



PATIENT PRESENTING CLINICAL SIGNS

Fuzz Gravis History: patient is dehydrated, lethargic, has a heart murmur, anorexic and has hind leg weakness patient has withdrawal reflexes and deep pain grade 3 murmur meds: mirtazapine, pradofloxacin, B12

SPECIES Abnormal PE/Chem/CBC/UA Results: SDMA 21 elevated WBC/neutrophils - acute (was not elevated prior) mild cough/gag noted please see attached labs and rads, HCT 21 retic 7.2, prev BUN 15.8, CREAT 190, CK 570, BNP 108, SG 1.014, neg pro & glu
Feline

BREED

DLH

SEX

MN

AGE

14 years

WEIGHT

3.9 kg

ULTRASONOGRAPHIC EXAMINATION OF THE HEART AND 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		211	0.48	1.55	0.48	45	80
FELINE CARDIAC PARAMETERS	LA/AO (Boon)	LA/AO HEART BASE (Sisson)	LA 2D 4-chamber long axis AS to FW (Sisson) (cm)	LVOT VEL. (m/s)	RVOT VEL. (m/s)	IVRT (m/)	
NORMAL PARAMETER	<1.5	0.88-1.79	0.7-1.7	<1.6	<1.3	40-60	
PATIENT	1.1	1.2	1.1		1.2	NM	
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							

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(Canine and Feline)

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Kelly Reschny

HOSPITAL NAME

Oxford County VC

REFERRING VET

Dr. Halfon

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Cardiac Presentation

The echocardiogram in this patient demonstrated normal left atrial size based on 3 separate LA measurements. The cranial and caudal mitral valve leaflets presented normal linear structure and kinetics. The left ventricle presented normal thicknesses with a linear contour and was not dilated nor restricted. IVS and LV free wall myocardial remodeling was present with prominent to remodeled papillary muscles. 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 and angles 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 and kinetics. 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 or extra cardiac pathology in the visible planes. The cranial mediastinum and pericardial regions were free of masses in the visible window.



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Urinary System

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The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

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The left kidney presented mildly subnormal in size compared to normal for the species and compared to the right kidney. A focal nonobstructive medullary renolith was observed in the right kidney. The renal cortex presented uniformly increased in echogenicity with uniform echotexture. The renal cortex appeared to be hypertrophied resulting in an altered cortex: medulla ratio. Mild loss of corticomedullary distinction was also present. The renal medullary volume was subjectively reduced. The left kidney measured 2.0 cm in length. The right kidney measured 4.5 cm in length.

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The area of the aortic trifurcation was free of pathology including no obvious evidence of a saddle thrombus.

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Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.25 cm width. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.38 cm width.

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Spleen

The spleen exhibited borderline mild enlargement with 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. The spleen measured 1.1 cm in width at the level of the hilus.

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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.

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Gastrointestinal

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 gastric body wall measured 0.25 cm in width.

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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. The jejunum wall measured 0.21 cm in width.

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

Pancreas

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The left limb of the pancreas exhibited mild prominent size with capsule asymmetry. Mild hypoechoic to nonhomogeneous parenchyma with minor pancreatic duct dilation was present.



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

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ULTRASONOGRAPHIC FINDINGS

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- Overtly normal cardiac structure and function for age with LV myocardial remodeling
- Nonspecific chronic renal changes with solitary nonobstructive right kidney medullary renolith
- Sonographically unremarkable GI tract
- Borderline splenomegaly-nonspecific
- Suspect chronic active pancreatitis

DLH

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

AGE

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No evidence of significant structural or functional cardiomyopathy including no evidence of left or right heart chamber enlargement or LV systolic dysfunction which would indicate an underlying cardiogenic cause of the patient's mild coughing or potential saddle thrombus. The murmur in this patient may be secondary to dehydration or benign physiologic or flow murmur. No indication for cardiac medications.

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Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered.

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Recheck retroviral status and CBC pathology review given the elevated WBC could be considered. Overall, an obvious or definitive cause of the elevated WBC was not evident in the cardiac or abdominal study. Potential for low grade to chronic active pancreatitis would be suspected if evidence of cranial abdominal or subxiphoid discomfort on palpation. Correlation with a Spec fPL would be warranted.

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Radiologist consult on three view chest radiographs is suggested. Empirical GI support as well as dehydration correction may prove beneficial.

