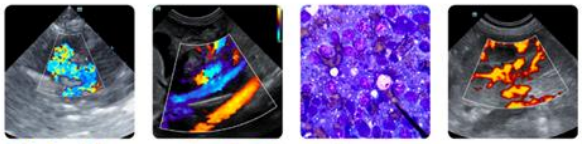


PATIENT

Prince Song Song

SPECIES

Canine

BREED

Yorkie

SEX

MI

AGE

11

WEIGHT

4.0lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Ramy Sharkawy

HOSPITAL NAME

Union Vet Animal Hospital

REFERRING VET

Dr. Parthenia Hemaiaalla

INVOICE
24619

DATE
04/25/2026

PRESENTING CLINICAL SIGNS

The pet presented for straining to defecate and a history of liver disease

Abnormal PE/Chem/CBC/UA Results: BSC 2/9 HM 4/6 bilatreral Left perineal hernia CBC HCT 22.3 HGB 8.0 RBC 3.30 CHEM BUN 31.6 Calcium 7.5 Corrected Ca 9.3 Total Protein 3.6 Albumin 1.7 GLOB 1.9 Alb/Glob 0.9 Glucose 57 Cholesterol 71 ALT (GPT) 237 AST (GOT) 65 ALP 175 Triglycerides 29

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN AND HEART

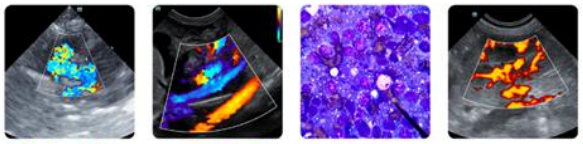
CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO M-mode	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
PATIENT	--	--	--	1.3	50	82	0.1
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV MAX** (m/s)	**BODY WEIGHT**	**LAD** LA MAX 4 Chamber	**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	--	--	1.0	4.0lb	2.2	2.0	--

Cardiac Presentation

The echocardiogram in this patient demonstrated normal left atrial size based on 2 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal mitral valve leaflets presented vegetative thickening consistent with endocardiosis (anterior>posterior). Doppler indicated moderate eccentric insufficiency. The left ventricle presented 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 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. 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. No echographically detectable evidence of infiltrative disease was visible. The cranial mediastinum and pericardial regions were free of masses in the visible window.

Urinary System

The urinary bladder was non-distended in size. Mild decreased proximal to prostatic urethral tone with normal structure to a depth of 2 cm. Anechoic urine was present in the lumen with moderate non-



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dependent particulate sediment. The ureteral papillae were normal. The ureters were not visible which is normal.

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 3.0 cm in length. The right kidney measured 2.7 cm in length.

The area of the iliac trifurcation was free of pathology including no visualized evidence of medial iliac or sublumbar lymphadenopathy or masses.

The prostate was enlarged in size with intact, symmetrical capsule contour. The margins of the gland were intact and able to be differentiated from the surrounding tissue. The prostatic parenchyma was mildly echogenic to heteroechoic without parenchymal mineralization. The prostate measured 3.1 cm in diameter. A solitary ventral prostate hypoechoic to non-homogenous nodule vs cyst measuring 1.0 cm in diameter was present.

Adrenal Glands

The left and right adrenal glands were not definitively visualized.

Spleen

The spleen was not definitively visualized.

Liver/Gallbladder

The liver was subjectively borderline to possible subnormal in size. 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. A solitary non-capsule deforming well demarcated mildly hyperechoic intraparenchymal nodule was present measuring 0.67 am in diameter. The gallbladder was non-distended in size with thin walls and mild non-organized debris. 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.

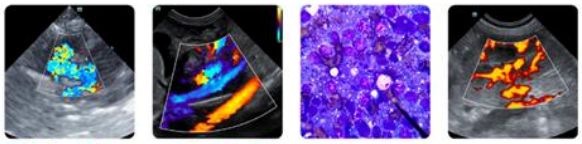
The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of mechanical/metabolic ileus, obstruction or foreign material.

Normal visible colon wall layers were present. The colon exhibited subjective distension with formed to semi-formed fecal matter.

Pancreas

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.

Free Abdomen



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No omental masses, overt lymphadenopathy or peritoneal effusion was present.

Minor caudal abdomen effusion was present.

