SonoPath
Clinical Sonography & Telecytology
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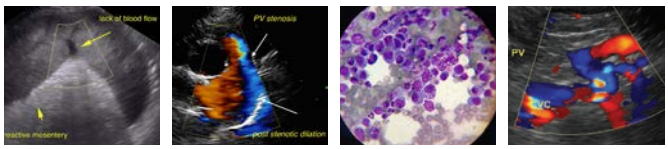

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1-800-838-4268 info@sonopath.com

**PATIENT**

Buddy Ventsch

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Spayed Female

**AGE**

12 Years 6 Months

**WEIGHT**

5.6 kg

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Shelley Lenz

**HOSPITAL NAME**

State Ave Vet Clinic

**REFERRING VET**

Dr. Shelley Lenz

**INVOICE**

47095

**DATE**

5/3/23

## PRESENTING CLINICAL SIGNS

Getting thin. About 2 - 3 weeks noticed weight loss. Eating drinking normal. Normal feces. Just and inside cat. Dry and wet food. Other cats in house doing ok

Abnormal PE/Chem/CBC/UA Results: PE: BCS 4/9 abdomen--soft, mildly generalized painful leukocytosis, neutrophilia markedly elevated ALP and ALT sl elevated TBIL

## 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 (3.56 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.

The right kidney has a normal shape and size (3.55 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 (0.61 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.

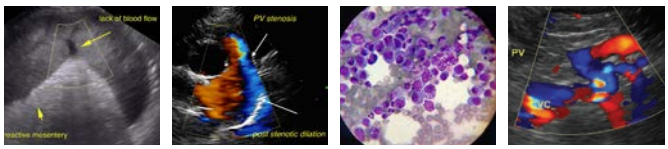
### *Liver*

The liver is large, irregular, and hyperechoic. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. The liver is highly irregular with too numerous to count ill-defined hypoechoic nodules, examples of which measures 0.57, 0.52, 0.70, and 1.0 cm. The caudate lobe of the liver is irregular and it is somewhat difficult to tell where the abnormal hepatic tissue ends and the abnormal pancreatic tissue starts, as there is a large amount of abnormal nodular hypoechoic tissue caudal to the right kidney.

The gallbladder is small with a small amount of debris and thickened wall measuring 0.28 cm.

### *Gastrointestinal*

The stomach contains moderate fluid. 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.



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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 0.21 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*

Both limbs of the pancreas are prominent, large, and hypoechoic, with prominent pancreatic duct visualized measuring 0.27 cm. The left limb of the pancreas is prominent with mildly hyperechoic mesentery surrounding. The right limb of the pancreas is similar proximally, but as it passes more caudal it appears to develop into a large, heterogeneous, nodular, poorly defined mass effect measuring >4.82 cm x 3.86 cm. The margins of this mass effect are difficult to delineated, and there are additional masses in the adenoma that appear to be arising from this tissue. A large hyperechoic mass effect in this region measures 3.0 cm x 2.51 cm, and a hypoechoic mass effect/nodule in the cranial abdomen is visualized measuring 1.2 cm, which could be consistent with a local lymph node or a focal nodule within the pancreatic mass.

### *Free Abdomen*

There is a small to moderate amount of free abdominal fluid. There are large mass effects/nodules in the cranial and mid abdomen. It is difficult to determine if these are abnormal lymph nodes or nodules arising from the abnormal pancreatic/hepatic tissue. The omentum is diffusely hyperechoic.

## PRIMARY FINDINGS

- Large, prominent, irregular, hypoechoic left and right limbs of the pancreas with a large, irregular, nodular, poorly defined mass effect that appears to be arising from the right limb of the pancreas. Possible differentials include carcinoma, lymphoma, other.
- Large, irregular, heterogeneous and hyperechoic liver with ill-defined hypoechoic nodules – Hepatic changes are non-specific and could be consistent with inflammation/infection (cholangiohepatitis), infiltrative neoplasia, lipidosis or other hepatopathy. The nature of the hepatic changes is concerning for a possible neoplastic process. It is difficult to discern the abnormal hepatic tissue from the abnormal pancreatic tissue.
- Mild to moderate free abdominal fluid.
- Suspect mesenteric lymphadenopathy – It is difficult to differentiate the pancreatic nodules/mass lesions from large irregular lymph nodes. I suspect both are present.

