

Canine Soft Tissue Sarcoma

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General Information

The term “soft tissue sarcoma” represents a broad category of malignant cancers that have arisen from connective tissue. These tumors typically occur in a solitary location and have the following general characteristics:

- aggressively infiltrate the surrounding normal tissue
- most typically found on the trunk or distal limb regions.
- generally do NOT metastasize (spread to distant locations), unless a high grade is identified via biopsy
- arise from connective tissue supporting nerve, muscle, fat or vascular tissues
- have a high rate of local recurrence if incompletely removed
- when occur in the oral cavity, abdominal/ thoracic cavity or brachial plexus, can behave more aggressively

How is the Diagnosis Made?

Fine needle aspiration cytology can raise the suspicion of this cancer, however a biopsy is required to confirm the diagnosis of “STS”. A piece of tissue is submitted for histopathology analysis. In addition, this biopsy sample can help us identify the “GRADE” of the tumor. The grading system indicates the degree of aggressiveness anticipated with the tumor. Grade I (“well differentiated”) is the lowest grade, Grade II (intermediate) is in the middle of the spectrum and Grade III (undifferentiated) is the highest. These grades help us to predict the likelihood of metastases (spread) and ultimately the patient’s prognosis.

What Other Tests are Useful with Understanding STS?

Blood tests, thoracic radiographs and sometimes abdominal ultrasound are indicated to help identify any other problems associated with this cancer. In addition, more detailed diagnostic imaging, such as an MRI or CT scan, can be very helpful when planning surgical removal. Such test results help us to understand the “STAGE” of the cancer, which means how far beyond the original tumor location this cancer extends. Thus determining the grade and the stage provide essential information to formulate an appropriate treatment plan for the patient.

What Treatments are Available?

Surgical removal with wide complete margins is the treatment of choice for soft tissue sarcomas. It is often quite difficult to remove these cancers completely because of the location --- eg: when it occurs on the distal portion of the limbs. "Wide" surgical margins usually mean at least a 3 cm rim of normal tissue surrounding the tumor in all dimensions. *This margin must be confirmed by a pathologist on the histopathology sample submitted.* Sometimes such margins are not attainable due to location, and the tumor will likely grow back in the same area if margins are not wide enough. Amputation can be a reasonable treatment option to pursue in a situation in which wide margins are not possible. If amputation is not an option, and the tumor cannot be completely surgically removed with wide margins, follow up therapy can be utilized to address the cells that are left behind so that they will not grow back (locally recur). Treatments such as full course radiation therapy, or metronomic oral therapy can be utilized to delay the recurrence of this tumor at the original site. The success of these adjuvant (after surgery) treatments depends upon the grade of the tumor.

What About My Dog's Situation?

Each patient's situation with Soft Tissue Sarcoma is unique. The specific appropriate diagnostic testing as well as the possible therapy options will be discussed in detail with you. Although the guidelines for treatment of this cancer are well described in the literature, not every patient is the same. Our goal is to help with your understanding of what options are the best fit for your companion to ensure a good quality of life.