



PATIENT

Jax Porter

SPECIES

Canine

BREED

Pitbull Mix

SEX

Neutered male

AGE

4 years

WEIGHT

77 lbs

INTERPRETED BY

Dr Brittany Sinclair,
BVSc(hons), DACVECC

IMAGING PERFORMED BY

Melissa Pascucci

HOSPITAL NAME

American AH

REFERRING VET

Dr. Vogel

INVOICE

42751

DATE

2/13/23

PRESENTING CLINICAL SIGNS

History: Elevated liver enzymes found on routine blood work 3 wks ago. No clinical signs. Repeated liver enzymes last week, did increase.

Abnormal PE/Chem/CBC/UA Results: ALT 435--> 596, AST 72--> 87

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, and visible pelvic urethra were of normal thickness. The ureters were not visible which is normal. There was normal wall layering with no masses, uroliths or abnormal thickening visualized. Urine was anechoic. No evidence of inflammatory or neoplastic changes were noted.

The kidneys were both normal size and structure, with smooth capsule and normal corticomedullary definition and ratio (cortex 1/3 of medulla). Medullary structure differed distinctly from that of the cortex. No evidence of pelvic dilation was present. The right kidney measured 6.19 cm. The left kidney measured 6.28 cm.

Adrenal Glands

Left adrenal gland caudal pole and right adrenal gland were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The right adrenal gland was not definitively visualized but the vasculature in the area was within normal limits. The left adrenal gland measured 0.48 cm at the caudal pole. The right kidney measured 1.77 cm in length x 0.59 cm at the caudal pole and 0.8 cm at the cranial pole.

Spleen

The spleen was normal with a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma and smooth capsule, with normal splenic vasculature with no signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarct changes were noted. The spleen was more cranial than usual, visualized cranial to the stomach between the stomach and liver.

Liver

The liver is subjectively normal in normal contours and structure though is subjectively small, with the spleen being more cranial than usual which may reflect microhepatia. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative or regenerative pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed. Gallbladder is moderately distended with normal wall thickness and anechoic contents. Common bile duct is non-distended and tapers normally

Gastrointestinal



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The stomach contains minimal luminal contents. It measures at a normal thickness of with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed. The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed. The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

The base and limbs of the pancreas were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour and parenchyma were normal. No overt evidence of active inflammatory or neoplastic disease was noted.

Lymph Nodes

No clinically significant lymphadenopathy or abnormalities noted.

Free Abdomen

No masses or free fluid were noted.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

1. Subjective microhepatia with cranial shift in splenic position
2. Normal liver and gall bladder parenchyma

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The position of the spleen is more cranial than is typical and is suspected to reflect microhepatia. Abdominal radiographs are the best way to evaluate liver size and are recommended. It is also possible that this splenic positioning is a result of splenomegaly, though I do not get that impression from this study, abdominal radiographs will also be of value to evaluate spleen size in relation to the other organs. Alternatively, this could be a variant of normal, reflect previous disruption of normal anatomy (ex gastropexy) and/or reflect patient positioning as the spleen is a somewhat mobile organ.

The liver parenchyma appears normal and there is no ultrasonographic explanation for the elevated liver enzymes in this patient. There is no significant disruption of architecture noted to suggest significant pathology. In the face of elevated liver enzymes, fine needle aspirate is recommended to further characterize parenchymal changes and bile acid profile to assess liver function. Ultimately liver biopsy is often required for more definitive diagnosis. Empiric treatments (SAM-E, milk thistle, Vitamin



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E, ursodiol if bilirubin elevated or gall bladder sludge) could be tried and liver enzymes re-evaluated, especially if liver FNA does not show significant pathology before more invasive liver sampling is pursued.

