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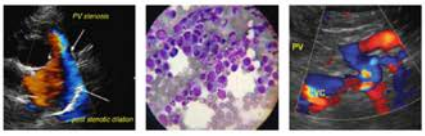

SonoPath
Clinical Sonography & Telecytology
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PATIENT

Frank Welch

SPECIES

Canine

BREED

West Highland Terrier

SEX

Neutered Male

AGE

8.5 Years

WEIGHT

20 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Amy Mayhew, LVT

HOSPITAL NAME

SVS Imaging MI

REFERRING VET

Hamilton AH

INVOICE

43156

DATE

12/2/22

PRESENTING CLINICAL SIGNS

What are his/her symtoms?: Blood clots from rectum following defecation and straining. Has kidney disease. Not eating or drinking as much as he normally does.

Abnormal PE/Chem/CBC/UA Results: - intestines appear thick- unsure if thickened or filled with fluid, no obvious mass or obstructive pattern. CBC- eos 0.05, plt 522, chem- bun 33, creat 2.2 alt 191, alp 323, Question you want answered with an ultrasound: R/O gastroentritis/colitis/pancreatitis vs neoplasia vs toxin vs cancer vs open Lab Results / X-rays: Comment or Message: Flagyl 250mg Give 1/2 tablet by mouth every 12 hours for 10 days and Sucralfate 1G Dissolve 1 tablet with 5 mL of warm water and give by mouth every 8 hours for 7 days. Give 30 minutes after all other medications - Started 11/21/22 Azodyl - Started 4/18/22 History of blood in stool February 2022 and April 2022 Owner is also giving Hills k/d food Rectal exam normal.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended with primarily anechoic contents and occasional echogenic non-shadowing debris. Apical urinary bladder wall is diffusely thick (0.64 cm). Mucosa is hyperechoic and irregular. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal thickness with a smooth mucosal surface.

Prostate is normal in size, echotexture and echogenicity for a neutered male.

Kidneys are bilaterally small, irregular and diffusely echogenic with decreased corticomedullary distinction and poor visualization of internal architecture. No mineral is observed. The right kidney measures 4.14 cm with pyelectasia measuring 0.25 cm in the transverse view. The left kidney measures 4.06 cm with pyelectasia measuring 0.24 cm in the transverse view.

Adrenal Glands

The right adrenal gland is normal in size (0.56 cm at the caudal pole, cranial pole unable to be fully visualized), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.50 cm at the cranial pole and 0.56 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

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). A small, less than 0.5 cm in diameter hypoechoic nodule is noted near the cranial head of the spleen without capsule disruption. 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 and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

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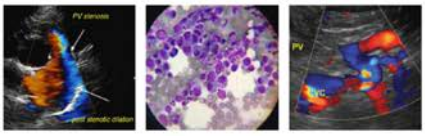

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Gastrointestinal

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with very echogenic reverberation artifact from intraluminal gas. There is no evidence of obstruction, foreign material or infiltrative disease; however, complete visualization of far wall is partially inhibited by gas. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

The colon is very mildly thick distally, measuring 0.30 cm thick with normal layering intact. 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

Scant amount of anechoic free fluid noted, primarily in the caudal abdomen.

There is no apparent lymphadenopathy noted in these images.

PRIMARY FINDINGS

- **Mildly thick colon with a scant amount of anechoic free fluid in the area** – suggestive of pericolonic inflammation. Differentials for the colitis include irritation secondary to dietary indiscretion or intolerance, bacterial, viral or parasitic protozoal disease, toxin, other metabolic disease, or even infiltrative inflammatory and/or neoplastic disease.
- **Chronic Cystitis -** Urinary bladder wall changes are most consistent with chronic cystitis. Infiltrative neoplasia cannot be ruled out but is considered less likely give the location and diffuse nature of the changes.
- **Bilateral pyelectasia –** Differentials for pyelectasia include pyelonephritis, diuresis, congenital malformation or ureteral or lower urinary tract obstruction.

SECONDARY FINDINGS

- **Hypo to anechoic splenic nodule** – likely represents a benign lesion such as a cyst, hematoma, nodular hyperplasia, extramedullary hematopoiesis, etc., however while considered less likely, infiltrative neoplasia can mimic benign lesions, and cannot be ruled out.
- **Gallbladder debris -** Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

If not already evaluated, a fecal exam is recommended.

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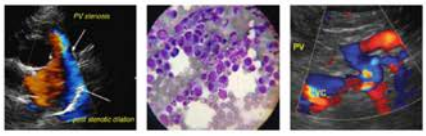

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A fecal enteropathogen PCR panel to Texas A&M GI Laboratory could be considered for further evaluation of possible infectious disease.

