

IMAGING PERFORMED BY

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DATE PRESENTING CLINICAL SIGNS

3/1/22 2/28/22- Referred for continued care of pancreatitis. Had dose of Cerenia and Gabapentin this morning; gets Proin XR in PM. Elevated Amylase, Lipase and cPL on labs.

PATIENT

Copper Savage Current Medications: Gabapentin, Buprenorphine, Proin, Cerenia.
Lab Results: Amylase 5243, Lipase >1800, Spec cPL 1685.

SPECIES

Canine

Date of Previous IntraPet Ultrasound:
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

BREED

Mixed

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.

SEX

Spayed Female

The left kidney has a normal shape and size (6.49 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

AGE

11/26/09

The right kidney has a normal shape and size (5.69 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

WEIGHT

57.8 Pounds

INTERPRETED BY

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

Adrenal Glands

The left adrenal gland is large in size measuring 1.39 cm at the cranial pole, 0.69 cm at the caudal pole, and 3.41 cm in length. It is observed in its normal position cranial to the left renal artery. It is somewhat irregular in appearance in that the cranial pole is much larger than the caudal pole. There is no evidence of irregularity or vascular invasion. Previous measurements of the left adrenal gland 6 months ago were 0.92 cm at the cranial pole, 0.44 cm at the caudal pole, and 2.6 cm in length, so there has been some suspected increase in size.

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Rachel Brilhart RDMS

The right adrenal gland is normal in size measuring 0.82 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.

HOSPITAL NAME

Animal Emergency
Hospital

Spleen

The spleen is subjectively normal in size, 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.

REFERRING VET

Dr. Martinoli

Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is homogenous echotexture. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

INVOICE

35783

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach is minimally distended with ingesta. The gastric wall appears diffusely prominent and somewhat thickened and hypoechoic. Some of this could be artifact due to rugal folding and the contrast between the very hyperechoic surrounding mesentery, but as the region of the pylorus comes into view, this thickening becomes more apparent, and there is suspected loss of layering. Gastric wall in the area of the pylorus measures 0.94 cm and is very hypoechoic. The omentum surrounding the stomach is very hyperechoic with prominent lymph nodes in the area and an inflamed pancreas.

The proximal duodenum appears hypoechoic and thickened. Many of the visualized areas of jejunum and ileum have a relatively uniform diameter with minimal fluid distention. Wall appears normal with intact layering and normal intestinal wall thickness. The proximal duodenum as it approaches the gastroduodenal junction appears thickened with reduced detail in layering measuring 0.75 cm. The surrounding tissue in this area is very hyperechoic. The mesentery is inflamed. The more distal duodenum appears normal, measuring 0.55 cm.

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 mesentery. There is no evidence of nodules or cystic lesions. There is evidence of regional mesenteric inflammation. Consistent with moderate to severe pancreatitis.

Free Abdomen

There is a scant amount of free abdominal fluid in the area around the stomach and pancreas. There is a mild regional lymphadenopathy in the cranial abdomen. The omentum is severely hyperechoic in the region around the stomach and pancreas.

ULTRASONOGRAPHIC FINDINGS

- Hypoechoic, mottled pancreas surrounded by severely inflamed hyperechoic mesentery – The pancreatic changes are most consistent with moderate to severe pancreatitis/pancreatic inflammation. Recommend PLI testing and continued monitoring for improvement or possible development of a pancreatic abscess. Consider fine needle aspirate if not improving.
- Thickened wall of the pylorus and proximal duodenum with loss of layering – Findings are concerning for either a primary neoplastic process or secondary inflammation due to focal peritonitis/pancreatitis.
- Enlarged left adrenal gland – Left/right adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.

