



## PATIENT

Chico Hoffman

## SPECIES

Canine

## BREED

Havanese

## SEX

Male, neutered

## AGE

13 Yrs. 3 months

## WEIGHT

13.4 lbs.

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Vincetn Ravancho

## HOSPITAL NAME

Brenda King VMD

## REFERRING VET

Dr. Brenda King

## INVOICE

13487

## DATE

2/17/26

## PRESENTING CLINICAL SIGNS

History:

- Persistent Proteinuria
- Hypertension
- Increasing Liver values
- Mild PU/PD
- Current medications: Enalapril 2.5mg, 1 1/2 tab BID, Clopidogrel 75mg 1/4th tab SID

Abnormal PE/Chem/CBC/UA Results: Low creatinine (0.3), ALT 590, ALKP (707), Cholesterol (340), UPC 3.1 progressively increasing over last 6 months USG 1.010

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### Urinary System

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder is moderately distended. Luminal contents are anechoic. No cystic calculi are observed. The region of the trigone and the proximal urethra, visible to a depth of 3 cm, are normal.

The prostate is normal in size (0.65 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The left kidney is normal in size (4.61 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. The cortex is isoechoic relative to the spleen. There is mild to moderate 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 (4.88 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. The cortex is isoechoic relative to the spleen. There is mild to moderate loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

### Adrenal Glands

The left adrenal gland is enlarged (1.69 cm at cranial pole) (1.09 cm at caudal pole) and irregular with swollen peripheral contours and a mass effect. The parenchyma is heterogeneous with a few mineralized foci. There is no obvious evidence of invasion into the caudal vena cava.

The right adrenal gland is normal in size (0.74 cm at cranial pole) (0.50 cm at caudal pole) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

### Spleen

The spleen is normal in size (1.19 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 isoechoic relative to the spleen. Several ill-defined hyperechoic nodules are observed throughout the organ. Vascular and biliary tracts are of normal volume with no evidence of congestion.



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The gall bladder lumen is moderately distended. The wall is thin and smooth. Several polypoid like lesions are arising from the mucosal surface. A small amount of echogenic to mineralized debris/sand along with a few non-obstructive choleliths are visualized within the lumen. The cystic and common bile ducts are normal/not seen.

### **Gastrointestinal**

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 not dilated. The small intestinal wall is normal in thickness 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.

### **Pancreas**

The right limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is slightly hyperechoic relative to surrounding omental fat and slightly heterogeneous in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

### **Lymph nodes**

The abdominal lymph nodes are normal/not visible.

### **Free Abdomen**

There is no obvious evidence of free fluid.

## ULTRASONOGRAPHIC FINDINGS

### Primary Findings:

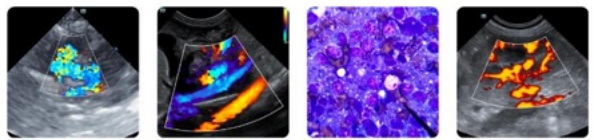
- Left adrenal mass effect. Neoplasia (i.e., adenocarcinoma, pheochromocytoma) is suspected with a lower possibility of adenoma, focal nodular hyperplasia, adrenalitis, other. The right adrenal gland is normal.
- The hepatic changes are nonspecific and could be secondary to inflammatory disease (i.e., cholangiohepatitis, chronic hepatitis), Leptospirosis, hepatotoxicosis, infiltrative neoplasia (i.e., lymphoma), vacuolar hepatopathy, regenerative nodular hyperplasia, other hepatopathy, or some combination thereof. The hyperechoic hepatic nodules trend toward the benign (i.e., regenerative nodules, meylolipomas) with a lower possibility of more insidious hepatic pathology.
- Gallbladder polyps with debris and non-obstructive choleliths

### Secondary Findings:

- Bilateral nonspecific, age-related renal changes with subtle dystrophic mineralization
- 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

