

WSC 2020-2021
Conference 24 Case 1.

Tissue from a cat.

MICROSCOPIC DESCRIPTION: Ileum: Multifocally within the submucosa, extending into the fibrotic and edematous muscular tunics and serosa are multiple chronic and organizing pyogranulomas **(1pt.)**. The pyogranulomas are centered on cellular debris, necrotic neutrophils **(1pt.)**, moderate numbers of debris laden macrophages **(1pt.)**, and occasionally, colonies of cocci **(1pt.)**. Bands of compact collagen interspersed with plump fibroblasts infiltrate and surround the exudate, elevate the overlying mucosa, and both compress and infiltrate the subjacent muscular tunics. **(1pt.)** Multifocally, the muscular tunics are effaced by nodular foci of fibrosis and measuring up to 0.5cm. **(1pt.)** These foci are composed of wide bands of dense fibrous connective tissue **(1pt.)** ranging up to 100um in width arranged in a vaguely concentric pattern. Between the bands of collagen are varying combinations and concentrations of foamy macrophages, neutrophils, eosinophils, fewer lymphocytes and myofibroblasts which line bands of collagen. Occasionally, foci of lytic necrosis are centered on colonies of cocci. At the periphery of these nodules, myofibroblasts **(1pt.)** are arranged in dense streams and centrifugally fill spaces between collagen bands, surround the nodule, and extend into the adjacent mildly fibrotic muscularis. **(1pt.)** Myofibroblasts have large oval nuclei with finely clumped chromatin, prominent nucleoli, and up to 3 mitoses per 2.37mm² (1pt). In areas of myofibroblast infiltration, muscle fibers of the muscular tunics are shrunken and hypereosinophilic (atrophic) and surrounded by fibrous connective tissue. **(1pt.)** the serosa is expanded by fibrosis and edema. **(1pt.)** In the overlying mucosa, there is mild villar blunting and edema, linear fibrosis at the base of the villi, **(1pt.)** multifocal expansion of the submucosa by lymphocytes, plasma cells, and abundant collagen and fibroblasts. **(1pt.)** The lumen is expanded by a brightly eosinophilic proteinaceous exudate containing numerous degenerate/necrotic neutrophils. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Ileum: Enteritis, pyogranulomatous and eosinophilic **(1pt.)**, chronic, multifocal to coalescing, moderate with sclerosing fibroplasia **(1pt.)** and colonies of cocci **(1pt.)**

NAME THE CONDITION: Feline gastrointestinal sclerosing eosinophilic fibroplasia **(3pt.)**

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

WSC 2020-2021
Conference 24 Case 2.

Tissue from a cat.

MICROSCOPIC DESCRIPTION: Digit, with second phalanx and pawpad **(1pt.)**: Within the second phalanx, filling marrow spaces, extending through the ventral cortex and extending into the distal soft tissues, **(1pt.)** there is a poorly demarcated, unencapsulated, moderately cellular, infiltrative neoplasm. **(1pt.)** The third phalanx appears missing in this section. The neoplasm is composed of polygonal epithelial **(1pt.)** cells forming solid nests, tubules, and acinar structures **(1pt.)** lined by multiple layers of cuboidal cells on a dense desmoplastic fibrous stroma **(1pt.)**. Neoplastic cells ranged from polygonal **(1pt.)** to cuboidal and occasional columnar with indistinct cell borders and a moderate amount of granular eosinophilic cytoplasm. Occasionally within larger acini, cuboidal epithelial cells demonstrate cilia **(1pt.)** at their apical margins. Nests of cells often contain central areas of necrosis. **(1pt.)** Nuclei are round with finely stippled chromatin and a single prominent eosinophilic nucleolus. **(1pt.)** Mitoses average 5 per 2.37mm² field. **(1pt.)** There is marked anisocytosis and anisokaryosis. **(1pt.)** Neoplastic cells (admixed with numerous plump fibroblasts and loosely arranged collagen extensively infiltrate the phalangeal bone, effacing normal adipose and marrow tissue, expanding the medullary cavity with resorption and marked remodeling of pre-existing bone with wide osteoid seams and prominent scalloping and reversal lines, and proliferation of the irregular trabeculae of woven bone within the medulla. **(1pt.)** There is subtotal resorption of the lamellar cortical bone on the ventral aspect of the phalanx with some periosteal new bone formation. **(1pt.)** Neoplastic cells have infiltrated the underlying soft tissues, including the flexor tendons, one of which has retracted after been infiltrated, **(1pt.)** down into the pawpad and dermis of the most proximal aspect of the toe. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Digit: Metastatic pulmonary carcinoma **(3pt.)**

