



**PATIENT PRESENTING CLINICAL SIGNS**

Paris Lyer 5/7 pt took Simparica trio for the first time and started vomiting 2-3 hours later 5/8 pt was lethargic, not eating, barely drinking water -PE: low temp, HR (w/abnormal rhythm) -bloodwork and therapy in medical records 5/9 received additional therapy - pt was doing better, ate chicken at home, more active 5/10 recheck bw and additional therapy, pt did not eat last night but still more mobile

**SPECIES**

Canine

**BREED ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

Mixed breed dog

**Urinary System**

**SEX**

Female, spayed

The urinary bladder is moderately distended with anechoic urine. The wall in the region of the apex is mildly thickened (up to 0.40 cm) and irregular. The wall tapers to a normal thickness as it extends toward the cystourethral junction. No cystic calculi are observed. The region of the trigone and the visible portion of the proximal urethra are normal.

**AGE**

3/21/2008

The left kidney is normal size (6.34 cm in length); normal shape and architecture with smooth peripheral margins. The cortex is mildly thickened and there is mild to moderate loss of corticomedullary distinction. Several small cortical cysts are seen. There is no evidence of pyelectasia, infarcts or hydronephrosis. Hyperechoic shadowing diverticular foci are visualized. Renal vasculature is normal.

**WEIGHT**

45.2 lbs.

The right kidney is normal size (5.70 cm in length); normal shape and architecture with smooth peripheral margins. The cortex is mildly thickened and there is mild to moderate loss of corticomedullary distinction. A few small cortical cysts are seen. There is no evidence of pyelectasia, infarcts or hydronephrosis. Hyperechoic shadowing diverticular foci are visualized. Renal vasculature is normal.

**INTERPRETED BY**

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

**Adrenal Glands**

The left adrenal gland is enlarged (1.31 cm at cranial pole) (1.65 cm at caudal pole) (3.48 cm in length) with an irregular shape and a mass effect. The parenchyma is heterogeneous with loss of glandular detail. There is no obvious evidence of vascular invasion.

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The right adrenal gland is normal size (1.45 cm at cranial pole) (0.55 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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Charleston VC

**Spleen**

The spleen is normal in size (1.31 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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Dr. Cribb

**Liver**

The liver is subjectively prominent in size with normal curvilinear peripheral contours. The parenchyma is hypoechoic relative to the spleen and subtly mottled in appearance. A 2.27 cm cystic lesion is 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 amount of echogenic to mineralized suspended debris is observed within the lumen. The cystic and common bile ducts are normal/not seen.

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**DATE**

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**PATIENT**

***Gastrointestinal***

Paris Lyer

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. 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 segmentally dilated with chyme (mild). The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The ileoceocolic junction and colonic wall are normal. No obstructive disease is noted.

**SPECIES**

Canine

**BREED**

***Pancreas***

Mixed breed dog

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.

**SEX**

Female, spayed

***Free Abdomen***

**AGE**

3/21/2008

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

***Other***

**WEIGHT**

45.2 lbs.

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

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**ULTRASONOGRAPHIC FINDINGS**

**Primary Findings:**

- Bilateral chronic nephropathy with dystrophic mineralization. Given the patient's clinical history, acute-on-chronic renal failure is suspected. Possible differentials for an acute-on-chronic insult include dehydration, Leptospirosis, pyelonephritis, toxicity, other.
- The hepatic parenchymal changes are non-specific and could be associated with an inflammatory hepatopathy (i.e., bacterial cholangiohepatitis, chronic hepatitis), Leptospirosis, hepatotoxicosis, age-related remodeling, regenerative nodular hyperplasia, other hepatopathy.
- Left adrenal mass. Neoplasia (i.e., adenoma, adenocarcinoma, pheochromocytoma) is suspected with a lower possibility of excessive benign nodular hyperplasia.
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.
- The urinary bladder wall changes are suggestive of cystitis. However, correlation with the patient's urinalysis findings is recommended.

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**Secondary Findings:**

- Gallbladder debris, non-mucocele.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**



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- Leptospirosis testing (i.e., blood and urine PCR, serology) is recommended.
- Regarding the azotemia, consider the following:
  1. Urinalysis, if not already performed
  2. Urine culture and sensitivity
  3. UPC, if proteinuria is present in the absence of infection
  4. Baseline blood pressure measurement
  5. Transition to a prescription renal diet
- Regarding the liver enzyme elevations, hepatic tissue sampling (i.e., fine needle aspirate or biopsies) can be considered, if clotting status is appropriate. If tissue sampling is not pursued at this time, empirical treatment for bacterial cholangiohepatitis/Leptospirosis is recommended, including amoxicillin clavulanic acid, hepatic antioxidants and other supportive measures.
- Regarding the left adrenal mass, consider the following:
  1. Three-view thoracic radiographs to assess for pulmonary metastatic disease
  2. Blood pressure measurement (as stated above)
  3. Further testing for a functional tumor (i.e., low-dose dexamethasone suppression test, urine/blood catecholamine levels)

