



ADIPOSE TUMORS

These notes are provided to help you understand the diagnosis or possible diagnosis of cancer in your pet. For general information on cancer in pets ask for our handout "What is Cancer". Your veterinarian may suggest certain tests to help confirm or eliminate diagnosis, and to help assess treatment options and likely outcomes. Because individual situations and responses vary, and because cancers often behave unpredictably, science can only give us a guide. However, information and understanding for tumors in animals is improving all the time.

We understand that this can be a very worrying time. We apologize for the need to use some technical language. If you have any questions please do not hesitate to ask us.

What is this tumor?

Almost all tumors of adipose tissue (fat) are slow-growing and benign. They are called **lipomas**. The tumors are usually permanently cured by full surgical removal. Rarely, they may keep growing and cause problems because of their size and infiltration of adjacent structures. A few tumors (**liposarcomas**) are well-demarcated but of low grade malignancy so they recur locally. Spread to other parts of the body (metastasis) is extremely rare but there is a syndrome of multiple tumors called **lipomatosis**.

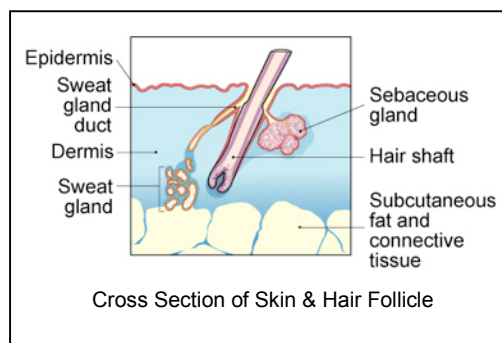
What do we know about the cause?

The reason why a particular pet may develop this, or any cancer, is not straightforward. Cancer is often seemingly the culmination of a series of circumstances that come together for the unfortunate individual.

Little is known about the cause of this type of tumor.

Is this a common tumor?

The benign tumors are common in dogs, mainly in middle-aged to older animals. The tumors are twice as frequent in bitches as in male dogs and more often in overweight dogs. The tumors are rare in cats, although again more common in obese animals.



The infiltrative tumors are uncommon in dogs and rare in cats. They may occur in young dogs. Most recorded cases have been in Labrador Retrievers. Both dogs and cats can have the syndrome of lipomatosis. Malignant tumors are rare.

How will this cancer affect my pet?

The most obvious effect of these tumors is a soft lump under the skin although they also occur within the abdomen. They rarely cause discomfort unless they are large. Ulceration and bleeding are rare but large lipomas may necrose (die), causing yellow discoloration of the fat with, in the case of very large ones, toxic effects to make the animal unwell.

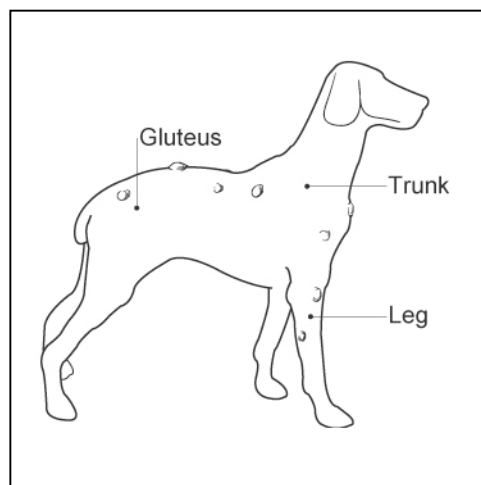
Infiltrative tumors may be deep under the skin of the trunk, hip region and upper limbs where they can also occur within the muscle.



The syndrome of lipomatosis affects pendulous, fatty skin folds. Compression of the spinal cord by excess fat deposits has been recorded. Infiltration of a salivary gland may also cause tumor-like swelling of the gland.

How is this cancer diagnosed?

Clinically, this tumor has a fairly typical appearance but to identify the tumor with more certainty, it is necessary to obtain a sample of the tumor itself. Various degrees of surgical sampling may be needed such as needle aspiration, punch biopsy, full excision or exploratory surgery (for tumors in the abdomen). The samples are submitted for microscopic examination.



Cytology is the microscopic examination of cell samples sucked (aspirated) from the tumor using a special needle. It is difficult to interpret for this tumor type because cell yields are low and the cells of the aspirates are identical to those of normal fat. In some cases, with the typical clinical appearance, cytology can give reasonable confirmation of tumor identity.



Histopathology is the microscopic examination of specially prepared and stained tissue sections from actual pieces of the tumor. This is done at a specialized laboratory where the slides are examined by a veterinary pathologist. The information from this examination is more detailed and reliable than cytology. The piece of tissue may be a small part of the mass (biopsy) or the whole

lump in which case the adequacy of excision can be assessed. Histopathology also rules out other diseases including more serious cancers.

The histopathology report indicates whether a tumor is 'benign' (non-spreading, local growth) or 'malignant' (recurrent) and how the cancer is likely to behave (prognosis).

What treatment is available?

Treatment is surgical removal.

Can this cancer disappear without treatment?

Cancer rarely disappears without treatment but as development is a multi-step process, it may stop at some stages. Loss of or reduced blood supply to this type of cancer is not uncommon. This will make it die but the dead tissue will probably need surgical removal. The body's own immune system can kill cancer cells but it is rarely 100% effective.

How can I nurse my pet?

Preventing your pet from rubbing, scratching, licking or biting the tumor will reduce inflammation. Any ulcerated area needs to be kept clean.

After surgery, the operation site similarly needs to be kept clean and your pet should not be allowed to interfere with the site. Any loss of sutures or significant swelling or bleeding



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should be reported to your veterinarian. If you require additional advice on post-surgical care, please ask.

How / When will I know if the cancer is permanently cured?

'Cured' has to be a guarded term in dealing with any cancer.

Histopathology will give your veterinarian the diagnosis that helps to indicate how it is likely to behave. The veterinary pathologist usually adds a prognosis that describes the probability of local recurrence or metastasis (distant spread).

Most of these tumors are benign and are cured surgically. The infiltrative type is sometimes difficult to remove and this, or regrowth after surgery, indicate the tumor is of this type. Further surgical intervention is successful in preventing recurrence or further spread in more than half the cases of this type of cancer.

Like other soft tissue sarcomas (malignant tumors), liposarcomas are locally invasive and sometimes recur after surgery. They rarely metastasize (spread to other parts of the body). Poorly differentiated and pleomorphic (literally "multi-form") subtypes are more likely to metastasize.

In the syndrome of lipomatosis, unrelated tumors may develop at different body sites.

Are there any risks to my family or other pets?

No, this is not an infectious tumor and it is not transmitted from pet to pet or from pet to people.