WSC 2023-2024
Conference 22, Case 1
Tissue from an ox.

MICROSCOPIC DESCRIPTION: Liver: Diffusely, portal areas are moderately to markedly expanded and bridged by mature collagen **(1pt)** and contain numerous profiles of tortuous and proliferating bile ducts **(1pt)** and low to moderate numbers of lymphocytes and plasma cells and scattered hemorrhage. The collagen often breaches the limiting plate, entrapping and surrounding individual and small groups of atrophic hepatocytes **(1pt)**, and there is bridging portal fibrosis (1pt). There is concentric fibrosis around sublobular bile ducts. **(1pt)** Areas of hemorrhage, abundant eosinophilic and basophilic cellular debris and large numbers of viable and degenerate neutrophils, macrophages, and eosinophils **(1pt)** are scattered randomly throughout the section (migration tracts) **(1pt)** which range up to 2mm in diameter. In one of the two submitted sections, within the hepatic parenchyma, there is a sagittal section of a larval **(1pt)** trematode **(1pt)** which has a thick hyaline ridged eosinophilic tegument **(1pt)**with somatic cell nuclei subjacent to the tegument, spongy body cavity **(1pt)**without a pseudocoelom, oral and ventral suckers **(1pt)**, and numerous cross sections of intestine. (Note: vitellarian glands, gonads and eggs are only present within hermaphroditic adults). Throughout the parenchyma, There is muscular hypertrophy of the walls of the arterioles.

MORPHOLOGIC DIAGNOSIS: Liver: Fibrosis **(1pt)**, portal, bridging **(1pt)**, diffuse, moderate to severe, with parasite migration tracts **(1pt)**and intraductal larval trematode parasite **(1pt)**.

CAUSE: Fasciola hepatica **(1pt)**

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

WSC 2023-2024
Conference 22, Case 2
Tissue from a horse.

MICROSCOPIC DESCRIPTION: Mammary gland: Approximately 90% of the section is effaced by coalescing areas of granulomatous inflammation **(1pt.)** consisting of variable combinations and conformations of epithelioid macrophages **(1pt.)** admixed with low to moderate numbers of eosinophils **(1pt.)**, multinucleated foreign-body macrophages **(1pt.)**, lymphocytes **(1pt.)**, plasma cells **(1pt.)**, fewer neutrophils, and cellular debris enmeshed in dense bands of mature fibrous connective tissue **(1pt.)** populated by plump fibroblasts. There are numerous small circular foci of fibrosis which represent migration tracts. Entrapped within the granulomatous inflammation there are numerous cross- and tangential sections of adult **(1pt.)** rhabditoid nematodes **(1pt.)** that are 10-25 um in diameter with a smooth cuticle, platymyarian-meromyarian musculature, an esophagus with terminal bulb **(1pt.)**, and numerous deeply basophilic 2-3 um internal structures within the pseudocoelom. Smaller larvae **(1pt.)** measuring 8-10um with a thin cuticle are also present and are in larger numbers. **(1pt.)** Larvae are also present within vessels. Throughout the section, remnant mammary secretory acini are atrophic to necrotic, and ducts are expanded by necrotic debris and occasionally nematode larvae. **(1pt.)**

A section of normal skeletal muscle and a hyperplastic lymph node are also present in the submission. The lymph exhibits diffuse expansion of the paracortex **(1pt.)**and there are low to moderate numbers of eosinophilis and plasma cells lining medullary cords.

MORPHOLOGIC DIAGNOSIS: . 1. Mammary gland: Mastitis, granulomatous **(1pt.)** and eosinophilic **(1pt.)**, diffuse, marked, with numerous adult **(1pt.)** and larval **(1pt.)** rhabditid **(1pt.)** nematodes.

2. Lymph node: Reactive hyperplasia, diffuse, moderate.

CAUSE: Halicephalobus gingivalis **(2pt.)**

WSC 2023-2024
Conference 22, Case 3.
Tissue from a dog.

MICROSCOPIC DESCRIPTION: Skeletal muscle and tendon. Effacing the pre-existent tissue and extending into the adjacent atrophic and fibrotic skeletal muscle, **(1pt.)** there is an infiltrative, unencapsulated, moderately cellular multilobular neoplasm. **(2pt.)** The neoplasm is composed of spindle cells **(1pt.)** which occasionally assume a polygonal morphology on a fine fibrovascular matrix **(1pt)**. Neoplastic cells often surround small irregular areas of homogenous hyaline eosinophilic matrix **(1pt.) (**osteoid). **(1pt.)** Neoplastic cells are arranged in short interlacing streams and bundles **(1pt.)** and there are large cystic areas of hemorrhage within the tumor. **(1pt.)** Nuclei are irregularly round with finely stippled chromatin; multinucleated forms are common**(1pt.)** There is moderate anisokaryosis and anisocytosis and mitoses average 12 per 2.37mm^2 field. **(1pt.)** There is extensive fibroplasia **(1pt.)** at the tumor periphery which infiltrates the adjacent atrophic skeletal muscle. Affected skeletal muscle demonstrates one or more of the following: shrinkage **(1pt.)**, hyalinization with loss of visible cross striations, hyperplasia of satellite nuclei **(1pt.)** and expansion of the perimysium, perimysium**(1pt.)**, and in areas of extensive fibrosis, perimysium by mature collagen and few plump fibroblasts.

MORPHOLOGIC DIAGNOSIS: Skeletal muscle and tendon (femur, but you can't tell that): Osteosarcoma, osteoblastic type. **(4pt.)**

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

WSC 2023-2024
Conference 22, Case 4.
Tissue from a dog

MICROSCOPIC DESCRIPTION: Urinary bladder **(1pt)**. Effacing the mucosa, projecting outward in papillary projections and extending transmurally **(1pt)** downward from the ulcerated mucosa, there is an infiltrative, unencapsulated, poorly demarcated, moderately cellular neoplasm. **(1pt)** Neoplastic cells are arranged in islands and nests and occasional tubules**(1pt)** on a fine fibrovascular stroma **(1pt)**. Neoplastic cells are polygonal **(1pt)** with indistinct cell borders with a moderate amount of granular basophilic cytoplasm which occasionally contains a single eosinophilic cytoplasmic protein inclusion **(1pt)** (Melamed-Wolinska bodies) **(1pt)** Occasionally cells have a large clear cytoplasmic vacuole **(1pt)** that peripheralizes the nucleus (signet ring cells). **(1pt)** Nuclei are irregularly round, and finely stippled chromatin with 2-3 small basophilic nucleoli. **(1pt)** (1pt) There is moderate anisokaryosis and anisocytosis **(1pt)**, and the mitotic count is 20 per 2.37mm field. **(1pt)** There are large areas of necrosis throughout the mass and within the central areas of infiltrative lobules **(1pt)** There are neoplastic cells within blood vessel lumina. **(1pt)** There are infiltrates of moderate of lymphocytes within the submucosa **(1pt)** at the deep margin of the main mass.

MORPHOLOGIC DIAGNOSIS: Urinary bladder: Transitional cell (urothelial) carcinoma, papillary and infiltrative. **(3pt)**

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