



PATIENT PRESENTING CLINICAL SIGNS

Bobby Shafto Humber

Bobby has a persistent grade 2 heart murmur. It was first heard at our clinic in 2021. Bobby seems to be less able to keep up with exercise compared to the owner's other cat. He is otherwise clinically normal. Bloodwork in Feb 2022 was reported as normal to owner at another clinic but I do not have the results. BPs-122,120,70,98,104

SPECIES

Feline

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

BREED

Siamese

SEX

Neutered Male

AGE

3 Years

WEIGHT

13.97 Pounds

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm)	LVIDd (cm) Short axis	LVWd (cm) Short axis	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT	6.35	153	0.52	1.30	0.69		NM
FELINE CARDIAC PARAMETERS	LA/AO (Boon)	LA/AO HEART BASE (Sisson)	LA 2D 4-chamber long axis AS to FW (Sisson) (cm)	LVOT VEL. (m/s)	RVOT VEL. (m/s)	IVRT (m/)	
NORMAL PARAMETER	<1.5	0.88-1.79	0.7-1.7	<1.6	<1.3	40-60	
PATIENT	1.37	1.35 ACVIM = 1.34			laminar 0.58	NM	

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

IMAGING PERFORMED BY

Jenna Walsh, CVT

Sedation: gabapentin

Electrocardiogram (AliveCor ECGs provided)

HOSPITAL NAME

West Eugene AH

Right lateral: Wandering atrial pacemaker and mildly prolonged PR interval; both of which are physiological responses. Respiratory sinus arrhythmia.

Sternal: Sinus rhythm. Mildly prolonged PR interval (physiological response).

REFERRING VET

Dr. Sundholm

Echocardiographic findings

Mitral valve

- Valve leaflets: The posterior leaflet is "slightly tethered" in its movement as a result of the way the chordae tendinae attaches to it, causing a trivial mitral regurgitation at the level of the left ventricular free wall (see photo).
- Mitral regurgitation: Very mild to mild
- Left atrium: No left atrial enlargement
- Left auricle: No abnormalities noted
- LA: Ao ratio: Within normal limits (WNL)
- Left ventricle: WNL
- No evidence of "smoke"

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PATIENT

Bobby Shafto Humber

- No systolic anterior motion of the mitral valve
- E and A waves: WNL

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Tricuspid valve

- Valve leaflets: Thin and regular (No abnormalities)
- Tricuspid regurgitation: Trivial to very mild
- Right atrium: No enlargement
- Right auricle: No enlargement
- Right ventricle: No enlargement

Aortic valve

- Valve leaflets: No abnormalities
- Aortic insufficiency: Absent
- Turbulent blood flow in the left ventricular outflow tract: Mild to moderate

Pulmonic valve

- Valve leaflets: No abnormalities
- Pulmonary insufficiency: Absent
- Main pulmonary artery: no obvious abnormalities

Other

- Pulmonary edema: Absent
- Pericardial and pleural effusion: Absent
- Pulmonary veins: No abnormal findings
- Intracardiac mass: No obvious signs
- Papillary muscles: Mildly prominent apical papillary muscle
- Endocardium: No abnormal findings
- Myocardium: No abnormal findings
- There are no obvious signs of a PDA, VSD or ASD based on chamber size or colour Doppler on certain views. Additional views could be performed, however, these differential diagnoses are highly unlikely based on the overall findings of the echocardiogram.

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ULTRASONOGRAPHIC FINDINGS

Cardiac

Multiple subtle changes are noted, however, none of which should be causing exercise intolerance. For example, mildly to moderately turbulent blood flow in the LVOT. The latter is usually caused by stress, i.e., it is a physiological response and does not cause clinical consequences. The apical papillary muscle is mildly prominent, which does not appear to be causing any abnormalities. Very mild mitral regurgitation is noted, which appears to be due to a posterior leaflet that has a slightly abnormal movement, however, this is not creating any abnormalities with the overall dynamic of blood flow and should not cause long term abnormalities. An obvious cause for the tricuspid regurgitation is not identified, but is extremely mild and not considered clinically significant at this time.



