

**PATIENT**

Cubbie Forster

SPECIES

Canine

BREED

Maltese Mix

SEX

MN

AGE

13 yr

WEIGHT

23.4 lbs.

INTERPRETED BYR. McKenzie Daniel,
DVM, DABVP (Canine
and Feline)**IMAGING
PERFORMED BY**

Rachel Runnells, RVT

HOSPITAL NAME

SVS Imaging KC

REFERRING VET

Dr. Susan Mervin

INVOICE

15835

DATE

1/13/23

PRESENTING CLINICAL SIGNS

Owner reports that Cubbie vomited overnight. There was blood in splatter pattern and then some in clumps. He has recovered from his not feeling well (12/29) and seemed to be doing well until last night (1/10). Previous LLDS-suppressed. Not PU/PD.

Abnormal PE/Chem/CBC/UA Results: 1/11: Pet is QAR, has some blood in feathers on ears (rt) and around nose/nostrils), did have a nose bleed at time of in clinic ultrasound, predominantly right nostril, E-mild bilateral NS, E-wnl, N-epistaxis, T-moderate tracheal rattle, Oral- DG 3, H/L-wnl, ABD-tense, pot-bellied, very large liver, not painful, M/S-some discomfort with palpation of lumbar spine/hips, Skin-wnl BW-GGT is higher today, ALKP>2000, Lipase is increased, CPL-abnormal UA-1025, 1+ protein, rest-nsaf US-liver is very large, extends several inches past rib cage, mixed echogenic pattern with multiple smaller hypoechoic nodules scattered throughout. Gall bladder-mucocele, unable to visualize adrenal glands as pet not able to be on back in trough as every time we tired to place him on back, his nose would start to bleed again, did ultrasound with him in Katie's lap, sitting/leaning position, rest-unremarkable BP--207-210 (doppler) Coag panel-normal. 1/13 (day of scan): Does not have any more nasal bleeding, but still has elevated blood pressure.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no sediment or calculi. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

The residual prostate was free of pathology.

The area of the aortic trifurcation was free of pathology.

Normal size and margination were 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 mild to moderate loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 5.7 cm in length. The right kidney measured 5.1 cm in length.

Adrenal Glands

The bilateral adrenal glands were mildly enlarged in size exhibited mild capsule asymmetry and bilateral heterogeneous adrenal parenchyma with discrete nondisruptive cranial right adrenal nodule measuring 0.8 cm x 0.6 cm. The overall right adrenal gland measured 2.8 cm length x 1.2 cm width at the cranial pole and 0.94 cm width at the caudal pole. The left adrenal gland measured 3.1 cm length x 1.0 cm width at the cranial pole and 0.95 cm width at the caudal pole. No evidence of adrenal capsular escape or vascular invasion.

Spleen

The spleen was normal in size with areas of minor lateral and medial capsule asymmetry. The spleen exhibited generalized mild parenchyma heterogeneity and subjective reduced parenchyma

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echogenicity with multifocal pinpoint hyperechoic splenic foci and normal splenic vascularity. No splenic masses were noted.

Liver/ Gallbladder**SPECIES**

Canine

The liver exhibited subjective moderate enlargement yet maintained symmetrical yet swollen capsule contour. Generalized mild nonhomogeneous mild increased parenchyma echogenicity exhibiting intermittent discrete nondisruptive hypoechoic intraparenchymal nodules were present with an example measuring 1.5 cm in diameter. The hepatic and portal vasculature were normal in appearance without signs of congestion.

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The gallbladder was non-distended. The gallbladder walls were sonographically normal without evidence of gallbladder wall inflammatory criteria. Moderate nondependent to organized nonmineralized gallbladder debris with mild stellate pattern was noted. No evidence of peripheral gallbladder inflammation was noted. The cystic and common bile ducts were normal.

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Gastrointestinal**AGE**

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The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material.

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.

