



PATIENT

Lilly Pettersen

PRESENTING CLINICAL SIGNS

History: weight loss
Abnormal PE/Chem/CBC/UA Results: dental tartar; calcium 14.5, on follow up ionized calcium was 1.47 (1.13-1.38) rule out emerging lymphoma; chest rad nsf

SPECIES

Feline

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

BREED

Domestic Shorthair

Urinary System

The urinary bladder is well distended. The wall is smooth and regular, but mildly thickened at 1.3 mm. No abnormalities are present with the trigone or proximal urethra. A small to moderate amount of free floating sediment is present, however, there is no evidence of cystoliths, polyps or a mass. At the end of the exam, a mild to moderate amount of sediment had settled by gravity.

SEX

Spayed Female

Kidneys

The **left** kidney measures 3.26 cm (3.80-4.40 cm). The capsule is smooth. The cortex is mildly hyperechoic and a mild loss of the normal definition of the cortico-medullary junction is present. Mineralizations of the diverticulae are present, without evidence of nephroliths or pyelectasia. Intrapelvic fat is noted. The surrounding mesentery is not hyperechoic.

AGE

10 years

The **right** kidney measures 3.69 cm (3.80-4.40 cm). Findings are similar to the left kidney.

WEIGHT

7 lbs

Aortic bifurcation/trifurcation

No abnormalities observed.

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

Adrenal Glands

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

IMAGING PERFORMED BY

Chelsea Pastor

The **right** adrenal gland measures 0.35 cm at the cranial pole, 0.32 at the caudal pole and 0.98 cm in length. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

HOSPITAL NAME

Fredon AH

Spleen

REFERRING VET

Dr. Grau

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.

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Liver

There are no obvious signs of hepatomegaly and its borders are smooth and sharp. The liver's echotexture is homogeneous, however, it is mildly hyperechoic, i.e. it is isoechoic to the falciform fat. No focal lesions are observed and no abnormalities are observed with the hepatic vessels visualized.

DATE

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PATIENT	The gallbladder wall is within normal limits in thickness and echogenicity. A trivial amount of echogenic material is present within the GB. The portion of the cystic duct visualized is not dilated. The common bile duct is not visualized. There are no obvious signs of an obstruction.
Lilly Pettersen	
SPECIES	
Feline	
BREED	Gastrointestinal
Domestic Shorthair	The gastric wall is within normal limits in thickness and the wall layers are well defined. No obvious abnormalities are observed with its peristalsis.
SEX	The small intestinal wall thickness is within normal limits and the definition of the wall layers is preserved. Abnormally dilated loops of bowel are not observed.
Spayed Female	The colonic wall is not thickened and mural detail is considered normal.
AGE	There are no obvious signs of a mass, foreign body, infiltrative disease or an obstruction in the gastrointestinal tract.
10 years	
WEIGHT	Pancreas
7 lbs	The left limb is mildly, but diffusely hypoechoic. The surrounding mesenteric fat is mildly hyperechoic, suggestive of saponification. These findings are suggestive of active pancreatitis. Overt signs of neoplasia are not noted.
INTERPRETED BY	A very small portion of the right limb is visualized. Findings are similar compared to the left limb. A well-circumscribed, hypoechoic nodule, measuring 4.21 mm in diameter x 4.63 mm in length is observed. The surrounding mesentery is moderately hyperechoic. It is difficult to determine if the nodule is within the pancreas or adjacent to it as the nodule is only visualized in one view. A lymph node cannot be excluded.
Lisa Carioto, DVM, DVSc, Diplomate ACVIM	
IMAGING PERFORMED BY	Other
Chelsea Pastor	Lymph nodes
HOSPITAL NAME	See pancreas above, however, no overt abnormalities are observed.
Fredon AH	Abdominal effusion is not visualized.
REFERRING VET	ULTRASONOGRAPHIC FINDINGS
Dr. Grau	<ul style="list-style-type: none"> A smoldering pancreatitis is suspected. The hypoechoic nodule noted may be a lymph node, however, a nodule within the pancreas cannot be excluded. Additional views are required to further characterize it. Cholangitis/cholangiohepatitis and cholestasis cannot be excluded based on the diffuse hyperechogenicity of the liver. Subclinical hepatic lipidosis due to pancreatitis may also be contributing to the hyperechogenicity. Note, the absence of sonographic changes of the intestinal tract does not exclude inflammatory bowel disease, i.e. Lilly may be suffering from "triaditis", which could be causing weight loss. There are no obvious signs of infiltrative disease, such as lymphoma.
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DATE	
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PATIENT

Lilly Pettersen

- A mild to moderate amount of urinary sediment had settled by gravity by the end of the exam. The wall of the urinary bladder is smooth, but very mildly thickened. A urinary tract infection cannot be excluded.

