

**PATIENT PRESENTING CLINICAL SIGNS**

Scamp Merkel

**SPECIES**

Canine

**BREED**

Maltipoo

**SEX**

Neutered Male

**AGE**

9 Years

**WEIGHT**

4.2 kg

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Kelly Reschny

**HOSPITAL NAME**

Yates Vet Hospital

**REFERRING VET**

Dr. Merkel

**INVOICE**

44065

**DATE**

1/10/23

Previously diagnosed Diabetic since 2020 that is fairly well controlled Anorexia began Jan 3/23, persisting through Jan 6th Diarrhea, borborygmi and retching starting Jan 4th Was hospitalized and treated for GI signs On Jan 4th -metronidazole 15mg/kg IV Q12 hours, famotidine 0.5mg/kg IV Q12 hours, cerenia 1mg/kg SQ Q24 hours, ampicillin 22mg/kg IV Q12 hours, methadone 0.1mg/kg Q12 hours PRN, 2.5% dextrose CRI, IV LRS at 2x maintenance. Caninsulin continued at 3IU BID with BG measurements Q2 hours. Bloodwork shows mild elevations in ALP (507 23-212 U/L), otherwise unremarkable and comparable to routine bloodwork performed Aug 2022. Became ketotic Jan 5th Clinical signs eventually subsided with above treatment and pet began eating Jan 6th. Currently passing soft, mucoid stools, still QAR but brighter than pet has been all week. Current Medications Metronidazole 50mg BID, Famotidine 2mg BID, Caninsulin 2IU BID

Abnormal PE/Chem/CBC/UA Results: \*\*CHEMS/CBC performed Jan 3/23\*\* Hematocrit 0.359 0.373 - 0.617 L/L Lymphocytes 0.53 1.05 - 5.10 x10<sup>9</sup>/L Glucose 19.01 3.89 - 7.95 mmol/L Creatinine 35 44 - 159 μmol/L ALP 507 23 - 212 U/L Cholesterol 9.01 2.84 - 8.26 mmol/L Amylase 381 500 - 1,500 U/L \*\*URINALYSIS Performed Jan 5/23 Specific Gravity 1.019 Ketones 1+ Blood / Hemoglobin 1+ Bilirubin 2+ Radiographic Findings Abdominal radiographs performed Jan 6th reveals a round, soft tissue opacity in the cranial abdomen on the R lateral view, which cannot be visualized on VD (there is little serosal detail on VD).

**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, or masses. There is a very small hyperechoic shadowing structure measuring 0.46 cm in diameter in the dependent portion of the urinary bladder, most consistent with a small calculus. Correlate with abdominal radiographs, urinalysis and culture.

The prostate is normal in size (0.76 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.

The left kidney has a normal shape and size (3.48 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 (3.25 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 0.47 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 0.72 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.



**PATIENT** *Spleen*

Scamp Merkel 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.

**SPECIES**

Canine

*Liver*

The liver is subjectively normal in size with smooth peripheral margins. The parenchyma is hyperechoic and homogenous in echotexture. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

**BREED**

Maltipoo

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.

**SEX**

Neutered Male

*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.

**AGE**

9 Years

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 0.32 cm. Jejunum wall measures 0.31 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

**WEIGHT**

4.2 kg

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with a large amount of formed fecal material and significant gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

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*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.

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*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.

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**ULTRASONOGRAPHIC FINDINGS**

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- Hyperechoic 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.

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- 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.

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- Small hyperechoic shadowing structure in the dependent portion of the urinary bladder – Findings are most consistent with a small bladder stone.



