

WSC 2026-2027
Conference 2, Case 1
Tissue from a dog.

MICROSCOPIC DESCRIPTION: Adrenal gland **(1pt.)**: Sagittal sections of two adrenal glands are submitted for examination and changes are similar in both. The cortical:medullary ratio is 1:5 **(2pt.)**. Diffusely, the cortex is reduced to a thin rim of tissue with loss of the characteristic architecture. **(1pt.)** All layers of the cortex **(1pt.)** are infiltrated and effaced by large numbers of lymphocytes **(2pt.)**, plasma cells **(1pt.)**, and macrophages **(1pt.)**, and few neutrophils admixed with cellular debris which occasionally form aggregates **(1pt.)** and expansion of the stroma by loosely arranged collagen and fibroblasts **(1pt.)**. There is a thick band of macrophages **(1pt.)** at the corticomedullary junction with abundant micro- to macrovacuolated golden brown cytoplasm **(1pt.)** (lipogranulomas). **(2pt.)** The medulla contains moderate numbers of lymphocytes with fewer plasma cells and macrophages which also form aggregates. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Adrenal gland cortex: Adrenalitis **(1pt.)**, lymphoplasmacytic **(1pt.)** and histiocytic **(1pt.)**, chronic, diffuse, marked, with severe pancortical atrophy and loss. **(1pt.)**

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

WSC 2026-2027

Conference 2, Case 2

Tissue from a cynomolgus macaque.

MICROSCOPIC DESCRIPTION: Uterus and mesometrium: Expanding the myometrium, extending laterally along the serosa, and multifocally infiltrating the adherent mesometrium, there are numerous tortuous endometrial glands **(1pt.)** surrounded by abundant, densely cellular endometrial stroma **(1pt.)**, which range from 0.06mm to 7mm in diameter. The endometrial glands are lined by simple to pseudostratified columnar, ciliated epithelial cells with a moderate amount of clear to pale eosinophilic cytoplasm and prominent basilar vacuolation **(1pt.)**. Nuclei are anti-basilar and oval with finely stippled chromatin and frequently exhibit nuclear regimentation **(1pt.)**. Glands contain small amounts of eosinophilic protein, admixed with low numbers of degenerated epithelial cells and hemorrhage **(1pt.)**. The endometrial stroma is composed of spindle cells with indistinct cell borders, scant eosinophilic, fibrillar cytoplasm, and an oval to elongate nucleus with finely stippled chromatin **(1pt.)**. Along the serosa, moderate edema separates spindle cells of the endometrial stroma. Multifocally and randomly surrounding the aberrantly placed endometrial glands, large foci of stromal cells are swollen by vacuolated eosinophilic cytoplasm **(1pt.)** (decidualization) **(1pt.)**. There are low numbers of lymphocytes and plasma cells subjacent to glandular epithelium scattered throughout the section, as well as rare perivascular aggregates **(1pt.)**. Within the normal endometrium, glands are ectatic and cystic (cystic endometrial hyperplasia) **(1pt.)** and contain moderate amounts of eosinophilic secretory product, and arteries are tortuous (likely this animal is multiparous) **(1pt.)**.

Adjacent to the uterine cross section, there is another section of tissue with abundant stromal decidualization, multifocal areas of hemorrhage and hemosiderin-laden macrophages **(1pt.)**, and scattered aggregates of foreign body-type macrophages. **(1pt.)** This tissue is surrounded by a thick rim of fibrous connective tissue with numerous fibroblasts. **(1pt.)** There is a large focus of necrosis tissue, hemorrhage,, and polymerized fibrin within this section (potentially a remnant of a “chocolate cyst”). **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Uterus: Endometriosis with adenomyosis. **(3pt.)**

2. Mesometrium: Endometriosis. **(1pt.)**

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

WSC 2026-2027
Conference 2, Case 3.
Tissue from a sheep.

