WSC 2025-2026
Conference 16, Case 1
Tissue from a pony.

MICROSCOPIC DESCRIPTION: Colon: Three sections of colon are submitted for examination and all are similar. Within each section there is partial to full thickness mucosal necrosis. **(1pt)** The affected mucosa is covered by a fibrinonecrotic membrane **(1pt)**, which contains abundant hemorrhage, necrotic cellular debris, numerous degenerative and fewer viable neutrophils, and scattered bacilli. **(1pt)** There is necrosis and loss of the mucosal epithelium **(1pt)**, which extends downward into the crypts. The lamina propria is markedly expanded by a cellular infiltrate, which includes abundant lymphocytes, plasma cells, macrophages, and neutrophils, and is mixed with hemorrhage, edema, and abundant cellular debris. **(1pt)** In one section, neutrophils transmigrate the mucosa in large numbers and extend laterally along the fibrinonecrotic membrane **(1pt)** ("volcano lesions") **(1pt)**. Colonic glands are occasionally dilated and contain abundant necrotic epithelial cells and are mixed with neutrophils and cellular debris **(1pt)** (crypt abscesses) **(1pt)**. This inflammation also extends down into the underlying and severely depleted Peyer's patches. **(1pt)** There is profound hemorrhage **(1pt)** and edema expanding the submucosa **(1pt)** – the edema is so severe with there are large clear cystic spaces within the submucosal collagen. **(1pt)** There is multifocal partially and fully occlusive thrombi **(1pt)** within proprial and submucosal vessels. **(1pt)** Edema extends into the muscularis and serosa. **(1pt)**The serosa is infiltrated by low numbers of lymphocytes, macrophages, and plasma cells scattered diffusely throughout the edematous tissue. **(1pt)** There is mild multifocal mesothelial hyperplasia.

MORPHOLOGIC DIAGNOSIS: Colon: Colitis, necrotizing **(1pt)**, diffuse, marked, with a fibrinonecrotic membrane, submucosal vascular thrombosis **(1pt)**, edema, crypt abscesses and multiple volcano lesions **(1pt)**.

CAUSE: Clostridioides difficile **(1pt)** and Salmonella TYPHIMURIUM (I think this particular agent is not easy to get to in this slide).

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

WSC 2025-2026
Conference 16, Case 2
Tissue from a cat.

MICROSCOPIC DESCRIPTION: skeletal muscle: Three sections of skeletal muscle are submitted for examination and all are similar. At subgross magnification, large clear areas of emphysema **(1pt.)** are scattered randomly through the section and measure up to 1.5 mm in diameter and which occasionally coalesce. **(1pt.)** Surrounding these areas of emphysema, skeletal muscle fibers exhibit one or more of the following changes: hyalinization, loss of cross striations **(1pt.)**, variation in fiber size **(1pt.)**, vacuolation (myofibrillolysis) **(1pt.)** (degenerative changes), formation of contraction bands **(1pt.)**, pyknosis, **(1pt.)** and fragmentation **(1pt.)** (necrosis). The epimysium is moderately to markedly expanded by edema, eosinophilic flocculent cellular debris **(1pt.)**, small amounts of hemorrhage and infiltrating macrophages which occasionally extend into myocyte cytoplasm. Within the necrotic myocytes and adjacent endomysium, thee ae low to moderate numbers of robust 2.3um rods **(1pt.)** consistent with clostridia. **(1pt.)** There are few necrotic neutrophils admixed with bacilli and cellular debris. **(1pt.)** The epimysium is also expanded by edema and emphysema. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Skeletal muscle: Myositis, necrotizing **(1pt.)**, diffuse, severe, with emphysema **(1pt.)** and robust bacilli. **(1pt.)**

CAUSE: *Clostridium novyi (C. perfringens, C. septicum, P. sordelli OK)* **(3pt.)**

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

WSC 2025-2026
Conference 16, Case 3.
Tissue from a dog.

MICROSCOPIC DESCRIPTION: Two sections of jejunum are submitted for examination and both are similar. Diffusely, there is marked thinning **(1pt.)** of the tunica muscularis, which affects both the inner circumferential **(1pt.)** and the outer longitudinal **(1pt.)** layers of smooth muscle. There is marked loss of smooth muscle cells **(1pt.)** and remaining leiomyocytes demonstrate one or more of the following changes: pale vacuolated cytoplasm, cell swelling, and occasional pyknosis **(1pt.)**. There is marked fibrosis **(1pt.)** in areas of smooth muscle loss. The two muscle layers are infiltrated by large numbers of lymphocytes **(1pt.)**, with fewer plasma cells, **(1pt.)** macrophages **(1pt.)** and neutrophils, which surround affected leiomyocytes and are mixed with edema and cellular debris. The inflammatory changes and loss of smooth muscle are more profound in the outer longitudinal layer. **(1pt.)** The inflammatory infiltrate infiltrates the neural plexus; however, neurons appear to be within normal limits. **(1pt.)** The submucosa and lamina propria are also infiltrated by moderate numbers of lymphocytes, **(1pt.)**plasma cells and macrophages. In one section, there is marked pink eosinophilic material adjacent to jejunal villi and this material contain largenumbers of mixed bacteria. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Jejunum: Leiomyositis **(1pt.)**, lymphocytic **(1pt.)**, chronic diffuse, severe, with marked smooth muscle loss **(1pt.)** and fibrosis **(1pt.)**.

NAME THE CONDITION: Chronic intestinal pseudo-obstruction (lymphocytic polymyositis OK). **(2pt.)**

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

WSC 2025-2026
Conference 16, Case 4.
Tissue from a rabbit.

MICROSCOPIC DESCRIPTION: Colon: Two sections of colon are submitted for examination and both are similar. There is marked submucosal edema **(2pt.)**; submucosal lymphatics are markedly ectatic **(1pt.)** and edema separates submucosal collagen fibers. **(1pt.)** The edematous submucosa is infiltrated by low to moderate numbers of neutrophils **(2pt.)**, macrophages **(2pt.)**, lymphocytes and plasma cells. The overlying mucosa is edematous as well **(1pt.)**, and there are multifocal areas of hemorrhage. **(1pt.)** There is multifocal necrosis of the overlying mucosa **(1pt.)**, with sloughing of mucosal epithelium into the lumen, where they are admixed with abundant cellular debris and large numbers of robust rod-shaped bacilli. **(2pt.)**

MORPHOLOGIC DIAGNOSIS: Colon: Colitis, necrotizing **(2pt.)**, multifocal, moderate with hemorrhage and severe submucosal edema. **(1pt.)**

CAUSE: *Clostridioides difficile* (*C. prefingens, C. spiroforme* OK) **(3pt.)**

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