METHODS

Biopsies from 92 dogs with TCC were routinely processed for histopathology and graded into low grade or high grade, according to Meuten & Meuten (2017). DNA-isolation from paraffin embedded material was performed with the use of commercially available sets. Exon 15 was examined for the presence of the BRAF variant c.1784T > A by TaqMan® SNP Assay.

RESULTS

64/92 TCCs were classified as high grade and 28/92 as low grade. BRAF mutation was found in 33/64 (51.5%)

of the high grade and in 12/28 (42.8%) of low grade TCCs.

STATEMENT (CONCLUSIONS)

BRAF variant analysis is a new, highly specific diagnostic test for TCC. However, it is important to note that only identification of the mutation is diagnostic. It must be taken into consideration that histologically low grade TCCs showed the mutation in only about 40% of the cases. Further studies of clinical outcome are ongoing to evaluate the prognostic relevance of this finding. Additional factors, such as breed and anatomical site of the neoplasm may also influence the prevalence of BRAF mutation.

Ki67 index in canine dermal mast cell tumours: do we only identify proliferating mast cells?

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OBJECTIVES

Ki67 index is considered to be a prognostic marker for canine mast cell tumours (MCTs). High Ki67 index is associated with shorter survival times, however long-term outcomes can also be observed. Ki67 index is determined by counting the number of Ki67 positive cells but this method does not discriminate proliferating mast cells from other proliferating cells. Our objective was to

assess the "true" number of Ki67 positive mast cells in canine MCTs.

METHODS

Patnaik grade-II MCTs were stained with a double KIT/Ki67 immunohistochemistry (IHC) technique. Mast cells were defined as "KIT positive (+)" and stromal cells were defined as "KIT negative (-)" cells. Proliferating cells were Ki67+ and non-proliferating cells were Ki67-. The proportion of Ki67+/KIT+, Ki67+/KIT-, Ki67-/KIT+, Ki67-/KIT- was evaluated.

RESULTS

Twenty-one MCTs were assessed. The median percentage of mast cells per MCT was 56.3% (9.7–87.6%). Ki67 index was correlated with both proliferating mast cells and proliferating stromal cells. There was no correlation between the number of proliferating mast cells and the number of proliferating stromal cells. In seven MCTs (33%), proliferating stromal cells outnumbered proliferating mast cells. Among the eight MCTs with high Ki67, two had more proliferating stromal cells than proliferating mast cells and the percentage of proliferating mast cells was low.

STATEMENT (CONCLUSIONS)

Ki67 index can overestimate the number of proliferating mast cells and double KIT/Ki67 IHC allows to determine the "true" number of proliferating mast cells. This method might provide better prognostic information and should be prospectively evaluated in canine MCT.