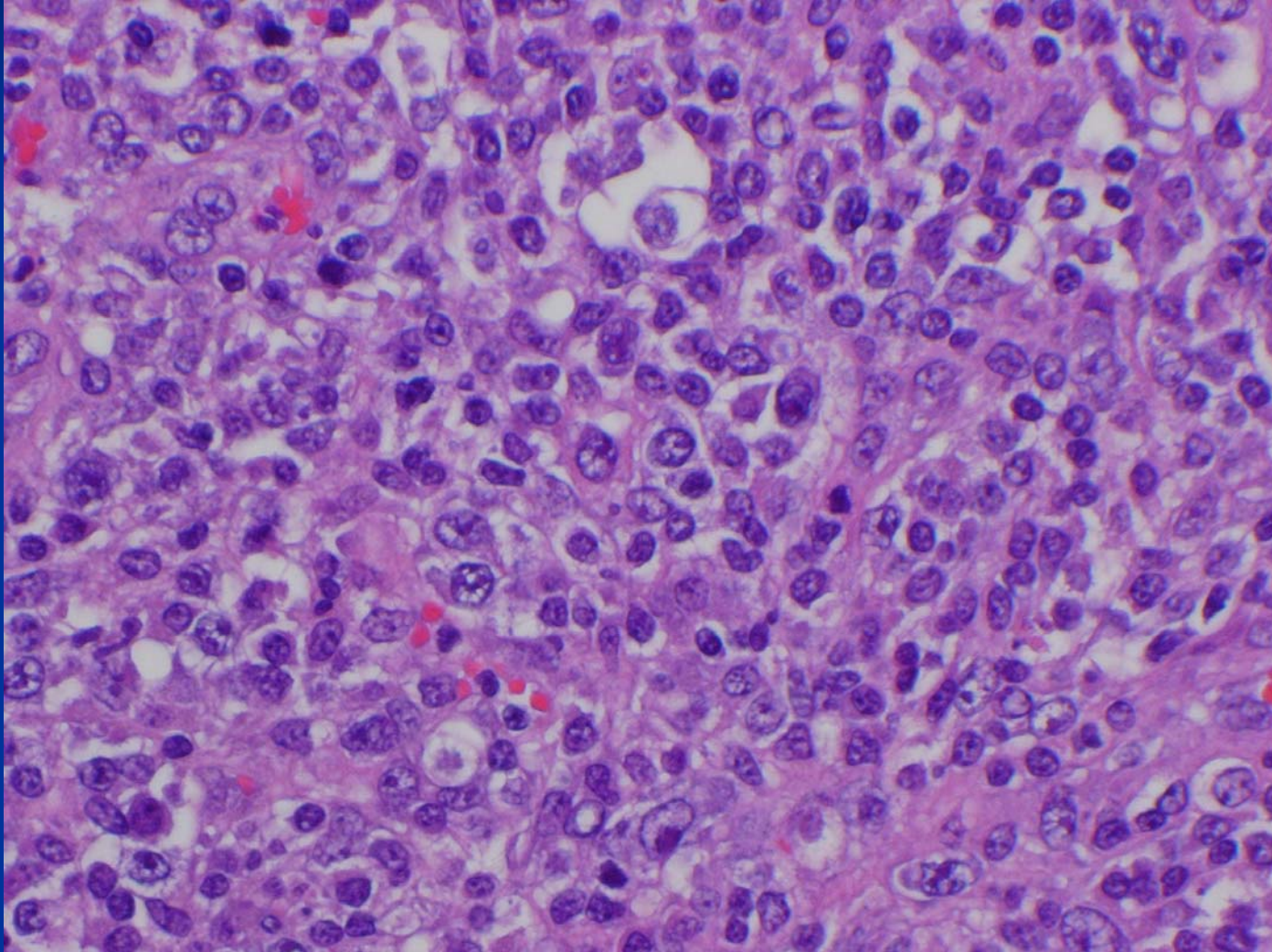
