



**PATIENT**

Jake Richardson

**SPECIES**

Canine

**BREED**

Beagle

**SEX**

Neutered Male

**AGE**

12 Years

**WEIGHT**

36.8 Pounds

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

Jessica Bailes

**HOSPITAL NAME**

All Creatures Great &  
Small Corvallis

**REFERRING VET**

Dr. Chantal Litalien

**INVOICE**

33209

**DATE**

12/2/21

**PRESENTING CLINICAL SIGNS**

Hx of elevated liver values (ALP>>>ALT), significant proteinuria and systemic hypertension not controlled despite enalapril and amlodipine. Hx of hypothyroidism - on levothyroxine. Prior Hx of ear infection/skin disease - not noted today.

Abnormal PE/Chem/CBC/UA Results: NSF on PE NSAID CHEM done 11/1/21: BUN 29 (7-27) -- was 27 ALT 187 (10-125) -- was 116 AST 69 (0-50) -- was 54 ALP > 2000 (23-212) -- was 1949 Superchem/CBC/TT4/UA done 8/21: CBC: WNL chem: marked increase ALP 2948 (5-131) increased PSL 299 (24-140) BUN - 20 (6-31) creat - 0.7 (0.5-1.6) T4 - 3.5 (0.8-3.5) (on thyro-tab) UA: USG - 1.024, pH - 6.0, +3 protein, quiet sediment UPCr - 5.2

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is mildly distended with anechoic urine. The bladder wall appears mildly thickened diffusely, measuring 0.55 cm. The mucosa appears smooth with no evidence of focal mass effects or calculi. The area of the trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear free of significant wall thickening, calculi, or mucosal irregularities. Findings are most consistent with lack of urine distention, but underlying cystitis cannot be ruled out.

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 (6.11 cm) with too numerous to count small cortical cysts. Overall echogenicity is slightly hyperechoic with poor 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 (7.23 cm) with numerous small cortical cysts. Overall echogenicity is slightly hyperechoic with poor 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 0.71 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 0.78 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.

**Liver**

The liver is large in size, and normal 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 is an irregular, well defined, hypoechoic mass effect



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visualized within the liver, measuring 3.51 cm x 2.77 cm. Additionally, there is a small anechoic cyst measuring 1.3 cm.

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The gallbladder lumen is moderately distended. The wall of the gall bladder has very small, irregular polypoid projections and there is a moderate amount of non-organized and partially mineralized echogenic debris. The cystic and common bile ducts are normal/not visible.

**Gastrointestinal**

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The stomach is moderately dilated with fluid and irregular shadowing material most consistent with normal ingesta and gas. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layering is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

**SEX**

Neutered Male

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Duodenum wall measured 0.58 cm. Jejunum wall measured 0.36 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

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The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. 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.

**WEIGHT**

36.8 Pounds

**Pancreas**

The pancreas is prominent and hypoechoic as compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

**INTERPRETED BY**

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

**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.

**IMAGING PERFORMED BY**

Jessica Bailes

**PRIMARY FINDINGS**

- Irregular, hypoechoic intraparenchymal hepatic mass – could be consistent with a benign lesion (hepatoma, necrosis, degenerative nodule etc.), or could be consistent with a cancerous lesion.
- Decreased corticomedullary distinction in both kidneys with small cortical cysts – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis.
- Prominent, hypoechoic pancreas with mildly surrounding hyperechoic mesentery – The pancreatic changes are most consistent with mild pancreatitis/pancreatic inflammation. Recommend fPLI testing and continued monitoring for improvement or possible development of a pancreatic abscess. Consider fine needle aspirate if not improving.
- Very mild gallbladder polyps and sludge – The significance of the gall bladder polyps and debris is unclear. This could represent an early mucocele, cholestasis, or chronic inflammation, or could be an incidental finding.

