



**PATIENT PRESENTING CLINICAL SIGNS**

**Machi Lee** prev diagnosis of PLE, more recent recurrent diarrhea that has been hard to manage. Follow up echo-changes seen previously

**SPECIES** med: vit B12, prednisolone 1.25mg SID, fortekor 1.25mg SID, clopidogrel 18.75mg SID, optixcare

**Canine** Abnormal PE/Chem/CBC/UA Results: Please see attached labs

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN AND HEART**

**BREED**

Maltese

**SEX**

FS

**AGE**

13yr

**WEIGHT**

4.1kg

| 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                   | 5.0           |               |                     | 2.0                     | 49.5                            | 82.3                                     | 0.21                                     |
| 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                   | 160           | 1.3           | 0.9                 |                         | 3.3                             | 3.0                                      |  |

**INTERPRETED BY**

R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

**IMAGING PERFORMED BY**

Kelly Reschny

**HOSPITAL NAME**

East Credit VH

**REFERRING VET**

Dr. Webster

**INVOICE**

12453ag

**DATE**

12/16/2022

**Cardiac Presentation**

The echocardiogram for this patient presented excessive left atrial size expressed both in the LA/AO and LA max measurements. Subtle deviation of the interatrial septum towards the right atrium suggestive of mild increased left atrial pressure was noted. The cranial and caudal mitral valve leaflets presented moderate thickening consistent with endocardiosis. Doppler indicated measurable moderate eccentric insufficiency. The left ventricle presented thicknesses with linear contour and increased left ventricle volume. 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 valvular assessment demonstrated adequate linear morphology. No significant TR on Doppler. 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.

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or



|  |  |
|--|--|
| <b>PATIENT</b>   | sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.   |
| Machi Lee  |  |
| <b>SPECIES</b>   | Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and moderate loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 3.7 cm in length. The right kidney measured 4.1 cm in length  |
| Canine   |  |
| <b>BREED</b>   | The area of the aortic trifurcation was free of pathology.   |
| Maltese  |  |
| <b>SEX</b>   | <b>Adrenal Glands</b>  |
| FS   | The bilateral adrenal glands exhibited mild subjective subnormal size likely owing to current prednisolone therapy. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 1.6 cm length and 0.33 cm width in the caudal pole. The right adrenal gland measured 1.6 cm length and 0.40 cm width in the caudal pole.   |
| <b>AGE</b>   | <b>Spleen</b>  |
| 13yr   | The spleen exhibited primarily finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Solitary, well-defined, symmetrical, hyperechoic nodule was present measuring 0.82 cm. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory or neoplastic changes were not noted. The hyperechoic nodules tend to trend benign and are most consistent with benign hyperplasia or myelolipomas. |
| <b>WEIGHT</b>  |  |
| 4.1kg  |  |
| <b>INTERPRETED BY</b>                                    | <b>Liver</b>   |
| R. McKenzie Daniel,<br>DVM, DABVP<br>(Canine and Feline) | The liver presented enlarged in size. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with primarily anechoic luminal content and moderate non-dependent mildly congealed debris. The cystic and common bile ducts were normal. |
| <b>IMAGING PERFORMED BY</b>                              | <b>Gastrointestinal</b>  |
| Kelly Reschny  | The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained mild ingesta/chyme with no signs of ileus, obstruction or foreign material.  |
| <b>HOSPITAL NAME</b>                                     | The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. Subtle generalized prominent mucosa was present along with segmental mild jejunal mucosal speckling. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material.  |
| East Credit VH   |  |
| <b>REFERRING VET</b>                                     | Normal visible colon wall layers were present with apparent formed feces in lumen.   |
| Dr. Webster  |  |
| <b>INVOICE</b>   | <b>Pancreas</b>  |
| 12453ag  | The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum, likely consistent with age related changes and considered incidental. No signs of active inflammation or neoplasia.   |
| <b>DATE</b>  | <b>Free Abdomen</b>  |
| 12/16/2022   | No omental masses, overt lymphadenopathy or peritoneal effusion was present.   |



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**ULTRASONOGRAPHIC FINDINGS**

