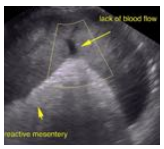

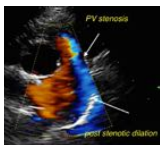

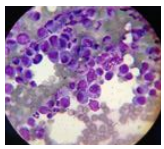
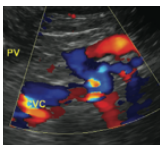


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**PATIENT**

Jojo Fields

**SPECIES**

Feline

**BREED**

Domestic Shorthair

**SEX**

Spayed female

**AGE**

16 years

**WEIGHT**

7.1 lbs

**INTERPRETED BY**

Eric Lindquist, DMV DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Gunther

**HOSPITAL NAME**

New Frontier AMC

**REFERRING VET**

Dr. Gunther

**INVOICE**

32387

**DATE**

8/17/22

## PRESENTING CLINICAL SIGNS

History: Several year history of CKD - managed by diet Mild elevation ALT No vomiting/diarrhea Patient is underweight but no progressive weight loss - has been underweight for several years
Abnormal PE/Chem/CBC/UA Results: CKD IRIS stage 2 mild elevation ALT - 153

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The pelvic urethra was imaged 2.0 cm beyond the cystourethral junction and appeared normal. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The left kidney measured 3.0 cm.

### *Adrenal Glands*

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 0.28 cm.

### *Spleen*

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes was noted.

### *Liver*

The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. The liver presented multi-focal, echogenic cysts that measured up to 3.0 cm in the left cranial liver. Caudal right cyst measured 2.0 cm. Cystic changes were noted throughout the remainder of the liver. The gallbladder was unremarkable.

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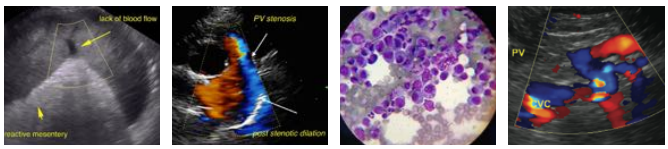


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### *Gastrointestinal*

The **gastrointestinal** presentation revealed mild uniform prominence of the gastric mucosa as well as areas of "ropey" small intestinal wall. The muscularis layer was hypertrophied inverting the normal ratio (1:3). The intestinal submucosa was slightly irregular, thickened and hyperechoic suggestive of low grade, chronic inflammation. Intestinal wall thickness measured up to 0.3 cm. No evidence of obstruction was present. Chronic inflammatory bowel disease is probable with a low possibility of an early neoplastic event such as lymphoma or, less likely, dry form FIP can at times be found on biopsy of these presentations. Full thickness tissue biopsies via open laparotomy, ideally guided by intraoperative ultrasound in order to obtain the most representative mural sample, would be necessary to rule more significant disease than IBD.

### *Pancreas*

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Some parenchymal remodeling, however, with mild deviation from curvilinear normalcy was observed. Pancreatic duct and capsular irregularities were present consistent with age related changes. If pain upon imaging (+ Murphy sign) was present or if the patient is focally painful in subxiphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

## ULTRASONOGRAPHIC FINDINGS

Polycystic liver changes, likely benign.

Echogenic debris within the liver cysts, primarily the left cranial cyst. This may represent infection.

Diffuse intestinal thickening without neoplastic criteria. Hypertrophied muscularis.

Age related pancreatic changes.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Drainage of the hepatic cysts could be considered. This is not likely to be neoplastic. The kidneys do not appear end stage. Pre renal issues may be occurring if azotemia develops periodically in this patient.

Part or all of this protocol may be considered based on your clinical impression of the patient:

Recommend pain management when anorexic with **Buprenorphine** (0.01-0.02 mg/kg IM or SC), clinical trial of **Zithromax** (50 mg sid/cat x 10 days, 3 weeks if bartonella +), **Prednisolone** (0.5-2 mg/kg tapering over 1 week to minimal effective dose), and **B12 injections** if weight loss (Cyanobalamine 250 mcg sub-q once-weekly x six weeks, then every other week for six weeks and then once-monthly, long-term if necessary), **novel-protein or hydrolyzed diet (***Hydrolyzed diets have been shown to be more effective in dietary intolerance case management compared to hypoallergenic diets***)** or the **magical Purina DM** (changing protein source is crucial and may need rotation every 6 months if clinical signs recur) Diet trials is a whatever works phenomenon. If vomiting becomes a persistent issue then endoscopy would be warranted and/or recheck sonogram to assess more emerging disease. One diet does not work for all patients so different trials may be necessary or protein source rotation every 6 months as new sensitivities develop.

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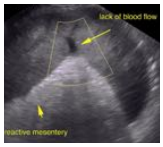
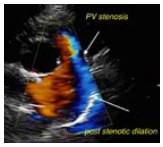
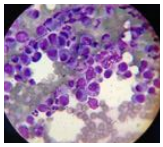
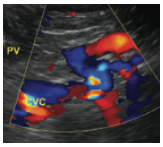