SPECIES

Feline

- Renal changes are suggestive of age-related degeneration and mild renal disease based on the mild decrease in size of both kidneys. Pyelonephritis cannot be excluded despite the absence of sonographic signs.

BREED

Domestic Shorthair

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

A PTH/PTHrP and ionized calcium may be performed, +/- vitamin D concentrations. An evaluation of the Lilly's nutrition suggested, in addition to determining whether she has access to vitamin D containing ointments (for example, licking client's arms, legs, etc.), as the latter may cause hypercalcemia.

SEX

Spayed Female

If not already performed, an evaluation of the mammary glands, lymph nodes, and a rectal examination (before and after having expressed the anal sacs) is recommended to exclude neoplasia. Mild sedation may be required in a cat, for example, gabapentin the morning of the appointment, +/- buprenorphine or butorphanol, as well as topical lidocaine jelly.

AGE

10 years

A urinalysis and urine culture and sensitivity are recommended to exclude a urinary tract infection and pyelonephritis.

WEIGHT

7 lbs

A spec fpL may be performed to confirm pancreatitis.

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

Additional views of the region of the right pancreas may be obtained to further characterize the hypoechoic nodule observed.

A fine needle aspirate of the nodule may be performed.

Treatment for pancreatitis is recommended, including analgesics, such as buprenorphine as well as supportive care, such as maropitant, +/- subcutaneous.

IMAGING PERFORMED BY

Chelsea Pastor

Deworming with a broad spectrum dewormer, such as fenbendazole, is suggested if Lilly goes outdoors or if he lives with other pets that go outdoors.

HOSPITAL NAME

Fredon AH

A veterinary prescription brand hypoallergenic diet, whether hydrolyzed or novel protein, may be tried. Multiple diets may be required, including only canned food, as some individuals cannot digest dry. The kibble may be soaked if an all canned diet is cost prohibitive.

A 10-14 day trial with famotidine or omeprazole may be considered.

REFERRING VET

Dr. Grau

A TLI, vitamin B12, and folate may be performed as cats suffering from IBD and pancreatitis may suffer from cobalamin deficiencies. If the test is cost prohibitive, supplementation with vitamin B12 is suggested.

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Cholestasis, cholangitis/cholangiohepatitis cannot be excluded, despite the absence of abnormalities with liver enzyme activities on blood work. Secondary ascending bacterial infections are common. Although indiscriminate use of antibiotics is not normally recommended, one could start treatment with a broad-spectrum antibiotic

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If there is no response to the above, and the PTH and PTHrP are not supportive of neoplasia, idiopathic hypercalcemia should be considered as the cause of the hypercalcemia and a high fibre diet may be instituted, or Lilly's diet is continued and a fibre supplement containing psyllium is added to her diet.

