Molecular Combinatorial Therapy for Canine Malignant Gliomas

Purpose

To determine the safety and effectiveness of a new chemotherapy drug and drug delivery method in the treatment of brain tumors (gliomas) in dogs.

Background

This clinical trial is a collaboration between the Virginia-Maryland Regional College of Veterinary and the Thomas K. Hearn Brain Tumor Research Center at the Wake Forest School of Medicine. The treatment administered in the trial involves a procedure termed Convection Enhanced Delivery (CED) of molecularly targeted cytotoxins, which are types of chemotherapeutic drugs, to the patient’s brain tumor. The chemotherapeutic drugs used in this trial are unique in that they are designed to affect only cancerous cells, and not normal brain tissue. Previous generations of one of the drugs (IL-13PE38QQR) used in this trial have been used safely in human brain tumor clinical trials.

Further information about CED can be found here: http://www.vetmed.vt.edu/research/rossmeisl/convection-enhanced-delivery.asp

Further information about molecularly targeted cytotoxins can be found here: http://www.vetmed.vt.edu/research/rossmeisl/molecularly-targeted-cytotoxins.asp

Eligibility

• Dogs of any age, breed, or sex > 3 and < 45 kg body weight;
• Clinical signs of mild to moderate neurologic dysfunction referable to the brain;
• MRI evidence of a single telencephalic intra-axial mass lesion consistent with a glioma;
• No clinical or other diagnostic evidence of other significant systemic disease.

Exclusion Criteria

• Dogs that are not expected to survive for the length of the study period based on clinical progression of tumor
• Dogs that have received immunotherapy in the previous 6 months
• Dogs that have received cytotoxic (standard) chemotherapy in the previous 6 weeks
• Dogs that have had surgery in the previous 6 weeks
• Dogs that have received radiation therapy
• Dogs with uncontrolled seizures

Study Design

The treatment administered in the trial involves a procedure termed Convection Enhanced Delivery (CED) of molecularly targeted cytotoxins, which are types of chemotherapeutic drugs, to the patient’s brain tumor. CED is performed by inserting specialized catheters directly into the tumor, and slowly infusing the drugs over a several hour period. Enrolled dogs typically remain in the hospital for 5-7 days for a biopsy procedure, the CED procedure, and post-treatment recovery. Dogs will return for outpatient recheck MRI examinations every 2-3 months for up to one year.

Compensation

Owner is responsible for the cost of obtaining an MRI to confirm diagnosis. Once the diagnosis is confirmed and the dog is enrolled, all treatment and follow-up examinations related to this study will be provided at no cost during the study period. Owners are responsible for travel-related expenses and medication costs associated with ongoing seizure control, if required.

Contact

To begin the enrollment process, please complete the consultation form online: https://virginiatech.qualtrics.com/SE/?SID=SV_2ct6Cm6EegrTga1

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If your query is urgent, please call the Small Animal Hospital on (540) 231-4621 and ask for the neurologist on duty.