



PATIENT

Coco Kim

SPECIES

Canine

BREED

Yorkshire Terrier

SEX

FI

AGE

9

WEIGHT

1.9kg

PRESENTING CLINICAL SIGNS

Has a vaginal mass that is attached in the area of the clitoris and has a stalk going into the vagina that is attached to the wall. Picture I closed. Pre surgical assessment prior to exploratory Non clinical for heart disease and not on any heart meds 3/6 murmur. Picture of vaginal mass attached 63 images echo 62 images abdominal scan 125 total

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN AND HEART

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	5.8		1.5	1.4	46	81	0.22
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	144	1.0	0.83		1.8	1.75	

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Belan

HOSPITAL NAME

Alpine 24/7

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Cardiac Presentation

The echocardiogram in this patient demonstrated normal left atrial size based on 3 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal mitral valve leaflets presented moderate thickening consistent with endocardiosis. Doppler indicated measurable 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, trigone, cystourethral junction, and visible pelvic urethra to a depth of 1 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 were noted.



PATIENT	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. Bilateral focal areas of non-obstructive medullary mineral were present. The left kidney measured 2.8 cm in length. The right kidney measured 2.7 cm in length.
Coco Kim	
SPECIES	The area of the aortic trifurcation was free of pathology.
Canine	
BREED	The visualized uterus exhibited mildly thickened to irregular wall layering and normal mural echogenicity without evidence of uterine masses or mural mineralization. The left and right uterine horns appeared to contain a mild to variable amount of anechoic fluid. The left and right ovaries appeared to be normal in size, position and shape. The left ovary measured 0.39 cm; the right ovary measured 0.50 cm.
Yorkshire Terrier	
SEX	Adrenal Glands
FI	The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.34 cm width at the caudal pole and 0.37 cm width at the cranial pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.34 cm width at the caudal pole and 0.41 cm width at the cranial pole.
AGE	Spleen
9	The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. 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. The parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age related remodeling with minor potential for inflammatory or neoplastic disease.
WEIGHT	Liver/Gallbladder
1.9kg	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 with minor particulate debris-likely incidental without evidence of mucocele criteria. No evidence of gallbladder or peripheral gallbladder inflammation was present. The cystic and common bile ducts were normal.
INTERPRETED BY	Gastrointestinal
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	The stomach presented primarily intact wall layering with a normal wall layer ratio. Regional areas of subjective variable to non-homogenous mucosal thickening in the area of the gastric fundus or body were present. Subjective intact gastric muscularis and submucosal layer present within the areas of gastric mucosal thickening. The lumen of the stomach contained mild subtle progressively shadowing ingesta along with mild luminal gas and no signs of ileus, obstruction or foreign material.
IMAGING PERFORMED BY	Pancreas
Dr. Belan	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.
HOSPITAL NAME	Normal visible colon wall layers were present with apparent formed feces in lumen.
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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.

SPECIES

Canine

Free Abdomen

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

BREED

Yorkshire Terrier

- Chronic mitral valve disease (ACVIM B1)
- Mild to variably thickened uterus containing left and right uterine horn anechoic fluid-suspect endometritis with emerging pyometra/mucometra/hydrometra or similar
- Mild chronic renal changes with non-obstructive medullary mineral
- Regionally thickened gastric mucosa-hyperplasia, atypical polyps, gastritis, infiltrative neoplasia (less likely) possible

SEX

FI

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

AGE

9

The cause of the murmur is chronic degenerative valvular changes with secondary eccentric mitral valve insufficiency. 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. No anesthetic contraindications.

WEIGHT

1.9kg

Exploratory laparotomy with OVH with gross inspection of the stomach and potential gastric biopsies pending examination is recommended. Empirical gastroprotectants and sonographic monitoring of the stomach for progressive mucosal thickening would be a more conservative approach.

INTERPRETED BY

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

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.

IMAGING PERFORMED BY

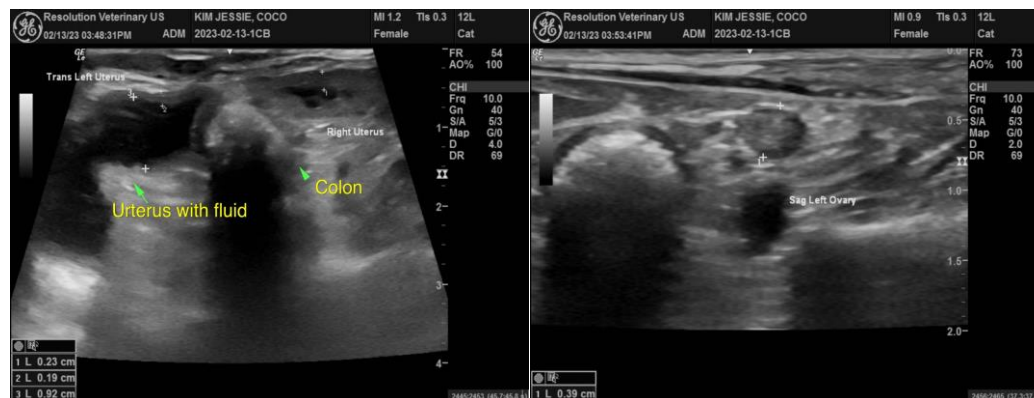
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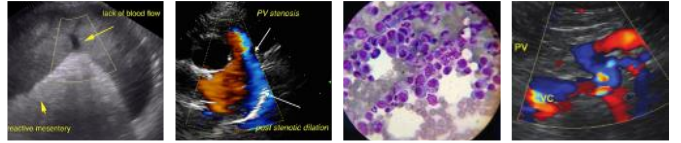


