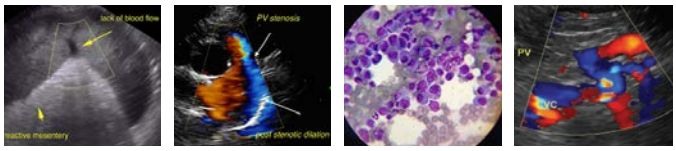
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Viktor Flageol

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

10 Years

WEIGHT

5.5 kg

INTERPRETED BY

Beth Johnson, DVM DACVIM

HOSPITAL NAME

Lomsnes Vet Hospital

REFERRING VET

Dr. Hayley Biederbeck

INVOICE NUMBER

34388

DATE

1/19/22

PRESENTING CLINICAL SIGNS

Workup due to hypercalcemia. Has lost 0.5kg in 1 year. New grade 2 murmur. Recent diarrhea, has resolved on metro.
Abnormal PE/Chem/CBC/UA Results: iCa mildly elevated (1.5 mmol/L N1.1 - 1.38), phos low- 2.4 (3.1-7.5) normal renal values - Creat 1.7, BUN 24, SDMA 8. USG 1.050. Remainder of CBC/Chem/TT4/ua normal

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The right kidney is small in size, measuring 2.9 cm. It has a smooth peripheral margination. It is diffusely hyperechoic with decreased corticomedullary distinction and poor visualization of internal architecture. A medullary rim sign is present, as is mild pyelectasia measuring 0.27 cm in the transverse view. There is no evidence of mineral or infarcts observed.

The left kidney is large in size, measuring 4.5 cm with increased cortical echogenicity. Normal smooth peripheral margination and shape are maintained. There is a slightly increased cortex/medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

Adrenal Glands

Right adrenal gland is normal in size (0.60 cm long x 0.18 cm thick), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Left adrenal gland is normal in size (0.64 cm long x 0.37 cm thick), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

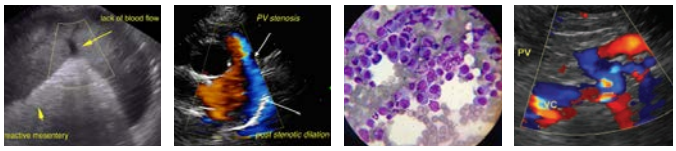
Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver

Liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. The caudal left liver is round in appearance, forming an emerging discreet mass that is heterogeneous in echotexture and measures 3.3 cm in diameter. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Viktor Flageol

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

10 Years

WEIGHT

5.5 kg

INTERPRETED BY

Beth Johnson, DVM DACVIM

HOSPITAL NAME

Lomsnes Vet Hospital

REFERRING VET

Dr. Hayley Biederbeck

INVOICE NUMBER

34388

DATE

1/19/22

Gastrointestinal

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

Pancreas

Pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

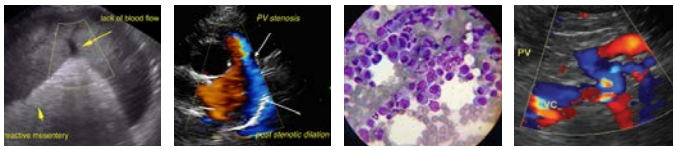
There is no evidence of peritoneal effusion. There is no apparent lymphadenopathy.

ULTRASONOGRAPHIC FINDINGS

- Left hyperechoic renomegaly – most consistent with compensatory hypertrophy. Infiltrative disease such as lymphoma, FIP, amyloidosis, etc. are considered possible, but less likely given the unilateral changes.
- Small right kidney – most consistent with chronic kidney disease such as chronic glomerulonephritis or chronic interstitial nephritis, or chronic pyelonephritis, etc.
- Medullary rim sign right kidney - of unknown clinical significance and can be a normal variant. Medullary rim sign(s) should be interpreted in combination with other more specific indications of kidney disease such as isosthenuria, proteinuria, azotemia, etc.
- Pyelectasia right kidney - Differentials for pyelectasia include pyelonephritis, diuresis, congenital malformation or ureteral or lower urinary tract obstruction.
- Emerging caudal left heterogeneous liver mass – Differentials include infiltrative neoplasia such as round cell neoplasia, metastatic neoplasia, or less likely nodular hyperplasia.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given this patient's low Phosphorus and increased ionized calcium, primary differentials for the hypercalcemia include hyperparathyroidism or hypercalcemia of malignancy versus hypercalcemia secondary to chronic kidneys disease. Having said that, the small right kidney is suggestive of chronic kidney disease. Therefore, if not already performed. a urine culture is recommended to rule out occult urinary tract infection/pyelonephritis. However, in this patient, the chronic kidney disease is more



SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Viktor Flageol

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

10 Years

WEIGHT

5.5 kg

INTERPRETED BY

Beth Johnson, DVM
DACVIM

HOSPITAL NAME

Lomsnes Vet Hospital

REFERRING VET

Dr. Hayley
Biederbeck

INVOICE NUMBER

34388

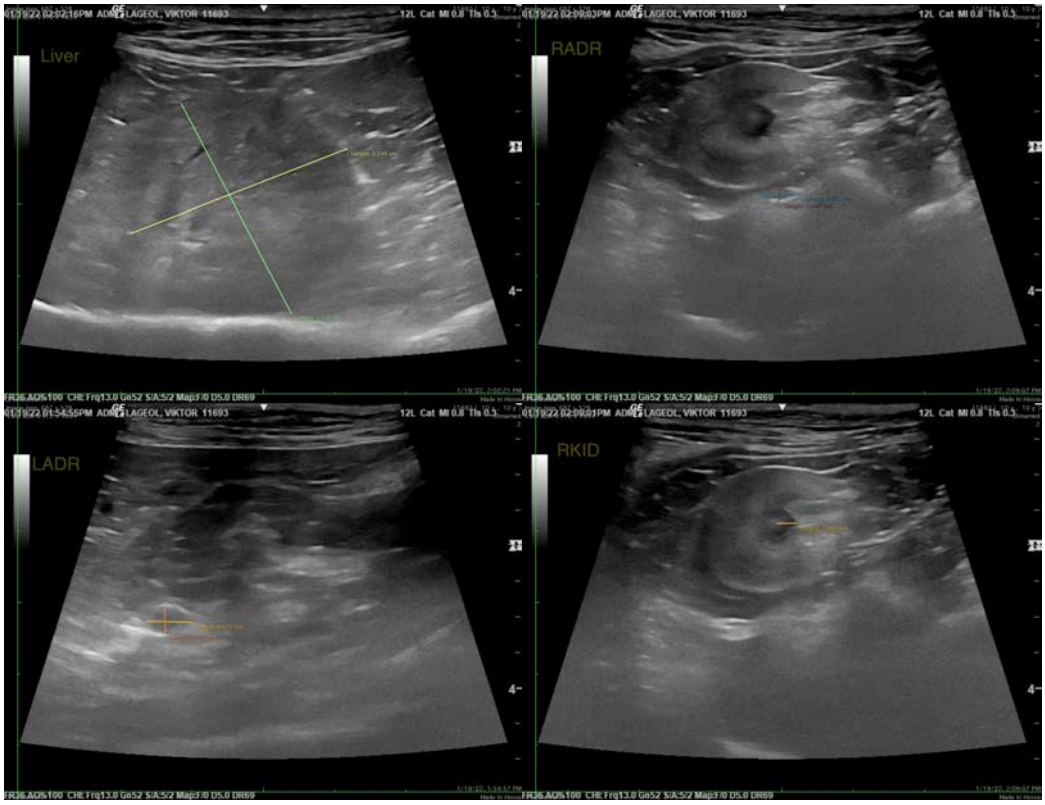
DATE

1/19/22

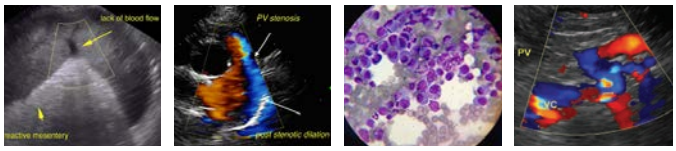
likely to be secondary to the hypercalcemia rather than the hypercalcemia being secondary to the chronic kidney disease.

Given the changes in the liver, hypercalcemia of malignancy (i.e., lymphoma) may be possible. Recommendations include a fine needle aspirate of the liver if patient's coagulation status is appropriate. Other recommendations include a PTH and PTHrP/malignancy profile.
A fine needle aspirate of the enlarged left kidney could be considered. However, infiltrative disease is less likely given the unilateral renomegaly.

Other diagnostic recommendations given the weight loss and diarrhea include a gastrointestinal malabsorption panel include TLI, PLI, folate and cobalamin to Texas A&M GI laboratory to further assess gastrointestinal function.



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Viktor Flageol

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

10 Years

WEIGHT

5.5 kg

INTERPRETED BY

Beth Johnson, DVM
DACVIM

HOSPITAL NAME

Lomsnes Vet Hospital

REFERRING VET

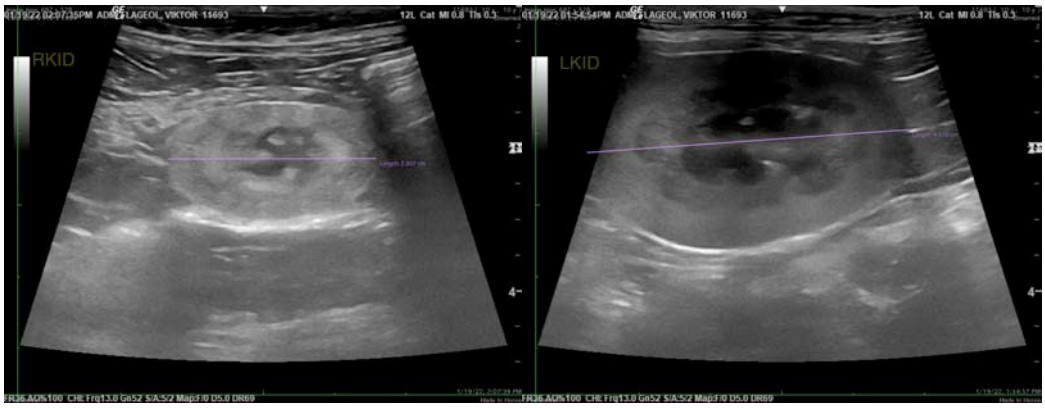
Dr. Hayley
Biederbeck

INVOICE NUMBER

34388

DATE

1/19/22



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.

Beth Johnson, DVM, DACVIM
Beth.Johnson@sonopath.com