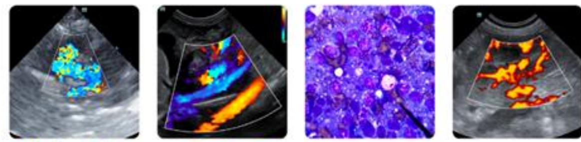


PATIENT
Milo Bruno

SPECIES
Feline

BREED
DSH

SEX
MN

AGE
14yr

WEIGHT
11.6

INTERPRETED BY
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

IMAGING PERFORMED BY
Quinn Robinson, RVT

HOSPITAL NAME
Hess Ridge Animal Hospital

REFERRING VET
Michael Skarie, DVM

INVOICE
24663

DATE
04/28/2026

PRESENTING CLINICAL SIGNS

-History of hyperthyroidism successfully treated with I-131.

-Patient is asymptomatic - AUS to assess increasing hypercalcemia.

-Thoracic radiographs have no significant findings

Abnormal PE/Chem/CBC/UA Results: SDMA: 19 ug/dL Increasing Calcium: 4/20/26: 12.7 mg/dL 1/20/26: 11.5 mg/dL 10/27/25: 10.7 mg/dL

ULTRASONOGRAPHIC EXAMINATION OF THE THORAX

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no evidence of urine/lumen sediment, mineral, or calculi. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

Normal size and margination were present in the left kidney. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Minor left retroperitoneal effusion and increased left retroperitoneal tissue echogenicity.

Normal renal size with asymmetrical margination was present in the right kidney. Caudal right kidney infarct was present. The renal cortex presented uniformly increased in echogenicity with uniform echotexture. The renal cortex appeared to be hypertrophied resulting in an altered cortex: medulla ratio. Moderate loss of corticomedullary distinction was also present. Mild increased right retroperitoneal tissue echogenicity, no obvious right retroperitoneal effusion. Mild medullary mineral was present. The renal medullary volume was subjectively reduced.

The left kidney measured 4.0 cm in length. The right kidney measured 4.0 cm in length.

The area of the aortic trifurcation was free of pathology.

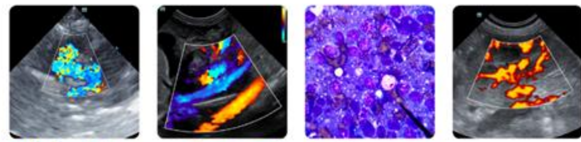
Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.46 cm width. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.38 cm width

Spleen

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. Intermittent small non-capsule deforming well-demarcated hyperechoic nodules were present; an example measured 0.44 cm in diameter. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. The spleen measured 0.95 cm in width at the level of the mid spleen.

Liver/Gallbladder



PATIENT
Milo Bruno

SPECIES
Feline

BREED
DSH

SEX
MN

AGE
14yr

WEIGHT
11.6

INTERPRETED BY
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

IMAGING PERFORMED BY
Quinn Robinson, RVT

HOSPITAL NAME
Hess Ridge Animal Hospital

REFERRING VET
Michael Skarie, DVM

INVOICE
24663

DATE
04/28/2026

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. Normal vascular volume. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with thin walls and mild non-organized debris. The common bile duct was not visualized without overt evidence of dilation or post hepatic obstructive criteria.

Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction or foreign material.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of mechanical/metabolic ileus, obstruction or foreign material. The ileocolic junction wall measured 0.38 cm in width. Small intestinal wall measured 0.21 cm in width.

Normal visible colon wall layers were present with apparent formed feces in lumen.

Pancreas

The parenchyma of the left limb, body and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.

Free Abdomen

No evidence of peritoneal effusion was present.

Intermittent mildly prominent to enlarged mesenteric lymph nodes were present. The lymph nodes were essentially isoechoic to adjacent omentum without evidence of peripheral inflammation and maintaining a normal width: length ratio (<0.5). An example measured 1.1 cm x 0.37 cm.

ULTRASONOGRAPHIC FINDINGS

Primary

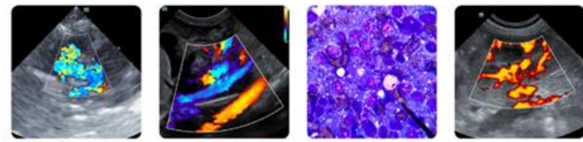
- Non-specific chronic renal changes exhibiting mild right kidney medullary mineral and mild left retroperitoneal effusion
- Discrete hyperechoic splenic nodules
- Gallbladder debris
- Sonographically unremarkable gastrointestinal tract
- Intermittent mild mesenteric lymphadenopathy

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

A full urinary workup including UA C/S and if clinically indicated UPC for renal staging despite no reported azotemia is recommended.

The discrete splenic nodules, although non-specific, suggest probable benign criteria, i.e. myelolipomas, potential for emerging splenic nodular or generalized neoplasia thought less likely. Given hypercalcemia and assuming normal clotting status, screening splenic FNA cytology using 25-gauge needle could be considered for further assessment.

