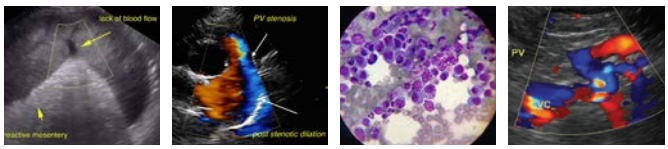
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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1-800-838-4268 info@sonopath.com

PATIENT
Daisy Lavaglio

SPECIES
Canine

BREED
Lhasa Apso

SEX
Spayed Ffemale

AGE
14 Years

WEIGHT
24 Pounds

INTERPRETED BY
Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY
Jessica Miller

HOSPITAL NAME
Tranquility VC

REFERRING VET
Dr. C

INVOICE
40879

DATE
8/30/22

PRESENTING CLINICAL SIGNS

Met check, cancer staging (Highly malignant Melanoma on ear) Current meds: Apoquel, Ketoconazole, Rimadyl

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended with primarily anechoic contents and occasional echogenic non-shadowing debris. Apical urinary bladder wall is diffusely thick (1.0-2.0 cm depending on view). Mucosa is hyperechoic and irregular. No masses are observed. No discrete cystoliths are present. However, there is mineral debris/sand both suspended and settled along the dependent wall. The trigone and visible pelvic urethra are normal thickness with a smooth mucosal surface.

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of pyelectasia, or infarcts observed. The left kidney measures 4.49 cm. The right kidney measures 5.31 cm. A hyperechoic band parallel to the corticomedullary border is present in both kidneys. Renal cortical cysts noted bilaterally. Non-obstructive areas of mineralization/nephroliths are noted in the left kidney.

Adrenal Glands

Adrenal glands are plump/swollen in size. Normal shape and contour are maintained without evidence of capsular invasion. However, capsular expansion is noted, caused by hyperechoic nodule in the caudal pole of the left gland and the crania pole of the right gland. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal. The left measures 2.8 cm long x 0.49 cm at the cranial pole and 1.63 cm at the caudal pole. The right measures 2.8 cm long x 1.6 cm at the cranial pole and 0.56 cm at the caudal pole.

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 were noted.

Liver

The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. Vascular and biliary tracts were of normal volume with no evidence of congestion. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.

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.

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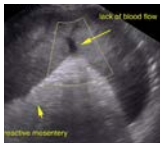
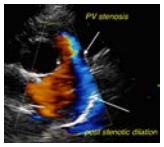
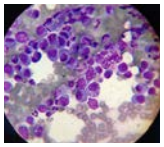
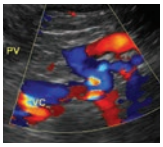

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Pancreas

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

PRIMARY FINDINGS

- **Bilateral adrenomegaly –** consistent with adrenal hyperplasia secondary to pituitary dependent hyperadrenocorticism vs stress or normal variant. Interpret in combination with clinical signs of hyperadrenocorticism.

- **Bilateral hyperechoic adrenal nodules –** Differentials include primary adrenal cortical adenoma or adenocarcinoma, pheochromocytoma, myelolipoma, adrenal hyperplasia secondary to pituitary disease or metastatic disease. Ultrasound alone cannot differentiate between functional and non-functional nodules and/or between benign and malignant disease. Small nodules without other evidence of abdominal disease (to suggest metastatic disease) and/or clinical signs (to suggest adrenal disease) are most often incidental and should be monitored.

- **Chronic Cystitis with mineral/sand debris -** Urinary bladder wall changes are most consistent with chronic cystitis. Infiltrative neoplasia cannot be ruled out but is considered less likely give the location and diffuse nature of the changes.

SECONDARY FINDINGS

- **Age related kidney changes with bilateral medullary rim sign -** This finding is of unknown clinical significance and can be a normal variant, often idiopathic. Medullary rim sign can be present with renal disease including FIP, lymphoma, hypercalcemic nephropathy, Leptospirosis, tubular disease, other and should be interpreted in combination with other more specific indications of kidney disease such as isosthenuria, proteinuria, azotemia, etc. This is a common incidental finding in patients with diabetes mellitus.

- Non-obstructive nephrolith in the left kidney and cortical cysts in both kidneys

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is no ultrasonographically visible evidence of metastatic disease in these images currently. Therefore, recommendations include following up with the reported melanoma therapy as directed by this patient's oncologist. In the meantime, given the ultrasound changes, Urinalysis and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended.

