



PATIENT PRESENTING CLINICAL SIGNS

Maggie Dunkman
Recent hematuria and urinary tract infection. P has also had dramatic weight loss - there has been a food change, but weight loss appears to be ongoing and excessive. P is eating regularly but may be showing some trouble swallowing. P currently is struggling with URI (likely feline herpes flare-up). P also has a grade 4/6 SHM (increased from 2/6 previously). Current Medications Convenia injection given 03/01/2023

SPECIES

Feline

BREED

Abnormal PE/Chem/CBC/UA Results: BUN 63, Creat 2.6, HCT 30%, WBC 11,000, T4 3.3

DLH

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

SEX

Urinary System

Spayed Female

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.

AGE

18 Years

Kidneys are bilaterally uniformly enlarged/swollen with an overall hyperechoic echogenicity and slight loss of corticomedullary definition. Normal smooth peripheral margination and shape are maintained. The renal pelvis are dilated with anechoic fluid and hyperechoic thickened pelvic fat. No overt evidence of neoplasia or mineral is observed. The perinephric area is enhanced by hyperechoic fat and mesentery. Left renal pyelectasia measures 0.88 cm in the transverse view. The left kidney measures 3.37 cm. Right renal pyelectasia measures 0.38 cm in the transverse view. The right kidney measures 3.76 cm.

WEIGHT

7.96 Pounds

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Adrenal Glands

Beth Johnson, DVM
DACVIM

Adrenal glands are bilaterally uniformly plump egg-shaped adrenals (left measures 0.47 cm, right measures 0.5-0 cm), hypoechoic in echogenicity with bilateral dystrophic mineralization noted. This is most likely a benign age-related change. This change can be caused by chronic stress/disease, so investigation for/management of other disease (chronic kidney disease, hyperthyroidism, etc.) is recommended.

IMAGING PERFORMED BY

Spleen

Jenna Walsh, CVT

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.

HOSPITAL NAME

Liver

West Hills AH

Liver is subjectively enlarged (swollen contour). Mild parenchymal remodeling with diffusely mildly coarse architecture and increased portal markings is present. A 1.3 cm x 1.2 cm slightly irregular hypoechoic nodule is noted in the mid caudal liver adjacent to the gallbladder, as well as a 0.5 cm in diameter anechoic cyst in the deep left liver. Visible vasculature and biliary tree appear normal without distension or congestion.

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The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. The cystic and common bile duct are tortuous in appearance without being pathologically distended, which is most often a normal anatomic variant in cats.

DATE

3/21/23



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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 thick muscularis layer relative to mucosa (disruption of the normal 1:3 muscularis:mucosa ratio). Small intestinal submucosa is slightly irregular, thick and hyperechoic. In the mid abdomen, several small bowel loops exhibit loss of mural detail/loss of layering. 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.

Mesenteric lymph nodes are enlarged with swollen irregular capsular contour and loss of normal length to width ratio (rounded in shape). Nodes are hypoechoic with loss of normal parenchymal detail.

ULTRASONOGRAPHIC FINDINGS

- **Gastrointestinal lymphoma (suspect) pattern** – Thick muscularis has been reported with infiltrative bowel disease including both benign inflammatory disease as well as infiltrative neoplasia such as lymphoma. Given the concurrent pathology noted, infiltrative neoplasia is considered more likely, but benign IBD cannot be ruled out without tissue sampling.
- **Aggressive mesenteric lymph nodes** – most consistent with infiltrative round cell or metastatic neoplasia. A benign aggressive inflammatory response cannot be ruled out without tissue sampling +/- culture.
- **Hypoechoic hepatomegaly with a hypoechoic nodule** – This appearance is consistent with an acute hepatopathy or acute cholangiohepatitis. Infiltrative neoplasia (round cell neoplasia) should also be considered. The hypoechoic nodule is concerning for infiltrative neoplasia such as lymphoma, given the concurrent pathology. However, benign nodular regeneration, etc. cannot be differentiated without tissue sampling.
- **Pyelonephritis** – These changes are most consistent with chronic pyelonephritis. Chronic scarring and fibrosis and/or chronic nephrolith passage can also result in these pelvic dilation changes. Early infiltrative disease cannot be ruled out but is considered less likely.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

A urinalysis and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ratio is recommended.



