



# ECVP/ESVP Summer School in Veterinary Pathology

## Summer School 2012 – Cytology

### Z12-1078

Cat, male neutered, 1y

Pleural effusion: cell count: 355'000 cell/ $\mu$ l, protein: 48 g/l, specific weight: 1034

### *Description*

The smear is highly cellular (for pleural effusion) and cells are evenly spread as a monolayer. Staining is evenly, however in some slides staining precipitates are present. More than 90% of the cell population consists of severely degenerate neutrophils. Most of them show sign of karyolysis characterized by nuclear swelling, loss of staining intensity, hyalinization of chromatin and disruption of nuclear membranes. Frequently the cytoplasm is bluish and contains small vacuoles. Karyopyknosis and karyorrhexis characterized by the presence of numerous small nuclear fragments is less prevalent. Within neutrophils numerous intracytoplasmic bacteria can be found. There are small round cocci as well as fine rods. As a background population only few macrophages (round cells with abundant bluish, often vacuolated cytoplasm and round to bean-shaped nuclei) as well as few small lymphocytes and erythrocytes are present.

### *Diagnosis*

Severe acute neutrophilic (purulent) pleuritis with severe degeneration of neutrophils and intracytoplasmic bacteria (cocci and rods)

### *Score*

Design	2
High cellularity, monolayer	2
Ratio of cell types present (90% neutrophils...)	1
Degeneration	1
Karyolysis (with description)	3
Karyorrhexis (with description)	3
Bacteria	3
Background population	2
Diagnosis	3