WSC 2022-2023
Conference 5, Case 1
Tissue from a dog.

MICROSCOPIC DESCRIPTION: Colon: Diffusely, colonic glands are separated and surrounded **(1 pt)** by a mixture of large numbers of polygonal macrophages **(2 pt)** with granular eosinophilic **(1 pt)** cytoplasm which range up to 15um **(1 pt)** in diameter. Macrophage cytoplasm occasionally contains round clear to eosinophilic vacuoles. Macrophages are admixed with numerous lymphocytes, plasma cells **(1pt)**, and fewer neutrophils, and small amounts of cellular debris. This infiltrates (with increased numbers of macrophages) and expands the underlying submucosa **(1 pt)** as well, separating and surrounding, and partially replacing pre-existing lymphoid follicles. There is multifocal and segmental ulceration of the mucosa **(1 pt)** with loss of colonic glands, and replacement with a coagulum of necrotic epithelium and cell debris, subjacent immature and edematous granulation tissue with innumerable infiltrating neutrophils admixed with the previously described inflammatory infiltrate**.(1 pt)** Adjacent to areas of ulceration, colonic glands are elongated, mildly tortuous and or ectatic, and contain numerous mitotic figures **(1 pt)** (hyperplasia) **(1 pt)**, and goblet cells are decreased in number **(1 pt)**.

MORPHOLOGIC DIAGNOSIS: Colon: Colitis, histiocytic (granulomatous OK) **(1 pt)** and ulcerative **(1 pt)**, diffuse, marked, with glandular hyperplasia. **(1 pt)**

NAME THE CONDITION: Histiocytic ulcerative colitis (Boxer colitis) **(1 pt)**

CAUSE: E. coli **(2pt)**

NAME AN APPROPRIATE SPECIAL STAIN: Periodic acid-Schiff **(1 pt)**

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

WSC 2022-2023
Conference 5, Case 2
Tissue from a mink.

MICROSCOPIC DESCRIPTION: Lung: Diffusely, alveolar spaces are filled and often expanded **(1pt)** by varying combinations and concentrations of viable and necrotic neutrophils **(1pt)**, foamy alveolar macrophages **(1pt)**, hemorrhage, edema fluid, polymerized fibrin **(1pt)** and admixed with innumerous 2-3um **(1pt)** bacterial rods **(1pt)** and abundant cellular debris, which are occasionally refluxed into adjacent airways **(1pt)**. Alveolar septa are diffusely expanded by congestion hypertrophic interstitial macrophages, circulating neutrophils, fibrin, and edema. **(1pt)** Multifocally, septa are discontinuous and occasionally lack stain affinity or are replaced by effaced by fibrin, hemorrhage, cellular debris, necrotic neutrophils and bacterial rods (septal necrosis) **(2pt)** – this change affects both individual septa and as well as extensive areas of pulmonary parenchyma up to 0.5mm in diameter. In airways that contain refluxed neutrophils, there are segmental areas of epithelial necrosis and extension of neutrophils into the airway wall. **(1pt)** Diffusely, the adventitia of venules and arterioles is greatly expanded by innumerable bacterial rods **(1pt)** and low to moderate numbers of neutrophils and fewer macrophages, and walls of small venules are often smudgy and hypereosinophilic and rarely contain cellular debris and bacterial rods within the wall itself **(1pt)** (vasculitis). **(1pt)**

MORPHOLOGIC DIAGNOSIS: Lung: Pneumonia, embolic **(1pt)**, necrotizing **(1pt)** and suppurative **(1pt)**, diffuse, severe, with septal necrosis, vasculitis **(1pt)**, and innumerable perivascular and alveolar bacterial rods.

CAUSE: *Pseudomonas aeruginosa.* **(2pt)**

WSC 2022-2023
Conference 5, Case 3
Tissue from a ferret.

MICROSCOPIC DESCRIPTION: Colon **(1pt)**: There is diffuse marked and circumferential thickening **(1pt)** of the mucosa in an accentuated rugal pattern. Glands are elongated and tortuous, **(1pt)**, and lined by basophilic columnar epithelial cells **(1pt)** whose vesicular nuclei are crowded **(1pt)**, and there are increased numbers of mitotic figures along the length of the glands **(1pt)** (hyperplasia). **(1pt)** There is a marked decrease in goblet cells **(1pt)**. Occasional crypts are elongate, tortuous, and variably lined by attenuated to hyperplastic epithelium and contain low numbers of necrotic epithelial cells admixed with cellular debris (crypt abscesses). **(1pt)** Within the proliferative mucosa, there is a marked decrease in goblet cells. **(1pt)** There is multifocal erosion and attenuation of mucosal epithelium. Multifocally, the lamina propria is mildly expanded by increased numbers of lymphocytes, plasma cells, few neutrophils and macrophages, and rare eosinophils. **(1pt)** Occasional epithelial cells contain condensed round apicomplexan schizonts **(1pt)** measuring up to 4um. Lesser numbers of epithelial cells contain either eosinophilic, uninucleated macrogamonts , or microgamonts **(1pt)**

MORPHOLOGIC DIAGNOSIS: 1. Colon: Colitis, proliferative **(1pt)**, diffuse, severe with marked glandular hyperplasia **(1pt)** and decrease in goblet cells **(1pt)**.

2. Colon: Intraepithelial apicomplexan schizonts and gamonts, few. **(1pt)**

CAUSE: *Lawsonia intracellulare* **(1pt)**, *Eimeria* sp. **(1pt)**

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

WSC 2021-2022,
Conference 5, Case 4.
Tissue from a dog.

MICROSCOPIC DESCRIPTION: Lung: Multifocally, within approximately 15% of the section, alveoli are filled **(1pt)** and often expanded by macrophages containing abundant intracytoplasmic homogeneous, grey to brown, mildly anisotropic hyaline material **(2pt)** admixed at lesion periphery with moderate numbers of alveolar macrophages **(1pt)** with foamy eosinophilic cytoplasm and lesser numbers of neutrophils, lymphocytes **(1pt)**, plasma cells and **(1pt)** multinucleated foreign-body macrophages, fibrin, and edema **(1pt)**. Within affected areas, alveolar septa are expanded markedly by fibroblasts **(1pt)** and collagen **(1pt**), macrophages, aggregates of lymphocytes **(1pt)**, and rare plasma cells, as well as type II pneumocyte hyperplasia **(1pt)**. Within affected areas, small airways are often filled by alveolar contents as listed above **(2pt)**, and bronchiolar epithelium is often attenuated. Within the adjacent unaffected parenchyma, alveoli contain patchy low-protein edema and scattered alveolar macrophages and neutrophils. **(1pt)**

MORPHOLOGIC DIAGNOSIS: Lung: Pneumonia, interstitial **(1pt)**, granulomatous **(1pt)**, chronic, focally extensive, severe, with abundant intracytoplasmic hyaline material. **(1pt)**

NAME THE CONDITION: Pulmonary hyalinosis **(2pt)**

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