

WSC 2025-2026
Conference 20, Case 1
Tissue from a donkey.

MICROSCOPIC DESCRIPTION: Lung: Two sections of lung are submitted for examination, and both are similar. Approximately 50% **(1pt.)** of the tissue in each section is affected with confluent areas of inflammation. Airways **(1pt.)** are filled with large numbers of neutrophils **(1pt.)** and fewer macrophages, admixed with sloughed epithelium, hemorrhage and edema fluid refluxed from adjacent alveoli, and sloughed airway epithelium **(1pt.)**, blue mucin **(1pt.)**, rare colonies of coccobacilli, and cellular debris. Airway walls are segmentally to totally denuded of lining epithelium. **(1pt.)** Alveolar septa are diffusely expanded by congestion and edema **(1pt.)**, and in areas of inflammation, hypertrophic intraseptal macrophages, neutrophils, and scattered type II pneumocyte hyperplasia. **(1pt.)** In areas of severe inflammation, there is multifocal discontinuity and loss of alveolar septa (septal necrosis). **(1pt.)** Alveolar spaces contain varying combinations and concentrations of neutrophils, alveolar macrophages **(1pt.)**, hemosiderin-laden macrophages, hemorrhage, edema, polymerized fibrin **(1pt.)** which occasionally compacts and lines alveolar septa (hyaline membranes) **(1pt.)**, blue mucin and cellular debris. In one section, at the periphery of an area of inflammation, a branch of a large pulmonary vein contains an occlusive fibrin thrombus. **(1pt.)** There is abundant acid hematin scattered throughout the section.

MORPHOLOGIC DIAGNOSIS: Lung: Pneumonia, bronchointerstitial **(1pt.)**, necrotizing **(1pt.)** and fibrinosuppurative **(1pt.)**, multifocal to coalescing, marked, with thrombosis, edema, septal necrosis **(1pt.)** and hyaline membrane formation. **(1pt.)**

CAUSE: Equine influenza (equine viral arteritis OK) **(2pt.)**

WSC 2025-2026
Conference 20, Case 2
Tissue from a cat.

MICROSCOPIC DESCRIPTION: Mesenteric lymph node and mesentery: A partial section (approximately 50%) of a markedly enlarged **(1pt.)** lymph node with small amounts of attached mesentery is submitted for examination. Normal lymph node architecture is effaced **(1pt.)** by marked expansion of the paracortex **(1pt.)** with effaces germinal centers **(1pt.)**, expands medullary cords **(1pt.)** and fills subcapsular and medullary sinuses **(1pt.)**. There are numerous apoptotic lymphocytes and tingible body macrophages **(1pt.)** giving the parenchyma a “starry sky” appearance **(1pt.)**. There are multifocal to coalescing areas of coagulative and lytic **(1pt.)** necrosis **(1pt.)** scattered throughout the node. There is marked lymphoplasmacytic inflammation within the adjacent mesentery **(1pt.)**, and areas of necrosis are present within these areas as well. Multifocally within the node, there are areas of granulomatous inflammation **(1pt.)** which efface the underlying parenchyma. Macrophages in these areas are found, measure 10um in diameter and are occasionally multinucleated. **(1pt.)** There is mild to moderate fibrosis of the node in areas of necrosis and granulomatous inflammation.

MORPHOLOGIC DIAGNOSIS: Mesenteric lymph node: Lymphadenitis, necrotizing **(1pt.)** and granulomatous **(1pt.)**, multifocal to coalescing, marked with reactive hyperplasia. **(1pt.)**

CAUSE: Mutated feline coronavirus **(2pt.)**

NAME THE DISEASE: Feline infectious peritonitis **(1pt.)**

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

WSC 2025-2026
Conference 20, Case 3.
Tissue from a starling.

MICROSCOPIC DESCRIPTION: Tissues from the gastrointestinal tract are submitted for examination. Only clinically relevant tissues from this slide will be described.

