



Measuring chemotherapy drug resistance in dogs with T-cell lymphoma

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Morris Animal Foundation-funded researchers from North Carolina State University are using state-of-the-art DNA technology to improve the outcome of dogs with T-cell lymphoma. Although most dogs with T-cell lymphoma temporarily attain remission when treated with chemotherapy, small numbers of drug-resistant cancer cells remain. Measuring the changing levels of these cancerous T-cells could provide valuable new information on the effectiveness of different chemotherapy agents, allowing for tailored treatments for individual patients.

The research team first studied the diversity of T-cells in the blood of both normal and T-cell lymphoma dogs to establish a robust baseline for chemotherapy-treated dogs for the study. Four canine lymphoma patients are now enrolled in the clinical trial and all dogs are receiving standard-of-care multidrug chemotherapy.

In the coming year, the team aims to recruit additional T-cell lymphoma canine patients and complete all sample collection and processing for final analysis. Ultimately, the research team hopes to provide veterinary oncologists with the tools needed to treat dogs with T-cell lymphoma using patient-customized, adaptive chemotherapy protocols that should result in longer remission and survival times. (D16CA-056)