

Vaccine-Related Sarcoma

Vaccine-related cancer in cats is very rare, yet obviously very serious. Veterinarians are very concerned and aware of the potential risks of vaccinating as well as the consequences of foregoing vaccinations. The most common type of cancer that may be related to vaccine administration is called fibrosarcoma. It can occur spontaneously in cats who have not received vaccines; however, an increased frequency of this type of tumor has been observed at vaccine injection sites. Various studies have indicated that vaccine-related sarcoma occurs in one to ten cats per 10,000 cats vaccinated. Vaccinations protect your cat from highly contagious, serious, and sometimes fatal diseases. Modifying vaccine protocols rather than eliminating vaccinations all together is the best method of reducing the incidence of this highly malignant form of cancer.

Fibrosarcoma is a highly invasive tumor that grows rapidly. It spreads deep into adjacent tissues and can metastasize (spread) to the lungs, regional lymph nodes, and the skin. When a fibrosarcoma is surgically removed, it often recurs and behaves even more aggressively. Radiation therapy can slow local recurrence, but the prognosis for these tumors remains guarded to poor. This type of tumor can invade the superficial tissues under the skin as well as deep into muscle, cartilage, and bone. Aggressive surgical excision preferably performed by a board-certified veterinary surgeon is the treatment of choice.

The exact relationship between fibrosarcoma and vaccine is unclear. It is thought that compounds added to killed-virus vaccines called adjuvants may be responsible for the tumor formation. Adjuvants cause the vaccine to be more effective at stimulating an immune response, which is the way that vaccines provide protection from disease. The local immune response may cause inflammatory cells to become pre-cancerous. Adjuvants have been found in fibrosarcomas during histopathology. Still, this doesn't prove that vaccines are the only cause of this tumor. It is also thought that some cats may have a genetic predisposition to fibrosarcoma. Furthermore, a tumor may form at the site of an injection of any drug.

Vaccine protocols and vaccines themselves have changed in recent years to attempt to reduce the incidence of cancer. Guidelines established by the American Association of Feline Practitioners (AAFP) have been implemented to document the brand and type of vaccine and the location on the cat where it was given. This standardization will help to reveal whether a particular vaccine or ingredient might be responsible for triggering feline sarcomas. Non-adjuvanted vaccines are available to reduce the risk of tumor occurrence. Veterinarians are encouraged to measure exposure risk for certain diseases and eliminate non-essential (non-core) vaccinations. FVRCP (Feline Distemper) and RV (Rabies Virus) are considered core vaccines that all cats should receive. While they are certainly serious diseases, FeLV (Feline Leukemia) and FIV (Feline Immunodeficiency Virus) require exposure to an infected cat; so, some cats may not be at risk. Be sure to discuss appropriate vaccination strategies with your vet.