MAKE YOUR WAY THROUGH THE CYTOLOGY OF THE LYMPHOID SYSTEM

Course tutors:

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Dear Colleagues,

Welcome to the Vet CPD Campus online course on cytology of the lymphoid system.

This comprehensive course will give you the basics you need for interpretation of the most common conditions affecting the lymphoid organs (mostly lymph nodes), with a special attention to the diagnostic approach to lymphoma in both dogs and cats. Participants will develop a logic approach to interpretation of cytological samples from lymphoid organs (mostly lymph nodes) through a case-based approach.

Clinical case challenges and diagnostic algorithms will also be provided to help you understand the concepts presented and to consolidate your knowledge.

We will explore these topics over 6 modules:

• **MODULE 1:** SAMPLING TECHNIQUES, SLIDE STAINING, AND SUBMISSION OF CYTOLOGICAL SAMPLES FROM LYMPHOID ORGANS TO EXTERNAL LABORATORIES. The objective of this module is to guide you in the correct sampling and preparation of cytological samples from lymphoid organs. We will discuss all the sampling techniques and the slide preparation process. Finally we will focus the attention on the sample staining methods.

• **MODULE 2:** CYTOLOGY OF THE NORMAL LYMPH NODE, INFLAMMATORY AND HYPERPLASTIC CONDITIONS. The aim of this section is to provide to the clinician a basic knowledge about the normal structure of the lymph node and a general and systematic approach to slide examination of cytological samples from these organs. This section will then focus on the most
common non-neoplastic lesions affecting the lymph nodes, including reactive/hyperplastic conditions and inflammatory processes (lymphadenitis).

- **MODULE 3: DIAGNOSTIC APPROACH TO LYMPHOMA, PART 1 (CYTOLOGY).** Lymphoma represents the most common hematopoietic neoplasm in the canine and feline species, and its diagnosis and characterisation is essential to plan an adequate therapeutic strategy. Cytology is commonly the first step in the diagnosis of lymphoma, and especially in the canine species, is capable to provide a final diagnosis in the vast majority of the cases (when good quality samples are available). This module will provide you the skills to recognise and differentiate the most common subtypes of lymphoma.

- **MODULE 4: DIAGNOSTIC APPROACH TO LYMPHOMA, PART 2 (HISTOLOGY, IMMUNOCYTO/HISTOCHEMISTRY, FLOW-CYTOMETRY, PARR).** When a definitive cytological diagnosis of lymphoma is not possible, or when there is need to further characterise this process, additional investigations may be necessary. This section will provide you the basic information you need, including 1) how to interpret an histological report 2) what is the importance of the immunophenotype and how this can be evaluated 3) what is the PARR and how this test can be helpful in the diagnosis of lymphoma.

- **MODULE 5: CYTOLOGY OF METASTATIC NEOPLASMS.** This section will focus on the most common metastatic neoplasms affecting the lymph node, especially carcinomas, sarcomas, melanomas and mast cell tumours, and their peculiar and distinctive cytological features.

- **MODULE 6: CYTOLOGY OF OTHER LYMPHOID ORGANS (THYMUS, SPLEEN, MUCOSA-ASSOCIATED LYMPHOID TISSUE).** Lymph nodes are not the only lymphoid organ that can be sampled for cytological examination. Lymphoid tissue includes bone marrow, thymus, and secondary lymphatic organs, which are lymph nodes, tonsils, spleen, and mucosa associated lymphoid tissue (MALT). In this section we will briefly discuss the cytological approach to splenic aspirates and the diagnostic approach to mediastinal lesions in both dogs and cats.
Throughout the 3 weeks of the course, you will also be presented with clinical cases to work through, that we invite you to analyse and discuss in the classroom forum. Please use the forum as much as possible to discuss the course material and to ask questions. Better understanding will be achieved through a dialogue and sharing your experiences with other delegates is invaluable.

Answers to the clinical cases will be posted on the forum after first allowing a few days’ discussion for each case; we will explore about 1 case per week.

**COURSE FORUM**

Each participant has access to the course forum to comment on and ask questions about course topics and the clinical cases as they are worked through. Don’t hesitate to ask questions! It’s quite likely that the questions you may have are shared by someone else. To add a new topic you can click and 'Add a new topic', or you can simply reply to a string in a current topic of discussion.

Welcome to the wonderful world of cytopathology!

We look forward to discussing these course topics with you and sharing our experiences and learning.

Kind regards,

Francesco and Paola