



## PATIENT PRESENTING CLINICAL SIGNS

Amy Johnson chronic cough, mild tachypnea noted by owner at home over past few months/weeks heart murmur - new overweight dental disease papillomas Heart Rate and Respiratory Rates Heart Rate: 126 (Bounding), Respiration: 60 (Increased)  
Abnormal PE/Chem/CBC/UA Results: PLT 516,000. ALP = 230 T4 is wnl at 2.1

Canine

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART

### BREED

Maltese

### SEX

Spayed Female

### AGE

9 Years

### WEIGHT

16 Pounds

### INTERPRETED BY

Eric Lindquist, DMV

DABVP, Cert. IVUSS

### IMAGING PERFORMED BY

Jenna Walsh, CVT

### HOSPITAL NAME

Countryside AC

### REFERRING VET

Dr. Cox

### INVOICE

40118

### DATE

8/3/22

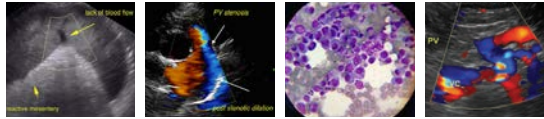
CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT	5.70	3.57	NM	1.7	80	98	0.27
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LA 2D short 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	159	1.37	0.89		3.24	2.75	

### Cardiac Presentation

The echocardiogram for this patient presented excessive **left atrial size** expressed both in the LA/AO and LA max measurements Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable 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** insufficiency noted. 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.

### ULTRASONOGRAPHIC FINDINGS

- Mitral insufficiency and mild left atrial enlargement, early Stage B2 valvular disease



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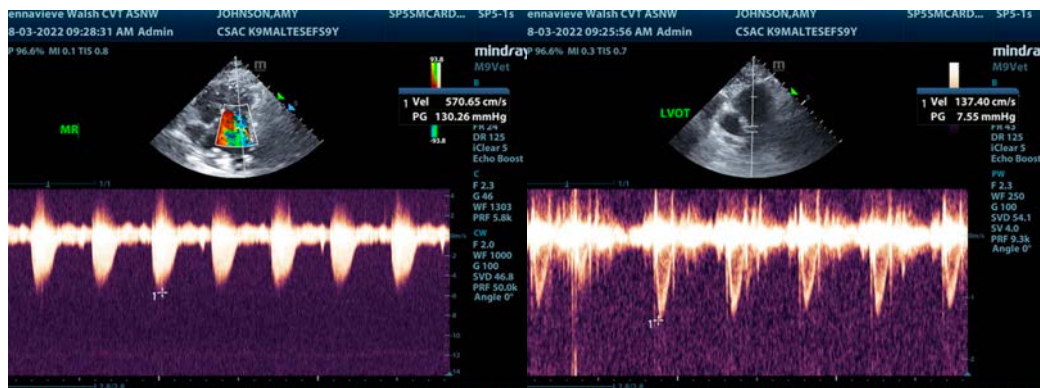
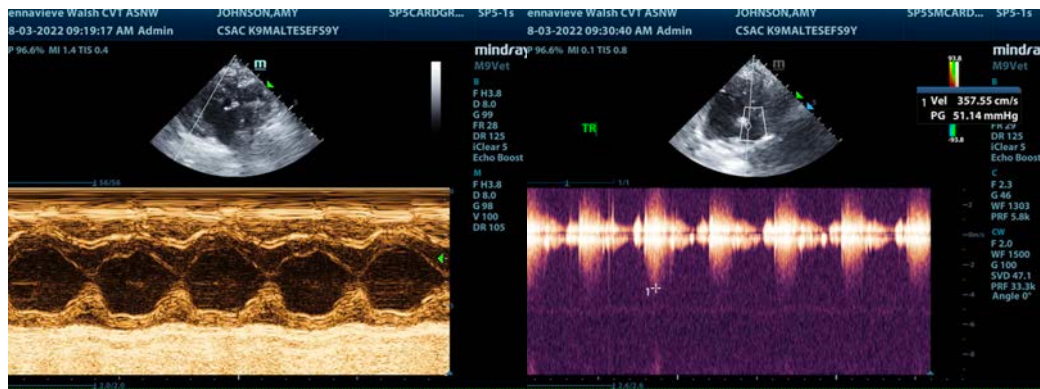
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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Pimobendan could be justified in this patient at 0.3 mg/kg BID. If systolic blood pressure is >160, then ACE inhibitor therapy would also be indicated. Even though the left atrial size is mildly enlarged, I do not believe this is the cause of the cough. Primary respiratory protocol recommended based on thoracic radiographs. Weight loss protocol likely beneficial in this patient.

