**DATE PRESENTING CLINICAL SIGNS**

7/17/23

Presented for vomiting and diarrhea. Tense on abdominal palpation; splinting. 4cm SQ mass ventral chest; 1/2cm skin mass medial aspect of left eye.

**PATIENT**

Charlie Flinger

Current Medications: Cerenia 24mg SID for 7 days.  
 Lab Results: CPL abnormal. O declined additional labwork.  
 Date of Previous IntraPet Ultrasound: No previous.  
 Sedation: Not required to complete full diagnostic ultrasound.  
 Stat Report: Not requested.  
 Imaging Performed By: Andi Parkinson, BS, RDMS.

**SPECIES**

Canine

**BREED**

Yorkie

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****Urinary System**

The urinary bladder is moderately distended with anechoic urine. The Bladder wall is irregular and thickened most severely at the ventral apical region where there is a focal pedunculated lesion measuring 0.51 cm x 1.21 cm. Additionally, there are numerous focal hypoechoic shadowing mineralizations most consistent with stones in the dependent portion examples measuring 0.39 cm, 0.67 cm, and 0.68 cm.

**AGE**

6/23/11

The prostate is normal in size (0.51 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**

20.6 Pounds

The left kidney has a normal shape and size (5.18 cm) with numerous small non obstructive nephroliths. 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, 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 (5.22 cm) with numerous focal shadowing nephroliths. Examples of which measure 0.49 cm, 0.58 cm, and 0.59 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, infarcts, or hydroureter. Renal vasculature is normal.

**HOSPITAL NAME**

Banfield Towson

**Adrenal Glands**

The left adrenal gland is large and slightly irregular measuring 1.13 cm at the cranial pole and 0.88 cm at the caudal pole, 2.81 cm in length. It is visualized in its normal position cranial to the left renal artery. It appears somewhat atypical in that it is large and there is a focal hyperechoic nodule in the cranial pole measuring 0.4 cm x 0.51 cm. No evidence of vascular invasion is visualized.

**REFERRING VET**

Dr. Lewis

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.

**INVOICE**

10342

**Spleen**

The spleen is subjectively normal in size and the echotexture is homogenous. The splenic capsule is smooth with no visible irregularities. Rare discrete focal hyperechoic, perivascular parenchymal abnormalities are present. The appearance of these lesions is most consistent with benign splenic myelolipomas. The blood flow through the hilus and splenic parenchyma appears normal.

### **Liver**

The liver is large in size, and normal in echogenicity with smooth peripheral margins. The parenchyma is mildly heterogenous in echotexture with subtle, indistinct focal mottling. 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.

### **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. The duodenum measured as normal (0.53 cm), and the jejunum measured as normal (0.36 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 large and hypoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is evidence of regional mesenteric inflammation. Consistent with mild pancreatitis in the right limb.

### **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.

### **PRIMARY FINDINGS**

- Irregular urinary bladder wall with focal pedunculated lesions (polyps?) and numerous calculi. Recommend urine analysis and culture and correlate findings with abdominal radiographs.
- Large left adrenal with a hyperechoic nodule in the cranial pole. Adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.
- Decreased corticomedullary distinction in both kidneys with non-obstructive nephroliths. Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis.
- Prominent mottled right limb of the pancreas with mild surrounding hyperechoic mesentery. The pancreatic changes are most consistent with mild pancreatitis/pancreatic infiltration. Recommend

fPLI testing and continued monitoring for improvement or possible development of a pancreatic abscess. Consider fine needle aspirate if not improving.

- Large, mildly heterogenous liver. The diffuse hepatic changes are non-specific and can be seen with vacuolar hepatopathy, reactive change, nodular hyperplasia or, less likely, inflammatory/immune-mediated disease, infiltrative neoplasia, or other hepatopathy.
- Moderate gallbladder debris. 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

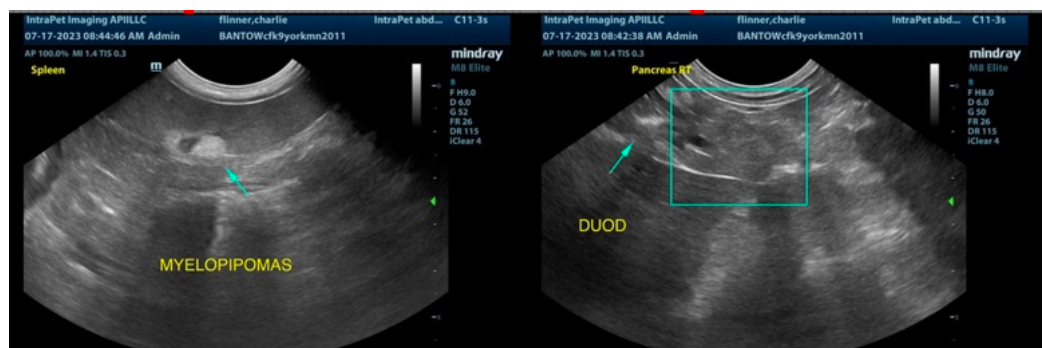
The right limb of the pancreas appears slightly prominent with mildly reactive mesentery in the region. This finding could be consistent with pancreatitis and could be contributing to or the source of the vomiting diarrhea reported. If the symptoms are more chronic in nature a concurrent enteropathy cannot be ruled out.

