



PATIENT

Baxter Fitzpatrick

PRESENTING CLINICAL SIGNS

History: Elevated liver values
Abnormal PE/Chem/CBC/UA Results: ALKP 234, ALT 258

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

BREED

Poodle Mix

Urinary bladder is adequately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

SEX

Neutered male

Prostate (neutered) is normal in size, echotexture and echogenicity for a neutered male.

Left kidney is normal is size (3.87 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. Non-obstructive areas of mineralization/nephroliths are noted. There is no evidence of pyelectasia or infarcts observed.

AGE

11 years

Right kidney is normal is size (4.26 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. Non-obstructive areas of mineralization/nephroliths are noted. There is no evidence of pyelectasia or infarcts observed.

WEIGHT

11 lbs

Adrenal Glands

INTERPRETED BY

Beth Johnson, DVM
DACVIM

Left adrenal gland is normal in size (1.5 cm long, 0.34 cm at cranial pole and 0.4 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

The right adrenal gland is enlarged (2.0 cm long, 1.15 cm at the cranial pole and 0.64 cm caudal) with mild heterogenous parenchymal changes. Swollen capsular expansion is noted without evident capsular escape or vascular invasion.

IMAGING PERFORMED BY

Shari Reffi CVT

Spleen

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Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

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Liver

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Liver is subjectively enlarged (swollen contour) without disruption of architecture. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen and falciform fat. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

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Gallbladder is visible, but small so difficult to fully assess, but there was no evidence of pathology noted. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

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Gastrointestinal

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

BREED

Poodle Mix

The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease.

SEX

Neutered male

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

AGE

11 years

Pancreas

WEIGHT

11 lbs

The observed pancreas appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

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DACVIM

Free Abdomen

There is no evidence of peritoneal effusion or apparent lymphadenopathy noted in these images.

IMAGING PERFORMED BY

Shari Reffi CVT

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- **Right adrenal mass** – consistent with adenoma or possibly hyperplasia. Early pheochromocytoma cannot be ruled out. Interpret in combination with clinical signs of hyperadrenocorticism or other adrenal disease.
- **Hyperechoic hepatomegaly** – This appearance is non-specific and most consistent with a benign steroid (endocrine) or vacuolar hepatopathy or reactive or idiopathic hepatopathy. Inflammatory and/or infiltrative disease (such as round cell neoplasia) are also possible, but considered less likely.

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Secondary Findings

- **Non-obstructive nephrolithiasis bilaterally.**

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The described adrenal gland and liver changes are suggestive of hyperadrenocorticism. If clinical signs of hyperadrenocorticism, such as polyuria, polydipsia, polyphagia, panting, hair loss, hypertension, etc. are present, testing for hyperadrenocorticism with a LDDS test is warranted.

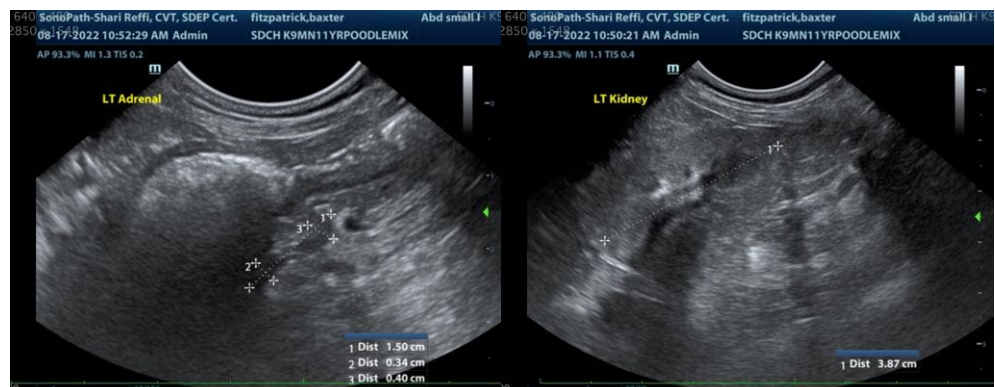
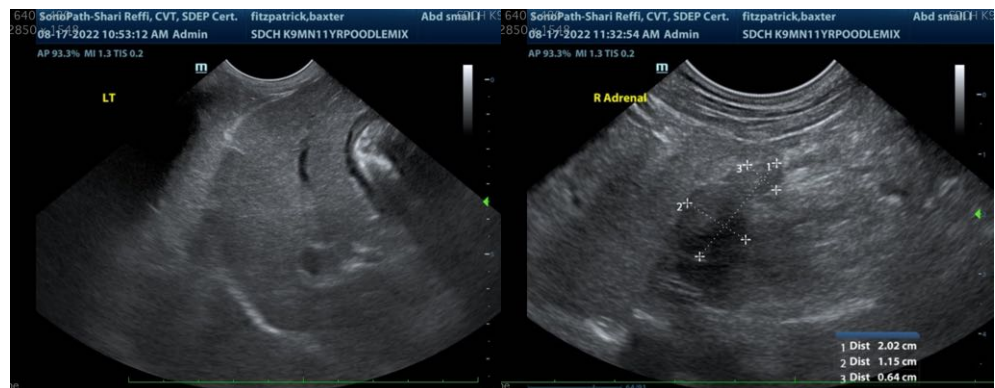
If clinical signs are not present, monitoring is recommended with testing pursued when/if clinical signs develop.

Regardless of clinical signs, if not recently evaluated blood pressure is recommended.

If not recently evaluated, a urinalysis and, if indicated based on urinalysis results, urine culture are also recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ratio is recommended.

However, hyperadrenocorticism does not typically cause the liver enzyme increase pattern described for this patient. Therefore, given the ALT:

Other recommendations include an “antigen search” for sources of reactive hepatopathy (including testing for Leptospirosis), followed by a course of empirical antibiotics and hepatic nutraceuticals, with monitoring of ALT for improvement. If improvement is not noted and/or enzyme increase progresses, a liver FNA or biopsy may be warranted.





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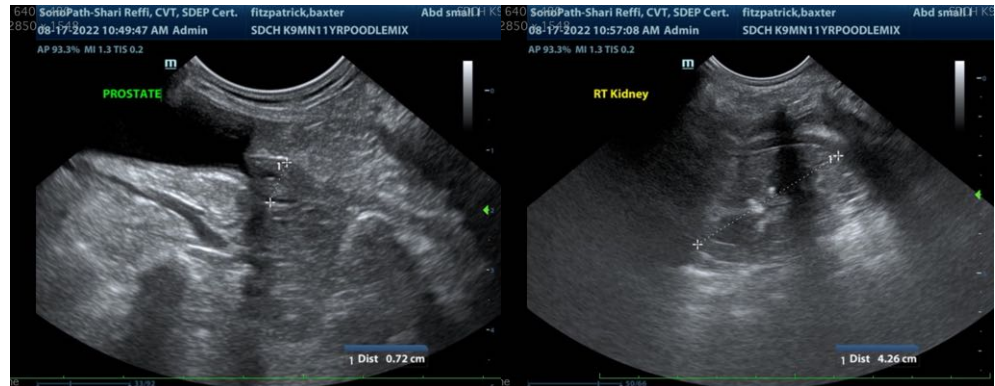
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Beth Johnson, DVM DACVIM

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