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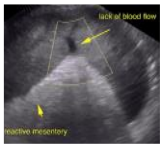
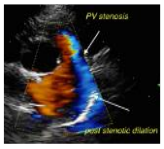
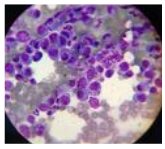
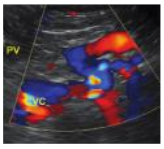

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Kimba Schiavo

SPECIES

Feline

BREED

DSH

SEX

M/N

AGE

17 years

WEIGHT

17.3 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

ACC Flanders

REFERRING VET

Dr. Hallihan

INVOICE

16223

DATE

2/21/23

PRESENTING CLINICAL SIGNS

Pre-sx evaluation for dental. Current meds: Insulin

Abnormal PE/Chem/CBC/UA Results: BUN 89, Creat 3.1, Glu 590, NaK ratio 42, Chlor 94, Chol 300, Trig 168, CPK 55, mono 6

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		186	0.51	1.65	0.55	48	82
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	1.4	1.4		1.6	1.0	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 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. No overt MR was noted on Doppler. The **left ventricular** septum and free wall revealed adequate contractility and normal left ventricular volume, yet some echogenic remodeling of the septum and free wall were noted. This does not appear to be a functional issue at this point. This is most consistent with some level of **myocardial fibrosis**, which is an age-related change. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. Normal measured LVOT velocity was noted. 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. No overt TR was noted on Doppler. 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). Normal RVOT velocity was noted. 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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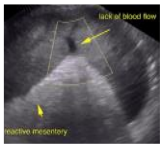

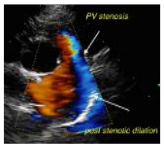

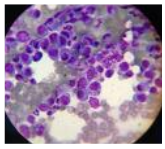
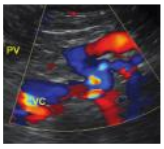

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Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 cm exhibited normal thickness and tone. 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 was noted.

The area of the aortic trifurcation was free of pathology.

The left kidney was borderline subnormal in size exhibiting asymmetrical margination, cortical infarction, and variable, mildly hyperechoic cortical hypertrophy. Moderate to marked loss of corticomedullary border demarcation was noted with subjective reduced medullary volume and mild left kidney pyelectasia. The left kidney measured 3.2 cm in length.

The right kidney was mildly enlarged in size exhibiting asymmetrical margination with cortical infarction and variable mildly hyperechoic cortical hypertrophy. Moderate to marked loss of corticomedullary border demarcation was noted with mild reduced medullary volume and mild right kidney pyelectasia. The right kidney measured 5.3 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 0.46 cm width. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.54 cm width.

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/ Gallbladder

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. 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 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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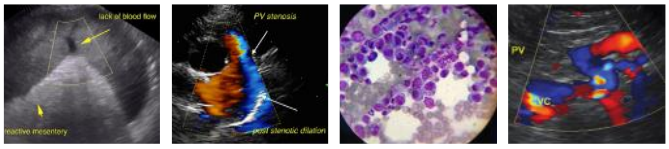

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Pancreas

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

Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

- Normal echocardiogram with mild LV myocardial remodeling
- Bilateral chronic degenerative kidneys exhibiting borderline subnormal left kidney size, subjective right kidney compensatory hypertrophy, cortical infarcts, and mild bilateral pyelectasia
- Heterogeneous pancreas

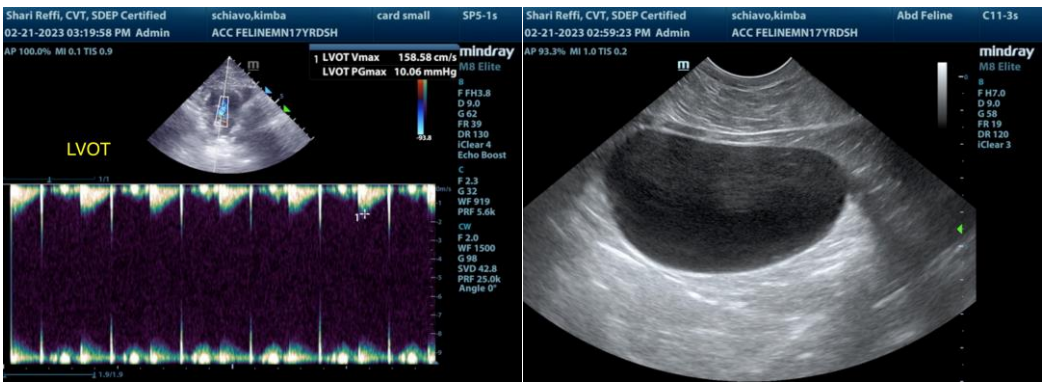
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No overt cardiac anesthetic contraindications are noted.

