

**PATIENT PRESENTING CLINICAL SIGNS**

Smokey Chambers The patient presented with a history of chronically elevated ALP but had a rapid jump from 800s to the 1700s within a span of 2 months. Otherwise asymptomatic.

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**BREED *Urinary System***

Beagle mix The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder is moderately distended. A scant amount of suspended echogenic debris is observed within the lumen. No cystic calculi are observed. The region of the trigone and the proximal urethra, visible to a depth of 2 cm, are normal.

**SEX**

Male, neutered

The prostate is normal in size (0.78 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

**AGE**

9 Yr. old

The left kidney is normal size (5.90 cm in length); normal shape and architecture with smooth peripheral margins. The cortex is isoechoic relative to the spleen, mildly thickened and there is mild to moderate loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

**WEIGHT**

14.45 kg.

The right kidney is normal size (6.04 cm in length); normal shape and architecture with smooth peripheral margins. The cortex is isoechoic relative to the spleen, mildly thickened and there is mild to moderate loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

**INTERPRETED BY**

Andrea Nicastro, DVM,  
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(Small Animal Internal  
Medicine)

***Adrenal Glands***

The left adrenal gland is normal size (0.50 cm at cranial pole) (0.59 cm at caudal pole); 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.

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The right adrenal gland is normal size (1.10 cm at cranial pole) (0.71 cm at caudal pole); 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**

Sun Dog Cat Moon

***Spleen***

The spleen is normal in size (1.48 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.

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***Liver***

The liver is subjectively enlarged with slightly swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and diffusely homogeneous in appearance. No distinct focal lesions are observed. Vascular and biliary tracts are of normal volume with no evidence of congestion. The portal vein to caudal vena cava ratio is approximately 1:1. The gall bladder lumen is moderately distended. The wall is thin and smooth. A small to moderate amount of aggregated echogenic gravity-dependent debris/sludge is observed within the lumen. The cystic and common bile ducts are normal/not seen.



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**Gastrointestinal**

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. 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 ileocecolic junction and colonic wall are normal. No obstructive disease is noted.

**Pancreas**

The right limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is largely isoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic 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**

A brief echocardiogram reveals no evidence of pericardial effusion or obvious right atrial/auricular mass.

**ULTRASONOGRAPHIC FINDINGS**

**Primary Findings:**

- The hepatic changes are consistent with a benign diffuse hepatopathy. Vacuolar hepatopathy (i.e., endocrine, idiopathic) is the top differential with a lower possibility of a more insidious hepatic pathology (i.e., inflammatory disease, infiltrative neoplasia, other).
- Gallbladder sludge- incidental.

**Secondary Findings:**

- The bilateral renal changes are most consistent with chronic interstitial nephrosis/nephritis.
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- Serial monitoring (i.e., every 3-4 months) of the patient's liver values is recommended. If liver values continue to increase, a repeat abdominal ultrasound +/- hepatic tissue sampling may be warranted.
- Consider testing for hyperadrenocorticism with a low-dose dexamethasone suppression test or ACTH stimulation test if clinical signs (i.e., PU/PD) develop in the future.



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- If the patient is to undergo anesthesia for a dental today, consider avoiding Benzodiazepines and using opioids judiciously.