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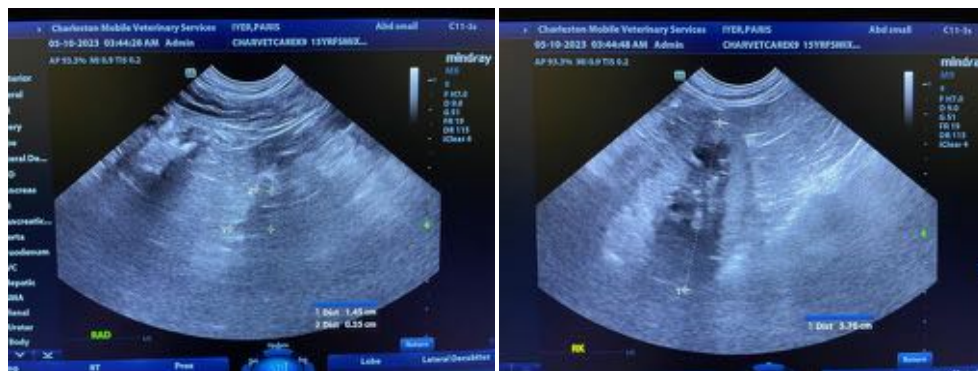
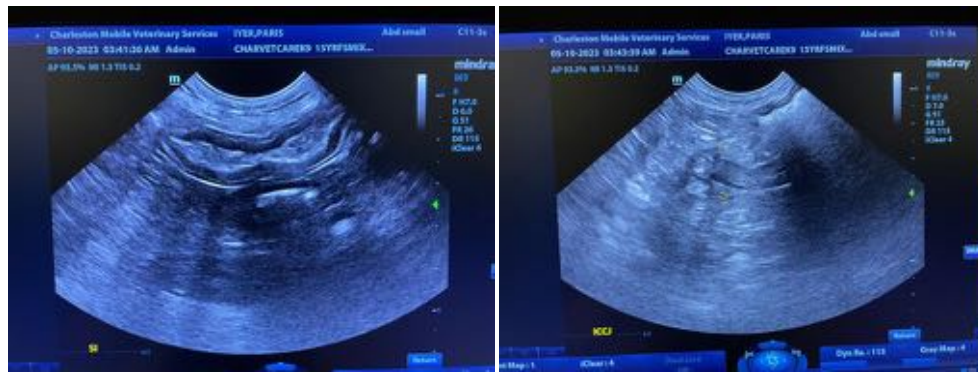
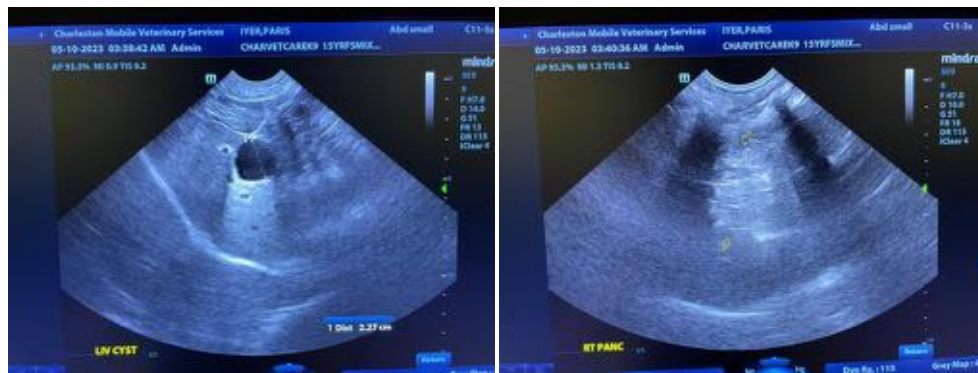
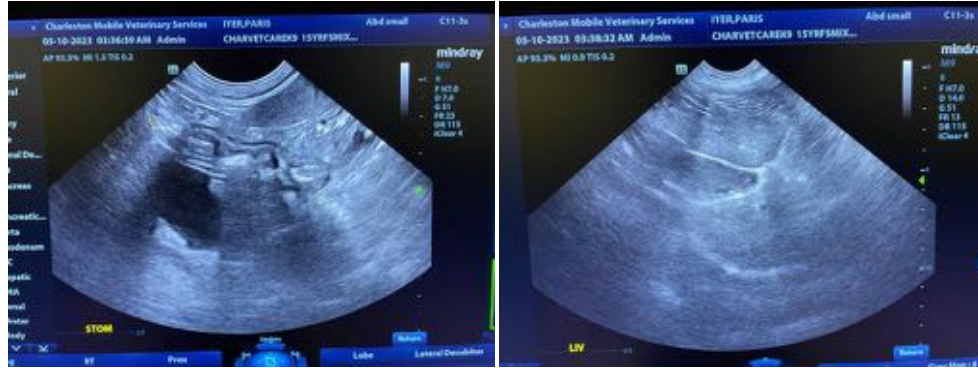
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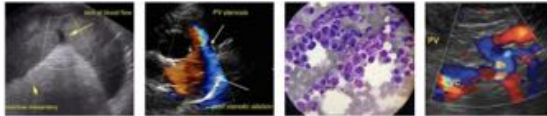
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible



**PATIENT** in the image/video clips provided.

Paris Lyer 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.

**SPECIES**

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