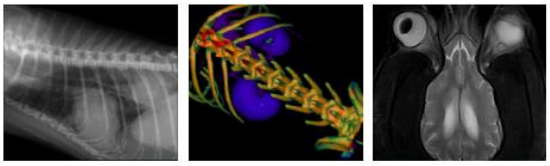
SonoPath Teleradiology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Jesse Cullen

SPECIES

Feline

BREED

Domestic Shorthair

SEX

Neutered Male

AGE

12 Years

INTERPRETED BY

Nele Eley, DVM
Dr. med. Vet. DipECVDI

HOSPITAL NAME

Neel Veterinary Hospital

REFERRING VET

Tina Neel DVM

INVOICE

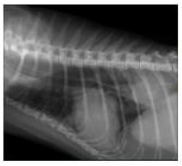
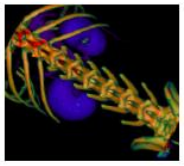
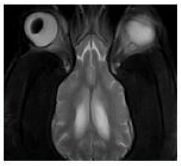
54068

DATE

9-13-22

PRESENTING CLINICAL SIGNS

Patient referred for further diagnostic work up. Jesse presented at RDVM on 8/26/22 for vomiting intermittently for 7 days . Owner reported that Jesse was vomiting 2-3 times per day. No diarrhea noted. RDVM ran blood work on 8/26/22 all normal except LIPA. X-rays on 8/26 showed lots of feces in the colon. Sent Owner home with special diet and instructed owner to give lactulose. Presented back at RDVM on 9/6/22 for no improvement RDVM repeated blood work. Sent to NVH for further work up . Abdominal u/s 9/7/22 FINDINGS: The urinary bladder is markedly filled. There is echogenic content within the lumen. Echogenic free fluid is present throughout the abdomen. The hepatic parenchyma is diffusely mildly hyperechoic. The splenic parenchyma appears normal and uniform. The right kidney is sonographically normal and measures 4.4 cm. The left kidney has several foci of mineralization and measures 3.3 cm. The left adrenal is normal in appearance and measures up to 3 millimeters. The right adrenal measures up to 4.5 mm. The stomach is almost empty and the visible gastric wall appears normal. Included images of the intestines have intact layering. The visible tip of the left pancreas is mildly hypoechoic. The descending duodenum appears mildly corrugated. CONCLUSIONS: The echogenic free peritoneal fluid is of uncertain definitive origin. No source of bleeding is specifically identified. Coagulopathic hemorrhage is a differential, but underlying malignant neoplasia is possible. Severe peritonitis or steatitis are not excluded. The hyperechoic liver could be chronic inflammation or hepatopathy. The appearance of the uine is consistent with increased cellularity and this may also be hemorrhage. Lipiduria is possible. Mild pancreatitis is possible sonographically. Fluid collected and sent out for path review: The lack of erythrophagia or hemosiderin formation suggests peripheral blood contamination at the time of sampling rather than from chronic hemorrhage occurring prior to sampling, however, correlation with clinical impressions is recommended. The presence of peripheral blood makes interpretation of the sample difficult, however. Subjectively, the numbers of leukocytes appear increased relative the amount of blood present, hence, there is suspicion for a modified transudate or potentially an exudate. The primary mechanism for development of a modified transudative effusion is increased venous or lymphatic hydrostatic pressure; however, the underlying cause is not usually evident with cytologic evaluation. Causes of a modified transudate include cardiac insufficiency, cardiomyopathy, obstruction of caudal vena cava or hepatic vein, compression of vessels from neoplasia, vascular insult (thrombosis), and inflammation or torsion of an organ. In contrast, exudates form as the result of increased capillary permeability associated with inflammation or other chemotactic stimuli. Infectious causes include bacteria, fungi, virus or protozoa. Noninfectious causes include organ inflammation such as pancreatitis, steatitis, neoplasia, bowel perforation or vasculitis. The absence of neoplastic cells in this fluid does not exclude a poorly exfoliating tumor. Ultrasound examination or drainage of the fluid followed by radiography may help to determine the etiology. Direct FNA of any discrete masses identified may provide diagnostic material. CYTOPATHOLOGIC DESCRIPTION: Abdominal fluid: 1 direct smears and 2 concentrated cytospin preparations are examined which are cellular and of good cytomorphological detail. The hematocrit of the fluid is approximately 5% and no erythrophagia or hemosiderin formation is seen. A 100-cell differential reveals 69% nondegenerate neutrophils, 11% macrophages and 20% small, mature lymphocytes. Within the background are many erythrocytes and basophilic proteinaceous tissue fluid. No etiologic agents are identified and no evidence of neoplasia is seen. Patient has also had a fever. Sending out fever of unknown origin panel still pending. Echo performed 9/12/22 report still pending. Abnormal PE/Chem/CBC/UA Results: 8/26/22 - LIPA 2805 U/L 9/6/22 Neu 12.37 K/uL Mono0.86K/uL EOS 0.14K/uL PLT 26 K/uL PCT 0.04% 9/7/22 UA Ketones 15mg/dL blood/hemoglobin 250Ery/uL WBC 3 /HPF RBC >50/HPF 9/8/22 Neutrophils 12.77K/uL Monocytes 0.79K/uL Plateletcrit 0.97% 9/9/22 Citrated PT 14.0 seconds Citrated PTT 192.0 seconds CBC RBC 6.04 M/uL Hematocrit 27.8 % Hemoglobin 8.8 g/dL WBC 10.31K/uL

