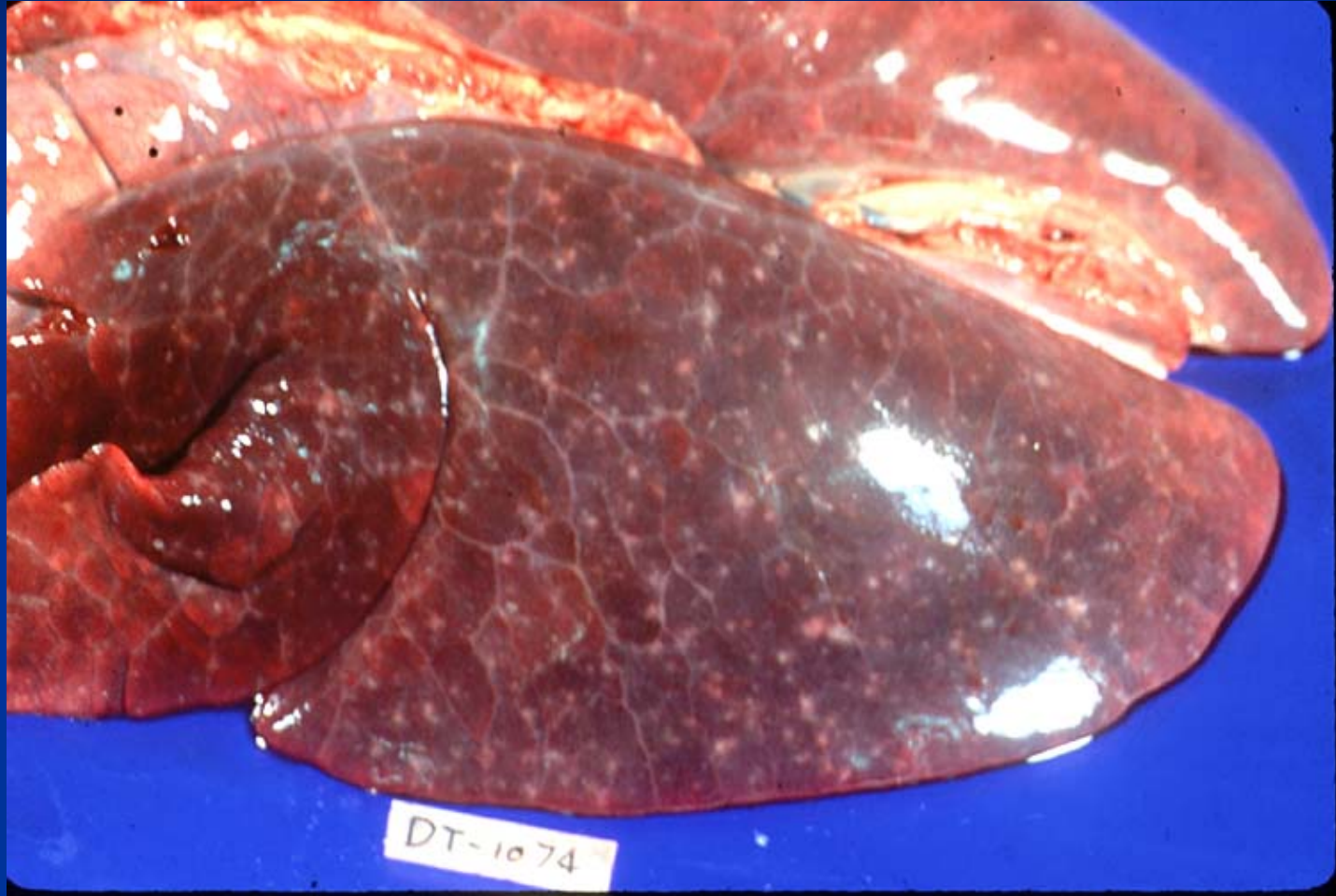


Mycotic and Protozoal Diseases

- Generally in immunosuppressed pigs
- *Pneumocystis carinii*
 - Generally secondary to viral diseases
 - Foamy material in alveoli
 - GMS stain needed
- Toxoplasmosis – *T. gondii*
 - Cat is definitive host
 - Zoonosis