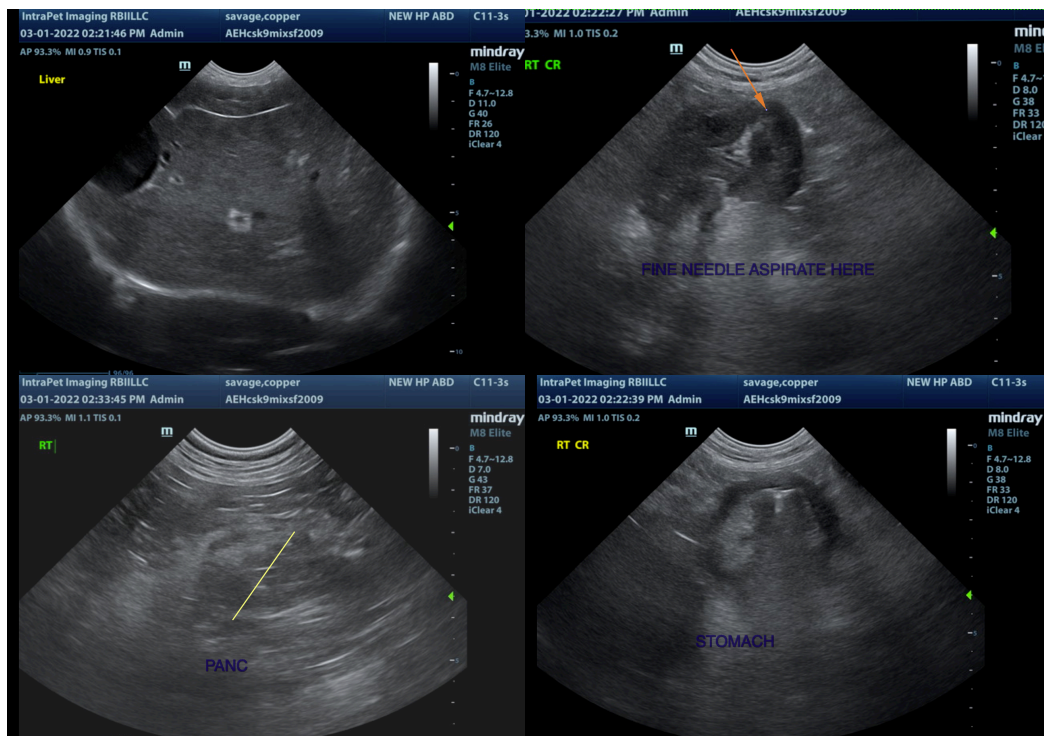
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

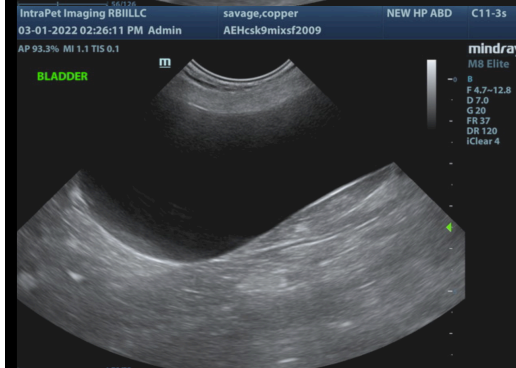
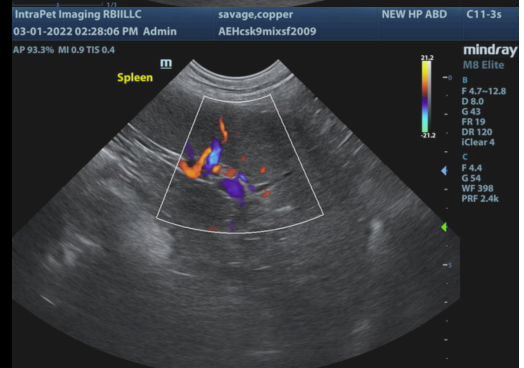
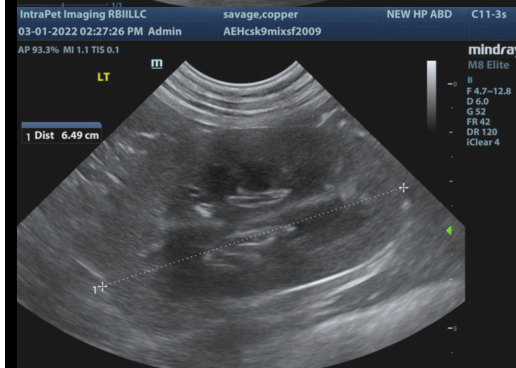
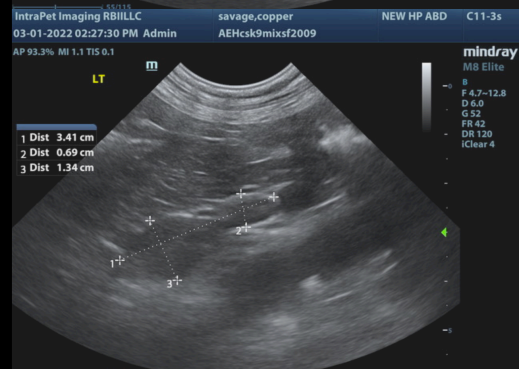
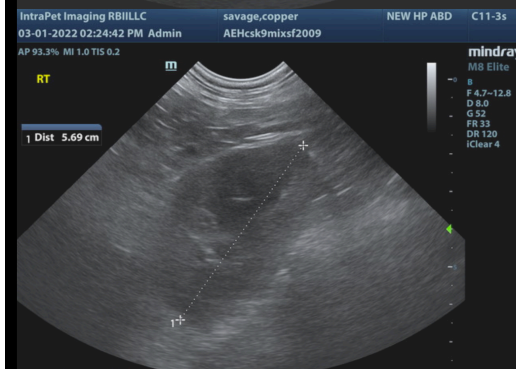
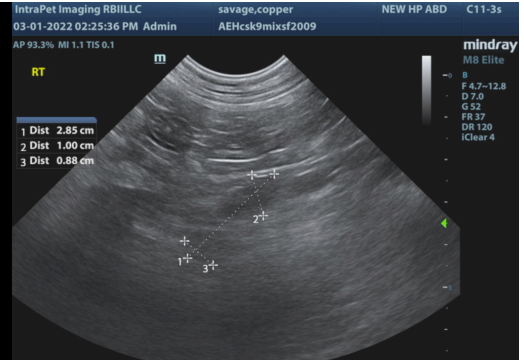
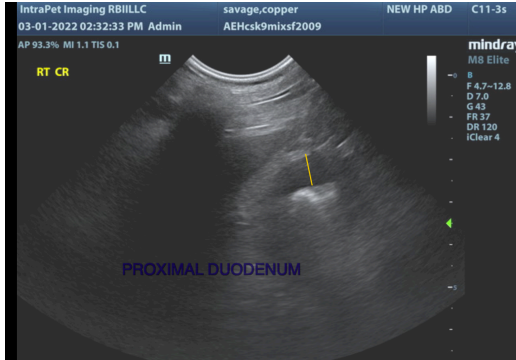
There is severe inflammation in the right cranial quadrant of the abdomen with thickened pylorus and duodenum. The question is if there is severe infiltrative disease affecting the pylorus and duodenum causing secondary omental inflammation, or if there is severe pancreatitis in this region causing edema and inflammation. Correlate this with clinical signs (have the GI signs been progressing over time or is this an extremely acute event?). Consider a fine needle aspirate of the pyloric wall (see images for guidance) to try to obtain a sample, as there is concern for a primary neoplastic process occurring.

