



**PATIENT PRESENTING CLINICAL SIGNS**

Baby Mercs

History: Coughing, cardiac murmur, hepatomegaly Energy level has been pretty good, still go for a good length of leash walk daily. One day seemed lethargic. Has always had a bit of a cough but not gagging lots every day- this started a few weeks ago. Barks like a sea lion, esp after she gets up.  
Abnormal PE/Chem/CBC/UA Results: Grade 3/6 holosystolic cardiac murmur, PMI left hemithorax  
Xrays: 1. Development of left-sided cardiomegaly likely due to valvular endocardiosis. There is no evidence of heart failure at this time. 2. Collapse of the ventrally placed left mainstem bronchus. 3. Even though evidence of a tracheal cough is not detected on this study, given the widening of the trachea on one of the lateral views, tracheal flaccidity is present and the possibility of an intermittent tracheal collapse cannot be ruled out. 4. Static moderate hepatomegaly. This is likely secondary to endocrinopathies, fatty infiltrates or nonspecific hepatopathy. 5. Otherwise unremarkable abdomen. 6. Intervertebral disc disease at C3-C4 and C6-C7. CBC wnl. Chem: ALT 149 (N 10-125), ALKP 908 (N 23-212)

**SPECIES**

Canine

**BREED**

Maltese

**SEX**

Female, spayed

**AGE**

9 Yrs. 11 months

**WEIGHT**

7.21 kg.

**INTERPRETED BY**

Andrea Nicastro, DVM,  
Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

*Urinary System*

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended. A small amount of suspended echogenic debris is observed within the lumen. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

The left kidney is normal in size (4.31 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. There is mild to moderate loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. Trace pyelectasia is present. There is no evidence of infarcts or hydronephrosis. Renal vasculature is normal.

The right kidney is normal size (4.38 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. There is mild to moderate loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. Trace pyelectasia is present. There is no evidence of infarcts or hydronephrosis. Renal vasculature is normal.

*Adrenal Glands*

The left adrenal gland is normal size (0.39 cm at cranial pole) (0.53 cm at caudal pole) (2.08 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is borderline enlarged (0.62 cm at cranial pole) (0.55 cm at caudal pole) (1.81 cm in length) with a relatively normal shape. A 0.58 x 0.44 cm hyperechoic nodule is observed approximately mid-gland. In the remainder of the gland, glandular echogenicity and detail are unremarkable. The phrenicoabdominal vein and surrounding vasculature are normal.

**IMAGING PERFORMED BY**

Dr. Barnes

**HOSPITAL NAME**

Westview VH

**REFERRING VET**

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*Spleen*

The spleen is normal in size (1.13 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

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*Liver*

The liver is subjectively enlarged with slightly swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and diffusely homogeneous in appearance. No distinct focal lesions are

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observed. Vascular and biliary tracts are of normal volume with no evidence of congestion. The portal vein: caudal vena cava ratio is approximately 1:1. The gallbladder is of normal contours and contains some dependent echogenic debris. The wall is normal in thickness. No choleliths are observed. The cystic and common bile ducts are normal.

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Canine

**Gastrointestinal**

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is minimally fluid distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive disease is noted.

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**Pancreas**

**SEX**

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The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

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**Free Abdomen**

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

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**ULTRASONOGRAPHIC FINDINGS**

**Primary Findings:**

- Non-specific diffuse hepatopathy, likely benign in nature. Vacuolar hepatopathy (i.e., idiopathic, endocrine) is the top differential. Inflammatory disease is possible but considered less likely given the liver enzyme pattern. Infiltrative neoplasia (i.e., lymphoma) is also possible but considered less likely given the sonographic appearance of the liver.
- The right adrenal nodule trends toward the benign (i.e., nodular hyperplasia). However, an emerging tumor (i.e., adenoma, adenocarcinoma, pheochromocytoma) cannot be completely excluded.

**Secondary Findings:**

- Bilateral, chronic nephropathy with dystrophic mineralization and trace pyelectasia.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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- A urinalysis is recommended to evaluate for isosthenuria, if not already performed.
- Consider testing for hyperadrenocorticism with a low-dose dexamethasone suppression test or ACTH stimulation test if clinical signs (i.e., PU/PD) develop.
- Serial monitoring (i.e., every 3-4 months) of the patient's liver values is recommended. If liver values continue to increase, a repeat abdominal ultrasound +/- hepatic tissue sampling may be warranted.