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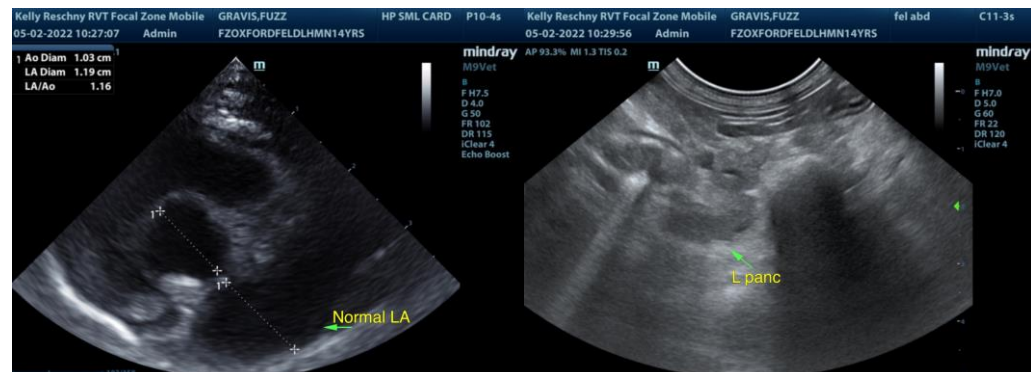
Dr. Halfon

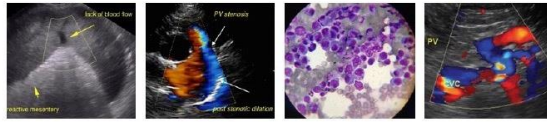
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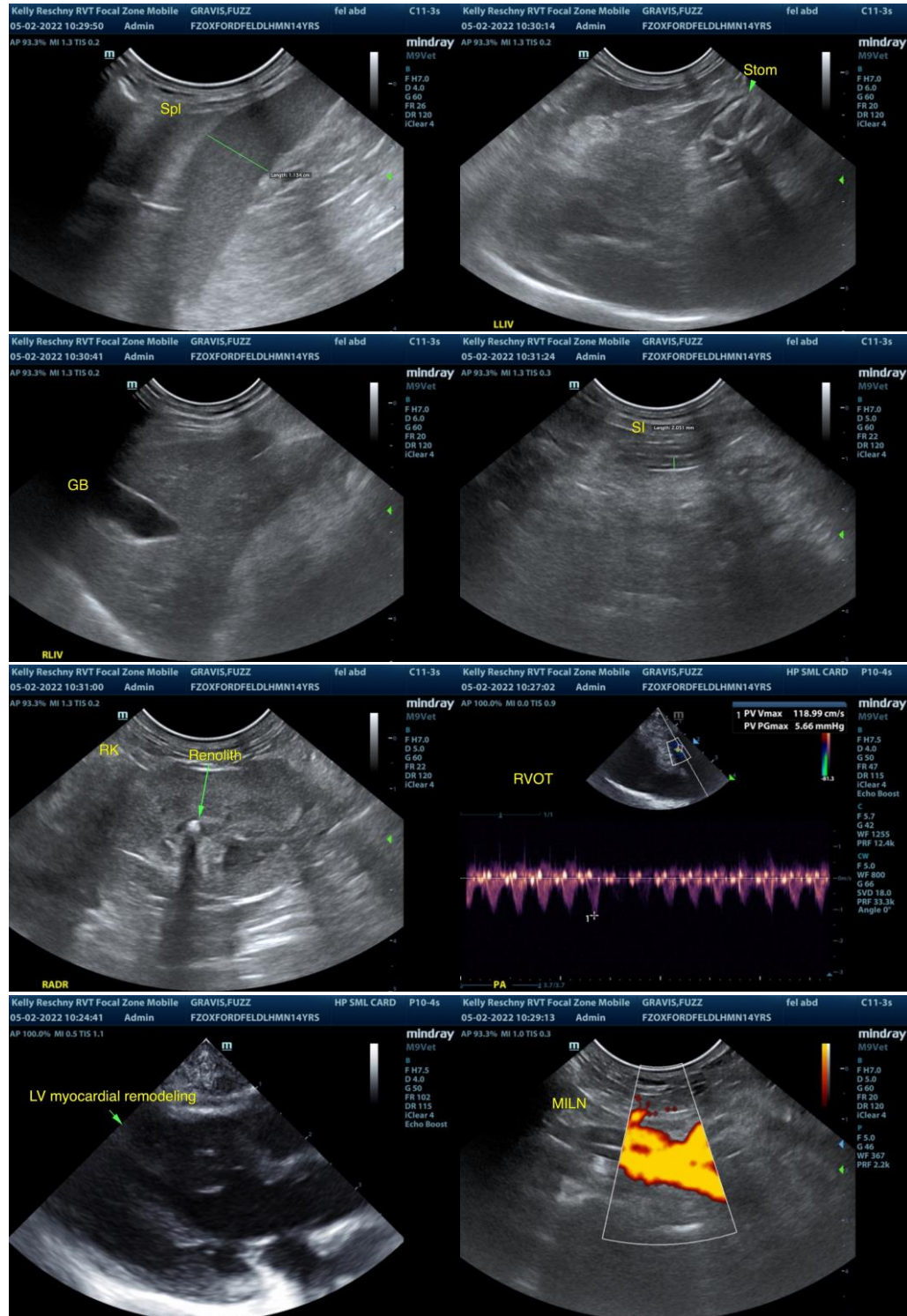
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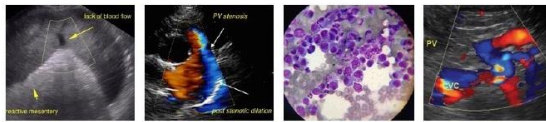
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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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