



# ECVP/ESVP Summer School in Veterinary Pathology



## Marie Curie Training Courses

### Summer School 2008 – Gastrointestinal ZH3

ZH 3, cat	Points
	24
Organ: Small intestine (0.5), ileum (0.5)	1
The whole superficial mucosa is <u>necrotic(0.5)</u> and multifocally to diffusely coated by fibrillary to homogenous eosinophilic material ( <u>fibrin: 0.5</u> ) and large amounts of multifocally arranged coccoid to rod-shaped <u>bacteria</u> . Within this necrotic area numerous, <u>rhomboid microorganisms (protozoa)</u> with a diameter of about 10 micrometer and a central basophilic nucleus (consistent with <u>Giardia sp.</u> ) are visible.	1 1 1 1 1
There is extensive <u>loss of intestinal crypts</u> and some enterocytes in the remaining crypts are swollen, show an enlarged nucleus and good visible nucleoli. These cells show moderate to large amounts of homogenous eosinophil to basophil sometimes vacuolated cytoplasm ( <u>hypertrophy</u> ). Mitotic figures in enterocytes and double nucleated cells are seldom seen ( <u>regeneration</u> ). Moderate amounts of enterocytes are sloughed into the crypt lumen, show <u>pyknotic and/or karyorrhectic nuclei</u> and hypereosinophilic cytoplasm (cellular debris- <u>necrosis</u> ). Between the crypts large amounts of fibroblasts with new formed collagen fibers are visible ( <u>fibrosis</u> ). Moderate to large amounts of <u>plasmacells</u> and <u>lymphocytes</u> are multifocally to diffusely infiltrating the mucosa. The same inflammatory cells are also visible in the submucosa as well as a lot of <u>macrophages (0.5)</u> and few <u>neutrophils (0.5)</u> . The peyers patches are <u>depleted</u> and in the lymphfollicle centers pyknotic and karyorrhectic lymphocytes ( <u>lymphfollicle necrosis: 0.5</u> ).	1 2 1 2 1 1 1 1 1
In the submucosa and muscularis <u>endothelial cells</u> are activated (0.5). In the lumen moderate amounts of neutrophils can be seen ( <u>neutrocytosis: 0.5</u> ). The vessel walls are thickened and infiltrated with few neutrophils and macrophages ( <u>vasculitis: 0.5</u> ).	1.5 1.5
The same are visible perivascular. The lymph vessels in the mesentery are slightly	

dilated and the mesentery is edematous. Mesothelial cells are activated.	
<b>Diagnosis:</b>	
Severe diffuse necrotizing to lymphoplasmacellular enteritis with severe crypt necrosis and crypt regeneration	2
moderate neutrophilic and histiocytic vasculitis (0.5)	
presence of numerous giardia (0.5)	1
<b>Aetiology:</b>	
Canine parvovirus	1
Giardia sp. (0.5)	
Name the disease: Parvovirosis (0.5)	1
Style: 1 point	