PATIENT Treatment for cardiac disease is not necessary.

Bobby Shafto Humber

Thoracic radiographs are suggested to evaluate for pulmonary changes, which could be due to subclinical feline asthma, particularly in the Siamese breed. Furthermore, secondary bacterial infections (*Mycoplasma* spp.) are possible.

SPECIES

Feline

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

BREED

Siamese

Cardiac

Videos of Bobby's respiration prior to, while he plays and during recovery from play are suggested.

SEX

Neutered Male

Deworm (fenbendazole once a day for 14 days)

AGE

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If no improvement is noted with deworming, thoracic radiographs (three views) are recommended +/- bronchoalveolar lavage or lavage across a sterile endotracheal tube for cytology and culture of fluid

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An echocardiogram is suggested if the intensity of Bobby's murmur increases in the future.

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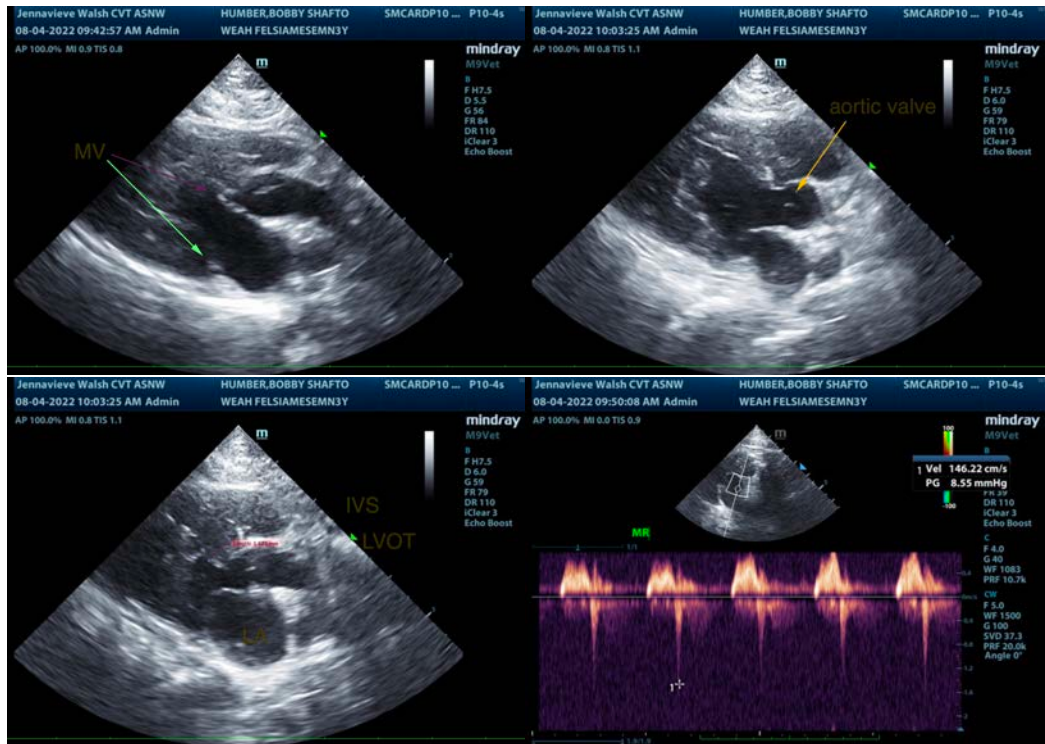
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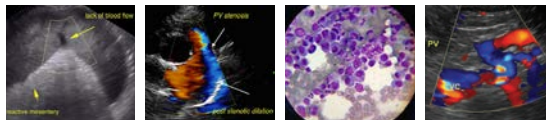
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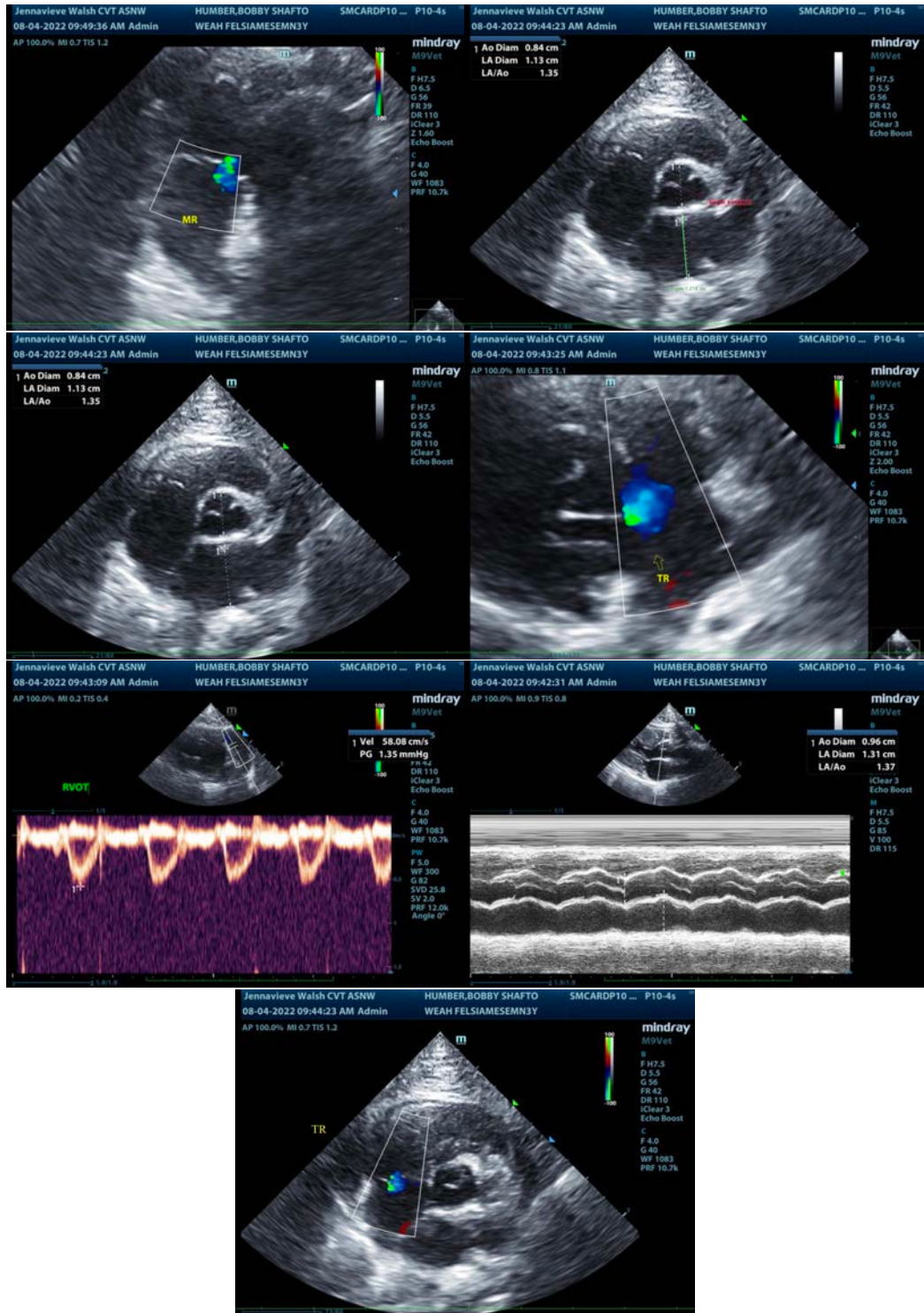
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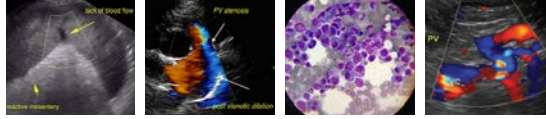
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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Feline

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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Lisa.Carioto@sonopath.com

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