



## PATIENT

Lily Hoffman

## SPECIES

Canine

## BREED

Shih Tzu

## SEX

FS

## AGE

6 years

## WEIGHT

13.3 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

15934

## DATE

1/25/23

## PRESENTING CLINICAL SIGNS

New low grade I-II/VI murmur (left). Hypotension during last dental a few months ago. Want to attempt dental again. No current meds.

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART

CANINE	MR	TR	LA/AO	LA/AO	FS	EF	EPSS
<b>CARDIAC PARAMETERS</b>	<b>VMAX</b> (m/s)	<b>VMAX</b> (m/s)	(Boon method)	(Heart Base; Swe)	(%)	(%)	(cm)
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
<b>PATIENT</b>	5.5	2.2	1.2	1.2	45	80	0.2
CANINE	HR	AV	PV	BODY WEIGHT	LA	LVIDd	LVIDs
<b>CARDIAC PARAMETERS</b>	(BPM)	<b>VMAX</b> (m/s)	<b>MAX</b> (m/s)	(kg)	2D short axis Base view (cm)	Avg; 2D and m-mode short axis (cm)	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>	166	1.3	1.1		2.5	2.4	

## 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 mild thickening consistent with mild endocardiosis. No evidence of valvular prolapse. Doppler indicated measurable mild 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. 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. Minor TR was 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). 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 arrhythmia was present.



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## ULTRASONOGRAPHIC FINDINGS

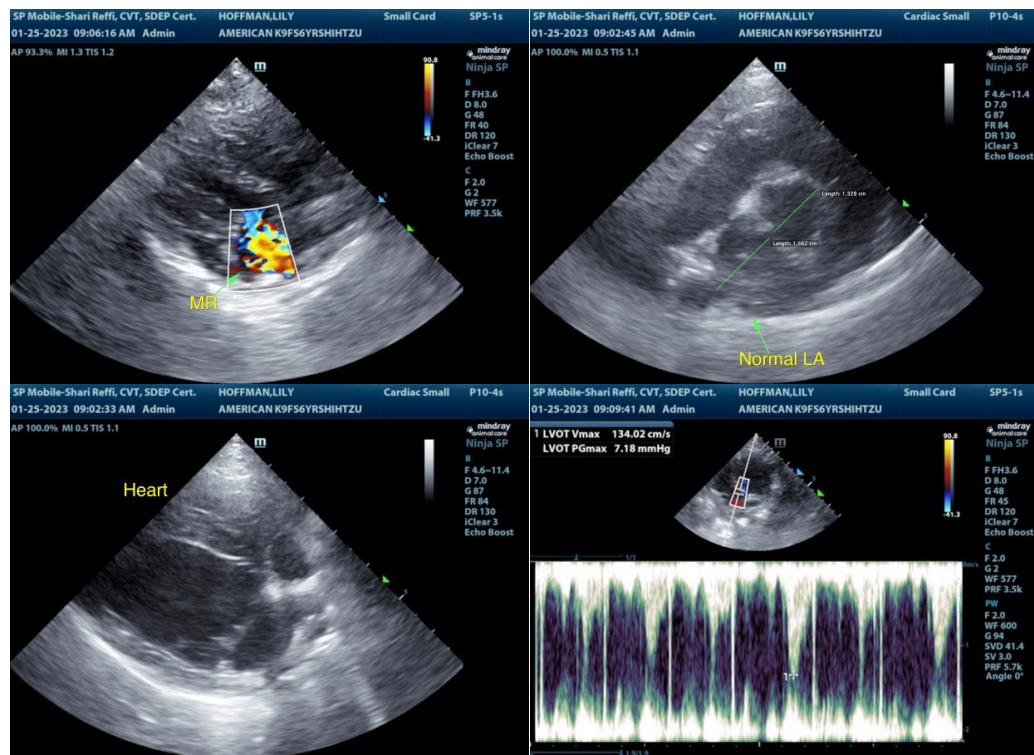
- Compensated mitral valve disease (ACVIM B1)
- Minor TR - no evidence of clinical pulmonary hypertension

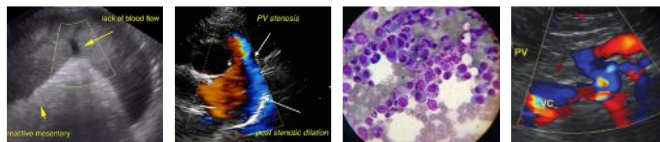
## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The lack of left atrium or generalized chamber enlargement indicates that the current and future risk secondary to MR is low. In a nonclinical patient without evidence of significant chamber enlargement, cardiac medications are not indicated at this stage. Serial sonographic monitoring is required for further prognosis. No other additional clinical issues such as LV systolic dysfunction. No overt anesthetic contraindications, given this presentation, assuming normal non-sedated or anesthetized systemic BP.

The following anesthetic protocol is suggested with possible pre-anesthetic IV fluid bolus prior to anesthesia to maintain adequate BP. Available hypotensive medications during anesthesia are suggested. Recheck echocardiogram is suggested in 6-12 months, sooner if clinical signs arise.

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.





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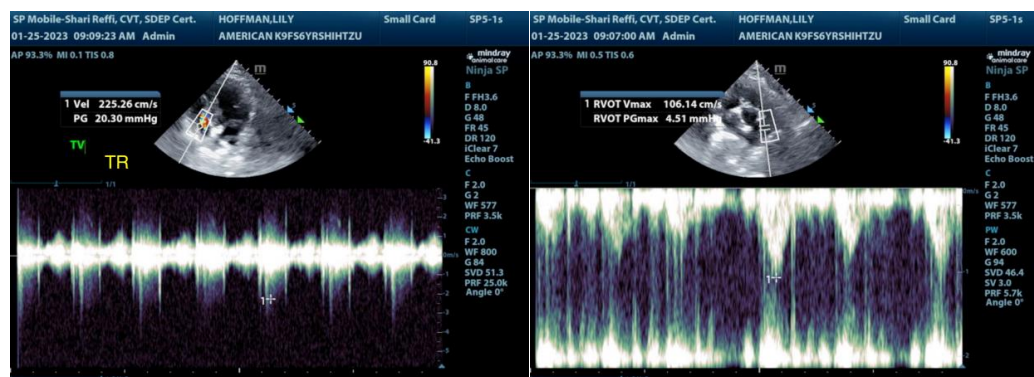
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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