

**DATE PRESENTING CLINICAL SIGNS**

1/25/23 Progressive, severe weight loss (BCS=2/9). No vomiting/diarrhea. Was 77 lb in 12/2021, 42 lb today. See previous intrapet report. No foreign material visualized to be passed--abd explore/biopsies was not performed. ER diagnosed hypoT4 at same time as AUS, so started on thyroxine 0.5 mg BID. PU/PD starting in Sept. Empiric round of amoxi with inactive sediment--no improvement. BW stable-->listed below

PATIENT

TJ Krabitz

SPECIES

Canine

BREED

Golden Retriever

SEX

Neutered Male

AGE

10/21/14

WEIGHT

42.7 Pounds

INTERPRETED BYBeth Johnson, DVM
DACVIM**HOSPITAL NAME**

Paradise AH

REFERRING VET

Dr. Riehl

INVOICE

44488

Current Medications: Thyroxine 0.5 mg BID, Adrenal Harmony Gold Supplement: o thinks has helped PU/PD
Lab Results: BW in Sept: GGT 23 (0-13), Alb 2.8 (2.7-3.9), BUN 10 (9-31), T4=1.7, USG=1.010. Recheck BW pending.

Date of Previous IntraPet Ultrasound: 12/22/21. See attached.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

Imaging Performed By: Rachel Brillhart, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**Urinary System**

The urinary bladder is moderately 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 in size (7.49 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 in size (7.29 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.

Adrenal Glands

Adrenal glands are mildly plump/swollen in size. Normal shape and contour are maintained without evidence of capsular invasion. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal. The right adrenal gland measures 3.09 cm long x 1.14 cm at the cranial pole and 1.1 cm at the caudal pole. The left adrenal gland measures 3.53 cm long x 0.93 cm at the cranial pole and 0.89 cm at the caudal pole.

Spleen

Spleen is generally normal in size and shape with a smooth capsular contour. Parenchyma is diffusely nodular in appearance characterized by small discrete hypoechoic nodules. Splenic vasculature appears normal.

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.

Gallbladder is moderately distended with anechoic bile as well as mild to moderate 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

Fundic mucosal hypertrophy with hyperechoic mucosa and some mucosal remodeling is noted. There is no loss of mural detail. Layering is normal. There is mild luminal fluid accumulation. No evidence of masses/nodules or foreign material present.

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.

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 evidence of free peritoneal effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

The right auricle and pericardium are unremarkable without evident pathology. The heart appears subjectively bradycardic. If cardiac function is desired, a full echocardiogram is recommended.

PRIMARY FINDINGS

- **Bilateral adrenomegaly** – consistent with adrenal hyperplasia secondary to pituitary dependent hyperadrenocorticism vs stress or normal variant. Interpret in combination with clinical signs of hyperadrenocorticism.
- **Gastritis** – Consistent with irritation secondary to dietary indiscretion or intolerance, infection (bacterial, viral, other), parasitic or protozoal disease, toxin, other metabolic disease such as pancreatitis, other. Microulceration cannot be ruled out.
- **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.

SECONDARY FINDINGS

- **Mild to 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 abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.
- **Splenic micronodular hyperplasia pattern** – This nodular change is often associated with benign aging nodular hyperplasia. Infiltrative neoplasia, however, including both early hemangiosarcoma as well as round cell neoplasia cannot be ruled out.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is no evidence ultrasonographically of an obstructive pattern or the suspicious foreign material appreciated a year ago. Given this patient's reported progressive weight loss combined with the appearance of the pancreas, 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.

