



ECVP/ESVP Summer School in Veterinary Pathology

Summer School 2012 – Cytology

H03-2138

Cat, SF, 12 y

Sample: Skin nodule (paw)

Description

Smears are highly cellular and there are many thick areas where cells from dense aggregations that are difficult to evaluate. The predominate cell population consists of highly polymorphic, polygonal, epithelial cells that form numerous variably sized cohesive clusters and are rarely individualized. These neoplastic cells are usually medium sized (up to 20µm), have distinct cell borders and blue cytoplasm. The N/C ratio is often high. Nuclei are round, measure up to 15µm and have a coarse chromatin. Usually one single nucleolus (up to 5 µm) is present and some are angular. Keratinizing neoplastic cells are present with lightly basophilic to blue-green stained cytoplasm. Many of these cells have large viable nuclei (asynchronous maturation) whereas others have condensed shrunken nuclei (pyknosis). Mitotic figures are rare. Anisocytosis and Anisokaryosis are moderate. In the background moderate numbers of macrophages with abundant, often vacuolated cytoplasm and bean-shaped nuclei and neutrophils without degeneration as well as few mast cells, lymphocytes and spindle cells (fibroblasts) are present. There are focal deposits of eosinophilic homogenous material (interpreted as extracellular matrix).

Diagnosis

Keratinizing squamous cell carcinoma

Score

Design	2
Cellularity	1
Epithelial cells, polygonal cohesive clusters	1
High N/C ratio	1
Nuclear features (chromatin, nucleoli, size)	3
Cytoplasmic features (basophilic)	1
Asynchronous maturation (with description)	4
Mitosis, anisokaryosis, anisocytosis	1
Macrophages, neutrophils	1
Extracellular matrix	1
Diagnosis	3