



PATIENT PRESENTING CLINICAL SIGNS

Stimmy Martone

History: Grade III/VI systolic murmur, episodes of syncope. No current meds.
 Abnormal PE/Chem/CBC/UA Results: BUN 48, ALT 789, SDMA 26. U/A-pending

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

BREED

Cockapoo

SEX

Spayed Female

AGE

15 years

WEIGHT

14.3 lbs

CANINE	MR	TR	LA/AO	LA/AO	FS	EF	EPSS
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
PATIENT	5.13	2.55	1.56	1.27	50	NM	0.27
CANINE	HR	AV	PV	BODY WEIGHT	LA	LVIDd	LVIDs
CARDIAC	(BPM)	VMAX (m/s)	MAX (m/s)	kg	2D long axis Base view	Avg; 2D and m-mode short axis	Avg; 2D and m-mode short axis
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6				
PATIENT	103	1.09	0.68	6.5	2.93	3.09	1.54

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

Lisa Carioto, DVM,
 DVSc, Diplomate
 ACVIM

Radiographs (Lateral view)

Cardiomegaly with left atrial and left ventricular enlargement (dorsal deviation of trachea)

Compression of left atrium by mainstem bronchus

High index of suspicion of right ventricular enlargement or possibly pulmonary artery

Moderate to severe mixed interstitial and peribronchiolar lung pattern

HOSPITAL NAME

Morris Hills VC

Hepatomegaly (mild)

Spondylosis (T12-T13)

REFERRING VET

Dr. Hirshenson

Echocardiographic findings

butorphanol (Torbugesic) administered

Mitral valve

- Mild to moderate (posterior) to moderate (septal) myxomatous degeneration
- Mild to moderate prolapse of the posterior leaflet and severe prolapse of the septal leaflet.

INVOICE

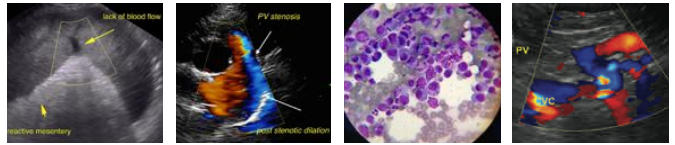
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6/6/22



PATIENT	<ul style="list-style-type: none"> Abnormal attachment of chordae tendinae from apical papillary muscle to septal leaflet Severe mitral regurgitation. Moderate to marked left atrial enlargement
Stimmy Martone	
SPECIES	<ul style="list-style-type: none"> Moderate left auricular enlargement. Very mild increase of LA: Ao ratio depending on method evaluated
Canine	
BREED	<ul style="list-style-type: none"> LA normalized for BW (LAN = 1.55); moderate to marked LVIDd normalized for BW (LVIDND = 1.8); mild enlargement LVIDs normalized for BW (LVIDNs = 0.85); within normal limits (WNL)
Cockapoo	
SEX	<i>Aortic valve</i>
Spayed Female	<ul style="list-style-type: none"> Mild hypertrophy of apical papillary muscle causing very mild turbulence of blood flow in the left ventricular outflow tract.
AGE	<ul style="list-style-type: none"> Valve leaflets: very mild thickening, but not hyperechoic (i.e. not vegetative) Mild aortic insufficiency
15 years	
WEIGHT	<i>Tricuspid valve</i>
14.3 lbs	<ul style="list-style-type: none"> Moderate to severe myxomatous degeneration of the septal leaflet and mild to moderate of the posterior leaflet Moderate prolapse of posterior leaflet. Moderate tricuspid regurgitation. No right ventricular or atrial enlargement.
INTERPRETED BY	<i>Pulmonic valve</i>
Lisa Carioto, DVM, DVSc, Diplomate ACVIM	<ul style="list-style-type: none"> No abnormalities Trivial pulmonary insufficiency. Main pulmonary artery within normal limits. Pulmonary artery - bifurcation, no abnormalities. No signs of heart worm.
IMAGING PERFORMED BY	<i>Other</i>
Shari Reffi, CVT	<ul style="list-style-type: none"> No signs of pericardial or pleural effusion No evidence of pulmonary edema. No obvious signs of a mass. The myocardium of the atrioventricular node is severely hyperechoic.
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PATIENT

ULTRASONOGRAPHIC FINDINGS

Stimmy Martone

- Moderate myxomatous degeneration of the mitral and tricuspid valves, with prolapse of both valves, ACVIM stage B2, with marked left atrial enlargement and mild left ventricular enlargement.

