

# Latin Comparative Pathology Group

## The Latin Subdivision of the CL Davis Foundation

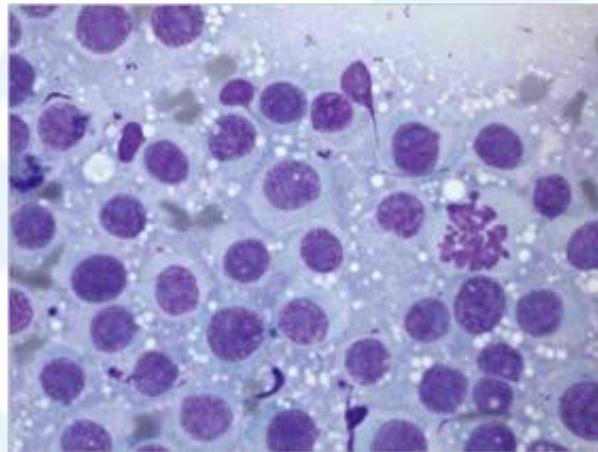
### Diagnostic Exercise

Case #: 44 Month: May Year: 2014

*Answer Sheet*

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**Clinical History:** A 5 year old, intact male Labrador Retriever presented to the Veterinary Teaching Hospital at the Universidad Santo Tomás, Viña del Mar, Chile for lethargy and several skin masses. On physical examination, the dog appeared in good body conditions, but presented multiple skin masses, some of them alopecic and ulcerated (Figures 1 and 2). The popliteal lymph nodes were enlarged.



**Figure 4:** Closer view of the cells from the same aspirate as in Figure 3 (Wright-Giemsa stain, 40X).

1. **Cytological description:** High cellularity sample with minimal hemodilution. There are sheets of large round cells with mild anisocytosis and anisokaryosis and moderate nuclear to cytoplasmic (N:C) ratio. The cytoplasm is pale blue and occasionally contains few discrete vacuoles. The nuclei are round and eccentrically placed with coarse chromatin and occasional nucleoli. There is one mitotic figure.
2. **Interpretation:** Round cell tumor compatible with canine transmissible venereal tumor.

3. **Differential diagnosis:** Histiocytic neoplasm, mast cell tumor with non-stained granules.
4. **Common locations:** Genital area (mucosae of the penis and vagina) and intranasal.
5. **Prognosis:** Good. It responds well to chemotherapy (vincristine).

**Comments:** This patient was treated with Vincristine and responded very well to the chemotherapy. The masses disappeared. Canine transmissible venereal tumor (CTVT) is a common tumor in both male and female dogs seen in countries in which animals are not spayed or neutered and in which many of them are free-roaming. The tumor has a wide distribution and occurs most commonly in areas with warm climate. Almost always the tumor is located in the genitalia and its transmission occurs through direct contact and implantation. Occasionally, tumors occur in the nasal cavity or rarely skin, oral cavity and conjunctival mucosae in the absence of a primary genital lesion. Furthermore, CTVT can metastasize to lymph nodes and viscera. Grossly the tumor is friable and pedunculated, with a cauliflower-like appearance. It is very unique in its ability to evade the host immune system. The definitive diagnosis is based on physical examination, and cytological findings typical of TVT of exfoliated cells obtained by swabs, fine needle aspirations or imprints of the tumor. Classical cytological findings includes very cellular samples with sheets of rounded cells with vacuolated cytoplasm, ovoid nucleus with one nucleolus, margined chromatin and frequent mitotic figures, Immunocytochemistry supports a leukocyte origin (vimentin, CD 45 and CD45RA positivity), with positive lysozyme and alpha-1-antitrypsin expression supportive of histiocytic origin. The cells have an abnormal karyotype with 59 instead of 78 chromosomes.

**References:**

- B. Borrell. How a contagious dog tumour went global. Nature News. 2014
- G Purohit. *Canine Transmissible Venereal Tumor: A Review*. The Internet Journal of Veterinary Medicine. 2008 Volume 6 Number 1.
- R Raskin. Skin and Subcutaneous tissues. In: *Canine and Feline Cytology*. R Raskin and D. Meyer. Second edition, 2010.

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Davis website by the end of the current month ([http://www.cldavis.org/lcpg\\_english.html](http://www.cldavis.org/lcpg_english.html)).