

**DATE PRESENTING CLINICAL SIGNS**

5/24/22

Elevated liver values 2/2022 and 4/2022. Confirmed Cushings.

PATIENT

Bentley Patton

Current Medications: Carprofen 100mg ½ BID. Started Anaipryl 30mg 1 SID.
 Lab Results: ALP 660, ALT 175, USG 1.018 with 2+ proteinuria, inactive sediment.
 Date of Previous IntraPet Ultrasound: No previous.
 Sedation: Not required to complete full diagnostic ultrasound.
 Stat Report: Not requested.
 Imaging Performed By: Stephanie Pearce RDCS, RVT.

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**BREED**

Sheltie

Urinary System

The urinary bladder, trigone, and pelvic urethra are 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.

SEX

Male, neutered

The prostate is normal in size (0.90 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

AGE

11/14/2011

The left kidney is normal in size (6.65 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. There is mild loss of corticomedullary distinction. Several pinpoint hyperechoic foci are observed within the cortex. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

WEIGHT

49 lbs.

The right kidney is normal in size (6.03 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.

INTERPRETED BY

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

Adrenal Glands

The left adrenal gland is enlarged (1.46 cm at cranial pole) (0.80 cm at caudal pole) (3.71 cm in length) with an irregular shape. A 1.59 x 1.36 cm hyperechoic to slightly heterogeneous nodule is observed at the cranial pole. In addition, a 0.82 x 0.54 cm hypoechoic nodule is observed at the tip of the caudal pole. In the remainder of the gland, the parenchyma is slightly heterogeneous with loss of glandular detail. The phrenicoabdominal vein and surrounding vasculature are normal.

HOSPITAL NAME

Pet Wellness Center

REFERRING VET

Dr. Twardus

The right adrenal gland is normal size (0.78 cm at cranial pole) (0.58 cm at caudal pole) (3.40 cm in length) with a slightly irregular shape. The parenchyma is heterogeneous with loss of glandular detail. A small cystic area is observed at the caudal pole. The phrenicoabdominal vein and surrounding vasculature are normal.

INVOICE

13424

Spleen

The spleen is normal in size (1.90 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. Several varying sized irregular hyperechoic nodules are observed throughout the organ. Splenic vasculature is normal.

Liver

The liver is subjectively prominent in size with normal curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and subtly heterogeneous in appearance. A 1.31 x 1.25 cm multi-septated cystic lesion 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 moderate

amount of aggregated echogenic partially dependent to suspended debris/sludge is observed within the lumen. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

A 3.5-4 cm hard shadowing structure is observed within the gastric lumen along with a small amount of ingesta. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract appears patent at the time of the study. 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.

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.

Free Abdomen

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

ULTRASONOGRAPHIC FINDINGS

Primary Findings:

- The diffuse hepatic parenchymal changes are most consistent with a benign hepatopathy (i.e., vacuolar hepatopathy, regenerative nodular hyperplasia and/or age-related remodeling). However, given the prior history of an elevated total bilirubin and a higher elevation in ALT, an underlying hepatopathy (i.e., inflammatory disease, copper hepatotoxicosis, other) cannot be completely excluded. The left cystic lesion could be consistent with a benign cyst, small hematoma, or less likely, an emerging vascular tumor.
- The gallbladder changes could be consistent with cholestasis, fasting, or a developing mucocele.
- The bilateral adrenal changes are consistent with previous diagnosis of pituitary-dependent hyperadrenocorticism.

Secondary Findings:

