



PATIENT

Lucy Carbonelli

PRESENTING CLINICAL SIGNS

Recheck echo, last echo 4/26/22. Stage B2 valvular disease. Patient doing well. Current meds: Vetmedin 2.4mg/ml - 0.5ml BID

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

BREED

Yorkie

SEX

Spayed Female

AGE

14 Years

WEIGHT

8.18 Pounds

INTERPRETED BY

Kathleen Sennello DVM,
MS, Diplomate ACVIM
(Small Animal Internal
Medicine)

IMAGING PERFORMED BY

Jessica Miller

HOSPITAL NAME

ACC Flanders

REFERRING VET

Dr. Hallihan

INVOICE

37939

DATE

5/24/22

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swedish)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT	5.2	0.45	2.14	2.10	48%	NM	0.12
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LA (2D long 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				
PATIENT	128	1.54	0.64	3.72	2.88	2.71	1.40

Adapted from June Boon, Veterinary Echocardiography, 1998
Sisson D et al. JVIM 1991; 5: 232, and Jacobs et al. Am J Vet Res 1985; 46:1705

Echocardiographic findings

Mitral valve: moderate degeneration of both leaflets. The septal leaflet is more severely affected compared to the posterior leaflet.

- Moderate (posterior) to marked prolapse (septal) of both leaflets.
- Severe mitral regurgitation.
- Severe left atrial enlargement
- Marked left auricular enlargement.
- Mild rounding of the interventricular septum, i.e. left ventricular enlargement is present
- Moderate to marked increase of LA: Ao ratio
- LA normalized for BW (LAN = 1.83); marked enlargement
- LVIDd normalized for BW (LVIDND = 1.84); moderate enlargement
- LVIDs normalized for BW (LVIDNs = 0.93); WNL

Aortic valve: no abnormalities

- Trivial aortic insufficiency

Tricuspid valve: very mild myxomatous degeneration of the tricuspid valve

- Prolapse of leaflets: absent.
- Trivial tricuspid regurgitation



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- No right ventricular or atrial enlargement.

Pulmonic valve: no abnormalities

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- Trivial pulmonary insufficiency.
- Pulmonary artery - bifurcation, no abnormalities.
- Pulmonary artery: aortic ratio within normal limits.

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- Main pulmonary artery within normal limits.
- No signs of heart worm.
- No signs of pericardial or pleural effusion

SEX

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- No evidence of pulmonary edema.
- No obvious signs of a mass.

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ULTRASONOGRAPHIC FINDINGS

- Myxomatous degeneration of the mitral (moderate) and tricuspid (mild) valves, ACVIM stage B2, with marked left atrial enlargement and moderate left ventricular enlargement. Severe prolapse of the septal leaflet of the mitral valve is present.

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- Results are stable compared to Lucy's original exam, therefore, it is possible the pimobendan in liquid form is not effective (see below), i.e. an improvement is not observed.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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Medicine)

Other suggestions/recommendations include:

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Jessica Miller

- Continue treatment with pimobendan at 0.25-0.30 mg/kg PO every 12 hours. However, pimobendan (Vetmedin) is recommended as the molecule is not stable in liquid form, particularly after one month. The medication can be crushed and mixed with a small amount of food or no salt broth.

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- Spironolactone is suggested to decrease myocardial fibrosis. It may also help decrease the size of the left atrium.

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- Monitoring of the resting (sleeping) respiratory rate (RRR) is highly recommended once a day. The RRR should NOT EXCEED 30 breaths per minute (bpm). If the respiratory rate is greater than 30 bpm, or if there is a gradual increase (over a day or two) toward 30 bpm, the patient should be evaluated immediately for congestive heart failure and the appropriate treatment initiated.

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- Other clinical signs clients should monitor for include coughing (particularly at night), fatigue, lethargy, decreased exercise tolerance (i.e., not being able to walk for as long before becoming tired, or "running out of breath" while playing, or going up and down stairs, as well as syncope (collapsing or fainting spells). Restlessness, or agitation during the night, or being unable to find a comfortable position to sleep are also very common clinical signs.

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- Mild to moderate salt restriction is suggested (less than 0.9 grams/1000 kcal of food, and ideally 0.4-0.5 grams/1000 kcal of food).



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- Monitoring for progression of heart disease with a re-evaluation of an echocardiogram every 6 to 8 months, or sooner if clinical signs develop, is recommended.

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- furosemide may be kept at home in case of an emergency.

