



**PATIENT**

Sheba Kubik

**SPECIES**

Canine

**BREED**

Shih Tzu X

**SEX**

Spayed Female

**AGE**

13 Years

**WEIGHT**

15.6 Pounds

**INTERPRETED BY**

Eric Lindquist, DMV

DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Heather Brenner

**HOSPITAL NAME**

Riverside AC

**REFERRING VET**

Dr. Heather Brenner

**INVOICE**

36277

**DATE**

3/17/22

**PRESENTING CLINICAL SIGNS**

Congestive Heart murmur treated with Furosemide only since Dec 2020. Suspicious Hemangiosarcoma subcutaneous neck aspirated March 3, 2022. Murmur louder and worsening coughing. Started Cardiac medication beyond furosemide. Enalapril 2.5mg 1 BID, Furosemide 12.5mg 1.5 BID, Spironolactone 25mg 1/2 BID, Pimobendan 5mg 1/2 BID. Started anorexia, vomit, diarrhea 10 days after starting cardiac medication.

Abnormal PE/Chem/CBC/UA Results: Radiographs March 3, 2022 cardiomegally, Pulmonary edema, soft tissue density cranial left abdomen. Mild ALT elevation 131 (10-125) and mild stable azotemia, SDMA elevated 33 (0-14). March 17, 2022 Recheck radiographs, less pulmonary edema, less cardiomegally, no coughing, soft tissue density still present cranial left abdomen. Azotemia worsened! SDMA 40 (0-14), BUN 120 (7-27), Creat 5.0 (.5-1.8). Elevated liver ALT 560 (10-125), ALKP 979 (23-212), GGT 20 (0-11).

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The **urinary bladder** was overdistended with suspended debris. Bladder wall was unremarkable. The pelvic urethra was imaged 2.0 cm beyond the cystourethral junction. The iliac trifurcation was unremarkable.

The **kidneys** presented a relatively uniform cortical hyperechogenicity when compared to the renal medulla, spleen and liver. No overt masses were noted. Corticomedullary definition was nebulous and the ratio favored the cortex slightly. 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. The right kidney measured 3.96 cm with pyelectasia noted. The left kidney measured 3.85 cm. Corticomedullary mineralization noted. Blood flow to the kidneys appeared to be mildly subnormal.

**Adrenal Glands**

The **right adrenal gland** was 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 0.80 cm at the cranial pole and 0.60 cm at the caudal pole.

The **left adrenal gland** was slightly irregular and heterogeneous, visualized obliquely. The left adrenal gland measured 1.46 cm x 0.47 cm at the cranial pole and 0.50 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** revealed a mixed hypoechoic cystic structure measuring 3.0 cm x 2.0 cm in the left medial liver. Other cysts were noted. The gallbladder was unremarkable. Minor heterogeneous parenchymal changes. Minor regional hepatic lymphadenopathy noted. Irregular swelling noted in the liver as well.



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**Gastrointestinal**

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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.

**SEX**

Spayed Female

**ULTRASONOGRAPHIC FINDINGS**

- Hepatic cyst and nodules – suspect abscessation in the left medial liver
- Moderate degenerative renal changes

**AGE**

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Ultrasound guided drainage warranted as well as FNA of the general liver and nodular changes. Culture and cytology indicated.

