

Case 1. Tissue from a mousece.

MICROSCOPIC DESCRIPTION: Vertebral body and epaxial musculature: Effacing the epaxial musculature and vertebral body and infiltrating the spinal canal, intervertebral disk, overlying dermis, and surrounding spinal nerves **(1pt.)**, there is a multilobular, densely cellular, unencapsulated, infiltrative, well-demarcated neoplasm **(1pt.)**. The neoplasm is composed of streams and bundles **(1pt.)** of pleomorphic **(1pt.)** spindle cells **(1pt.)** on a moderate fibrovascular stroma **(1pt.)**. Neoplastic cells are elongate with moderate amounts of a finely fibrillar eosinophilic cytoplasm **(1pt.)**. Nuclei are irregularly round to oval with finely stippled chromatin and 1-4 prominent nucleoli **(1pt.)**. Mitotic figures average 2 per 400X field and are occasionally bizarre **(1pt.)**. There are numerous apoptotic neoplastic cells throughout the neoplasm. Aggregates of low to moderate numbers of lymphocytes are scattered throughout the neoplasm **(1pt.)**. Within the epaxial musculature in areas of skeletal muscle infiltration, degenerative **(1pt.)** myofibers are variably sized, often shrunken, variably eosinophilic (both pale and brightly eosinophilic), with occasionally central nuclei. Occasionally, degenerate fibers are mineralized. The cortex of the vertebral body and transverse processes is thin and markedly scalloped in apposition with neoplastic cells **(1pt.)**. Unilaterally, myelin sheaths within one lateral funiculus are dilated **(1pt.)**, with rare swelling of axons **(1pt.)**.

MORPHOLOGIC DIAGNOSIS: 1. Vertebral body and epaxial musculature: Rhabdomyosarcoma **(4pt.)**.

2. Spinal cord: Leukomalacia, focally extensive, moderate. **(1pt.)**

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

WSC 2013-2014, Conference 16

Case 2. Tissue from a partridge.

**MICROSCOPIC DESCRIPTION:** Lung Pulmonary arteries and arterioles **(1pt.)** are distended, filled, and and occasionally occluded **(1pt.)** by emboli of brain tissue **(2pt.)**, primarily gray but also white matter. Within some vessels, embolized neural tissue contains Purkinje cells as well as distinct granular and molecular cell layers (cerebellum) **(2pt.)**. There is mild edema surrounding affected vessels **(1pt.)**. Multifocally, adjacent to airways **(1pt.)**, there are several granulomas **(2pt.)** ranging up to 200 um in diameter composed of a central area of eosinophilic and granular black cellular debris (anthracotic pigment) **(2pt.)**, surrounded by moderate numbers of foreign body macrophages **(1pt.)** which are surrounded by an additional layer of epithelioid macrophages **(1pt.)** and lymphocytes and plasma cells **(1pt.)** enmeshed in concentric layers of mature collagen.

**MORPHOLOGIC DIAGNOSIS:** 1. Lung, pulmonary arteries: Neural embolism, multiple. **(2pt.)**

2. Lung, peribronchial tissue: Granulomas, multiple, with anthracosilicotic pigments. **(2pt.)**

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

WSC 2013-2014, Conference 16

Case 3. Tissue from a rat.

**MICROSCOPIC DESCRIPTION:** Testis: Multifocally, within seminiferous tubules contain markedly decreased to no spermatids. **(1pt.)** Sertoli cells are markedly swollen **(2pt.)** and cytoplasm is expanded by numerous small often coalescing vacuoles **(1pt.)** (degeneration) **(1pt.)**. Spermatocytes show a variety of degenerative changes, including cytoplasmic vacuolation **(2pt.)** and peripheralization **(2pt.)** and clumping of nuclear chromatin **(1pt.)**, and occasionally cytoplasmic inclusions **(2pt.)**. Spermatocytes are occasionally shrunken **(1pt.)** with pyknotic nuclei (necrosis) **(2pt.)**. Occasional multinucleated giant cell spermatids **(2pt.)** are present within tubules.

**MORPHOLOGIC DIAGNOSIS:** Testis, seminiferous tubules: Degeneration, multifocal, moderate, with Sertoli cell vacuolation, spermatocyte degeneration and necrosis, and multinucleated spermatid formation. **(4pt.)**

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

WSC 2013-2014, Conference 16

Case 4. Tissue from a chicken.

**MICROSCOPIC DESCRIPTION:** Liver: There is diffuse loss of hepatocellular plate architecture **(1pt.)**. Hepatocytes in all areas of the lobule exhibit degenerative changes **(1pt.)** including cytoplasmic swelling, **(1pt.)** granularity, and numerous discrete intracytoplasmic lipid vacuoles **(1pt.)**. Scattered among these cells are large numbers of necrotic **(2pt.)** hepatocytes which are fragmented and contain pyknotic or karyorrhectic nuclei. Sinusoids include granular pink cytoplasmic debris. Approximately 10-15% of degenerate hepatocytes contain a 3-4um dark purple rhomboidal **(1pt.)** viral **(2pt.)** inclusion within the nucleus **(1pt.)** which expands the nucleus **(1pt.)** and is rarely surrounded by a clear halo. Poretal areas are multifocally expanded by moderate numbers of lymphocytes and plasma cells **(1pt.)**. Hepatic edges are rounded.

**MORPHOLOGIC DIAGNOSIS:** Liver: Hepatitis, necrotizing, diffuse, severe, with numerous intranuclear viral inclusions **(3 pt.)**

**CAUSE:** Avian Group 1 adenovirus **(2pt.)**

**NAME THE DISEASE:** Inclusion body hepatitis **(2pt.)**

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