The mild gallbladder debris may be associated with mild non-obstructive cholestasis or low-grade



PATIENT

Milo Bruno

SPECIES

Feline

BREED

DSH

SEX

MN

AGE

14yr

WEIGHT

11.6

INTERPRETED BY

R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

IMAGING PERFORMED BY

Quinn Robinson, RVT

HOSPITAL NAME

Hess Ridge Animal Hospital

REFERRING VET

Michael Skarie, DVM

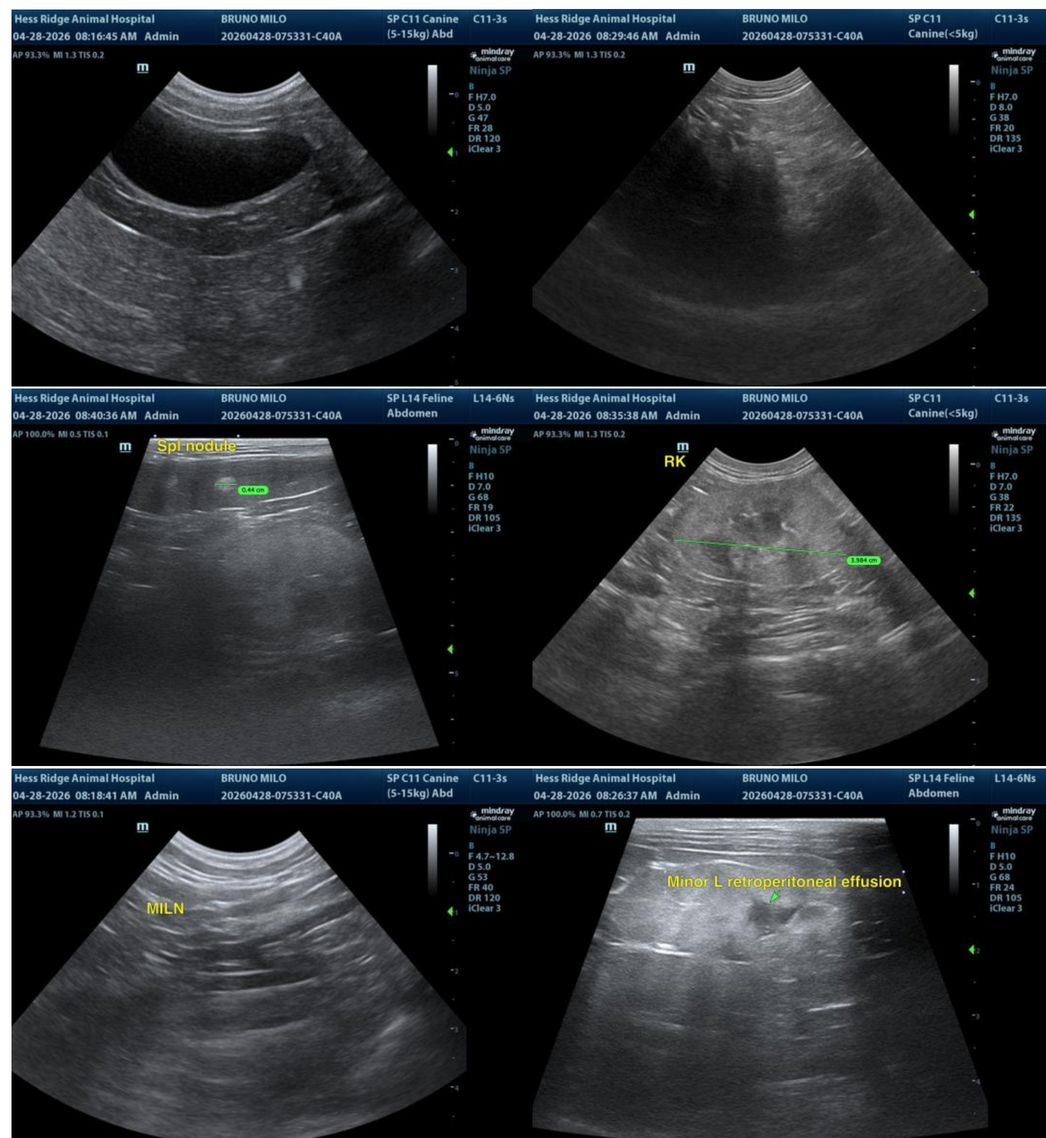
INVOICE
24663

DATE
04/28/2026

hepatobiliary inflammation given short half-life of hepatic enzymes in cats. Monitoring of hepatic enzymes is recommended.

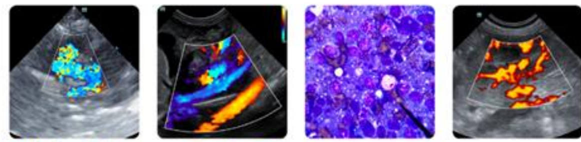
The mild mesenteric lymphadenopathy did not meet neoplastic or metastatic criteria with mild reactive hyperplasia or possible lymphadenitis probable. Sonographic monitoring of the lymph nodes for evidence of progression is recommended.

