



at the heart of critical care

ANIMAL EMERGENCY CENTER

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SOFT-TISSUE SARCOMAS

The term soft-tissue sarcoma refers to a group of malignant tumors arising from connective tissue mainly in or under the skin. Examples of tissues that may form soft-tissue sarcomas include fibrous connective tissue, fat, muscle, and cells surrounding blood vessels and nerves.

Although classified as malignant because of their ability to deeply invade surrounding tissues, the likelihood of metastasis (spread to other parts of the body) from most soft-tissue sarcomas is small (less than 15% in most cases). They are more problematic due to their tendency to regrow after conservative surgery is performed. Tumors that are allowed to recur typically will grow faster than the first time, and are more likely to deeply invade surrounding tissues and cause pain, to ulcerate, and may be more likely to metastasize as well. Thus, ***the best chance we have to cure animals with soft-tissue sarcomas is to treat them aggressively the first time they occur.***

DIAGNOSIS / INITIAL EVALUATION

In order to achieve a diagnosis, a biopsy is usually required. Prior to contemplating definitive treatment, we will usually obtain some blood tests to assess your pet's general health and fitness for surgery and anesthesia. We will also usually recommend x-rays of the chest to rule out tumor spread to the lungs (the likelihood of spread from most soft-tissue sarcomas is low, but it is not zero) as the presence of spread dramatically changes the prognosis and treatment recommendations.

TREATMENT AND PROGNOSIS

The most common and effective method of treatment for soft-tissue sarcomas is surgery with wide surgical margins. It is common for soft-tissue sarcomas to project "fingers" of microscopic tumor cells into the normal-appearing tissue surrounding the tumor. If these fingers are not removed completely the tumor is very likely to regrow. If microscopic tumor cells are left behind after surgery, at least 80% of the tumors will recur. This can take variable amounts of time depending on the individual case (anywhere from a few weeks to longer than a year).

In order to prevent recurrence, we recommend the removal of the tumor and surrounding tissue on all sides and underneath to attempt to remove all of the tumor cells. The methods needed to remove all the tissue will be discussed with you in detail prior to any surgical intervention. ***With complete removal of all tumor cells, the likelihood of tumor recurrence is less than 10%.***

Sometimes, despite even aggressive surgery, the tumor is located in an area on the body that does not allow complete removal of the tumor. In these cases surgical removal of as much of the tumor as possible is followed up with radiation therapy. This involves the application of a powerful form of radiation directly onto the site of the tumor. This treatment is most effective when treating microscopic tumor cells left over after surgery. Using this therapy after incomplete surgical excision, results in approximately 85% of dogs alive for 5 years without evidence of tumor regrowth. Please consult the VETERINARY RADIATION THERAPY information sheet for more detailed information.

A small number of soft-tissue sarcomas may be associated with a somewhat higher risk of spread (perhaps 25 to 40%). Tumors that are classified as “high-grade” (or Grade III), “anaplastic”, or “undifferentiated” by the pathologist may fall into this category. When these tumors are encountered, we may recommend chemotherapy following surgery. This is given in an attempt to delay or prevent the occurrence of spread. Unfortunately, there are no concrete statistics or percentages to quote regarding the efficacy of this type of treatment in dogs, but we know that these drugs are capable of killing soft-tissue sarcoma cells experimentally.

Following completion of treatment, we recommend that your pet receive regular rechecks for early detection of recurrence or spread. A typical schedule for rechecks is quarterly for 1 1/2 years, then twice yearly thereafter. At these rechecks, we will perform a thorough physical examination and recommend chest X-rays to rule out tumor spread.