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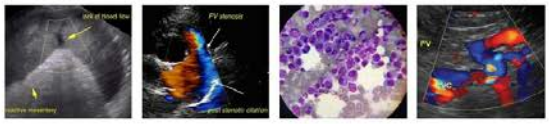


IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

PATIENT

Tahoe Wanco

SPECIES

Canine

BREED

Coton de Tulear

SEX

Neutered Male

AGE

14 Years

WEIGHT

3.9 kg

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Loetitia Saint-Jacques, LVT

HOSPITAL NAME

LuxPetVet

REFERRING VET

Dr. Kristin Lee

INVOICE

44616

DATE

8/2/23

PRESENTING CLINICAL SIGNS

Progressive weight loss and picky eating from June 2023. Patient has lost almost half of his weight despite appetite support and dietary changes to higher caloric content foods. Patient has a history of renal insufficiency (at least IRIS Stage 2, however, suspect higher grade based upon level of cachexia), elevated ALP, and a large (5cm x 4cm) benign cyst in the left submandibular region. Upon exam, patient is QAR with moderate dehydration, a newly diagnosed grade 2 right-sided heart murmur, moderate periodontal disease, and severe diffuse muscle atrophy. BCS 1.5/9. See attached CBC, chem, and rads. BP 146 mmHg- MEDS: 0.45mL Entyce PO SID; 8mg Cerenia PO SID

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.

The prostate is unable to be well visualized in these images.

Kidneys are bilaterally small, irregular and diffusely echogenic with decreased corticomedullary distinction and poor visualization of internal architecture. No mineral is observed. Pyelectasia is noted bilaterally, measuring 0.31 cm in the transverse view in the left kidney and 0.58 cm in the transverse view in the right kidney. Multiple cortical cysts are present bilaterally. The left kidney measures 4.09 cm. The right kidney measures 4.0 cm.

Adrenal Glands

The right adrenal gland is normal in size (0.71 cm at the cranial pole and 0.83 cm at the caudal pole), with a subjectively plump appearance and normal shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.66 cm at the cranial pole and 0.86 cm at the caudal pole), with a subjectively plump appearance and normal shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

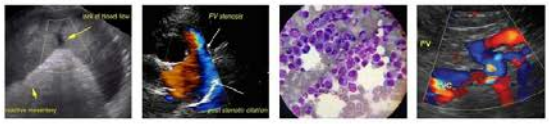
Spleen

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). A very small 0.20 cm x 0.30 cm non-capsular disrupting hypo- to anechoic nodule is noted in the mid body. 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. In the deep mid liver a 2.0 cm x 2.8 cm homogeneous hyperechoic nodule is present. 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. A 2.0 cm x 2.7 cm echogenic non-mobile ball of presumed sludge/debris, given lack of visible vascular uptake, is noted. Hypo to anechoic cystic areas are noted between the



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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 largely empty with no evidence of obstruction, foreign material or infiltrative disease. However, in the fundus of the stomach, a 2.5 cm curvilinear echogenic density is noted with strong acoustic shadow. There is no evidence of obstruction or dilation. 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

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.

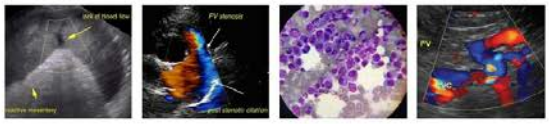
Free Abdomen

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

There is no apparent lymphadenopathy noted in these images.

ULTRASONOGRAPHIC FINDINGS

- The gastric intraluminal acoustic shadow could be secondary to a non-obstructive gastric foreign body. However, a mineralized gastric mass cannot be definitively ruled out. Additional imaging is recommended to help differentiate.
- Chronic Kidney Disease – This appearance of the kidneys is consistent with chronic kidney disease such as chronic glomerular or interstitial nephritis, chronic pyelonephritis, etc.
- Very mild/subtle bilateral adrenomegaly – Likely a normal patient variant and should be interpreted in combination with clinical signs of hyperadrenocorticism/adrenal disease or lack thereof.
- 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.
- Liver nodule- Differentials for a discrete liver nodule include primarily benign changes such as nodular hyperplasia, fibrosis of an old hematoma, granuloma, myelolipoma, etc.; however, while considered less likely, primary hepatic neoplasia, infiltrative round cell neoplasia and metastatic disease can mimic benign lesions and cannot be definitively ruled out.