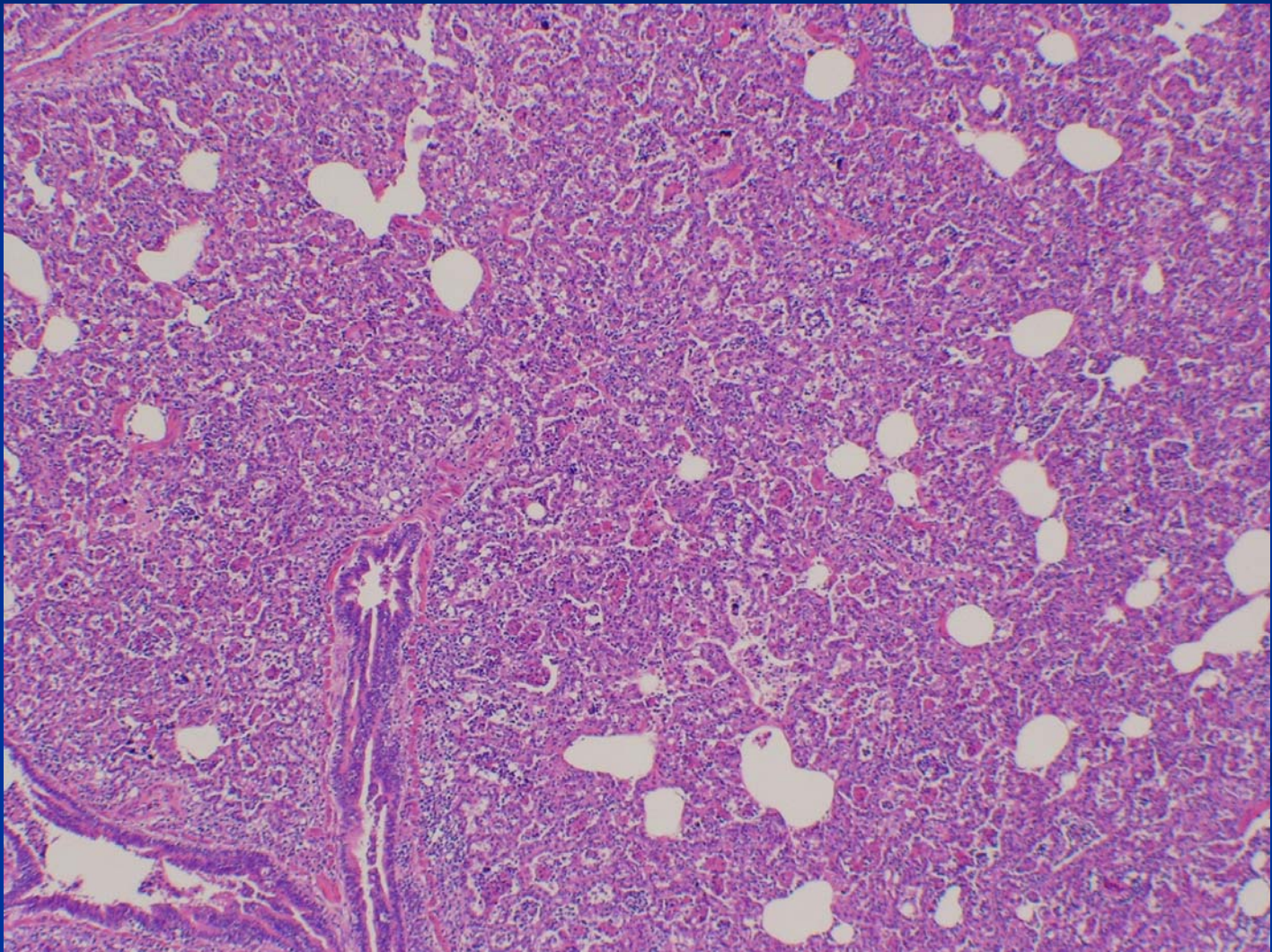


