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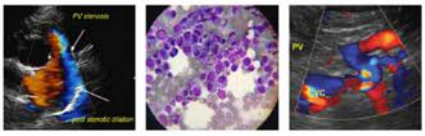

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**PATIENT**

Patchouli Tate

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Spayed Female

**AGE**

14 Years

**WEIGHT**

8 Pounds

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Amy Mayhew, LVT

**HOSPITAL NAME**

SVS Imaging MI

**REFERRING VET**

Kimball AH

**INVOICE**

42092

**DATE**

10/14/22

## PRESENTING CLINICAL SIGNS

Strange breathing pattern, reduced lung sounds. Lethargic.
Abnormal PE/Chem/CBC/UA Results: reduced lung sounds and for replaceable hernia, also bloodwork given lethargy and eating less despite glucose an Fructosamine doing well. Dx: Bloodwork- unremarkable Dx: lat/vd- thorax NSF, abd- mod hepatomegaly, mild rounding bilateral kidney with small foci of radiopaque material, loss of detail in mid cranial abd and mild caudal displacement of stomach, VD- possible soift tissue density R upper abdominal quadrant given stomach and intestines displaced laterally Disc: called owner, noted bloodwork and rads- rec ultrasound for add visualization of abd given loss of detail area, also for other organs including adrenal given hormonal suspicion from vague signs, rec add supportive care today with cerenia and vitamin B complex, noted possible pain medications BUT concern for additional issues given unknown underlying cause

## 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 bit of shadowing debris in the dependent portion of the urinary bladder, most consistent with a small stone or sandy debris, measuring 0.24 cm.

The left kidney has a normal shape and size (4.6 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 pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (4.84 cm) with mild pyelectasia at 0.21 cm and sandy debris visualized within the renal pelvis. 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.

### *Adrenal Glands*

The left adrenal gland is normal in size measuring 0.46 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 0.45 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 (0.68 cm in width at the level of the hilus), 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 large with smooth peripheral margins. The parenchyma is hyperechoic and homogenous in echotexture. The visible portions of the vasculature and biliary tract appear normal. There is a small ill-defined hypoechoic nodule on the right side of the liver measuring 0.76 cm in diameter.

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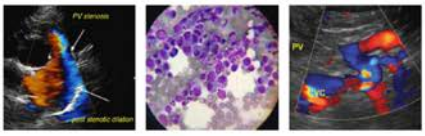

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The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. The bile duct appears somewhat prominent and thickened. It is visualized just proximal to the duodenal papilla measuring 0.28 cm.

### *Gastrointestinal*

The stomach contains a large amount of shadowing ingesta. 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.

No focal GI lesions are observed but in some images the wall of the pylorus appears prominent. Evaluation is impaired by a large amount of ingesta in the stomach and pylorus. Re-evaluation with an empty stomach is recommended.

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 0.27 cm. Jejunum wall measures 0.25 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 large and hypoechoic to surrounding the mesentery. The parenchyma is diffusely mottled with some ill-defined hypoechoic cystic/nodular regions. There is some evidence of regional mesenteric inflammation, consistent with moderate pancreatitis. Additionally, there is a 0.83 cm x 1.75 cm iso- to hyperechoic rounded mass effect near the pancreaticoduodenal junction, which is most consistent with either a pancreatic mass or a local lymph node.

### *Free Abdomen*

Evaluation of the peritoneal cavity did not reveal any evidence of effusion. Prominent lymph nodes are seen in the sublumbar area measuring 0.36 cm in thickness, and a pancreaticoduodenal lymph node at 0.41 cm. The omentum is somewhat hyperechoic in the cranial abdomen around the pancreas.

### *Other*

Ringdown artifact is visualized at the level of the diaphragm.

