



PATIENT

Andi Soth

SPECIES

Canine

BREED

Lhasa X Poodle

SEX

FS

AGE

14yr

WEIGHT

10.2kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Donna Markland

HOSPITAL NAME

Island Mobile Paws
VS

REFERRING VET

Petroglyph Animal
Hospital

INVOICE

13106ag

DATE

03/03/2023

PRESENTING CLINICAL SIGNS

Incidental finding of ALP>2000 on in-house bloodwork. This was first noted in September, 2022 and found again on bloodwork on February 17th. Globulins were mildly decreased in February. Andi is not reported to be pu/pd. She has a normal appetite and activity level. Notable PE findings included dental disease and increased BCS (6-7/9).

Abnormal PE/Chem/CBC/UA Results: February 17, 2023 ALP>2000 (23-212) Globulin=23 (25-45)

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with minor pinpoint dependent mineral. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

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 loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Bilateral non-obstructive medullary nephroliths and small left kidney cortical cyst were present. The left kidney measured 4.7 cm in length. The right kidney measured 5.0 cm in length.

The area of the aortic trifurcation was free of pathology.

Adrenal Glands

The left adrenal gland was borderline prominent in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 1.8 cm length and 0.58 cm width in the caudal pole. The right adrenal gland was enlarged exhibiting mild asymmetrical contour and non-homogenous hyperechoic nodular parenchyma. Color Doppler revealed adjacent adrenal vasculature, potential for vascular invasion cannot be definitively excluded. The overall right adrenal gland measured 3.5 cm length and 1.6 cm width in the caudal pole.

Spleen

The spleen exhibited primarily finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Multifocal to coalescing, well-defined, symmetrical, hyperechoic nodules were present throughout the cranial to caudal parenchyma. An example measured 1.6 cm in diameter. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory or neoplastic changes were not noted. The hyperechoic nodules tend to trend benign and are most consistent with benign hyperplasia or myelolipomas.

Liver/Gallbladder

The liver presented increased in size. The parenchyma of the liver was subjectively increased in echogenicity compared to the spleen. The echotexture of the liver parenchyma was uniform with a mild coarse echotexture. The capsule of the liver was symmetrical in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with primarily anechoic luminal content and moderate non-dependent mildly



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inspissated debris. No evidence of gallbladder or peripheral gallbladder inflammation was present. The cystic and common bile ducts were normal.

Gastrointestinal

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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

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The parenchyma of the left limb, body and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.

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Free Abdomen

No omental masses, overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

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- Pinpoint dependent urinary bladder luminal mineral
- Mild chronic renal changes with non-obstructive nephroliths
- Borderline prominent left adrenal gland
- Enlarged irregular to nodular right adrenal gland-adenomatous change, benign hyperplasia, lipogranuloma, neoplasia i.e., pheochromocytoma possible
- Hepatopathy-subjectively benign, suggestive of vacuolar hepatopathy pattern
- Mild to moderate non-dependent inspissated gallbladder debris-not overtly consistent with mucocele criteria

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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A screening BP is advised to assess for evidence of hypertension which may allude to emerging right adrenal neoplastic criteria i.e., pheochromocytoma. Adrenal testing not overtly indicated given lack of reported clinical signs.

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This patient is suspected to be passing small amounts of mineral from the kidneys into the urinary bladder. Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered.

Hepatosupportive medications such as Denamarin and Ursodiol may prove beneficial.

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Ideally further assessment of the right adrenal gland including abdominal CT with possible right adrenalectomy as well as hepatic biopsy is recommended. If this is not possible and pending additional diagnostics, serial sonographic monitoring of the right adrenal gland with initial recheck in 4 weeks for evidence of progressive enlargement or parenchymal changes is recommended.

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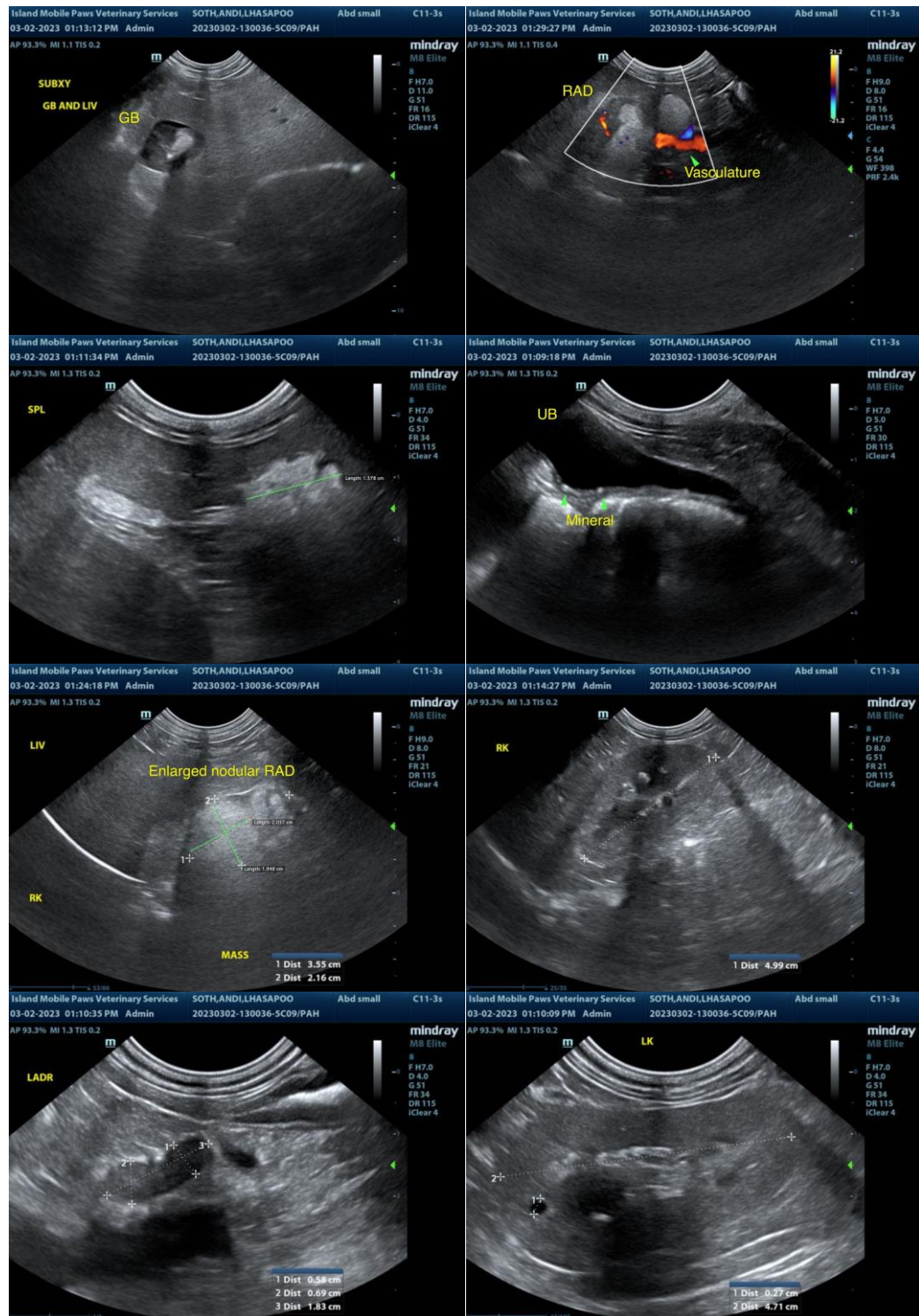
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I



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can be of any further assistance, please contact me.

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