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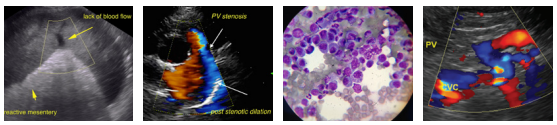

ANIMAL SOUNDS NW
MOBILE VETERINARY ULTRASOUND
IMAGING PERFORMED BY
AnimalSoundsNW.com 541-357-9423

PATIENT

Sir Angus Rattenborg

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

13 Years

WEIGHT

12.4 Pounds

INTERPRETED BY

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

The Veterinary Hospital

REFERRING VET

Dr. Berman

INVOICE

36689

DATE

4/1/22

PRESENTING CLINICAL SIGNS

Recently diagnosed diabetic, presents BAR, happy and friendly, waxing and waning appetite
Abnormal PE/Chem/CBC/UA Results: blood glucose has been erratic ranging for over 400 to lows in the 100's Current Medications Vetsulin 3 IU in the AM, 2 IU in the PM

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is well filled. The wall is smooth and regular. No abnormalities are present with the trigone or proximal urethra, and there is no evidence of sediment, cystoliths, polyps or a mass.

*Bilateral renomegaly is present in addition to hyperechogenicity of both cortices, which are also thickened.

The left kidney measures 4.88 cm (3.80-4.40 cm). Moderate loss of the normal definition of the cortico-medullary junction is observed. Very small, punctate, mineralizations of the diverticulae are present without evidence of nephroliths or pyelectasia. The surrounding mesentery is not hyperechoic.

The right kidney measures 4.66 cm (3.80-4.40 cm). A mild to moderate loss of the normal definition of the cortico-medullary junction is present. Very small, punctate, mineralizations of the diverticulae are present without evidence of nephroliths or pyelectasia. The surrounding mesentery is not hyperechoic.

Adrenal Glands

The left adrenal gland measures 0.24 cm in diameter x 0.51 cm in length. No abnormalities are noted with the gland's shape, overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

The right adrenal gland measures 0.31 cm in diameter x 0.62 cm in length. No abnormalities are noted with the gland's shape, overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

Spleen

The spleen measures 9.2 mm in diameter. It is within normal limits in architecture, echotexture, and echogenicity. Although the spleen is within normal reference range in width, it seems "generous" in length. The capsule is smooth. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified.

Liver

Subjectively, the liver may be mildly enlarged and mildly hyperechoic, yet, it remains hypoechoic to the falciform fat. These changes are most likely associated with diabetes mellitus. However, underlying cholangitis/cholangiohepatitis, and cholestasis cannot be excluded.

The gall bladder wall is within normal limits in thickness and echogenicity. There is no evidence of echogenic material (sludge) within the GB or edema surrounding it. The initial portion of the cystic duct is very mildly tortuous, but not dilated. The cystic duct cannot be followed to the common bile duct due to food and gas in the stomach.

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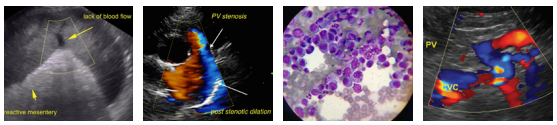

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Gastrointestinal

Sir Angus was not fasted. A large amount of gas and ingesta are is present in the gastrointestinal tract.

The gastric wall and pylorus are within normal limits in thickness. There is no loss of definition of the normal architecture of the wall layers. No obvious abnormalities are observed with its peristalsis.

The small intestinal wall thickness is within normal limits and the definition of the wall layers is preserved. Wall thickness measures between 0.22-0.25 cm (high normal). Fogging of the mucosa is observed diffusely throughout the small intestines. Dilated loops of bowel are not observed.

The colonic wall is not thickened and mural detail is considered normal. There are no obvious signs of a mass, foreign body, infiltrative disease or an obstruction.

Pancreas

The left limb of the pancreas has is mildly heterogeneous. The hypoechoic areas are most likely due to nodular hyperplasia, and the hyperechoic foci are most likely a result of fibrosis due to previous episodes of pancreatitis or ischemia, or possibly amyloid deposition. There are no signs of active pancreatitis.

Proper evaluation of the right limb of the pancreas is not possible due to the ingesta and gas in the surrounding gastrointestinal tract.

