



## Canine Hemangiosarcoma

### **What is hemangiosarcoma?**

Hemangiosarcoma is a generally aggressive malignant tumor that originates from the blood vessels in various parts of the body. It can occur in all dogs, but is most common in the large breeds. It often results in internal bleeding and secondary complications.

### **What types of hemangiosarcoma affect dogs?**

Hemangiosarcoma is generally classified based on the location in the body that the tumor originates. Most cases are associated with the spleen and/or liver. A smaller percentage of cases are associated with the heart, skin or other locations in the body.

### **What causes hemangiosarcoma?**

Cancer is caused by a combination of environmental and genetic factors. While certain breeds are predisposed to hemangiosarcoma (German Shepherds, for example), a specific cause is usually not identified.

### **What clinical signs does hemangiosarcoma cause?**

The signs created by a tumor depend highly on the primary tumor location and stage of the disease. Hemangiosarcoma often causes internal bleeding. This results in *anemia* (low red cell count) and shock, which can cause acute weakness, collapse, pale gums and tongue, or difficulty breathing. Heart rhythm disturbances created by the disease can also cause similar signs. If left unchecked, these signs may wax and wane. Rarely, abdominal tumors are found incidentally as part of routine examination. Skin tumors may cause no clinical signs or bleeding and bruising under the skin. Finally, animals may die acutely from this disease.

*Clinical signs may include:*

- |                    |                        |                        |
|--------------------|------------------------|------------------------|
| ■ Collapse         | ■ Difficulty breathing | ■ Pale gums and tongue |
| ■ Lethargy         | ■ Palpable masses      | ■ Seizure              |
| ■ Rapid heart rate |                        |                        |

### **What laboratory changes does hemangiosarcoma cause?**

Most patients with hemangiosarcoma present with a mild to moderate *anemia* (decreased red blood cell numbers) from internal bleeding. Depending on the severity



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of bleeding, the platelet count may also be decreased. Life-threatening clotting disorders can occasionally be observed. In more advanced disease, internal organ function may be affected.

### **What testing is recommended for hemangiosarcoma patients?**

In evaluating patients with hemangiosarcoma, our primary concerns are to understand where the primary disease is and make certain that there are no obvious metastatic lesions or other underlying conditions present that may affect treatment. Routine screening urinalysis, CBC and chemistry are performed to rule-out other underlying diseases. Thoracic radiographs are required to evaluate for metastatic disease or heart involvement. Abdominal and heart ultrasound are performed to evaluate the location of the primary tumor. Other tests may be required in certain cases.

*Most patients evaluated for hemangiosarcoma will have the following tests:*

- Chemistry profile
- Urinalysis
- Clotting tests
- Complete Blood Count (CBC)
- Cardiac ultrasound
- Abdominal ultrasound
- Chest X-rays

### **What treatment options are available for hemangiosarcoma patients?**

For patients with incidental masses or internal bleeding, surgery is often required to remove the primary tumor and confirm the diagnosis. Because metastatic disease is very common with hemangiosarcoma, chemotherapy is strongly recommended following surgery. For dogs with skin involvement surgery alone or in combination with chemotherapy is typically recommended. The chemotherapy drugs used for this disease are generally well tolerated. For dogs with heart involvement, surgery is generally not an option. Palliative treatment options are available, however. The specific treatment plan will depend on the individual case and we will discuss the treatment options with you at the time of your appointment. Please see our chemotherapy handout for more specific information on these drugs and the side effects that can be seen.



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### **What is the prognosis with hemangiosarcoma in dogs?**

Hemangiosarcoma carries a guarded long-term prognosis. For animals with abdominal disease that undergo surgery alone, average survival times are 6-10 weeks. Chemotherapy extends survival times to 6-9 months. Animals with primary skin involvement are thought to have less aggressive disease. The prognosis depends on the history, clinical signs, and location of the hemangiosarcoma. We will discuss the specifics of your dog's case at the time of your visit.