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Clinical Sonography & Telecytology
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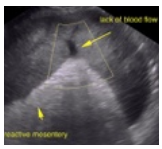
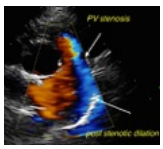
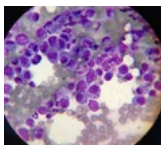
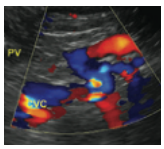





SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Toby Williams

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

9y

WEIGHT

14.3#

INTERPRETED BY

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

IMAGING PERFORMED BY

Val Shumskaya

HOSPITAL NAME

Animal General Edgewater

REFERRING VET

Dr.Ng

INVOICE

10353

DATE

7/19/2023

PRESENTING CLINICAL SIGNS

Decreased appetite, lethargy.
Abnormal PE/Chem/CBC/UA Results: Hx diabetes - in remission 7/7/23 BG 253, normal fructosamine

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		196	0.44	1.4	0.44	56	89
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		1.3	1.3		1.0	0.78	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

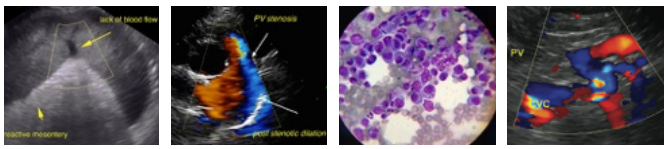
Cardiac Presentation

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 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 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.

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2 cm exhibited normal thickness and tone. Primarily anechoic urine was present in the lumen. Mild non-dependent to hyperechoic sediment was present without evidence of calculus formation. 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.



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Normal size and margination was present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and minor loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 4.4 cm in length. The right kidney measured 4.7 cm in length.

Adrenal Glands

No overt pathology in the area of the left or right adrenal glands

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. The spleen measured 0.95 cm width level of the mid spleen. No splenic masses, nodules, or infiltrative neoplastic criteria.

Liver/ Gallbladder

The liver was subjective borderline to mildly enlarged in size and maintained a symmetrical capsular contour. Primarily homogeneous parenchyma exhibiting overall normal parenchyma echogenicity with mild coarse echotexture. A solitary mildly non-homogeneous to isoechoic intraparenchymal nodule mid-liver measuring 1.9 cm in diameter. Subjective normal hepatic vascular volume. 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 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 ileus, obstruction, or foreign material.

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

Pancreas

The pancreas was normal in size and contour. The pancreas base extending into the left pancreatic limb revealed isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

Free Abdomen

Mild volume peritoneal free fluid noted around the liver, spleen, and in the caudal abdomen around the urinary bladder. No evidence of medial, iliac, or sub lumbar lymphadnopathy or masses. No overt or significant omental lymphadenopathy. No visualized omental masses. Generalized primarily uniformed increased omental echogenicity.

ULTRASONOGRAPHIC FINDINGS

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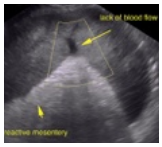
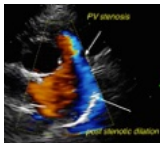
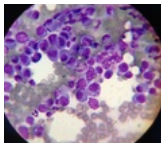
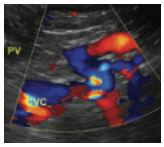

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Primary Findings

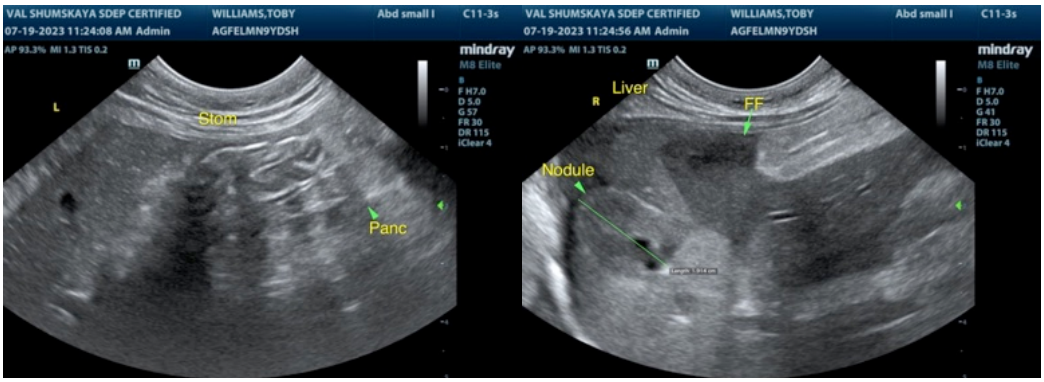
- Minor urinary bladder sediment
- Sonographically unremarkable gastrointestinal tract
- Mild heterogeneous pancreas – not sonographically consistent with significant/active pancreatitis.
- Subjective borderline/mild hepatomegaly with non-specific intraparenchymal nodule
- Mild volume non-specific peritoneal effusion
- Normal echocardiogram

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Without evidence of structural function or cardiomyopathy. No evidence of overt hepatic congestive criteria and lack of significant pancreatitis or gastrointestinal mural pathology, a definitive cause of the mild volume peritoneal effusion was unclear. Effusion analysis, cytology, and +/- CS for further assessment is recommended. Screening hepatic parenchyma and if assessable intraparenchymal nodule FNA cytology using a 25-gauge needle is warranted.

