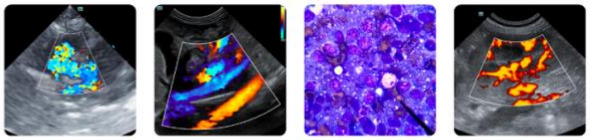


PATIENT

Lucky Puente

SPECIES

Canine

BREED

Terrier X

SEX

Neutered Male

AGE

13 Years

WEIGHT

7 kg

INTERPRETED BY

Eric Lindquist, DMV, DABVP (CFM), Cert. IVUSS

IMAGING PERFORMED BY

Catherine Alexander, LVT

HOSPITAL NAME

NorthStar VS

REFERRING VET

Dr. Puente

INVOICE

36230

DATE

3/14/26

PRESENTING CLINICAL SIGNS

Patient has had severe diarrhea and anorexia for 2 days. On aFAST a large amount of gallbladder debris was noted.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes were noted. Ureteral papillae were normal.

The **prostate** was slightly heterogenous with a hypoechoic nodule (0.75 cm x 0.5 cm).

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some moderate age-related loss of curvilinear patterns regarding the capsule and C/M junction. A moderate amount of remodeling was noted in the kidneys. The cortices presented largely uniform texture with some increased echogenicity expected for this age patient. Medullary structure differed distinctly from that of the cortex, and no evidence of pelvic dilation was present. Occasional cortical cysts were noted. The right kidney measured 4.06 cm. The left kidney measured 4.06 cm.

Adrenal Glands

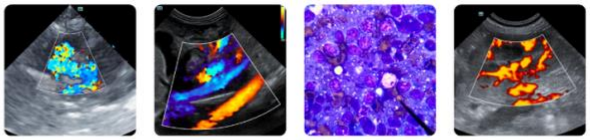
Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The right adrenal gland measured 0.6 cm at the cranial pole and 0.54 cm at the caudal pole. The left adrenal gland measured 0.6 cm at the caudal pole and 0.33 cm at the cranial pole.

Spleen

The **spleen** presented discrete and diffuse hypoechoic micronodular parenchyma. The capsule was generally smooth without noticeable impingement from within the spleen or from pathology in the adjacent abdomen. The splenic vasculature demonstrated normal volume without signs of congestion or significant contraction. These changes are consistent with age related benign nodular hyperplasia. However, early hemangiosarcoma, lymphoma or mast cell neoplasia could not be entirely ruled out. Fine needle aspirate or biopsy following coagulation panel would be ideal especially of any weight loss is an issue. Otherwise, follow up ultrasound in 3-4 weeks to track these changes would be a more conservative approach. The largest nodule in the spleen measured 0.65 cm. The nodules were nondisruptive.

Liver

The **liver** revealed macronodular changes with increased portal markings. The **gallbladder** was mildly over distended with suspended and dependent debris, yet not to the level of emerging mucocele, yet sludge appears to be mildly excessive. No adjunctive inflammation was noted.



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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. 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.

Free Abdomen

The mesenteric **lymph nodes** presented normal length to width ratio with slight, swollen contour. There was no loss of parenchymal detail. This is most consistent with reactive lymphadenitis or lymphatic hyperplasia.

ULTRASONOGRAPHIC FINDINGS

- Micronodular hyperplasia of the spleen
- Macronodular hepatic changes with increased portal markings
- Minor excessive gallbladder debris, not to the level of mucocele formation
- Slightly heterogenous prostate with a hypoechoic nodule
- Reactive mesenteric lymph nodes
- Moderate age-related renal changes with occasional cortical cysts

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

FNA of the spleen and liver are indicated for further definition, yet subjectively they appear benign. This is a largely geriatric abdomen with nodular hyperplasia liver pattern. Bile acid profile could be considered of the liver, given the diffuse changes, yet FNA of the spleen and liver (25-gauge on the spleen/22-gauge on the liver) is recommended for further definition. Structurally the GI tract appeared unremarkable.

Occult parasitism, dietary indiscretion, dietary intolerance, antibiotic responsive colitis, intestinal dysbiosis and occult Addison's should all be considered as causes of diarrhea in this patient. A hydrolyzed diet trial may be in this patient's best interest +/- probiotics. 24-hour NPO and reintroduction of bland diet indicated. I recommend a baseline cortisol or ACTH stimulation test, a fresh fecal smear and fecal floatation analysis if not already performed. Note that recent research has shown that indiscriminate use of antibiotics may actually cause harm. Most acute cases of diarrhea will respond to probiotic therapy, fiber, and gastrointestinal diets over the next 3-5 days.

