

IMAGING PERFORMED BY

IntraPet.com



**SonoPath**

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

1-800-838-4268 info@sonopath.com SonoPath.com

**DATE PRESENTING CLINICAL SIGNS**

3/16/22 P not moving around, eyes are moving in the back of her head, not eating and drinking a lot. When she gets up to move she will fall over. O said this all started yesterday. O said p did vomit once yesterday. O had to put p into litter box and she did urinate.

**PATIENT**

Zsa Zsa Merchant

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Spayed Female

**AGE**

7/18/16

**WEIGHT**

9.26 Pounds

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Stephanie Pearce  
RDMS, RVT

**HOSPITAL NAME**

Taylorville Vet Clinic

**REFERRING VET**

Dr. Earp

**INVOICE**

36201

Current Medications: Prednisolone - Give 1/2 tablet by mouth twice daily for 14 days, then 1/2 tablet once daily for 7 days, then 1/2 tablet every other day until gone - dispensed 2/28/22. Benzoyl Peroxide - small amount on gauze pad to clean chin BID - dispensed 2/28/22  
Bravecto Cat - 1 dose every 3 months - dispensed 2/28/2022  
Labs: See attached.  
Date of Previous IntraPet Ultrasound: No previous.  
Sedation: Not required to complete full diagnostic ultrasound.  
Stat Report: Requested.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is mildly distended with anechoic urine. No obvious abnormalities are visualized with the bladder wall, ureteral papillae, trigone, or proximal urethra. No calculi are observed. Evaluation of the bladder wall is somewhat impaired by lack of urine distention.

The left kidney has a normal shape and size (3.48 cm) with 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 perinephric inflammation or effusion. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (4.23 cm). 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 0.41 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 0.42 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 spleen is folded over upon itself. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

**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. No focal nodules or cystic lesions are observed.

The gallbladder lumen is moderately distended. The wall of the gall bladder appears relatively normal and has a smooth mucosal surface. There is some debris with hyperechoic shadowing stones visualized within the

lumen. The bile duct appears somewhat dilated and tortuous with some pinpoint mineralizations evident within the bile duct, and some echogenic/muroid debris/fluid. At the level of the duodenal papillae, the bile duct appears thickened with echogenic fluid and mucus. The wall of the bile duct appears thickened, and the duct itself measures 0.65 cm in diameter. There is what appears to be a stone lodged in the area of the duodenal papilla, and another mineralization more proximally. There is inflammation surrounding the gallbladder and bile duct.

### ***Gastrointestinal***

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.36cm 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. Jejunum wall measured 0.20 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 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.

### ***Free Abdomen***

Evaluation of the peritoneal cavity did not reveal any evidence of effusion. There is no significant lymphadenopathy. The omentum is generally increased in echogenicity, particularly around the gallbladder, bile duct and pancreas.

## **PRIMARY FINDINGS**

- Hypoechoic, prominent pancreas – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.
- Distended gallbladder with intraluminal stones as well as a thickened, dilated bile duct with stones and muroid debris – Findings are most consistent with cholecystitis and biliary obstruction. A stone is visualized at the level of the duodenal papilla.
- Hyperechoic mesentery in the cranial abdomen – Findings are consistent with reactive peritonitis.

## **SECONDARY FINDINGS**

- Decreased corticomedullary distinction in both kidneys and left-sided non-obstructive nephroliths – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis.

