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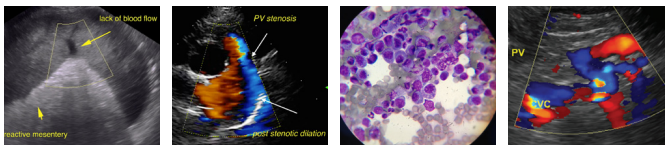

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PATIENT
Lulubelle Zang

SPECIES
Ferret

BREED
Ferret

SEX
Spayed Female

AGE
6 Years 5 Months

WEIGHT
1.3 Pounds

INTERPRETED BY
Lisa Carioto, DVM, DVSc, Diplomate ACVIM

IMAGING PERFORMED BY
Dr. Munoz

HOSPITAL NAME
Lone Mountain AH

REFERRING VET
Dr. Munoz

INVOICE
36048

DATE
3/9/22

PRESENTING CLINICAL SIGNS

Presents for xrays and Abd US. P was hypoglycemic previously (Dec 2021) and has been on prednisolone for suspected insulinoma. Estradiol elevated at 210, p was placed on suprelorin implant in Dec 2021. Elevated liver values in bw: ALP 914, ALT 761.
Abnormal PE/Chem/CBC/UA Results: BW from Dec 2021: ALP 914, ALT 761, BUN 35, Cre 0.9, Glu 57 BG (3/9/22) while on prednisolone: 4 hr fasted - 59

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

One still image of the urinary bladder is available for review. The wall is smooth and regular. The trigone and proximal urethra are not visualized. However, there is no evidence of sediment, cystoliths, polyps, or a mass.

The left kidney is within normal limits in size for the patient's weight (2.45 cm). The capsule is smooth. There is mild loss of the normal definition of the corticomedullary junction. Very mild punctate mineralizations of the diverticulae are present. There are no signs of nephroliths or pyelectasia. The surrounding mesentery is not hyperechoic.

The right kidney is within normal limits in size (2.5 cm). Similar findings are noted with the right kidney compared to the left, in addition to a small cyst measuring 1.2 mm x 1.7 mm.

Adrenal Glands

The left adrenal gland shows signs of a nodule at the caudal pole, which measures 5.1 mm. The cranial pole measures 2.5 mm. Its length is 1.13 cm. The caudal pole, which is very rounded and has a nodular form, is hypoechoic to the remainder of the gland. There is possible invasion of the phrenicoabdominal vein. The surrounding vasculature is not visualized.

The right adrenal gland was not identified during the ultrasound.

Spleen

The spleen is within normal limits in size, architecture, echotexture, and echogenicity. It is hyperechoic to both the liver and renal cortex. The capsule is smooth. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified.

Liver

Mild hepatomegaly may be present. The liver is diffusely hypoechoic and has a coarse, granular echotexture. The latter may be secondary to a reactive hepatopathy. Its borders are very rounded. There are no signs of congestion of the vessels. However, the walls of the blood vessels are hyperechoic, which may be suggestive of inflammation. Hyperechoic "speckling" is visualized in a generalized pattern throughout the liver, which may be due to mineralization. An obvious mass is not observed.

The gall bladder wall appears to be within normal limits in thickness and echogenicity. There is no evidence of echogenic material (sludge) within the GB or edema surrounding it.

Gastrointestinal

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

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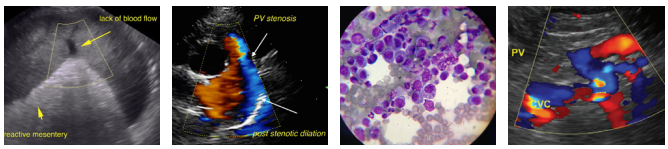

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The small intestinal wall thickness is within normal limits and there is no evidence of dilation. The definition of the wall layers is preserved. There are no obvious signs of a mass, foreign body, infiltrative disease or an obstruction.