- Chronic mitral disease (ACVIM B2)
- Intact GI walls exhibiting mild jejunal mucosa speckling/fogging
- Gallbladder debris (non-mucocele)
- Splenic nodule-consistent with benign myelolipoma
- Bilateral chronic renal changes

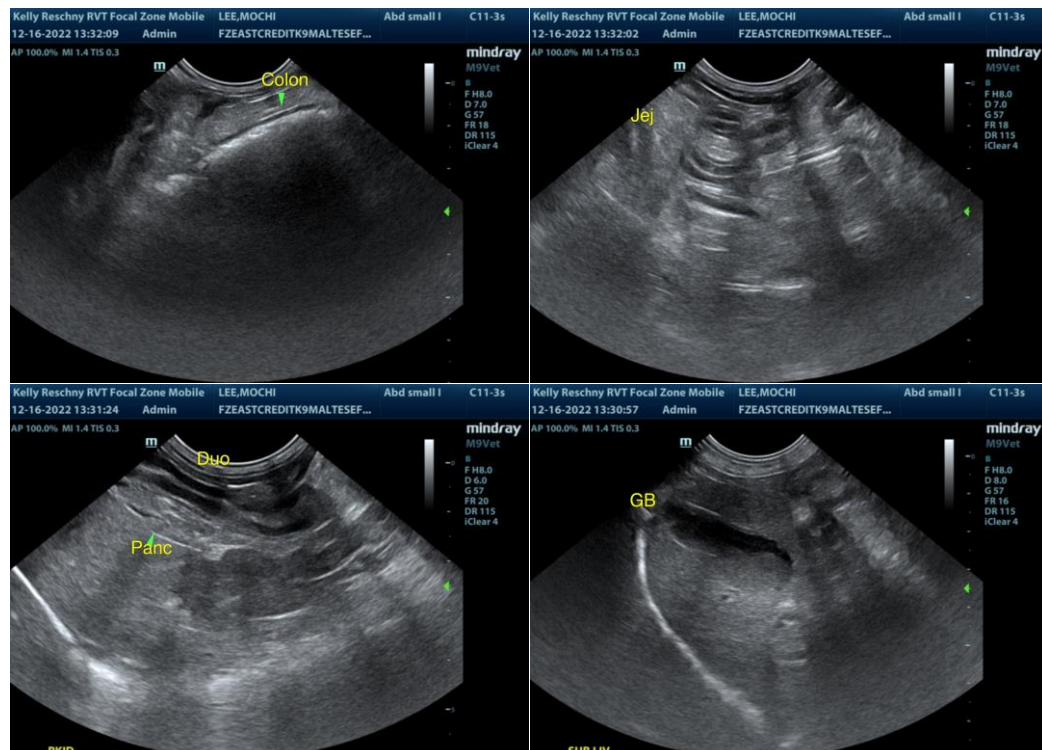
**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

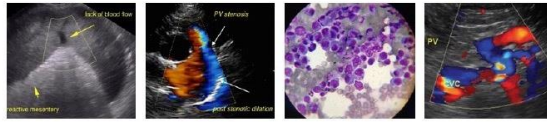
Given no reported clinical signs in this patient, the heart appears to be compensated yet risk of complication owing to left heart volume overload remains elevated. If not currently instituted, Pimobendan 0.3 mg/kg PO BID is warranted if tolerated. Baseline monitoring of resting respiration rate and serial sonograph monitoring required for further prognosis. Recheck echocardiogram recommended in 6 months, sooner if clinical signs arise.

The small intestinal presentation is suggestive of previous diagnosis of PLE. A hydrolyzed diet trial and high colony count probiotic may prove beneficial. Broad spectrum deworming suggested even if fecal testing is negative.

For an additional charge, internal medicine consult can be utilized through Sonopath.com. You can select the internal medicine drop down at <http://spa.sonopath.com/>.

