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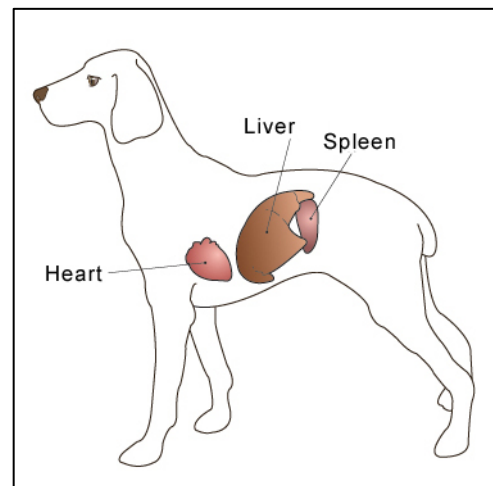
VASCULAR TUMORS OF THE VISCERA

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 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 are these tumors?

These are tumors of the blood vessels. 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 seemingly the culmination of a series of circumstances that come together for the unfortunate individual.

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

Are they common tumors?

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 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 is this cancer 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. This is done at a specialized laboratory where the slides are examined 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 the time of writing, 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, the operation site needs to be kept clean and your pet should not be allowed to interfere with the site. 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. If you require additional advice on post-surgical care, please ask.

How will I know how the cancer will behave?

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.



When will I know if the cancer is permanently cured?

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

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

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 be certain of 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.