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## Implication of CA 15-3, CEA and mammary gland temperature in diagnosis and management of canine mammary tumor

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This study was conducted to explore the diagnostic potential of serum biomarkers such as CA 15-3 and CEA, along with mammary tissue infrared temperature in canine mammary tumor (CMT). Total thirty five suspected cases of CMTs were evaluated by histopathology. Further CA 15-3, CEA, and mammary tissue infrared temperature value was figured out and correlated with clinical picture of CMTs. Mammary tissue infrared temperature as well as CA 15-3 and CEA values were significantly higher in dogs with CMTs than healthy dogs. These values were also higher in malignant cases as compared to benign cases. Diagnostic sensitivity of CA 15-3, CEA and infrared thermography were 94.29%, 54.28% and 88.57%, whereas specificity were 87.5%, 87.5% and 100%, respectively for CMTs. CA 15-3 strongly associated with tumor progression, malignancy, CEA level, mammary tissue temperature, number of mammary gland involvement, ulceration, tumor size and tumor weight. Post-surgery reduction in serum concentration of tumor markers and mammary gland temperature were recorded in recovered animals. Thus, expression of CA 15-3 and CEA tumor markers along with mammary tissue infrared temperature could provide valuable diagnostic significance regarding nature of tumor and start of treatment regimen in CMTs.

**Keywords:** Canine mammary tumor, CA 15-3, CEA, Infrared mammary temperature, Surgico-chemotherapeutic management

Canine mammary tumors (CMTs) represent a very... Recently, new diagnostic options have emerged