



PATIENT PRESENTING CLINICAL SIGNS

Echo Scherer Acute collapse, decreased CP right hind, absent femoral pulse and cold paw. hx of MCT removal right shoulder; hx of horner's syndrome.

SPECIES Abnormal PE/Chem/CBC/UA Results: HCT and platelets wnl; TP 5.2, chol 400, ALT 122, ALKP 162, GGT 48, K 3.6, lymphs low 0.47
Canine

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

BREED

Golden Retriever X

SEX

Neutered Male

AGE

13 Years

WEIGHT

59 Pounds

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	<1.6	28-40	40-100	<0.6
PATIENT			1.2	1.0	31	60	0.43
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	BELOW	BELOW	BELOW	BELOW
PATIENT	135	1.2	1.0		3.88	3.78	

INTERPRETED BY

Eric Lindquist, DMV

DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Diane McFadden

HOSPITAL NAME

Newton Vet Hospital

REFERRING VET

Dr. Kim

INVOICE

42456

DATE

10/28/22

Cardiac Presentation

The **left atrium** subjectively appeared volume contracted. Trivial mitral insufficiency noted, not clinically significant. 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. **Aortic** insufficiency also noted. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinesis. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonary outflow** 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. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window.

Aortic thrombus noted in the iliac trifurcation, likely owing to paraneoplastic hypercoagulable state. Blood flow was minimal.

Urinary System

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes were noted. Ureteral papillae were normal.



PATIENT

Echo Scherer

The **left kidney** resented a mixed hypoechoic complex mass with cavitation and pericapsular inflammation. The mass escaped into the retroperitoneal space with significant inflammation.

SPECIES

Canine

The **right kidney** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortex presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The right kidney measured 7.53 cm.

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Golden Retriever X

Adrenal Glands

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The right adrenal gland measured 2.83 cm x 0.82 cm at the caudal pole and 0.74 cm at the cranial pole. The right adrenal gland measured 2.94 cm x 2.15 cm at the cranial pole and 0.48 cm at the caudal pole.

SEX

Neutered Male

Spleen

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes were noted.

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Liver

The **liver** images from right and left intercostal as well as subcostal views revealed subjectively normal liver size, contour, and structure. Some age-related parenchymal remodeling was noted but likely not clinically significant at this time. Vascular and biliary tracts were of normal volume and no evidence of congestion was noted. The gallbladder presented some dependent debris with essentially normal contour. The cystic and common bile ducts were normal. No overt evidence of active inflammatory, infiltrative or regenerative pathology was noted but should be paired with current or past LE elevations regarding any clinical significance to this presentation. The hepatic lymph nodes were unremarkable.

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Gastrointestinal

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

Pancreas

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The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

ULTRASONOGRAPHIC FINDINGS

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- Normal cardiac presentation with trivial aortic and mitral insufficiency
- Volume contracted, potentially shocky heart
- Saddle thrombus
- Left renal mass with pericapsular and retroperitoneal escape – strongly suggests for hemangiosarcoma.



