



**PATIENT**

Bruce Roddy

**SPECIES**

Canine

**BREED**

Border Collie

**SEX**

Neutered Male

**AGE**

8 Years

**WEIGHT**

60 Pounds

**INTERPRETED BY**

Sara Brethel, DVM,  
DACVIM (Cardiology)

**IMAGING PERFORMED BY**

Sara Hansen

**HOSPITAL NAME**

South Willamette VC

**REFERRING VET**

Dr. Olson

**INVOICE**

37341

**DATE**

6/4/26

**PRESENTING CLINICAL SIGNS**

Findings: Cardiac arrhythmia with possible tamponade, Dry cough, Weight loss, Lethargy. ABNORMAL Labwork Values: Increased ALT, labwork and rads sent via email. Radiographic Findings: Marked cardiac enlargement, Dilation of cardiac vessels, mild pulmonary edema. Notes to Specialist (if any): Concern for DCM vs pericardial effusion, would like treatment recs/pearls of wisdom if pericardial effusion. O consented to pericardiocentesis if indicated today.

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (M-Mode)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
<b>PATIENT</b>	4.07	--	2.41	2.25	5.17	--	--
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LAD LA MAX 4 Chamber	LVIDd Avg; 2D and m-mode short axis (cm)	LVIDs Avg; 2D and m-mode short axis (cm)
<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6				
<b>PATIENT</b>	NM	0.58	0.5	27.27	6.7	5.8	5.5

**ECG Interpretation**

Sinus rhythm with evidence of a sinus tachycardia.

**Cardiac Presentation**

The mitral valve leaflets are normal with mild mitral regurgitation centrally directed. There is no prolapse of mitral valve leaflets. The left atrial size is severely increased. LV internal dimensions during diastole are increased and systolic function is decreased in the face of mitral regurgitation. The left ventricle is hypodynamic with thinning of the left ventricular walls. There is mild right atrial enlargement with mild evidence of tricuspid regurgitation. The tricuspid valve leaflets are normal. There is no evidence of pulmonary hypertension on this evaluation. Subjectively, the right ventricle appears to have decreased systolic function. The aortic and pulmonic valves had normal morphology and the corresponding outflow velocities are reduced. There was no evidence of pulmonic or aortic insufficiency. The aorta appears normal. The pulmonary artery and associated branches appear normal. There is no evidence of pleural effusion. There is scant pericardial effusion. There is no evidence of an intracardiac mass. There is evidence of ascites.



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**ULTRASONOGRAPHIC FINDINGS**

- Dilated cardiomyopathy phenotype
- Severe left atrial enlargement
- Left ventricular systolic dysfunction
- Subjective right ventricular systolic dysfunction
- Tricuspid regurgitation
- Scant pericardial effusion
- Ascites

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

There is evidence of a dilated cardiomyopathy phenotype. Differentials include primary dilated cardiomyopathy (idiopathic), dietary related, infectious, or inflammatory. Sometimes, non traditional grain free diets can cause decreased pumping function of the heart. There are other diseases such as infectious causes (tick borne), inflammatory conditions, or diseases that affect the body that can also cause this type of appearance to the heart. Other diagnostics to consider include screening for infectious diseases, ensuring blood work is within normal limits, and considering an abdominal ultrasound if the breed is not a classic breed for DCM (ie: classic breeds: Doberman, Great Dane, Irish Wolfhounds).

Cardiac medications such as furosemide (2.0 mg/kg twice daily) in addition to the pimobendan (0.27-0.32mg/kg PO q12), along with an ACE inhibitor (enalapril or benazepril 0.5mg/kg POq12-24)are recommended. 1-2 weeks after starting ACE inhibition and diuretic therapy repeat kidney values, fluid check and chest radiographs are recommended.

Due to the potential for arrhythmias with DCM, a Holter monitor is recommended. If a Holter is unavailable, recommend evaluating the rate and rhythm with an electrocardiogram. Unfortunately, due to the nature of this disease, the patient is at risk of passing away suddenly.

Unfortunately, patients in congestive heart failure with DCM have a poor to guarded prognosis. The median survival times are roughly 6-9 months (with some patients doing better and other patients not doing as well).