SPECIES

Feline

BREED

Domestic Shorthair

SEX

Spayed Female

AGE

10 years

WEIGHT

7 lbs

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IMAGING PERFORMED BY

Chelsea Pastor

HOSPITAL NAME

Fredon AH

REFERRING VET

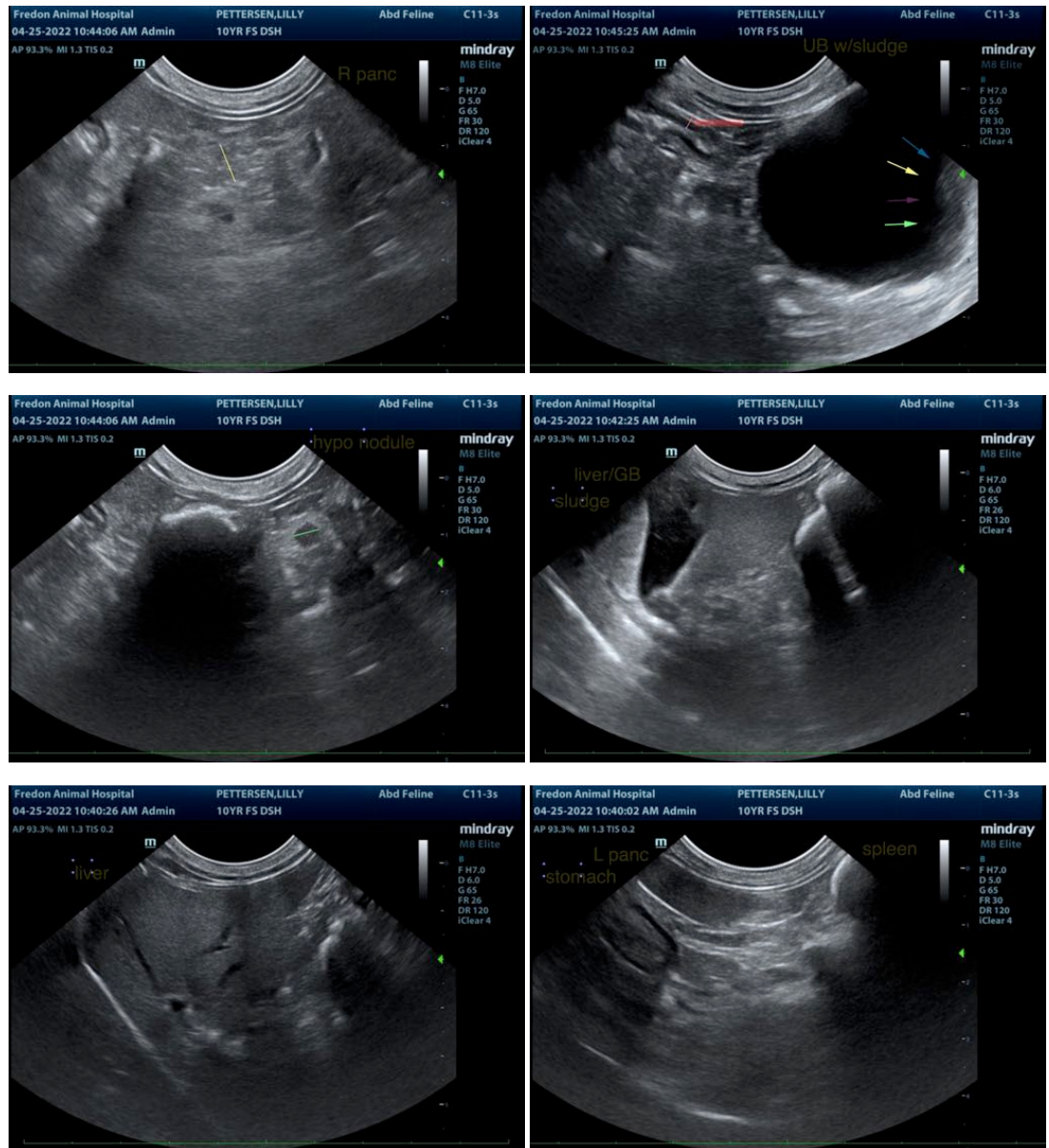
Dr. Grau

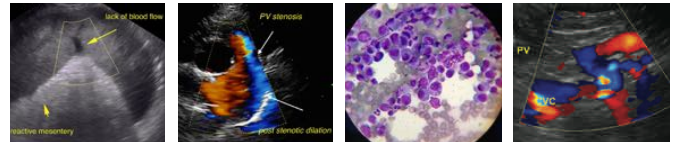
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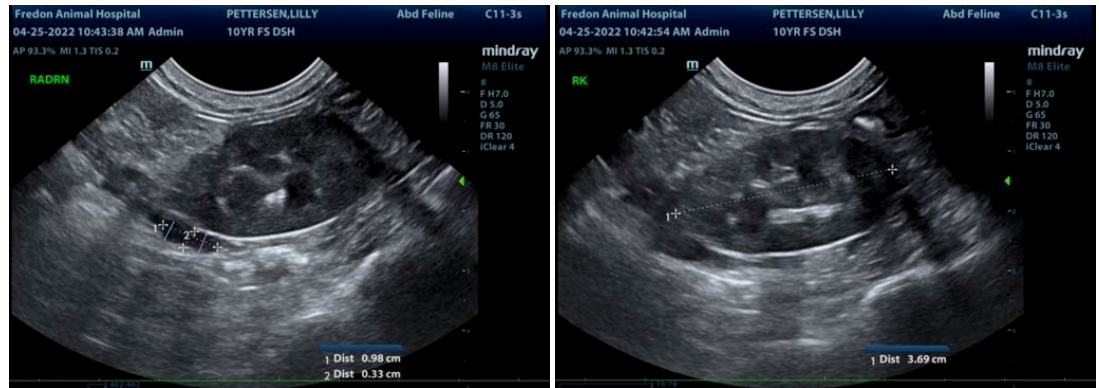
Dr. Grau

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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

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