SPECIES

Canine

- The myocardium of the atrioventricular node is severely hyperechoic, therefore, an intermittent arrhythmia is possible, despite not observing one during the echocardiogram.

BREED

Cockapoo

- There are no obvious signs of congestive heart failure based on the ultrasound findings, however, treatment with pimobendan (Vetmedin) is recommended to help slow the progression of Stimmy's disease.

SEX

Spayed Female

- Very mild thickening of the aortic leaflets, likely secondary to age-related changes, with secondary mild to moderate aortic insufficiency, with a rapid velocity. There is no evidence of a vegetative lesion (endocarditis).

AGE

15 years

- Stimmy may also be suffering from hepatitis, including infectious diseases, for example, leptospirosis or vector borne diseases, which may also cause elevations of renal parameters and secondary glomerulonephritis. These infectious diseases can also cause myocarditis and syncope.

WEIGHT

14.3 lbs

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Treatment with pimobendan is recommended (see below).

Other suggestions/recommendations include:

- Evaluation of blood pressure
- Treatment with pimobendan at 0.25-0.30 mg/kg PO every 12 hours. If sensitive GI system, 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), and ideally between 0.4-0.5 grams/1000 kcal of food). Monitor salt content in treats.

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- 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



PATIENT

to 8 months, or sooner if clinical signs develop, is recommended.

Stimmy Martone

- Obtain a history to exclude causes of primary or secondary hepatitis

SPECIES

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- A urinalysis and urine culture and sensitivity

BREED

Cockapoo

- A urine protein: creatinine ratio, if the urine culture is negative (particularly if the urine specific gravity is less than 1.015)

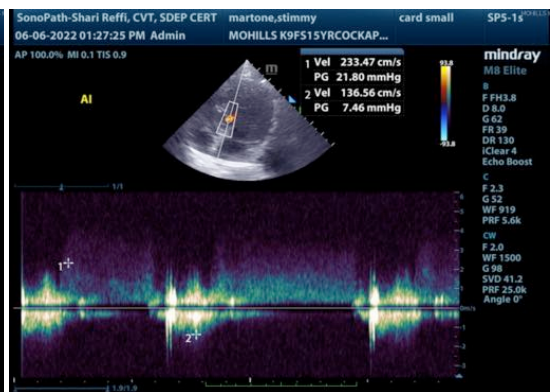
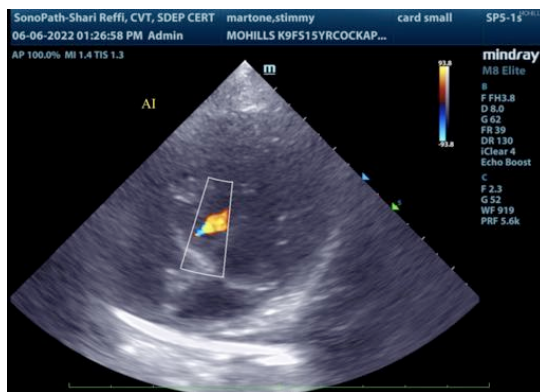
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Spayed Female

- The appropriate tests to exclude glomerulonephritis, for example, SNAP 4Dx (or equivalent test), *Leptospira* PCR and/or serology, +/- testing for *Bartonella* spp., as well as PCR tests for other vector borne diseases

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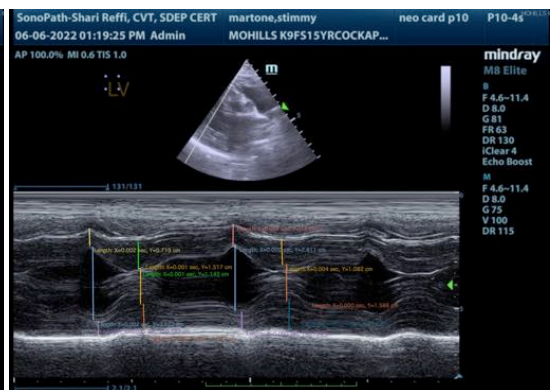
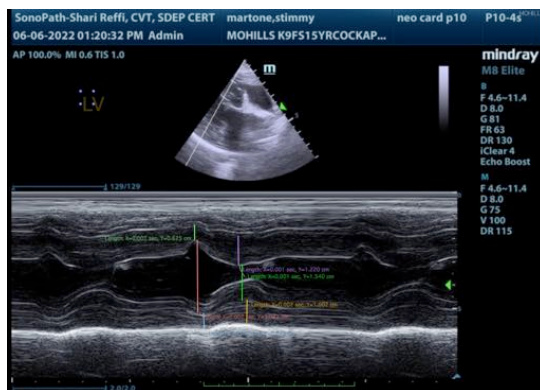


