



PATIENT

Luna Kling

SPECIES

Canine

BREED

Goldendoodle

SEX

FS

AGE

13 years

WEIGHT

58 lbs

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Dr. Jennifer Todd

HOSPITAL NAME

Lambs Gap Animal
Hospital

REFERRING VET

Dr. Jennifer Todd

INVOICE

11717

DATE

4/16/2026

PRESENTING CLINICAL SIGNS

Luna is a thirteen-year-old, FS, Goldendoodle with a history of proteinuria and chronic liver enzyme elevations--with recent progression. She also has a 3-week history of decreased appetite and diarrhea. Lab results from 4/6/26 showed ALT=936 and ALP=740. Daily medications are Apoquel, Benazepril, Denamarin, Cosequin, and B12. FNA samples of mass being sent to lab today.

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.

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of pyelectasia, mineral or infarcts observed. Left kidney measures 6.59 cm and the right kidney measures 6.89 cm.

Adrenal Glands

The right adrenal gland is unable to be well visualized in these images.

The left adrenal gland is normal in size (0.69 cm at cranial pole and 1.0 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal. A hyperechoic nodule is noted in the caudal pole. Nodule does not disrupt normal shape and/or architecture. The nodule measures 0.84 cm x 1.2 cm in size.

Spleen

The 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). No focal nodules or masses are observed. Splenic vasculature appears normal. *See Liver*

Liver

The liver is subjectively normal except for in the mid cranial abdomen there is an approximately 9.5 cm x 10.5 cm heterogenous, mixed, largely cystic mass that appears to originate from the caudal liver. Having said that, origin is difficult to definitively determine and spleen, while considered less likely, can't be definitively ruled out.

The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

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.



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The visible small intestine demonstrates areas of moderate to severely thick muscularis layer relative to mucosa (disruption of the normal 1:3 muscularis:mucosa ratio). Small intestinal submucosa is slightly irregular, thick and hyperechoic, without evident loss of layering appreciated. 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 pancreas that is observed 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 visible free peritoneal effusion noted in these images.

There is no apparent pathologic lymphadenopathy noted in these images.

PRIMARY FINDINGS

- The cranial abdominal/suspect liver mass is concerning for neoplasia such as sarcoma versus hepatocellular carcinoma versus round cell neoplasia versus other. A benign process, however, including a large cyst, hematoma, hepatoma/adenoma, chronic inflammatory lesion, etc. can't be ruled out without tissue sampling. As mentioned above, splenic origin is thought less likely but can't be definitively ruled out.
- Moderate inflammatory bowel disease (IBD) pattern – Thick muscularis has been reported with infiltrative bowel disease including both benign inflammatory disease as well as infiltrative neoplasia such as lymphoma. No loss of layering or distinct characteristics of malignancy are present. Therefore, differentials cannot be further ranked without tissue sampling.

SECONDARY FINDINGS

- Hyperechoic adrenal nodule in the cranial pole of the left adrenal – Differentials include primary adrenal cortical adenoma or adenocarcinoma, pheochromocytoma, myelolipoma, adrenal hyperplasia secondary to pituitary disease or metastatic disease. Ultrasound alone cannot differentiate between functional and non-functional nodules and/or between benign and malignant disease. Small nodules without other evidence of abdominal disease (to suggest metastatic disease) and/or clinical signs (to suggest adrenal disease) are most often incidental and should be monitored.
- Mild age-related kidney changes.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.

As is reportedly already pending, fine needle aspirates of the mass are recommended if patient's coagulation status is appropriate.



