



**PATIENT PRESENTING CLINICAL SIGNS**

Flynnigan Xamin Elevated PSL, recurrent vomiting and diarrhea despite GI low fat food. Metronidazole and Cerenia.  
Abnormal PE/Chem/CBC/UA Results: Elevated PSL and on U/A - Sp. grav-1.049 and struvite crystals present.

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

**BREED**

Morkie

The urinary bladder was normal in size and tone with mild dependent shadowing mineral present along with mild non-dependent particulate sediment. Potential for pinpoint mineral possible in the area of the ventral apical luminal surface. Ventral apical wall measured 0.38 cm in width. No evidence of pathology in the area of the residual prostate.

**SEX**

Neutered Male

The area of the aortic trifurcation was free of pathology.

**AGE**

10 Years

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 4.0 cm. The right kidney measured 3.8 cm.

**Adrenal Glands**

**WEIGHT**

5.3 kg

The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.61 cm at the cranial pole and 0.40 cm at the caudal pole. The left adrenal gland was indistinctly visualized with only the caudal pole visible, yet overtly normal, measuring 0.46 cm.

**Spleen**

**INTERPRETED BY**

R. McKenzie Daniel, DVM,  
DABVP (Canine and  
Feline)

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

**IMAGING PERFORMED BY**

Crystal Hill

**Liver**

The liver exhibited borderline to mild enlargement. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with primarily anechoic luminal content. The cystic and common bile ducts were normal.

**HOSPITAL NAME**

Westoak AH

**Gastrointestinal**

**REFERRING VET**

Dr. Kohlmaier

The visible gastric walls were sonographically unremarkable. Ventral gastric body wall measured 0.40 cm. The lumen of the stomach contained mild to moderate, nonshadowing ingesta most consistent with post prandial presentation without signs of ileus, obstruction or foreign material.

**INVOICE**

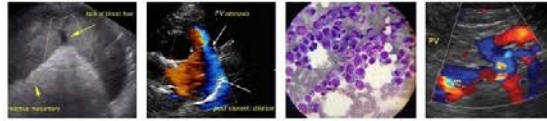
33601

The small intestine presented intact wall layering with subjective propensity for mildly prominent generalized small intestinal mucosal layer with intermittent mucosal speckling. Duodenum wall measured 0.44 cm. Jejunum wall measured 0.34 cm.

**DATE**

12/20/21

Normal visible colon wall layers were present with apparent formed feces in lumen.



**PATIENT** *Pancreas*

Flynnigan Xamin

The parenchyma of the left limb, body and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.

**SPECIES**

Canine

*Free Abdomen*

No overt lymphadenopathy or peritoneal effusion was present.

**BREED**

Morkie

**ULTRASONOGRAPHIC FINDINGS**

**SEX**

Neutered Male

- Mild dependent urinary bladder mineral with non-dependent particulate sediment, potential for minor ventral apical cystitis.
- Mild age related kidneys
- Mild gastroenterocolitis – potential inflammatory bowel.
- Overtly normal pancreas – potential for low-grade to chronic pancreatitis, yet sonographically normal.
- Borderline to mild hepatomegaly – subjectively benign, reactive or vacuolar hepatopathy likely.

**AGE**

10 Years

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**WEIGHT**

5.3 kg

Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered.

**INTERPRETED BY**

R. McKenzie Daniel, DVM,  
DABVP (Canine and  
Feline)

In patients with recurrent gastrointestinal signs, mild to chronic pancreatitis, dysbiosis, food intolerance/hypersensitivity, inflammatory bowel disease, or less likely intestinal neoplasia may be possible. Fresh fecal analysis to assess for parasitic ova/giardia as well as GI panel to include PLI, TLI, cobalamin and folate are warranted.

**IMAGING PERFORMED BY**

Crystal Hill

Empirically, a limited antigen or hydrolyzed diet trial with potential long term dietary therapy, prophylactic deworming (Panacur 50 mg/kg SID x 5 consecutive days with repeat protocol in 3 weeks even if fecal testing is negative), high colony count probiotic (Provable or Visbiome), antibiotic trial and as needed gastrointestinal support with assessment of clinical response may prove beneficial. Intestinal biopsies may be indicated if GI signs continue despite empirical therapy.

**HOSPITAL NAME**

Westoak AH

Although considered unlikely, resting cortisol to rule out occult Addison's disease may be considered.