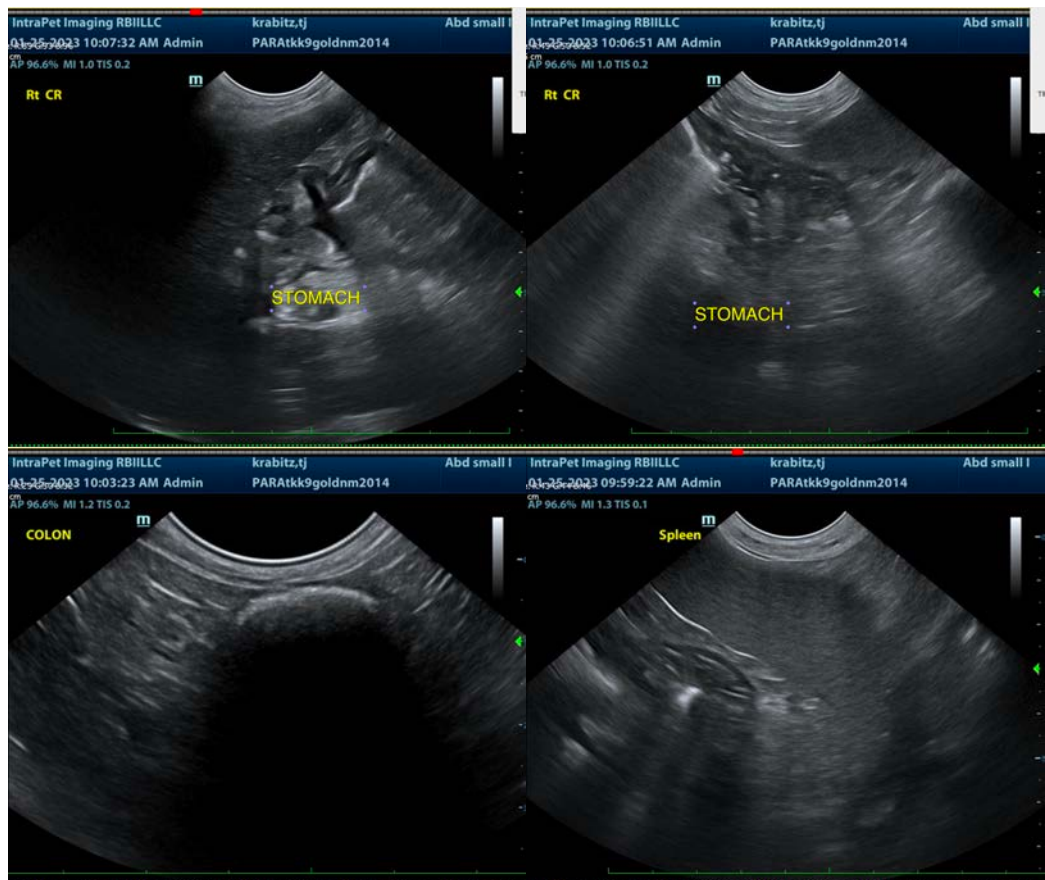
Additionally, given the low normal albumin and low normal BUN, bile acid testing could be considered.

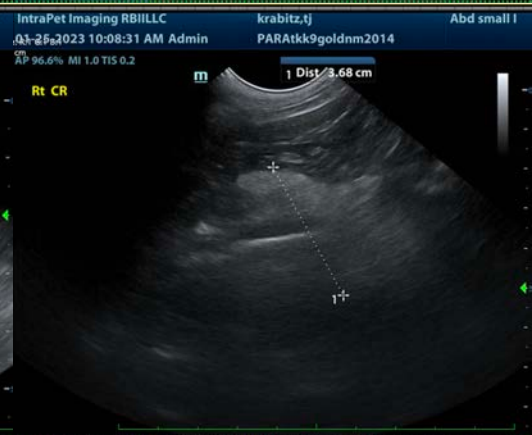
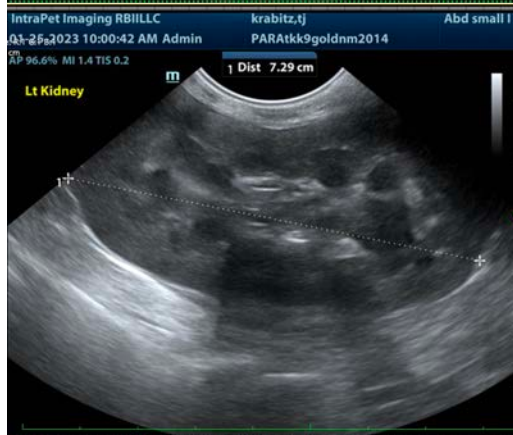
Finally, pending results, a baseline cortisol is recommended. If baseline cortisol is less than 2, a full ACTH stimulation test is recommended to rule out hypoadrenocorticism.

