

WSC 2024-2025
Conference 22, Case 1
Tissue from a sheep.

MICROSCOPIC DESCRIPTION: Placenta (1pt.): Multiple sections of cotyledon and intercotyledonary placenta are submitted for examination and all are similar. Within the cotyledons, there is diffuse coagulative and lytic necrosis (1pt.) and loss of the chorioallantois (1pt.), cotyledonary epithelium (1pt.) and trophoblasts (1pt.) which extends down into the caruncular epithelium and stroma. (1pt.) Sloughed trophoblasts within the debris field and in the intercotyledonary space are markedly expanded by large numbers of bacilli (1pt.). The surface of the necrotic cotyledon is lined by a coagulum (1pt.), of abundant necrotic debris sloughed trophoblasts, necrotic neutrophils and numerous bacilli. There is necrosis of the epithelium and trophoblasts of the intercotyledonary space as well (1pt.) which also contain intracytoplasmic bacilli. There is necrosis and infiltration of the edematous (1pt.) caruncular (endometrial) stroma with by large numbers of neutrophils (1pt.) and fewer macrophages, which are primarily in proximity to the endometrial capillaries. (1pt.) There is multifocal necrosis of walls of endometrial vessels (1pt.), which infiltrated with low to moderate numbers of neutrophils (1pt.), cellular debris, and rarely extravasated red blood cells (vasculitis (1pt.)). There is multifocal thrombosis of endometrial vessels. (1pt.)

MORPHOLOGIC DIAGNOSIS: Cotyledonary placenta Placentitis, necrotizing, (1pt.) diffuse, severe with vasculitis (1pt.), edema, and numerous intratrophoblastic bacilli. (1pt.)

CAUSE: *Listeria monocytogenes* (1pt.)

O/C: (1pt.)

WSC 2024-2025
Conference 22, Case 2
Tissue from a sheep.

MICROSCOPIC DESCRIPTION: Liver: Predominantly within centrilobular to midzonal areas, there is marked dissolution of hepatic plates **(2pt)**; hepatocytes are individualized and rounded up **(1pt)**. Multifocally, low numbers of individualized hepatocytes, with brightly eosinophilic hyalinized cytoplasm **(1pt)** and occasional cytosegresomes (degeneration) **(1pt)** and occasionally have pyknotic or karyorrhectic nuclei (necrosis) **(1pt)**. There is multifocal EMH within sinusoids. **(1pt)** There is abundant granular eosinophilic material vessels surrounding and separating hepatocytes and filling sinusoids. **(1pt)** There are few intact circulating erythrocytes within sinusoids and larger branches of the hepatic circulation. There is proliferation of oval cells **(1pt)** and low to moderate numbers of lymphocytes and fewer plasma cells within portal areas. **(1pt)** The hepatic capsule is markedly undulant **(1pt)** as a result hepatocellular disorganization.

MORPHOLOGIC DIAGNOSIS: Liver: Hepatitis, necrotizing **(1pt)**, diffuse, moderate, with marked disorganization of hepatic plates **(1pt)**

CAUSE: *Leptospira* sp. **(3pt)**

O/C - (1pt)

WSC 2024-2025
Conference 22, Case 3.
Tissue from a sheep.

MICROSCOPIC DESCRIPTION: Kidney: There are changes at all levels of the nephron. There is diffuse marked decreased in the numbers of tubules **(1pt)** (cortical and medullary) and marked interstitial fibrosis **(1pt)**. Diffusely throughout the cortex, many remnant tubules are ectatic **(1pt)**, lined by attenuated **(1pt)** hypereosinophilic or vacuolated **(1pt)** epithelial cells (degeneration) **(1pt)** which are occasionally necrotic and sloughed into the lumen. Numerous tubules contain one or more of the following: yellow, translucent, fan-shaped, anisotropic crystals **(1 pt)** (oxalate crystals) **(2pt)**, variably eosinophilic protein **(1pt)**, or sloughed epithelial cells. Glomeruli exhibit one or more of the following: swollen tufts, hypercellularity, synechiae **(1pt)**, periglomerular fibrosis **(1pt)**, and reflux of tubular protein into Bowman's space. The interstitium and perivascular connective tissue are markedly expanded by fibrosis **(1pt)** and contain numerous lymphocytes and plasma cells. **(1pt)**

MORPHOLOGIC DIAGNOSIS: Kidney, tubules: Degeneration, necrosis, ectasia and loss, **(1pt)** diffuse, , with marked tubular proteinosis **(1pt)**, numerous oxalate crystals **(1pt)**, and lymphoplasmacytic chronic interstitial nephritis. **(1pt)**

CAUSE: Any oxalate containing plant is acceptable (this one is my favorite – soursob!.) **(2pt)**

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

WSC 2024-2025
Conference 22 Case 4.
Tissue from a goat.

MICROSCOPIC DESCRIPTION: Lung: There is diffuse hypercellularity and atelectasis in this section. Diffusely, peribronchiolar and perivascular lymphoid tissue **(1pt.)** is markedly expanded, often forming follicles that range up to 1 mm in diameter and extend into the surrounding septa, accompanied by low numbers of macrophages. **(1pt.)** Diffusely, alveolar septa are expanded **(1pt.)** up to three times normal by low to moderate numbers of lymphocytes, macrophages **(1pt.)**, and rare neutrophils and plasma cells, as well as hyperplastic smooth muscle and in areas are multifocally lined by type II pneumocytes. **(1pt.)** Alveoli contain one or more of the following: eosinophilic edema fluid **(1pt.)**, polymerized fibrin, neutrophils, foamy alveolar macrophages, and cellular debris. Airways often contain numerous viable and few degenerate neutrophils and cellular debris in blue mucus **(1pt.)** and there is mild hyperplasia of lining epithelium. There is edema of the interlobular septa. **(1pt.)**

Brainstem: Within the white matter along the midline, there is an infiltrate of large numbers of lymphocytes **(1pt.)**, macrophages **(1pt.)** and Gitter cells **(1pt.)** with fewer plasma cells and neutrophils which largely effaces normal neuroparenchymal architecture. There is admixed gliosis with numerous and rare dilated empty axon sheaths. Neurons in this area are swollen with chromatolysis **(1pt.)** and often surrounded by 2 or more astrocytes. Perivascular spaces are mildly expanded by moderately expanded by several layers of lymphocytes and macrophages **(1pt.)** .

MORPHOLOGIC DIAGNOSIS: : 1. Lung: Pneumonia, interstitial **(1pt.)**, lymphohistiocytic **(1pt.)**, diffuse, moderate with peribronchiolar and perivascular lymphoid hyperplasia, and smooth muscle hyperplasia. 2. Brainstem, white matter: Rhombencephalitis, necrotizing **(1pt.)** and lymphohistiocytic **(1pt.)** , focally extensive, severe with gliosis.

CAUSE: Small ruminant lentivirus (CAE virus) - **(2pt.)**

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