- Regarding the elevated liver values, consider the following:
  1. Pre and post-prandial serum bile acids



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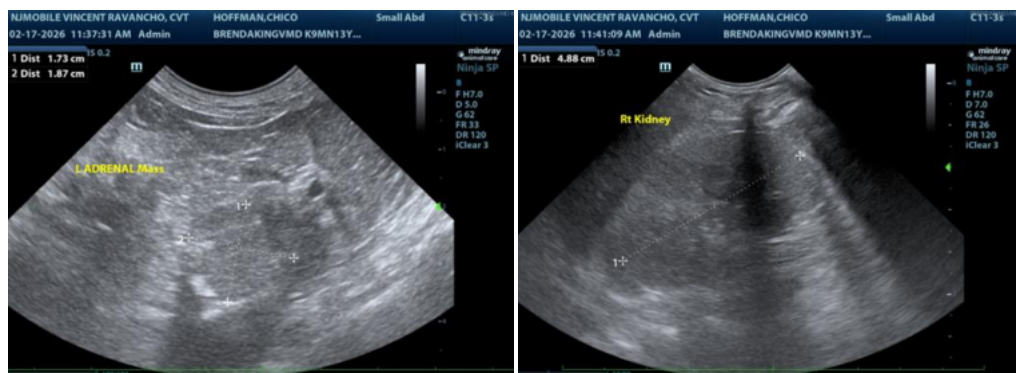
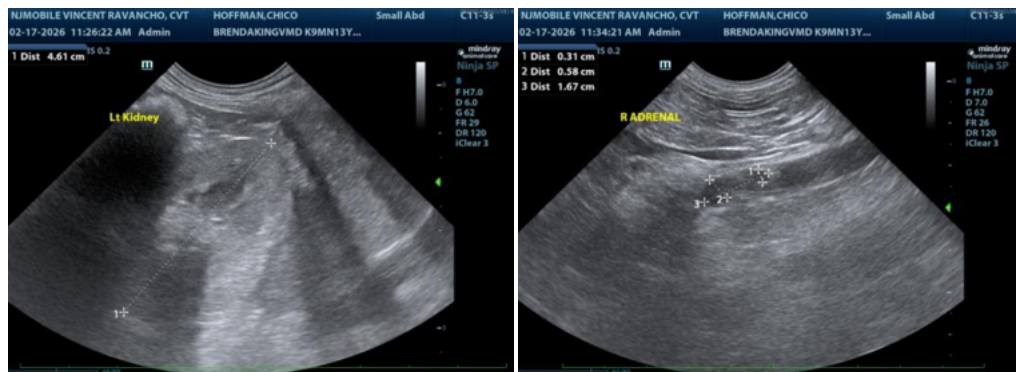
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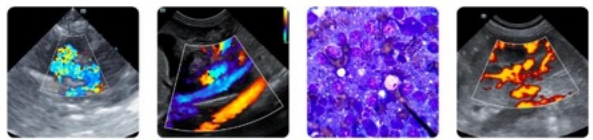
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2. Leptospirosis testing (i.e., blood and urine PCR, serology) particularly if clinical suspicion for disease is high
  3. Cytologic evaluation of the liver should be considered in this patient if clotting status is appropriate. A fine needle aspirate using a 25-gauge needle is recommended. If cytologic evaluation is inconclusive or if a more aggressive approach is desired, consider laparoscopic or surgical liver biopsies with aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for copper quantitation.
  4. If a conservative approach is desired, consider empirical treatment for bacterial cholangiohepatitis (amoxicillin-clavulanic acid, Denamarin). If no improvement in the liver values is seen within 7-10 days of initiating therapy, antibiotics should be discontinued, and hepatic tissue sampling reconsidered. If liver values improve, continue therapy for at least 4-6 weeks and 1 week beyond normalization of the liver values.
- Regarding the left adrenal mass effect, consider the following:
    1. Three-view thoracic radiographs are recommended to assess for pulmonary metastases.
    2. Further testing for a functional tumor (i.e., low-dose dexamethasone suppression test, urine/blood metanephrine levels) particularly if clinical suspicion for disease is high
    3. +/- abdominal CT scan and consultation with a board-certified surgeon particularly if a left adrenalectomy is to be considered. Otherwise, serial sonographic monitoring (i.e., every 3-4 months) can be considered to assess for growth of the gland.





