

## PATIENT

Lalo Haghighi

## PRESENTING CLINICAL SIGNS

## SPECIES

Canine

## BREED

Chihuahua

## SEX

Neutered Male

on 6/9/2022: P presented for possible pancreatitis flare up- P was seen at SVS 05/05/2022 and was diagnosed with pancreatitis/GE. P has been vomiting, diarrhea, decreased appetite over last 48 hours; O states the symptoms are the same as the ER visit. P main diet is chicken/rice, O introduced canned food about 1 week ago and husband sometimes gives treats/human food. Last vomited yesterday (foam/bile/grass), last diarrhea episode was this AM, no blood this AM but did have a little last night. Decreased water intake. ON 6/13/2022: O presents p for IV fluids drop off. O states that p did a little better over the weekend. Medications seemed to help p, but o states that p still showed signs of stomach cramps, tightness around the abdomen and p releasing gas. O states that she gave p medication this morning Cernia, Gabapentin, and Metronidazole (gave the same amount listed on the instructions) o wanted to prevent p from releasing gas. Eating small amount of food. O was not interested in drinking in water, O gave pedalyte in syringe. U/D normal. No Vomitting or Diarrhea over the weekend.  
Abnormal PE/Chem/CBC/UA Results: cP abnormal- all else WNL

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### AGE

5 Years 3 Months

### Urinary System

The urinary bladder is well distended. The wall is smooth and regular. No abnormalities are present with the trigone or proximal urethra. A few free floating “scintillating” or “twinkling” echogenic sediment are observed, suggestive of crystalluria. This is not clinically significant. There is no evidence of cystoliths, polyps or a mass.

### WEIGHT

9.8 Pounds

### Prostate

The prostate is homogenous and measures 0.52 cm, which is within normal limits for a neutered male.

## INTERPRETED BY

Lisa Carioto, DVM,  
DVSc, Diplomate  
ACVIM

### Kidneys

The **left** kidney measures 3.10 cm. The capsule is smooth. Its overall architecture, including the definition of the cortico-medullary junction, is preserved. There are no signs of nephroliths or pyelectasia. Blood flow is within normal limits. The surrounding mesentery is not hyperechoic.

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Loetitia Saint-Jacques,  
LVT

The **right** kidney measures 3.55 cm. Its overall architecture, including the definition of the cortico-medullary junction, is preserved. There are no signs of nephroliths or pyelectasia. The surrounding mesentery is not hyperechoic.

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### Aortic bifurcation/trifurcation

No abnormalities observed.

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### Adrenal Glands

The **left** adrenal gland measures 0.41 cm at the cranial pole, 0.36 cm at the caudal pole. The cranial pole is mildly rounded, however, a mass or nodule is not observed. No abnormalities are noted with the gland’s overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

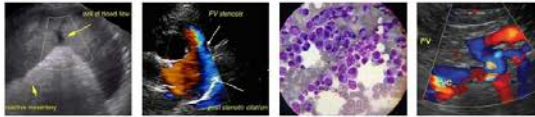
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The **right** adrenal gland measures 0.40 cm at the cranial pole, 0.40 cm at the caudal pole. No abnormalities are noted with the gland’s overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

## DATE

6/15/22



Portable Animal Wellness Sonography, Inc.

IMAGING PERFORMED BY

[pawsonography@gmail.com](mailto:pawsonography@gmail.com) 530-786-8340

## PATIENT

Lalo Haghighi

### **Spleen**

The spleen is within normal limits in size, architecture, echotexture, and echogenicity. The capsule is smooth. Perivascular cuffing is noted surrounding a blood vessel at the head of the spleen, which is consistent with a myelolipoma. The latter is not clinically significant. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified.

## SPECIES

Canine

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Chihuahua

### **Liver**

There are no obvious signs of hepatomegaly and its borders are smooth and sharp. The liver's echotexture is homogeneous and it is within normal limits in echogenicity. Focal lesions are not observed and no abnormalities are observed with the hepatic vessels.

