

WSC 2022-2023

Conference 10, Case 1

Tissue from an aborted caprine fetus.

**MICROSCOPIC DESCRIPTION:** Lung: There is mild autolysis. **(1pt)** There are multifocal areas of lytic necrosis **(1pt)** scattered throughout the pulmonary parenchyma. Areas of necrosis demonstrate discontinuous septa with architectural loss and replacement by eosinophilic and basophilic cellular debris, hemorrhage, fibrin, **(1pt)** edema fluid and few infiltrating macrophages and necrotic neutrophils **(1pt)**. Scattered throughout these areas of necrosis, and often at the periphery are cells of indeterminate origin which are individualized and contain a single intranuclear eosinophilic viral inclusion. **(2pt)** There is mild to moderate diffuse edema of the pleura and interlobular fibrous connective tissue. **(1pt)**

Liver: There is moderate autolysis which has resulted in loss of plate architecture and individualization of hepatocytes; there are no intact red blood cells in this section of liver. **(1pt)** Scattered throughout the section, there are multifocal areas of lytic **(1pt)** hepatocellular necrosis. Areas of necrosis are characterized by loss of hepatocytes and replacement by abundant eosinophilic and basophilic cellular debris. **(1pt)** Areas of necrosis contain low numbers of macrophages with ingested cellular debris and necrotic neutrophils. Hepatocytes at the periphery rarely contain a single eosinophilic intranuclear inclusion **(2pt)** which fills the nucleus and peripheralizes the chromatin. Sublobular and portal lymphatics are dilated and there is mild edema of the hepatic capsule.

**MORPHOLOGIC DIAGNOSIS:** 1 Lung: Pneumonia, necrotizing **(1pt)**, multifocal, mild to moderate, with rare intranuclear eosinophilic viral inclusions. **(1pt)**

2. Liver: Hepatitis, necrotizing, **(1pt)** multifocal, mild to moderate, with rare intranuclear eosinophilic viral inclusions. **(1pt)**

**CAUSE:** Caprine herpesvirus-1 **(3pt)**

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

WSC 2022-2023  
Conference 10, Case 2  
Tissue from a cat

**MICROSCOPIC DESCRIPTION:** Cervical spinal cord: On one side of the section, there is a large focus of necrosis **(1pt.)** and rarefaction which effaces large areas of both white **(1pt.)** and grey **(1pt.)** matter. The necrotic, markedly edematous **(1pt.)** neuropil is infiltrated by large numbers of lymphocytes **(1pt.)** with fewer neutrophils **(1pt.)**, histiocytes and plasma cells **(1pt.)** admixed with small amounts of cellular debris often embedded in numerous astrocyte processes. **(1pt.)** At the periphery of the necrotic areas in the white matter, myelin sheaths are markedly dilated **(1pt.)**, often with swollen axons (spheroids) **(1pt.)**, and occasionally contain myelin debris and Gitter cells. There is gliosis of the white matter with numerous Gitter cells, **(1pt.)** hypertrophied microglia, **(1pt.)** and numerous large gemistocytic astrocytes **(1pt.)**. There are a similar inflammatory infiltrate and gliosis within the grey matter as well. Scattered throughout the grey matter, there are intracellular protozoal cysts **(1pt.)** ranging up to 100um in diameter which contain innumerable 2-3um round to ellipsoid zoites. **(1pt.)** Multifocally on the affected side, there is infiltration of the meninges by low to moderate numbers of lymphocytes and histiocytes.

**MORPHOLOGIC DIAGNOSIS:** Cervical spinal cord: Myelitis **(1pt.)**, necrotizing **(1pt.)** and lymphoplasmacytic, unilateral, focally extensive, severe, with rare intracellular protozoal cysts **(1pt.)**.

**CAUSE:** *Toxoplasma gondii* (*Neospora caninum* OK) **(2pt.)**

WSC 2022-2023  
Conference 10, Case 3  
Tissue from a rabbit.

**MICROSCOPIC DESCRIPTION:** Uterus: **(1pt.)** Segmentally infiltrating the uterine smooth muscle is an unencapsulated, densely cellular, poorly demarcated neoplasm composed of polygonal cells arranged in glands and tubules, and fine fibrous stroma. **(1pt.)** Neoplastic cells have indistinct cell borders, a small amount of eosinophilic cytoplasm, **(1pt.)** and a round to oval nucleus with finely stippled chromatin and indistinct nucleoli. **(1pt.)** There is mild anisocytosis and anisokaryosis, and 15 mitotic figures per 2.37mm<sup>2</sup>. **(1pt.)** Multifocally hyperplastic glands are markedly ectatic forming cystic structures up to 1.5mm diameter **(1pt.)** that are lined by attenuated epithelium, as well as papillary projections into the lumen lined by a single layer of cuboidal epithelium. **(1pt.)** Arising from the endometrium and projecting into the uterine lumen, there is a markedly dilated, endothelial-lined vein **(1pt.)** measuring 3mm **(1pt.)** in diameter which is partially occluded by a large fibrin thrombus **(1pt.)** with pronounced lines of Zahn which is attached to the wall of the vein. **(1pt.)** Smaller lumens surround the large aneurysmal vein. **(1pt.)** The fibrin thrombus contains small amounts of hemorrhage and few siderophages. There is moderate fibrosis expanding the endometrium at the base of the dilated vein. **(1pt.)**

**MORPHOLOGIC DIAGNOSIS:** 1. Uterus: Endometrial carcinoma, tubular. **(2pt.)**  
2. Uterus: Endometrial venous aneurysm. **(2pt.)**  
3. Uterus: Cystic endometrial hyperplasia, diffuse, marked. **(2pt.)**

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

WSC 2022-2023  
Conference 10, Case 4.  
Tissue from a dog.

**MICROSCOPIC DESCRIPTION:** Uterus: Two sections of uterus are submitted for examination. The endometrium is diffusely and moderately hyperplastic **(2pt.)** and edematous **(1pt.)** forming broad rugae. Mucosal epithelium is tall columnar with numerous cytoplasmic vacuoles **(1pt.)** (progesterone change) **(1pt.)** and large open-faced nucleoli with a single prominent central nucleolus. **(1pt.)** Mucosal epithelium often forms micropapillary projections into the lumina. The edematous stroma is infiltrated by large numbers of eosinophils **(2pt.)** which occasionally infiltrate the overlying endometrial glands and aggregate in glandular lumina. **(1pt.)** There are moderate numbers of foamy macrophages **(1pt.)** within the loosely arranged stroma, which often contain a brown granular pigment **(1pt.)**, and scattered moderate hemorrhage **(1pt.)**. The deeper areas of the endometrium are expanded by mature collagen **(1pt.)** which separates ectatic endometrial glands lined by attenuated epithelium. Vessels are prominent with plump endothelium. The eosinophilic infiltrate extends down and expands perivascular connective tissue within the mural smooth muscle **(1pt.)**, which is multifocally also expanded by loosely arranged collagen. **(1pt.)** The lumen contains small numbers of eosinophils, sloughed endometrial cells and cellular debris.

**MORPHOLOGIC DIAGNOSIS:** 1. Uterus: Endometritis **(1pt.)**, eosinophilic **(1pt.)**, diffuse, severe, with edema.

2. Uterus, endometrium: Hyperplasia **(1pt.)**, diffuse, moderate, with progesterone change. **(1pt.)**

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