



PATIENT

Freya Giess-Iverson

SPECIES

Canine

BREED

Mixed

SEX

FS

AGE

12 years 11 months

WEIGHT

39.8 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Lucas Budden

HOSPITAL NAME

Frontier VH

REFERRING VET

Dr. Lucas Budden

INVOICE

11525

DATE

3/18/2026

PRESENTING CLINICAL SIGNS

- Clinical signs: PU/PD.
- History: Presented on 3/4/26 for increased thirst and urination. Owner was out of town and pet sitter described her as peeing small/frequent amounts. After owner returned home she described Freya's urination habits as PU/PD. She was licking her vulva more than usual with the pet sitter, but after returning home owner has not seen her excessively lick at her vulva.
- Current medications: Butorphanol to facilitate imaging

Abnormal PE/Chem/CBC/UA Results: Physical exam: Slightly recessed vulva, mild dental tartar, nuclear sclerosis OU, abdomen comfortable on palpation, peripheral LNs normal Lab work: CBC/chem/UA/fecal 2/14/26 Creatinine high 1.5 Remainder of chemistry normal CBC normal USG 1.013 Quite sediment Fecal negative UA/culture 3/4/26 USG 1.012 Quite sediment Culture negative.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The majority of the bladder wall appears of normal thickness with a smooth mucosal surface. Apical region appears mildly thickened and irregular measuring at 0.43 cm. The 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.

The left kidney has a normal shape and size (4.73 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.

The right kidney has a normal shape and size (5.39 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.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.54 cm at the cranial pole and 0.64 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.

The right adrenal gland is normal in size measuring 0.75 cm at the caudal pole (cranial pole is not clearly visualized). 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.

Spleen

The spleen is subjectively normal in size (1.29 cm) and the echotexture is homogenous. The splenic capsule is smooth with no visible irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.



PATIENT

Freya Giess-Iverson

SPECIES

Canine

BREED

Mixed

SEX

FS

AGE

12 years 11 months

WEIGHT

39.8 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Lucas Budden

HOSPITAL NAME

Frontier VH

REFERRING VET

Dr. Lucas Budden

INVOICE

11525

DATE

3/18/2026

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 hypoechoic nodule in the left side measuring 0.58 cm x 0.85 cm.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

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 0.33 cm 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 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 (0.46 cm in wall thickness) and the jejunum measured as normal (0.39 cm.) Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

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 prominent and mottled in the right limb. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

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.

ULTRASONOGRAPHIC FINDINGS

- Mildly thickened, irregular apical wall of the urinary bladder. The bladder mucosal changes could be consistent with cystitis or artifactual due to lack of adequate luminal distension. Bladder neoplasia cannot be ruled out but is considered unlikely in this patient.
- Pancreatic changes most consistent with chronic pancreatic remodeling.
- Hypoechoic nodule visualized in the liver. Findings are suggestive of a benign lesion such as regenerative nodule. An early neoplastic lesion cannot be ruled out.
- Moderate 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.



PATIENT

Freya Giess-Iverson

SPECIES

Canine

BREED

Mixed

SEX

FS

AGE

12 years 11 months

WEIGHT

39.8 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Lucas Budden

HOSPITAL NAME

Frontier VH

REFERRING VET

Dr. Lucas Budden

INVOICE

11525

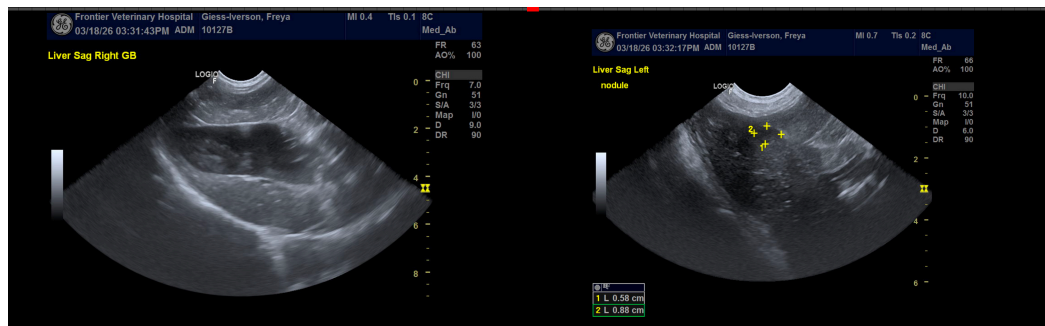
DATE

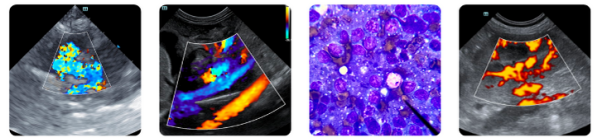
3/18/2026

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

An obvious lesion responsible for the reported increase in thirst and urination was not visualized. Some issues such as early renal disease, cushings disease, behavioral, neurologic, dietary, electrolyte disturbances etc.. are not able to be diagnosed with ultrasound alone. These can be challenging cases. The top 10 differentials can be ruled in/out with routine bloodwork, urinalysis and culture, several more can be evaluated with a good history and imaging. Unfortunately, as you work your way down the list the differentials become harder to definitively diagnose. This is the differential list I start with.

