



PATIENT PRESENTING CLINICAL SIGNS

Olivia Stone History: Pulmonary hypertension.

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

Canine

BREED

York

SEX

Spayed Female

AGE

14

WEIGHT

12

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
PATIENT	--	4.8	NM	1.0	50	85	0.1
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LA 2D short axis Base view (cm)	LVIDd Avg; 2D and m-mode short axis (cm)	LVIDs Avg; 2D and m-mode short axis (cm)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6				
PATIENT	NM	NM	NM	--	1.0	1.0	--

Cardiac Presentation

Normal LA size/dimension was noted. Mild reduced LV luminal volume was noted with subjective evidence of mild LV pseudohypertrophy and flattening of the IVS. Mildly thickened mitral valve leaflets were noted, without evidence of valvular prolapse. Possible mild eccentric MR, although not considered hemodynamically significant. Normal LV systolic function was present. Moderate RA/RV enlargement with mild RV free wall hypertrophy was present. Subjective normal laminar systolic LVOT and RVOT out flow with trace aortic and pulmonic insufficiency noted on doppler. Dilation of the main pulmonary artery was present. Thickened tricuspid valve with moderate to severe TR noted on doppler. No evidence of pericardial or pleural effusion. No obvious cardiac tumors were observed.

INTERPRETED BY

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

IMAGING PERFORMED BY

Hunt

HOSPITAL NAME

Bayshore VH

REFERRING VET

Dr. Hunt

INVOICE

20395

DATE

1/5/23

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with minor dependent luminal mineral. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted. Aortic trifurcation was normal.

The left and right kidneys revealed moderate to severe chronic degenerative corticomedullary changes with marked loss of corticomedullary border demarcation. Increased corticomedullary echogenicity was noted, including mild medullary mineralization, bilateral scant pyelectasia and cortical cysts. The left kidney measured 3.8 cm. The right kidney measured 4.8 cm.

Adrenal Glands

The left adrenal gland was normal in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 2.1 cm x 0.4 cm.



PATIENT	The right adrenal gland was enlarged in size, exhibiting mild asymmetrical yet intact capsule contour and nonhomogeneously to variably echogenic parenchyma. The right adrenal gland measured 2.7 cm x 1.7 cm.
Olivia Stone	
SPECIES	<i>Spleen</i>
Canine	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.
BREED	<i>Liver</i>
York	
SEX	The liver presented enlarged in size with symmetrical yet swollen contour. The parenchyma exhibited conserved uniform parenchyma with normal echogenicity isoechoic to the spleen and falciform fat. Distended to prominent caudal vena cava at the level of the liver and diaphragm was noted, exhibiting subjective laminar flow on doppler. Possible although not definitive soft tissue echo within segments of the caudal vena cava at the level of the right adrenal gland and right kidney. Potential for artifact.
Spayed Female	
AGE	The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.
14	
WEIGHT	<i>Gastrointestinal</i>
12	
INTERPRETED BY	The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained moderate echogenic ingesta, exhibiting area of progressive to strong distal acoustic shadowing. No evidence of mechanical pyloric out flow obstruction.
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	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.
IMAGING PERFORMED BY	Normal visible colon wall layers were present with apparent formed feces in lumen.
Hunt	<i>Pancreas</i>
HOSPITAL NAME	The parenchyma of the left limb, body and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.
Bayshore VH	<i>Free Abdomen</i>
REFERRING VET	Mild to moderate volume anechoic ascites was present. Generalized mild hyperechoic mesentery was noted. No omental masses or lymphadenopathy present.
Dr. Hunt	ULTRASONOGRAPHIC FINDINGS
INVOICE	<ul style="list-style-type: none"> • Severe pulmonary hypertension with secondary RA/RV/MPA enlargement • Trace aortic/pulmonic insufficiency • Mild urinary bladder mineral • Chronic degenerative kidneys, exhibiting medullary mineral, mild pyelectasia and cortical cysts • Congestive hepatomegaly
20395	
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PATIENT

Olivia Stone

- Right adrenal mass- possible, although not definitive, early vascular invasion
- Nonspecific shadowing gastric ingesta
- Mild to moderate volume ascites

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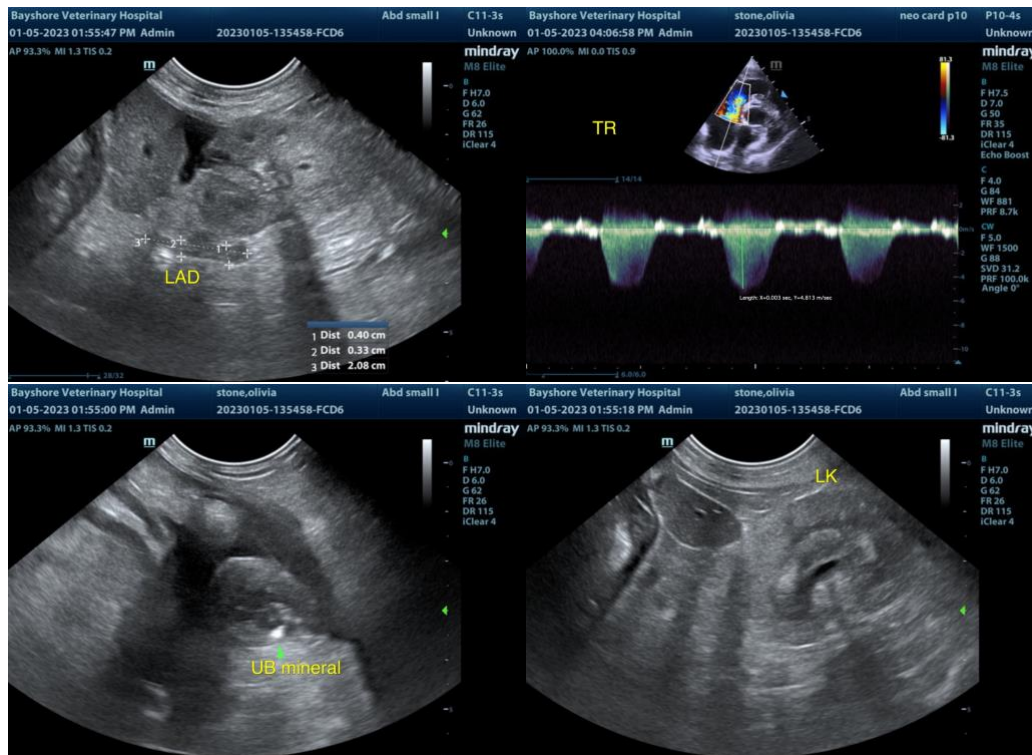
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The right adrenal mass is nonspecific with considerations including functional/nonfunctional adenoma or benign hyperplasia, although neoplastic criteria, i.e., pheochromocytoma or other, is favored. Screening blood pressure is recommended to assess for evidence of hypertension +/- urine catecholamine levels.