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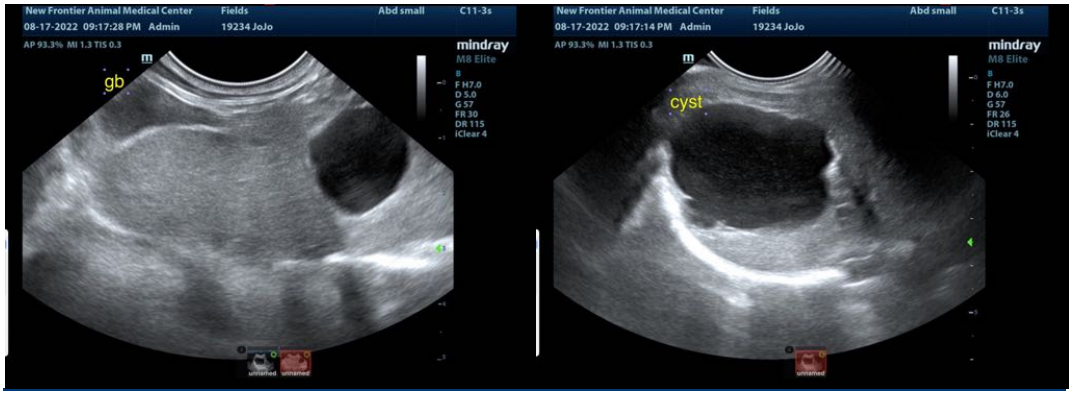


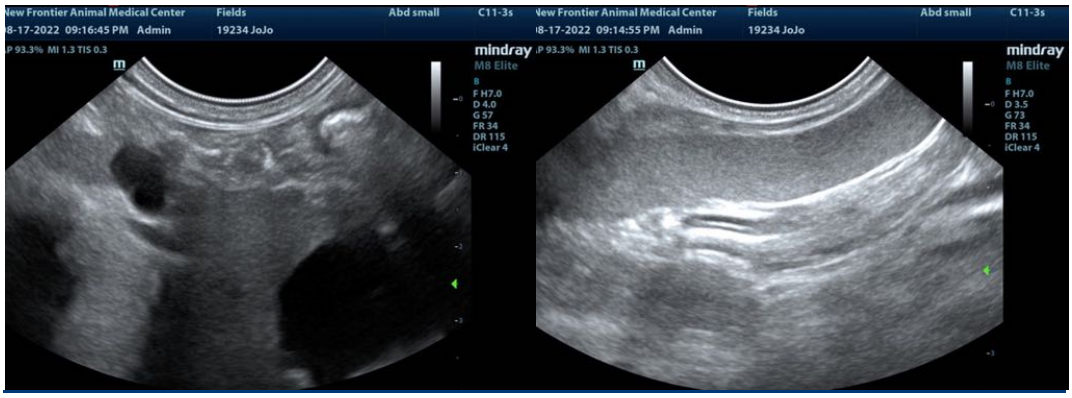

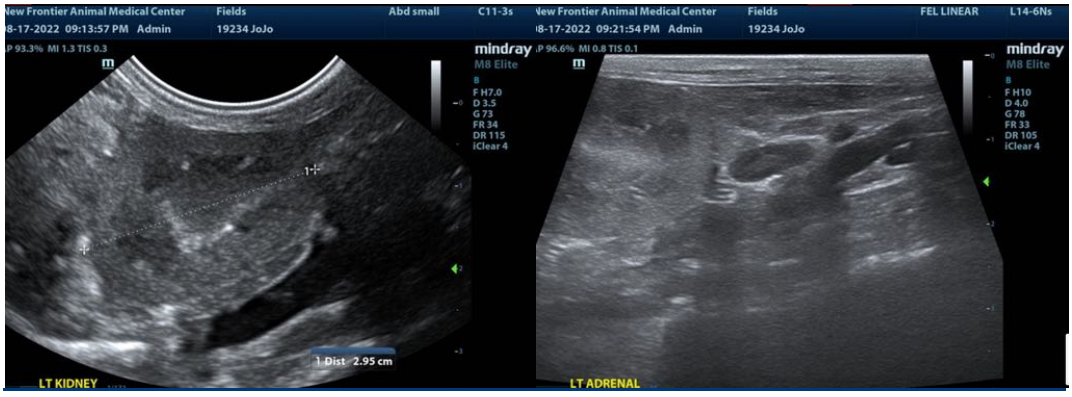


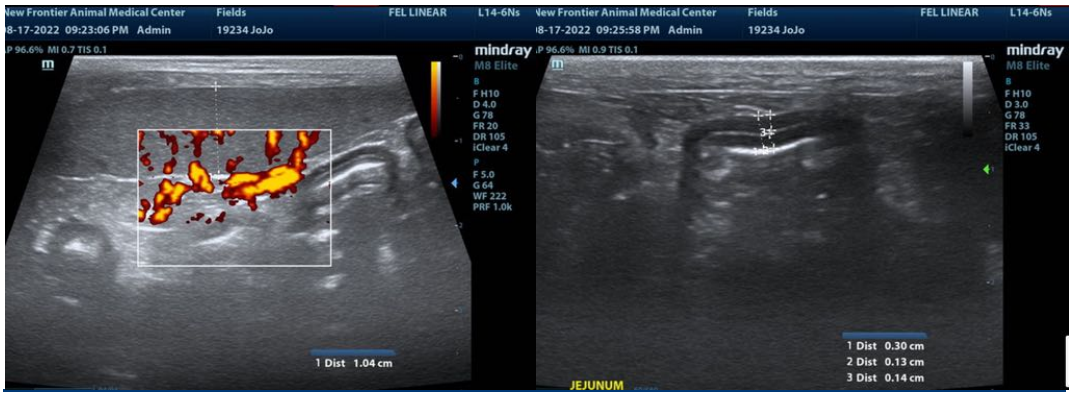

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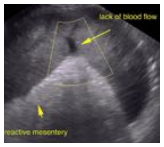
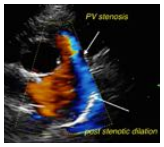
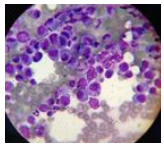
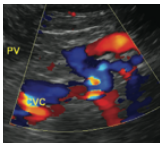

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**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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.

**Eric Lindquist**, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com
info@SonoPath.com