## SEX

Neutered Male

The gallbladder (GB) is moderately distended with a moderate amount of free floating and gravity dependent echogenic material. The GB wall is within normal limits in thickness and echogenicity. There are no signs of edema surrounding it. The cystic and common bile ducts are not dilated or tortuous, however, the walls of the CBD are hyperechoic. There are no signs of an obstruction.

## AGE

5 Years 3 Months

### **Gastrointestinal**

A small amount of liquid and gas are present in the lumen of the stomach. The gastric wall is within normal limits in thickness and the wall layers are well defined. However, the submucosa and muscularis are more prominent than usual. Peristalsis is mildly decreased, i.e., a "to and fro" motion is noted.

## WEIGHT

9.8 Pounds

The mesentery surrounding the gastro-duodenal junction is hyperechoic.

The small intestinal wall thickness, including the duodenum, is within normal limits and the definition of the wall layers is preserved. A small amount of ingesta is present within the small intestines.

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Jejunum: stippling of the mucosa is present, as well as increased prominence of the submucosa  
No abnormalities are observed with the ileo-cecal-colic junction.

Abnormally dilated loops of bowel are not observed.

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The colonic wall is not thickened and mural detail is considered normal. Soft stools are present within the colon.

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### **Pancreas**

The **left** limb is not overtly enlarged, but is moderately coarse and moderately to severely heterogeneous, with hypo and anechoic areas and punctate hyperechoic foci dispersed throughout the parenchyma. The contours are mildly irregular. The anechoic regions are suggestive of edema and active inflammation. The surrounding mesentery is very mildly hyperechoic.

## REFERRING VET

Dr. Johnson

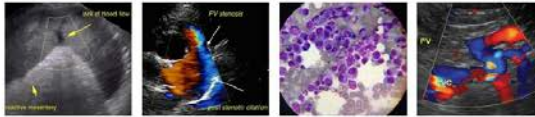
The **right** limb has a mildly coarse echotexture, and is mildly heterogeneous. It consists of hyperechoic foci scattered throughout the parenchyma, suggestive of fibrosis secondary to previous episodes of pancreatitis. Signs of active pancreatitis and neoplasia are not appreciated.

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**Other**

**Lymph nodes**

The pancreatic and mesenteric lymph nodes are prominent and is mildly hypoechoic.

## SPECIES

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**Abdominal effusion** is not visualized.

**Heart**

A brief video clip of the heart was submitted. Pericardial and pleural effusion are not identified.

There is no evidence of a mass in any of the cardiac chambers, including the right auricle. No obvious abnormalities with contractility (measurements not performed).

## BREED

Chihuahua

## ULTRASONOGRAPHIC FINDINGS

### SEX

Neutered Male

• **Pancreas:** The **left** limb is consistent with *mild pancreatitis* and signs of *fibrosis* due to previous episodes of pancreatitis. Findings of the right limb are also consistent with fibrosis.

### AGE

5 Years 3 Months

• **Gastrointestinal:** A *mild ileus* of the stomach is present, as well as signs of *gastritis*. There are no obvious signs of inflammation of the colon, however, soft stools are present in the lumen, consistent with Lalo's signs of *colitis*. *Gastro-enterocolitis* secondary to pancreatitis is suspected, however, a chronic enteropathy, such as underlying inflammatory bowel disease, fibre responsive diarrhea, and/or dysbiosis, cannot be excluded.

### WEIGHT

9.8 Pounds

• **Gallbladder:** Gallbladder *sludge* is often clinically insignificant, however, gastroesophageal reflux disease (GERD), can occur in some patients. *Cholecystitis* cannot be excluded based on the hyperechogenicity of the wall of the common bile duct. Obtaining a history regarding signs of GERD from the client is suggested. Treatment with an anti-acid, proton pump inhibitor or ursodeoxycholic acid may be required.

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• **Lymph nodes:** The prominent pancreatic and mesenteric lymph nodes are consistent with reactive hyperplasia.

