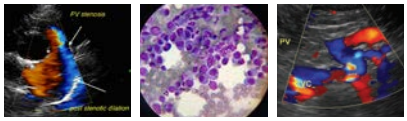
IMAGING PERFORMED BY

IntraPet.com



SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

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DATE

2/23/23

PATIENT

Louie Rutzebeck

SPECIES

Feline

BREED

Persian

SEX

Neutered Male

AGE

1/1/17

WEIGHT

9 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

HOSPITAL NAME

AMC of Dulaney Valley

REFERRING VET

Dr. Chrest

INVOICE

45464

PRESENTING CLINICAL SIGNS

Losing weight, increased Ca++ levels.

Current Medications: None.
Lab Results: Increased calcium levels.
Radiographs: See attached.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Andi Parkinson, BS, RDMS.

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 incidental suspended lipid in a cat, possibly combined with exfoliated cells, mucous and/or small blood clots. Both sterile inflammation as well as urinary tract infection can also present with echogenic debris. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Kidneys are normal in size and contour. A relatively uniform hyperechogenicity is observed with mildly decreased corticomedullary distinction. There is no pyelectasia noted and no mineral is observed. No overt masses/nodules are observed. The left kidney measured 4.07 cm. The right kidney measures 3.79 cm.

Adrenal Glands

The areas of the adrenal glands are examined without evident adrenal gland pathology.

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 appears normal. **See gallbladder.

The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. The common bile duct is mildly tortuous in appearance and near the upper end of normal limit for distention, measuring 0.42 cm distended. Adjacent to the gallbladder, there is a mildly dilated anechoic structure containing an approximately 1.0 cm echogenic shadowing density, most consistent with a lobar cholecystolith.

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 intestine demonstrates areas of mildly thick muscularis layer relative to mucosa (disruption of the normal 1:3 muscularis:mucosa ratio). Small intestinal submucosa is slightly irregular, thick and

hyperechoic, without evident loss of layering appreciated. The lumen is empty with no evidence of obstruction or foreign material.

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

- **Nephritis –** This appearance can be consistent with chronic interstitial nephritis or glomerulonephritis. Toxic insult and/or infectious disease (pyelonephritis, Leptospirosis, etc.) cannot be ruled out. This finding should be interpreted in combination with suspicion for renal disease and/or supporting laboratory or urinalysis changes.

- **Lobar cholecystolith with very mild bile duct dilation –** This is often a normal incidental and subclinical finding in a cat. However, given the very mild dilation, partial obstruction or ongoing concurrent, even resolved, cholangitis are also possible, and this finding should be interpreted in combination with clinical signs such as nausea, decreased appetite, cranial abdominal pain, and/or laboratory changes such as increased liver enzymes, etc.

- **Mild inflammatory bowel disease (IBD) pattern –** Thick muscularis has been reported with infiltrative bowel disease including both benign inflammatory disease as well as infiltrative neoplasia such as lymphoma. No aggressive lymphadenopathy, loss of layering, etc. is noted to make lymphoma more probable, but lymphoma cannot be definitively ruled out without tissue sampling.