PATIENT

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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.

SPECIES

Feline

Tissue sampling is recommended to look for further evidence of infiltrative round cell disease such as lymphoma. A fine needle aspirate of the liver +/- enlarged lymph nodes (if they can safely be reached) could be considered if patient's coagulation status is appropriate.

BREED

DLH

If a cytologic diagnosis is not obtained, ideally, biopsies of the GI tract, being sure to include ileum if possible, are recommended to definitively diagnose and therefore manage the infiltrative bowel disease.

SEX

Spayed Female

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 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.

AGE

18 Years

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.).

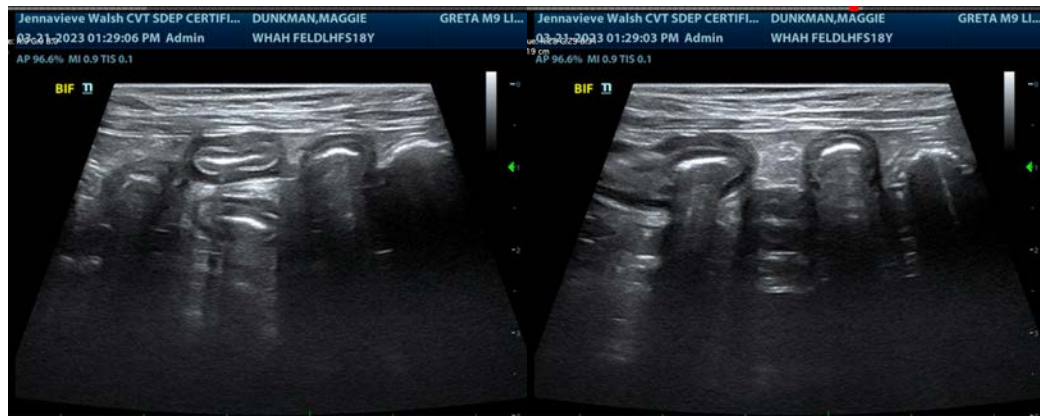
WEIGHT

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In the meantime, additional broad-spectrum antibiotics +/- fluid therapy, etc. to address the suspected pyelonephritis is recommended.

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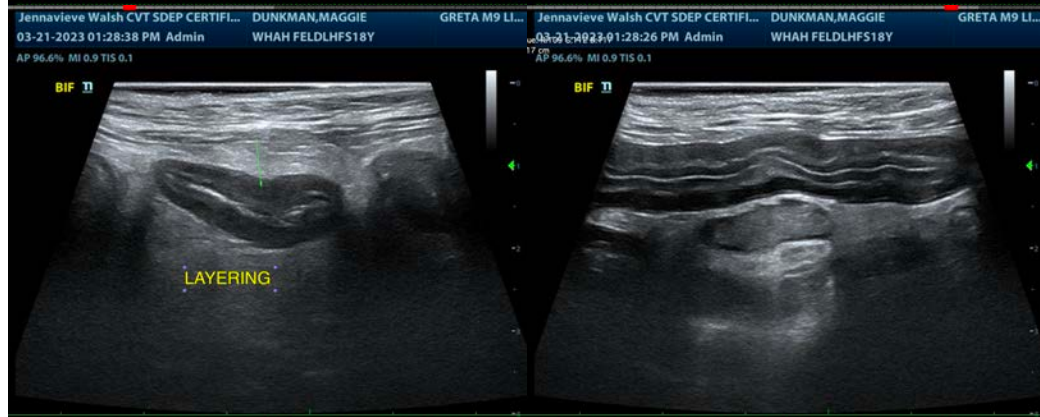