ULTRASONOGRAPHIC FINDINGS

Primary

- Chronic mitral valve disease (B1)
- Non-distended urinary bladder with urine sediment, mild distended proximal/ prostatic urethra
- Enlarged non-homogenous hyperechoic prostate with prostatic nodule vs cystic lesion
- Distended colon containing formed to semi-formed fecal matter
- Chronic hepatopathy exhibiting borderline possible mild subnormal size and solitary hyperechoic parenchymal nodule
- Mild gallbladder debris (non-mucocele)
- Minor caudal abdomen effusion

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is subjective mild chronic degenerative valvular changes with secondary MR. No evidence of additional issues such as DCM criteria, LV systolic dysfunction or clinical pulmonary hypertension. The lack of left atrial enlargement implies that the risk of complication secondary to mitral valve insufficiency is relatively low at this time and, without current clinical signs, indicates that medical therapy is not required at this stage. Prognosis at this stage is variable and serial sonographic monitoring is recommended with a recheck echocardiogram in 6 months, sooner if clinical signs suggestive of heart disease develop. Cardiac anesthetic risk is considered mild.

Association between the perineal hernia, urinary bladder, prostate and descending colon could not be determined. The straining to defecate may be associated with prostatomegaly or association with the perineal hernia assuming no evidence of pathology on rectal palpation. Possible non-visible colon mural pathology obscured by fecal matter is not definitively excluded. Benign prostatic hyperplasia, prostatitis, prostatic cyst, emerging abscess with possible emerging prostatic neoplasia all potentials.

Although non-specific the chronic hepatopathy and parenchymal nodules suggest benign criteria with occult emerging low-grade nodular hepatic neoplasia thought less likely. Further assessment may include assuming normal clotting status hepatic FNA cytology and correlation with bile acid profile. Surgical consult regarding the perineal hernia with concurrent neuter and prostatic sampling is recommended.

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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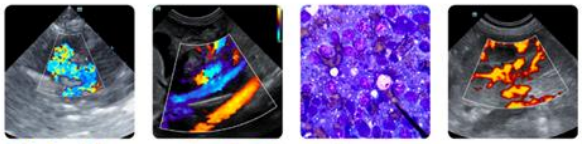

Clinical Sonography & Telecytology
Educational Teleconsultation Services™

SonoPath.com | info@sonopath.com | 1.800.838.4268

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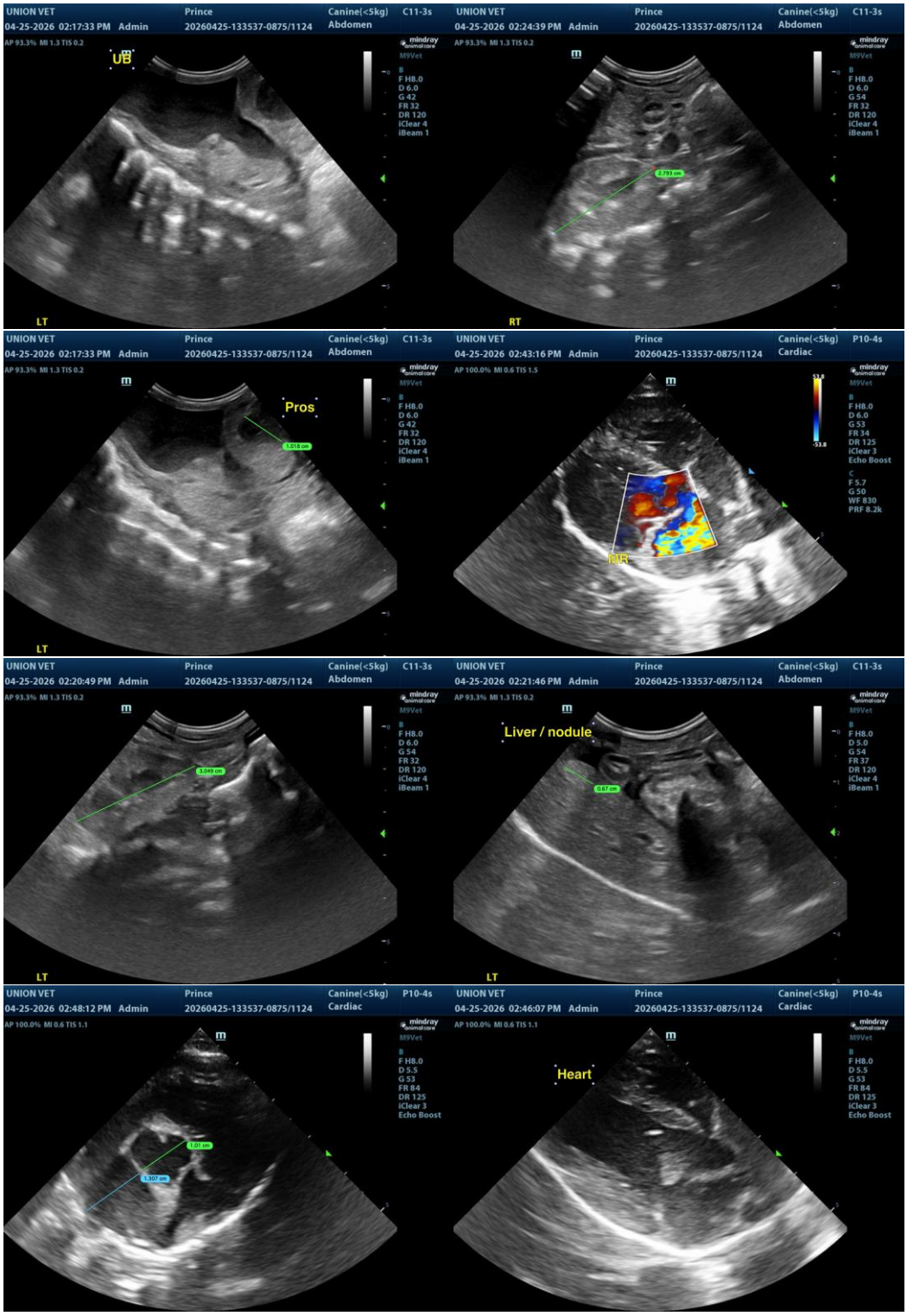

