PATIENT

Gizmo Murray

SPECIES

Canine

BREED

Chihuahua Mix

SEX

FS

AGE

14 years 9 months

WEIGHT

13.4 lbs

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Loetitia Saint-Jacques, LVT

HOSPITAL NAME

Incline Veterinary Hospital

REFERRING VET

Dr. Kateryna Sovik

INVOICE

11267

DATE

2/9/2026

PRESENTING CLINICAL SIGNS

- Visited Pacific Veterinary Emergency Specialist on Sunday, 2026-01-18, for straining to defecate. The episodes of straining began every half hour, then progressed to every 10 minutes. Produced little to no feces, and a small amount of urine. The ER performed blood work and radiographs, which ruled out an intestinal blockage. The ER diagnosed pancreatitis and recommended a follow-up with the primary veterinarian. For medical history the pet has periodically has difficulty defecating or seems to struggle. Has occasional bouts of gastrointestinal upset and diarrhea. Doctor Sovik recommended an abdominal ultrasound to further evaluate the liver and rule out underlying pathology like nodules or other changes as well as to investigate the cause of the elevated ALP and mild hepatomegaly.

Abnormal PE/Chem/CBC/UA Results: Mildly elevated ALP - r/o age-related change, hepatobiliary disease, cardiac disease, endocrine disease, others Abdominal tension - r/o gastrointestinal discomfort, visceral pain, others History of tenesmus and diarrhea - r/o gastroenteritis, dietary indiscretion, inflammatory bowel disease, others. RDW 22.2 13.6 - 21.7 % HIGH ALKP 349 23 - 212 U/L HIGH.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is adequately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The right kidney is normal is size (4.31 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. A hyperechoic band parallel to the corticomedullary border is present. There is no evidence of pyelectasia, mineral or infarcts observed.

The left kidney is normal is size (3.82 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. A hyperechoic band parallel to the corticomedullary border is present. There is no evidence of pyelectasia, mineral or infarcts observed.

Adrenal Glands

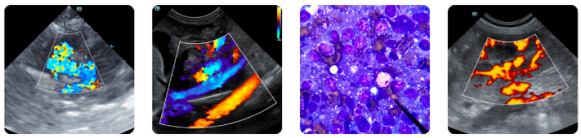
The right adrenal gland is normal in size (0.59 cm at caudal pole and the cranial pole is unable to be well visualized in these images), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.53 cm at cranial pole and 0.56 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

Spleen

The spleen is subjectively normal in size (1.7 cm thick at the hilus) with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver



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Liver is subjectively enlarged with mildly irregular margins. Parenchyma is diffusely, 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. Additionally, there are multifocal discrete homogenous hyperechoic nodules throughout the parenchyma all measuring less than 1.0 cm in size.

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. 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 (< 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

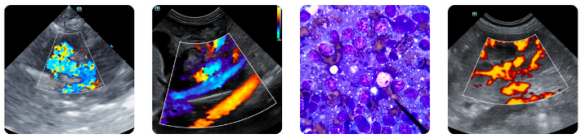
There is no visible free peritoneal effusion noted in these images.

There is no apparent pathologic lymphadenopathy noted in these images.

Assessment of heart base images is included when/if a splenic nodule/mass is present (as a complimentary add on). They are also assessed when a specific request is made for assessment of a limited second cavity (heart base and/or thorax) for an additional charge. Images of the heart (and/or) thorax were not assessed for this study. Please contact us if you would like a second cavity.

ULTRASONOGRAPHIC FINDINGS

- 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 to moderately 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.

- Bilateral medullary rim sign - This finding is of unknown clinical significance and can be a normal variant, often idiopathic. Medullary rim sign can be present with renal disease including lymphoma, hypercalcemic nephropathy, Leptospirosis, tubular disease, other and should be interpreted in combination with other more specific indications of kidney disease such as isosthenuria, proteinuria, azotemia, etc. This is a common incidental finding in patients with diabetes mellitus.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Further recommendations for patient's reported straining to defecate depend on whether or not the straining is believed to be tenesmus related to diarrhea and urgency versus true constipation. Especially in the face of diarrhea or chronic gastrointestinal signs that are not constipation, recommendations include:

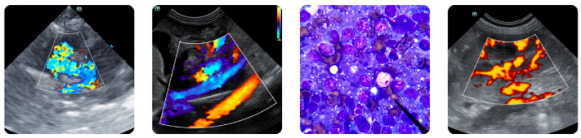
- A routine fecal/giardia exam.
- A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.
- A fecal enteropathogen PCR panel to Texas A&M GI Laboratory could be considered for further evaluation of possible infectious disease. Contact lab for recommendations on how long to discontinue antibiotics (if indicated) prior to obtaining a stool sample for submission.