Liver: Diffusely, portal areas **(1pt.)** are markedly expanded by innumerable macrophages **(1pt.)**, large numbers of lymphocytes and plasma cells **(1pt.)**, and fewer granulocytes, which extend into and efface the adjacent parenchyma. A similar cellular infiltrate is also present around larger branches of the lobular and sublobular veins. The cytoplasm of macrophages occasionally contains one or multiple round 2-3um zoites **(1pt.)** that are often surrounded by a clear halo. Some histiocytes contain a large pink gamont within their cytoplasm. There is multifocal biliary hyperplasia. Within the adjacent infiltrated parenchyma, the limiting plate is lost and inflammatory cells surround and separate shrunken disassociated hepatocytes which often have a single clear vacuole. Some hepatocytes contain a brown to black granular pigment. Vessels often contain histiocytes (some with apicomplexan zoites within their cytoplasm) as well as rounded up hepatocytes within their lumina. **(1pt.)**

Duodenum: Three sections of duodenum (with associated pancreas) are submitted for examination and all are similar. The lamina propria is expanded by innumerable epithelioid **(1pt.)** and fewer multinucleated macrophages admixed with a few lymphocytes and plasma cells, which surround, widely separate and often efface crypts. **(1pt.)** The luminal mucosa is autolytic. Multifocally within macrophage cytoplasm, contains one or multiple round 2-3um zoites that are often surrounded by a clear halo. **(1pt.)**

Peripancreatic fat: There is marked atrophy of fat in the peripancreatic region. **(1pt.)** The pancreas itself is without lesion.

Cloaca: There is diffuse hyperplasia of the cloacal mucosa and crypts contain increased numbers of mitotic figures which extend to the autolytic luminal mucosa. **(1pt.)** Crypts are separated, surrounded, and occasionally effaced by a dense inflammatory infiltrate composed of large numbers of macrophages, **(1pt.)** and fewer lymphocytes and plasma cells. There are numerous sloughed enterocytes, histiocytes and trichomonads within the cloacal lumen. Trichomonads are pyriform, 4-5um in length with a prominent nucleus. **(1pt.)**

Bursa of Fabricius: There is moderate reactive hyperplasia **(1pt.)** of the bursa with numerous tingible body macrophages. Within the lumen and adjacent to bursal epithelium invaginations within the bursal follicles, there are low to moderate numbers of trichomonads as previously described. **(1pt.)** Within the bursal epithelium, there are low to moderate numbers of intracytoplasmic, extracellular round 2-4um apicomplexan schizonts and gamonts consistent with cryptosporidia. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: 1. Liver: Cholangiohepatitis, granulomatous and lymphoplasmacytic, diffuse, marked with intrahistiocytic apicomplexan zoites. **(1pt.)**
2. Duodenum: Duodenitis, granulomatous, diffuse, severe with intrahistiocytic apicomplexan zoites. **(1pt.)**
3. Coelomic fat: Atrophy, diffuse, severe.

4. Cloaca: Cloacitis, proliferative and granulomatous, diffuse, marked with numerous luminal trichomonads. **(1pt.)**
5. Bursa of Fabricius: Reactive hyperplasia, diffuse, marked with intraluminal trichomonads and intraepithelial extracytoplasmic cryptosporidial schizonts and gamonts. **(1pt.)**

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

WSC 2025-2026

Conference 20, Case 4.

Tissue from a dog.

MICRSCOPIC DESCRIPTION: Cerebrum: Within white matter tracts of the internal capsule and the thalamus, **(1pt)** there are extensive and coalescing areas of spongiosis **(1pt)**. Within these areas, myelin sheaths are dilated up to 50um and occasionally coalesce (digestion chambers) **(1pt)**, and contain dilated axons **(1pt)**, myelin debris, and Gitter cells. There are numerous hypertrophic microglia. **(1pt)**. In more severely affected areas, there is rarefaction of the intervening white matter with infiltration of numerous foamy Gitter cells **(1pt)**, increased numbers of hypertrophic microglia **(1pt)**, (demyelination) **(1pt)**. Multifocally, neurons occasionally are swollen and chromatolytic, and few are shrunken and pyknotic (necrosis) **(1pt)**. Rare neurons and astrocytes contain 4-5umum intranuclear **(1pt)** and/or 2-3 um intracytoplasmic **(1pt)** eosinophilic viral inclusions. In these areas, there is marked gliosis **(1pt)**, with microglial hypertrophy, scattered glial nodules (1pt), and few hypertrophic astrocytes **(1pt)**. Within the thalamus, Virchow Robins spaces are multifocally expanded by 5-7 layers of lymphocytes and plasma cells. **(1pt)**

MORPHOLOGIC DIAGNOSIS: Cerebrum: Demyelination **(1pt.)**, multifocal to coalescing, severe, with spongiosis **(1pt)**, gliosis, and neuronal **(1pt)** and astrocytic intranuclear and intracytoplasmic viral inclusions **(1pt)**

CAUSE: Canine morbillivirus **(2pt)**

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