## ULTRASONOGRAPHIC FINDINGS

- Small mineralizations in the urinary bladder – most consistent with small stones or sandy debris. Correlate with abdominal radiographs. Recommend urinalysis and culture.
- Decreased corticomedullary distinction in both kidneys with mild right-sided pyelectasia and some sandy debris visualized in the renal pelvis – The bilateral renal findings are consistent with age-related change. Pyelectasia of the kidney(s)could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.
- Hypoechoic, irregular mottled pancreas with hypoechoic ill-defined cystic lesions/nodules and suspect a larger pancreatic mass – The pancreas is very prominent and appears to be causing moderate inflammation. Some of these changes could be secondary to remodeling, pancreatic

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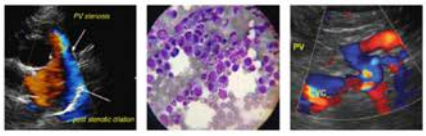

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cysts, etc., but there is concern for infiltrative disease. Recommend a fine needle aspirate.

- Large, hyperechoic liver with small ill-defined hypoechoic nodule – Hepatic changes are non-specific and could be consistent with hepatic lipidosis, inflammatory/infectious disease, infiltrative neoplasia, or other hepatopathy. This is most consistent with a diabetic hepatopathy. The appearance of the hypoechoic nodule trends towards a benign lesion, but sampling or continued monitoring is warranted.
- Large amount of shadowing material within the gastric lumen – Correlate with the feeding history and abdominal radiographs. If the patient was adequately fasted consider such differentials as delayed gastric emptying, a partial outflow tract obstruction (none seen) or ingested foreign material.
- Mild cranial abdominal lymphadenopathy – The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.
- Ringdown artifact visualized at the level of the diaphragm – This can be seen with pulmonary parenchymal disease. Recommend 3-view thoracic radiographs.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The pancreas is very prominent. It is mottled, nodular, and irregular. These could be benign changes consistent with lymphoid nodules and remodeling, but additionally there is a rounded mass lesion visualized near the duodenum, which would be most consistent with either a pancreatic mass or lymph node in the region. Recommend a fine needle aspirate of this lesion (see images) and treatment for pancreatitis.

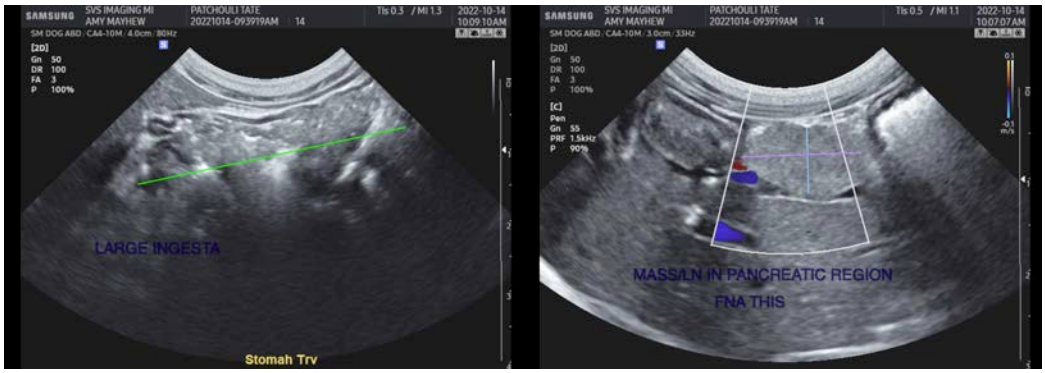
There is mild sandy debris visualized in the urinary bladder. Recommend urinalysis and culture.

Both kidneys have changes consistent with age related change and some small mineralizations. Recommend a blood pressure evaluation.

The changes in the liver are most consistent with a diabetic hepatopathy. If significant liver enzyme elevations are present, you could consider a liver function test and a fine needle aspirate of the liver provided coagulation parameters are normal. Continued monitoring of the hypoechoic nodule is warranted.

Ringdown artifact is seen at the diaphragm. This can be see with pulmonary parenchymal disease.

