WSC 2025-2026
Conference 24, Case 1
Tissue from a cat.

MICROSCOPIC DESCRIPTION: Trachea: Transmurally **(1pt.)** infiltrating the tracheal wall from the mucosa, between tracheal rings **(1pt.)**, and into the adjacent mediastinum and skeletal muscle **(1pt.)**, there is an infiltrative, unencapsulated, moderately cellular multilobular neoplasm. **(1pt.)** Neoplastic cells form nests and tubules **(1pt.)** on a dense fibrous stroma **(1pt.)** (and rarely line areas of ulcerated muucosa in a pluristratified fashion.) **(1pt.)**. Neoplastic cells are polygonal, and have distinct cell borders with a moderate amount of finely granular to cleared cytoplasm. **(1pt.)** Nuclei are irregularly round to oval with coarsely stippled chromatin and 1-3 prominent basophilic nucleoli. **(1pt.)** There is moderate anisocytosis and anisokaryosis with moderate pleomorphism. **(1pt.)** Rare single cells are dyskeratotic. **(1pt.)** Mitoses average 6 per 2.37mm^2 field with occasional atypical mitoses. **(1pt.)** Neoplastic glands contain variable combinations and concentrations of mucin and neutrophils along with sloughed epithelium. **(1pt.)** There are moderate numbers of lymphocytes and plasma cells within the dense fibrous stroma. **(1pt.)** The neoplasm extends and effaces the adjacent skeletal muscle; in areas of infiltration the muscle fibers are thin, smaller than normal and brightly eosinophilic. **(1pt.)**

Neoplastic tubules are diffusely present throughout the paracortex and sinusoids of an adjacent mediastinal lymph node. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Trachea: Tracheal adenocarcinoma. **(3pt.)**

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

WSC 2025-2026
Conference 24, Case 2
Tissue from a cat

MICROSCOPIC DESCRIPTION: Three sections of lung are submitted for examination. At subgross magnification, two sections of lung are similar and demonstrate diffuse extensive alveolar hemorrhage **(2pt.)** Alveoli are filled with innumerable extravasated erythrocytes, with smaller amounts of edema and polymerized fibrin **(1pt.)**, and scattered hemosiderin and debris-laden macrophages and cellular debris. **(1pt.)** Alveolar septa are markedly congested **(1pt.)**, and multifocally have lost their differential staining (coagulative necrosis) **(1pt.)**. Alvolar intraseptal macrophages are often hypertrophied, and regionally in remnant patent alveoli, there are increased numbers of neutrophils within the septa. **(1pt.)** Hemorrhage has refluxed into the airways from the alveoli. **(1pt.)** Perivascular interstitial tissue is expanded by moderate amounts of a blue granular ground substance and few infiltrating macrophages and lymphocytes. **(1pt.)** The overlying pleura is markedly expanded by abundant maturing granulation tissue, **(1pt.)** characterized by loosely arranged fibroblasts, small capillaries, abundant blue granular ground substance, and infiltration by low to moderate numbers of macrophages with fewer lymphocytes, neutrophils, and plasma cells. **(1pt.)** There are mats of fibrin **(1pt.)** at the exterior edge of the thickened pleura.

In the third section, alveoli are free of the hemorrhage characterizing the other two sections, but contain variable combinations and concentrations of edema, increased numbers of foamy alveolar macrophages, and small amounts of edema. Alveolar septa are diffusely congested. Alveolar contents have refluxed into airways. Arterioles in the central areas of the section contain non-occlusive fibrin clots. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Lung: Necrosis, **(1pt.)** diffuse, with abundant intraalveolar hemorrhage **(1pt.)**and pleural granulation tissue **(1pt.)** (lobar torsion) **(3pt.)**

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

WSC 2025-2026
Conference 24, Case 3.
Tissue from a puppy.

