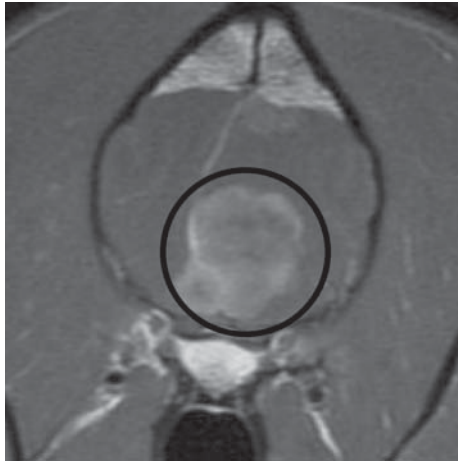


## How can I learn more about the program and clinical trials?

To learn more about the canine brain tumor clinical trials program, visit [www.braintumorlab.com](http://www.braintumorlab.com) and click on "For Dog Owners."



## How do I schedule an appointment for my dog to have a brain scan?

Call the small animal surgery appointment line at 612-625-8755 or 612-626-VETS (8387) for an appointment with Dr. Pluhar or the Small Animal Surgery or Neurology service. In most cases, your dog will need to be examined by a doctor and have blood work prior to scheduling any brain imaging studies.



## About the University of Minnesota College of Veterinary Medicine

The College of Veterinary Medicine improves the health and well-being of animals and people by providing high-quality veterinary training, conducting leading-edge translational research, and delivering innovative veterinary services. The College's faculty is nationally and internationally recognized for teaching and research excellence. Areas of research strength include infectious disease, genomics, comparative medicine, public health, epidemiology, and dairy, swine, and avian medicine.



## About the Veterinary Medical Center

The Veterinary Medical Center (VMC) has served the community for more than a century. It is the most advanced, full-service referral care center for large and small animals in Minnesota. The VMC sees more than 35,000 cases annually, with specialists available in all areas of medicine and surgery. More than 50 of the veterinarians on staff have undergone several years of additional training to become board-certified specialists in a particular area of veterinary medicine.

## About the Masonic Cancer Center

The Masonic Cancer Center is one of 41 comprehensive cancer centers in the United States designated by the National Cancer Institute for cancer research, treatment, and education. Its mission of advancing knowledge and enhancing care is fostered by creating a collaborative research environment focused on the causes, prevention, detection, and treatment of cancer; applying that knowledge to improve quality of life for patients and survivors; and sharing its discoveries with other scientists, students, professionals, and the community.

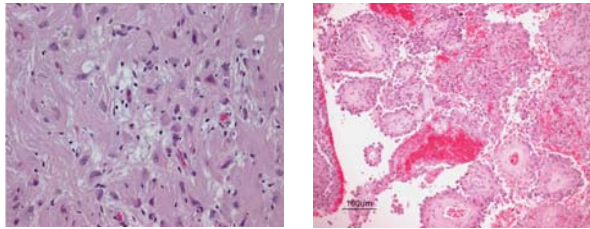
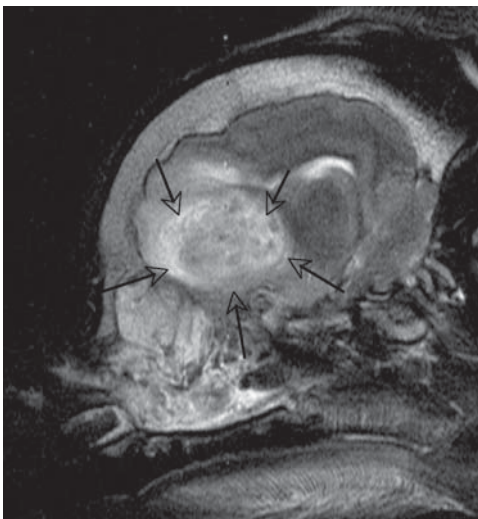
# Canine Brain Tumor Clinical Trials Program



## Brain tumors in dogs

Brain tumors occur more frequently in dogs than in people. In fact, brain tumors are about 10 times more prevalent in dogs. Despite common misconceptions, many of the brain tumors that develop in dogs can be successfully controlled while maintaining good quality of life. However, due to the advanced age of many of these patients and the high cost of treatment, most of these tumors go undiagnosed and untreated. Often, owners choose to humanely end their pet's suffering through euthanasia.

The first step in making an informed decision about whether to treat a dog's brain tumor is to determine which type of tumor the animal has. Tumors can range from "benign" meningiomas to the more malignant gliomas, both of which recur after surgery. Dogs with meningiomas and gliomas have been treated by the canine brain tumor clinical trials program with success. These new treatments aim to prevent tumor recurrence using a combination of surgery, gene therapy, and vaccine therapy. These treatments will have far-reaching implications in the future treatment of brain cancer in dogs.



## What is the canine brain tumor clinical trials program?

The canine brain tumor clinical trials program is a collaborative effort of the University of Minnesota's Veterinary Medical Center and Masonic Cancer Center. Medical researchers and veterinarians work together to diagnose and treat brain tumors in dogs with breakthrough therapies. Eventually, these novel therapies could also be used to help people. The program offers several unique therapies, but often the best course of treatment may be a combination of therapies. To maximize the likelihood of success, one or more of the following treatment courses may be used:

- Surgery to remove as much of the tumor as possible
- Localized radiation administered to the tumor
- Chemotherapy administered orally, intravenously, or directly into the brain
- Gene therapy administered to the tumor site
- Anti-cancer vaccines, also called immunotherapy, given by injection into the skin

## Which dogs are eligible for the program?

The canine brain tumor clinical trials program will consider any dog that has a tumor that originated in the brain. In addition, both the dog and dog owner must have the ability to complete the trial, which generally lasts for about six months. During this time, your dog will need to return to the Veterinary Medical Center at least twice following the initial treatment. Some trials that involve radiation therapy require many repeated visits.

## How much does it cost?

Costs are minimal for dogs accepted to one of three clinical trials. The canine brain tumor clinical trials program will pay the vast majority of costs regardless of which trial a dog is enrolled in. The program covers the costs of treatment, including surgery and supportive care, while the dog is enrolled in a trial. Owners are generally responsible for initial diagnostic testing costs, but even these can sometimes be waived. If funding by private and public sources were not available to meet these expenses, total costs could run as high as \$20,000 per dog.

## What are the symptoms of a brain tumor?

Typical symptoms of a brain tumor depend on the location of the tumor and commonly include seizures, weakness on one side of the body, loss of appetite, and sudden changes in behavior. The primary way to determine whether a dog's symptoms are due to a brain tumor is to perform advanced brain imaging, such as computed tomography (CT) or magnetic resonance imaging (MRI). If a suspicious mass is present and your dog's veterinarian suspects a brain tumor, further tests may be needed before discussing treatment options. The only way to definitively diagnose whether a brain mass is a tumor is with microscopic examination of a biopsy.

## What are the risks and benefits of enrolling my dog in the program?

A team of doctors will help you decide which clinical trial is most appropriate for your dog. This will be based partly on odds of success as well as which protocol is safest for your pet. Most dogs, however, will need to undergo brain surgery to remove the tumor. While there are always risks involved with surgery, particularly for geriatric dogs, leaving the tumor untreated is fatal.

The potential benefits of treatment include pain relief, improved neurological function and quality of life, extended life, and an increase in energy and alertness. While long-term data is not yet available, the dogs that have already been treated have responded well. However, as with any clinical trial, improvements in health cannot be guaranteed.