



PATIENT PRESENTING CLINICAL SIGNS

Sophie Moran History: Suspect liver failure, want to monitor progression of liver - had prior AUS, inappetent. Current meds: Levothyroxine, Cerenia, mirtazapine, Denamarin, Cell Advance (Vit E.), ursodiol.

SPECIES Abnormal PE/Chem/CBC/UA Results: As of 9/20: albumin 2.2, AST 194, ALT 425, ALP 1549, GGT 72, T. bili 1.7.

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

BREED *Urinary System*

Shepherd Mix

The **urinary bladder** is moderately distended. The wall is normal in thickness. At least one irregular urinary bladder stone is visualized, measuring 1.87 cm in length. The remaining luminal contents are anechoic. The region of the trigone and the visible portion of the proximal urethra are normal.

SEX

Spayed Female

The **left kidney** is normal size (7.32 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

AGE

12 years

The **right kidney** is not definitively visualized in the available images.

Adrenal Glands

WEIGHT

64 lbs

The **left adrenal gland** is normal size (0.51 cm at cranial pole) (0.46 cm at caudal pole) (1.45 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The region of the **right adrenal gland** is evaluated. No obvious pathology is observed.

INTERPRETED BY

Andrea Nicastro,
DVM, Diplomate
ACVIM (*Small Animal
Internal Medicine*)

Spleen

The **spleen** is subjectively normal in size (2.01 cm in width at the level of the hilus). The parenchyma is subjectively hypoechoic and diffusely mottled in appearance. There is a focal (0.98 cm) protrusion of the capsule at the caudomedial aspect. The remaining margins are curvilinear. A few small myelolipomas are seen. Splenic vasculature appears normal with no evidence of thrombosis.

IMAGING PERFORMED BY

Kelly Vazquez

Liver

The **liver** is subjectively normal to slightly prominent in size with irregular peripheral contours. The parenchyma is isoechoic relative to the spleen and diffusely heterogenous, bordering on nodular in appearance. A 3.35 x 3.26 cm isoechoic nodule/mass is observed on the left side. In addition, a 4.32 x 3.67 cm isoechoic nodule is observed in the region of the right medial lobe. Ill-defined nodules are observed throughout the remaining parenchyma. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

HOSPITAL NAME

Ramapo Valley AH

REFERRING VET

Dr. Katara

The **gall bladder** is mildly distended. The wall is normal in thickness. A small amount of aggregated, echogenic suspended debris/sludge is observed within the lumen. In addition, a 1.45 cm aggregation of mineralized debris/cholelith is observed. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

INVOICE

11822

The **gastric lumen** is mildly distended with ingesta. The gastric wall is normal in thickness with a normal layering pattern. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. There is no evidence of an obstructive pattern.

DATE

10.13.22

Pancreas

The **pancreas** is diffusely prominent to enlarged with slightly irregular peripheral contours. The parenchyma is hypoechoic relative to surrounding omental fat and mottled in appearance. A 0.57 cm hypoechoic nodule is observed in the right limb. The pancreatic duct is not overtly dilated.

Free Abdomen

The **mesentery** throughout the abdomen is mildly hyperechoic. A small amount of free fluid is observed. The abdominal **lymph nodes** are normal/not visible.

Other

A brief visualization of the thorax reveals a large amount of pleural effusion.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Hepatic masses with suspected diffuse parenchymal nodules. Neoplasia (i.e., adenocarcinoma, round cell tumor, other) is suspected. However, excessive nodular hyperplasia cannot be completely excluded. Changes are similar to the previous sonogram.
- Pleural effusion
- The splenic parenchymal changes are concerning for infiltrative neoplasia. However, a benign process such as lymphoid hyperplasia, extramedullary hematopoiesis, or similar cannot be excluded.
- Diffuse peritonitis is present, likely secondary to hepatic pathology.

Secondary Findings

- Suspected cholelith – incidental
- Chronic age-related changes in the left kidney
- The pancreatic changes are most consistent with chronic, +/- active pancreatitis. Changes are similar to the previous sonogram. The pancreatic nodule could be consistent with a benign lesion. Alternatively, neoplasia (i.e., metastatic disease) cannot be completely excluded.
- Cystic calculus/calculi

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the presence of pleural effusion, thoracic radiographs +/- an echocardiogram should be considered. Therapeutic thoracocentesis with submission of the fluid for analysis and cytology is also recommended. If results are inconclusive, a thoracic CT scan may be warranted.

Consider fine-needle aspirates of the hepatic masses if clotting status is appropriate. Twenty-five gauge-needles should be used.





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.

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