COMPARATIVE ANALYSIS OF CANINE LYMPHOMAS DIAGNOSED AT THE DEPARTMENT OF VETERINARY PATHOLOGY, FACULTY OF VETERINARY MEDICINE, UNIVERSITY OF ZAGREB

M. Hohšteter[*], L. Medven Zagradišnik[*], M. Matasović[†], I.C. Šoštarić-Zuckermann[*], B. Artuković[*], D. Huber[*], D. Vlahović[*] and A. Gudan Kurilj[*]

[*]Department of Veterinary Pathology, Faculty of Veterinary Medicine, University of Zagreb and [†]Vet Point, Veterinary Practice, Zagreb, HR

Introduction: Lymphomas are the most common canine haematopoietic tumours. This research presents the analysis of canine lymphomas diagnosed at the Department of Veterinary Pathology, Faculty of Veterinary Medicine, Zagreb (DVP). The aim was to gain insight into the incidence and characteristics of canine lymphoma in Croatia.

Materials and Methods: The research included records of the cytological (CY), histopathological (HP), immunocytochemical (ICC) and immunohistochemical (IHC) examinations of the DVP in the period 2009-2021.

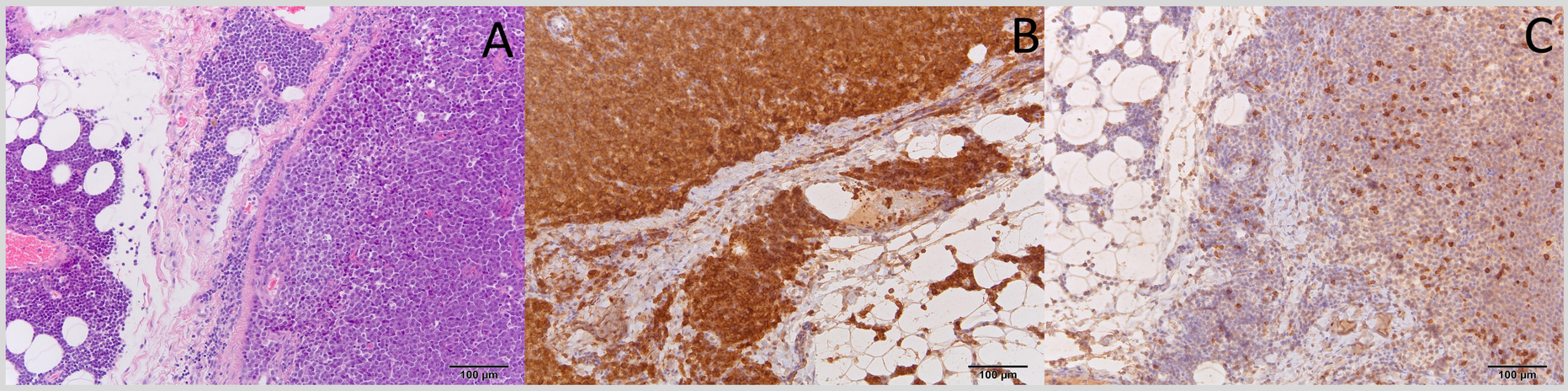

Figure 1. Dog, lymph node, lymphoma, multicentric, B-cell: A) HP, H&E; B) IHC, CD20; C) IHC, CD3.

Results: Lymphoma was diagnosed in 1.1% of dogs by CY, HP, and confirmed by ICC/IHC (Fig.1, 2, 3), and was suspected in 0.72% (without ICC/IHC confirmation). The majority of dogs (54%) were 5-9 years old (Fig. 4); 60.7% were males and 39.9% females (Fig.5).

