



PATIENT

Lucy Gouldsbrough

SPECIES

Canine

BREED

Kelpie Mix

SEX

Female spayed

AGE

12 Years

WEIGHT

57.4 lbs.

INTERPRETED BY

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

**IMAGING
PERFORMED BY**

Dr. Hadi

HOSPITAL NAME

Bethany Family Pet
Clinic

REFERRING VET

Dr. Hadi

INVOICE

11644kk

DATE

8/13/21

PRESENTING CLINICAL SIGNS

History: P presented for a routine exam on 6/15. BW showed a mild ALT increase, moderate ALKP increase, and moderate to marked lipase increase. P was on Denamarin for one month, and values rechecked. Values stayed consistent. P doing great otherwise.

Abnormal PE/Chem/CBC/UA Results: 6/15: ALT: 172 U/L, ALKP: 475 U/L, Amylase: 1634 U/L, Lipase: 1770 U/L 7/21: ALT: 154 U/L, ALKP: 1069 U/L, Amylase: 1332 U/L, Lipase: 1239 U/L. On both BW, T-bili, cholesterol, cbc, ggt, ast all WNL.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

The left kidney is normal size (6.13 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

The right kidney is subjectively normal size with 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 hydronephrosis. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is mildly enlarged (0.83 cm at cranial pole) (0.98 cm at caudal pole) (2.37 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 caudal pole of the right adrenal gland is visualized and is normal size (0.66 cm in width) with a normal shape, glandular echogenicity, and detail. Surrounding vasculature appear normal.

Spleen

The spleen is normal in size (1.75 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

Liver

The liver is subjectively enlarged with swollen peripheral contours. The parenchyma is hyperechoic relative to the spleen and diffusely heterogeneous in appearance with numerous, ill-defined, varying-sized, hypoechoic nodules/areas observed throughout the organ. A 2.63 x 1.95 cm heterogeneous swelling is observed in the deep left to mid-liver at the caudal aspect. In addition, a 7.67 x 4.60 cm anechoic cyst is observed on the right side. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion. The gall bladder is moderately distended. The wall is normal in thickness. A few small polypoid-like lesions are arising from the luminal surface. A moderate amount of aggregated, echogenic, partially dependent sludge is observed within the lumen, some of which is in a partially stellate pattern. The cystic and common bile ducts are normal/not seen.



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Gastrointestinal

The gastric lumen is moderately distended with ingesta. The gastric wall is normal in thickness with a normal layering pattern. The small intestinal lumen is segmentally dilated with chyme. 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. No obstructive disease is noted.

Pancreas

The pancreas is diffusely prominent to enlarged with slightly irregular peripheral contours. The parenchyma is isoechoic to slightly hypoechoic relative to surrounding omental fat and subtly mottled in appearance. No distinct focal lesions are observed. The pancreatic duct is visible but not overtly dilated (0.34 cm in diameter). There is no evidence of peripancreatic effusion.

Free Abdomen

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

ULTRASONOGRAPHIC FINDINGS

Primary Findings:

- The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, regenerative nodular hyperplasia, and/or age-related remodeling. Inflammatory and infiltrative disease are considered less likely. The hepatic swelling at the caudal aspect could be consistent with a benign process (i.e., nodular hyperplasia). Alternatively, an early neoplastic process cannot be excluded. The large hepatic cyst is likely benign with low potential for emerging neoplasia.
- The gall bladder changes are concerning for early mucocele formation. However, cholestasis cannot be excluded as a possible cause for the sludge accumulation.
- The pancreatic changes are most consistent with chronic pancreatitis.
- Mild left adrenomegaly.

Secondary Findings:

- Minor, bilateral, age-related renal pathology.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

1. Continued monitoring of the patient's liver values (i.e., every 3-4 months) is recommended. If the patient develops clinical signs of Cushing's disease, further testing (i.e., a low-dose dexamethasone suppression test or ACTH stimulation test) should be considered. If liver values continue to worsen, repeat abdominal imaging +/- hepatic tissue sampling may be warranted.
2. Regarding the pancreatic changes, consider a PLI to further confirm pancreatitis. Also consider transitioning to a prescription low-fat diet to help prevent future flare ups.
3. Regarding the gall bladder and hepatic swelling, a repeat ultrasound is recommended in 3-4 weeks, preferably 2 hours post small meal (to allow for gall bladder contraction). If the gall



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bladder changes are the same to worse at that time, Ursodiol therapy can be considered. If the parenchymal swelling is increasing in size, tissue sampling may be warranted.