PMWS – Lymph Node

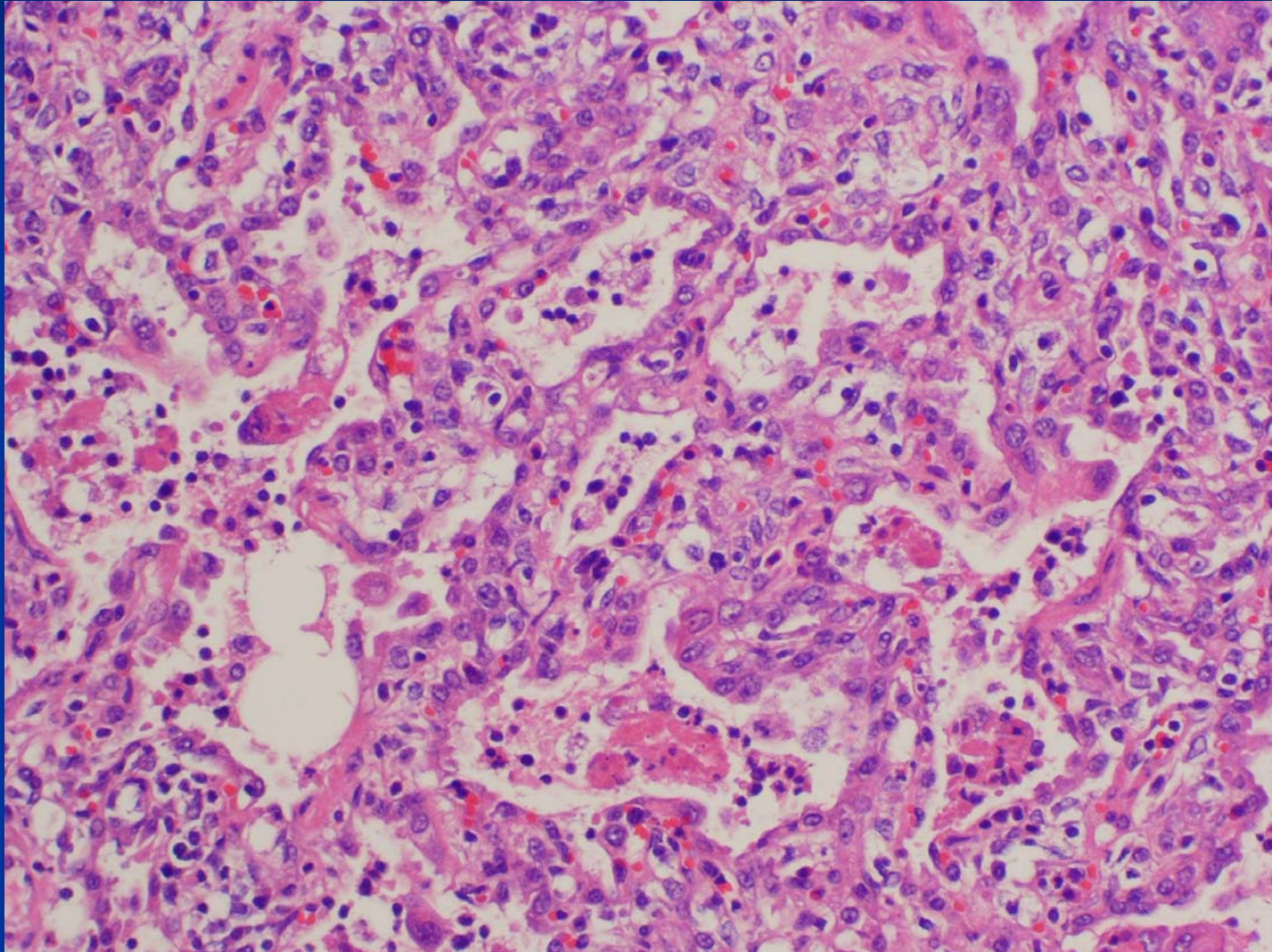
Lymphoid tissue replaced by macrophages



