


PATIENT

Luna Diamond

SPECIES

Canine

BREED

German Shepherd Mix

SEX

Spayed Female

AGE

13 Years

WEIGHT

81.2 Pounds

INTERPRETED BY

 R. McKenzie Daniel,
 DVM, DABVP
 (Canine and Feline)

IMAGING PERFORMED BY

Dr. Jo Goodman

HOSPITAL NAME

Evandale-Blue Ash PH

REFERRING VET

Dr. Stephanie Wehmer

INVOICE

38916

DATE

6/21/22

PRESENTING CLINICAL SIGNS

History: History of UTI's, hypothyroidism, laryngeal paralysis. Soft tissue sarcoma diagnosed right shoulder on 2/4/22. Medications were carprofen 75mg, levothyroxine 0.8mg SID, zyrtec SID, gabapentin 400mg BID, omeprazole SID. owners noticed around 6/4/22 patient had increased thirst, urination, and hunger. No history of vomiting or diarrhea. Patient had evidence of vulvar dermatitis on exam on 6/13/22. Urinalysis and urine culture did not reveal infection. Patient did not improve on course of clavamox. Base line blood on 6/17/22 revealed elevated liver values. Discontinued carprofen, started metronidazole 750mg BID, started denamarin, started ursodiol 300mg SID, and continued clavamox. During ultrasound, the p is obese and was difficult to get a good view up near the liver. After performing the ultrasound we found out from owner patient was not fasted

Abnormal PE/Chem/CBC/UA Results: 12/30/21 Liver enzymes - ALT 45, ALP 230, GGT 2, CHOL 295
 6/13/22 UA - usg was 1.008, inactive sediment 6/17/22 - Liver enzymes elevated - ALT 139, ALKP 1647, GGT 13, CHOL 381

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN
Urinary System

The urinary bladder presented mild uniformly thickened ventral apical to dorsal urinary bladder wall isoechoic to the adjacent normal urinary bladder wall. Ventral apical urinary bladder wall measured 0.50 cm. Anechoic urine present with very minor particulate urinary bladder sediment, which may indicate minor cellular debris/protein, crystalline debris or mucus. The luminal margin of the thickened urinary bladder wall was mildly asymmetrical in contour. Mineralization or echogenic foci within the thickened areas of urinary bladder wall was not present. The urethra was overtly normal in structure and tone to a depth of 2.0 cm.

The area of the aortic trifurcation was free of pathology.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. A small cortical cyst was present in the right kidney. Pinpoint medullary mineral present in both kidneys. The left kidney measured 7.6 cm. The right kidney measured 6.6 cm.

Adrenal Glands

The left adrenal gland was mildly prominent in size, exhibiting mild nodular parenchyma and maintained capsule symmetry. No evidence of left adrenal parenchymal mineralization. The left adrenal gland measured 3.7 cm length x 1.3 cm at the cranial pole and 1.2 cm at the caudal pole. The right adrenal gland measured 3.6 cm length x 0.76 cm at the caudal pole.

Spleen

The spleen exhibited primarily finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. An echogenic nodule was noted in the mid spleen, adjacent to the hilus. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory or neoplastic changes were not noted. The echogenic nodules tend to trend benign and are most consistent with benign hyperplasia or myelolipomas.

Liver

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to



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benign parenchymal remodeling. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non distended in size with mild, echogenic, nonmineralized biliary sludge. The cystic duct and common bile ducts were normal without evidence of dilation.

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Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. Moderate strongly shadowing gastric ingesta was present in the stomach.

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The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material.

Normal visible colon wall layers were present with apparent formed feces in lumen.

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Pancreas

The parenchyma of the left limb, body and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.

