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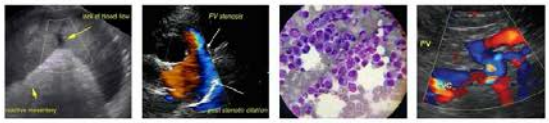


IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

**PATIENT**

Lexi Heston

**SPECIES**

Feline

**BREED**

Papillon

**SEX**

Spayed Female

**AGE**

5 Years 4 Months

**WEIGHT**

3.8 Pounds

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Loetitia Saint-Jacques, RVT

**HOSPITAL NAME**

Advanced PetCare of Nevada

**REFERRING VET**

Dr. Sarah Behrens

**INVOICE**

34066

**DATE**

1/6/22

## PRESENTING CLINICAL SIGNS

Persistent proteinuria On routine labwork on 10/30/2021, proteinuria was identified with UPC of 2.0. SDMA 14, BUN elevated at 44, and creatinine normal at 1.1 UPC repeated 11/19 and was 0.7, then again on 12/4 and was 0.9. On 12/4, SDMA was 19 with BUN 32, and creatinine 1.0. TP slightly low at 5.4, albumin and globulins low-end of normal at 2.7. Blood pressure normal with patient stress, systolic about 155 mmHg. Mild persistent thrombocytosis. P is on home-cooked diet that has not been reviewed by boarded nutritionist. P has no overt clinical signs – no recent changes in drinking, urination, defecation, appetite, energy, etc. O declined tickborne disease testing and leptospirosis given low likelihood in our area and P's lifestyle. We have not started her on any medications yet at this time. Lab Work Attached for Review? Yes Radiographs Attached for Review? None taken

## 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 (2.23 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion, but there is evidence of corticomedullary rim sign. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (2.96 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion, but there is evidence of corticomedullary 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 0.33 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.

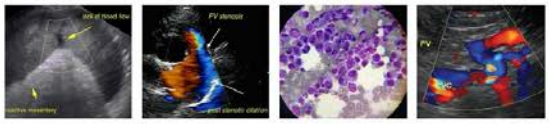
The right adrenal gland is normal in size measuring 0.27 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

### *Spleen*

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The 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.





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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.

### *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 measures 0.2 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 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.

### *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.

### *Free Abdomen*

A brief view of the heart was submitted. No significant pericardial effusion was seen.

## ULTRASONOGRAPHIC FINDINGS

- Moderate gallbladder sludge – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.
- Prominent corticomedullary rim sign in both kidneys – Clinical significance uncertain, can be seen in normal patients and in cases of ethylene glycol toxicity, chronic interstitial nephritis, and leptospirosis.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Today's scan was relatively normal. The significance of the prominent corticomedullary rim sign is unclear. Based on the history provided, the most recent urine protein/creatinine ratio was 0.9. While this is elevated, this is still very mildly elevated, and you would not expect any changes in albumin with this mild degree of protein loss. Consider the possibility of additional reasons for hypoalbuminemia such as liver dysfunction (recommend pre- and post-prandial bile acids test) or GI losses (is there any history of GI signs? Consider a GI panel to Texas A&M for a qualitative PLI, TLI, cobalamin and folate to further evaluate the small intestine).

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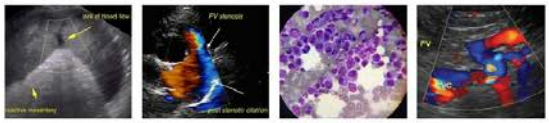

