



**PATIENT**

Sally Brownie Blondie

**SPECIES**

Canine

**BREED**

Mixed

**SEX**

Female

**AGE**

10 Years

**WEIGHT**

29.2

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING PERFORMED BY**

Dr. Ferrer

**HOSPITAL NAME**

Paseos Vet Center

**REFERRING VET**

Dr. Franco Ortiz

**INVOICE**

44554

**DATE**

1/26/23

**PRESENTING CLINICAL SIGNS**

Presented for an abdominal u/s to further evaluate chronic diarrhea. Pt was dx a couple of years ago with possible EPI. Has been with steatorrhea good appetite no vomiting Tx: Prozyme: 1 tsp per 10 kg of bodyweight per meal. Hypoallergenic

Abnormal PE/Chem/CBC/UA Results: PE: BCS 3/9 CBC: WNL CHEM: GLU 148 mg/dL 70 - 143, CREA 0.4 mg/dL 0.5 - 1.8, ALKP 242 U/L 23 - 212, CHOL 88 mg/dL 110 - 320, AMYL 203 U/L 500 - 1500 X-Rays: possible air in the gallbladder Fecal: negative

**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.

The right kidney is normal in size (6.28 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

The left kidney is normal in size (5.91 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

**Adrenal Glands**

The right adrenal gland is normal in size (0.67 cm at the cranial pole and 0.50 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.51 cm at the cranial pole and 0.61 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). No focal nodules or masses are observed. 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.

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 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



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obstruction, foreign material or infiltrative disease; however, complete visualization of far wall is partially inhibited by gas. Pyloric outflow tract appears patent.

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The visible small intestine demonstrates areas of mildly 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 lumen is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction or foreign material noted.

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The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

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**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.

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**Free Abdomen**

There is no evidence of free peritoneal effusion noted in these images.

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The medial iliac and mesenteric lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

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**ULTRASONOGRAPHIC FINDINGS**

- **Mild 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.
- **Reactive mesenteric and medial iliac lymph nodes** – infiltrative neoplastic disease cannot be ruled out but is considered less likely.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Given this patient's reported historical diagnosis of EPI, a recheck gastrointestinal malabsorption panel may be warranted to further evaluate Vitamin B12 and folate to see if additional supplementation may help minimize clinical signs.

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Additionally, given the compromised bowel health, looking for concurrent or underlying infectious disease via a fecal enteropathogen PCR panel to Texas A&M GI is also recommended.

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If not recently evaluated, a fecal exam is warranted.

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Given the mildly thick muscularis reported above, this patient may have some concurrent inflammatory bowel disease, and ultimately biopsies of the gastrointestinal tract may be warranted. However, in the meantime, in addition to the treatment for EPI currently in place, additional recommendations include cobalamin supplementation (unless not warranted based on gastrointestinal malabsorption panel results), empirical deworming with a 5-day course of Panacur, as well as a probiotic such as Visbiome or Provable.



