

**PATIENT**

Loubie Trimboli

**SPECIES**

Canine

**BREED**

Boston Terrier

**SEX**

Spayed female

**AGE**

8 years

**WEIGHT**

20 pounds

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**IMAGING PERFORMED BY**

Sarah Pender CVT

**HOSPITAL NAME**

SVS Imaging QC

**REFERRING VET**

Dr. Anne Pelzer

**INVOICE**

10247ag

**DATE**

03/29/2022

**PRESENTING CLINICAL SIGNS**

History: shortness of breath, diarrhea, lethargy

Abnormal PE/Chem/CBC/UA Results: Tachypnea, pale mm, pleural effusion found on radiographs. No heart murmur heard. CBC and Chem unremarkable. 60ml serosanguinous fluid removed from right side on initial thoracocentesis yesterday, but still looked like more present on radiographs

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT	5.5	3.2		1.6	39	72.5	0.25
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LA 2D short 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	BELOW	BELOW	BELOW	BELOW
PATIENT	172	1.0	0.9		2.3	1.9	

**Cardiac Presentation**

The echocardiogram in this patient demonstrated normal left atrial size based on 3 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal mitral valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable insufficiency. The left ventricle presented thicknesses with linear contour and was not dilated nor restricted. The myocardium presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. Contractility of the ventricular walls was adequate and in normal range for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions of the myocardium. The left ventricular outflow tract demonstrated normal laminar flow and subjective structural integrity. The right atrium and auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. Tricuspid valvular assessment demonstrated adequate linear morphology. The right ventricle was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. Pulmonic tract assessment revealed normal valve structure, laminar flow, and diameter (approx.1:1 pa/ao ratio). Moderate volume primarily anechoic free pleural fluid exhibiting mild cellular component was present without evidence of concurrent or visible pericardial free fluid. A large nonhomogeneous mass exhibiting suspected pinpoint hyperechoic intra mass foci which may indicate pinpoint areas of air entrapment to mineralization was noted in the mid to cranial thorax and pericardial space measuring approximately 7-8 cm in diameter. Potential extension of the mass or a separate smaller mass lesion was also present in the mid thorax measuring approximately 4-5 cm in diameter.



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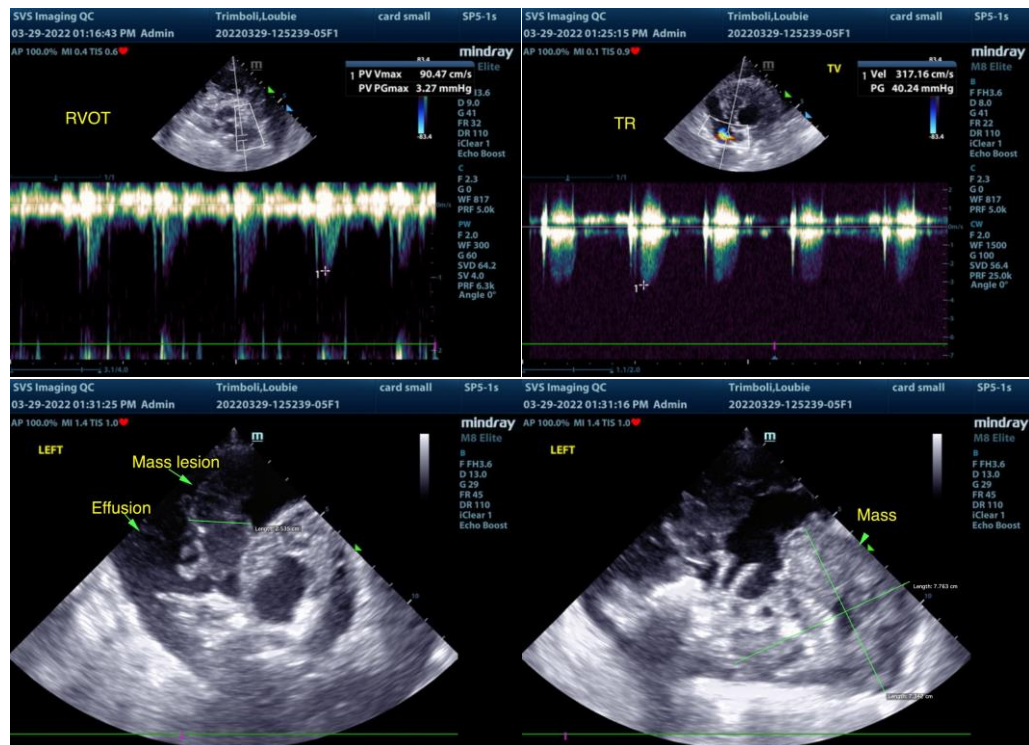
Dr. Anne Pelzer

