

**PATIENT**

Tucker Spain

**PRESENTING CLINICAL SIGNS**

History: Coughing for several weeks - more frequent the last few days. Heart murmur 4/6  
 Abnormal PE/Chem/CBC/UA Results: Heart Rate and Respiratory Rates HR 150, RR 32

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

BREED	CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
Chihuahua								
SEX	NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
Neutered Male	PATIENT	5.5	3.73	2.43	2.5	41	73	0.35
AGE	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)
10 Years	NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
WEIGHT	PATIENT	190	.90	0.72	--	4.74	3.56	--

11 Lbs.

**Cardiac Presentation**

Severe **left atrial** enlargement was expressed both in the LA/AO and LA max measurements Chamber volumes and echogenicity were normal. Prolapsed anterior mitral valve leaflet noted with vegetative changes noted on the anterior valve leaflet. Doppler indicated measurable insufficiency. Volume overload of the left ventricle was noted with hypocontractility. 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 was noted at 3.73 m/s. 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.

**INTERPRETED BY**

Eric Lindquist, DMV, DABVP, Cert. IVUSS

**HOSPITAL NAME**

Countryside AC

**REFERRING VET**

Dr. Cox

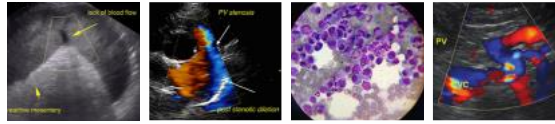
**INVOICE NUMBER**

14044

**DATE**

2/21/22

**ULTRASONOGRAPHIC FINDINGS**



**PATIENT**  
 Tucker Spain

- Stage C-1 valvular disease with severe volume overload of the left atrium and left ventricle
- Emerging myocardial insufficiency

**SPECIES** INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Canine  
 I recommend quadra therapy in this patient with Lasix at 2-4 mg/kg BID, Ace-inhibitor 0.5 mg/kg SID progressing to BID and Pimobendan at 0.3 mg/kg BID, Spironolactone at 1-2 mg/kg BID.

**BREED**  
 Chihuahua  
 The heart is in a somewhat precarious state with volume overload and a heart that 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.

**SEX**  
 Neutered Male

**AGE**  
 10 Years

**WEIGHT**  
 11 Lbs.

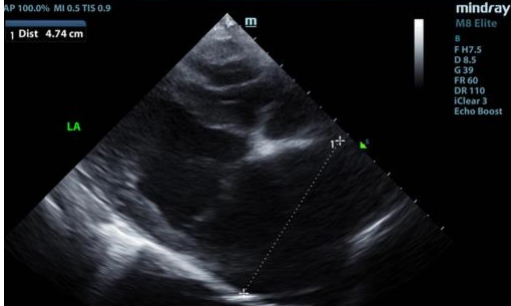


1 IVSd	0.60 cm
LVIDd	3.56 cm
LVPWd	0.64 cm
EDV(Teich)	52.97 ml
1 IVSs	0.86 cm
LVIDs	2.10 cm
LVPWs	0.89 cm
ESV(Teich)	14.42 ml
SV(Teich)	38.56 ml
EF(Teich)	74.74 %
FS	40.98 %
HR	190(2) Bpm
CO(Teich)	7.325 L/min

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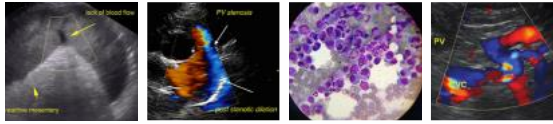
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1 Dist	4.74 cm
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Chihuahua