If clinical signs of hyperadrenocorticism are present such as PU/PD, polyphagia, etc., testing could be considered in the form of a low-dose Dexamethasone suppression test. However, without clinical signs, testing is not necessarily indicated at this time.

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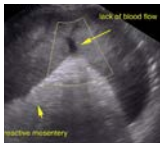
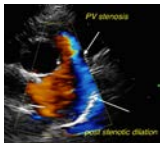
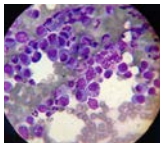
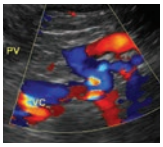

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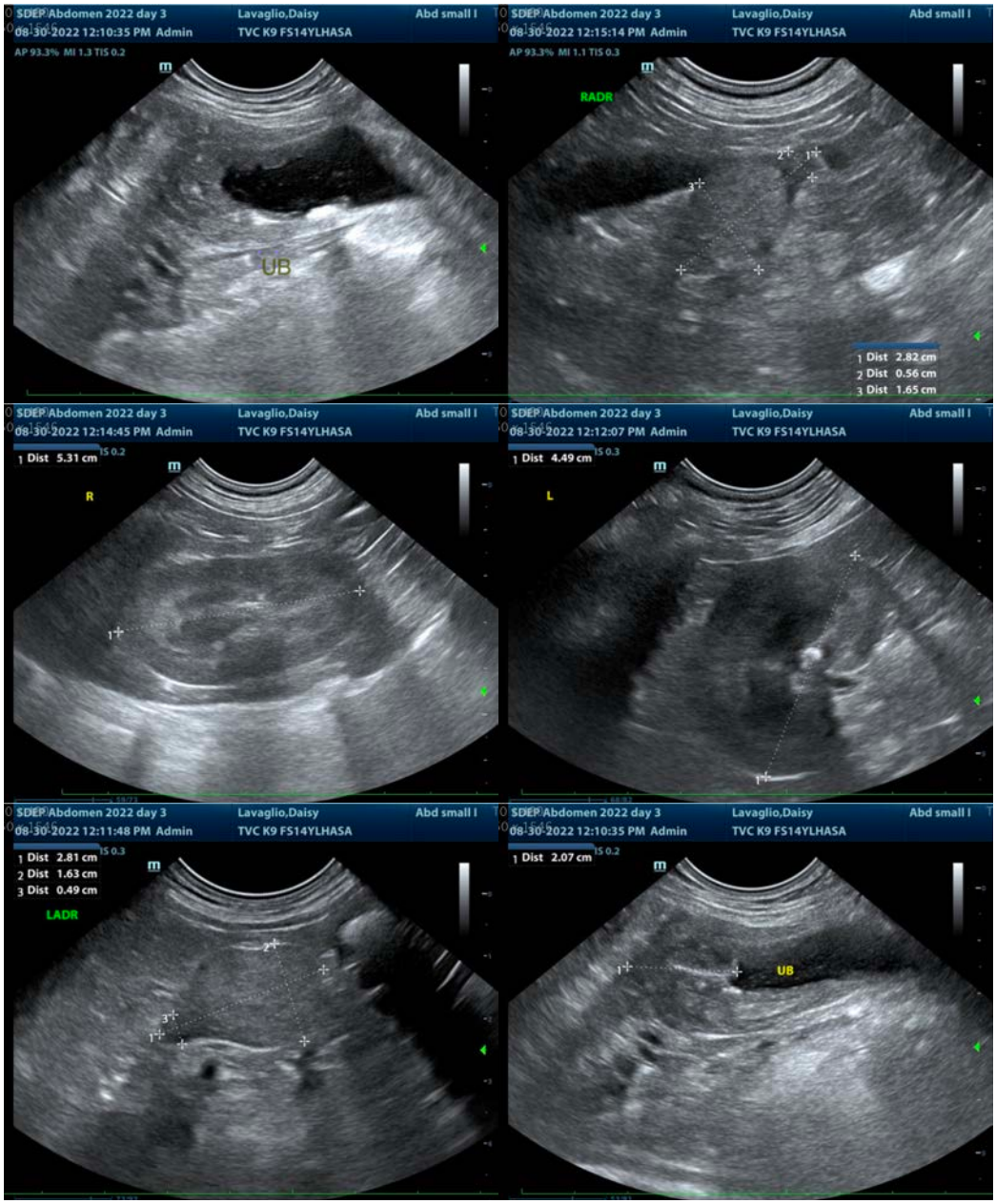

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com

info@SonoPath.com