



PATIENT

Bruno Cichy

SPECIES

Canine

BREED

Pitbull Mix

SEX

MN

AGE

10 years

WEIGHT

65 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Gromalak

HOSPITAL NAME

SVS Imaging

REFERRING VET

Dr. Beyer

INVOICE

12316

DATE

9/28/21

PRESENTING CLINICAL SIGNS

History of being fed grain free food. worsening heart murmur noted and exercise intolerance.

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	5.0	1.4	NM	1.7	26.8	51.8	0.54
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	139	1.7	0.9		5.6	5.5	

Cardiac Presentation

The echocardiogram in this patient demonstrated mild to moderate enlarged **left atrial** size based on 3 different LA measurement methods. The cranial and caudal **mitral** valve leaflets presented subtle subjective vegetative thickening potentially indicative of subtle endocardiosis. Normal valvular coaptation was present without evidence of valvular prolapse. Doppler indicated measurable eccentric to centralized insufficiency. The **left ventricle** presented thicknesses with maintained linear contour with increased left ventricle volume. The **myocardium** presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. **Contractility** of the ventricular walls was mildly subnormal as 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. Color doppler assessment revealed tract tricuspid valve 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. No evidence of arrhythmogenic disease.



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ULTRASONOGRAPHIC FINDINGS

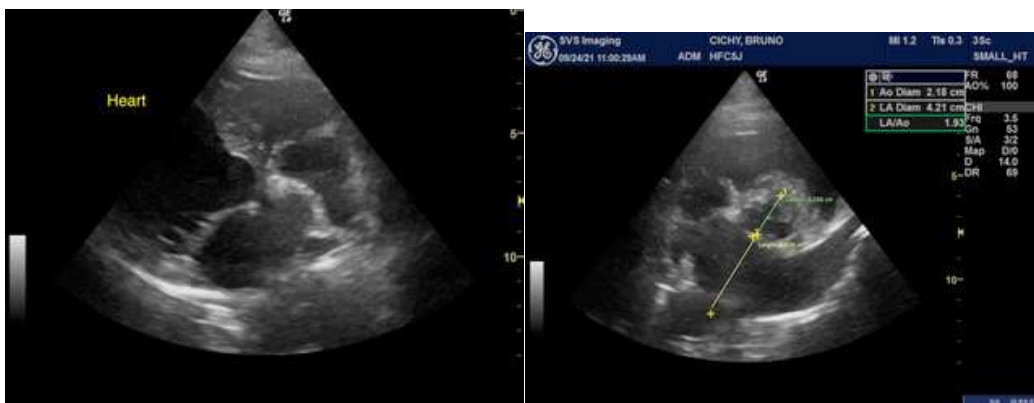
Primary Findings

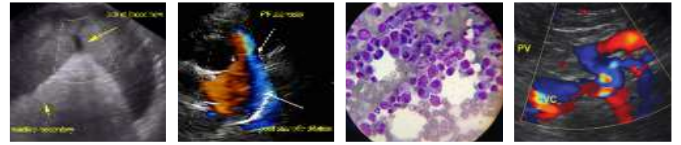
- Left atrium and left ventricle enlargement
- Mild subnormal myocardium contractility
- Mitral valve insufficiency
- Trace tricuspid valve insufficiency - estimated pulmonary pressure gradient not consistent with clinical pulmonary hypertension

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cardiac presentation may indicate primary cardiomyopathy such as large breed chronic mitral valve disease or emerging DCM-like cardiomyopathy, or potential secondary cardiomyopathy owing to Taurine deficiency, given the patient's dietary history, hypothyroidism, myocarditis, or less likely infiltrative disease such a lymphoma. Given the recent correlation between grain-free diets and cardiomyopathy, Taurine levels may be considered. Thyroid status +/- Troponin levels may also be considered if clinically indicated. Given the cardiac changes, Pimobendan 0.3 mg/kg PO BID is recommended with an assessment of systemic blood pressure, as well as three view chest radiographs if not done, to assess for evidence of pulmonary edema. Switching to a traditional diet +/- empirical Taurine supplementation or if Taurine levels are low, would be appropriate.

Recheck echocardiogram is suggested in 4-6 weeks, sooner if clinical signs consistent with heart failure develop or persist.





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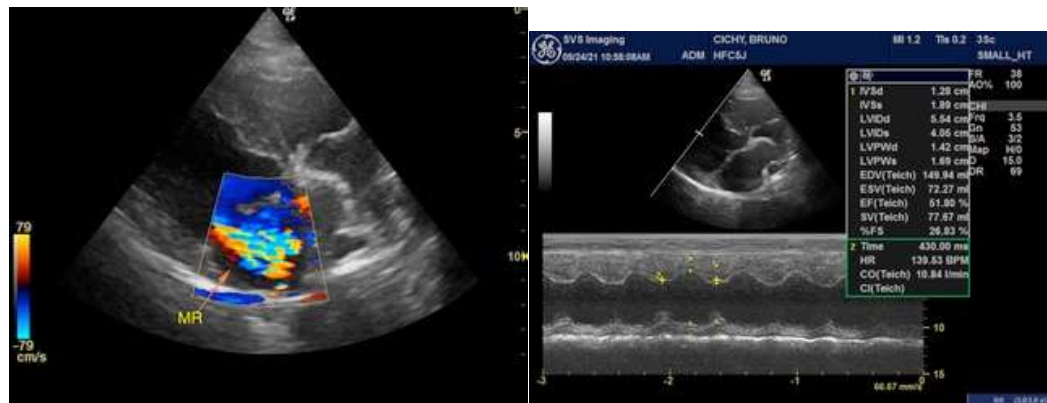
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)
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