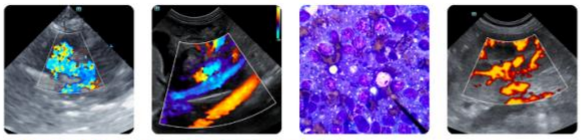




**DATE**

05/15/26

**PATIENT**

Beau Miller

**SPECIES**

Canine

**BREED**

Pitbull Mix

**SEX**

Neutered Male

**AGE**

06/25/20

**WEIGHT**

98 lbs

**INTERPRETED BY**

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

**HOSPITAL NAME**

Madonna Veterinary Clinic

**REFERRING VET**

Dr. Smith

**INVOICE**

16249

## PRESENTING CLINICAL SIGNS

Patient History: Patient is going to an orthopedic surgeon for a CCL repair. Pre-Op bloodwork showed a consistent/chronic ALKP elevation likely due to Keppra administration for seizures which he has been taking for 2 years (750mg TID). The referral surgeon requested AUS prior to CCL repair to help rule out any other major liver issues.

Current Medications: Keppra 750mg TID, long term
Labwork Results: Labwork attached.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Dexdomitor/Torbugesic.
Stat Report: Not requested.
Imaging Performed by: Stephanie Warga RDCS, RVT.

## 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 2.0 cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The prostate is normal in size (0.96 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 (7.85 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of 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 (7.76 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of 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 0.8 cm at the cranial pole and 0.7 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 normal in size measuring 0.71 cm at the cranial pole and 0.76 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

### *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. The spleen measures 2.24 cm.

### *Liver*

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There's an irregular hypoechoic region/nodule visualized in the mid-caudal region of the liver measuring 2.0 cm in diameter.

The gall bladder lumen is significantly distended. Some areas of the wall appear mildly thickened with adherent debris. There is a large amount of primarily non-organized echogenic debris. There is no evidence of bile duct dilation.

### *Gastrointestinal*

The stomach contains minimal luminal contents. It measures at a normal thickness of 0.23 cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with mild fluid and gas. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis: mucosa layer ratio. The duodenum measured as normal (0.57 cm in wall thickness) and the jejunum measured as normal (0.34 cm) Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering. The descending colon wall measures 0.16 cm.

### *Pancreas*

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*

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

## ULTRASONOGRAPHIC FINDINGS

- Heterogeneous liver with a hypoechoic area/nodule- The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, infiltrative neoplasia (less likely) or other hepatopathy. The hypoechoic lesion could be consistent with the regenerative nodule, an area of fibrosis, etc. An early neoplastic lesion cannot be ruled out.

- Distended gallbladder with a large amount of non-organized intraluminal material- A large amount of debris is evident in the gall bladder with no evidence of a mucocele or associated inflammation at this time. This could represent an early mucocele or cholestasis. Continued monitoring of labwork and ultrasound are warranted for progression of this lesion. Ursodiol therapy could be considered.

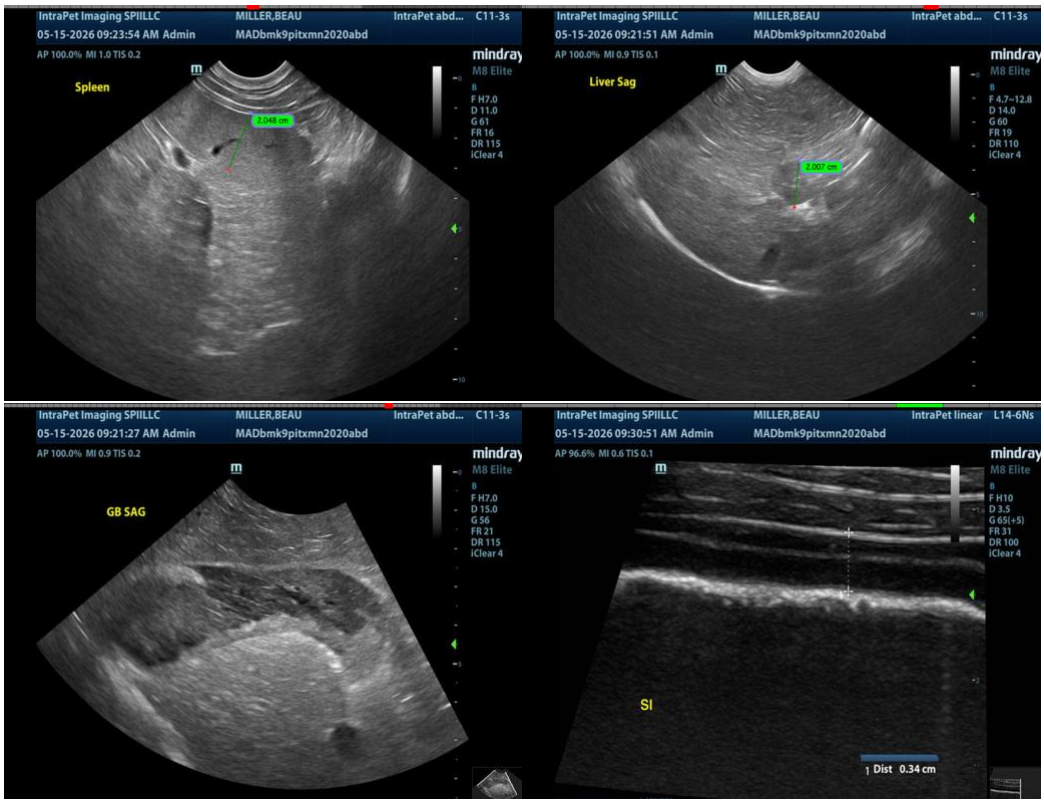
## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

