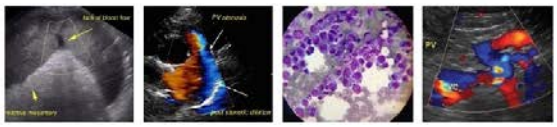
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com



THE FOCAL ZONE
IMAGING PERFORMED BY
289-808-2608 info@thefocalzone.com

PATIENT

Carrie Schaub

SPECIES

Feline

BREED

Munchkin

SEX

Spayed Female

AGE

13 Years

WEIGHT

2.6 kg

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

New Hamburg VC

REFERRING VET

Dr. Schroeder

INVOICE

42445

DATE

10/27/22

PRESENTING CLINICAL SIGNS

Acute onset of hyporexia and vomiting. History of megacolon and constipation. Takes Cisapride 2.5mg every 8 hours and GI diet. Has been on Clavaseptin(just finished) and Mirtazipine.

Abnormal PE/Chem/CBC/UA Results: CBC WNL. Urine sp grav - 1.021, blood 4+, RBCs TNTC, Bacteria 1+cocci Ionized calcium 1.74(1.13-1.38) Chem - Calcium 3.60(1.95-2.83) Previous blood 1 week prior showed ALT 303(elevated) but this returned to within normal limits week later.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is only mildly distended (empty). Visible contents are anechoic. Urinary bladder wall is unable to be fully assessed for pathology without further distension. No visible masses or cystoliths are observed. The trigone and visible pelvic urethra are normal thickness with a smooth mucosal surface. If there are urinary signs and/or concern for urinary bladder pathology, reassessment after complete filling is recommended.

Kidneys are bilaterally small, irregular and diffusely echogenic with decreased corticomedullary distinction and poor visualization of internal architecture. There is no pyelectasia noted. Non-obstructive areas of mineralization/nephroliths are noted in the left kidney. The left kidney measures 3.16 cm. The right kidney measures 2.84 cm.

Adrenal Glands

The right adrenal gland is normal in size (0.37 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.29 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

The 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

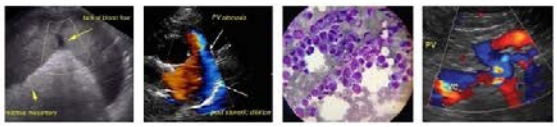
The liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

The 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.

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 empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestine demonstrates areas of mildly thick muscularis layer relative to mucosa (disruption of the normal 1:3 muscularis:mucosa ratio). Small intestinal submucosa is slightly irregular, thick and hyperechoic, without evident loss of layering appreciated.



PATIENT

Carrie Schaub

SPECIES

Feline

BREED

Munchkin

SEX

Spayed Female

AGE

13 Years

WEIGHT

2.6 kg

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

New Hamburg VC

REFERRING VET

Dr. Schroeder

INVOICE

42445

DATE

10/27/22

The visible colon is normal in wall thickness (< 0.2 cm) and layering. It is subjectively overdistended with formed feces, consistent with this patient history of constipation/megacolon.

Pancreas

The 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 free peritoneal effusion noted in these images.

The lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

ULTRASONOGRAPHIC FINDINGS

- **Inflammatory bowel disease (IBD) pattern –** Thick muscularis has been reported with infiltrative bowel disease including both benign inflammatory disease as well as infiltrative neoplasia such as lymphoma. No aggressive lymphadenopathy, loss of layering, etc. is noted to make lymphoma more probable, but lymphoma cannot be definitively ruled out without tissue sampling.
- **Reactive mesenteric lymph nodes –** infiltrative neoplastic disease cannot be ruled out but is considered less likely.
- **Chronic Kidney Disease –** This appearance of the kidneys is consistent with chronic kidney disease such as chronic glomerular or interstitial nephritis, chronic pyelonephritis, etc.
- Non-obstructive nephroliths in the left kidney
- **Subjectively overdistended colon** – Consistent with this patient's history of obstipations.

