



The University of Georgia
College of Veterinary Medicine
Comparative Oncology Program
www.vet.uga.edu/cancer

FELINE INJECTION SITE SARCOMAS

Injection site sarcomas (ISS) (also referred to as vaccine-associated sarcomas) are locally aggressive tumors with a reported low to moderate potential for metastases (spread to other locations, such as lung). ISS can affect any age, sex or breed of cat. Although rare, these tumors develop in locations where cats have received injections, mainly vaccines. ISS are commonly located in sites such as between the shoulder blades, on the flank or limbs and they appear as firm nodules or masses under the skin.

The clinical evaluation (called staging) of a cat with an ISS includes a physical examination, complete blood cell count, serum chemistry profile, urinalysis, and chest x-rays. In some situations, abdominal x-rays and abdominal ultrasound may be advised. Local or regional lymph nodes may be aspirated if they are enlarged. CT scan will help to better define the extent of the tumor, which aids in treatment planning. Diagnosis of ISS requires a sample of the tumor for cytological or histological evaluation.

Treatment options for cats with ISS depend on the size and location of the tumor. Wide surgical excision is generally the treatment of choice if the tumor is small, well-defined and if it is in a location where the tumor can be removed with “clean” margins. Clean margins mean that there is no residual evidence of the tumor. If surgery was attempted first and the margins are not clean, then local recurrence is likely to develop and additional treatment is needed. Definitive [radiation therapy](#) (RT) is recommended for STS that are incompletely excised. RT may be advised *prior* to surgery if the tumor is too large to remove entirely. RT typically involves 12 – 19 radiation treatments given over a 4-week period. An estimate for RT is approximately \$2800 – 3200 at our facility. The type of RT that is recommended may depend on the size and location of the tumor. Please refer to the handout on RT for additional information. [Chemotherapy](#) may be indicated for your cat after RT and surgery.

The overall prognosis for cats with ISS that are treated with a combination of RT and aggressive surgery is fair; the reported survival times for cats treated with a multimodality approach ranges from 2 – 3 years. Unfortunately, cats that are treated with conservative surgery alone will likely develop local recurrence in a short time.

Some cats may develop a small, firm, non-painful swelling under the skin after vaccination that usually resolves within 4 – 6 weeks. If you detect a lump, you should notify your veterinarian as soon as possible. There are specific guidelines that your veterinarian will follow if the lump persists for more than 2 – 3 months after vaccination, if the lump is greater than 2 cm (approximately 1 inch), or if it is increasing in size one month after vaccination. For further information regarding ISS and cats, please visit the Vaccine-Associated Feline Sarcoma Task Force (VAFSTF) web site for additional recommendations at www.avma.org/vafstf .

We will be happy to discuss all the treatment options that are available for your pet and to answer any questions that you may have.
