

DATE

1/3/23

PATIENT

Lizzie Wolf

SPECIES

Canine

BREED

Pug

SEX

Spayed female

AGE

10/9/14

WEIGHT

18.3 lbs

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

HOSPITAL NAME

Hickory VH

REFERRING VET

Dr. Lyle

INVOICE

42483

PRESENTING CLINICAL SIGNS

PU/PD for 1 month. History of chronic intermittent UTIs.
Current Medications: None.
Lab Results: 12/30 CBC- WNL, Chem K 6.2, Na:K 24, ALT 202, ALKP 356. 12/29 U/A SG 1.021, Prot neg.
Culture pending.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Rachel Brillhart, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The pelvic urethra was imaged 2.0 cm beyond the cystourethral junction and appeared normal. The ureters were not visible which is normal. The bladder revealed sand accumulation that measured up to 2.5 cm that was non-obstructive. 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. Non-obstructive mineralization was noted in the kidneys. The largest calculus measured 0.17 cm on the left kidney. The left kidney measured 4.1 cm. The right kidney measured 4.06 cm with the largest calculus measuring 0.29 cm.

Adrenal Glands

The left adrenal gland revealed mild, uniform swelling at the cranial pole measuring 0.97 x 0.76 cm. The left adrenal gland measured 2.18 x 0.59 cm at the caudal pole and 0.79 cm at the cranial pole. The right adrenal gland was isoechoic with an expansive nodule at the cranial pole that measured 1.115 x 1.02 cm. The right adrenal gland measured 1.77 x 0.73 cm at the cranial pole and 0.65 cm at the caudal 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 submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. Vascular and biliary tracts were of normal volume with no evidence of congestion. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.

Gastrointestinal

There was some residual chyme and gas was noted in the **stomach**, yet not pathological. This is consistent with end post prandial presentation. Transit of chyme into the small intestine was normal. Curvilinear patterns were maintained throughout the GI tract. No evidence of pathology. 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

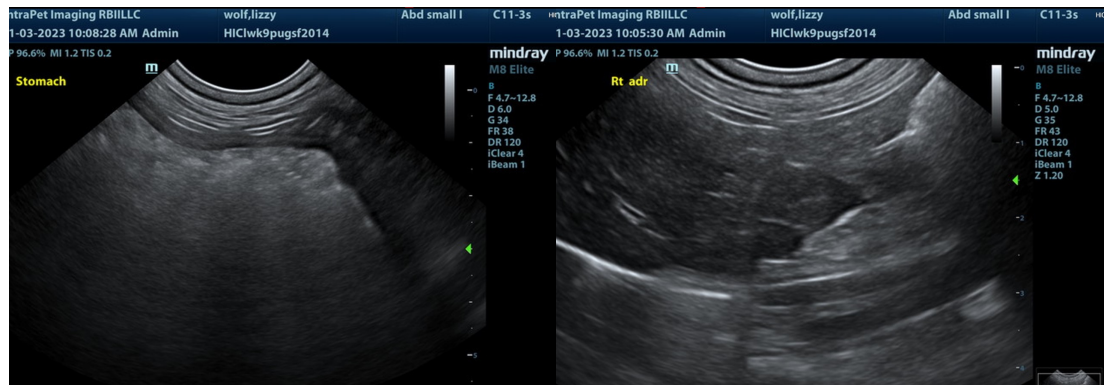
The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