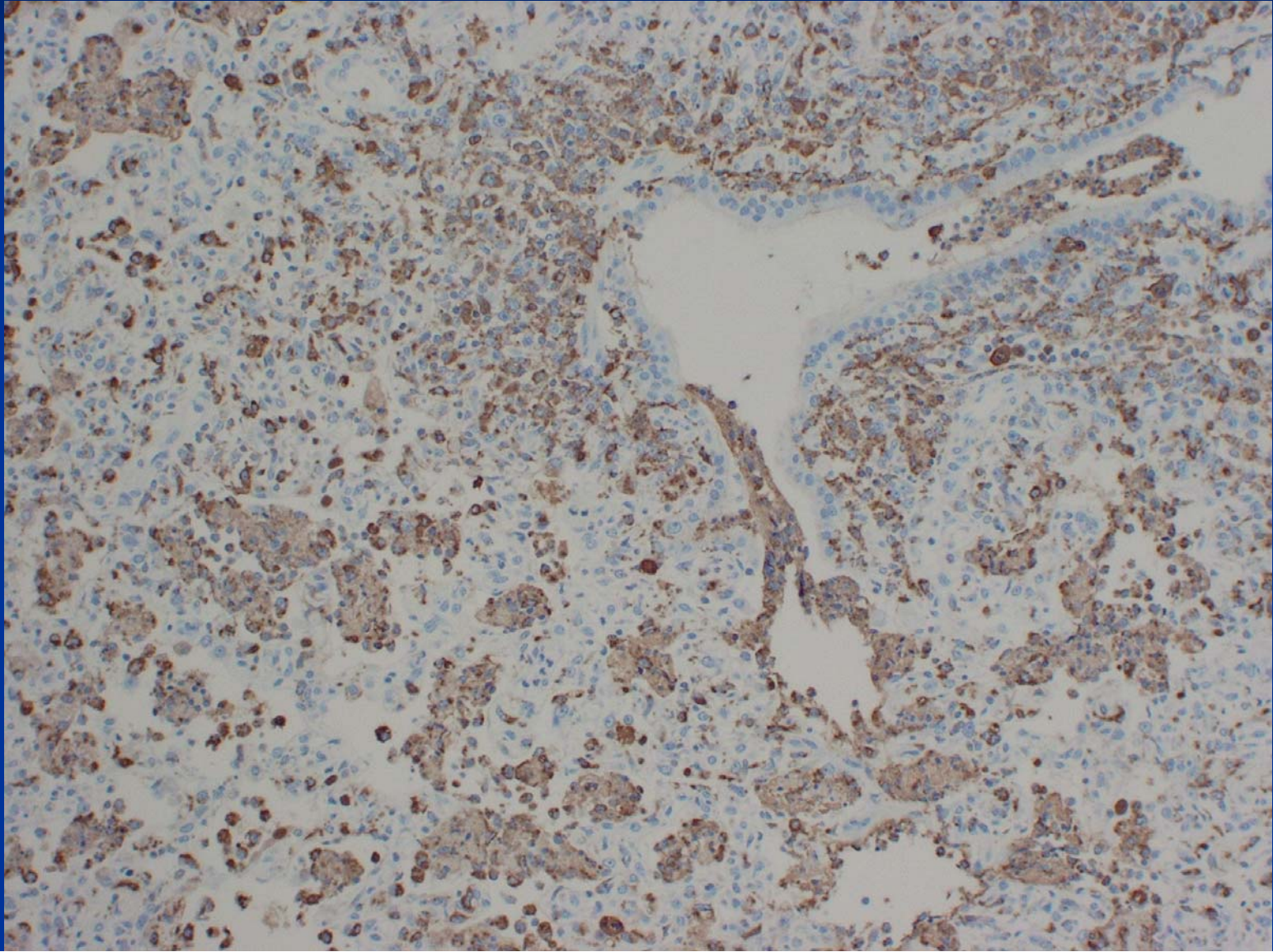
Porcine Respiratory Disease Complex with *Bordetella bronchiseptica*



