



What is hemangiosarcoma?

Hemangiosarcoma is a malignant cancer of the lining of the blood vessels. These tumors can arise from organs such as the spleen, liver, heart, kidneys, skin, or underneath the skin.

What are the symptoms of hemangiosarcoma?

Because these are tumors of the blood vessels, they can rupture and cause sudden weakness or collapse from rapid blood loss, or cause other less dramatic signs, such as lethargy or decreased appetite from slow blood loss. Hemangiosarcoma of the skin can look like a red mass.

What is the behavior of hemangiosarcoma?

Hemangiosarcoma is invasive into the tissues where it originates, but also can have a high rate of spread to other parts of the body such as the liver, spleen, lungs, or heart. Our treatment is aimed at addressing the tumor itself, but also the chance for spread (metastasis). Hemangiosarcoma of the superficial skin tends to have a lower rate of spread.

How is hemangiosarcoma treated?

Surgery is the first treatment to remove the mass. We submit the mass for histopathology (biopsy) to get a final diagnosis and in the meantime allow your pet to recover from surgery. The follow-up treatment is [chemotherapy](#) to help delay or prevent metastasis to other organs. Generally, the chemotherapy is intravenous every 2-3 weeks for five treatments with doxorubicin (Adriamycin). However, if that is not the right treatment for your pet, there are other alternatives available that you can discuss with your oncologist. Hemangiosarcoma of the superficial skin may sometimes be treated with surgery or cryotherapy (freezing of the tissues). It can also be treated with [electrochemotherapy](#) (ECT), which uses electrical stimulation (electroporation) to open up cell pores to allow chemotherapy to enter tumor cells.

What are the side effects of chemotherapy?

Please see the [Chemotherapy](#) handout for more information.

In general, chemotherapy is tolerated very well by dogs and cats. Side effects may include bone marrow suppression (decreased white blood cells, platelets, or red blood cells) and gastrointestinal upset (vomiting, diarrhea, decreased appetite). Pets generally do not lose all of their hair during treatment, but regrowth of the hair may be slower than usual and dogs with long hair coats may lose more hair during chemotherapy. Dogs with continuously growing haircoats (dogs that need to have haircuts like poodles, schnauzers, or Maltese) may have more dramatic temporary hair loss. Some drugs have specific side effects (such as toxicity to the heart, kidneys, or liver).

We check blood counts before every chemotherapy administration and depending on the drug being administered, may recommend other specific tests such as an electrocardiogram, cardiac ultrasound or blood tests to evaluate organ function. Approximately 80% of patients have mild to no side effects and 10-20% may have moderate side effects that are easily managed with medications or fluid therapy. Our protocols are intentionally designed so that less than 5% of patients have severe side effects that may require hospitalization with potentially life-threatening complications.

If your pet gets ill, please let your oncologist know and we can try to assess whether to reduce the dose the next time or send home supportive medications with the next chemotherapy dose. Our primary goal is to provide a good quality of life throughout the chemotherapy.