



PATIENT

Queso Hoopman

SPECIES

Feline

BREED

DLH

SEX

Female Spayed

AGE

7y

WEIGHT

10 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Chrissy Krell, DVM

HOSPITAL NAME

Town&Country AC

REFERRING VET

Amanda Bergin, DVM

INVOICE

13212

DATE

2/17/26

PRESENTING CLINICAL SIGNS

History:

- History of inappropriate urination, High blood pressure and multiple non-obstructive nephroliths and infarcts in both kidneys. CKD. Hypertension. FIC. Anxiety. No new updates to blood work from previous evaluation, new labs are pending as of today.

Abnormal PE/Chem/CBC/UA Results: Today PE: no significant abnormalities on exam, slightly increased BCS. Not performed since 02/07/2025, labs pending for today.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm)	LVIDd (cm)	LVWd (cm)	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT	--	170	0.55	1.46	0.52	48	81
FELINE CARDIAC PARAMETERS	LA/AO (M-mode)	LA/AO HEART BASE (Sisson)	LAD LA MAX 4 Chamber		LVOT VEL. (m/s)	RVOT VEL. (m/s)	IVRT (m/)
NORMAL PARAMETER	<1.5	1.6	0.7-1.7		<1.6	<1.3	40-60
PATIENT	--	1.32	1.3		1.0	0.6	--
Adapted from June Boon, Veterinary Echocardiography, 1998 Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705							

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 2 separate methods of LA evaluation. The cranial and caudal **mitral** valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. The **left ventricle** presented thicknesses with linear contour and was not dilated nor restricted. The **myocardium** presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. **Contractility** of the ventricular walls was adequate and in normal range for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions of the myocardium. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinesis. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonary outflow** tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). No visible **pericardial** or free pleura fluid was noted. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window.



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Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 4.0 cm exhibited normal thickness and tone. Primarily anechoic urine was present in the lumen. Mild, echogenic to particulate non-dependent sediment was present without evidence of calculus formation. Mild, dependent lumen mineral noted. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic mural changes were noted.

The area of the aortic trifurcation was free of pathology.

The kidneys were borderline to subnormal in size with asymmetrical margination exhibiting variably thickened cortex and cortical infarcts. Reduced medullary volume and marked loss corticomedullary border demarcation. Areas of medullary mineral to small renoliths was present. The left kidney measured 3.2 cm in length. The right kidney measured 2.9 cm in length.

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.42 cm. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.51 cm.

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

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. 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, echogenic, non-shadowing ingesta without 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 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 overt lymphadenopathy or peritoneal effusion was present.



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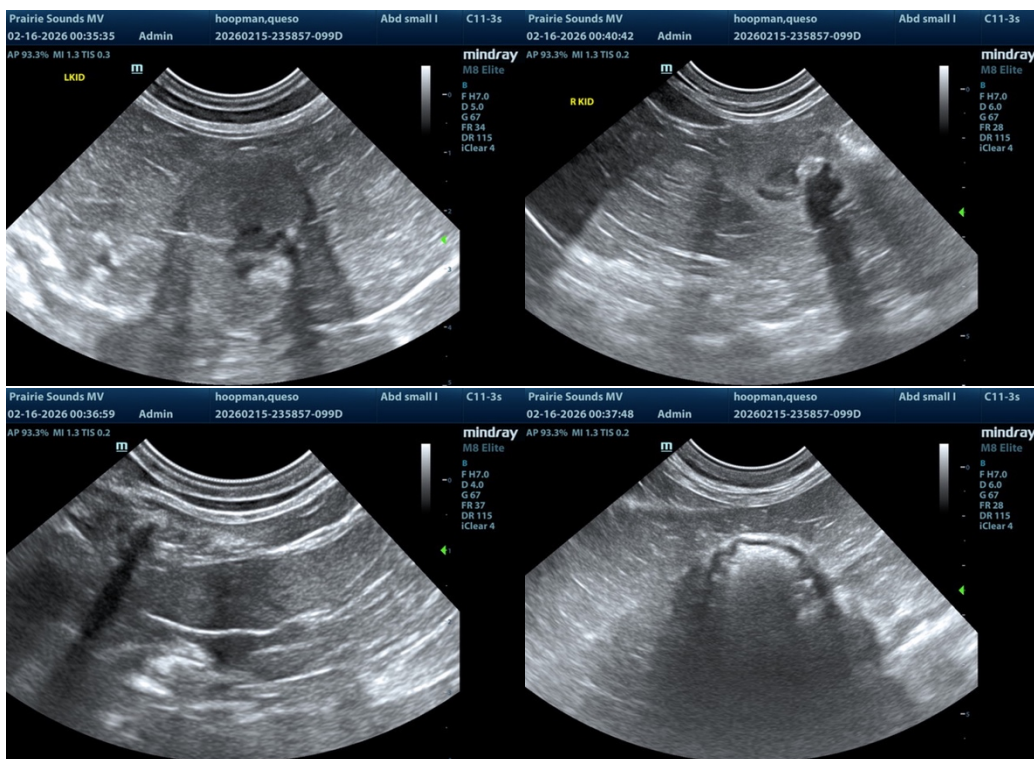
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ULTRASONOGRAPHIC FINDINGS

