

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

MICROSCOPIC DESCRIPTION: Thyroid gland **(1pt.)**: The majority of well-formed follicles contain no colloid. **(2pt.)** Many follicles are collapsed **(1pt.)**, and the minority of follicles are increased in size up to 0.2mm in diameter **(1pt.)**, and colloid is pale pink. All follicles are lined by a single layer of hypertrophic **(1pt.)** columnar **(1pt.)** follicular epithelium **(1pt.)** with clear cytoplasm **(1pt.)**. **(1pt.)** The follicular epithelium is often detached and apoptotic and free floating within the colloid. **(1pt.)** C-cells are inapparent in these sections.

MORPHOLOGIC DIAGNOSIS: Thyroid gland: Follicular hyperplasia **(2pt.)**, diffuse, moderate. **(1pt.)**

Name the condition: Colloid goiter **(2pt.)**

CAUSE: Iodine deficiency in the mare **(3pt.)**

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

WSC 2025-2026
Conference 1, Case 2
Tissue from a horse.

MICROSCOPIC DESCRIPTION: Cerebrum: Within the gray matter **(1pt.)**, there is a focally extensive area (and several smaller satellite foci elsewhere in the section), of cavitating lytic necrosis **(1pt.)**. Areas of necrosis are characterized by infiltration of large numbers of viable and degenerate neutrophils **(1pt.)**, macrophages **(1pt.)**, Gitter cells **(1pt.)**, and fewer multinucleated foreign body type giant cells **(1pt.)**, lymphocytes and plasma cells, admixed with abundant cellular debris. Affected areas are expanded by moderate amounts of edema **(1pt.)**, multifocal areas of hemorrhage, and contain numerous fibrocytic astrocytes and increased numbers of glial cells **(1pt.)**, swollen eosinophilic axons (spheroids) **(1pt.)**, necrotic neurons, and more cavitated areas contain gliovascular strands. Within the necrotic area, the walls of the tortuous and largely exposed blood vessels are expanded and/or effaced by low to moderate numbers of transmigrating neutrophils, with necrosis of smooth muscle cells admixed with extravasated protein and cellular debris (vasculitis) **(1pt.)** At more distance, blood vessels are cuffed by low to moderate numbers of lymphocytes and plasma cells **(1pt.)**. Multifocally within areas of necrosis, there are rare fungal hyphae **(1pt.)** with measure 4-10um in diameter, have thin brown **(1pt.)**parallel walls, are pauciseptate and exhibit occasionally dichotomous branching and terminal swellings **(1pt.)**.

MORPHOLOGIC DIAGNOSIS: Cerebrum: Encephalitis **(1pt.)**, necrotizing and pyogranulomatous **(1pt.)**, focally extensive, severe, with vasculitis and rare dematiaceous fungal hyphae **(1pt.)**

NAME THE CONDITION: Phaeohyphomycosis **(2pt)**

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

WSC 2025-2026

Conference 1, Case 3.

Tissue from a horse.

MICROSCOPIC DESCRIPTION: Colon **(1pt.)**: One full thickness section of colon is submitted for examination. There is transmural inflammation of the colonic wall. **(1pt.)** In this section, approximately 50% of the mucosa **(1pt.)** has lost differential staining (coagulative necrosis) **(1pt.)** and is admixed with cellular debris and colonies of bacteria. The coagulative necrosis affects progressively less mucosa at a distance; in these regions of the colonic mucosa **(1pt.)**, there is dilation of colonic glands with accumulation of necrotic epithelial cells, hemorrhage, and cellular debris. **(1pt.)** The remainder of the mucosa is markedly congested and the lamina propria is infiltrated by variable combinations and concentrations of neutrophils **(1pt.)**, eosinophils **(1pt.)**, lymphocytes and plasma cells. The muscularis mucosae is necrotic beneath the large area of mucosal necrosis and infiltration by neutrophils and eosinophils. The submucosa is markedly expanded up to 7mm **(1pt.)** by profound edema **(1pt.)**, less hemorrhage and polymerized fibrin **(1pt.)** with enmeshed bacterial colonies, and an infiltrate of large numbers of viable and necrotic neutrophils, eosinophils, and fewer macrophages, lymphocytes **(1pt.)** and plasma cells. The inflammatory changes multifocally efface the submucosa adipose tissue. The inflammatory cells infiltrated the underlying muscularis **(1pt.)**, dissecting between smooth muscle fibers and expanding perivascular areas. The serosa **(1pt.)** is moderately and symmetrically inflamed and edematous as well.

MORPHOLOGIC DIAGNOSIS: Colon: Colitis **(1pt.)**, necrotizing **(1pt.)** and eosinophilic **(1pt.)**, focally extensive, severe with marked edema **(1pt.)**.

NAME TWO POSSIBLE CONDITIONS: Idiopathic focal eosinophilic enteritis, diffuse eosinophilic enteritis, multisystemic epitheliotrophic eosinophilic disease. (These choices are predicated on the fact that you didn't see an etiologic agent in these sections. **(2pt.)**)

O/C: (1pt.)

WSC 2025-2026
Conference 1 Case 4.
Tissue from a horse

MICROSCOPIC DESCRIPTION: MICROSCOPIC DESCRIPTION: Spinal cord **(1pt)** : One section of spinal cord (presumably from the cervical spinal cord, judging by the size of the dorsal and ventral horns as well as the large size of the dorsal funiculi) is submitted for examination. **(1pt)** Diffuse, there are numerous areas of hemorrhage **(1pt)** averaging 100um **(1pt)** scattered randomly throughout the gray and white matter. **(1pt)** Within both the gray and white matter, vessels are cuffed by low to moderate numbers of lymphocytes **(1pt)**, histiocytes **(1pt)** and fewer plasma cells **(1pt)** which extend into the surrounding neuropil. Multifocally, affected vessels are surrounded by variable amounts of pink edema fluid. **(1pt)** Within the grey matter, there are nodular aggregates **(1pt)** of lymphocytes, histiocytes and plasma cells, as well as a diffuse and moderate astrogliosis **(1pt)**. Rare multinucleated cells **(1pt)**, presumably astrocytes, are scattered within inflammatory infiltrates at the junction of the gray and white matter. Multifocally within the gray matter, neurons are occasionally swollen, with a light pink cytoplasm, loss of Nissl substance **(1pt)**, and their axons are also moderately swollen, resembling spheroids (degeneration) **(1pt)**.

MORPHOLOGIC DIAGNOSIS: Spinal cord: Poliomyelitis **(1pt)**, lymphohistiocytic **(1pt)**, diffuse, mild to moderate with multifocal neuronal degeneration. **(1pt)**

CAUSE: Equine flavivirus **(2pt.)**

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