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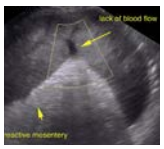
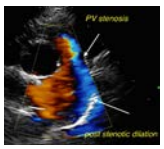
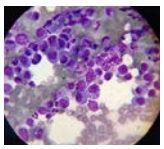
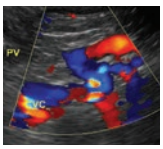

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1-800-838-4268 info@sonopath.com

**PATIENT**

Zissou Naylor

**SPECIES**

Feline

**BREED**

DMH

**SEX**

Neutered Male

**AGE**

11 Months

**WEIGHT**

7.16 Pounds

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Velasco

**HOSPITAL NAME**

Bethany Family PC

**REFERRING VET**

Dr. Velasco

**INVOICE**

43964

**DATE**

7/13/23

## PRESENTING CLINICAL SIGNS

Zissou present for FUO about 10 weeks ago. This resolved with fluids and Cderenia. He had Feline FUO panel/PCR at that time through IDEXX - all negative. CBC/Chem/UA were also all wNL. Zissou presented again in temp = 105.0 this week. Very responsive to fluids and Onsior. He was inappetant - responsive to app stim. Radiographs are NSF of thorax and abdomen.

Abnormal PE/Chem/CBC/UA Results: Repeat WBC/Chem/UA at E-clinic are WNL. HCT = 26.7 now. Not examined for Mycoplasma Hemobart.

## 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 (3.19 cm) with corticomedullary rim sign evident. 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 (3.94 cm) with corticomedullary rim sign. 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 region of left adrenal (Cranial to left renal artery) is unremarkable but the adrenal is not distinctly visualized. No evidence of a mass effect is visualized.

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 (0.50 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.

### *Liver*

The liver is subjectively normal in size, and hypoechoic with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. 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. There is a mild amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

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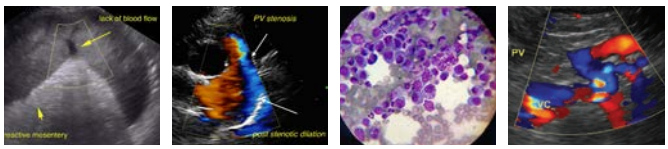

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## *Gastrointestinal*

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 0.20 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 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.

## *Free Abdomen*

Evaluation of the peritoneal cavity did not reveal any evidence of effusion. There are prominent hypoechoic mesenteric lymph nodes visualized. Examples measure 0.83 cm and 0.86 cm. The omentum is of normal echogenicity.

## ULTRASONOGRAPHIC FINDINGS

- Corticomedullary rim sign visualized associated with both kidneys – Clinical significance uncertain, can be seen in normal patients and in cases of ethylene glycol toxicity, FIP, chronic interstitial nephritis, and leptospirosis.
- Hypoechoic heterogeneous liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. In the absence of liver enzyme elevations, this is likely within normal limits for this individual.
- Mild gallbladder debris – The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting. Incidental gall bladder debris is less common in cats.
- Prominent mesenteric lymph nodes – The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No large focal lesions are visualized on today's exam to explain the fever reported. There are prominent mesenteric lymph nodes evident. These are likely reactive, but a fine needle aspirate could be considered.

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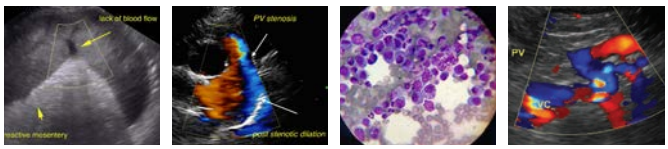

