

**DATE**

2/21/22

PRESENTING CLINICAL SIGNS

History of elevated liver values (ALKP & ALT) since 5/29/2021. Pet was placed on Denamarin at that time with no response. 1/15/22- IOF ALKP (921) H< ALT (228) H, Bile Acid Abnormal: Pre 18.5, Post 39.8 H.
Current Medications: Denamarin small breed: 0.25 tablet once daily

PATIENT

Charlie Hardy

Lab Results: Clinic did not provide

Date of Previous IntraPet Ultrasound:

Sedation: Declined. Sedation required for further imaging.

Stat Report: Not requested.

Imaging Performed By: Rachel Brillhart, RDMS.

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**BREED**

Yorkshire Terrier

Urinary System

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. Bladder calculi were noted and smaller calculus that measured 0.5 cm. The larger calculus measured 1.4 cm. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

SEX

Neutered male

The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. The left kidney measured 4.0 cm with corticomedullary calculi that measured up to 0.3 cm. The left kidney revealed slight pyelectasia at 0.43 cm. The right kidney revealed multiple calculi. The largest of which measured 0.25 cm. The right kidney measured 3.89 cm.

AGE

10/12/11

WEIGHT

11.2 lbs

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

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 2.0 x 0.65 cm at the caudal pole and 0.6 cm at the cranial pole. The right adrenal gland measured 1.47 x 0.59 cm at the caudal pole and 0.5 cm at the cranial pole.

HOSPITAL NAMEBanfield Pet Hospital
City Plaza**Spleen**

The **spleen** in this patient was mildly enlarged with uniform parenchyma and was folded upon itself caudally. This is a positional variant and is not pathological. There was no evidence of significant disease.

REFERRING VET

Dr. Roberts

Liver

The **liver** was uniformly swollen with minor, excessive gallbladder debris and over distension with dependent and suspended bile without evidence of overt mucocele formation. However, excessive sludge was present. The liver presented coarse architecture with mildly increased portal markings and subtle, mixed echogenic changes. This is consistent with vacuolar hepatopathy and some level of remodeling and history of inflammatory component. There was no overt suspicion of neoplasia.

INVOICE

96190

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. 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

Bladder calculi.

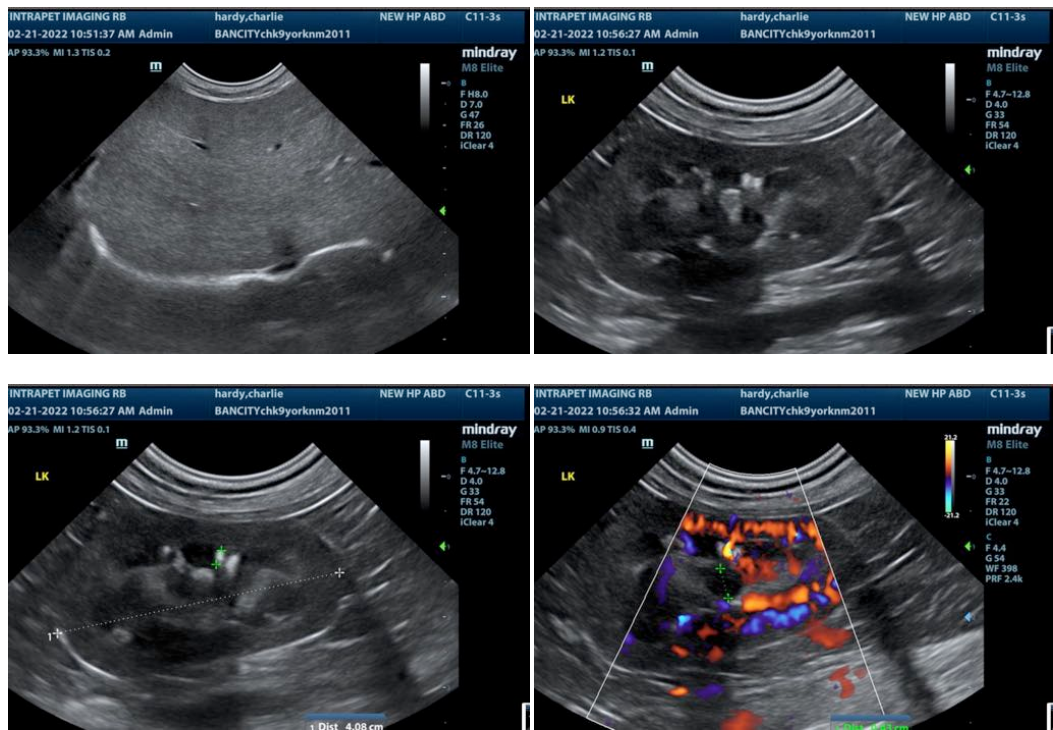
Renal calculi, mild to moderate degenerative renal changes.

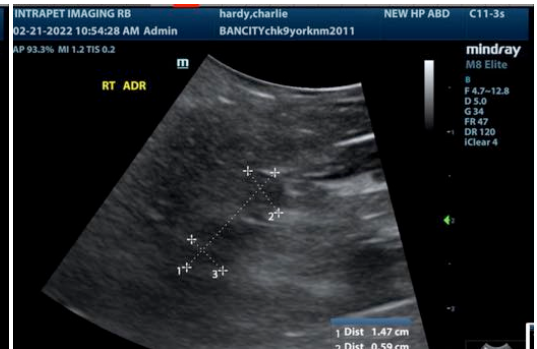
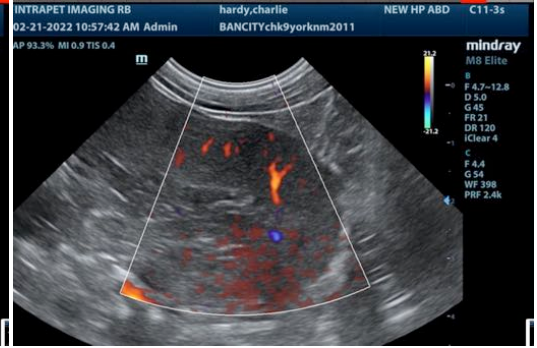
Gallbladder sludge.

Benign hepatopathy with mild remodeling and excessive gallbladder debris, not to the level of mucocele formation.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

I recommend cystotomy, stone analysis and culture in this patient. Ursodiol therapy and liver support protocol is warranted. Manual expression of the gallbladder and liver biopsy can be taken at the time of cystotomy for further long term management. A recheck sonogram primarily for the liver and gallbladder is recommended in 6-8 weeks after initiating therapy.





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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