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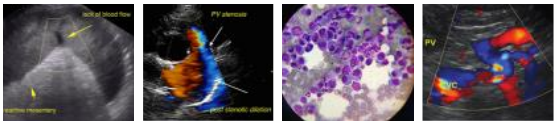


ANIMAL SOUNDS NW
MOBILE VETERINARY ULTRASOUND
IMAGING PERFORMED BY
AnimalSoundsNW.com 541-357-9423

PATIENT
Xyro Taylor

SPECIES
Canine

BREED
Rottweiler

SEX
Neutered Male

AGE
11 Years

WEIGHT
83 Pounds

INTERPRETED BY
Lisa Carioto, DVM, DVSc, Diplomate ACVIM

IMAGING PERFORMED BY
Jenna Walsh, CVT

HOSPITAL NAME
Access VC

REFERRING VET
Dr. Aher

DATE
7/29/22

Invoice
16620

PRESENTING CLINICAL SIGNS

History: - Bleeding digital mass left front paw [suspected neoplasia, amputation surgery planned if ultrasound normal] - Historical heart murmur - not appreciated on recent exam - Pale mucous membranes - Osteoarthritis

Abnormal PE/Chem/CBC/UA Results: - Anemia 28% [suspect non-regenerative] - Hypoalbuminemia 2.1 [2.7-4.4 g/dL] - Potassium 5.8 [3.5-5.5 mEq/L] Heart murmur previously detected in 2017 during a sedated exam. Prescribed Enalapril for presumptive heart disease. ProBNP 9/19/17: 1116 pmol/L H [0-900]. ProBNP elevated 6/24/20 - proBNP-K9 3226 pmol/L H [0-900]. Enalapril increased from once a day to twice a day. No thoracic radiographs, echocardiogram or ECG performed. Meds-Trazodone 300 mg, Acepromazine 20 mg for vet visit, Meloxicam 7.5 mg - 1/2 tablet once daily. Fluoxetine 20 mg 2 capsules by mouth once daily in am Gabapentin 800 mg 1/4 tablet 3 x day. Codeine sulfate 30 mg - 1 tablet in the morning and 2 tablets in the afternoon, Enalapril 20 mg 1 tablet twice daily. Recently stopped Methocarbamol 500 mg 1 tablet twice a day.

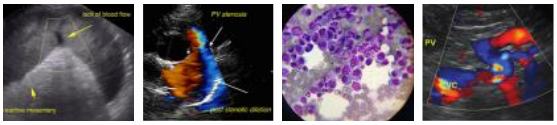
ULTRASONOGRAPHIC EXAMINATION OF THE HEART

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	<1.3	28-40	40-100	<0.6
PATIENT	3.03	2.17	1.1	1.2	SAx= 19 LAx= 29	NM	0.96
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				
PATIENT		0.99	0.69	37.7	3.96	LAx= 4.13 SAx= 4.61	LAx= 2.94 SAx= 3.71

Echocardiographic findings

Mitral valve

- Mild (posterior) to moderate thickening and irregularity (septal); consistent with myxomatous degeneration
- Very mild prolapse of leaflets.
- Moderate mitral regurgitation.



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- Prominent left auricle.
- LA: Ao ratio: WNL
- LA normalized for BW (LAN = 1.15), mild enlargement
- LVIDd normalized for BW (LVIDND = 1.6), high normal
- LVIDs normalized for BW (LVIDNs = 1.2), high normal

Aortic valve

- No abnormalities
- No aortic insufficiency

Tricuspid valve

- Thickening and mild irregularity of the posterior leaflet; consistent with myxomatous degeneration
- Septal valve is short and appears tethered to the chordae tendinae. The posterior wall is thicker, moderately hyperechoic, and has the appearance of a “string of pearls”, i.e. endocarditis cannot be excluded.
- No prolapse.
- Mild tricuspid regurgitation.
- Paradoxical motion of the right ventricular free wall causing asymmetrical flattening of the interventricular septum
- No right ventricular or atrial enlargement.

