



PATIENT

Piper Cabrera

SPECIES

Canine

BREED

Mixed

SEX

Spayed Female

AGE

12 years

WEIGHT

28 lbs

INTERPRETED BY

Bradley Harris, DVM,
 DACVECC, DACVIM
 (cardiology)

IMAGING PERFORMED BY

Meghan Morse, LVT,
 CVT

HOSPITAL NAME

Bergen County
 Veterinary Center

REFERRING VET

Dr. Santo

INVOICE

10718

DATE

11/11/2025

PRESENTING CLINICAL SIGNS

Coughing, harsh lung sounds, increased resp rate and effort Radiographs attached Current meds: Doxycycline.

Abnormal PE/Chem/CBC/UA Results: CBC: monocytes 9.6, suspected bands, basophils 0.11, MPV 14.2 Chem: Sodium 163.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

CANINE CARDIAC PARAMETERS	BW	HR BPM	LAD 4 ch Long	RAD 4 ch Long	La/Ao Heart Base	LVIDd	LVIDs
NORMAL PARAMETER		50-100			<1.6		
PATIENT	12.73 kg	NM	3.77	2.36	1.27	2.97	1.51
CANINE CARDIAC PARAMETERS	FS	EPSS	PV V MAX (m/s)	AV V Max (m/sec)	MR Vmax	TR Vmax	RPA distensibility (normal >30%)
NORMAL PARAMETER	28-40	<0.6	0.7-1.6	0.7-1.7	4.5-5.5	< 2.7	
PATIENT	49	0.3	1.1	1.7	5.5	Not present	41%

Cardiac Presentation

The left atrium is normal in dimension. The left ventricle is normal in dimension with normal systolic function. The right atrium and ventricle are subjectively normal in dimension and systolic function. The mitral valve is thickened and redundant consistent with myxomatous changes, and there is no significant prolapse. There is evidence of mild mitral regurgitation. The tricuspid valve leaflets are subjectively normal with no tricuspid regurgitation and no evidence of pulmonary hypertension. The left ventricular outflow tract demonstrated normal laminar flow and the visible aorta is unremarkable. The right ventricular outflow tract assessment revealed normal laminar flow, and appropriate diameter and distensibility. There is no evidence of semilunar valve insufficiency. There is no visible pericardial, pleural, or free peritoneal fluid noted. There is a hypoechoic soft tissue mass effect at the caudal border of the cardiac apex, that is of uncertain origin. There are no doppler or echocardiographic changes consistent with an intrapericardial mass (tamponade) but, it cannot be definitively excluded. Instead, a mass or thrombus in the pleural space is considered more likely.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, and pelvic urethra are unremarkable with normal wall thicknesses and normal tone. The ureters were not visualized, which is a normal finding. There are no uroliths or



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sediment noted, and anechoic urine is present. The ureteral papillae appear normal. There is no evidence of inflammatory, infiltrative, or neoplastic disease.

The kidneys are normal in size. The cortices are mildly hyperechoic with a decrease in corticomedullary junction definition. The cortex to medulla ratio is appropriate with no significant pyelectasis or pelvis dilation. There's mild dystrophic mineralization noted bilaterally, with slightly irregular renal capsular contour. Left kidney measures 5.07 cm, and the right kidney measures 4.83 cm.

Adrenal Glands

Both adrenal glands have heterogenous, rounded mass effects that slightly distort the capsule of the cranial pole bilaterally. The left measures approximately 1.06 cm in diameter, and the right is approximately 1.52 cm. There is no evidence of capsular escape or vascular invasion noted bilaterally. There's a single hypoechoic and irregular lymph node in the region of the left adrenal gland, with a slightly hyperechoic and enflamed mesentery in the region. The left adrenal measures 2.3 cm in length x 0.56 cm at the caudal pole. The right adrenal measures 0.72 cm in width at the caudal pole, and 2.4 cm in length.

Spleen

The spleen measures 1.53 cm at the hilus. The parenchyma is diffusely heterogenous and irregular, with ill-defined, hypoechoic nodular changes throughout. These nodules to mass effects do not readily distort the splenic capsule that is smooth, without significant irregularity. The vasculature appears normal with no evidence of congestion, spontaneous echo contrast, or thrombosis. The spleen measures 1.53 cm at the hilus.

