
PATIENT PRESENTING CLINICAL SIGNS

Ammo Zebo
SPECIES Canine
BREED Labrador
SEX Neutered Male
AGE 10 years
WEIGHT 68 Pounds

History: 13 pound weight loss since 5/2020. Decreased appetite. Physical exam findings: only finding on PE is a likely slab fracture on right maxillary fourth premolar Abnormal CBC values: WBC 4.4 (4.9 - 17.6 K/ μ L), Neutrophils 2.904 (2.94 - 12.67 K/ μ L) Abnormal Chemistry Values: IDEXX SDMA 15 (0 - 14 μ g/dL), ALT 205 (18 - 121 U/L) Abnormal UA Values: none Radiograph Findings(email radiographs if available): chest radiographs appear WNL. Single right lateral abdomen shows hepatomegaly with rounded border and splenomegaly. No mass effect noted Reason for Ultrasound: evaluate for weight loss and hyporexia

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN
Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The prostate was normal at 1.0 cm.

The left kidney has a normal shape and size (7.07 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (6.96 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is large in size measuring 1.47 cm at the cranial pole, 0.9 cm at the caudal pole and 2.88 cm in length. It is situated in its normal location cranial to the left renal artery. It is somewhat irregular in appearance and is large. The cranial pole appears somewhat enlarged and there is an ill-defined, hyperechoic nodule towards the caudal pole and measured 0.7 cm. It appears generally mottled.

The right adrenal gland is normal in size measuring 0.75 cm at the caudal pole It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size The spleen echotexture is heterogenous and mottled, the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. There are numerous, ill-defined, small, hyperechoic nodules within the parenchyma that measured between 0.2-0.5 cm. There is a mild irregularity at the tip of the tail of the spleen, which is isoechoic with hyperechoic nodules within, which is likely most consistent an anatomic irregularity, but a mass effect cannot be definitively ruled out.

INTERPRETED BY

Kathleen Sennello DVM,
 MS, Diplomate ACVIM
 (Small Animal Internal
 Medicine)

IMAGING PERFORMED BY

Loetitia Saint-Jacques, RVT

HOSPITAL NAME

Alpine AH

REFERRING VET

Dr. Sheets

INVOICE

94719

DATE

12/17/21



PATIENT *Liver*

Ammo Zebo The liver is large, heterogenous and irregular in shape. The visible portions of the vasculature and biliary tract appear normal. There are numerous, ill-defined, hypoechoic nodules noted diffusely within the parenchyma. The nodules varied in size from 0.3-1.5 cm. Additionally, there are more pronounced, focal, larger, hypoechoic nodules that measured 0.81 cm, 0.7 cm and 1.03 x 1.5 cm. The gallbladder lumen is moderately distended. The wall of the gallbladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

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Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm 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.

SEX

Neutered Male

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. The duodenum measured as normal and the jejunum measured as normal (0.29 cm). Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

AGE

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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.

WEIGHT

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Pancreas

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Medicine)

The pancreas is prominent and hypoechoic as compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

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Free Abdomen

Loetitia Saint-Jacques, RVT

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

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Heart

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A brief view of the heart was submitted. No pericardial effusion was seen.

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ULTRASONOGRAPHIC FINDINGS

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PRIMARY FINDINGS:

- Large, irregular, heterogenous liver with ill-defined, hypoechoic nodules. The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis,

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toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy.

Ammo Zebo

- Irregular, enlarged left adrenal gland. Left adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.

SPECIES

Canine

- Mildly mottled spleen with hyperechoic nodules. These changes favor a benign lesion, but underlying neoplasia cannot be excluded. Consider a FNA.

BREED

Labrador

- Hypoechoic, prominent pancreas. The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.

SEX

Neutered Male

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Many of the changes observed on today's scan are non-specific and can be somewhat age related. I am most concerned about the liver changes combined with the liver enzyme elevation in an older Labrador.