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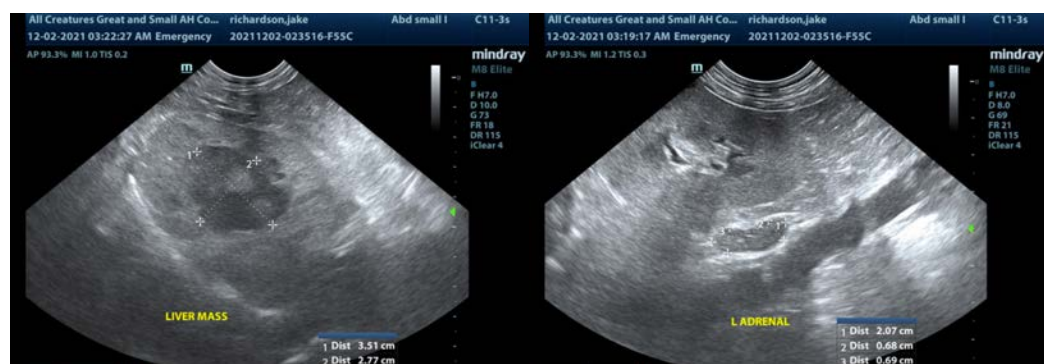
## SECONDARY FINDINGS

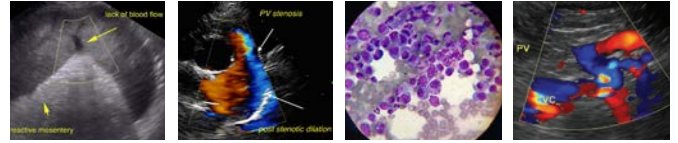
- Mildly thickened urinary bladder wall – The bladder mucosal changes could be consistent with cystitis or artifactual due to lack of adequate luminal distension. Bladder neoplasia cannot be ruled out but is considered unlikely in this patient.
- Borderline plump adrenals – Both adrenals measure within normal size, but are on the high end of normal. The bilateral adrenomegaly could be consistent with bilateral hyperplasia (e.g., secondary to pituitary-dependent hyperadrenocorticism), bilateral infiltrative neoplasia, inflammatory adrenal disease, other. Correlation with clinical findings is recommended.
- Moderate distention of the stomach with ingesta – Correlate with feeding history. If appropriately fasted, differentials would include delayed gastric emptying or partial gastric obstruction (none visualized).

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is a hypochoic lesion in the liver. The nature of this lesion is not clear, but it could be contributing to the ALP elevation reported. Options moving forward include a fine needle aspirate of the lesion and/or advanced imaging (contrast CT scan of the liver to evaluate for possible surgical removal). This could be a benign or cancerous lesion.

Both kidneys are somewhat hyperechoic with small cysts and have decreased corticomedullary distinction. These changes are consistent with the renal disease described. Consider possible contributing factors to the hypertension such as concurrent Cushing's disease(?), as the adrenals are borderline large in size. Additionally, you could consider different anti-hypertensive treatment such as angiotensin receptor blocker (telmisartan) with caution regarding kidney function. Additionally, the mass effect in the liver could be contributing to chronic inflammation and the proteinuria reported. Recommend 3-view thoracic radiographs to look for evidence of concurrent intrathoracic disease or evidence of metastasis.