Liver

The liver also has several hypoechoic, ill-defined nodules to mass lesions, and the remainder of the parenchyma is naturally coarse, and hypoechoic to the spleen. The liver is subjectively normal in size. The vasculature is normal with no evidence of congestion. The gallbladder has thin walls which contain anechoic bile. There is no evidence of intra- or extra-hepatic biliary dilation. The cystic and common bile ducts were normal. No hepatic lymphadenopathy is documented. There is no overt structural evidence of inflammatory, infiltrative or regenerative pathology evident.

Gastrointestinal

The stomach and intestines are free of stasis and peristaltic activity, with no significant dilation noted. There is normal wall thickness and acceptable curvilinear mural detail. The pyloric-duodenal junction and ileocecolic junction are patent, and the colon contains normal shadowing feces. There is no evidence of shadowing obstructive material or overt infiltrative disease noted. No associated abnormal lymphatic activity is documented.

Pancreas

The base and limbs of the pancreas are isoechoic to surrounding omental fat. The pancreatic duct and capsular contour are normal. There is no overt evidence of active inflammatory or neoplastic disease.

Free Abdomen

There is no other intraabdominal lymphadenopathy noted, and there is no significant free peritoneal effusion.



PATIENT **ULTRASONOGRAPHIC FINDINGS**

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- These findings are consistent with degenerative/myxomatous mitral valve disease with minimal to mild hemodynamic effects consistent with ACVIM Stage B1 disease. It is unlikely that any current morbidity is of cardiac origin. The presence of the soft tissue mass effect at the caudal aspect of the heart is of uncertain etiology. A pleural space lesion is considered most likely.
- The kidneys are relatively normal in size and structure, and cortex:medulla ratio (cortex 1/3 of medulla) is essentially maintained. There is age-related loss of the normal smooth capsular contour and C/M junction definition. The cortices are largely uniform in texture with mild hyperechogenicity expected for this patient's age. Dystrophic mineralization was noted and appears non-obstructive at this time, with no evidence of pylectasis.
- The cranial pole of the left and right adrenal glands were enlarged with a swollen capsule and mild heterogenous parenchymal changes. This is most consistent with hyperplasia or an adenoma. Capsular expansion was noted without capsular escape or vascular invasion.
- The spleen has several ill-defined hypoechoic nodular lesions throughout. These lesions do not distort the splenic capsule and may represent benign changes such as lymphoid hyperplasia or extramedullary hematopoiesis. However, infiltrative neoplastic disease must also be considered.
- The liver has similar hypoechoic nodular changes throughout. These may also represent nodular hyperplasia or vacuolar hepatopathy. However, metastatic neoplastic disease cannot be definitively excluded.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given these findings, no cardiac therapy is recommended. A thoracic CT scan with angiography is recommended to better evaluate the origin of the abnormality within the pleural space. There are no cardiac contraindications to anesthesia, fluid therapy, vasopressor therapy, or corticosteroids as indicated for further assessment and treatment. If not already performed, baseline thoracic radiographs and blood pressure are recommended. A recheck echocardiogram is recommended in 6 months.

Anesthesia considerations:

If anesthesia is necessary, alpha-2 agonists, ketamine, high dose acepromazine, and Telazol should be avoided. Fluid therapy during anesthesia should be considered at a conservative rate (e.g., 5 ml/kg/hour) if possible.

Diet:

A high-quality food from Hills, Royal Canin, Science Diet, Eukanuba, Iams, or Purina that is highly palatable with adequate protein and calories for maintaining optimal body condition is reasonable.

Activity:

No special considerations are necessary.

Fine needle aspirates of the spleen and liver with cytology are recommended. A coagulation profile and platelet estimate prior to sampling are indicated to ensure the absence of coagulopathy.

Occasionally some tissues are poorly exfoliative, or cytology is non-specific, in which case biopsy with histopathology may be required for a definitive diagnosis.

