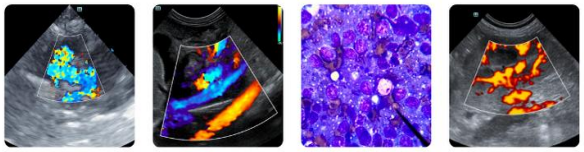


Clinical Sonography & Telecytology
Educational Teleconsultation Services™

PATIENT
Lulu Morse

SPECIES
Canine

BREED
Yorkie Mix

SEX
FS

AGE
14yr

WEIGHT
9.2lb

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

IMAGING PERFORMED BY
Rebecca Hamilton

HOSPITAL NAME
Ramapo Valley AH

REFERRING VET
Dr Katara

INVOICE
24311

DATE
03/27/2026

PRESENTING CLINICAL SIGNS

- Suspected CHF
- Coughing, cardiomegaly, assumed fluid in lungs (based on rads)
- Grade 4-5/6 Systolic murmur
- Meds: Lasix 12.5 mg 1/2 BID, Pimobendan 5 mg 1/4 BID, Tussigon 5 mg 1/2 up to TID
- Abnormal PE/Chem/CBC/UA Results: 2/12/26 BUN 86, K+ 6, Phos 7.4

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)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
PATIENT	5.4	--	--	1.3	38	70	0.2
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	1.5	1.0	9.2lb	2..5	2.1	--

Cardiac Presentation

The echocardiogram in this patient demonstrated normal left atrial size based on 2 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal mitral valve leaflets presented vegetative thickening consistent with endocardiosis with valvular prolapse. Doppler indicated measurable moderate eccentric 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. Mild aortic valve insufficiency on Doppler measuring 3.0 m/s. The right atrium and auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. Tricuspid valvular assessment demonstrated thickening without overt significant TR 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). No visible pericardial or free pleura fluid was noted. No echographically detectable evidence of infiltrative disease was visible. The cranial mediastinum and pericardial regions were free of masses in the visible window. No evidence of arrythmia.

PATIENT

Lulu Morse

SPECIES

Canine

BREED

Yorkie Mix

SEX

FS

AGE

14yr

WEIGHT

9.2lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Rebecca Hamilton

HOSPITAL NAME

Ramapo Valley AH

REFERRING VET

Dr Katara

INVOICE
24311

DATE
03/27/2026

ULTRASONOGRAPHIC FINDINGS

Primary

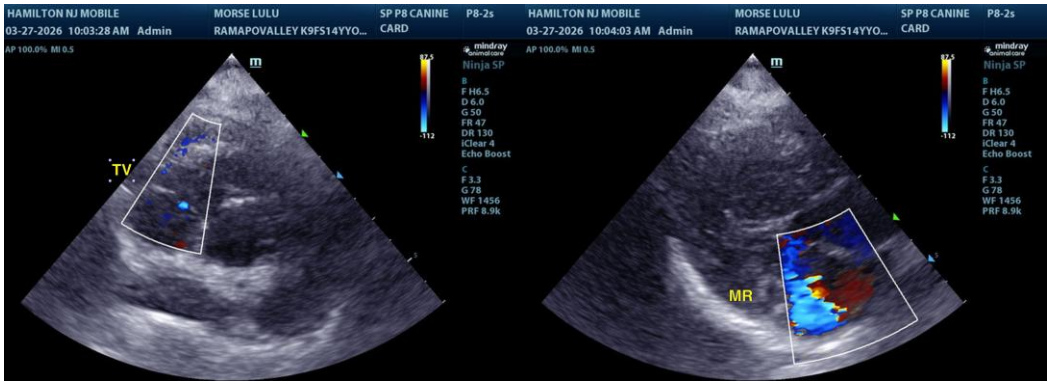
- Chronic mitral valve disease (B1)
- Mild aortic valve insufficiency

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is chronic degenerative valvular changes and secondary eccentric MR. The lack of LA enlargement indicates the current future risk of complications secondary to MR is low and not consistent with left heart volume overload. No overt evidence of clinical pulmonary hypertension without right atrium, ventricle or pulmonary artery enlargement. Overall, the cardiac presentation is not consistent with cardiogenic pulmonary edema or congestive heart failure. Primary lower airway disease is probable. Continued cardiac support pending respiratory therapy and assessment of clinical response would be reasonable. Assessment of systemic BP for evidence of hypertension given aortic valve insufficiency is recommended.

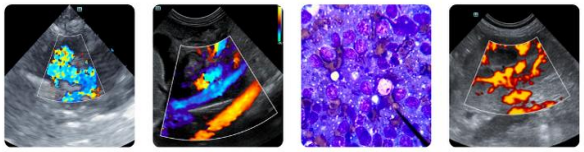
Cardiac prognosis is variable and sonographic monitoring is advised. Recheck echo is recommended in 6 months, sooner if clinically indicated.

Cardiac anesthetic risk is considered. Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists.



New Jersey Mobile
FUELED BY SONOPATH VETERINARY ULTRASOUND

SonoPath
FOSTERING THE ART OF VETERINARY MEDICINE™
www.SonoPath.com
info@sonopath.com
800.838.4268



Clinical Sonography & Telecytology
Educational Teleconsultation Services™

PATIENT

Lulu Morse

SPECIES

Canine

BREED

Yorkie Mix

SEX

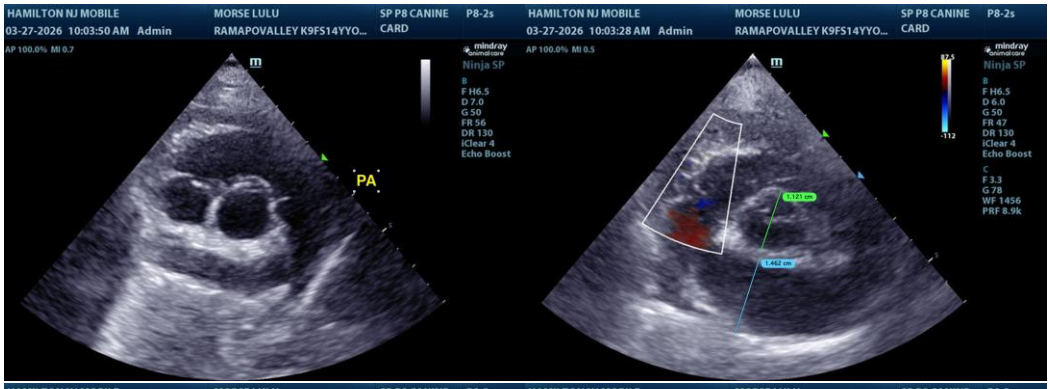
FS

AGE

14yr

WEIGHT

9.2lb



INTERPRETED BY

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

IMAGING PERFORMED BY

Rebecca Hamilton

HOSPITAL NAME

Ramapo Valley AH

REFERRING VET

Dr Katara

INVOICE
24311

DATE
03/27/2026

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