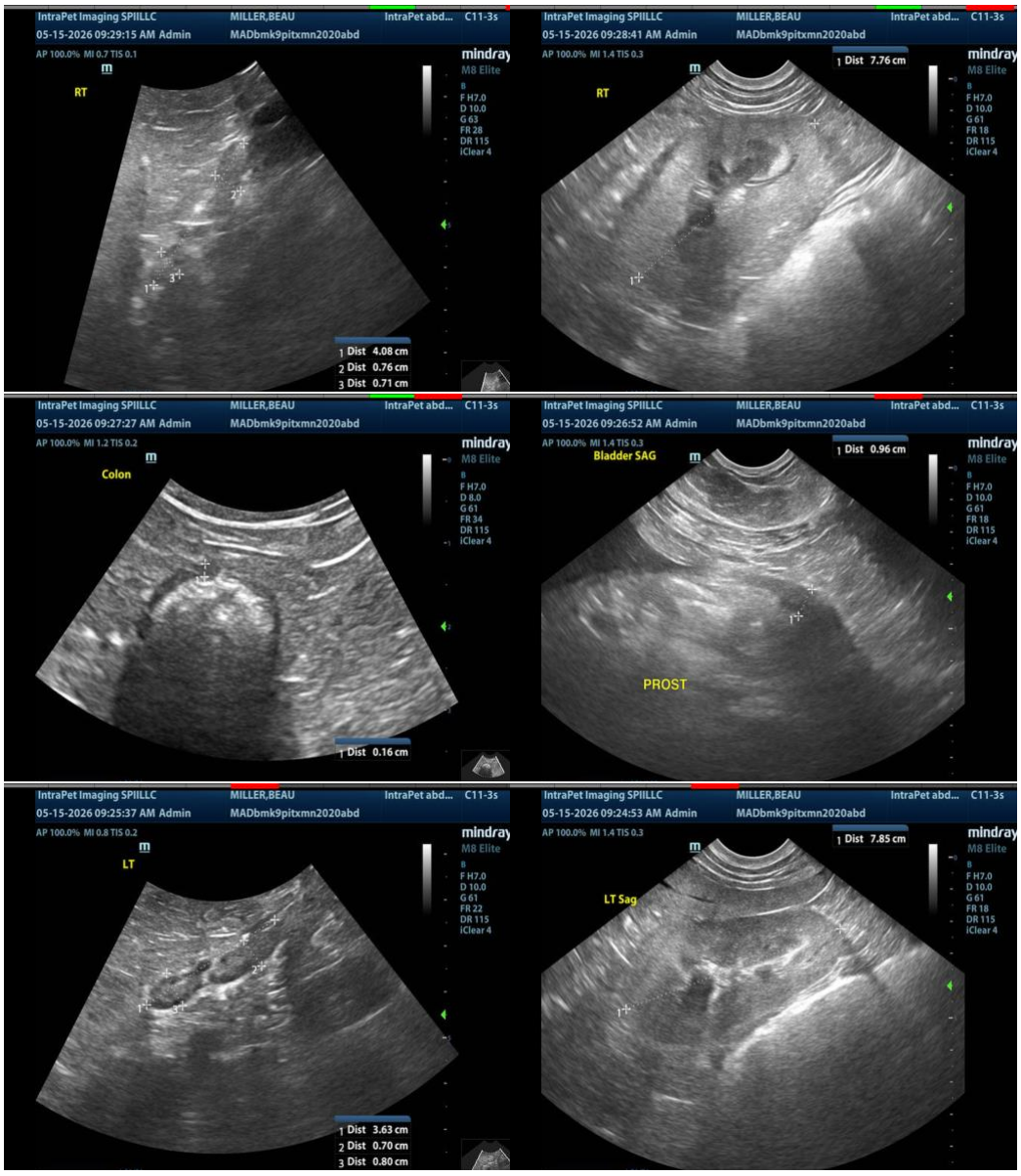
The liver subjectively appears mildly heterogeneous. There are no large focal lesions. A smaller hypoechoic region in the mid-area of the liver, possibly consistent with a hypoechoic nodule, is of uncertain significance at this time and is unlikely to be reachable for a fine-needle aspirate. Recommend continued monitoring with ultrasound. A vacuolar hepatopathy would be the most likely differential, but other differentials are possible.

