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Clinical Sonography & Telecytology
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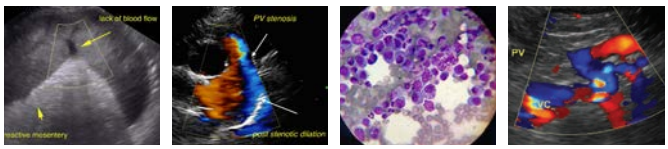

SonoPath.com
1-800-838-4268 info@sonopath.com

**PATIENT**

Yogi Ferguson

**SPECIES**

Canine

**BREED**

English Springer Spaniel

**SEX**

Neutered Male

**AGE**

8 Years

**WEIGHT**

70

**INTERPRETED BY**

Beth Johnson, DVM DACVIM

**IMAGING PERFORMED BY**

Dr. Carlos Abdul-Chani

**HOSPITAL NAME**

Byram Animal Hospital

**REFERRING VET**

Dr. Carlos Abdul-Chani

**INVOICE**

46093

**DATE**

3/23/23

## PRESENTING CLINICAL SIGNS

Presented for PU/PD. Abdominal mass palpated during PE. Current Meds: None
Abnormal PE/Chem/CBC/UA Results: Pres. PSL: 294 ; WBC = 30.8 ; Neutrophils = 22,484 ; Mono = 3080

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The prostate is normal in size (1.0 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (6.77 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (6.84 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

### *Adrenal Glands*

The left adrenal gland is normal in size measuring 0.73 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is somewhat irregular and borderline large, measuring 0.73 cm at the cranial pole, 1.35 cm at the caudal pole, and 3.22 cm in length. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is somewhat abnormal in appearance in that the caudal pole is slightly irregular and enlarged. There is no obvious evidence of vascular invasion visualized.

### *Spleen*

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

### *Liver*

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is homogenous echotexture. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

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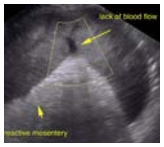
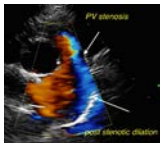
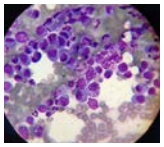
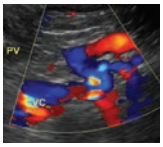

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### *Gastrointestinal*

The stomach is difficult to clearly visualized due to gas shadowing and interference secondary to the large abdominal mass effect(s) that are visualized within the abdomen. There is a small, mildly fluid filled structure in the cranial abdomen, most consistent with a normal stomach.

Some of the visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. In these areas, wall thickness is normal and bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Duodenum wall measures 0.43 cm. Jejunum wall measures 0.32 cm. There is a very large section of bowel with severely thickened wall and complete loss of layering. This mass lesion is extensive, and I suspect there may be more than one mass. One of the abnormal areas of bowel measures approximately 4.5 cm in diameter. It involves approximately 10.26 cm of bowel, and the bowel wall in this region measures 2.97 cm in thickness. There is another area of bowel evaluated on the cross section that has a diameter of 1.46 cm and a wall thickness of 0.67 cm with complete loss of wall layering.

The large intestine is difficult to visualize due to the presence of an extensive bowel mass .The distal colon appears within normal limits.

### *Pancreas*

The area of the pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

### *Free Abdomen*

There is a small amount of free abdominal fluid. There are enlarged cranial abdominal lymph nodes, one measuring 2.43 cm in diameter. The omentum is diffusely hyperechoic.

### PRIMARY FINDINGS

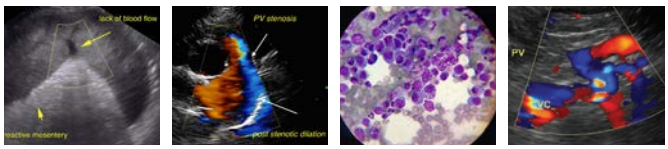
- Multiple large areas of bowel with complete loss of wall layering and severe thickening, creating the appearance of multiple bowel masses – Findings are concerning for round cell neoplasia, carcinoma, other.
- Irregular large caudal pole of the right adrenal gland – Adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.
- Significant cranial abdominal lymphadenopathy – The moderate mesenteric lymphadenopathy could be concerning for a neoplastic process, although you can see significant lymphadenopathy in some cases of autoimmune/inflammatory disease, infectious disease(tick born disease-such as bartonella, fungal infections, FIP (cats)) etc. A fine needle aspirate with cytology is recommended for further evaluation.

### SECONDARY FINDINGS

- Moderate gallbladder sludge – The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.

### INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is an extensive section of bowel that has complete loss of wall alyering and severe gastric wall thickening. These areas of bowel have a large amount of intraluminal gas and some likely trapped shadowing material, ingesta, etc. The location of this lesion appears primarily towards the mid to caudal abdomen, but there is a section of bowel possibly in the region of the ileocecal junction that also has



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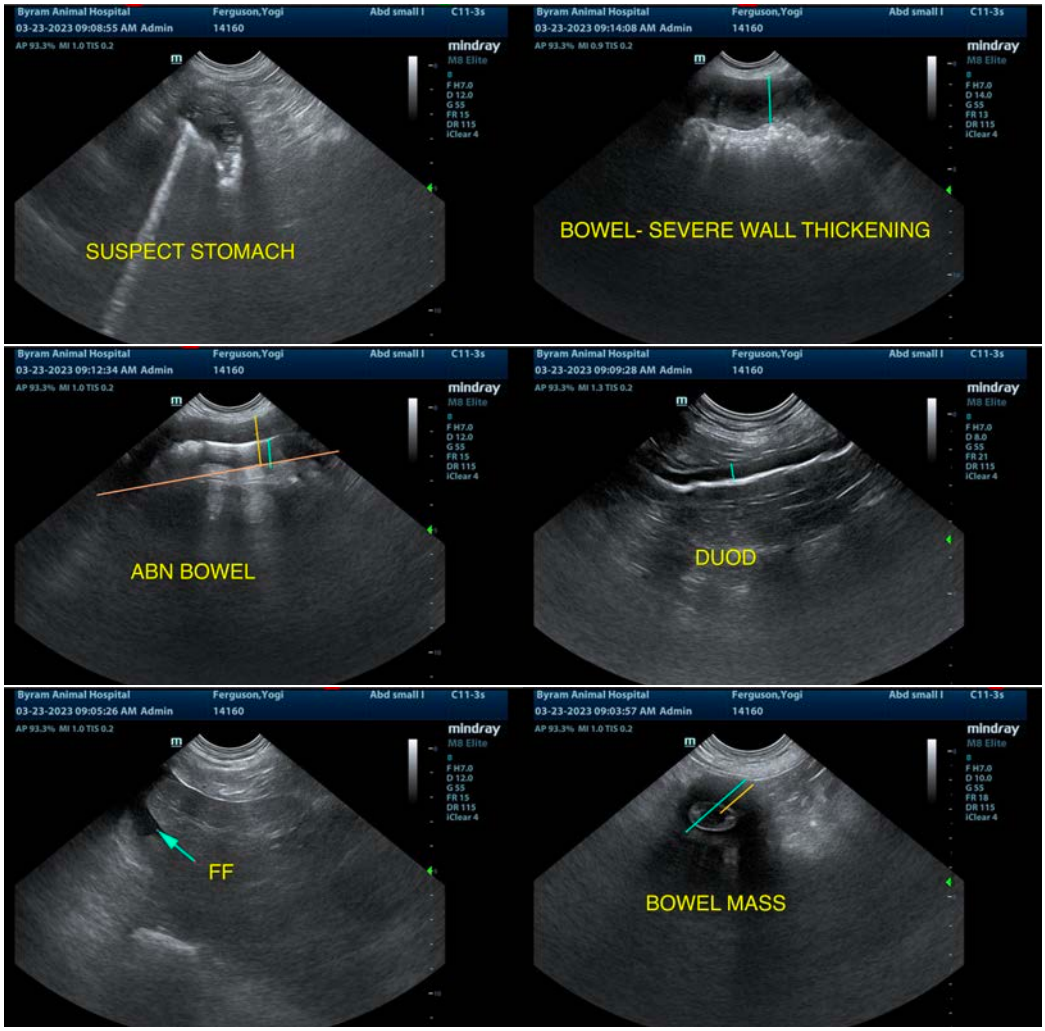
significant loss of wall layering and significantly thickened wall, consistent with a mass effect. Unfortunately, I cannot definitively identify the stomach, although there is a small fluid filled structure caudal to the liver that I suspect is normal stomach.

Recommend a fine needle aspirate of hypoechoic thickened bowel wall. Based on the appearance, there is concern that this may be a non-resectable lesion, but this is difficult to definitively say. If surgical evaluation is to be considered, you could opt for an exploratory with biopsies +/- preoperative CT scan. If there is concern about gastric involvement, you could consider administering a very small swallow of barium to mark the location of the stomach in comparison to the mass effect on radiographs.

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.

