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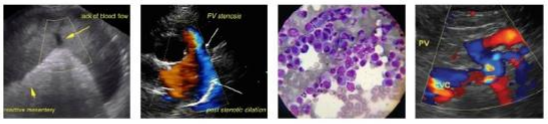


IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

PATIENT

Hunter Squatrito

SPECIES

Canine

BREED

Beagle

SEX

Neutered Male

AGE

14.2 years

WEIGHT

40.8 lbs

INTERPRETED BY

Andrea Nicastro, DVM, Diplomate ACVIM (Small Animal Internal Medicine)

IMAGING PERFORMED BY

Loetitia Saint-Jacques, RVT LVT

HOSPITAL NAME

Truckee Meadows VH

REFERRING VET

Dr. Rachel Kuester

INVOICE

10991

DATE

5/26/22

PRESENTING CLINICAL SIGNS

History: Medication Carprofen 75 mg 1/2 T PO BID Gabapentin 100 mg PRN Procedure: AUS and 3 view chest rads, Please scan parathyroid gland as well Current Problem List: - Hx of CCLR and surgery RPL - Decreased appetite - open - Mildly elevated ALP - DDx: Induction, boney changes, primary hepatopathy, other - Elevated iCa++ - DDx: HyperCa++ of Malignancy vs HyperPTH disease - PSL - unlikely to be of clinical significance, no C/S of pancreatitis - low T4, normal TSH, normal FT4 - DDx euthyroid illness - Elevated SDMA - DDx: early renal degenerative disease - Proteinuria - UPC 3.7 Presenting Complaint: Presented for exam to check growths (warty) on head and discuss removal. O pre-anesthetic labs significant changes noted. (see above and below). Concern for neoplasia vs parathyroid disease. Pertinent Diagnostic Results: 5/18/22 Total Body Function ALP 276 Ca++ 13.8 PSL 199 PLT 419 T4 0.6 SDMA 15.8 5/23/22 I-stat 8+ - iCa++ 2.0 - BUN 28 TSH - 0.57 (N) FT4 11.7 (N) UA - USG 1.024 UPC 3.7

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

The prostate is normal in size (1.07 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The left kidney is normal in size (5.78 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. A few, small focus of mineralization are visualized. There is no evidence of pyelectasia, infarcts or hydroureter.

The right kidney presented normal size (5.97 cm in length); with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. A few, small focus of mineralization are visualized. There is no evidence of pyelectasia, infarcts or hydroureter.

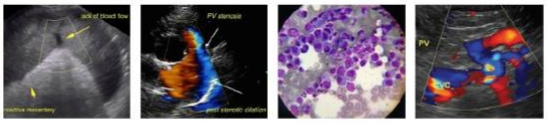
Adrenal Glands

The left adrenal gland is normal size (0.69 cm at cranial pole) (0.69 cm at caudal pole); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is normal in size (1.06 cm at cranial pole) (0.54 cm at caudal pole) (2.33 cm in length); with a normal shape and smooth peripheral contours. A 0.87 x 0.62 cm irregular, hyperechoic nodule is observed at the cranial aspect. Glandular echogenicity and detail at the caudal aspect are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen

The spleen is normal to slightly prominent in size (1.87 cm in width at the level of the hilus) with



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irregular peripheral contours at eh cranial aspect. A 2.70 cm hyperechoic nodule/mass is observed at the cranial pole. The lesion causes mild capsular expansion. Additional ill-defined hyperechoic nodules are also seen throughout the organ. In addition, a 0.56 cm hypoechoic nodule is visualized. Splenic vasculature appears normal with no evidence of thrombosis.

Liver

The liver is subjectively normal in size with normal curvilinear peripheral contours. The parenchyma is hypoechoic relative to the spleen with minor changes consistent with age-related remodeling. No focal lesions are observed. Hepatic vasculature and biliary tracts are of normal volume with no evidence of congestion.

The gall bladder lumen is moderately distended. The wall is thin and smooth. A moderate amount of aggregated, echogenic to mineralized, gravity dependent debris/sludge is observed within the lumen. The cystic and common bile ducts are normal.

Gastrointestinal

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive or overt infiltrative disease is noted.

Pancreas

The base and limbs of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is largely isoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

Free Abdomen

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. A 1.02 cm left medial iliac lymph node is visible. The node is hyperechoic to slightly heterogenous in appearance. A few mesenteric lymph nodes are visible, the largest measuring 3.11 cm in length. The nodes are of normal shape and echogenicity.

