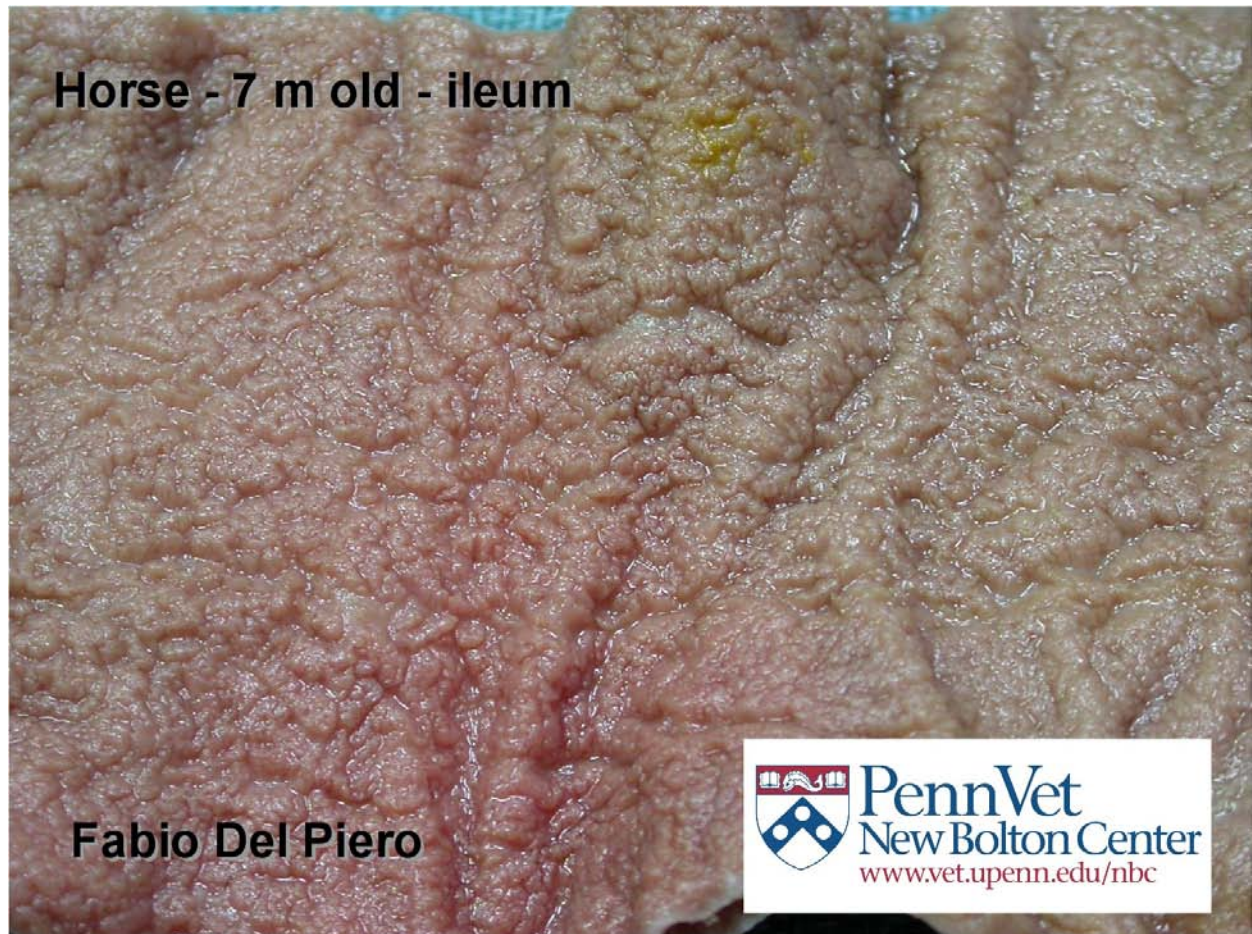
