



**PATIENT**

Isabell Birchfield

**SPECIES**

Canine

**BREED**

Great Dane

**SEX**

Spayed Female

**AGE**

9 Years

**WEIGHT**

45 kg

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING PERFORMED BY**

Hayley Heindel, CVT

**HOSPITAL NAME**

Mason Dixon Animal  
Emergency Hospital

**REFERRING VET**

Dr. Bateman

**INVOICE**

46401

**DATE**

4/5/23

**PRESENTING CLINICAL SIGNS**

v/d, decreased appetite

Abnormal PE/Chem/CBC/UA Results: PLT 36, WBC 2.9, BUN 32.7, Ca 12.8, ALT 475, ALP 159

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

Urinary bladder is adequately distended. It has a normal uniform wall thickness. Contents include primarily anechoic fluid with occasional echogenic non-shadowing debris, most consistent with exfoliated cells, mucous and/or small blood clots. Both sterile inflammation as well as urinary tract infection can also present with echogenic debris. In addition, there is a 1.2 cm shadowing cystoliths in the trigone. No masses are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The right kidney is normal in size (8.69 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 (8.94 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**

The adrenal glands are unable to be well visualized in these images.

**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.

**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.

The 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.

**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. Bowel is diffusely mildly fluid distended without evidence of an obstructive pattern, plication and/or visible foreign material. Small intestinal hyperperistalsis is noted.

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 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.

The medial iliac lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

**PRIMARY FINDINGS**

- **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.
- **Reactive medial iliac lymph nodes** – infiltrative neoplastic disease cannot be ruled out but is considered less likely.

**SECONDARY FINDINGS**

- Urinary bladder debris and cystolith

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

This patient's clinical signs and possible gastroenteritis are likely secondary to an underlying metabolic disease also resulting in the hypercalcemia, pancytopenia, etc. Next recommendations include further evaluation of the hypercalcemia via a malignancy panel to include PTH, PTHrP, and ionized calcium.

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

In the meantime, while awaiting results, if not already evaluated, a thorough rectal and perianal exam as well as peripheral lymph node palpation is recommended to look for primary causes of hypercalcemia.

Given the increased ALT, a fine needle aspirate of the liver could be considered if patient's coagulation status is appropriate and should definitely be pursued if the calcium panel/malignancy panel comes back supportive of hypercalcemia of malignancy versus hyperparathyroidism versus other.

In the meantime, supportive/symptomatic medical management of the gastrointestinal signs in the form of antiemetics, gastroprotectants, and appetite stimulant if necessary, a probiotic such as Visbiome or Provable, etc. is recommended.



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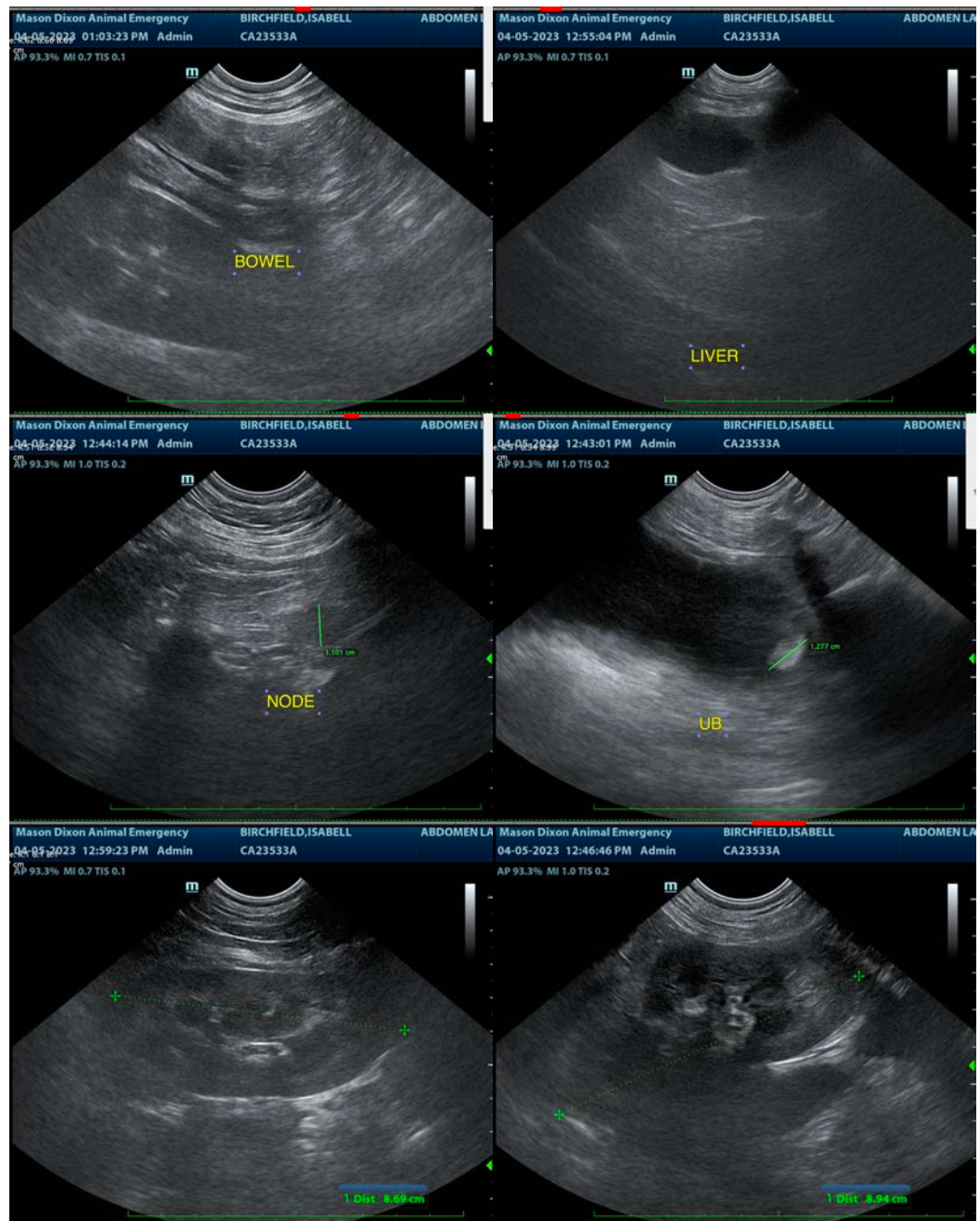
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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**  
Beth.Johnson@sonopath.com