Beyond patient's reported gastrointestinal signs, given the 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.

- 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 as a finding.
- 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.

Imaging performed by

pawsonography@gmail.com
530-786-8340



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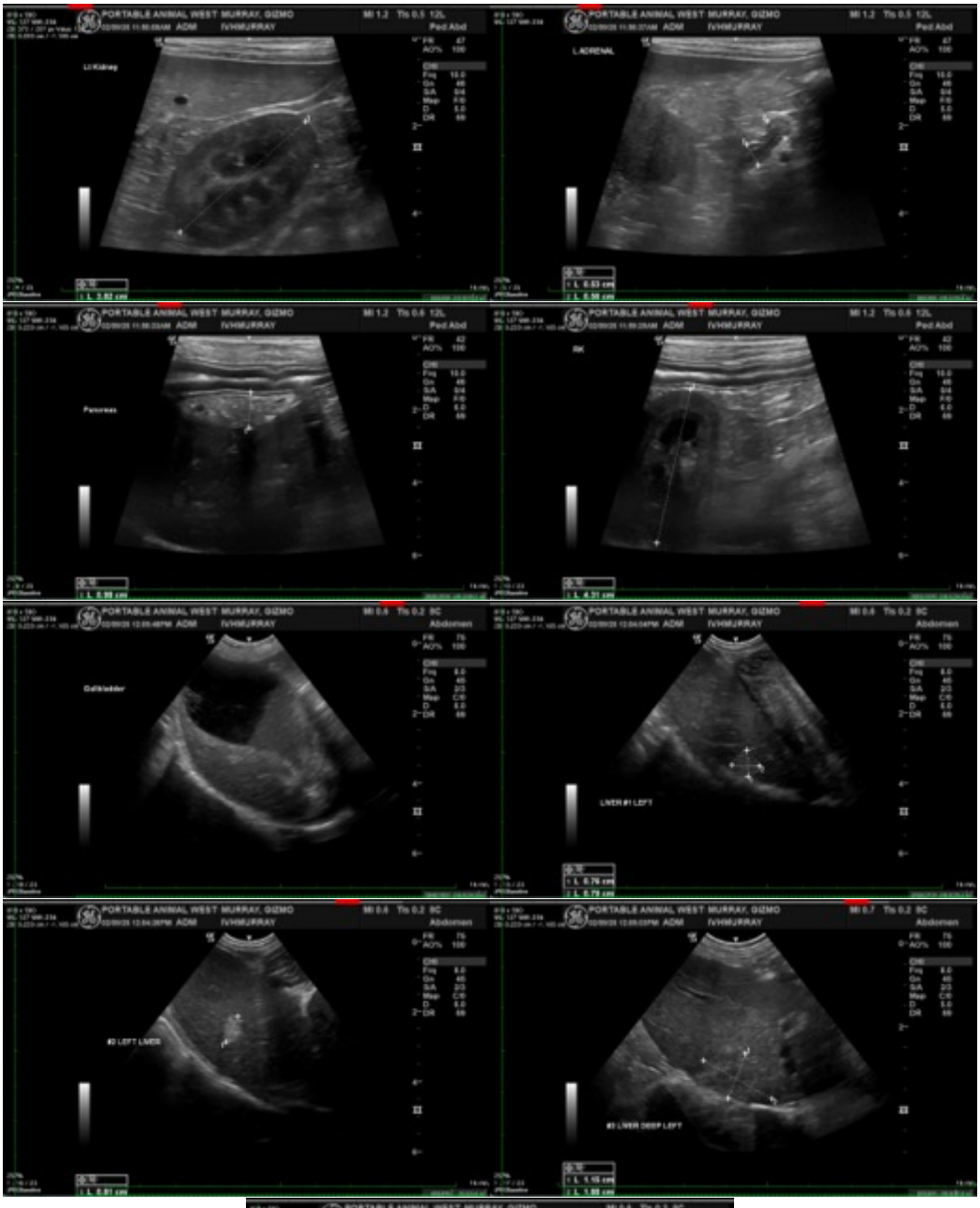

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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
info@sonopath.com