Hypercalcemia panel including ionized calcium suggested if not done.



SonoPath
FOSTERING THE ART OF VETERINARY MEDICINE™

SonoPath.com info@sonopath.com 1.800.838.4268



Clinical Sonography & Telecytology
Educational Teleconsultation Services™

PATIENT

Milo Bruno

SPECIES

Feline

BREED

DSH

SEX

MN

AGE

14yr

WEIGHT

11.6

INTERPRETED BY

R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

IMAGING PERFORMED BY

Quinn Robinson, RVT

HOSPITAL NAME

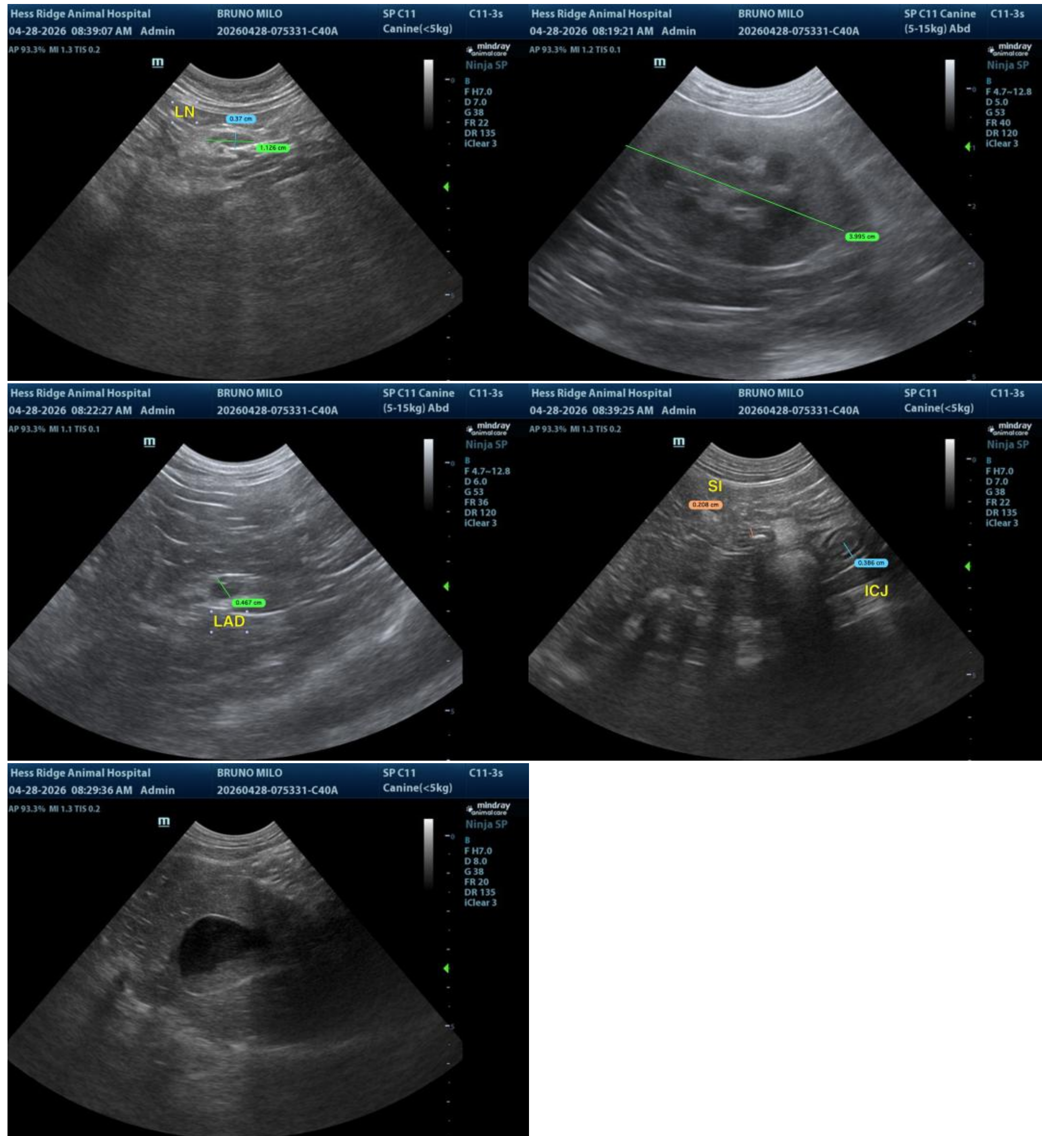
Hess Ridge Animal Hospital

REFERRING VET

Michael Skarie, DVM

INVOICE
24663

DATE
04/28/2026



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.

R. McKenzie Daniel, DVM, DABVP (Canine/Feline Practice)
info@sonopath.com