



**PATIENT PRESENTING CLINICAL SIGNS**

Zane Howe Has been having anxiety and shivering, suspect cushings disease but has never noted significant PU/PD. BW is worsening. ALP has been unreadable for a couple of years. Meds Librela and Gabapentin.

**SPECIES**

Canine

Abnormal PE/Chem/CBC/UA Results: CBC low lymphocytes, high platelets, high plateletcrit. Chem - Urea 12.9 high, ALT 159 high, GGT high 209, Cholesterol high 10.02, ALP unreadable.

**BREED**

Fox Terrier X

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

**SEX**

Neutered Male

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

**AGE**

14 Years

No overt pathology in the area of the residual prostate.

**WEIGHT**

11 kg

Normal size and margination was present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Non-obstructive medullary mineral noted, primarily in the lateral diverticuli.

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**Adrenal Glands**

The bilateral adrenal glands were normal in size. Non-homogeneous parenchyma noted. Mild capsule asymmetry was present without suspicion for overt neoplasia. Pinpoint discreet suspected dystrophic mineralization noted, which may indicate discreet areas of dystrophic mineralization. No overt adrenal tumor. The left adrenal gland measured 0.87 cm at the cranial pole and 0.73 cm at the caudal pole. The right adrenal gland measured 0.78 cm at the cranial pole and 0.80 cm at the caudal pole.

**IMAGING PERFORMED BY**

Crystal Hill

**Spleen**

The spleen was normal in size. Diffuse coalescing hyperechoic splenic foci to striations noted. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. No splenic masses or nodules. Generalized parenchyma heterogeneity noted.

**HOSPITAL NAME**

Downtown AH

**Liver**

**REFERRING VET**

Dr. Ahn

The liver presented enlarged in size. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with mild echogenic gallbladder sludge. The cystic and common bile ducts were normal.

**INVOICE**

46912

**DATE**

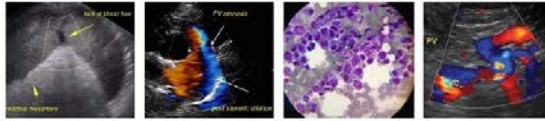
4/25/23

**Gastrointestinal**

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained mild shadowing ingesta.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material.

Normal visible colon wall layers were present with apparent formed feces in lumen.



**PATIENT** *Pancreas*

Zane Howe

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

**SPECIES**

Canine

**ULTRASONOGRAPHIC FINDINGS**

**BREED**

Fox Terrier X

**SEX**

Neutered Male

**AGE**

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**WEIGHT**

11 kg

- Moderate chronic renal changes with non-obstructive medullary mineral.
- Bilateral prominent, non-homogeneous to irregular adrenal glands.
- Hyperechoic splenic foci to parenchymal striations – non-specific yet subjectively benign, splenic mineralization, microinfarction, or fibrosis possible.
- Non-specific hepatopathy.
- Minor gallbladder debris (non-mucocele).
- Mild hepatic parenchymal remodeling.
- Mild shadowing gastric ingesta.

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DVM, DABVP  
(Canine and Feline)

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Assessment of first morning urine specific gravity as well as additional renal staging to include screening culture and sensitivity and baseline UPC level suggested. Adrenal workup warranted in this patient, even without significant PU/PD, given adrenal and hepatic presentation in conjunction with hypercholesterolemia as well as thrombocytosis. Suspected vacuolar hepatopathy, hepatic inflammatory/immune mediate disease, hyperplasia, hematopoiesis, non-obstructive cholestasis, infiltrative neoplasia (less likely) are all potentials. If Cushing's disease is ruled out in this patient, hepatic sampling may be considered for further clarification. Hepatosupportive medications including Denamarin, Ursodiol +/- bland or hydrolyzed diet trial may prove beneficial.

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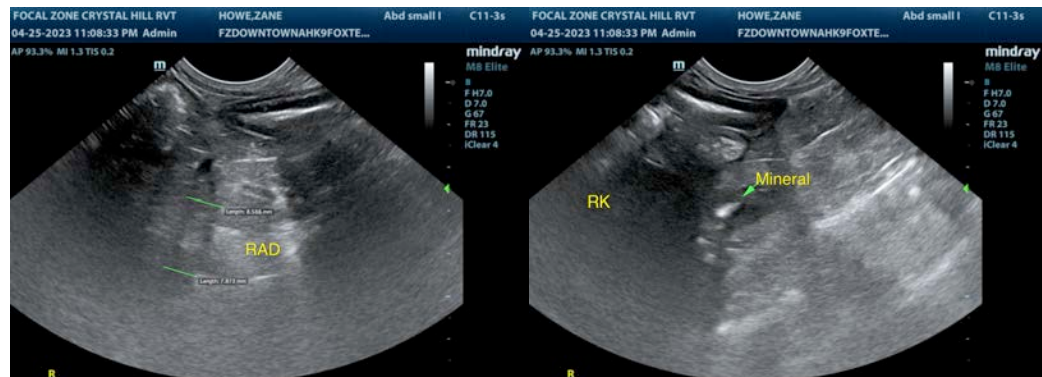
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**PATIENT**

