



**PATIENT**

Maggie Funke

**SPECIES**

Canine

**BREED**

Miniature Schnauzer

**SEX**

Spayed Female

**AGE**

13 Years

**WEIGHT**

16 Pounds

**INTERPRETED BY**

James Wood, DVM,  
DACVIM (Cardiology)

**IMAGING PERFORMED BY**

Dr. Gudrun Gunther

**HOSPITAL NAME**

New Frontier AMC

**REFERRING VET**

Dr. Solonyka

**INVOICE**

37167

**DATE**

5/21/26

**PRESENTING CLINICAL SIGNS**

History: Patient has had low grade heart murmur since starting care at CVH in 2023 increasing year by year. Stable until recently. Sent home labs for proBNP and chest radiographs prior to dental procedure in February 2026. ProBNP elevated at that time. 5/13/26 - presented for abdominal distension, increased respiratory effort and exercise intolerance. Previous medication - Apoquel Started Furosemide and Pimobendan on 5/13/26.

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

CANINE CARDIAC PARAMETERS	LA long axis	LAmxN	Ao long axis	LA/AO (Heart Base; Swe, short axis)	LA/AO long axis	LVIDd	LVIDdN
<b>NORMAL PARAMETER</b>		<1.57		<1.6	<2.5		<1.7
<b>PATIENT</b>	3.2	1.74	0.9	1.92	3.56	2.79	1.5
CARDIAC PARAMETERS	Body Weight (kg)	AV VMAX (m/s)	PV MAX (m/s)	MR VMAX (m/s)	TR VMAX (m/s)	FS (%)	LVIDsN
<b>NORMAL PARAMETER</b>		0.7-1.7	0.7-1.6			22 - 49%	<0.9
<b>PATIENT</b>	7.27	0.9	1.2	5.8	--	60	0.52
CARDIAC PARAMETERS	HR (bpm)	MV E (m/s)	MV A (m/s)	MV E/A (m/s)	EF (%)	IVSdN	LVFWdN
<b>NORMAL PARAMETER</b>						<0.6	<0.6
<b>PATIENT</b>	100	1.0	0.93	1.1	68.7	0.58	0.5

**Cardiac Presentation**

The mitral valve leaflets are mildly thickened with mild eccentric and posteriorly directed mitral valve insufficiency. There is mild anterior leaflet prolapse. The left atrium is moderately dilated. The left ventricular diastolic dimension is high/normal. Normal global left ventricular systolic function. There is normal right atrial size. The tricuspid valve is competent. There is no evidence of clinically relevant pulmonary hypertension based on the lack of changes to the right heart and proximal pulmonary arteries. The right ventricle subjectively appears normal in structure and function. The aortic valve is normal in appearance, however, there is mild aortic valve insufficiency based on the aortic regurgitant pressure half-time. No vegetative lesions were identified. The pulmonic valve has normal appearance



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and motion, and the corresponding outflow velocities are within normal limits. There is no evidence of pulmonary or aortic valve insufficiency. The aorta appears normal. The pulmonary artery and associated branches appear normal. There is no evidence of pleural effusion, pericardial effusion, or intracardiac masses.

## ULTRASONOGRAPHIC FINDINGS

- Degenerative mitral and aortic valve disease - moderate left atrial enlargement mild left ventricular enlargement.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

These echocardiographic findings suggest degenerative mitral and aortic valve disease. There is moderate left atrial enlargement and high normal left ventricular size. Given the reported history of furosemide therapy, it is possible that the left ventricular size is reduced on furosemide therapy. If a positive clinical response was noted to furosemide therapy, this can be continued unchanged along with pimobendan. The pimobendan and furosemide doses were not enumerated. Recommended doses include pimobendan 0.3 mg/kg PO Q12 and furosemide 1.5 – 2.0 mg/kg PO Q12. Recheck renal function after starting new medications in 2 weeks. Consider an ACE inhibitor at 0.5 mg/kg Q12 and spironolactone 1.0 – 3.0 mg/kg PO Q24, provided normal renal function. A blood pressure is recommended to rule out systemic hypertension as a cause of the aortic insufficiency. Recheck every 3-4 months for an echocardiogram and thoracic radiographs.

### Monitoring

It is very important to catch any clinical signs concerning for emerging CHF as early as possible. The client should be closely monitoring and ideally tracking the sleeping respiratory rate. The sleeping RR should be between 10-30 breaths per minute or less (ideally in the teens or low 20s). **If the resting RR is trending upward**, consistently >35/min while resting/sleeping AND/OR there is a new or progressive cough, the patient should be seen urgent for evaluation to determine if CHF is developing. \*RECHECK ASAP for thoracic radiographs if there is a new cough or increase in RR to detect early CHF and avoid ER presentation\*\*

### Salt Restriction

Moderate sodium restriction may be beneficial in managing this stage of cardiac disease. High-salt treats or diets should be avoided. If interested, further information on moderate sodium restricted diets for dogs with advanced cardiac disease can be found at:

<https://heartsmart.vet.tufts.edu/nutrition/>.



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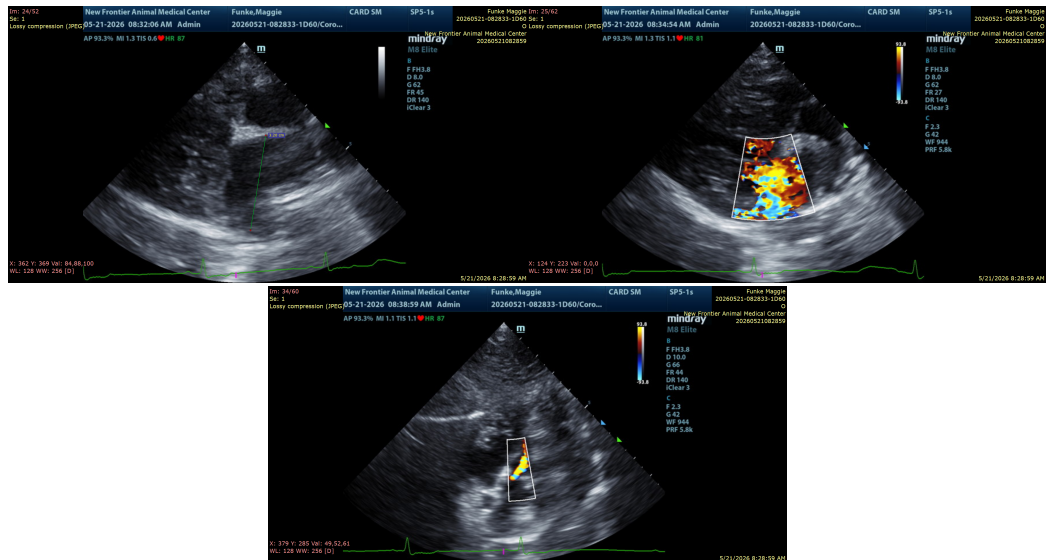
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

James Wood, DVM, DACVIM (Cardiology)

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