


PATIENT

Ripley Brand

PRESENTING CLINICAL SIGNS

Dog with previous history of adoption from the South, presents today for recent heartworm positive. No cough, but owner reports dog gets fatigued after exercise. Diet not known.

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE HEART
BREED

Pit Bull Terrier X

SEX

Neutered Male

AGE

2 Years

WEIGHT

56 Pounds

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swedish)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT	2.19	1.82	1.07	1.23	32	NM	0.8
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LA (2D long 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				
PATIENT	80	1.26	0.79	25.4	4.19	5.01	3.39

Adapted from June Boon, Veterinary Echocardiography, 1998
 Sisson D et al. JVIM 1991; 5: 232, and Jacobs et al. Am J Vet Res 1985; 46:1705

INTERPRETED BY

 Lisa Carioto, DVM,
 DVSc, Diplomate
 ACVIM

Echocardiographic findings

No ECG, however, no abnormal contractions noted during the echocardiogram

IMAGING PERFORMED BY

Kelly Vazquez

Mitral valve

- Mild thickening and very mild irregularity of both leaflets, consistent with myxomatous degeneration.
- No prolapse of leaflets
- Moderate mitral regurgitation
- Left auricle - mildly prominent
- LA: Ao ratio: within normal limits (WNL)
- LA normalized for BW (LAN = 1.4), moderately enlarged
- LVIDd normalized for BW (LVIDND = 1.9), moderately enlarged
- LVIDs normalized for BW (LVIDNS = 1.22), high normal

HOSPITAL NAME

Glen Rock VH

Aortic valve

- No obvious abnormalities
- Trivial aortic insufficiency

REFERRING VET

Dr. Scott Stekler

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40204

DATE

8/4/22



PATIENT	<i>Tricuspid valve</i>
Ripley Brand	<ul style="list-style-type: none"> No abnormalities with valve leaflets
SPECIES	<ul style="list-style-type: none"> No prolapse of leaflets
Canine	<ul style="list-style-type: none"> Trivial to very mild tricuspid regurgitation
BREED	<ul style="list-style-type: none"> No obvious heart worms in right atrium or right auricle
Pit Bull Terrier X	<ul style="list-style-type: none"> Heart worms observed in right ventricle (a few)
SEX	<i>Pulmonic valve</i>
Neutered Male	<ul style="list-style-type: none"> No abnormalities with valve leaflets Pulmonary insufficiency: Moderate (colour Doppler) with low velocity (0.47 m/s) Main pulmonary artery: Within normal limits (WNL) Pulmonary artery: aorta ratio = 0.96 (WNL, but high normal)
AGE	<i>Other</i>
2 Years	<ul style="list-style-type: none"> A couple of B lines (“rocket signs”), suggestive of pulmonary pathology; however, there are no cardiac abnormalities to suggest pulmonary edema No signs of pericardial or pleural effusion
WEIGHT	<ul style="list-style-type: none"> Pulmonary veins: NAF No evidence of a mass
56 Pounds	
INTERPRETED BY	ULTRASONOGRAPHIC FINDINGS
Lisa Carioto, DVM, DVSc, Diplomate ACVIM	Heart worm disease, with a mild number of heart worms visualized within the right ventricle. Although the pulmonary artery is within the normal reference range, the PA: Ao ratio is at the high end of the normal reference range.
IMAGING PERFORMED BY	Pulmonary pathology is present based on the presence of a few “B lines” (“rocket signs”), however, there are no indications on Ripley’s echocardiogram that the “B lines” are due to pulmonary edema. Baseline radiographs are recommended to assess Ripley’s lungs, if not already performed.
Kelly Vazquez	Dilated cardiomyopathy of the left heart is evident, based on the left atrial and left ventricular enlargement, with a mild decrease in fractional shortening
HOSPITAL NAME	pimobendan and spironolactone are recommended to help improve Ripley’s cardiac function, in addition to doxycycline and macrolide (adulticide) therapy.
Glen Rock VH	
REFERRING VET	INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS
Dr. Scott Stekler	Suggestions/recommendations include:
INVOICE	<ul style="list-style-type: none"> Evaluation of blood pressure, if not already performed.
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- Baseline radiographs are recommended to assess Ripley's lungs, i.e. administration of steroids, and possibly the delayed protocol (despite the fact that this is no longer considered ideal as per the American Heartworm Society). That is, the decision should be based on Ripley's clinical status to help decrease the risk of worm emboli.

