

Feline Injection Site Sarcoma (FISS)

What is a feline injection site sarcoma?

Cats can develop tumors, specifically sarcomas, at the sites of previous injections. These are most commonly noted after vaccinations, but have also been noted following subcutaneous fluid administration, insulin injections, subcutaneous injections of other medications, and after the implant of microchips. These sarcomas are locally invasive tumors that extend tendrils of cancer into the surrounding muscle, making their removal difficult. However, they tend to have a low rate of spread to other parts of the body (0-25%).

What are the clinical signs of an injection site sarcoma?

It is important to monitor your cat closely following any vaccinations or injections. The American Veterinary Medical Association has developed guidelines for monitoring and management of feline vaccine-associated sarcomas. If a mass develops at a previous injection site and meets any of the criteria outlined below, it should be treated aggressively and considered malignant until proven otherwise:

- The mass persists more than 3 months post-injection
- The mass is larger than 2 cm in diameter
- The mass is increasing in size 1 month post-injection

How is an injection site sarcoma diagnosed?

The diagnosis of a vaccine-associated sarcoma requires a biopsy. Full staging to evaluate for disease spread including samples of the local lymph nodes and x-rays of the chest are recommended. A CT scan of the mass is recommended to plan appropriate treatment.

How is injection site sarcoma treated?

The most aggressive treatment is often a combination of surgery and radiation therapy. Sometimes radiation therapy is recommended prior to surgery to help shrink the mass, other times it is recommended after surgery to help sterilize the incision and decrease the chance that the mass will regrow. Feline injection site sarcomas are very difficult to treat with surgery alone, and often regrow quickly without additional treatment. The most effective surgical treatments sometimes include removal of a limb to attain the best chance of tumor control. In conjunction with radiation therapy and surgery, chemotherapy may be recommended. This would involve an injectable drug called doxorubicin given once every 3-weeks for a total of 6 doses.

If aggressive surgery and radiation are not the best option for your cat, chemotherapy alone with or without palliative radiation therapy are also treatment options. Approximately 40% of cats respond to chemotherapy alone and responses usually last about 3 months. Palliative radiation therapy consists of 4-5 treatments with a goal of decreasing pain and minimizing the effects of the tumor on quality of life.

What is the prognosis for feline injection site sarcoma?

Unfortunately, FISS is an aggressive tumor that can be difficult to control, especially depending on size of the tumor at diagnosis and location. Even with aggressive treatment, cats usually succumb to this disease within a matter of months.