

# ECVP/ESVP Summer School in Veterinary Pathology

## Summer School 2012 – Cytology

### S93-2463

Cat, 4 years, female neutered  
loss of weight, vomiting  
mesenteric lymph nodes enlarged (=> imprint)

#### *Description*

The smear is moderately to highly cellular. A low amount of the cells has no visible cytoplasm (artificially damaged) and there is grey-blue, finely granular material with small round empty spaces present in the background (probably artificially lysed cytoplasm). There is a polymorphic population of large (up to 60µm), extremely variably sized (severe anisocytosis) round, individualized cells that have usually a large amount of lightly blue cytoplasm and distinct cell borders. Small numbers of intracytoplasmic, small to medium sized purple granules and small vacuoles are present. Nuclei are usually large (> 25-30µm, up to 50µm, macrocytosis), round to rarely bean-shaped and extremely variable in size (severe anisokaryosis). The chromatin is fine and one, rarely two, round, large (often > 6µm, up to 15µm), dark blue nucleolus of variable size (severe anisonucleoliosis) are visible. A moderate number of multinucleated cells, and few mitotic figures (occasionally atypical) are seen. The background population consists of few red blood cells, few large cells with granular to vacuolated cytoplasm (interpreted as macrophages) and rare intracytoplasmic erythrocytes (indicative of recent haemorrhage).

#### *Diagnosis*

Pleomorphic round cell neoplasm (most likely histiocytic sarcoma) (Also accepted: malignant mesenchymal neoplasia, not further classifiable)

#### *Comment*

In paraffin sections, the tumour cell cytoplasm showed a positive immunohistochemical reaction for lysozyme. The diagnosis was "disseminated histiocytic sarcoma".

#### *Score*

Design	2
Moderate to high cellularity	1
Polymorphic cells	1
Large, round cells	2
Anisocytosis, anisokaryosis, anisonucleoliosis	3
Intracytoplasmic granules	1
Round nucleus	1



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Fine chromatin	1
Large nucleolus	1
Multinucleated cells	1
Giant nuclei	1
Mitotic figures	1
Background macrophages	1
Diagnosis (histiocytosis)	2