WSC 2020-2021
Conference 14, Case 1.

Tissue from a horse.

MICROSCOPIC DESCRIPTION: Ganglion (site unspecified) **(1pt.)**: Multifocally, over 80% of neurons exhibit one or more signs of degeneration **(2pt.)** including cytoplasmic swelling **(1pt.)** with large numbers of discrete cytoplasmic clear vacuoles **(1pt.)** loss of Nissl substance **(2pt.)** either *in toto* or centrally (central chromatolysis) **(1pt.)**, peripheralization of hyperchromatic to pyknotic nuclei **(1pt.)** and shrinkage **(1pt.)** with brightly eosinophilic cytoplasm **(1pt.)**. Neuronal cytoplasm often contains small amounts of lipofuscin. **(1pt.)** There are increased numbers of satellite cells surrounding neuronal cell bodies throughout the ganglion. There are small aggregates of lymphocytes scattered widely throughout the section. **(1pt.)** Multifocally, within large nerve bundles, there are occasional dilated myelin sheaths with dilated swollen axons (spheroids). **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Ganglion: Neuronal degeneration **(1pt.)**, multifocal, moderate, with chromatolysis **(1pt.)** and marked cytoplasmic vacuolation **(1pt.)**.

NAME THE CONDITION : Dysautonomia **(2pt.)**

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

WSC 2020-2021
Conference 14, Case 2.

Tissue from a horse.

MICROSCOPIC DESCRIPTION: Presumptive dermis: Diffusely infiltrating the fibrotic **(1pt)** dermis; surrounding, separating, and replacing collagen bundles and adnexa; there is a nodular focus of granulomatous **(1pt)** inflammation composed of moderate numbers of macrophages **(1pt)** admixed with large numbers of lymphocytes **(1pt)** and plasma cells **(1pt)**, and rare eosinophils, and occasional multinucleated giant cell macrophages **(1pt)** (Langhans type) **(1pt)**. Protozoal amastigotes **(2pt)** are present within the cytoplasm of macrophages and multinucleated giant cell macrophages, often within a clear vacuole (likely retraction artifact). Fewer amastigotes appear to be free within the extracellular space. Amastigotes (sans vacuoles) are 2-3 um in diameter **(1pt)** with clear cytoplasm and a single 1 um diameter basophilic nucleus **(1pt)** and rarely, a rod-shaped kinetoplast **(1pt)** may be seen. Vessels in the deep dermis are surrounded by cuffs of lymphocytes and plasma cells measuring 4-5 cell layers thick **(1pt)**.

MORPHOLOGIC DIAGNOSIS: Presumptive skin, dermis: Dermatitis, granulomatous **(1pt)** and plasmacytic **(1pt)**, focally extensive, severe, with numerous intrahistiocytics amastigotes **(1pt)**

CAUSE: *Leishmania sp.* **(3pt)**

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

WSC 2020-2021
Conference 14, Case 3.
Tissue from a horse.

MICROSCOPIC DESCRIPTION: Liver **(1pt.)**: Diffuse, the entire section exhibits coagulative necrosis **(1pt.)**, with loss of differential staining but largely maintaining its pre-existing architecture. **(1pt.)** Architectural changes that pre-date the necrotic event include marked sinusoidal congestion and hemorrhage **(1pt.)** which widely separates hepatic plates and marked dilation of sublobular lymphatics (edema) **(1pt.)**. There are individual or small aggregates of hemosiderin-laden macrophages **(2pt.)** scattered throughout the section. Markedly dilated vessels, (both veins and lymphatics) often contain fibrin or fibrinocellular thrombi. **(1pt.)** Scattered throughout the section there are linear to serpentine aggregates of degenerate neutrophils admixed with abundant cellular debris throughout the parenchyma and occasionally incorporating vessel walls **(2pt.)**. There are variably sized clear spaces scattered randomly throughout the section (emphysema) **(2pt.)** and numerous 4-6um spore-forming bacilli **(1pt.)** scattered throughout the section both individually and in small groups, often prominently within areas of lytic inflammation. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Liver: Hepatitis, necrotizing **(1pt.)**, diffuse, severe, with emphysema **(1pt.)** and numerous spore-forming bacilli **(1pt.)**.

CAUSE: *Clostridium spp* . **(2 pt.)** (Actually *Clostridium novyi)*

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

WSC 2020-2021
Conference 14, Case 4.

Tissue from a horse.

MICROSCOPIC DESCRIPTION: Lung: Within a focally extensive area approximating 60% of the section, alveolar septa are diffusely and markedly thickened up to 200um (avg 50um) **(1pt)** by abundant mature collagen **(1pt)**, plump fibroblasts **(1pt)**, low numbers of neutrophils, histiocytes, congested capillaries, and often lined by hyperplastic type II pneumocytes **(1pt)** and scattered aggregates of siderophages. **(1pt)** Alveolar spaces are distorted by the fibrosis (alveolar remodeling) **(1pt)**, often expanded, and filled by various combinations and concentrations of viable and degenerate neutrophils **(1pt)**, foamy and often debris-laden macrophages **(1pt)**, fewer eosinophils, sloughed degenerate type II pneumocytes, cellular debris, fibrin, and edema fluid **(1pt).** Rarely, alveolar macrophages contain a single, 4-6 um, smudgy basophilic **(1pt)** intranuclear viral inclusion **(1pt)** which is often surrounded by a clear halo. All areas of remodeling are similar and are separated by the presence of mildly expanded, fibrotic interlobular septa. **(1pt)** Bronchioles are often filled with sloughed respiratory epithelium (due to the moderate autolysis in this slide) and occasionally with cells refluxed from adjacent alveoli. **(1pt).** There are numerous thick-walled arterioles with a loosely arranged, myxomatous tunica media scattered throughout this fibrous connective tissue.

MORPHOLOGIC DIAGNOSIS: Lung: Pneumonia, necrotizing **(1pt)** and sclerosing **(1pt)**, interstitial, focally extensive, severe, with marked alveolar remodeling, type II pneumocyte hyperplasia (1pt) and rare intrahistiocytic intranuclear viral inclusions **(1pt).**

Name the disease: Equine multinodular pulmonary fibrosis **(1pt)**

CAUSE: Equine herpesvirus-5 **(2pt)**

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