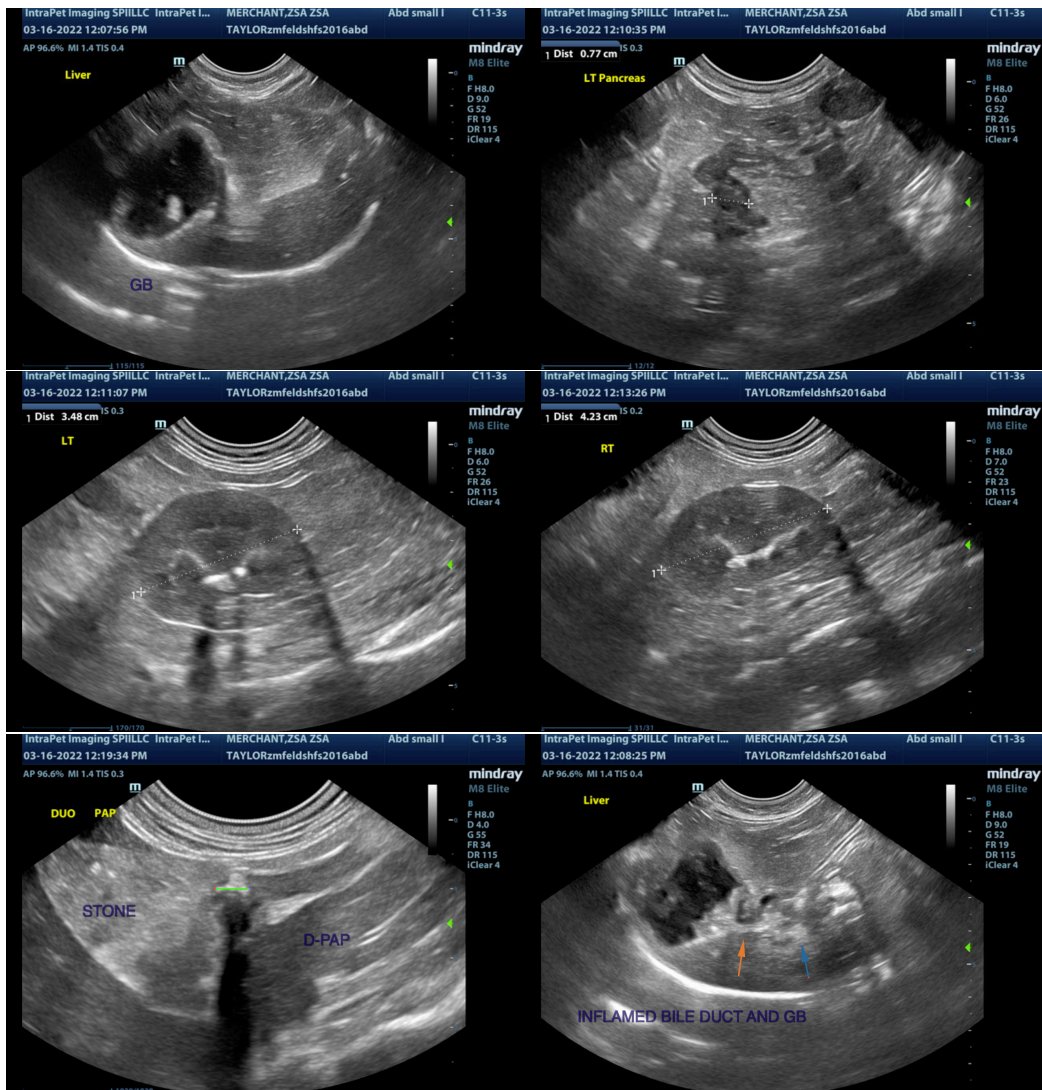
## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

There are numerous small stones visualized within the gallbladder and bile duct. The bile duct itself is dilated with thickened wall, and muroid debris is present. There is the suggestion of a terminal stone in the duodenal papilla, which could be causing a complete or partial obstruction. There is a large amount of inflammation

around the gallbladder and bile duct with no free fluid visible at this time. Possible options include medical management with antibiotics, pain medications, and possibly an anti-inflammatory dose of steroids (0.5 mg/kg per day), and very close monitoring with ultrasound and lab work, as this could become a surgical case. Alternately, you could consider a referral to a veterinary surgeon at this time who could consider advanced imaging (contrast CT scan) to better determine when and if surgery should be pursued. If initial medical management is chosen as an option, then consider a fine needle aspirate of the liver to try to rule out round cell neoplasia as underlying factor (provided coagulation parameters are normal, etc.).

- Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.
- Recommend a quantitative PLI level.
- Recommend coagulation testing and possible Vitamin K supplementation.
- Recommend rehydration and stabilization, hopefully to correct the prerenal azotemia.

These patients can be very unstable, particularly under anesthesia. Very close monitoring of blood pressure and other parameters is warranted.



**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