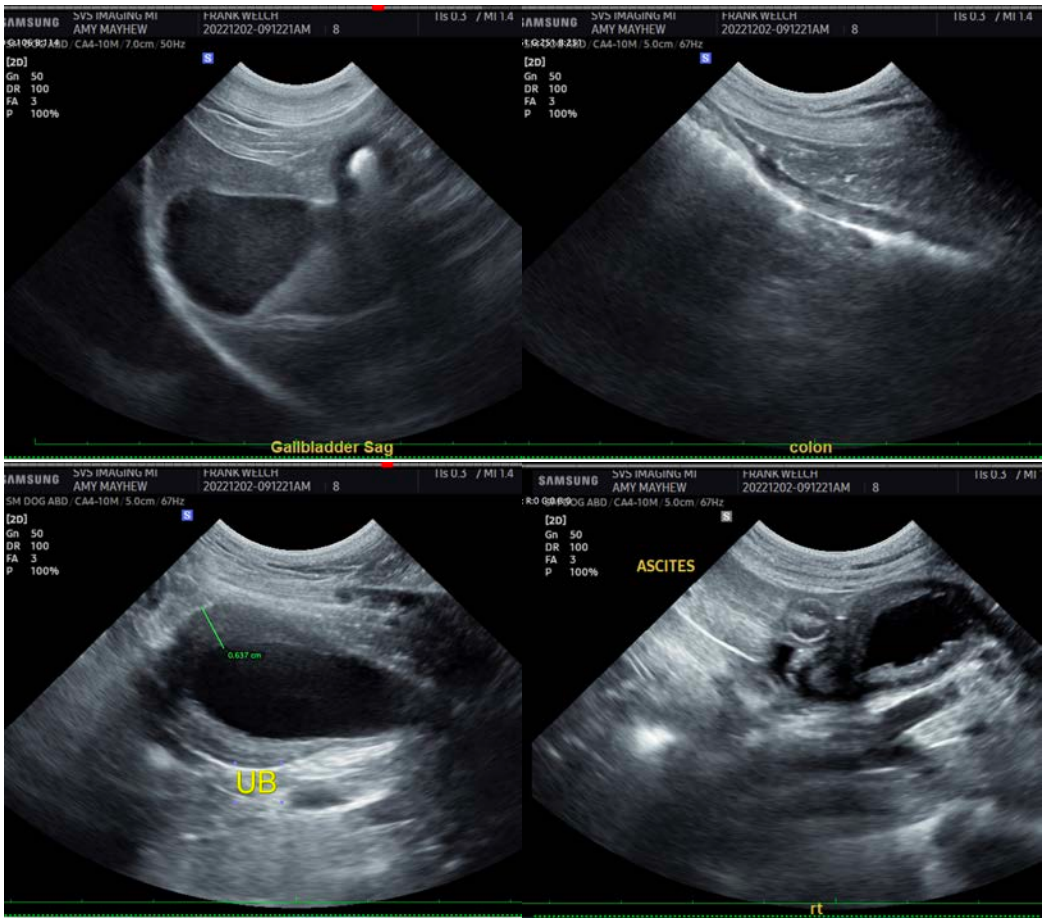
A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

A baseline cortisol is recommended. If baseline cortisol is less than 2, a full ACTH stimulation test is recommended to rule out hypoadrenocorticism.

In the meantime, empirical deworming with a 5-day course of Panacur is recommended as well as a probiotic such as Visbiome or Proviable, combined with a transition in diet based on trial and error response, with options including a hydrolyzed protein diet to begin with, or potentially a high fiber colitis diet, etc. Additionally, a course of an antibiotic such as Tylosin for 6-8 weeks could be tried to address possible “antibiotic responsive diarrhea”. Metronidazole is less recommended long-term due to side effects.

Ultimately, if clinical signs persist, colonoscopy is recommended for further evaluation and biopsies of the colon.

Additionally, if not recently evaluated, 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 ration is recommended.



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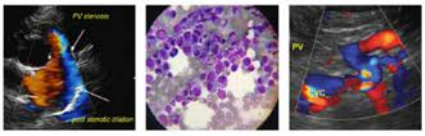

