

WSC 2023-2024
Conference 18, Case 1
Tissue from a bison.

MICROSCOPIC DESCRIPTION: Lung: Diffusely, bronchioles are expanded and largely effaced **(1pt.)** by lytic necrosis **(1pt.)**, characterized by central area of brightly eosinophilic cellular debris, **(1pt.)** degenerate neutrophils **(1pt.)** and centripetally, numerous epithelioid macrophages **(1pt.)** (and additional cellular debris all enmeshed in small amounts of mature collagen) which replaces the bronchiolar wall **(1pt.)** (bronchiectasis) **(1pt.)**. The lumina of these airways also contains abundant eosinophilic cellular debris and degenerate neutrophils. **(1pt.)** The necrosis often extends into the surrounding alveolar architecture **(1pt.)**, where it is often admixed by abundant hemorrhage and polymerized fibrin as a result of septal necrosis. **(1pt.)** Areas of necrosis are often outlined by a dense band of degenerate neutrophils, cellular debris, and a rim of epithelioid macrophages. **(1pt.)** Diffusely, alveoli are expanded and filled by variable combinations and concentrations of alveolar macrophages, viable and degenerate neutrophils, fewer lymphocytes and plasma cells, edema, polymerized fibrin **(1pt.)**, rare hemorrhage, and cellular debris **(1pt.)** Interlobular septa and pleura connective tissues are markedly expanded **(1pt.)** by clear space, distended lymphatic which often contain fibrin thrombi **(1pt.)** and or small number s of neutrophils and macrophages, edema, and multifocal areas of fibrosis.

MORPHOLOGIC DIAGNOSIS: Lung: Bronchopneumonia **(1pt.)**, necrotizing **(1pt.)** and fibrinosuppurative **(1pt.)** diffuse, severe, with bronchiectasis **(1pt.)**

CAUSE(S): Mycoplasma bovis **(3pt.)**

O/C: **(1pt.)**

WSC 2023-2024
Conference 18, Case 2
Tissue from a skunk..

MICROSCOPIC DESCRIPTION: Cerebrum at level of lateral ventricles: The meninges **(1pt.)** and by extension the Virchow Robins spaces are expanded by moderate number of macrophages **(1pt.)**, lymphocytes **(1pt.)** and plasma cells and neutrophils **(1pt.)** which occasionally extend into the adjacent grey matter. Within the adjacent neuropil and to a lesser extent diffusely within the grey matter there is necrosis and karyorrhexis of glial cells **(1pt.)**, fewer astrocytes, and rarely neurons. Affected neurons are shrunken, eosinophilic, and rarely surrounded by glial cells (neuronophagia.) **(1pt.)** There is a diffuse gliosis **(1pt.)** within the grey matter. There are multifocal areas of hemorrhage within the meninges which extends downward along the Virchow Robins spaces. **(1pt.)**

Pancreas: Randomly scattered throughout the pancreas are numerous areas of lytic necrosis **(1pt.)** affecting both acinar tissue **(1pt.)** and ducts **(1pt.)**. Areas of necrosis contain numerous necrotic neutrophils admixed with cellular debris which replace acinar tissue. Multifocally, similar cells are present within the lumen, focally within the wall, and extend into the adjacent interstitium. Vessels contain similar cells, and occasionally, these cells are present within their walls **(1pt.)** where they are admixed with necrotic smooth muscle cells and cellular debris. (vasculitis.) **(1pt.)** Scattered throughout the parenchyma, in areas of necrosis as well as in unaffected tissue, there are foci of pink amorphous material suggestive of amyloid. **(1pt.)** Adjacent to areas of necrosis and amyloid, pancreatic acini are partially to totally lost, with remnant acinar cells shrunken with decreased zymogen granules (atrophy).

MORPHOLOGIC DIAGNOSIS: 1. Cerebrum: Meningoencephalitis **(1pt.)**, necrotizing and lymphohistiocytic **(1pt.)**, diffuse, mild to moderate.

2. Pancreas: Pancreatitis, necrotizing and lymphoplasmacytic, diffuse, moderate. **(1pt.)**

3. Pancreas: Amyloidosis, multifocal, mild with acinar loss. **(1pt)**

CAUSE: Highly pathogenic Avian Influenza **(1pt.)**

O/C: (1pt)

WSC 2023-2024

Conference 18, Case 3.

Tissue from a black-tailed jackrabbitg.

MICROSCOPIC DESCRIPTION: Liver: Normal hepatocellular plate architecture is diffusely lost **(1pt.)** with individualization **(1pt.)** of hepatocytes. There is apoptosis (necrosis OK) **(2pt.)** of approximately 90%+ of hepatocytes in all areas of the lobule **(1pt.)** with individualization, slight swelling, hypereosinophilia, a range of nuclear changes from peripheralization and crescenting **(1pt.)** of nuclear chromatin, pyknosis, and rhexis. **(1pt.)** Cytoplasm of apoptotic hepatocytes is granular and often contains numerous clear vacuoles (autophagic vacuoles). **(1pt.)** Viable and degenerate neutrophils and debris-laden macrophages are scattered throughout the section **(1pt.)** in small numbers, and remnant Kupffer cells are diffusely hypertrophied **(1pt.)** Sinusoids are diffusely congested and there are numerous areas of hemorrhage as a result of loss of sinusoidal integrity. **(1pt.)** Hepatic sinusoids contain abundant eosinophilic cellular debris and rare fibrin thrombi. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Liver: Hepatitis, necrotizing **(2pt.)**, massive **(2pt.)**, diffuse, severe.

CAUSE: Rabbit calicivirus **(2pt.)**

NAME THE DISEASE: Rabbit hemorrhagic disease. **(2pt.)**

O/C: **(1pt.)**

WSC 2023-2024
Conference 18, Case 4.
Tissue from a deer.

MICROSCOPIC DESCRIPTION: Lung: There is mild autolysis and there are food particles in section (field dressed specimen?) **(1pt.)** Multifocally, there is loss of normal parenchymal architecture. **(1pt.)** There are expansile nodular masses measuring up to 2mm **(2pt.)** within the pulmonary architecture in which alveoli are expanded or ruptured and coalescing. **(1pt.)** These nodules are filled with concave **(1pt.)** yeasts **(2pt.)** which range from 4-12mm in diameter **(1pt.)** which occasionally exhibit narrow-based budding. **(1pt.)** The yeasts are surrounded by a clear capsule and are widely spaced. **(1pt.)** There is minimal inflammation with few alveolar macrophages and neutrophils within the surrounding alveoli. **(2pt.)** Adjacent alveoli are compressed.

MORPHOLOGIC DIAGNOSIS: Lung: Pneumonia, interstitial **(1pt.)** granulomatous **(1pt.)**, multifocal to coalescing, mild with numerous yeast. **(1pt.)**

CAUSE: Cryptococcus neoformans **(3pt.)**.

O/C: **(1pt.)**