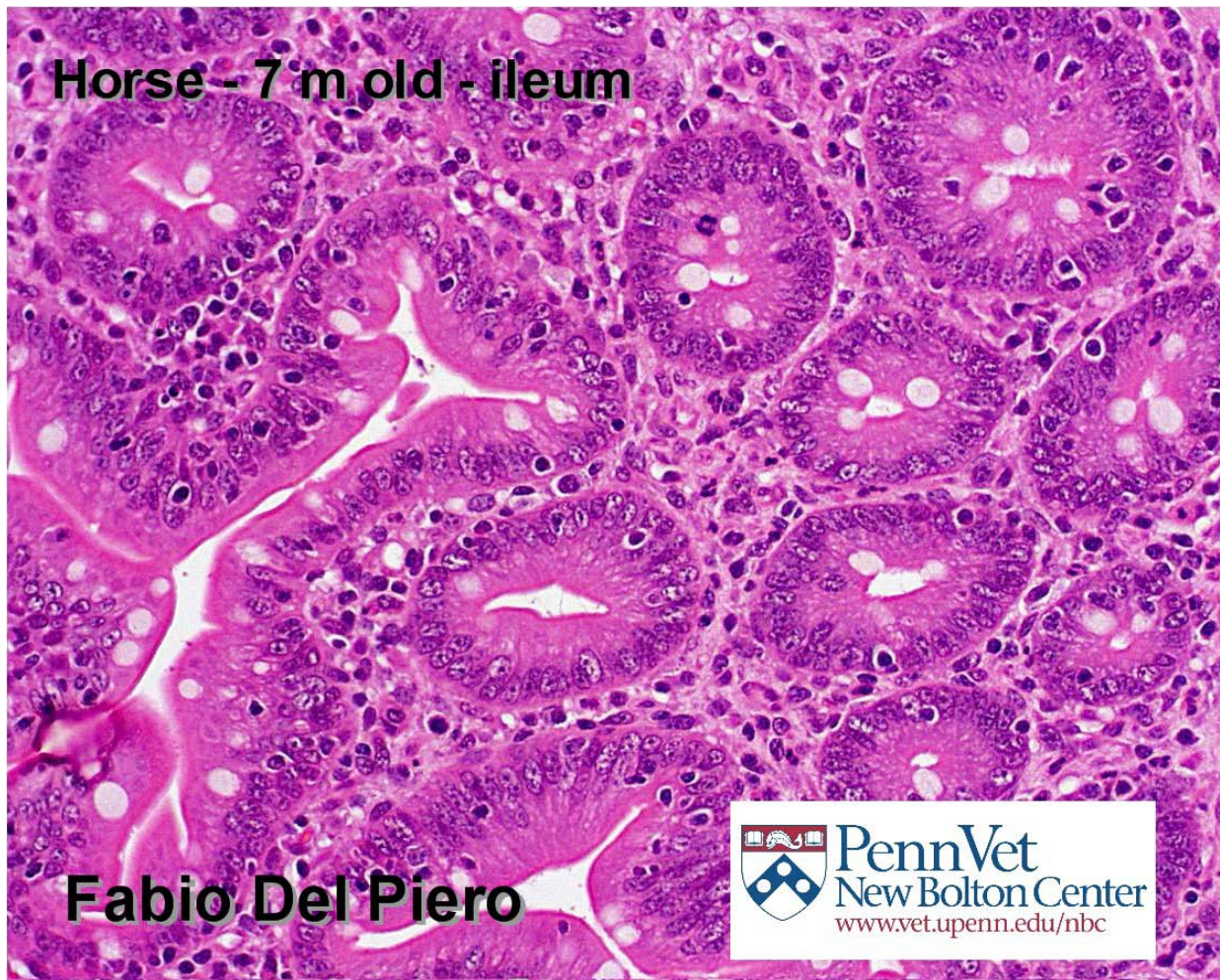


