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# Detection and clinical significance of plasma glutathione-S-transferases in dogs with lymphoma

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## Abstract

**Background:** The objective of this study was to determine if glutathione-S-transferases were detectable in the plasma of dogs and to determine if concentrations of the a- and pi-subtypes were related with tumor response to single agent anthracycline (e.g., doxorubicin) chemotherapy in dogs with lymphoma.

**Materials and methods:** Plasma was obtained from 10 healthy, normal dogs and from 11 dogs with lymphoma before treatment, 3 weeks after 1 dose of doxorubicin and every 3 weeks thereafter until relapse (the physical detection of recurrent and enlarged peripheral lymph nodes). Plasma concentration of alpha and pi-GST was determined by use of an ELISA technique with well plates pre-coated with IgG[anti-Canine alpha-GST or anti-Human pi-GST].

**Results:** Mean plasma alpha-GST concentrations did not significantly decline after 1 dose of doxorubicin chemotherapy; however, mean plasma alpha-GST concentrations were markedly increased ( $p < 0.05$ ) at the time of relapse (the physical detection of recurrent and enlarged peripheral lymph nodes).

**Conclusions:** In this study we show that a relationship exists between the plasma alpha-GST concentration and the clinical response of dogs with lymphoma to doxorubicin chemotherapy.

## Related information

[PubChem Compound \(MeSH Keyword\)](#)

## LinkOut – more resources

### Research Materials

[NCI CPTC Antibody Characterization Program](#)

### Miscellaneous

[NCI CPTAC Assay Portal](#)