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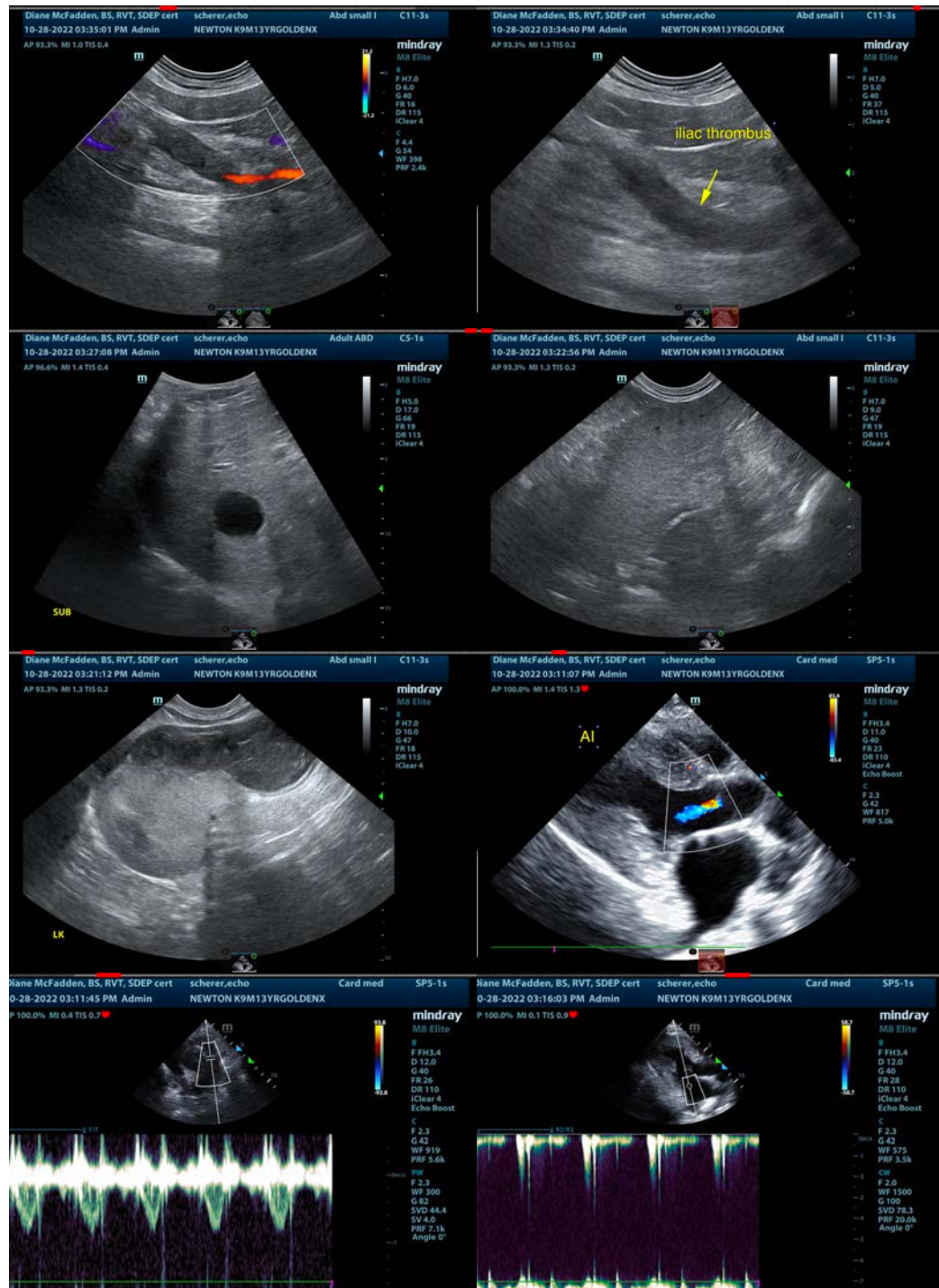
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Prognosis is extremely guarded to poor in this patient. Attempt at dissolution of the saddle thrombus with medical management, CT of the abdomen to assess for potential surgical evaluation of the left renal mass, as well as chest CT to assess for metastatic disease would all be indicated. Full coagulation panel indicated to assess the hypercoagulable state present. IV fluid support, Plavix therapy or similar thrombus management protocol indicated.