Other

The hepatic lymph node is enlarged at 6.6 mm. It is hypoechoic, with a smooth capsule, and surrounded by a hyperechoic mesentery. No other obvious lymphadenomegaly is observed.

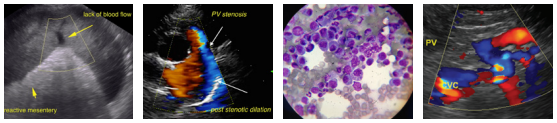
Abdominal effusion is not visualized.

Heart

A brief video clip of the heart was submitted. No pericardial or pleural effusion is identified. No abnormalities are observed with the right atrium or right auricle.

ULTRASONOGRAPHIC FINDINGS

- Both kidneys show degenerative changes, which are suggestive of age related degeneration. However, there are also changes that may be consistent with glomerulonephritis. The latter may occur with diabetes mellitus. Although no obvious signs of pyelonephritis are observed, the latter cannot be excluded based on the absence of sonographic abnormalities.
- The “plump” and “elongated” spleen may be due to splenitis secondary to inflammation and antigenic stimulation and extramedullary hematopoiesis. Neoplasia, such as lymphoma, mast cell tumor or other round cell tumour, is considered far less likely.
- The hepatic changes are attributed to Sir Angus’ diabetes mellitus, however, cholangitis/cholangiohepatitis and cholestasis cannot be excluded, particularly in conjunction with the gastrointestinal changes observed.



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- Fogging of the gastrointestinal tract is a non-specific sign, but may occur with inflammation (i.e., underlying inflammatory bowel disease). There are no obvious signs of infiltrative disease such as neoplasia.

- The hypoechoic areas noted in the left limb of the pancreas are most likely due to nodular hyperplasia, which is a benign, age-related change. The hyperechoic foci are most likely due to fibrosis, which may occur with age and previous episodes of pancreatitis. Other differential diagnoses include, ischemia and amyloid deposition.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

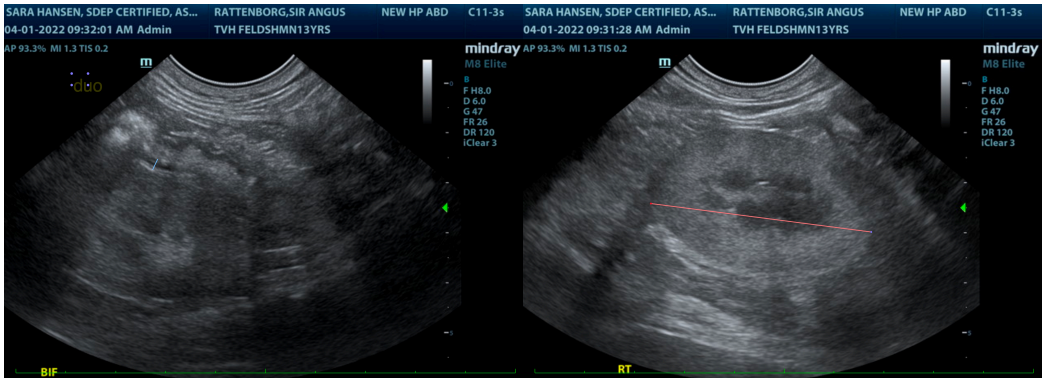
Cats with diabetes mellitus can often suffer from exocrine pancreatic insufficiency, even in the absence of diarrhea and weight loss. Therefore, TLI, cobalamin and folate concentrations are recommended.

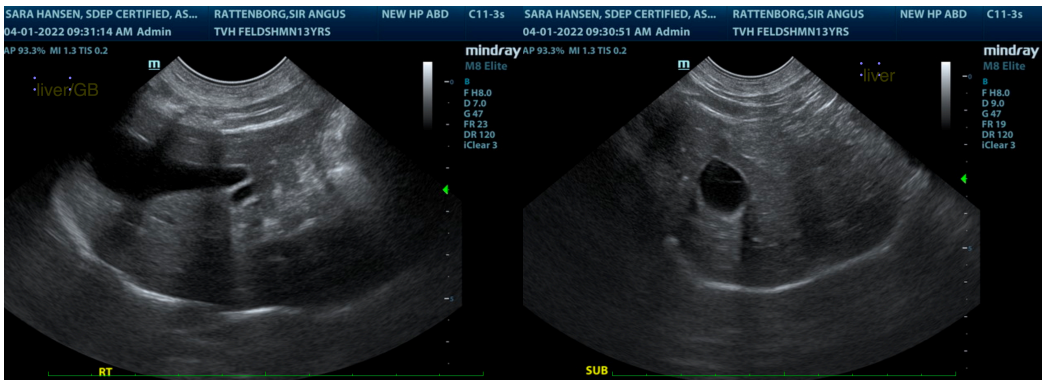
Supplementation with vitamin B12 may be considered to treat malabsorption, however, pancreatic enzyme supplementation is not suggested unless a TLI is performed.