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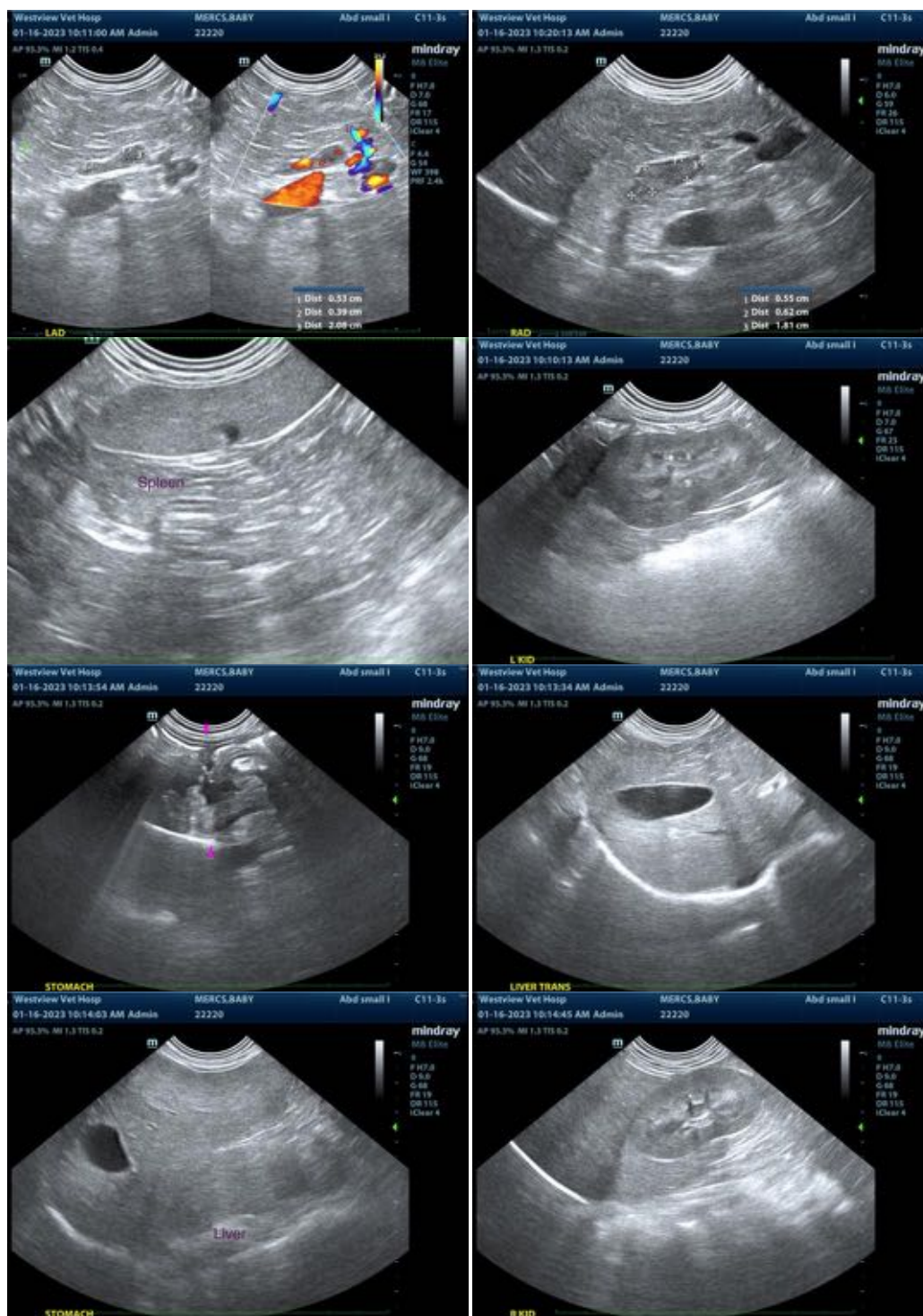
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.



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