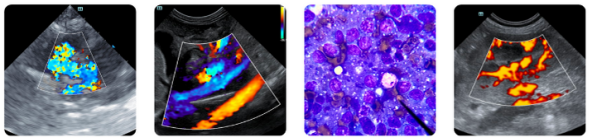

PATIENT

Mango Ip

SPECIES

Canine

BREED

Maltese

SEX

MN

AGE

10 years

WEIGHT

3.8 kg

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Dr. Gira

HOSPITAL NAME

Argo Vet

REFERRING VET

Dr. Lam

INVOICE

10840

DATE

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PRESENTING CLINICAL SIGNS

Pertinent History - Previously diagnosed with Cushing's disease by a specialist. The owner reports that treatment with Trilostane led to weight loss and muscle atrophy. The specialist has recently questioned this diagnosis and stopped his trilostane - An ACTH stimulation test performed in September 2025 showed results that do not support a diagnosis of hyperadrenocorticism, and Trilostane was discontinued. -significant weight loss over the past year - hair loss, enlarged abdomen.

Abnormal PE/Chem/CBC/UA Results: Chemistry: - BUN 4.79 mmol/L (3.21-10.35); was 3.4 Sept 2025 - stable - Creat 32 umol/L (35-124); was 22 -- likely reduced muscle mass - Hyperphosphatemia 1.73 mmol/L (0.61-1.61); was 1.48 - Mild hyperglycemia 7 mmol/L (4.2-6.9); was 4.6 - Mild hypercholesterolemia 10.55 mmol/L (3.1-8.02); was 5.3 - Moderate ALT incr 428 U/L (0-120); was 171 - Mild AST incr 66 U/L (0-60); was 53 - Marked ALP incr >993 U/L (0-140); was 2228 - Marked GGT incr 247 U/L (0-14); was 92 - Mild hypertriglyceridemia 1.61 mmol/L (0.34-1.47); was 0.72 - Hyponatremia 138 mmol/L (141-152); was 153 - Hypochloremia 98 mmol/L (102-120) - Na:K 35; was 33 ACTH Stim ran again Nov 19 2025 - does not support Cushings.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended. It has a normal uniform wall thickness. Contents include primarily anechoic fluid with occasional echogenic non-shadowing debris, most consistent with exfoliated cells, mucous and/or small blood clots, as well as dependent mineral “sand” (crystals) debris. Both sterile inflammation as well as urinary tract infection can present with echogenic debris. No masses or discrete definitive cystoliths are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface. There is some mineral density that appears to be within the intraprostatic urethra, with no visible evidence of obstruction noted in these images at this time.

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

The right kidney is normal is size (4.29 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.

The left kidney is normal is size (4.03 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.

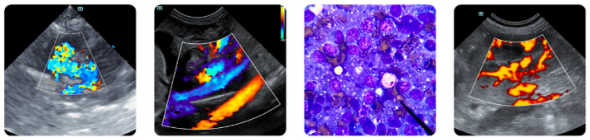
Adrenal Glands

The right adrenal gland is normal in size (0.55 cm at cranial pole and 0.59 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.6 cm at cranial pole and 0.6 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

Spleen

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). Multifocal well-demarcated hyperechoic homogenous nodules are noted. Splenic vasculature appears normal.



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Liver

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is mildly heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as 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. Hyperechoic mucosal fogging or speckling is noted. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction or foreign material.

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

Pancreas

The area of the pancreas contains irregular hyperechoic pancreatic remodeling.

Free Abdomen

There is no visible free peritoneal effusion noted in these images.

There is no apparent pathologic lymphadenopathy noted in these images.