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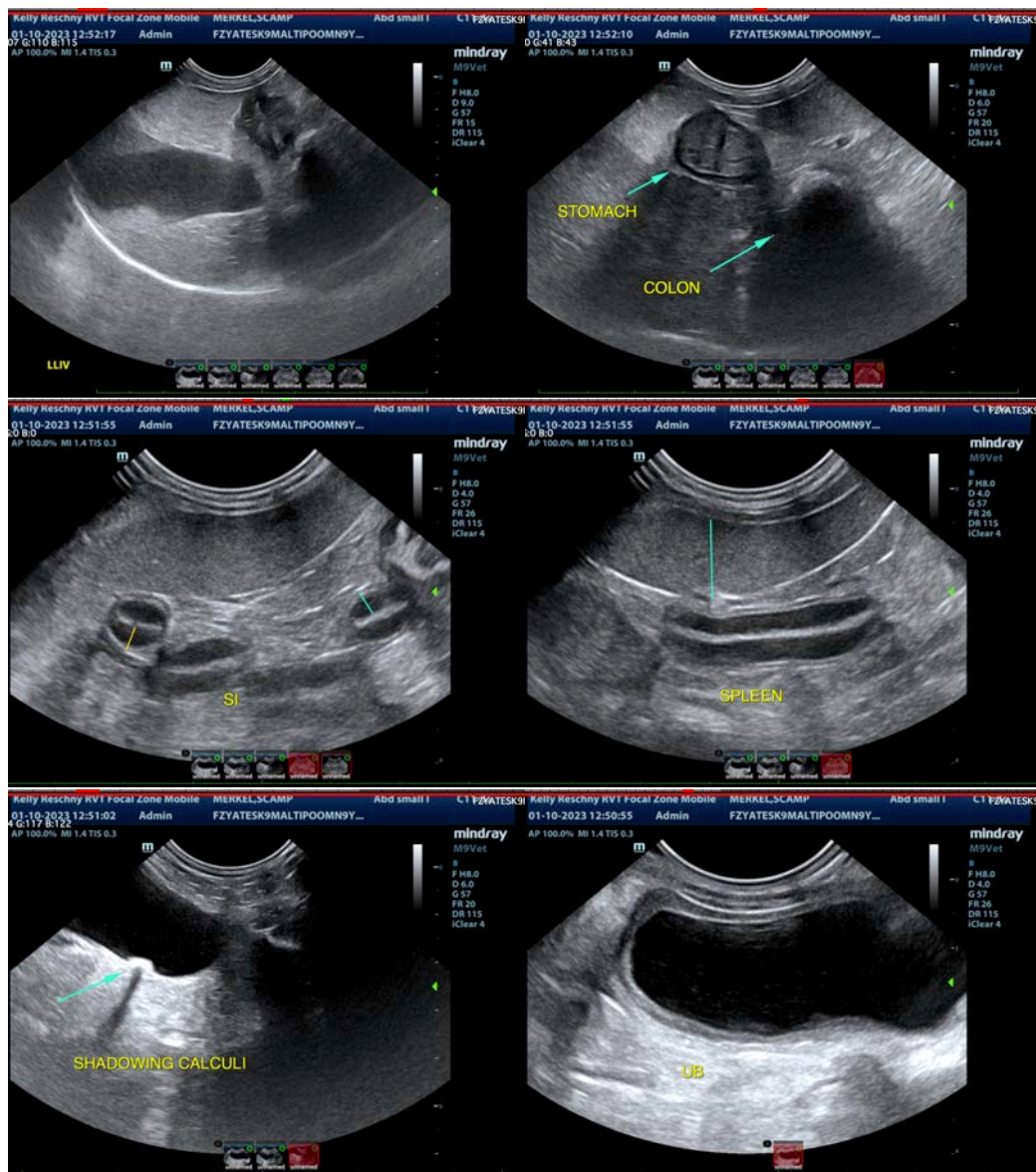
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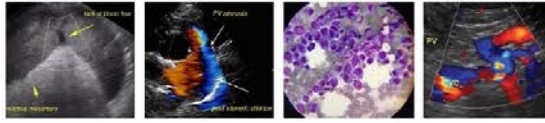
**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Today's scan appears relatively normal. I suspect the mass effect visualized on radiographs is the pylorus, as the cranial abdomen and stomach appear relatively normal on today's scan. Additionally, there is no evidence of an obstructive pattern, severe pancreatitis, or significant gallbladder disease. There is a moderate amount of shadowing material that appears to be within the colon, most consistent with stool. Correlate with abdominal radiographs.

There is a small hyperechoic shadowing opacity in the urinary bladder, most consistent with a small stone. Correlate these findings with abdominal radiographs, urinalysis and culture.

An obvious cause for the recent episode of vomiting and diarrhea is not visualized, although it is not uncommon to have causes for vomiting or diarrhea that cannot be diagnosed by ultrasound alone. Hopefully as this patient is clinically improving, this episode of suspected gastroenteritis passing, but continued vigilance is warranted.





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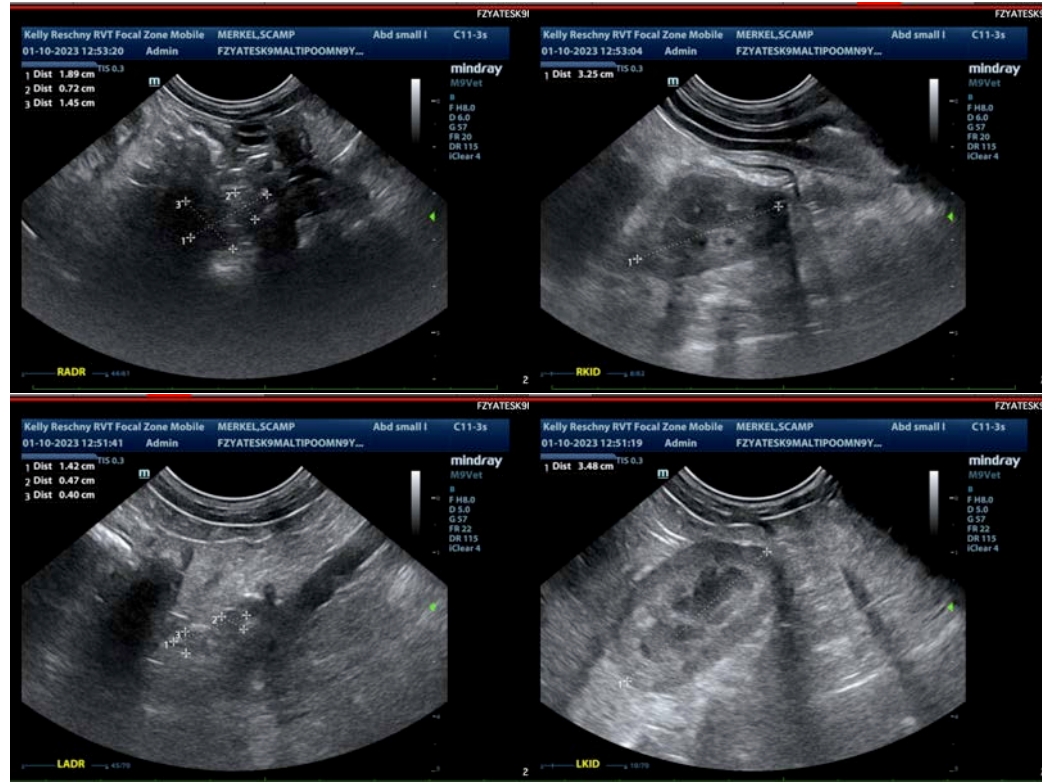
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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