



**PATIENT**

Maddie Wilson

**PRESENTING CLINICAL SIGNS**

History: No clinical signs  
Abnormal PE/Chem/CBC/UA Results: elevated ALKP and ALT

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

*Urinary System*

**BREED**

Pit bull mix

The urinary bladder and visible portion of the pelvic urethra are normal for the degree of luminal distension. The urine is anechoic with no evidence of debris. Cystic calculi and discrete masses are not observed. The region of the trigone and the proximal urethra, visible to a depth of 2-3 cm, are normal.

**SEX**

Female, spayed

The left kidney is normal in size (6.25 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

**AGE**

11 Yrs.

The right kidney is normal size (6.68 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. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

**WEIGHT**

69.4 lbs.

*Adrenal Glands*

The left adrenal gland is normal size (0.62 cm at cranial pole) (0.76 cm at caudal pole) (3.02 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.

**INTERPRETED BY**

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

The right adrenal gland is enlarged (1.75 cm at cranial pole) (1.22 cm at caudal pole) (2.86 cm in length) with an irregular shape. The parenchyma is heterogeneous with loss of glandular detail. A 0.25 cm hyperechoic to mineralized focus is observed in the cranial to mid aspect. Surrounding vasculature appears normal.

*Spleen*

**IMAGING  
PERFORMED BY**

Diane McFadden,  
RVT

The spleen measures 1.61 cm in width at the level of the hilus. A 1.94 x 1.3 cm hyperechoic multi-septated cystic nodule/mass is observed at the caudomedial aspect. The lesion causes slight capsular expansion. In the remainder of the spleen, the margins are curvilinear and the parenchyma is homogeneous. Splenic vasculature is normal with no evidence of thrombosis.

**HOSPITAL NAME**

Wantage VH

*Liver*

The liver is subjectively prominent in size with normal curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and exhibits mild heterogeneity. No distinct focal lesions are observed. Hepatic vasculature and biliary tracts are of normal volume with no evidence of congestion. 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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Dr. Bullock

*Gastrointestinal*

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The gastric lumen is mildly distended with ingesta. A 0.56 cm hyperechoic shadowing structure is observed in the pyloric antral lumen. The pyloric outflow tract is otherwise patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and

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appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. The lumen of the descending colon contains shadowing fecal material. No obstructive disease is noted.

**Pancreas**

**SPECIES**

Canine

The right limb of the pancreas is normal in size with normal curvilinear peripheral contours. The parenchyma is largely isoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

**BREED**

Pit bull mix

**Free Abdomen**

**SEX**

Female, spayed

**Other**

A brief echocardiogram reveals no evidence of pericardial effusion or obvious right atrial/auricular mass.

**AGE**

11 Yrs.

**ULTRASONOGRAPHIC FINDINGS**

**WEIGHT**

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**Primary Findings:**

- Cystic splenic nodule/mass. Differentials include neoplasia (i.e., sarcoma, round cell tumor) vs a benign lesion.
- Diffuse hepatopathy. Differentials depend on the liver enzyme pattern. If the ALT is substantially elevated, inflammatory disease, hepatotoxicosis (i.e., copper) and fibrosis would be the top differentials. If the ALP is the predominant elevation, a more benign process (i.e., regenerative nodular hyperplasia and/or vacuolar hepatopathy) would be the most likely differentials.
- The right adrenal changes could be consistent with hyperplastic change. Alternatively, an emerging tumor is possible.

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Medicine)

**Secondary Findings:**

- Age-related pancreatic remodeling.
- The shadowing structure within the pyloric antral lumen may represent a pill (if recently administered) or small non-obstructive foreign material.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- Given the splenic lesion, three-view thoracic radiographs are recommended to assess for pulmonary metastases.
- If an aggressive approach is desired and there is no evidence of pulmonary metastatic lesions, consider a splenectomy with submission of the spleen for histopathology along with a liver biopsy, bile cultures +/- copper quantitation on the liver tissue samples.

