



**PATIENT**

Balthazar Zajac

**SPECIES**

Canine

**BREED**

German Shepherd

**SEX**

Neutered male

**AGE**

6 years

**WEIGHT**

55 lbs

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING PERFORMED BY**

Dr. Myers

**HOSPITAL NAME**

Hershire AH

**REFERRING VET**

Dr. Myers

**INVOICE**

42269

**DATE**

11/1/22

**PRESENTING CLINICAL SIGNS**

History: Juvenile diabetic, has had chronic history of intermittent GI issues (anorexia, diarrhea, vomit). Chronic history of trouble gaining weight/keeping weight on. Recently diagnosed with bladder polyps (braf test negative). Trial of rimadyl to see if any changes in polyps, 5 days after starting rimadyl, pet had significantly decreased appetite and soft stool. Rimadyl was discontinued however pet has not rebounded and continues to have very poor appetite. Weight loss of 10 pounds in last month. significant dehydration, lethargic.

Abnormal PE/Chem/CBC/UA Results: 10/10/22: eosinophilia, bun 40, decreased glucose (over regulation of diabetes). 10/7/22: u/a: large blood, tntc cocci, rare wbc mild blood ketones today, fasted bg 575mg/dl cbc/chem/lytes/t4/resting cortisol pending after cardiac arrest. Texas GI panel done but it was years ago Resting cortisol was 2 years ago. None recently. E-lytes on recent blood work were normal though. current meds: cerenia, pepcid, zyrtek, apoquel, metronidazole, ondansetron (all po)

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

Urinary bladder is adequately distended with primarily anechoic contents and occasional echogenic non-shadowing debris. Mucosa is hyperechoic and irregular with multiple pedunculated masses extending into the lumen of the bladder. No cystoliths are observed. The trigone and visible pelvic urethra are normal thickness with a smooth mucosal surface.

The area of the prostate is examined without evidence of pathology.

Left kidney is normal is size (6.6 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. A hyperechoic band parallel to the corticomedullary border is present. Non-obstructive linear multifocal hyperechoic diverticular foci with acoustic shadowing are noted. There is no evidence of pyelectasia or infarcts observed.

Right kidney was not examined.

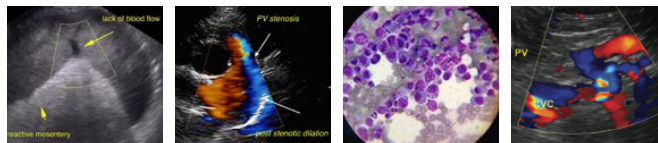
**Adrenal Glands**

The left adrenal gland is small (flattened contour). Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal. The left adrenal gland measured 0.27 cm at the cranial pole and 0.4 cm at the caudal pole.

Right adrenal gland was not examined.

**Spleen**

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.



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**Liver**

Balthazar Zajac

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.

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Gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

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The visible stomach wall is normal in thickness 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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The visible small intestines are normal in wall thickness and layering. Bowel is diffusely mildly fluid distended without evidence of an obstructive pattern, plication and/or visible foreign material. Small intestinal hyperperistalsis is noted.

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

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**Pancreas**

The observed pancreas appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

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**Free Abdomen**

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

There is no apparent lymphadenopathy noted in these images.

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**ULTRASONOGRAPHIC FINDINGS**

**Primary Findings**

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- **Gastroenteritis** – 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.
- **Flat left adrenal gland** – This can be a normal patient variant and/or a sign of exogenous cortisol administration. If exogenous steroids are not being administered, hypoadrenocorticism (either relative or absolute) should be considered.
- **Hyperechoic hepatomegaly (canine)** – 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.

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- **Medullary rim sign** - This finding is of unknown clinical significance and can be a normal variant, often idiopathic. Medullary rim sign can be present with renal disease including FIP, lymphoma, hypercalcemic nephropathy, Leptospirosis, tubular disease, other and should be interpreted in combination with other more specific indications of kidney disease such as isosthenuria, proteinuria, azotemia, etc. This is a common incidental finding in patients with diabetes mellitus.
- **Non-obstructive nephrolithiasis in the left kidney.**
- **Polypoid Cystitis** – Urinary bladder wall changes are most consistent with polypoid cystitis. Infiltrative neoplasia cannot be ruled out but is considered less likely given the appearance of the polyps.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

\*\*\*The ultrasound exam was cut short due to the patient's instability. Therefore, the right kidney and right adrenal gland was not visualized.