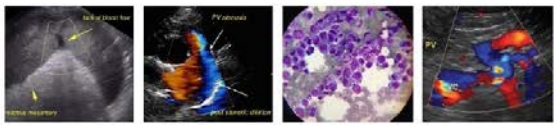
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

This patient's reportedly acute vomiting and decreased appetite could be secondary to infiltrative small bowel disease, given the pathology noted here, or could be an acute exacerbation of constipation. Recommendations include addressing constipation if clinically and/or radigraphically significant, with management already currently in place +/- additionally fluid therapy and/or a stool softener, Metamucil, etc.

Given the hypercalcemia, which is likely contributing to the constipation, recommendations include further evaluation of hypercalcemia to help determine underlying cause and therefore guide treatment, beginning with a malignancy panel to include PTH, PTHrP, and ionized calcium to Michigan State University.

Finally, given the small bowel changes, a gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

Ideally, biopsies of the GI tract, being sure to include ileum if possible, are recommended to definitively diagnose and therefore manage the infiltrative bowel disease.



PATIENT

Carrie Schaub

SPECIES

Feline

BREED

Munchkin

SEX

Spayed Female

AGE

13 Years

WEIGHT

2.6 kg

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

New Hamburg VC

REFERRING VET

Dr. Schroeder

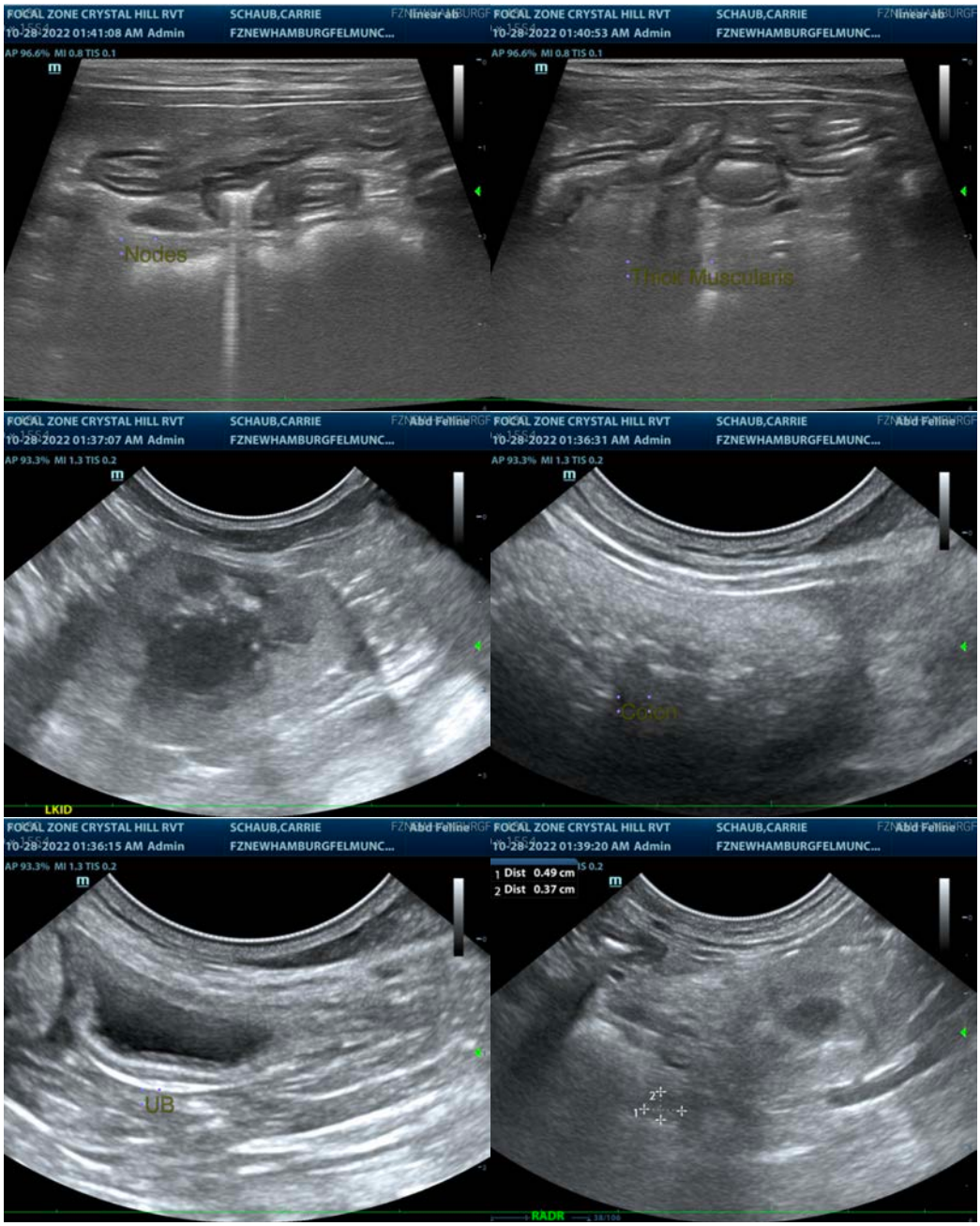
INVOICE

42445

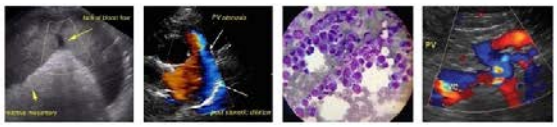
DATE

10/27/22

If biopsies cannot be obtained, empirical therapies could include diet change, empirical deworming with a 5 day course of Panacur, cobalamin supplementation (unless cobalamin level is evaluated and supplementation is not warranted) and prednisolone (if not contraindicated based on patient contraindications, co-morbidities, etc.). Other supportive therapeutic considerations could include fiber supplementation, especially with large bowel diarrhea and/or a probiotic.



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com



THE FOCAL ZONE
IMAGING PERFORMED BY
289-808-2608 info@thefocalzone.com

PATIENT

Carrie Schaub

SPECIES

Feline

BREED

Munchkin

SEX

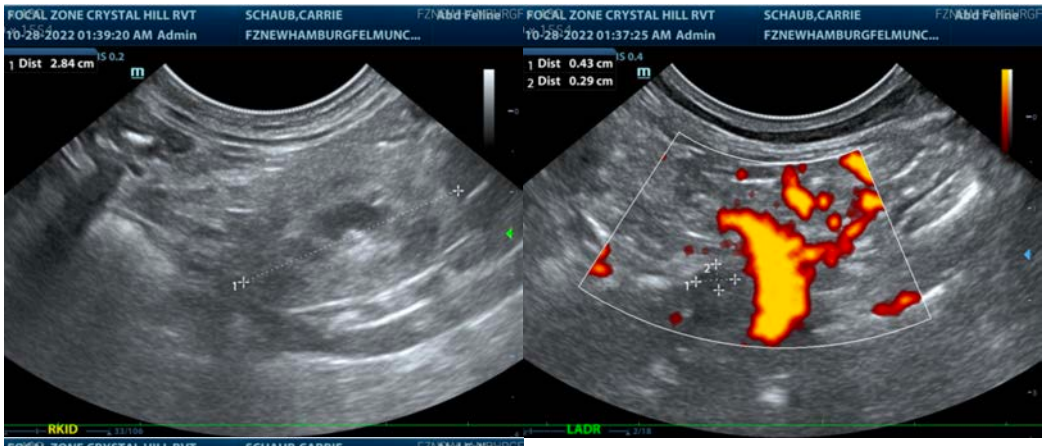
Spayed Female

AGE

13 Years

WEIGHT

2.6 kg



INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

New Hamburg VC

REFERRING VET

Dr. Schroeder

INVOICE

42445

DATE

10/27/22

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.

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