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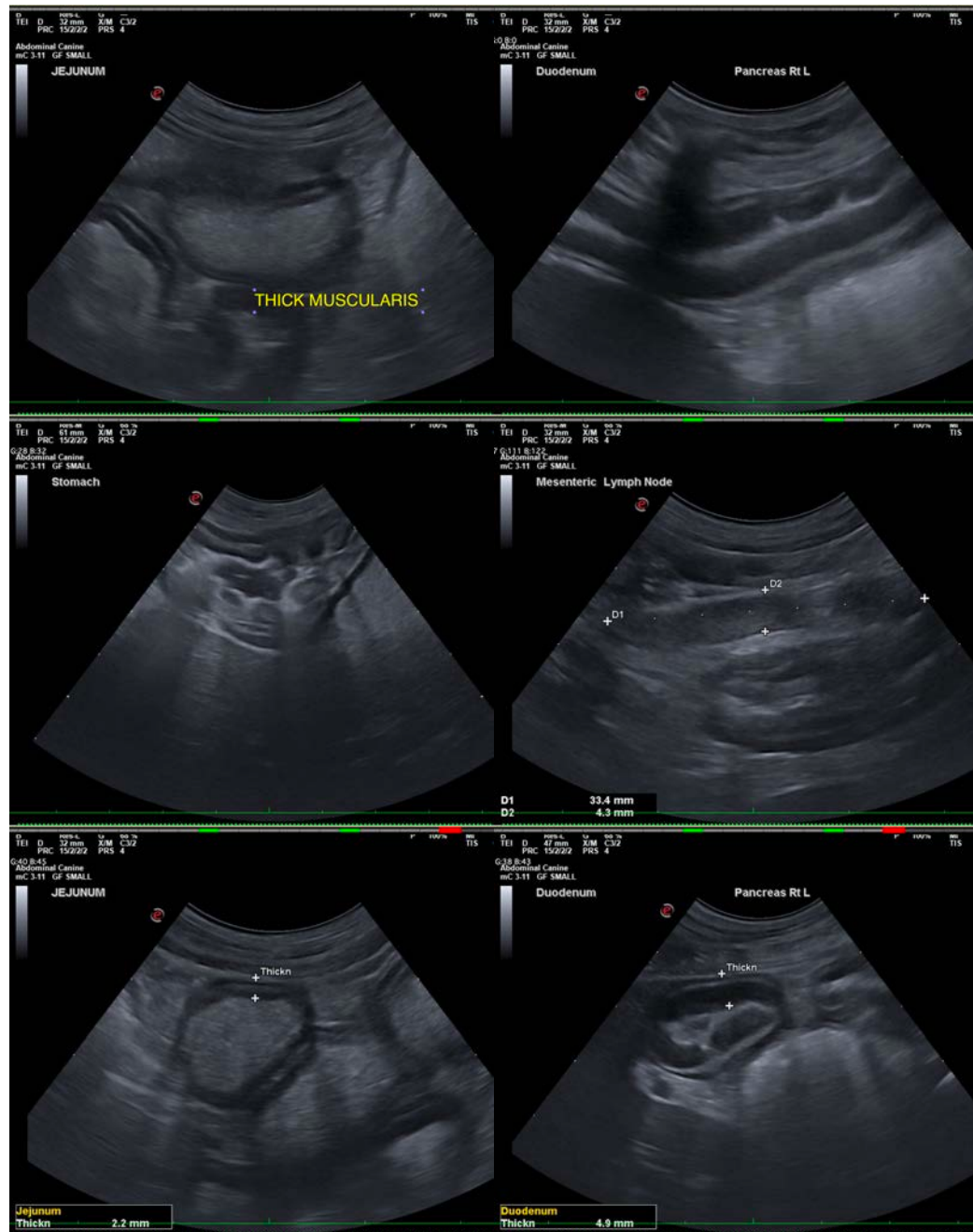
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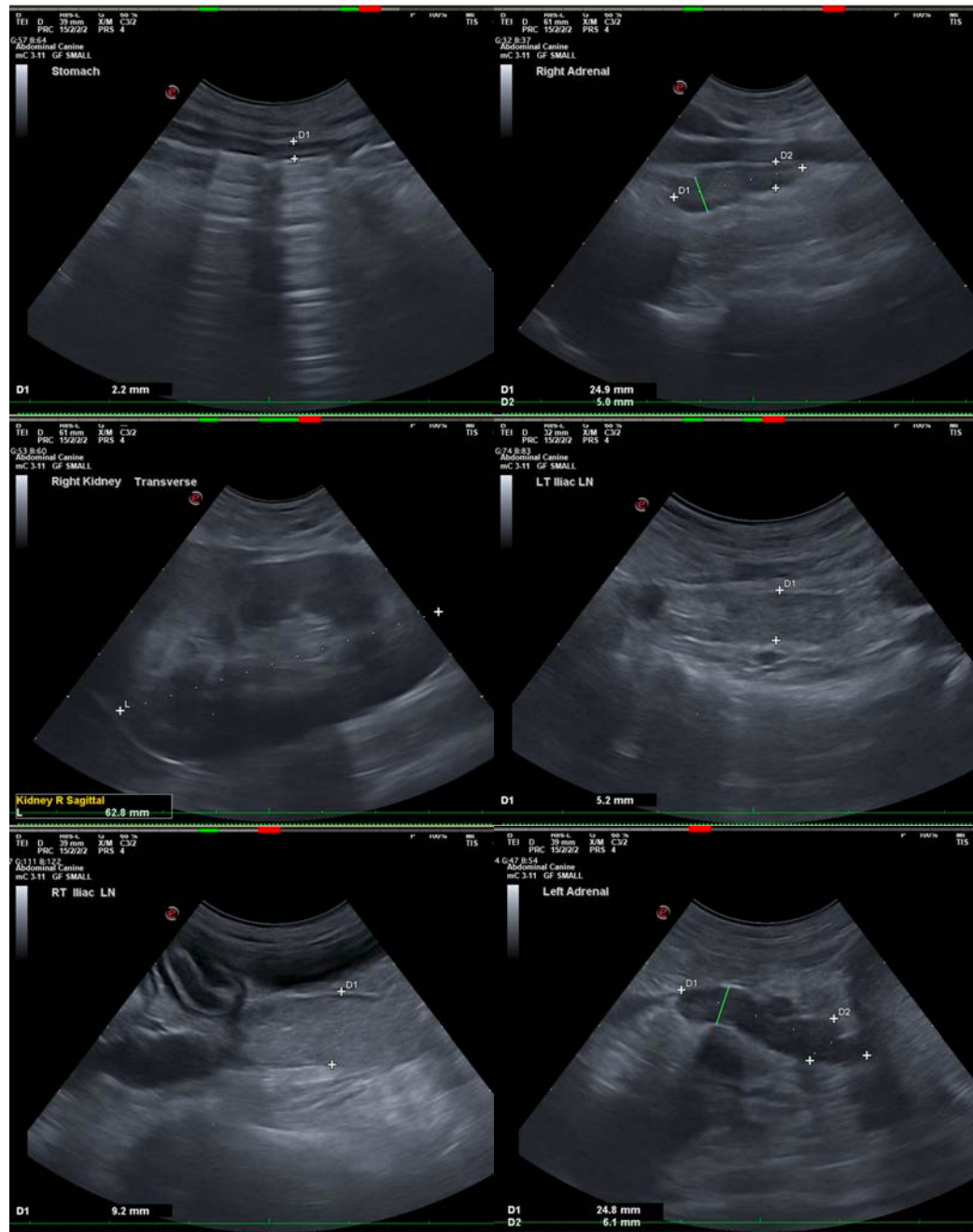
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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