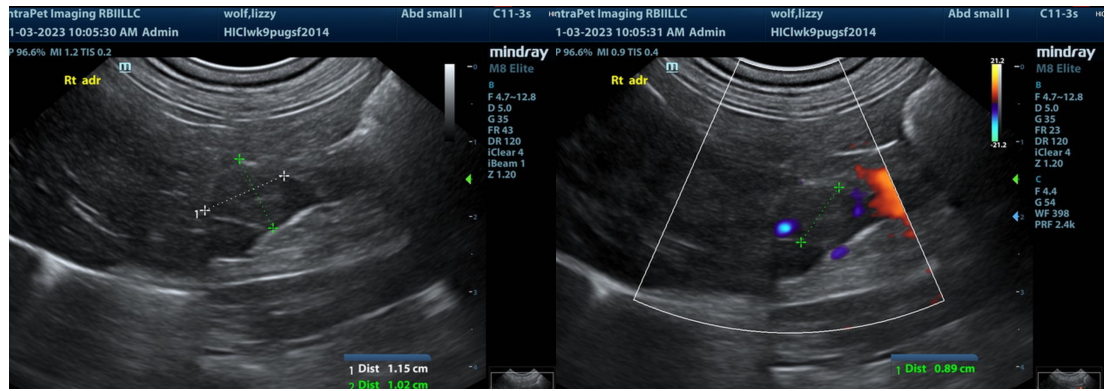
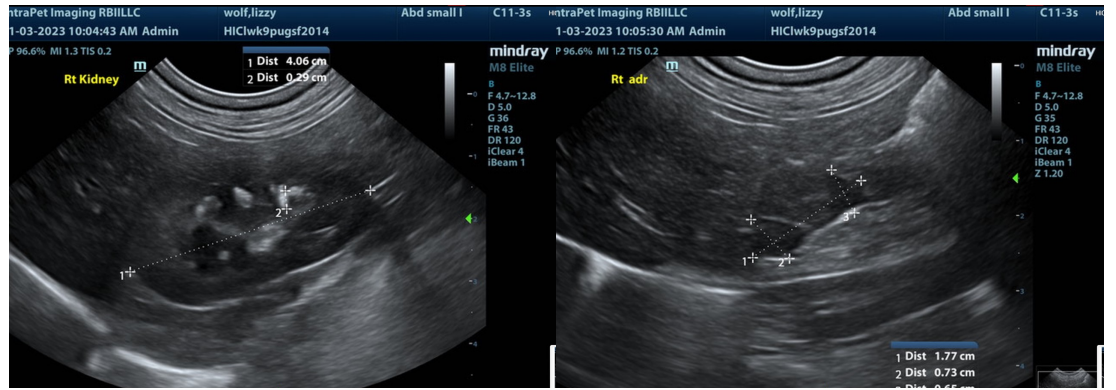
ULTRASONOGRAPHIC FINDINGS

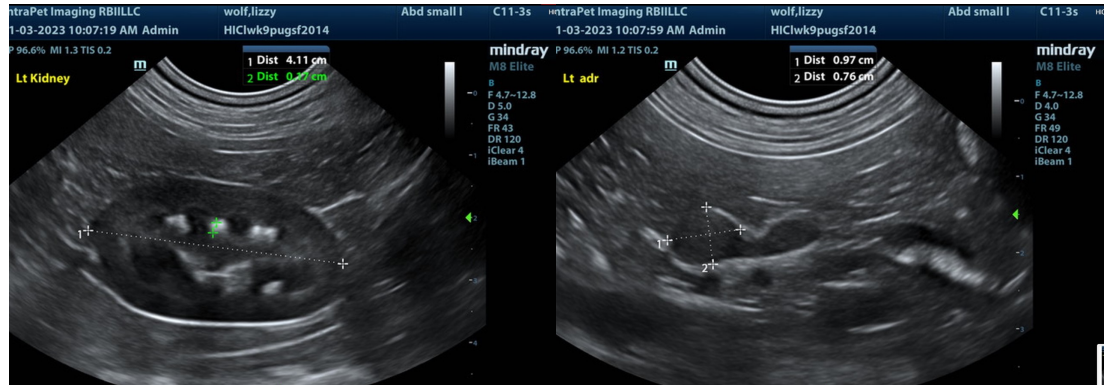
Renal calculi.
Bladder sand.
Irregular, right adrenal gland with nodular change.
Uniform left adrenal adenomatous type change.
Retention of ingesta in the stomach.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

I am more concerned for the right adrenal gland in this patient as capsular expansion was more aggressive than the left adrenal gland. Serial blood pressure measurements are recommended given the irregular right adrenal gland. Differentials include adenoma, adenocarcinoma and pheochromocytoma. If hypertension is an issue then urine catecholamine is indicated. If the patient appears Cushingoid and urine specific gravity is less than 1.020 then UCCR +/- LDDST would be indicated. The sand should be able to be liberated in this patient given the female gender. This is non-obstructive, yet the patient is likely passing calculi periodically. Recheck sonogram, primarily of the bladder sand and right adrenal gland, is recommended in 4 weeks after medical management.







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.

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