Consider additional diagnostics to evaluate the adrenal masses. Including an ACTH stimulation test



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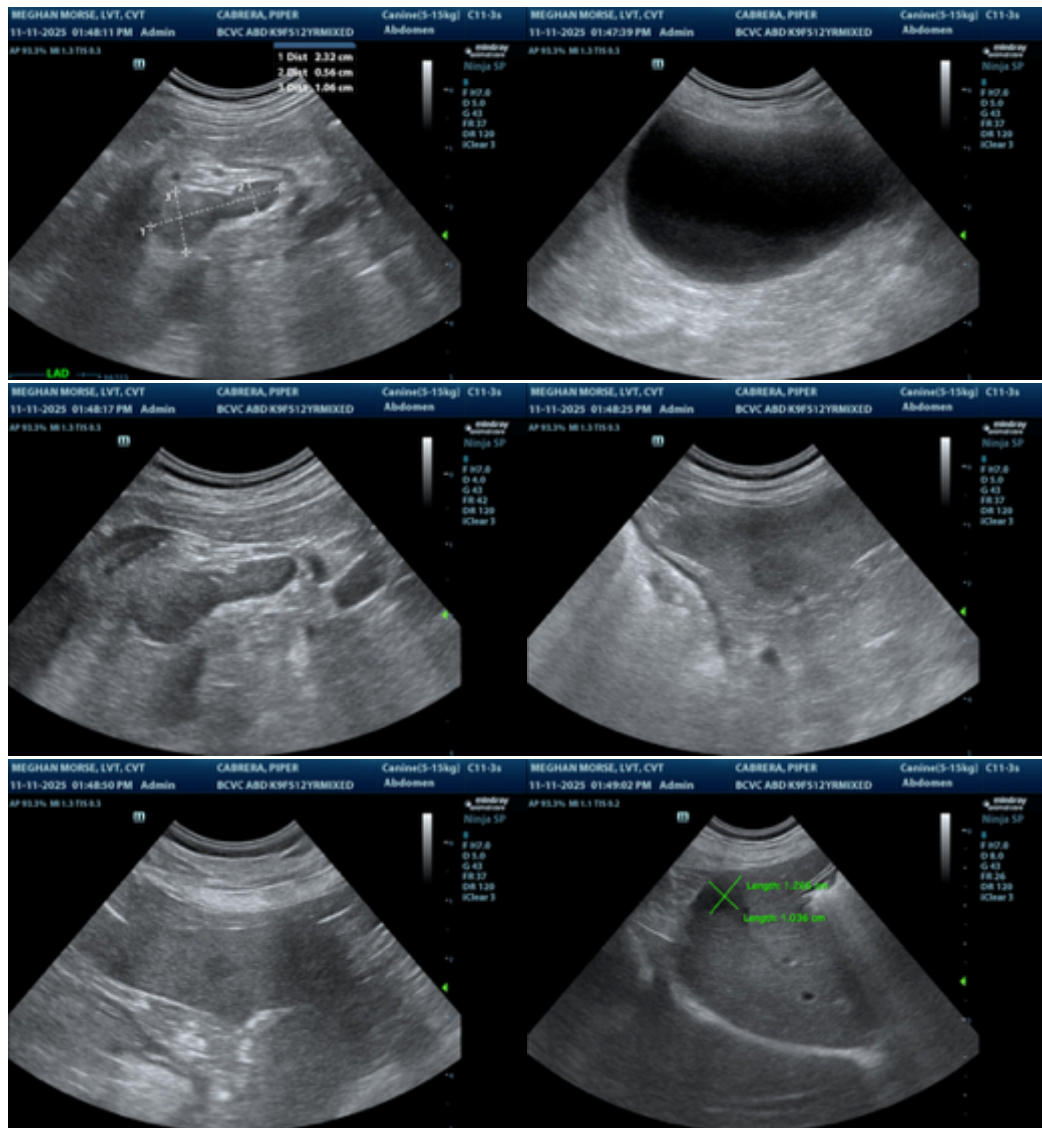
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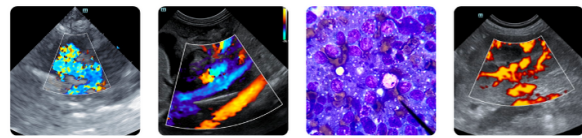
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with possible low dose dexamethasone suppression test, as well as a urine norepinephrine to further evaluate for a potential pheochromocytoma.

A urinalysis and urine culture via cystocentesis are recommended to evaluate the urinary tract changes for potential urinary tract infection.