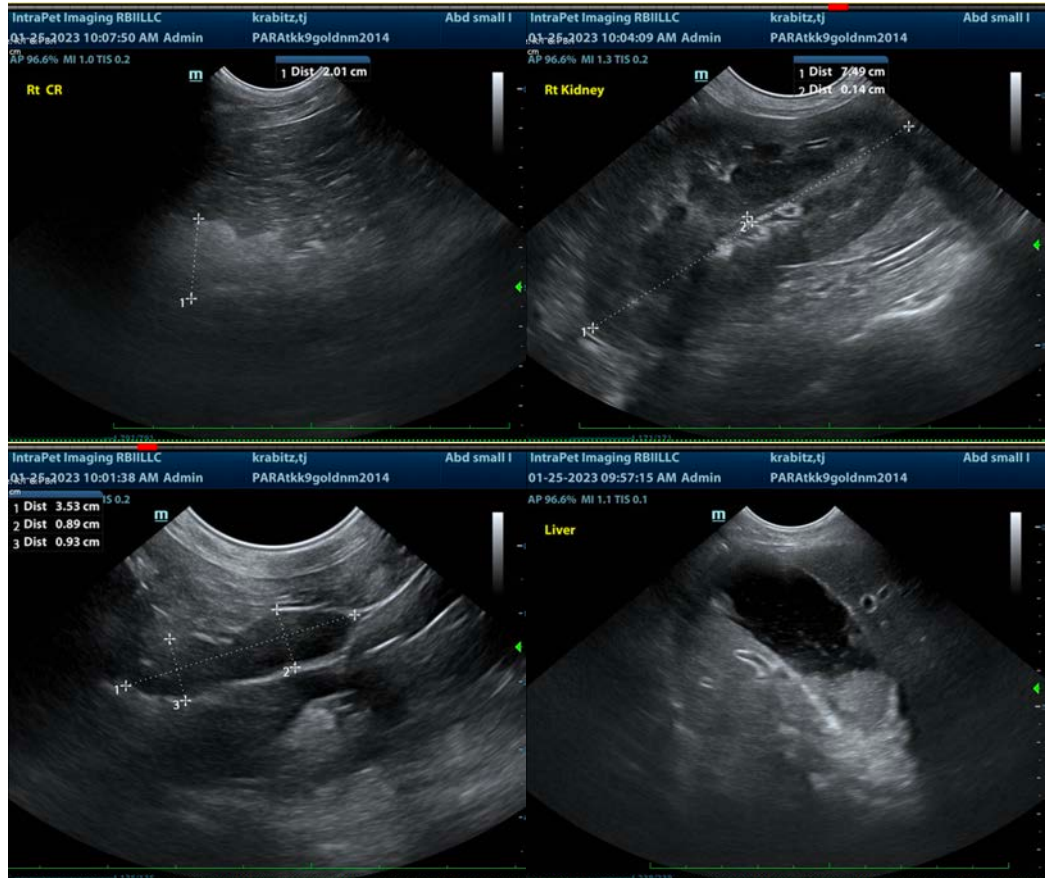
As is reportedly already pending, a recheck T4 level is indicated in case this patient's original hypothyroid diagnosis was sick euthyroid syndrome, and potentially the thyroid supplement is contributing to the ongoing weight loss, as well as the newly developed PU/PD, in which case the thyroid supplement could be temporarily discontinued with monitoring of patient's clinical signs for improvement.

In the meantime, empirical deworming with a 5-day course of Panacur is recommended, as is close evaluation of patient's daily caloric intake to ensure that there is not an inadvertent calorie restriction, followed potentially by a transition in diet to a more calorically dense diet, or potentially if an allergy is suspected, hydrolyzed protein diet, etc.

Ultimately, if a diagnosis is not obtained, and clinical signs persist, and exploratory laparotomy is still indicated for further evaluation visually of the gastrointestinal tract, as well as full thickness biopsies.







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
Beth.Johnson@sonopath.com