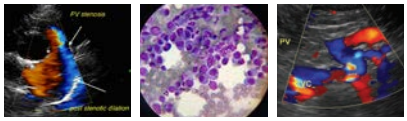
IMAGING PERFORMED BY

IntraPet.com



SonoPath
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DATE

2/14/23

PATIENT

Violet Carcireri

SPECIES

Canine

BREED

Min Pin

SEX

Spayed Female

AGE

8/5/11

WEIGHT

22.4 Pounds

INTERPRETED BY

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

HOSPITAL NAME

Animal Care Center

REFERRING VET

Dr. Beavers

INVOICE

45105

PRESENTING CLINICAL SIGNS

History of chronic pancreatitis, seen on 2/3/23 for vomiting, not eating normal diet, increased gastric noises

Current Medications: Cerenia 24mg q 24 hours, Gabapentin 100mg q 12 hours prn
Lab Results: elevated ALT, ALP, cPL
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Stephanie Warga RDCS, RVT.

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 (5.15 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 (5.38 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.

Adrenal Glands

The left adrenal gland is normal/borderline “plump” in size measuring 0.75 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 borderline large in size measuring 1.02 cm at the cranial pole, 0.61 cm at the caudal pole, and 2.14 cm in length. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is somewhat abnormal in appearance in that there is an indistinct hyperechoic region on the cranial pole measuring approximately 0.66 cm x 0.63 cm, possibly consistent with an early adrenal nodule. There is no evidence of vascular invasion visualized.

Spleen

The spleen is subjectively normal in size and the echotexture is homogenous. The splenic capsule is smooth with no visible irregularities. Rare discrete focal hyperechoic, perivascular parenchymal abnormalities are present. The appearance of these lesions is most consistent with benign splenic myelolipomas. Additionally, there are numerous pinpoint hyperechoic foci visualized throughout the parenchyma, most consistent with small mineralizations. The blood flow through the hilus and splenic parenchyma appears normal.

Liver

The liver is large in size, with normal echogenicity and smooth peripheral margins. The parenchyma is homogenous echotexture. The visible portions of the vasculature and biliary tract appear normal. There is a small, ill-defined, hyperechoic focus visualized near the gallbladder measuring 1.03 cm.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of 0.66 cm 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 focal lesions are visualized associated with the stomach, but in some regions the gastric wall appears slightly prominent, measuring at the upper end of normal at 0.66 cm.

The visualized areas of duodenum, jejunum and ileum have a uniform diameter with minimal fluid distension. Wall thickness is moderately increased. Bowel loops follow a typical curvilinear path. Some areas have reduced detail of wall layering. Duodenum wall measures 0.69 cm. Jejunum wall measures 0.48 cm. Mucosal speckling is visualized. 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 prominent and mottled compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

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.

PRIMARY FINDINGS

- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.
- Prominent, mottled pancreas – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.
- Large liver with a hyperechoic focus near the gallbladder – Findings could be consistent with a vacuolar hepatopathy, less likely hepatitis, infiltrative disease, congestion, etc. The appearance of the hyperechoic focus in the liver trends towards a benign lesion.
- Borderline bilateral adrenomegaly with a hyperechoic focus in the cranial pole of the right adrenal gland – The bilateral adrenomegaly could be consistent with bilateral hyperplasia (e.g., secondary to pituitary-dependent hyperadrenocorticism), bilateral infiltrative neoplasia, inflammatory adrenal disease, other. Correlation with clinical findings is recommended. The hyperechoic focus on the cranial pole could be consistent with a benign lesion (hyperplasia, adenoma, etc.), or could be consistent with an early neoplastic lesion (carcinoma, pheochromocytoma, etc).
- Diffusely thickened small intestine with mucosal speckling – Bright mucosal speckling has been postulated to represent dilated lacteals or focal accumulations of mucus, cellular debris, etc.. in the mucosal crypts.

SECONDARY FINDINGS

- Hyperechoic foci visualized within the spleen – Findings are most consistent with benign myelolipomas and pinpoint mineralizations.

- Mild gallbladder debris – The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.

- Slightly prominent gastric rugal folds – Findings could be consistent with edema, inflammation, or imaging artifact.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is the general impression of diffusely thickened small bowel with some mucosal speckling evident. This cold be consistent with a primary enteropathy. The pancreas is visible and slightly mottled, but does not appear overtly inflamed. If underlying gastrointestinal disease is suspected, then consider the following:

- Consider a novel protein/hydrolyzed protein diet (exclusively at least 4-6 weeks). You may want to consider the lowest fat options of these if this patient has recurring pancreatitis or hyperlipidemia.

