

**DATE PRESENTING CLINICAL SIGNS**

2/7/23 Drinking a lot and urine SPG low, blood calcium and ionized calcium high.

**PATIENT** Current Medications: Mineral oil orally for constipation issues.

Lab Results: See attached.

Q DiGennaro Radiographs: See attached.

Date of Previous IntraPet Ultrasound: No previous.

**SPECIES** Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

Feline Imaging Performed By: Stephanie Warga RDCS, RVT.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****BREED****Urinary System**

DSH

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

**SEX**

Spayed Female

The left kidney has a normal shape and size (3.65 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**AGE**

11/20/10

**WEIGHT**

16 Pounds

The right kidney has a normal shape and size (4.1 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric effusion, but there is some mild generalized hyperechoic mesentery. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**INTERPRETED BY**

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MS, Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.32 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

**HOSPITAL NAME**

Pleasantville AH

The right adrenal gland is normal in size measuring 0.47 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

**REFERRING VET**

Dr. Gounaris

**Spleen**

The spleen is subjectively normal in size (0.62 cm), echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

**INVOICE**

44812

**Liver**

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is homogenous echotexture. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. The cystic and common bile ducts are normal/not visible.

### ***Gastrointestinal***

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.36cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a uniform diameter with minimal fluid distension. Wall thickness is normal to slightly increased. Bowel loops follow a typical curvilinear path with distinct wall layering, but some areas display a prominent muscularis layer which does not display the typical 1:3 muscularis:mucosa layer ratio. Jejunum wall measures 0.27 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. The proximal colon is visualized and appears slightly fluid dilated with some shadowing intraluminal material. There is no observed focal or generalized colon wall thickening or loss of layering.

### ***Pancreas***

The pancreas is mildly prominent and mottled compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

### ***Free Abdomen***

Evaluation of the peritoneal cavity did not reveal any evidence of effusion. There is no evidence of a lymphadenopathy, but there are four anechoic cystic structures visualized within the omentum, possibly consistent with cystic lymph nodes. These measure 1.14 cm, 0.96 cm, 0.93 cm, and 0.87 cm. The omentum is generally of normal echogenicity, but is slightly hyperechoic around the right kidney.

## **PRIMARY FINDINGS**

- Prominent muscularis layer to the small intestine – The small intestinal wall changes could be consistent with an underlying inflammatory process. These types of changes can sometimes be seen in normal older cats. Correlate with clinical signs.
- Four cystic omental structures – Findings are most consistent with benign cystic lymph nodes. Continued monitoring is warranted.
- Mildly hyperechoic mesentery in the region of the right kidney – The significance of this is unknown.

## **SECONDARY FINDINGS**

- Mildly prominent, mottled pancreas – The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

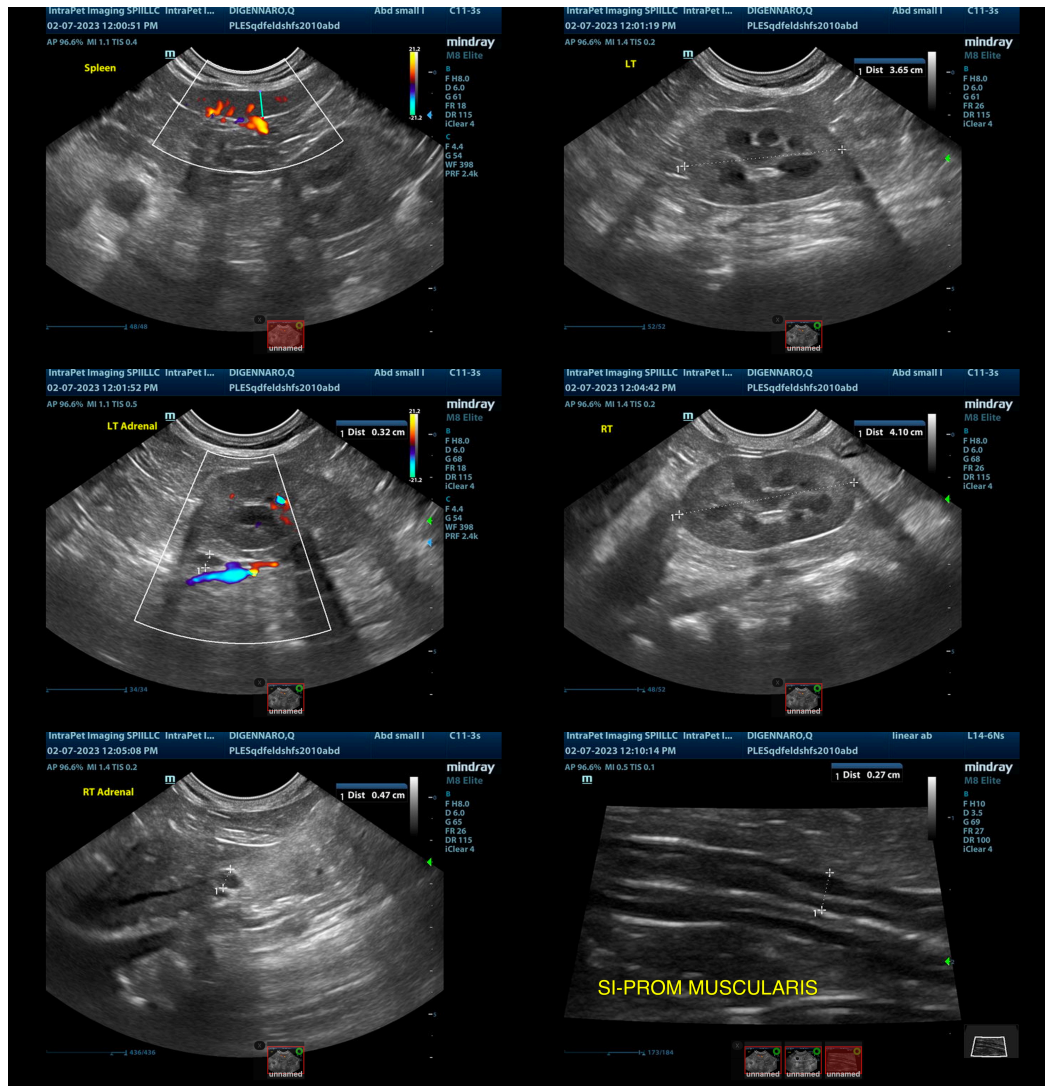
## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