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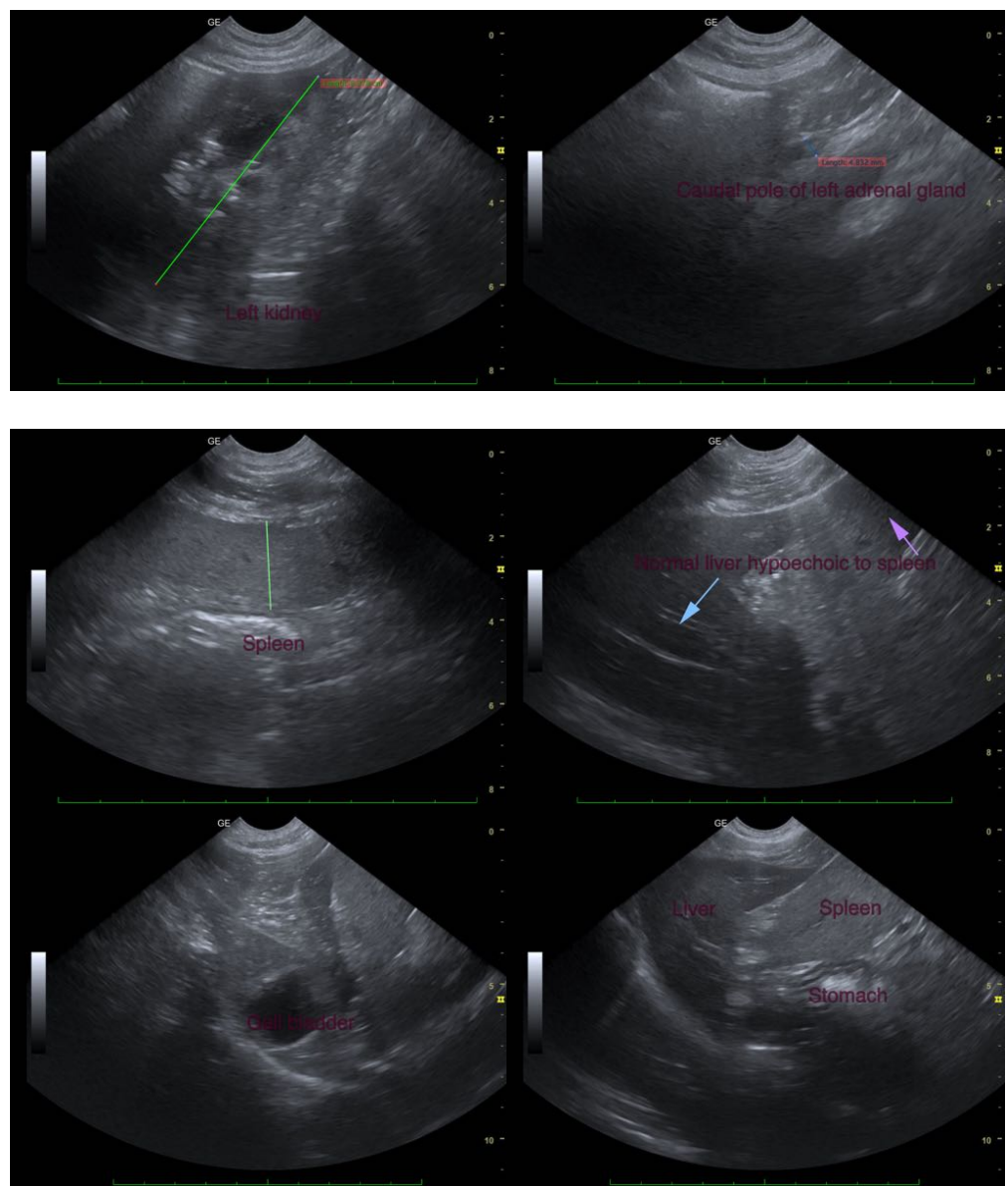
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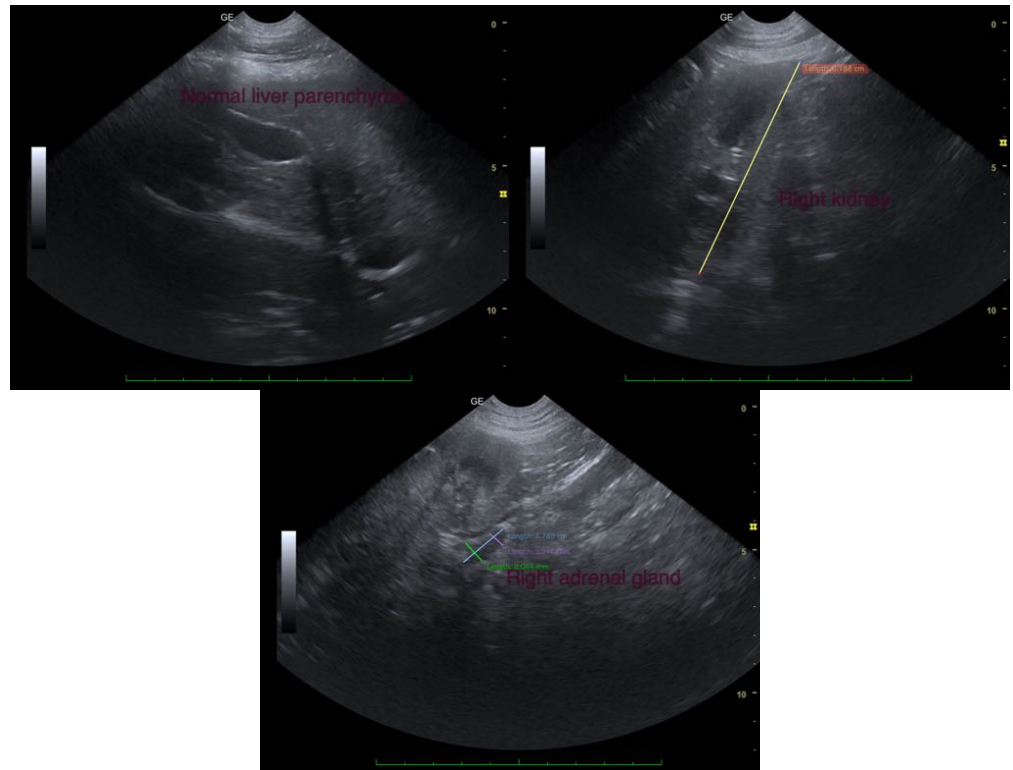
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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