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Skin – Lymphoid 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 about tumors and their treatment in animals is improving all the time.

We understand that this can be a very worrying time. If you have any questions please do not hesitate to ask us.

What are lymphocytes?

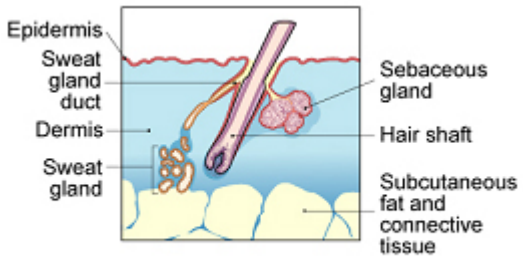
Lymphocytes are specialized cells that function as part of the body's immune system, and are key cells in the body's ability to fight and prevent infection. Lymphocytes are found in the blood and tissues throughout the body, and are in particular concentration in lymph nodes and other 'lymphoid tissue'. Lymphocytes are of two main types, called 'T' lymphocytes and 'B' lymphocytes. Each plays a different role in immunity.

What is a lymphoid skin tumor?

The reason why a particular pet may develop this, or any cancer, is not straightforward. Cancer is often the culmination of a series of circumstances that come together for the unfortunate individual. It is the result of non-lethal genetic damage to cells, with "external" contributory factors such as radiation, chemicals, hormones and infections. The mutated cells upset the normal regulation of cell death and replacement. They do this by activating growth-promoting oncogenes (cancer genes), inactivating suppressor genes and altering the genes that regulate normal, programmed cell death (apoptosis).

Lymphocytosis is a term used to describe abnormal accumulations of lymphoid cells in the dermis or subcutaneous tissue of the skin. Occasionally, the term "pseudolymphoma" is used for these. They are non-cancerous but some may progress to be cancerous (neoplasia).

"Dermal cutaneous lymphosarcoma is a malignant proliferation of abnormal lymphocytes."



Cross Section of Skin & Hair Follicle

Dermal cutaneous lymphosarcoma is a malignant proliferation of abnormal lymphocytes, usually visible as nodules in the skin. It is often rapidly progressive. The disease spreads to the lymph nodes ("glands") and later to other organs of the body.

"Epitheliotropic lymphoma... is progressive and spreads to lymph nodes."

Epitheliotropic lymphoma, (sometimes described by human terms including mycosis fungoides, pagetoid reticulosis and Sezary syndrome) has a very variable clinical presentation. Sometimes there are skin nodules but the lesion may resemble an inflammatory skin disease with scaling, hair loss or secondary infection. It is progressive and spreads to lymph nodes.

What do we know about the cause?

Little is known about the causes of these tumors.

Why has my pet developed this cancer?

Some animals have a greater tendency (genetic susceptibility) to cancer. Some breeds have far more cancers than others, often of specific types. The more divisions a cell undergoes, the more probable is a mutation so cancer is more common in older animals. In some cases, an animal has been exposed to environmental factors that cause or promote cancer. These include sunlight, some chemicals and some infections.

Are these common tumors?

These are uncommon tumors in dogs and cats. They occur mainly in middle aged to older animals.

How will this cancer affect my pet?

Some of these present as plaques or swellings. Epitheliotropic tumors have a varied presentation, often looking like an inflammatory skin disease or a primary hair loss problem. As the cancers spread, the local lymph nodes may swell. Epitheliotropic tumors often spread to the mouth. Epitheliotropic tumors can also occur initially in the gut, liver and urinary bladder.

"Weight loss due to loss of body fat and muscle is common in the later stages of the malignant cancers."

Weight loss due to loss of body fat and muscle is common in the later stages of the malignant cancers. The immune system is often damaged, so secondary infections are common. Some tumors induce signs that are not readily explained by local or wider spread of the tumors. Called "paraneoplastic syndromes", these signs are due to abnormal hormone production by the cancers. These include increased blood calcium levels leading to loss of bone.

How is this cancer diagnosed?

Clinically, these tumors resemble many other lesions, and can be difficult to diagnose with specificity. Diagnosis relies upon microscopic examination of tissue.

To obtain the appropriate samples, your veterinarian may recommend one or more of various sampling techniques such as fine needle aspiration, punch biopsy and full excision. The sample will be prepared and examined by either cytology or histopathology. Cytology is the microscopic examination of cell samples obtained by aspiration techniques. This is useful for rapid or preliminary screening tests on lumps and nodules. Histopathology is the microscopic examination of tissue samples that have been specially prepared and stained. Histopathology will give a more accurate diagnosis and prognosis (prediction of behavior). Histopathology also rules out other forms of cancer. Your veterinarian will submit the samples to a specialized laboratory for examination and diagnosis by a veterinary pathologist.

What types of treatment are available?

"There is no curative treatment for these cancers."

There is no curative treatment for these cancers. Chemotherapy of various types may slow the progression or bring clinical relief but there is currently no firm evidence that treatment consistently improves survival times.

Symptomatic treatment of the inflammatory skin disease associated with epitheliotropic lymphoma may make your pet more comfortable.

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. The body's own immune system can kill cancer cells but it is rarely 100% effective. Occasionally, these tumors have phases of spontaneous remission.

How can I nurse my pet?

The dermal tumors are rarely itchy and rarely ulcerate, so there is little that can be done to help. Use of symptomatic skin care products may help to alleviate discomfort caused by epitheliotropic lymphoma.

After surgery, you need to keep the incision site clean and dry and prevent your pet from interfering with it. Report any loss of stitches or significant swelling or bleeding to your veterinarian. If you require additional advice on post-surgical care, please ask.

How will I know how this cancer will behave?

"Sadly, these are not curable diseases."

Sadly, these are not curable diseases. Histopathology will give your veterinarian the diagnosis that will indicate the type and how it is likely to behave. However, there is significant variation between animals in their response to the tumors and therapy. If epitheliotropic tumors are diagnosed at an early stage, months or occasionally years of good quality life may remain, but in others the progress is very rapid and only weeks of quality life may remain.

Are there any risks to my family or other pets?

No, these are not known to be infectious and are not transmitted from pet to pet or from pets to people.

This client information sheet is based on material written by: Joan Rest, BVSc, PhD, MRCPath, MRCVS