WSC 2020-2021
Conference 12, Case 1.

Tissue from a rabbit.

MICROSCOPIC DESCRIPTION: Liver: Normal hepatocellular plate architecture is diffusely lost with individualization of hepatocytes. **(1pt.)** There is apoptosis (necrosis OK) **(2pt.)** of approximately 90% of hepatocytes in portal and midzonal areas **(1pt.)** with few remaining centrilobular hepatocytes. **(1pt.)** Apoptotic hepatocytes demonstrate slight swelling, hypereosinophilia, granular cytoplasm **(1pt.)** and a range of nuclear changes from peripheralization and crescenting (1pt) of nuclear chromatin, pyknosis, and rrhexis. **(1pt.)** Low numbers of individual apoptotic/necrotic hepatocytes are outlined by granular cytoplasmic mineral. **(1pt.)** Hepatic sinusoids contain abundant eosinophilic cellular debris and rare fibrin thrombi **(1pt.)**. Kupffer cells **(1pt.)** demonstrate a range of changes from hypertrophy to karyorrhexis. Portal areas contain low to moderate numbers of heterophils, and lymphocytes **(1pt.)** which rarely are present within the lumina or traverse the epithelium of bile ductules. Portal and sublobular lymphatics are dilated (edema) **(1pt.)**. There is minimal oval cell hyperplasia within portal areas.

MORPHOLOGIC DIAGNOSIS: Liver: Necrosis **(1pt.)**, periportal **(1pt.)** and midzonal, diffuse, with rare hepatocellular mineralization.

CAUSE: Rabbit hemorrhagic disease virus (RHDV) **(3pt.)**

NAME TWO OTHER ORGANS WHERE YOU MIGHT FIND LESIONS: Intestine **(1pt.)**, lung **(1pt.)**

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

WSC 2020-2021
Conference 12, Case 2.

Tissue from a horse

MICROSCOPIC DESCRIPTION: Heart 2 sections. 50% of the muscle bundles in one section is replaced by discrete bands of fat **(1pt.)**, composed of well-differentiated adipocytes **(1pt.)**, which are in turn separated into lobules by bands of mature collagen. **(1pt.)** Mural smooth muscle cells of arterioles in this area are swollen with abundant cleared cytoplasm. **(1pt.)** This fibrofatty tissue surrounds, separates and effaces myofibers **(1pt.)**, and entrapped remnant myofibers are markedly decreased in size (atrophy) **(1pt.)**. Within the remaining uninfiltrated muscle bundles and those of the adjacent section, myofibers occasionally contain one or two 2-4um diameter clear cytoplasmic vacuoles **(2pt.)**, and rarely, myofibers contain a 3-5u diameter, round to rhomboid amphophilic to grey **(2pt.)** cytoplasmic inclusions **(1pt.)** which are randomly spaced within the myofibers. Inclusions are surrounded by a clear halo due to displacement of myofibrils. Myofibers often have large clusters of lipofuscin **(1pt.)** granules adjacent to the nucleus.

MORPHOLOGIC DIAGNOSIS: 1. Heart, myocardium: Fibrofatty infiltration **(1pt.)**, multifocal to coalescing, severe, with cardiomyocyte atrophy, and loss **(1pt.)**

2. Heart, myofibers: Cytoplasmic glycogen-like inclusions, numerous. **(2pt.)**

NAME THE CONDITION: Equine polysaccharide storage myopathy **(3pt.)**

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

WSC 2020-2021
Conference 12, Case 3.
Tissue from a dog.

MICROSCOPIC DESCRIPTION: Multiple sections of cerebellum, cerebrum, and spinal cord: Multifocally, in all sections, the meninges **(2pt.)** are expanded by the presence of numerous 4-6um (1pt.) bluish translucent elliptical to concave yeasts **(2pt.)** which are surrounded by a clear capsule ranging up to 10 um thick **(1pt.)**. These yeasts are surrounded by variable combinations of low numbers of foamy macrophages **(2pt.)**, lymphocytes **(1pt.)**, and fewer plasma cells **(1pt.)** and neutrophils **(1pt.)**, which in many areas are limited to non-existent in number **(1pt.)**.

MORPHOLOGIC DIAGNOSIS: Cerebrum, cerebellum, spinal cord: Meningitis **(1pt.)**, granulomatous **(1pt.)**, multifocal to coalescing, moderate with numerous encapsulated yeasts **(1pt.)**.

CAUSE: *Cryptococcus neoformans*. **(2 pt.)**

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

WSC 2020-2021
Conference 12, Case 4.

Tissue from a military macaw.

MICROSCOPIC DESCRIPTION: Ventriculus **(1pt.)**: There is mild autolysis throughout the slide. There is diffuse thinning of the mural smooth muscle. **(1pt.)** Low to moderate numbers of lymphocytes **(1pt.)** and plasma cells **(1pt.)** infiltrate nerve bundles **(2pt.)** throughout the section, separating individual fibers. Remaining nerve cell bodies are shrunken and contracted (degeneration) **(1pt.)** and there is increased amounts of fibrous connective tissue within the nerve fibers. Low to moderate numbers of lymphocytes ad plasma cells also infiltrate smooth muscle bundles **(2pt.)**, and and in areas of infiltration, the myocytes are shrunken **(1pt.)**, hypereosinophilic **(1pt.)** and separated by edema and admixed with small amounts of cellular debris from fragmented myofibers.

MORPHOLOGIC DIAGNOSIS: Ventriculus: Ganglioneuritis **(1pt.)** and leiomyositis **(1pt.)**, lymphoplasmacytic **(1pt.)** multifocal, moderate, with myofiber atrophy and loss. **(1pt.)**

NAME THE DISEASE: Proventricular dilation syndrome **(2pt.)**

CAUSE: Avian bornavirus **(2pt.)**

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