

Respiratory Disease of Guinea Pigs

- Anatomic feature - thick medial walls of pulmonary vessels
- Background lesions often include severe inflammation
- Infectious agents: *Bordetella*, *S. pneumonia*, *S. zooepidemicus*, *Klebsiella*, *Pasteurella multocida*, *P. aeruginosa*, *C. freundii*, *S. aureus*,

Respiratory Disease of Hamsters

- **NonInfectious**
- Congestive heart failure
- **Viruses – as mice and rats**
- Sendai virus
- MPV (murine pneumonia virus)
- **Bacteria**
- *Pasteurella pneumotropica*
- *Streptococcus pneumonia*
- *Streptococcus agalactiae*
- *Mycoplasma pulmonis*

Respiratory Disease of Ferrets

- Non infectious lesions
 - Aspiration pneumonia
 - Endogenous lipid pneumonia
- Infectious diseases
 - Canine distemper
 - Influenza - human

Respiratory Pathology of Non Human Primates

- Viruses
 - Cytomegalovirus
 - Other herpes viruses - lung involvement as part of systemic disease -focal necrosis with/without intranuclear inclusion bodies
 - Measles
 - Adenovirus
- Bacteria
- Fungi
- Parasites

Cytomegalovirus

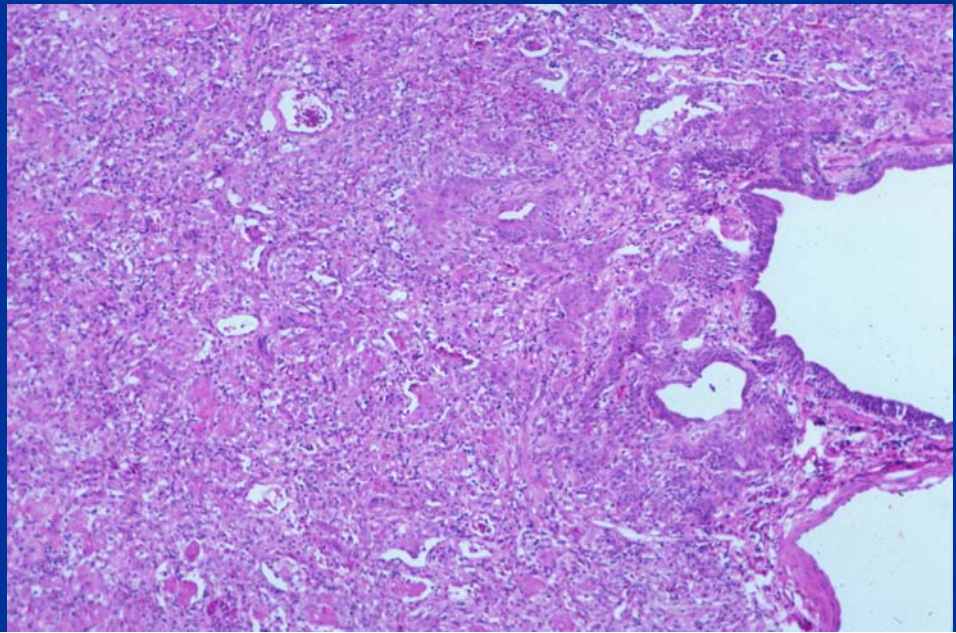
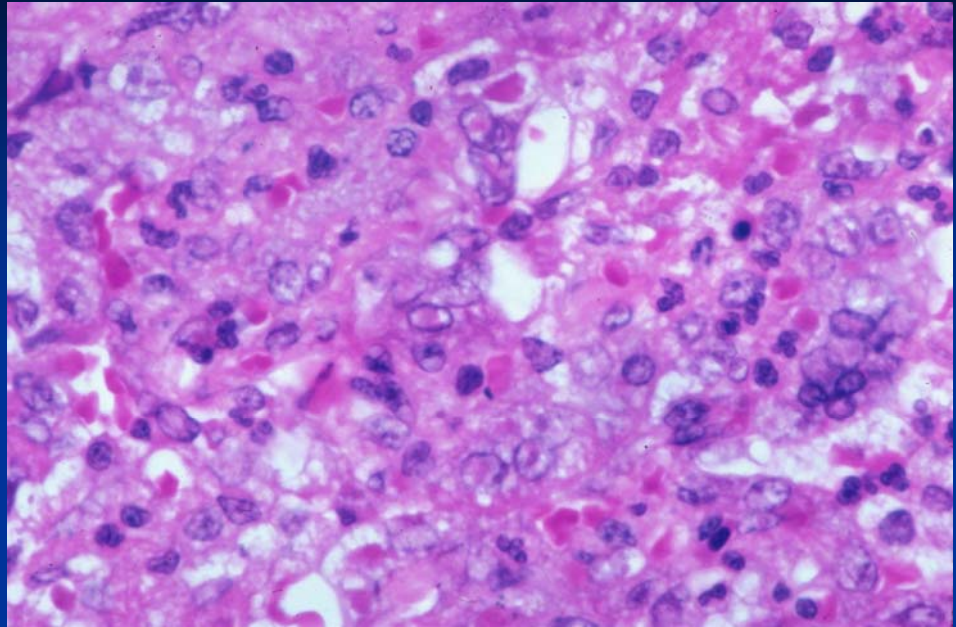
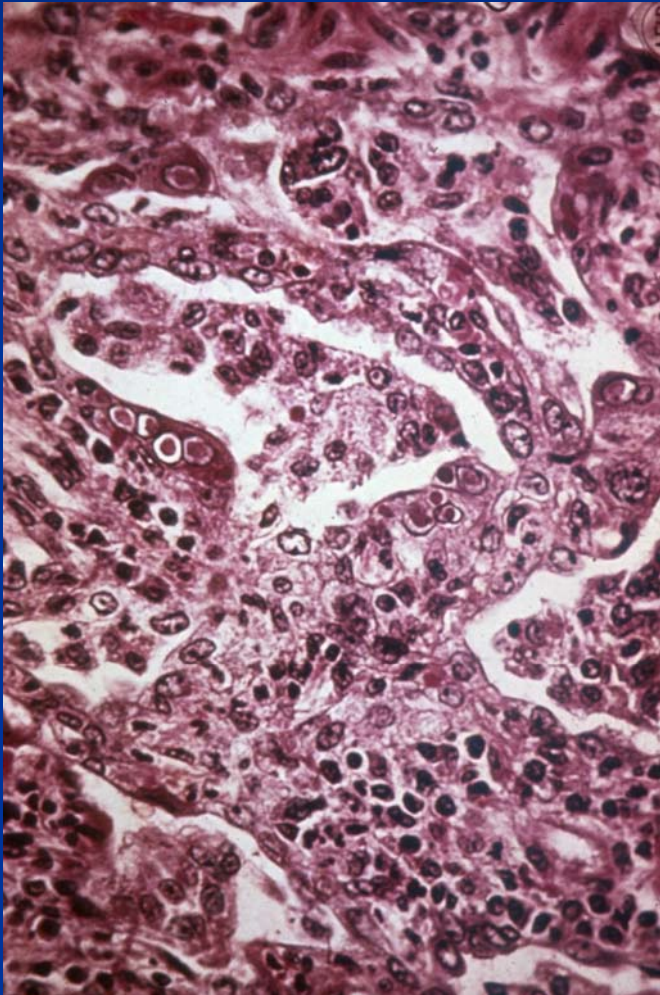
- *Etiology*: Betaherpesvirus
- Highly species-specific
- *Transmission*: shed in urine, may be acquired transplacentally
- *Clinical*: Usually none. Disease only in fetuses and immunodeficient. CNS and respiratory signs may be noted
 - In macaques, widespread latent infection with most seroconverting during the first year of life.
 - Common opportunistic infection in SIV- and SRV-infected macaques.

