



## PATIENT

Vanilla Davis

## SPECIES

Canine

## BREED

Mix

## SEX

FS

## AGE

11 years

## WEIGHT

37 lbs.

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Shari Reffi, CVT

## HOSPITAL NAME

American AH

## REFERRING VET

Dr. Pascucci

## INVOICE

15745

## DATE

12/29/22

## PRESENTING CLINICAL SIGNS

Chronic cough w/ evidence of bronchitis in past 6mos. Now worsening, evidence of pulmonary edema and heart murmur. Just started Furosemide 2 days ago (3mg/kg bid), has been responsive to hydrocodone, Temaril P and Doxy

## 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	<1.3	28-40	40-100	<0.6
PATIENT	5.4	2.6		1.33	38	70	0.3
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				
PATIENT	135	1.0	0.88		3.7	3.2	

## Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 2 different LA measurement methods. Very subtle deviation of the interatrial septum towards the right atrium, which may suggest subtle to minor increased left atrial pressure, was present, yet no evidence of significant increased LA volume. The cranial and caudal **mitral** valve leaflets presented mild thickening consistent with mild endocardiosis. Doppler indicated measurable eccentric to centralized 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. Normal measured LVOT velocity was present. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. **Tricuspid** valvular assessment demonstrated minor thickening with mild TR present on Doppler. 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). Normal measured RVOT velocity was present. No visible **pericardial** or free pleura fluid was noted. No echographically detectable evidence of infiltrative



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disease was visible. The cranial **mediastinum and pericardial regions** were free of masses in the visible window.

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**ULTRASONOGRAPHIC FINDINGS**

- Chronic mitral valve disease (ACVIM B1-possible very early to emerging B2)
- TR - estimated pulmonary pressure gradient (~27 mm Hg) not consistent with overt clinical pulmonary hypertension

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The lack of significant LA enlargement, evidence of left heart volume overload, LV systolic dysfunction, or lack of evidence to support clinical pulmonary hypertension indicate that the chronic coughing in this patient is noncardiogenic in origin. In a patient exhibiting MR without evidence of significant chamber enlargement, or other additional clinical issues, cardiac medications are not overtly indicated.

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Continued and empirical therapy for primary lower airway disease would be reasonable. The prognosis for MR is highly variable and sonographic monitoring is recommended for further assessment. Recheck echocardiogram is suggested in 6 months, sooner if clinical signs consistent with left-sided cardiac disease or pulmonary hypertension arise.

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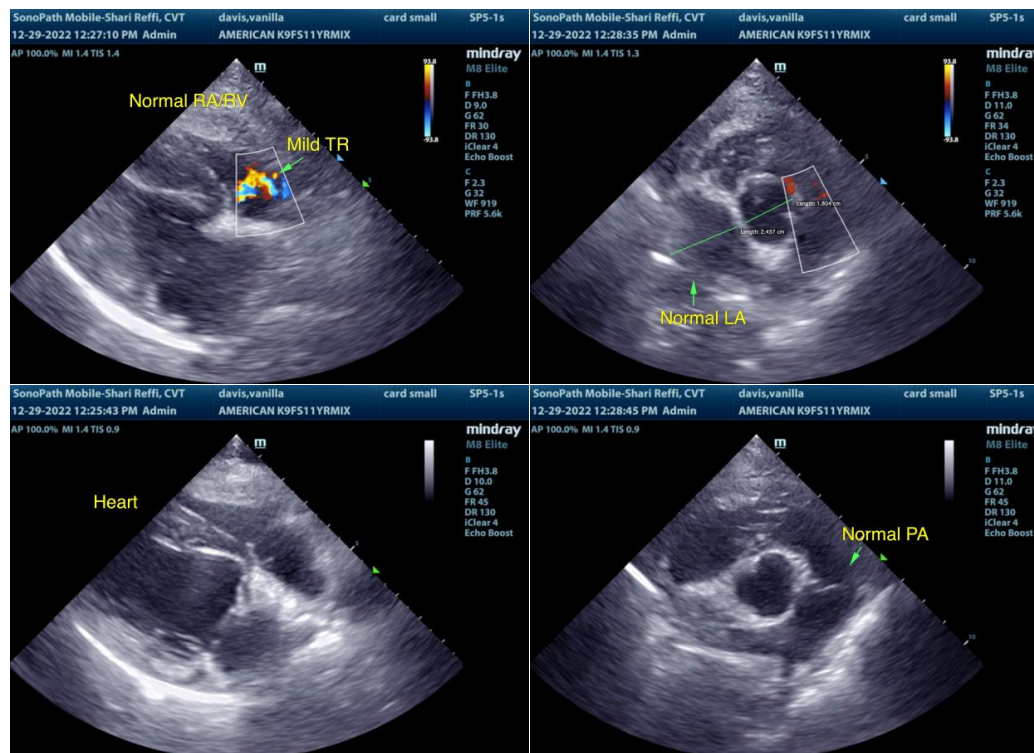
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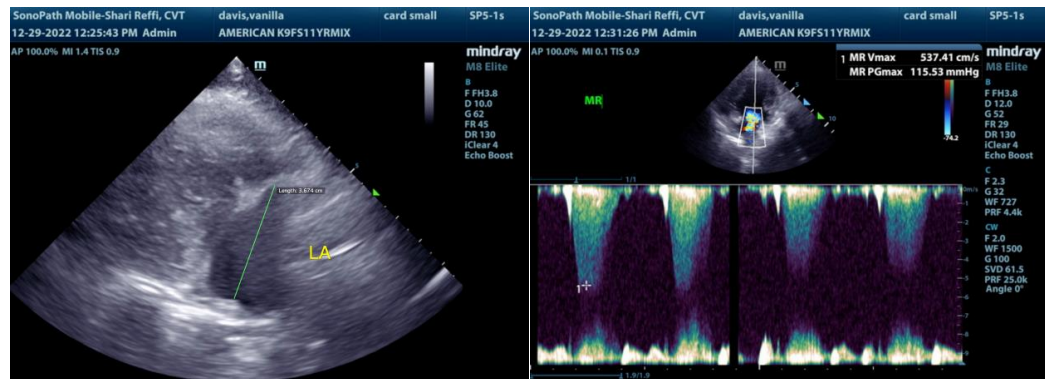
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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