

**PATIENT**

Taco Andrews

**SPECIES**

Canine

**BREED**

Daschund

**SEX**

Male, neutered

**AGE**

6/6/2015

**WEIGHT**

25.6 lbs.

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

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

**HOSPITAL NAME**

Southside AH

**REFERRING VET**

Dr. Carroll

**INVOICE**

13394

**DATE**

12/2/25

**PRESENTING CLINICAL SIGNS**

Elevated liver values  
Poss suspicious liver  
Hx of splenectomy last year. ALT 531, ALP 556, GGT 26

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is mildly distended with anechoic urine. The wall is of appropriate thickness for the level of repletion. The mucosal surface is slightly irregular. No cystic calculi are observed. The region of the trigone and the proximal urethra, visible to a depth of 3 cm, are normal.

The prostate is mildly enlarged (1.31 cm in width) with smooth peripheral contours. The parenchyma is subtly heterogeneous in appearance. No distinct focal lesions are observed. The prostatic urethra is not overtly dilated.

The left kidney is normal in size (5.79 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. A 0.54 cm cortical cyst is seen. A few small non-obstructive mineralized foci are visualized. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal in size (5.61 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. Several small non-obstructive mineralized foci are visualized. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

**Adrenal Glands**

The left adrenal gland is enlarged (0.86 cm at cranial pole) (1.28 cm at caudal pole) with an irregular shape. The parenchyma is heterogeneous with loss of glandular detail. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is enlarged (1.51 cm at cranial pole) (0.62 cm at caudal pole) with a swollen cranial pole. At the cranial aspect, a 1.38 x 1.33 cm hyperechoic to heterogeneous nodule is visualized. The glandular echogenicity and detail at the caudal pole are unremarkable. The phrenicoabdominal vein and surrounding vasculature are normal.

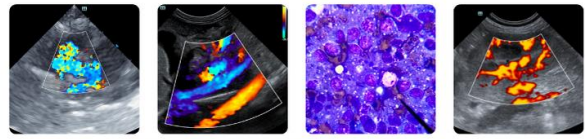
**Spleen**

The spleen is normal in size (SplAN 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.

**Liver**

The liver is subjectively enlarged with swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and subtly heterogeneous in appearance. A 2.87 x 1.93 cm ill-defined hypoechoic to heterogeneous macronodule is observed near the diaphragm. Vascular and biliary tracts are of normal volume with no evidence of congestion. The portal vein to caudal vena cava ratio is approximately 1:1.

The gall bladder lumen is moderately distended. The wall is thin and smooth. A moderate amount of aggregated, echogenic to mineralized, partially dependent sludge is observed within the lumen. A few small non-obstructive choleliths are also suspected. The cystic and common bile ducts are normal/not seen. The duodenal papilla is normal in size (0.27 cm in width).



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**Gastrointestinal**

The gastric lumen is mildly 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 is normal in thickness with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The ileoceocolic junction and colonic wall are normal. There is no obvious evidence of an obstructive pattern.

**Pancreas**

The right limb of the pancreas is 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.

**Lymph nodes**

The abdominal lymph nodes are normal/not visible.

**Free Abdomen**

The peritoneal cavity is normal. There is no evidence of inflammation or effusion.

**Other**

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

**ULTRASONOGRAPHIC FINDINGS**

**Primary Findings:**

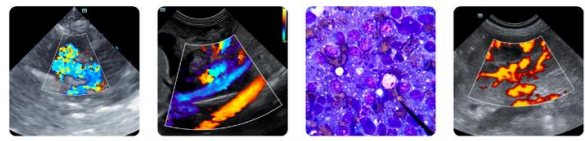
- The hepatic changes are nonspecific and could be secondary to inflammatory disease (i.e., cholangiohepatitis, chronic hepatitis), Leptospirosis, hepatotoxicosis, infiltrative neoplasia (i.e., lymphoma), vacuolar hepatopathy, regenerative nodular hyperplasia, other hepatopathy, or some combination thereof. The hepatic macronodule near the diaphragm could be consistent with a benign regenerative nodule, inflammatory focus, emerging tumor (i.e., adenoma, adenocarcinoma), other.
- The gallbladder changes are consistent with a developing mucocele with a few suspected non-obstructive choleliths.
- Bilateral adrenomegaly. The right adrenal nodule could be consistent with focal nodular hyperplasia, adenoma, emerging adenocarcinoma, pheochromocytoma, other.
- The mild prostatomegaly may be a normal variant for this patient or could be secondary to late-in-life neutering (if applicable), prostatitis or emerging neoplasia.