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- Hypo to anechoic splenic nodule – likely represents a benign lesion such as a cyst, hematoma, nodular hyperplasia, extramedullary hematopoiesis, etc., however while considered less likely, infiltrative neoplasia can mimic benign lesions, and cannot be ruled out.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Based on this ultrasound, this patient has multiple differentials for possible decreased appetite and weight loss, including hypercalcemia, the emerging gallbladder mucocele, potentially a gastric foreign body, or even a gastric mass, chronic kidney disease, etc.

If not recently evaluated, recommendations include:

Urinalysis and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ratio is recommended.

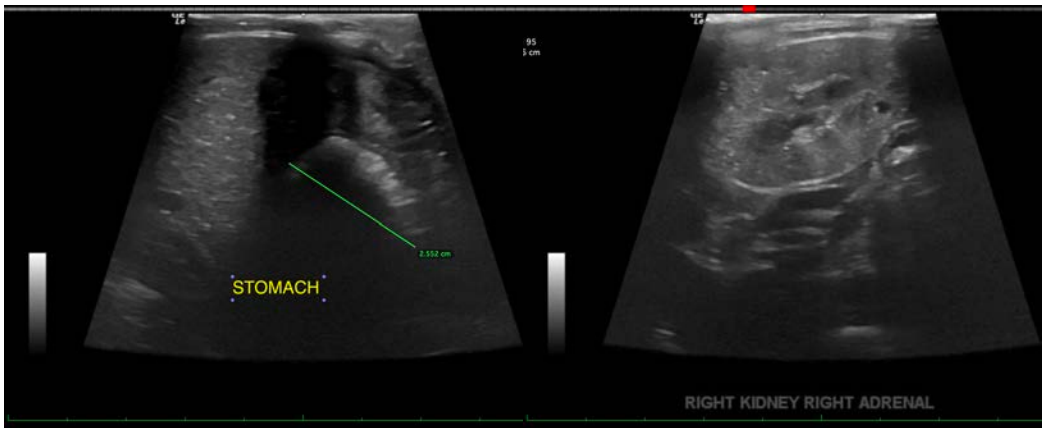
A malignancy profile is recommended to include PTH, PTHrP, and ionized calcium.

Additional imaging of the stomach could be considered, such as an abdominal CT scan or contrast radiography, to help identify FB vs mass. Ideally, gastroscopy would be considered for either FB removal or mass biopsy.

Further evaluation for possible hyperadrenocorticism is not recommended in the face of concurrent illness, decreased appetite, etc., and shouldn't be considered until patient is clinically healthy and clinical signs of hyperadrenocorticism have developed.

Therapeutic recommendations are largely dependent on diagnostic results, especially the malignancy panel. In the meantime, supportive/symptomatic medical management of potentially subclinical nausea in the form of antiemetics and gastroprotectants is recommended, as is appetite stimulation.