Pancreas

The contours of the pancreas are irregular. It is diffusely hyperechoic with multiple hypoechoic nodules. Some of the nodules visualized are of mixed echogenicity and echotexture. One of the nodules measures 6.1 mm x 6.1 mm. Another nodule measures 5.3 mm x 3.3 mm. The left pancreas, right pancreas, and the body appear to be affected. The pancreatic duct appears patent.

Other

The hepatic lymph node is hypoechoic and enlarged, measuring approximately 4.4 mm x 4.4 mm. The surrounding mesentery is hyperechoic.

Abdominal effusion is not visualized.

ULTRASONOGRAPHIC FINDINGS

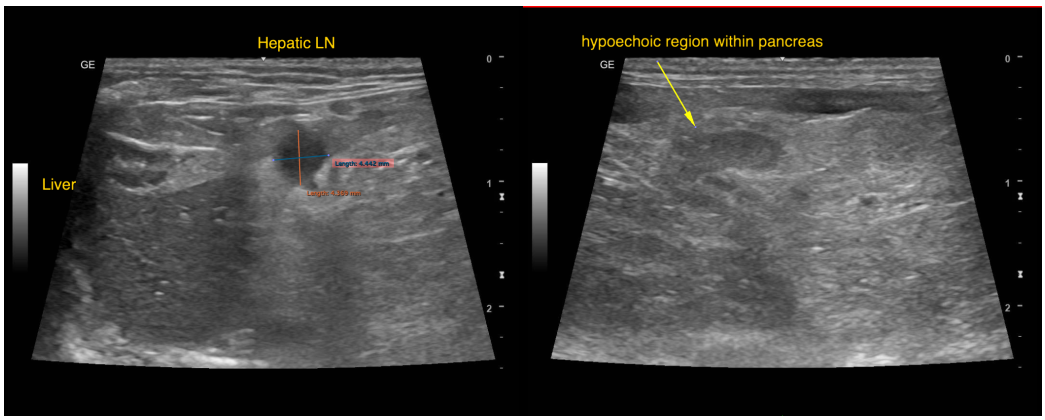
- The pancreatic lesions are highly suggestive of neoplasia, most consistent with an insulinoma based on Lulubelle's hypoglycemia.
- A mass or nodule affecting the left adrenal gland is also present.
- Some of the changes associated with the liver are suggestive of age related changes. However, diffuse hypoechogenicity of the liver may occur due to neoplasia.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

A CBC and serum biochemical profile and urinalysis are recommended. If this is not possible, then increasing the dose of prednisolone may be worthwhile, although dexamethasone will likely be more effective than prednisolone.

Other treatments that may be considered include diazoxide and octreotide. Additional treatment for the adrenal mass may not be required depending on Lulubelle's clinical signs.

A diet low in simple sugars should be avoided to decrease hyperglycemia and the risk of rebound hypoglycemia. A high protein, low carbohydrate diet is recommended to help maintain glycemic control.



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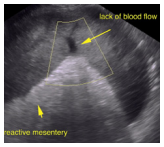

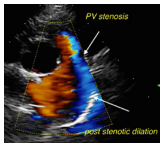

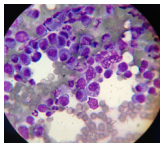
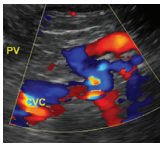

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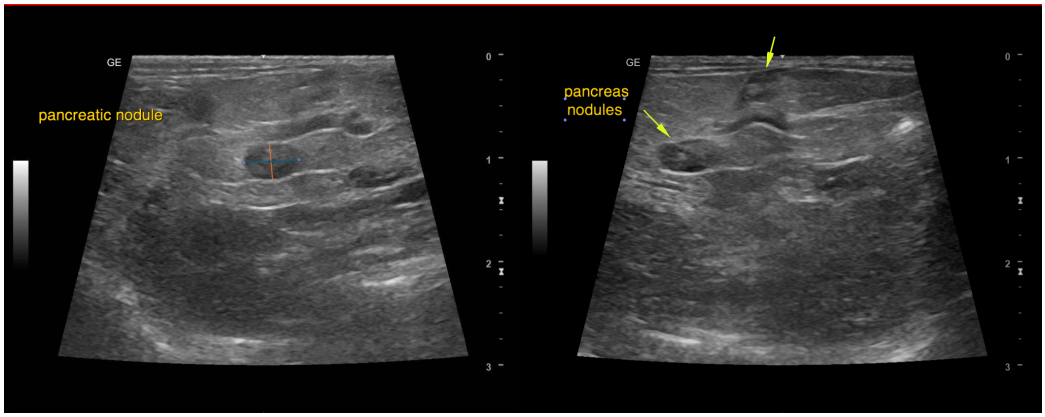

