



## PATIENT

Sulu Lutton

## SPECIES

Feline

## BREED

DSH

## SEX

Female

## AGE

10

## WEIGHT

9.77 lbs

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Dr. Shane Stafford

## HOSPITAL NAME

West Newton Animal  
Clinic

## REFERRING VET

Dr. Shane Stafford

## INVOICE

73426

## DATE

3/5/26

## PRESENTING CLINICAL SIGNS

Sulu is a 10-year-old FS feline with diabetes mellitus currently managed with Senvelgo and concurrent chronic kidney disease. She has had persistent total hypercalcemia noted on serial monitoring despite diet modification and the addition of psyllium fiber to the diet in an attempt to reduce gastrointestinal calcium absorption.

Documented total calcium levels (ref 7.8–11.3 mg/dL) include: 6/13/2025: 10.3 (normal), 9/19/2025: 12.8 (high), 1/5/2026: 12.3 (high), 1/27/2026: 12.9 (high), 2/26/2026: 13.2 (high). Because the hypercalcemia has continued to increase despite fiber supplementation and dietary adjustments, further investigation is recommended to evaluate for potential underlying causes such as neoplasia, renal disease progression, infectious disease, or idiopathic hypercalcemia.

Thoracic radiographs were previously performed and were reported as normal. Sulu is scheduled for abdominal ultrasound today, and an MSU Hypercalcemia of Malignancy Profile (MSU hypercalcemia panel) will be sent out today during the ultrasound appointment and is currently pending to further evaluate the calcium regulatory pathway.

## 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 is borderline large (5.19 cm) with a hyperechoic thickened cortex and pyelectasia at 0.38 cm. There is poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. On some views there is a hyperechoic line separating the cortex and medulla, most consistent with medullary rim sign. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (4.02 cm). The cortex appears thickened and hyperechoic, with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is a thin hyperechoic line separating the cortex and medulla, most consistent with medullary rim sign. 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 0.37 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 0.47 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 (0.72 cm), 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.



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## Liver

The liver is large 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.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and likely incidental at this time. The cystic and common bile ducts are normal/not visible.

## Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.36cm 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 uniform diameter with minimal fluid distension. Wall thickness is normal to slightly increased. Bowel loops follow a typical curvilinear path with distinct wall layering, but some areas display a prominent muscularis layer which does not display the typical 1:3 muscularis:mucosa layer ratio. Duodenum wall measures 0.30 cm. Jejunum wall measures 0.30 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 left limb of 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. Occasional mesenteric lymph nodes are visualized, examples measure 0.24 cm and 0.22 cm. The omentum is mildly diffusely hyperechoic.

## ULTRASONOGRAPHIC FINDINGS

- Borderline large, rounded, hyperechoic kidneys with decreased corticomedullary distinction, left-sided pyelectasia, and medullary rim sign – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis. Pyelectasia of the kidney(s) could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.
- Pancreatic changes most consistent with chronic pancreatic remodeling in the left limb – Chronic active pancreatitis cannot be ruled out.
- Large, heterogeneous liver – Findings are most consistent with a diabetic hepatopathy. Other hepatopathies are possible.



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- Prominent, “ropey” small intestine with some areas exhibiting a prominent muscularis layer – The small intestinal wall changes are most consistent with an inflammatory process (i.e., inflammatory bowel disease) with a low possibility of emerging lymphoma.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Both kidneys appear borderline large and hyperechoic with decreased corticomedullary distinction and medullary rim sign. Findings are most consistent with chronic renal disease. Recommend continued monitoring of the kidneys and renal values. If there is progressive change, consider repeat imaging in the future, looking for any changes that could be consistent with infiltrative neoplasia or similar. Recommend a blood pressure, urinalysis and culture as a baseline.

The left limb of the pancreas is prominent and hypoechoic. Findings are most consistent with chronic pancreatic remodeling. Correlate with PLI level. If this is significantly elevated, there could be concurrent chronic active pancreatitis.

Some areas of the small intestine exhibit a prominent muscularis layer. These changes are most consistent with inflammatory type change, although early neoplastic change cannot be ruled out.

A definitive cause for the hypercalcemia is not visualized. The kidneys are borderline large and hyperechoic. If renal values are progressive, consider repeat imaging to ensure early lymphoma is not present.

