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## Canine Cutaneous Mast Cell Tumor: Biologic Behavior and Its Correlation with Prognostic Indicators

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### ABSTRACT

Cutaneous mast cell tumor (MCT) shows a variable biological behavior in dogs and may present either as solitary masse that can be treated and cured with surgical removal or as a systemic metastatic and fatal disease. Histological grade, KIT pattern and proliferative index are typically prognostic factors in MCTs. In the present study, we have investigated correlation between clinical data (breed, age, gender, tumour location, tumor size, time before surgery, number of tumours, occurrence of metastasis and recurrence), cellular proliferation (Ki-67, mitotic index), intratumoural microvessel density (IMVD) and apoptotic index with the histological grade and KIT pattern. 28 tumors, from 20 dogs with cutaneous MCT were evaluated. There was association between histological grade, IMVD, tumor ulceration and number of tumors. A significant increase of Ki-67 expression and mitotic index was observed in MCTs with cytoplasmic KIT staining pattern. Patnaik histological grade system was related to mitotic index. Histological grade in canine cutaneous MCT should not be assessed as the only prognostic factor, but associated with KIT pattern, IMDV, cellular proliferation, presence of tumour ulceration, number of tumours, recurrences and metastases.

### KEYWORDS

Dog; Mast Cell Tumor; Prognosis; Biologic Behavior

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