The heart has some volume overload and is working to compensate for the valvular insufficiency. Target respiratory rate is < 20 resp/minute after therapy. After initiating therapy, I recommend recheck on the clinical exam, BUN, Creatinine, USG, Chest radiographs & Blood pressure in 5-7 days. Recheck echo in 1 month. Earlier if clinical decompensation is occurring. I do not recommend anesthesia at this time until stabilization has occurred on the recommended medications. Repeat preanesthetic echo is ideal if anesthesia is eventually necessary. There is moderate anesthetic risk for this patient. I recommend cardiac treatment prior to sedation unless only light opioids are utilized which would have minimal effect on heart function.





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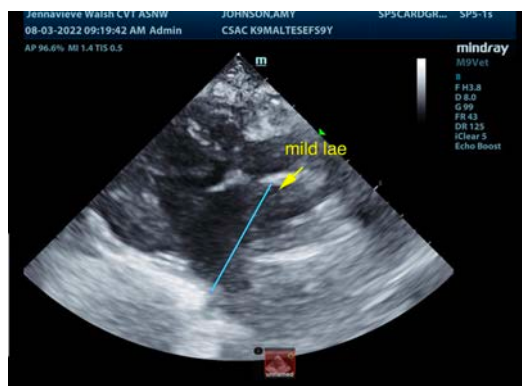
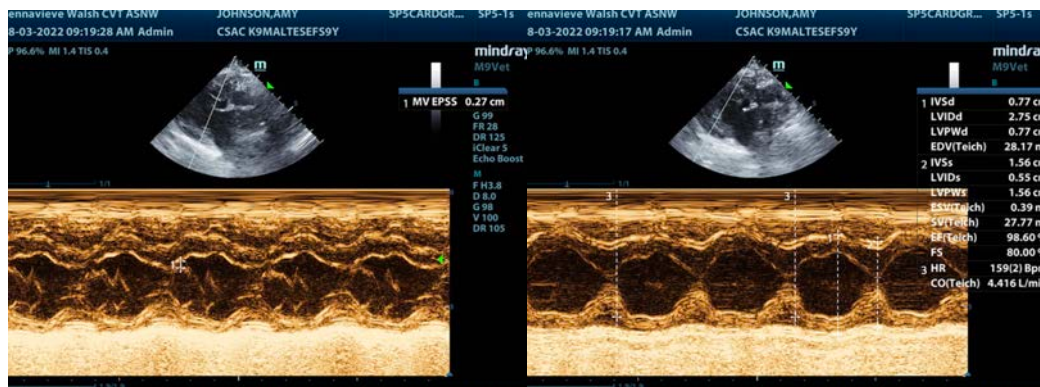
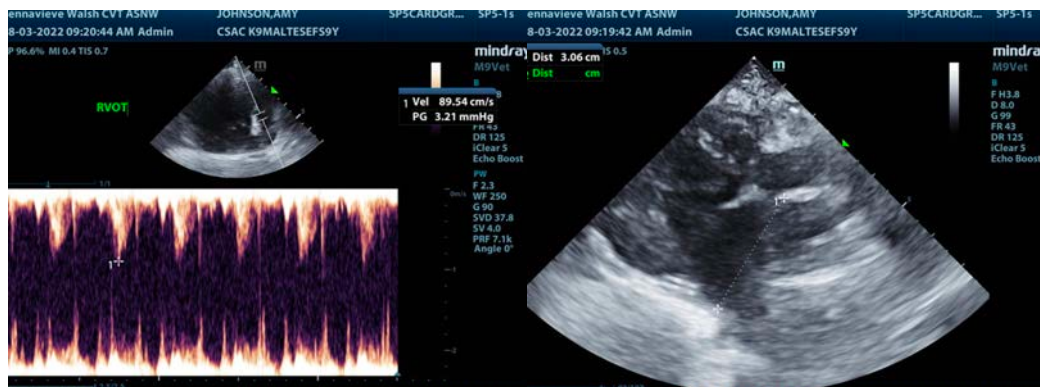
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**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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.

**Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com**

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