



**PATIENT**

Izzy King

**SPECIES**

Canine

**BREED**

Schnauzer Mix

**SEX**

FS

**AGE**

11.5yr

**WEIGHT**

9.2lb

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Jennifer Todd

**HOSPITAL NAME**

Lambs Gap Animal  
Hospital

**REFERRING VET**

Dr. Cynthia Kinney

**INVOICE**

13661ag

**DATE**

05/01/2023

**PRESENTING CLINICAL SIGNS**

Izzy is an eleven year old, FS, Schnauzer mix with a history of anemia (non-regenerative). Izzy is anemic again and her WBC count is low again, with the history of anemia back in 10/22 and now again, concerned for underlying disease r/o cancer, bone marrow suppression, bleed somewhere, it is noted that both episodes of anemia were seen with general anesthesia and not with the sedation (splenic contraction with sedation?), do not think the general anesthesia caused the anemia, recommend 3 view chest rads and AUS, will need sedation-can do Zenalpha, discussed with JLT, if these diagnostics normal then would recommend referral for evaluation/bone marrow disease work up if owner wants to further explore cause of anemia/leukopenia \*only chronic med is fluoxetine

Abnormal PE/Chem/CBC/UA Results: 4/18/22: CBC, Chemistry attached as a pdf FYI

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3 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.

Normal size and subtle asymmetrical margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with variable echogenicity and mild to moderate loss of corticomedullary symmetry and definition expected for the age of the patient. Pinpoint areas of corticomedullary dystrophic mineral were present. No evidence of pelvic dilation was present. The left kidney measured 3.9 cm in length. The right kidney measured 4.0 cm in length.

The area of the iliac trifurcation was free of pathology including no evidence of medial, iliac or sublumbar lymphadenopathy or masses.

**Adrenal Glands**

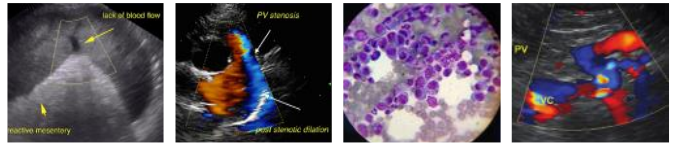
The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.43 cm width at the caudal pole and 1.7 cm length. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.46 cm width at the caudal pole and 2.0 cm length.

**Spleen**

The spleen exhibited overall normal size with primarily symmetrical contour. Subtle parenchyma heterogeneity was present. A solitary subtly expansive hypoechoic nodule was present in the medial parenchyma with discrete distortion of the associated medial capsule. The nodule measured 0.87 cm in diameter.

**Liver/Gallbladder**

The liver presented normal 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 moderate coarse echotexture and evidence of remodeling. Focal to intermittent non-disruptive hyperechoic nodules were present, an example measured 0.68 cm in diameter. The capsule of the liver was symmetrically rounded in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with primarily



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anechoic luminal content and minor non-organized echogenic debris. 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.

**BREED**

Schnauzer Mix

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

**Pancreas**

**SEX**

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

**Free Abdomen**

**AGE**

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

**ULTRASONOGRAPHIC FINDINGS**

**WEIGHT**

9.2lb

- Chronic renal changes with mild variable corticomedullary echogenicity, pinpoint corticomedullary mineral.
- Nonspecific splenic nodule.
- Benign hepatic nodule-sonographically consistent with benign lipogranuloma or nodular hyperplasia.
- Gallbladder debris (non-mucocele).
- Mild pancreatic remodeling.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Aside from the splenic nodule, largely a geriatric abdomen with no overt evidence of significant abdominal visceral pathology as a definitive cause of the patient's clinical signs.

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The splenic nodule is non-specific with focal hyperplasia, hematopoiesis, focal splenitis, small hematoma or similar suspected, potential for emerging nodular neoplastic criteria thought less likely yet cannot be definitively excluded. Assuming normal clotting status and using a 25g needle, a splenic parenchyma and nodule FNA for screening cytology is warranted for further assessment. Sonographic monitoring of the splenic nodule for evidence of progression or additional splenic nodular changes with initial recheck in 4 weeks would be a more conservative approach.

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Three view chest radiographs are recommended if not done to assess for occult thoracic pathology.

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Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered.

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For an additional charge, internal medicine consult can be utilized through SonoPath.com. You can select the internal medicine drop down at <http://spa.sonopath.com/>.

One of the world's top internists & SonoPath associate Dr. Remo Lobetti BVSc, MMedVet, PhD, DECVIM can evaluate your case through SonoPath. <https://sonopath.com/resources/sonopath-services/internal-medicine-teleconsultation-services>

