



PATIENT

Josie Zucker

SPECIES

Canine

BREED

Mixed

SEX

FS

AGE

7yr

WEIGHT

54lb

PRESENTING CLINICAL SIGNS

- PU/PD vs Cystitis
- Current medications - Desmopressin tablets
- Abnormal PE/Chem/CBC/UA Results: USG 1.011

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN AND HEART

	CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO M-mode	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER		4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
PATIENT		--	--	--	1.1	35	68	0.3
	CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT	LAD LA MAX 4 Chamber	LVIDd Avg; 2D and m-mode short axis (cm)	LVIDs Avg; 2D and m-mode short axis (cm)
NORMAL PARAMETER		50-100	0.7-1.7	0.7-1.6				
PATIENT		125	1.7	0.9	54lb	3.3	3.3	--

Cardiac Presentation

The echocardiogram in this patient demonstrated normal left atrial size based on 2 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal mitral valve leaflets presented mild thickening consistent with mild endocardiosis. Doppler indicated mild eccentric insufficiency. 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 or chamber overload. Tricuspid valvular assessment demonstrated adequate linear morphology. The right ventricle was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. Pulmonic 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. No echographically detectable evidence of infiltrative disease was visible. The cranial mediastinum and pericardial regions were free of masses in the visible window.

Urinary System

INTERPRETED BY

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

IMAGING PERFORMED BY

Vincent Ravancho

HOSPITAL NAME

Marsh Hospital for Animals

REFERRING VET

Dr. Armani

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The urinary bladder was normal in size and tone. Variably thickened ventroapical to dorsoapical urinary bladder wall with asymmetrical luminal surface contour and hyperechoic mural foci. Thickened apical wall measured up to 1.6 cm width. Anechoic urine with mild dependent lumen hyperechoic sand / mineral and mild non-dependent particulate urine sediment was present. The trigone, cystourethral junction, and visible pelvic urethra to a depth of 3 cm exhibited normal thickness and tone.

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No evidence of pathology in the area of the uterine remnant.

BREED

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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 6.0 cm in length. The right kidney measured 6.7 cm in length.

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The area of the aortic trifurcation was free of pathology.

Adrenal Glands

AGE

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The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.61 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 0.62 cm width at the caudal pole.

Spleen

WEIGHT

54lb

The spleen exhibited primarily finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. A solitary small mid to caudal hyperechoic splenic nodule was present measuring 0.75 cm in diameter. 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 or neoplastic changes were not noted. The echogenic nodules tend to trend benign and are most consistent with benign hyperplasia or myelolipomas.

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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 moderate non-organized debris. The cystic and common bile ducts were normal.

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Gastrointestinal

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The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, 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.

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Pancreas

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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.

SPECIES

Free Abdomen

Canine

No omental masses, overt lymphadenopathy or peritoneal effusion was present.

BREED

ULTRASONOGRAPHIC FINDINGS

Mixed

Primary

SEX

- Normal cardiac structure / function with mild compensated mitral valve insufficiency (B1)
- Variably thickened apical urinary bladder wall with hyperechoic mural foci, mild urinary bladder lumen mineral and particulate urine sediment
- Normal bilateral kidneys
- Sonographically normal adrenal glands
- Non-organized gallbladder debris (non-mucocele)

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

WEIGHT

54lb

The lack of LA enlargement indicates the current risk of complications secondary to MR is low. No indication for cardiac medication. Sonographic monitoring recommended with recheck echo suggested in 8-12 months, sooner if clinically indicated. No cardiac anesthetic contraindications.

The pattern of apical bladder thickening tends to trend towards cystitis although neoplasia such as transitional cell carcinoma is not definitively excluded. Correlation with urinary workup including UA, C/S and screening BRAF assay is recommended. Bladder wall biopsy for histopathology +/- tissue C/S may be required for definitive diagnosis.

No overt adrenal pathology as a contributing factor. Adrenal screening could be considered if clinical signs consistent with Cushing syndrome and concurrent non-obvious hepatopathy.

