



**PATIENT PRESENTING CLINICAL SIGNS**

Kaia Ulrich Wheezing/trouble breathing, collapsed after excitement. Xrays wnl physical exam revealed mild wheezes in lungs

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

Canine

**BREED**

French Bulldog

**SEX**

FS

**AGE**

2yr

**WEIGHT**

32lb

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO M-mode	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
PATIENT	--	--	--	1.1	40	74	0.1
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT	LAD LA MAX 4 Chamber	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				
PATIENT	NM	1.3	6.3	32lb	2.6	2.5	--

**Cardiac Presentation**

The echocardiogram in this patient demonstrated normal left atrial size based on 2 separate methods of LA evaluation. The cranial and caudal mitral valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. No overt MR on Doppler. The left ventricle presented thicknesses with linear contour and was not dilated nor restricted. Mild flattened IVS. 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. Normal measured LVOT velocity. The right atrium and auricle revealed normal size, structure and content. No evidence of masses was noted. Tricuspid valvular assessment demonstrated adequate linear morphology and kinesis. No overt significant TR on Doppler. The right ventricle was enlarged in size compared to the LV with moderate concentric hypertrophy and increased dimension. Pulmonary outflow tract assessment revealed non-visualized valve, yet severe dynamic to turbulent outflow pattern and severe increased measured RV outflow velocity. No visible pericardial or free pleural fluid was noted. The cranial mediastinum and pericardial and extra-cardiac regions were free of masses in the visible window. No obvious arrhythmia.

**ULTRASONOGRAPHIC FINDINGS**

Primary

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Kerri Becker

**HOSPITAL NAME**

Farview AC

**REFERRING VET**

Dr Mosaad

**INVOICE 23983**

**DATE 02/25/2026**



**PATIENT**

Kaia Ulrich

- Severe pulmonic stenosis with associated right ventricle hypertrophy and increased dimension.
- Normal LA / LV with mild flattened IVS.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The estimated pressure gradient based on 6.3 measured RV outflow velocity equals ~150 mmHg consistent with severe pulmonic stenosis. Definitive visualization of the pulmonic valve was not obtained. An additional smaller or non-visualized congenital defect / flow abnormality or possible concurrent pulmonary hypertension given flattened IVS is not definitively excluded.

Given the severity of pulmonic stenosis and associated right heart changes, cardiology referral is strongly recommended for further clarification and potential interventional procedure as this patient will remain at significantly increased risk for progressive right side heart failure, potential pulmonary hypertension or development of malignant arrhythmia.

Empirically, atenolol 1 mg/kg PO BID is recommended. Elective anesthesia is not advised until further assessment.

An extremely guarded prognosis is indicated.



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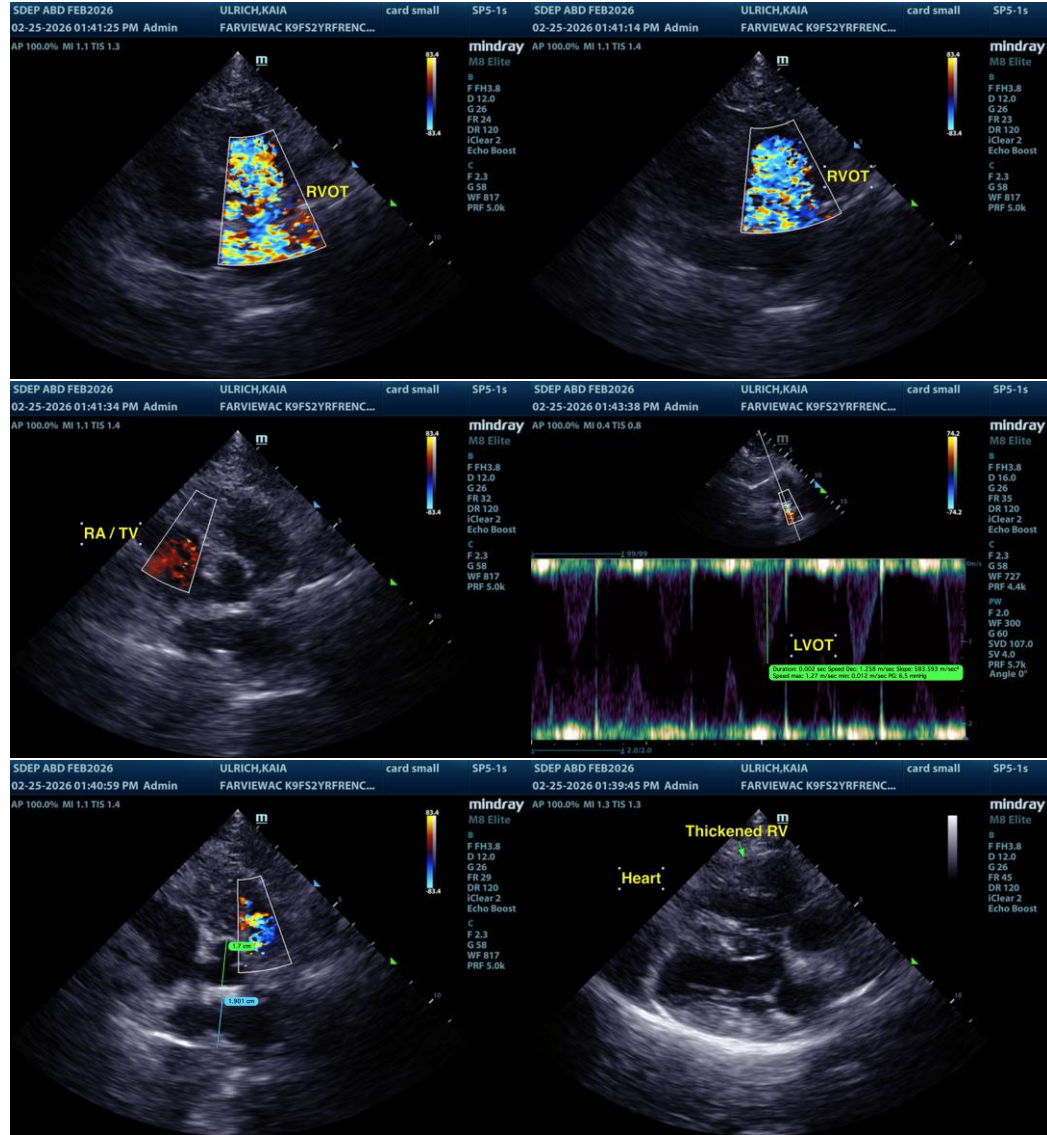
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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](mailto:info@sonopath.com)