

IMAGING PERFORMED BY

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Clinical Sonography & Telectology

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**DATE PRESENTING CLINICAL SIGNS**

11/23/22

Pet has seemed "bloated" looking for awhile now. O notes spine is more prominent, pet still has good appetite, no vomiting, diarrhea occasionally. O notes slowing of mobility, pet will not attempt to jump anymore. Still feeding I/D mixed with Pedigree- discussed with o concern for right sided heart failure (most likely) vs neoplasia vs other. due to lack of serosal detail.

**PATIENT**

Ziggy Vollmerhausen

**SPECIES**

Canine

Current Medications: None listed.  
Radiographs: See attached Synergy report.  
Date of Previous IntraPet Ultrasound: No previous.  
Sedation: Not required to complete full diagnostic ultrasound.  
Stat Report: Declined at this time.

**BREED**

Dachshund

Thoracic ultrasound offered and declined.

**SEX**

Neutered Male

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is moderately distended with anechoic urine. 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 cystic calculi.

**AGE**

3/12/12

The prostate is normal in size (0.79 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

**WEIGHT**

14.8 Pounds

The left kidney has a normal shape and size (4.55 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**INTERPRETED BY**

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

The right kidney has a normal shape and size (4.41 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**IMAGING PERFORMED BY**

Stephanie Warga  
RDMS, RVT

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.75 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.

**HOSPITAL NAME**

Eldersburg VH

The right adrenal gland is normal in size measuring 0.53 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.

**REFERRING VET**

Dr. Alper

**Spleen**

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

**INVOICE**

42960

### ***Liver***

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is homogenous echotexture. The visible portions of the vasculature and biliary tract appear normal. There is a small, slightly hypoechoic intraparenchymal nodule visualized on the right side of the liver measuring 1.19 cm x 1.17 cm. Additionally, on the left side there is an iso- to slightly hypoechoic nodule visualized measuring 1.01 cm x 0.79 cm.

The gallbladder lumen is moderately distended. The wall of the gall bladder appears slightly thickened and irregular, likely due to the adherence of debris to the gallbladder wall. This is measured at 0.73 cm. No evidence of bile duct dilation.

### ***Gastrointestinal***

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.

The visualized areas of duodenum, jejunum and ileum have a uniform diameter with minimal fluid distension. Wall thickness is moderately increased. Bowel loops follow a typical curvilinear path. Some areas have reduced detail of wall layering. Jejunum wall measures 0.47 cm. The bowel wall appears somewhat "fuzzy" in appearance and there is evidence of mucosal speckling. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

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.

### ***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***

There is a large amount of anechoic free fluid. No lymphadenopathy. The omentum is generally of normal echogenicity.

### ***Other***

A brief view of the heart was submitted. No significant pericardial effusion was seen. No significant right-sided enlargement.

## **ULTRASONOGRAPHIC FINDINGS**

- Occasional small hypo- to isoechoic hepatic nodules visualized – The significance of these nodules is uncertain. They have a somewhat benign appearance, but one lesion does mildly deviate the margin of the liver. Recommend continued monitoring +/- fine needle aspirate.
- Moderate adhered gallbladder debris – The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.
- Shadowing material visualized within the gastric lumen – Correlate with the feeding history and abdominal radiographs. If the patient was adequately fasted consider such differentials as delayed gastric emptying, a partial outflow tract obstruction (none seen) or ingested foreign material.

- Thickened small intestine with mucosal speckling – The bowel wall thickening could be consistent with inflammation, edema, or infiltrative neoplasia. Bright mucosal speckling has been postulated to represent dilated lacteals or focal accumulations of mucus, cellular debris, etc.. in the mucosal crypts.
- Large volume anechoic free abdominal fluid

### INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No focal mass lesions are visualized in the abdomen to explain the effusion noted. The liver appears relatively normal in appearance, although there are occasional ill-defined hypoechoic nodules visualized. Consider continued monitoring or a fine needle aspirate of the liver (provided coagulation parameters are normal).

Additionally, there is some adherent debris to the gallbladder wall. Correlate these findings with bloodwork results. If there are significant liver enzyme elevations, consider chronic Ursodiol therapy and continued monitoring.