MICROSCOPIC DESCRIPTION: Skeletal muscle: Diffusely expanding the epimysium, multifocally expanding the perimysium, and rarely extending into the epimysium and replacing skeletal myofibers. **(1pt.)** there are large numbers of epithelioid macrophages **(1pt.)** admixed with fewer lymphocytes **(1pt.)** and occasional plasma cells and rare foreign body macrophages **(1pt.)**, admixed with numerous plump fibroblasts and mature collagen. **(1pt.)** There are foci of lytic necrosis **(1pt.)** scattered throughout the infiltrate, which are occasionally geographic and contain lakes of mineral **(1pt.)**. The inflammatory infiltrate contains scattered irregularly round, optically empty spaces. **(1pt.)** In areas of perimysial and endomysial infiltration, skeletal muscle fibers are variably shrunken **(1pt.)**, hypereosinophilic, and occasionally contain internalized nuclei with prominent basophilic nucleoli (atrophy and incipient regeneration) **(1pt.)**. The inflammatory infiltrate surrounds peripheral nerves and, in a large nerve fiber, infiltrates the epineurium, primarily in perivascular spaces. **(1pt.)** There are multifocal sarcocysts within skeletal muscle fibers.

Spinal cord: Within the lateral and ventral funiculi **(1pt.)**, there are randomly scattered low to moderate numbers of dilated axon sheaths **(1pt.)** which are empty, or contain myelin debris or Gitter cells. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: 1. Skeletal muscle: Myositis **(1pt.)** , granulomatous **(1pt.)** and necrotizing **(1pt.)**, multifocal to coalescing, marked.
2. Spinal cord, lateral and ventral funiculi: Axonal degeneration, multifocal, mild. **(1pt.)**

CAUSE: Oil-based vaccine injection **(1pt.)**

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

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Conference 2, Case 4.

Tissue from an orangutan.

MICROSCOPIC DESCRIPTION: Ileocecal junction and cecum: A similar inflammatory process is occurring in both sections, but is more severe in the ileocecal junction.

The mucosa is moderately thickened by a necrotizing and inflammatory process in both sections. There is diffuse loss of the luminal epithelium in both sections, and regionally, this necrosis extends partially into the underlying lamina propria. **(1pt)** The lamina propria in both sections is markedly expanded by an increase in numbers of lymphocytes, plasma cells, and eosinophils. **(1pt)**. Crypts are hyperplastic as evidenced by numerous mitotic figures as well as invagination into the underlying Peyer's patches. The GALT is markedly reactive. There are numerous crypt abscesses within the inflamed mucosa. **(1pt)** Embedded within the mucosa, particularly within the crypt epithelium of the ileum and glandular epithelium of the colon **(1pt)**, and multifocally expanding ectatic crypts are numerous cross and tangential sections of adult and larval rhabditid **(1pt)** nematodes. Adults **(1pt)** are often contained within the epithelium of the glands **(1pt.)** , and are 150um in length and 10-15um in diameter, with a smooth cuticle, a pseudocoelom, platymyarian-meromyarian musculature **(1pt.)** , a triradiate esophagus, a small intestinal tract with numerous epithelial cells, and a paired uterus. **(1pt.)** Within the lumen of both sections of gut, and occasionally within the glandular epithelium, there are numerous cross-sections of nematode larvae **(1pt.)** measuring up to 10 um in diameter with a thin cuticle, a prominent esophagus with an isthmus, corpus, and bulb (the so-called "rhabditoid" esophagus – note the extra "o"), **(1pt)** and numerous somatic cell nuclei. Within the crypt lumina and less commonly the epithelium, there are occasionally clusters of eggs **(1pt)** ranging up to 25um with a 2-3um shell and a 15um morula. **(1pt)** The lumen of the ileocecal junction contains innumerable mixed bacilli admixed with larval nematodes and eggs. **(1pt)**

There is a lymph node adjacent to the ileocecal junction. There is marked reactive hyperplasia with prominent germinal centers and an expanded paracortex. **(1pt)**

MORPHOLOGIC DIAGNOSIS: Ileocecal junction, colon: Enterocolitis, necrotizing **(1pt)**, subacute, diffuse, moderate with adult and larval rhabditid nematodes. **(1pt)**

CAUSE: *Strongyloides stercoralis* **(2pt.)**

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