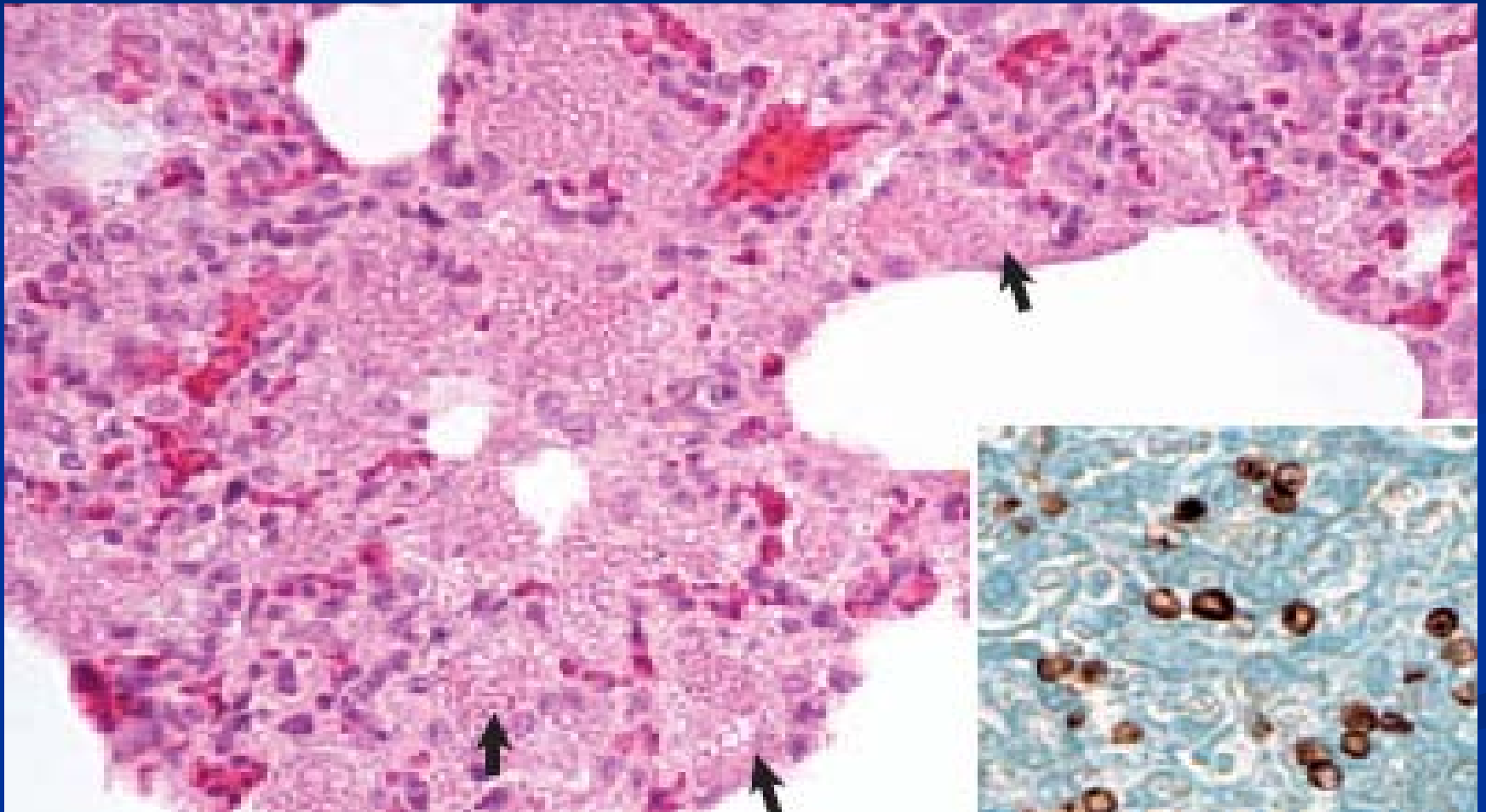
Porcine Respiratory Disease Complex with *Bordetella bronchiseptica*



Porcine Respiratory Disease Complex Circovirus-2 IHC



Pneumocystosis Secondary to PWMS



Swine Influenza

- Orthomyxovirus, Type A
- Enzootic worldwide
- Zoonotic -cause of human influenza pandemic during WW I
- Transmission
 - Aerosols and oral routes
 - Via lungworms and earth worms
- Disease – high morbidity, low mortality unless secondary bacterial infection