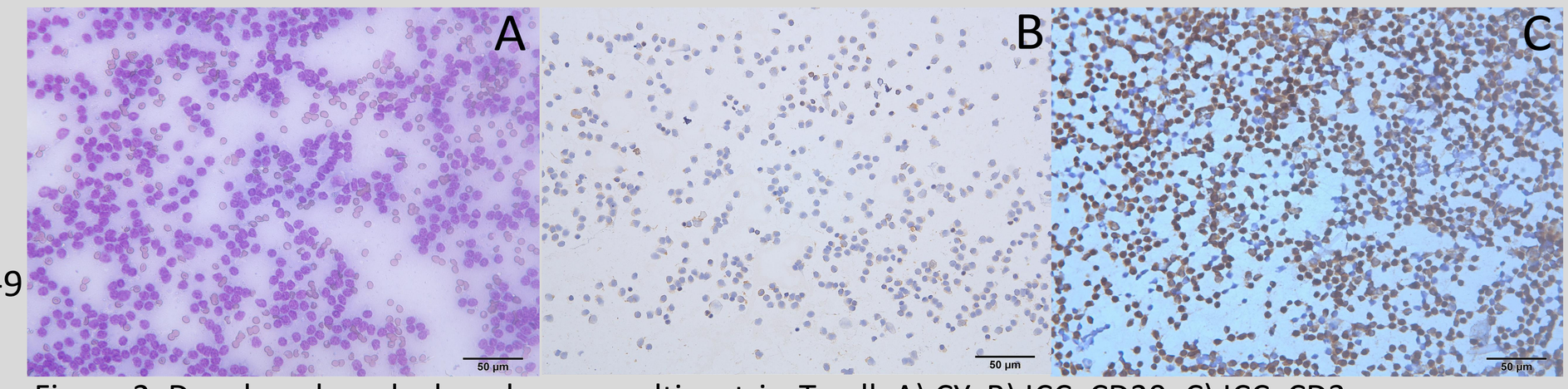

Figure 2. Dog, lymph node, lymphoma, multicentric, T-cell: A) CY; B) ICC, CD20; C) ICC, CD3.

Regarding breed, 26.0% were crossbreds, while 74.0% were purebred, most frequently Bouvier des Flandres (40%), Bullmastiff (6.9%), Shar Pei (6.5%), and Samoyed (4.9%). The Maltese (0.5%), West Highland and Yorkshire terriers (0.7%) had the lowest share of lymphoma. According to the anatomical location, the most common were multicentric (17.4%), and the rarest extranodal lymphoma (1.2%) (Fig. 6). Immunophenotyping was performed in 31.4%, and 50.0% were B-cell, 43.4% T-cell, 5.3% T-cell-rich B-cell and 1.3% non-T non–B cell lymphomas (Fig. 7).

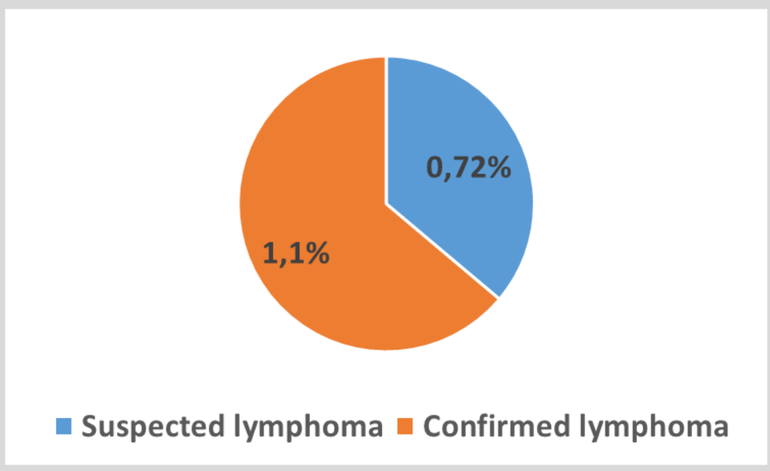

Figure 3. Ratio of confirmed and unconfirmed lymphoma.

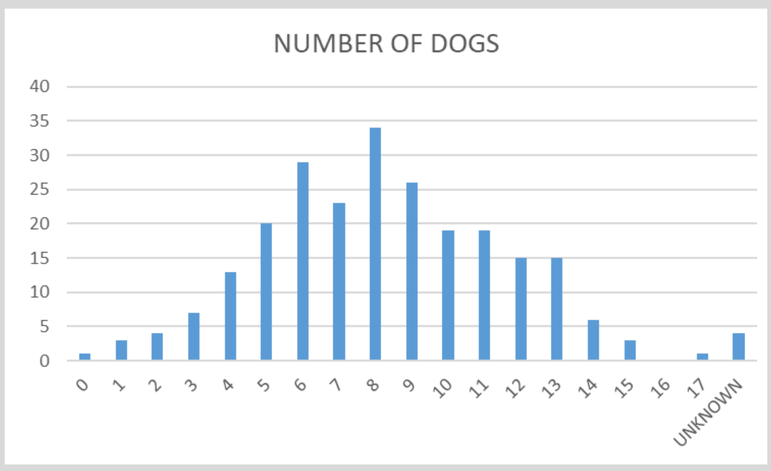

Figure 4. Number of dogs diagnosed with lymphoma according to the dog's age.

