

PATIENT PRESENTING CLINICAL SIGNS

Lucy Meyers History: loosing weight, appetite good. III/VI heart murmur. No current meds.

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART

Canine

BREED	CANINE	MR	TR	LA/AO	LA/AO	FS	EF	EPSS
Coton De Tulear	CARDIAC PARAMETERS	VMAX (m/s)	VMAX (m/s)	(Boon method)	(Heart Base; Swedish)	(%)	(%)	(cm)
	NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
Female	PATIENT	5.9	2.7		1.68	39	NM	0.09
AGE	CANINE	HR	AV	PV	BODY WEIGHT	LA	LVIDd	LVIDs
	CARDIAC	(BPM)	VMAX	MAX	kg	2D long axis Base view	Avg; 2D and m-mode short axis	Avg; 2D and m-mode short axis
12 years	NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6				
	PATIENT	121	1.04	0.68	15 lb = 6.82 kg	2.30	2.91	1.68
WEIGHT								
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								

INTERPRETED BY Echocardiographic findings

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

Mitral valve

- Mild to moderate thickening and irregularity of both leaflets, consistent with myxomatous degeneration. The septal leaflet is more severely affected compared to the posterior leaflet.
- Very mild to mild prolapse of both leaflets. The septal leaflet is more severely affected compared to the posterior leaflet.
- Moderate mitral regurgitation.
- Moderate left atrial enlargement
- Mild left auricular enlargement.
- Rounding of the interventricular septum, i.e. left ventricular enlargement is present
- LA: Ao ratio: high normal
- LA normalized for BW (LAN = 1.20); Moderate left atrial enlargement
- LVIDd normalized for BW (LVIDND = 1.65) high normal
- LVIDs normalized for BW (LVIDNs = 0.92); within normal limits

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Jessica Miller, RDMS

HOSPITAL NAME

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PATIENT

Aortic valve

Lucy Meyers

- No abnormalities
- No aortic insufficiency

SPECIES

Canine

Tricuspid valve

BREED

Coton De Tulear

- Mild thickening and irregularity of both leaflets, consistent with myxomatous degeneration. The septal leaflet is more severely affected compared to the posterior leaflet.

SEX

Female

- Very mild to mild prolapse of septal leaflet.
- Mild to moderate tricuspid regurgitation.
- No right ventricular or atrial enlargement.

AGE

12 years

Pulmonic valve

WEIGHT

- No abnormalities
- Trivial pulmonary insufficiency (0.37 m/s)
- Main pulmonary artery within normal limits.
- Pulmonary artery - bifurcation, no abnormalities.

INTERPRETED BY

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Other

- No signs of pericardial or pleural effusion
- 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 moderate left atrial enlargement. The left ventricle is at the high end of the normal reference range.
- There are no obvious signs of congestive heart failure based on the ultrasound findings, however, advanced Lucy is borderline for the criteria of the EPIC study for initiation of pimobendan (Vetmedin). Treatment is suggested to help slow the progression of Lucy's disease, but also evaluate her response to the medication, for example, increased energy, improved appetite and weight gain. If there is no improvement within 2 to 3 weeks, further diagnostics, such as an abdominal ultrasound, are recommended.
- Trivial pulmonary insufficiency; clinically insignificant

