



## PATIENT

Freya Liguori

## SPECIES

Canine

## BREED

Pitbull Mix

## SEX

FI

## AGE

6mo

## WEIGHT

23.5kg

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Dr. Jill Rankin

## HOSPITAL NAME

Calgary Family Vet

## REFERRING VET

DR. YOLANDA LOPEZ

## INVOICE

23394

## DATE

12/31/2025

## PRESENTING CLINICAL SIGNS

Freya, a six month-old intact female, presents with a history of recurrent urinary tract infections (UTIs) and persistent inappropriate urination that began when she was very young. The patient's primary issue has been a cycle of inappropriate urination, followed by diagnosis and treatment for UTIs, which leads to temporary resolution of signs before they recur. Despite various antibiotic treatments, including one course lasting 21 days with monitoring cultures, the inappropriate urination consistently returns. Cultures have reportedly shown bacteria susceptible to common antibiotics. A physical finding of a hooded vulva has been noted. Recently, the patient has experienced a recurrence of inappropriate urination along with an episode of hematuria. It was confirmed that she has never had a heat cycle. To date, no diagnostic imaging, such as x-rays, has been performed to specifically evaluate her urinary system.

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### Urinary System

The urinary bladder was normal in size and tone with subjective mild thickened overall bladder wall measuring 0.30 cm wall width. The trigone, cystourethral junction, and visible pelvic urethra to a depth of 3 cm exhibited normal thickness and tone. Mild anechoic urine was present in the lumen with mild non-dependent particulate urine sediment. Subjective visualized non-dilated distal ureter entering the area of the ureteral papilla. No evidence of neoplastic changes/tumors was noted.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. The left kidney measured 6.4 cm in length. The right kidney measured 6.9 cm in length.

The area of the aortic trifurcation was free of pathology. No evidence of medial iliac or sublumbar lymphadenopathy.

The left ovary was sonographically normal measuring 1.5 cm in diameter, no evidence of pathology in the area of the right ovary. The visualized uterus was sonographically normal.

### Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.41 cm width at the caudal pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.55 cm width at the caudal pole.

### Spleen

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.

### Liver/Gallbladder



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The liver was subjectively normal in size, structure, and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. Normal vascular volume. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

### **Gastrointestinal**

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained mild non-shadowing ingesta sonographically suggestive of food echogenicity with no signs of obstruction or foreign material.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of mechanical/metabolic ileus, obstruction or foreign material.

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

### **Pancreas**

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.

### **Free Abdomen**

No omental masses or peritoneal effusion was present.

Intermittent mildly prominent to enlarged mesenteric lymph nodes were present. The lymph nodes were essentially isoechoic to adjacent omentum without evidence of peripheral inflammation and maintaining a normal width: length ratio (<0.5).

## **ULTRASONOGRAPHIC FINDINGS**

### **Primary**

- Normal urinary bladder size / tone with subjective mild cystitis pattern.
- Normal visible proximal urethra
- Sonographically unremarkable visible uterus
- Normal bilateral kidneys.
- Intermittent mild mesenteric lymphadenopathy - consistent with probable immunologic immaturity or incidental hyperplasia

## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

No definitive evidence of upper or lower urinary tract or uterine pathology, i.e. renal dysplasia, pyelonephritis, congenital defects such as definitive ectopic urethra, etc. as an obvious cause or contributing factor to the recurrent UTI. Ascending infection owing to vulva or vaginal structural abnormality may be suspected. Contrast imaging or cystoscopy would be ideal for further clarification and rule out of a small or non-visualized structural abnormality or congenital defect which may be difficult to visualize sonographically.