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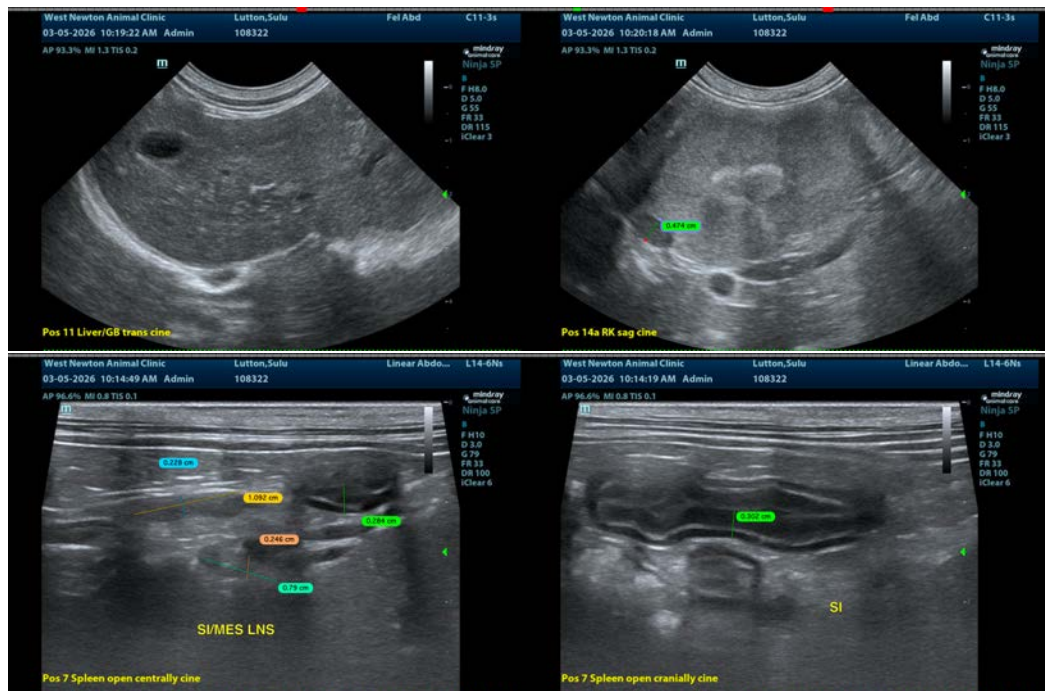
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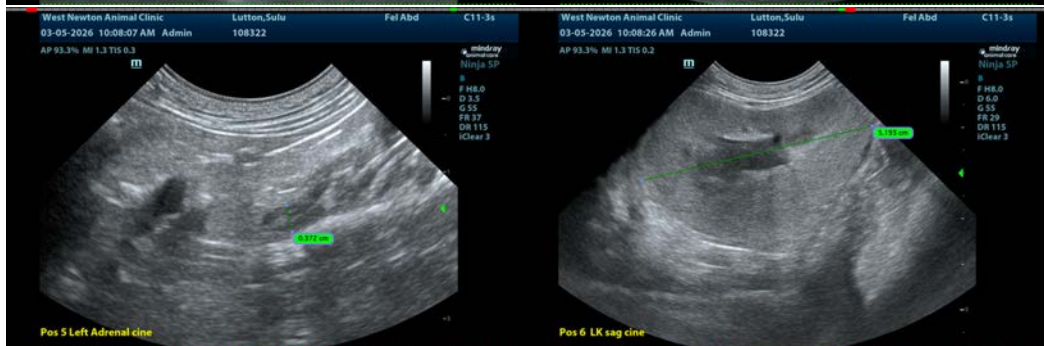
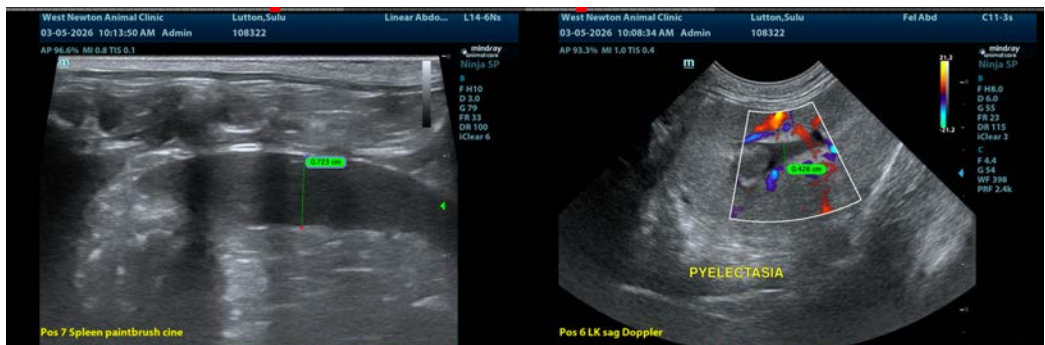
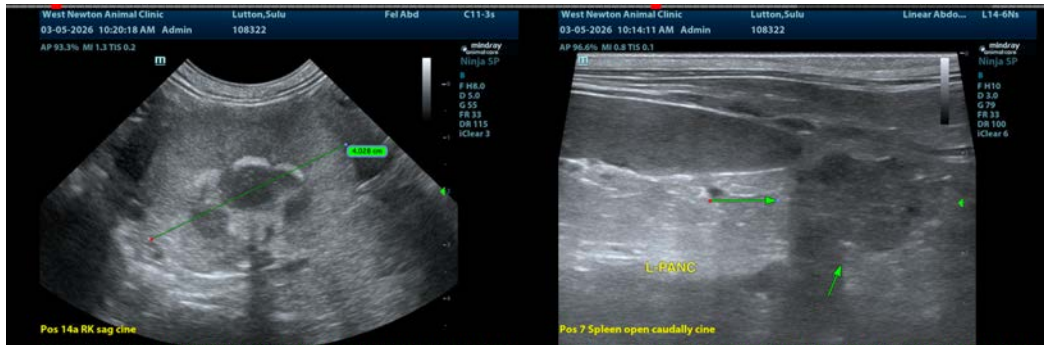
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

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