



## KEY WORDS

- ✓ Canine mammary tumors
- ✓ Neoadjuvant chemotherapy
- ✓ Doxorubicin/cyclophosphamide
- ✓ Paclitaxel
- ✓ Systemic inflammatory markers

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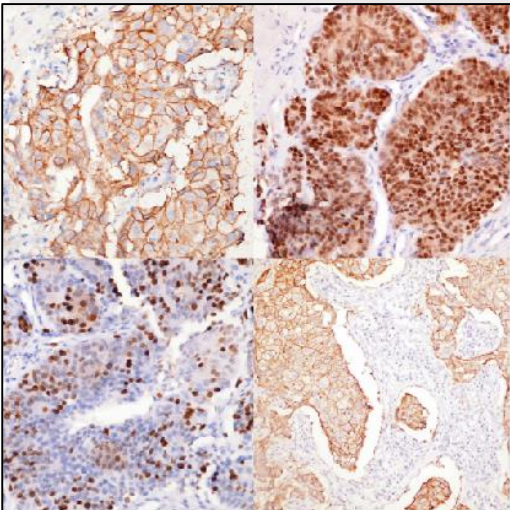
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## DETERMINATION OF THE PROGNOSTIC VALUE OF SYSTEMIC INFLAMMATORY MARKERS IN PREDICTING RESPONSE TO NEOADJUVANT CHEMOTHERAPY IN CANINE MAMMARY TUMORS

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## THESIS ABSTRACT

In this study, we aimed to investigate firstly, the role of inflammation in the etiopathogenesis of canine mammary tumors (CMTs) and secondly, the prognostic value of some systemic inflammatory markers (neutrophil/lymphocyte ratio (NLR), lymphocyte/monocyte ratio (LMR), platelet/lymphocyte ratio (PLR), albumin/globulin ratio (AGR), systemic immune-inflammation index (SII) and prognostic nutritional index (PNI) in the response to neoadjuvant chemotherapy (NAC) in CMTs with different molecular characteristics (estrogen, progesterone, HER2, Ki-67 and caspase-3) compared to those with malignant CMT. It was concluded that the balance between the immune and inflammatory systems is disrupted in dogs with CMT and circulating neutrophil counts and AGR value may be diagnostically useful to predict malignancy. There were most partial responses to NAC therapy and the best responses were in the triplenegative molecular subtype. NLR and PNI parameters were found to be useful markers to predict outcome in dogs responding to NAC therapy.

## APPLICATION AREAS OF THE THESIS RESULTS

It has been shown that an increase in systemic inflammation occurs in benign CMTs and this increase becomes more pronounced in the presence of malignant CMTs. It was also found that circulating neutrophil counts and AGR value may be useful in differentiating benign and malignant disease. It was concluded that the balance between immune and inflammatory responses in dogs with CMT is in favor of inflammation as the disease becomes malignant. It was shown that NLR value was lower and PNI value was higher in dogs that responded to NAC treatment compared to those that did not, and it was found that low NLR and high PNI values can be used as positive prognostic indicators for NAC treatment results.

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