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

Pancreas**INTERPRETED BY**

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The pancreas was subjectively normal in size and maintained symmetrical capsule contour with heterogeneous mildly echogenic parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

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ULTRASONOGRAPHIC FINDINGS**HOSPITAL NAME**

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- Bilateral chronic renal changes
- Bilateral mild adrenomegaly exhibiting nonhomogeneous nonmineralized parenchyma, discrete nonspecific, nondisruptive cranial right adrenal nodule
- Subjective vacuolar hepatopathy pattern with intermittent discrete nondisruptive intraparenchymal nodules- nodules likely consistent with discrete nodular hyperplasia, hematopoiesis, or similar
- Gallbladder mucocele - subjectively noninflamed
- Mild pancreatic remodeling - possible chronic pancreatitis or pancreatic fibrosis
- Benign splenic hyperechoic parenchyma foci - suggestive of microinfarction, pinpoint mineralization or pinpoint fibrosis

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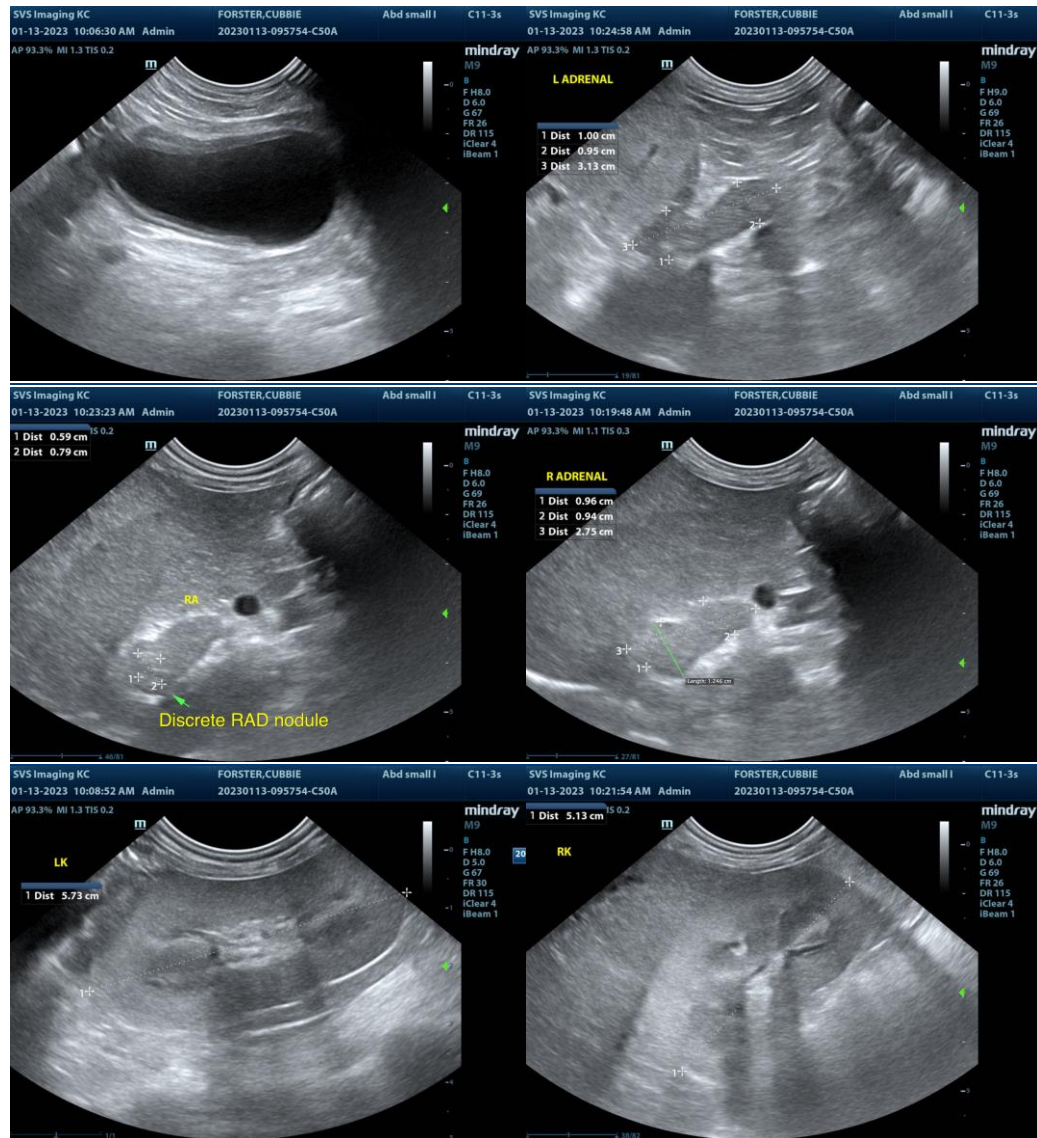
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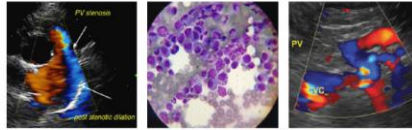
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Considerations for the bilateral adrenal glands may include benign hyperplasia, and functional vs nonfunctional adenomatous change, while technically the possibility of emerging right pheochromocytoma, given the discrete nondisruptive cranial right adrenal nodule, cannot be definitively excluded. However, no evidence of a definitive adrenal mass. Adrenal hyperfunction is considered less likely, given previous normal LDDST and without current clinical signs i.e., PU/PD, polyphagia, etc. Urine catecholamine levels may be considered for further assessment.

