

**DATE PRESENTING CLINICAL SIGNS**

2/23/22

Pet presented for routine bloodwork in order to have Thyroxine dispensed on 2/8/22. Several abnormalities were noted on the bloodwork (see below) and further work up was recommended. After results were received AUS was recommended. Pet is asymptomatic at home.

**PATIENT**

Kodi Gilligan

Current Medications: Thyroxine 0.2mg SID (started prior to becoming a client here in 9/21), Gabapentin 50mg upon arrival to the hospital.

**SPECIES**

Canine

Lab Results: 2/8/22: Lymphocytes 0.992 (1.06-4.95), ALT 161 (18-121), ALP 1056 (5-160), GGT 14 (0-13), Chol 489 (131-345), Lipase 408 (0-250), TT4 (406 hr post pill) 3.0 (2.1-5.4 therapeutic). UA- USG 1.040, pH 7.5, Protein 2+ Ammonium mg phosphate 2+. 2/11/22 UPC 1.3 (>0.5 proteinuric). UCCR 141 (>34 hyperadrenocorticism is possible). Spec CPL 390 (0-200). 2/15/22 Bile Acid testing: pre 2.8 (0-14.9), post 11.5 (0-29.9).

**BREED**

Poodle

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

**SEX**

Neutered Male

**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.

**AGE**

8/23/11

Prostate (neutered) is normal in size, echotexture and echogenicity for a neutered male.

**WEIGHT**

17.8 Pounds

The right kidney is normal in size (4.67 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.

**INTERPRETED BY**Beth Johnson, DVM  
DACVIM

The left kidney is normal in size (4.57 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.

**IMAGING PERFORMED BY**

Rachel Brilhart RDMS

**Adrenal Glands**

The left adrenal gland is enlarged in size (2.28 cm long x 0.77 cm at the cranial pole and 0.91 cm at the caudal pole). Normal shape and contour are maintained. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**HOSPITAL NAME**

Westminster VH

The right adrenal gland is enlarged in size (2.61 cm long x 0.97 cm at the cranial pole and 0.79 cm at the caudal pole). Normal shape and contour are maintained. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**REFERRING VET**

Dr. Hall

**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.

**INVOICE**

35848

**Liver**

Liver is subjectively enlarged. Margins are smooth but round. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

GB contains a moderate amount of non-dependent, mildly aggregated/inspissated sludge. Hypo to anechoic cystic areas are noted between the gallbladder sludge and luminal wall. The wall is otherwise smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion.

### ***Gastrointestinal***

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.

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. There is mild hyperechoic speckling throughout the mucosa.

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 is diffusely prominent in size and mildly irregular in shape with a diffusely coarse echotexture and heterogeneous to hyperechoic echogenicity.

### ***Free Abdomen***

There is no evidence of peritoneal effusion. mesenteric lymph nodes are prominent and hypoechoic, maintaining normal elongated shape.

## **PRIMARY FINDINGS**

- Early mucocele – 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. The non-dependent nature of this sludge combined with the cystic areas are suggestive, however, of possible emerging cystic mucosal hyperplasia or early gallbladder mucocele.
- Hyperechoic hepatomegaly canine – most consistent with benign steroid (endocrine) hepatopathy or reactive or idiopathic hepatopathy. Infiltrative neoplasia such as round cell neoplasia is also possible, but considered less likely.
- Bilateral adrenomegaly – consistent with adrenal hyperplasia secondary to pituitary depending hyperadrenocorticism vs normal variant.