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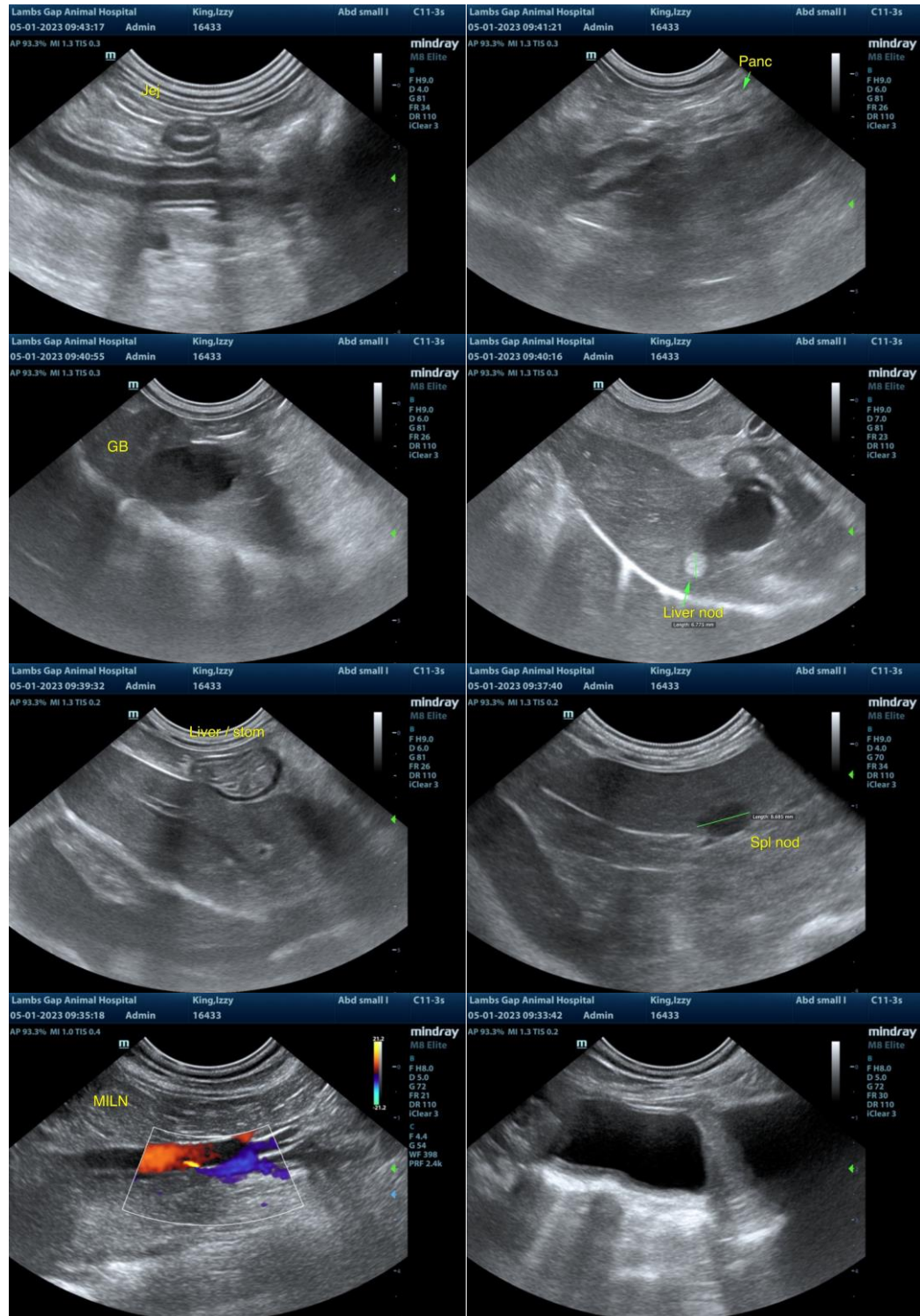
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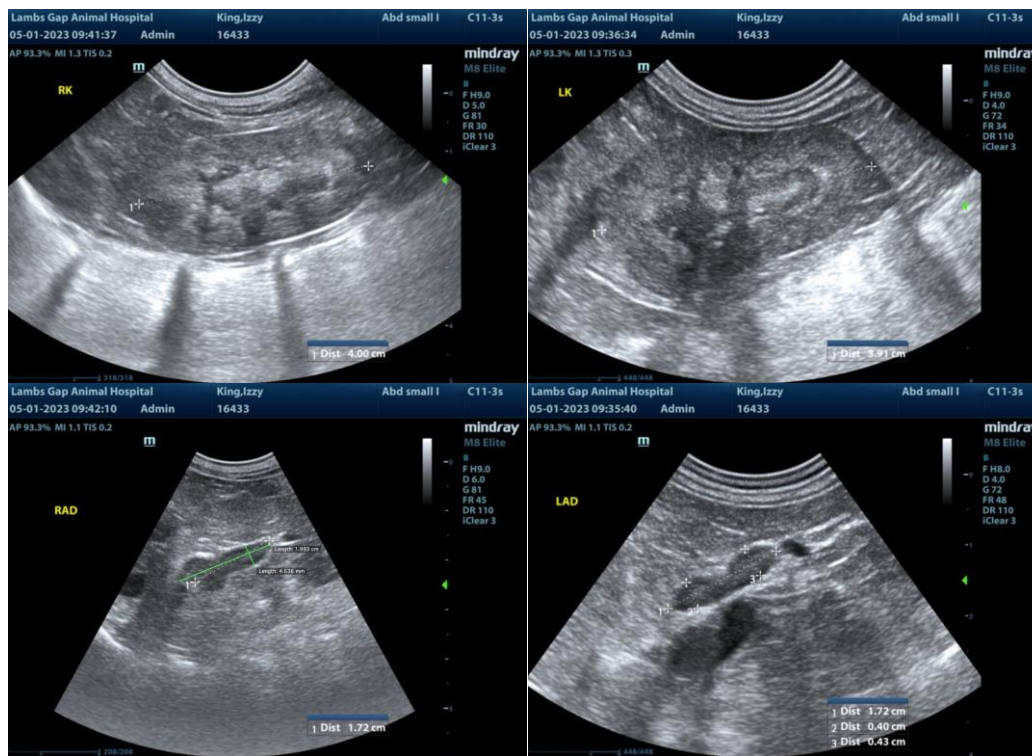
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine/Feline Practice)  
[mac.daniel@sonopath.com](mailto:mac.daniel@sonopath.com)

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