



Interleukin-8 expression associated with canine mammary tumors

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ABSTRACT. The use of prognostic markers for mammary cancer is important for routine diagnosis and research. Interleukin-8 (IL-8) is a chemotactic cytokine, produced by several cell types in response to inflammation. The expression, regulation and function of IL-8 in dogs are little known. Recent studies have associated angiogenesis and inflammatory processes with tumor malignancy. We investigated a possible correlation between IL-8 expression and mammary tumor prognosis in female dogs. IL-8 expression was measured in 50 dogs with mammary neoplasia by immunohistochemistry and real-time PCR. Immunohistochemical staining was done with anti-IL-8 antibodies and PCR amplifications were performed in a 7500 Fast Real-Time PCR system. Gene expression stability was analyzed by the geNorm software. Quantitative real-time PCR showed that IL-8 expression decreased in malignant mammary cells compared to normal mammary tissue, while weak immunostaining was associated with a diagnosis of carcinoma. Complementing earlier studies on IL-8 expression in several types of

cancer, including mammary cancer, we conclude that IL-8 has potential for use as a prognostic marker for canine mammary neoplasia.

Key words: Interleukin-8; Mammary cancer; Immunohistochemistry; Real-time PCR; Prognosis