



**PATIENT**

Goldie Kuddar

**SPECIES**

Canine

**BREED**

Labrador Retriever

**SEX**

Spayed Female

**AGE**

12 Years

**WEIGHT**

60 Pounds

**INTERPRETED BY**

Kathleen Sennello DVM,  
MS, Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**IMAGING  
PERFORMED BY**

Dr. Tam Mengine

**HOSPITAL NAME**

Stoney Creek VH

**REFERRING VET**

Dr. Tam Mengine

**INVOICE**

36072

**DATE**

3/10/22

**PRESENTING CLINICAL SIGNS**

Patient presented yesterday for several days of large bowel diarrhea and inappetence, second occurrence in 2.5 months. Equivocal PU/PD. On bloodwork, ALT 144, ALP 766 (up from ALT 130, ALP 400 in 9/21). U/A pending, blood pressure pending.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is moderately distended with anechoic urine. The Bladder wall largely appears normal with no evidence of diffuse thickening. There is an elongated, somewhat polypoid mass lesion evident towards the apex of the urinary bladder, measuring 2.2 cm in length and 0.47 cm in width at the base of the mass effect. This could be consistent with a tumor, benign polyp, or even attached debris. The area of the trigone, ureteral papillae and visible urethra (to a depth of 2cm) appears free of any mucosal irregularities, mass effects, or calculi.

The left kidney has a normal shape and size (5.86 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (5.83 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**Adrenal Glands**

The left adrenal gland is large in size measuring 0.97 cm at the cranial pole, 1.44 cm at the caudal pole, and 2.7 cm in length. It is observed in its normal position cranial to the left renal artery. It is somewhat irregular in appearance in that it is large, and the caudal pole is rounded, creating a mass effect. There is no obvious evidence of vascular invasion observed.

The right adrenal gland is normal in size measuring 0.49 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

**Spleen**

The spleen is subjectively normal in size and the echotexture is homogenous. The splenic capsule is smooth with no visible irregularities. Rare discrete focal hyperechoic, perivascular parenchymal abnormalities are present. The appearance of these lesions is most consistent with benign splenic myelolipomas. The blood flow through the hilus and splenic parenchyma appears normal.

**Liver**

The liver is large in size, and normal in echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.



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**Gastrointestinal**

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Jejunum wall measured 0.32 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering. Colon wall measures 0.18 cm.

**Pancreas**

The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

**Free Abdomen**

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

**ULTRASONOGRAPHIC FINDINGS**

- Narrow based polypoid mass effect within the urinary bladder – Differentials include benign polyp, transitional cell carcinoma, attached bladder debris, etc.
- Enlarged caudal pole of the left adrenal gland – Left/right adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.
- Large, heterogeneous liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The combination of the enlarged left adrenal gland and the heterogeneous liver with liver enzyme elevations (primarily ALP) is possibly consistent with adrenal dependent hyperadrenocorticism. Consider adrenal function testing, blood pressure evaluation, etc. Here are my recommendations for an adrenal mass:

There is an enlarged left adrenal gland visualized. I do not see evidence of clear vascular invasion, but it is still possible. These mass lesions can be benign or malignant and can secrete hormones or be non-active. Options moving forward include:

- If signs of cushings are present, consider adrenal function testing. I prefer an ACTH stimulation test combined with an adrenal panel to the University of Tennessee's endocrine lab to look for



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atypical adrenal hormones as well as cortisol. (other testing can suffice)

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- If adrenal dependent cushings is suspected and supported by adrenal function testing consider medical therapy with lysodren or trilostane and/or consider surgical removal (recommend referral to a board certified veterinary surgeon and possible pre op CT)-This can be a challenging surgery with significant risk for complication

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- Recommend blood pressure evaluation-if hypertensive consider testing catecholamine levels for a possible pheochromocytoma

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- Due to the invasive nature of these masses a CT scan is recommended to evaluate for metastasis and vascular invasion.
- If no symptoms of cushings are present, consider either referral for surgery or if surgery is not an option consultation with a veterinary oncologist regarding chemotherapeutic options and continued monitoring with ultrasound (in 4-6 weeks) can be considered.

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Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.

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Although the adrenal mass is a significant finding, I suspect it is not directly associated with the symptoms this dog presented for. Recommend general symptomatic treatment for colitis. If symptoms continue to recur, consider a colonoscopy. Additionally, recommend screening for large bowel parasites and empirical treatment, and additional screening for clostridia and other infectious causes of large bowel diarrhea.

