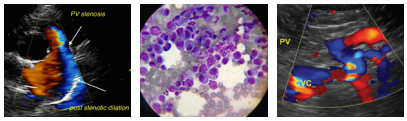
IMAGING PERFORMED BY

IntraPet.com



SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

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

DATE

3/8/23

PATIENT

Duke Vaughn

SPECIES

Canine

BREED

Beagle Mix

SEX

Neutered male

AGE

2/15/12

WEIGHT

51.6 lbs

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

HOSPITAL NAME

Frederick Road VH

REFERRING VET

Dr. Beyer

INVOICE

43202

PRESENTING CLINICAL SIGNS

Hypercalcemia; PU/PD, hypercalcemia panel sent to MSU. 01/31/2023 9:00:00 Endocrinology Interpretation. This elevated concentration of parathyroid hormone is inappropriately increased in association with
hypercalcemia. The results of this profile are consistent with a diagnosis of primary hyperparathyroidism. The low (normal) PTHrP concentration would be expected with this diagnosis.
Current Medications: None.
Lab Results: Ca 12.7 (8.4-11.8), ALKP 205 (5-160). USG 1.008 (owner brought urine first am sample, 1.016). PTH 11.3, ionized Ca 1.71, pTHrp 0.0.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Torbugesic IV.
Stat Report: Not requested.
Imaging Performed By: Stephanie Warga RDCS, RVT.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. Sand and debris was noted in the bladder. Sand accumulation measured 2.1 cm. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. Slight mineralization was noted in the kidneys. The right kidney measured 5.4 cm. The left kidney measured 5.74 cm.

Adrenal Glands

The right **adrenal gland** was uniform and measured 2.4 x 0.54 cm at the caudal pole and 0.48 cm at the cranial pole. The left adrenal gland revealed slight mineralization and remodeling noted. The left adrenal gland measured 2.67 x 0.76 cm at the caudal pole and 0.62 cm at the cranial pole.

Spleen

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes was noted.

Liver

The **liver** images from right and left intercostal as well as subcostal views revealed subjectively normal liver size, contour, and structure. Some age-related parenchymal remodeling was noted but likely not clinically significant at this time. Occasional, hypoechoic nodule was noted in the liver and was non-disruptive measuring up to 1.37 cm. Vascular and biliary tracts were of normal volume and no evidence of congestion was noted. The gallbladder presented some dependent debris with essentially normal contour. The cystic and common bile ducts were normal. No overt evidence of active inflammatory, infiltrative or regenerative pathology was noted but should be paired with current or past LE elevations regarding any clinical significance to this presentation. The hepatic lymph nodes were unremarkable.

Gastrointestinal

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

Pancreas

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

ULTRASONOGRAPHIC EXAMINATION OF THE THYROID

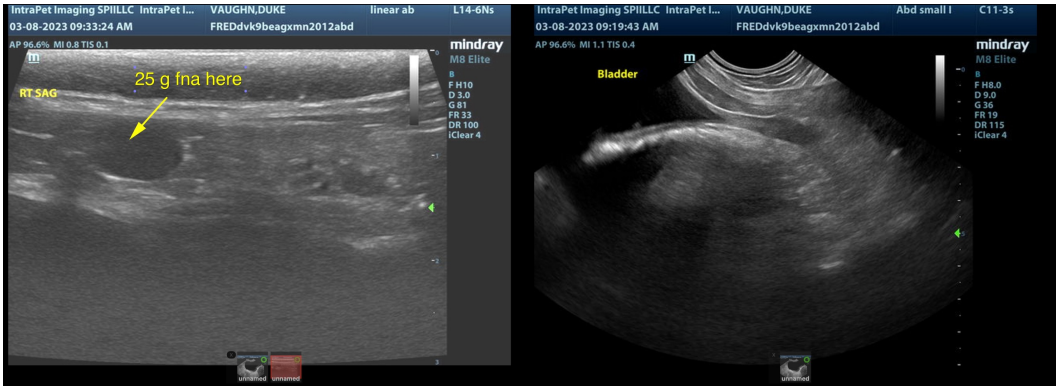
The thyroid lobes in this patient were remodeled with heterogenous, parenchymal changes. The right lobe revealed a 0.95 x 0.55 cm hypoechoic nodule at the cranial pole of the right thyroid lobe. This is consistent with parathyroid adenoma. Other nodular changes consistent with hyperplasia were noted. The left thyroid lobe was unremarkable and fairly uniform with minor, echogenic remodeling.

