

Conference 20 Case 1
Tissue from a dog.

MICROSCOPIC DESCRIPTION: Gallbladder (note the remaining glands at the periphery). Effacing the gallbladder mucosa, there is an unencapsulated, expansile, well-demarcated, moderately cellular neoplasm with a thin compression capsule. **(2pt.)** Neoplastic cells are polygonal **(1pt.)** and arranged in nests and packets **(2pt.)** on a fine fibrovascular stroma **(1pt.)**. Neoplastic cells have indistinct cell borders and moderate amounts of finely vacuolated eosinophilic cytoplasm. **(2pt.)** Nuclei are irregularly round with finely stippled chromatin and 1-2 prominent nucleoli. **(1pt.)** There is marked pleomorphism **(1pt.)** throughout the tumor, with some nuclei ranging up to 18 um in diameter. **(1pt.)** Mitoses are rare. **(1pt.)** There are lymphoid follicles scattered within the neoplasm, which contain numerous apoptotic lymphocytes **(2pt.)**, and low numbers of scattered lymphocytes at the edge of the neoplasm in the preexistent gallbladder.

MORPHOLOGIC DIAGNOSIS: Gallbladder: Neuroendocrine tumor (carcinoid) **(4pt.)**

NAME TWO POSITIVE IMMUNOSTAINS: Synaptophysin, chromogranin A **(1pt.)**

O/C: (1pt.)

Conference 20 Case 2

Tissue from a dog.

MICROSCOPIC DESCRIPTION: Liver: There is diffuse severe bridging portal fibrosis **(1pt.)** which subdivides the liver parenchyma into variably sized round nodules **(1pt.)** ranging up to 2mm in diameter which lack portal triads (regenerative nodules) **(1pt.)**. Portal areas are expanded by abundant mature collagen separated by numerous profiles of biliary ductules (biliary hyperplasia) **(1pt.)** as well as moderate numbers of lymphocytes **(1pt.)** and plasma cells and individual and clusters of hemosiderin-laden macrophages. This fibrosis **(1pt.)**, surrounds and entraps atrophic periportal hepatocytes. **(1pt.)**. There is marked cholestasis **(1pt.)**, with expansion of bile canaliculi, most prominently at the periphery of the regenerative **(1pt.)** nodules of hepatocytes. Hepatocytes are swollen **(1pt.)**, often compressing sinusoids) with abundant cytoplasm which often contains numerous discrete lipid vacuoles **(1pt.)**, and abundant brownish intracellular pigment **(1pt.)** (most prominent at the periphery of the nodules. Portal and subcapsular lymphatics are mildly dilated. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Liver: Bridging fibrosis **(1pt.)**, diffuse, severe, with macronodular hepatocellular regeneration **(1pt.)**, marked biliary hyperplasia **(1pt.)**, cholestasis **(1pt.)**, and diffuse, mild hepatocellular lipidosis.

NAME TWO APPROPRIATE SPECIAL STAINS: Rhodanine (for copper) and reticulin (to see if fibrosis extends into sinusoids – markedly worsens prognosis) **(2pt.)**

(O/C): (1pt.)

Conference 20 Case 3
Tissue from a cat.

MICROSCOPIC DIAGNOSIS: Liver: Portal tracts are moderately to markedly expanded **(1 pt.)** by large numbers of lymphocytes **(1 pt.)** , and fewer plasma cells and macrophages **(1 pt.)** and rare eosinophils and neutrophils and small amounts of mature collagen **(1 pt.)**, which surround and separate hyperplastic biliary profiles **(1 pt.)**. The inflammatory infiltrate often breaches the limiting plate **(1 pt.)**, surrounding entrapped, swollen lipid laden hepatocytes **(1 pt.)**. There is marked dilation of portal and subcapsular lymphatics. **(1 pt.)** Throughout the section, hepatocytes are markedly swollen **(1 pt.)**, compressing sinusoids and contain numerous poorly defined glycogen vacuoles **(1 pt.)**. Sinusoids often contain fibrin thrombi **(1 pt.)**. Within the center of the section, there is a focal area of closely packed distorted bile ducts **(1 pt.)** which are surrounded by dense fibrous connective tissue **(1 pt.)** and contain small to moderate numbers of neutrophils and sloughed epithelial cells. The biliary epithelium is moderately anisocytotic and anisokaryotic.

MORPHOLOGIC DIAGNOSIS: 1. Liver: Cholangiohepatitis, lymphocytic, chronic, diffuse, severe. **(2pt.)**

2. Liver, bile ducts: Cholangitis, proliferative and neutrophilic, focally extensive. **(2pt.)**

Name the condition: Lymphocytic cholangiohepatitis **(2 pt.)**

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

Conference 20, Case 4

Tissue from a dog.

MICROSCOPIC DESCRIPTION: Liver: Approximately 50% of the liver is replaced by an infiltrative, unencapsulated, poorly demarcated, sparsely cellular multilobulated neoplasm (**2 pt.**) which fingers out into the adjacent parenchyma (**1 pt.**). Neoplastic cells are arranged in short streams and bundles (**1 pt.**) on a pre-existent stroma (**1 pt.**) and are often separated by abundant clear space which often contain small amounts of collagen. (**1 pt.**) Neoplastic cells often form variably sized whorls (**1 pt.**) around blood vessels or rarely, bile ducts. Neoplastic cells are spindled to elongate (**1 pt.**) with indistinct cell borders and a small amount of eosinophilic cytoplasm (**1 pt.**). Occasionally, spindle cells contain a single large clear vacuole (signet ring cell) (**1 pt.**). Neoplastic cells have elliptical to elongate nuclei with finely stippled chromatin and 1-2 small basophilic nucleoli. (**1 pt.**) Mitoses are rare. (**1 pt.**) The neoplasm often entraps cords of atrophic hepatocytes (**1 pt.**) with numerous discrete vacuoles. There are multifocal areas of hemorrhage scattered randomly throughout the neoplasm. Peripheral to the neoplasm, there is marked distortion of sinusoidal architecture with markedly dilated congested sinusoids. (**1 pt.**) There is a focally extensive area of the capsule which contains large aggregates of lipophages (**1 pt.**) (macrophages contain lipid from defunct hepatocytes) and mildly dilated lymphatics.

MORPHOLOGIC DIAGNOSIS: Metastatic sarcoma. (**4pt.**) (I – and John Cullen, really don't think you can get much farther than that with out a huge battery of special stains. But it's a nice slide to describe.)

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

