

Instructional Objectives / Learning Outcomes
DMP 775, Veterinary Clinical Pathology
Department of Diagnostic Medicine/Pathobiology
College of Veterinary Medicine, Kansas State University

Material not in *Fundamentals of Veterinary Clinical Pathology, 2002*

Cytologic Examination of Tissues

352. In the context of assessing lesions, explain the:
- a. Advantages of cytologic compared to histologic examinations
 - b. Disadvantages of cytologic compared to histologic examinations
353. Explain the goals of:
- a. Biopsy collection methods
 - b. Biopsy cytopreparatory techniques
 - c. Cytologic examination of tissues
354. State the types of cells, cell populations, or material that would suggest that a cutaneous or subcutaneous lesion is due to:
- a. An inflammatory process
 - b. A neoplastic process
355. State the 3 major groups of cutaneous or subcutaneous neoplasms of dogs; for each, give examples of cytologic features that are used to differentiate them.
356. Define the following terms as they are used to describe cell populations and explain why malignant cells may have each feature.
- a. Anisokaryosis
 - b. Increased nuclear:cytoplasmic (N:C) ratio
 - c. Anisocytosis
 - d. Poikilocaryosis
 - e. Pleomorphism
 - f. Monomorphism
 - g. Anaplasia
357. Name (list) 6 tumors of canine skin (epidermis, dermis, or subcutaneous) that may be considered discrete or round cell tumors. For each, state or recognize the unique features which allow us to identify the cells of the neoplasms.
358. Explain why the cellular criteria of malignancy are not typically applied as rigorously to canine discrete cell neoplasms (melanoma an exception) as they are to epithelial and non-epithelial (mesenchymal) neoplasia.
359. Explain or list the staining features of the following.
- a. On Wright-stained slides
 - 1) Bacteria other than *Mycobacterium* sp.
 - 2) *Mycobacterium* sp.
 - b. On Gram-stained slides
 - 1) Purple (purplish-blue) organisms
 - 2) Pink organisms
 - 3) Pink debris
 - c. Based on the above, what stain would best allow for detection of all bacteria?
360. Recognized or describe microscopic findings that suggest bacteria are:
- a. Pathogens
 - b. Nonpathogens (flora, contaminants)

361. List the major microscopic features of cells that are the best for differentiating benign cells from malignant cells.
362. If given color photocopies of microscopic fields, identify the following cells types or lesions:
- a. Mast cell neoplasm
 - b. Melanoma
 - c. TVT
 - d. Histiocytoma
 - e. Epithelial cells (well-differentiated)
 - f. Spindle cells (well-differentiated)
 - g. Malignant cells (poorly differentiated)
 - h. Adipocytes (well-differentiated)