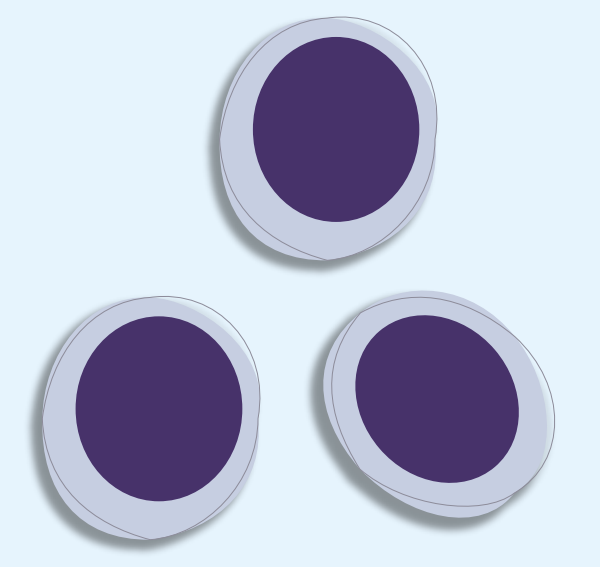


IMMUNOPHENOTYPIC STUDY

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INTRODUCTION

- Canine lymphoma is a common type of neoplasia that results from the uncontrolled proliferation of cells of the lymphoid system
- Although some breeds may be more susceptible, the disease has the potential to affect dogs of any breed and age
- This neoplasia is classified into B and T subtypes based on histomorphology and immunophenotyping

The aim of this study was to identify, by immunophenotypic analysis, the subtypes of lymphoid cells involved in the pathophysiology of canine lymphoma that influence the treatment, prognosis, and natural history of this disease

