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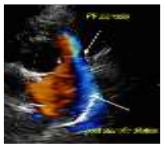
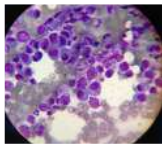
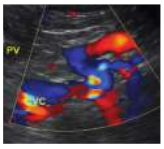

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Oscar Terhune

SPECIES

Feline

BREED

DSH

SEX

MN

AGE

6 years

WEIGHT

12.1 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

Oakland AH

REFERRING VET

Dr. Chabora

INVOICE

13412

DATE

2/24/22

PRESENTING CLINICAL SIGNS

Left anterior fascicular block, gallop rhythm, weight loss. 3/24/21 - mild intestinal thickening, mesenteric lymphadenopathy. Cobalamine.

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		140	0.43	1.86	0.43	43.2	77.4
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	1.4	1.1	1.6		1.1	0.82	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 overt masses in the visible window with mild subjective left atrium fat overlay, as well as potential mild increased cranial mediastinal fat.

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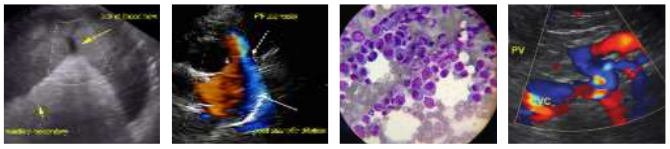

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Urinary System

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.

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. An intermittent to subtle hyperechoic corticomedullary band, consistent with a medullary rim sign, was present. This is a nonspecific finding seen in both normal and abnormal kidneys. It may be associated interstitial renal disease, hypercalcemia, tubular necrosis, lymphoma, and FIP. However, it is a nonspecific finding. The left kidney measured 4.1 cm in length. The right kidney measured 4.2 cm in length.

Adrenal Glands

The bilateral adrenal glands exhibited subjective mild prominent size with indistinct pinpoint hyperechoic foci present in the left adrenal gland. This likely indicated pinpoint dystrophic left adrenal gland mineralization, which is considered an incidental or age-related finding in a cat and not considered pathological. The left adrenal gland measured 0.57 cm width. The right adrenal gland measured 0.53 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. The spleen measured 0.7 cm width at the level of the hilus.

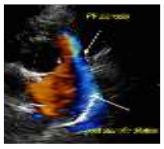
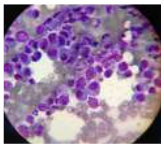
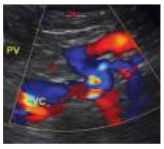
Liver/ Gallbladder

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.

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 pylorus body wall width measured 0.34 cm.

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 duodenum wall width measured 0.26 cm. The jejunum wall width measured 0.26-0.28 cm.

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

Pancreas

The pancreas was normal in size and contour with subtle uniform hypoechoic parenchymal noted in the left pancreatic limb compared to adjacent nonreactive peripancreatic omentum.

Free Abdomen

No omental masses, previously noted lymphadenopathy, or peritoneal effusion were noted.

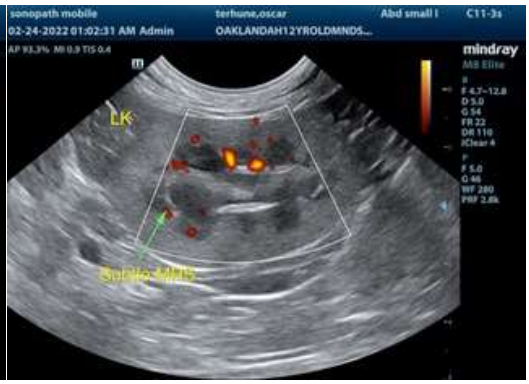
ULTRASONOGRAPHIC FINDINGS

- Overtly normal cardiac and function
- Subtle to indistinct, nonspecific bilateral renal medullary rim sign
- Overtly normal gastrointestinal tract
- Mildly hypoechoic pancreas - nonspecific

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No evidence of significant structural or functional cardiomyopathy such as left or right heart chamber enlargement, systolic dysfunction, or overt masses. No indication for cardiac medications based on this study. Continued monitoring of ECG for further clarification of the fascicular block and gallop rhythm is recommended. Recheck echocardiogram Is suggested in 6 months pending ECG assessment or if clinical signs consistent with heart disease arise.

Overall, no overt evidence of significant abdominal visceral pathology. Potential for structurally insignificant gastrointestinal disease or low-grade pancreatitis may be present yet sonographically normal. No evidence of previously noted mesenteric lymphadenopathy was noted. Recheck GI panel despite cobalamin supplementation or if cobalamin has not recently been supplemented. Three view chest radiographs, as well as thorough muscular skeletal an neurological examination to rule out occult pathology as potential contributing factors to the weight loss, may be considered.