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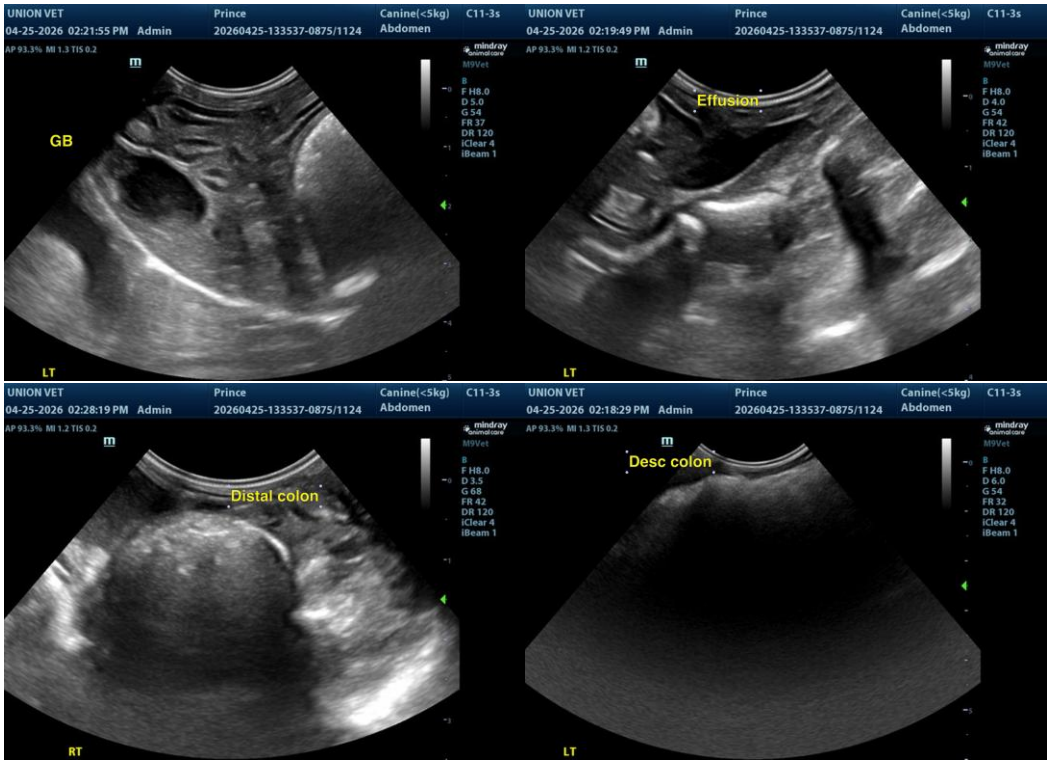

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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