Given that cardiogenic congestive hepatopathy and ascites, secondary to severe pulmonary hypertension and right heart failure, is present, continued sildenafil at recommended dose with additional of Pimobendan 0.3 mg/kg PO BID may prove beneficial.

Monitoring for evidence of gastric emptying is suggested, especially if documented NPO prior to the ultrasound.





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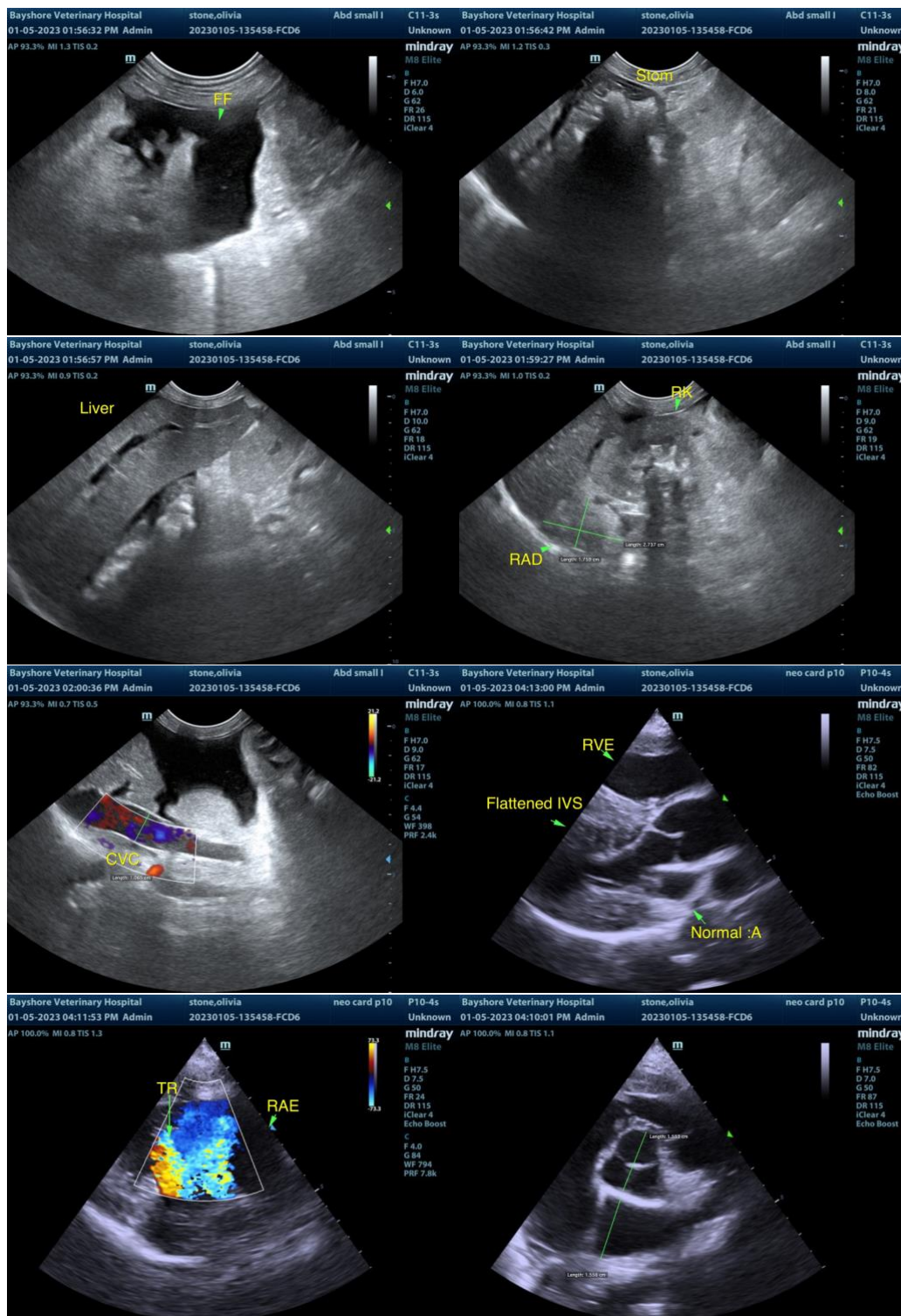
Dr. Hunt

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The information and recommendations provided are based on the images presented by the referring veterinarian. 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



PATIENT

can be of any further assistance please contact me.

Olivia Stone

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info@SonoPath.com

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