The caudal pole of the right adrenal is irregular and large There is no distinct mass effect, but this is abnormal in appearance. Options moving forward would include advanced imaging +/- surgical removal or continued monitoring with ultrasound. Additionally, a blood pressure should be considered to look for any evidence of a possible pheochromocytoma. I would likely recommend continued monitoring of this lesion.



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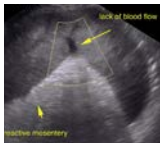
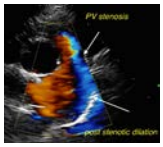
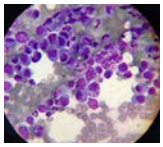
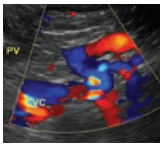

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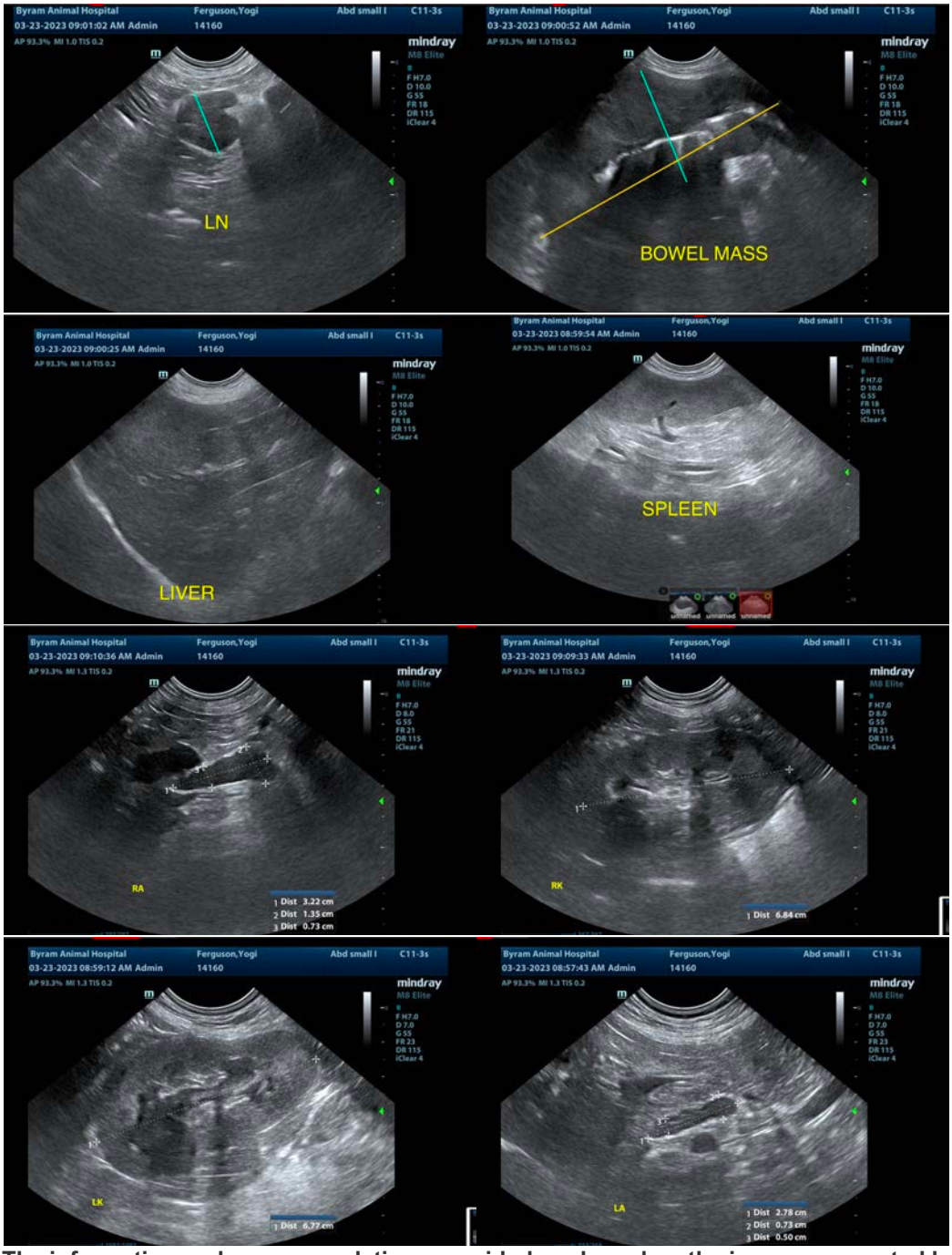


**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)

kathleen.sennello@sonopath.com