

Hemangiosarcoma (HSA) is a cancer of blood vessels. This very aggressive cancer metastasizes, or spreads, early and is associated with a poor prognosis. Usually diagnosed in older dogs, ages 9-12, HSA may affect any breed, but breeds that are predisposed include Golden Retrievers, Labrador Retrievers, and German Shepherds.

HSA may affect any part of the body, but the three most common sites are the spleen, right atrium/auricle of the heart, and skin or subcutaneous tissues. This cancer spreads by traveling in the blood. Sometimes, a primary tumor in the abdomen ruptures, filling the belly with cancer cells.

This cancer commonly spreads to the liver, internal organs, and lungs; it may also spread to the brain, heart, and skin.

Clinical signs of HSA vary greatly depending on organs affected and degree of spread. The majority of dogs with HSA will present with weakness and collapse from tumor rupture resulting in blood loss.

A diagnosis of HSA must be made on biopsy with histopathology. This involves obtaining some of the tumor for review by a pathologist. Once a diagnosis has been made more tests may be recommended to determine the extent (stage) of the cancer. These tests can include: a complete blood count (CBC)

- serum chemistry
- urinalysis
- chest x-rays
- abdominal ultrasound
- echocardiography

Below you'll find the different stages of HSA that would apply to a dog with a splenic tumor:

**Stage I:** Tumor less than 5cm, confined to one area without evidence of metastatic disease.

**Stage II:** Any tumor that has ruptured, without evidence of metastatic disease.

**Stage III:** Any tumor with distant metastatic disease (e.g. liver or lungs).

Average survival time for a dog with splenic HSA treated with surgery alone is around 1-2 months. Some dogs may do worse and some may do better. Chemotherapy can slow the spread of disease—adding it to treatment has shown to increase average survival times to approximately 6-8 months. Chemotherapeutic protocols commonly used for HSA include doxorubicin/Adriamycin, used alone or in combination with other drugs.



## Hemangiosarcoma

The chemotherapy protocol used at WestVet typically includes five doses of doxorubicin/ Adriamycin given every two weeks. A complete blood count is typically drawn 7-10 days after the first 1-3 doses and again, before each dose is given.

After treatment is complete, the staging tests can then be performed again to look for evidence of cancer prior to stopping chemotherapy.

Side effects of this medication include gastrointestinal side effects (nausea, vomiting, diarrhea, decreased appetite), bone marrow suppression, and cumulative toxicity to the heart. Therefore, an echocardiogram is usually performed prior to the fifth dose of chemotherapy. If a patient has pre-existing heart disease, an echocardiogram is usually performed prior to the first dose as well.

*We are pleased to provide the services of Carrie Hume, VMD, DACVIM, Idaho's only board certified small animal oncologist. Please contact our office if you have any questions regarding oncology care for your pet.*