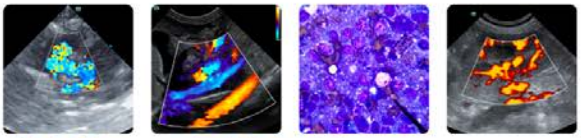


PATIENT

GeorgiaDay VanWagenen

SPECIES

Canine

BREED

Chihuahua

SEX

Spayed Female

AGE

13 Years

WEIGHT

7 lbs

INTERPRETED BY

Brad Harris, DVM, DACVECC, DACVIM (cardiology)

IMAGING PERFORMED BY

Meghan Morse, LVT, CVT

HOSPITAL NAME

Kingston Animal Hospital

REFERRING VET

Dr. Alden

INVOICE

72540

DATE

12/11/25

PRESENTING CLINICAL SIGNS

Labored breathing, cough, fluid in chest, heart disease Current meds: Lasix, Pred

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

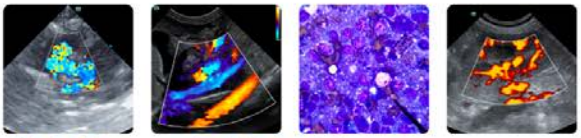
CANINE CARDIAC PARAMETERS	BW	HR BPM	LAD 4 ch Long	RAD 4 ch Long	La/Ao Heart Base	LVIDd	LVIDs
NORMAL PARAMETER		50-100			<1.6		
PATIENT	3.18	NM	1.66	1.37	1.32	1.68	0.88
CANINE CARDIAC PARAMETERS	**FS**	**EPSS**	**PV V MAX (m/s)**	**AV V Max (m/sec)**	**MR Vmax**	**TR Vmax**	**RPA distensibility (normal >30%)**
NORMAL PARAMETER	28-40	<0.6	0.7-1.6	0.7-1.7	4.5-5.5	< 2.7	
PATIENT	48	0.1	1.1	1.4	NM	3.9	32

Cardiac Presentation

The left atrium is normal in dimension. The left ventricle is normal in dimension, with normal systolic function. The right atrium and ventricle are subjectively normal in dimension and systolic function. The mitral valve is minimally thickened and redundant consistent with myxomatous changes, and there is no significant prolapse. There is evidence of trivial mitral regurgitation. The tricuspid valve leaflets are subjectively thickened with moderate tricuspid regurgitation and possible pulmonary hypertension. The left ventricular outflow tract demonstrated normal laminar flow and the visible aorta is unremarkable. The right ventricular outflow tract assessment revealed normal laminar flow, and appropriate diameter and distensibility. There is evidence of trace aortic valve insufficiency. There is no visible pericardial, pleural, or free peritoneal fluid noted. The cardiac chambers, pericardial and visible extra-cardiac regions were free of masses, spontaneous echo contrast, or thrombi.

ULTRASONOGRAPHIC FINDINGS

- These findings identify significant pulmonary hypertension (PH) in the absence of any clinically relevant left sided disease, making the PH more likely related to primary respiratory disease or other etiology (non-type 2 PH). However, the concurrent use of diuretics may be artificially altering interpretation of the left sided dimensions. Pulmonary hypertension in dogs is most commonly secondary to primary respiratory disease (chronic bronchitis, pulmonary fibrosis, or other forms of pulmonary interstitial disease). Pulmonary hypertension can also develop in dogs with severe heartworm disease or secondary to pulmonary thromboembolism (PTE). Less commonly, pulmonary hypertension is identified in dogs as an idiopathic condition. Pulmonary hypertension commonly causes syncope, and a patient's signs may be attributable to this condition.



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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

These findings identify significant pulmonary hypertension (PH) in the absence of any clinically relevant left sided disease, making the PH more likely related to primary respiratory disease or other etiology (non-type 2 PH). However, the concurrent use of diuretics may be artificially altering interpretation of the left sided dimensions. Pulmonary hypertension in dogs is most commonly secondary to primary respiratory disease (chronic bronchitis, pulmonary fibrosis, or other forms of pulmonary interstitial disease). Pulmonary hypertension can also develop in dogs with severe heartworm disease or secondary to pulmonary thromboembolism (PTE). Less commonly, pulmonary hypertension is identified in dogs as an idiopathic condition. Pulmonary hypertension commonly causes syncope, and a patient's signs may be attributable to this condition.

Recommendations/Treatment:
There is no clear indication for cardiac therapy at this time. Treatment for the PH/presumed respiratory disease is warranted, as clinical signs are present. The use of sildenafil (2 mg/kg BID) could be considered if the patient is acutely dyspneic or is refractory to other therapy directed at respiratory disease. The merits of an airway scope/wash should be discussed with the owner, especially prior to any steroid use. A repeat echo is indicated in another 6 months, or sooner if progression is suspected, clinical signs develop/worsen, or cardiac therapy is being contemplated.

