

**DATE**

12/20/21

PRESENTING CLINICAL SIGNS

History: 13-year-old obese Min pin with elevated liver enzymes. LDDST suppression test consistent with Cushing's but could not differentiate between pituitary vs adrenal dependent.
Current Medications: Gabapentin 100mg PO BID, Dasuquin, Denamarin.
Date of Previous IntraPet Ultrasound: No previous IntraPet scans.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

PATIENT

Minnie Anderson

SPECIES

Canine

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. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

BREED

Miniature Pinscher

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 this age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. Non-obstructive calculi were noted and measured up to 0.21 cm in the corticomedullary junction. The right kidney measured 6.6 cm and the left kidney measured 5.8 cm.

SEX

Spayed Female

AGE

5/12/09

WEIGHT

31 lbs

Adrenal Glands

The left adrenal gland had a slightly enlarged caudal pole. The left adrenal gland measured 2.41 x 0.94 cm at the caudal pole and 0.63 cm at the cranial pole. The left adrenal gland revealed slight areas of mineralization. The right adrenal gland was slightly swollen and measured 2.19 x 0.99 cm at the caudal pole and 0.66 cm at the cranial pole.

INTERPRETED BYEric Lindquist, DMV
DABVP, Cert. IVUSS**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.

IMAGING PERFORMED BY

Rachel Brillhart RDMS

Liver

Exam of the cranial abdomen demonstrated excessive **liver** size and swollen contour. Mild, coarse architecture was noted with increased portal markings and minor parenchymal remodeling is suggestive of an inflammatory component. Subtle, non-disruptive, micronodular changes were noted. Minor excessive GB debris was noted with the presence gallbladder dilation and precipitate without the overt formation of mucocele but this may be an issue in the future. This type of liver presentation typically is associated with slow and gradual SAP elevations with low-grade ALT rise. USG-FNA sampling is encouraged if more aggressive LE profiles are present such as ALT > 200 or rapid rise in SAP. These presentations are usually reactive hepatopathies owing to other disease processes either endocrine (Diabetes, Hypothyroidism, Cushing's disease), "antigen surveillance" from the gut/pancreas, or idiopathic breed predisposed progressions.

HOSPITAL NAMEBanfield Pet Hospital
of Columbia**REFERRING VET**

Dr. Hirsch

INVOICE

94735

Gastrointestinal

The **stomach** revealed multiple, hypoechoic mucosal polyps that measured up to 1.38 cm and 1.86 cm. These do not appear to disturb the submucosal layers. The small intestine and colon were unremarkable.

Pancreas

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Some parenchymal remodeling, however, with mild deviation from curvilinear normalcy was observed. Pancreatic duct and capsular irregularities were present consistent with age related changes. If pain upon imaging (+ Murphy sign) was present or if the patient is focally painful in subxiphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

ULTRASONOGRAPHIC FINDINGS

Vacuolar hepatopathy, nodular hyperplasia liver pattern.

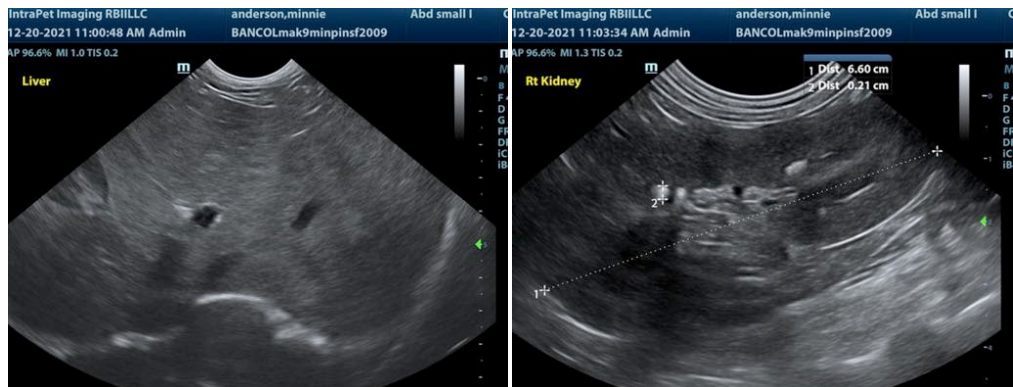
Gastric mucosal polyps.