Gross inspection of the bilateral adrenal glands, specifically the right adrenal gland, at the time of surgery may be considered. Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered.





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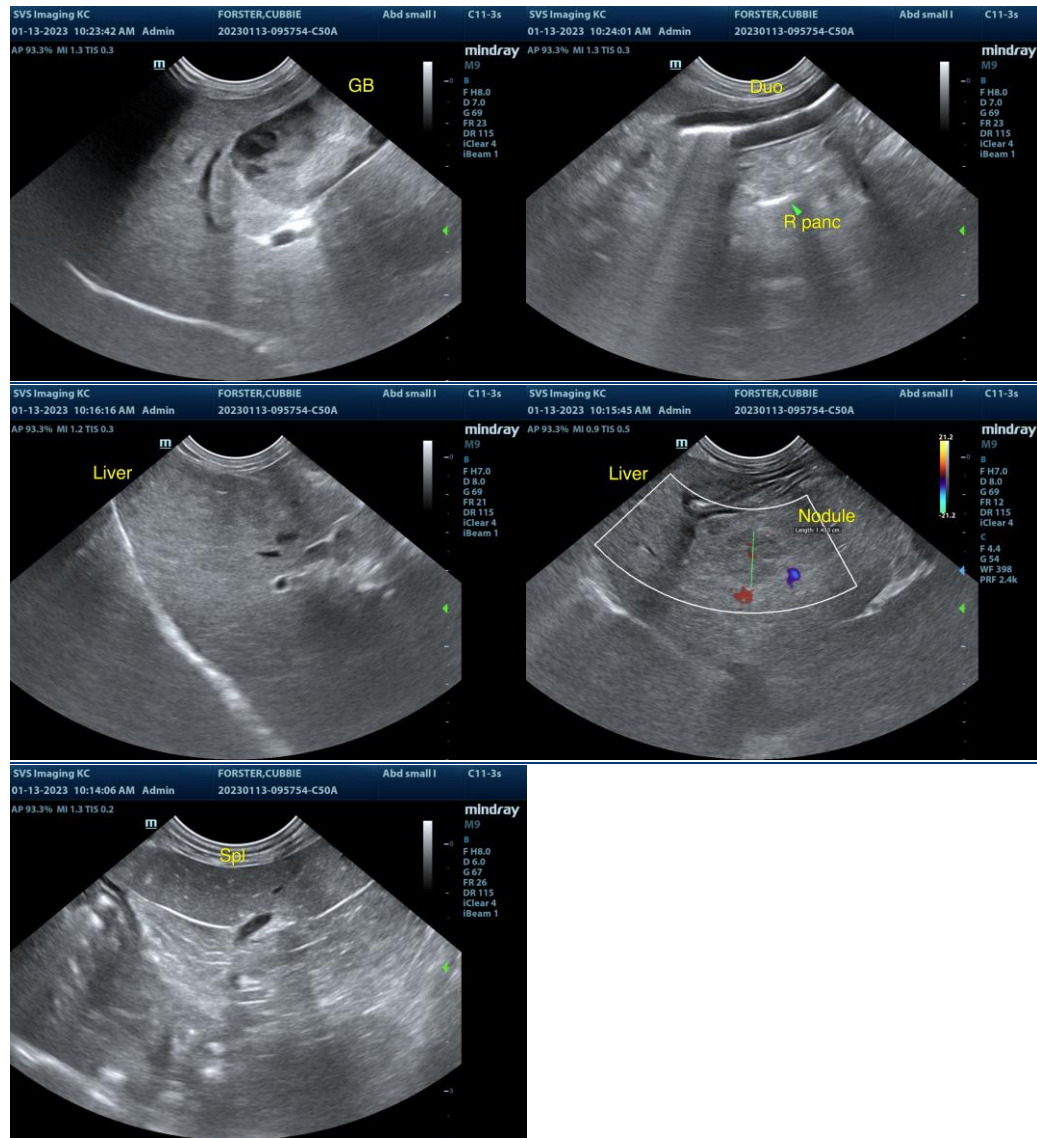
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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