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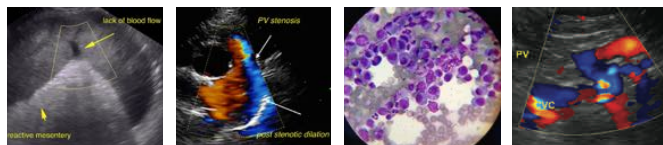
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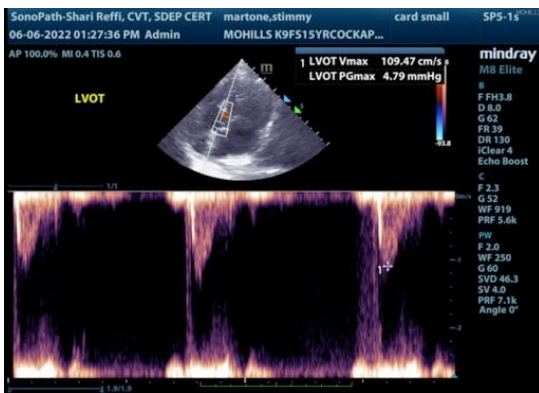
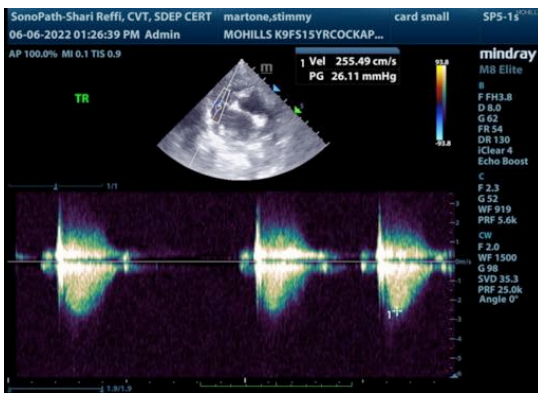
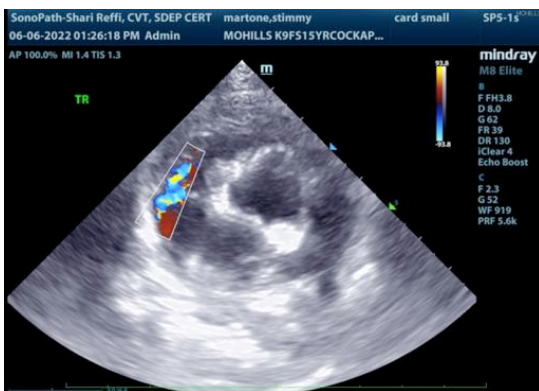
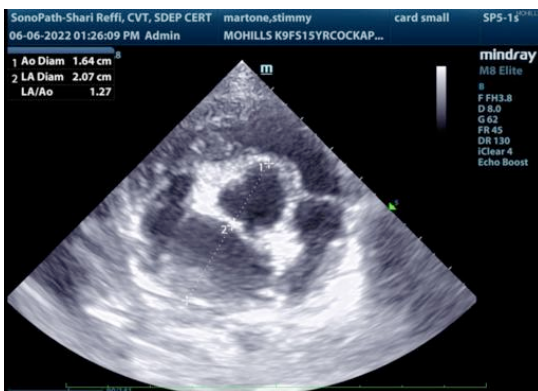
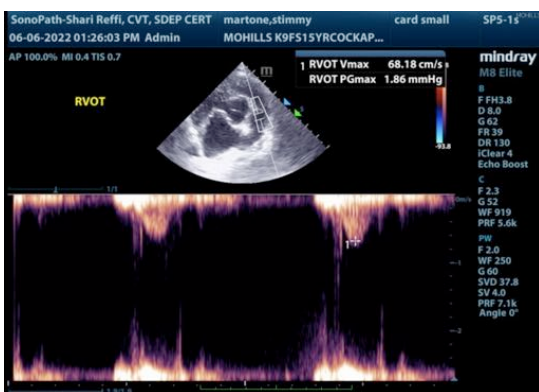
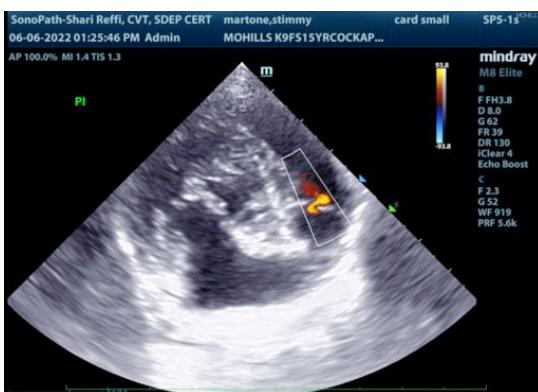