The administration of glargine insulin is suggested, rather than Vetsulin, as most cats tend to respond more consistently to glargine. This may also help improve Sir Angus' appetite and overall general health.

An evaluation of his diet is also suggested.

An internal medicine consultation may be requested if you would like to discuss Sir Angus' case in further detail.





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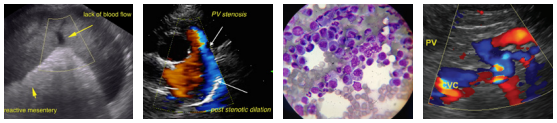

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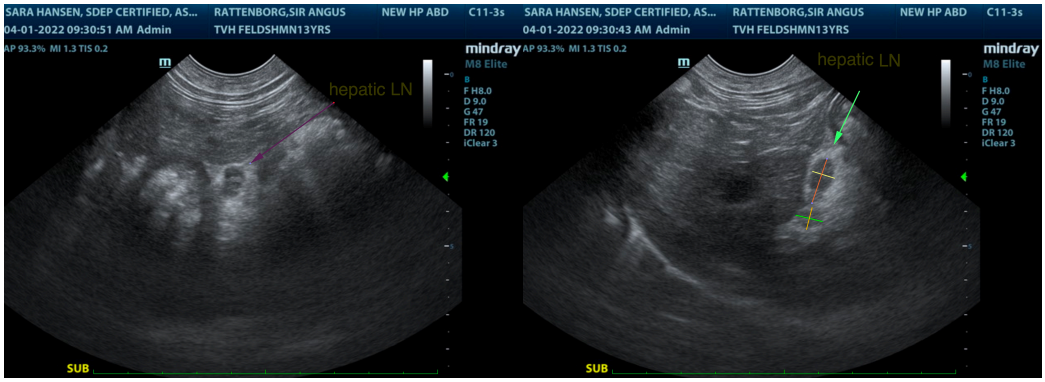

