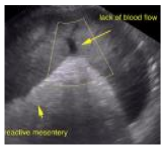
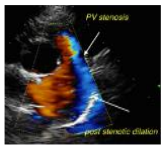
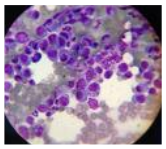
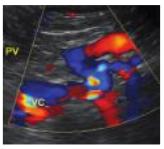
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™





SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Roxy Irons

SPECIES

Canine

BREED

Terrier Mix

SEX

Spayed Female

AGE

14 Years

WEIGHT

8.8 kg

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Munoz

HOSPITAL NAME

Lone Mtn AH

REFERRING VET

Dr. Munoz

INVOICE

15100

DATE

5/6/22

PRESENTING CLINICAL SIGNS

History: History of elevated liver values. P started on Denamarin and Doxycycline for resistant UTI. P stopped eating and started vomiting after starting meds so O stopped Denamarin. BW rechecked about a month after and liver values increased significantly. O reports that they travel often to Arizona and stay by the river. O reports that p ate a little this morning.

Abnormal PE/Chem/CBC/UA Results: chem (3/30/2022): ALT 198, ALP 345, CHol 406, Tryg 377 chem (5/5/2022): AST 67, ALT 603, ALP 1013, GGT 40, BUN 43, Chol 347 cbc wnl Abdominal radiographs 3/30/2022: Radiographic Findings: Radiographs of the abdomen were submitted. The liver is moderately enlarged and somewhat rounded where it extends beyond the costal arch. There is a rounded mass-effect seen on the VD view in the right cranial abdomen in the region of the duodenum/pancreas or right side of the liver. The stomach is mildly distended with gas. The small bowel is normal and minimally distended. The entire small bowel is of similar diameter. The colon contains gas and poorly defined feces. The spleen is normal. The urinary bladder is minimally distended. On the VD view there is an irregularly shaped soft tissue opacity seen in the region of the left kidney. There is punctate mineralization in this area. The right kidney is ill-defined. I do not see any abnormalities in the TL spine. No evidence of calculi are seen in the urinary bladder or region of the urethra. Radiographic Conclusions/Recommendations: Suspect small misshapened left kidney with a small stone. Chronic renal disease is possible however I cannot definitively rule out renal neoplasia. The right kidney is ill-defined. Moderate hepatomegaly is present and a possible mass in the right cranial aspect of the liver or pancreas. An ultrasound of the liver, pancreatic region and kidneys appears to be indicated. Evaluation of the urinary bladder with ultrasound is also recommended.

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.

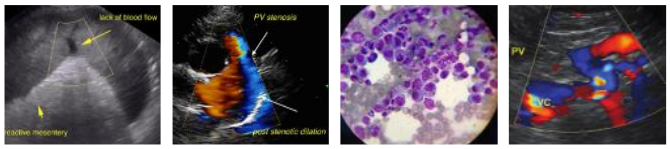
The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some moderate age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex. The right kidney revealed an infarct at the caudal pole. Trace pyelectasia noted in the left kidney. Mineralization was noted in the left kidney, nonobstructive. Both kidneys measured approximately 3.8 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. The left adrenal gland measured 0.6 cm.

Spleen

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Roxy Irons

SPECIES
Canine

BREED
Terrier Mix

SEX
Spayed Female

AGE
14 Years

WEIGHT
8.8 kg

INTERPRETED BY
Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY
Dr. Munoz

HOSPITAL NAME
Lone Mtn AH

REFERRING VET
Dr. Munoz

INVOICE
15100

DATE
5/6/22

The **spleen** was largely smooth with subtle heterogeneous parenchymal changes while maintaining normal echogenic relationship to the liver and kidney. These changes are consistent with normal age-related alteration. The capsule was 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. No evidence of active acute or chronic inflammatory, neoplastic, or infarctual changes were noted. This is a mild change. Hyperechoic lipogranuloma was noted.

Liver

The **liver** revealed slight increased portal markings. Normal size and vascularity noted in the liver. Minor excessive gallbladder debris noted yet structurally unremarkable.

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. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted. Soft stool was noted in the colon.

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.

ULTRASONOGRAPHIC FINDINGS

- Benign hepatopathy, mild inflammatory hepatopathy pattern
- Excessive gallbladder debris, not to the level of mucocele formation
- Geriatric abdomen with renal infarcts and mineralization otherwise

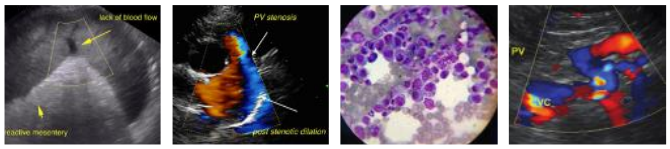
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Regarding the pyelectasia in the left kidney, given the recurrent UTI issue in this patient, embedded infection within the kidney may be cause for recurrence. FNA of the liver could be considered for further definition. No evidence of neoplasia. Ursodiol therapy would be appropriate over 6 week period and recheck sonogram.