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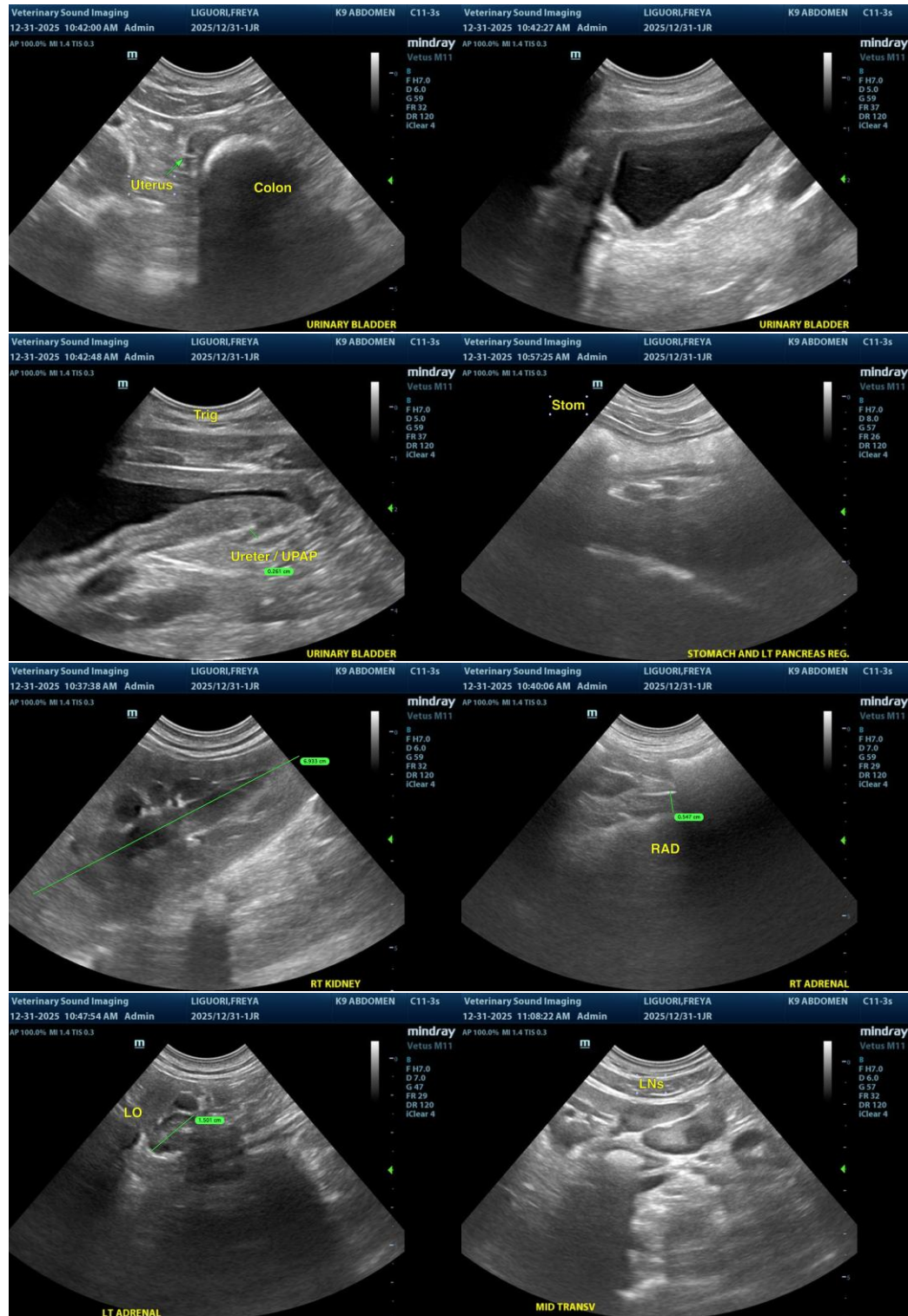
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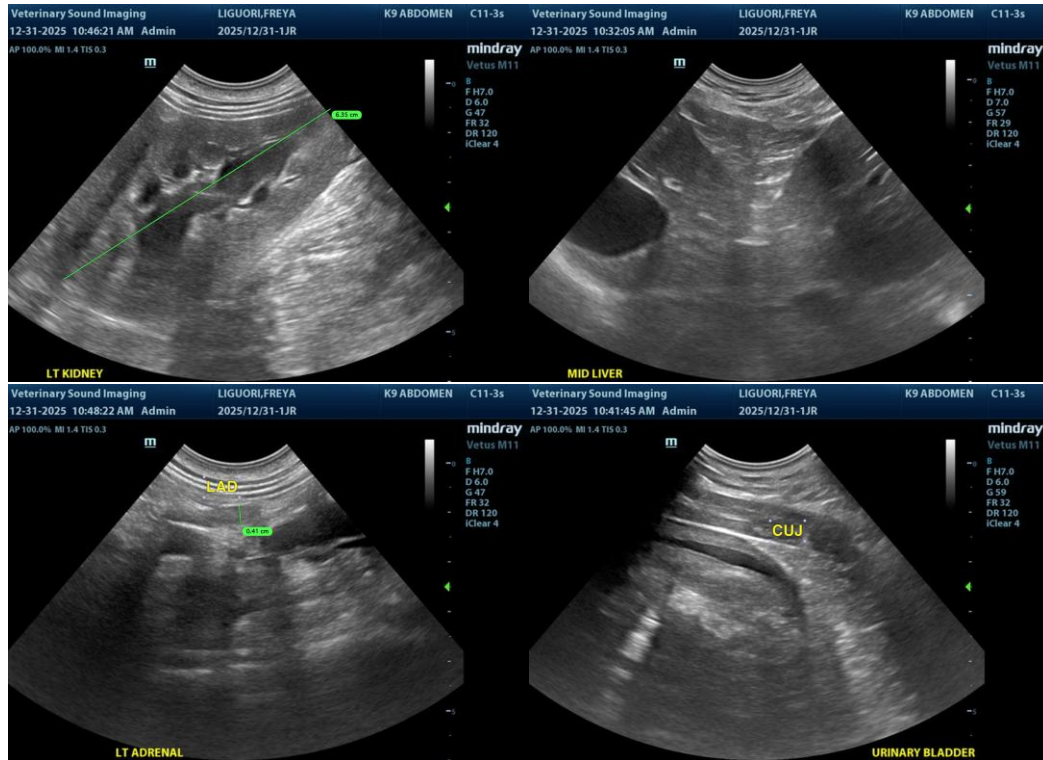
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine/Feline Practice)  
[info@sonopath.com](mailto:info@sonopath.com)