**Secondary Findings:**

- Bilateral non-obstructive nephrocalcinosis
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- Regarding the elevated liver values and sonographic hepatic changes:



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1. Consider Leptospirosis testing (i.e., blood and urine PCR, serology) particularly if clinical suspicion for disease is high.
2. Cytologic evaluation of the liver should be considered in this patient if clotting status is appropriate. A fine needle aspirate using a 25-gauge needle is recommended. If cytologic evaluation is inconclusive or if a more aggressive approach is desired, consider laparoscopic or surgical liver biopsies with aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for copper quantitation.
  - Regarding the adrenal changes, consider further testing for Cushing's disease (i.e., low-dose dexamethasone suppression test) particularly if the patient is exhibiting appropriate clinical signs. A baseline blood pressure measurement is also recommended along with a urinalysis +/- UPC (if proteinuria is present on the urine dipstick). A recheck ultrasound is also recommended in 2-3 months to assess for growth of the right adrenal nodule.
  - Given the gall bladder changes, Ursodeoxycholic acid (Ursodiol) is recommended. Serial sonographic monitoring (e.g., every 6-8 weeks) of the gall bladder is recommended to assess for progression to a fully formed mucocele. If progression occurs, a cholecystectomy may be warranted.
  - Given the mild prostatomegaly, consider a urine BRAF test to further evaluate for lower urinary tract neoplasia. A positive test confirms neoplasia, however a negative test does not rule out the possibility of cancer and further diagnostics (i.e., biopsies) may be necessary to get a definitive diagnosis.