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- If a more conservative approach is desired, consider a repeat ultrasound of the spleen in 4 weeks to assess for progression along with hepatic antioxidants +/- a course of broad-spectrum antibiotics as empirical treatment for bacterial cholangiohepatitis.
- Other considerations include pre and post prandial serum bile acids and Leptospirosis testing.

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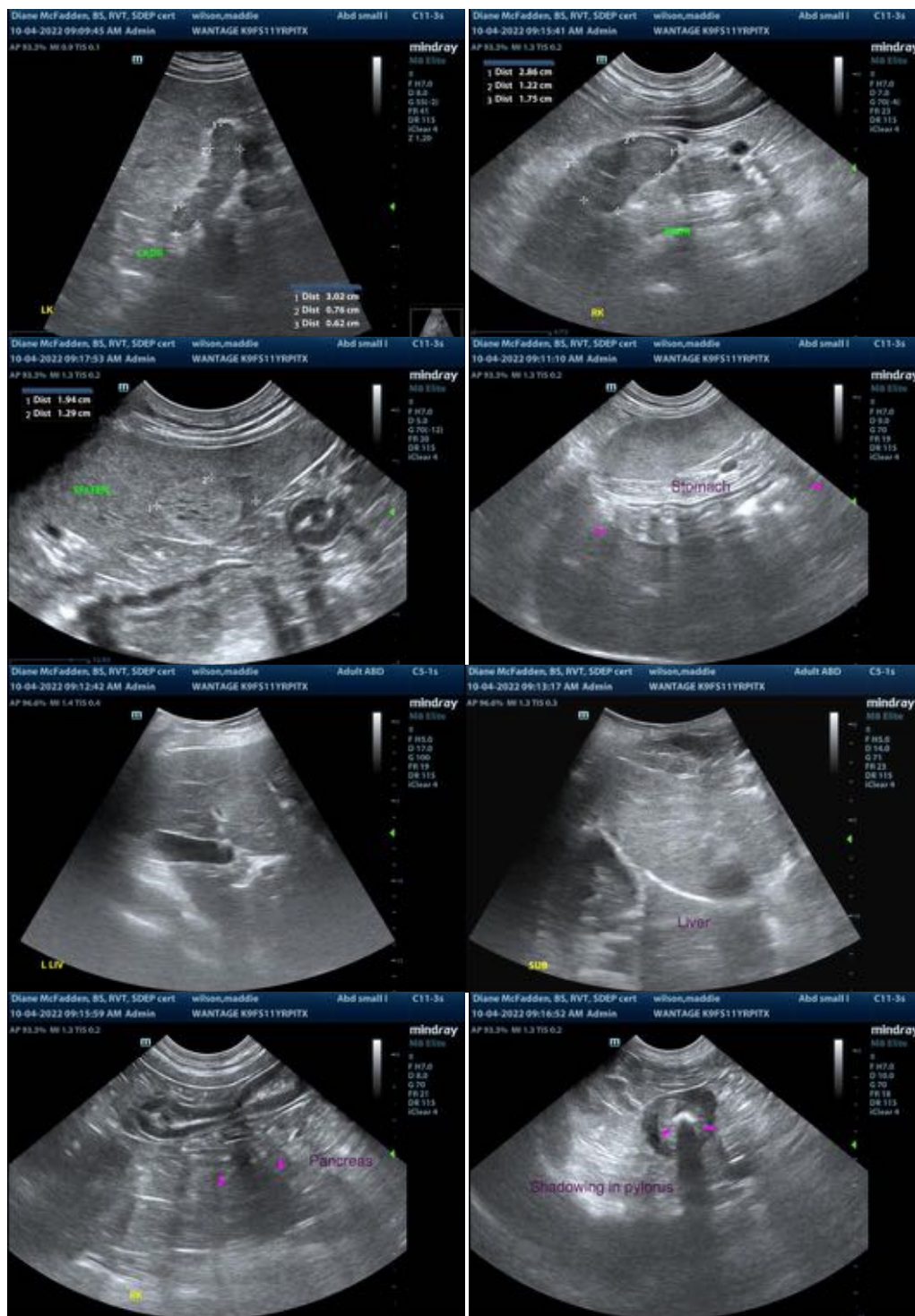
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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