

**PATIENT**

Bodie Harklau

**SPECIES**

Canine

**BREED**

Golden Retriever

**SEX**

Neutered Male

**AGE**

10 Years

**WEIGHT**

NULL

**INTERPRETED BY**

Sara Brethel DVM,  
DACVIM (Cardiology)

**IMAGING PERFORMED BY**

Andrea Nicastro, DVM,  
DACVIM

**HOSPITAL NAME**

Blue Pearl Summerville

**REFERRING VET**

Dr. Wasiak

**INVOICE**

35405

**DATE**

1/15/26

**PRESENTING CLINICAL SIGNS**

History: 1. Pleural effusion 2. Scant pericardial effusion 3. Unilateral epistaxis 4. Hepatomegaly  
Meds: Keppra ER 750mg - 3tab Q12 (last dose 4am today) Potassium Bromide 200mg - 2 caps Q24 (last dose last night) Apoquel 16mg - 1 Q24 Provable - 1 Q24

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (M-Mode)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
<b>PATIENT</b>	~5.0	~3.0	1.42	1.41	30	NM	--
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LAD LA MAX 4 Chamber	LVIDd Avg; 2D and m-mode short axis (cm)	LVIDs Avg; 2D and m-mode short axis (cm)
<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6				
<b>PATIENT</b>	--	~2.0	~1.0	~40 kg	4.8	4.86	3.4

**Cardiac Presentation**

The mitral valve leaflets are normal and there is trivial mitral regurgitation. There is no prolapse of the mitral valve leaflets. The left atrial size is normal. Left ventricular systolic and diastolic function is within normal limits. There is normal right atrial size with trivial tricuspid regurgitation. There is no prolapse of the tricuspid valve leaflets and no evidence of pulmonary hypertension on today's evaluation. The right ventricle subjectively appears normal in structure and function. The aortic and pulmonic valves have normal morphology and the corresponding outflow velocities are within normal limits. There is trace evidence of pulmonic insufficiency and no aortic insufficiency. The aorta appears normal. The pulmonary artery and associated branches appear normal. There is mild pleural effusion. There is no pericardial effusion and no evidence of an intracardiac mass.

**ULTRASONOGRAPHIC FINDINGS**

- Pleural effusion
- Trivial mitral and tricuspid regurgitation
- Trace pulmonic insufficiency

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**



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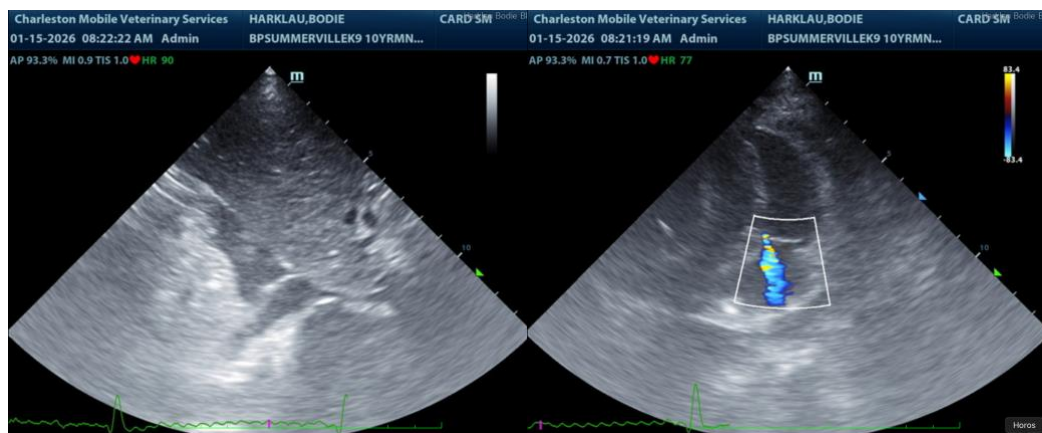
1/15/26

The cause of the pleural effusion is not cardiac in nature. On the chest radiographs provided, there is evidence of pleural effusion, however, the cardiac silhouette and the pulmonary vasculature appear normal. Recommend trying to obtain a diagnostic sample of the effusion with submission for fluid analysis and cytology.

The significance of the mitral and tricuspid regurgitation is not entirely known. This could represent mild degenerative changes; however, no cardiac therapies are recommended, and similarly the cause of the pleural effusion is not cardiac in nature.

A recheck echo is recommended in 10-12 months, just to monitor the regurgitation, sooner if a murmur develops.

For sedation and anesthesia, if needed, I recommend avoiding dexmedetomidine and ketamine. Otherwise, standard fluid rates should be well tolerated.



**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.

Sara Brethel DVM, DACVIM (Cardiology)

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