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Evaluation of Collection and Distribution of Samples for Histological, Stereological Analysis and Cell Culture of Canine Mast Cell Tumors

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ABSTRACT

Objective: To collect high quality, representative tissue material from tumors and manage its distribution to different laboratories. Design: Prospective controlled study. Animals: Thirty-six dogs with mast cell tumors. Procedures: The samples were submitted for the following analyses: stereology; histopathology; cell culture; breakdown for cytogenetic analysis of chromosomes (based on the Boxer breed published genome); Cell lysis for Real Time PCR and quantification of gene expression of CX 43, 32 and E-cadherin in canine mast cells. Results: Cytogenetic chromosome analysis, 90.9% of the samples were considered to be of good quality. For gene expression quantification of CX 43, 32 and E-cadherin in canine mast cell tumors (MCT), 95.5% of samples were considered to be of good quality. Conclusions and Clinical Relevance: We seek to assess the importance of surgical collection and post-surgical tissue preparation on laboratory testing by collecting surgical material appropriately to allow accurate diagnosis and reliable clinical prognosis and minimize errors caused by inadequate preparation of samples.

KEYWORDS

Mast Cell Tumor; Oncologic Surgery; Canine; Tumor Collection; Stereological Analysis

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