

**DATE PRESENTING CLINICAL SIGNS**

9/23/22

Hx of sudden partial anorexia beginning 3 weeks ago. No emesis. On and off constipation. Now is becoming icteric.

**PATIENT**

Jack Clabaugh

Current Medications: Amoxicillin/Clavulonate 125 mg. b.i.d. Cerenia 24 mg. qd. Gabapentin 50mg.b.i.d, Entyce 30 mg. qd. Lactulose 2 cc. b.i.d. Probiotic

Lab Results: ALT, AST, GGT, ALP elevated 2 months ago.

Radiographs: suggest slight bronchiolar thickening but nothing else.

**SPECIES**

Canine

Date of Previous IntraPet Ultrasound: No previous.

**BREED**

Poodle

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Approved.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****SEX**

Neutered Male

**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.

**AGE**

5/4/09

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.

**WEIGHT**

18.4 Pounds

The left kidney has a normal shape and size (4.88 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 focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**INTERPRETED BY**

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

The right kidney has a normal shape and size (3.98 cm) with small cortical cysts, the largest of which measures 0.69 cm. Overall echogenicity is slightly hyperechoic with poor 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.

**IMAGING PERFORMED BY**

Stephanie Warga  
RDMS, RVT

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.72 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.

**HOSPITAL NAME**

Hoenygo AH

The right adrenal gland is normal in size measuring 0.56 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.

**REFERRING VET**

Dr. Moffa

**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. There is a mixed echogenic nodule visualized in the spleen measuring 1.39 cm x 0.69 cm and a small hypoechoic lesion measuring 0.44 cm x 0.30 cm.

**INVOICE**

41549

### **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. A discrete hypoechoic lesion is visualized on the right side of the liver measuring 1.66 cm x 2.13 cm. Additionally, there is an ill-defined hyperechoic lesion visualized on the right side of the liver measuring 1.12 cm x 1.02 cm.

The gallbladder lumen is large and distended. The wall of the gall bladder is slightly irregular and hyperechoic and thickened, measuring at 0.36 cm. There is adherent debris and there is organization and early stranding of this debris into an early mucocele. There is mild surrounding inflammation and no obvious free fluid observed. The bile duct is normal/not visible. Findings are most consistent with an early mucocele and cholecystitis.

### **Gastrointestinal**

The stomach contains minimal luminal contents. 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 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 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 measures 0.33 cm. Jejunum wall measures 0.23 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

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.

### **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.

### **Other**

A brief view of the heart was submitted. No significant pericardial effusion was seen.

## **ULTRASONOGRAPHIC FINDINGS**

- Large gallbladder with thickened wall and significant adherent debris with early organization and surrounding inflammation – most consistent with a gallbladder mucocele and cholecystitis.
- 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.
- Mixed echogenic nodule and hypoechoic nodule visualized in the spleen – There are several non-cavitated hypoechoic and mixed echogenic splenic nodules visualized. Differentials include lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.

- Hypoechoic and hyperechoic hepatic nodules – The hyperechoic nodule trends towards the appearance of a benign lesion. The hypoechoic nodule could represent a benign or neoplastic lesion.

### INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

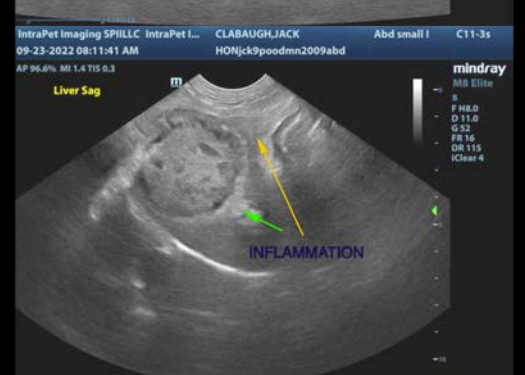
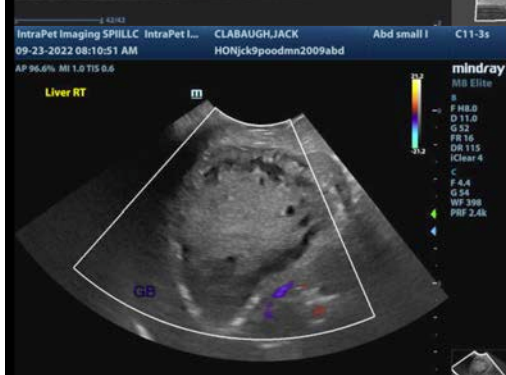
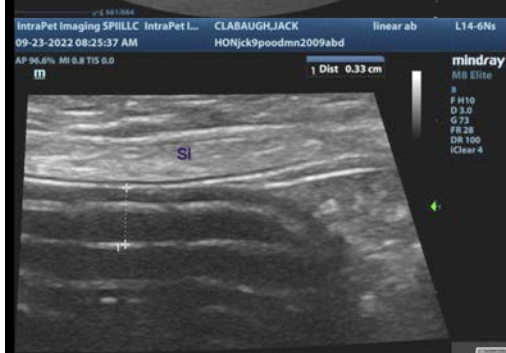
The gallbladder is significantly distended with a thickened wall and early mucocele and some surrounding inflammation. Given the information provided, I would be concerned about cholecystitis and the possible need for gallbladder removal. There is no surrounding free fluid and no indication of rupture. If surgery is absolutely not a possibility, then I would consider medical management with antibiotics and Ursodial. I would recommend a liver biopsy at the same time with samples for histopathology +/- culture.

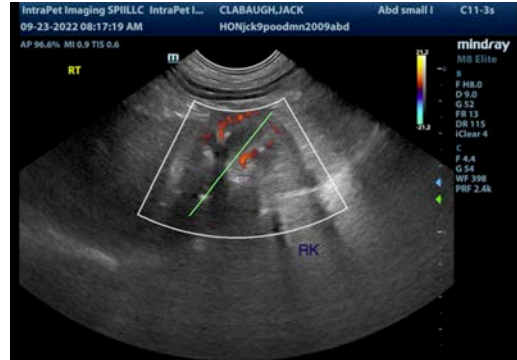
There are two lesions visualized in the spleen, a larger mixed echogenic nodule and a very small hypoechoic nodule. If possible, cytologic evaluation of these lesions (probably just the mixed echogenic nodule would be able to be aspirated) is recommended.

There are two lesions observed in the liver, one discrete hypoechoic nodule that may be due to deep to easily aspirate and could represent either a very hypoechoic nodule or a mildly echogenic hepatic cyst. The hyperechoic nodule is ill-defined and has more of a benign appearance.

Based on the clinical presentation of this patient and the lab work, you will need to consider the possibility of emergency surgery for gallbladder removal. If the patient is more stable and liver enzyme values are not dramatic, then there is the possibility of monitoring and obtaining cytology samples of the spleen, etc., but based on the information provided at this point, surgical intervention sooner than later is recommended.







**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