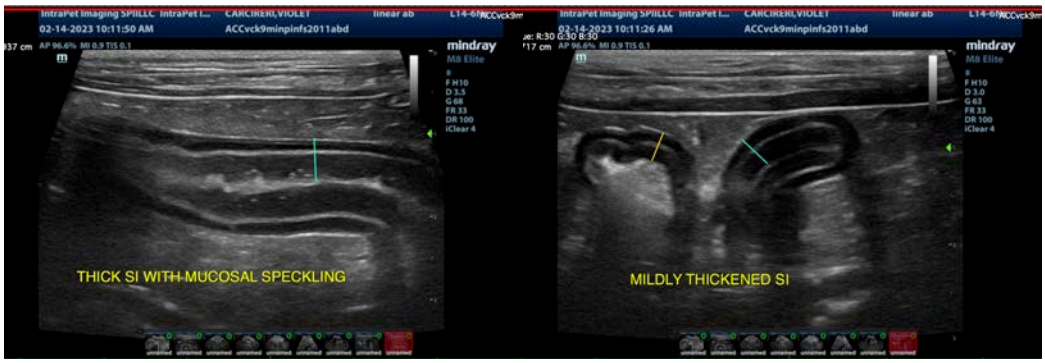
- Consider a GI panel to Texas A&M for evaluation of B12 levels, folate, PLI/TLI etc.. to further evaluate for pancreatic/small intestinal disease.

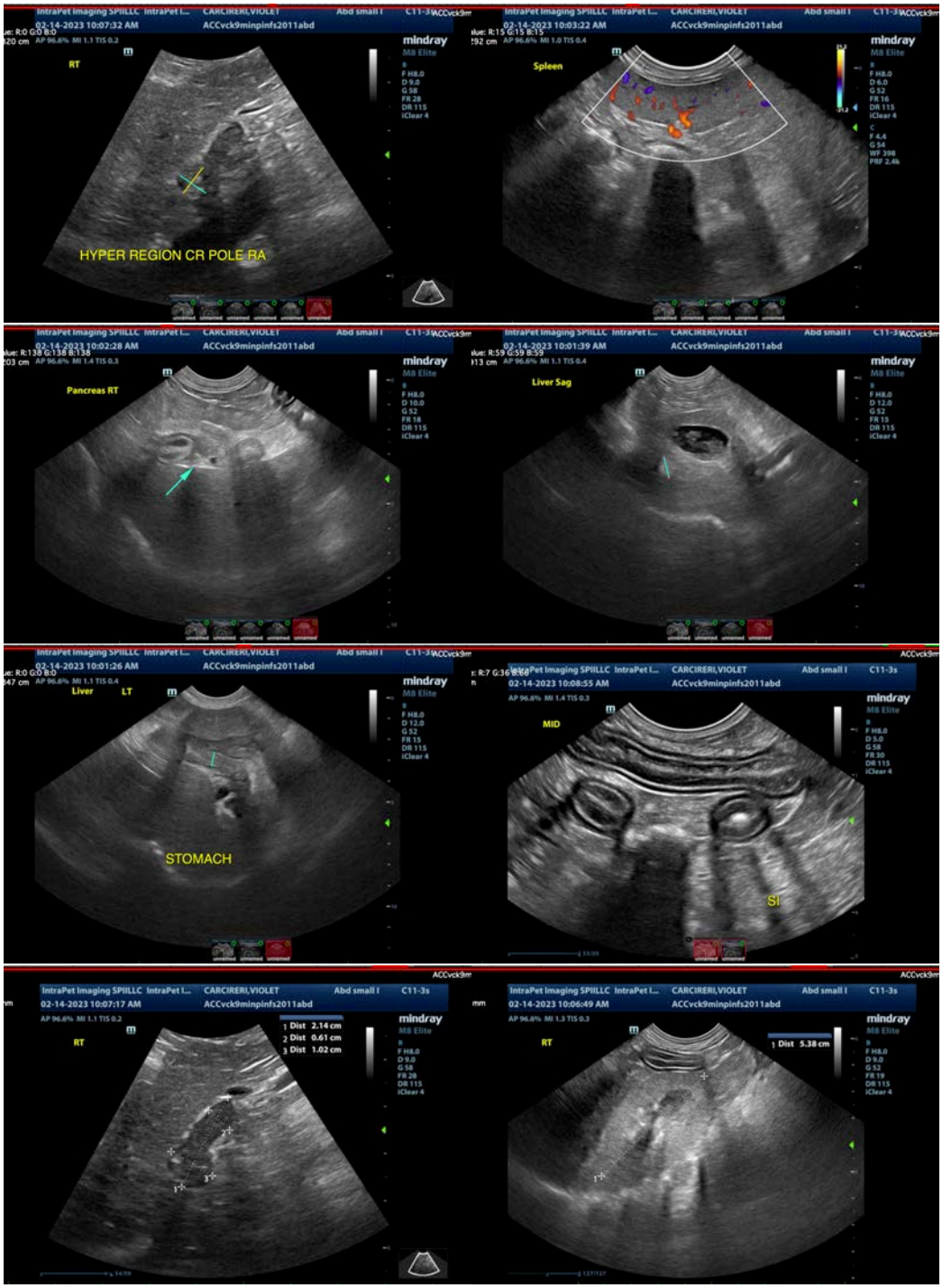
- Recommend chronic pre- and probiotic therapy.