If further evaluation is desired, consider pre- and postprandial bile acids to assess liver function and a fine-needle aspirate of the liver.

To my knowledge, Keppra does not cause significant liver enzyme elevations, as it is primarily metabolized by the kidneys.

There's a large amount of non-organized debris visualized within the gallbladder with no evidence of significant wall thickening or surrounding inflammation. Consider chronic ursodiol therapy and continued monitoring of the gallbladder.




IntraPet Imaging SPIILLC
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RT
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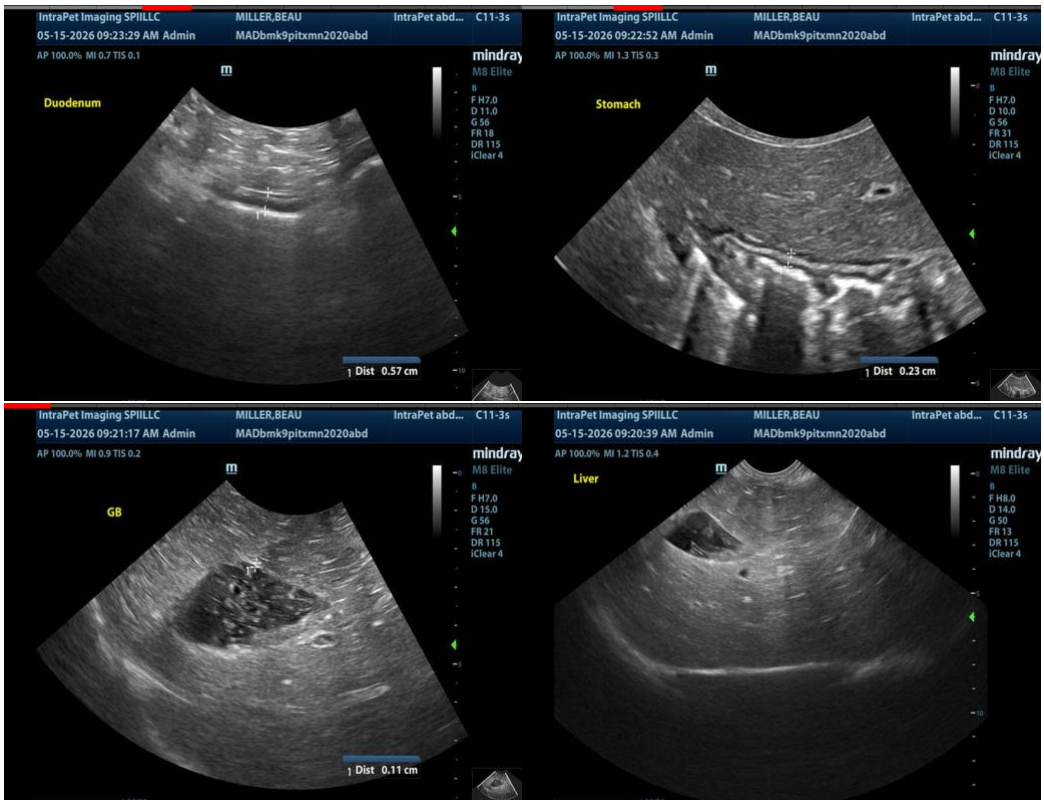
mindray
M8 Elite




**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)

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