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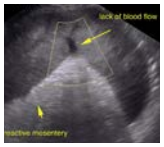
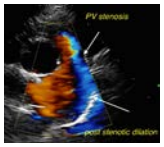
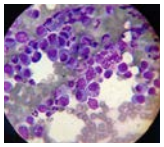
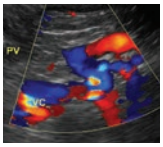
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

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1-800-838-4268 info@sonopath.com

PATIENT
Bella Barnreiter

SPECIES
Feline

BREED
DSH

SEX
Spayed Female

AGE
11

WEIGHT
3.4 kg

INTERPRETED BY
Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY
Dr. Callihan/PCMV

HOSPITAL NAME
Pacific Crest Mobile

REFERRING VET
Dr. Foote/Village VH

INVOICE
43840

DATE
7/13/23

PRESENTING CLINICAL SIGNS

Ultrasound requested to evaluate progressive weight loss (over 1-2 years); pt has history of chronic renal insufficiency. History of cardiac arrhythmia ausculted previously, and mild cardiomegaly radiographically; elev proBNP (echo is declined today but owner may pursue later) **Note: no murmur, and arrhythmia was not ausculted prior to today's sedation but was ausculted after sedation with butorph, midaz, alfaxalone- unfortunately she is too spicy for imaging without sedation
Abnormal PE/Chem/CBC/UA Results: BCS 4/9, nsf otherwise Labs: DMA: 16 Cr: 2.0 BUN: 35 T4 2.5 proBNP 380 (ref <270) CBC wnl USG 1.021 quiet sed 8/2022 SDMA: 15 Cr: 1.3 BUN: 27

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Kidneys are bilaterally, irregular and diffusely echogenic with decreased corticomedullary distinction and poor visualization of internal architecture. There is no pyelectasia noted and no mineral is observed. The left kidney is normal in size, measuring 3.45 cm. The right kidney is small at 2.43 cm. A chronic infarct is noted in the caudal pole of the right kidney.

Adrenal Glands

The right adrenal gland is normal in size (0.32 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.30 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

Spleen is subjectively large in size with subtly scalloped or undulating capsular contour. Parenchyma is normal in echogenicity with a mildly coarse/heterogenous echotexture. No focal nodules or masses are observed. Splenic vasculature appears normal.

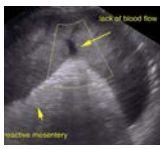
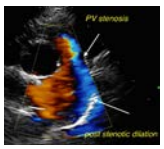
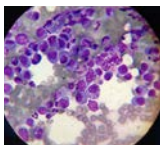
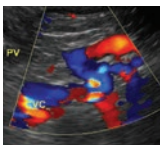
Liver

Liver is subjectively enlarged (swollen contour). Mild parenchymal remodeling with diffusely mildly coarse architecture and increased portal markings is present. A 1.0 cm x 1.5 cm cystic lesion/nodule is noted in the caudal right liver. 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 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.

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The visible small intestine demonstrates areas of 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 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.

ULTRASONOGRAPHIC FINDINGS

- **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.

- **Hypoechoic hepatomegaly with a cystic lesion** – This appearance is consistent with an acute hepatopathy or acute cholangiohepatitis. Infiltrative neoplasia (round cell neoplasia) should also be considered. The cystic lesion is consistent with a possible hepatic cyst versus possible feline biliary cystadenoma. Malignancy cannot be ruled out but is considered less likely give lack of clinical signs and/or laboratory changes.

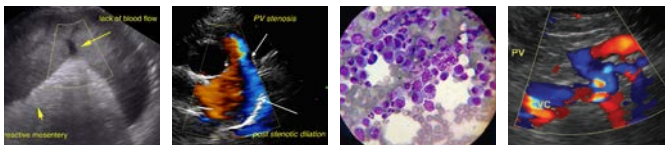
- **Scalloped spleen –** can be associated with benign or malignant infiltrative disease. Common causes include a reactive spleen secondary to immune stimulus or early infiltrative round cell neoplasia such as lymphoma or mast cell tumor.