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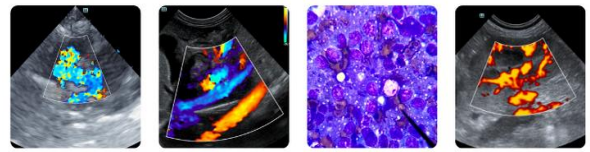
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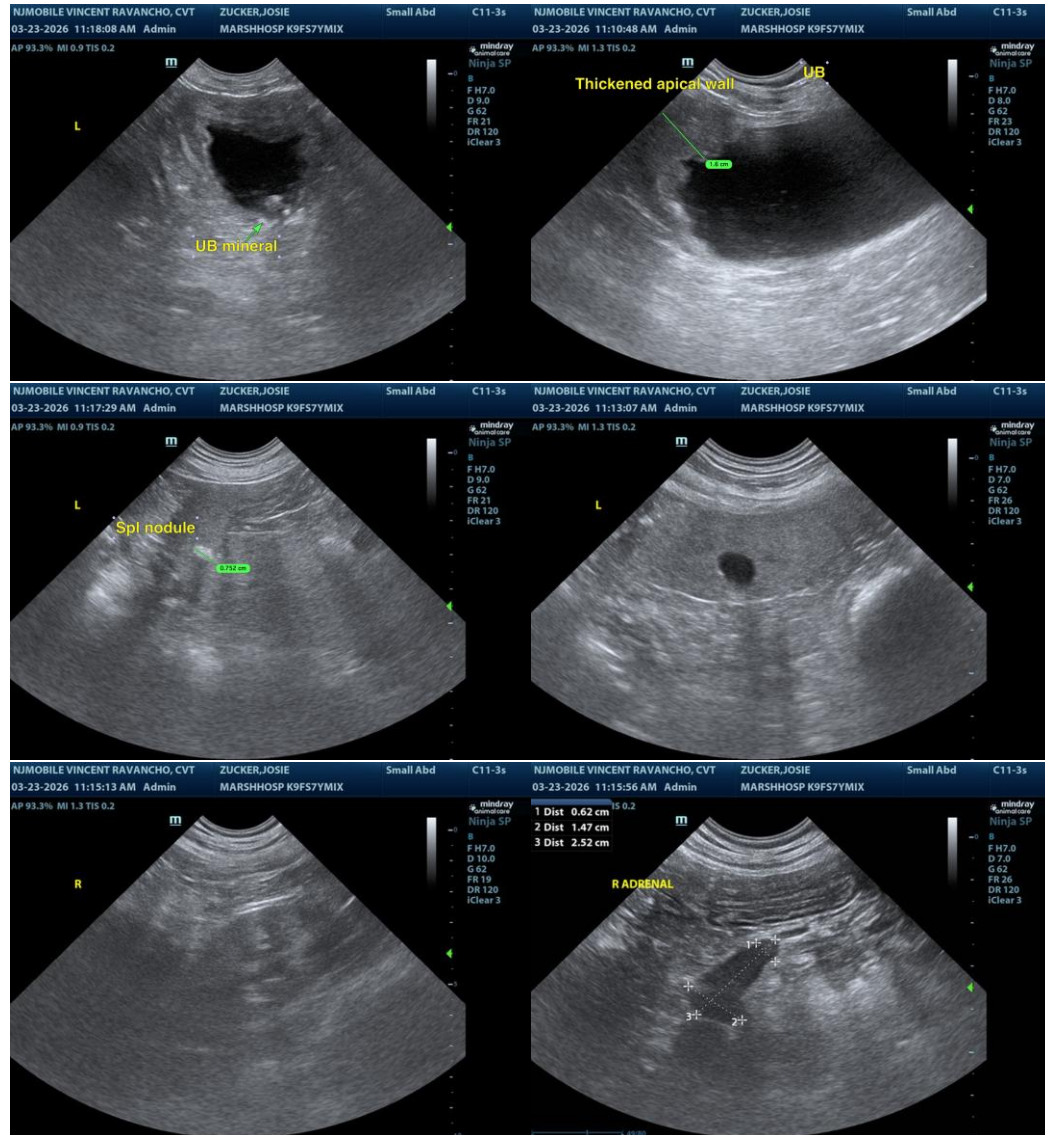
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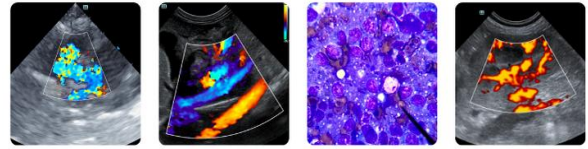
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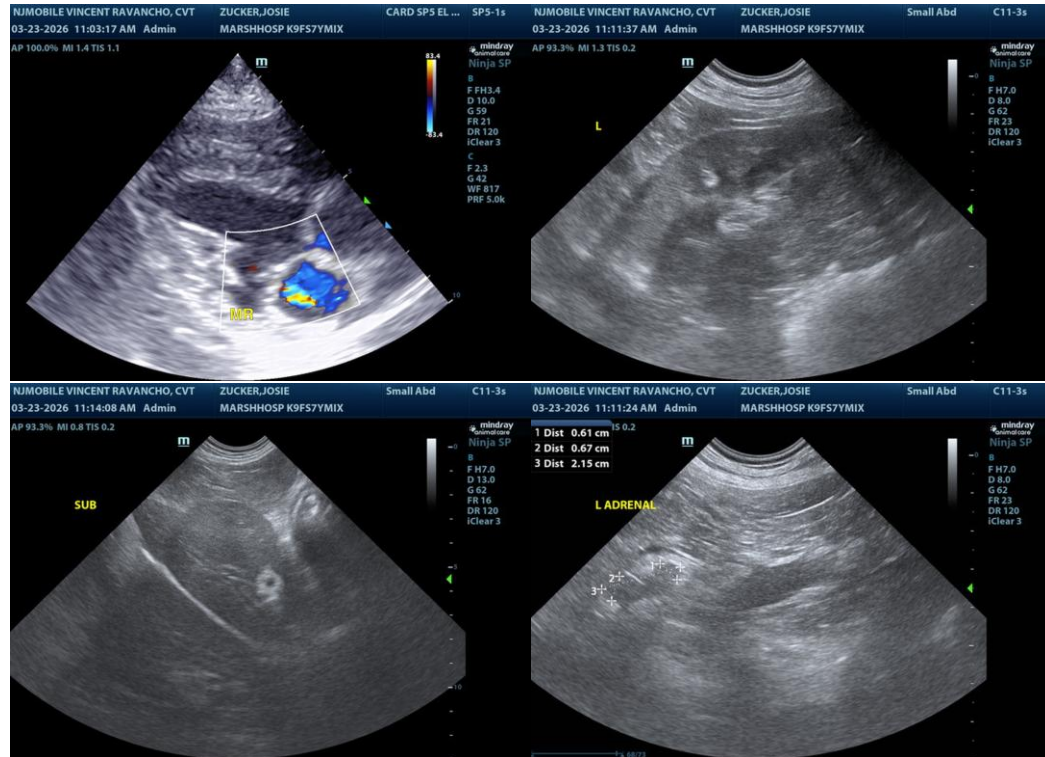