SPECIES

Canine

- pimobendan (Vetmedin) at a dose of 0.25-0.30 mg/kg PO every 12 hours. If he has a sensitive GI system, the dose should be started at 0.10 mg/kg PO every 12 hours for 3 days prior to increasing to the full dose. Administer with a small amount of food to decrease nausea.

BREED

Pit Bull Terrier X

- spironolactone 0.5-1 mg/kg PO q12h. A slow up titration o
- furosemide. The clients should have access to furosemide at home in case of decompensation

SEX

Neutered Male

- **Cage rest** will be of utmost importance to minimize the risk of sudden death associated with thromboemboli caused by the death of worms. The American Heartworm Society website has a section for clients and their dogs to help Ripley and his newly adopted family remain "sane" during the period of exercise restriction.

AGE

2 Years

- Monitoring of the resting (sleeping) respiratory rate (RRR) may be started to obtain a baseline, for example, once a day. The RRR should NOT EXCEED 30 breaths per minute (bpm). If the respiratory rate is greater than 30 bpm, or if there is a gradual increase (over a day or two) toward 30 bpm, the patient should be evaluated immediately for congestive heart failure and the appropriate treatment initiated.

WEIGHT

56 Pounds

- Signs of cardiac decompensation include, coughing (particularly at night), fatigue, lethargy, decreased exercise tolerance (i.e., not being able to walk for as long before becoming tired, or "running out of breath" while playing, or going up and down stairs, as well as syncope (collapsing or fainting spells). Restlessness, or agitation during the night, or being unable to find a comfortable position to sleep are also very common clinical signs.

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

- Mild salt restriction is suggested (less than 0.9 grams/1000 kcal of food). Monitor salt content in treats.

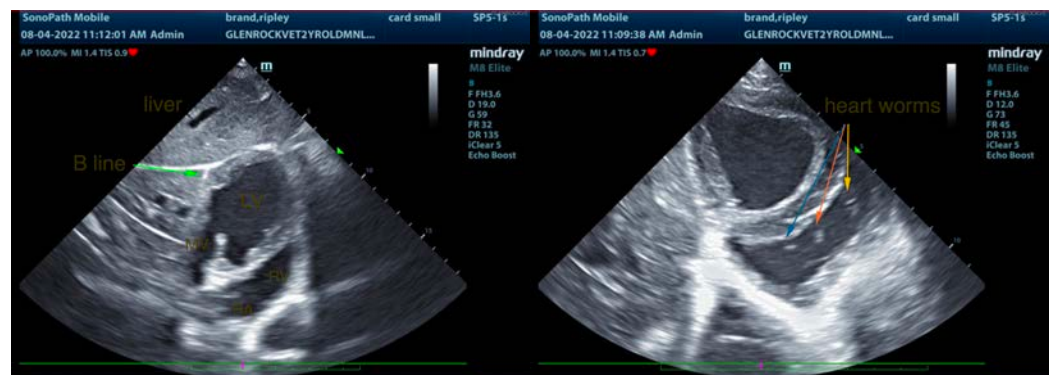
IMAGING PERFORMED BY

Kelly Vazquez

- As a precaution, a re-evaluation of Ripley's echocardiogram is recommended in 6-8 months to ensure his results remain stable.