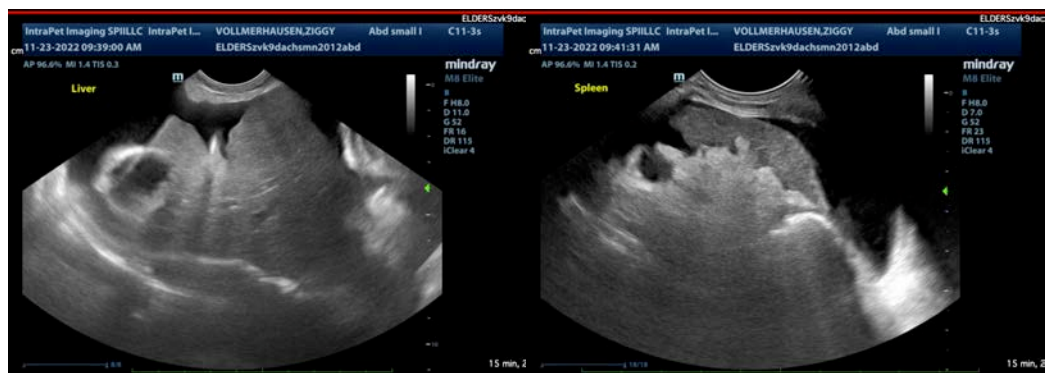
Additionally, submission of the collected abdominal effusion (abdominocentesis imaged in scan) will be helpful in trying to determine possible differentials for this effusion.

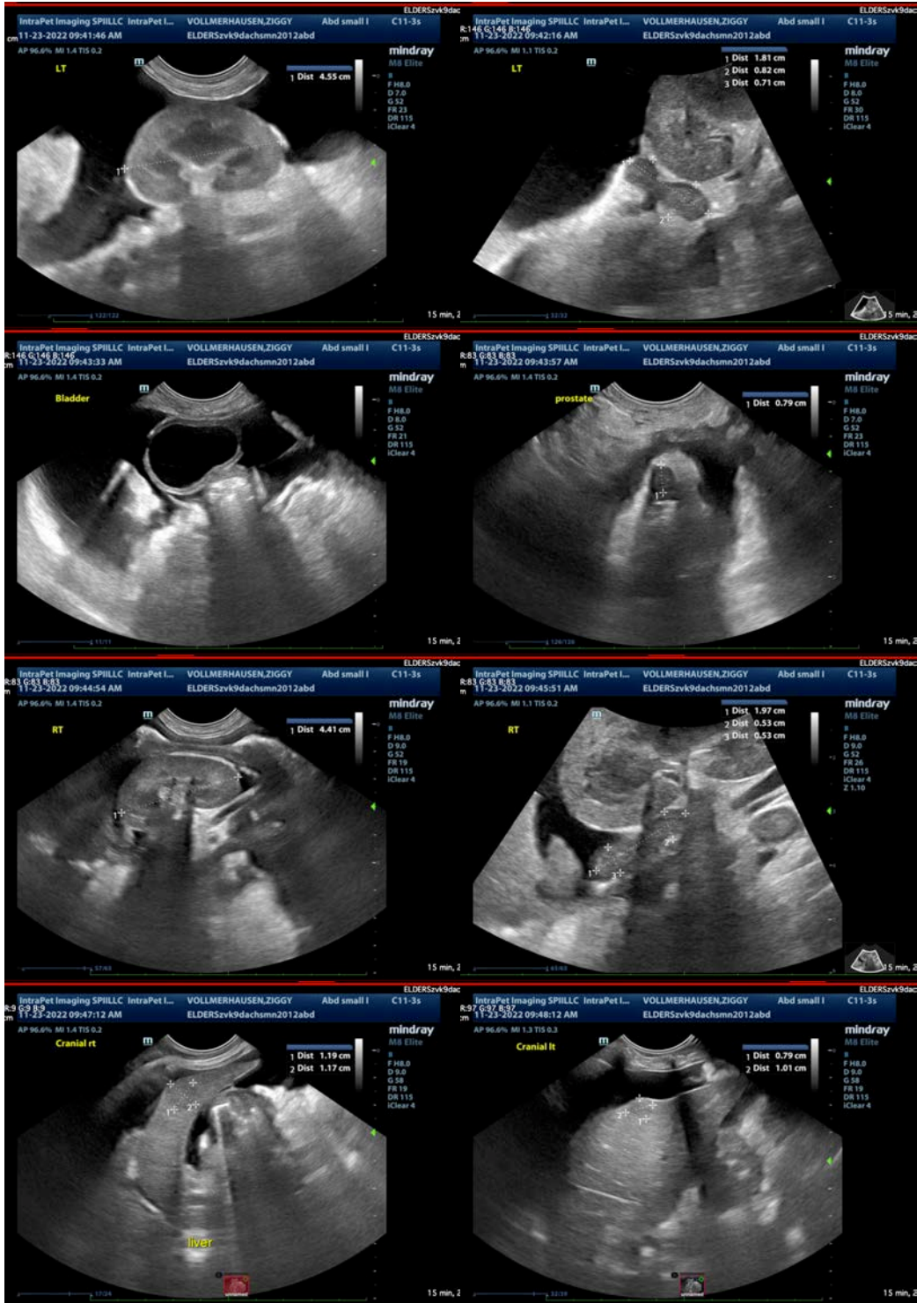
The small intestine appears somewhat thickened and edematous with mucosal speckling. I would suspect this could be consistent with a protein losing enteropathy depending on lab work findings (is albumin low?). Some of these changes can be secondary to the effusion causing some edema, etc., so interpretation by ultrasound alone is difficult.