## SECONDARY 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.

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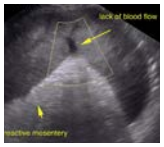
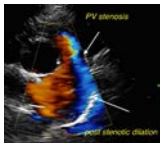
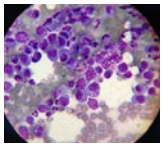
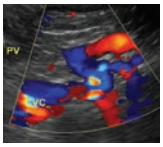

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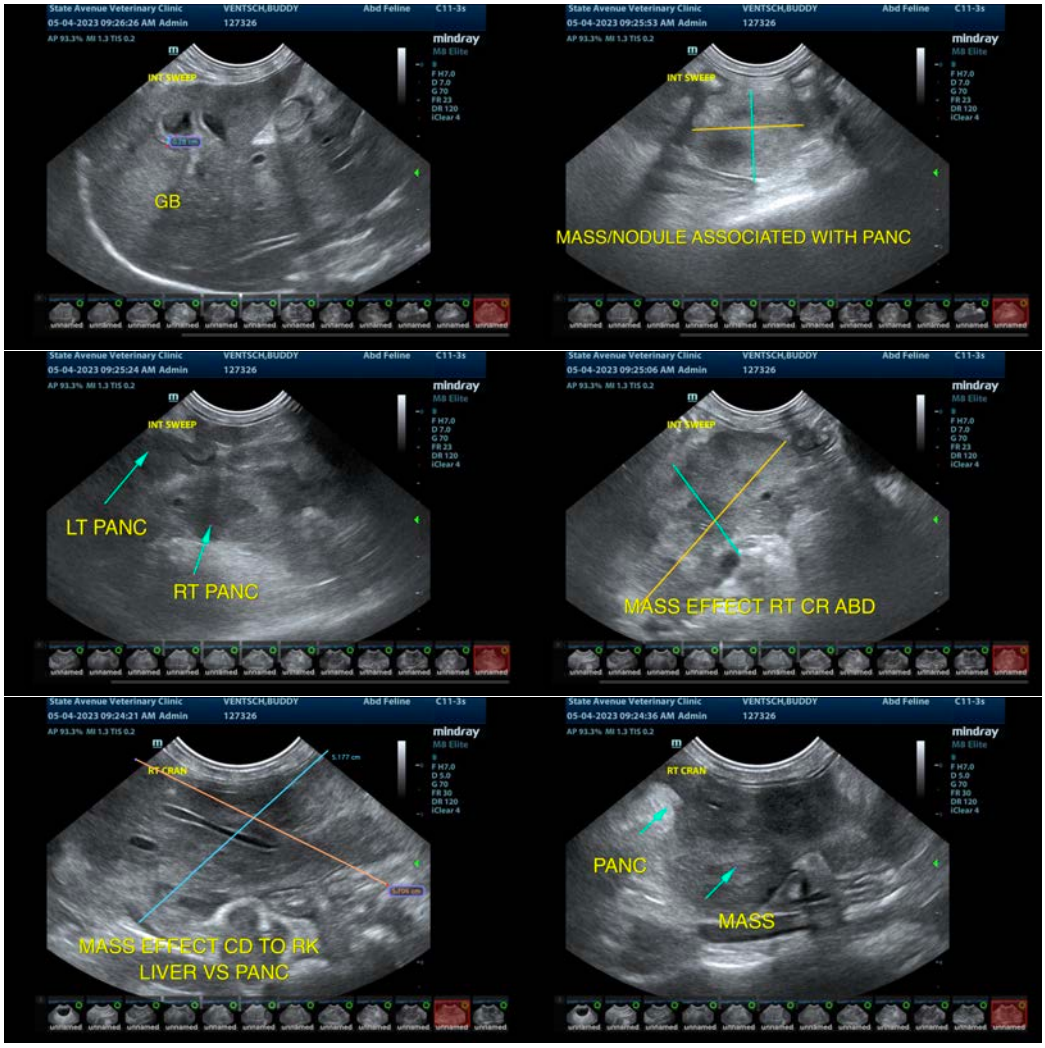
## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is a large, irregular, poorly defined mass effect visualized caudal to the right kidney. This appears intimately associated with the pancreas and is most consistent with a pancreatic mass lesion. This tissue appears to come into contact with/coalesce with abnormal hepatic tissue, and there are nodules throughout this tissue that could represent enlarged lymph nodes or nodules within the primary mass lesion. Findings are highly concerning for a possible metastatic neoplasia. Recommend a fine needle aspirate of the abnormal tissue caudal to the right kidney. Additionally, recommend a fine needle aspirate of the liver and possible sampling of the free abdominal fluid for fluid analysis and cytology. If a cytologic diagnosis cannot be obtained, you could consider sampling some of the focal nodules in the caudal abdomen. Otherwise, surgical biopsies may be necessary.