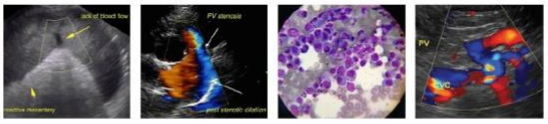
Other

A brief echocardiogram reveals no evidence of pericardial effusion or obvious right atrial/auricular mass.

ULTRASONOGRAPHIC EXAMINATION OF THE THYROID

The left thyroid lobe measures 1.92 x 0.42 cm. One left parathyroid gland is seen and measures 0.24 cm in diameter. Left salivary gland measures 2.29 x 1.47 cm. No obvious pathology is seen.

The right thyroid lobe is mildly enlarged (1.97 x 0.67 cm). An enlarged right parathyroid gland is visualized (measuring 1.06 x 0.64 cm). The right salivary gland measures 3.04 x 1.50 cm. No obvious



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pathology is observed.

ULTRASONOGRAPHIC FINDINGS OF THE THYROID

Right parathyroid nodule. Differentials include adenoma, adenocarcinoma, hyperplasia.

ULTRASONOGRAPHIC FINDINGS OF THE ABDOMEN

Primary Findings

- The bilateral renal changes are most consistent with chronic interstitial nephrosis/nephritis with minor nephrocalcinosis.
- Suspected benign hepatopathy. Top differentials include age-related remodeling, regenerative nodular hyperplasia and/or vacuolar hepatopathy.
- Gall bladder debris/sludge, non-mucocele

Secondary Findings

- Age-related pancreatic remodeling +/- fibrosis. Mild chronic pancreatitis may also be present, particularly if the patient exhibits a positive Murphy's sign.
- The lymph node changes are most consistent with reactive lymphadenitis or lymphoid hyperplasia.
- The hyperechoic splenic lesions trends toward the benign (i.e., myelolipomas). However, emerging neoplasia cannot be completely excluded. The hypoechoic splenic nodule is most consistent with a benign process (i.e., a focus of lymphoid hyperplasia, extramedullary hematopoiesis) or similar with a lower possibility of emerging neoplasia.
- The right adrenal nodule could be consistent with nodular hyperplasia or an emerging tumor.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the parathyroid nodule, the following diagnostics are recommended:

1 Three-view thoracic radiographs to assess for pulmonary metastatic disease
2 PTH/PTHrP
3 If primary hyperparathyroidism is confirmed, surgical removal of the right parathyroid nodule is recommended by a board-certified surgeon.

Serial monitoring (i.e., every 3-4 months) of the patient's liver and renal values is recommended to assess for progression. If values continue to increase, a repeat ultrasound may be warranted.

Regarding the hyperechoic splenic nodule/mass, consider a fine-needle aspirate if clotting status is appropriate.

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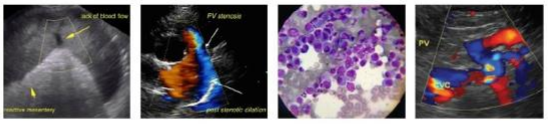

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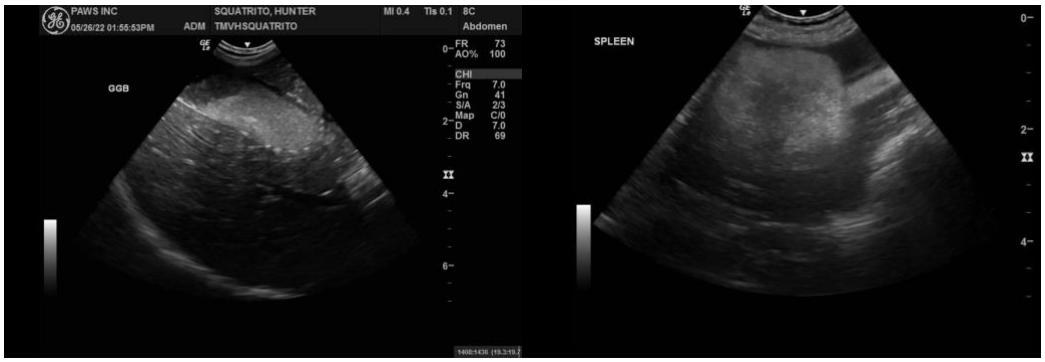
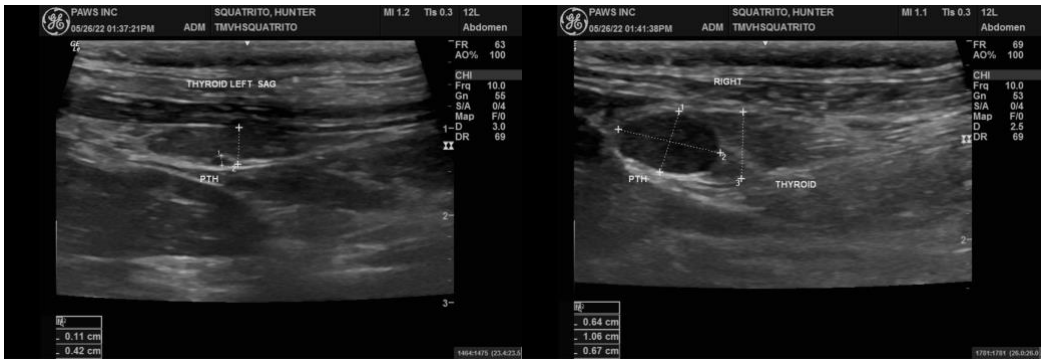
Regarding the proteinuria, consider the following:

