



**PATIENT PRESENTING CLINICAL SIGNS**

**Brynn Mann** Prednisone 5mg- 1/2 tablet every other day, and 1/4 tablet on every other day. Has been off and on food, not really taking in a meal anymore. A bit quieter. Want overall scan for any answers. Confirmed did eat a bit of food this am.

**SPECIES** Abnormal PE/Chem/CBC/UA Results: n/a

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**BREED Urinary System**

**Welsh Terrier** The urinary bladder is moderately distended with mild primarily suspended echogenic debris present. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or calculi. Echogenic debris of this type can be associated with small crystals, cellular debris and proteinaceous debris.

**SEX**

**Spayed Female** The left kidney has a normal shape and size (4.76 cm) with mild pyelectasia at 0.21 cm and hyperechoic cortical foci, most consistent with pinpoint mineralizations. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of infarcts or hydroureter. Renal vasculature is normal.

**AGE**

12 Years

The right kidney has a normal shape and size (5.42 cm) with pinpoint non-obstructive mineralizations and pyelectasia at 0.16 cm. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**WEIGHT**

15.4 Pounds

**Adrenal Glands**

**INTERPRETED BY**

Kathleen Sennello DVM,  
MS, Diplomate ACVIM  
(Small Animal Internal  
Medicine)

The left adrenal gland is normal in size measuring 0.57 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

**IMAGING PERFORMED BY**

Crystal Hill

The right adrenal gland is normal in size measuring 0.37 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

**HOSPITAL NAME**

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**Spleen**

The spleen is subjectively normal in size and the echotexture is homogenous. The splenic capsule is smooth with no visible irregularities. Rare discrete focal hyperechoic, perivascular parenchymal abnormalities are present. The appearance of these lesions is most consistent with benign splenic myelolipomas. The blood flow through the hilus and splenic parenchyma appears normal. There are diffuse hyperechoic foci throughout the splenic parenchyma. This appearance trends towards benign parenchymal change.

**REFERRING VET**

Dr. Keir

**Liver**

The liver is large in size, and normal in echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There are numerous ill-defined hypoechoic nodules visualized, examples measured 0.76 cm and 2.0 cm.

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The gall bladder lumen is moderately distended. The wall of the gall bladder is mildly thickened at 0.30 cm. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.


**PATIENT** *Gastrointestinal*

Brynn Mann The stomach is moderately dilated with fluid and irregular shadowing material most consistent with normal ingesta and gas. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layering is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

**SPECIES**

Canine

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.)

**BREED**

Welsh Terrier

Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

**SEX**

Spayed Female

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

**AGE**

12 Years

**Pancreas**

The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

**Free Abdomen**
**WEIGHT**

15.4 Pounds

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

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 Kathleen Sennello DVM,  
 MS, Diplomate ACVIM  
 (Small Animal Internal  
 Medicine)

**Other**

A brief view of the heart was submitted. No significant pericardial effusion was seen.

**IMAGING PERFORMED BY**

Crystal Hill

**PRIMARY FINDINGS**

- Echogenic debris visualized in the urinary bladder – The echogenic debris in the bladder lumen could be consistent with cells, crystals, and/or mucus.
- Decreased corticomedullary distinction in both kidneys with mild pyelectasia and punctate hyperechoic cortical foci – The bilateral renal findings are consistent with age-related change. Pyelectasia of the left/right kidney could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other. The hyperechoic foci are likely an incidental change.
- Large, heterogeneous liver with hypoechoic nodules – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. The hypoechoic nodules visualized could represent benign or neoplastic lesions.
- Moderate gallbladder debris with mild gallbladder wall thickening – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.
- Shadowing ingesta within the gastric lumen – This material obscures visualization of many of the deeper structures in the abdomen.

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## PATIENT

Brynn Mann

## SECONDARY FINDINGS

- Hyperechoic foci visualized in the spleen – most consistent with benign myelolipomas and parenchymal mineralizations.

## SPECIES

Canine

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There was no significant focal lesion observed to explain the drop in appetite recently observed. Many of the changes seen on today's scan are consistent with chronic age related changes.

## BREED

Welsh Terrier

- Consider a urinalysis and culture to further evaluate the echogenic debris in the urinary bladder.
- Recommend a blood pressure evaluation and urine protein levels to further evaluate the changes observed in the kidneys.

## SEX

Spayed Female

- The changes observed in the liver parenchyma are likely partially a steroid hepatopathy. The hypoechoic nodules are of uncertain significance. A fine needle aspirate could be considered.

## AGE

12 Years

There is some thickening of the gallbladder wall, which could be an indicator of cholecystitis. I do not see significant surrounding inflammation. Correlate all of these ultrasonographic findings with blood work. Is this patient azotemic, other liver enzyme elevations, etc. If there is concern for cholecystitis, you could consider starting Ursodiol and a round of antibiotic therapy with continued monitoring of the gallbladder with ultrasound.

## WEIGHT

15.4 Pounds

The reason for the chronic Prednisone therapy was not stated in the history. If this patient has a history of gastrointestinal disease, there could be progression of this condition. A GI panel to Texas A&M for a qualitative PLI, TLI, cobalamin and folate could be considered, as well as obtaining GI biopsies.

