

WSC 2009-2010, Conference 20, Case 1.

Tissue from a horse.

MICROSCOPIC DESCRIPTION: Placenta, chorioallantois (allantochorion): There is diffuse coagulative necrosis (**2pt.**) of the chorionic villi, with retention of villar outlines and a distinct lack of differential staining. Multifocally, the deepest parts of the chorionic villi exhibit necrosis and sloughing of epithelium, infiltration of moderate numbers of neutrophils (**1 pt.**) and rare macrophages, which are admixed with eosinophilic cellular and karyorrhectic/necrotic debris, fibrin (**1 pt.**), hemorrhage (**1 pt.**), and mineral. Villar capillaries are dilated, congested, and contain moderate numbers of neutrophils. (**1 pt.**) Throughout the necrotic villi, there are outlines of 3-6 μ m wide, fungal hyphae (**2 pt.**) which are rarely pigmented brown. The chorioallantoic stroma is diffusely and moderately edematous. (**1 pt.**) There are large numbers of viable and degenerate neutrophils, primarily within the superficial chorioallantoic stroma, admixed with edema and cellular debris. (**1 pt.**) Vessels within chorioallantoic stroma often contain fibrin thrombi (**2 pt.**), and occasional veins contain small numbers of neutrophils, necrotic cellular debris, and small amounts of a brightly eosinophilic material (exuded protein), within the wall (vasculitis) (**1 pt.**). The allantoic epithelium is diffusely hypertrophic. (**1 pt.**)

MICROSCOPIC DIAGNOSIS: Placenta, chorioallantois (allantochorion): Placentitis , necrotizing, diffuse, severe, with fibrin thrombi and numerous fungal hyphae. (**4 pt.**)

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

Most likely cause: *Aspergillus fumigatus* (**1 pt.**) but in this case only *Bipolaris* was isolated (may have overgrown the original pathogen)

WSC 2009-2010. Conference 20, Case 2

Tissue from a horse.

MICROSCOPIC DESCRIPTION: Testis (**1 pt.**): Expanding the testis and compressing the adjacent atrophic testicular tissue is a well-demarcated, unencapsulated, expansile, variably cellular, nodular neoplasm (**2 pt.**) composed of tissue types from all three germ cell lines (**1 pt.**). Approximately 33% of the neoplasm is composed of well-differentiated neural tissue (**1 pt.**) which contains large nerve bundles, glial cells and occasional neurons (**1 pt.**) embedded in neuropil (ectoderm), which often courses through other elements. The remainder of the neoplasm is composed of well-differentiated tissues arising from mesodermal elements, including large areas of adipose tissue (**1 pt.**), skeletal muscle (**1 pt.**), abundant collagen, and nodules of well-differentiated cartilage (**1 pt.**). There are rare glands lined by non-ciliated cuboidal epithelium which are surrounded by low numbers of lymphocytes (**1 pt.**). Mitoses in all cell populations average less than 1 per 10 HPF (**1 pt.**). Within the adjacent compressed testis, seminiferous tubules are markedly decreased in number (**1 pt.**), devoid of spermatozoa, and are embedded in a loosely stroma composed of numerous fibrocytes with minimal collagen (**1 pt.**). Interstitial cells contain abundant golden-brown lipochrome pigment (**1 pt.**) within the cytoplasm and there is rare hemorrhage scattered throughout the stroma.

MORPHOLOGIC DIAGNOSIS: Testicle: Teratoma.

O/C – (**1 pt.**)

WSC 2009-2010, Conference 20, Case 3.

Tissue from a dog.

MICROSCOPIC DESCRIPTION: Ovary **(1pt.)**: Effacing 95% of the ovary is a well-demarcated, expansile, encapsulated, multilobular, densely cellular neoplasm **(2pt.)** composed of sheets **(2pt.)** of round cells **(1pt.)**. Lobules are separated by moderate bands of fibrous connective tissue. Neoplastic cells have distinct cell borders and moderate to abundant eosinophilic granular cytoplasm. **(1pt.)** Nuclei are often eccentric and have finely clumped chromatin with 1-2 prominent magenta nucleoli. **(1pt.)** There is marked anisokaryosis and anisocytosis **(1pt.)**; mitoses range from 2-8 per HPF, averaging 4 **(1pt.)**. There is marked multifocal individual cell necrosis **(1pt.)**. In an extensive area of the neoplasm, there is marked acute hemorrhage **(1pt.)** with large areas of necrosis **(1pt.)**. There is moderate congestion and hemorrhage within the capsule. There is diffuse atrophy of overlying ovarian elements **(1pt.)**, with follicular atresia, fibrosis, congestion, and hemorrhage, and mild hypertrophy of surface epithelium.

MORPHOLOGIC DIAGNOSIS: Ovary: Dysgerminoma. **(5pt.)**

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

WSC 2009-2010, Conference 20, Case 4.

Tissue from a rhesus macaque.

MICROSCOPIC DESCRIPTION: Cervix, mesocolon, and colon: Effacing the cervix, infiltrating the vaginal wall, mesocolon, and the serosa and muscularis of the colon (**1 pt.**), there is an infiltrative, unencapsulated, densely cellular, well-demarcated neoplasm (**2 pt.**). Neoplastic cells are polygonal and arranged in nests, packets, acini, and florid arborizing papillary projections (**2 pt.**) on a fine fibrovascular stroma (**1 pt.**). Neoplastic cells have indistinct cell borders, and a moderate amount of a finely granular eosinophilic cytoplasm (**1 pt.**). Nuclei are irregularly round to oval with finely clumped chromatin and 1-2 large magenta nucleoli (**1 pt.**). Mitotic figures average 2/HPF (**1 pt.**). There is moderate anisocytosis and anisokaryosis, and scattered individual cell necrosis (**1 pt.**). In some areas of the neoplasm, there are large areas of necrosis (**1 pt.**), especially in the areas of the cervix. There is abundant fibrous connective tissue separating nests of neoplastic cells which expands the mesocolon and separates, surrounds and isolates atrophic colonic smooth muscle (**1 pt.**). Scattered throughout the edematous fibrous connective tissue are low numbers of neutrophils, macrophages and lymphocytes (**1 pt.**). There is moderate edema of the colonic submucosa and lamina propria, as well as low numbers of neutrophils within the colonic mucosa (**1 pt.**).

MORPHOLOGIC DIAGNOSIS: Cervix, vagin, colon, mesocolon: Cervical adenocarcinoma (**4 pt.**).

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