

**DATE PRESENTING CLINICAL SIGNS**

8/11/21

History: History of elevated liver values, nonresponsive to Denamarin. Incidental finding.

PATIENT

Sasha Bermudez

Current Medications: Denamarin Small Dog ¼ tab SID current, and for past 30 days.

Lab Results: ALT 198, AlkP 224.

Radiographs: Not provided by the veterinarian.

Date of Previous IntraPet Ultrasound: No previous IntraPet scans.

Sedation: Sedation not required for scan.

Stat Report: STAT report not requested by the veterinarian.

SPECIES

Canine

BREED

Miniature Schnauzer

SEX

Female, intact

AGE

8/21/2013

WEIGHT

13 lbs.

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 mildly 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 in size (3.99 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. There is minimal loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

The right kidney is normal in size (4.29 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

INTERPRETED BY

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

Adrenal Glands

The left adrenal gland is normal size (0.48 cm at cranial pole) (0.45 cm at caudal pole) (1.43 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.

HOSPITAL NAME

Banfield Pet Hospital
 of Columbia

The right adrenal gland is normal size (0.68 cm at cranial pole) (0.64 cm at caudal pole) (1.93 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.

REFERRING VET

Dr. Scherping

Spleen

The spleen is normal in size (1.24 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.

INVOICE

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Liver

The liver is subjectively normal in size with normal curvilinear peripheral contours. The parenchyma is hypoechoic relative to the spleen with minor changes consistent with age-related remodeling. No focal lesions are observed. Hepatic vasculature and biliary tracts are of normal volume with no evidence of congestion. The portal vein: caudal vena cava ratio is approximately 1:1. The gall bladder lumen is moderately distended. The wall is thin and smooth. A small amount of aggregated echogenic to mineralized debris/sludge is observed within the lumen, some of which is gravity dependent and some of which is adherent. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

The gastric lumen is mildly distended with ingesta. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. 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. No obstructive disease is noted.

Pancreas

The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

Free Abdomen

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

Other

The uterine body measures 0.54 cm in width. No obvious pathology is observed.

The left ovary is normal in size (1.42 x 0.85 cm) with a normal shape. 2 anechoic cystic structures are observed within the parenchyma. The parenchyma is otherwise unremarkable.

The right ovary is normal in size (1.29 x 0.99 cm) with a normal shape. 1 anechoic cystic lesion is observed within the parenchyma. The parenchyma is otherwise unremarkable.

ULTRASONOGRAPHIC FINDINGS

Primary Findings:

- An obvious cause for the patient's elevated liver values is not identified in this study. Possibilities include age-related pathology (i.e., regenerative nodular hyperplasia, remodeling, vacuolar hepatopathy). Alternatively, early inflammatory disease or hepatotoxicosis may be present. Neoplasia is possible but considered less likely.

Secondary Findings:

- Unremarkable uterus. The anechoic structures within the ovarian parenchyma may represent follicles or cysts.
- Bilateral age-related renal pathology with dystrophic mineralization.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- If an aggressive approach is desired, hepatic tissue sampling (i.e., fine needle aspirate or biopsy) can be considered.
- If a more conservative approach is desired, recheck liver values in 1-2 months to assess for progression. If the values are increasing, hepatic tissue sampling can be considered at that time.
- Leptospirosis testing can also be considered. However, if the liver enzyme elevations are chronic, this differential is considered less likely.





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.

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