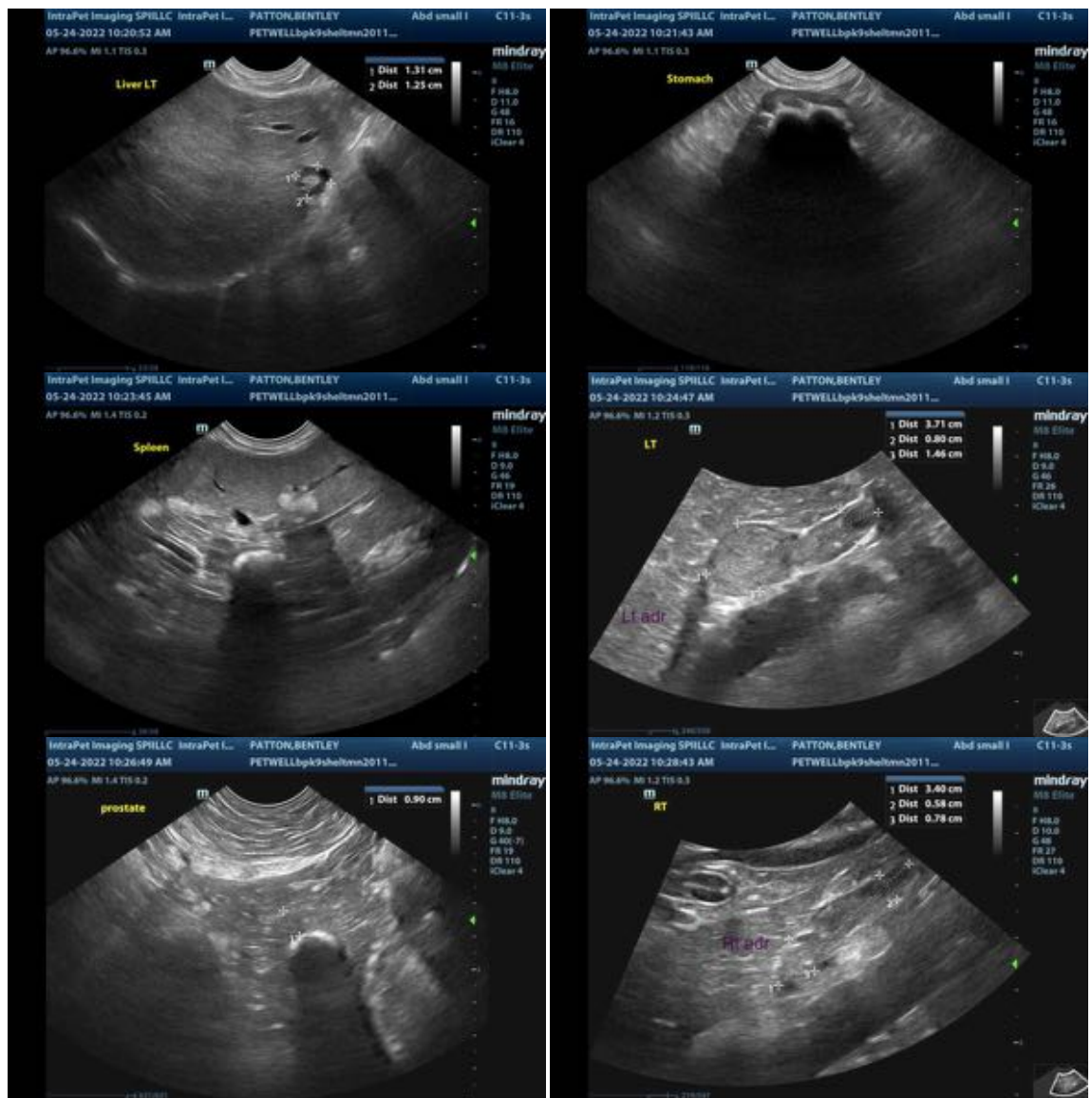
- Mild bilateral, age-related renal changes with dystrophic mineralization.
- The hyperechoic splenic nodules trend toward the benign (i.e., myelolipomas or similar) with a low possibility of emerging neoplasia.
- Gastric foreign material, which appears non-obstructive at this time.
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

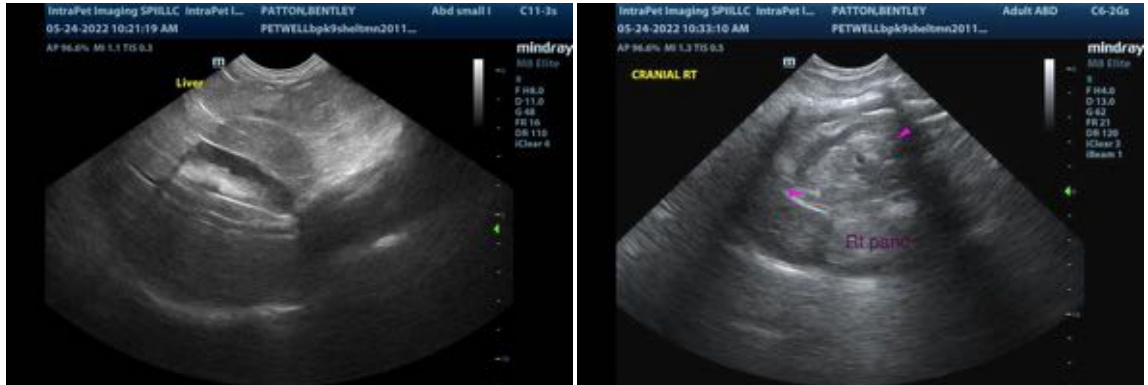
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Continued treatment for Cushing's disease is recommended. If the current medication is ineffective at controlling clinical signs, consider switching to Trilostane. Also consider a baseline blood pressure

measurement to assess for systemic hypertension as well as a UPC.

- 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.
- Given the breed and gallbladder changes, consider initiation of Ursodiol therapy at this time. Alternatively, consider performing a recheck ultrasound in 2-3 months. If the gallbladder changes are similar at that time, Ursodiol therapy can be initiated then.





The information and recommendations provided are based on the images presented by the referring veterinarian. 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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