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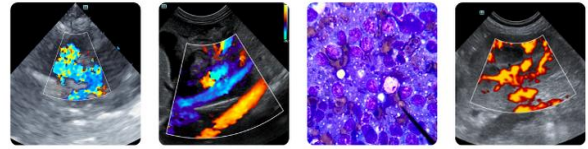
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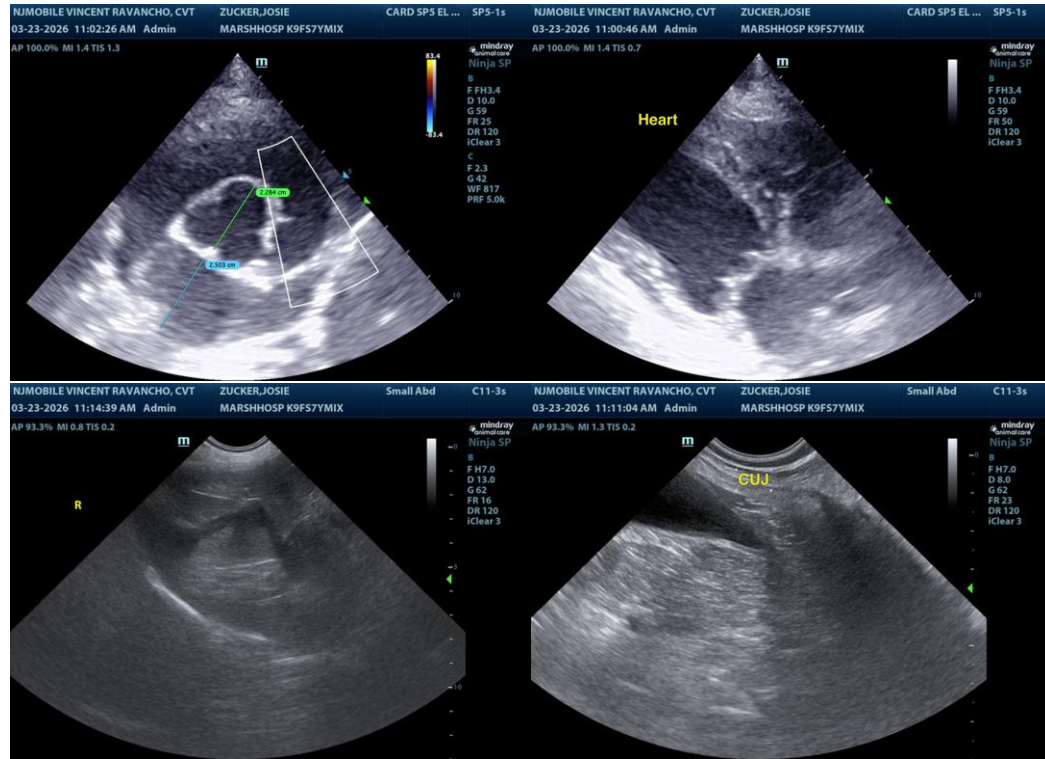
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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