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Clinical Sonography & Telecytology
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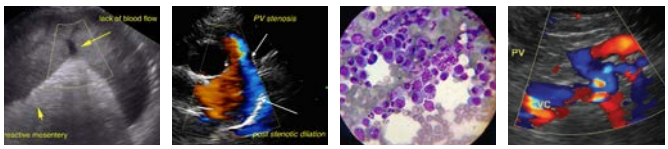

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1-800-838-4268 info@sonopath.com

PATIENT
Max Hollis

SPECIES
Canine

BREED
Mini Schnauzer

SEX
Neutered Male

AGE
14 Years

WEIGHT
17

INTERPRETED BY
Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY
Dr. Kuzimski

HOSPITAL NAME
Animal Emergency Hospital Deland

REFERRING VET
Dr. Kuzimski

INVOICE
46740

DATE
4/19/23

PRESENTING CLINICAL SIGNS

Presents for not eating or drinking the last 24 hours. No v/d/c/s. Per O he has been declining over the past 2 weeks. Radiographs Findings Thorax/abdomen (three images dated April 13, 2023): The cardiovascular structures are within normal limits. The pulmonary parenchyma is unremarkable. There is no evidence of pleural disease or lymph node enlargement. The trachea is normal in size. A small amount of fluid is present in the caudal thoracic esophagus. There is good serosal demarcation of the abdominal viscera. The liver is small with cranial angulation of the gastric axis. The spleen is normal in size and margination. The stomach contains a small amount of gas. The small intestine and colon are normal in size and contents. The kidneys and urinary bladder are within normal limits. The prostate gland is not identified. The osseous structures are unremarkable. Conclusion 1. Unremarkable thorax 2. Microhepatia – Differentials include a normal patient variant, chronic hepatitis, portosystemic shunt and less likely cirrhosis. – Other differentials to consider for the patient's clinical signs include infectious or inflammatory gastroenteritis, pancreatitis and metabolic disease. Recommendations An abdominal ultrasound could be considered to further assess the liver, pancreas and gastrointestinal tract. Other Patient has a heart murmur.

Abnormal PE/Chem/CBC/UA Results: CpLi. abnormal CBC: NSF COMP: BUN 34.4, lipase 488 EPOC: BUN 33 PCV/TS: 46%/7.2g/dL then EPOC results: pO2 59 cSO2 92.7 pH 7.497

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The 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.

Prostate is normal in size, echotexture and echogenicity for a neutered male.

The right kidney is normal in size (4.43 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

The left kidney is normal in size (4.68 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

Adrenal Glands

The right adrenal gland is unable to be well visualized in these images.

The left adrenal gland is normal in size (0.43 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal. The cranial pole is unable to be well visualized in these images.

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). Multifocal well-demarcated hyperechoic homogenous nodules are noted. Splenic vasculature appears normal.

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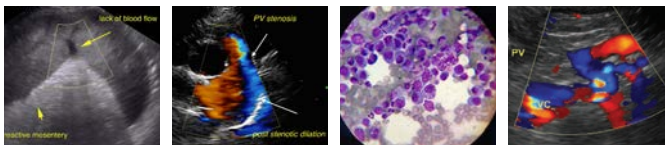

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Liver

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.

Gallbladder is mildly overdistended with a moderate amount of non-dependent, mildly aggregated/inspissated sludge. Hypo to anechoic cystic areas are noted between the gallbladder sludge and luminal wall. The wall is otherwise smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion.

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 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

Pancreas is prominent (enlarged) in size and mildly irregular in shape with a slightly undulating contour. Parenchyma is coarse in echotexture and heterogenous to hypoechoic in echogenicity.

Free Abdomen

There is no evidence of free peritoneal effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

PRIMARY FINDINGS

- **Emerging mucocele –** Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. The non-dependent nature of this sludge combined with the cystic areas are suggestive, however, of possible emerging cystic mucosal hyperplasia or early gallbladder mucocele.

- Chronic active pancreatitis

SECONDARY FINDINGS

- **Hyperechoic splenic nodules –** most consistent with benign myelolipomas. Other differentials such as fibrosis or calcification caused by old hematomas or infarcts, chronic inflammation, granulomatous disease or metastatic disease cannot be ruled out, but are considered less likely.