SECONDARY FINDINGS

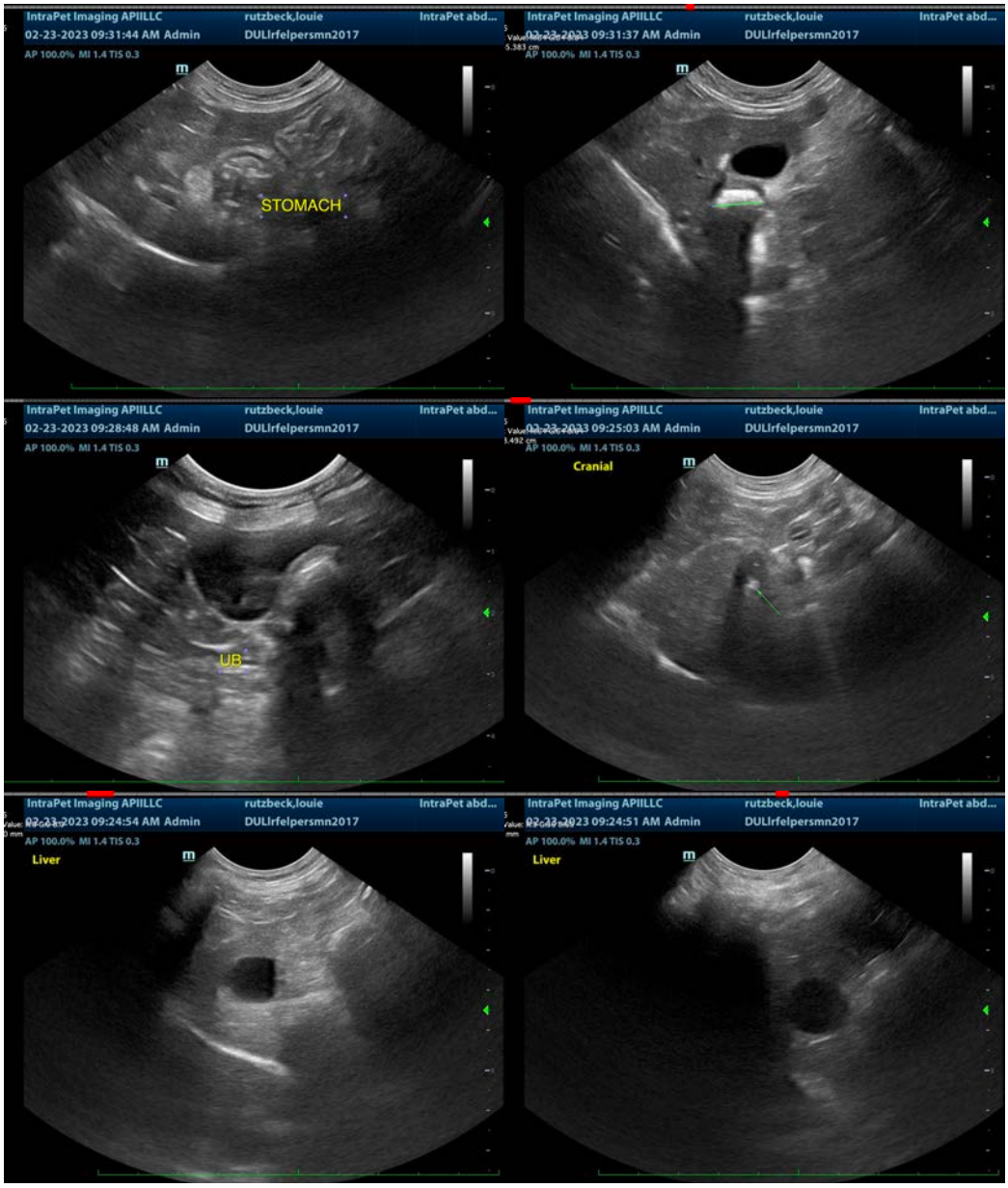
- Urinary bladder debris

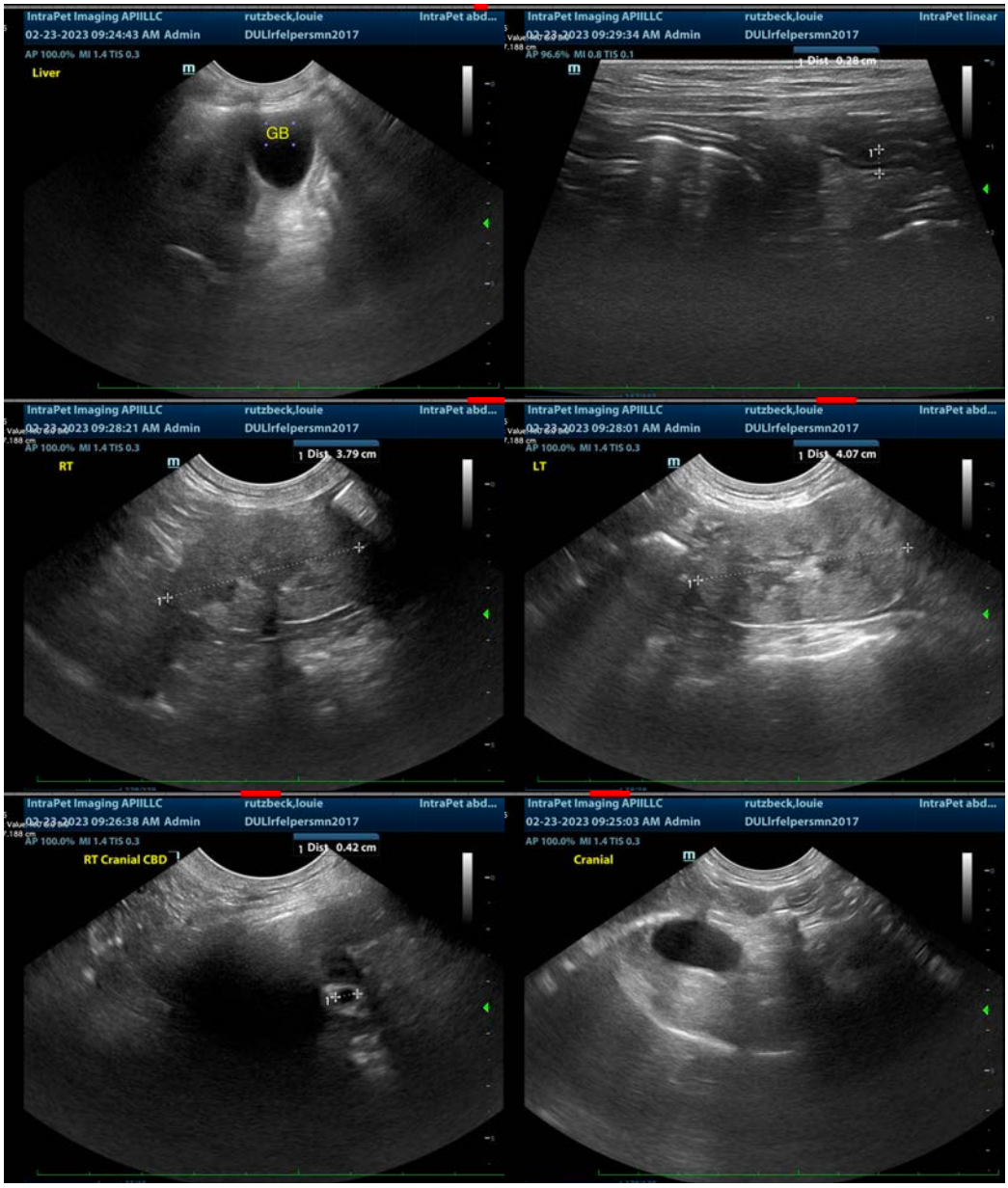
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

If not recently evaluated, a general metabolic health screen for further evaluation (especially of liver enzymes and kidney values) is recommended in the form of a CBC/Chem panel, electrolytes, a urinalysis and, if indicated based on urinalysis results, urine culture. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ratio is recommended. Additionally, given the historical hypercalcemia, further evaluation of a malignancy panel to include PTH, PTHrP, and ionized calcium is recommended.

In the meantime, empirical hepatic nutraceuticals include Ursodiol could be considered with monitoring of the cholecystolith for improvement versus progression, etc. Ultimately, if it appears obstructive, and clinical signs and/or laboratory values and/or biliary dilation progress, surgery could be warranted for removal. However, that does not appear necessary in the emergent future. Identifying the underlying cause of the hypercalcemia, even if it is idiopathic hypercalcemia, and managing that may help prevent further stone development.

Pending results of the above, given this patient's reported weight loss and mild bowel changes, further workup of possible maldigestive/malabsorptive condition could be considered, beginning with a gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.





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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