Swine Influenza

■ Clinical signs

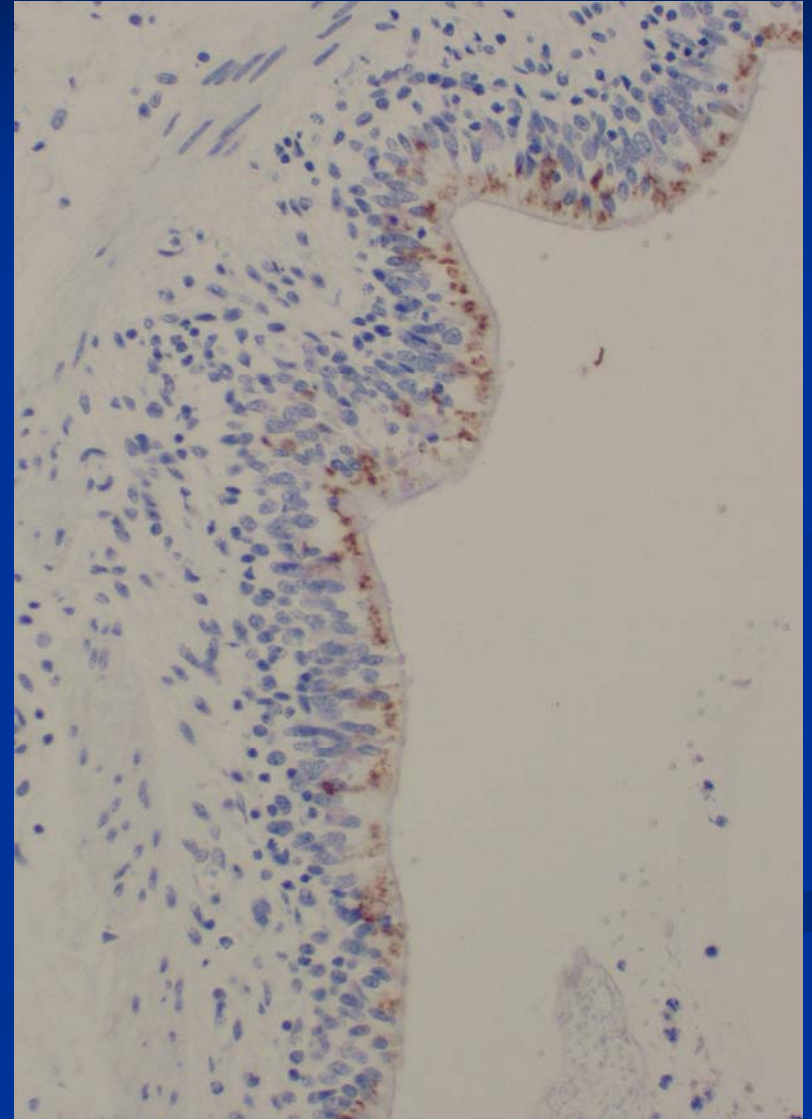
- Fever, cough, oculo-nasal discharge
- Weight loss, abortions, weak piglets

■ Pathology

- Mucopurulent exudate in airways
- Necrotizing broncho-interstitial pneumonia
- Multifocal atelectasis (checkerboard pattern)
- +/- Anteroventral bronchopneumonia

Swine Influenza

- Diagnosis
 - Nasal secretions – PCR
 - Tissue – viral antigen in infected epithelial cells – IHC
- SIV IHC in porcine respiratory disease complex (right)



Porcine Reproductive and Respiratory Syndrome (PRRS)

- Arterivirus
- Major problem in Americas, Europe, Asia
- Transmission – aerosol, semen
- Disease
 - Respiratory in young pigs
 - Reproductive – late term abortions and still births
- Clinical signs – anorexia, dyspnea (cyanosis if severe), cough and occasional death

Porcine Reproductive and Respiratory Syndrome

- Pathogenesis – mucosal entry, replication in macrophages, apoptosis, followed by viremia
 - Persistent infection with shedding via semen
- Pathology: interstitial pneumonia with prominent macrophage component
 - Secondary *Pneumocystis carinii* infection possible
 - Enlarged regional lymph nodes
- Diagnosis in tissue – PCR, IHC