

# “Only the Good Die Young”

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*Seems we can no longer assume our beloved companions will live to be senior citizens. Over the years, our breed has lost some special dogs, in their prime by most standards. Several conditions are linked to sudden death in a seemingly healthy dog.*

**F**irst on the list of conditions is a ruptured hemangiosarcoma. This malignant tumor arises from cells lining blood vessels and mainly affects the spleen, heart, and liver. Middle age to older dogs and possibly more males than females can be found dead showing no symptoms suggesting cause of death. German Wirehaired Pointers, like many other large breeds, have a higher incidence of this type of cancer.

## CLINICAL SIGNS

Clinical signs of splenic hemangiosarcoma (HSA) vary and range from vague, nonspecific signs of illness to asymptomatic abdominal swelling to acute death secondary to hemorrhagic shock. Early symptoms can be subtle and easily missed. Some dogs merely show a change in appetite or unexplained vomiting. Splenic growths have the unfortunate tendency to break open and bleed profusely. Pale gums, distended abdomen, lethargy (weakness), or difficulty breathing should be investigated.

Like the splenic hemangiosarcoma, the heart-based HSA exerts its life-threatening effects by bleeding. The heart is encased in a thin, membranous sac called the pericardium. The hemangiosarcoma is usually attached to the upper right chamber of the heart. When it bleeds, the blood fills the pericardium until it is so full the heart inside has no room to fill with the blood it has to pump. This condition results in labored breathing, weakness, and emergency circulatory collapse. Hemopericardium can only be relieved by tapping the pericardium with an ultrasound-guided needle and withdrawing the fluid. Pericardiocentesis allows the heart room to fill with blood and resume pumping. A dog showing any clinical signs of exercise intolerance, shortness of breath, or unexplained weight loss should be evaluated by a veterinarian.

## DIAGNOSIS

Lab work and x-rays are indicated if the doctor suspects hemangiosarcoma. A complete blood count

shows anemia (low red blood cell numbers) and changes in red blood cell structure. Lower platelet counts are identified as the dog's body tries to clot the hemorrhages associated with this vascular tumor. X-rays of the chest or abdomen can reveal



an enlarged heart or abdominal mass in the dog exhibiting “vague” symptoms. Ultrasound clearly shows blood-filled hemangiosarcomas, but only biopsy confirms malignancy.

## PROGNOSIS

Hemangiosarcoma is a very serious disease with a grave prognosis. Most dogs live only a short time (weeks to months) after diagnosis. Since hemangiosarcomas arise from the lining of blood vessels, they are highly metastatic. This tumor has an increased chance of shedding cancer cells into the blood vessels and these cancer cells implant and grow other places like the liver and lungs within months. This tumor is so aggressive, even surgery combined with chemotherapy is usually not curative.

**A**second cause of sudden death is dilated cardiomyopathy. This sneaky disease of the heart muscle fibers is characterized by severe cardiac contraction dysfunction. The heart muscle weakens, loses its ability to pump blood effectively, and the electric pathway determining a dog's heart rate and rhythm is altered. Fatal arrhythmias may develop resulting in sudden death.

## ETIOLOGY

Breed-associated dilated cardiomyopathy is likely a genetically programmed inherited disorder, in most cases with unknown mechanism of cause. Doberman Pinschers, Boxers, Great Danes, Portugese Water Dogs, and Cocker Spaniels are breeds known to be genetically predisposed to dilated cardiomyopathy (DCM). Dilated cardiomyopathy is not limited to specific breeds. It is an adult onset disease affecting many large/giant breeds including German Wirehaired

Pointers. DCM appears to affect more males than females usually between the ages of four and ten. Proposed causes of idiopathic (unknown cause) dilated cardiomyopathy include: viral infection, underlying immune-mediated disease, nutritional deficiencies such as taurine and L-carnitine, and microvascular (microscopic blood vessel) disease. Toxins such as doxorubicin, a chemotherapy drug used to treat cancers in dogs, and Trypanosomiasis, an uncommon infectious disease found mainly in the southern United States can also cause DCM.

## DIAGNOSIS

Diagnosing dilated cardiomyopathy can be complicated. Structural changes in the heart muscle result in three clinical presentations:

1) Occult disease- the patient shows no obvious clinical signs. A dog is “screened” for another problem and heart abnormalities are detected incidentally, most often by auscultation (listening with a stethoscope) or x-raying the chest.

2) Congestive heart failure- the patient shows clinical signs of a steadily progressive disease characterized by lethargy (lack of energy), increased heart rate, coughing, weakness, and weight loss.

3) Cardiac arrhythmias caused by electrical instability resulting in episodes of syncope (fainting) or collapse and sudden death.

Do not ignore signs of weakness. Pursuing any unexplained cough, collapsing episode, or change in a dog’s ability to exercise or breathe at rest will lead to an earlier diagnosis. Most cardiac conditions can be suspected with good auscultation and confirmed with an ECG (electrocardiogram) or an echocardiogram (ultrasound of the heart). Chest x-rays might show an enlarged heart and/or fluid in the lung tissue or chest cavity. Some dogs in the early stages of DCM have normal chest films but show arrhythmias on their ECG.

Cardiac ultrasound can help identify dogs with DCM before they develop clinical signs. The echocardiogram shows the larger heart chamber size, thinner heart walls, and reduced power of the heartbeat. Decreased systolic (pumping) function and ventricular enlargement confirm dilated cardiomyopathy. This examination is best performed by a board certified veterinary cardiologist.

## TREATMENT

Regardless of whether dilated cardiomyopathy is breed- associated or idiopathic (unknown cause) it is rarely reversible. Humans with cardiomyopathy often receive heart transplants. In veterinary medicine drugs are prescribed to support the heart, reduce clinical signs of congestive heart failure, reduce life-threatening arrhythmias, and prolong survival. The cornerstones of DCM treatment include diuretics (drugs to eliminate fluid from the lungs), ACE inhibitors (blood vessel dilators to help relieve the strain on the heart muscle), digitalis, and pimobendan - a newer medication that increases the strength of contractility of the heart muscle.

Progression of the disease varies with each individual dog. Patients that respond to treatment for DCM can feel well and be normal in every way except they lack stamina and endurance. Physical activity may need to be moderated or eliminated according to the disease’s severity. Dogs with DCM are always at risk for sudden death, usually during exercise or excitement.

## THE FUTURE

To suddenly lose a dog without warning or explanation is a heart wrenching experience. Without performing a post mortem exam, we only speculate about the cause of sudden death. Do German Wirehaired Pointers have a heart problem? Are we seeing more hemangiosarcomas in our middle-age dogs? We need the information gathered only when fanciers confirm a cause of death and share the diagnosis.

Each day researchers learn more about the heritability of so many conditions. Scientists suspect hemangiosarcoma and dilated cardiomyopathy affect family lines. To learn a dog’s sire, dam, or relative died of cancer or a cardiac condition allows an owner to be super vigilant and suspect a problem early, perhaps when more can be done to provide treatment.

Keep a close eye on your “retired” companion. Don’t assume he’s just old and “tired.” Report any depression, unexplained change in appetite or respiratory distress to your veterinarian. You want to be together for “the longest time