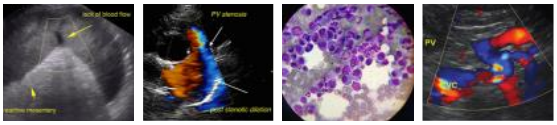
Pulmonic valve

- No abnormalities
- No pulmonary insufficiency.
- Main pulmonary artery within normal limits.
- Pulmonary artery - bifurcation, no abnormalities.
- Pulmonary artery: aortic ratio: 0.83 (WNL)

Other

- No signs of pericardial or pleural effusion
- No evidence of pulmonary edema.
- No obvious signs of a mass.

ULTRASONOGRAPHIC FINDINGS



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- Myxomatous degeneration of the mitral (moderate) and tricuspid (very mild) valves, ACVIM stage B2, with mild left atrial enlargement. The left ventricle is at the high end of the normal reference range.
- A very mild form of tricuspid valve dysplasia cannot be excluded
- Possible endocarditis of the tricuspid valve
- Paradoxical motion of the right ventricular free wall causing asymmetrical flattening of the interventricular septum, without signs of right ventricular enlargement or increased pressure based on measurements obtained.
- Although Xylo's results only meet some of the criteria of the EPIC study, the administration of pimobendan (Vetmedin) is recommended to help slow the progression of Xyro's heart disease and improve the contractility of his heart.
- An evaluation of his temperature at home (even if axillary) is recommended twice a day for a few days to exclude a fever, as well as a urine culture to exclude an underlying urinary tract infection or pyelonephritis as a source of endocarditis.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Suggestions/recommendations include:

- Evaluation of arterial blood pressure; this may not be possible due to his demeanour
- 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.
- Monitoring of the resting (sleeping) respiratory rate (RRR) is highly recommended 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.
- Other clinical signs clients should monitor for 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.
- Mild salt restriction is suggested (less than 0.9 grams/1000 kcal of food). Monitor salt content in treats.
- Omega-3 fatty acids may be helpful (EPA = 40 mg/kg/day and DHA = 25 mg/kg/day); gradual uptitration of the dose is suggested to decrease risk of gastrointestinal effects. However, *they should not be introduced at the same time as pimobendan*.
- Monitoring for progression of heart disease with a re-evaluation of an echocardiogram every

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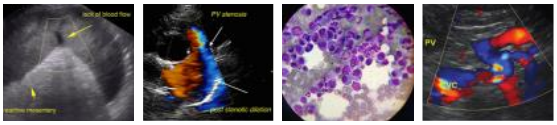