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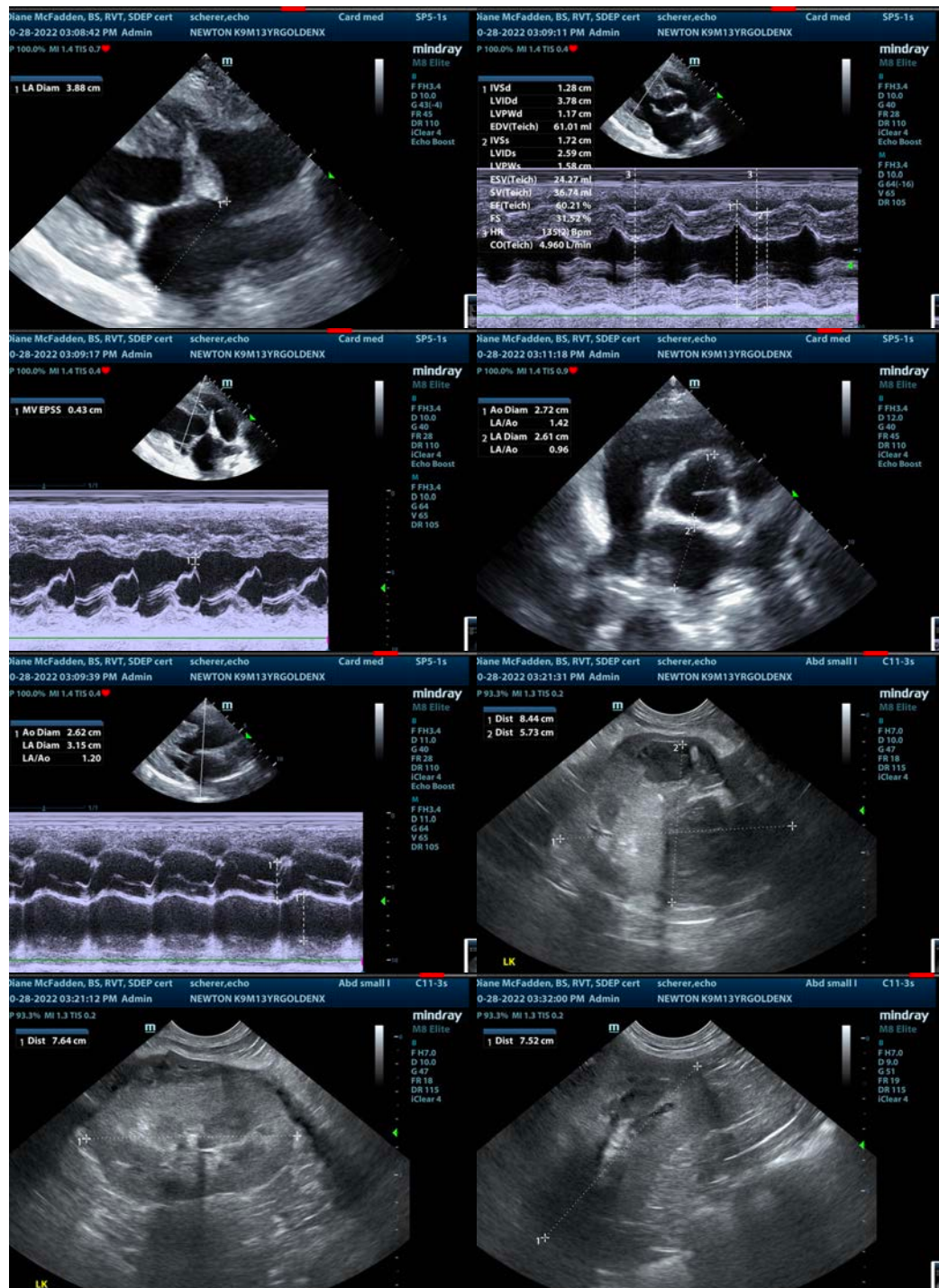
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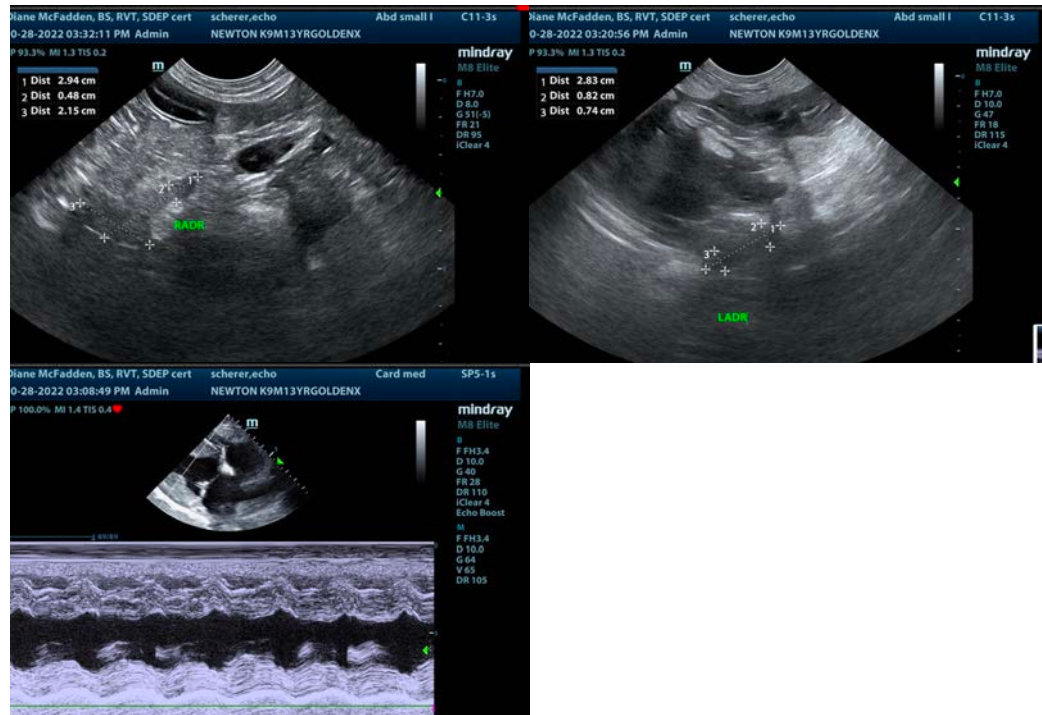
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com

info@SonoPath.com