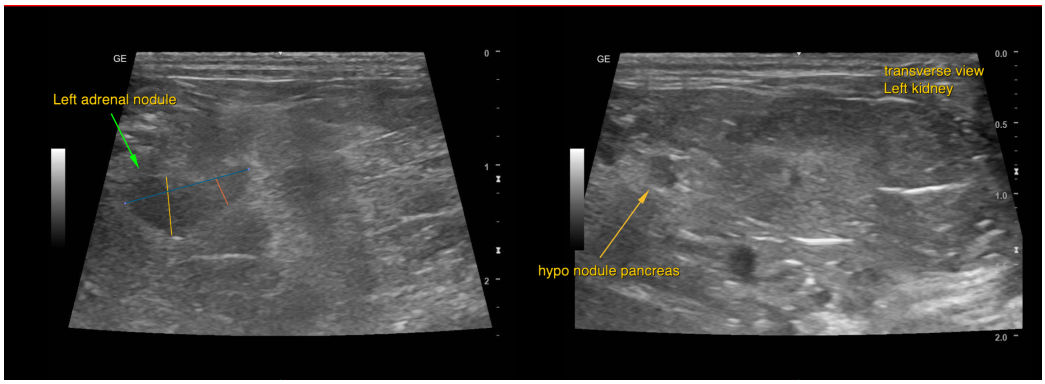

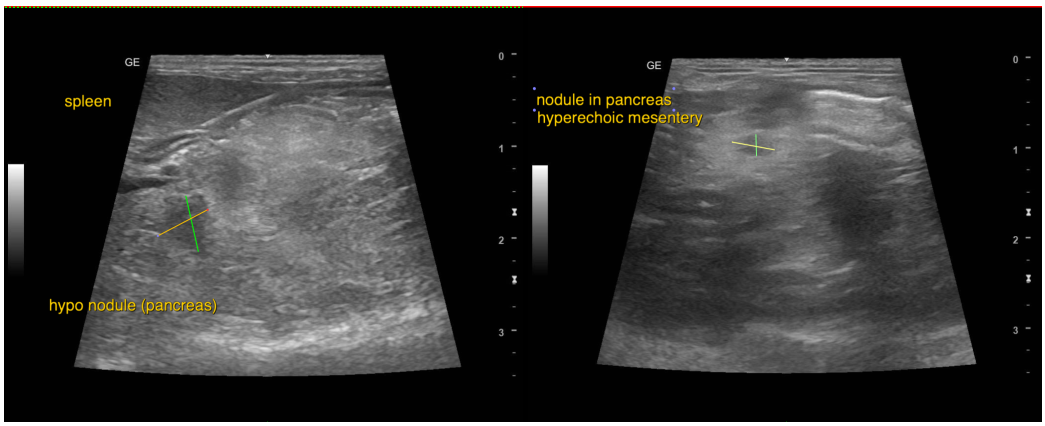

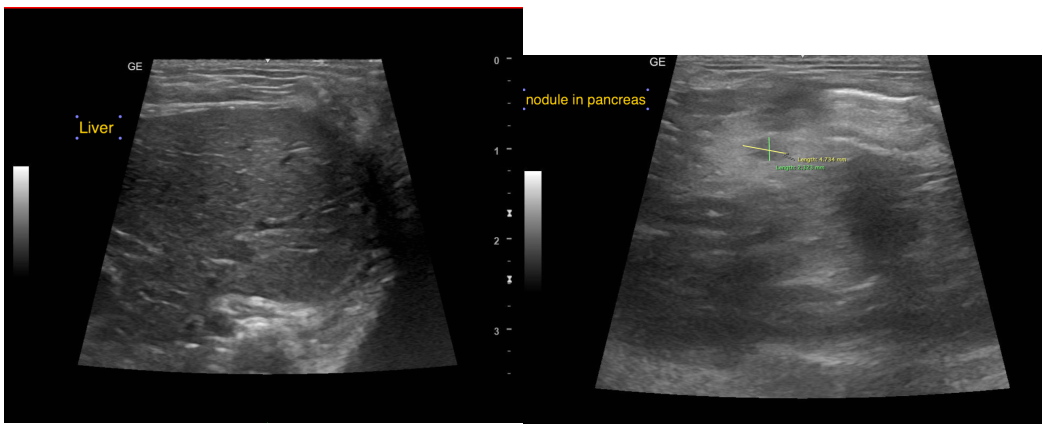

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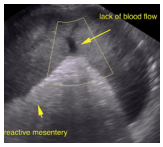

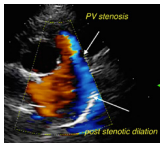

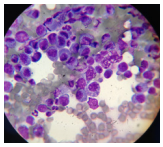
