

**PATIENT PRESENTING CLINICAL SIGNS**

Frank Schiciano History: elevated liver values on pre-dental bloodwork: ALP 1048. ALT 208.  
August 22: ALP 879. ALT 75.

**SPECIES**

Canine

Last year had gall bladder sludge and was put on Ursodiol and Denamarin (no longer on these medications). Last year, also had a low-dose dexamethasone suppression test that was not consistent with Cushing's disease. Currently asymptomatic.

**BREED**

Maltese

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

**SEX**

Neutered Male

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder is moderately distended. A scant amount of suspended echogenic debris is observed within the lumen. No cystic calculi are observed. The region of the trigone and visible portion of the proximal urethra are normal.

**AGE**

8 yr

The prostate is normal in size (0.85 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

**WEIGHT**

13.4 lb

The left kidney is normal in size (3.78 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. The cortex is isoechoic relative to the spleen. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. Pinpoint focus of mineralization are visualized. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

**INTERPRETED BY**

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

The right kidney is normal in size (4.22 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. The cortex is isoechoic relative to the spleen. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. Pinpoint focus of mineralization are visualized. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

**IMAGING PERFORMED BY**

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**Adrenal Glands**

The left adrenal gland is normal in size (0.45 cm at cranial pole) (0.48 cm at caudal pole) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature appear normal.

**HOSPITAL NAME**

Salt Marsh AH

The right adrenal gland is in normal size (0.49 cm at cranial pole) (0.44 cm at caudal pole) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature appear normal.

**REFERRING VET**

Dr. Thompson

**Spleen**

**INVOICE**

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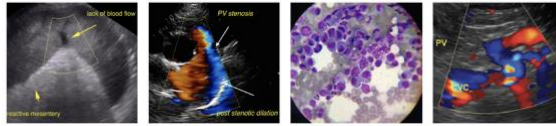
The spleen is normal in size (0.75 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature appears normal.

**DATE**

8.15.23

**Liver**

The liver is subjectively enlarged with swollen peripheral contours. The parenchyma is isoechoic relative to the spleen. A few, small, ill-defined hypoechoic nodules are visualized (the largest measuring 0.98 cm in its longest dimension). One-to-two ill-defined hyperechoic foci are also seen. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion. The portal vein to caudal vena cava ratio is approximately 1: 1.



**PATIENT**

Frank Schiciano

The gall bladder lumen is moderately distended. The wall is thin and smooth. A small-to-moderate amount of aggregated, echogenic, gravity-dependent debris/sludge is observed within the lumen. The cystic and common bile ducts are normal/not seen.

**SPECIES**

Canine

**Gastrointestinal**

The gastric lumen is not distended. The gastric wall in the region of the fundus is normal to borderline thickened (up to 0.57 cm) with retention of the normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall is normal in thickness with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The ileocecolic junction and colonic wall are normal. There is no evidence of an obstructive pattern.

**BREED**

Maltese

**SEX**

Neutered Male

**Pancreas**

The base and limbs of the pancreas are visible 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.

**AGE**

8 yr

**Free Abdomen**

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

**WEIGHT**

13.4 lb

**Other**

A 0.76 x 0.53 cm irregular hyperechoic nodule is observed in the cranial abdomen, adjacent to the pyloric outflow tract.

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

**ULTRASONOGRAPHIC FINDINGS**

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**Primary Findings**

- The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, regenerative nodular hyperplasia, and/or age-related remodeling. Inflammatory and infiltrative disease are considered less likely.
- Gall bladder debris/sludge, non-mucocele
- The borderline gastric wall thickening may be a normal variant for this patient or may be secondary to mild inflammation, hypertrophy, or less likely, emerging neoplasia. Correlation with the patient's clinical history is recommended.