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



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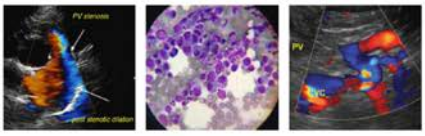

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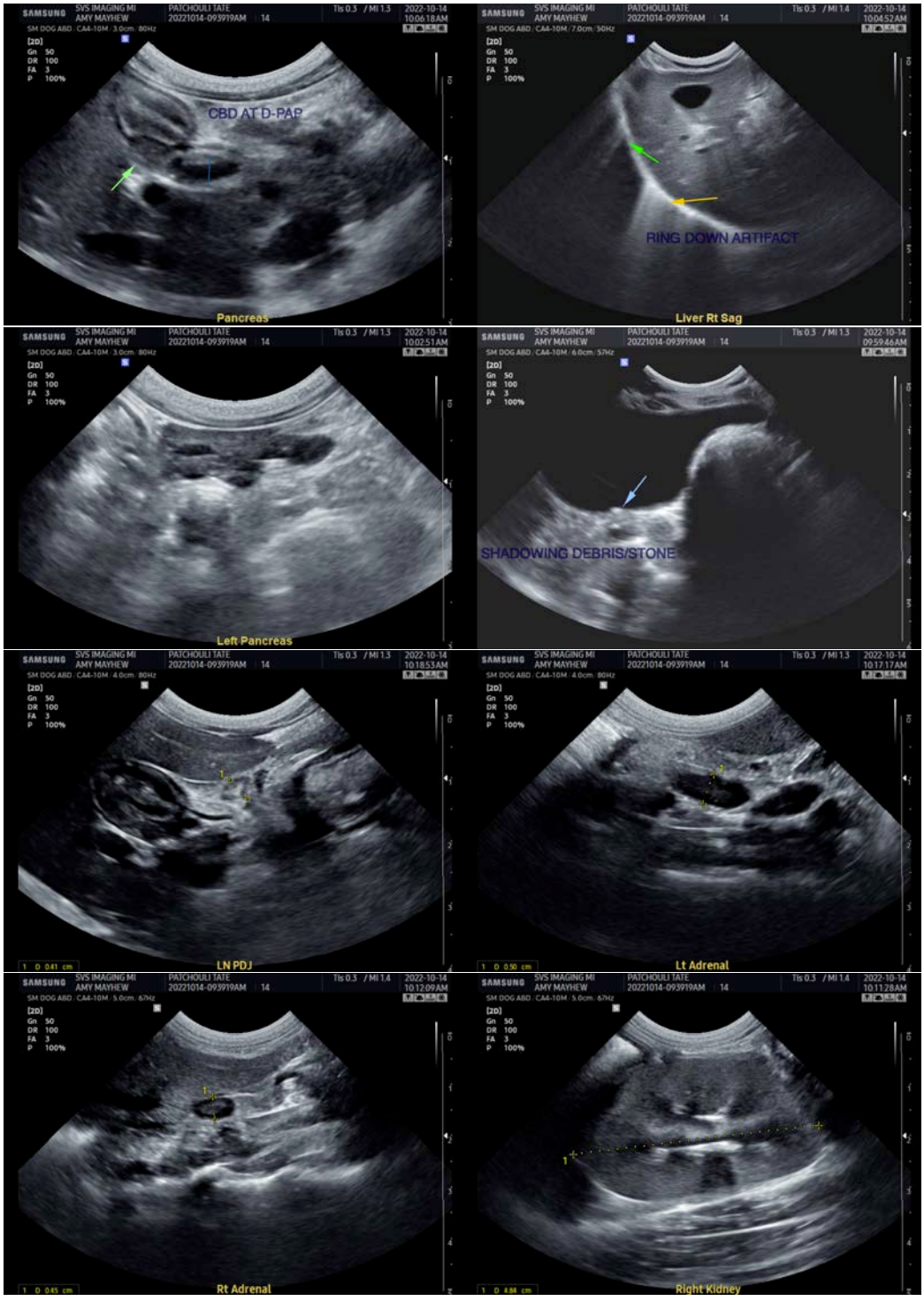

