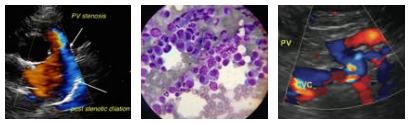
IMAGING PERFORMED BY

IntraPet.com



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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DATE
6/20/22

PATIENT
Nala Hall

SPECIES
Feline

BREED
Domestic Shorthair

SEX
Spayed Female

AGE
6/18/11

WEIGHT
9.2 lbs

INTERPRETED BY
Lisa Carioto, DVM, DVSc, Diplomate ACVIM

HOSPITAL NAME
Animal Emergency Hospital

REFERRING VET
Dr. Ruby

INVOICE
31100

PRESENTING CLINICAL SIGNS

Uncontrolled Diabetes Mellitus, Not Eating, Vomiting
History: Referred for chronic vomiting; even while on Cerenia. Diabetic.
Current Medications: Gabapentin, Buprenorphine, Cerenia.
Lab Results: Negative ketones; BG 400 on presentation; gradually decreasing while on IVF; down to high 200's.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Rachel Brilhart, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** is very distended with anechoic contents. The wall is smooth and regular. No abnormalities are noted with the trigone. The proximal 5 cm of the urethra is dilated (4.6 mm). A trivial amount of sediment is noted at the trigone. There is no evidence of, cystoliths, polyps or a mass.
An obstruction was not present as Nala urinated once she was offered a larger litter box.

Kidneys

The **left** kidney measures 4.33 cm (3.80-4.40 cm). The capsule is smooth. A moderate loss of the normal definition of the cortico-medullary junction is present. There is no evidence of nephroliths. Significant pyelectasia is noted (longitudinal view 0.81 cm), as well as very mild hydroureter. An accumulation of intrapelvic fat is noted. Blood flow is within normal limits. The surrounding mesentery is not hyperechoic.
The **right** kidney measures 4.55 cm (3.80-4.40 cm). The capsule is smooth. A moderate loss of the normal definition of the cortico-medullary junction is present. There is no evidence of nephroliths. Significant pyelectasia is noted (longitudinal view 0.60 cm), as well as very mild hydroureter. An accumulation of intrapelvic fat is noted. Blood flow is within normal limits. The surrounding mesentery is not hyperechoic.

Aortic bifurcation/trifurcation

No abnormalities observed.

Adrenal Glands

The **left** adrenal gland measures 0.38 cm at the cranial pole, 0.37 cm at the caudal pole. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

The **right** adrenal gland measures 0.36 cm at the cranial pole, 0.38 cm at the caudal pole. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

Spleen

The spleen is within normal limits in size, echotexture, and echogenicity. The capsule is smooth. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified.

Liver

There are no obvious signs of hepatomegaly and its borders are smooth and sharp. The liver's echotexture is homogeneous and it is within normal limits in echogenicity. Focal lesions are not observed and no abnormalities are observed with the hepatic vessels.

The gallbladder wall is within normal limits in thickness and echogenicity. A trivial amount of echogenic material is present within the GB. The portions of the cystic and/or common bile ducts observed are not dilated or tortuous, i.e. there are no signs of an obstruction.

Gastrointestinal

The gastric wall is within normal limits in thickness and the wall layers are well defined, however, the submucosa of the stomach is more prominent than usual. No obvious abnormalities are observed with its peristalsis.

The small intestinal wall thickness varies between normal and mildly thickened (0.21 cm, 0.28 cm). Jejunum: Fogging of the mucosa and muscularis are present. The muscularis is also more prominent than usual.

No abnormalities are observed with the ileocecal colic junction.

Abnormally dilated loops of bowel are not observed.

The colonic wall is not thickened and mural detail is considered normal. Formed stools are present within the colon.