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

WSC 2020-2021

Conference 24, Case 3.

Tissue from a cat.

Liver: Effacing 90 percent of normal tissue, there is a multilobular, moderately cellular, unencapsulated infiltrative, moderately cellular neoplasm **(2pt.)**. The neoplasm is composed of polygonal cells **(1pt.)** arranged in nests, packets, anastomosing trabeculae **(1pt.)** and occasional true rosettes (1pt.) which are supported by a fine fibrovascular stroma **(1pt.)**. Neoplastic cells are polygonal **(1pt.)** with indistinct cell borders and a moderate amount of a coarsely granular (1pt.) eosinophilic basophilic cytoplasm. **(1pt.)** Nuclei are round, often basilar, with finely stippled chromatin and indistinct nucleoli. **(1pt.)** There is mild anisokaryosis. **(1pt.)** Mitotic figures are rare **(1pt.)**. In between lobules of the tumor and occasionally within the stroma, there are small numbers of entrapped hepatocytes, which are either compressed (at the edge of the tumor) or swollen by one or more discrete lipid vacuoles **(1pt.)**, obscuring sinusoidal architecture. **(1pt.)** In areas of infiltration, there is hemorrhage both within remaining liver tissue as well as the center of neoplastic nests and trabeculae. There is dilation of lymphatics around sublobular veins.

MORPHOLOGIC DIAGNOSIS: Liver: Neuroendocrine carcinoma (carcinoid OK – I'm easy!). **(5pt.)**

NAME 2 APPROPRIATE IMMUNOHISTOCHEMICAL MARKERS: Synaptophysin, chromagranin, S-100, NSE **(3pt.)**

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

WSC 2020-2021
Conference 23, Case 4.

Tissue from a dog

MICROSCOPIC DESCRIPTION: Globe: Expanding the iris **(1pt.)**, infiltrating the ciliary body and effacing the filtration angle **(1pt.)** partially filling the anterior chamber and abutting the posterior surface of the cornea, is an unencapsulated, infiltrative, moderately cellular nodular neoplasm. **(1pt.)** Neoplastic cells are arranged in vague short streams **(1pt.)** on a fine fibrovascular stroma **(1pt.)**. Neoplastic cells are polygonal **(1pt.)** with indistinct cell borders and a moderate amount of finely vacuolated amphophilic cytoplasm **(1pt.)**. Nuclei are irregularly round with finely clumped chromatin and 1-3 small basophilic nucleoli. **(1pt.)** There is moderate anisocytosis and anisokaryosis **(1pt.)** and mitotic figures average 40 per 2.37mm² field. **(1pt.)** There are low numbers of apoptotic cells scattered throughout the neoplasm **(1pt.)**, are multifocal areas of hemorrhage and necrosis. **(1pt.)** There are melanophages contained within the mass in proximity to areas of ciliary body infiltration. There is mild hemorrhage and fibrin deposition within the posterior chamber **(1pt.)** at the posterior of the neoplasm. There is artifactual retinal detachment in the back of the eye, the lens or optic nerve is not present in this section.

MORPHOLOGIC DIAGNOSIS: Globe: Iridociliary adenoma. **(5pt.)**

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