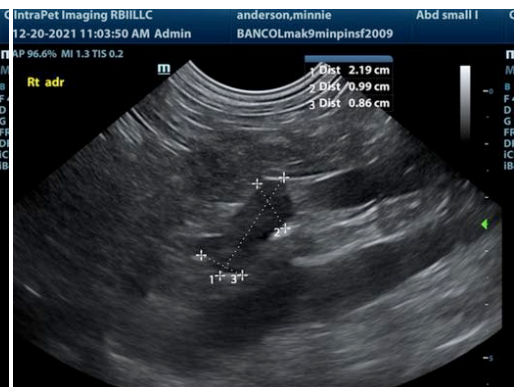
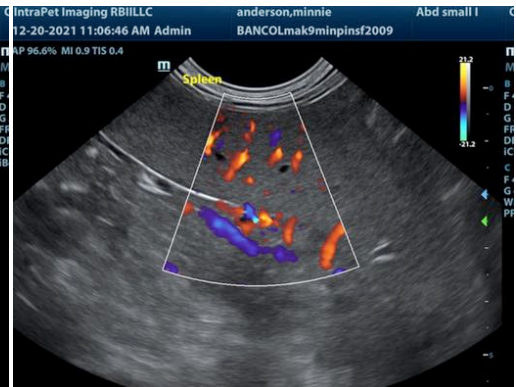
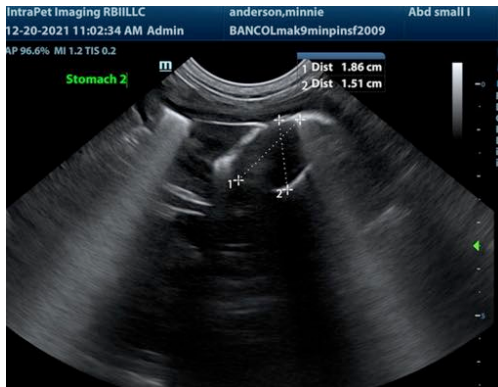
Mild bilateral adrenal hypertrophy with slight irregular contour to the left and mineralization.

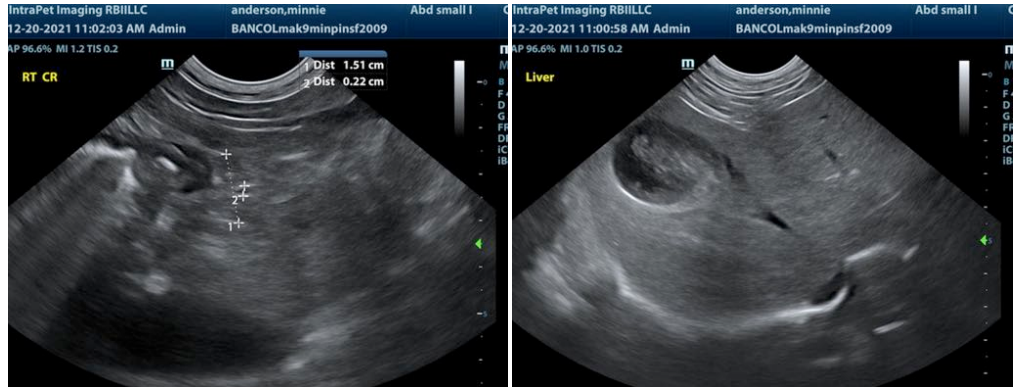
Renal mineralization, mild degenerative changes.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Endoscopy would be warranted to obtain mucosal biopsies. This appeared to be localized to the mucosa. The mucosal polyps could represent transiting ingesta that may be adhered to the gastric wall. The remainder of the gastric wall was unremarkable. These are likely benign or low grade, but should be monitored. Given the patient's history pituitary dependent hyperadrenocorticism is likely. Blood pressure measurements are warranted. Assuming that urine specific gravity is less than 1.020 and urine cortisol to creatinine ratio is elevated then treatment for PDH would be appropriate.







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