



SAGE

INJECTION-SITE SARCOMA (FELINE)

What is an injection-site sarcoma?

An injection-site sarcoma is a tumor that forms in connective tissue. These tumors are a result of inflammation caused by vaccines and other injections given to cats. Injection-site sarcomas are estimated to occur in 1 out of every 10,000 vaccines administered in cats. These tumors generally tend to be locally aggressive (invade the normal surrounding tissue) and have an estimated 20-25% rate of spread to other parts of the body (metastasis).

How is an injection-site sarcoma treated?

Surgery is the first treatment of choice. These tumors can be challenging because of how they invade the tissues around them. Often we are unable to remove 100% of the tumor because it has microscopic tumor extensions that invade into surrounding tissues. We assess whether there is/will be disease remaining in the surgery site based on a combination of the type of surgery performed, the surgeon's assessment during surgery, the final biopsy results, and sometimes even a pre-operative CT (computed tomography) or MRI scan.

What other treatments are available for an injection-site sarcoma?

If we determine that there may be cancer cells remaining in the surgery site, there are several additional treatment options.

Radiation therapy:

Radiation therapy is offered in our [SAGE Campbell](#) location with [PetCure Oncology](#). Radiation can be performed either before or after surgery and sometimes as an alternative to surgery altogether. It can generally provide good control of the tumor. Radiation therapy can be as minimal as a single treatment, or it can be up to 4 weeks of treatment, depending on what you and your oncologist decide together. Side effects can be divided into "early" or "late." Early side effects can include inflammation of the skin or hair loss. This is typically minimal in cats. Late side effects can occur months to years later or not at all. This may include permanent hair loss, pigmentation of the skin, change in hair color and very rarely necrosis (cell death) of skin, bone or nerves. A CT scan is required prior to radiation therapy to develop a treatment plan. Please refer to the [Radiation Therapy and Stereotactic Radiosurgery \(SRS\)](#) handout for more information.

Chemotherapy:

Sometimes chemotherapy may be an option for your pet if radiation therapy is not feasible. The type of chemotherapy depends on what you and your oncologist decide together, and may include oral (metronomic chemotherapy, or low-dose chemotherapy) or injectable chemotherapy. Please refer to the [Chemotherapy](#) handout for more information.

Electrochemotherapy (ECT):

ECT uses electric stimulation to open up cell pores to allow low-dose chemotherapy to enter tumor cells. Side effects are minimal and mostly limited to mild skin reactions. This treatment is available in our SAGE Concord and Dublin locations. Each treatment is given under short, light anesthesia and patients typically go home the day of treatment. Please refer to the [Electrochemotherapy](#) handout for more information.