



**PATIENT**

Bella Mehrkens

**SPECIES**

Canine

**BREED**

Chihuahua Mix

**SEX**

Spayed female

**AGE**

8 years

**WEIGHT**

18 lbs

**PRESENTING CLINICAL SIGNS**

History: Seen @ ER for decompensating CHF, was on O2 Current meds: Recent increase from 18 to 25mg Furosemide BID, Enalapril 3.75mg SID, Pimobendan 2.5 BID  
 Abnormal PE/Chem/CBC/UA Results: ALP 686, WBC 23.54

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

The **left atrium** is severely enlarged. Left atrial tear was not overtly visualized; however, given the pericardial effusion present, small left atrial tear may be an issue. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Prolapse of the anterior mitral valve leaflet was noted. Doppler indicated measurable insufficiency. The **left ventricle** was severely dilated with non-compensatory, hypocontractility for this type of pathology. 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. 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). **Pericardial** effusion was noted in this patient. This may be related to a left atrial tear.

**INTERPRETED BY**

Eric Lindquist, DMV  
 DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Jessica Miller, RDMS

**HOSPITAL NAME**

Fredon AH

**REFERRING VET**

Dr. Grau

**INVOICE**

**DATE**

10/24/22

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	5.28		2.5	3.04	57	87	0.1
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT	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	124	1.71	1.0	18 lbs	4.9	4.94	



**PATIENT**

Bella Mehrkens

**ULTRASONOGRAPHIC FINDINGS**

Advanced stage C1 to emerging D1 valvular disease.

**SPECIES**

Canine

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

I recommend continuation of the current protocol as well as adding Spironolactone at 1-2 mg/kg b.i.d. and increasing Enalapril to b.i.d. dosing. The prognosis is guarded. The patient is at risk for sudden death.

**BREED**

Chihuahua Mix

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 3-6 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.

**AGE**

8 years

**WEIGHT**

18 lbs



**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Jessica Miller, RDMS

**HOSPITAL NAME**

Fredon AH



**REFERRING VET**

Dr. Grau

**INVOICE**

**DATE**

10/24/22



**PATIENT**

Bella Mehrkens

**SPECIES**

Canine

**BREED**

Chihuahua Mix

**SEX**

Spayed female

**AGE**

8 years

**WEIGHT**

18 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Jessica Miller, RDMS

**HOSPITAL NAME**

Fredon AH

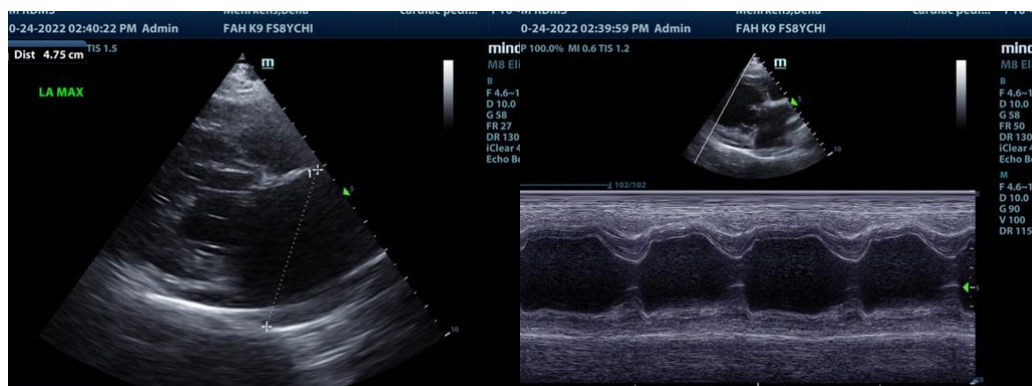
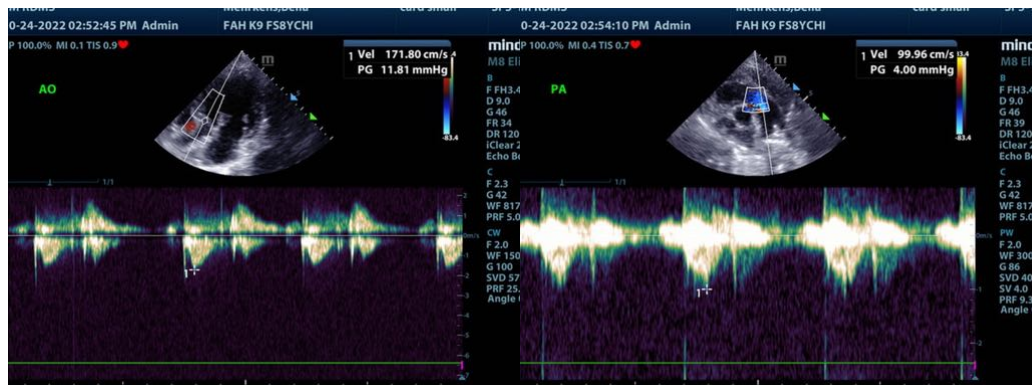
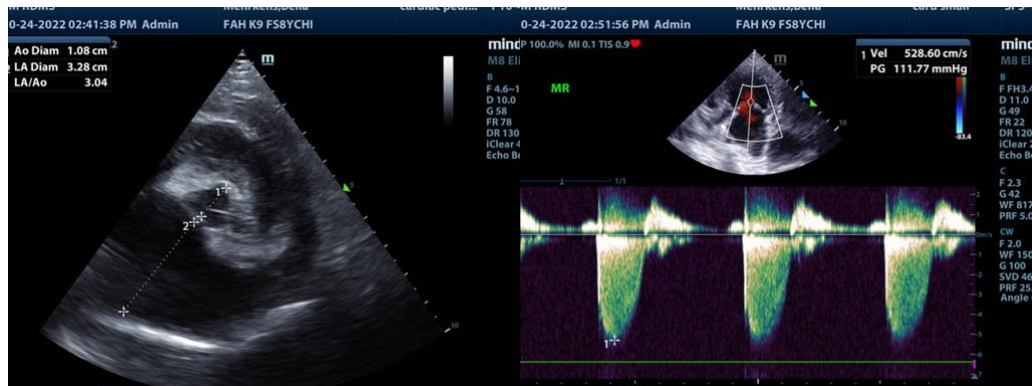
**REFERRING VET**

Dr. Grau

**INVOICE**

**DATE**

10/24/22



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**  
info@SonoPath.com