

WSC 2023-2024  
Conference 4, Case 1  
Tissue from a foal.

**MICROSCOPIC DESCRIPTION:** Liver: Approximately 50% of the section **(1pt)** is replaced by coalescing, up to 1 mm in diameter foci of lytic **(1pt)** necrosis **(1pt)**. Foci of necrosis are devoid of hepatocytes with remnant and visible stroma, which is infiltrated by numerous viable and necrotic neutrophils **(2pt)**, admixed with fewer macrophages, abundant cellular debris **(1pt)**, and small amounts of hemorrhage and fibrin. At the periphery of these areas, hepatocytes are swollen with pale, vacuolated cytoplasm (degeneration) **(1pt)**, and often contain numerous haphazardly arranged pale, basophilic, filamentous (1x 5um) **(1pt)** intracytoplasmic **(1pt)** bacilli **(2pt)** Portal areas and the subcapsular space are expanded up to three times normal by ectatic lymphatic vessels (edema) **(1pt)**, and low numbers of lymphocytes **(1pt)**, plasma cells, macrophages, and rare neutrophils .

**MORPHOLOGIC DIAGNOSIS:** Liver: Hepatitis, necrotizing, multifocal to coalescing, with numerous intracytoplasmic bacilli. **(3pt)**

**CAUSE:** Clostridium piliforme **(3pt)**

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

WSC 2023-2024  
Conference 4, Case 2  
Tissue from a chicken.

**MICROSCOPIC DESCRIPTION:** Crop **(1pt.)**: There is marked segmental hyperplasia **(1pt.)** of the squamous epithelium up to 5mm. **(1pt.)** Within the hyperplastic epithelium there are several cross and tangential sections of adult nematode **(1pt.)** parasites up to 180um **(1pt.)** in diameter with a 5 um thick, eosinophilic cuticle,**(1pt.)** a pseudocoelom **(1pt.)**, coelomyarian-polymyarian musculature **(1pt.)**; bacillary bands **(1pt.)** , a small intestine containing uninucleated epithelial cells **(1pt.)**, and cross sections of an ovary **(1pt.)**. Tunnels within the epithelium containing cross sections of adult nematodes (and some that do not) contain numerous 25umx40um assymmetrically **(1pt.)** bioperculated **(1pt.)** embryonated eggs with a 4um thick hyaline shell. The lamina propria is expanded by low to moderate numbers of macrophages, lymphocytes, plasma cells, with fewer eosinophils and neutrophils, and increased clear space (edema). **(1pt.)**

**MORPHOLOGIC DIAGNOSIS :** Crop, mucosa: Hyperplasia **(1pt.)**, segmental **(1pt.)**, marked with few adult female aphasmid nematodes **(1pt.)** and numerous eggs..

Cause: *Capillaria contorta* (or *annulata*) **(2pt.)**

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

WSC 2023-2024  
Conference 4, Case 3.  
Tissue from an ox.

**MICROSCOPIC DESCRIPTION:** Heart **(1pt.)**: Two sections of myocardium are submitted for examination. Infiltrating the myocardium and conduction system **(1pt.)** separating and surrounding cardiomyocytes and Purkinje fibers, and expanding the epimysium, perimysium, and endomysium, **(1pt.)** there is an unencapsulated, infiltrative, poorly demarcated densely cellular round cell neoplasm. **(1pt.)** Neoplastic lymphocytes **(1pt.)** are arranged in sheets **(1pt.)** on a pre-existing fibrous stroma. Neoplastic lymphocytes range up to 15um in diameter **(1pt.)** with a moderate amount of granular amphophilic cytoplasm. **(1pt.)** Nuclei are irregularly round with coarsely clumped chromatin and 1-3 nucleoli. **(1pt.)** Anisocytosis and anisokaryosis is moderate **(1pt.)** with mitoses averaging 7 per 2.37mm<sup>2</sup> field. **(1pt.)** There is extensive apoptosis of neoplastic cells. **(1pt.)** Multifocally, cardiomyocytes exhibit swelling, hyalinosis, and loss of cross-strations (degeneration) **(1pt.)** and occasional fragmentation and nuclear pyknosis (necrosis.) **(1pt.)** There is multifocal hemorrhage with polymerized fibrin. **(1pt.)**

Occasional cardiomyocytes are expanded by numerous zoites (sarcocysts.) **(1pt.)**

**MORPHOLOGIC DIAGNOSIS:** 1. Myocardium: Lymphoma. **(1pt.)**  
2. Myocardium, cardiomyocytes: Sarcocysts, few. **(1pt.)**

Cause: Bovine retrovirus **(1pt.)**

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

WSC 2020-2021  
Conference 4 Case 4.  
Tissue from an ox.

**MICROSCOPIC DESCRIPTION:** Liver: One section of liver is submitted for examination. Effacing approximately 50% **(1pt)** of this section are several discrete granulomas **(1pt)** ranging up to 0.5 cm in diameter. The granulomas are composed of a center of eosinophilic debris **(1pt)** admixed with small amounts of mineral **(1pt)**, which is in turn surrounded by numerous epithelioid macrophages **(1pt)** and fewer lymphocytes **(1pt)**, plasma cells, multinucleate giant cell macrophages of the Langhans **(1pt)** and foreign body **(1pt)** types, which are enmeshed in lamellations of centripetally mature connective tissue. **(1pt)** At the edge of the granulomas, remnant hepatocytes are compressed and atrophic **(1pt)** with congestion of dilated sinusoids. There is moderate bridging fibrosis between portal areas **(1pt)** as well as between centrilobular areas **(1pt)**, and mild biliary hyperplasia **(1pt)**. There is also fibrosis of the capsule and small numbers of lymphocytes and plasma cells scattered throughout the capsule. **(1pt.)**

**MORPHOLOGIC DIAGNOSIS:** Liver: Granulomas **(1pt)**, multiple, with Langhans and foreign body giant cells **(1pt)** and mineralization **(1pt)** and bridging centrilobular and portal fibrosis.

**CAUSE:** Mycobacterium bovis **(2pt)**

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