**ULTRASONOGRAPHIC FINDINGS**

- Compensated chronic mitral valve disease (ACVIM B1)-cardiac presentation not consistent with cardiogenic pleural effusion.
- TV insufficiency-estimated pulmonary pressure gradient consistent with mild elevated pulmonary pressure yet not overtly suggestive of clinical pulmonary hypertension.
- Large to potentially multifocal intrathoracic masses-probable primary pulmonary origin.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

This study confirms the presence of moderate volume pleural free fluid which given the cardiac presentation is not cardiogenic in origin. Neoplastic criteria is favored for the intrathoracic masses, non-neoplastic etiologies such as pulmonary consolidation, granuloma or other could be possible yet thought less likely. Further assessment may include pleural effusion analysis cytology +/- C/S if clinically indicated. Ultrasound guided sampling of the intrathoracic masses via FNA and concurrent cytology +/- thoracic CT would be recommended if further clarification is needed. However, given this presentation there is a very guarded to unfavorable long-term diagnosis for this patient.



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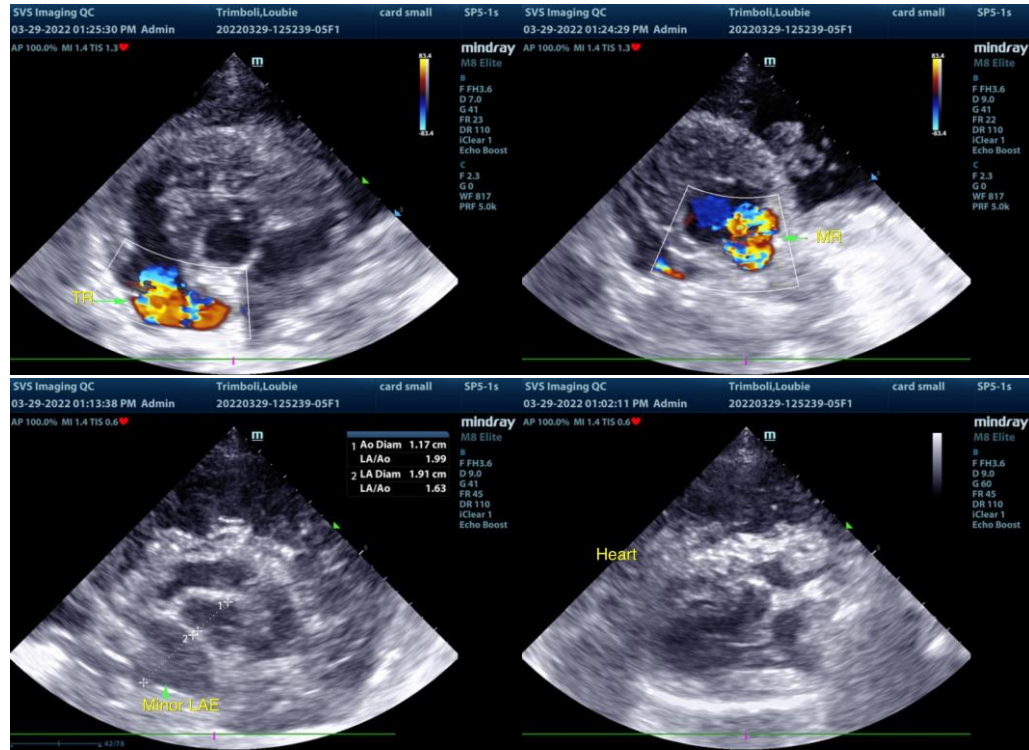
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

info@SonoPath.com