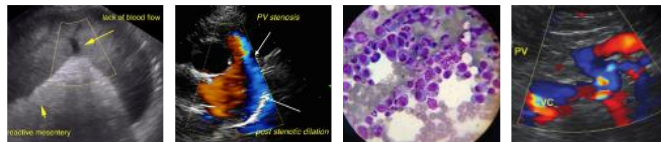


<b>PATIENT</b>	<b>PRESENTING CLINICAL SIGNS</b>
Mei Gallagher	History: History of cystic calculi-Struvite (August 2020), then combination of struvite/ calcium carbonate/ammonium urate ( February 2022). Diet: Derm Complete. Recently finished course of Marboquin
<b>SPECIES</b>	
Canine	Abnormal PE/Chem/CBC/UA Results: Bile Acids: Pre 6.6 (normal) Post 36.3 (High) Urine PH 6.5, Bilirubin 1+, Crystals 1+, Struvite 1+, Calcium Oxalate 1+ Urine specific Gravity 1.040 Chem/CBC: NSF
<b>BREED</b>	<b>ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN</b>
Pug	<b>Urinary System</b>
<b>SEX</b>	The <b>urinary bladder</b> , trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized, and anechoic urine was present. No evidence of inflammatory or neoplastic changes were noted. Ureteral papillae were normal. The pelvic urethra was imaged 2.0 cm beyond the cystourethral junction.
Spayed Female	
<b>AGE</b>	The <b>kidneys</b> revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. Both kidneys measured 4.0 cm each.
8 Years	
<b>WEIGHT</b>	<b>Adrenal Glands</b>
22.8 Pounds	Both <b>adrenal glands</b> were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland was visualized obliquely, measuring 0.4 cm. The right adrenal gland was visualized obliquely, measuring approximately 0.6 cm.
<b>INTERPRETED BY</b>	<b>Spleen</b>
Eric Lindquist, DMV DABVP, Cert. IVUSS	The <b>spleen</b> presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes were noted.
<b>IMAGING PERFORMED BY</b>	<b>Liver</b>
Amy	The <b>liver</b> revealed mild uniform swelling and minor increased portal markings. A history of inflammatory hepatopathy is likely. The gallbladder and common bile duct were unremarkable. No evidence of intrahepatic or extra hepatic shunting. The portal vein to vena cava ratio was 1:1, both measuring 5.0 mm.
<b>HOSPITAL NAME</b>	
Long Valley AH	
<b>REFERRING VET</b>	<b>Gastrointestinal</b>
Dr. Earl	Examination of the <b>gastrointestinal tract</b> revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine
<b>INVOICE</b>	
16165	
<b>DATE</b>	
6/17/22	



**PATIENT**

Mei Gallagher

demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

**Pancreas**

**SPECIES**

Canine

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

**BREED**

Pug

**ULTRASONOGRAPHIC FINDINGS**

- Benign hepatopathy, minor remodeling
- Structurally unremarkable abdomen otherwise

**SEX**

Spayed Female

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

A trial of the following could be considered from an empirical standpoint. Primarily liver oriented diet and metronidazole over a 10-14 day period and recheck of the bile acids could be considered. However, the changes in the liver appear very benign. The bile acid elevation may be a spurious elevation.

**AGE**

8 Years

**Hepatic Support for Bile Acid Elevation +/- Hepatic Encephalopathy**

**WEIGHT**

22.8 Pounds

**Royal Canin Hepatic Support diet or Hills L/D, Metronidazole** (7.5 mg/kg PO bid) over the next 14 days, **Lactulose** (Oral: 3.1-3.7 g/5 ml lactulose in a syrup base) long term to target 2-3 soft stools/day, with a **high-quality protein supplement** of minor amount of **yogurt** or **cheddar cheese**. Monitor bile acids, with attention paid to dropping albumin, BUN or cholesterol. SAME and nutraceuticals as needed. **Ursodiol** (10-15 mg/kg p.o. q24h) can be considered as hepatoprotectant and to enhance bile flow. **Zinc** serum level keep between 200—500 ug/dl. If deficient then Tx zinc acetate 1-3 mg/kg/day. Gastrointestinal protectants are recommended if the patient is anorexic.