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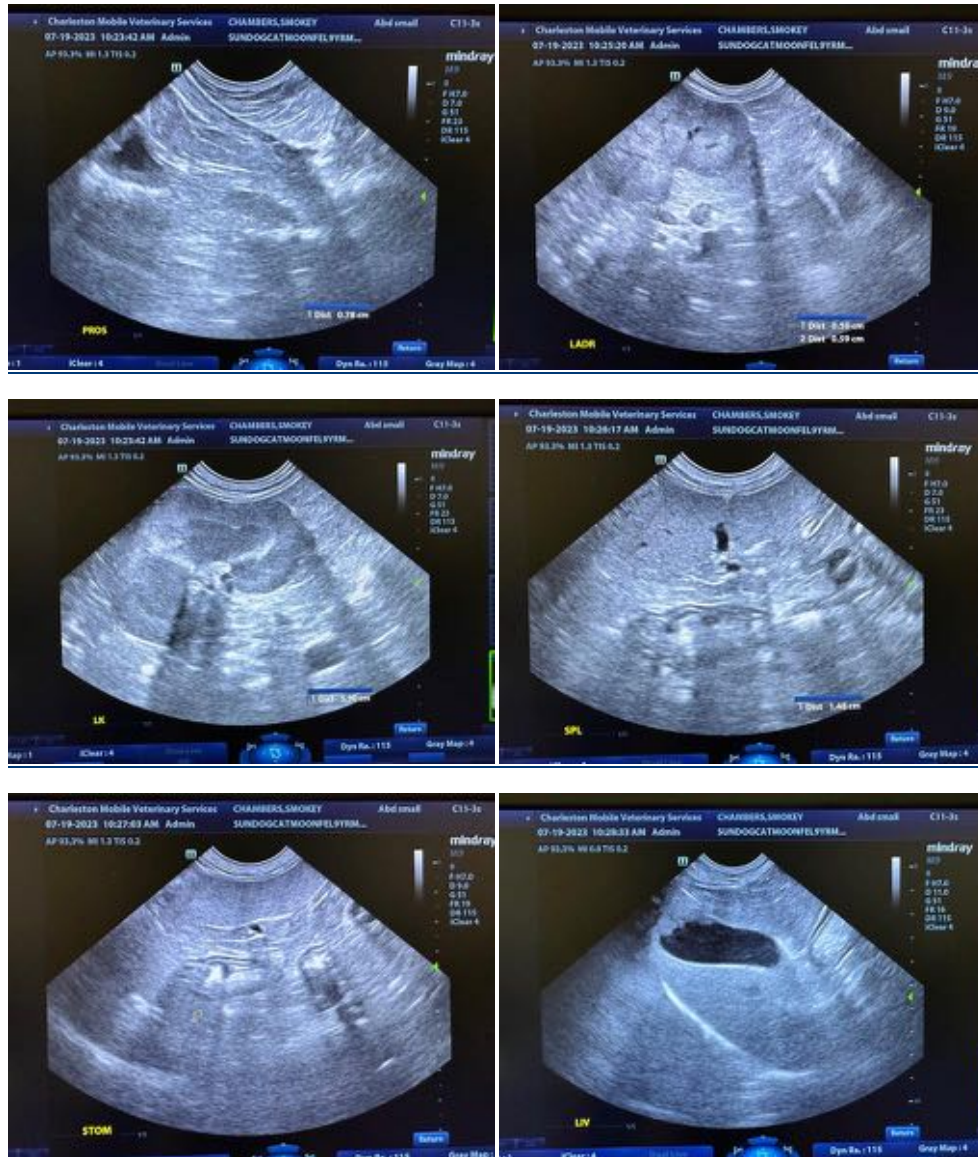
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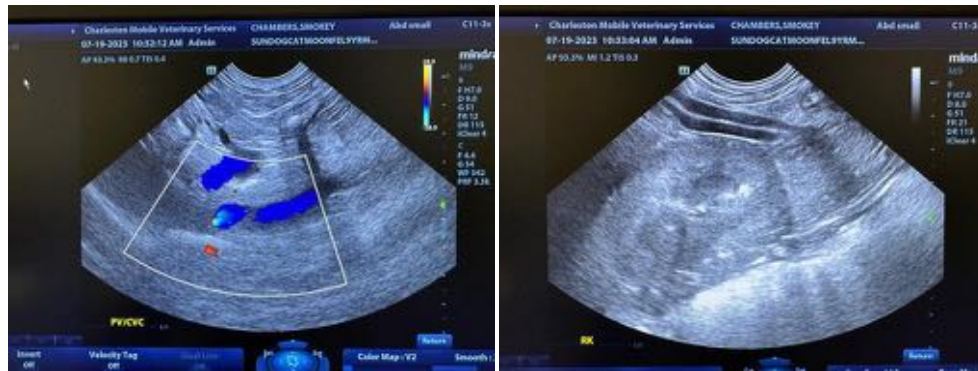
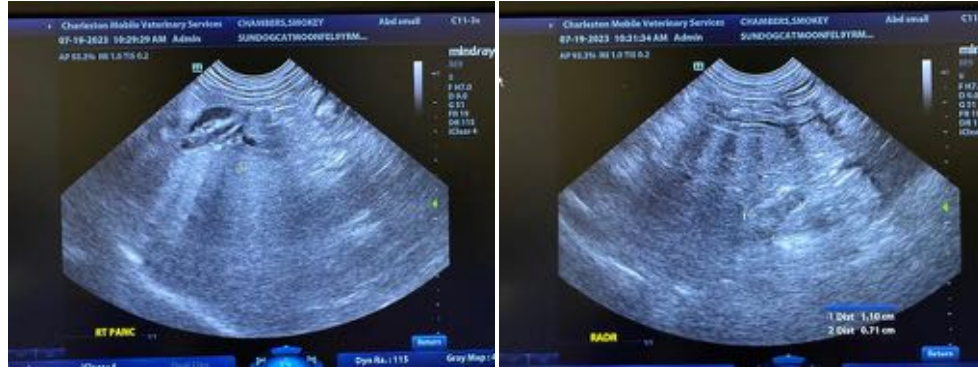
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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