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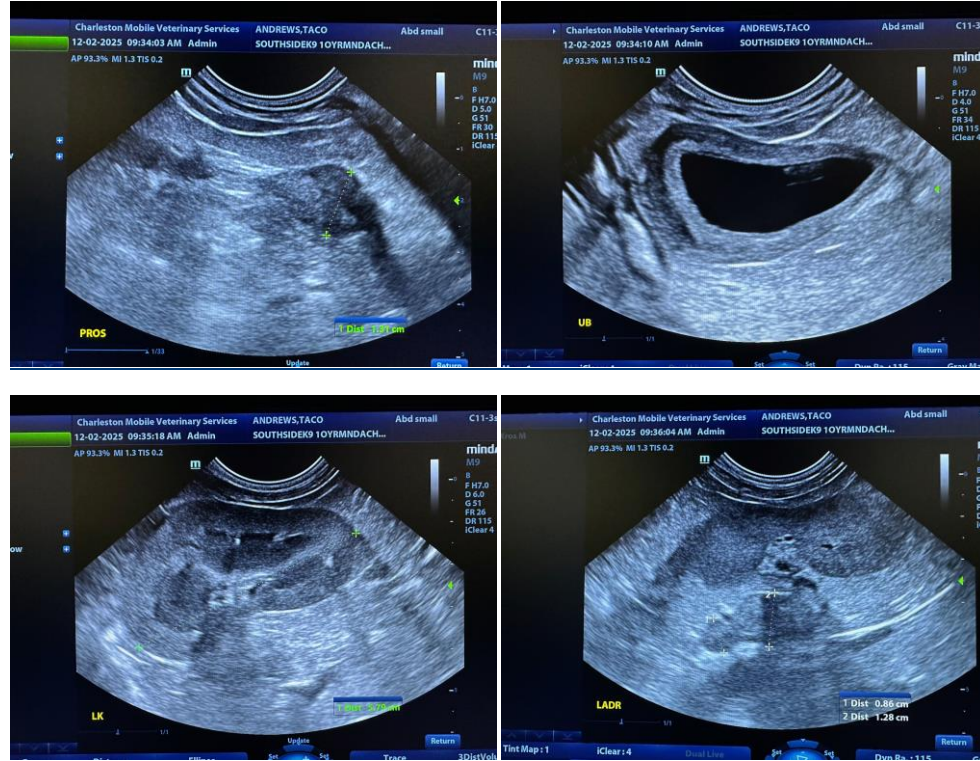
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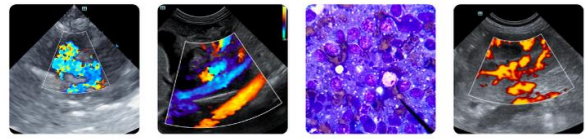
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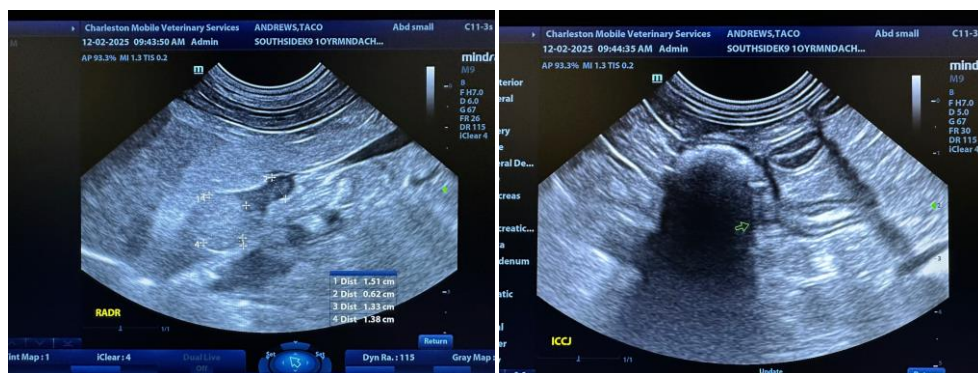
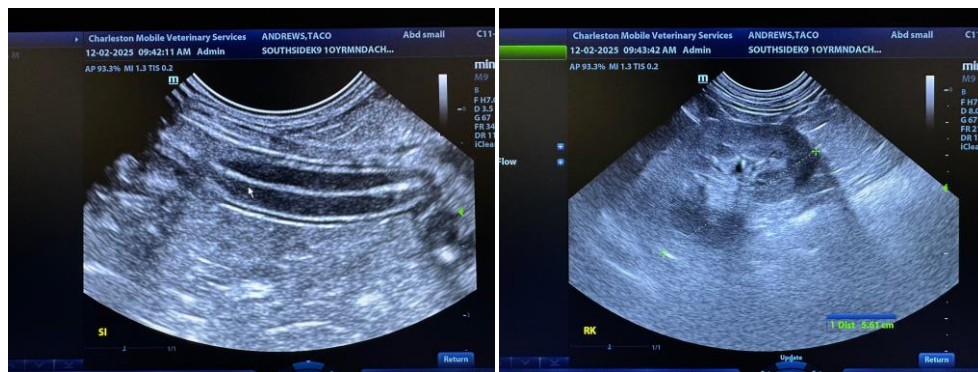
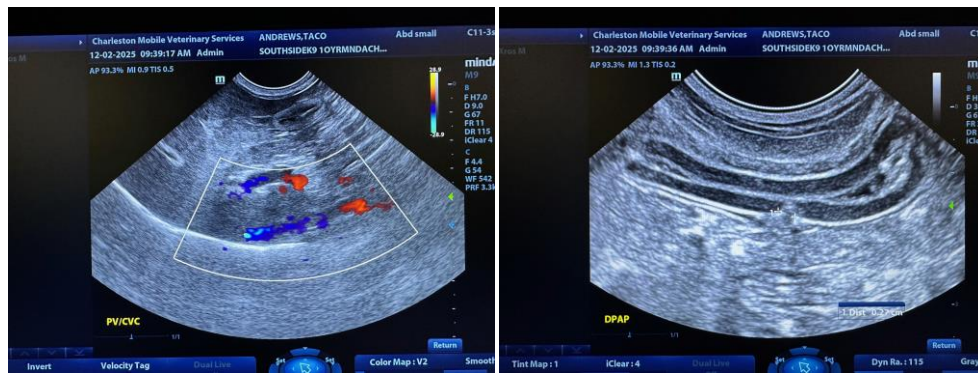
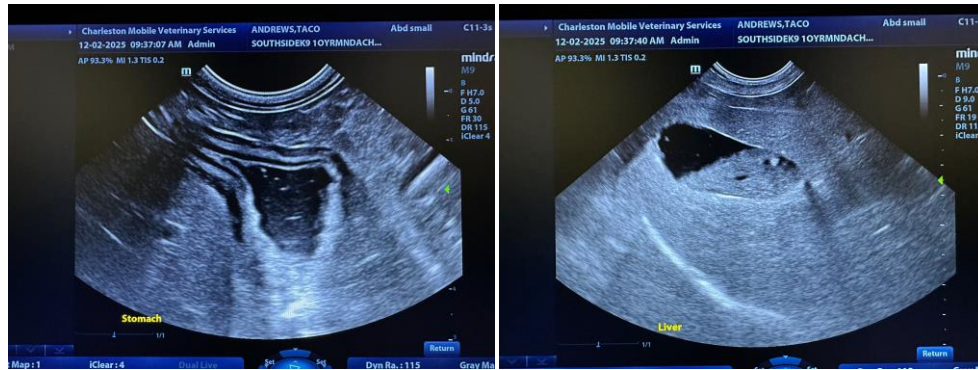