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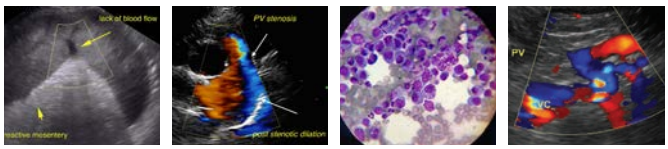

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

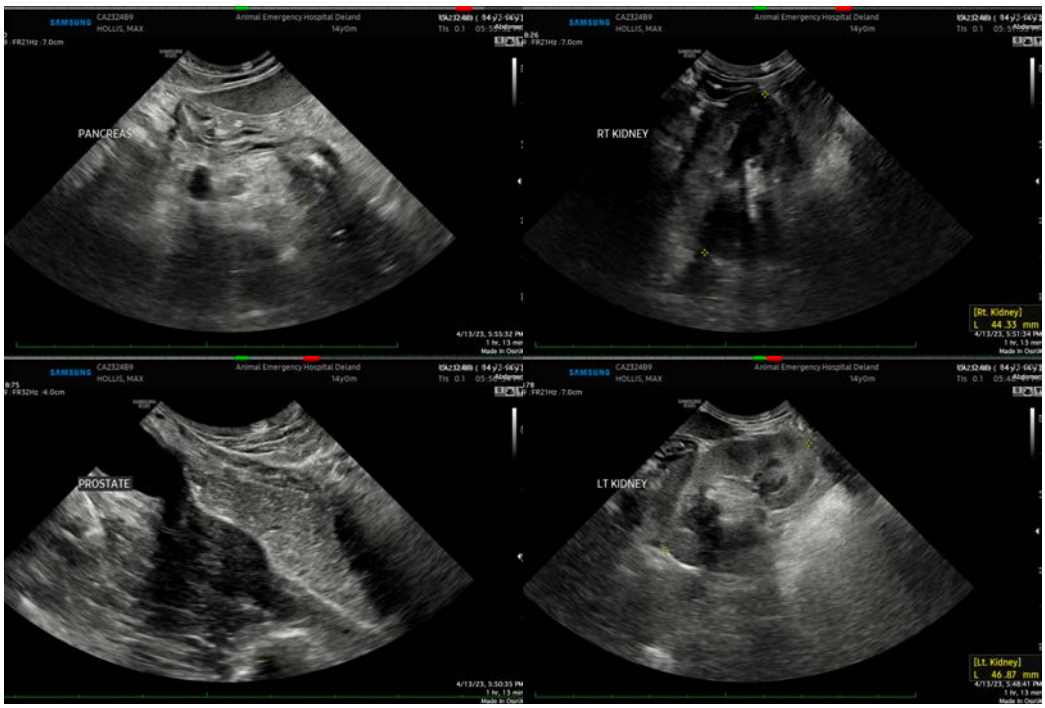
This interpretation is based primarily on still images. Subtle pathology or pathology not included in still images could potentially be missed.

Based on these ultrasound images, possible differentials for this patient's decreased appetite include chronic smoldering pancreatitis or potentially the emerging gallbladder mucocele.

Cranial abdominal pain and/or subclinical nausea would support either differential. Recommendations include supportive/symptomatic medical management of possible subclinical nausea with antiemetics, as well as potentially a gastroprotectants and appetite stimulant. Additionally, if tolerated once appetite returns, an easy to digest low-fat diet could be considered. Ultimately, pending patient progression, a cholecystectomy may need to be pursued. Other considerations for decreased appetite include dental pain, other generalized pain, behavioral concerns, neurologic disease, etc., and further diagnostics beyond investigating those things could include bile acids (given this patients reported radiographic microhepatica, which is a more sensitive indicator of size than ultrasound).

A baseline cortisol is recommended. If baseline cortisol is less than 2, a full ACTH stimulation test is recommended to rule out hypoadrenocorticism.

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.