MICROSCOPIC DESCRIPTION: Kidney: Multifocally, within both the cortex, and to a lesser extent in the medulla, there are multifocal areas of hemorrhage and necrosis. **(1pt)**, Within the cortex, there are clusters of proximal convoluted tubules in which epithelium is necrotic preservation of the tubular epithelium and basement membrane. **(1pt)** In these areas, there is hemorrhage and edema within the adjacent interstitium. **(1pt)** Similar, though less extensive changes are present within the medulla. There are rare 2-4um irregularly shaped eosinophilic intranuclear viral inclusions present within the nuclei of tubular epithelial cells. **(1pt)** There is multifocal necrosis of glomerular **(1pt)** mesangial and endothelial cells, with intraglomerular hemorrhage.

Lung: Diffusely, alveolar septa are moderately expanded by variable combinations and concentrations of edema, congestion, fibrin, neutrophils **(1pt)** and histiocytes, as well as cellular debris, and there is multifocal septal necrosis **(1pt)**. There are scattered areas coagulative parenchymal necrosis as demonstrated by diffuse lack of differential staining affect alveolar septa, and adjacent vasculature. **(1pt)**. Alveoli within these area contain variable amounts of polymerized fibrin **(1pt)**, degenerate alveolar macrophages and neutrophils, edema fluid, and cellular debris. Airway epithelium is often diffusely necrotic **(1pt)** and/lost and lumens are filled with edema fluid, fibrin, and sloughed necrotic airway epithelium, as well as abundant cellular debris. Rare type 1 pneumocytes, and airway epithelial cells contain a single 2-4um eosinophilic intranuclear viral inclusions **(1pt)** which are often surrounded by a clear halo. There is moderate edema surrounding pulmonary arteriolar branches.

MORPHOLOGIC DIAGNOSIS: 1. Kidney: Nephritis, necrotizing **(1pt)**, tubular and glomerular, multifocal, moderate with rare intranuclear viral inclusions. **(1pt)**
2. Lung: Pneumonia, bronchointerstitial**(1pt)**, necrotizing **(1pt)**, multifocal to coalescing with numerous intranuclear viral inclusions. **(1pt)**

CAUSE: Canine herpesvirus-1 **(3pt)**

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

WSC 2025-2026
Conference 24, Case 4.
Tissue from a Rocky Mountain ighorn sheep.

MICRSCOPIC DESCRIPTION: Lung: In two of the three sections, alveoli are diffusely filled with variable combinations and concentrations of viable neutrophils **(1pt)** and fewer degenerate neutrophils, foamy macrophages **(1pt)**, fewer lymphocytes, admixed with edema fluid **(1pt)**, rare hemorrhage and fibrin **(1pt)**, and cellular debris. Alveolar septa are diffusely expanded by edema fluid, circulating neutrophils, few foamy macrophages, and scattered type II pneumocytes hyperplasia**(1pt).** Airway lumina contain a similar cellular exudate **(1pt)** as previously described in alveoli. Airway epithelium is hyperplastic **(1pt)** and piled up to three cell layers thick. Airway epithelium exhibits multifocal intracellular edema and necrosis **(1pt),** and is infiltrated by low to moderate numbers of neutrophils and lymphocytes. The edematous submucosal connective tissue is expanded by large numbers of lymphocytes **(1pt),** plasma cells **(1pt)** and fewer neutrophils and histiocytes which multifocally infiltrate and separate submucosal glands. Multifocally within airways and alveoli, there are low numbers of cross and tangential sections of a larval nematode **(1pt)** measuring 100 X 15 µm and have a 1-2 µm thick smooth eosinophilic cuticle and a thin posterior tip. **(1pt)**

MORPHOLOGIC DIAGNOSIS: Lung: Bronchopneumonia **(1pt)** , fibrinosuppurative **(1pt)**, chronic, diffuse, moderate, with type II pneumocyte hyperplasia, and low numers of nematode larvae. **(1pt)**

CAUSE: Mycoplasma ovipneumoniae **(1pt)** and Protostrongylus rufescens or Muerllerius capillaris **(1pt)**

O/C: (1pt)