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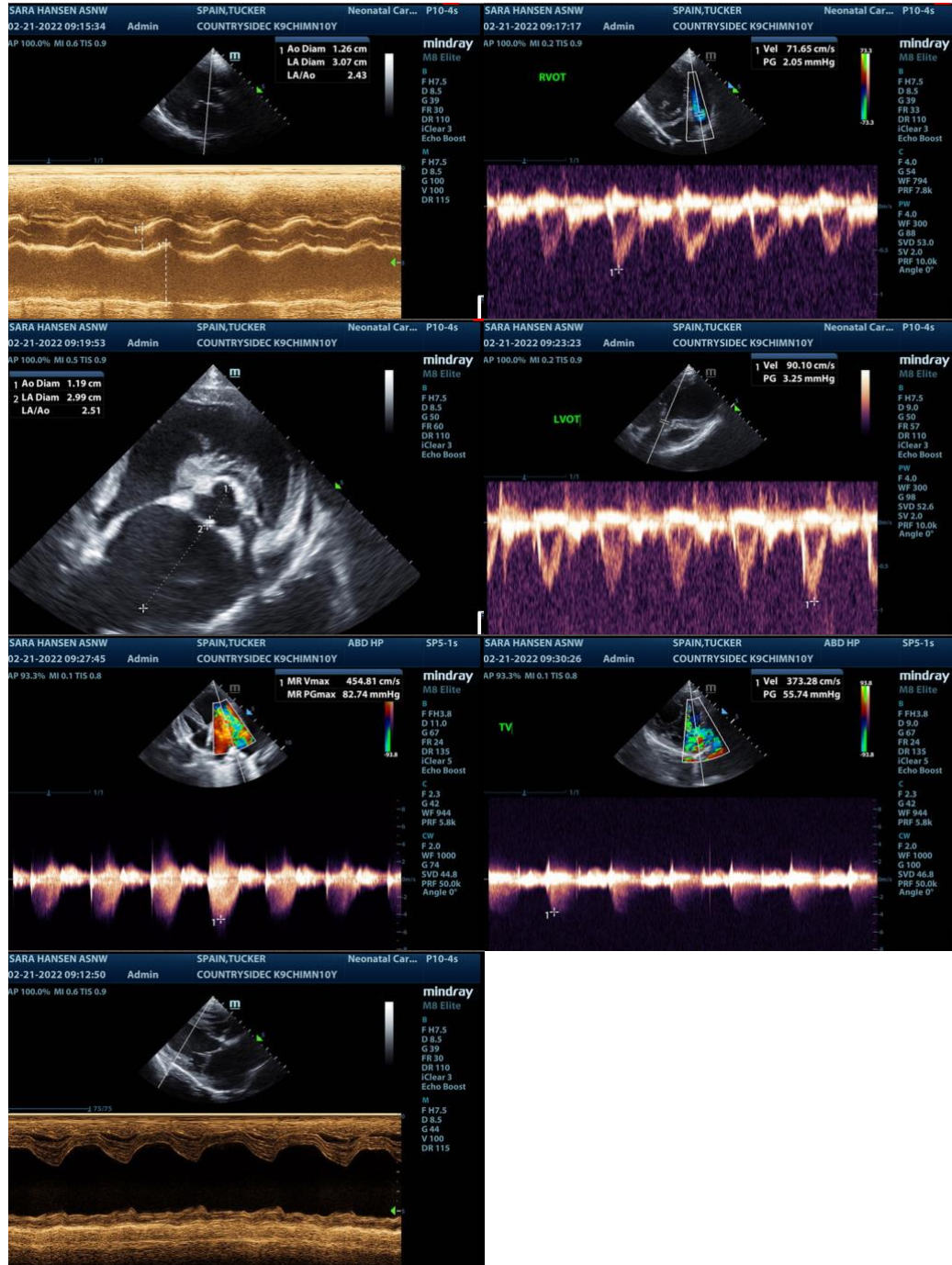
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

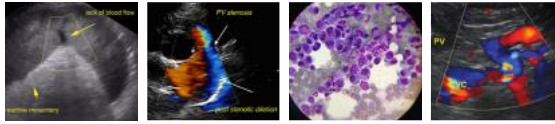
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Thank you for this referral. If the clinical or image interpretation does not parallel your



**PATIENT** findings or if I can be of any further assistance please contact me.

Tucker Spain

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

Chihuahua

**SEX**

Neutered Male

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