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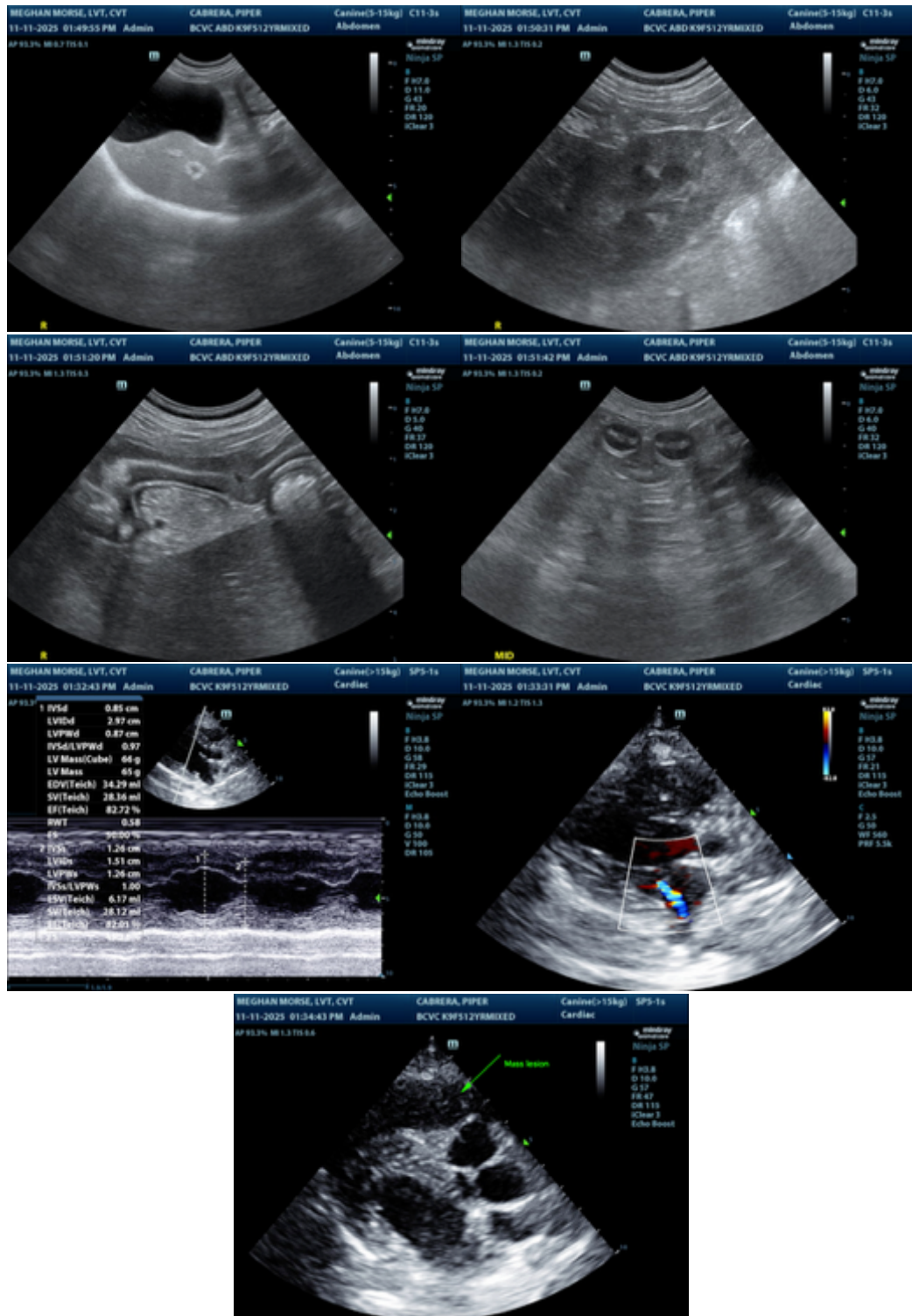
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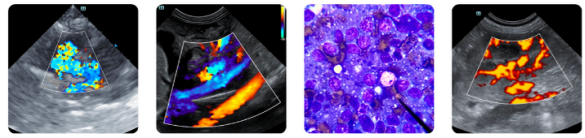
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not



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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.

Bradley Harris, DVM, DACVECC, DACVIM (cardiology)

info@SonoPath.com