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Neutrophils 17.59K/uL Monocytes1.11K/uL Eosinophils 0.11K/uL Chem normal 9/10/22 RBC 5.76 M/uL Hematocrit 26.8% Hemoglobin 8.4g/dL WBC 19.69 Neutrophil 17.35 K/uL Monocytes 0.73K/uL Eosinophils 0.14K/uL BUN 14mg/dL 9/12/22 RBC 4.9M/uL Hematocrit 22.3% Hemoglobin 7.2g/dL Reticulocytes 54.9 K/uL WBC 19.69 K/uL Neutrophils 16.43K/uL Monocytes 1.2K/uL Citrated PT 12.0 seconds Citrated PTT 153 seconds 9/12/22 RBC 4.9M/uL Hematocrit 21.7 % Hemoglobin 7.0g/dL Reticulocytes 87.2 K/uL WBC 23.29K/uL Neutrophils 20.38 K/uL Monocytes 1.28 K/uL Platelets 795 K/uL Plateletcrit 1.35%

COMPUTED TOMOGRAPHIC STUDY OF THE HEAD, NECK, THORAX, & ABDOMEN

Plain and post contrast studies of the head, neck, thorax, and abdomen available for review.

COMPUTED TOMOGRAPHIC FINDINGS

Abdomen

A moderate amount of free peritoneal fluid is seen.

The liver is of normal size. Multiple cystic lesions are scattered throughout the hepatic parenchyma. The gallbladder is moderate distended. No evidence of cystic duct dilation is seen. There is mild extrahepatic biliary duct dilation noted. The common bile duct is mildly dilated. Mild enlargement of the duodenal papilla is noted.

The portal and jejunal lymph nodes are moderately enlarged, rounded, and measure up to 10mm in diameter. The contrast enhancement is uniform but decreased.

The spleen and gastrointestinal tract present within the expected limits.

A 7mm sized thick walled cyst is seen in the base of the pancreas. The pancreas is moderately enlarged, and pancreatic duct dilation is noted. The organ contours are irregular.

Bilateral renal pelvis dilation is seen with weak nephrogram and lacking pyelogram in the left kidney. Two mineral attenuating foci are seen within the renal pelvis and renal diverticuli. The renal pelvis measures approximately 8mm in diameter. Mild proximal ureteral dilation is seen. There is no contrast media seen within the left ureter while the right ureter is filled with contrast media already.

The adrenal glands present within normal limits.

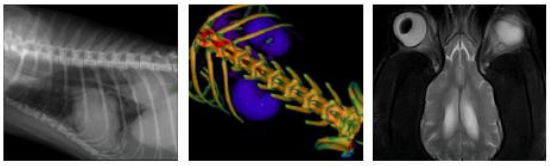
Thorax

The bony and surrounding soft tissue structures are within normal limits.

Mild sternal lymphadenomegaly is noted.

The cardiovascular structures including the pulmonary vasculature are within normal limits.

The bronchial tree presents with regular branching and tapers uniformly towards the periphery as expected, the bronchial walls are thin and smooth. The bronchus-to-artery ratio is within normal limits.



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The lung parenchyma presents the expected architecture and attenuation behavior.

Small incidental gas pockets are seen within the esophageal lumen, there is no evidence of abnormal dilation.

Head

The brain presents no deviation from normal anatomy and symmetry. The grey and white matter distinction and the neuroparenchymal attenuation are as expected. The distribution of contrast enhancement is within normal limits throughout the parenchyma and meninges. The ventricular system is non-dilated and within the limits of the expected volume and symmetry.

Thin and smoothly folded conchae and turbinates with even smooth mucosal lining. The osseous lining of the nasal cavities is intact.

Both temporomandibular joints present congruent joint spaces with even subchondral bone surfaces and are considered within normal limits.

Both tympanic bullae are aerated, the mucosal lining is not seen, the bony wall is smooth and thin. The external auditory meatuses present within normal limits.

The submandibular and medial retropharyngeal lymph nodes are small and elongated with a normal short-to-long-axis-ratio is < 0.5, the attenuation and contrast enhancement pattern is uniform.

The salivary glands present within normal limits.

Neck

Both lobes of the thyroid gland present within normal limits.

COMPUTED TOMOGRAPHIC DIAGNOSIS

- Moderate peritoneal effusion.
- Multifocal mesenteric lymphadenomegaly.
- Thick walled pancreatic cyst and pancreatitis presentation.
- Multiple cystic liver nodules.
- Bilateral pyelectasia with reduced renal excretion and potential for non-attenuating obstruction of the left renal pelvis.
- Sternal lymphadenomegaly.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The multiple cystic nodules of the liver are likely to represent biliary cyst adenoma. Cyst adenocarcinoma and other cystic neoplasia are thought unlikely but cannot be ruled out entirely.