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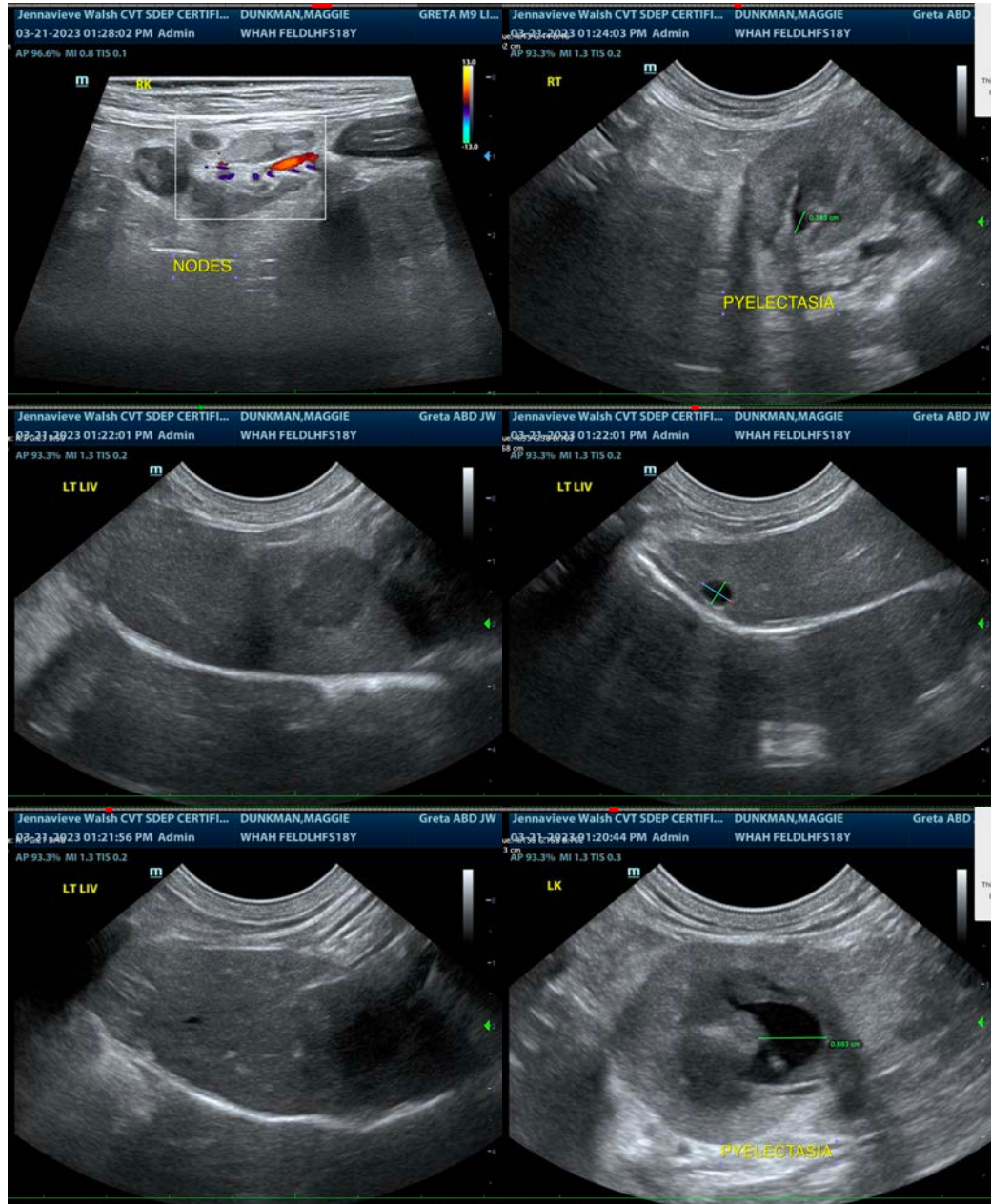
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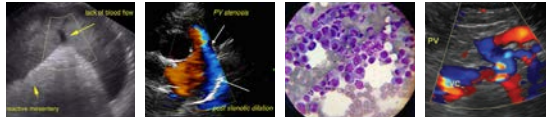
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