WSC 2025-2026
Conference 10, Case 1
Tissue from a dog

MICROSCOPIC DESCRIPTION: Adrenal gland **(1pt)**: One section of adrenal gland is presented for examination. There is a focal 2 mm cortical nodule **(1pt)** and numerous nests of zona glomerulosa cells within the capsule. **(1pt)** There are multifocal areas of sinusoidal congestion, dilation, hemorrhage **(1pt)**, and polymerized fibrin scattered throughout the cortex and medulla. **(1pt)** Multifocally, often in proximity to areas of hemorrhage, cortical and medullary small arteriolar profiles are tortuous **(1pt)**, and the tunica intima and media **(1pt)** are expanded by moderate amounts of homogeneous eosinophilic protein **(1pt)** which compromises the lumen **(1pt)**, effaces the inner elastic lamina and separates and effaces smooth muscle **(1pt)**of the tunica media. Occasionally, effete arterioles are surrounded by multiple lamellae of fibroblasts and mature collagen ("onion-skinning") **(1pt)**. Some arterioles contain fibrin thrombi. **(1pt)**

MORPHOLOGIC DIAGNOSIS: Adrenal gland, arterioles: Fibrinoid necrosis **(2pt)**, diffuse, mild to moderate with adventitial fibrosis **(1pt)** and hemorrhage **(1pt)**.

NAME THE CONDITION: Hyaline arteriolosclerosis **(2pt)**

NAME A LIKELY CAUSE: Hypertension **(2pt)**

O/C:

WSC 2025-2026
Conference 9, Case 2
Tissue from a puppy.

MICROSCOPIC DESCRIPTION: Colon: Multiple sections of colon are submitted for examination and each is similar. In each section of colon, there is a regionally extensive area of full thickness necrosis of the mucosa. **(1pt)** The necrosis and inflammation extends down into the submucosa and in some sections extends transmurally through the smooth muscle wall. **(1pt)** Areas of necrosis are characterized by loss of normal colonic architecture with infiltration by large numbers of neutrophils **(1pt)**, macrophages **(1pt)**, occasionally foreign body type macrophages **(1pt)**, and lymphocytes, admixed with multifocal hemorrhage, edema, and an abundance of cellular debris. **(1pt)** Wtihin necrotic aras of the mural smooth muscle, with are inflammatory changes as previous described as well as necrosis and degeneration of smooth muscle cells. **(1pt)** Blood vessels within areas of necrosis often contain fibrin thrombi. **(1pt)** Within areas of necrosis from the remnant mucosa to the necrotic mural smooth muscle and occcasionally within vascular lumina, there are numerous cross and tangential sections of hyphae **(1pt)**. which are 8-16um in diameter **(1pt)** with a 2um hyaline cell wall. The hyphae are pauciseptate with non-parallel walls **(1pt)** and vacuolated cytoplasm(1pt.) Necrotic sloughed mucosa and fungal hyphae, and numerous 2-4um zoospores are present within the lumen. **(1pt)** There is marked and diffuse loss of colonic lymphoid tissue.

Duodenum: There is a focal area of ulceration **(1pt)** within the duodenum which incorporates a depleted Peyer's patch. In this section, necrosis is largely restricted to the mucosa and submucosa, with infiltration by moderate numbers of neutrophils, macrophages, and few foreign body type macrophages. There is lymphocytolysis and depletion of lymphoid tissue within the submucosa. **(1pt)**There is no evidence of hyphae within this particular section.

Pancreas: One section of pancreas is attached to the duodenum. There is multifocal to coalescing atrophy of pancreatic acini. **(1pt)**The pancreatic interstitium is infiltrated by large numbers of lymphocytes, plasma cells and macrophages. **(1pt)**

MORPHOLOGIC DIAGNOSIS : 1. Colon: Colitis **(1pt)**, necrotizing and pyogranulomatous, multifocal, severe, with numerous hyphae.
Duodenum: Duodenitis, ulcerative, multifocal moderate. **(1pt)**
Pancreas: Pancreatitis, lymphoplasmacytic and histiocytic, diffuse, marked, with acinar atrophy. :**(1pt)**

CAUSE: *Pythium, Lagenidium or Zygomyces* sp. All OK **(2pt.)**

WSC 2025-2026
Conference 10, Case 3.
Tissue from a golden lion tamarin.