One of the world's top internists & SonoPath associate Dr. Remo Lobetti BVSc, MMedVet, PhD, DECVIM can evaluate your case through SonoPath. <https://sonopath.com/resources/sonopath-services/internal-medicine-teleconsultation-services>





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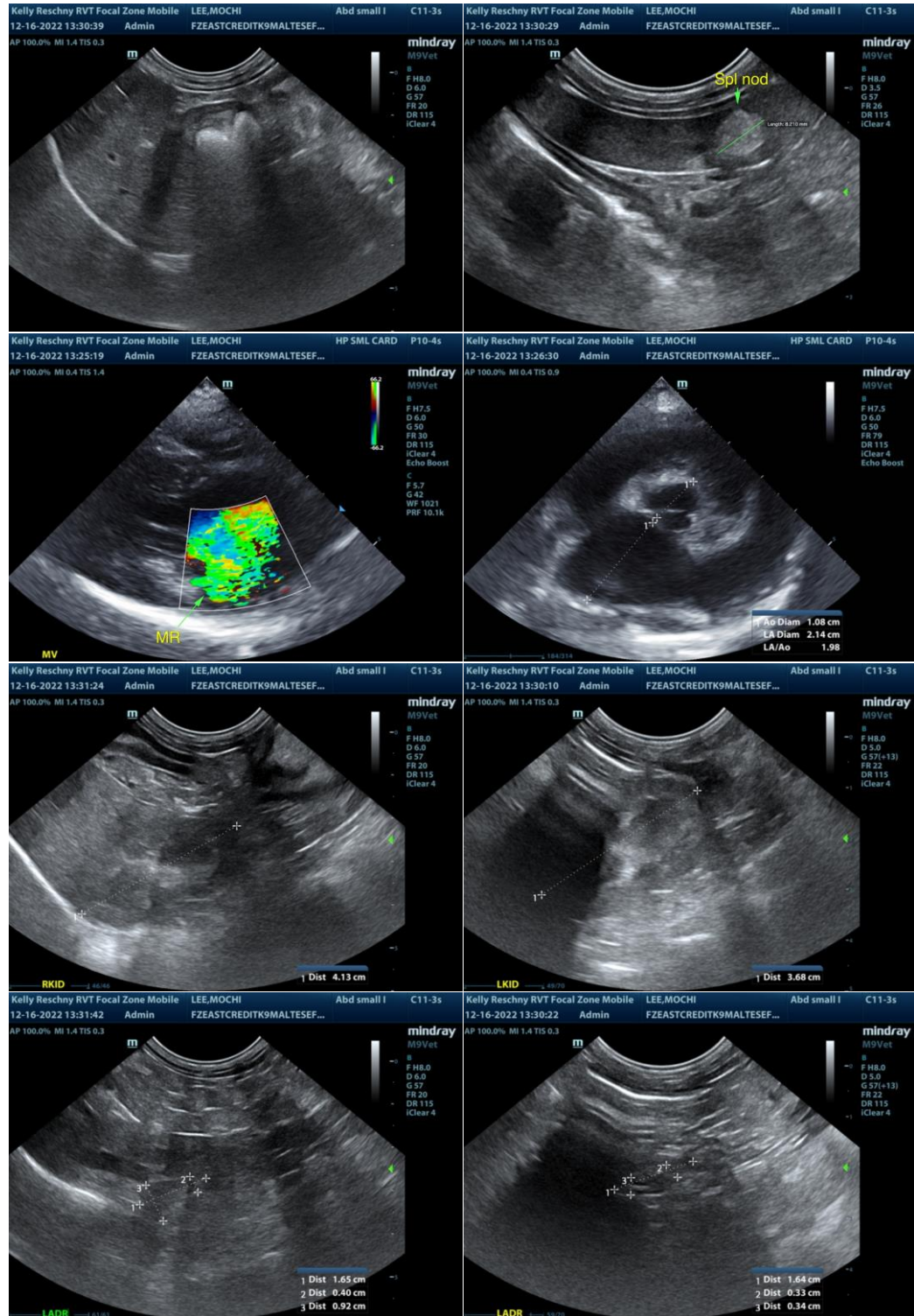
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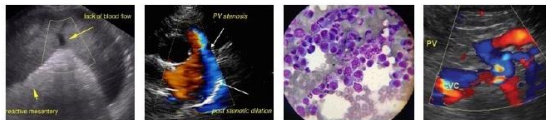
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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



**PATIENT**

can be of any further assistance please contact me.

Machi Lee

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

info@SonoPath.com

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