



PATIENT

Brandi Ruffner

SPECIES

Canine

BREED

Pomeranian

SEX

Spayed Female

AGE

9 years

WEIGHT

13 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

Warren AH

REFERRING VET

Dr. Bauer

INVOICE

12236

DATE

9/14/21

PRESENTING CLINICAL SIGNS

Murmur heard during dental procedure.

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	2.6	1.44	1.45	35.0	66.1	0.4
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	97	1.0	0.8		2.9	2.87	

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. No evidence of valvular prolapse or chordae tendinae rupture. Doppler indicated measurable 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 subjective systolic laminar flow and overall normal structural integrity. Color doppler assessment of the aortic valve revealed mild aortic valve Insufficiency. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. **Tricuspid** valvular assessment demonstrated subtle thickening with mild prolapse of the septal leaflet. Color dopper assessment revealed insufficiency. 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.



PATIENT

Brandi Ruffner

SPECIES

Canine

BREED

Pomeranian

SEX

Spayed Female

AGE

9 years

WEIGHT

13 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

Warren AH

REFERRING VET

Dr. Bauer

INVOICE

12236

DATE

9/14/21

ULTRASONOGRAPHIC FINDINGS

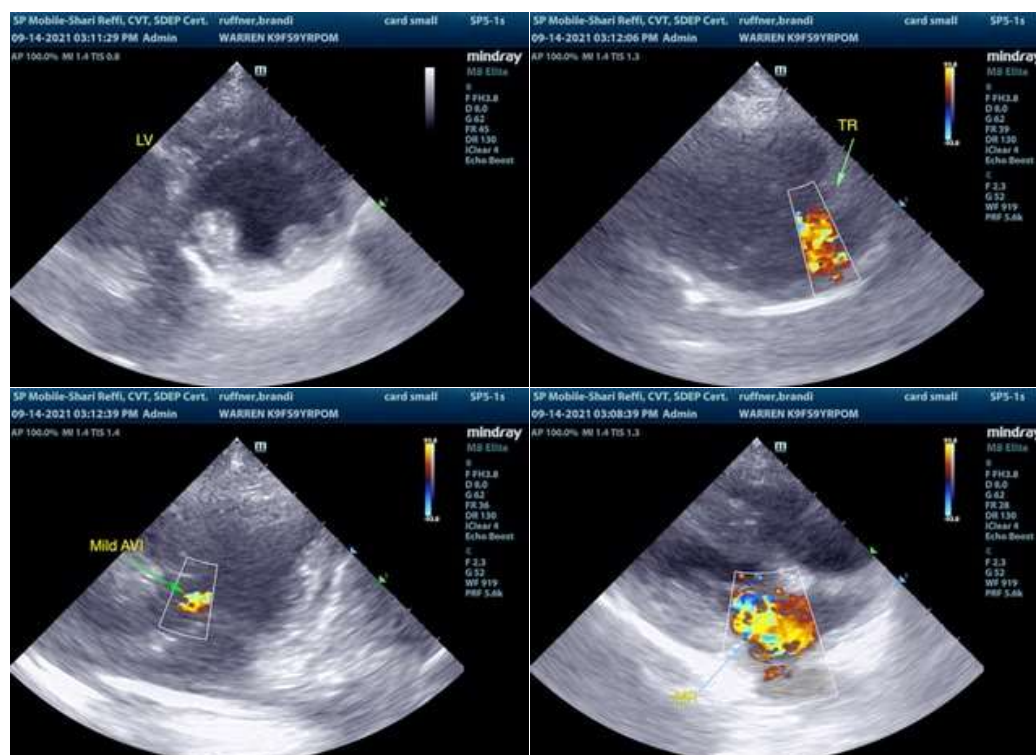
Primary Findings

- Chronic mitral valve disease (ACVIM B1)
- Tricuspid valve insufficiency with mild tricuspid valve prolapse - estimated pulmonary pressure gradient not consistent with clinical pulmonary hypertension
- Mild aortic valve insufficiency

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is secondary to chronic valvular disease with secondary eccentric mitral valve insufficiency. Concurrent mild tricuspid and aortic valve insufficiency are also present. The lack of left atrium enlargement indicated that the risk of future complication secondary to mitral valve insufficiency is low at this time, although the prognosis is highly variable. No other issues such as systolic dysfunction were noted.

Given these findings, no overt indication for cardiac medication. Screening blood pressure is suggested given the presence of aortic valve insufficiency. Conservative monitoring is appropriate with recheck echocardiogram suggested in 6 months, sooner if clinical signs consistent with heart disease develop.





PATIENT

Brandi Ruffner

SPECIES

Canine

BREED

Pomeranian

SEX

Spayed Female

AGE

9 years

WEIGHT

13 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

Warren AH

REFERRING VET

Dr. Bauer

INVOICE

12236

DATE

9/14/21



The information and recommendations provided are based on the images presented by the referring veterinarian. 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