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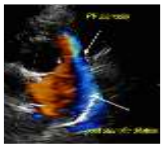
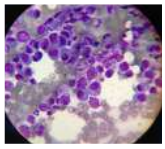
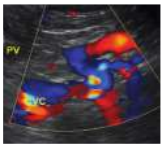

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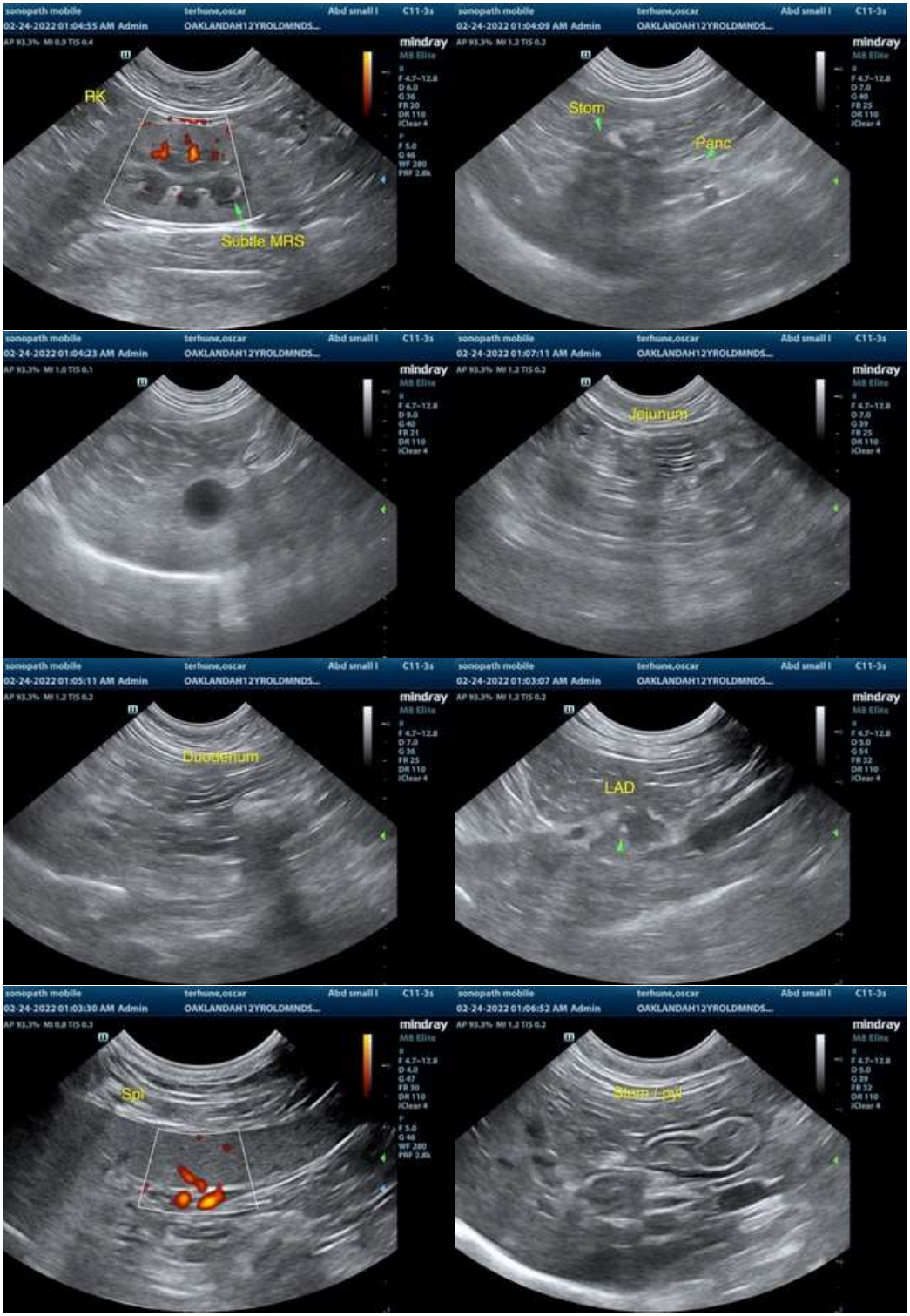

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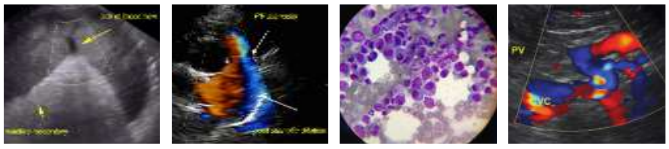

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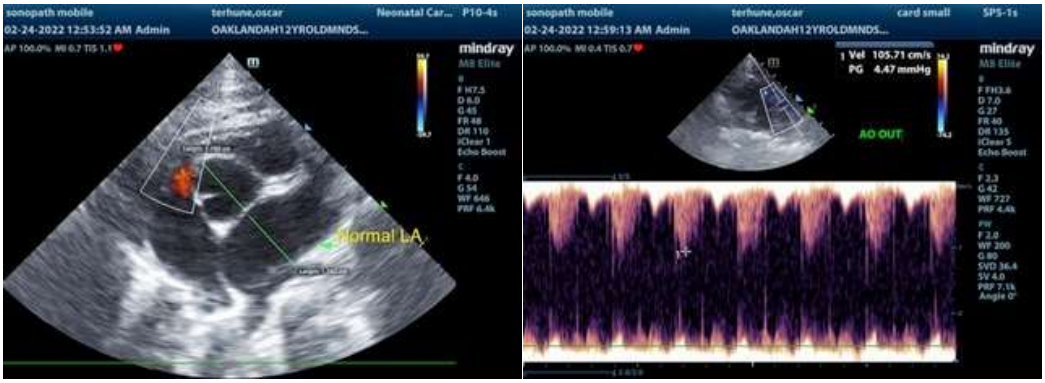

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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