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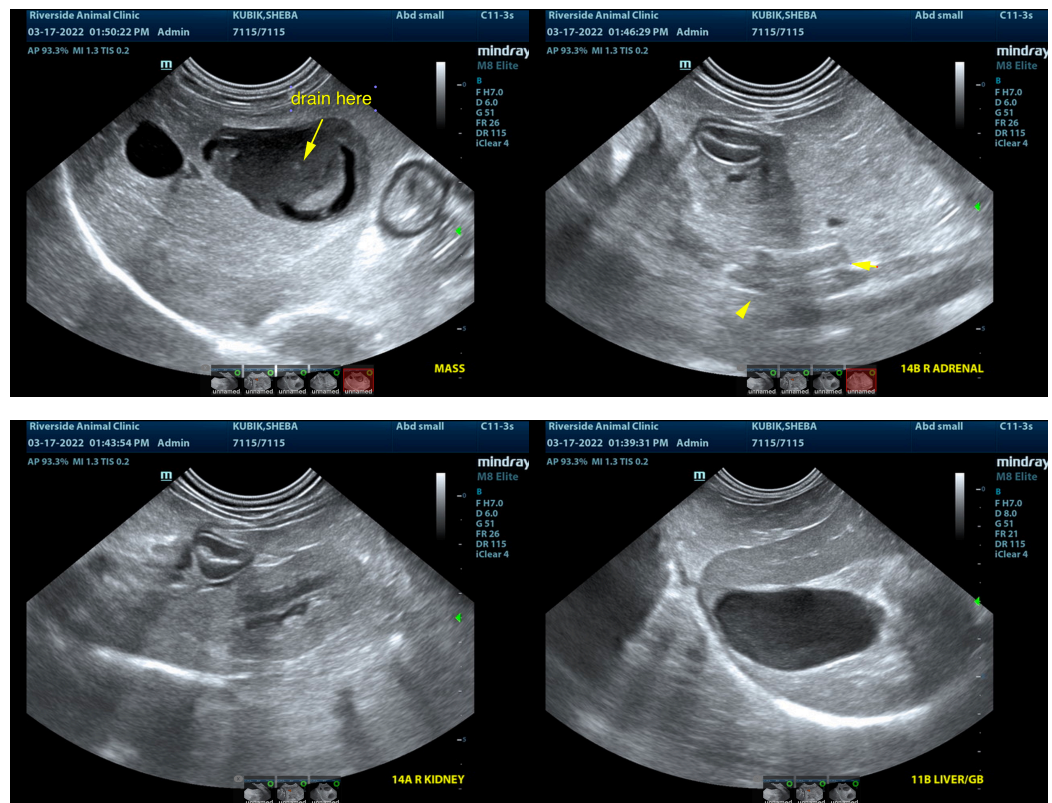
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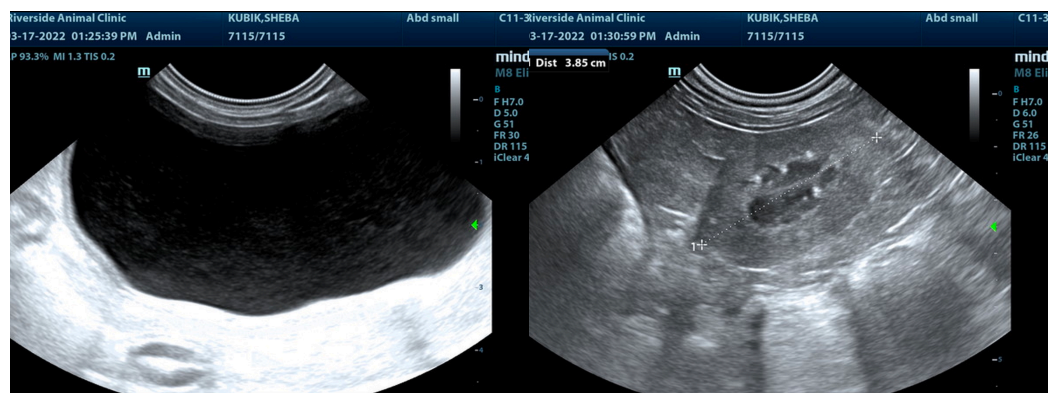
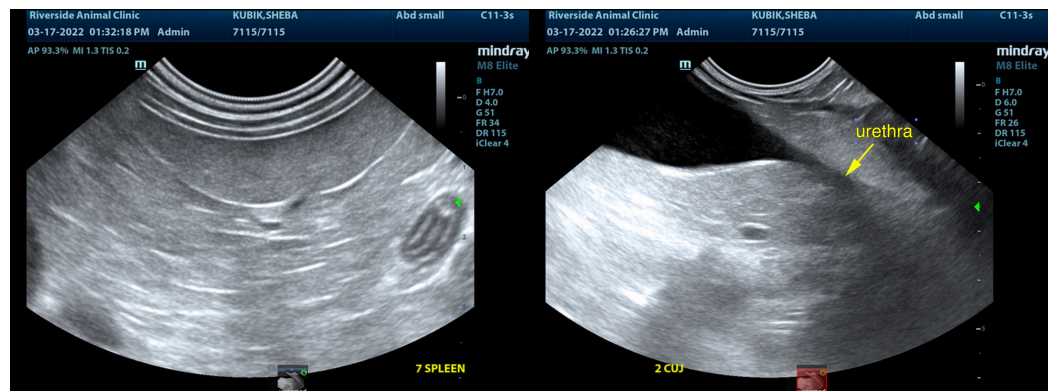
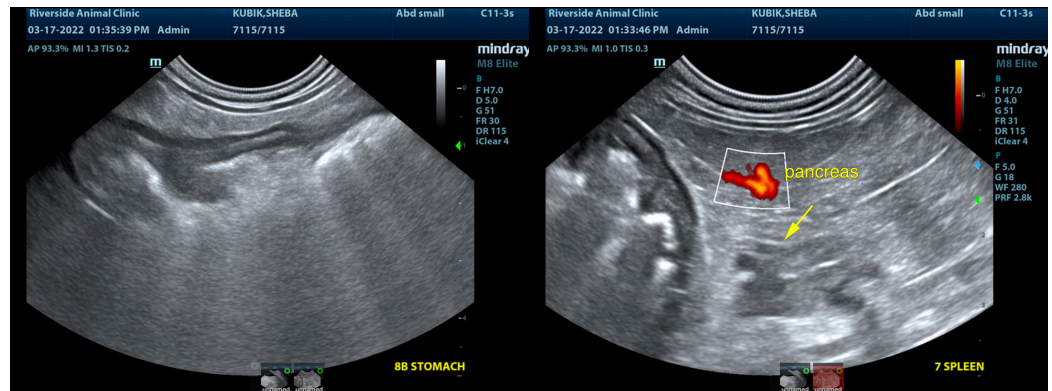
