

Lung Tumors in Dogs

A Brief Guide • Part of the Educational Pet Disease Series from Lap of Love

Signs & Symptoms

Initial Symptoms

- Regurgitation
- Weight loss
- Cough that may sometimes produce mucous/blood
- Exercise intolerance
- Abdominal breathing

Intermediate Symptoms

- Lethargy
- Trouble breathing
- Wheezing
- Inability to get comfortable
- Shaking
- Panting

Advanced Symptoms

- Reclusive behavior
- Decreased appetite
- Nausea/vomiting
- Diarrhea
- Limp/lameness
- Dull mentation

Crisis Situations Requiring Immediate Medical Intervention

- Difficulty breathing/Excessive panting
- Unable to walk
- Blue gums and/or tongue
- Sudden collapse
- Uncontrollable vomiting/diarrhea
- Crying out, sudden severe pain
- Seizures

What Is It?

The lung is an essential organ whose principal functions are to transport oxygen through respiration into the bloodstream and to release carbon dioxide into the air. There are two types of canine lung cancer, primary and secondary. Primary lung cancer that forms directly from lung tissue is less common than secondary lung cancer. Secondary lung cancers are those which spread to the lungs from elsewhere in the body. Primary lung cancers are uncommon and almost always malignant carcinomas or hemangiosarcomas. These tumors are aggressive and spread to other areas in the chest and lymph nodes. Due to their vascular (high blood supply) nature, lungs represent a common place for metastasis (spread from elsewhere). Secondary lung cancers typically present as multiple nodules in the lung tissue as opposed to a singular mass as is more commonly seen with primary lung tumors. Symptoms include coughing (may produce blood or mucous), exercise intolerance, weight loss, trouble breathing, and shortness of breath. Dogs may also experience fluid buildup around the lungs that may require drainage by your veterinarian. Up to 25% of pets may not show any signs of illness. Occasionally an affected dog will present with a limp due to metastatic spread to the bones. Diagnostically there are several conditions that can cause similar symptoms to those seen in lung cancer cases. that should be ruled out such as heart failure, heartworm infection, and bronchitis. The environment plays an important role in the development of lung cancer as well. Secondhand smoke is a known cause of increased risk for lung cancer in dogs. Brachycephalic (push-nose breeds) breeds are more susceptible to environmental carcinogens as their shortened nasal passages reduce filtering of harmful substances from the air.

Diagnosis

Early detection of lung tumors is difficult as clinical symptoms typically do not present until the lung mass has grown large enough to affect the overall health and function of the dog. Baseline diagnostics include blood work, lymph node biopsy (to determine possible spread of the cancer), chest x-rays, and ideally a lung biopsy to secure a diagnosis. A CT scan, if possible, is optimal for diagnosis and treatment planning. An abdominal ultrasound helps check for the presence of other tumors elsewhere in the body. This is especially helpful in cases of metastasis to assist in identifying the location of the primary tumor.

Treatment and Management

For primary, single lung tumors, surgical removal of the affected lung lobe can result in the complete removal of the mass. However, this is a major surgery that requires time and dedication to home care in order for your dog to fully recover. In addition, chemotherapy and/or radiation may be beneficial. If surgery is not an option, chemotherapy may slow the progression of disease. Radiation therapy is a viable treatment option depending on the location of the tumor relative to other important structures like the heart which may become compromised in the treatment process. Metastatic lung cancer is most commonly treated with radiation or chemotherapy. Surgery for metastatic disease is not typical, but can be discussed on a case by case basis. This is most commonly performed in cases of bone cancer.

Prognosis

Dogs affected by a single primary lung tumor without evidence of metastasis can have a good prognosis. It is generally expected that up to 50% of dogs treated



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with surgery to remove the primary mass will live an average of a year or more. Dogs with lower grade, non-aggressive tumors may benefit from surgery with an average reported survival time of 18-24 months. Once symptoms begin to progress the survival time decreases and the prognosis is more guarded. Canine pulmonary adenocarcinomas have the longest average survival time among primary lung cancers.

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Management Tips

Consider providing:

- Easily accessible food and water
- Standing level food and water dishes
- Canned food over kibble
- Access to "safe" quiet areas
- Warm, soft sleeping areas
- Natural calming products
- Harness instead of a collar to relieve neck pressure
- Palliative removal of fluid from the chest and abdomen by your veterinarian
- Room purifiers to decrease air pollution
- Low energy, creative stimulation indoors

Try to:

- Be consistent with medications
- Provide proactive pain management
- Track respirations, appetite, weight, etc.
- Track the good days vs. the bad days
- Limit stress (kids, noise)
- Use gentle handling at all times
- Stay consistent with preventative care
- Provide adequate humidity in dry weather
- Avoid contact with unknown dogs
- Provide easy access to all important things such as food, the outside, etc.
- Keep pet as trim as possible
- Let pet determine his/her activity level

Before your pet's condition becomes unmanageable or they are losing quality of life, it is important to begin end-of-life care discussions. Learn about pet hospice care and/or euthanasia services in your area so you are prepared.