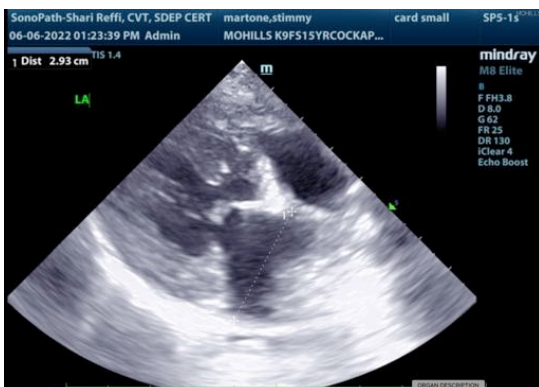
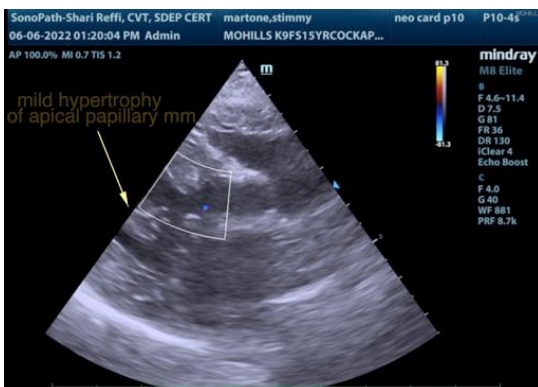
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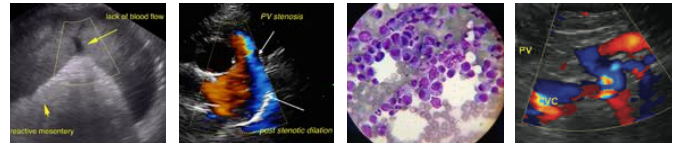
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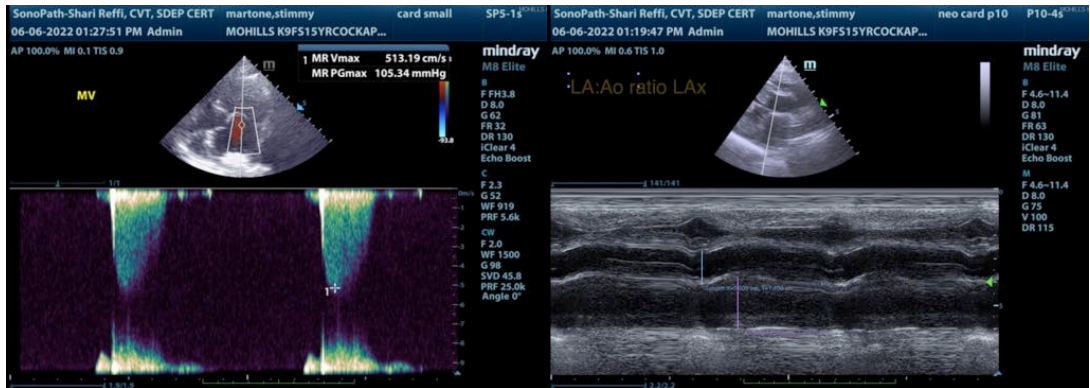
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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