

The **PROTECT** study¹:

A paradigm shift in veterinary cardiology

Background:

1st

Dilated cardiomyopathy (DCM) is the **most common form of acquired heart disease** in **large and giant** breed dogs²



1 in 10

canine heart disease cases are caused by DCM and breeds most commonly affected include Dobermanns, Boxers, Great Danes, Irish Wolfhounds, Deerhounds and Newfoundlands³



25–50%

of Dobermanns develop DCM in their lifetime and **≥25–30%** will die suddenly before symptoms of CHF develop^{4–6}

The PROTECT study set out to determine whether Vetmedin® could delay the onset of CHF or sudden death and extend overall survival in Dobermanns with asymptomatic DCM

The study recruited!

76 Dobermanns

39 received Vetmedin® and

37 received placebo



from **14** centres in **3** countries

Inclusion Criteria

Dobermanns aged between

4–9 YEARS

with evidence of **asymptomatic DCM** on cardiac ultrasound

Could Vetmedin® delay the onset of CHF or sudden death in Dobermanns with asymptomatic DCM?

RESULTS



Median time to onset of CHF or sudden death

441 DAYS

Placebo (p=0.0088)

718 DAYS

Vetmedin®

Vetmedin® extended the asymptomatic phase by an average of **9 months**

63%
extension of the asymptomatic phase

+157 DAYS

Vetmedin®
extended survival
by an average of
157 days

Median Survival Time

466 DAYS Placebo (p=0.034)

623 DAYS Vetmedin®

Vetmedin® extended survival by an average of **5 months**

34%
extension of
overall survival

Screen for asymptomatic DCM to give dogs more life to live

IDENTIFY
dogs at risk



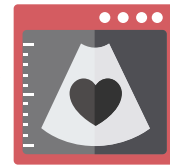
>3 years of age
AND
>20 kg
AND/OR
At-risk breed*
OR
Suspicion of DCM on
history or clinical
examination†

SCREEN
for asymptomatic DCM



NT-proBNP biomarker
Abnormal:
≥900 pmol/L
≥550 pmol/L (for Dobermanns)

DIAGNOSE
asymptomatic DCM



Cardiac ultrasound‡
Abnormal:
• Increased LVIDD
• Increased LVIDs

TREAT



Treat with
Vetmedin®§

Abnormal

Normal‡



Vetmedin® helps dogs with DCM live longer, happier lives, giving them more quality time to enjoy with their owner



*Dobermann, Boxer, Great Dane, Irish Wolfhound, Dalmatian, Newfoundland, Afghan Hound, Bullmastiff, Neopolitan Mastiff, German Shepherd Dog, Great Pyrenees, Golden Retriever, Scottish Deerhound, Rottweiler, Saint Bernard, Cocker Spaniel, Leonberger, Flat-coated Retriever, Airedale Terrier, Bernese Mountain Dog, Bouvier des Flandres, Dogue du Bordeaux, Old English Sheepdog, Labrador Retriever, Samoyed, English Springer Spaniel, Standard Schnauzer, or other large breeds.

†If you have a clinical suspicion that a dog may have early signs of CHF secondary to DCM (gallop rhythm, soft murmur, audible arrhythmia, mild exercise intolerance) you may wish to consider a cardiac ultrasound regardless of the NT-proBNP value, or instead of running a NT-proBNP test.

‡A Holter is indicated in many dogs with asymptomatic DCM and as a screening test in some high-risk breeds, such as the Boxer and Dobermann, regardless of cardiac ultrasound findings.

§Vetmedin® chewable tablets are licensed for the treatment of dilated cardiomyopathy in the preclinical stage (asymptomatic with an increase in left ventricular end-systolic and end-diastolic diameter) in Doberman Pinschers following echocardiographic diagnosis of cardiac disease.

References:

1. Summerfield NJ, Boswood A, O'Grady MR, et al. Efficacy of pimobendan in the prevention of congestive heart failure or sudden death in Doberman Pinschers with preclinical dilated cardiomyopathy (the PROTECT Study). *J Vet Intern Med.* 2012;26(6):1337-1349. 2. Vollmar AC, Aupperle H. Cardiac pathology in Irish wolfhounds with heart disease. *J Vet Cardiol.* 2016;18(1):57-70. 3. Egenvall A, Bonnett BN, Häggström J. Heart disease as a cause of death in insured Swedish dogs younger than 10 years of age. *J Vet Intern Med.* 2006;20(4):894-903. 4. Wess G, Schulze A, Butz V, et al. Prevalence of dilated cardiomyopathy in Doberman Pinschers in various age groups. *J Vet Intern Med.* 2010;24:533-538. 5. O'Grady MR, O'Sullivan ML. Dilated cardiomyopathy: an update. *Vet Clin North Am Small Anim Pract.* 2004;34:1187-1207. 6. Calvert CA, Jacobs G, Pickus CW, et al. Results of ambulatory electrocardiography in overtly healthy Doberman Pinschers with echocardiographic abnormalities. *J Am Vet Med Assoc.* 2000;217:1328-1332.

Vetmedin® contains pimobendan. UK: POM-V IE: POM. Further information available in the SPC or from Boehringer Ingelheim Animal Health UK Ltd., RG12 8YS, UK. UK Tel: 01344 746959 (sales) or 01344 746957 (technical), IE Tel: 01 291 3985 (all queries). Email: vetenquiries@boehringer-ingelheim.com. Vetmedin® is a registered trademark of Boehringer Ingelheim Vetmedica GmbH, used under licence.

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