

Brain Tumors

Who Can Be Affected?

Both dogs and cats can be affected by brain tumors. Primary brain tumors, originating from the brain tissues themselves, are encountered more often than secondary or metastatic brain tumor(s). Primary and secondary brain tumors can occur in any breed of dog or cat and both males and females can be affected. Brain tumors are encountered more often in middle-aged to older dogs and cats, most being over 9 years old at the time of diagnosis.



Types of Brain Tumors

Meningioma is the most common primary brain tumor found in both dogs and cats; it arises from the tissue lining the brain. Gliomas are another type of primary brain tumor often seen in dogs but less so in cats. Other types like choroid plexus tumors, medulloblastoma, primary CNS lymphoma, histiocytic sarcoma, and neuroblastoma are occasionally noted. Long-nosed dog breeds, such as German Shepherds, Collies, and Golden Retrievers, seem more prone to meningiomas, while "squishy faced" breeds like Boxers, French Bulldogs, and Boston Terriers are more susceptible to gliomas. Male cats tend to be more at risk for meningiomas.

What Clinical Signs Occur with Brain Tumors?

Signs and symptoms of a brain tumor can vary widely, depending on how the tumor affects normal brain tissue, blood flow, and skull pressure. Common signs include behavior changes, seizures, compulsive circling, head pressing, incoordination, and vision problems. Seizures are the most frequent complaint in dogs, while behavior changes are often the first sign in cats. Symptoms usually develop slowly over months, but sudden onset is possible, though less common.

How are Brain Tumors Diagnosed?

A brain tumor is often suspected based on history, age, and neurological exam findings. In older dogs or cats showing progressive signs of brain dysfunction or new seizures, a brain tumor is highly suspect. Advanced imaging like MRI or CT scans, along with a possible spinal tap, are needed for a more definitive diagnosis.

How are Brain Tumors Treated?

There are two main approaches to treating primary brain tumors: supportive and definitive therapy. Supportive therapy is aimed at reducing the tumor's secondary effects while definitive therapy is directed towards reducing tumor volume, or in rare cases, eliminating the tumor entirely.

Supportive therapy typically consists of anti-inflammatory doses of steroids (prednisone) to help decrease any swelling and inflammation associated with a tumor. Anti-epileptic medications are also prescribed to those patients with seizures. In most instances a cure for a brain tumor is not a realistic expectation, but surgical removal/debulking, megavoltage radiation and chemotherapy can be used to help mitigate clinical signs and prolong survival.

Prognosis

Generally, the prognosis for patients treated with supportive therapy alone (steroids and possibly anti-seizure medication) is poor with average survival times ranging from a few weeks to months.

Prognosis with definitive treatment varies based on the tumor type, location, and treatment method. Long-term outcomes also differ between dogs and cats, with cat meningiomas often having a better prognosis when surgical removal is possible.