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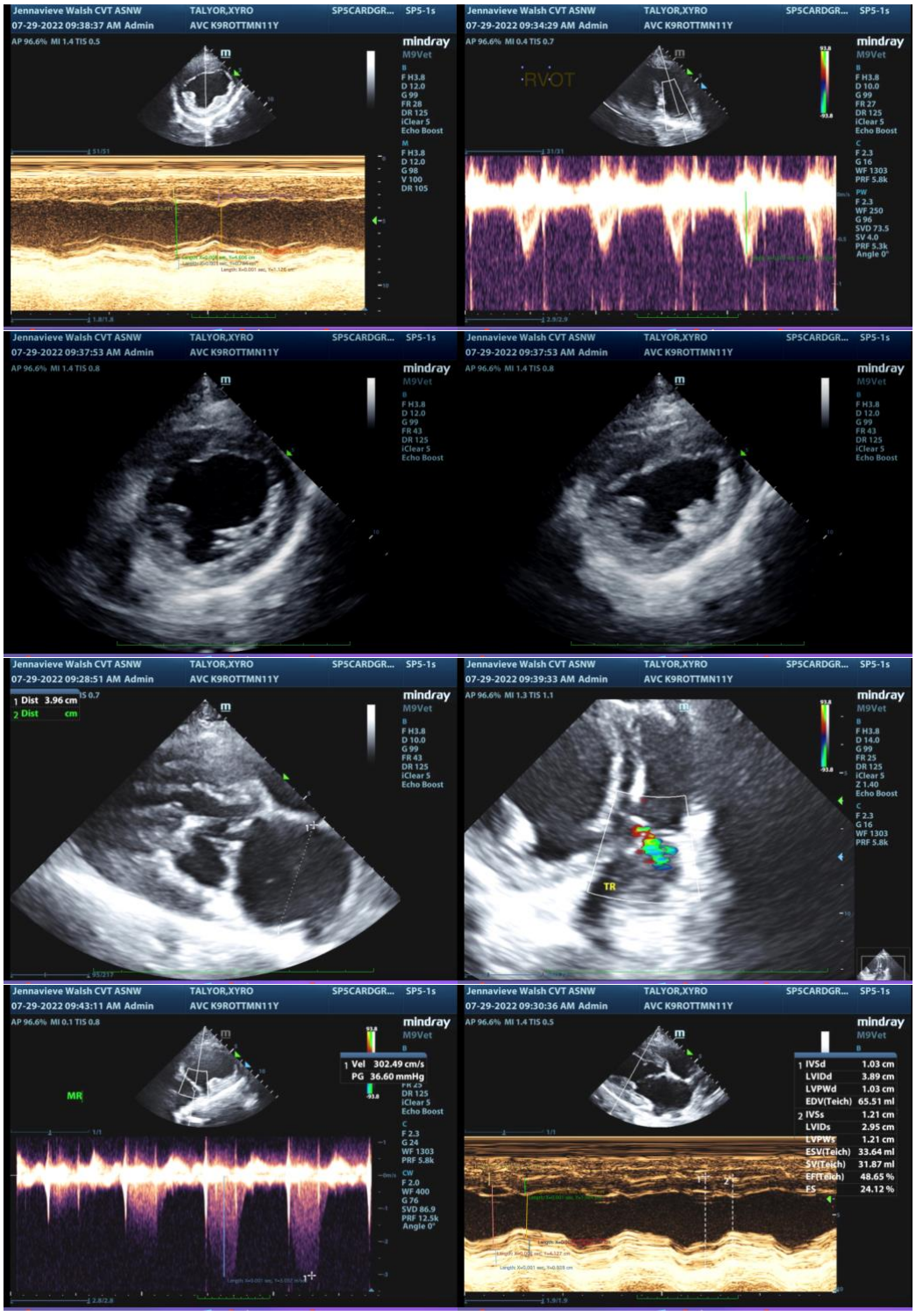
6 to 8 months, or sooner if clinical signs develop, is recommended.



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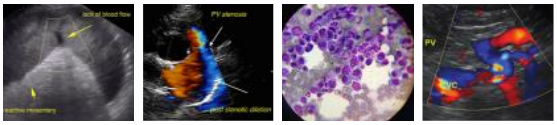

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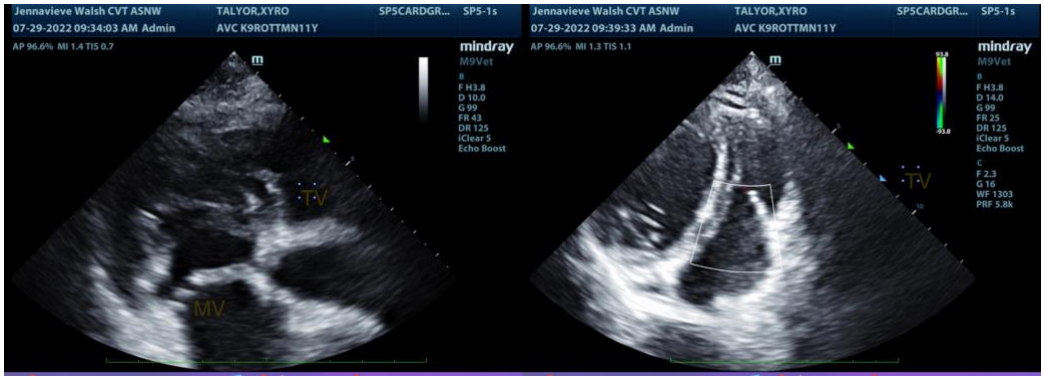

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

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