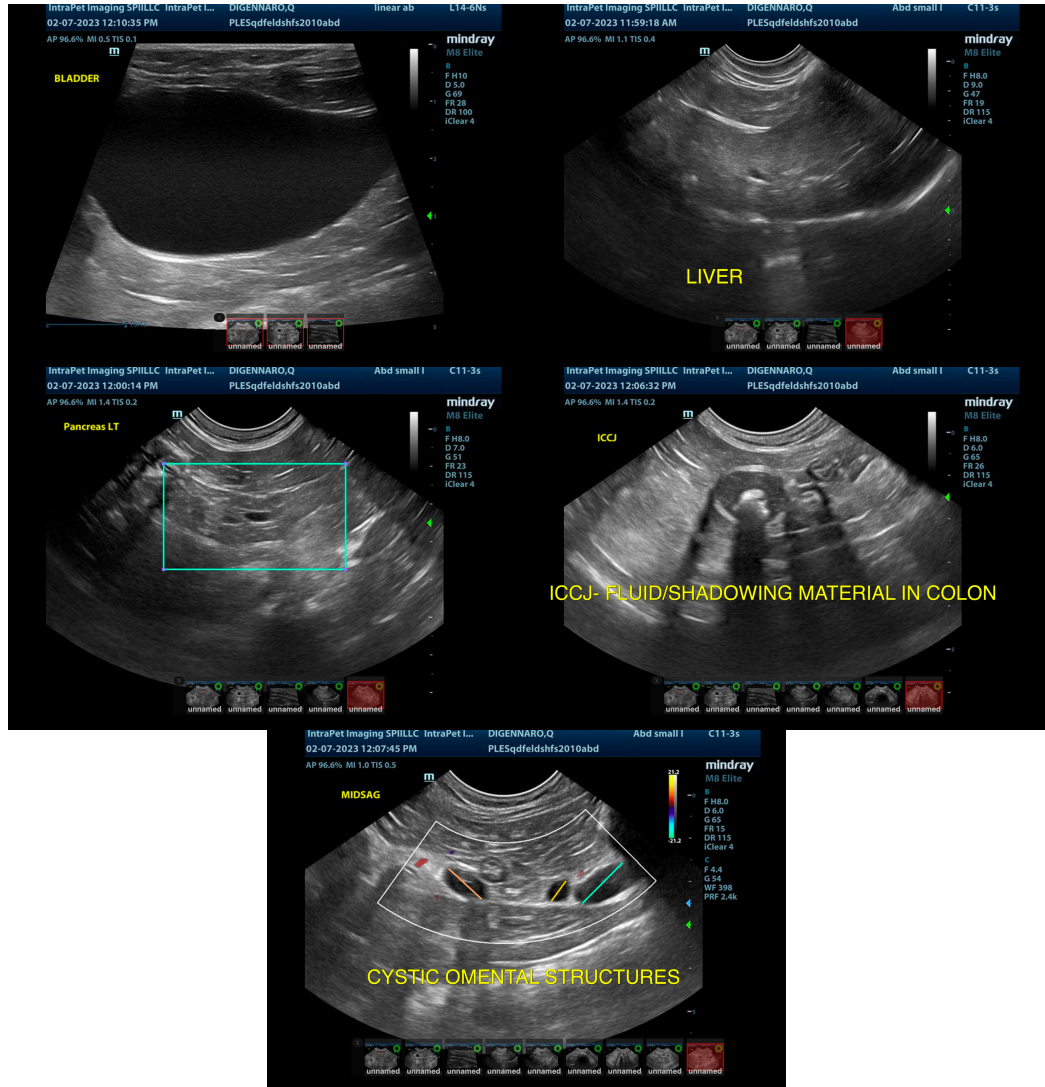
Today's scan is relatively normal. The lesions observed are relatively mild with uncertain significance. The pancreatic changes are most consistent with pancreatic remodeling and previous episodes of pancreatic inflammation. The muscularis layer of the small intestine is somewhat prominent. This could be associated with small intestinal disease but can also be a normal finding in older cats. If there is no evidence of current small intestinal disease, the significance of this is uncertain.

The cystic omental structures are most consistent with cystic lymph nodes. This is likely a benign change but continued monitoring is warranted.

An obvious cause for the hypercalcemia reported is not identified. Correlate these findings with PTH levels, 3-view thoracic radiographs, and possibly a pathologist review of the blood smear, looking for any evidence of underlying leukemia, etc., as well as a good physical exam evaluating for any evidence of oral mass lesions, masses associated with the anal glands, etc. If no cause is identified, then consider the possibility of idiopathic hypercalcemia.

Consider replacing mineral oil therapy with Miralax for constipation.





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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