Pancreas

Both limbs are enlarged and mildly hypoechoic. They also have a mild, diffusely coarse echotexture. Pinpoint hyperechoic foci are scattered throughout the parenchyma, which may be due age-related changes, such as fibrosis, secondary to previous episodes of pancreatitis, mineralization and amyloid deposition. The surrounding mesentery is mildly hyperechoic. Signs of neoplasia are not appreciated.

Other

Lymph nodes

No abnormalities are observed

Abdominal effusion

A trivial amount of anechoic effusion is visualized caudal to the urinary bladder.

ULTRASONOGRAPHIC FINDINGS

- **Pancreas**: *Mild active pancreatitis* is suspected, in addition to *age-related changes*, including fibrosis, possibly due to previous episodes of pancreatitis, mineralization and/or amyloid deposition. The surrounding mesentery is mildly hyperechoic. Signs of neoplasia are not appreciated.

- **Gastrointestinal tract:** Inflammatory changes with stomach and duodenum consistent with *chronic vomiting*. Jejunal abnormalities suggestive of an inflammatory process, such as inflammatory bowel disease. Infiltrative disease, such as lymphoma or other round cell tumour, is considered less likely.

- **Kidneys**: Pyelectasia and very mild hydroureter attributed to administration of intravenous fluids. However, pyelonephritis cannot be excluded, despite the absence of overt sonographic signs. Age-related degeneration is likely contributing to the renal changes observed. Well-distended urinary bladder and urethra associated with lack of voiding due to size of litter box, as Nala urinated once she was offered a larger box. One could re-ultrasound her urinary system to confirm this suspicion.

- The trivial amount of abdominal effusion may be due to increased permeability due to overdistention of the urinary bladder, mild vasculitis, and volume overload.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

A spec fPL is suggested to exclude active pancreatitis.

Nala may also be suffering from exocrine pancreatic insufficiency, which is not uncommon in cats with diabetes. A TLI is not recommended for the moment as a false negative may occur with pancreatic inflammation. A TLI is suggested in a few weeks (4-6 weeks), once she has recovered from her current illness. Serum cobalamin and folate. If cost prohibitive, supplement with cobalamin for 1-2 months and assess response.

Arterial blood pressure

Urine culture and sensitivity to exclude pyelonephritis
Consider fluoroquinolone pending culture results

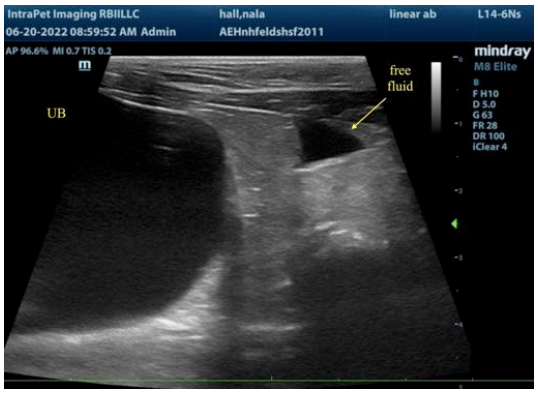
Ondansetron to control vomiting

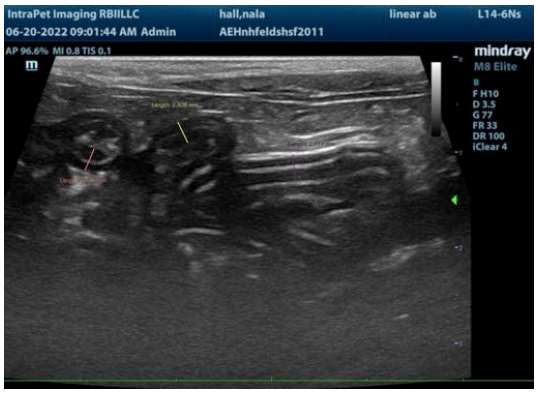
Continue buprenorphine and gabapentin. A CRI of lidocaine and ketamine may be required if analgesia not adequate.