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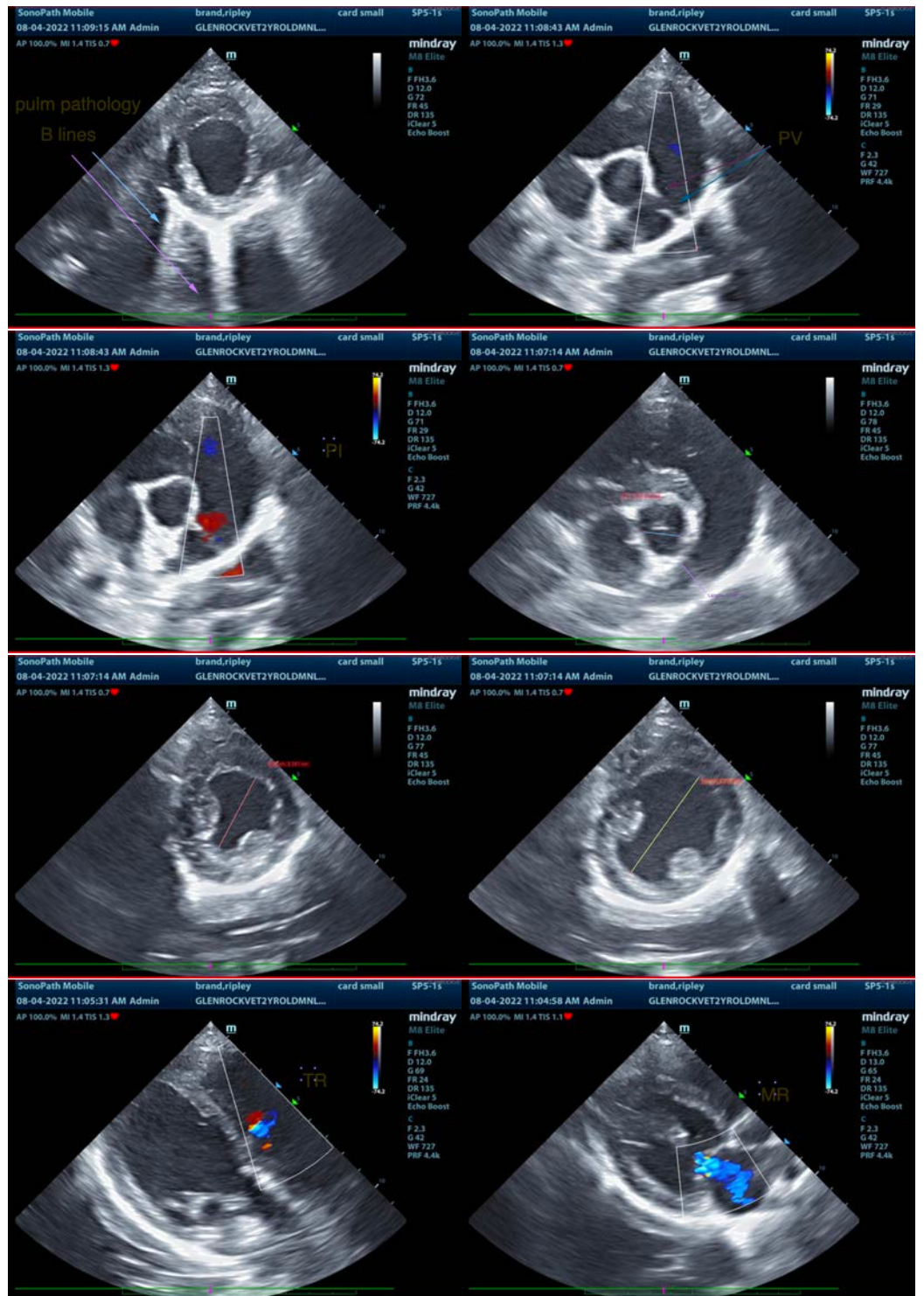
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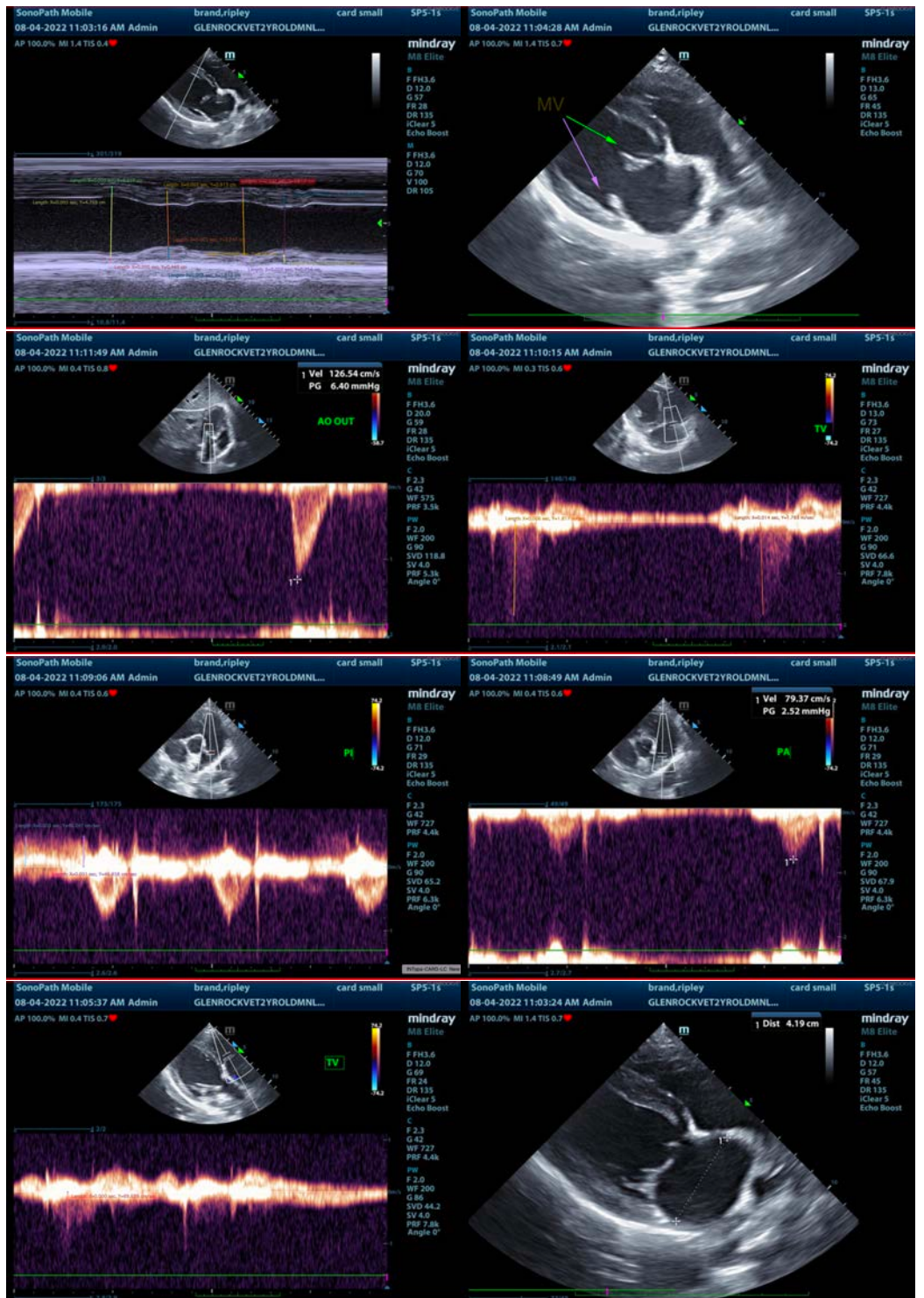
Dr. Scott Stekler

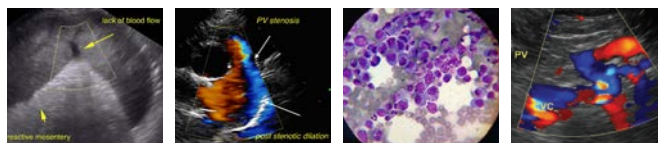
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

SPECIES

Canine

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.

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

Lisa.Carioto@sonopath.com

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