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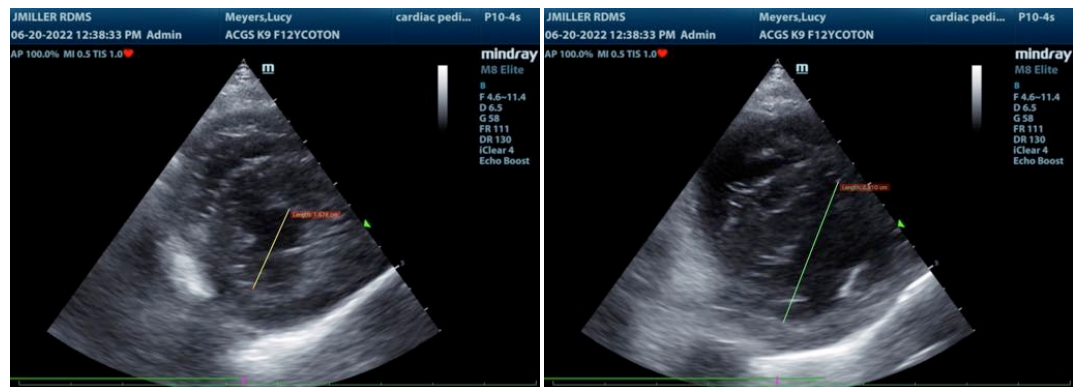
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- An arterial blood pressure
- Treatment with pimobendan at 0.25-0.30 mg/kg PO every 12 hours. To avoid GI side effects, the dose should be started at 0.10 mg/kg PO every 12 hours for 3 days prior to increasing to the full dose. Administer with a small amount of food to decrease nausea.
- 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.
- 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.
- Mild salt restriction is suggested (less than 0.9 grams/1000 kcal of food). Monitor salt content in treats.