Assessment for evidence of cranial abdominal subxiphoid discomfort on palpation which may allude to mild or chronic pancreatitis which may present sonographically normal suggested. GI panel to include PLI/TLI/Cobalamin/Folate to assess for occult intestinal or pancreatic disease as a contributing factor to the patients clinical signs may be considered.

Recheck full CBC, chemistry panel, urine analysis, and T4 levels recommended. Empirical gastrointestinal supportive care pending additional diagnostics and possible sonographic reassessment if progressive clinical signs or peritoneal effusion would be reasonable.



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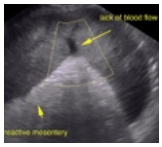
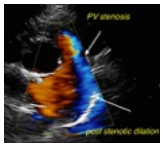
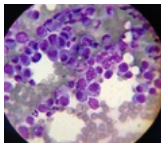
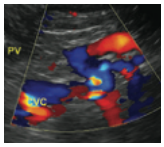

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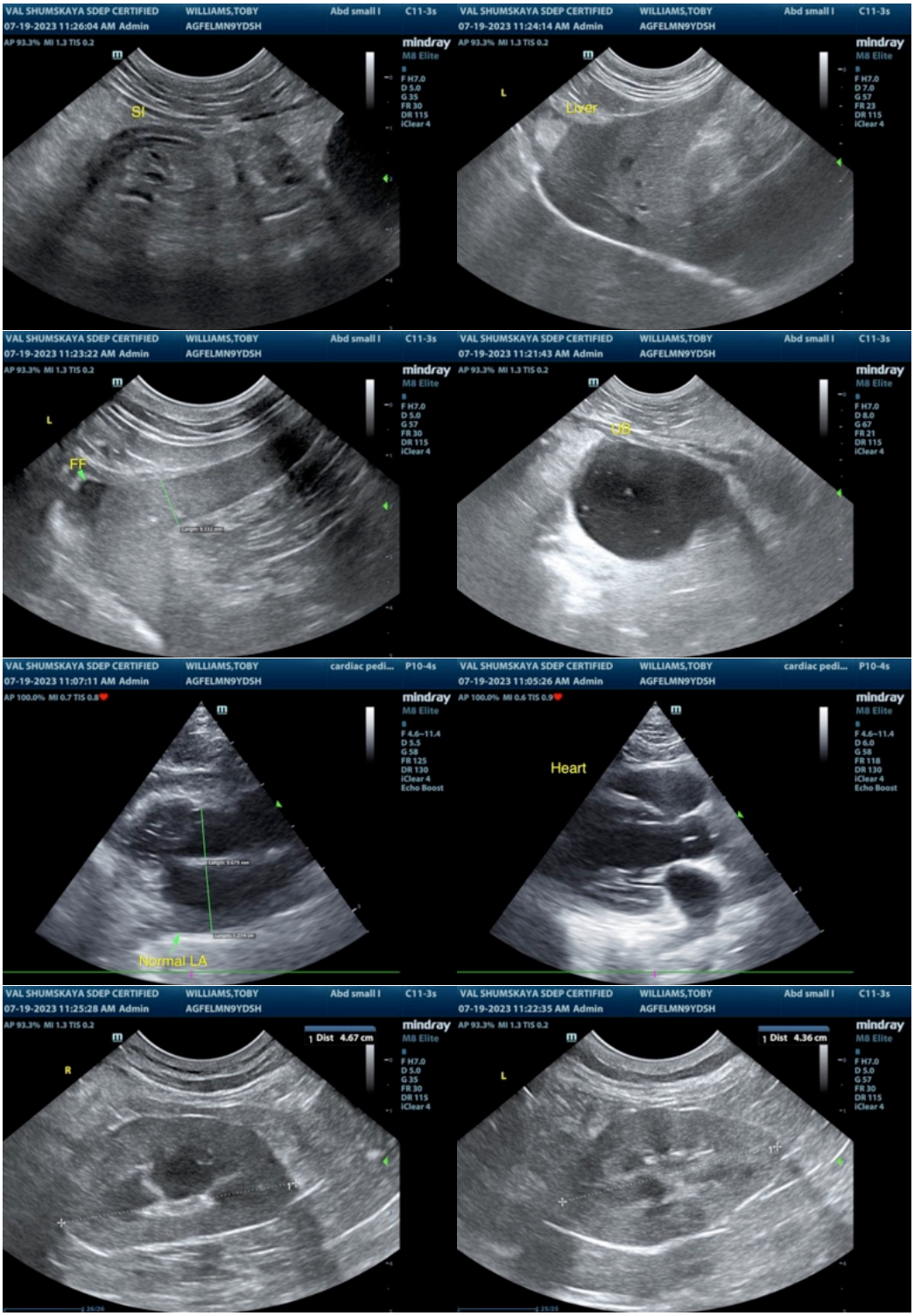
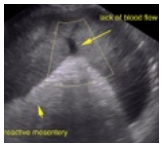
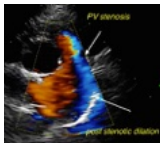
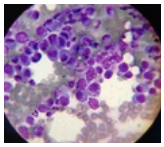
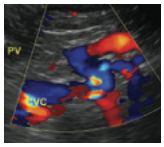


The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I

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can be of any further assistance, please contact me.

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