- Normal cardiac structure/function
- Urinary bladder sediment and mild dependent lumen mineral
- Chronic degenerative renal changes exhibiting medullary mineral/renoliths and cortical infarcts
- Mild gastric ingesta – consistent with food echogenicity

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Sonographically, the kidneys appear similar to the previous study, although potential for decreased renal function possible. Pending recheck lab work and urinalysis, this patient may be passing small amounts of mineral from the kidneys into the urinary bladder. Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered. Continued CKD therapy with monitoring of systemic BP indicated. Recheck sonogram indicated if progressive azotemia or clinical signs consistent with progressive chronic kidney disease.





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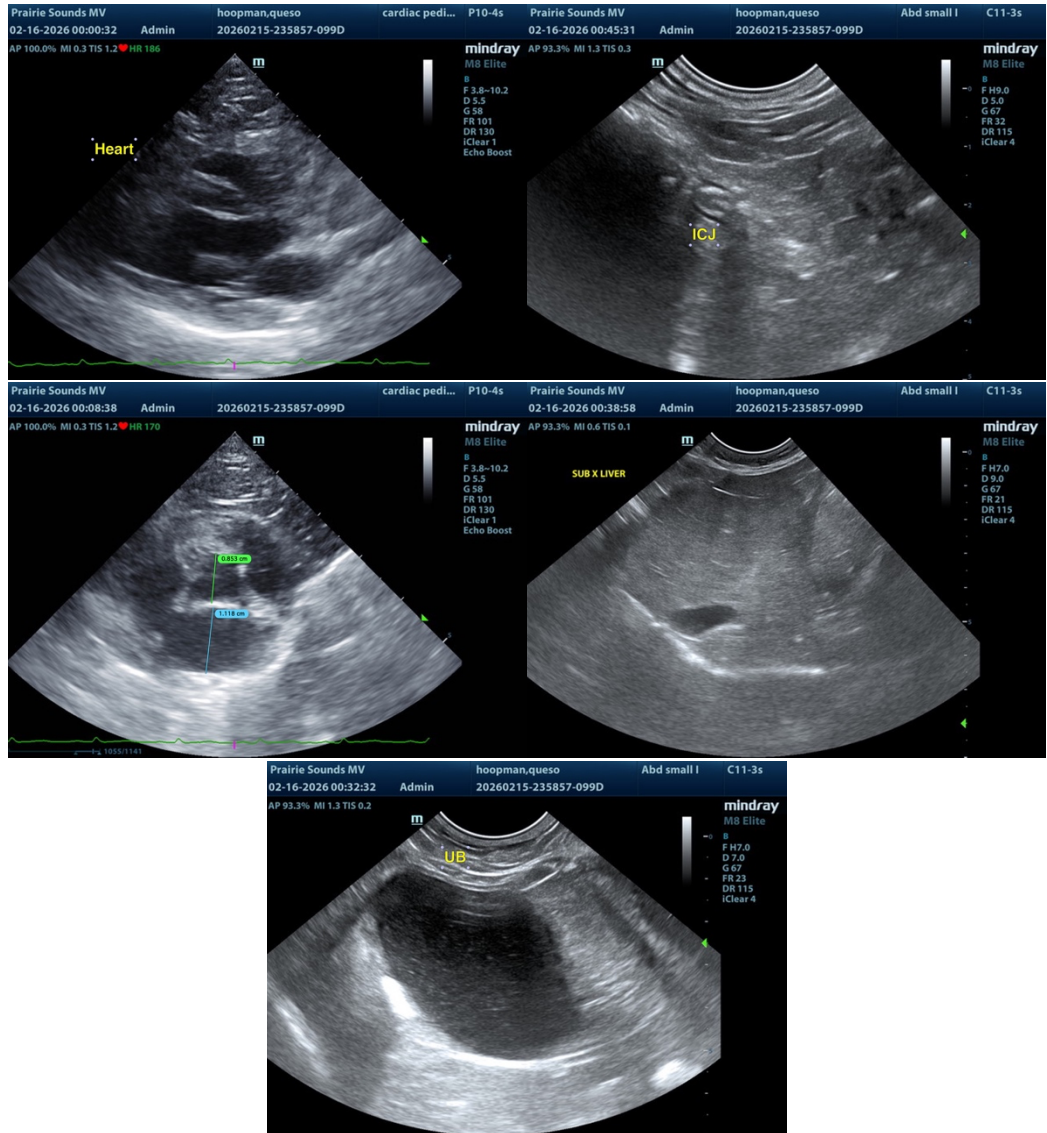
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

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