SECONDARY FINDINGS

- Mucosal speckling – Mucosal speckling is often present with inflammatory bowel disease (IBD). It is not specific for type or severity of disease. Mild speckling change can occur as a normal patient variant in the post-prandial state.
- Hyperechoic pancreas – This finding is suggestive of pancreatic fibrosis, possibly secondary to chronic pancreatitis. A TLI is recommended to rule out exocrine pancreatic insufficiency (EPI), especially if clinical signs (weight loss, diarrhea, etc.) are present.
- Mildly heterogenous liver – These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia.
- Moderate gallbladder debris - 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

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abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

SECONDARY FINDINGS

- Hyperechoic splenic nodules – most consistent with benign myelolipomas. Other differentials such as fibrosis or calcification caused by old hematomas or infarcts, chronic inflammation, granulomatous disease or metastatic disease cannot be ruled out, but are considered less likely.

- A moderate to large amount of echogenic urinary bladder mineral/sand debris including suspected intraprostatic urethral intraluminal mineral debris.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

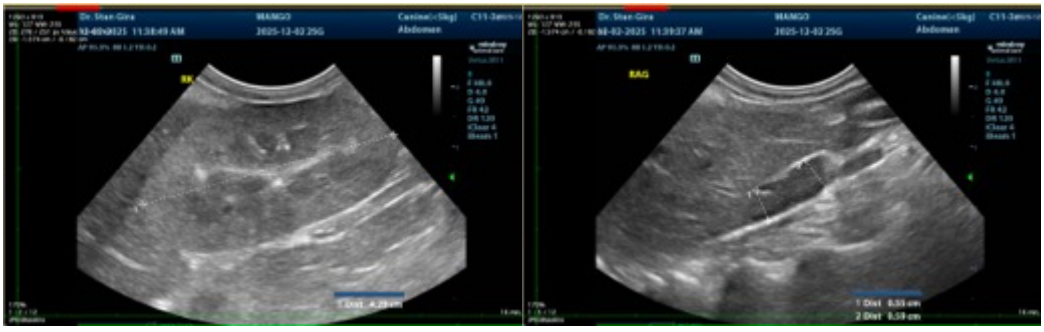
Regarding patient's reported alkaline phosphatase, differentials for a primary cholestatic liver enzyme pattern (increased ALP) are vast and non-specific. Differentials include, but are not limited to, benign nodular hyperplasia which occurs in 70% of older dogs and often does not result in an abnormal 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.

- Given the gallbladder debris noted above, empirical hepatic nutraceuticals including ursodiol could be considered while monitoring for improvement.

- 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.

Having said that, given patient's reported weight loss in the face of the bowel and pancreatic changes noted above, further digestion and absorption evaluation is recommended 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.



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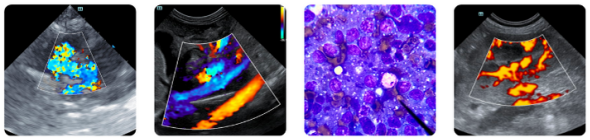