Urinalysis with screening C/S, as well as baseline UPC level is recommended. Assessment of systemic BP is recommended if not done.

The bilateral renal pyelectasia is suspected to be secondary to chronic renal changes or potential pelvic scarring with bilateral chronic pyelonephritis considered less likely. Anesthetic contraindications associated with significant chronic renal disease may be indicated. If anesthesia is elected, perioperative appropriate hydration with close monitoring of systemic BP under anesthesia would be indicated. CRD therapy, if not currently instituted, is suggested. A Spec fPL could be considered to assess for evidence of chronic pancreatitis, given the history of diabetes.

Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists.



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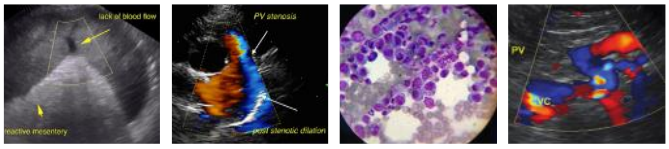

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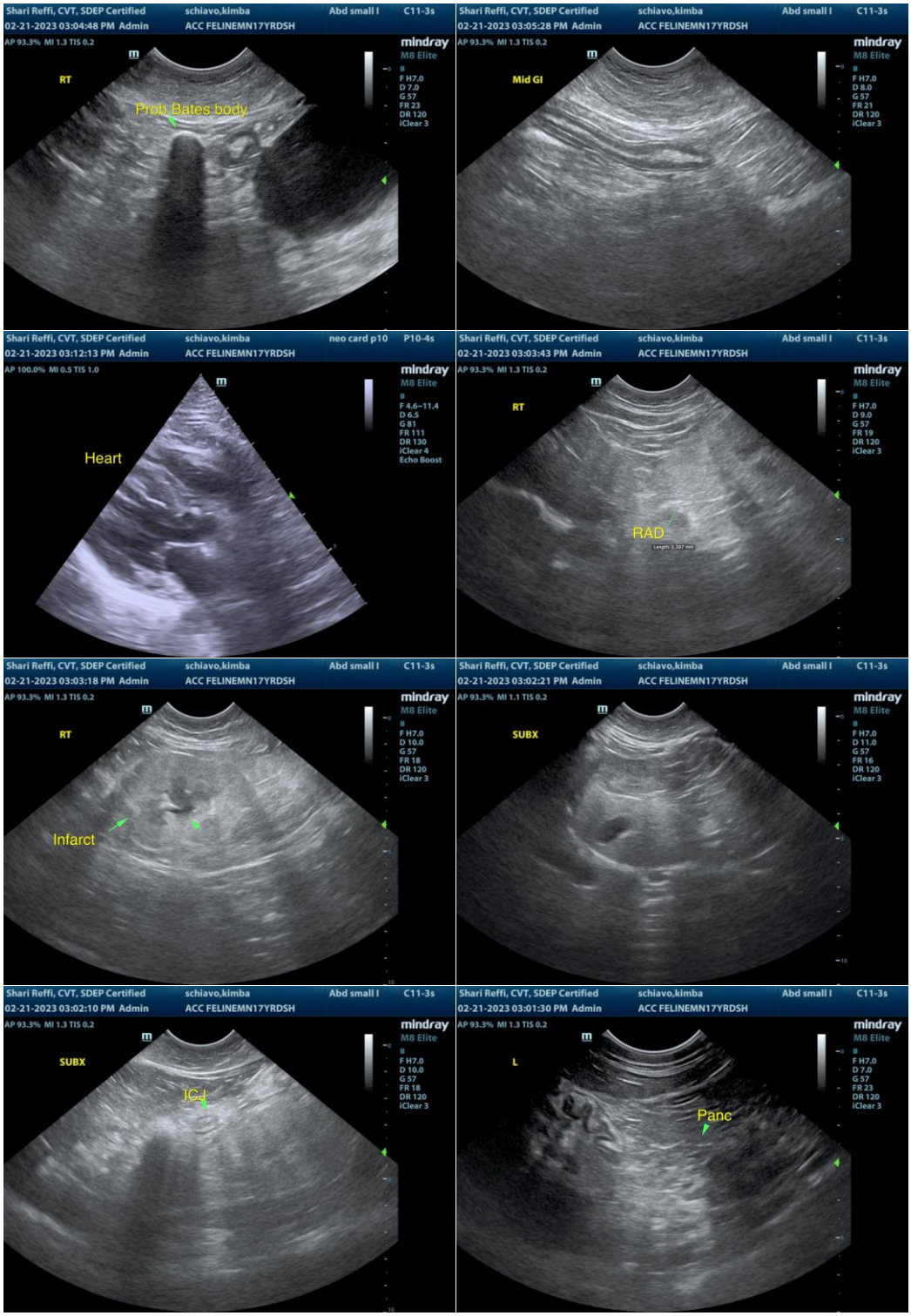