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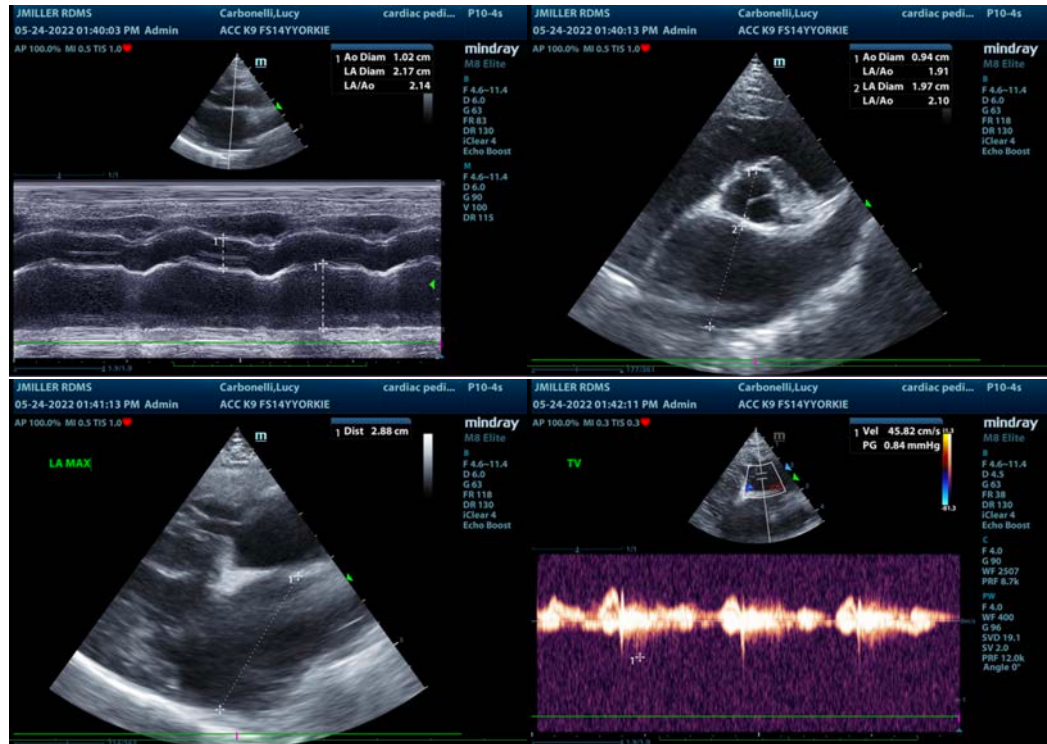
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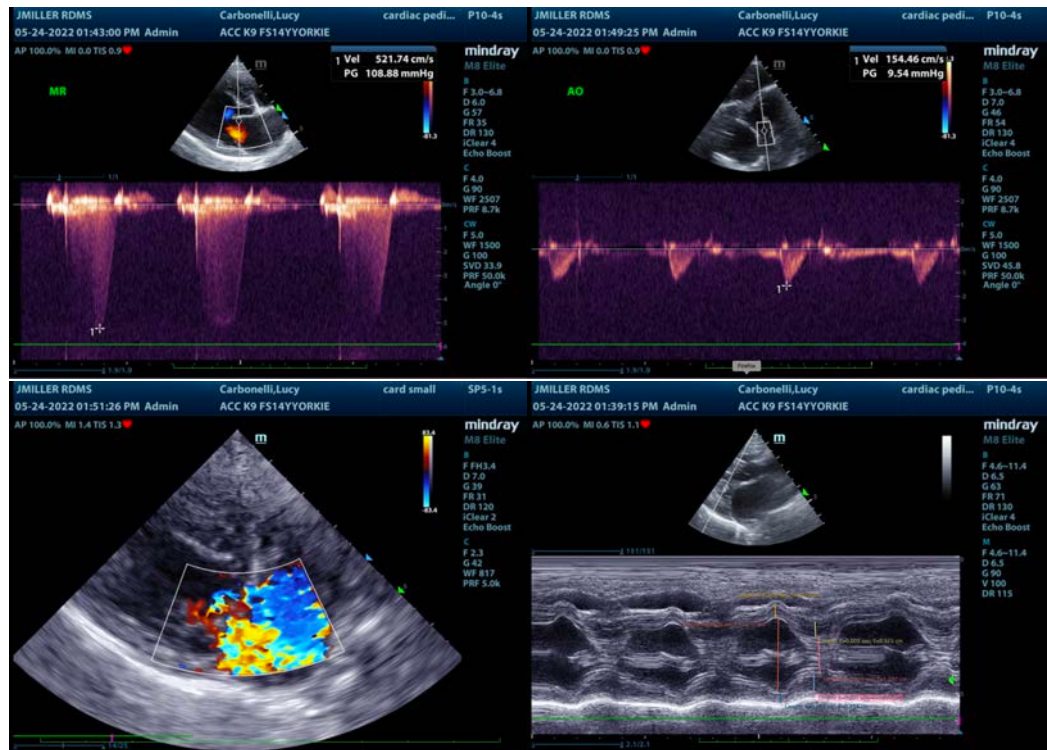
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

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