

WSC 2025-2026
Conference 6, Case 1
Tissue from a dog.

MICROSCOPIC DESCRIPTION: Intestine and mesentery: Multiple sections of intestine and mesentery are submitted for examination. Within the mesentery, small and medium-caliber muscular arteries **(1pt.)** are undergoing various stages of thrombosis and recanalization. Some arterioles contain variably occlusive fibrin thrombi within their lumen **(1pt.)**, and in other arterioles, the thrombus is undergoing recanalization with ingrowth of fibroblasts and endothelial cells into the luminal thrombus **(1pt.)**. There is marked fibroplasia **(1pt.)** surrounding single arterioles and clusters of tortuous arteriolar cross sections, and this process, composed of variably mature collagen, fibroblasts, developing capillaries, and scattered low to moderate numbers of lymphocytes, plasma cells and macrophages, **(1pt.)** and this process also extends along the lobular septa **(1pt.)** of mesenteric fat. In one section, there is a focally extensive area in which the mesentery is effaced by an infiltrate of large numbers of eosinophils **(1pt.)**, neutrophils, macrophages, and fewer lymphocytes and plasma cells with is centered on a single tangential section of a larval spirurid nematode which has a ridged cuticle, polymyarian-coelomyarian musculature **(1pt.)**, a pseudocoelom filled with abundant eosinophilic material **(1pt.)**, and a single cross section of a large multinucleated intestine. Arterioles within this area of inflammation also contain occlusive fibrin thrombi and variable number of infiltrating fibroblasts and endothelium, and their walls are expanded by brightly eosinophilic protein, cellular debris, and infiltrating neutrophils and eosinophils (necrotizing arteritis) **(1pt.)**. In one section, the segment of intestine overlying the thrombosed vessels demonstrates a prolonged ischemic insult, characterized by full thickness loss of the mucosa **(1pt.)** and expansion and partial effacement of the submucosa and muscularis by focally extensive areas of profound inflammation and necrosis **(1pt.)**, or granulation tissue **(1pt.)** replete with large numbers of neutrophils, eosinophils, and macrophages, hemorrhage, and cellular debris. Within the affected and hemorrhagic muscularis, smooth muscle cells demonstrate one or more of the following changes – vacuolation (degeneration), fragmentation and pykosis (necrosis), shrinkage and hypereosinophilia (atrophy). **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Mesentery: Arteritis **(1pt.)** and periarteritis, necrotizing **(1pt.)**, multifocal, severe with arteriolar thrombosis, eosinophilic **(1pt.)** and necrotizing peritonitis and enteritis, and rare larval spirurid nematodes. **(1pt.)**

CAUSE: *Spirocerca lupi* **(2pt.)**

WSC 2025-2026
Conference 6, Case 2
Tissue from a sheep.

MICROSCOPIC DESCRIPTION: Cerebrum at level of hippocampus (diencephalon) **(1pt.)**: At subgross magnification, there is diffuse thinning **(1pt.)** (atrophy) **(1pt.)** of the cortical gray matter **(1pt.)** and expansion of the lateral ventricles (*hydrocephalus ex vacuo*) **(1pt.)**. There is diffuse loss of the normal stratified arrangement of neurons within the gray matter. **(1pt.)** Within neurons of all sizes, the cytoplasm **(1pt.)** is distended by an accumulation of 2um amphophilic to light brown vacuoles granules **(1pt.)** (lipofuscin granules) **(1pt.)**. Neuronal axons are often prominent and contain lipofuscin granules as well. **(1pt.)** Rare small neurons contain contracted hyperchromatic nuclei (pyknosis). **(1pt.)** There is a diffuse mild astrocytosis **(1pt.)**. There is diffuse edema expanding the meninges. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Cerebrum: Cortical atrophy **(1pt.)**, diffuse, severe, with neuronal ceroidosis **(1pt.)** and loss, mild astrocytosis, and *hydrocephalus ex vacuo* **(1pt.)**.