Chronic UTI Protocol

I recommend **Enrofloxacin** (5-10 mg/kg SID PO) (In patients > 1 year of age) in late pm after urination to maximize urinary concentrations overnight. This assumes that culture supports this use. Repeat **culture** at 3-4 weeks and continue treatment at least 7-10 days post negative urinary sediment and negative culture. *Note: Negative culture does not necessarily mean lack of UTI.* Other favorite antibiotics for chronic UTI include third generation Cefa (Ceftiafur or similar s.i.d. injectable) or Clavamox. If suspicion of occult urinary incontinence is present then **phenylpropanolamine (PPA)** (1-2 mg/kg BID) can be employed long term to enhance urethral tone.

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Roxy Irons

SPECIES

Canine

BREED

Terrier Mix

SEX

Spayed Female

AGE

14 Years

WEIGHT

8.8 kg

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Munoz

HOSPITAL NAME

Lone Mtn AH

REFERRING VET

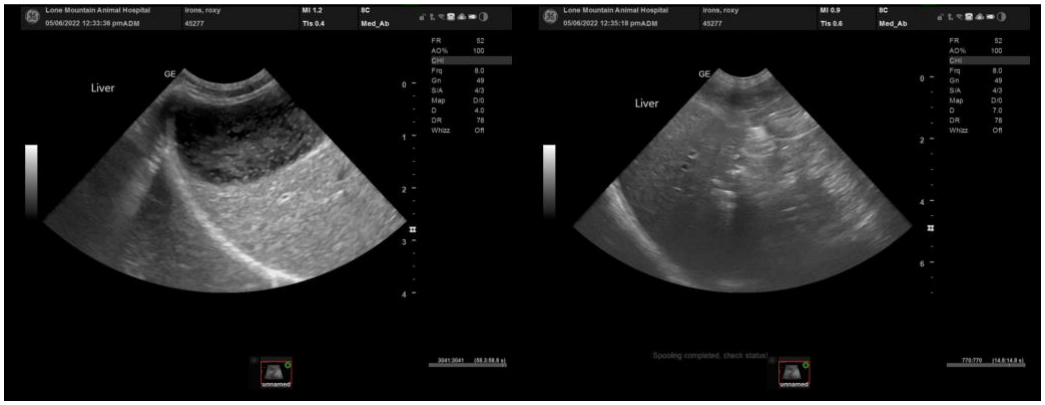
Dr. Munoz

INVOICE

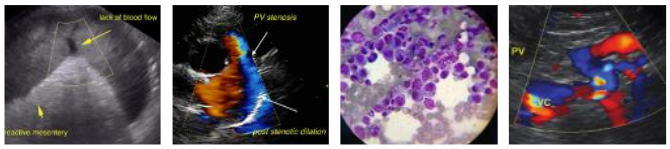
15100

DATE

5/6/22



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Roxy Irons

SPECIES

Canine

BREED

Terrier Mix

SEX

Spayed Female

AGE

14 Years

WEIGHT

8.8 kg

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Munoz

HOSPITAL NAME

Lone Mtn AH

REFERRING VET

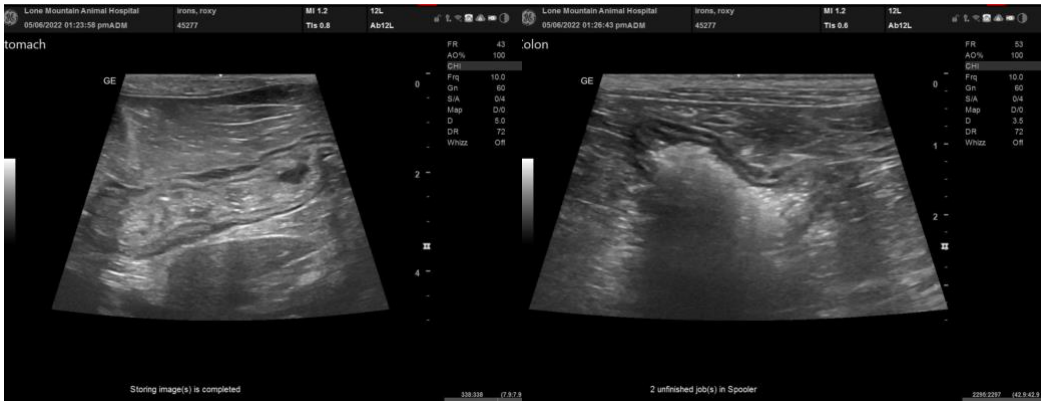
Dr. Munoz

INVOICE

15100

DATE

5/6/22



The information and recommendations provided are based on the images presented by the referring veterinarian. 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