

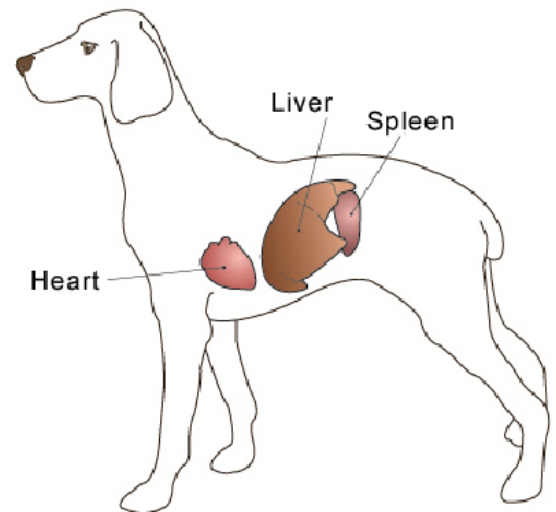
Vascular Tumors Viscera

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. We If you have any questions please do not hesitate to ask us.

What are vascular tumors of the viscera?

These are tumors of the blood vessels of internal organs. Some are benign (hemangioma) but most are malignant (hemangiosarcoma). The benign tumors usually remain undetected unless they rupture and cause internal bleeding. Provided this is not massive enough to be life-threatening, they can be cured surgically. The malignant tumors spread to other parts of the body (metastasize) and are often not noticed until they are present in many sites. The most common of these sites are the spleen, heart and liver but they may occur anywhere including the mouth, intestine and bones. This group of tumors also includes some rare types such as the **epithelioid angiosarcoma**, which can occur in the mouth.



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 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).

Little is known about the causes of these internal tumors but similar tumors in the skin are caused, in part, by sun exposure.

Are they common tumors?

"Hemangiomas are moderately common in the spleens of old dogs."

Hemangiomas are moderately common in the spleens of old dogs. Hemangiosarcomas are also moderately common with a predilection for the German Shepherd dog, Golden Retriever and Border Collie. The tumors are uncommon in cats. Epithelioid angiosarcoma is very rare but it is difficult to diagnose, requiring special techniques; therefore the frequency of occurrence of this tumor may be underestimated.

How will this cancer affect my pet?

Hemangiomas may rupture spontaneously and cause serious, even life-threatening internal bleeding. Hemangiosarcomas often cause sudden death from heart failure or respiratory difficulty, or cause acute vascular collapse as the result of rupture of the spleen. In other cases, there are less severe signs such as increased heart rate and anemia. Epithelioid angiosarcoma is a lump in the mouth and may interfere with eating as well as bleed.

How are these cancers diagnosed?

Clinically, the tumors can be confused with rupture of the spleen from other causes, twisting of the spleen, bleeding due to trauma and some conditions affecting the heart.

In order to identify the tumor definitively, it is necessary to obtain a sample of the tumor itself. Needle aspiration and microscopic examination of the cell sample (cytology) is not diagnostic. Histopathology, the microscopic examination of specially prepared and stained tissue sections, is necessary. Your veterinarian will submit the samples to a specialized laboratory for examination and diagnosis by a veterinary pathologist. Sometimes, diagnosis of malignant tumors can be difficult on small pieces of tissue.

What treatment is available?

Treatment is surgical removal if the tumors are in accessible sites. At this time, no other treatment has been successful.

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 some cancer cells but is not effective against this type.

How can I nurse my pet?

After surgery, you need to keep the incision site clean and dry and prevent your pet from interfering with it. Any deterioration in condition, loss of sutures or significant swelling or bleeding should be reported to your veterinarian.

"Your pet may already have lost significant amounts of blood so prompt reporting of swelling or bleeding is very important."

Your pet may already have lost significant amounts of blood so prompt reporting of swelling or bleeding is very important. If you require additional advice on post-surgical care, please ask.

How will I know how the cancer will behave?

The histopathology report 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.

When will I know if the cancer is permanently cured?

Hemangiomas are benign and may be cured surgically if they are in organs such as the spleen that can be removed.

Removal of the spleen can slow the progression of hemangiosarcoma but dogs are not cured. Median survival time is approximately three months after surgery.

Epithelioid angiosarcomas are too rare to predict their behavior, but they will probably recur locally and may even metastasize.

Are there any risks to my family or other pets?

No, these are not infectious tumors and are not transmitted from pet to pet or from pet to people.

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