

**DATE PRESENTING CLINICAL SIGNS**

1/23/23 History: Chronic elevation in ALP despite Denamarin. Chronic intermittent v/d, currently not clinical.

PATIENT

Andie Harvey

Current Medications: Denamarin since Oct.
 Lab Results: ALP Oct 2022: 237, Jan 2023 384. Remainder of labs unremarkable.
 Date of Previous IntraPet Ultrasound: No previous.
 Sedation: Not required to complete full diagnostic ultrasound.
 Stat Report: Not requested.
 Imaging Performed By: Stephanie Warga RDCS, RVT.

SPECIES

Canine

BREED

Labrador Retriever

SEX

Spayed Female

AGE

8/25/14

WEIGHT

66.4 Pounds

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**Urinary System**

Urinary bladder is only mildly distended (empty). Visible contents are anechoic. Urinary bladder wall is unable to be fully assessed for pathology without further distension. No visible masses or cystoliths are observed. The trigone and visible pelvic urethra are normal thickness with a smooth mucosal surface. If there are urinary signs and/or concern for urinary bladder pathology, reassessment after complete filling is recommended.

Left kidney is normal is size (6.6 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

Right kidney is normal is size (6.86 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

INTERPRETED BY

Beth Johnson, DVM
 DACVIM

Adrenal Glands

Left adrenal gland is plump/swollen in size (3.41 cm long x 1.37 cm at cranial pole and 1.59 cm at caudal pole). Normal shape and contour are maintained without evidence of capsular invasion. Corticomedullary structure is unremarkable, except for the presence of hyperechoic nodules in the cranial and caudal pole, that do not disrupt normal shape and/or architecture. Visible surrounding vasculature appears normal.

Right adrenal gland is normal in size (2.49 cm long x 0.91 cm at cranial pole and 0.68 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

HOSPITAL NAME

Everhart VH

REFERRING VET

Dr. DeFavero

Spleen

Spleen is generally normal in size and shape with a smooth capsular contour. Parenchyma is diffusely nodular in appearance characterized by small discrete hypoechoic nodules. Splenic vasculature appears normal.

INVOICE

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Liver

Liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as mild suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

Gastrointestinal

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

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 empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness and layering. Contents are consistent with normal formed feces and gas.

Pancreas

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.

Free Abdomen

There is no evidence of peritoneal effusion. There is no apparent lymphadenopathy.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Splenic micronodular hyperplasia pattern– This nodular change is often associated with benign aging nodular hyperplasia. Infiltrative neoplasia, however, including both early hemangiosarcoma as well as round cell neoplasia cannot be ruled out.

Secondary Findings

- Gallbladder debris (canine) - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.
- Left adrenomegaly may be an incidental normal variant or stress response, however, it could indicate adrenal hyperplasia, secondary to pituitary hyperadrenocorticism or an adrenal adenoma. Pheochromocytoma, adrenal adenocarcinoma are considered possible but much less likely.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

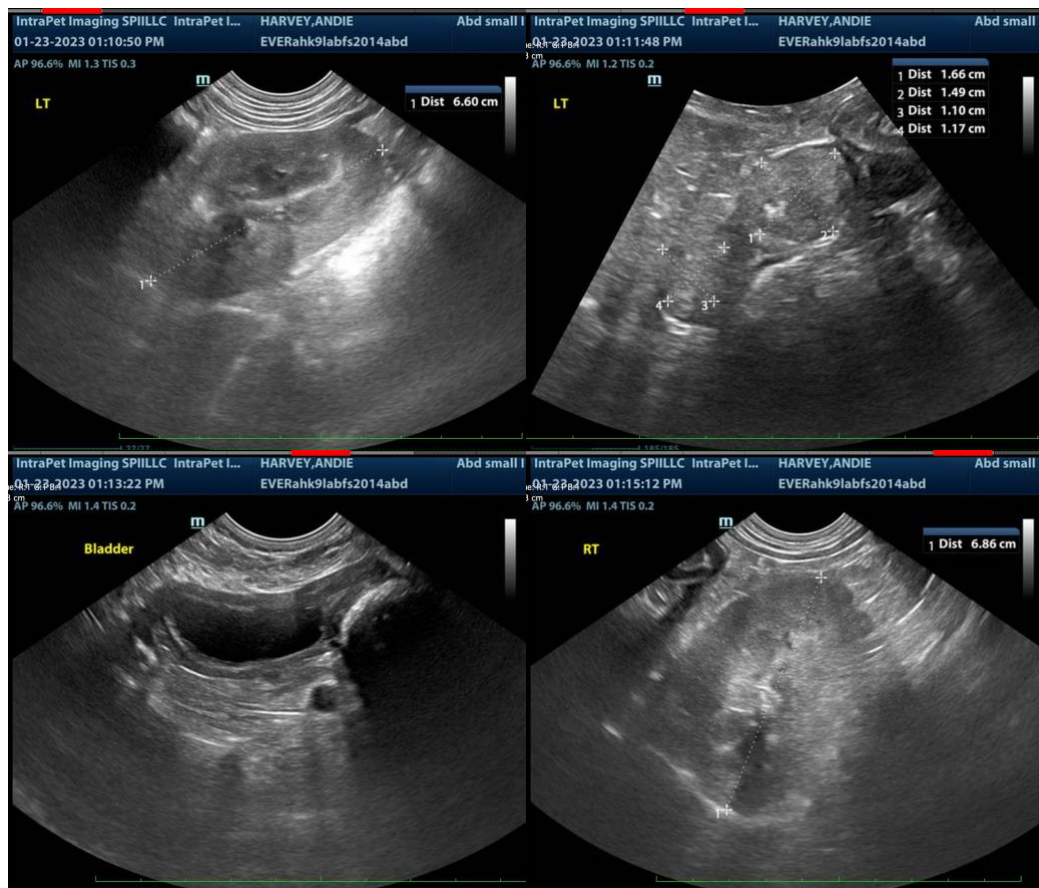
Differentials for increased ALP are vast and non-specific. Differentials for increased ALP include, but are not limited to, benign nodular hyperplasia which occurs in 70% of older dogs and often does not result in an abnormal ultrasound, reactive or idiopathic/vacuolar hepatopathy, cholestasis and/or hyperadrenocorticism as well as many chronic non-hepatobiliary diseases such as chronic infections/inflammation from dental disease, IBD, neoplasia, hyperlipidemia, hypothyroidism, chronic pancreatitis, chronic stress, etc.