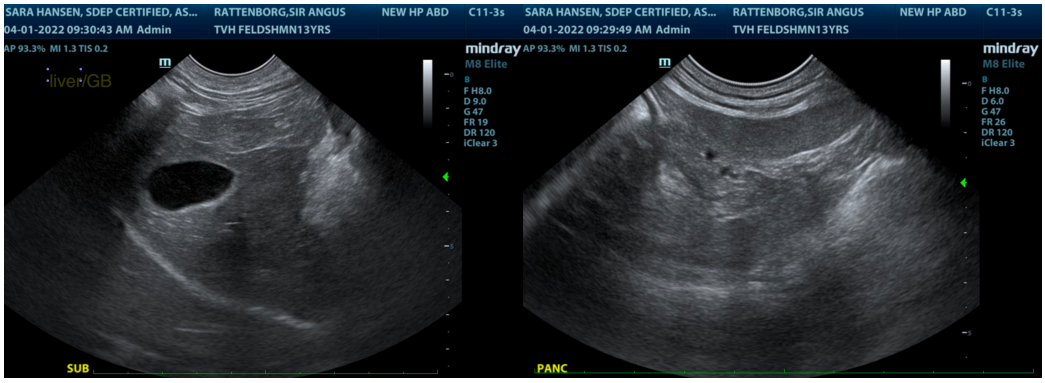

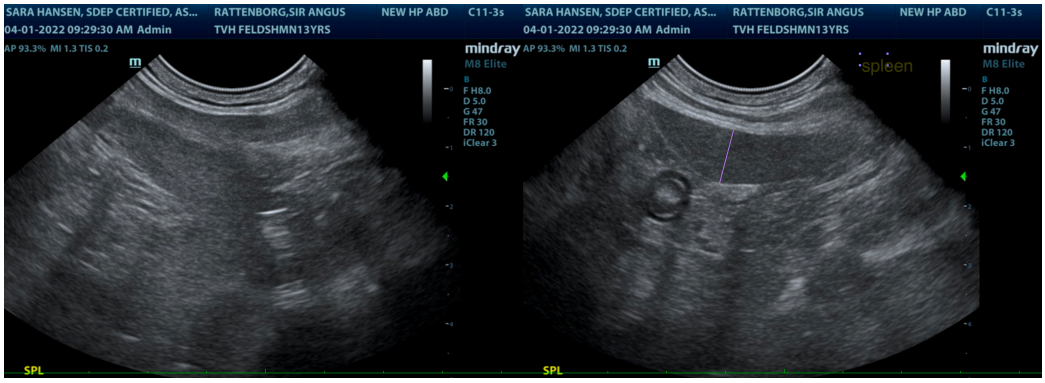

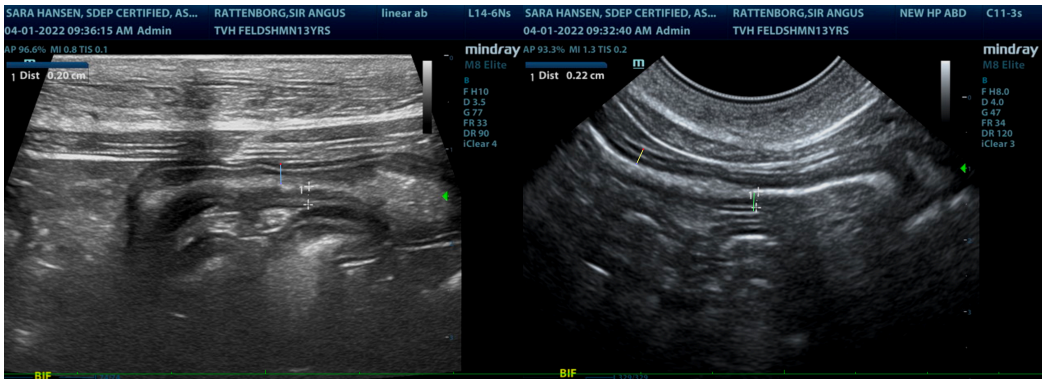

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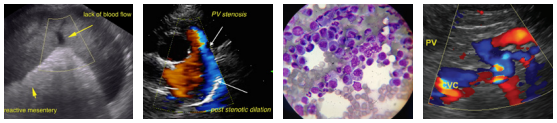

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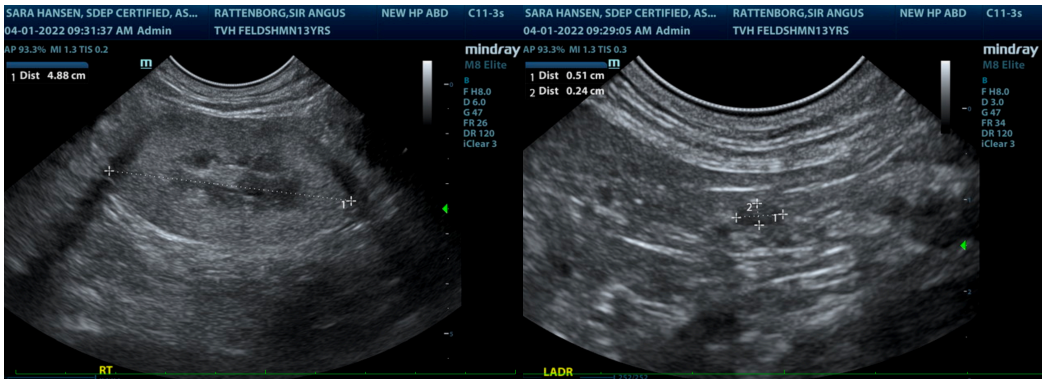

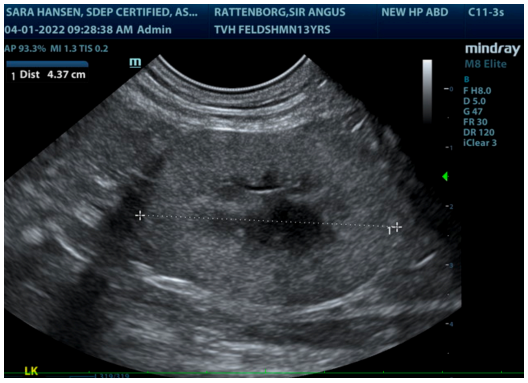

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

Lisa.Carioto@sonopath.com