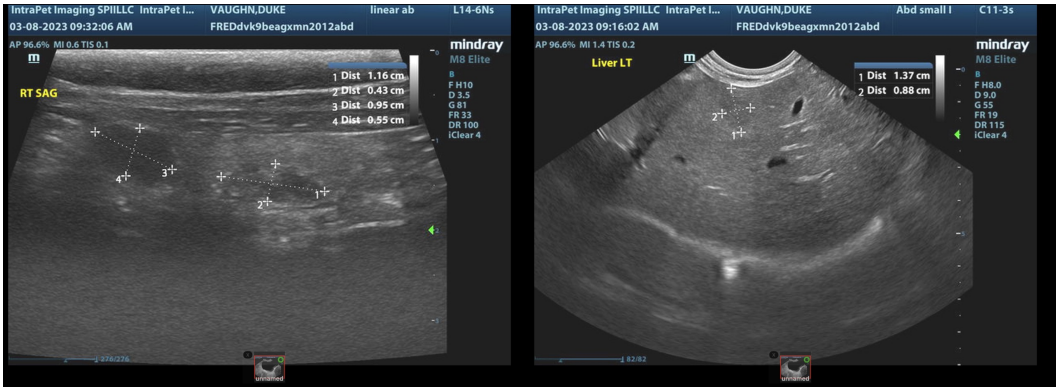
ULTRASONOGRAPHIC FINDINGS

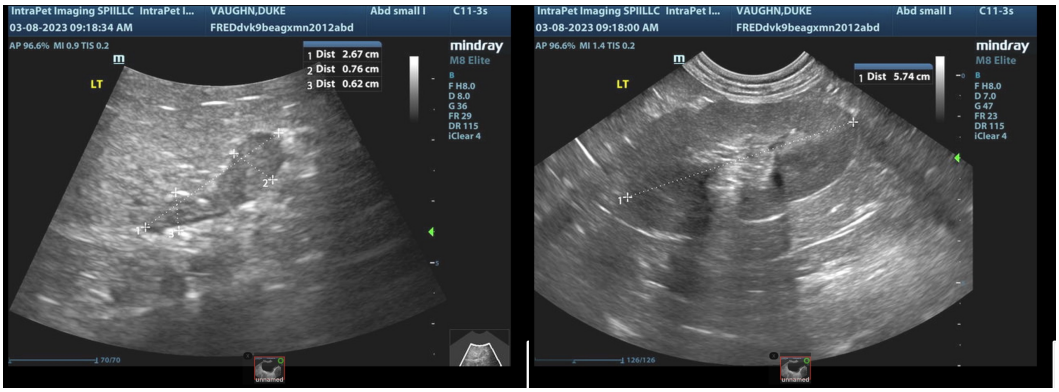
Right cranial parathyroid nodule, consistent with adenoma.
Minor heterogenous adrenal glands.
Age related hepatic changes with non-disruptive nodules.
Bladder sand, likely secondary to hypercalcemia.
Non-obstructive nephrolithiasis, non-obstructive and likely secondary to hypercalcemia.

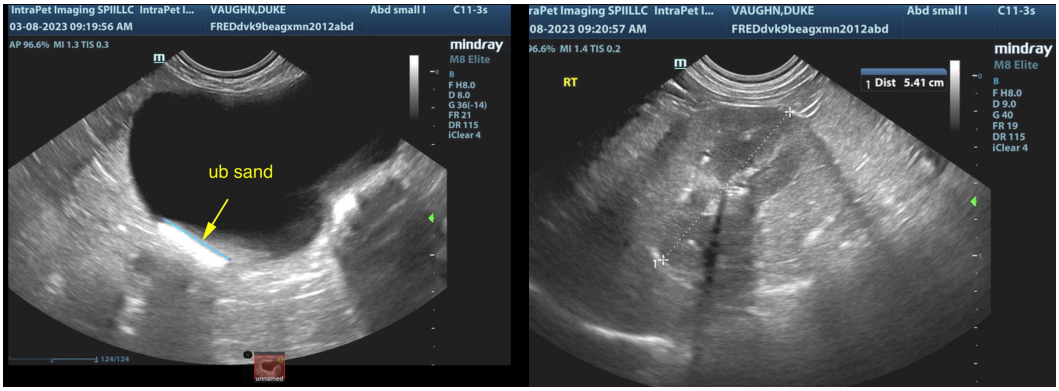
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

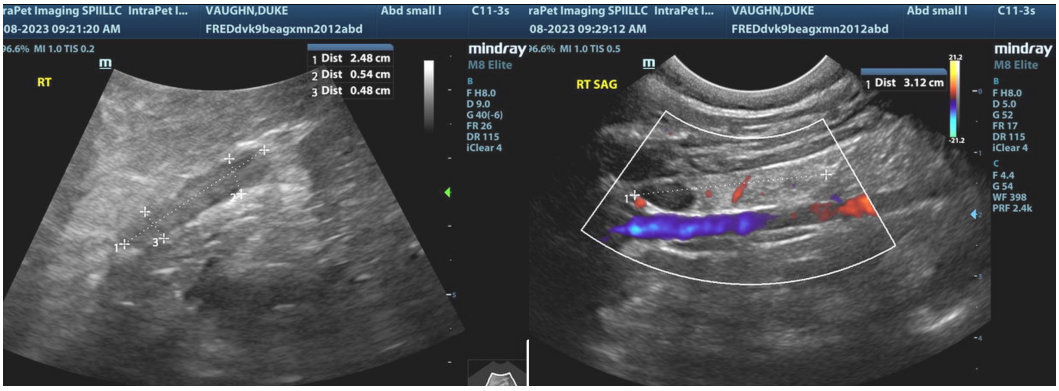
25-gauge FNA of the parathyroid nodule can be considered for confirmation or direct surgical removal. FNA of the hepatic nodules would be ideal.

