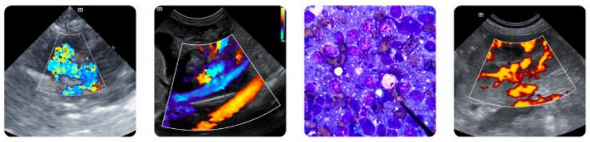

PATIENT
Bruno Ellis

SPECIES
Canine

BREED
Doberman

SEX
Male

AGE
5 years

WEIGHT
86lbs

INTERPRETED BY
Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY
Julia Bakker, DVM

HOSPITAL NAME
Orange Blossom Veterinary Imaging

REFERRING VET
Dr. Pepper

INVOICE
46315

DATE
1/6/26

PRESENTING CLINICAL SIGNS

History: 1-week of productive cough that is increasing in frequency and some lethargy. CXR show cardiomegaly and CHF. BNP is pending. Started Lasix; improving symptoms some.

RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental cardiac information only.

Cardiomegaly with evidence of CHF.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Severe left ventricular dilation with diminished systolic function. Severe left atrial enlargement. The mitral valve appears normal in form and function, with no obvious prolapse into the left atrial lumen. Mild central mitral regurgitation secondary to annular stretch. Normal MR velocity. Decreased LV wall thickness and increased sphericity. The tricuspid valve appears normal in form and function. Mild right atrial and ventricular dilation. Trace tricuspid regurgitation. Normal velocity. The aortic valve is normal in morphology and mobility. No subvalvular ridge present; decreased LVOT and RVOT velocities. trivial aortic insufficiency. Normal pulmonic valve with no pulmonic insufficiency seen. No pericardial or pleural effusion noted. No obvious cardiac tumors.

CARDIAC CHART

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT	5.0	2.5	NM	2.1	16	30	NM
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV MAX** (m/s)	**BODY WEIGHT** (kg)	**LA** 2D short axis Base view (cm)	**LVIDd** Avg; 2D and m-mode short axis (cm)	**LVIDs** Avg; 2D and m-mode short axis (cm)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
PATIENT	NM	0.8	0.9	39.0	4.5	6.4	5.4
*Normal chamber parameters expressed as a mean value (SD)				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
BODY WEIGHT DEPENDENT PARAMETERS				5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
Note: All measurements based upon multi-modal images and methods. An average value is reported.				10	1.50 (3.8)	3.27 (3.5)	2.06 (3.1)
				15	1.83 (2.0)	3.71 (2.4)	2.43 (2.1)
				20	2.02 (1.9)	4.14 (2.2)	2.80 (2.0)
				25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
				30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
				35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
				40	2.62 (5.2)	5.48 (6.1)	3.96 (5.4)
				50	2.88 (7.1)	6.07 (8.3)	4.46 (7.4)

Adapted from June Boon, Veterinary Echocardiography, 1998
Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435
Hansson et al, Vet Rad and Ultrasound 2002
Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Unfortunately, this patient has end-stage cardiomyopathy and systolic dysfunction. This is causing dilation and overload of the left heart resulting in insufficiency of the mitral valve. The degree of dilation and pump failure is resulting in congestive heart failure. The right heart is also mildly affected, with mild dilation.

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Systolic failure can be primary in nature (DCM) or secondary to taurine deficiency, myocarditis, tachycardia-induced cardiomyopathy, or infiltrative disease such as lymphoma. In a predisposed breed such as a Doberman, this is considered genetic primary DCM until proven otherwise. A diet history should be sought. Prognosis is poor to grave at this stage in the disease process, with an average survival time of <6 months. Most Dobermans will succumb to either refractory CHF or sudden arrhythmic death at any time, and this risk should be relayed regardless of therapy.

Initiation of full cardiac supportive medications is recommended as below. If the patient appears unstable, hospitalization for supportive care is ideal. Cases of systolic failure are at high risk for malignant tachyarrhythmias (such as VT) and sudden death, and a baseline ECG and/or 24-hour holter monitor is recommended.

Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit. Monitor for development of a cough, worsening labored breathing, exercise intolerance or collapse episodes in the future. Monitoring of sleeping breathing rates at home is recommended to assess response to medications and recurrence of CHF in the future.

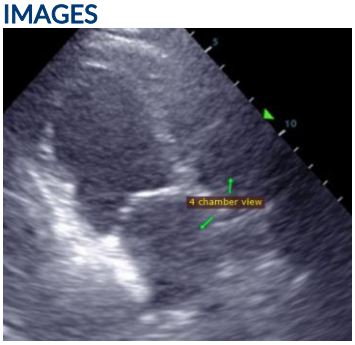
PLAN:

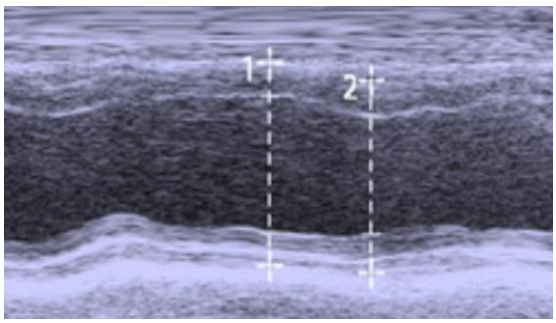
Recommend baseline ECG and BP. Recommend the following oral medications: Continue Furosemide 1-2mg/kg PO q12h. Institute Pimobendan 0.25-0.3mg/kg PO q12h and Spironolactone 1-2mg/kg PO q12h.

Recheck renal panel, BP and clinical response in 5-7 days, than every 3-4 months lifelong. Pending BP >130mmHg and patient doing well, institute ACE-I 0.5mg/kg PO q12h.

Recheck echocardiogram in 6 months to screen for progression, sooner if clinical signs arise in the interim.

IMAGES





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

Thank you for this referral. This report was generated using transcription software, and minor dictation errors may be present. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

Maggie Machen Lamy, DVM
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com