- **Chronic Kidney Disease –** This appearance of the kidneys is consistent with chronic kidney disease such as chronic glomerular or interstitial nephritis, chronic pyelonephritis, etc.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Further recommendations for this patient's weight loss are partially dependent on whether the weight loss is in the face of a decreased versus a normal or even increased appetite, as if this patient's appetite is decreased, further medical management of the historical chronic kidney disease could be tried in the form of antiemetic, gastroprotectants, appetite stimulant, etc. trial with monitoring for improvement. However, given the additional pathology, other diagnostic considerations to look for evidence of infiltrative disease could include fine needle aspirates of the spleen and liver if patient's coagulation status is appropriate, or ultimately biopsies of the GI tract being sure to include ileum.

If biopsies cannot be obtained, empirical therapies could include a probiotic (if diarrhea is present, such as visbiome or proviable), empirical deworming with a 5-day course of Panacur and, if tolerated, a



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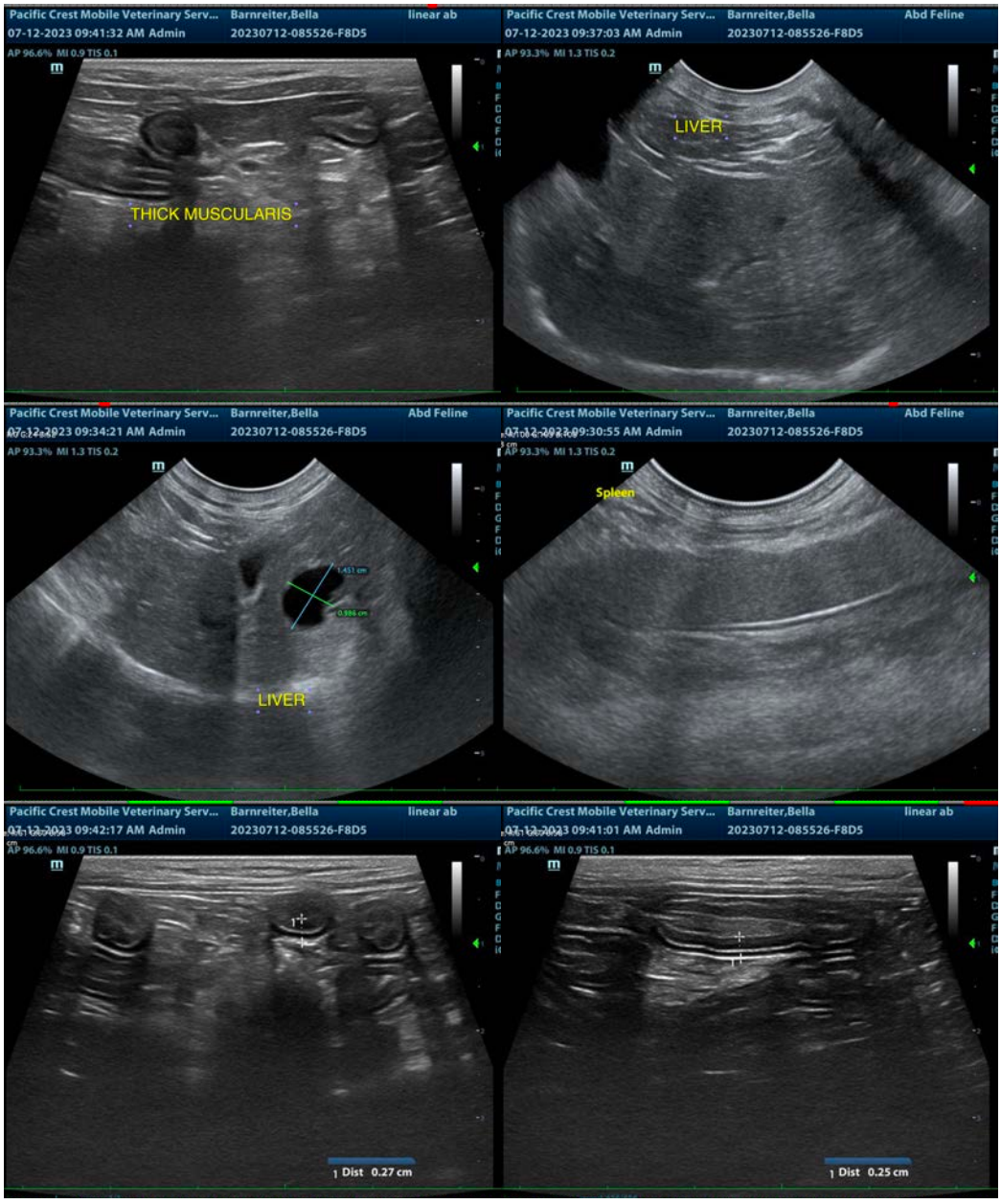
transition in diet, based on trial-and-error response, beginning with a hydrolyzed protein diet. Some patients respond to one brand/version of a hydrolyzed protein diet better than another brand, so several trials may be required.

