



## PATIENT

Luna Miller

## SPECIES

Canine

## BREED

Shih Tzu

## SEX

Spayed Female

## AGE

14 Years

## WEIGHT

16 lbs

## INTERPRETED BY

Beth Johnson, DVM  
DACVIM

## IMAGING PERFORMED BY

Julia Bakker, DVM

## HOSPITAL NAME

Orange Blossom  
Veterinary Imaging

## REFERRING VET

Danielle Husted, DVM

## INVOICE

73117

## DATE

2/19/26

## PRESENTING CLINICAL SIGNS

Pet has been having episodes of not wanting to eat, and nausea. Overall generally lethargic.

History of arrhythmias but no murmur. Previous echos unremarkable. Screening echo performed today after more episodes of syncope.

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### Urinary System

The urinary bladder is adequately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Kidneys are bilaterally irregular and diffusely echogenic with decreased corticomedullary distinction and poor visualization of internal architecture. No mineral is observed. Left kidney is small-normal at 3.28 cm with mild pyelectasia at 0.25 cm in the transverse view. Right kidney is normal in size at 3.95 cm.

### Adrenal Glands

The right adrenal gland is normal in size (0.62 cm at cranial pole and 0.56 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.38 cm at cranial pole and 0.21 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

### Spleen

Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Multifocal mineral foci are noted. Splenic vasculature appears normal.

### Liver

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is mildly heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion

Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

### Gastrointestinal

The gastric wall is diffusely markedly thick, measuring 1.3 cm thick, with an overall mildly heterogeneous, hypoechoic appearance to the wall. Layering is not completely lost but is much less distinct than normal. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease.



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The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

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The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

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### **Pancreas**

The observed pancreas is prominent (enlarged) in size, hypoechoic to surrounding tissue and irregular in shape with a swollen undulating contour. Enhanced hyperechoic ill-defined surrounding fat is noted.

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### **Free Abdomen**

There is no visible free peritoneal effusion noted in these images.

There is no apparent pathologic lymphadenopathy noted in these images.

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In the cranial abdomen, surrounding the stomach and pancreas, is diffusely hyperechoic.

### **ULTRASONOGRAPHIC FINDINGS**

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- The thick gastric wall is concerning for an infiltrative process. Both severe but benign inflammatory processes as well as infiltrative neoplasia are considerations and can't be fully differentiated without tissue sampling.
- Concurrent acute pancreatitis can't be ruled out, although difficult to attribute the enhanced fat to the gastric changes versus concurrent inflammation of the prominent pancreas.
- Mildly heterogenous liver - These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia.
- Mild gallbladder debris - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.
- Spleen mineralization - This is a benign change but can be associated with endocrinopathies, especially hyperadrenocorticism.
- Mild bilateral chronic kidney disease changes with mild pyelectasia in the left kidney.

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

If not recently evaluated, a general metabolic health screen (CBC, chemistry panel with electrolytes and urinalysis) is recommended.

Three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.

Fine needle aspirates of the gastric wall are recommended if patient's coagulation status is appropriate.



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Pending results of above, if a cytologic diagnosis is not made and/or a benign inflammatory gastritis is diagnosed, further gastrointestinal workup recommendations include:

A routine fecal/giardia exam.

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A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

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A baseline cortisol is recommended. If baseline cortisol is less than 2, a full ACTH stimulation test is recommended to rule out hypoadrenocorticism.

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In the meantime, supportive/symptomatic medical management of clinical signs is recommended, including anti-emetics, gastroprotectants (+/- sucralfate, especially with any history of hematemesis), an appetite stimulant and fluid therapy if indicated, etc.

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Additionally, empirical deworming with a 5-day course of Panacur is recommended as is a full course of empirical Helicobacter triple therapy.

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Finally, if tolerated, a transition in diet could be considered, based on trial-and-error response with some options to consider including a gastrointestinal biome diet vs a hydrolyzed protein diet (sometimes several trials with different brands are necessary) vs an easy to digest, bland or low-fat diet vs other.