Anesthesia considerations:
While there is no CHF present, there is likely an increased anesthetic risk which must be considered prior to any anesthetic procedure. If anesthesia is necessary, then alpha-2 agonists, ketamine, and Telazol should be avoided. Fluid therapy during anesthesia does not necessarily need to be adjusted. A shorter anesthetic duration will reduce the risk of complications. Pre-oxygenation is mandatory. Premedication with an opioid (e.g., butorphanol, hydromorphone, oxymorphone) with or without a benzodiazepine is generally the safest protocol. An induction agent such as Propofol, alfaxalone, or diazepam/etomidate can be used to effect. Maintenance of anesthesia with isoflurane or sevoflurane is reasonable.

Diet:
No special considerations are necessary. Any high-quality food from Hills, Royal Canin, Science Diet, Eukanuba, Iams, or Purina is reasonable.

Activity:
Moderate physical activity (meandering walks, exploring the backyard, playing with toys inside, getting excited when family gets home, etc.) is encouraged, but periods of strenuous aerobic activity (jogging, strenuous outdoor ball play, prolonged play at the dog park, etc.) should be avoided, especially during periods of high heat (> 80 F) and humidity. Dogs with heart disease tend to tolerate cool and cold temperatures much better than high temperatures. Avoid sudden increases in activity (e.g. 2 block walks during the week but 2 mile walks followed by 30 minutes at the dog park on the weekends) as this may be difficult for the cardiovascular system to deal with.

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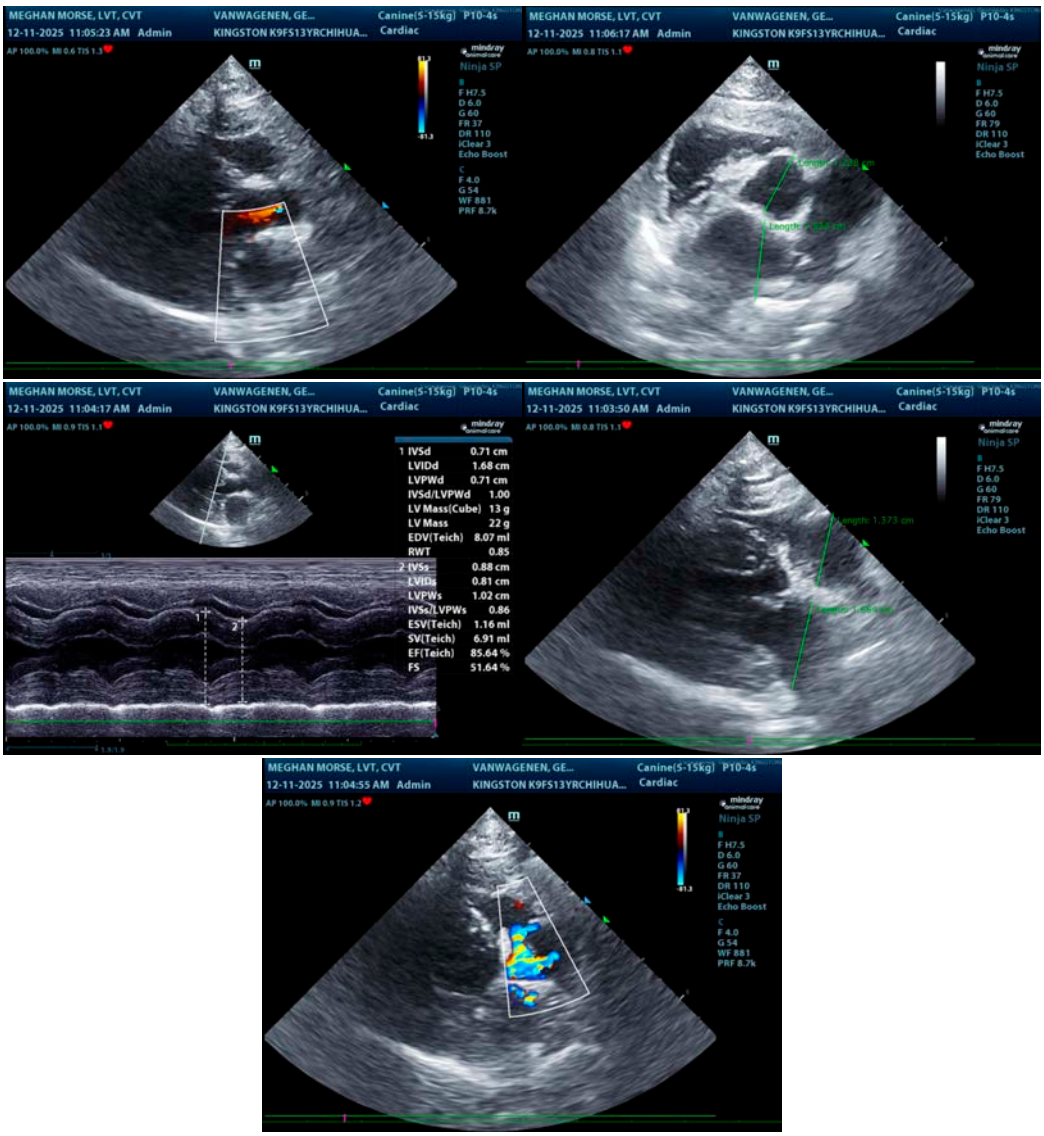

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Brad Harris, DVM, DACVECC, DACVIM (cardiology)

info@SonoPath.com