MATERIALS AND METHODS

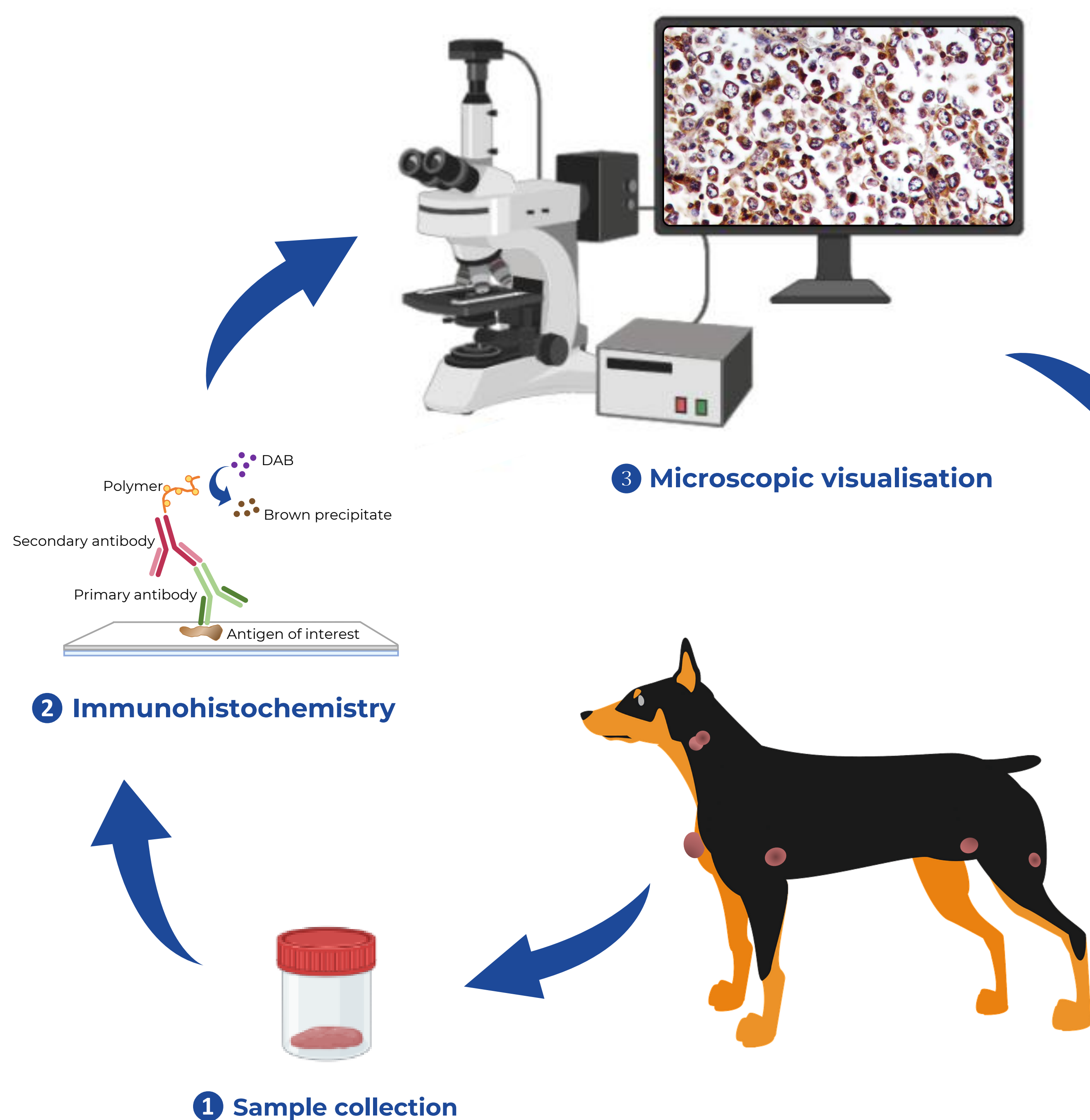


Figure 1 | Overview of the immunohistochemistry diagnostic process for lymphoma subtypes, informed by eighty cases at the UTAD's Histology and Pathology Laboratory. ① The tissue of interest is first fixed, paraffin embedded, and sectioned. ② The stored sections are processed (using deparaffinization for paraffin-embedded sections) for antigen retrieval and then immunoassayed using antibodies specific to the antigens (anti-CD3 and anti-PAX-5). Immunohistochemistry uses a combination of a primary and a secondary antibody. Detection is accomplished by using enzymes such as peroxidase and the chromogenic agent DAB. ③ Samples are visualized using microscopy.

RESULTS

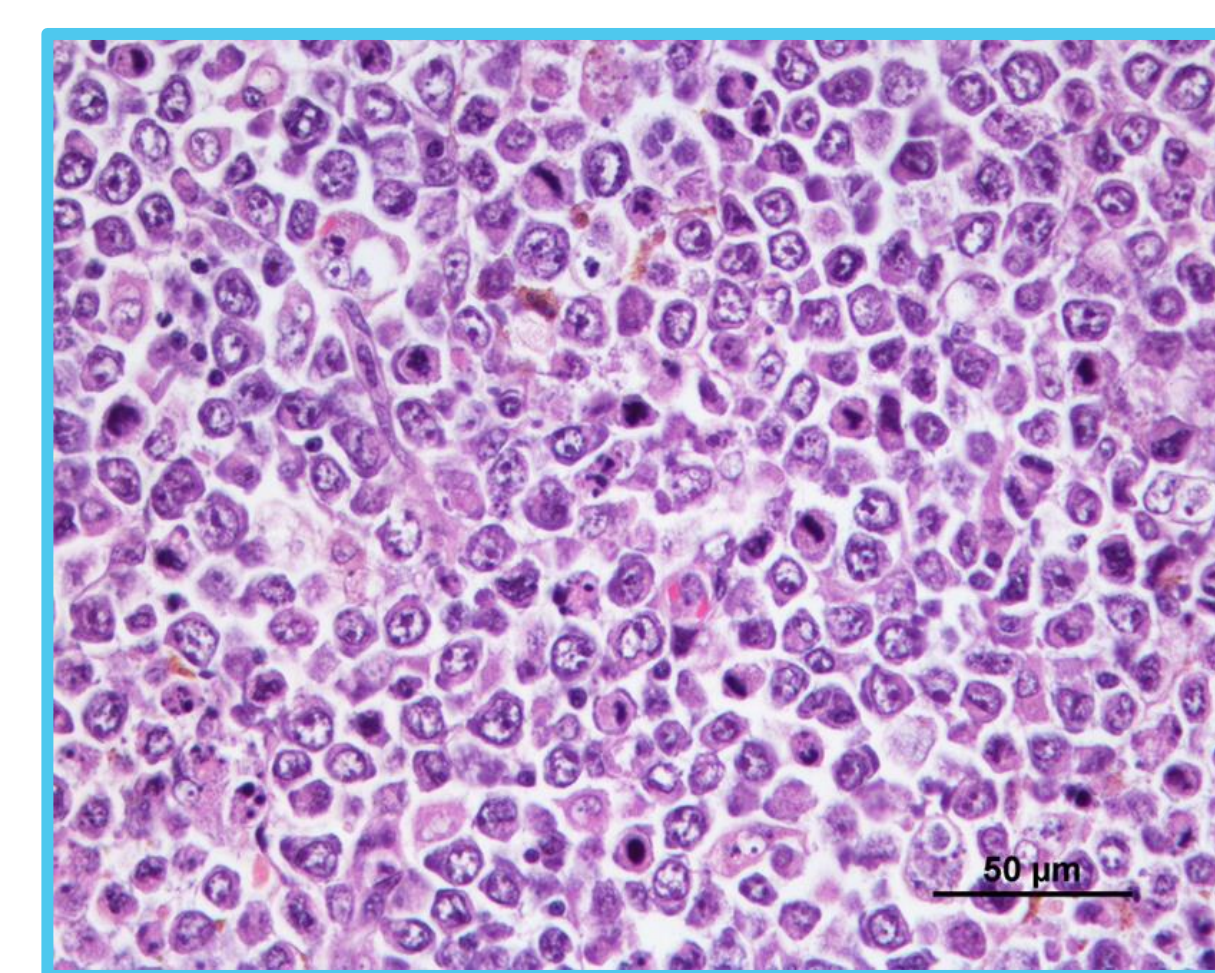


Figure 2 | Morphological aspect of a tissue with lymphoid cells proliferation. Haematoxylin and Eosin.