MICROSCOPIC DESCRIPTION: Liver: Three sections of liver are submitted for examination and all are similar. Scattered randomly through the section, there are numerous areas of lytic necrosis **(1 pt.)** which range up to 1.5 millimeters in diameter **(1 pt.)**. The areas of necrosis contain necrotic hepatocytes and are infiltrated by varying combinations and concentrations of viable and necrotic neutrophils, **(1 pt.)** macrophages, **(1 pt.)** and abundant cellular debris. Diffusely, hepatocytes contain abundant brown granular intracytoplasmic pigment, and there are scattered aggregates of hemosiderin-laden macrophages throughout the parenchyma. **(1 pt.)** Diffusely within portal and sublobular areas, lymphatics are dilated. **(1 pt.)** Portal areas are infiltrated by moderate numbers of lymphocytes and plasma cells, with occasional neutrophils, and are often bordered by aggregates of hemosiderin-laden macrophages. **(1 pt.)**

Spleen: Three sections of spleen are submitted for examination and all are similar. The splenic architecture is normal. Randomly scattered throughout the splenic parenchyma are foci of lytic necrosis **(1 pt.)**which range up to 1 mm in diameter. Foci of necrosis contain large numbers of viable and necrotic neutrophils mixed with fewer macrophages and abundant cellular debris. There is mild hyperplasia of the white pulp with few tingible body macrophages. "Burned-out" germinal centers contain moderate amounts of eosinophilic protein **(1 pt.)** and aggregates of hemosiderin-laden macrophages. These macrophages are present within the hyperplastic white pulp. **(1 pt.)** There is diffuse congestion and multifocal hemorrhage within the splenic red pulp and scattered hemosiderin-laden macrophages. **(1 pt.)**

Pancreatic lymph node: There are scattered aggregates of macrophages within the mildly reactive paracortex and within subcapsular sinuses. **(1 pt.)** There are multifocal aggregates of hemosiderin-laden macrophages

MORPHOLOGIC DIAGNOSIS: 1. Liver: Hepatitis, necrosuppurative **(1 pt.)**, multifocal, moderate.
2. Spleen: Splenitis, necrosuppurative, multifocal, moderate. **(1 pt.)**
3. Mesenteric (pancreatic) lymph node: Sinus histiocytosis, multifocal, moderate. **(1 pt.)**
4. Pancreas: No significant lesion.

CAUSE: *Listeria monocytogenes* **(3 pt.)**

O/C – **(1 pt.)**

WSC 2025-2026
Conference 10, Case 4.
Tissue from a rat.

MICROSCOPIC DESCRIPTION: Skeletal muscle: Arising within the skeletal muscle, there is a multilobular, densely cellular, unencapsulated, infiltrative, well-demarcated neoplasm **(1pt.)**. The neoplasm is composed of vague streams and bundles **(1pt.)** of pleomorphic **(1pt.)** spindle cells **(1pt.)** on a variably dense fibrous stroma . Neoplastic cells are polygonal **(1pt.)** to spindle with abundant finely fibrillar eosinophilic cytoplasm **(1pt.)** Some cells have prominent perinuclear vacuoles **(1pt.)**. Strap cells, some with multiple nuclei, are common. **(1pt.) (1pt.)** Nuclei are pleomorphic (can't say it enough) irregularly round to oval with coarsely stippled chromatin and 1-3 prominent eosinophilic nuclei **(1pt.)** Nuclear pleomorphism is marked, and there are numerous multinucleated forms. **(1pt.)** Mitotic figures average 15 per 2.37mm^2 **(1pt.)** and are occasionally atypical **(1pt.)** There are numerous apoptotic neoplastic cells throughout the neoplasm, and areas of coagulative necrosis comprise up to 20% of the neoplasm. **(1pt.)** In areas of the adjacent skeletal muscle infiltration, degenerative **(1pt.)** myofibers are variably sized, often shrunken, variably eosinophilic (both pale and brightly eosinophilic), with occasionally centralized nuclei. **(1pt.)** There are numerous lymphocytes within the areas of skeletal muscle infiltration

MORPHOLOGIC DIAGNOSIS: Skeletal muscle: Rhabdomyosarcoma **(3pt.)** , pleomorphic type.

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