- Diabetes Mellitus
- Chronic Renal Disease/Renal Failure (can present pre-azotemic, especially in dogs, but expect the BUN & creatinine not to be at the low end of the reference range)
- Hypercalcemia.
- Urinary tract infection.
- Iatrogenic Disease due to medications (diuretics, phenobarbital, KBr; diets either high in salt [such as S/D] or very low in protein (such as U/D)).
- Hyperthyroidism.
- Hypokalemia.
- Liver Disease (hepatic encephalopathy may be a mixed primary PU and PD).
- Pyelonephritis.
- Polycythemia.
- Renal Tubular Diseases (glycosuria or Fanconi & Fanconi-like syndromes or RTA).
- Hyperadrenocorticism (may be a mixed primary PU and PD)
- Hypoadrenocorticism (either Addison's or hypocortisolism)
- Paraneoplastic Syndromes (particularly splenic hemangiosarcoma?)
- Pericardial Effusion.
- Pyometra (including stump pyometra in spayed dogs).
- Chronic Partial Urinary Obstruction or Post-Obstructive Diuresis.
- Pheochromocytoma.
- Psychogenic Polydipsia (as in a true behavior disorder with a compulsive element).
- Primary Non-Medical Polydipsia (aka "I drink a lot because I like it or I engage in activities that promote it, but that doesn't mean I'm sick").
- Primary Nephrogenic Diabetes Insipidus (Congenital Nephrogenic Diabetes Insipidus, other diseases that cause primary PU other than Congenital Diabetes Insipidus would be considered Acquired Nephrogenic Diabetes Insipidus) cion.
- Atypical Cushing's and SARDS.
- Central Diabetes Insipidus.





