

**DATE PRESENTING CLINICAL SIGNS**

10/20/22 PU/PD for unknown length of time and increased anxiety (Seeming disoriented).

**PATIENT** Current Medications: No known medications.

Nacho Ariza-Davidson

Lab Results: Mild hypoglycemia 65, Increased BUN 62.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Dexdomitor/Torbugesic.

Stat Report: Not requested.

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****BREED**

Yorkie

**Urinary System**

Urinary bladder is adequately distended with primarily anechoic contents and occasional echogenic non-shadowing debris. Apical urinary bladder wall is diffusely thick (0.50 cm). An echogenic avascular density/polyp/nodule is noted along the dorsal wall of the urinary bladder with a 0.40 cm base that extends 0.70 cm into the lumen. Mucosa is hyperechoic and irregular. The trigone and visible pelvic urethra are normal thickness with a smooth mucosal surface.

**SEX**

Neutered Male

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

**AGE**

12/18/08

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. The left kidney measured 3.93 cm. The right kidney measured 3.42 cm.

**WEIGHT**

11.3 Pounds

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**Adrenal Glands**

The right adrenal gland is normal in size (1.72 cm long x 0.47 cm at the cranial pole and 0.32 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**IMAGING PERFORMED BY**

Stephanie Warga  
RDCS, RVT

The left adrenal gland is normal in size (2.0 cm long x 0.41 cm at the caudal pole and 0.48 cm at the cranial pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**HOSPITAL NAME**

Eastern AH

**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.

**REFERRING VET**

Dr. Valero

**Liver**

Liver is subjectively enlarged (swollen contour) without disruption of architecture. 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 and falciform fat. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

**INVOICE**

42244

Gallbladder is moderately distended with anechoic bile as well as 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***

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with very echogenic reverberation artifact from intraluminal gas. There is no evidence of obstruction, foreign material or infiltrative disease; however, complete visualization of far wall is partially inhibited by gas. 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.

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

### ***Pancreas***

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.

### ***Free Abdomen***

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

There is no apparent lymphadenopathy noted in these images.

## **PRIMARY FINDINGS**

- **Echogenic density in the urinary bladder** – This appears to be adherent tissue versus mucus/debris, although mucus/debris cannot be definitively ruled out, given the lack of vascularity. If it is a tissue growth as suspected, top differentials are benign polyp. Infiltrative neoplasia such as transitional cell carcinoma is possible but considered much less likely. While rare/uncommon, given this patient's reported PU/PD and hypoglycemia, a leiomyoma or leiomyosarcoma of the urinary bladder could be considered as well.
- **Hyperechoic hepatomegaly** - This appearance is non-specific and most consistent with a benign steroid (endocrine) or vacuolar hepatopathy or reactive or idiopathic hepatopathy. Inflammatory and/or infiltrative disease (such as round cell neoplasia) are also possible, but considered less likely.

## **SECONDARY FINDINGS**

- **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.
- Age related kidney changes

## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

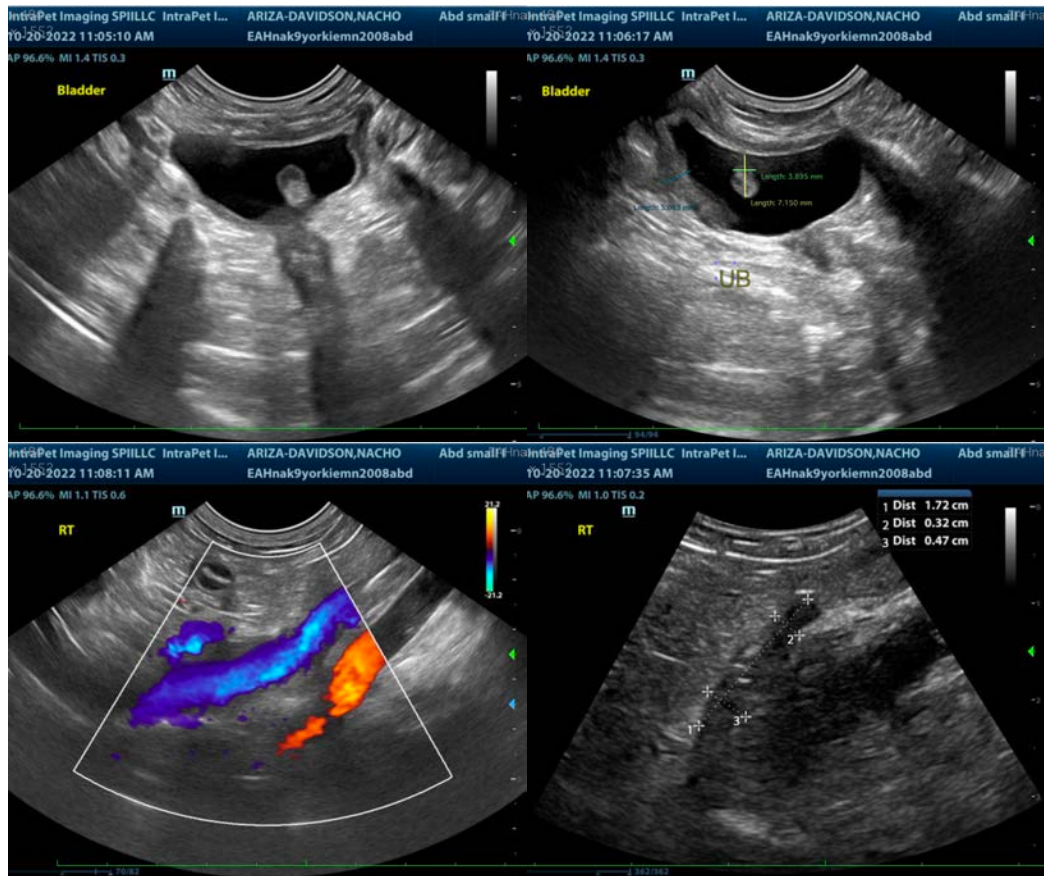
Given this patient's reported hypoglycemia and disorientation, etc., workup of the hypoglycemia is recommended beginning with a baseline cortisol. If baseline cortisol is less than 2, a full ACTH stimulation test is recommended to rule out hypoadrenocorticism.

