



PATIENT PRESENTING CLINICAL SIGNS

Tillie Moy History: Hx of elevated liver enzymes
Abnormal PE/Chem/CBC/UA Results: Elevated liver enzymes.

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Canine *Urinary System*

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. 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.

BREED

Chihuahua mix

SEX

Female, spayed

The left kidney is normal size (5.20 cm in length); normal shape and architecture with smooth peripheral margins. The cortex is hyperechoic with several small cortical cysts and there is mild to moderate loss of corticomedullary distinction. Trace pyelectasia is present (0.19 cm in the transverse plane). There is no evidence of nephroliths, infarcts or hydronephrosis.

AGE

13 yrs.

The right kidney is normal size (4.60 cm in length); normal shape and architecture with smooth peripheral margins. The cortex is hyperechoic with several small cortical cysts and there is mild to moderate loss of corticomedullary distinction. Trace pyelectasia is present (0.20 cm in the transverse plane). There is no evidence of nephroliths, infarcts or hydronephrosis.

WEIGHT

14.8 lbs.

Adrenal Glands

The left adrenal gland is mildly enlarged (0.78 cm at cranial pole) (0.74 cm at caudal pole) (1.99 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 borderline enlarged (0.93 cm at cranial pole) (0.57 cm at caudal pole) (2.07 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.

IMAGING PERFORMED BY

Amy Mayhew

Spleen

The spleen is normal in size (1.35 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.

HOSPITAL NAME

Liver

SVS Imaging Michigan

The liver is subjectively enlarged with swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and diffusely mottled and heterogeneous in appearance with numerous, varying sized, ill-defined hypoechoic nodules/areas. A 0.43 cm cyst is observed on the left side. Vascular and biliary tracts are of normal volume with no evidence of congestion. The gall bladder lumen is moderately distended. The wall is thin and smooth. A small to moderate amount of aggregated echogenic partially dependent to suspended sludge is observed within the lumen. The cystic and common bile ducts are normal/not seen.

REFERRING VET

Rochester VH

INVOICE

14253

Gastrointestinal

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The

DATE

11/22/22



PATIENT

Tillie Moy

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.

SPECIES

Canine

Pancreas

The body and right limb 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.

BREED

Chihuahua mix

Free Abdomen

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

SEX

Female, spayed

AGE

13 yrs.

ULTRASONOGRAPHIC FINDINGS

Primary Findings:

- Diffuse hepatopathy. Differentials will depend on the liver enzyme pattern. If the ALP is disproportionately elevated relative to the ALT, regenerative nodular hyperplasia and/or vacuolar hepatopathy would be the top differentials. If the ALT is substantially elevated, inflammatory disease and hepatotoxicosis should be considered. Infiltrative neoplasia (i.e., lymphoma) is also a possibility and would certainly be of consideration if the patient is experiencing clinical signs.

WEIGHT

14.8 lbs.

Secondary Findings:

- Mild bilateral adrenomegaly.
- The bilateral renal changes are most consistent with chronic interstitial nephrosis/nephritis with cortical cysts. The trace pyelectasia may be secondary to age-related remodeling, pyelonephritis, PU/PD (if applicable) or some combination thereof.
- Gallbladder sludge, non-mucocele.
- Age-related pancreatic remodeling.

INTERPRETED BY

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

IMAGING PERFORMED BY

Amy Mayhew

HOSPITAL NAME

SVS Imaging Michigan

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- If the ALT is substantially elevated, consider the following:
 1. Pre and post prandial serum bile acids can be considered to assess hepatic function.
 2. Leptospirosis testing (i.e., blood and urine PCR) should be considered, particularly if the liver enzyme elevations are acute in nature.
 3. Hepatic tissue sampling (i.e., fine needle aspirate or biopsy- laparoscopic or surgical). If biopsies are pursued, additional samples should be obtained for copper quantitation. In addition, bile samples should be acquired for aerobic and anaerobic cultures.
- If the ALP is disproportionately elevated relative to the ALT, consider the following:

REFERRING VET

Rochester VH

INVOICE

14253

DATE

11/22/22



PATIENT

Tillie Moy

1. Further testing for Cushing's disease (i.e., low-dose dexamethasone suppression test, ACTH stimulation test), particularly if the patient is exhibiting typical clinical signs.
2. 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.

SPECIES

Canine

BREED

Chihuahua mix

SEX

Female, spayed

AGE

13 yrs.