As is reportedly already pending especially given the patient's eosinophilia:

1. A baseline cortisol is recommended. If baseline cortisol is less than 2, a full ACTH stimulation test is recommended to rule out hypoadrenocorticism. Given the patient's critical state and reported arrest initiating at least physiologic possibly 2-3 times physiologic steroids sooner rather than later may be necessary. Therefore, performing a full ACTH stimulation test immediately rather than a baseline cortisol, which may need to be ultimately followed by a full ACTH stimulation test may be a better option to allow the administration for steroids sooner rather than later if necessary.
2. Fecal exam is recommended if not recently evaluated in addition to a recheck GI panel.
3. 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.

In the meantime, in addition to stabilizing the patient, supportive/symptomatic medical management of gastroenteritis is recommended in the form of empirical deworming with a 5 day course of Panacur, antiemetics, gastroprotectants, potentially a probiotic such as Visbiome or proviable and transition to a hydrolyzed protein diet. Additionally, given the patient's reported arrest blood pressure is recommended if not recently evaluated as are thoracic radiographs +/- an echocardiogram.



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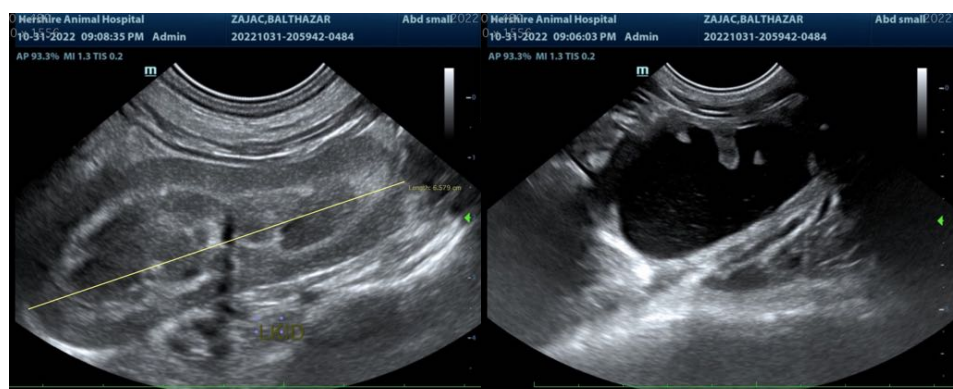
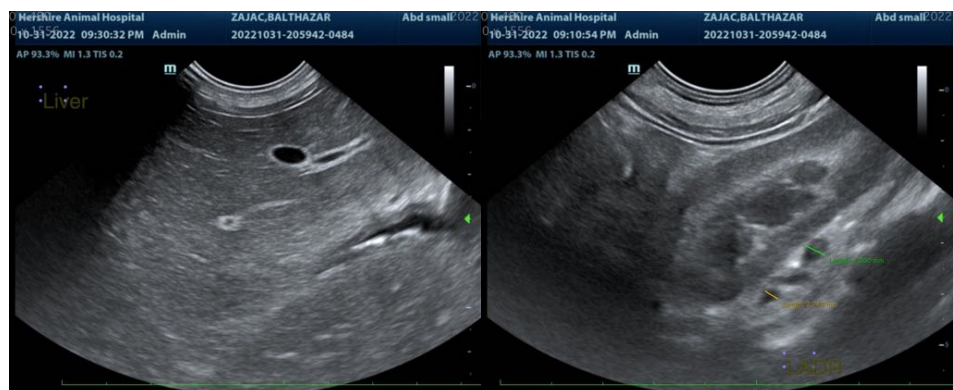
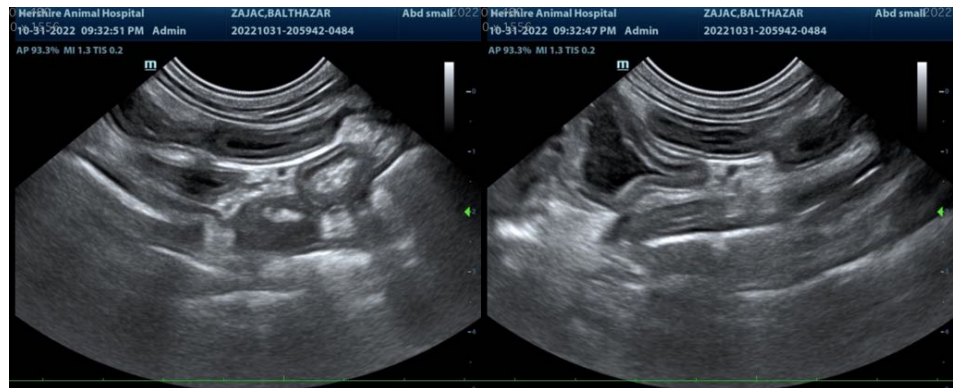
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Beth Johnson, DVM DACVIM**

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