1. Angiotensin II receptor blocker (e.g., telmisartan)
2. Antithrombotic (e.g., clopidogrel at 2.5 mg/kg PO q 24 hours)
3. Omega-3 fatty acids (65 mg/kg of DHA and EPA combined daily)
4. Prescription renal diet
5. Baseline blood pressure measurement with serial monitoring thereafter
6. Routine monitoring of UPC and bloodwork (CBC, chemistry panel) to assess for progressive disease





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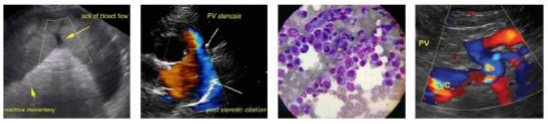

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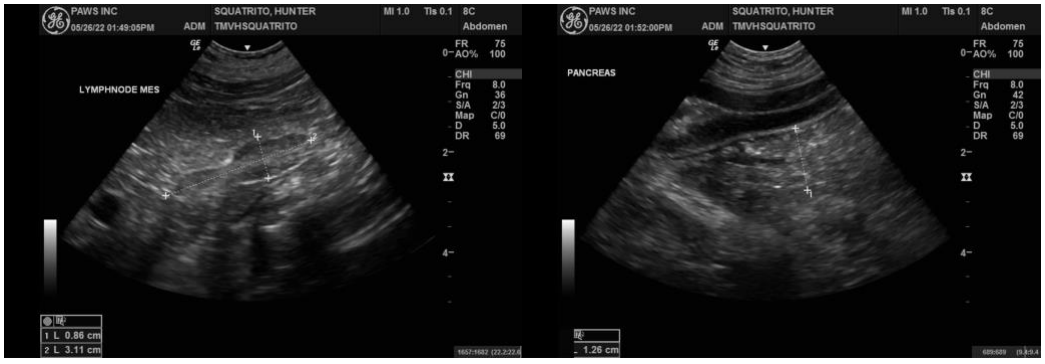

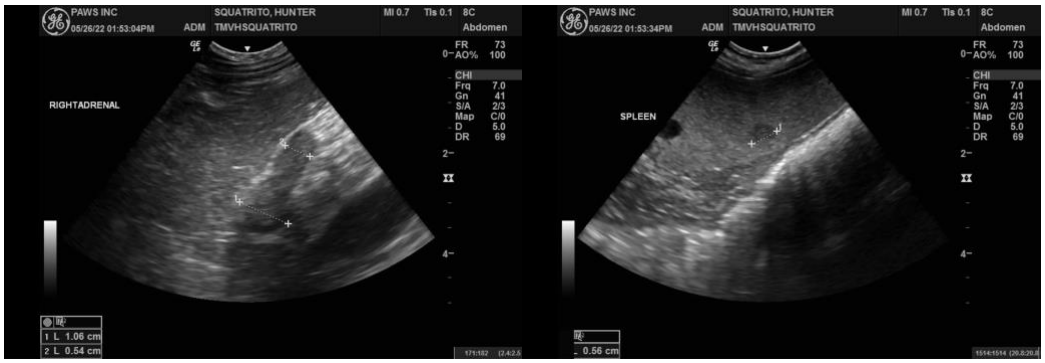

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Andrea Nicastro, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
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