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Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

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ULTRASONOGRAPHIC FINDINGS

- Minor cystitis pattern
- Bilateral chronic renal changes with right kidney cortical cyst – chronic changes, slightly more prominent in the right kidney.
- Mildly prominent to indistinctly nodular left adrenal gland – suspect benign hyperplasia or adenomatous change.
- Hepatopathy – subjectively benign, vacuolar hepatopathy, inflammatory/immune mediated disease (i.e., non-specific hepatitis or other hepatopathy possible). No evidence of neoplastic criteria.
- Benign splenic nodule – consistent with probable myelolipoma.
- Mild gallbladder debris (non-mucocele)
- Strongly shadowing gastric ingesta

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

REFERRING VET

Dr. Stephanie Wehmer

Further assessment of the liver may include ultrasound guided FNA for screening cytology, assuming normal clotting status. Empirically, continued hepatosupportive medications and antibiotics would be reasonable. Discontinuation of antibiotics suggested if no improvement after two weeks of therapy, while continued antibiotics may be indicated if hepatic enzyme levels decline. Hepatic core surgical biopsy is likely required for definitive diagnosis.

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Technically, the possibility of emerging neoplastic criteria associated with the left adrenal gland cannot be excluded. Screening blood pressure to assess for evidence of hypertension, which may allude to a left pheochromocytoma, is recommended. Ideally, sonographic monitoring of the left adrenal gland for evidence of progressive changes with initial recheck in 4-6 weeks is suggested. Full adrenal workup could be considered if strong clinical concern for clinical signs suggestive of Cushing's syndrome.

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The strongly shadowing gastric ingesta, although non-specific, likely correlates with post-prandial presentation. Monitoring of gastric emptying could be considered.

