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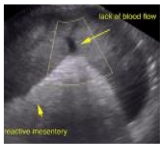
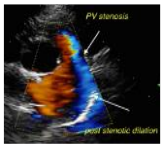
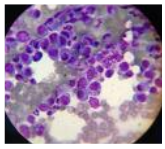
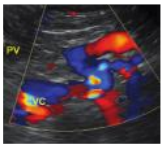





SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Kimmel Kurtz

SPECIES

Feline

BREED

DSH

SEX

MN

AGE

12 year old

WEIGHT

10 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

Animal Paradise Hospital

REFERRING VET

Dr. ElShafie

INVOICE

14160

DATE

6/30/22

PRESENTING CLINICAL SIGNS

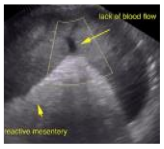
Pet has been vomiting for the past few days, still eating and acting himself. Current med: Cerenia 16 mgs.
Abnormal PE/Chem/CBC/UA Results: CBC: WNL, FPL: WNL. Chem: ALP 114, ALT 715, amylase 1128, glucose 188, T. bili 0.8. U/A: protein 2+, blood 3+, RBCs 4-10.

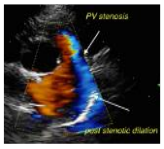
ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

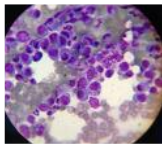
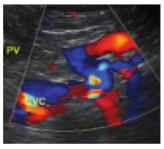
FELINE CARDIAC PARAMETERS	**BODY WEIGHT** (kg)	**HR** (BPM)	**IVSd** (cm)	**LVIDd** (cm)	**LVWd** (cm)	**FS** (%)	**EF** (%)
NORMAL PARAMETER	------	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT		105	0.35	1.2	0.36	38	73
FELINE CARDIAC PARAMETERS	**LA/AO** (Boon)	**LA/AO HEART BASE** (Sisson)	**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	1.22	1.1	1.1		1.0	0.7	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 and structure. Chamber volume and blood echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented minor irregular age-related changes that are not clinically significant at this time with adequate extension in systole and union in diastole. The **left ventricle** presented normal free wall and septal thicknesses with linear contour. The **myocardium** presented some echogenic remodeling consistent with expected age-related change. **Contractility** of the ventricular walls was adequate and in normal range for this breed and patient size. The **left ventricular outflow** tract demonstrated normal laminar flow with subjectively unremarkable structure. Subjective assessment of the **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated expected findings for this age patient. The **right ventricle** was of normal size (1/3 diameter of LV), 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 pleural fluid was noted. The **mediastinum** was free of masses in the visible window. Mild bradycardia owing to anesthesia was present.





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Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 cm exhibited normal thickness and tone. Mild dependent mineral and nondependent hyperechoic sediment were present. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

The area of the aortic trifurcation was free of pathology.

Normal size and margination were 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 mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 3.7 cm in length. The right kidney measured 3.9 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 0.55 cm width. No overt pathology was noted in the area of the right adrenal gland.

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 0.97 cm width at the level of the hilus.

Liver/ Gallbladder

The liver was enlarged in size yet primarily maintained symmetrical capsule contour with overall normal hepatic parenchyma echogenicity exhibiting moderate coarse echotexture and minor parenchymal remodeling. Intermittent small variably echogenic intraparenchymal nodules were present with an example measuring 0.62 cm. A solitary nonhomogeneous macronodule to small mass with mild distortion of surrounding hepatic parenchyma was noted dorsal to the gallbladder, measuring 2.3 cm in diameter. 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.

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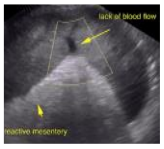

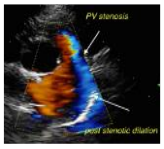

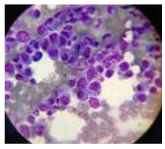
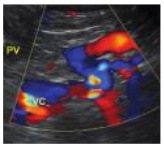

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Pancreas

The pancreas was normal in size and contour with heterogeneous to mildly hypoechoic parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

Free Abdomen

No overt lymphadenopathy was present. The omentum was of uniform echogenicity. Minor perihepatic free fluid was present.

ULTRASONOGRAPHIC FINDINGS

- Normal echocardiogram
- Hepatomegaly exhibiting nonuniform to intermittently nodular parenchyma, nonhomogeneous macronodule to small mass dorsal to gallbladder
- Minor perihepatic free fluid
- Overtly normal gastrointestinal tract
- Possible low-grade chronic to chronic active pancreatitis
- Mild chronic renal changes
- Mild urinary bladder mineral / sediment

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The hepatic parenchymal changes including the visualized macronodule to small mass were nonspecific and could indicate chronic inflammatory hepatopathy i.e., cholangiohepatitis, vacuolar hepatic changes, nodular hyperplasia, fibrosis, hematopoiesis, or potential neoplasia. Correlation with pending hepatic cytology is recommended.

Potential for low-grade chronic to chronic active pancreatitis may be suspected If evidence of cranial abdominal or subxiphoid discomfort on palpation. A Spec fPL could be considered for further assessment.

As-needed gastrointestinal support is warranted. Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered.