- Omega-3 fatty acids may be helpful (EPA = 40 mg/kg/day and DHA = 25 mg/kg/day); gradual uptitration of the dose is suggested to decrease risk of gastrointestinal effects. However, they should not be introduced at the same time as pimobendan.
- 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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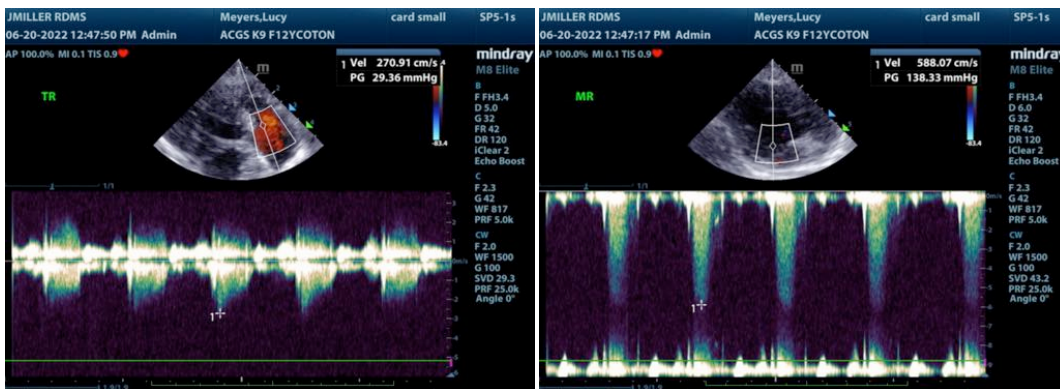
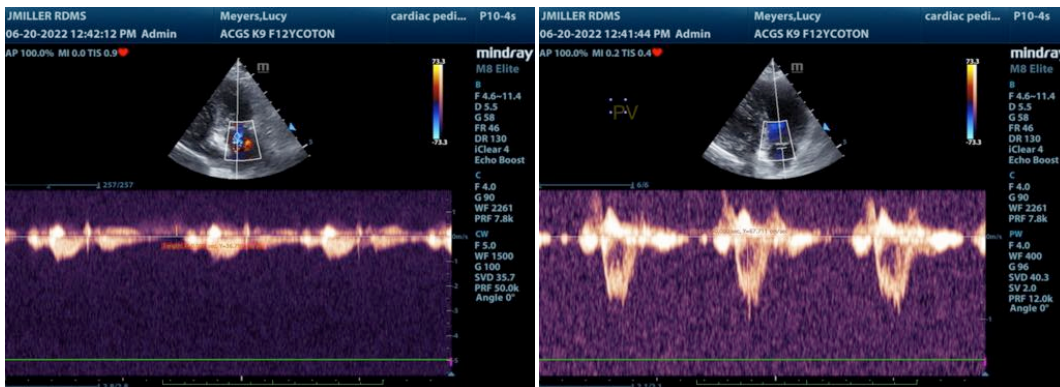
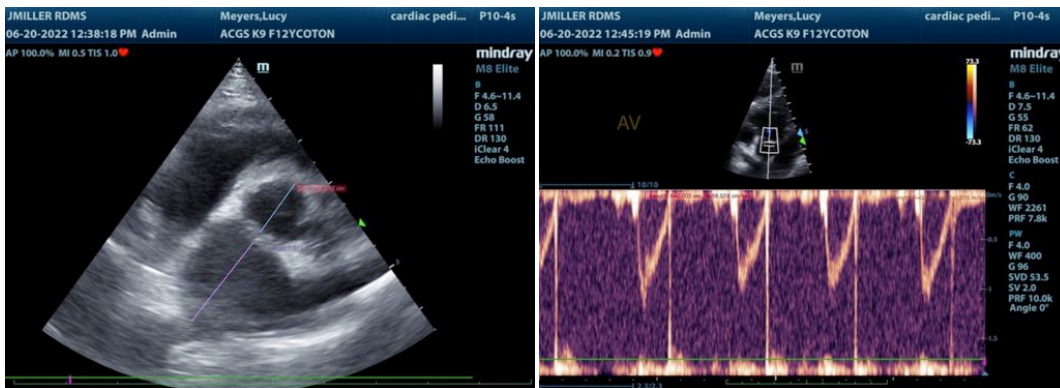
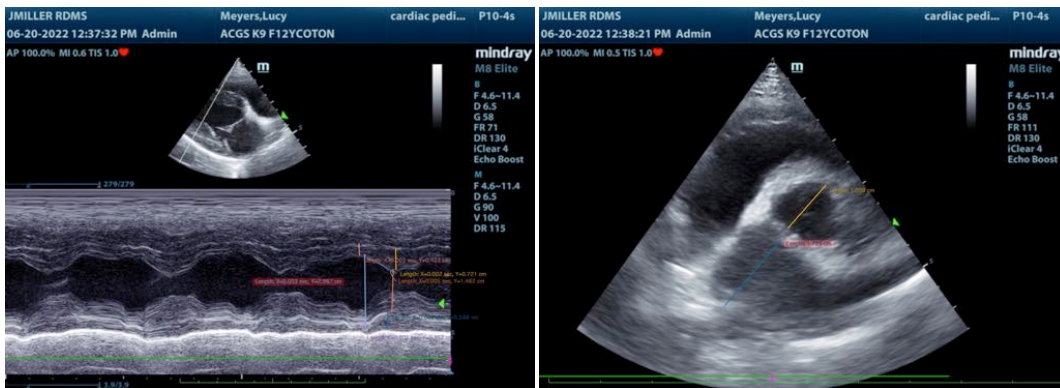
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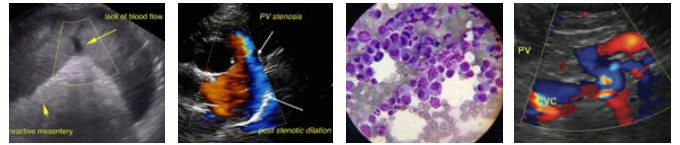
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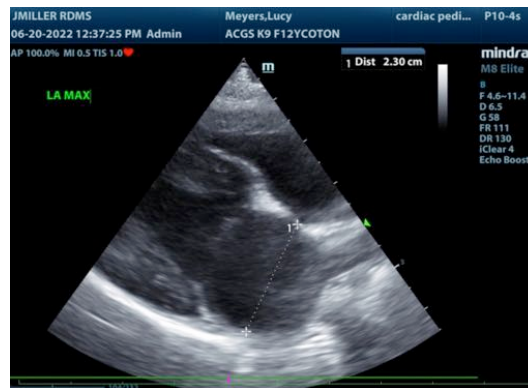
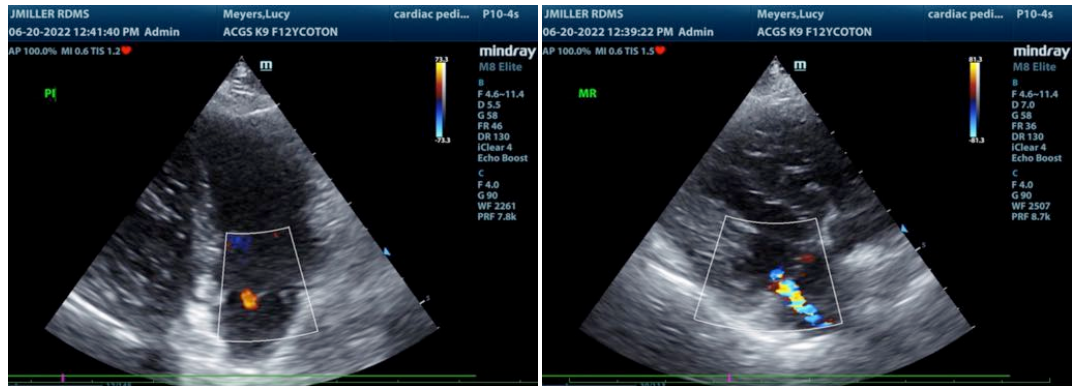
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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