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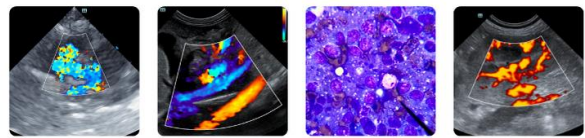
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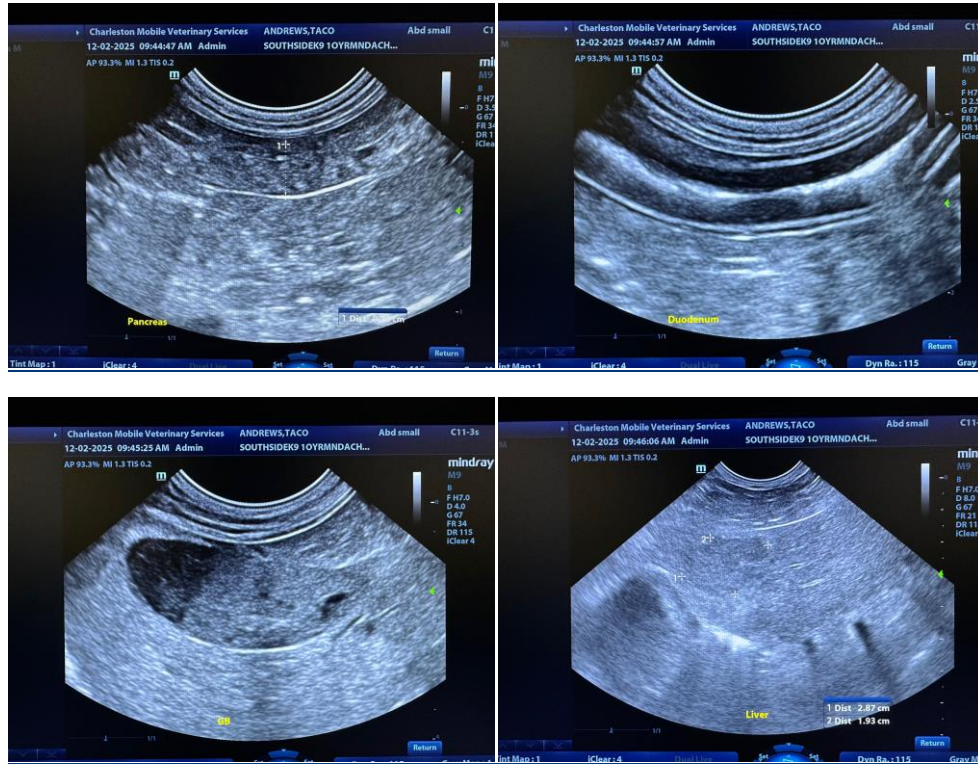
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Andrea Nicastro, MPH, DVM, Diplomate DACVIM (Small Animal Internal Medicine)  
[info@SonoPath.com](mailto:info@SonoPath.com)