



PATIENT

Molly Martinson

SPECIES

Canine

BREED

Shih Tzu X

SEX

Spayed Female

AGE

12 Years

WEIGHT

24 Pounds

INTERPRETED BY

Eric Lindquist, DMV

DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Christina Sitton

HOSPITAL NAME

Shewood Family PC

REFERRING VET

Dr. Christina Sitton

INVOICE

42397

DATE

10/27/22

PRESENTING CLINICAL SIGNS

presented for episode of collapse and congestion

Abnormal PE/Chem/CBC/UA Results: PE: Abdominal distension, possible PU/PD, increased panting
Chemistry SDMA 16 (0-14) Potassium 5.7 (4-5.4) Chloride 102 (109-119) Na/K 26 (28-37) Bicarb 28 (13-27) ALT 167 (18-121) ALP 3159 (5-160) GGT 33 (0-13) Lipase 308 (0-250) CBC: wnl T4: wnl
URINALYSIS: UA SP GRAVITY 1.014 PH 7.5 PROTEIN 1+ otherwise wnl Lepto antibody by microagglutination: negative

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 pelvic urethra was imaged 3.0 cm beyond the cystourethral junction.

The **kidneys** presented thickened irregular cortices. Occasional cortical cyst noted. Moderate degenerative changes with multifocal mineralization. Minor pyelectasia noted in the right kidney. The right kidney measured 4.6 cm with minor cortical infarcts. The left kidney measured 4.0 cm.

Adrenal Glands

The **left adrenal gland** revealed a complex mixed echogenic mass with mixed hyperechoic lipogranulomatous type changes. The mass measured 4.1 cm x 4.9 cm and appeared encapsulated without capsular escape or vascular invasion.

The **right adrenal gland** revealed a mineralizing mass measuring 5.2 cm x 3.3 cm. Capsular expansion noted. The right adrenal appeared to be bilobed with a primary mass and a secondary nodular mass cranially. The vena cava appeared to be free of evident pathology.

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. Hyperechoic lipogranulomatous nodules noted. 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** was uniformly swollen with minor, excessive gallbladder debris and over distension with dependent and suspended bile without evidence of overt mucocele formation. However, excessive sludge was present. Gallbladder wall was slightly echogenic, not pathological. The liver presented coarse architecture with mildly increased portal markings and subtle, mixed echogenic changes. This is consistent with vacuolar hepatopathy and some level of remodeling and history of inflammatory component. There was no overt suspicion of neoplasia. Stable fibrotic type presentation.

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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Pancreas

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The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Some parenchymal remodeling, however, with mild deviation from curvilinear normalcy was observed. Pancreatic duct and capsular irregularities were present consistent with age related changes. If pain upon imaging (+ Murphy sign) was present or if the patient is focally painful in subxyphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

BREED

Shih Tzu X

Free Abdomen

A large amount of abdominal fat was noted in this patient.

SEX

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ULTRASONOGRAPHIC FINDINGS

- Bilateral adrenal masses – adenomas, adenocarcinomas, less likely pheochromocytomas or myelolipomas.
- Vacuolar hepatopathy pattern
- Age related renal changes
- Pancreatic remodeling

AGE

12 Years

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Both adrenals appear resectable. No vascular invasion noted. Full adrenal workup warranted with blood pressure measurements. Medical management is likely the best option. If the sonographer is comfortable with the procedure, 25-gauge ultrasound guided FNA of both masses could be considered for further definition. However, given the bilateral masses and that bilateral adrenalectomy is not an option, medical management may be necessary.

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For an additional charge an internal medicine consult can be utilized through [Sonopath.com](http://sonopath.com). You can select the internal medicine drop down at <http://spa.sonopath.com/>.

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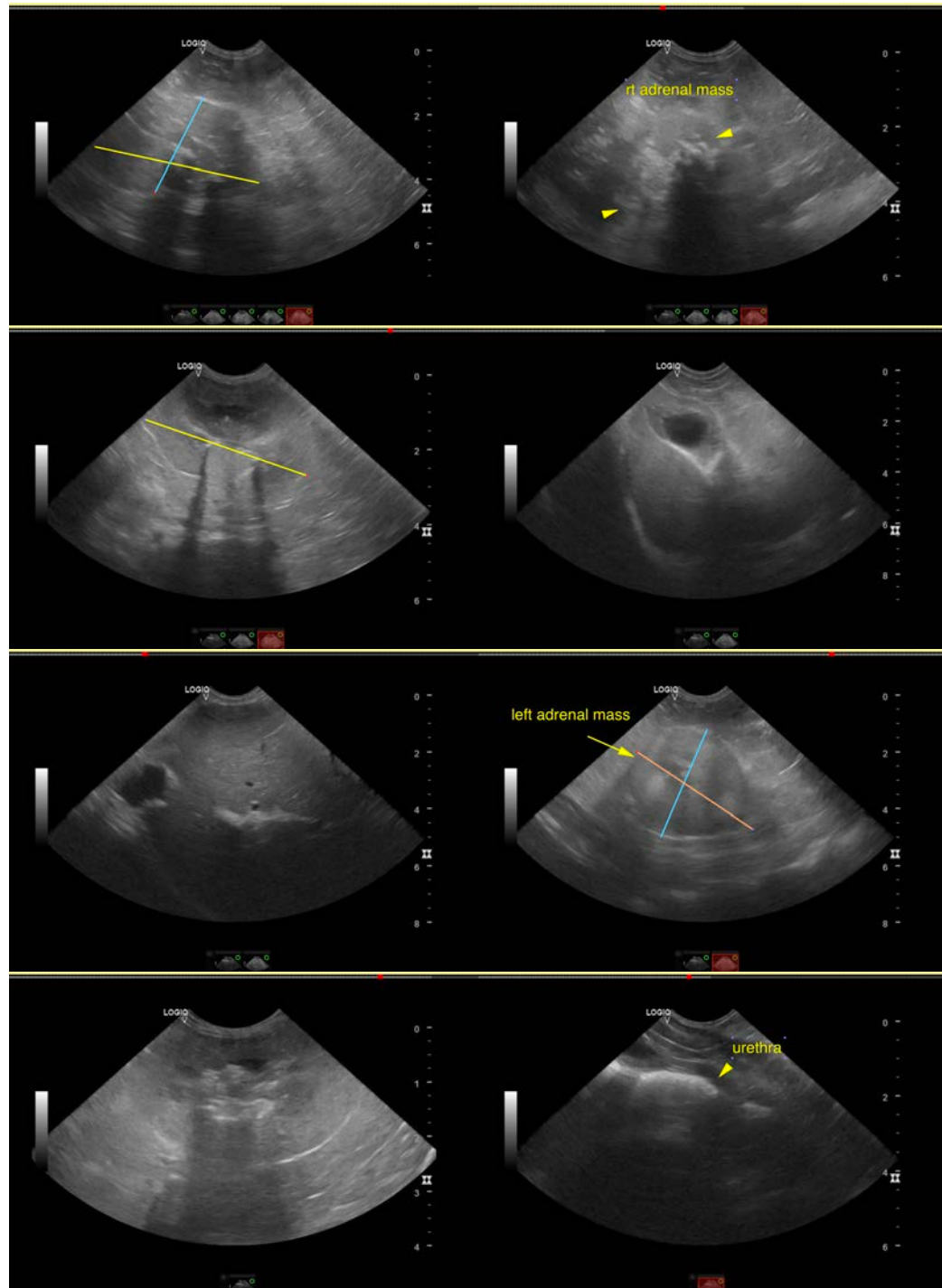
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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

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