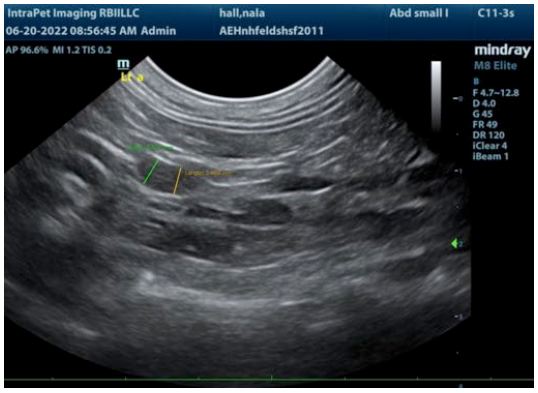
Glargine to treat diabetes.

A Freestyle LIBRE sensor can be placed for close in hospital and at home monitoring.

Chlorambucil may be required to control GI inflammation (IBD), as steroids are contraindicated. Cyclosporine may be considered, although the latter may also affect glucose regulation.



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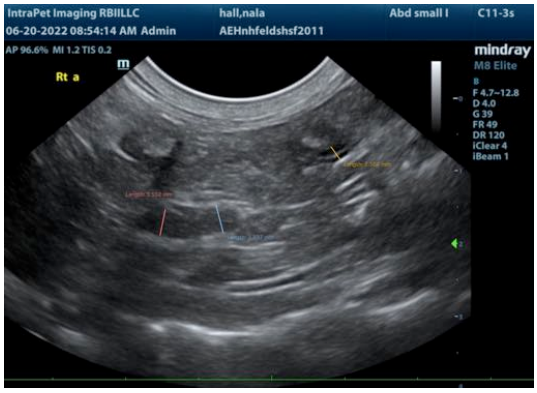
Lt a
mindray
M8 Elite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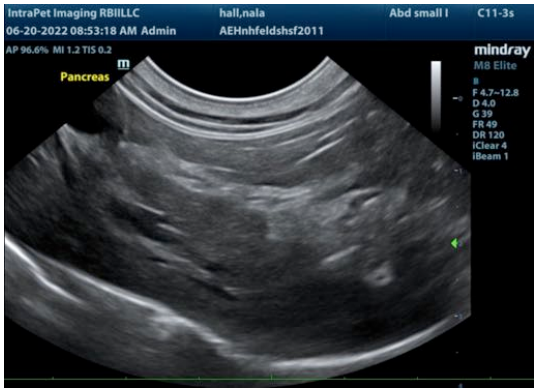
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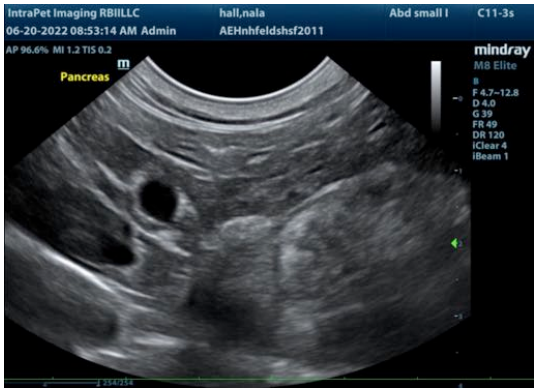