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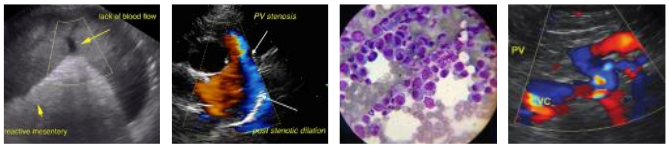

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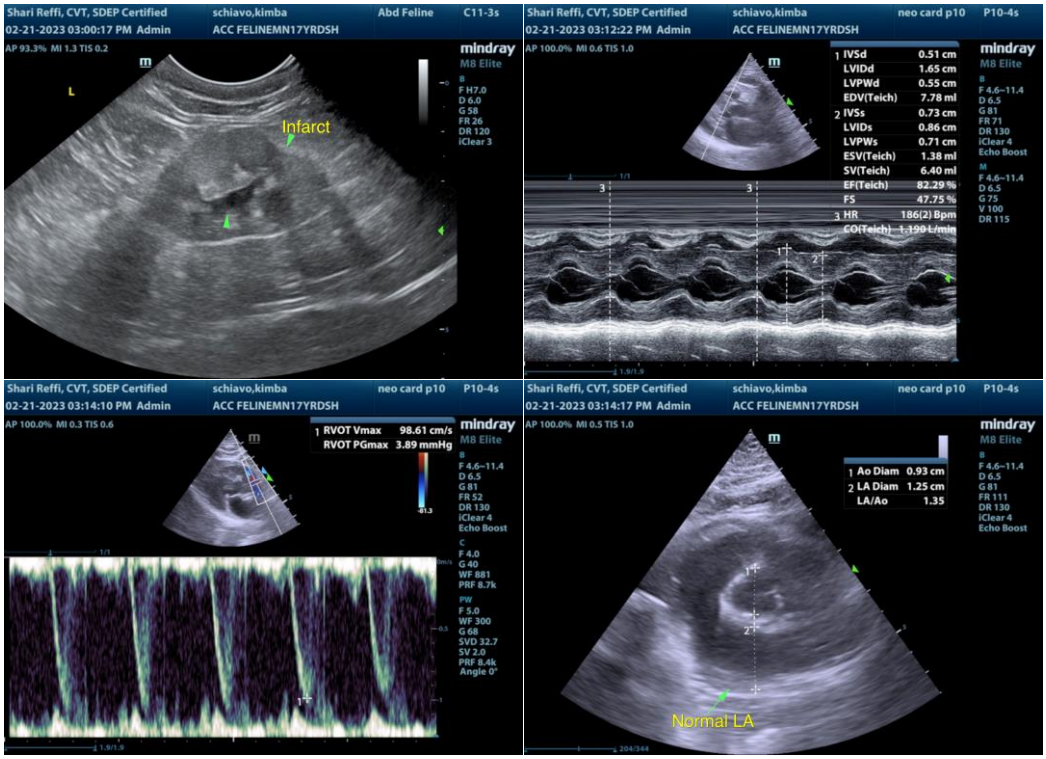

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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