It is recommended to consider switching to a grain-based commercial dog food diet made by Purina, Science Diet, or Royal Canin (if there is no history of a food allergy) since there is currently an association between cardiac changes (poor pumping function and dilation of the heart) and multiple grain free and limited ingredient diets. Current investigation is still underway, and the definitive causative factor has not been identified. A grain source including corn or barley should be seen on the dog food label. Substitutes for common grain sources such as peas, lentils and even rice have been implicated in cardiac dysfunction. Any diet change should be gradual by adding small amounts to the current diet first and then increasing the ratio of the new food gradually over two weeks to avoid gastrointestinal upset.



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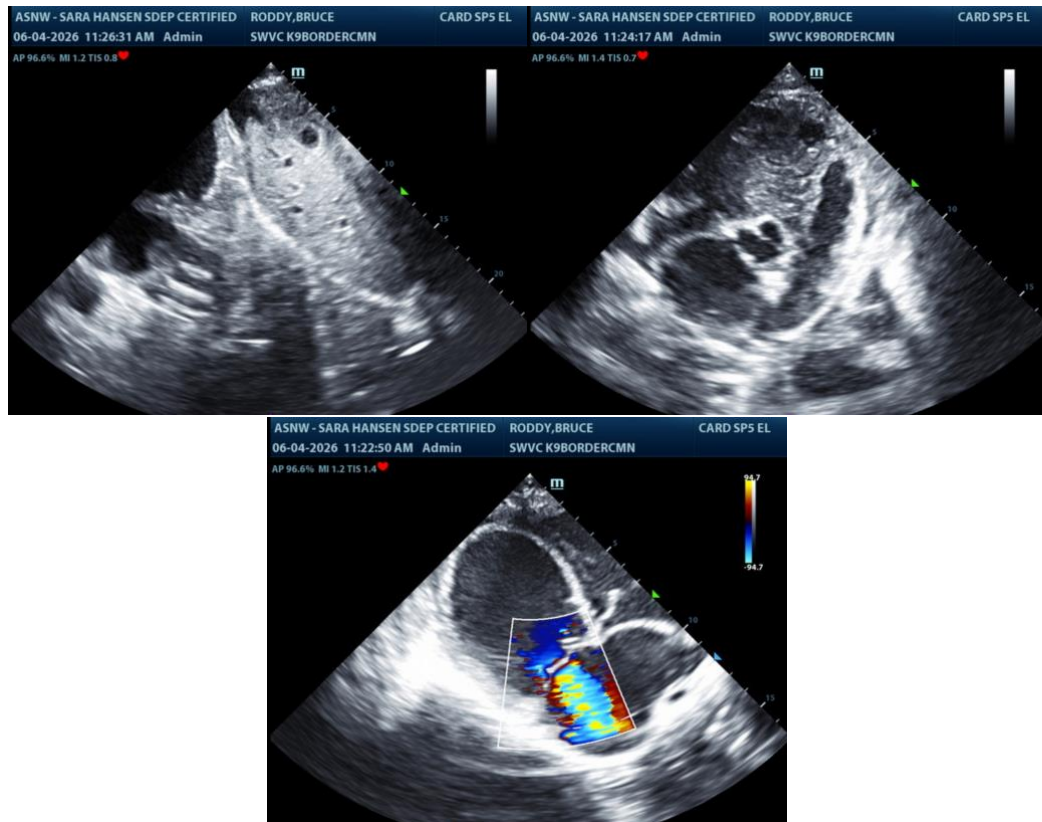
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Cardiac supplementation can be considered for this patient. If the patient is eating well, recommend starting taurine (30mg/kg PO q12) and L-carnitine (50mg/kg q8) supplementation (brands: Now, Solgar, PetAg, Twinlabs). Fish oil supplementation can also be administered (EPA 40mg/kg + DHA 25mg/kg PO q24). Can consider staging these medications (ie: starting one and then a week later starting another) due to the potential for stomach upset.

The client should start monitoring respiratory rate and effort at home if not already doing so. The resting respiratory rate should be < 35-40 breathes/minute when the patient is resting or sleeping. If the breathing rates are increasing, then chest radiographs are recommended.

Recommend ensuring the ascites is secondary to congestive heart failure and there's no evidence of an intraabdominal mass.



**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

Sara Brethel DVM, DACVIM (Cardiology)

[info@SonoPath.com](mailto:info@SonoPath.com)



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