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Amy

**HOSPITAL NAME**

Long Valley AH

**REFERRING VET**

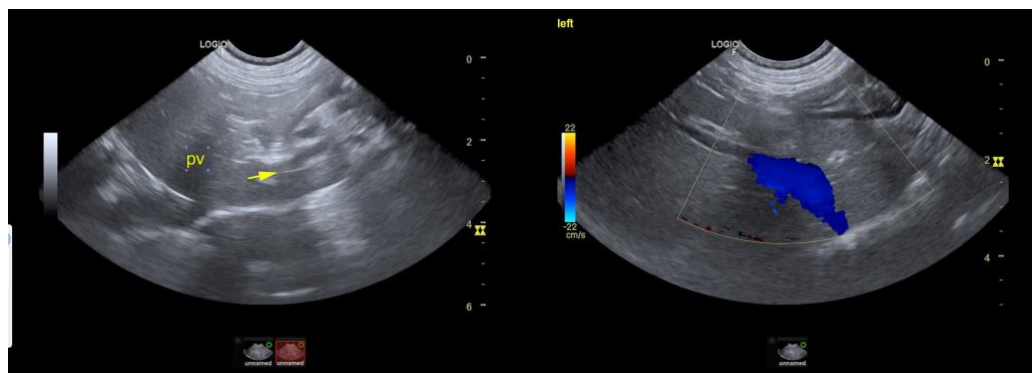
Dr. Earl

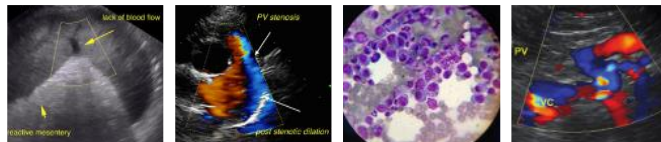
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**PATIENT**

Mei Gallagher

**SPECIES**

Canine

**BREED**

Pug

**SEX**

Spayed Female

**AGE**

8 Years

**WEIGHT**

22.8 Pounds

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Amy

**HOSPITAL NAME**

Long Valley AH

**REFERRING VET**

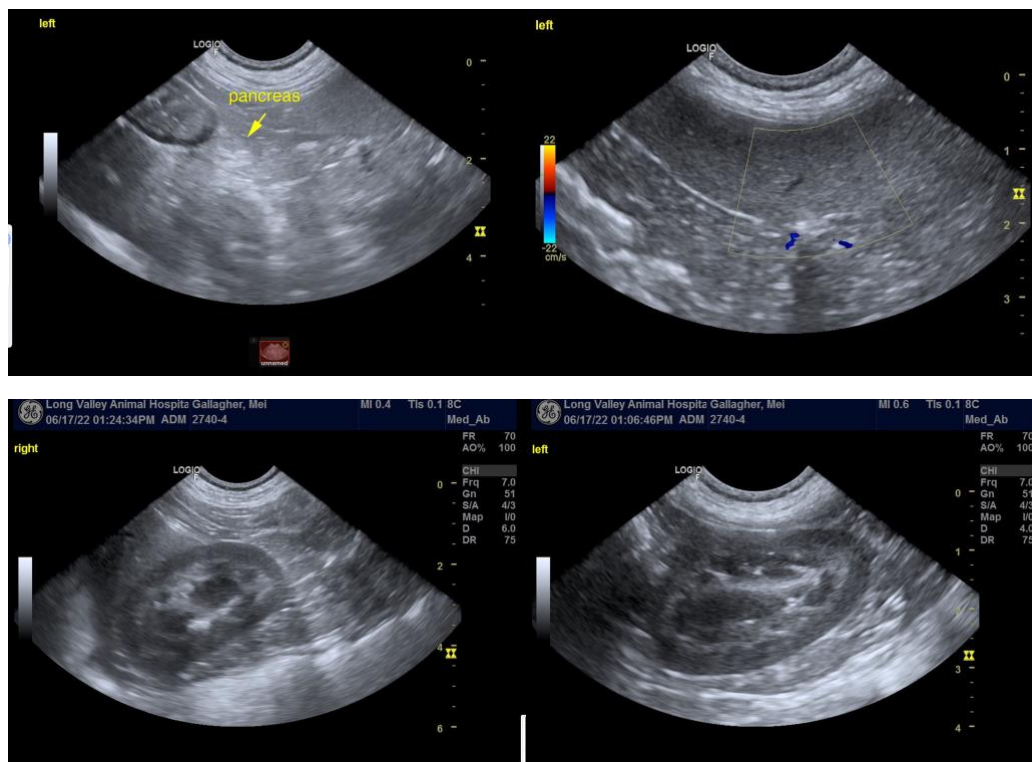
Dr. Earl

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**DATE**

6/17/22



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.

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.

**Eric Lindquist**, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com  
info@SonoPath.com