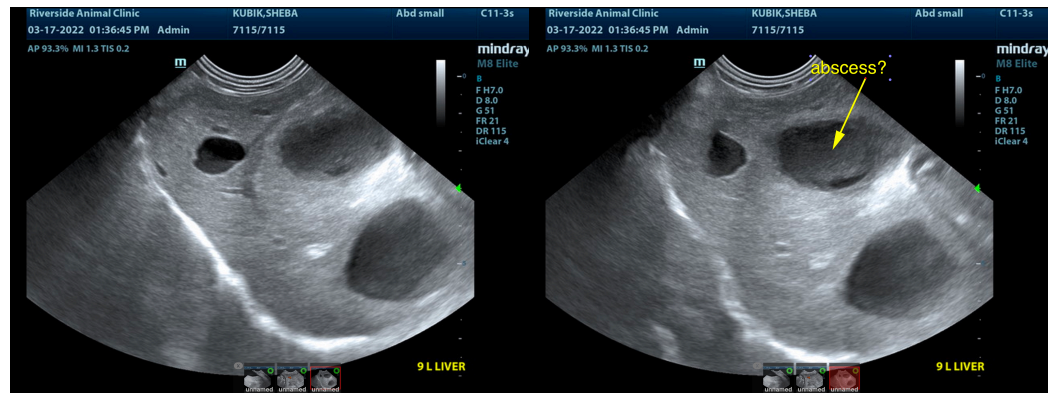
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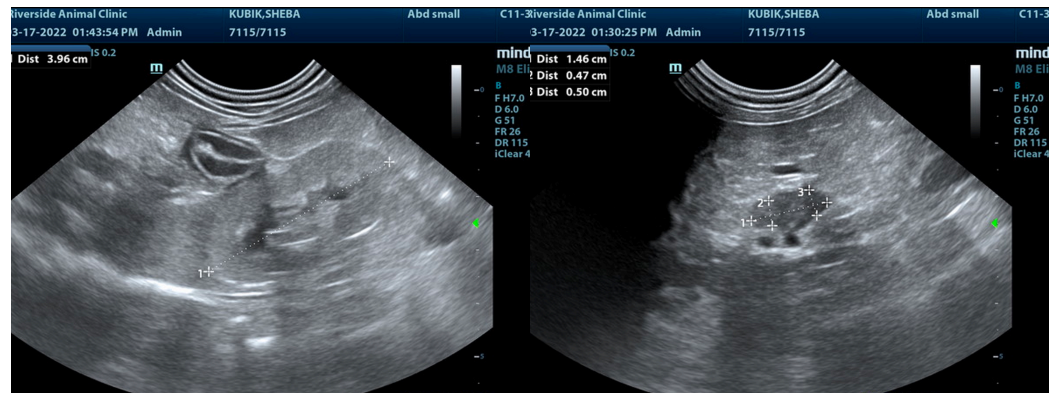
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

[info@SonoPath.com](mailto:info@SonoPath.com)