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There is a narrow based lesion within the urinary bladder. This appears somewhat polypoid, but a definitive diagnosis of a bladder mass cannot be determined by ultrasound alone.

- Recommend urinalysis and culture. If infection is present, then re-evaluate the urinary bladder with ultrasound approximately two weeks into the course of antibiotics to see if it is improving. Recommend continued antibiotics with intermittent culturing until the lesion has completely resolved, and two weeks beyond resolution of the lesion.

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- If urine culture is negative, or the lesion does not resolve with antibiotics, then consider urine evaluation for the BRAF mutation seen in patients with transitional cell carcinomas. If this test is positive, it would increase the likelihood of a cancerous lesion. If BRAF testing is negative, this is considered a non-diagnostic test, and traumatic catheterization would be recommended to obtain representative cells for cytology, or cystoscopy could be considered to biopsy the lesion.

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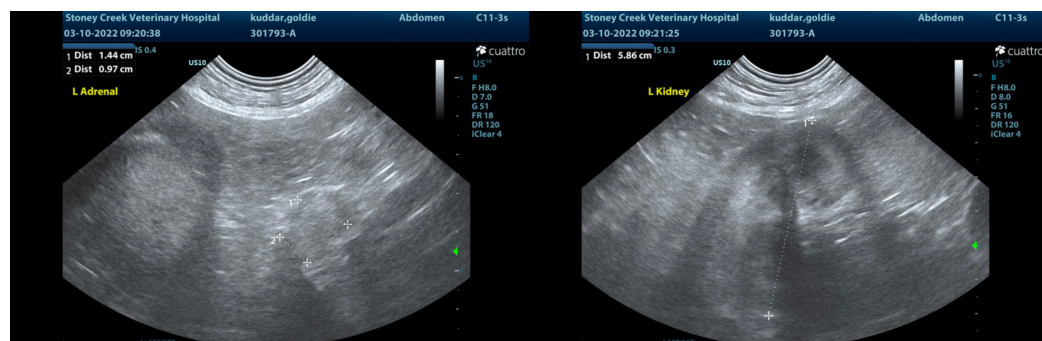
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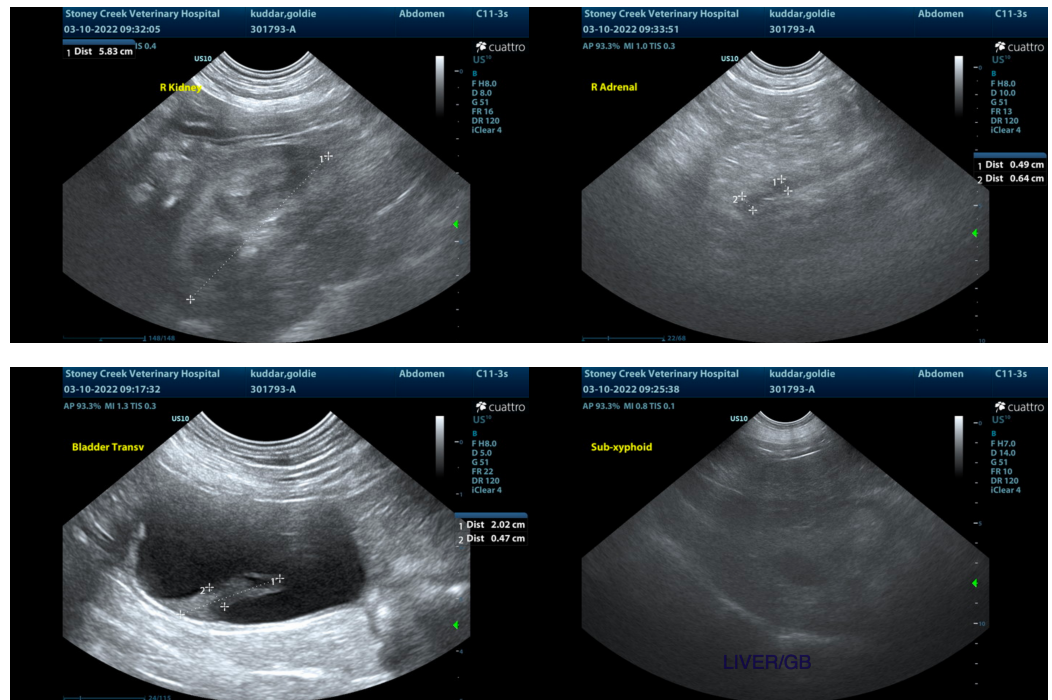
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)

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