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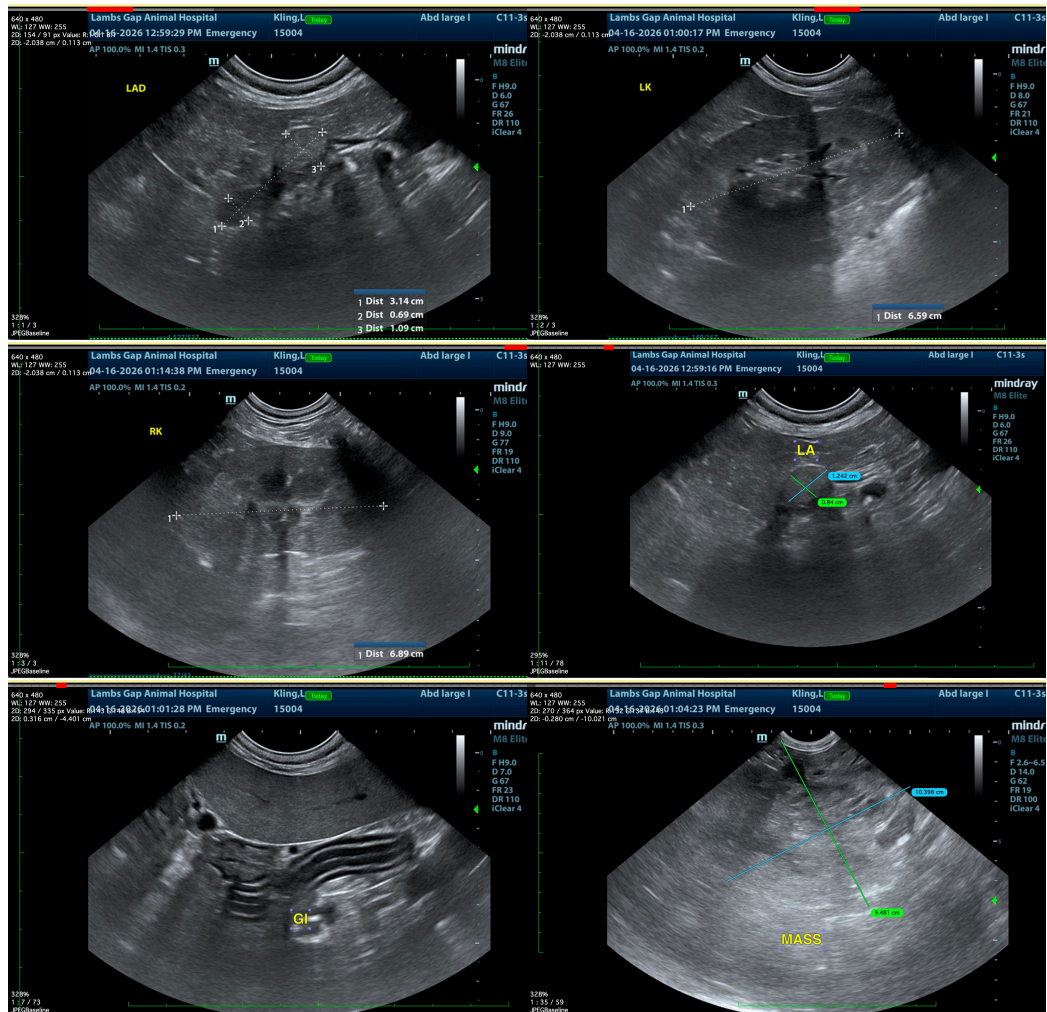
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In the meantime, given patient's reported diarrhea combined with the bowel changes observed above, etc. further gastrointestinal workup recommendations could include a routine fecal/giardia exam is recommended if not recently evaluated.

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.

While continuing workup, supportive/symptomatic medical management of clinical signs is recommended, including a probiotic (such as visbiome or proviable), empirical deworming with a 5-day course of Panacur and, if tolerated, a transition in diet, based on trial-and-error response, beginning possibly with a gastrointestinal biome diet vs a hydrolyzed protein diet vs other. Some patients respond to one brand/version of a hydrolyzed protein diet better than another brand, so several brand attempts may be required.





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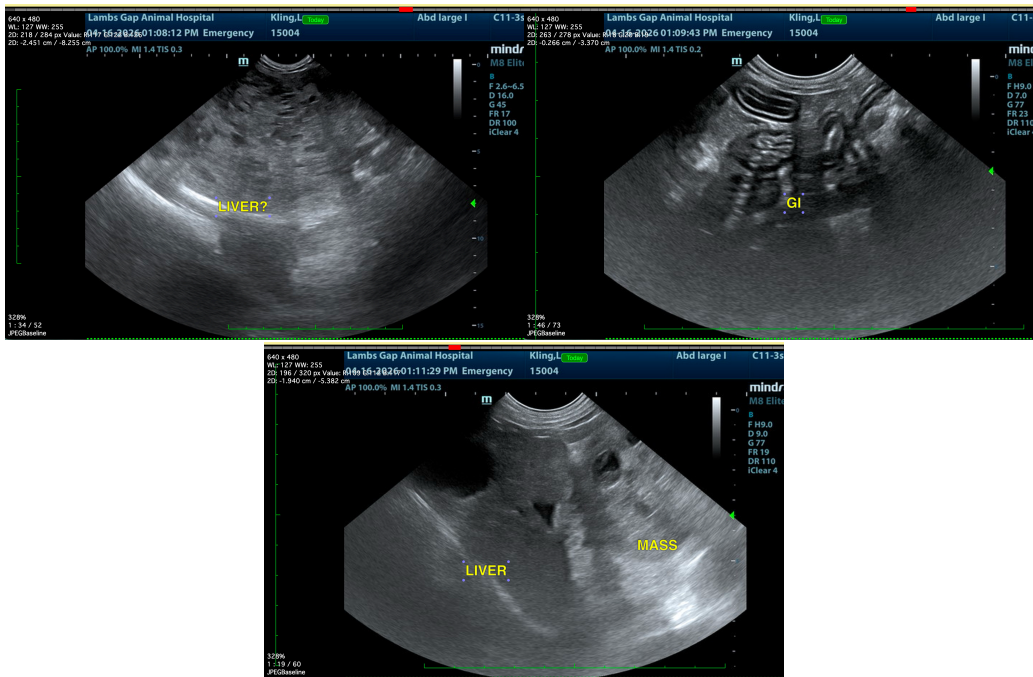
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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