PATIENT

Freya Giess-Iverson

SPECIES

Canine

BREED

Mixed

SEX

FS

AGE

12 years 11 months

WEIGHT

39.8 lbs

INTERPRETED BY

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

**IMAGING
PERFORMED BY**

Dr. Lucas Budden

HOSPITAL NAME

Frontier VH

REFERRING VET

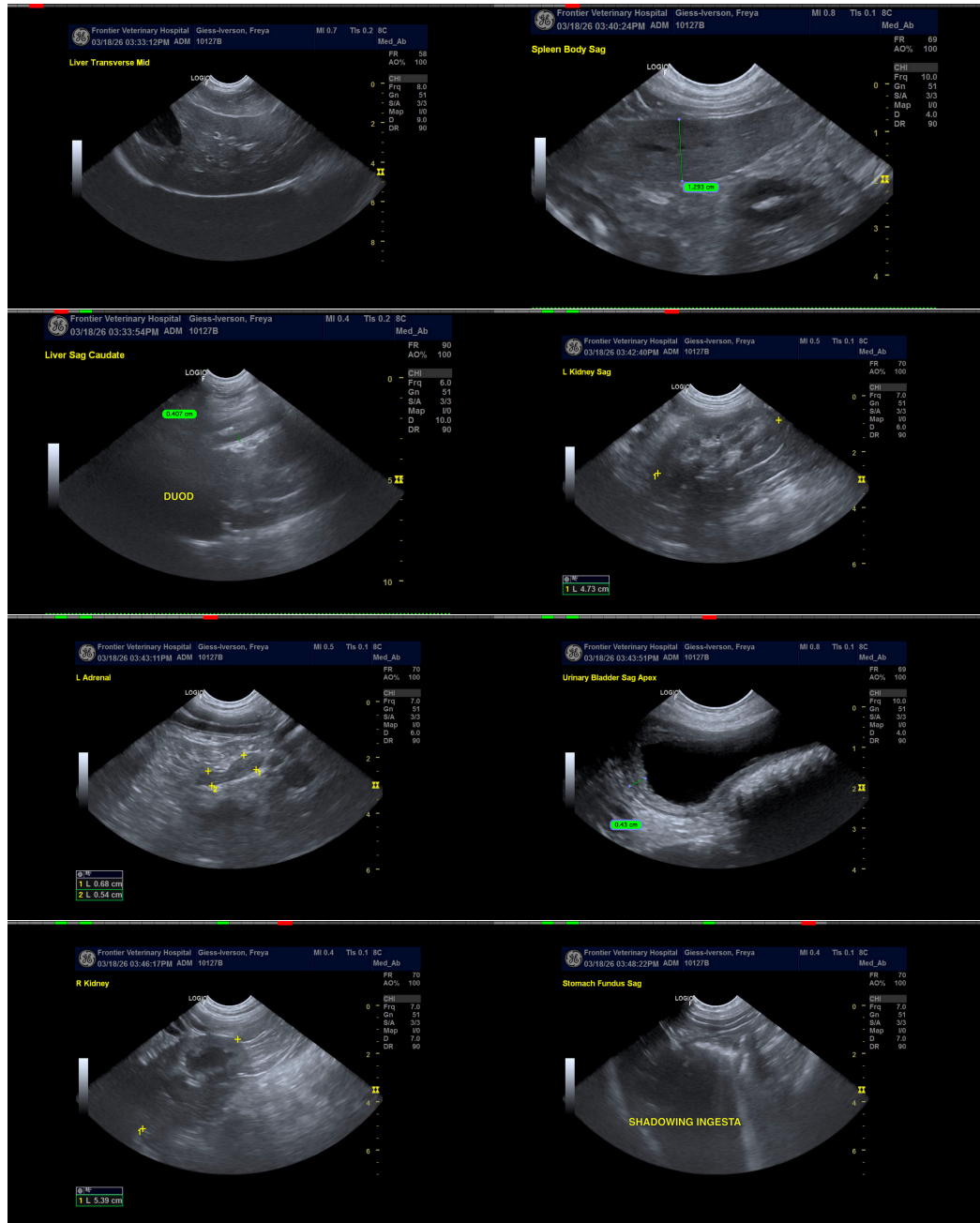
Dr. Lucas Budden

INVOICE

11525

DATE

3/18/2026





PATIENT

Freya Giess-Iverson

SPECIES

Canine

BREED

Mixed

SEX

FS

AGE

12 years 11 months

WEIGHT

39.8 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Lucas Budden

HOSPITAL NAME

Frontier VH

REFERRING VET

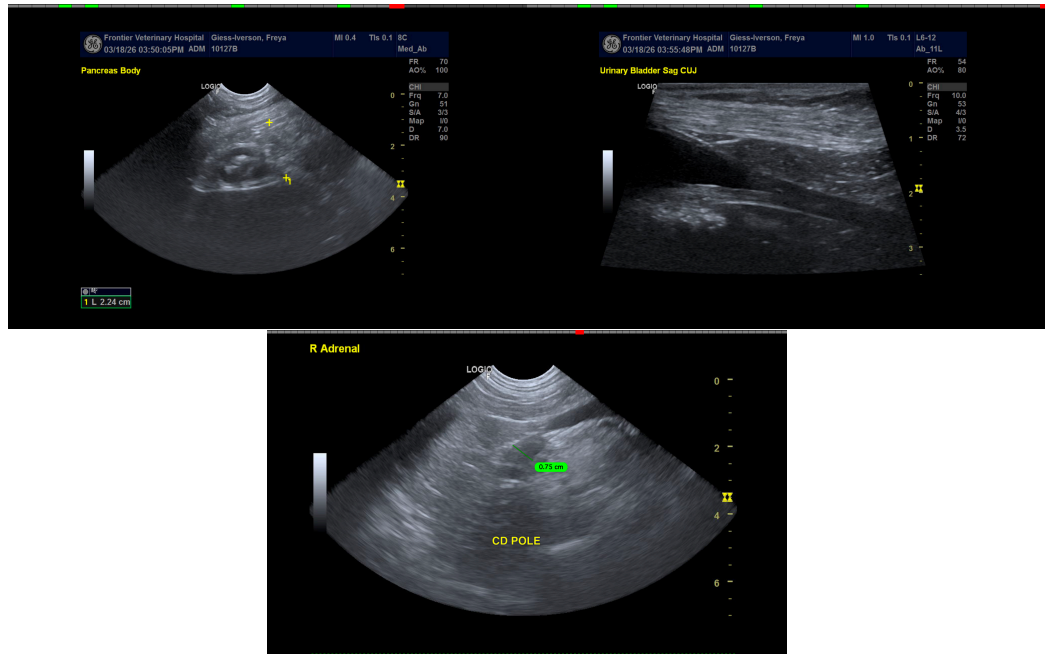
Dr. Lucas Budden

INVOICE

11525

DATE

3/18/2026



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)

info@sonopath.com