



Canine Dilated Cardiomyopathy

What is Canine Dilated Cardiomyopathy?

- Canine Dilated Cardiomyopathy (DCM) is a primary heart muscle disease that typically affects large breed dogs.
- DCM can have genetic, metabolic, nutritional, or infectious causes, but often the cause can't be found.
- DCM causes the heart muscle to weaken (loss of contractility), and the heart chambers to enlarge (dilate).
- Irregular heartbeats (arrhythmias) often complicate DCM, and can sometimes cause of DCM.
- DCM is usually a progressive disease. Clinical signs occur when the heart can no longer pump enough blood to meet the body's needs for oxygen and nutrients (heart failure). Arrhythmias can cause clinical signs as well (episodes of weakness or fainting), and they cause some patients to die suddenly.
- DCM is inherited in some breeds (e.g. Doberman Pinschers, Boxers, Irish Wolfhounds, Great Danes).

How is DCM diagnosed?

- DCM may be diagnosed by screening tests in at risk breeds, allowing earlier treatment.
- Common screening tests include echocardiography, Holter (24 hour ECG) monitoring, and serum biomarkers such as NT-proBNP and troponin.
- Unfortunately, DCM is often first diagnosed signs of congestive heart failure are present.
- Genetic testing for traits that predispose to DCM is available for Boxers and Doberman Pinchers at NC State Cardiology Genetics lab. For more information, visit www.ncstatevets.org/genetics.

What is the treatment for DCM?

- Medications (pimobendan, ACE inhibitors, other medications) delay the onset of heart failure in dogs identified by screening prior to the onset of clinical signs of heart failure.
- The treatment congestive heart failure (CHF) typically includes these medications in addition to diuretics.
- Specific antiarrhythmic drugs may also be needed.
- In addition to drug therapy, nutritional and metabolic supplements may be helpful.

How can I tell how my dog is doing at home?

- The goal is for your dog to behave normally at home.
- Monitoring breathing rate when your dog is asleep will help detect the onset or recurrence of CHF.
- Normal respirations are less than 36 breaths per minute, but a 20% increase over 2 days is concerning.
- A smartphone app called Cardalis simplifies obtaining and tracking the breathing rate from a distance.
- Other signs can include decreased activity or appetite, coughing, weakness, fainting or belly distention.

What is the prognosis with DCM?

- Dogs identified by screening tests before the onset of clinical signs may do well for 1-4 years.
- The average time to development of heart failure or sudden cardiac death in preclinical phase variable.
- Dogs with clinical signs of heart failure often survive 6 - 24 months with medications and excellent care.