

**PATIENT**

Zoe Komarniski

**SPECIES**

Canine

**BREED**

Golden Retriever

**SEX**

Spayed Female

**AGE**

13 Years

**WEIGHT**

29 kg

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

Kelly Reschny

**HOSPITAL NAME**

Grand River VH

**REFERRING VET**

Dr. Day

**INVOICE**

47063

**DATE**

5/3/23

**PRESENTING CLINICAL SIGNS**

Owner reports Patient, Zoe, has been experiencing a decrease in appetite, weight loss, and occasional dry cough/gagging. Patient's stool has improved since last visit and is now more formed. Owner notes that Zoe seems more lethargic than usual. No vomiting noted, no more diarrhea, occ cough/gag noted, no sneezing Weight loss, decreased appetite, lethargy, and irregular heart rate

Abnormal PE/Chem/CBC/UA Results: Irregular heart rate, HR hard to get - poss 130? very irregular.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**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.

The left kidney has a normal shape and size (6.44 cm). Overall echogenicity is normal with adequate 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.

The right kidney has a normal shape and size (7.23 cm). Overall echogenicity is normal with adequate 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.

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.57 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 region of the right adrenal (between right cranial kidney and vena cava) is unremarkable, but the adrenal is not distinctly visualized. No evidence of a mass effect is visualized.

**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 and irregular. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There are occasional hypoechoic nodules visualized in the parenchyma, examples of which measure 1.33 and 1.38 cm. One of these appears to deviate the hepatic margins. Additionally, the liver lobes appear blunted and irregular, almost creating somewhat of a mass effect, but the tissue is relatively isoechoic.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. The cystic and common bile ducts are normal/not visible.



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***Gastrointestinal***

Zoe Komarniski

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.

**SPECIES**

Canine

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 (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.)

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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.

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***Pancreas***

The area of 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.

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***Free Abdomen***

There is a large amount of anechoic free fluid. No lymphadenopathy. The omentum is diffusely hyperechoic.

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**ULTRASONOGRAPHIC FINDINGS**

- Irregularly shaped liver with heterogeneous parenchyma and hypoechoic nodules – The hypoechoic nodules could represent benign (hyperplasia, adenoma, etc.) or neoplastic (carcinoma, metastasis, etc.) disease. Consider a fine needle aspirate. The appearance trends towards a more benign lesion, but there is some deviation of the hepatic margins. Additionally, the liver lobes are rounded and irregular, almost creating an isoechoic mass effect in some regions.
- Large volume free abdominal fluid

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**REFERRING VET**

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There is a very large amount of anechoic free fluid in the abdomen. Recommend sampling for fluid analysis and cytology. A large focal mass effect is not visualized to explain the fluid observed today.

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The liver appears irregular in shape with rounded margins, creating somewhat of a mass effect, although I suspect this is anatomic variation. Additionally, it is heterogeneous with some ill-defined hypoechoic nodules. Correlate these findings with bloodwork, fluid analysis and cytology, and the cardiac ultrasound. If liver enzymes are significantly elevated and heart disease is thought an unlikely source of the fluid, then you could consider a liver function test and a fine needle aspirate of the liver.

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Additionally, a contrast CT scan could be considered to further evaluate the hepatic irregularity and look for any other possible sources of effusion.

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



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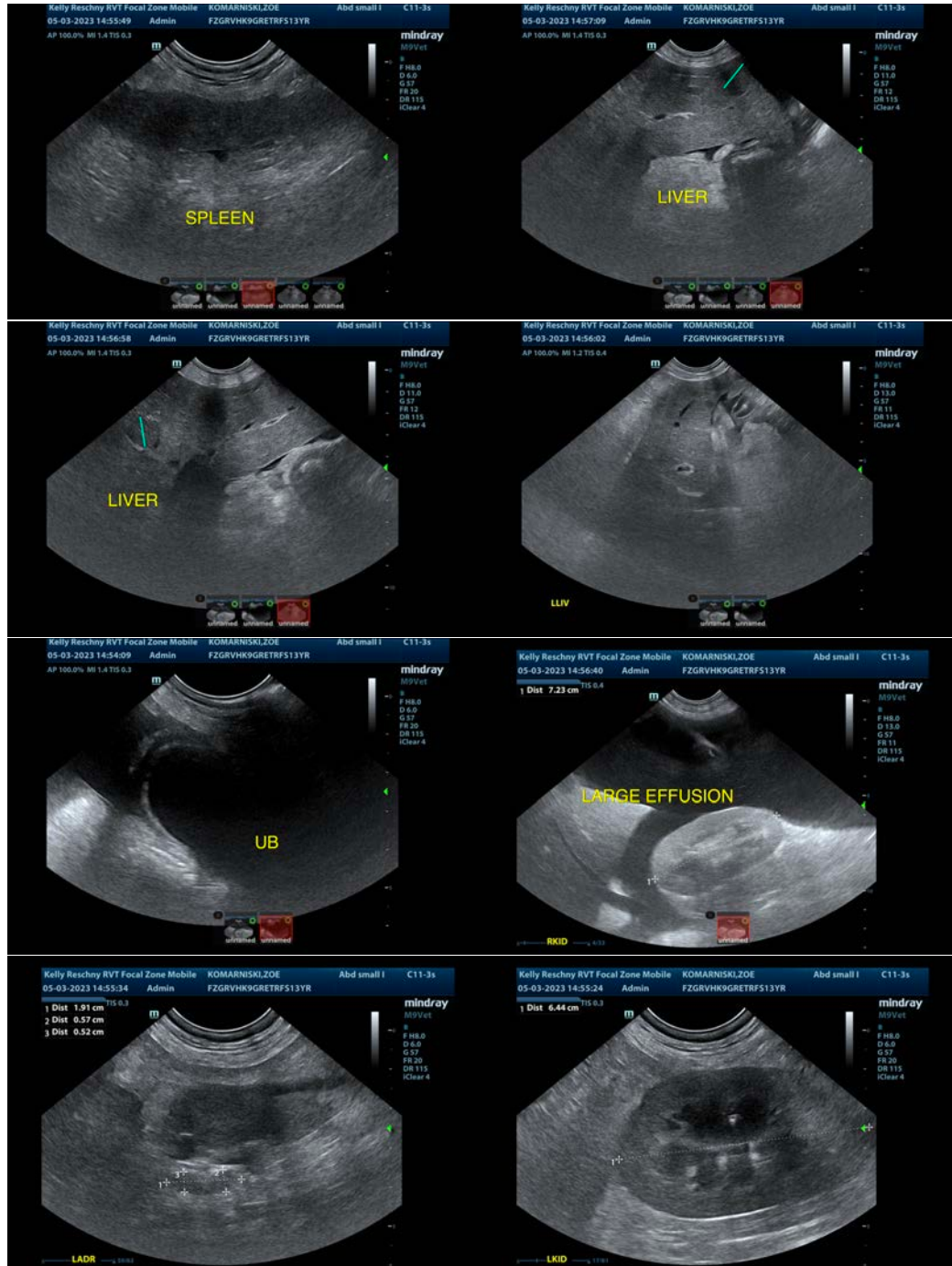
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

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