



**PATIENT PRESENTING CLINICAL SIGNS**

Spike Marcaccio

Not eating for about 1 week, vomited bile/froth a few times in the last 3 days. Owner has tried a few different foods. No abdominal pain on deep palpation. Mild atrophy of hind legs. Cataracts. Rest if PE unremarkable. Gave Convenia, SQ fluids, Cerenia

**SPECIES**

Canine

Abnormal PE/Chem/CBC/UA Results: CBC mild neutrophilia, monocytosis. Mildly elevated BUN/Creatinine/SDMA, extremely elevated Amylase and Lipase.

**BREED**

Chihuahua

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**SEX**

**Urinary System**

Neutered Male

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.

**AGE**

14 Years

The visualized areas of prostate and surrounding tissue appear normal. Unfortunately, the prostate is not fully visualized likely due to its intrapelvic location. Correlate with rectal exam findings.

**WEIGHT**

3.8 kg

The left kidney has a normal shape and size (2.77 cm) with numerous nephroliths at the corticomedullary junction and mild pyelectasia at 0.28 cm. Overall echogenicity is slightly hyperechoic with poor 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 infarcts or hydroureter. Renal vasculature is normal.

**INTERPRETED BY**

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

The right kidney has a normal shape and size (3.49 cm) with nephroliths. Overall echogenicity is slightly hyperechoic with poor 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, infarcts or hydroureter. Renal vasculature is normal.

**IMAGING PERFORMED BY**

Crystal Hill

**Adrenal Glands**

**HOSPITAL NAME**

Village Centre AH

The left adrenal gland is normal in size measuring 0.63 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.

**REFERRING VET**

Dr. Kunnath

The right adrenal gland is normal in size measuring 0.43 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.

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**Spleen**

The spleen is subjectively normal in size (0.99 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.

**DATE**

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**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.

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.


**PATIENT**
***Gastrointestinal***

Spike Marcaccio

The stomach contains a small amount of gas and shadowing material. 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

**BREED**

Chihuahua

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 0.34 cm. Jejunum wall measures 0.26 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

**SEX**

Neutered Male

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.

**AGE**

14 Years

***Pancreas***
**WEIGHT**

3.8 kg

The pancreas is large and hypoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is evidence of regional mesenteric inflammation. Consistent with mild pancreatitis.

***Free Abdomen***
**INTERPRETED BY**

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

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.

**ULTRASONOGRAPHIC FINDINGS**
**IMAGING PERFORMED BY**

Crystal Hill

- Decreased corticomedullary distinction in both kidneys with left-sided pyelectasia and bilateral nephroliths – The bilateral renal findings are consistent with age-related change. The hyperechoic mineralized foci observed at the corticomedullary junction of the left/right kidney are consistent with small, non-obstructive nephroliths. Pyelectasia of the kidney(s) could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.
- Hypoechoic, prominent pancreas with surrounding hyperechoic mesentery – The pancreatic changes are most consistent with mild pancreatitis/pancreatic inflammation. Recommend fPLI testing and continued monitoring for improvement or possible development of a pancreatic abscess. Consider fine needle aspirate if not improving.
- Small amount of shadowing material and fluid in the gastric lumen – Correlate with feeding history. This is likely incidental but continued monitoring is warranted.

**HOSPITAL NAME**

Village Centre AH

**REFERRING VET**

Dr. Kunnath

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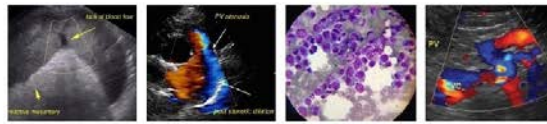
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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**
**DATE**

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The pancreas appears hypoechoic and is surrounded by hyperechoic mesentery. This is most consistent with mild pancreatic inflammation. This appears relatively focal, but the ultrasonographic appearance does not always correlate with the severity of the clinical symptoms. The findings are most consistent with mild to moderate pancreatitis. There is a small amount of gas and shadowing material within the gastric lumen. There is no evidence of an obstruction, but if the patient was adequately fasted, continued monitoring and correlation with abdominal radiographs is warranted.

Both kidneys have nephroliths, particularly the left kidney has numerous nephroliths and pyelectasia. Recommend a blood pressure evaluation, urinalysis and culture, looking for any evidence of



**PATIENT**

Spike Marcaccio

pyelonephritis, etc. Additionally, radiographs are recommended, looking for the presence of any stones in the ureters, urethra, etc.

