

**PATIENT**

Kili Godwin

**PRESENTING CLINICAL SIGNS**

Presented for annual exam, has had some weight loss &amp; vomits approx 3 times weekly

Abnormal PE/Chem/CBC/UA Results: Elevated ALT 648, ALP 63, Total Bili 0.7, normal fPL

**SPECIES**

Feline

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****Urinary System****BREED**

DLH

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 incidental suspended lipid in a cat, possibly combined with exfoliated cells, mucous and/or small blood clots. Both sterile inflammation as well as urinary tract infection can also present with echogenic debris. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

**SEX**

Spayed Female

The right kidney is normal in size (4.51 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.

**AGE**

9 Years

The left kidney is normal in 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.

**WEIGHT**

14.8 Pounds

**Adrenal Glands**

The right adrenal gland is normal in size (0.43 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**INTERPRETED BY**Beth Johnson, DVM  
DACVIM

The left adrenal gland is normal in size (0.52 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**Spleen****IMAGING PERFORMED BY**

Amy Mayhew, LVT

Spleen is subjectively increased 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**

The 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.

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Oxford Vet Hospital

The gallbladder wall is normal and smooth in appearance. However, the gallbladder appears subjectively overdistended with anechoic contents, and the cystic and common bile duct are tortuous and dilated as well, measuring 0.80 cm dilated with no visible evidence of an obstructive cause such as a nodule, stone, sludge, etc. present in these images at this time.

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**Gastrointestinal****DATE**

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The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) 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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svsimagingmi@gmail.com**PATIENT**

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The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). 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.

**SPECIES**

Feline

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

***Pancreas*****BREED**

DLH

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

**SEX**

Spayed Female

***Free Abdomen***

There is no evidence of free peritoneal effusion noted in these images.

**AGE**

9 Years

The mesenteric lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

**ULTRASONOGRAPHIC FINDINGS**

- **Overdistended gallbladder and dilated cystic and common bile duct** – suggestive of a post-hepatic obstruction, the cause of which is not visible in these images at this time. Therefore, differentials include potentially sludge, mucus, or debris, even a cholecystolith that previously passed and this is residual dilation, or a nodule, mass, stone, etc. still present that just isn't able to be seen at this time, versus sand and debris secondary to cholangitis/cholangiohepatitis without an overt obstruction.
- **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.
- **Reactive mesenteric lymph nodes** – infiltrative neoplastic disease cannot be ruled out but is considered less likely.
- Urinary bladder debris

**WEIGHT**

14.8 Pounds

**INTERPRETED BY**Beth Johnson, DVM  
DACVIM**IMAGING PERFORMED BY**

Amy Mayhew, LVT

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Given this patient's combined clinical signs of vomiting and weight loss as well as an increased ALT, without a concurrently increased ALP and only mildly increased total bilirubin, testing for hyperthyroidism is recommended with a T4 and a free T4.

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.

The appearance of the spleen trends towards the benign. However, given the mild splenomegaly and this patient's weight loss, a fine needle aspirate of the spleen is recommended if patient's coagulation status is appropriate, and recommendations are to premedicate with diphenhydramine prior to the aspirate.

In the meantime, treatment recommendations for suspect cholangitis/cholangiohepatitis include fluid therapy, anti-emetics, gastroprotectants, hepatic nutraceuticals such as ursodiol and/or Denamarin, and broad spectrum antibiotics. Nutritional support is critical to prevent/manage concurrent hepatic lipidosis, so appetite stimulants and/or, if indicated, feeding tube placement is also recommended. If

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either clinical and/or laboratory improvements are not noticed, and/or signs and/or laboratory changes progress, recheck imaging is recommended.