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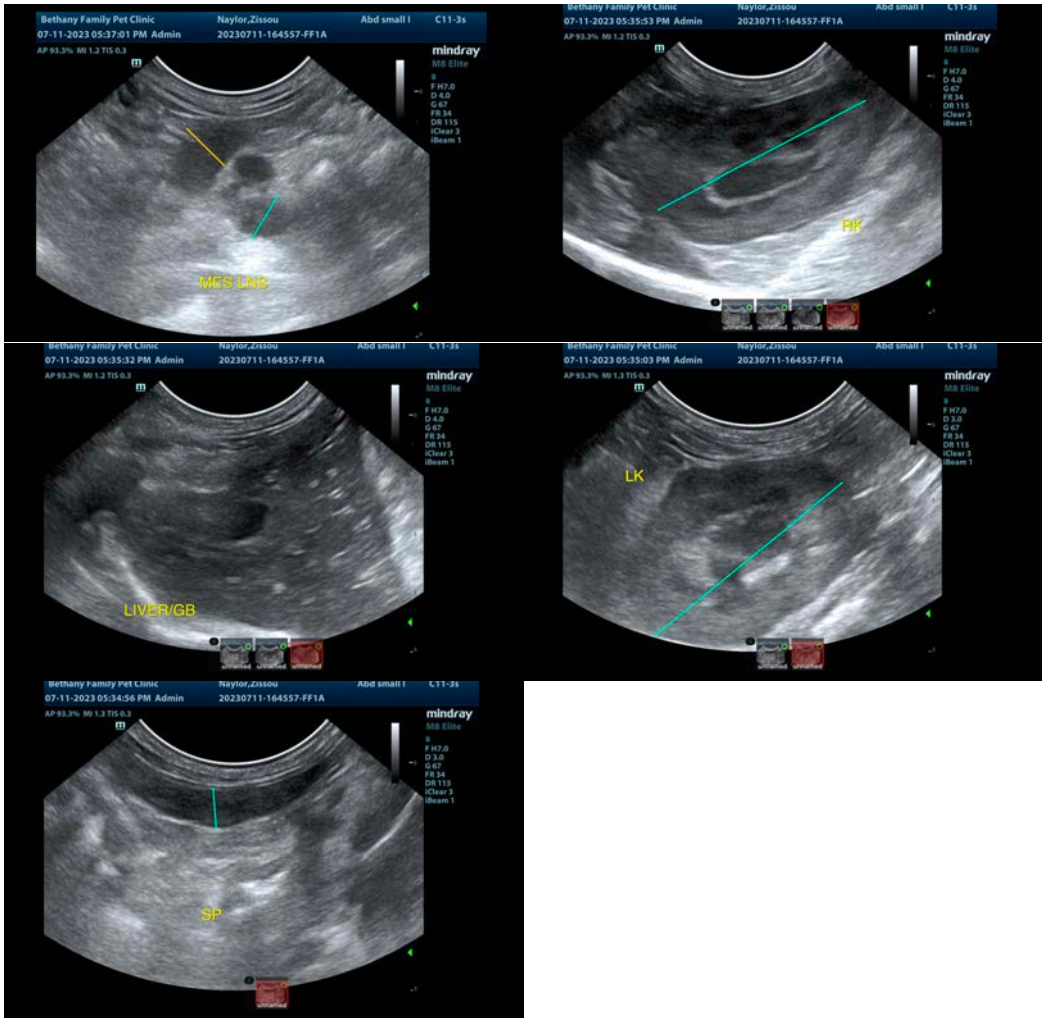
Corticomedullary rim sign is evident on both kidneys. This is a non-specific finding of uncertain significance, but it has been associated with FIP in some individuals. Additionally, a hypoechoic liver can sometimes be consistent with inflammatory conditions, although in this young cat with normal liver enzymes, I suspect it is incidental.

If the fever is persistent despite non-specific therapy, consider infectious disease testing. I like the feline panel to NC State's vector borne disease lab, as this screens for mycoplasma, bartonella, heartworm disease, etc. If the globulin is high or there are other signs suggestive of FIP (uveitis, etc.). You could consider a FIP PCR (Auburn University). Additionally, screening for toxo or any other relevant infectious disease could be considered, as well as an empirical course of Doxycycline combined with probiotic therapy (spaced two hours apart). Additionally, you could consider a pathologist review of a blood smear to further evaluate the anemia present. If non-regenerative, persistent, or worsening, you could consider bone marrow evaluation.

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



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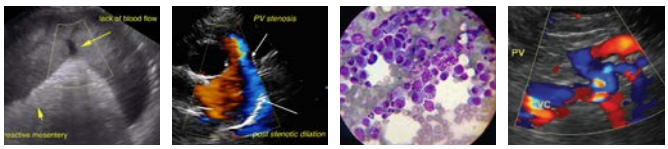

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**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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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