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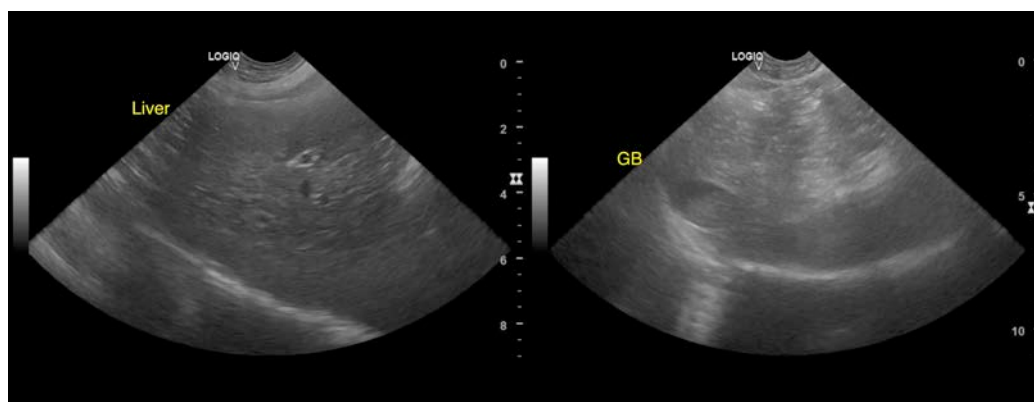
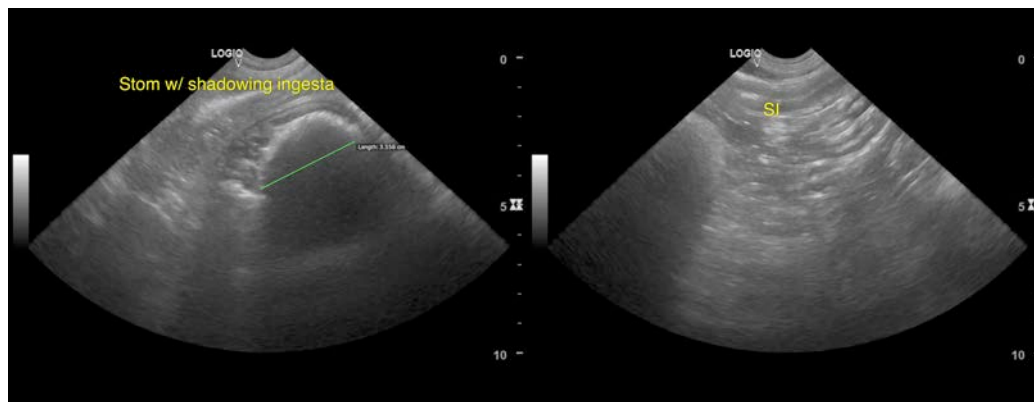
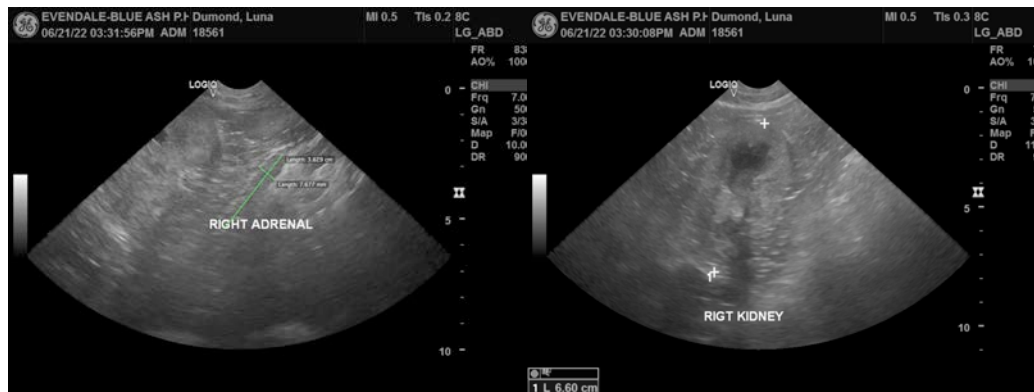
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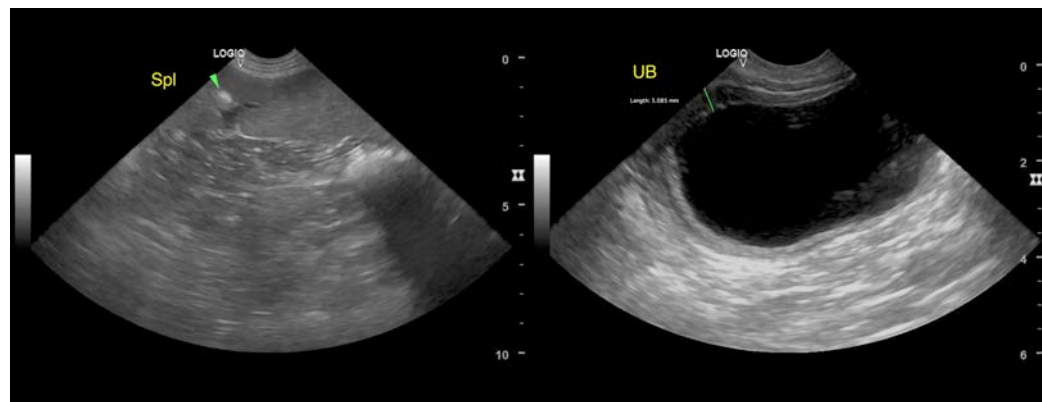
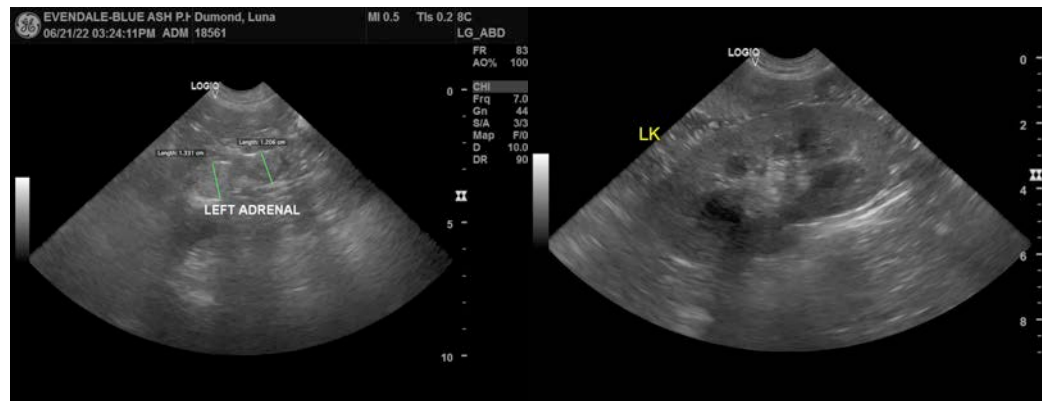
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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