**REFERRING VET**

Dr. Kohlmaier

**INVOICE**

33601

**DATE**

12/20/21





**PATIENT**

Flynnigan Xamin

**SPECIES**

Canine

**BREED**

Morkie

**SEX**

Neutered Male

**AGE**

10 Years

**WEIGHT**

5.3 kg

**INTERPRETED BY**

R. McKenzie Daniel, DVM,  
DABVP (Canine and Feline)

**IMAGING PERFORMED BY**

Crystal Hill

**HOSPITAL NAME**

Westoak AH

**REFERRING VET**

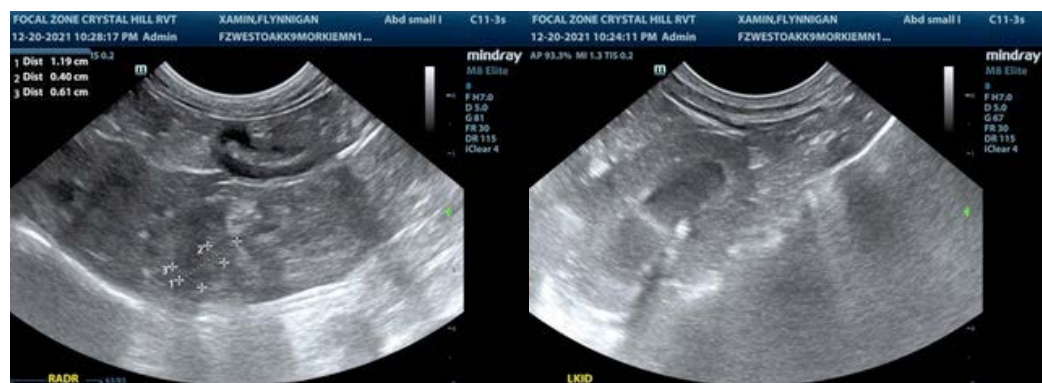
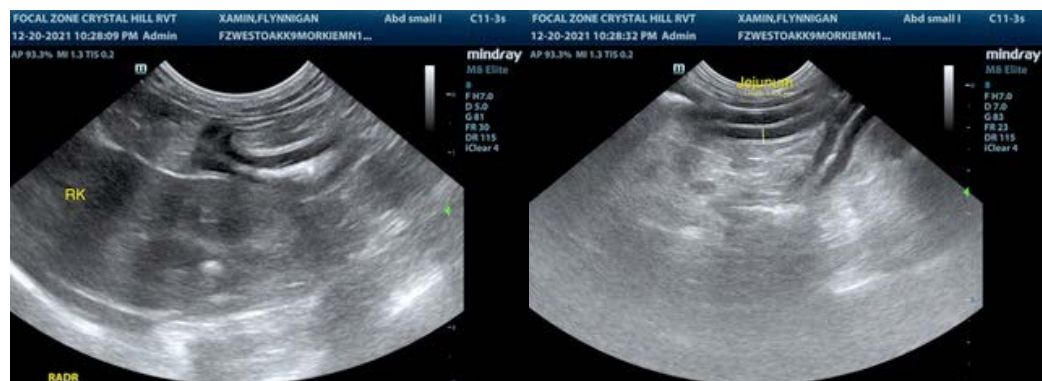
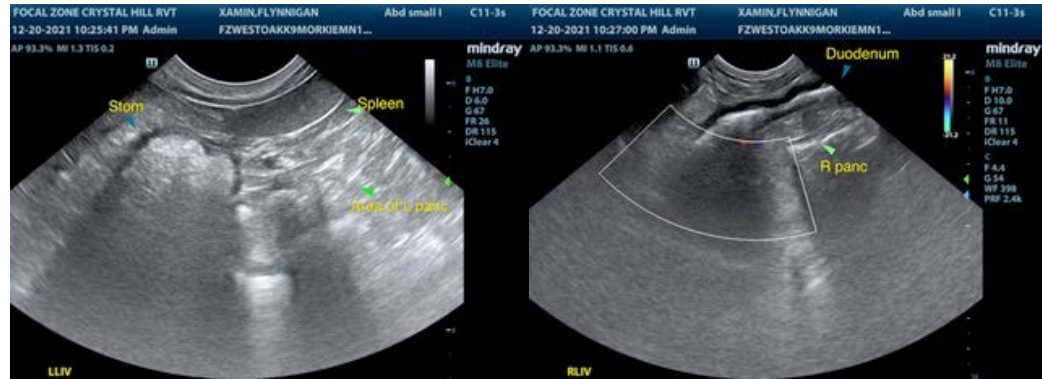
Dr. Kohlmaier

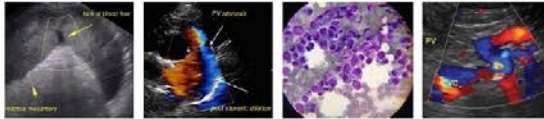
**INVOICE**

33601

**DATE**

12/20/21





**PATIENT**

Flynnigan Xamin

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.

**SPECIES**

Canine

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.

**BREED**

Morkie

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)  
info@SonoPath.com

**SEX**

Neutered Male

**AGE**

10 Years

**WEIGHT**

5.3 kg

**INTERPRETED BY**

R. McKenzie Daniel, DVM,  
DABVP (Canine and  
Feline)

**IMAGING  
PERFORMED BY**

Crystal Hill

**HOSPITAL NAME**

Westoak AH

**REFERRING VET**

Dr. Kohlmaier

**INVOICE**

33601

**DATE**

12/20/21