**HOSPITAL NAME**

Salt Marsh AH

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**Secondary Findings**

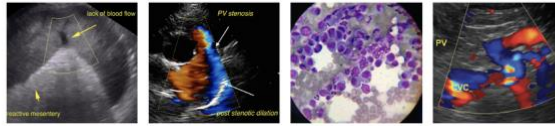
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- Mild bilateral chronic renal changes with subtle nonobstructive nephrocalcinosis
- The origin of the hyperechoic nodule in the cranial abdomen is unclear. It may be arising from mesentery, pancreas, liver, other. Given its appearance, a benign process (i.e., granuloma, inflammatory focus) is favored over a neoplastic lesion.
- Minor, age-related pancreatic remodeling



**PATIENT INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Frank Schiciano

- Serial monitoring (i.e., every 3-4 months) of the patient's liver values is recommended. If values continue to increase, a repeat abdomen ultrasound +/- a more advanced hepatic work-up (i.e., tissue sampling) may be warranted.

**SPECIES**

Canine

- Consider testing for hyperadrenocorticism with a low-dose dexamethasone suppression test or ACTH stimulation test if clinical signs (i.e., PU/PD) develop in the future.

**BREED**

Maltese

- If the patient is to undergo anesthesia, consider avoiding benzodiazepines and using opioids judiciously due to the liver enzyme elevations.