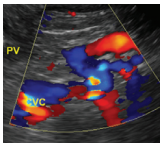

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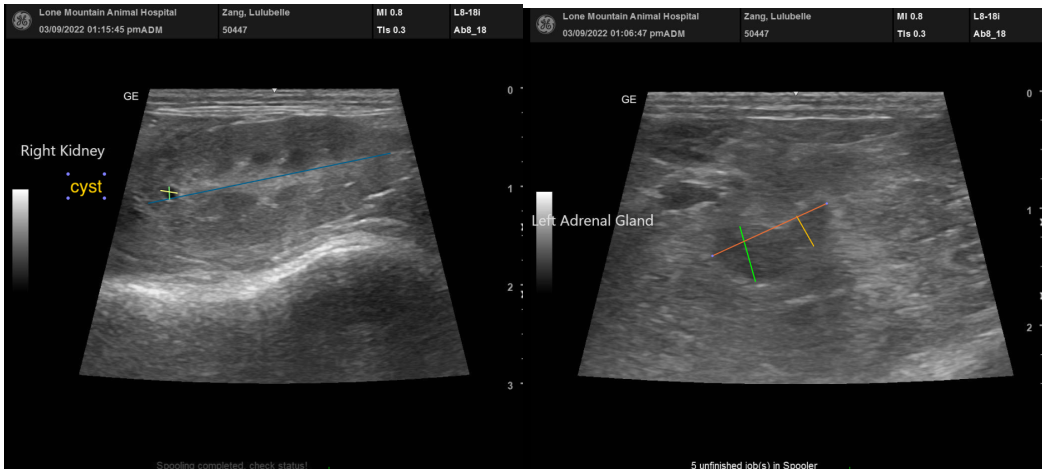

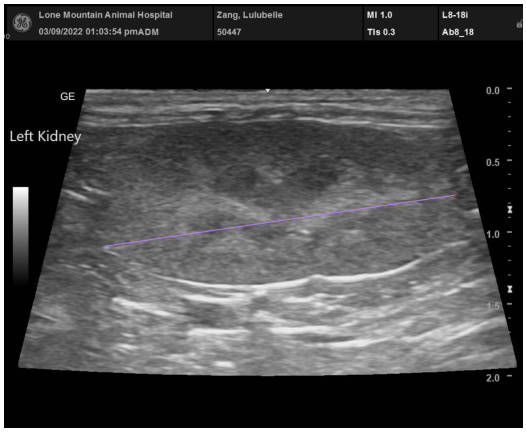

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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