



PATIENT PRESENTING CLINICAL SIGNS

PATIENT
Arlo Boyes

SPECIES
Feline

BREED
Russian Blue

SEX
Neutered male

AGE
18 years

WEIGHT
3.3 kg

INTERPRETED BY
Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY
Dr. Iacovides

HOSPITAL NAME
Tuxedo AH

REFERRING VET
Dr. Dorval

INVOICE
43462

DATE
3/22/23

History: During recent senior wellness exam rDVM palpated possible mass. Cat's weight is stable. Appetite is picky. Bm's are soft and sometimes outside litterbox. Eats Hills i/d dry with other foods mixed in. Had urinary obstruction 2years ago.)

Abnormal PE/Chem/CBC/UA Results: Abdominal palpation hepatomegaly/abdominal mass (cranial abdomen) Stifles feel thickened, possible djd as he has trouble jumping BCS 3/9 Heart murmur grade 1/6 T (101.3F/38.5C), P (220), R (normal), MM (pink), Patient attitude/demeanor (bright) CBC: HCT 0.215 (0.3-0.5) (Note was 0.21 in October '22) Retic 0.3% WBC 25.8 (2.87-17) (was 23.5 in October '22) Neutr 19.2 (2.3-10.29) (was 19.0 in October '22) Mono 1.07 (0.05-0.67) (was 0.81 in October '22) Chem last run in Oct '22: ALT 743 u/l (12-130) Gluc 10.9 mmol/l (3.95-8.84) UA last run in Oct '22: USG 1.014

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 was noted. Ureteral papillae were normal.

The **kidneys** presented a relatively uniform cortical hyperechogenicity when compared to the renal medulla, spleen and liver. No overt masses were noted. The ureters were not visible and assumed to be normal. These changes are most consistent with chronic interstitial nephritis yet infiltrative disease could not be entirely ruled out without biopsy though neoplasia is not suspected. Loss of corticomedullary definition was noted. The left kidney measured 3.4 cm. The right kidney measured 3.85 cm with slight pyelectasia.

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 0.4 cm. The left adrenal gland measured 0.41 cm.

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 was noted.

Liver

The **liver** in this patient revealed a moderately complex microcystic and parenchymal mass that measured 4.5 cm and occupied the left medial liver and impinged upon the pylorus, gallbladder and common bile duct. Heterogenous nodular changes were noted throughout the liver. The gallbladder wall