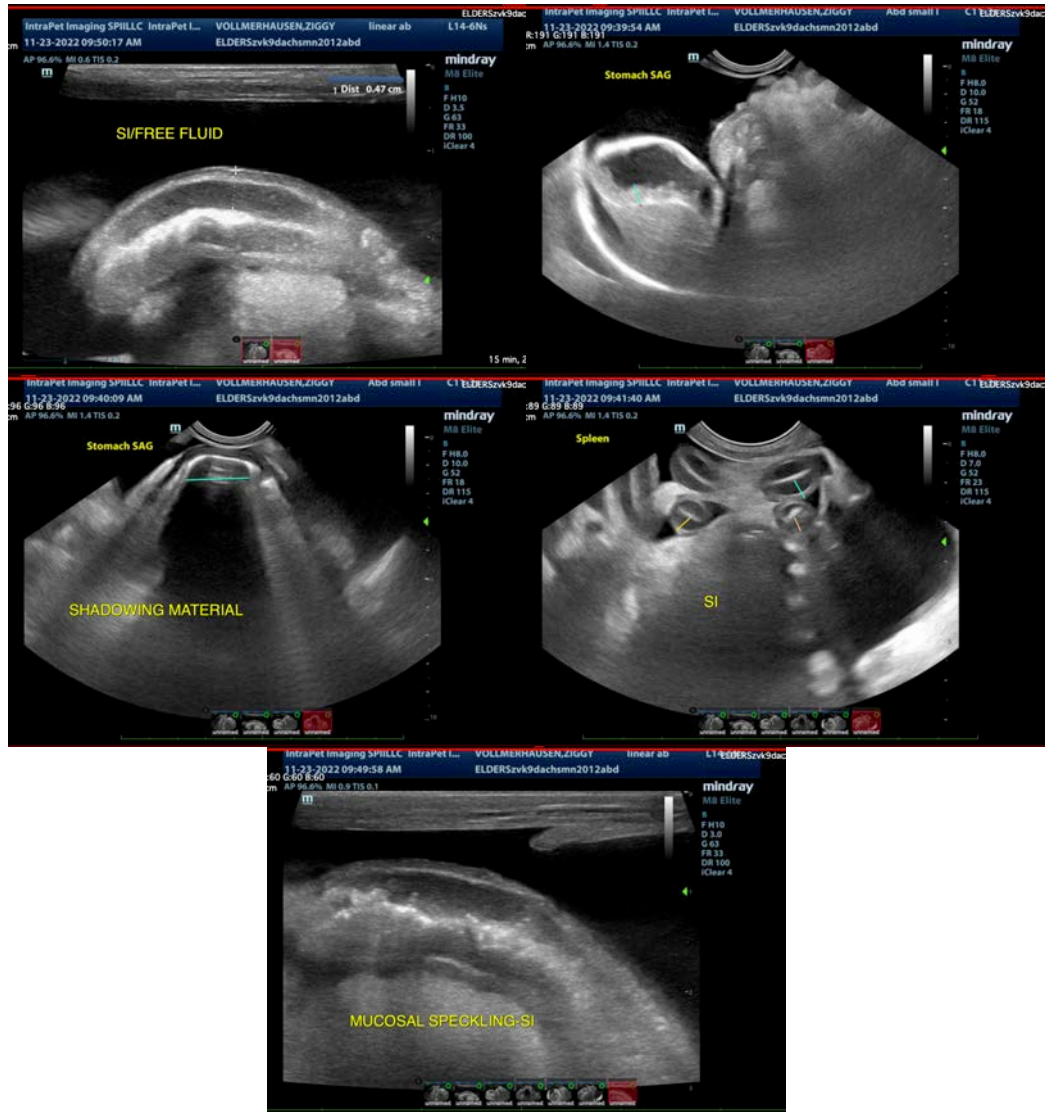
There is some focal shadowing material visualized within the stomach. Correlate with abdominal radiographs and feeding history. This could be consistent with ingesta or ingested foreign material, etc.

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.

Recommend full echocardiogram if there is still concern for underlying heart disease, and current thoracic radiographs, looking for evidence of effusion.







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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)  
 kathleen.sennello@sonopath.com