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## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Analgesia for visceral pain; gabapentin and/or methadone for a few days  
Fasting triglycerides are suggested to exclude hypertriglyceridemia as a predisposing cause of gallbladder sludge.

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Diet trial (veterinary prescription low fat, hypoallergenic, hydrolyzed or novel protein) due to history of pancreatitis, for example, Purina HA, is suggested if hypertriglyceridemia is identified.

Small, frequent meals

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Dr. Johnson

If homemade diets will be fed, ensure complete and well balanced

Obtaining a history regarding signs of GERD from the client is suggested. Treatment with an anti-acid, proton pump inhibitor (0.7-1 mg/kg PO q12h) or ursodeoxycholic acid may be required.

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+/- serum cobalamin, folate  
Pre and probiotic (synbiotic)

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**PATIENT**

Lalo Haghighi Clay based paste containing montmorillonite to treat diarrhea +/- fibre (psyllium)

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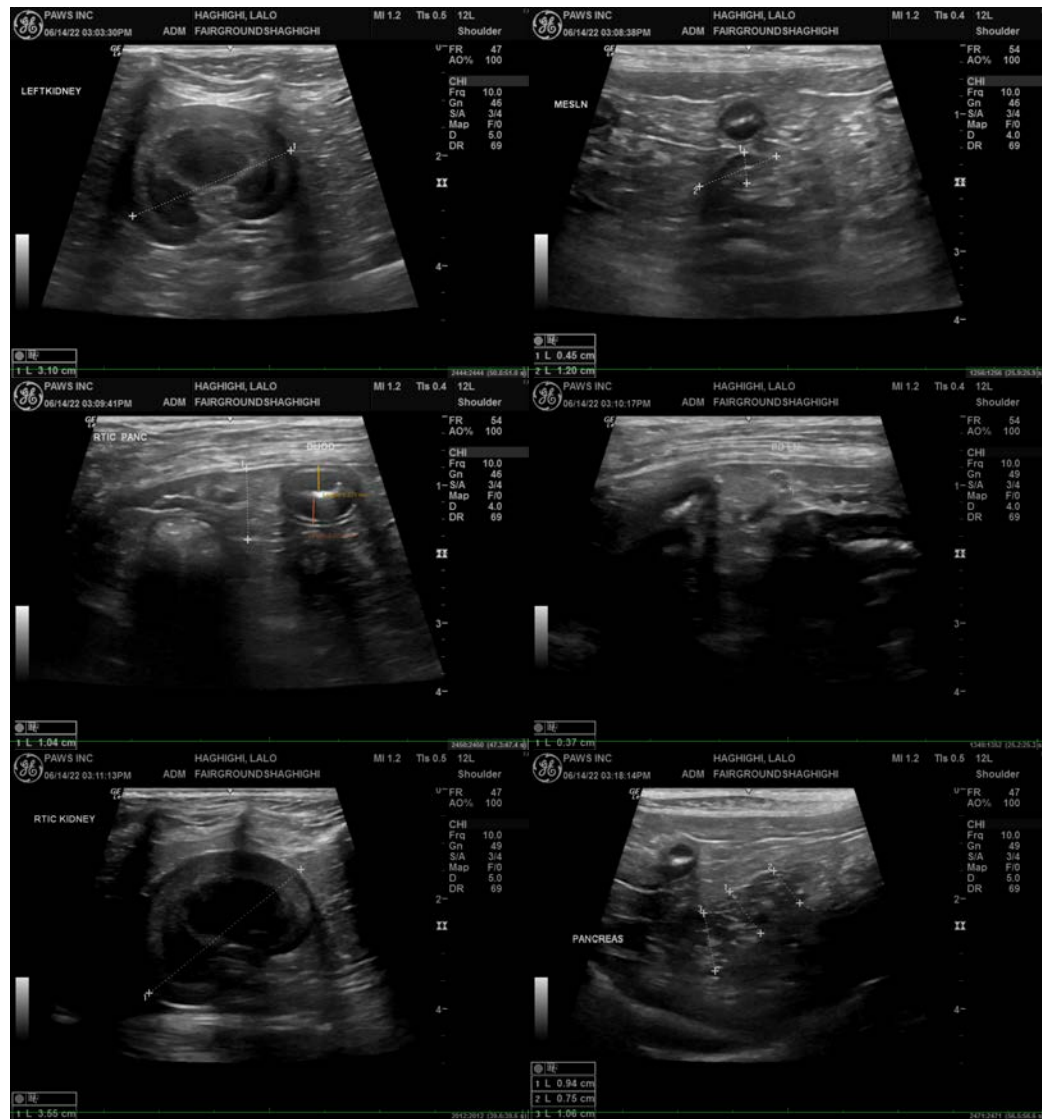
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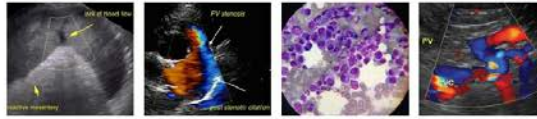
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**AGE**

