How to Calculate the Vertebral Heart Score (VHS)¹

1. Using a lateral thoracic radiograph, ensure the thoracic vertebrae T4 to T12 are clearly delineated.

2. Using calipers, measure the longest axis of the cardiac silhouette from the carina of the mainstem bronchus to the apex (designated “L”).

3. Transfer this long axis measurement to the vertebrae, starting at the cranial edge of T4, and count the number of vertebrae that fall within the caliper points.

4. Using calipers, measure the short axis at the widest part of the cardiac silhouette, perpendicular to the long axis measurement (designated “S”).

5. Transfer this short axis measurement to the vertebrae, starting at the cranial edge of T4, and count the number of vertebrae that fall within the caliper points.

6. Sum the two measurements.

\[
\text{VHS} = S + L
\]

VHS for Normal Dogs = 8.7 - 10.7

This example:

- Long Axis Line: (5.2)
- Short Axis Line: (4.4)

\[
\text{VHS} = L + S
\]

\[
= 5.2 + 4.4
\]

\[
= 9.6
\]

= normal

**Vetmedin**

**Cardiac drug for oral use in dogs only**

**Vetmedin (pimobendan) maleate**

**Dosage and Administration:**

**Cardiac drug for oral use in dogs only**

**Vetmedin** (pimobendan) is indicated for the treatment of dogs with asymptomatic heart disease (AVVI) or dilated cardiomyopathy (DCM). Dogs in both treatment groups received either pimobendan (0.5 mg/kg/day) or enalapril (0.5 mg/kg/day) divided twice daily for 56 days. Dogs in the Vetmedin group had the following prevalence (percentages of dogs with at least one occurrence of common adverse reactions/new clinical findings (not present in a dog in the active control or enalapril group): poor appetite (8%), lethargy (33%), diarrhea (30%), dyspnea (29%), azotemia (14%), weakness and ataxia (13%), pleural effusion (10%), fever (7%), sudden death (8%), ascites (6%), and heart murmur (5%). Prevalence was similar to the active control group. The prevalence of renal failure was higher in the active control group (4%) compared to the Vetmedin group (1%).

Adverse reactions/new clinical findings were seen in both treatment groups. The adverse reactions were typical of CHF, the therapy of CHF, or both. The following adverse reactions/new clinical findings are listed according to body system and are not in order of prevalence:

- cardiovascular: palpitations, atrial fibrillation, ventricular outflow tract, death, sudden death, chordate tendineae, respiratory, fatigue, poor appetite, lethargy, diarrhea;
- neurologic: seizures, trembling, ataxia, seizures, restlessness, agitation, ataxia, death, photosensitivity;
- renal: proteinuria, renal failure, urine output normal, renal failure, urinary retention, urinary acids, azotemia, dermatitis, abnormal serum electrolytes, protein, and glucose values;
- endocrine: hyperactivity, excited behavior, erythema, rash, drooling, constipation, and diabetes mellitus.

To report suspected adverse reactions, to obtain a copy of the label or for technical assistance, call 1-866-638-2226.

**Clinical Pharmacology:** Pimobendan is oxidatively deaminated and excreted in the urine mainly via feces. It is not a substrate for P-glycoprotein (thereby avoiding competition and inhibition of phosphodiesterase Type III). Pimobendan exhibits vasodilator activity by virtue of its action on beta-adrenergic and type IVa myocardial receptors. The chemical name of pimobendan is 4,5-dihydro-6-[(2-(4-methoxyphenyl)-1H-benzimidazole-2-yl)phosphodiester (Type III). Pimobendan exhibits sensitivity of cardiac myofilaments and inhibition of phosphodiesterase (Type III). Pimobendan exhibits vasodilator activity by virtue of its action on beta-adrenergic and type IVa myocardial receptors. The chemical name of pimobendan is 4,5-dihydro-6-[(2-(4-methoxyphenyl)-1H-benzimidazole-2-yl)phosphodiester (Type III). Pimobendan exhibits sensitivity of cardiac myofilaments and inhibition of phosphodiesterase (Type III). Pimobendan exhibits sensitivity of cardiac myofilaments and inhibition of phosphodiesterase (Type III). Pimobendan exhibits sensitivity of cardiac myofilaments and inhibition of phosphodiesterase (Type III).