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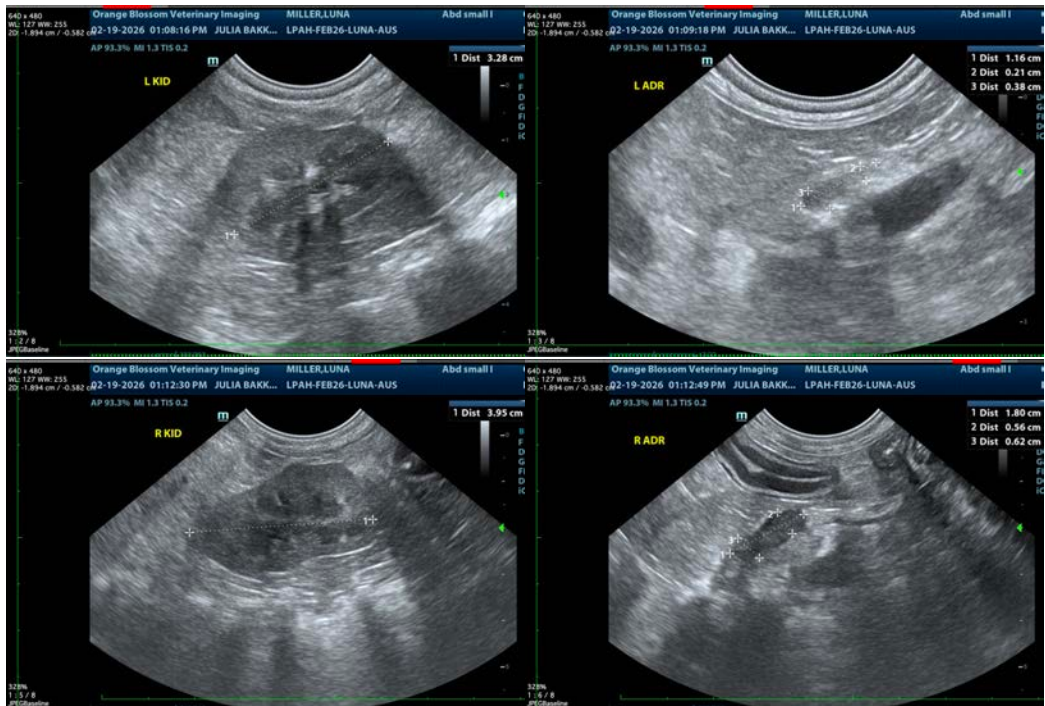
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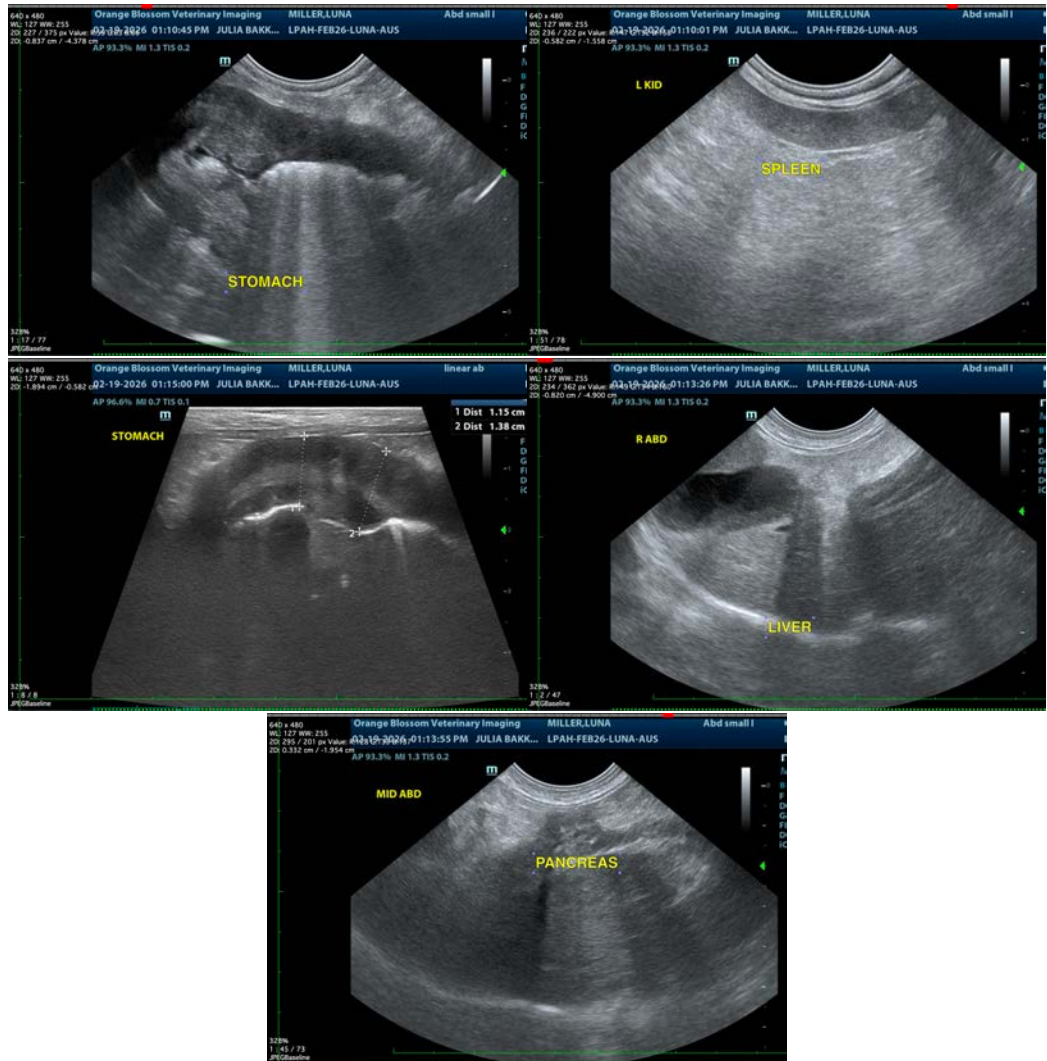
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Beth Johnson, DVM, DACVIM**  
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