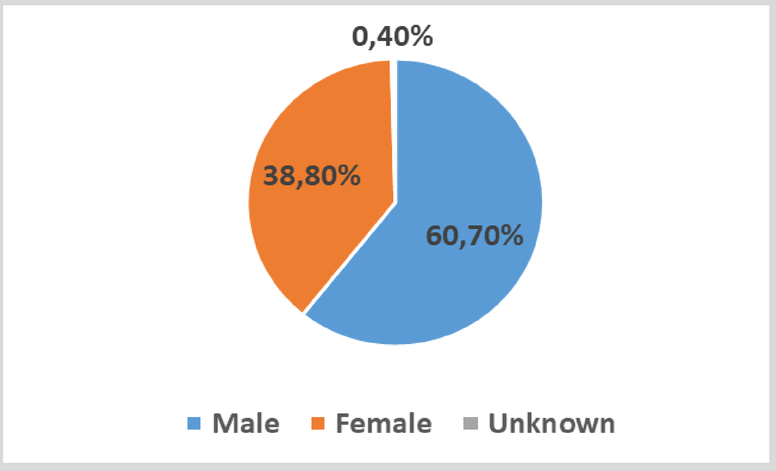

Figure 5. Gender ratio of dogs diagnosed with lymphoma.

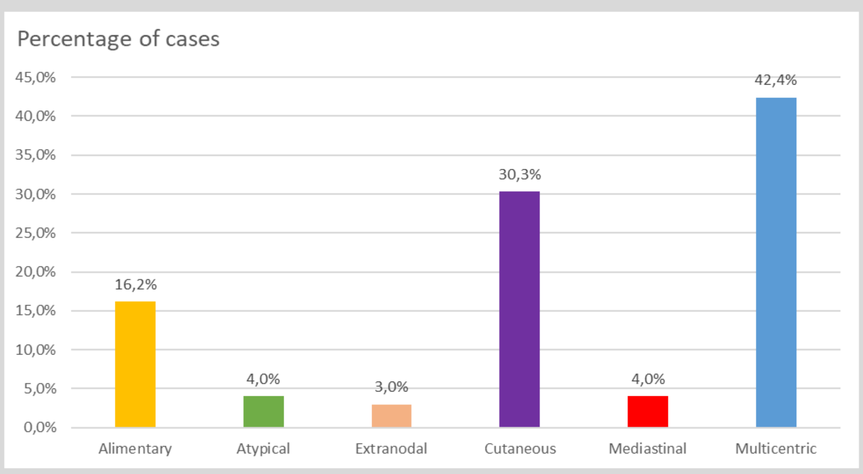

Figure 6. Distribution of lymphoma subtypes according to the anatomical classification.

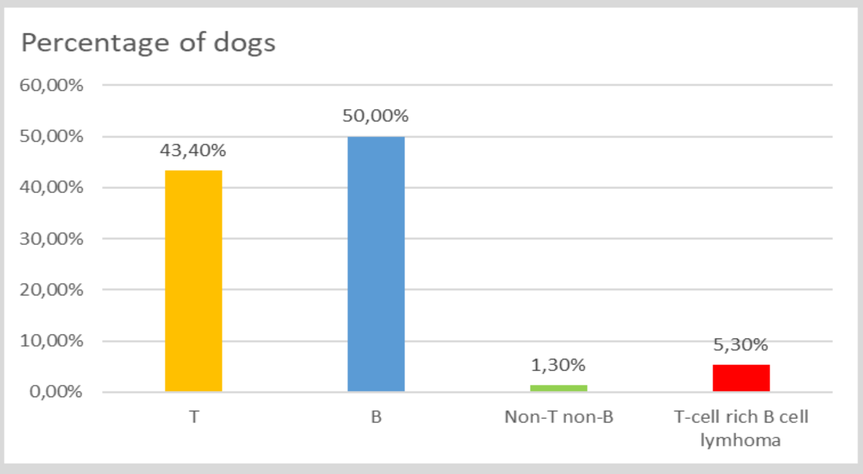

Figure 7. Distribution of lymphoma according to immunophenotype of neoplastic cells.

Conclusions: The distribution of lymphomas regarding age, sex and breed corresponds to the literature. As in the literature, B-cell lymphomas were most prevalent but with a lower percentage. However, immunophenotyping of a larger number of lymphomas would probably increase the proportion of B-cell lymphomas. Owners should be encouraged to agree to immunophenotyping for accurate diagnosis, allowing a more accurate prognosis and therapy.