

Title:

Indirect Measurement of Dihydropyrimidine Dehydrogenase Activity in Dogs and Cats

Investigators:

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Study description:

The purpose of this study is to determine the amount of dihydropyrimidine dehydrogenase (DPD) activity in healthy dogs and cats, tumor-bearing dogs and cats, and dogs and cats with kidney disease. DPD is an enzyme required for the metabolism of certain chemotherapeutic agents used for cancer treatment and immunosuppression after organ transplantation (such as kidney transplant). To participate in the study, one small blood sample (approximately 2-3 mL of blood) will be taken once from your pet if his or her blood is going to be drawn for other diagnostics. The sample will be analyzed by assay to indirectly estimate DPD activity. The study will pay for the cost of obtaining this additional blood sample and related DPD laboratory tests.

Duration of study:

The study is ongoing and will continue until approximately 30 dogs and cats of any sex or breed are enrolled in each group: normal, tumor bearing, and renal insufficient. It is expected that enrollment will be complete by June 2010.

Potential benefits to veterinary medicine:

This study has the potential to have a significant impact on the field of veterinary transplantation and oncologic care, by providing valuable information about the DPD activity in dogs and cats. With this information, we hope to incorporate the use of chemotherapy drugs requiring this enzyme for metabolism into our cancer and transplant patients.