

## HEMANGIOSARCOMA

A general definition of cancer is a group of cells that grow abnormally, usually with uncontrolled multiplication of cells. Cancers can be roughly divided into 2 groups – benign and malignant. Benign cancers are considered to be less aggressive while malignant cancers often spread to body parts other than the original location and are much more aggressive. There are, unfortunately, many types of cancer that can affect cats.

**Hemangiosarcoma** is a malignant cancer of the cells that form blood vessels. These tumors start in blood vessels so they are often filled with blood. They are more common in dogs than cats but can occur in both species. They are a very aggressive tumor that tends to metastasize early in the disease process. Because they are associated with blood vessels, hemangiosarcomas can occur almost anywhere in the body but they occur more commonly in the spleen, the right atrium of the heart and the skin or subcuticular layer.

This article will focus on skin tumors, as that is the type of tumor found on one of the Cats Anonymous kitties. The skin (cutaneous) tumors may be sunlight induced. They often occur on the head – nose, ear tips, eyelids – but can occur anywhere on the body, more likely on non-pigmented skin.

**Clinical Signs:** A single nodule, usually well defined, which is red/brown or black, soft to firm and bleeds when cut. Usually not painful when touched.

**Diagnosis:** A sample of some cells from the skin mass can be obtained via a *fine needle aspirate* – placing a needle into the mass and drawing some of the material from the mass into a syringe. The material is placed onto a glass slide, stained, and then looked at under a microscope. Cancer cells often have a unique appearance with signs of excessive cellular activity associated with their rapid rate of reproduction.

If a skin tumor is small and the surgical risks associated with the anesthetic are minimal, then the entire mass can be removed and sent to a *histopathologist* (a specialist who will section the tumor and look at it) to confirm the diagnosis.

Due to the aggressive nature of hemangiosarcomas, it is also recommended to perform an *abdominal x-ray or ultrasound* to look for other internal tumor locations.

*Chest x-rays* are routinely taken in any cats with cancer. The lungs are a very common site for the spread of hemangiosarcoma.

*Bloodwork*, including complete blood counts of red and white blood cells and blood chemistries for assessment of liver and kidney function, is also important to determine if the cancer is affecting any other body systems.

**Treatment:** *Surgical removal* is the best treatment for skin tumors. Removal of a large margin around the tumor site is important because these tumors extend into the surrounding tissues with finger-like projections and may regrow if all of the tumor cells are not removed. It is important to send the tumor to a *histopathologist* to assess if the entire tumor was removed.

If the tumor occurs in only the upper layer of the skin then the prognosis is excellent with surgical removal alone. If the tumor has infiltrated deeper layers of the skin or underlying tissues then there is more potential for spread to other organs. In this case, follow-up chemotherapy is recommended following surgery. If the entire tumor cannot be removed surgically then post-operative radiation treatment and chemotherapy are recommended.

**Prognosis:** The *prognosis* for cutaneous hemangiosarcomas is good with early detection and treatment.