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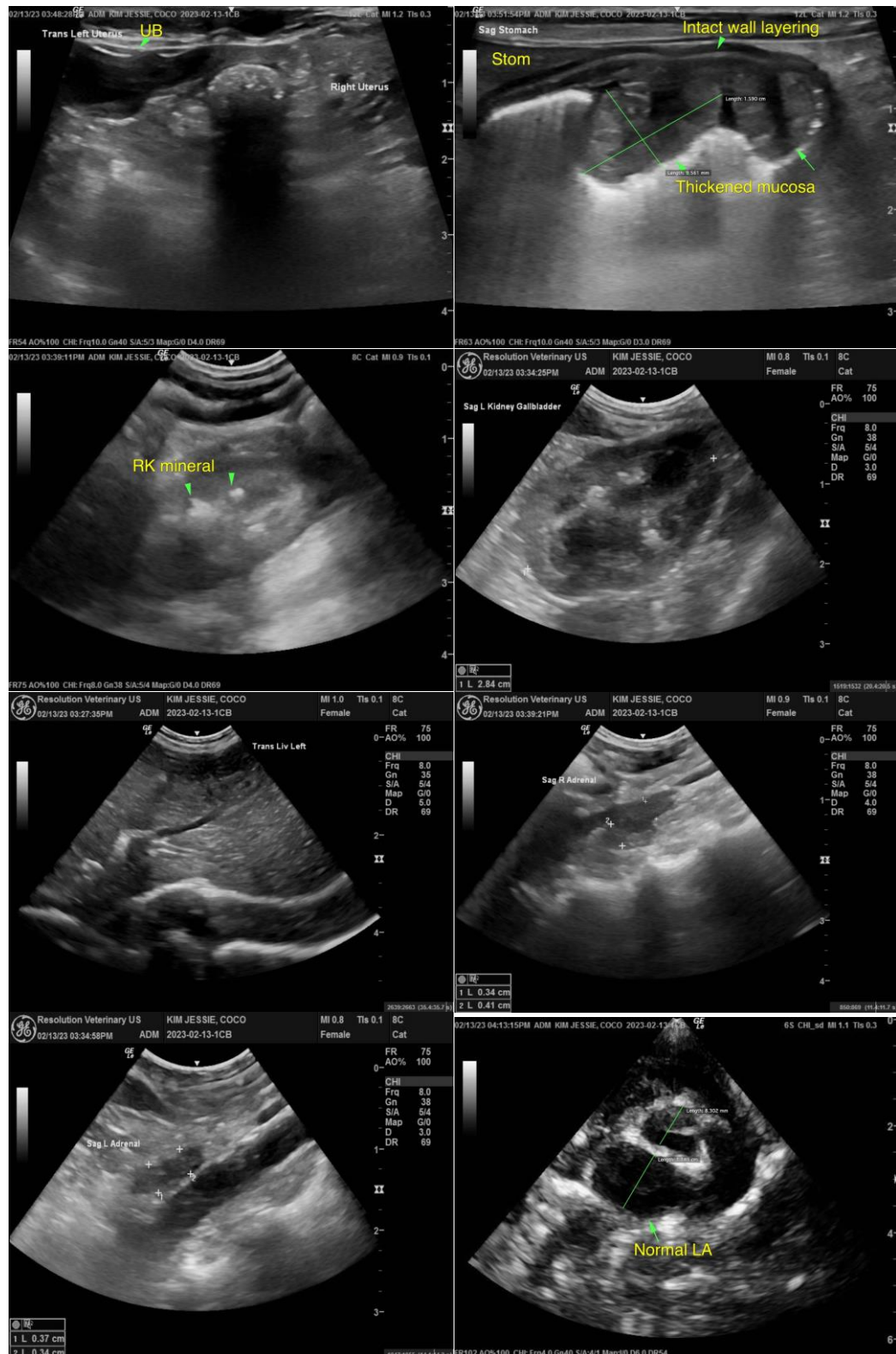
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not



PATIENT

visible in the image/video clips provided.

Coco Kim

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.

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mac.daniel@sonopath.com

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