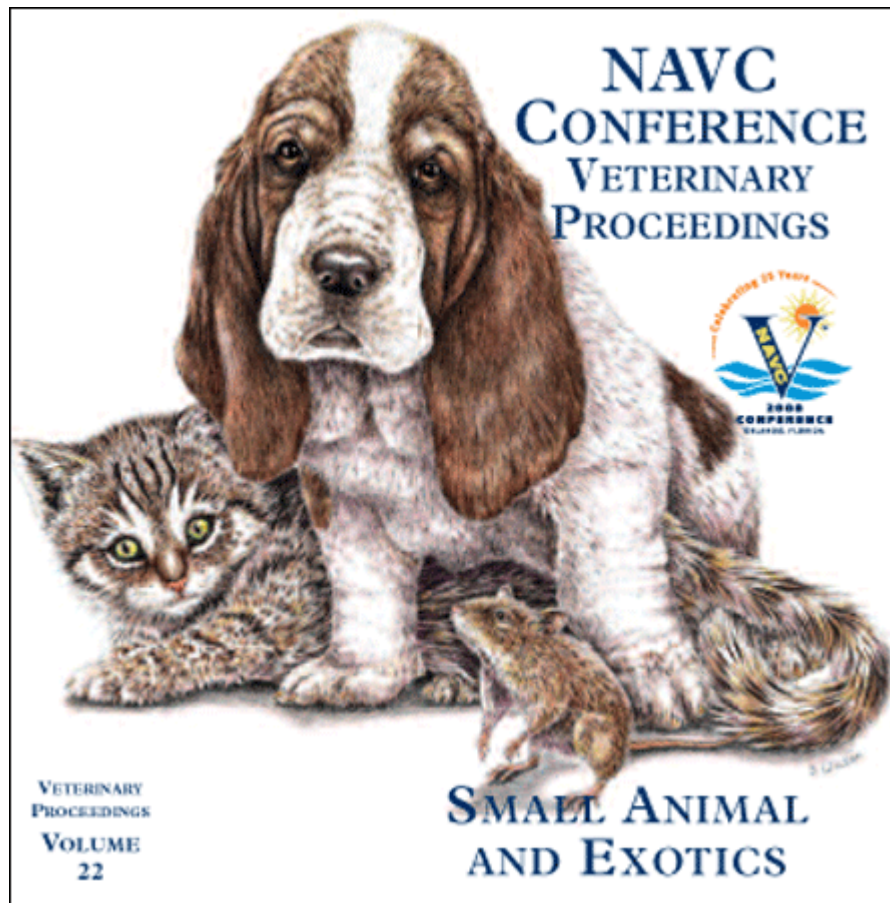


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PRIMARY LUNG TUMORS

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Primary lung tumors in dogs are relatively uncommon tumors. Risk factors are yet to be identified. The most common types of primary lung tumors are carcinomas and adenocarcinomas. These can be further broken down into being of bronchial, bronchoalveolar, or alveolar origin. Squamous cell carcinoma is also seen on occasion. Uncommonly benign tumors such as adenomas are found.

Generally, older dogs are affected by this disease, with a reported median age of 10.5 years. The majority of dogs present asymptotically. These tumors are most commonly found when taking thoracic radiographs for some other reason. If dogs are showing clinical signs, they often relate to the respiratory tract and include exercise intolerance and cough. Rarely dogs present with lameness secondary to hypertrophic osteopathy as a paraneoplastic syndrome, which can resolve with removal of the lung mass.

The majority of cases will present with a single nodule seen on thoracic radiographs, although some dogs may present with multiple nodules, indicating spread of the tumor. Differentials include a primary lung tumor, a granuloma, or a metastatic lesion. A thorough work-up including physical examination, blood work and abdominal ultrasound are indicated to look for cancer elsewhere in the body to rule out the mass being metastatic disease from another tumor. Depending on the location ultrasound, guided aspirates of a pulmonary mass may be possible, which can further help differentiate primary lung tumors from other causes. This procedure is not without risk however and results from cytology may not be diagnostic.

A CT scan of the thorax can help further rule out the spread of tumor within the lungs themselves or to the perihilar lymph nodes. CT has been shown to be more sensitive and accurate than radiographs in identifying affected lymph nodes. Several studies suggest that these tumors are highly metastatic to other areas of the lung or to the hilar lymph nodes, further supporting the use a CT scan prior to deciding on a treatment course.

Treatment of primary lung tumors most often involves surgical removal of the affected lung lobe. If possible, the hilar lymph nodes should be biopsied to look for metastasis. Most dogs recover quite well from the procedure, although may require substantial aftercare in the immediate post-operative period. There is a recent report of thorascopic lung lobectomy for the treatment of lung tumors in dogs. While this procedure is less invasive than thoracotomy, the surgeon has to be prepared to convert to a thoracotomy should it be

needed, as was the case for 4 out of 9 patients in this study. In several studies, median survival for dogs with primary lung tumors treated with surgery is about one year.

There is little information regarding the use of chemotherapy for primary lung tumors in dogs. One relatively recent study suggests some efficacy for vinorelbine (15–18 mg/m² IV), but this has not been fully investigated.

Prognostic factors for primary lung tumors in dogs include the size of the lesion, visual identification of enlarged lymph nodes during surgery, histological type, tumor stage, the presence of clinical signs at presentation, positive surgical lymph nodes and grade. In one study, dogs who did not have visually enlarged hilar lymph nodes had a median remission duration of 365 days, while those who did had a median remission duration of 60 days. This again stresses the importance of staging the patient before treatment.

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