- I recommend pre and post prandial bile acids to further evaluate liver function.
- Consider screening for Leptospirosis.
- Consider a liver aspirate to potentially rule out round cell neoplasia (seems unlikely).
- If liver function testing is abnormal I would recommend a liver biopsy to look for evidence of inflammatory disease, etc.
- Additionally closely evaluate history for any medications, toxins, dietary changes, etc. which can be contributing.

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The left adrenal gland is irregular and enlarged. This could be considered with benign or cancerous change. There is no evidence of vascular invasion and no discrete invasive mass effect visualized.

Options moving forward include:

- Recommend blood pressure evaluation. If hypertension is present I recommend catecholamine levels to look for evidence of pheochromocytoma.
- If surgical removal would be considered then I recommend advanced imaging (contrast CT scan to further evaluate this area).
- If surgical removal would not be considered then I recommend monitoring with abdominal ultrasound.
- If signs of Cushing's disease are present then I recommend adrenal function testing.

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The adrenal gland could be a concern, but it seems unlikely to be contributing to the weight loss issue. If liver function is normal and aspirates are normal then there could be an as of yet unidentified reason for the weight loss described. I recommend three view chest radiographs. Additionally, you can consider occult GI disease as this often does not produce significant biochemical changes and many times causes only subtle ultrasonographic changes. If this is suspected you can consider a GI panel to Texas A&M for a qualitative PLI, TLI, cobalamin and folate to further evaluate the pancreatic changes observed in the small intestine. If these findings are abnormal additional diagnostics could be considered involving the GI tract.

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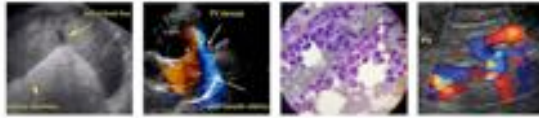
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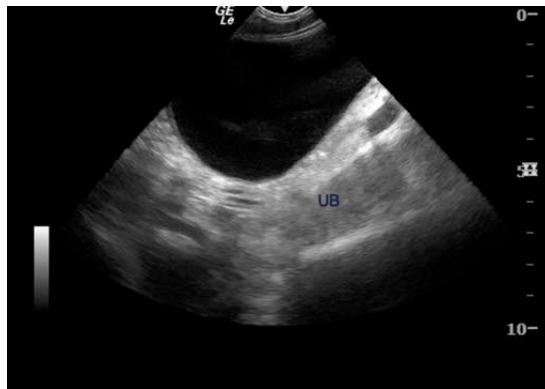
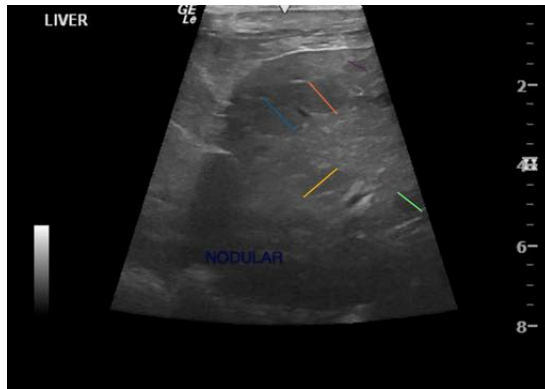
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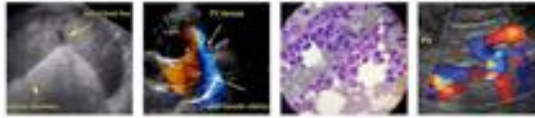
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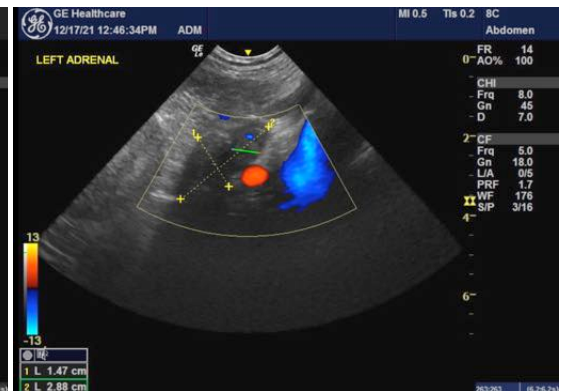
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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