Zane Howe

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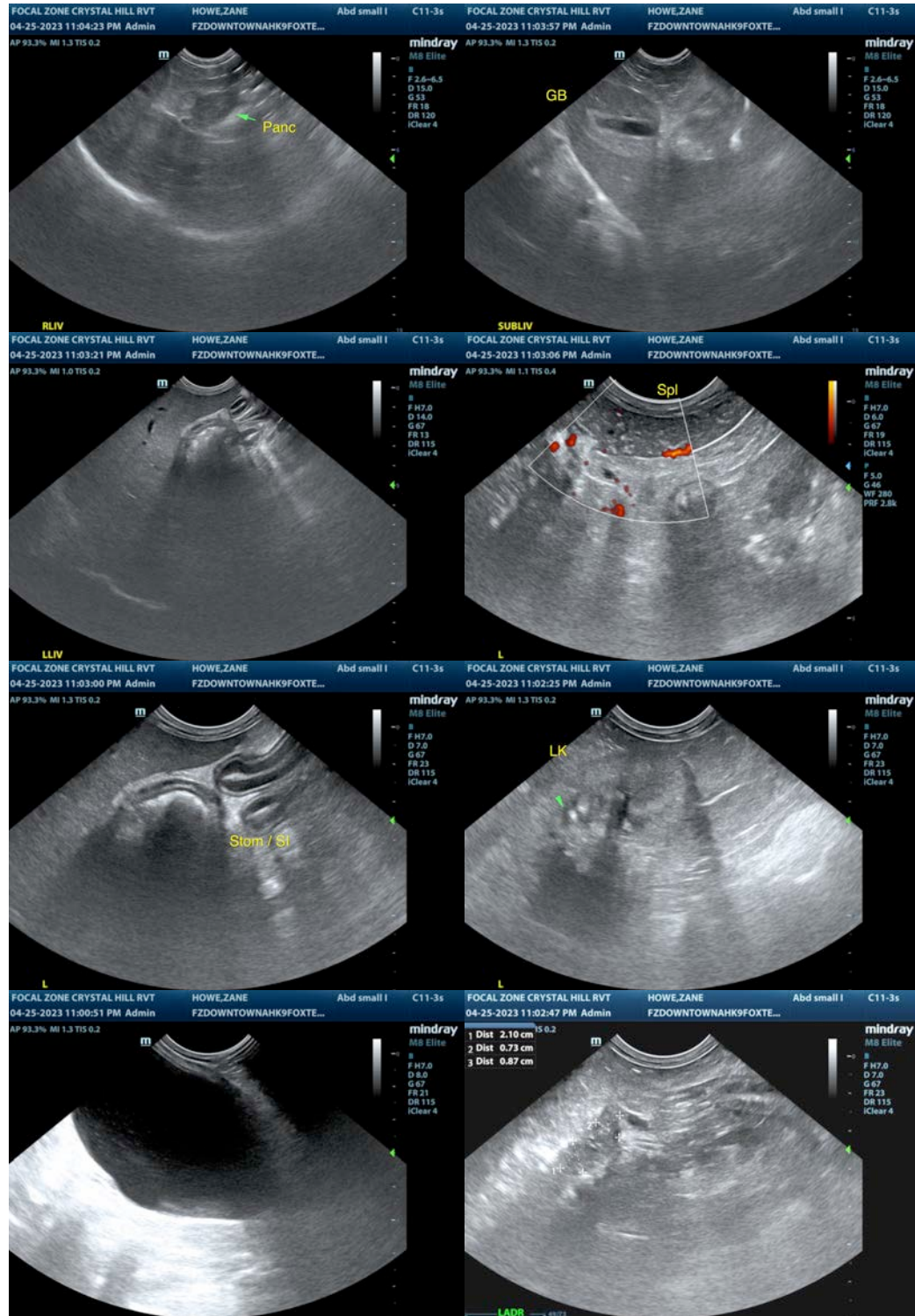
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**PATIENT**

Zane Howe

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.

**SPECIES**

Canine

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.

**BREED**

Fox Terrier X

**R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)**

info@SonoPath.com

**SEX**

Neutered Male

**AGE**

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