**SEX**

Neutered Male

**AGE**

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**WEIGHT**

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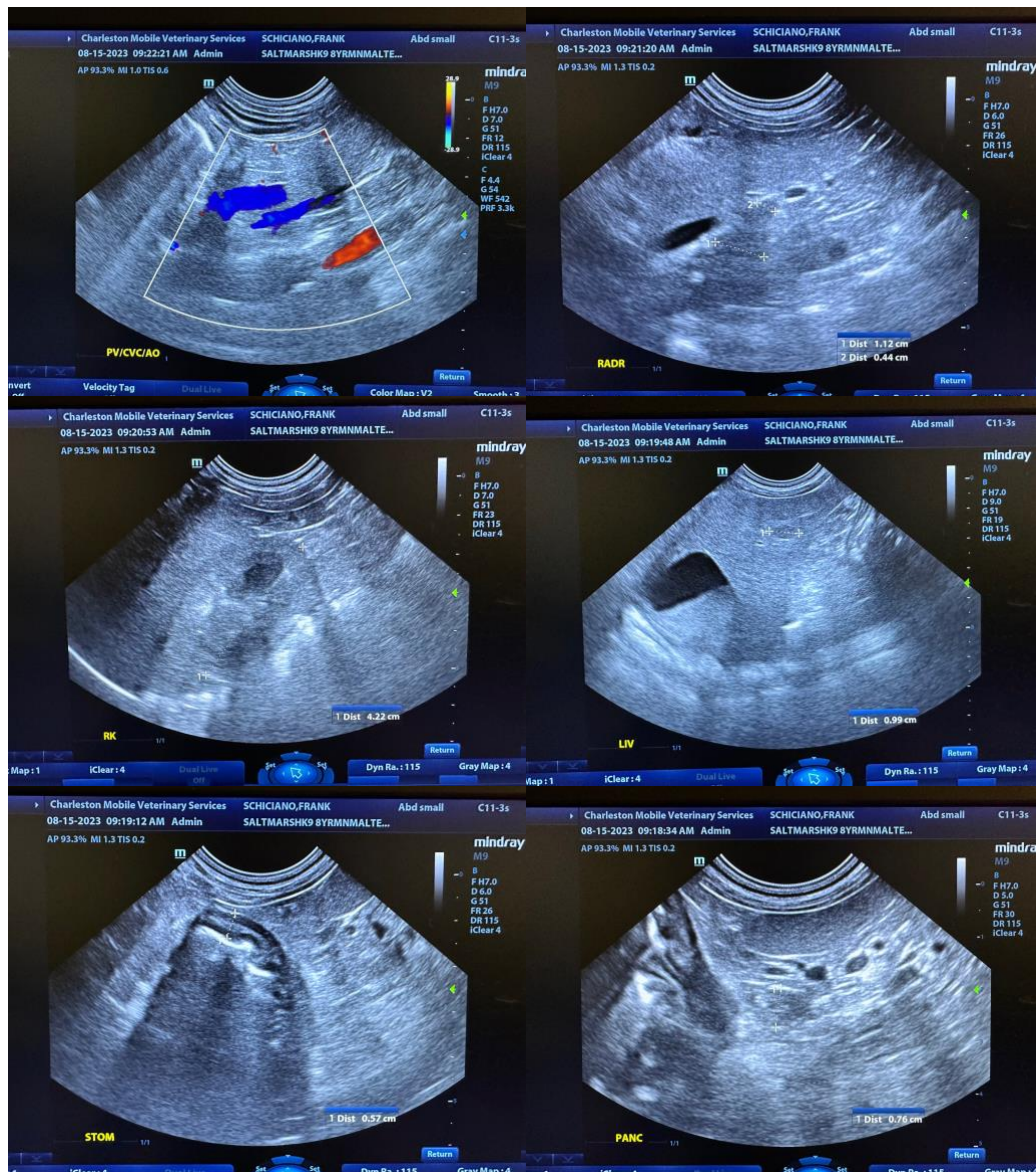
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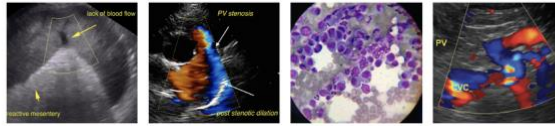
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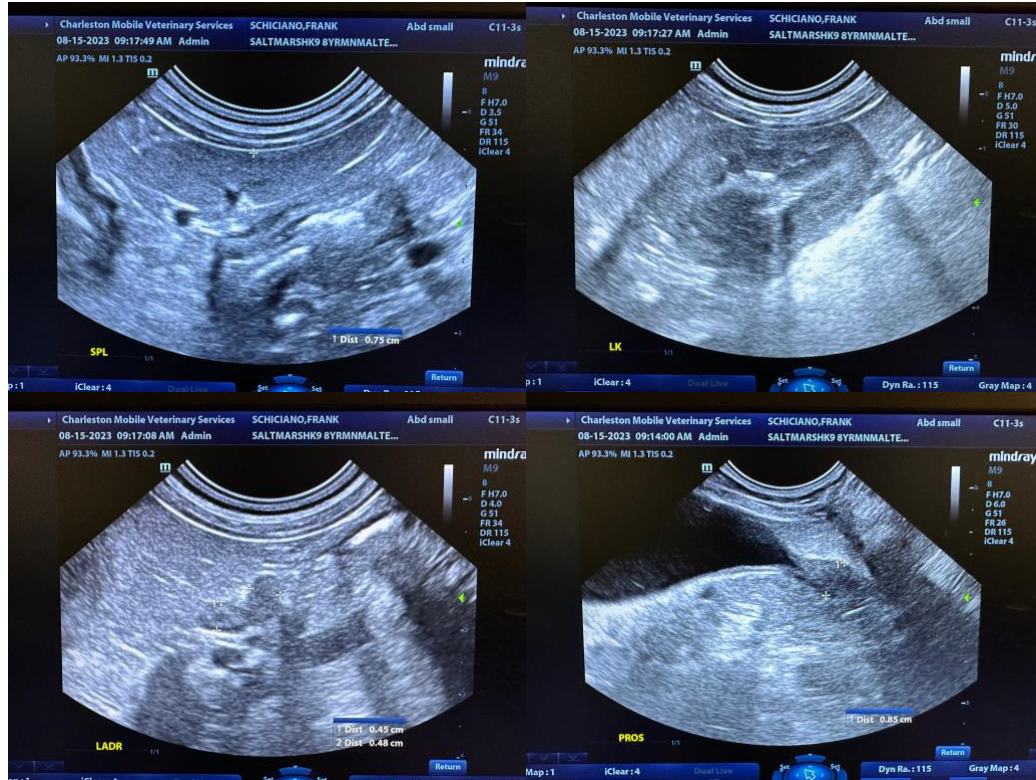
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

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