

## Canine cutaneous mast cell tumor: a retrospective study

### Mastocitoma cutâneo canino: estudo retrospectivo

DOI: 10.34188/bjaerv5n4-069

Recebimento dos originais: 05/082022

Aceitação para publicação: 30/09/2022

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**RESUMO**

O mastocitoma cutâneo (MCT) é uma neoplasia de células redondas caracterizada pela proliferação de mastócitos e possui uma grande variação de potencial metastático. O presente estudo teve como objetivo analisar a frequência de MCT cutâneo canino quanto à raça, sexo, idade, localização anatômica e grau histológico. Os dados foram obtidos dos registros dos casos diagnosticados entre 2014 e 2018 na cidade de Niterói - RJ. Os animais mais acometidos foram os sem raça definida (SRD) seguidos da raça Boxer e Labrador. Os locais mais acometidos foram membros, região anogenital e abdome. O MCT cutâneo canino é mais frequente no grau I, na população canina mais velha e nos animais sem raça definida.

**Palavras-chave:** Cão, Tumor de células redondas, Pele

**ABSTRACT**

Cutaneous mast cell tumor (MCT) is a round cell neoplasm characterized by mast cell proliferation and has a wide range of metastatic potential. The present study aimed to analyze the frequency of canine cutaneous MCT about the breed, sex, age, anatomical location, and histological grade. Data were obtained from the records of cases diagnosed between 2014 and 2018 in the city of Niterói - RJ. The most affected animal breeds were mixed breed followed by Boxer and Labrador. The most affected sites were limbs, ano-genital region and abdomen. The canine cutaneous MCT is more frequent in grade I, in older canine population and in mixed breed animals.

**Keywords:** Dog, Round cell tumor, Skin

**1 INTRODUCTION**

Cutaneous mast cell tumor (MCT) is a high-frequency tumor in dogs, the percentage can reach 21% of all cutaneous neoplasms in dogs (KIUPEL; CAMUS, 2019). This frequency varies according to the breed of dog, ranging from 2.55% to 18.36% (ŚMIECH et al., 2019). Mast cell tumor has a high metastatic and growth capacity, although the size of the tumor does not influence the probability of metastasis (REYNOLDS et al., 2019). The aim of the study was to analyze the frequency of canine cutaneous MCT about the breed, sex, age, anatomical location, and histological grade.

## 2 METHODS

The records of all cases between 2014 and 2018 at Niterói - RJ were the source of the data. The data were stored and analyzed using software Excel® e Bioestat®5.3. Breed, sex, age, anatomic location and histologic grade (PATNAIK; EHLER; MACEWEN, 1984) were the analyzed variables.

## 3 RESULTS AND DISCUSSION

Most of the canine cutaneous MCT cases were from females with 52,1% (37/71) and 8,9 of average age. Mixed breed, Boxer and Labrador with 41,5% (29/71), 14,3% (10/71) e 10% (7/71), respectively, were the most common breeds (Figure 1). The limbs with 34,3% (24/71), ano-genital and abdominal area, both with 14,28% (10/71), were the most common locations (Figure 2). Grade I with 49,3% (35/71) was the most common grade. Grade II had 42,25% (30/71) and III 8,45% (6/71) of percentage, respectively. Metastasis was found in five cases 83,33% (5/6) of cutaneous MCT grade III that the regional lymph node was also evaluated. All metastasis were in grade III MCT. This result corroborate with Stefanello et al. (2015) who found that dogs with grade III MCT are at significantly more risk to have metastases than the dogs with grade II or I. The present study also corroborates with Costa et al. (2017) that mixed breed had the highest prevalence of MCT. As in the study by Smiech et al. (2019), the Boxer and Labrador breed also highlighted the number of animals positive for mast cell tumors, indicating that these two breeds are essential in the epidemiology of this type of tumor. Limbs were the most prevalent location for MCT, different from Costa et al. (2017) findings that the genital area was the most affected. Among all the parameters evaluated in this study, the grade was the most important in the evaluation of a possible survival. That result corroborates with the mast cell tumor clinical and survival outcomes (TAMLIN et al., 2022).

## 4 CONCLUSIONS

There was no major difference between the male and female dogs. Adult dogs, with age close to senility were the most affected with cutaneous MCT. The mixed breed due to its high prevalence in the studied canine community was the most affected and the histological grade I is the most frequent in this same locality.

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Figure 1: Percentage of breeds affected with mast cells tumour in dogs between 2014 and 2018 at Niterói – RJ.

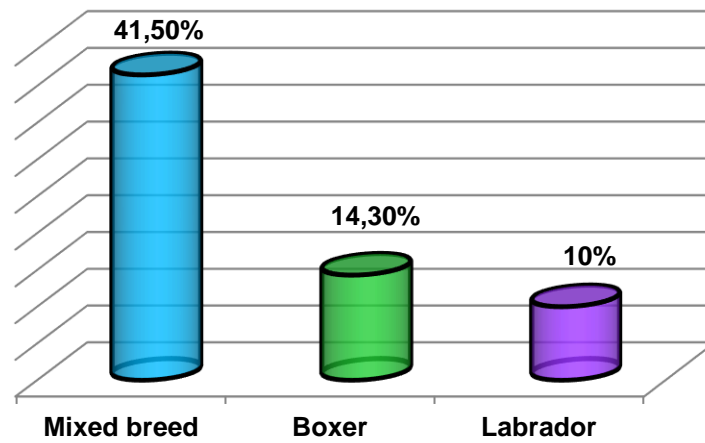


Figure 2: Percentage of different areas affected with mast cells tumour in dogs between 2014 and 2018 at Niterói – RJ