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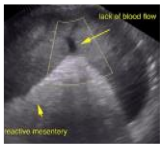

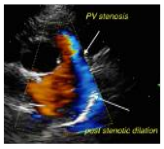

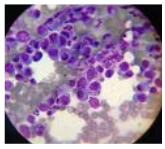
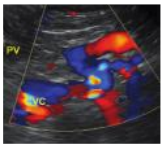

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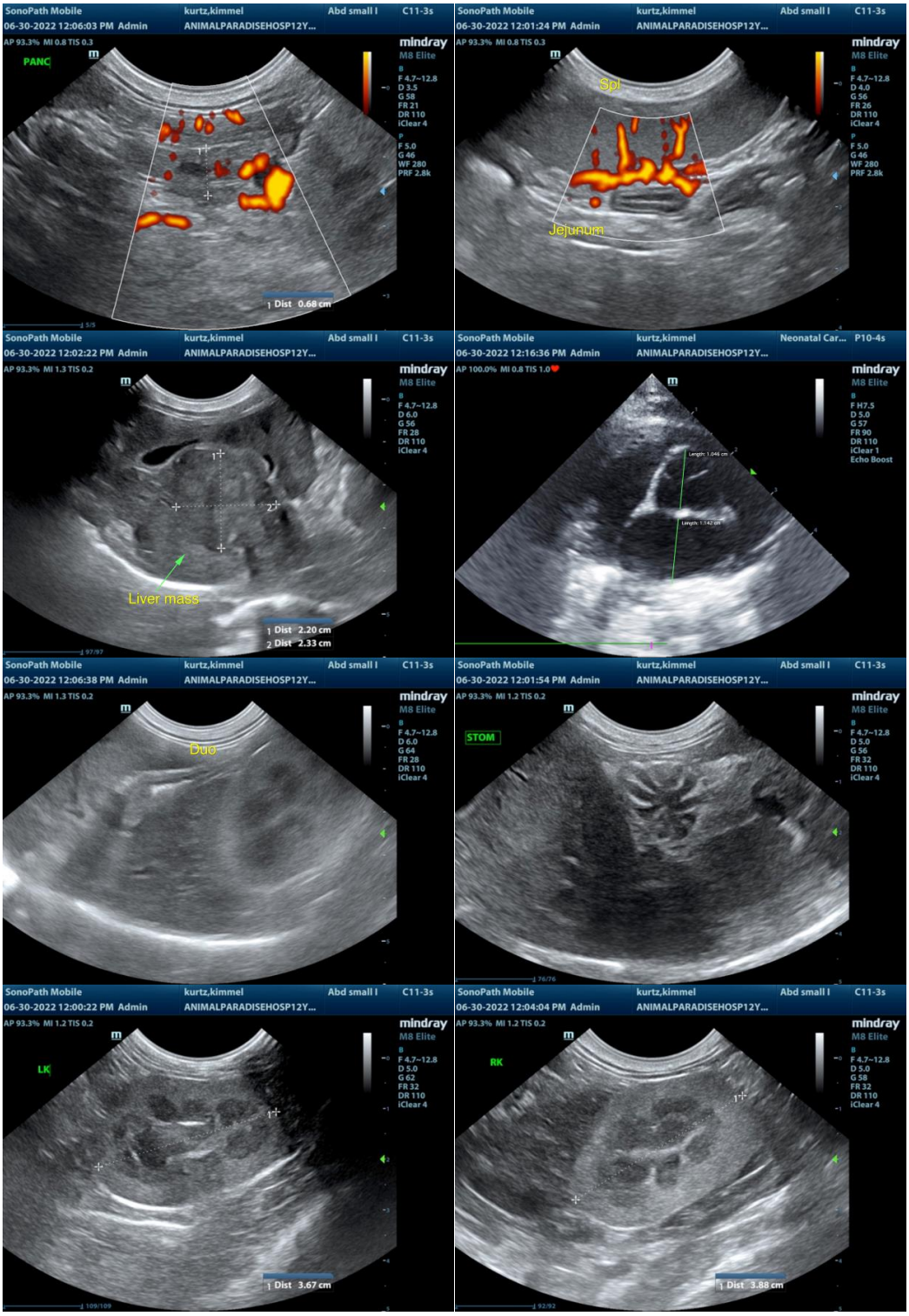

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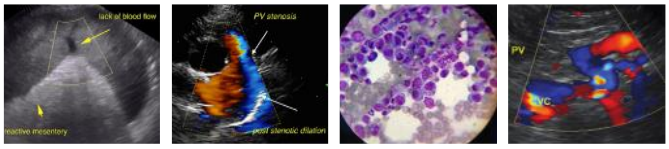

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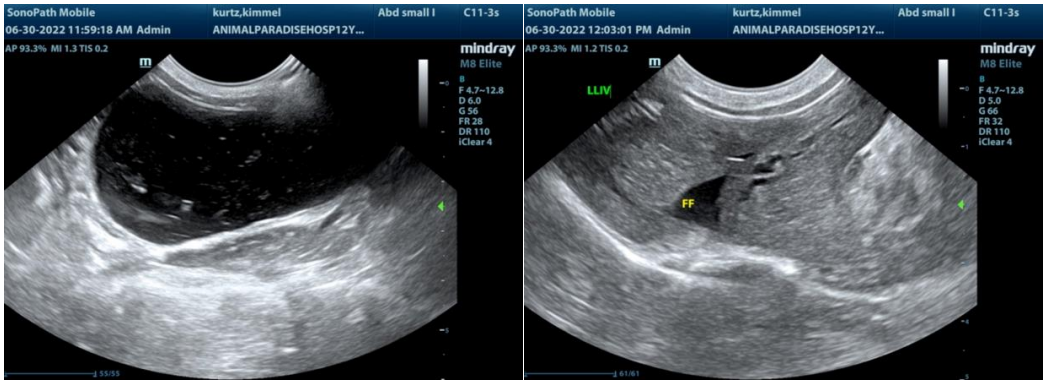

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com