Additional considerations could include cobalamin supplementation (unless cobalamin level is evaluated and supplementation is not warranted) and prednisolone (if not contraindicated based on patient contraindications, co-morbidities, etc.).



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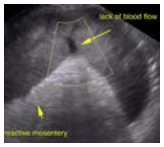
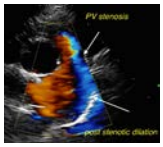
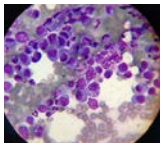
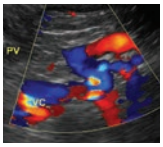

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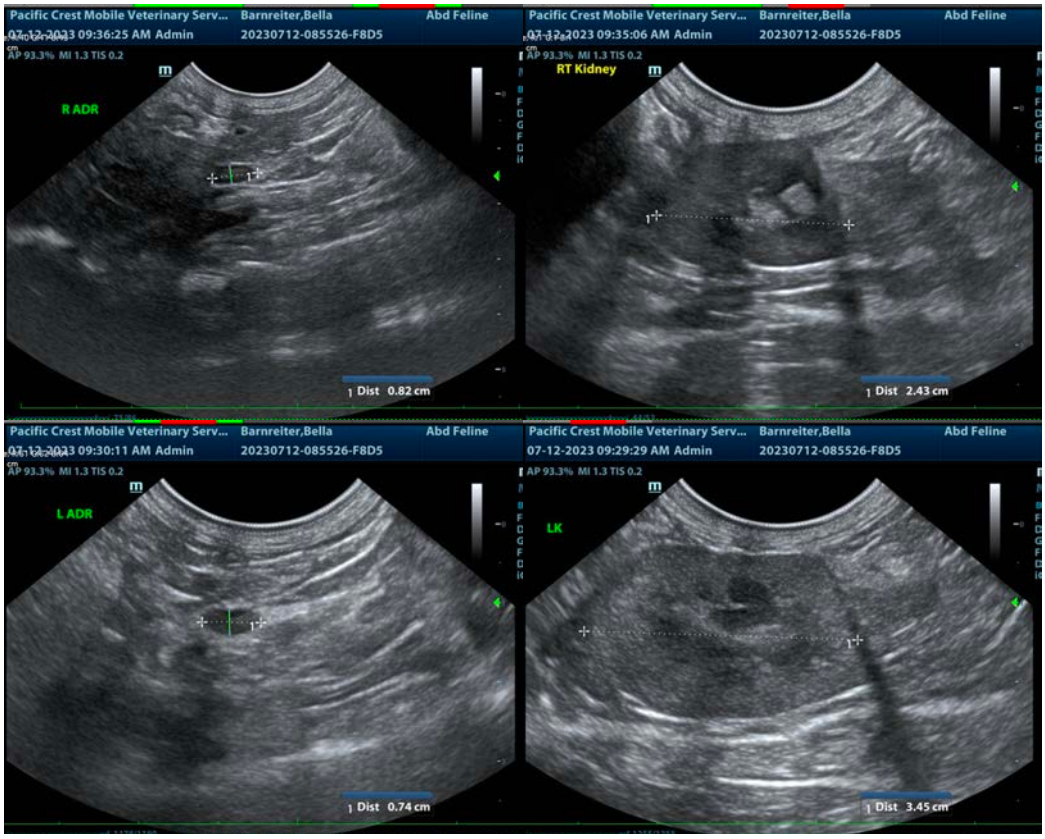

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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