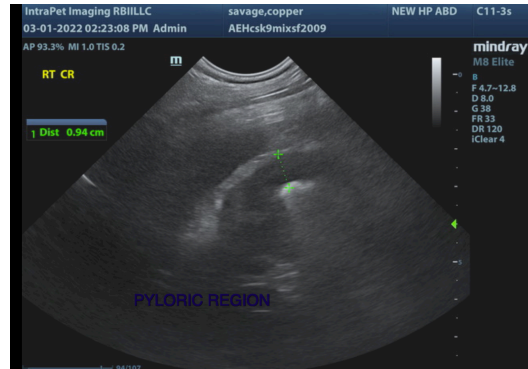
Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.

The left adrenal gland appears prominent with an enlarged cranial pole. This asymmetry was somewhat present 6 months ago when previously imaged (9/3/21), but has progressed somewhat. There is no obvious vascular invasion or inflammation around this lesion. Options moving forward would include further workup including blood pressure evaluation or continued monitoring with ultrasound. See recommendations to consider below.

- If signs of Cushing's are present, consider adrenal function testing. I prefer an ACTH stimulation test combined with an adrenal panel to the University of Tennessee's endocrine lab to look for atypical adrenal hormones as well as cortisol. (other testing can suffice)
- If adrenal dependent Cushing's is suspected and supported by adrenal function testing consider medical therapy with Lysodren or trilostane or consider surgical removal (recommend referral to a board certified veterinary surgeon and possible pre op CT)
- Recommend blood pressure evaluation-if hypertensive consider testing catecholamine levels for a possible pheochromocytoma
- If no symptoms of Cushing's are present, consider either referral for surgery or continued monitoring with ultrasound (in 3-4 months).
- Many of these nodules can be benign and incidental in nature, unfortunately this lesion appears to be getting somewhat larger, and there can be risk for acute hemorrhage from vascular invasion, etc.







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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