**Heart base and cervical images provided and interpretation was declined.



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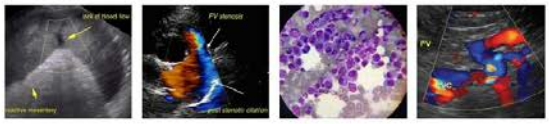

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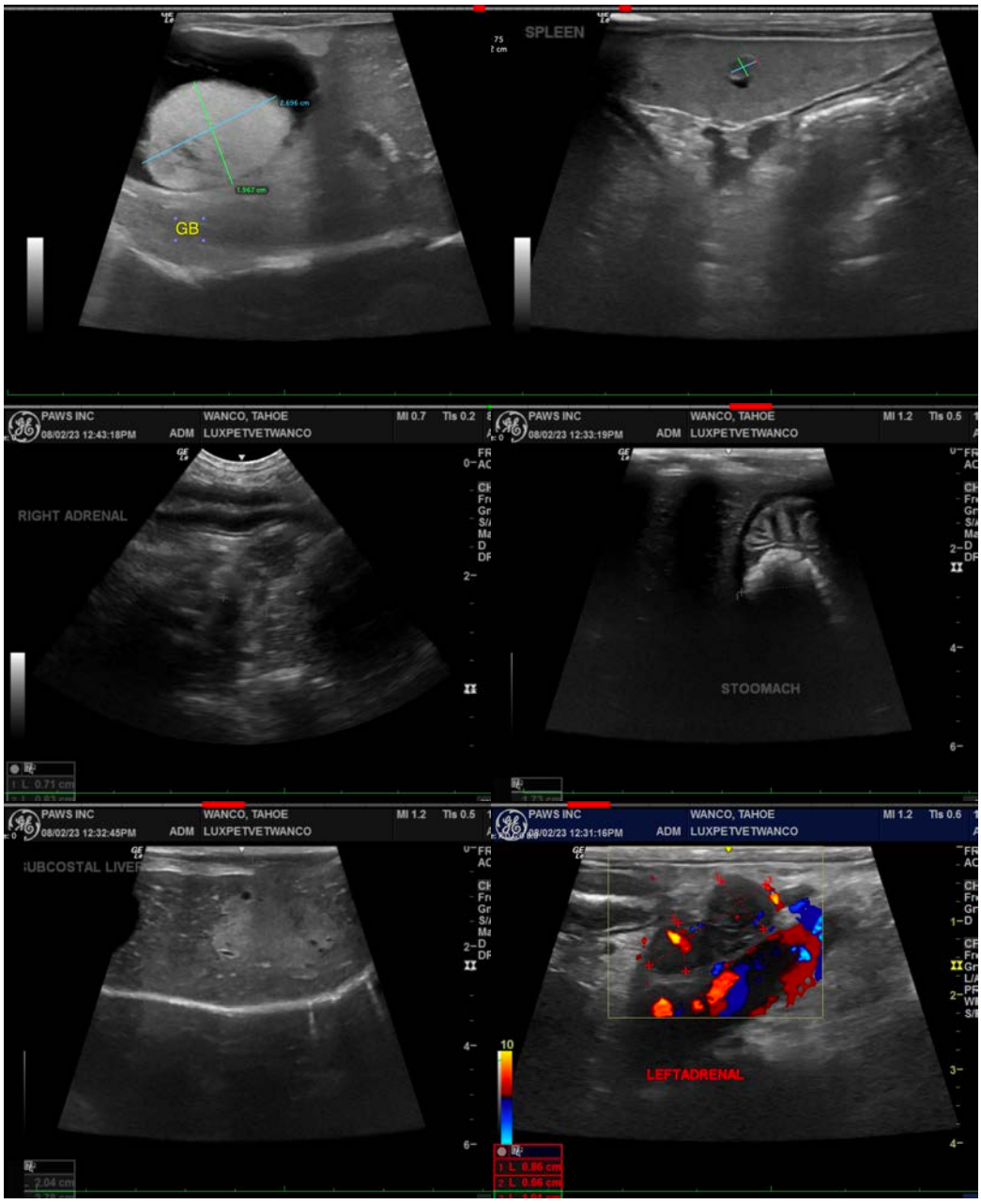

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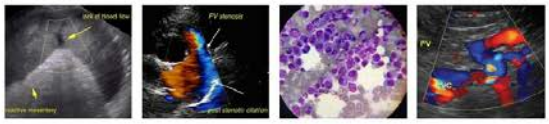

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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
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