5 Years 3 Months

**WEIGHT**

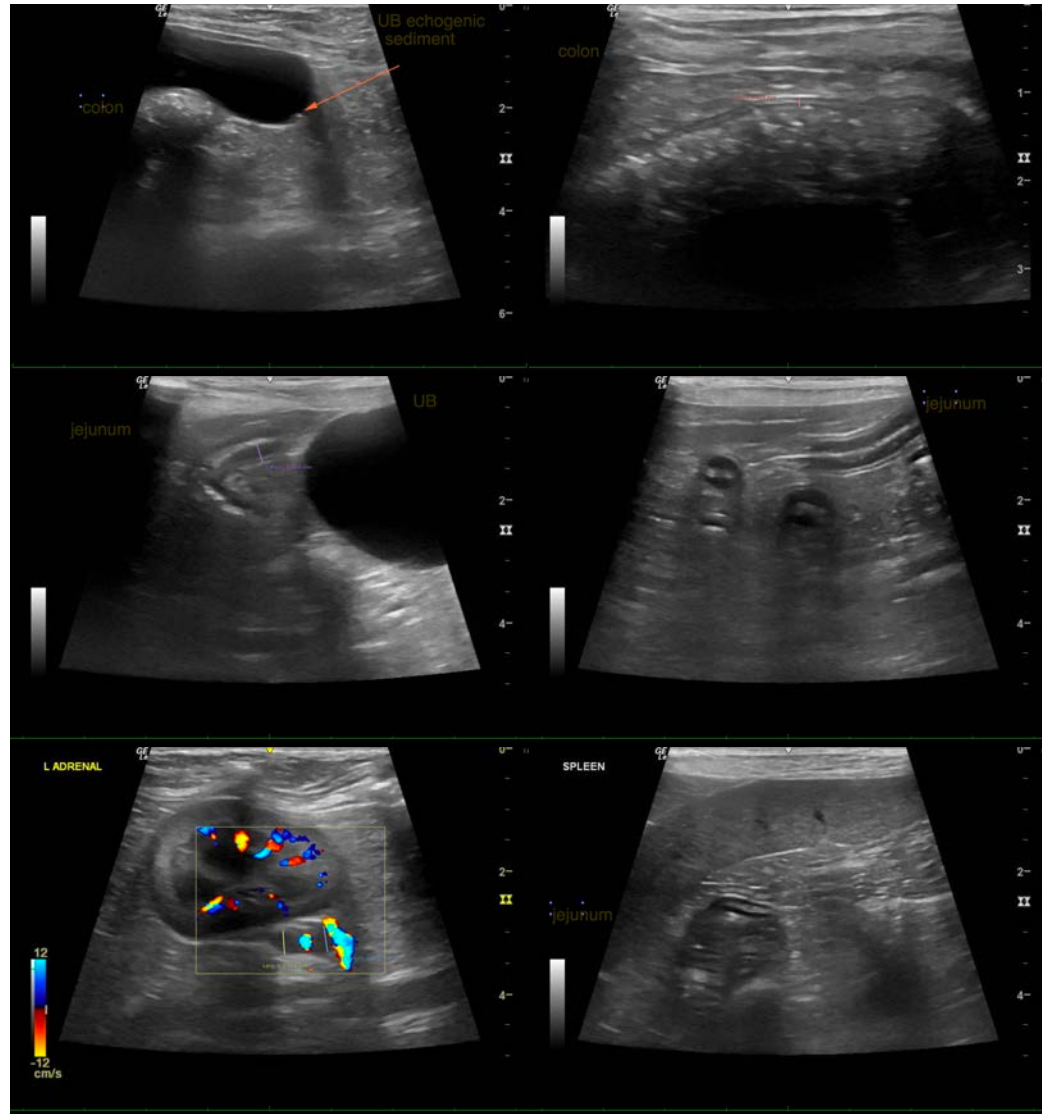
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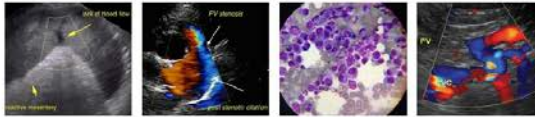
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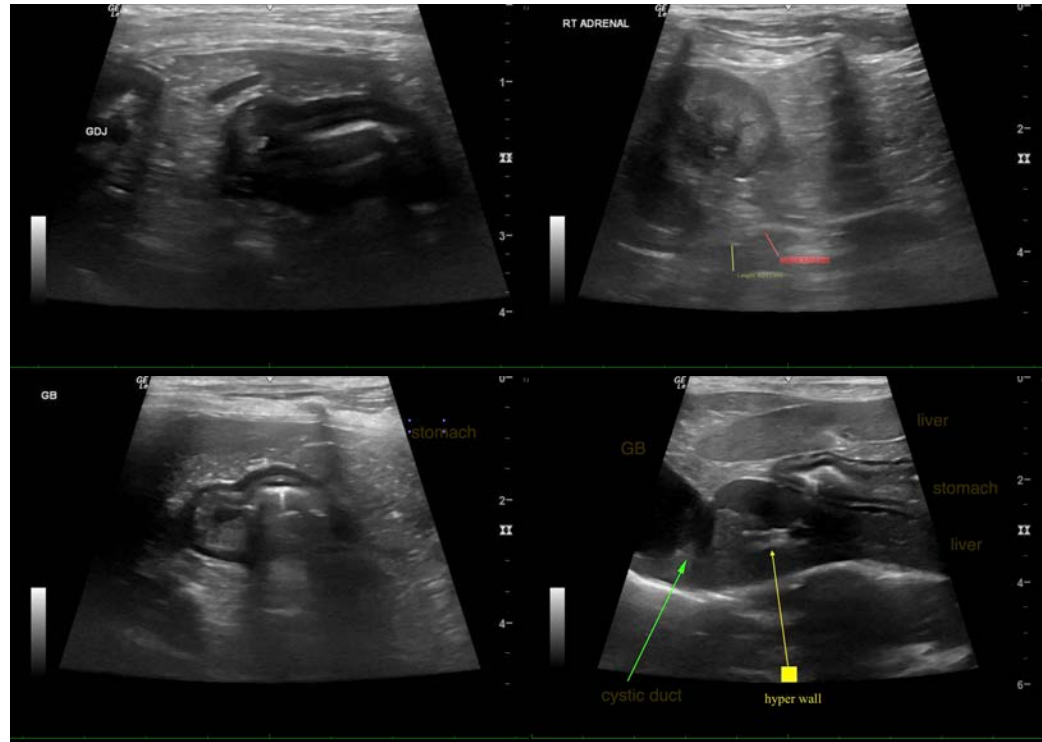
Neutered Male

**AGE**

5 Years 3 Months

**WEIGHT**

9.8 Pounds



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ACVIM

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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