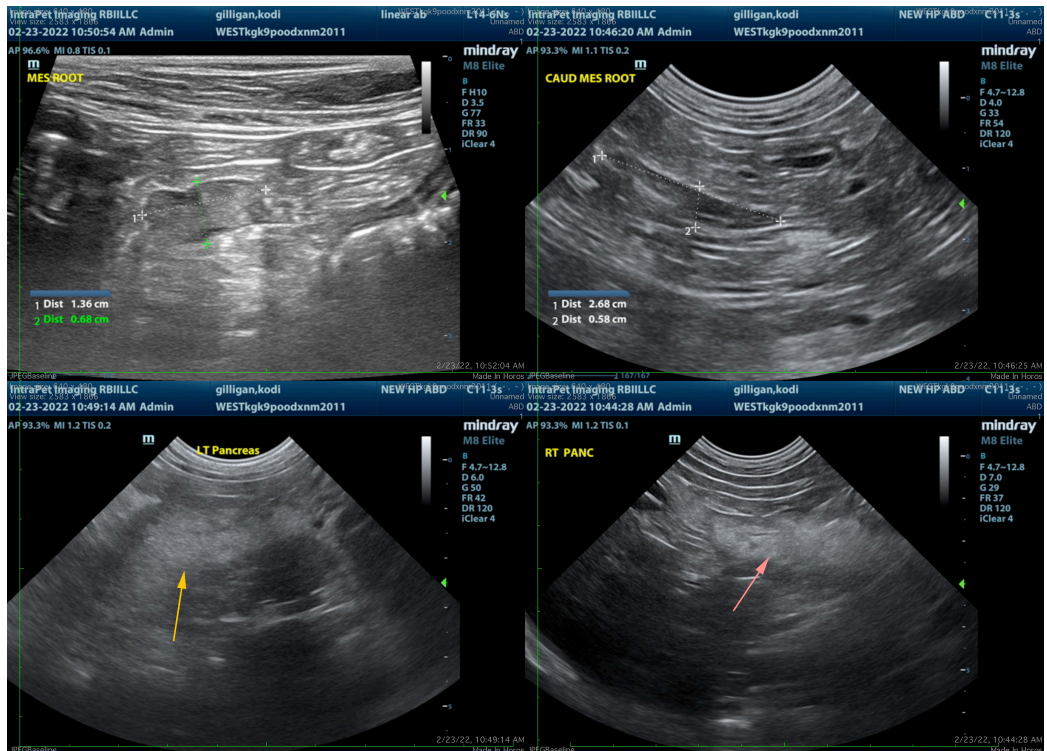
## **SECONDARY FINDINGS**

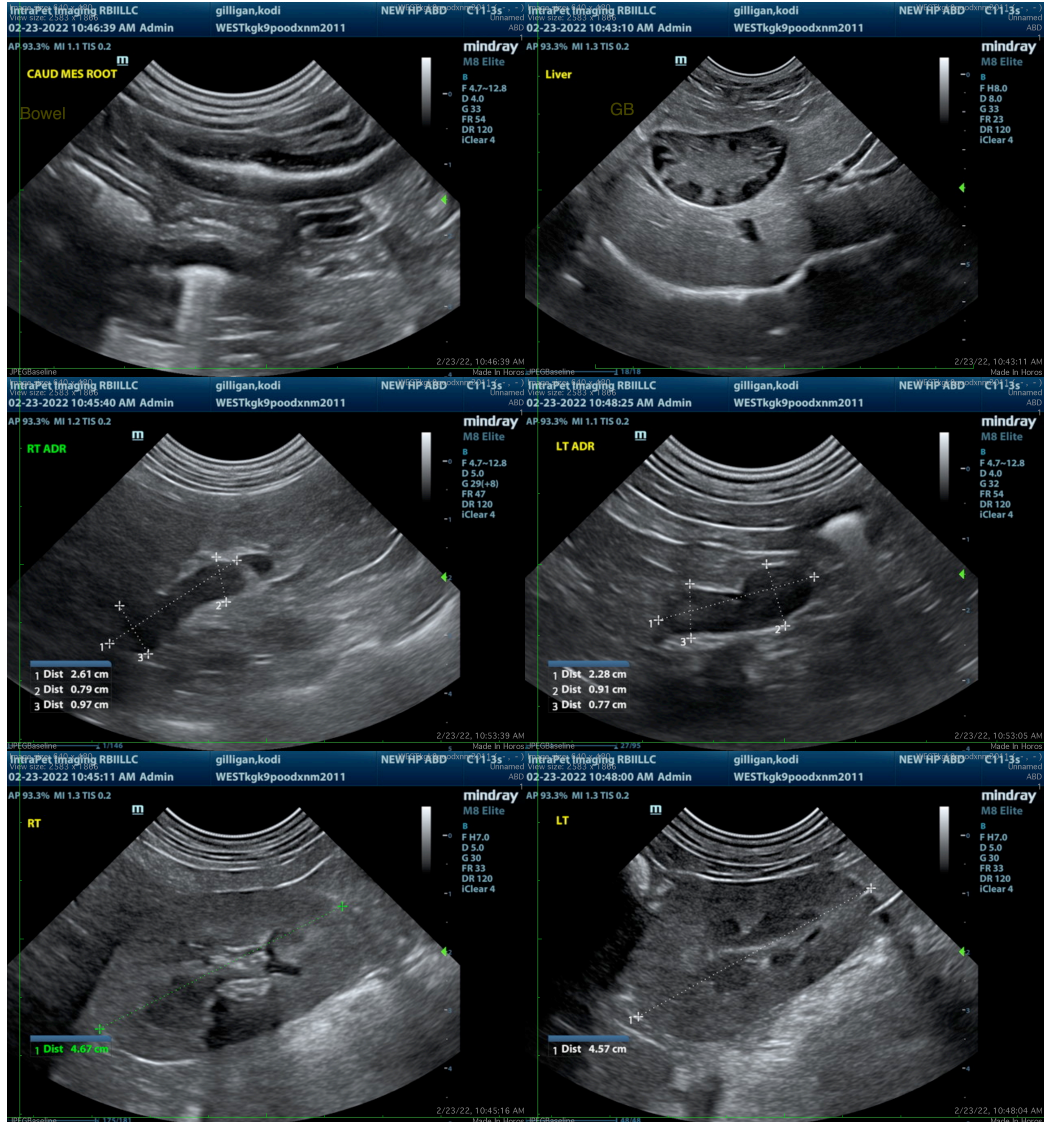
- Chronic pancreatitis
- Mild hyperechoic small bowel mucosal speckling – This is a non-specific finding that can be associated with inflammatory bowel disease.
- Mesenteric lymphadenopathy – Most likely reactive. Infiltrative neoplasia cannot be ruled out, but is considered less likely.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the reported liver enzyme increases combined with the bilateral adrenomegaly, recommendations include a low-dose Dexamethasone suppression test for further investigation of possible hyperadrenocorticism, if clinical signs of hyperadrenocorticism such as polyuria, polydipsia, polyphagia, etc. are present. If clinical signs of hyperadrenocorticism are not present and/or hyperadrenocorticism is not diagnosed, recommendations would include addressing the emerging mucocele with a course of broad-spectrum antibiotics and Ursodiol with monitoring of the ALP for improvement while on antibiotics. If the ALP improves, recommendations are to continue antibiotics until the value has completely resolved and/or plateaued.

If clinical signs of a mucocele develop such as decreased appetite, cranial abdominal pain, nausea, etc., a cholecystectomy is recommended over medical management and monitoring. If there are any gastrointestinal signs present such as diarrhea, weight loss, etc., further workup of possible inflammatory bowel disease (beginning with a gastrointestinal malabsorption panel to include TLI, PLI, folate and cobalamin to Texas A&M GI laboratory) could be considered, as could a fine needle aspirate of the enlarged mesenteric lymph nodes. However, if gastrointestinal signs are not present, this could be considered an incidental finding with monitoring being a reasonable approach.





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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