NAME THE CONDITION: Ceroid lipofuscinosis. **(3pt.)**

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

WSC 2025-2026
Conference 6, Case 3.
Tissue from a cat.

MICROSCOPIC DESCRIPTION: Lung: There is mild autolysis in this section. Approximately 90% of alveoli are filled with variable concentrations of histiocytes **(1pt.)** with indistinct cell borders, and a moderate amount of granular eosinophilic cytoplasm **(1pt.)** and have a tendency to stream **(1pt.)**. Nuclei are irregularly round **(1pt.)**, with coarsely clumped chromatin and 1-3 prominent basophilic nucleoli. **(1pt.)** Throughout most of the section, these cells are admixed with small amounts of fibrin **(1pt.)**, and in some alveoli are admixed with variable combinations and concentrations of alveolar macrophages, neutrophils and cellular debris. **(1pt.)** Alveoli without these proliferating cells contain and are expanded by expanded by foamy alveolar macrophages. **(1pt.)** Alveolar septa are markedly expanded by congestion, edema, fibrous connective tissue **(1pt.)**, which often extends into effaces adjacent pulmonary parenchyma in cell-poor regions of the section. **(1pt.)** Airways are filled with refluxed histiocytes and inflammatory cells as previously described and admixed with sloughed airway epithelium. **(1pt.)** and there is moderate smooth muscle hyperplasia. **(1pt.)** Proliferating histiocytes often expand and extend through the overlying pleura. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Lung: Histiocytosis **(1pt.)**, alveolar, **(1pt.)** chronic, diffuse, severe, with fibrosis and smooth muscle hyperplasia. **(1pt.)**

NAME THE CONDITION: Pulmonary Langerhans cell histiocytosis **(3 pts)**

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

WSC 2025-2026

Conference 6, Case 4.

Tissue from a dromedary camel.

MICROSCOPIC DESCRIPTION: Lymph node: The normal cortical and medullary architecture is effaced **(1pt.)** by an by an unencapsulated, infiltrative, poorly demarcated, densely cellular lymphocytic malignancy **(1pt.)**. Neoplastic cells are arranged in sheets **(1pt.)** on a pre-existing stroma **(1pt.)**. Neoplastic lymphocytes average 6mm in diameter **(1pt.)**, with distinct cell borders and a moderate amount of finely granular eosinophilic cytoplasm **(1pt.)**. Nuclei are round, occasionally excentric, with finely clumped chromatin and 1-3 small basophilic nucleoli. **(1pt.)** Anisocytosis and anisokaryosis is mild, and mitoses average less than one per 400X field **(1pt.)** (approximately 5 per 2.37mm² field. Neoplastic cells are often present within the lumina of blood vessels. **(1pt.)**

Lung: The normal pulmonary architecture is effaced by the neoplasm. Cellular features are described above. Neoplastic cells markedly expand alveolar septa **(1pt.)** in which they are admixed with fibrin, edema, congestion, and low numbers of neutrophils and hypertrophied intraseptal macrophages. Neoplastic cells are present within alveolar spaces **(1pt.)** in lower numbers, where they are admixed with varying combinations and concentrations of neutrophils **(1pt.)** (in higher numbers than in the septa), edema fluid, polymerized fibrin **(1pt.)**, and cellular debris. Neoplastic cells infiltrate and transmurally expand the wall of bronchi and bronchioles **(1pt.)**, and cellular and non-cellular components from the adjacent alveoli are refluxed into their lumina. Bronchiolar-associated lymphoid tissue has been largely effaced by the neoplastic population. **(1pt.)** Blood vessels of all sizes contain numerous neoplastic lymphocytes within their lumina. **(1pt.)** The interlobular septa and pleura are infiltrated and expanded by neoplastic lymphocytes. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Lymph node, lung: Lymphoma **(1pt.)**, with atypical circulating lymphocytes. **(1pt.)**

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