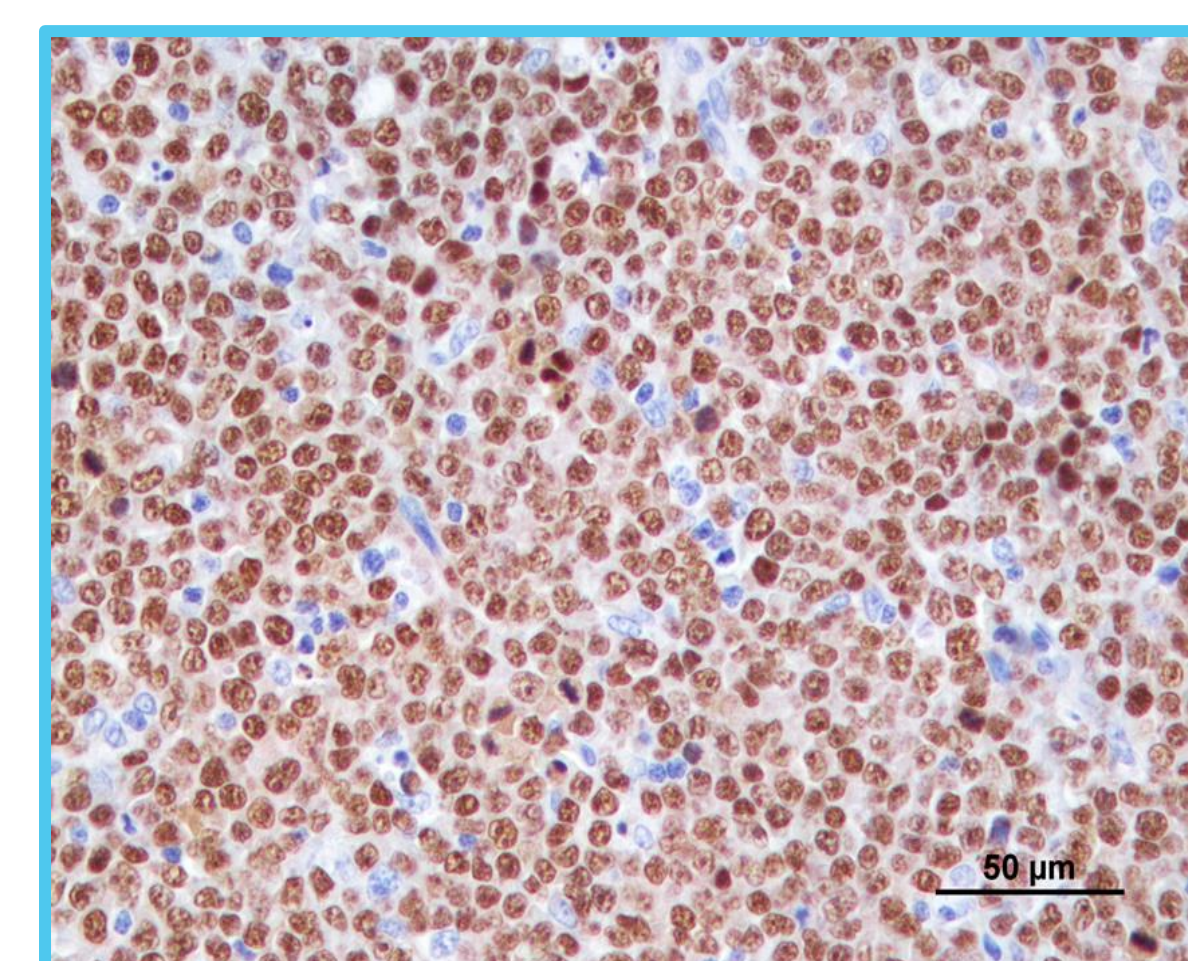


Figure 3 | Expression of CD3 positivity in a T-cell lymphoma. Contrast with Gill's haematoxylin.