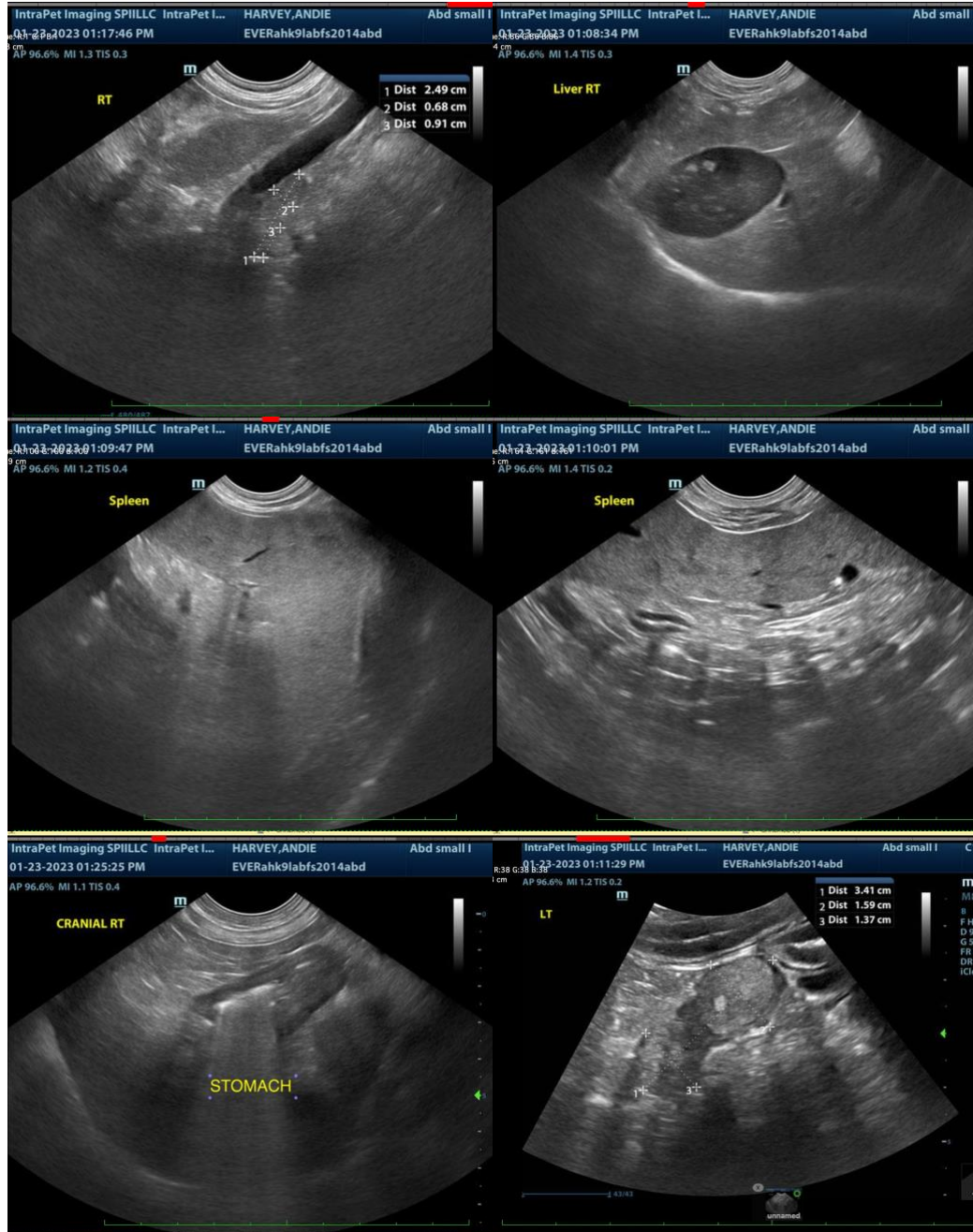
There is no ultrasonographic evidence of cholestasis. Adrenocortical testing such as a low dose dexamethasone suppression test could be considered if clinical signs of hyperadrenocorticism are present. Ursodiol could be considered if gallbladder sludge is noted. A fine needle aspirate of the liver could be considered if patient's coagulation status is appropriate. Otherwise, recommendations include addressing any other concurrent disease and monitoring. If values are progressive, recheck imaging is recommended.

Specifically for this patient, given the adrenal glands, hyperadrenocorticism could be the underlying cause for the reported increased ALP, however, further testing for hyperadrenocorticism is not indicated based on an increased ALP alone and should only be pursued when and if clinical signs of hyperadrenocorticism develop.

Given this patient's chronic intermittent vomiting and diarrhea, additional evaluation of the gastrointestinal tract should be considered, beginning with a gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

In the meantime, empirical deworming with a 5-day course of Panacur is recommended and if tolerated, a transition in diet could be considered based on trial and error response, beginning with a hydrolyzed protein diet.





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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