The gallbladder is small and relatively empty. The elevation in liver enzymes and bilirubin are likely due to a primary hepatopathy/neoplastic process.

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



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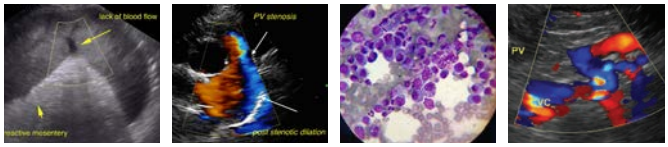

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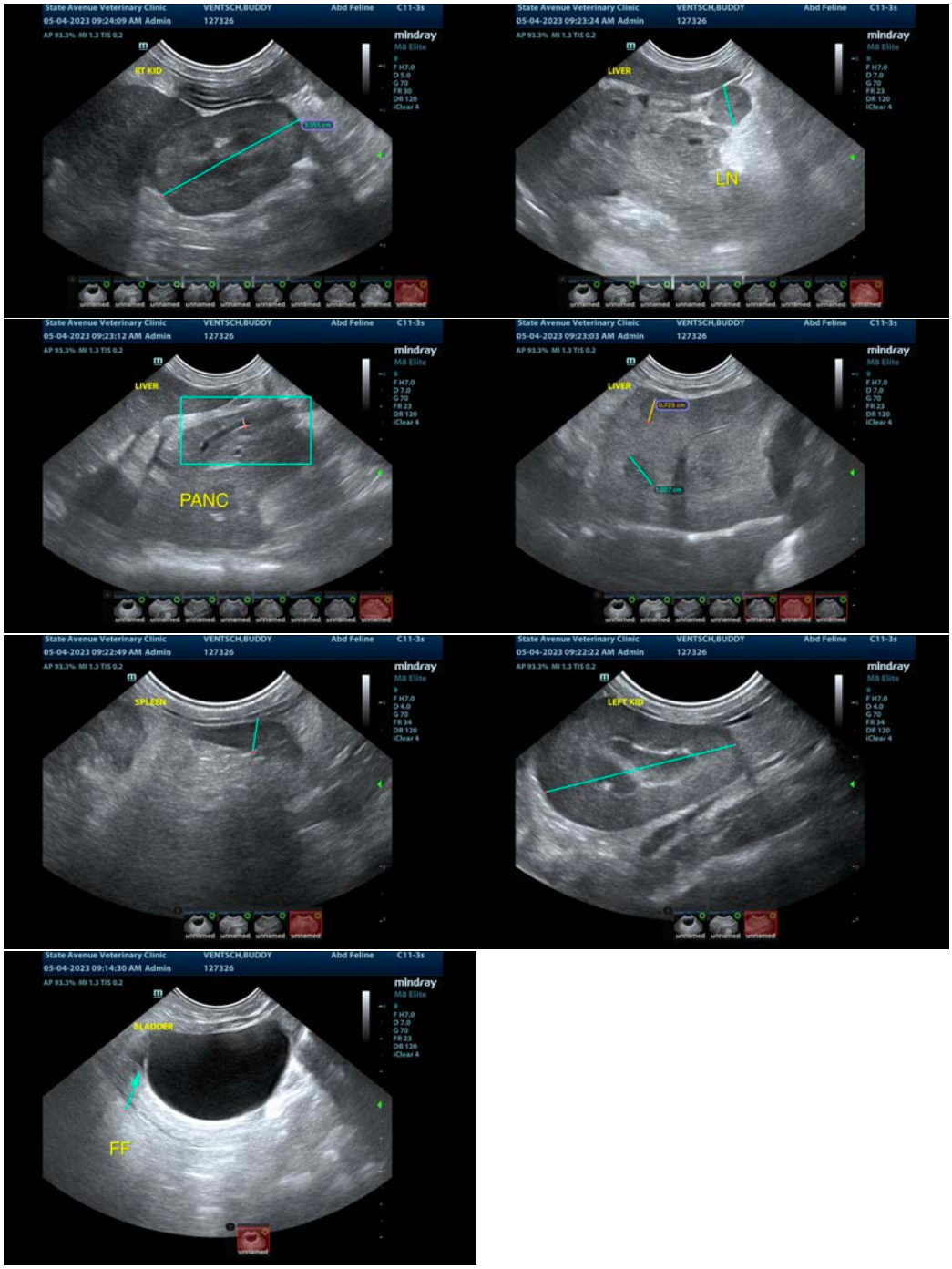


**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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)

kathleen.sennello@sonopath.com