Toxoplasmosis

Multifocal pulmonary granulomas



Parasitic Diseases

- *Ascaris suum*
 - Larvae migrate thru lung
 - Acutely may see petechial hemorrhages
 - Cause inflammation and granulomas
- Lungworms (bronchi, bronchioles)
 - Worldwide distribution
 - *Metastrongylus apri* (*elongatus*), *M. salmi*, *M. pudendotectus*
 - Intermediate hosts are earthworms
 - May transmit swine influenza virus
 - Cough and growth retardation
 - Pathology
 - Nodules, especially dorsocaudally

Toxic Diseases

- Fumonsins
 - PPE – porcine pulmonary edema
- Pyrrolizidine alkaloids
 - Interstitial pneumonia
- Vitamin D toxicosis
 - Mineralization with multinucleated giant cells
- Warfarin toxicity (rat bait)
 - Multifocal hemorrhages

Toxic Diseases

■ Fumonsins

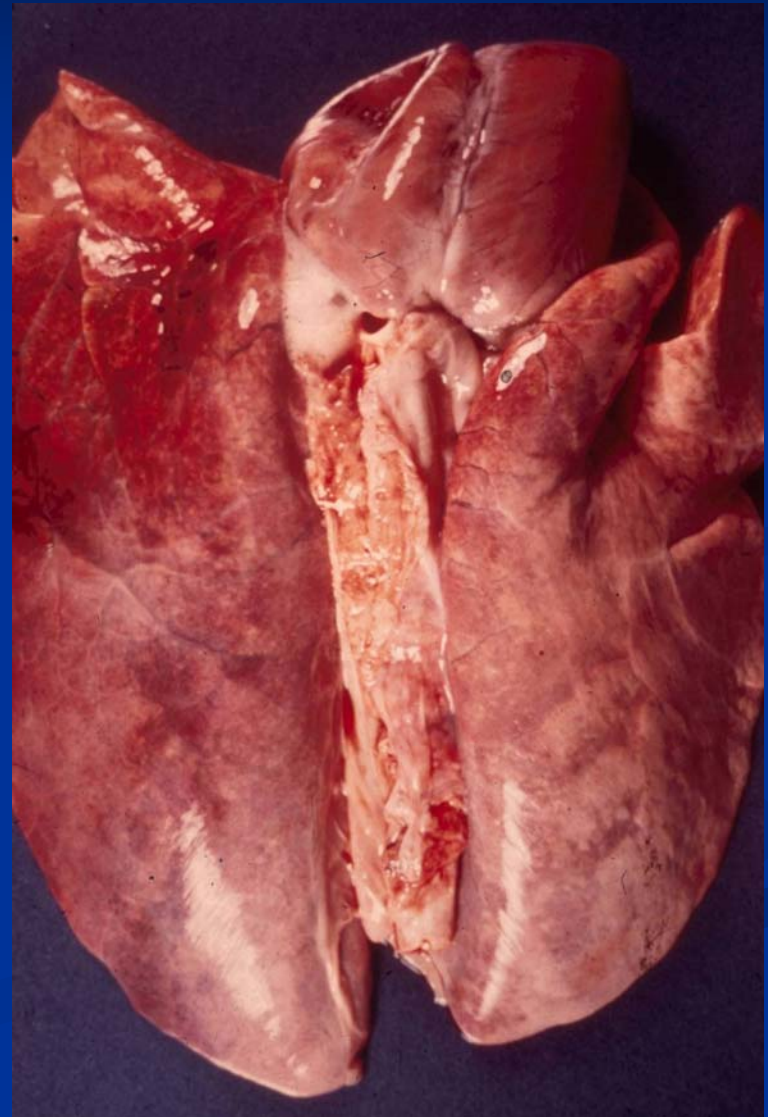
- Mycotoxins produced by *Fusarium verticillioides* (*moniliforme*) and other fungi
- Present in corn worldwide
- Hepatic injury in all species
- Leukoencephalomalacia (ELEM) in horses, most sensitive species (< 5 ppm)
- Pulmonary edema (cardiogenic) in pigs (<50 ppm)
- Epidemiologically – neural tube defects and esophageal cancer in humans