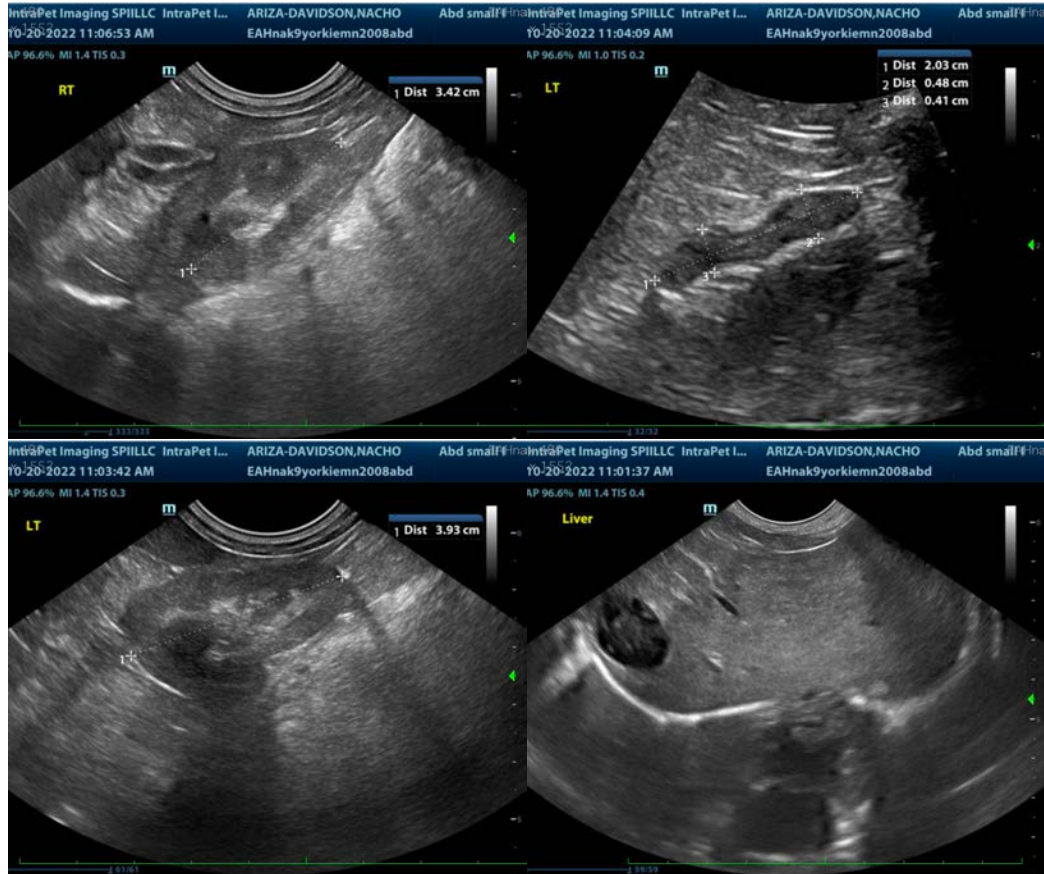
Bile acids are recommended.

An insulin to glucose ratio is recommended at a time when the glucose is <50.

Urinalysis and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended.

Ultimately, especially if the urinary bladder polyp/mass is believed to be contributing to the hypoglycemia and/or PU/PD, tissue sampling is recommended. A fine needle aspirate could be tried if patient's coagulation status is appropriate. However, given the small size, a cystoscopy or cystotomy obtained biopsy/removal may be necessary.





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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