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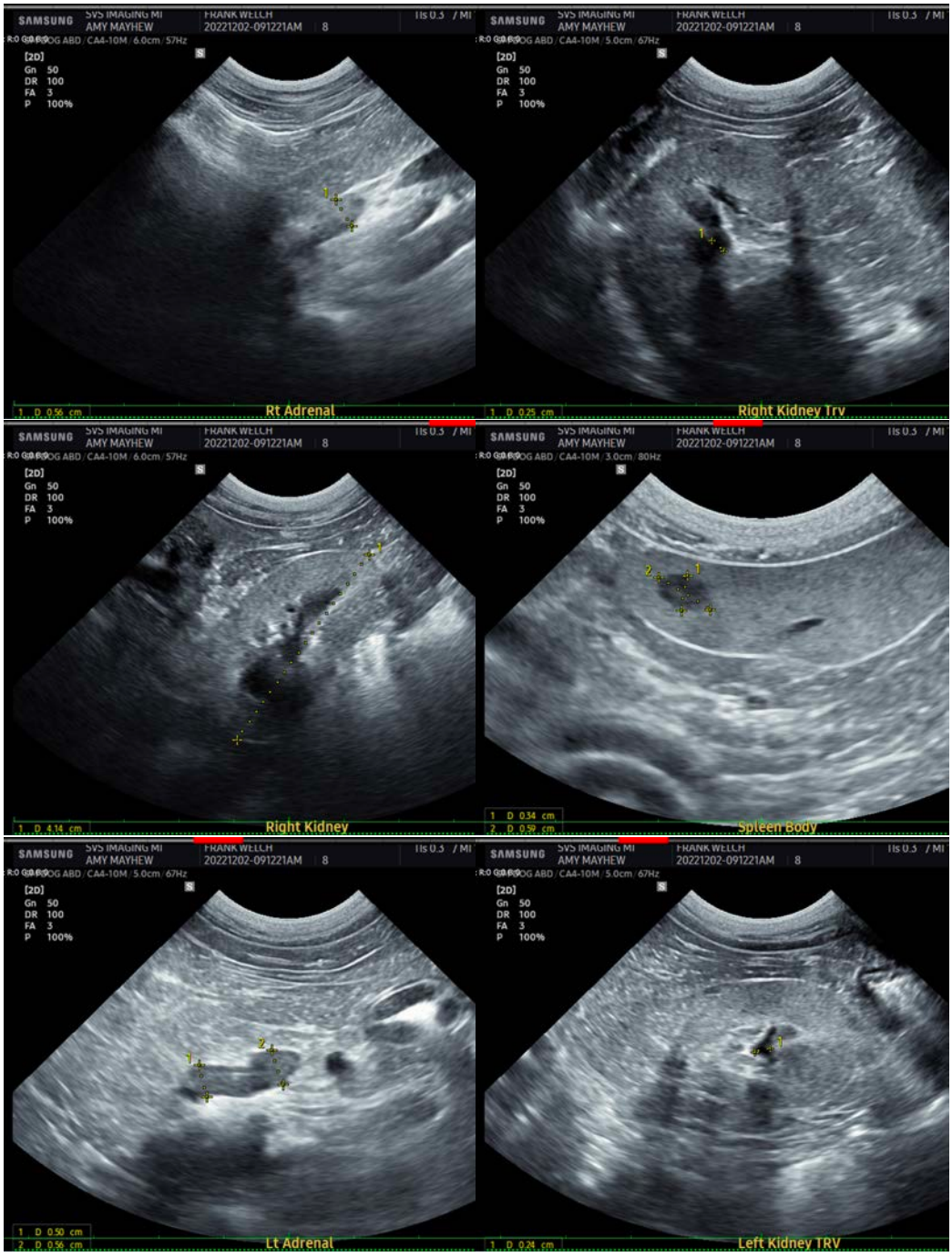

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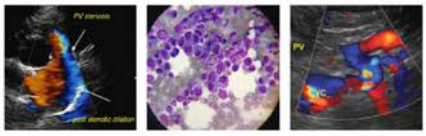

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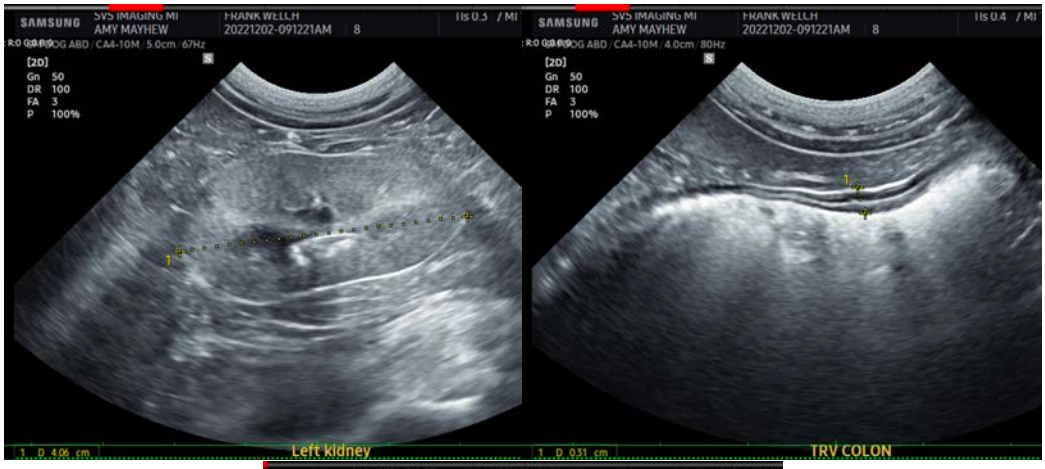

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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