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Feline

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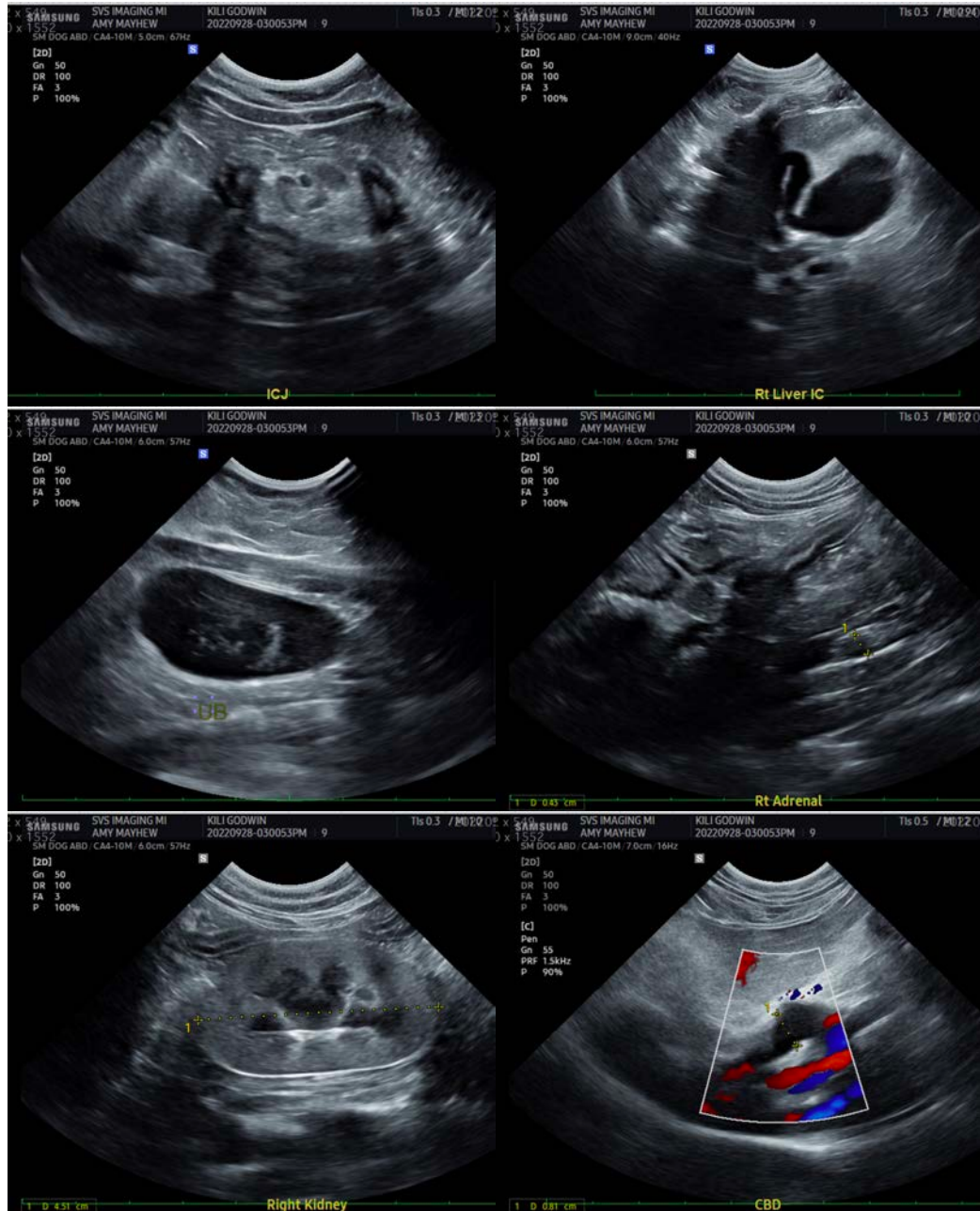
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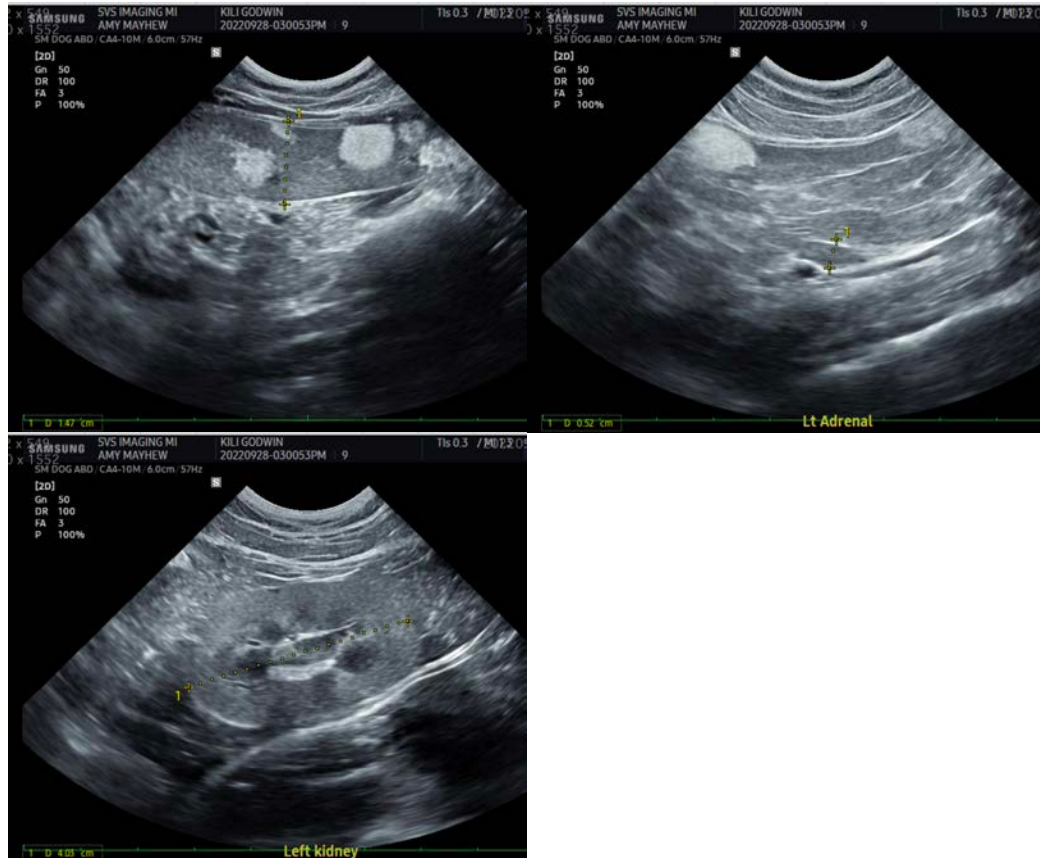
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**AGE**

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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.

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