The cystic lesion within the pancreas may represent a pancreatic pseudocyst or abscess. Concurrent pancreatic enlargement and heterogeneity indicate potential for pancreatitis to correlate with the laboratory values.

The mesenteric lymphadenomegaly is equivocal for reactive lymphadenitis versus a

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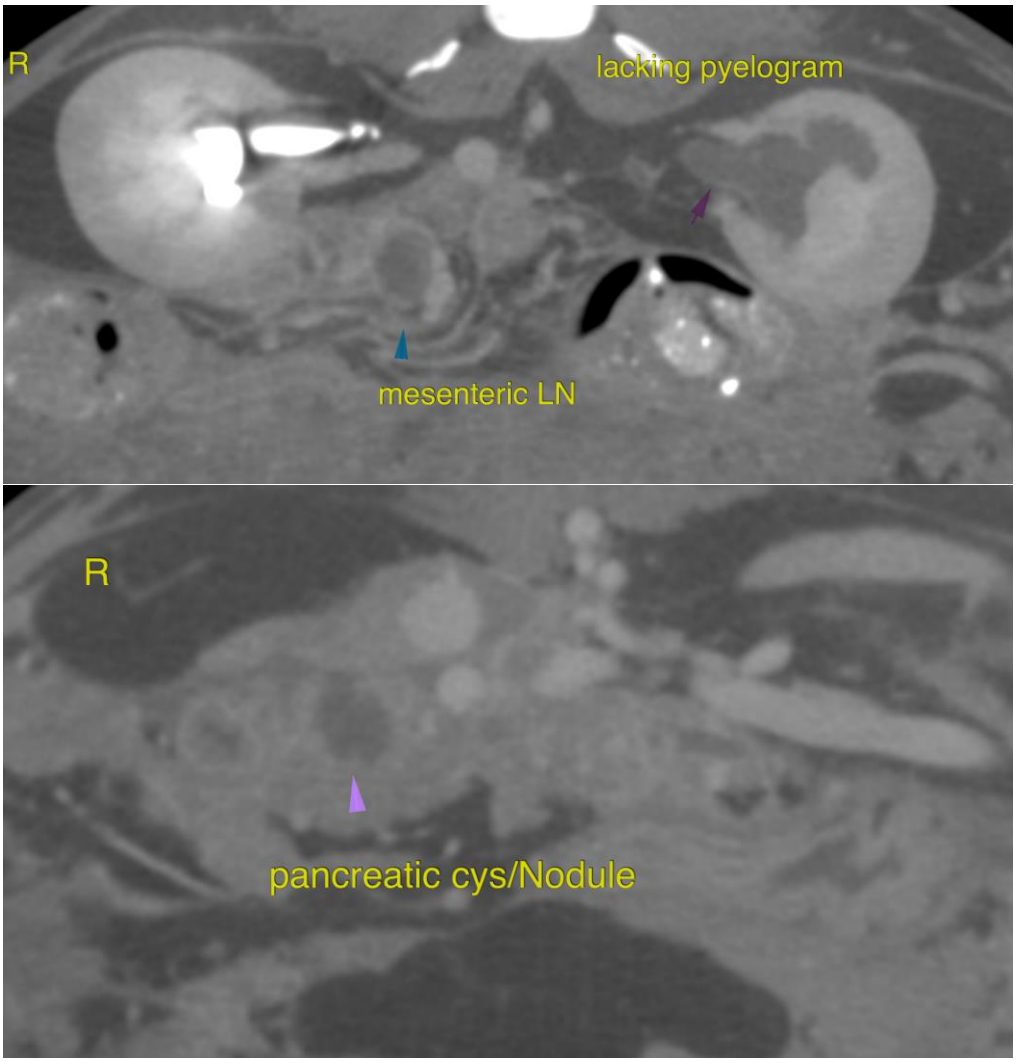
lymphomatous infiltrate. Fine needle aspiration or excisional biopsy are recommended for further definition.

The lacking pyelogram of the left kidney may be due to reduced renal function. However, non-attenuating obstruction of the renal pelvis such as with mucus, hematoma/hemo plug, or pus are potential differential diagnoses

The sternal lymphadenomegaly is likely to represent reactive hyperplasia. However, lymphomatous or other neoplastic infiltrate cannot be ruled out entirely.



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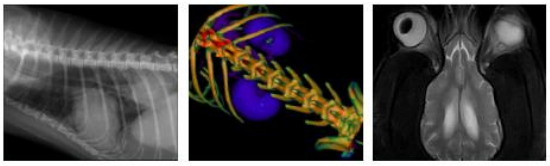

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Nele Eley, DVM, Dr. med. vet., DipECVDI
European Specialist in Veterinary Diagnostic Imaging, Cert. Radiology,
Senior lecturer University of Giessen, Germany, Veterinary Faculty, Department of Radiology
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