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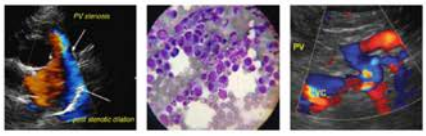

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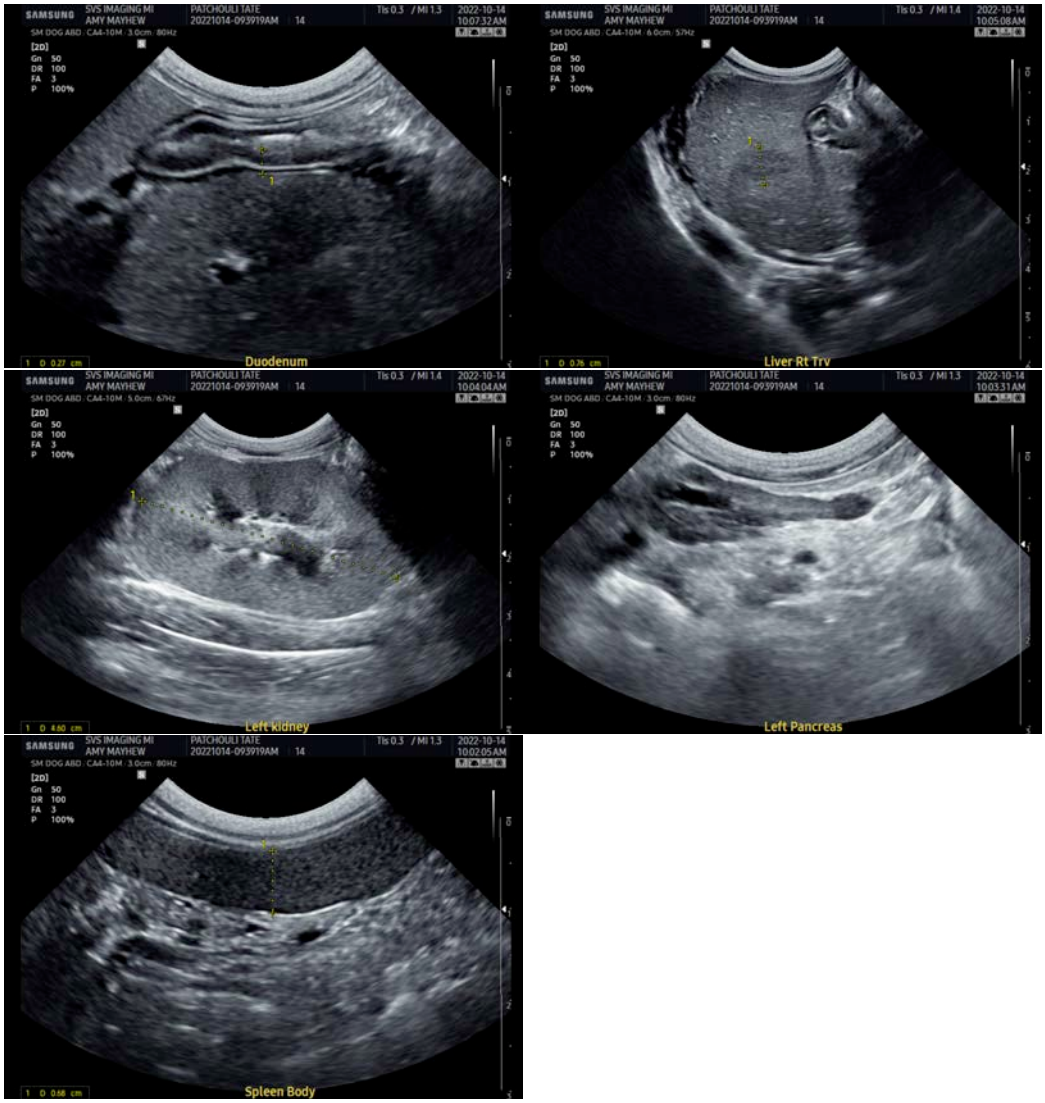


**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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)

kathleen.sennello@sonopath.com