

**PATIENT PRESENTING CLINICAL SIGNS**

Sam Finn coughing, especially at night, not eating possible fluid in lungs on rads  
Abnormal PE/Chem/CBC/UA Results: please see attached rads

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

Canine

**BREED**

Shih Tzu X

**SEX**

Intact Male

**AGE**

9 Years

**WEIGHT**

7 kg

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	5.51	2.6	NM	1.06	49	83	NM
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	120		1.04		2.38	2.43	

**Cardiac Presentation**

The echocardiogram presented a prominent **right heart** with mild **right ventricular** hypertrophy. Minor tricuspid insufficiency noted. Normal **right atrial** size. 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. **Mitral** insufficiency noted. No significant **left atrial** dilation was noted. The **left ventricular outflow** demonstrated normal flow patterns and velocities through the aortic valve. Non-cardiogenic pleural effusion 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.

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Kelly Reschny

**HOSPITAL NAME**

Collegeway AH

**REFERRING VET**

Dr. Hanna

**ULTRASONOGRAPHIC FINDINGS**

- Non-cardiogenic pleural effusion
- Stage B1 valvular disease

**INVOICE**

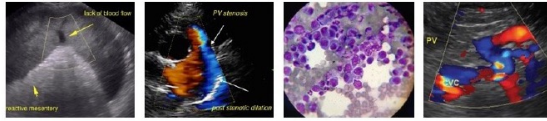
36989

**DATE**

4/19/22

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Abdominal sonogram recommended to assess for primary disease that may be metastatic to the chest. Pleurocentesis and cytospin recommended to assess for exfoliating neoplasia or inflammatory sediment. CT with contrast of the chest after pleural drainage would be optimal. No cardiac medications recommended. This is not a cardiac issue. Even though valvular disease is present, it is well compensated. Internal chambers sizes are normal, contractility and structure is normal other than Stage



**PATIENT** B1 valvular disease.

Sam Finn

**Radiographs: Right-sided cardiomegaly with pleural effusion, volume contracted vasculature, suggestive for non-cardiogenic pleural effusion.**

**SPECIES**

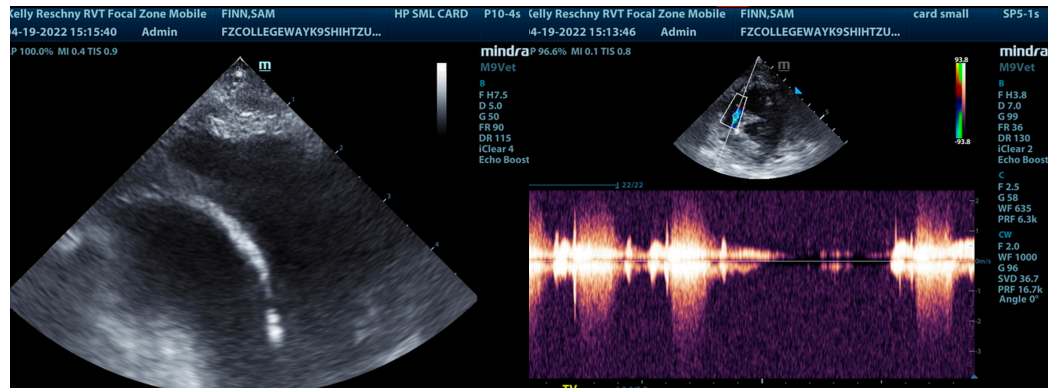
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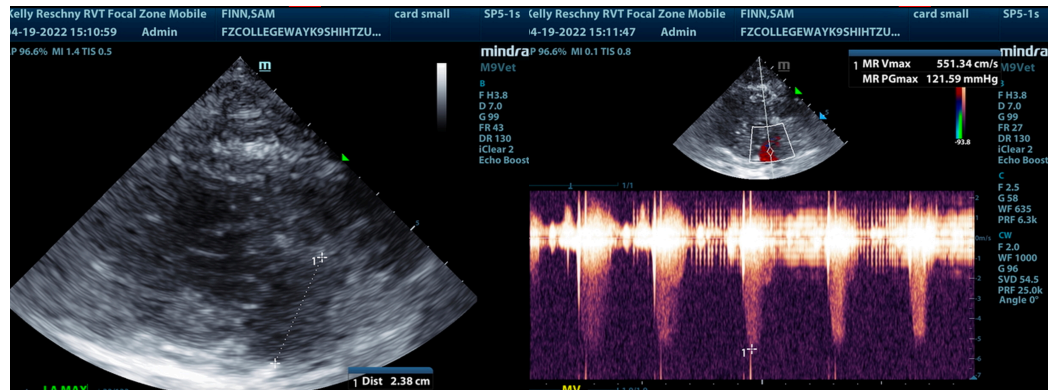
**WEIGHT**

7 kg

**INTERPRETED BY**

Eric Lindquist, DMV

DABVP, Cert. IVUSS

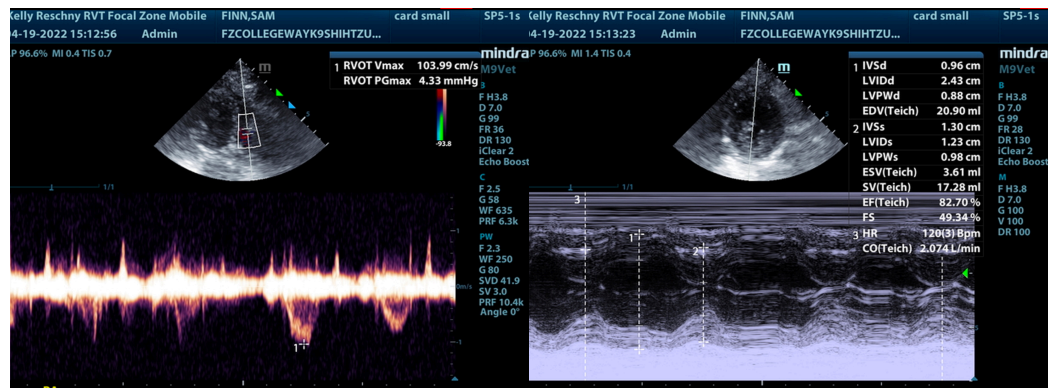


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Kelly Reschny

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**REFERRING VET**

Dr. Hanna

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.

**INVOICE**

36989

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

**DATE**

4/19/22

[info@SonoPath.com](mailto:info@SonoPath.com)