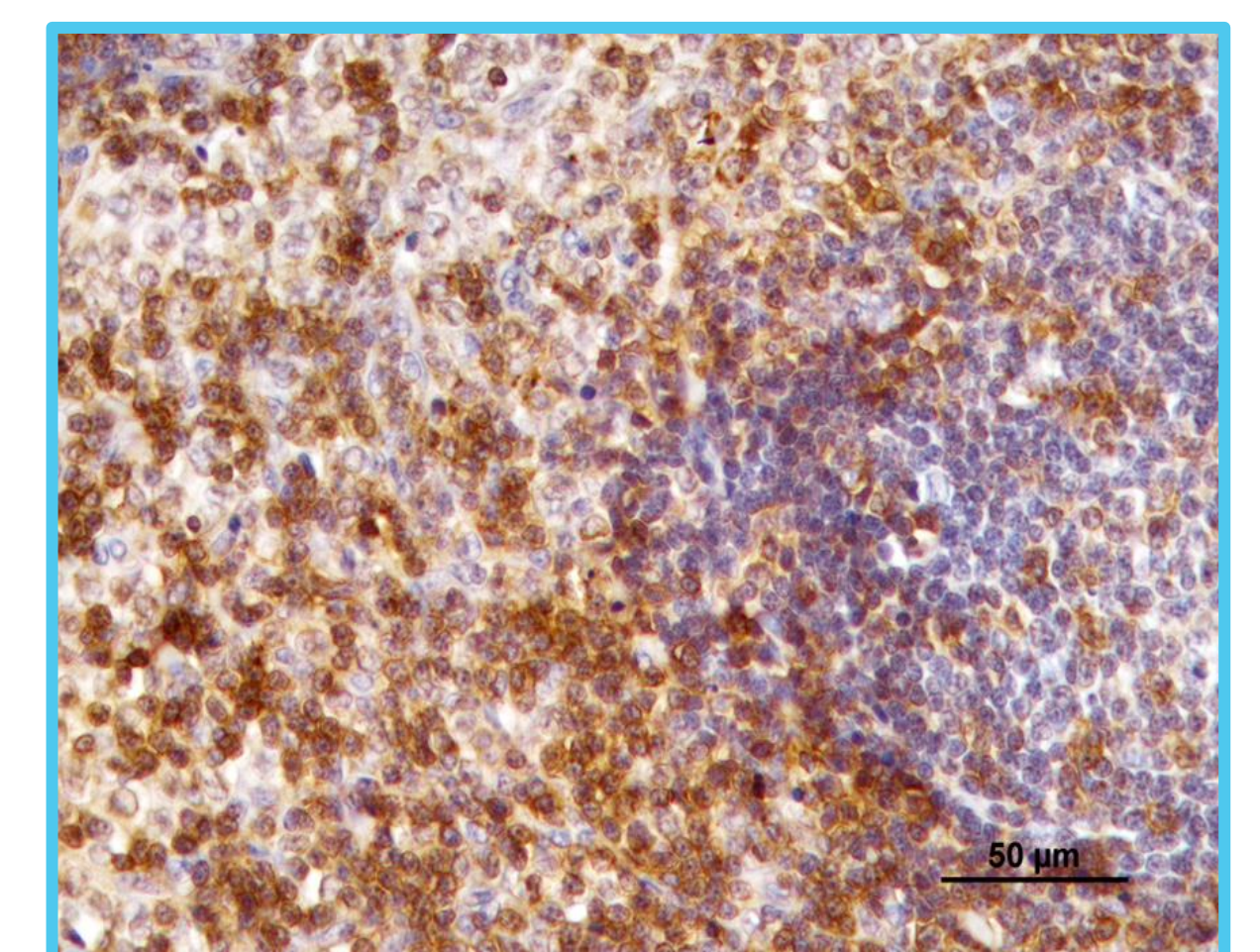


Figure 4 | Expression of PAX-5 positivity in a B-cell lymphoma. Contrast with Gill's haematoxylin.

- Canine lymphoma was more common in males (61%), with a median age of 7 years, and the Doberman was the most affected breed, followed by the Labrador
- On a total of 80 lymphoma cases:
 - 42 (52.5%) were T-cell
 - 38 (47.5%) were B-cell

CONCLUSIONS

- This study contradicts previous findings indicating dogs are more susceptible to developing B cell lymphomas
- Despite the unknown aetiology of canine lymphoma, these differences might be due to environmental and genetic factors
- The results need to be confirmed by more extended epidemiological studies, including the use of molecular diagnostic methods

Acknowledgments: To CECAV-UTAD, Vila Real, project UIDP/CVT/00772/2020, and to AL4Animals, project LA/P/0059/2020, both supported by FCT (Foundation for Science and Technology), Portugal.

Funding: This work was funded by R&D&I project "oneHcancer – One Health Approach in Animal Cancer", operation no.: NORTE-01-0145-FEDER-000078, co-funded by the European Regional Development Fund (ERDF) through NORTE 2020 (North Portugal Regional Operational Program 2014/2020).