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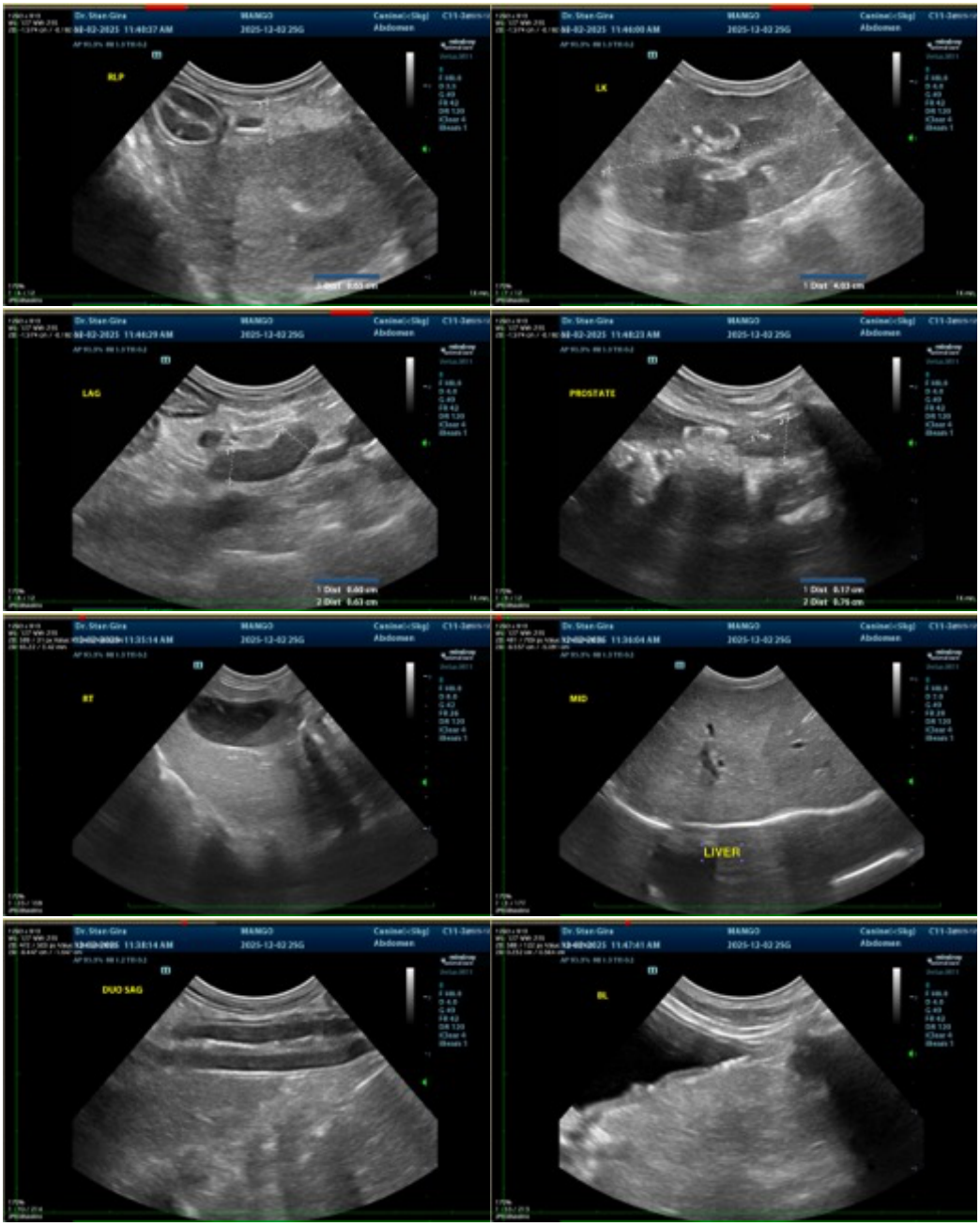

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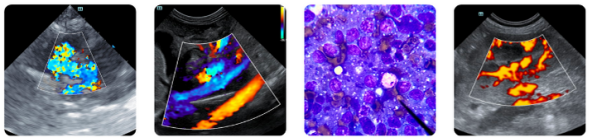

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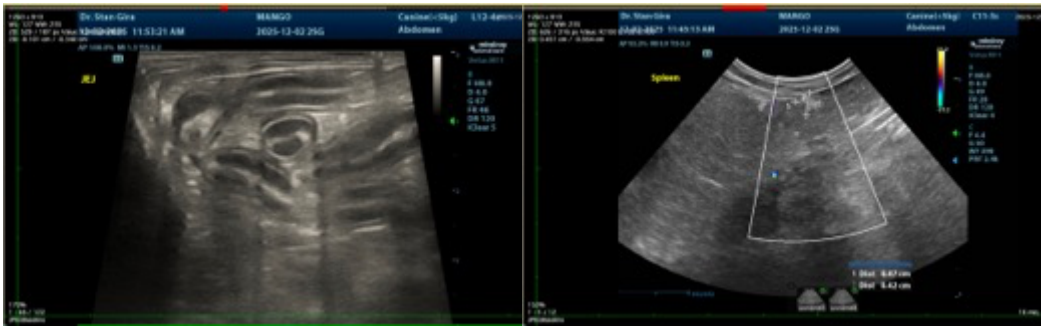

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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