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CANINE MAMMARY TUMORS

Mammary gland ("breast") tumors are the most common type of tumor in the unspayed female dog. Breeds at risk for developing mammary gland tumors include toy and miniature Poodles, Spaniels, and German Shepherds. The average age of dogs at diagnosis is 10-11 years. There can be single or multiple tumors, and they can occur in one or more glands. The last two sets of glands (the 4th and 5th glands) are most commonly affected. The tumors can be firm or soft, well-defined lumps or diffuse swellings and they can be attached to underlying tissues, moveable, skin-covered, or ulcerated. They can be different sizes, and they may grow slowly or quite fast. Most dogs are seen by the veterinarian for signs associated with the primary tumor and are otherwise feeling well. A few dogs are diagnosed with advanced metastasis (tumors that have spread to elsewhere in the body, such as the lungs and lymph nodes) and might be feeling ill from their tumors when they come for treatment.

Early spaying significantly decreases the risk for tumor development. Studies have shown that spaying a dog before her first, second, or third heat cycle can significantly decrease the risk for developing mammary gland tumors later in life. Mammary gland tumors can be either malignant (cancerous) or benign (non-cancerous) and arise from the different types of tissues in the mammary gland. The most common types are tumors from the glandular tissues and include adenoma, carcinoma, and adenocarcinoma. Half of all mammary gland tumors are benign and can be treated successfully with surgery alone. The other half are malignant (cancerous) and have the potential for metastasis. The outcome for patients with malignant mammary gland tumors depends on several factors including tumor type, histologic grade (appearance of the tumor cells under the microscope and how similar or dissimilar they are to normal tissues), tumor size, and tumor stage (presence of regional and distant metastasis).

We recommend that all mammary gland masses are surgically removed and biopsied to determine the tumor type. Dogs with benign tumors usually do not require further treatment, but cases with malignant tumors should be "staged" (evaluated for metastasis by tests such as chest x-rays and sometimes abdominal ultrasound). Malignant mammary tumors have the ability to spread to regional lymph nodes within the mammary glands, internal lymph nodes within the abdomen, the lungs, and occasionally internal abdominal organs such as the liver.

Dogs with small tumors and those that are low grade with no evidence of metastasis may be treated effectively with surgery alone. The surgery may involve removal of the mass alone (lumpectomy), an entire mammary gland (simple mastectomy), the mass and adjacent mammary glands (regional mastectomy), or removal of the entire chain of 5 mammary glands (radical mastectomy). The type of surgery that may be recommended by the veterinarian or surgeon is based upon the location of the tumor, the size, and the aggressiveness of the tumor.

Dogs that have large or invasive tumors, high histologic grade, or sarcomas (tumors of mesenchymal origin), have a higher likelihood of metastasis (spread). Chemotherapy may be recommended for these patients in addition to surgery to help prevent or slow the development of metastasis. Chemotherapy is often recommended with recurrent tumors and tumors that have metastasized, as these cases do have improved outcome with the addition of chemotherapy. Chemotherapy protocol options are variable and can be discussed in detail during consultation.

Please remember that each patient is an individual and can have variable presentations of their cancer and their response to treatment. Specific details and recommendations for your pet can be discussed in detail during a consultation with the oncologists at the Animal Cancer Center of Texas.