- Three-view thoracic radiographs are recommended to assess cardiopulmonary status.

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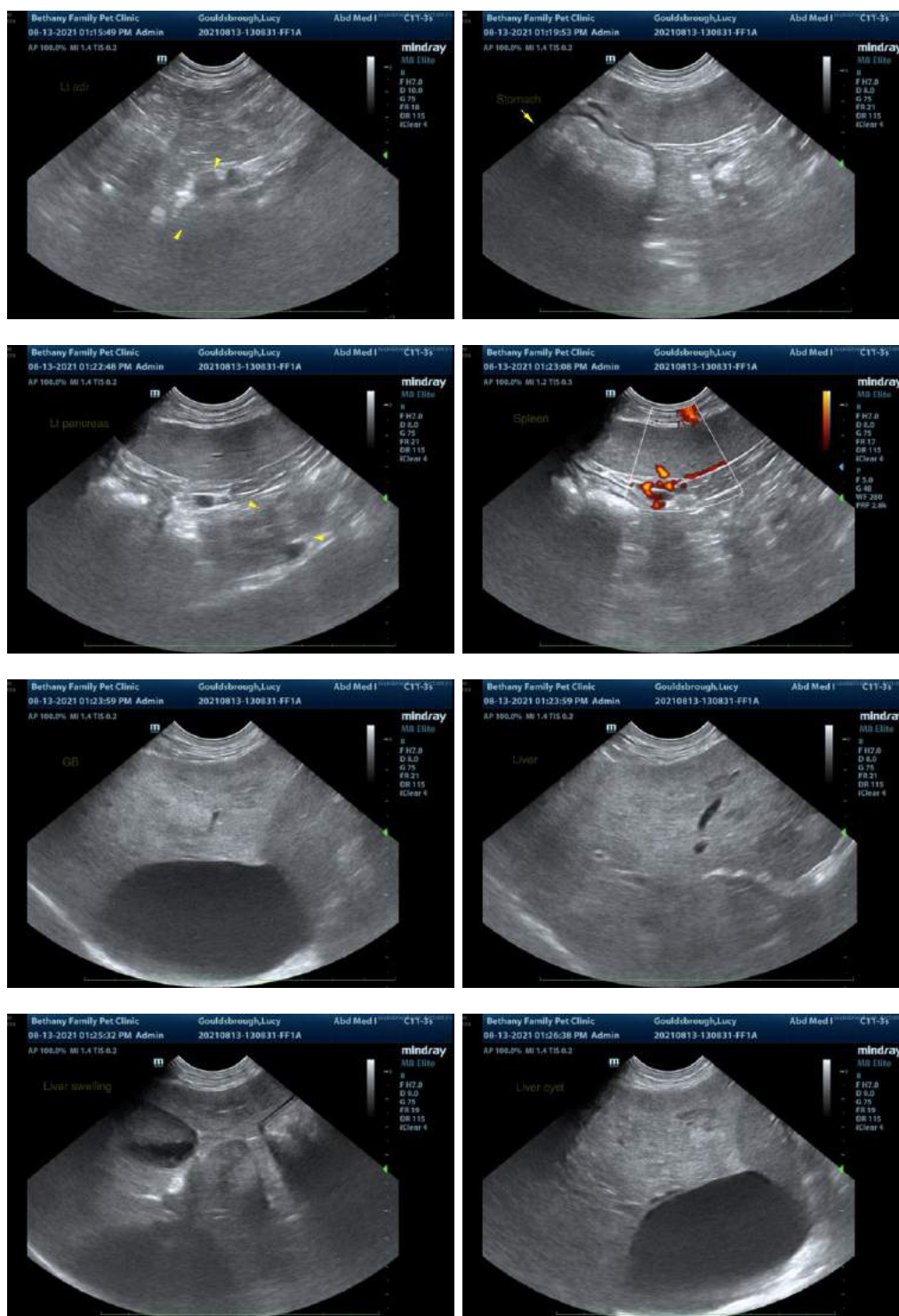
Dr. Hadi

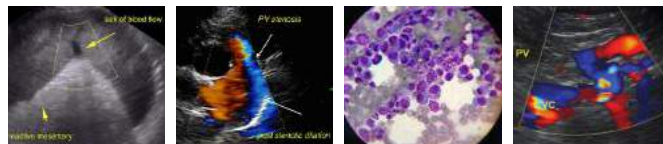
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Andrea Nicastro, DVM, Diplomate ACVIM (*Small Animal Internal Medicine*)
Andrea.nicastro@sonopath.com