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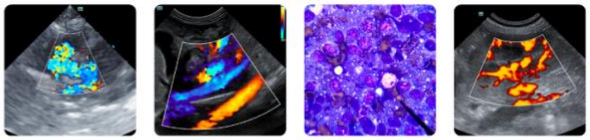

Clinical Sonography & Telecytology
Educational Teleconsultation Services™

SonoPath.com info@sonopath.com 1.800.838.4268

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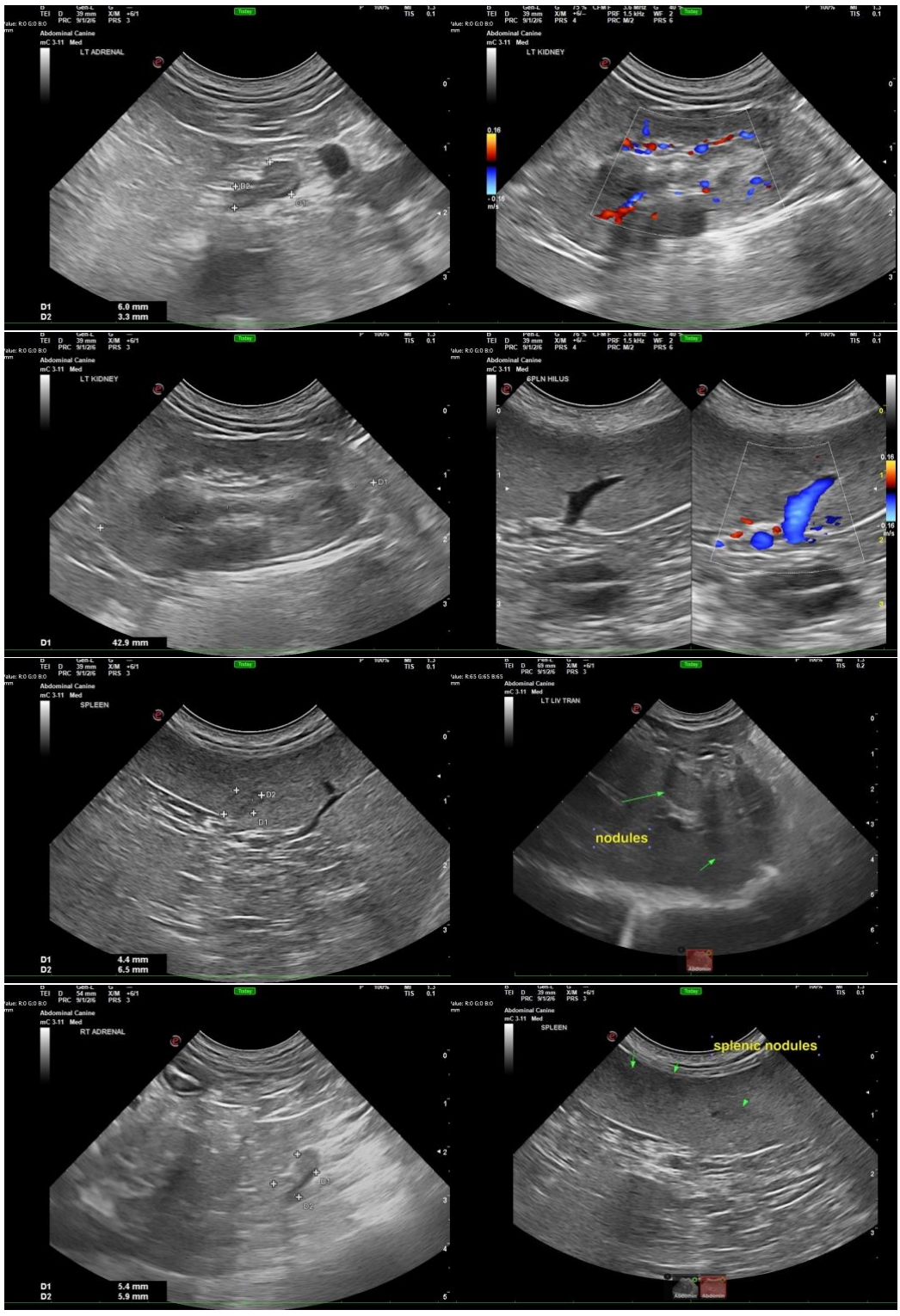

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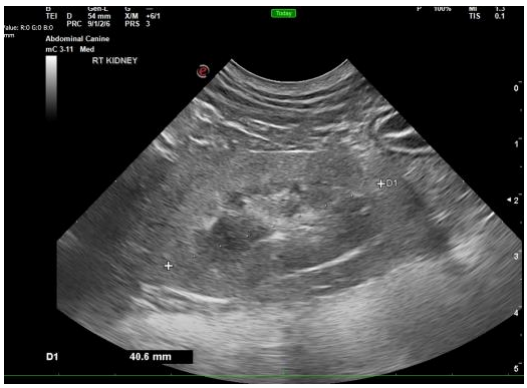

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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(CFM), Cert. IVUSS,
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info@SonoPath.com