WEIGHT

14.8 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Amy Mayhew

HOSPITAL NAME

SVS Imaging Michigan

REFERRING VET

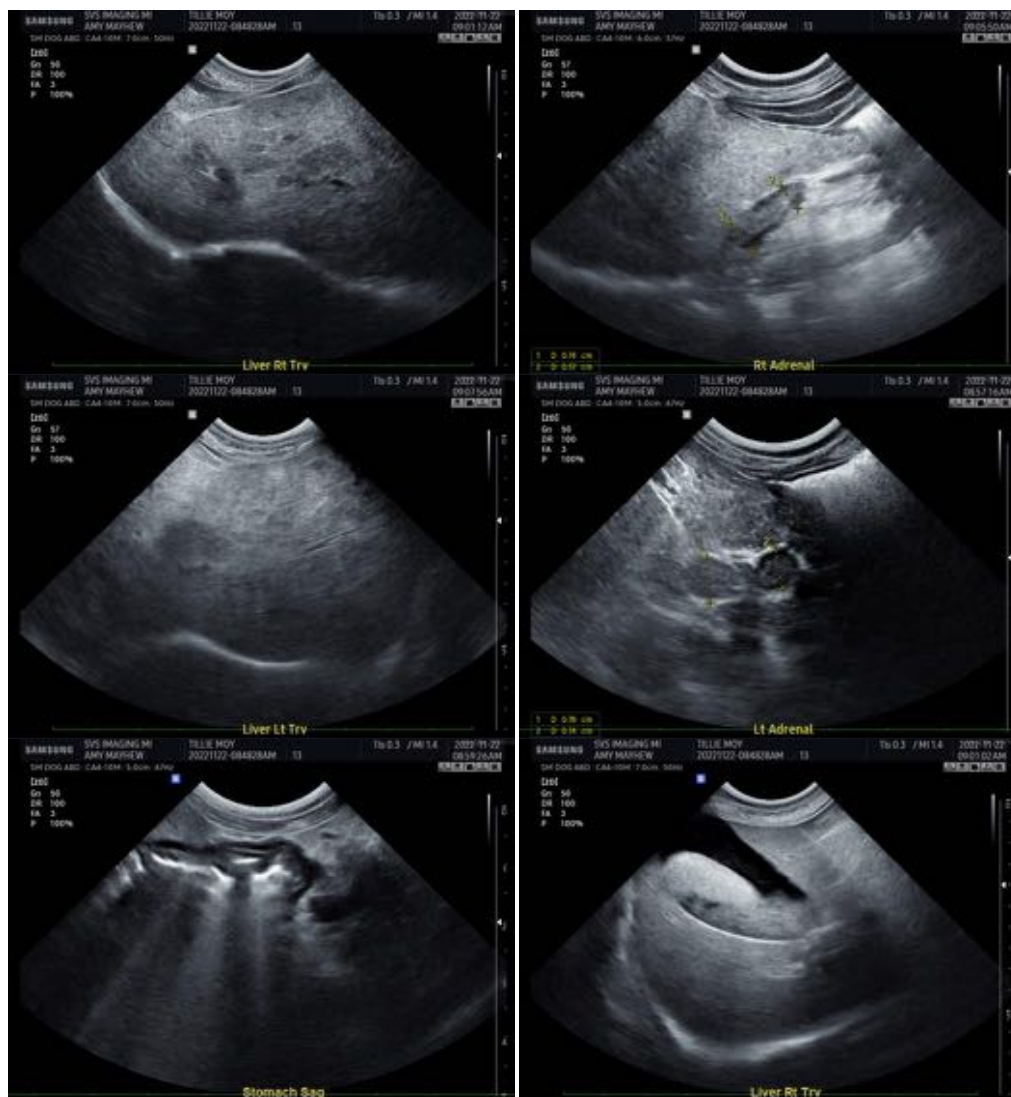
Rochester VH

INVOICE

14253

DATE

11/22/22





PATIENT

Tillie Moy

SPECIES

Canine

BREED

Chihuahua mix



SEX

Female, spayed

AGE

13 yrs.

WEIGHT

14.8 lbs.

INTERPRETED BY

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

**IMAGING
PERFORMED BY**

Amy Mayhew

HOSPITAL NAME

SVS Imaging Michigan

REFERRING VET

Rochester VH

INVOICE

14253

DATE

11/22/22

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