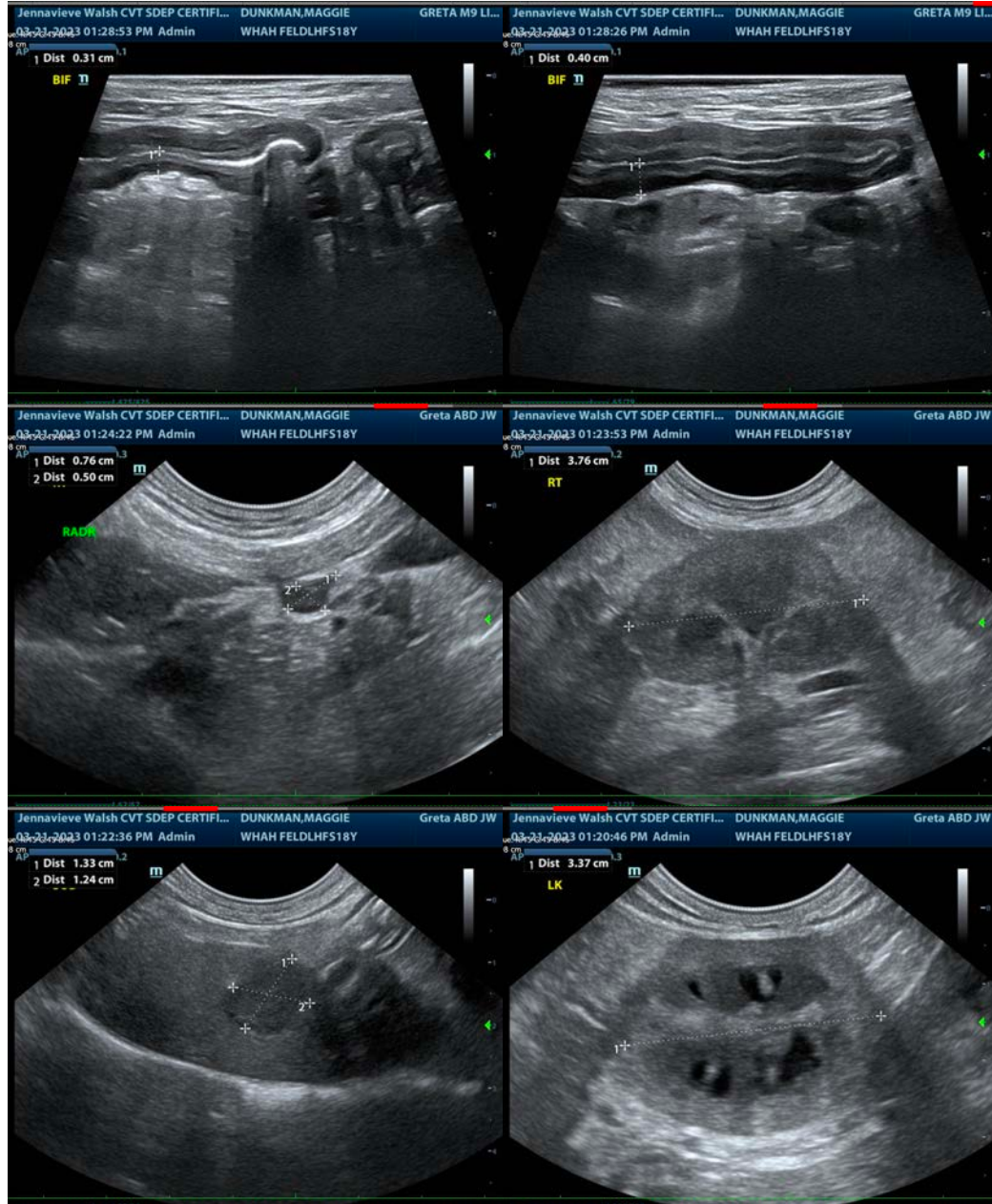
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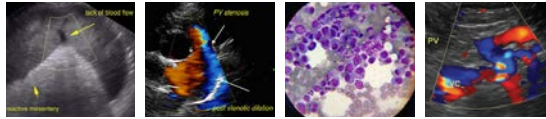
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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