



**PATIENT**

Chloe McDougle

**SPECIES**

Canine

**BREED**

Shepherd Cross

**SEX**

Spayed female

**AGE**

10 years

**WEIGHT**

46 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Gunther

**HOSPITAL NAME**

New Frontier AMC

**REFERRING VET**

Dr. Gunther

**PRESENTING CLINICAL SIGNS**

History: 2 week history of abnormal panting, mostly in the evenings no heart murmur heard thoracic radiographs - VHS 11, possible enlarged pulmonary veins  
Abnormal PE/Chem/CBC/UA Results: CBC/CHEM done in March 2022 - WNL

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

The **echocardiogram** presented a prominent **right heart** with mild **right ventricular** hypertrophy, with **tricuspid** regurgitation. The **right atrial** size is normal. No evidence of neoplasia was noted in the right auricle, or elsewhere in the heart. The **pulmonary artery** was uniformly prominent with mildly depressed pulmonic velocity measured on PW Doppler. No overt heartworms were noted in the main or visible deep pulmonary arteries. Yet, theoretically heartworms could be present in the deep pulmonary vasculature out of visible sonographic range. More likely, however, this prominent right heart is due to excessive intra-thoracic pressures caused by chronic respiratory disease or potentially excessive intra-thoracic fat (Pickwickian syndrome). The **left heart** demonstrated a linear **ventricular septum**. Contractility was functionally adequate demonstrated by the FS% measurement. The **mitral valve** was not significantly insufficient and no significant **left atrial** dilation was noted. The **left ventricular outflow** demonstrated normal flow patterns and velocities through the aortic valve. No evidence of tumor, pericardial or pleural effusion was noted. The visible **extra-cardiac** tissues were uniformly linear without evidence of masses, infiltrative or inflammatory mediastinal tissue. No evident arrhythmic activity was noted during the exam.

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			1.2	1.4	38	69	0.44
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		1.24		46 lbs	3.96	3.84	

**ULTRASONOGRAPHIC FINDINGS**

Cor pulmonale.  
Enlarged right heart.  
No evidence of left-sided cardiac disease.  
Mild tricuspid insufficiency noted on color flow assessment.

**INVOICE**

32083

**DATE**

7/29/22



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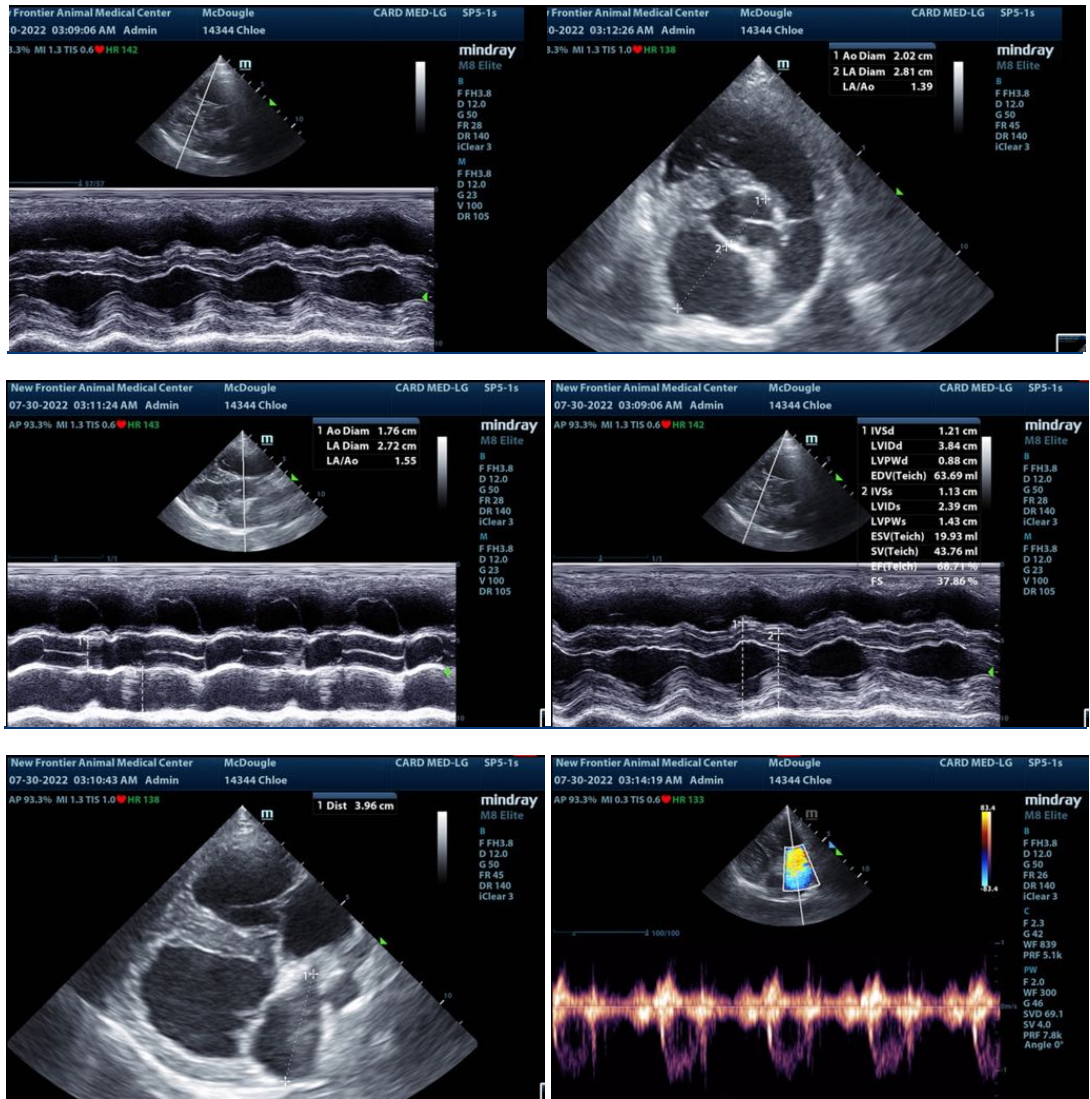
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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

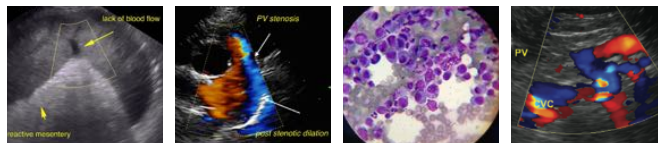
There was no overt evidence of pulmonary hypertension. I recommend assessment of hepatic veins for any evidence of passive congestion, dilation. Primary respiratory disease is likely. There is no clinical cardiac disease at this time. I recommend to focus on primary respiratory cause unless the hepatic veins are dilated.



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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info@SonoPath.com

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