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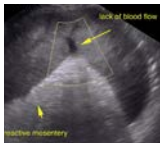
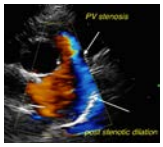
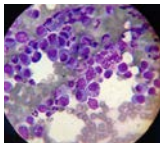
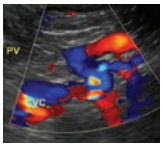

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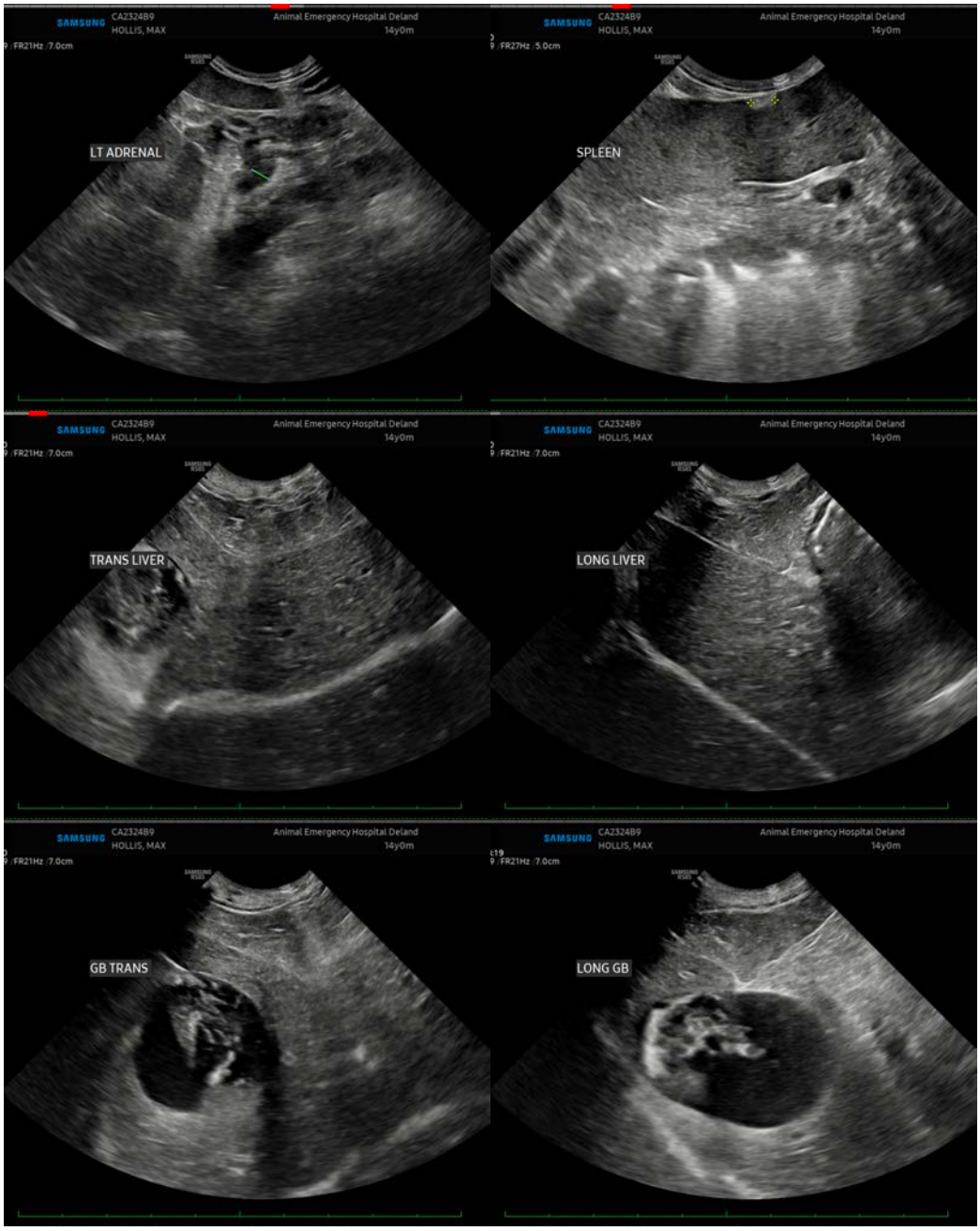

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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