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| PATIENT | was slightly echogenic and thickened measuring 0.23 cm with debris, over distension and non-obstructive calculi. The common bile duct was mildly thickened and measured 0.25 cm. |
| Arlo Boyes | |
| SPECIES | <i>Gastrointestinal</i> |
| Feline | The gastrointestinal tract revealed minor variable thickening and echogenic submucosal changes most consistent with low grade end result of chronic GI disease such as IBD and may be related to malassimilation of nutrients if any weight loss is present. No obvious neoplastic patterns were noted and luminal content as unremarkable. |
| BREED | |
| Russian Blue | |
| SEX | <i>Pancreas</i> |
| Neutered male | The pancreas is heterogenous, hypoechoic and irregular with enhanced surrounding mesentery. This is suggestive for pancreatitis. |
| AGE | <i>Free Abdomen</i> |
| 18 years | A slight amount of free fluid was noted between the liver lobes. |
| WEIGHT | ULTRASONOGRAPHIC FINDINGS |
| 3.3 kg | Chronic cholangitis liver pattern with cyst adenomatous type mass. |
| INTERPRETED BY | Biliary cystadenoma versus biliary carcinoma are possibilities. |
| Eric Lindquist, DMV DABVP, Cert. IVUSS | Nodular hyperplasia versus carcinoma of the liver or concurrent cholangitis with biliary calculi that are non-obstructive. |
| IMAGING PERFORMED BY | Moderate chronic degenerative renal changes. Concern for emerging renal failure. |
| Dr. Iacovides | |
| HOSPITAL NAME | <u>INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS</u> |
| Tuxedo AH | The mass is potentially resectable. An argument can be made for chronic benign changes given the age of the patient. However, I am most concerned about the liver changes and the slight free fluid between the liver lobes. This may be owing to chronic cholangitis; however, FNA of the parenchymal portion of the primary mass and liver nodules would be ideal. Surgical intervention with potential mass resection and cholecystectomy can also be justified; however, it is dubious utility given the patient's age. CT evaluation for surgical planning would be ideal. WBC elevation may be justified from the biliary disease, pancreas or potential UTI if there is any evidence of that present. Given the isosthenuria washout effect upon inflammatory sediment may be an issue. The prognosis is guarded. |
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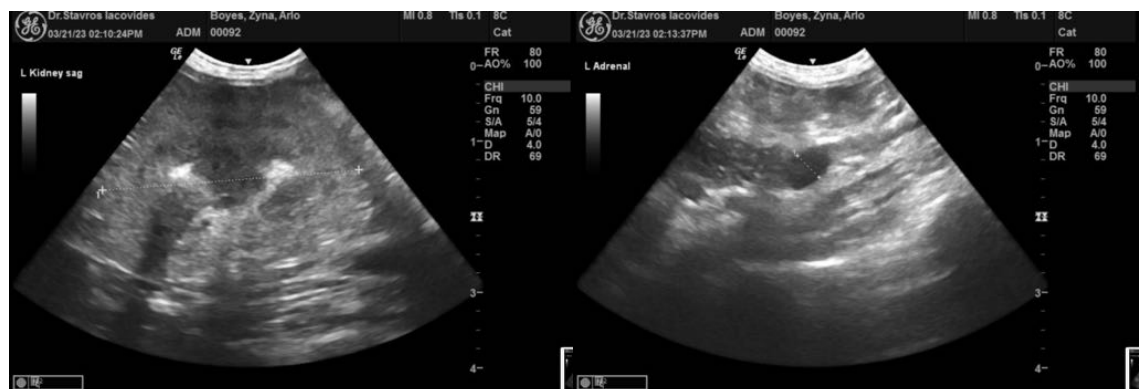
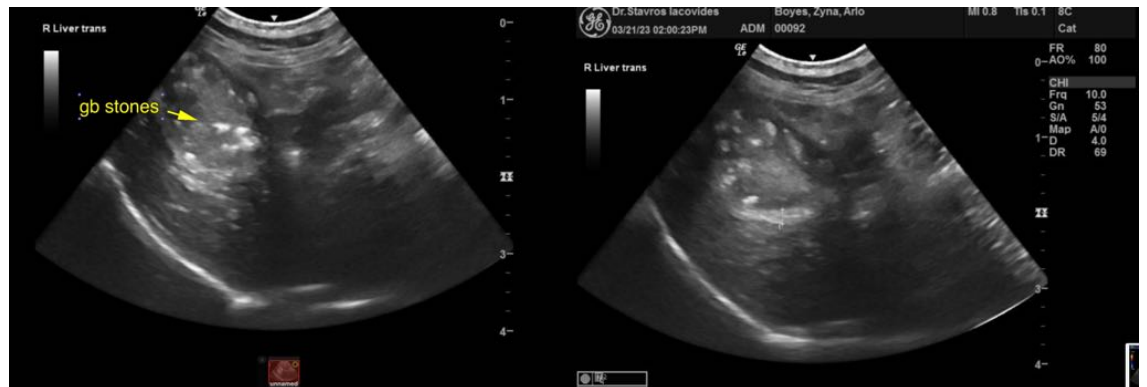
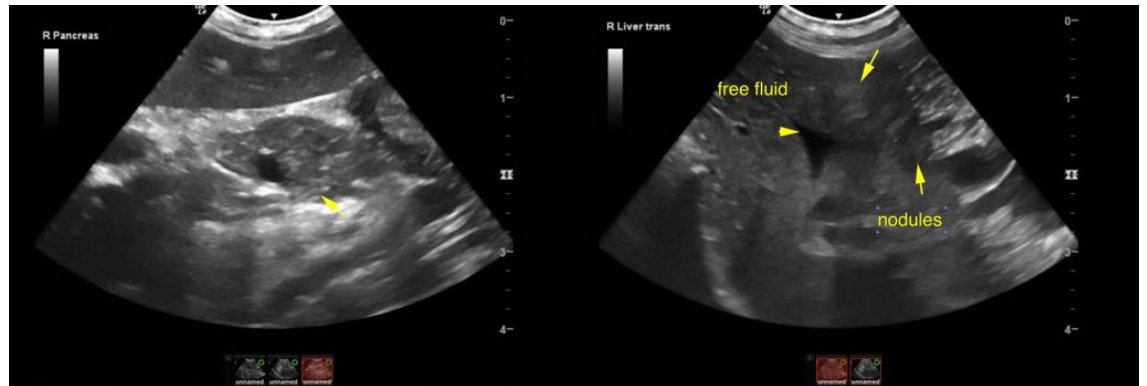
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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