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Canine

Recommend treatment for pancreatitis with continued monitoring for development of an obstructive pattern, etc. If this patient is not starting to eat, a feeding tube may need to be considered.

**BREED**

Chihuahua

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

**SEX**

Neutered Male

**AGE**

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**WEIGHT**

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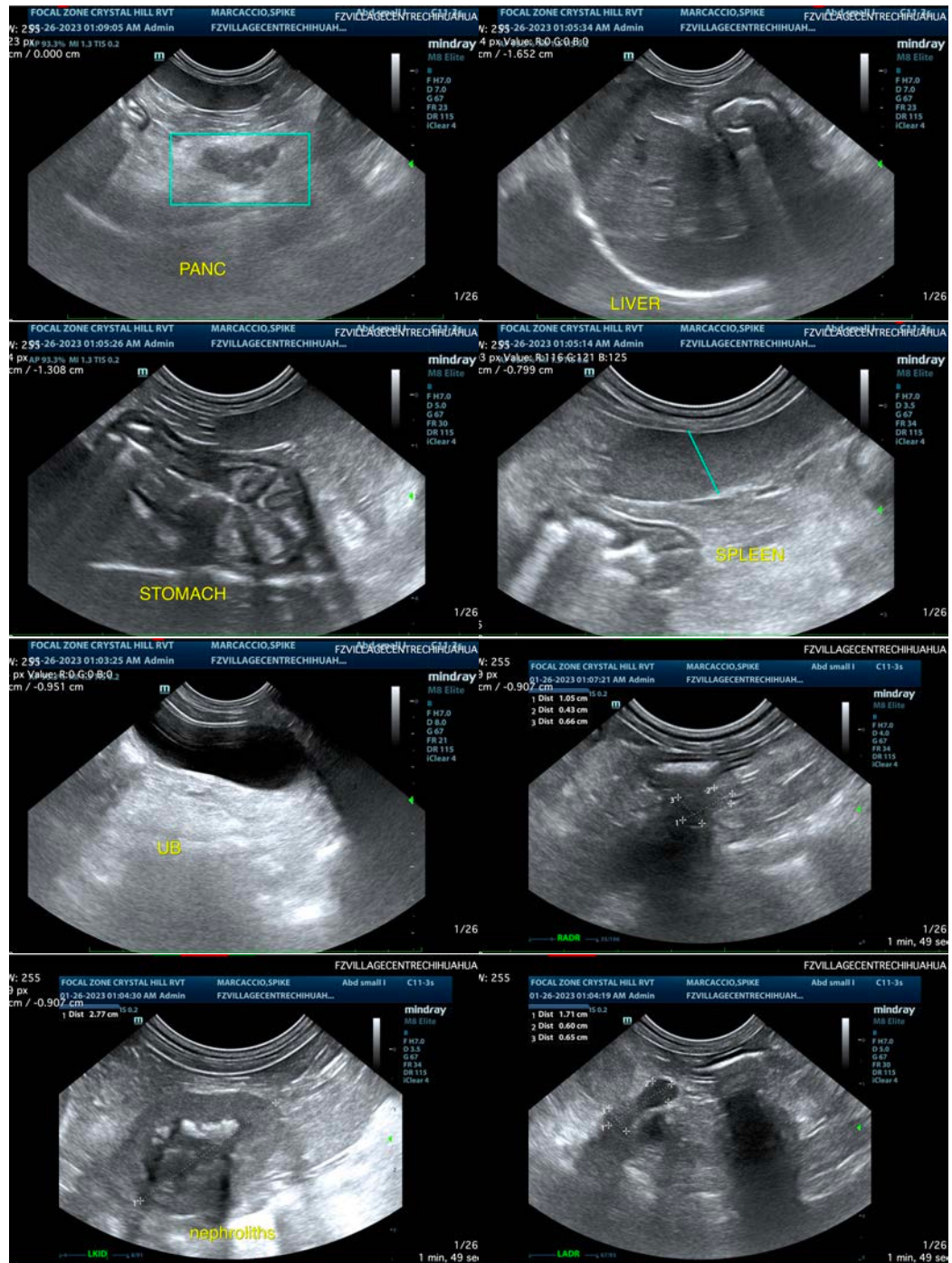
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**PATIENT**

Spike Marcaccio

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.

**SPECIES**

Canine

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.

**BREED**

Chihuahua

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

kathleen.sennello@sonopath.com

**SEX**

Neutered Male

**AGE**

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**WEIGHT**

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