LCGP DIAGNOSTIC EXERCISE # 2 (August 2010)

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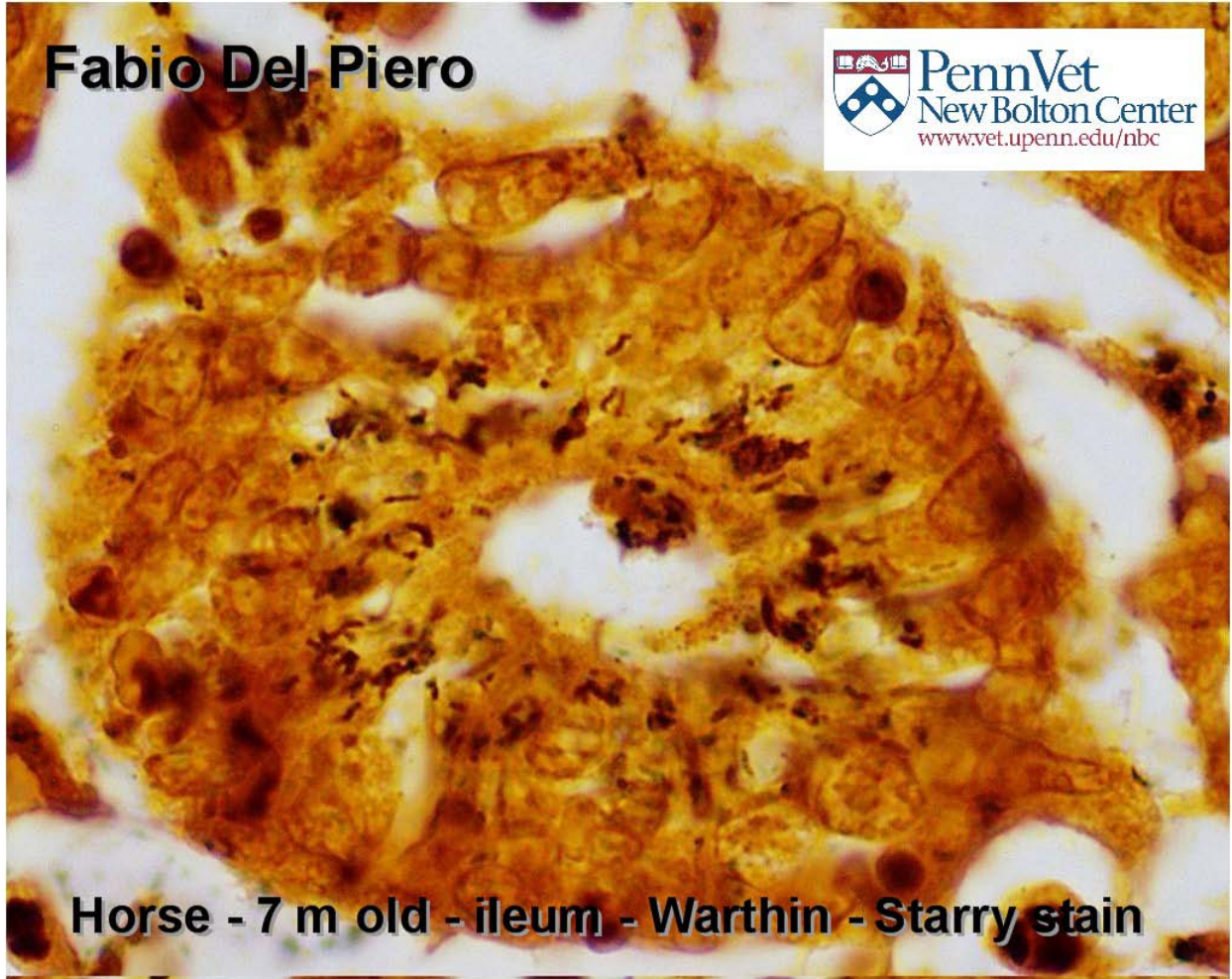
Horse - 7 m old - ileum



Fabio Del Piero



Fabio Del Piero



Horse - 7 m old - ileum - Warthin - Starry stain

Questions and answers

Gross:

1. Describe. Diffuse mucosal thickening
2. Differential Morphologic diagnoses: Lymphoma; Proliferative enteritis.
3. Histology: 1. Describe. Diffuse intestinal glands hyperplasia with lymphocytic enteritis (ileitis)

Histochemistry. 1. Intraenterocytic intracytoplasmic curved bacteria

4. Etiologic Diagnosis: *Lawsonia intracellularis*

Name the disease. Proliferative ileitis due to *L. intracellularis*.

Discussion. *Lawsonia intracellularis* is a bacterial pathogen which causes disease in a wide range of animals, mainly pigs. It invades the intestinal epithelial cells causing hyperplasia of the infected cells. The disease has two clinical manifestations in pigs: an acute hemorrhagic form often called porcine hemorrhagic enteropathy, and a more chronic proliferative form often referred as porcine intestinal adenomatosis. *Lawsonia intracellularis* though primarily recognized in pigs, is spreading to a wide range of mammals. Based on 16SrRNA gene sequence, *Lawsonia intracellularis* is related to *Desulfovibrio*, a sulfate-reducing bacteria and *Bilophila wadsworthia*.

This is a frequent condition in certain horse farms. The mode of transmission of *Lawsonia intracellularis* remains elusive, not just in horses, but also in other susceptible species. As the survival of the organism in nature is limited, continuous self-perpetuating infection through fecal shedding seems most likely. It is possible that wildlife have a significant role in the transmission of the disease. The diagnosis can be confirmed via PCR in vivo and post mortem and via indirect immunohistochemistry (generally post mortem). Grossly the contributor (FDP) tended to exclude Salmonella, Clostridium, Rhodococcus and other bacterial pathogens were excluded because of the preservation of the mucosal lining.