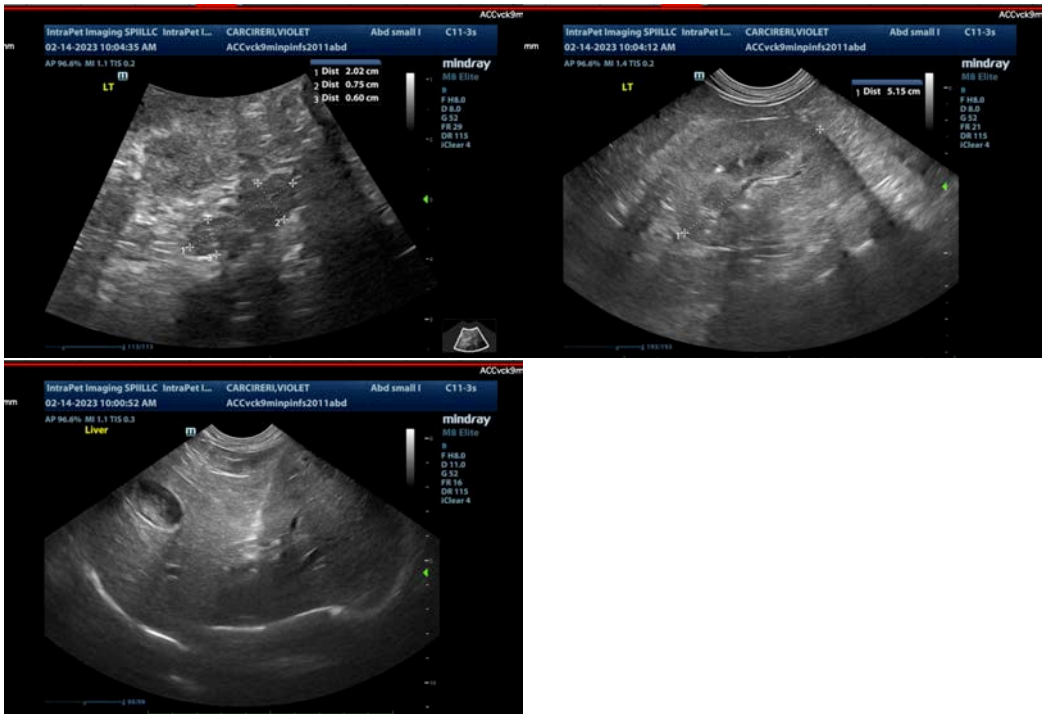
- If symptoms are persisting and primary gastrointestinal disease is strongly suspected, then consider obtaining GI biopsies.

The liver generally appears slightly enlarged and there is a small hyperechoic focus near the gallbladder. This lesion has minimal criteria for malignancy. Consider a liver function test +/-a fine needle aspirate and consider the possibility of Cushing's disease if clinically appropriate.

Both adrenals appear borderline large for this size dog. Additionally, there is an ill-defined hyperechoic focus in the cranial pole of the right adrenal gland. The significance of this is uncertain. If this patient has signs consistent with Cushing's disease, I would consider adrenal function testing. If these are not present, then consider a blood pressure evaluation (measure catecholamine levels if blood pressure is elevated) and recommend reevaluation of this lesion with ultrasound in approximately 2 months. If there is apparent change, then a contrast CT scan could be considered to evaluate for possible surgical removal.




RT
HYPER REGION CR POLE RA
Spleen
Pancreas RT
Liver Sag
Liver LT
STOMACH
MID
SI
RT
1 Dist 2.14 cm
2 Dist 0.61 cm
3 Dist 1.02 cm
RT
1 Dist 5.38 cm



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.

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