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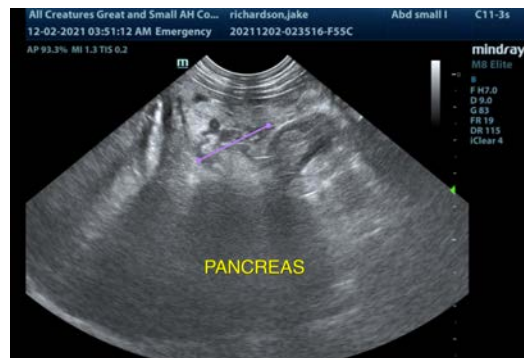
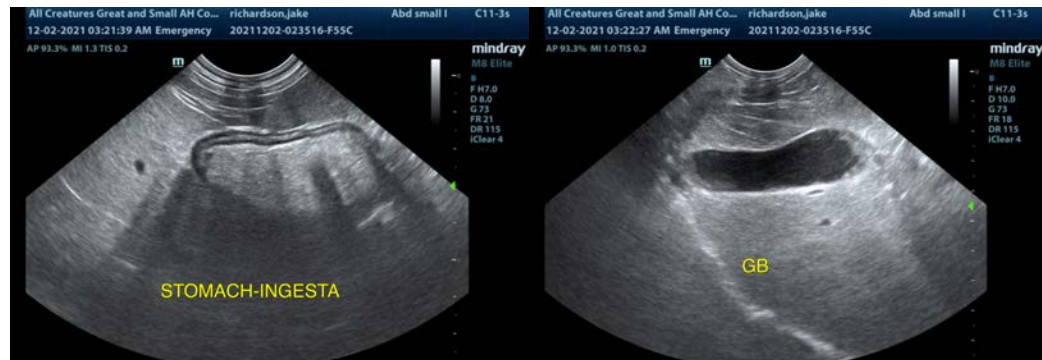
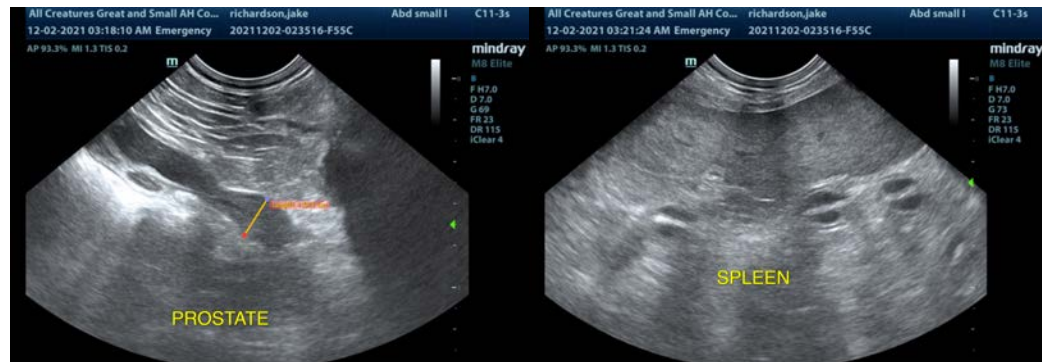
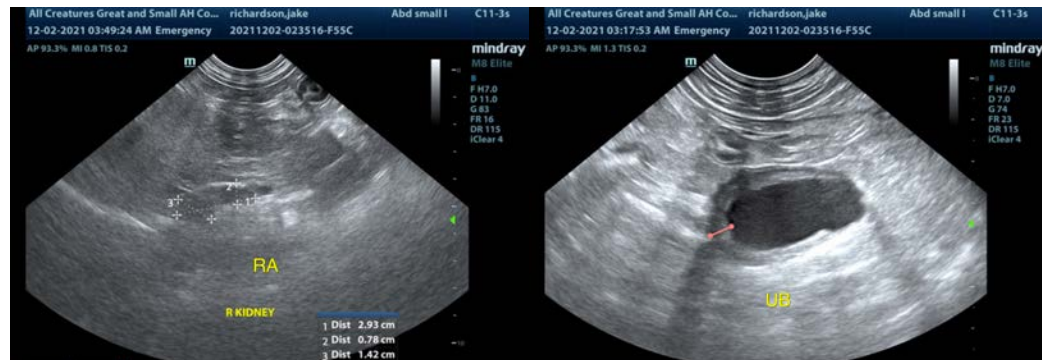
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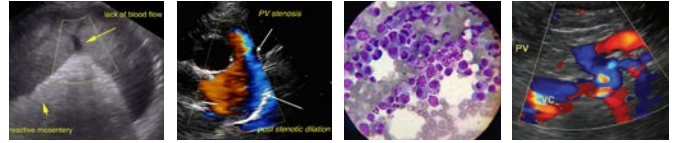
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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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kathleen.sennello@sonopath.com

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