WSC 2022-2023
Conference 23, Case 1
Tissue from a dog.

MICROSCOPIC DESCRIPTION: Globe and periorbital tissue: Effacing the optic nerve**(1pt.)**, compressing the globe and infiltrating centrifugally into the periocular muscles and retro-orbital fat **(1pt.)**, is an unencapsulated, infiltrative, poorly demarcated, multilobulated moderately cellular neoplasm **(1pt.)**. The neoplasm is composed of long bundles and streams and frequent whorls of spindle cells **(1pt.**) on a moderate fibrovascular stroma **(1pt.)**. Neoplastic cells have indistinct cell borders with a moderate amount of pink granular cytoplasm**(1pt.)** . Nuclei are elliptical with finely stippled chromatin and 1-2 small pink nucleoli **(1pt.)**. Mitoses average 35 per 2.37mm^2 field **(1pt.)**. There are large areas of necrosis and hemorrhage **(1pt.)**, comprising 15-20% of the neoplasm. The globe is phthitic **(1pt.)**, with fibrous tissue replacing the anterior and posterior segments and all structures within **(1pt.)**. Pigment from the ciliary body and choroid remains **(1pt.)**, and the scleral is wrinkled and convoluted due to shrinkage of the globe. **(1pt.)** There is hemorrhage anterior to the ciliary body, and the cornea does not appear in this section. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Eye, optic nerve: Meningioma (optic nerve type),**(5 pt)**

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

WSC 22-23
Conference 23, Case 2
Tissue from a cat.

MICROSCOPIC DESCRIPTION: Spinal cord. Multiple sections of spinal cord are submitted for examination. Unilaterally **(1pt)** effacing approximately 50% of the spinal cord and matter predominantly of the lateral funiculus and infiltrating grey matter (predominantly the dorsal and ventral horns on one side) **(1pt)** is an unencapsulated moderately cellular nodular, poorly demarcated, infiltrative neoplasm. **(1pt)** The neoplasm is composed of neoplastic **(1pt)** astrocytes on a pre-existent stroma. Astrocytes are polygonal and range up to 15 to 20 microns in diameter **(1pt)** with distinct cell borders and abundant finely granular brightly eosinophilic cytoplasm. **(1pt)** There are sheaves of astrocytic processes separating neoplastic cells. **(1pt)** Nuclei are irregularly round with finely stippled chromatin and onesmall eosinophilic nucleolus. **(1pt)** There is moderate anisocytosis and anisokaryosis, and mitoses average 4 per 2.37 mm^2 field. **(1pt)** There are large numbers of microglia scattered throughout the neoplasm **(1pt)** as well smaller numbers of non-neoplastic astrocytes and hypertrophic Schwann cell nuclei. **(1pt)** In areas adjacent to the neoplasm, there is dilation of myelin sheaths which occasionally contain axonal debris and Gitter cells, and spheroid formation **(1pt)**, can occasional get ourselves within dilated mileage sheets. In the infiltrated grey matter there is moderate gliosis at the edge of the neoplasm with increased numbers of microglia and astrocytes. **(1pt)**

MICROSCOPIC DIAGNOSIS: Spinal cord: Gemistocytic astrocytoma.**(3pt)**

NAME TWO APPROPRIATE IMMUNOHISTOCHEMICAL STAINS AND ONE HISTOCHEMICAL STAIN: GFAP **(1pt)**, OLIG-2 **(1pt)**, Bielchowsky **(1pt)**

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

WSC 2022-2023
Conference 23, Case 3
Tissue from a cat.

MICROSCOPIC DESCRIPTION: Spinal cord: One section of spinal cord with spinal nerves is submitted for examination. **(1pt)** Circumferentially, surrounding and separating the spinal nerves **(1pt)** and expanding the leptomeninges **(1pt)** is an unencapsulated, infiltrative, well-demarcated neoplasm. **(1pt)** The neoplasm is composed of neoplastic oligodendrocytes **(1pt)** arranged in loose sheets **(1pt)** on a fine fibrovascular stroma **(1pt)**. Neoplastic cells have distinct cell borders and a moderate amount of finely granular eosinophilic cytoplasm. **(1pt)** Nuclei are irregularly round would finally stippled chromatin an indistinct nucleoli **(1pt)**; approximately 33% of the nuclei are hyperchromatic. There is mild anisokaryosis **(1pt)** and anisocytosis and mitoses average 16 per high power field. **(1pt)** There are variably sized areas of hemorrhage **(1pt)** and necrosis **(1pt)** throughout the neoplasm. There is minimal to imaginary change within entrapped spinal nerves and the white matter of the spinal cord. **(1pt)**

MORPHOLGIC DIAGNOSIS: Spinal cord, meninges: Oligodendroglioma. **(5pt)**

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

WSC 2022-2023
Conference 23, Case 4.
Tissue from a dog.

MICROSCOPIC DESCRIPTION: Cerebellum: Cerebellar folia are diffusely thinner than normal **(1 pt.).** There is diffuse and severe loss **(1pt.)** of granular cell nuclei **(2 pt.)** Remaining granular cells are often shrunken and surrounded by a clear halo **(1 pt.)** Within the depleted granular cell layers, there is marked vacuolation of the underlying neuropil **(1 pt.),** with scattered swollen axons (spheroids) **(1 pt)**, as well as scattered gemistocytes and a mild increase in microglia and astrocytes. **(1 pt)** There is multifocal loss of Purkinje cells **(1 pt.)** with replacement by clusters of glial cells (Bergmann's astrocytes) **(1 pt)** There is thinning of the molecular layer and mild spongiosis of the molecular layer **(1 pt)**, and meningeal edema **(1 pt)**.

MORPHOLOGIC DIAGNOSIS: Cerebellum, granular cell layer **(1 pt)**: Degeneration and loss**(1 pt)**, diffuse, severe, with white matter spongiosis **(1 pt)** and mild multifocal Purkinje cell loss. **(1 pt)** (4 pt.)

NAME THE CONDITION: Cerebellar abiotrophy **(3 pt.)**

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