



ECVP/ESVP Summer School in Veterinary Pathology



Marie Curie Training Courses

Summer School 2007 – Cytology Case 2

Case #2 – C1748/02

DOG

Mammary mass (scraping)

Cytologic description

The smear is highly cellular with some blood contamination and naked nuclei. There is a mixed population of cells with large prevalence of neoplastic pleomorphic epithelial cells, both isolated or in variably sized clusters.

The cells are variable sized (15-50 μ), round to polygonal, with variable N/C ratio (moderate to high), often palisading, sometimes organized in acinar structures. The nuclei are round, paracentral to peripheral, 10-40 μ in size, with granular chromatin irregularly coarsely clumped and 1-4 prominent nucleoli of variable size and shape. Nuclear molding is sometimes evident. Multinucleated cells are present. Rare, atypical mitotic figures are visible. The cytoplasm, variable from scant to relatively abundant, is finely granular, light blue with occasional multiple, clear, small vacuoles. Anisocytosis and anisokaryosis are moderate to severe.

There is also a moderate number of foamy macrophages, often in phagocytosis of blue-green glassy material (hemosiderin/secretory material).

Some degenerated neutrophils (karyolysis) without phagocytosis of bacteria are present. Occasional lymphocytes and spindle reactive cells.

Around the clusters of epithelial cells there is occasional purple glassy material (mesenchymal matrix).

Score

Style	(2 points)
High cellularity	(1 point)
Prevalence of epithelial cells	(1 point)
Size and shape	(1 point)
Variable N/C ratio	(1 point)
Nuclear features	(2 points)
Multinucleated cells	(1 point)
Nuclear molding	(1 point)
Mitosis	(1 point)
Cytoplasmic features	(2 points)
Anisocytosis/Anisokaryosis	(1 points)
Macrophages	(1 point)
Other inflammatory cells	(1 point)
Reactive spindle cells and extracellular matrix	(1 point)

MD

Mammary adenocarcinoma	(3 points)
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