**Porcine
Pulmonary
Edema (PPE) –
Fumonisin
Toxicosis**



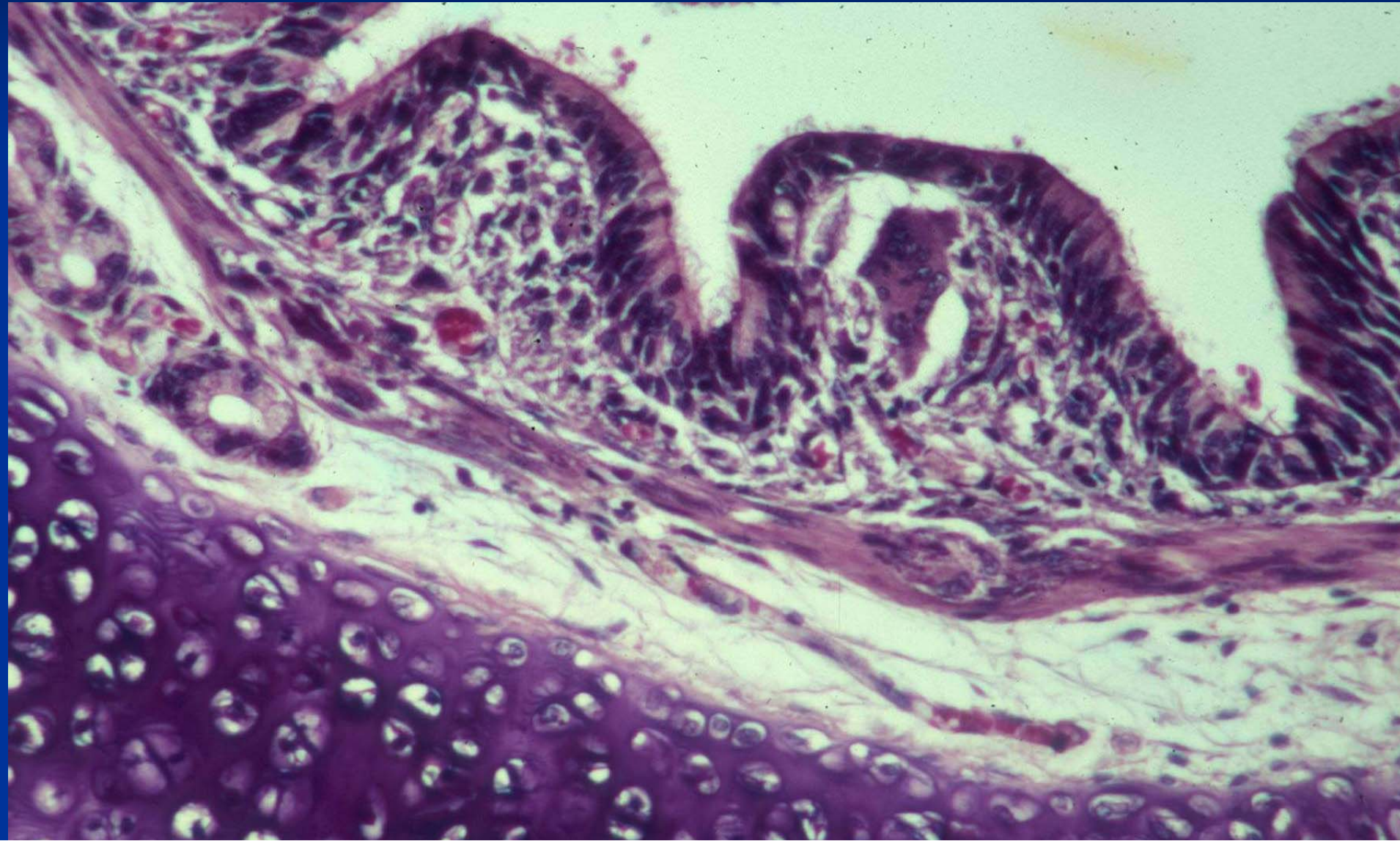
Pyrrolizidine Alkaloid Toxicoses

- Pyrrolizidine alkaloids (*Crotalaria spectabilis*, *C. retusa*, - both contain monocrotaline)
 - Reported in S. Africa, Northern Territory (contaminant in grain sorghum diet)
 - Interstitial pneumonia with/without megalocytosis
 - Also liver and kidney lesions with megalocytosis



Hypervitaminosis D

Mineralization and syncytial cell



**Warfarin
Toxicity -
Hematomas**