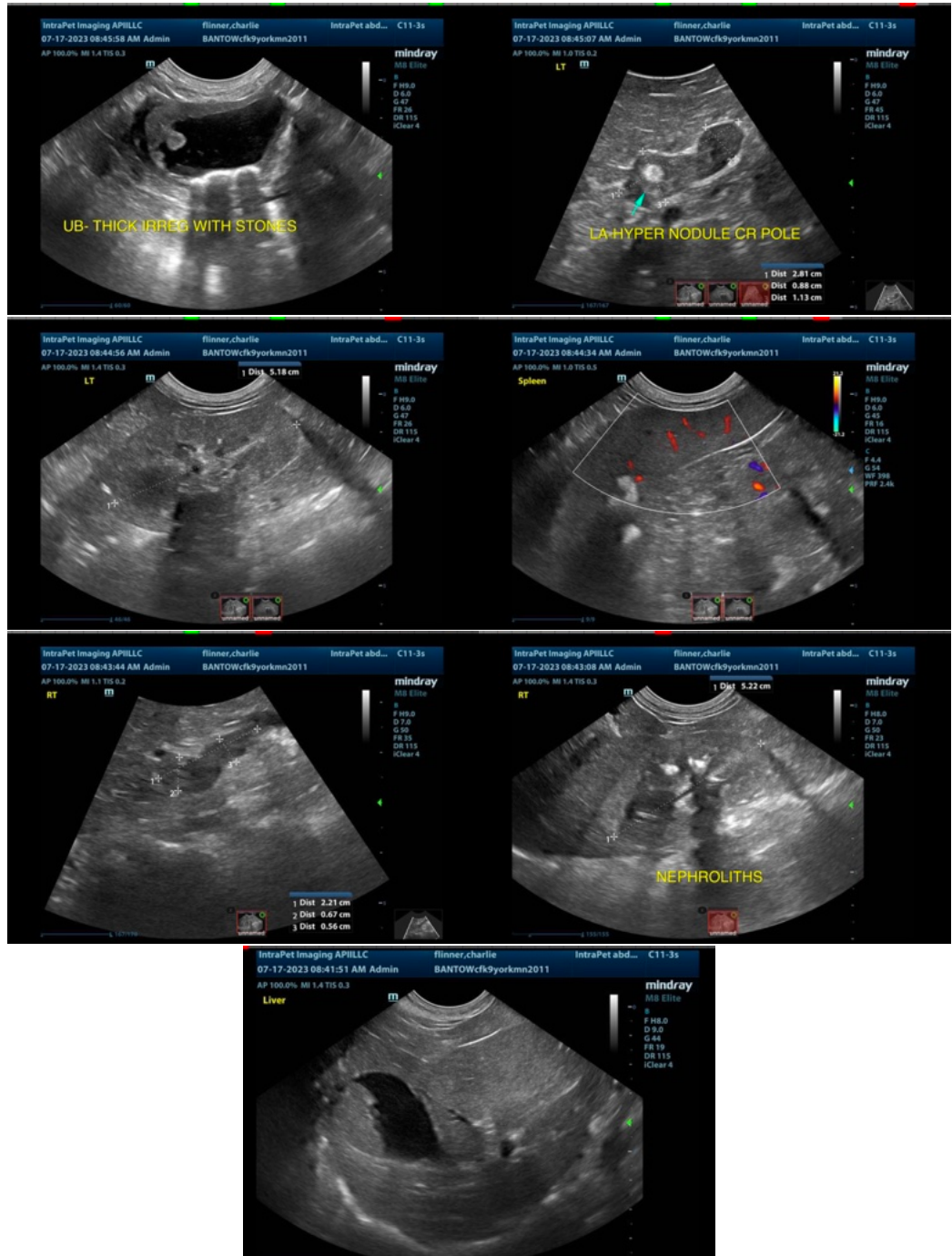
Additionally, the urinary bladder is very abnormal with numerous stones and irregular thicken wall etc. Correlate with abdominal radiographs, urine analysis, and culture, as this could be contributing to the abdominal pain reported. Depending on the size and number of stones present a cystostomy may be considered for stone analysis and culture.

The left adrenal gland appears slightly enlarged with a small hyperechoic nodule. The significance of this lesion is unclear at this time, it is most consistent with a benign lesion (hyperplasia, adenoma, etc.) but continued monitoring is warranted as an early neoplastic lesion could not be ruled out. Additionally, recommend blood pressure evaluation. If hypertension is present, consider catecholamine levels.

The changes visualized associated with the liver and gallbladder of uncertain significances correlate with current bloodwork.

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





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)  
info@sonopath.com