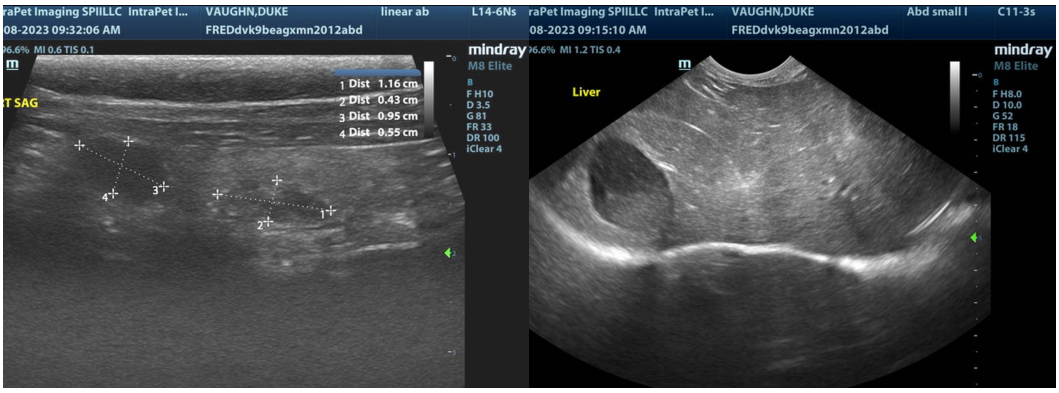



IntraPet Imaging SPIILLC IntraPet I...
VAUGHN,DUKE
linear ab
L14-6Ns
03-08-2023 09:32:06 AM
FREDdvk9beagxmn2012abd
AP 96.6% MI 0.6 TIS 0.1
RT SAG
1 Dist 1.16 cm
2 Dist 0.43 cm
3 Dist 0.95 cm
4 Dist 0.55 cm
mindray
M8 Elite
IntraPet Imaging SPIILLC IntraPet I...
VAUGHN,DUKE
Abd small I
C11-3s
03-08-2023 09:16:02 AM
FREDdvk9beagxmn2012abd
AP 96.6% MI 1.4 TIS 0.2
Liver LT
1 Dist 1.37 cm
2 Dist 0.88 cm
mindray
M8 Elite


IntraPet Imaging SPIILLC IntraPet I...
VAUGHN,DUKE
Abd small I
C11-3s
03-08-2023 09:18:34 AM
FREDdvk9beagxmn2012abd
AP 96.6% MI 0.9 TIS 0.2
LT
1 Dist 2.67 cm
2 Dist 0.76 cm
3 Dist 0.62 cm
mindray
M8 Elite
IntraPet Imaging SPIILLC IntraPet I...
VAUGHN,DUKE
Abd small I
C11-3s
03-08-2023 09:18:00 AM
FREDdvk9beagxmn2012abd
AP 96.6% MI 1.4 TIS 0.2
LT
1 Dist 5.74 cm
mindray
M8 Elite


IntraPet Imaging SPIILLC IntraPet I...
VAUGHN,DUKE
Abd small I
C11-3s
03-08-2023 09:19:56 AM
FREDdvk9beagxmn2012abd
AP 96.6% MI 1.3 TIS 0.3
ub sand
mindray
M8 Elite
raPet Imaging SPIILLC IntraPet I...
VAUGHN,DUKE
Abd small I
C11-3s
08-2023 09:20:57 AM
FREDdvk9beagxmn2012abd
96.6% MI 1.4 TIS 0.2
RT
1 Dist 5.41 cm
mindray
M8 Elite


raPet Imaging SPIILLC IntraPet I...
VAUGHN,DUKE
Abd small I
C11-3s
08-2023 09:21:20 AM
FREDdvk9beagxmn2012abd
96.6% MI 1.0 TIS 0.2
RT
1 Dist 2.48 cm
2 Dist 0.54 cm
3 Dist 0.48 cm
mindray
M8 Elite
raPet Imaging SPIILLC IntraPet I...
VAUGHN,DUKE
Abd small I
C11-3s
08-2023 09:29:12 AM
FREDdvk9beagxmn2012abd
96.6% MI 1.0 TIS 0.5
RT SAG
1 Dist 3.12 cm
mindray
M8 Elite



The information and recommendations provided are based on the images presented by the referring veterinarian. 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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com
Eric.Lindquist@SonoPath.com