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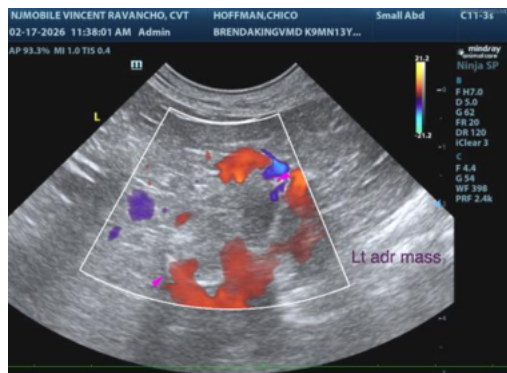
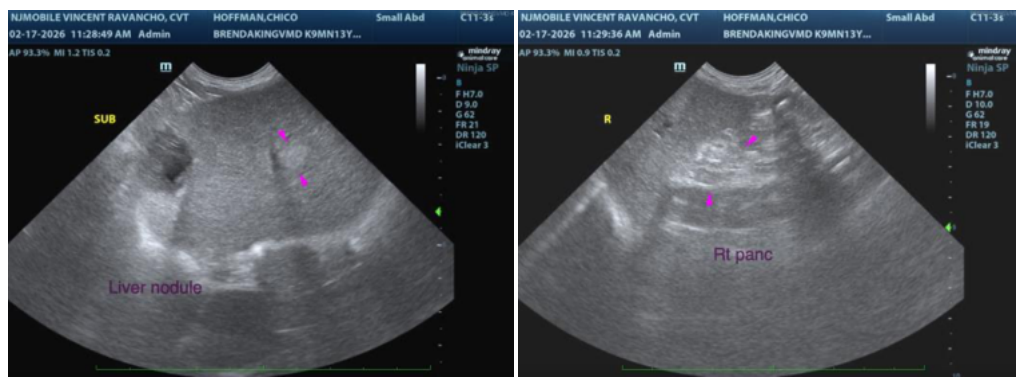
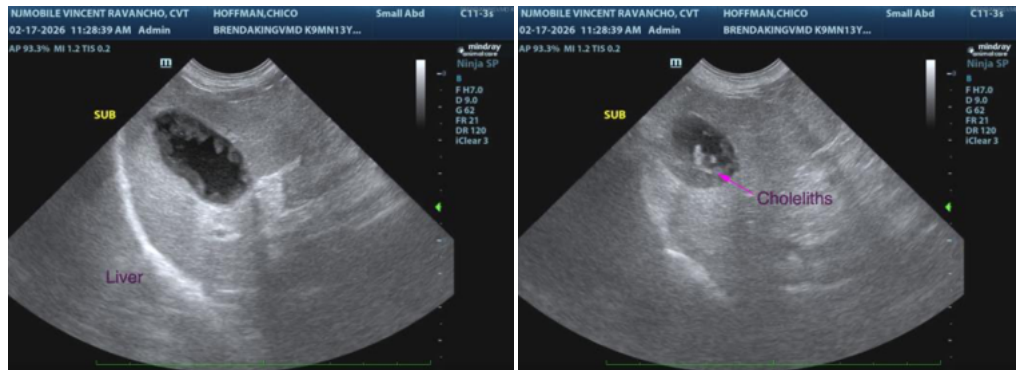
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Andrea Nicastro, MPH, DVM, Diplomate DACVIM (Small Animal Internal Medicine)  
info@SonoPath.com