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## REFERRING VET

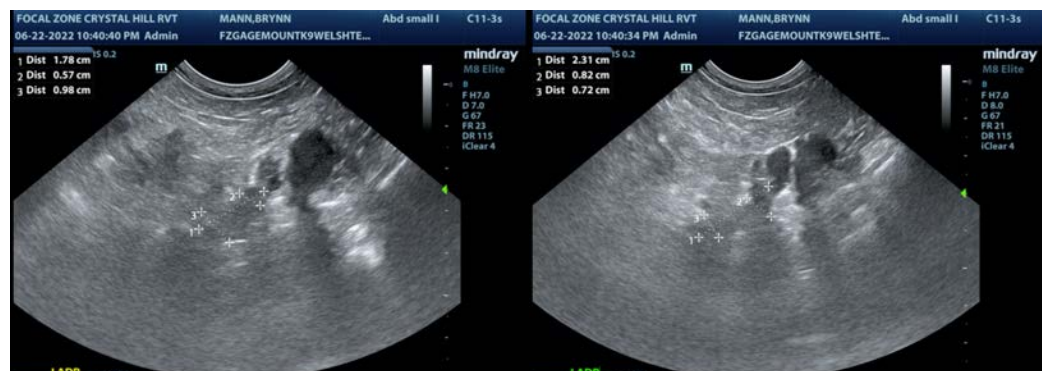
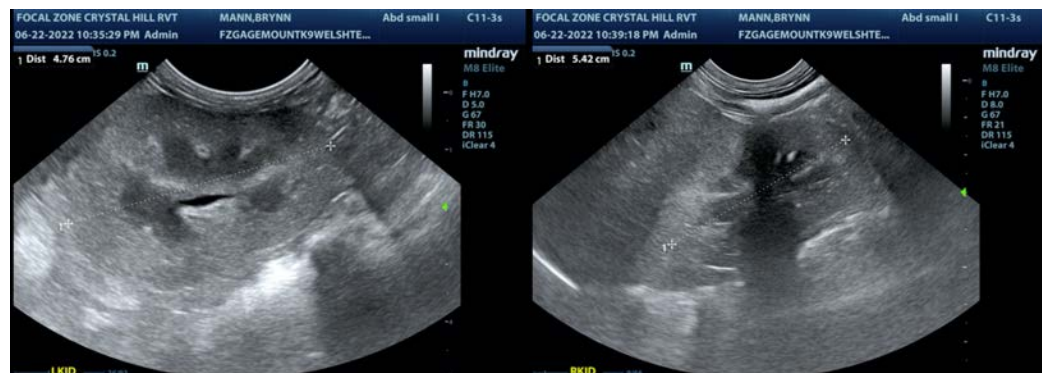
Dr. Keir

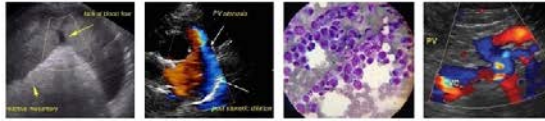
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**PATIENT**

Brynn Mann

**SPECIES**

Canine

**BREED**

Welsh Terrier

**SEX**

Spayed Female

**AGE**

12 Years

**WEIGHT**

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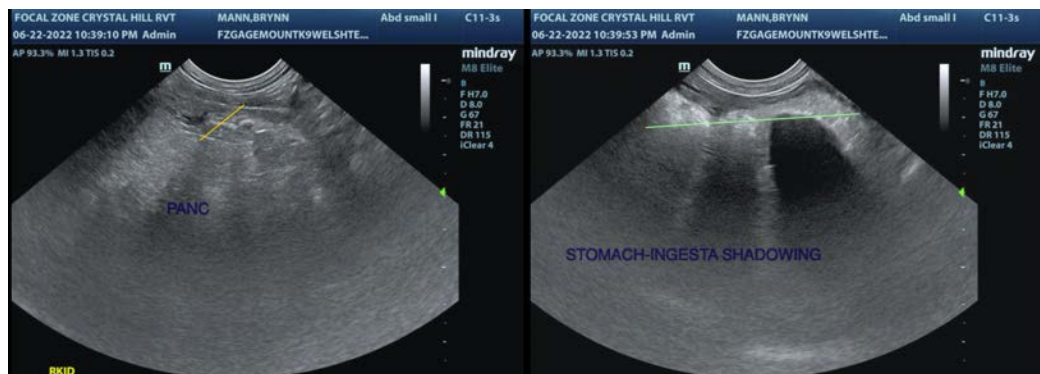
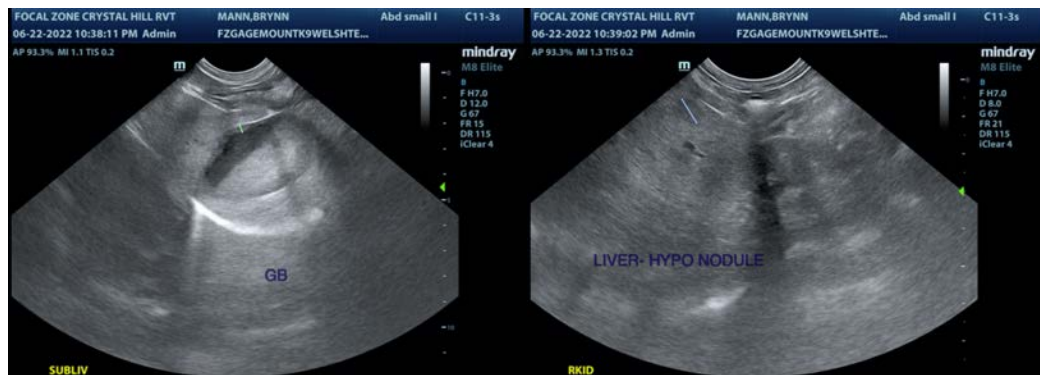
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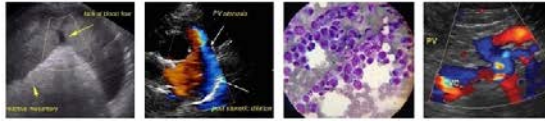
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**PATIENT**

Brynn Mann

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.

**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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)

kathleen.sennello@sonopath.com

**BREED**

Welsh Terrier

**SEX**

Spayed Female

**AGE**

12 Years

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