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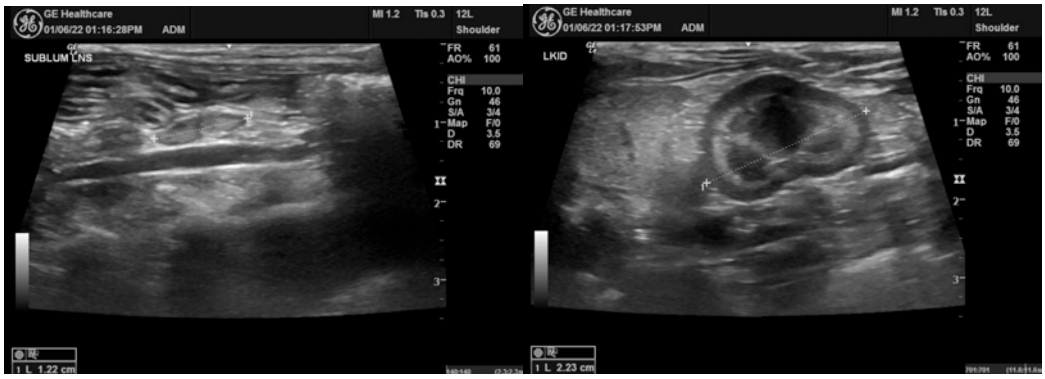
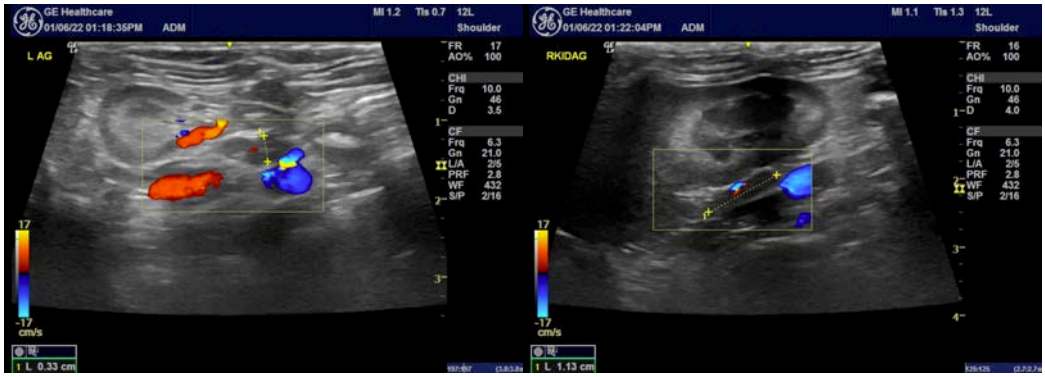
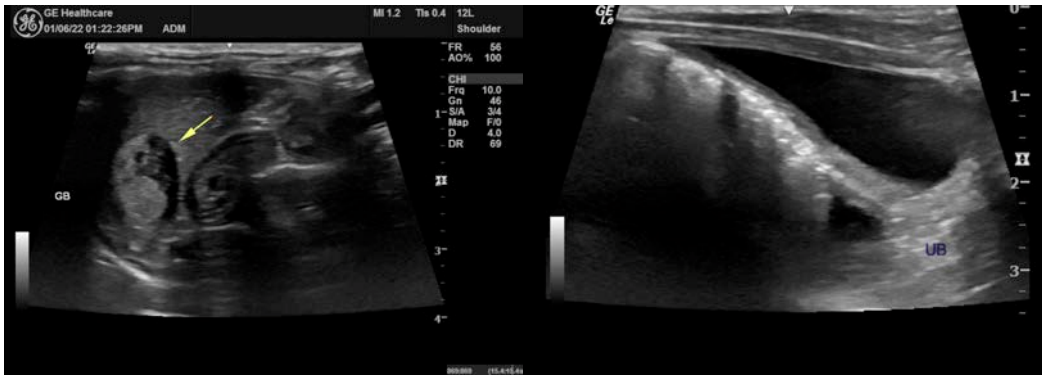
You're doing a good job with monitoring blood pressure and looking for evidence of concurrent disease/chronic inflammation. I typically recommend a full urinalysis and culture. I would let the nutritionist consulting on the diet know about your concerns regarding renal function and possible proteinuria (is urine concentrating ability ok?), as this may affect diet recommendations.

I think it's very borderline as to whether I would recommend treatment for this degree of proteinuria at this time. I would recommend very close monitoring of renal values, blood pressure, and urine protein levels in the very least.



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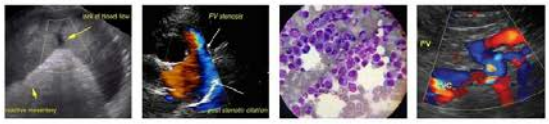

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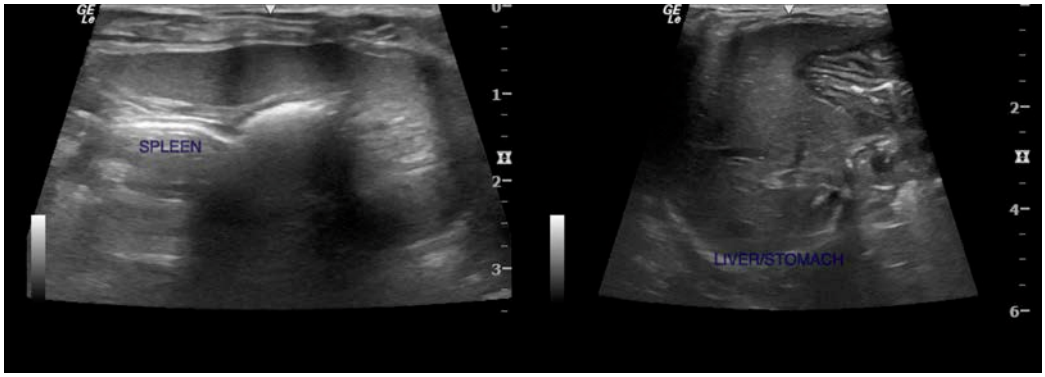


**The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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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