Pathology:

Cytomegalovirus Infection

- In immunodeficient animals, generalized infection - necrotizing meningitis and neuritis, interstitial pneumonia, arteritis, enterocolitis, orchitis, and focal necrosis in liver and spleen.
- Infects mesenchymal cells, rather than epithelium
- Cells often enlarged, may contain large basophilic INIB and granular eosinophilic ICIB.

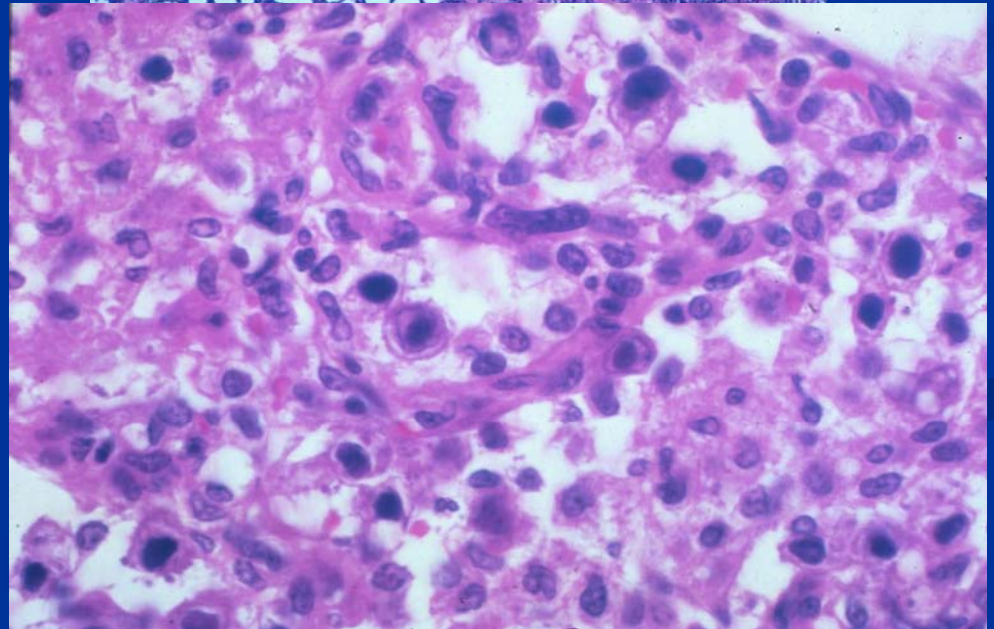
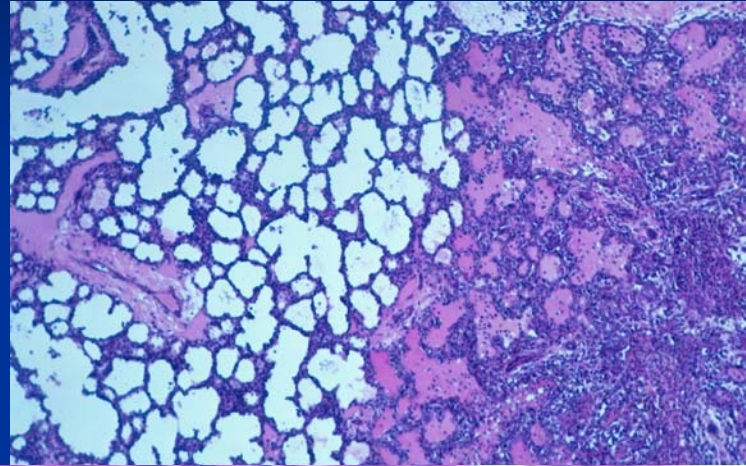
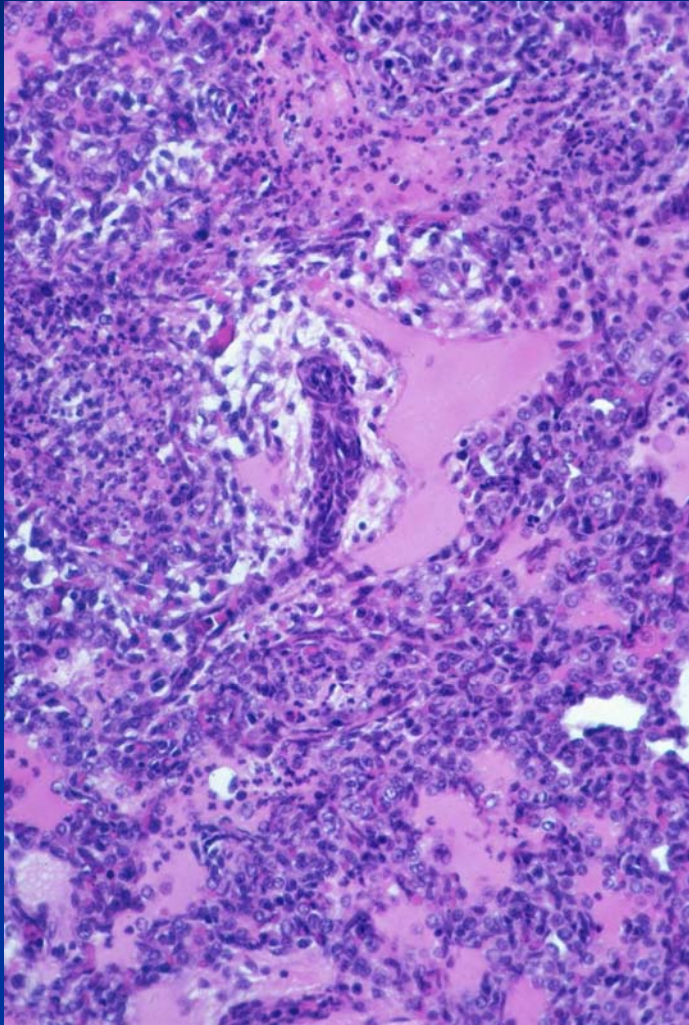
Measles - Monkey



Adenovirus

- *Etiology*: Adenovirus
- *Clinical*: Usually no clinical signs, but virus can be isolated. In some cases, conjunctivitis and respiratory infections, diarrhea, and pancreatitis in rhesus. Severe infections in immunodeficient animals.
- *Pathology*: In immunodeficient monkeys, necrotizing bronchointerstitial pneumonia, pancreatitis and enteritis
 - Intranuclear inclusions vary in size and color

Adenovirus—Fetal Monkey



Respiratory Pathology of Non Human Primates

- Viruses
- Bacteria
 - *Mycobacterium spp*
 - *Streptococcus pneumoniae*
 - *Bordetella bronchiseptica*
 - *Klebsiella pneumoniae*
 - *Nocardia sp*
- Fungi
- Parasites