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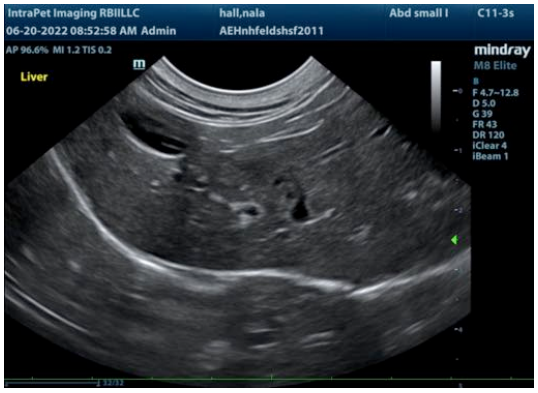
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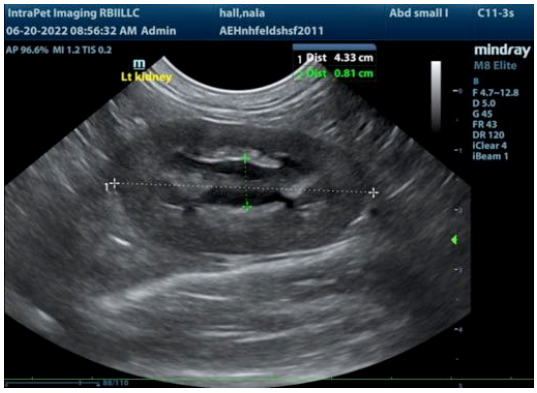
Liver
mindray
M8 Elite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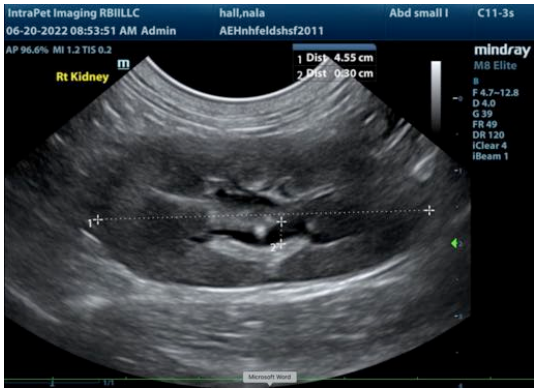
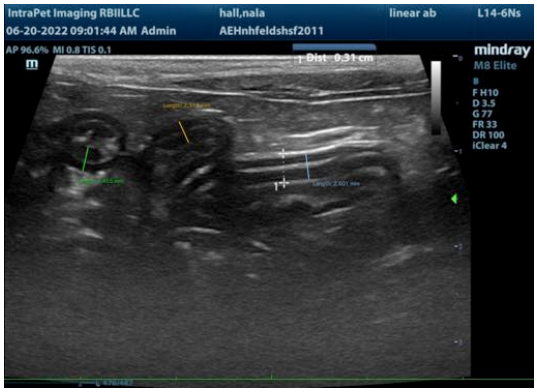
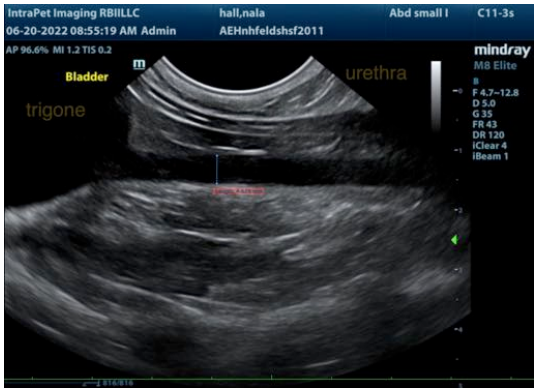
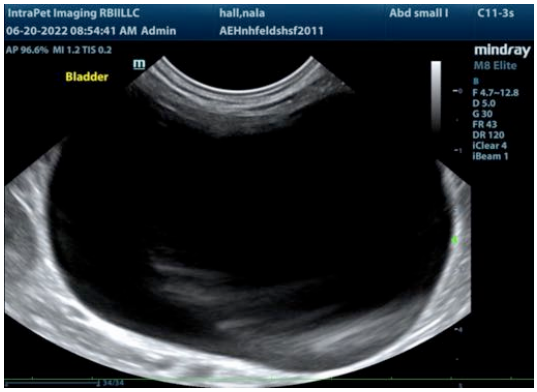
Lt kidney
1 Dist 4.33 cm
2 Dist 0.81 cm
mindray
M8 Elite









The information and recommendations provided are based on the images presented by the referring veterinarian. 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