

## Information for Oncology Clients

### Soft Tissue Sarcomas in Dogs

Comprehensive Cancer Care Service

Ryan Veterinary Hospital of the University of Pennsylvania

Soft tissue sarcomas are tumors that arise from the connective tissues of the body. Although there are various subtypes of soft tissue sarcomas, in general all subtypes tend to be very invasive into the surrounding tissues, but most are relatively unlikely to metastasize (spread) elsewhere in the body. High-grade tumors may behave more aggressively, and the most common site of metastasis in these cases is the lungs.

Given the local infiltration of these tumors, the treatment of choice is surgery, and low- and intermediate-grade tumors can often be cured with complete surgical excision. However, because of the degree of infiltration, complete removal can often be difficult, particularly when tumors are located on the limbs. Soft tissue sarcomas often have finger-like projections that extend beneath the surface of the skin and into surrounding tissues, making wide surgical margins necessary to help prevent recurrence. When a soft tissue sarcoma is not completely excised with the first surgery, a wider surgical procedure in an attempt to get complete or "clean" margins is typically the recommendation when feasible. In cases where a complete surgical resection is not possible, radiation therapy is the standard recommendation.

Radiation therapy is often effective at controlling microscopic sarcoma cells left behind after surgery, and offers a 70-80% chance of long-term tumor control in this setting, which is called "definitive" radiation therapy. This type of treatment consists of daily therapy (Monday-Friday) under light anesthesia for about one month.

For those soft tissue sarcomas that appear aggressive on histopathology, chemotherapy is recommended following surgery or radiation therapy in an attempt to eradicate or delay metastasis.

When a soft tissue sarcoma is too large to remove with surgery, and is causing problems such as bleeding or pain, palliative treatment options can be discussed. These may involve palliative radiation therapy, amputation if the tumor is located on a limb, and/or chemotherapy. "Palliative" radiation therapy typically consists of once weekly radiation treatments for 3 to 4 weeks, with the goal of alleviating pain and inflammation and decreasing tumor size.

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