



**PATIENT PRESENTING CLINICAL SIGNS**

Brandy Murray History: mild nonregenerative anemia (new); tense abdomen, possible splenomegaly, . Hx of hepatic /splenic nodules. Worsening heart murmur (hx of stage B1 MVD). R/O from anemia vs worsening heart disease.

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

**BREED**

Beagle

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 was noted. Ureteral papillae were normal.

**SEX**

Spayed female

The **kidneys** 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 cortices 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 6.62 cm. The left kidney measured 6.98 cm.

**AGE**

15 years

**WEIGHT**

47 lbs

**Adrenal Glands**

The **adrenal glands** appeared slightly enlarged and swollen. No evidence of focal capsular expansion or invasion into the phrenic veins was noted. No overt suspicion of neoplasia was noted. This is considered likely a hyperplastic change associated with stress or adrenal endocrinopathy (PDH). If isosthenuria is persistently present and the patient morphologically suggests Cushing's disease then ACTH testing would be indicated. The right adrenal gland measured 3.05 x 2.15 cm at the cranial pole and 0.94 cm at the caudal pole. The left adrenal gland measured 3.1 x 1.0 cm at the caudal pole and 1.25 cm at the cranial pole.

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**Spleen**

The **spleen** was enlarged, hypoechoic, irregular and nodular. There was significant progression from the prior sonogram.

**IMAGING PERFORMED BY**

Diane McFadden, RVT

**Liver**

The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. Vascular and biliary tracts were of normal volume with no evidence of congestion. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. The hepatic lymph nodes are enlarged, irregular and hypoechoic measuring up to 3.0 cm.

**HOSPITAL NAME**

Animal Care Centers of  
Landing

**REFERRING VET**

Dr -

**INVOICE**

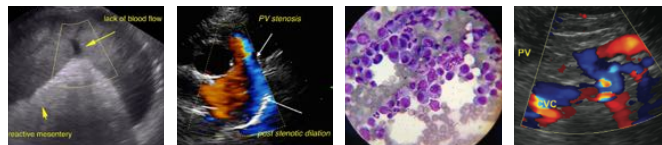
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**DATE**

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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



**PATIENT**

Brandy Murray

demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

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**Pancreas**

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.

**BREED**

Beagle

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

**SEX**

Spayed female

The echocardiogram in this patient demonstrated persistent mitral and tricuspid insufficiency. Left ventricular and left atrial volumes have slightly increased in this patient. The right heart is unremarkable. The contractility was normal. There was no pericardial or pleural effusion.

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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	6.0	2.61	NM	2.0	43	74	0.1
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT	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	1.37	1.73	1.0	47 lbs	5.48	4.78	

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**ULTRASONOGRAPHIC FINDINGS**

Mitral and tricuspid insufficiency with mild progression of the left atrial size.

Progressive nodular splenic and hepatic changes.

Enlarged hepatic lymph nodes.

Bilateral adrenal hypertrophy, progressed from the prior sonogram.

Anechoic cysts in the right cranial kidney.



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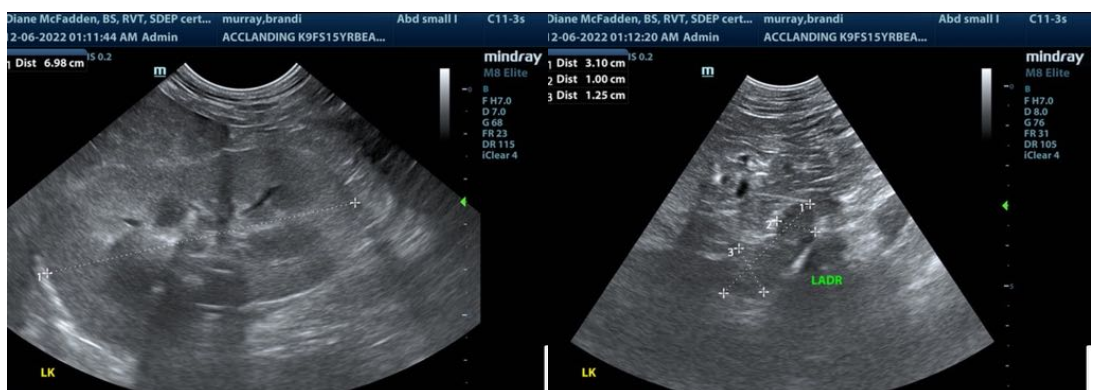
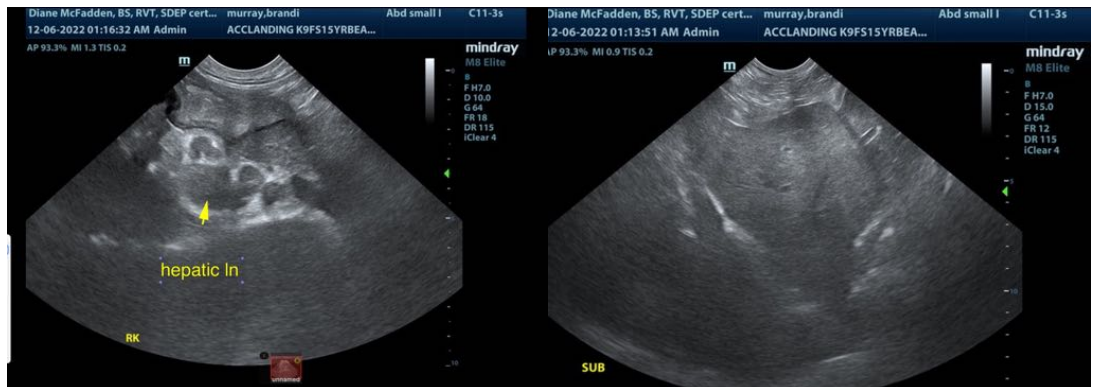
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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Pimobendan is indicated at 0.3 mg/kg b.i.d. This is consistent with early stage B2 valvular disease.

There is a strong concern for splenohepatic infiltrative disease. Sedation with Torbutrol is indicated as well as FNA of the spleen and liver. The prognosis is extremely guarded. Chest radiographs are warranted to assess for comorbidities. Round cell neoplasia versus hemangiosarcoma are the primary concerns.





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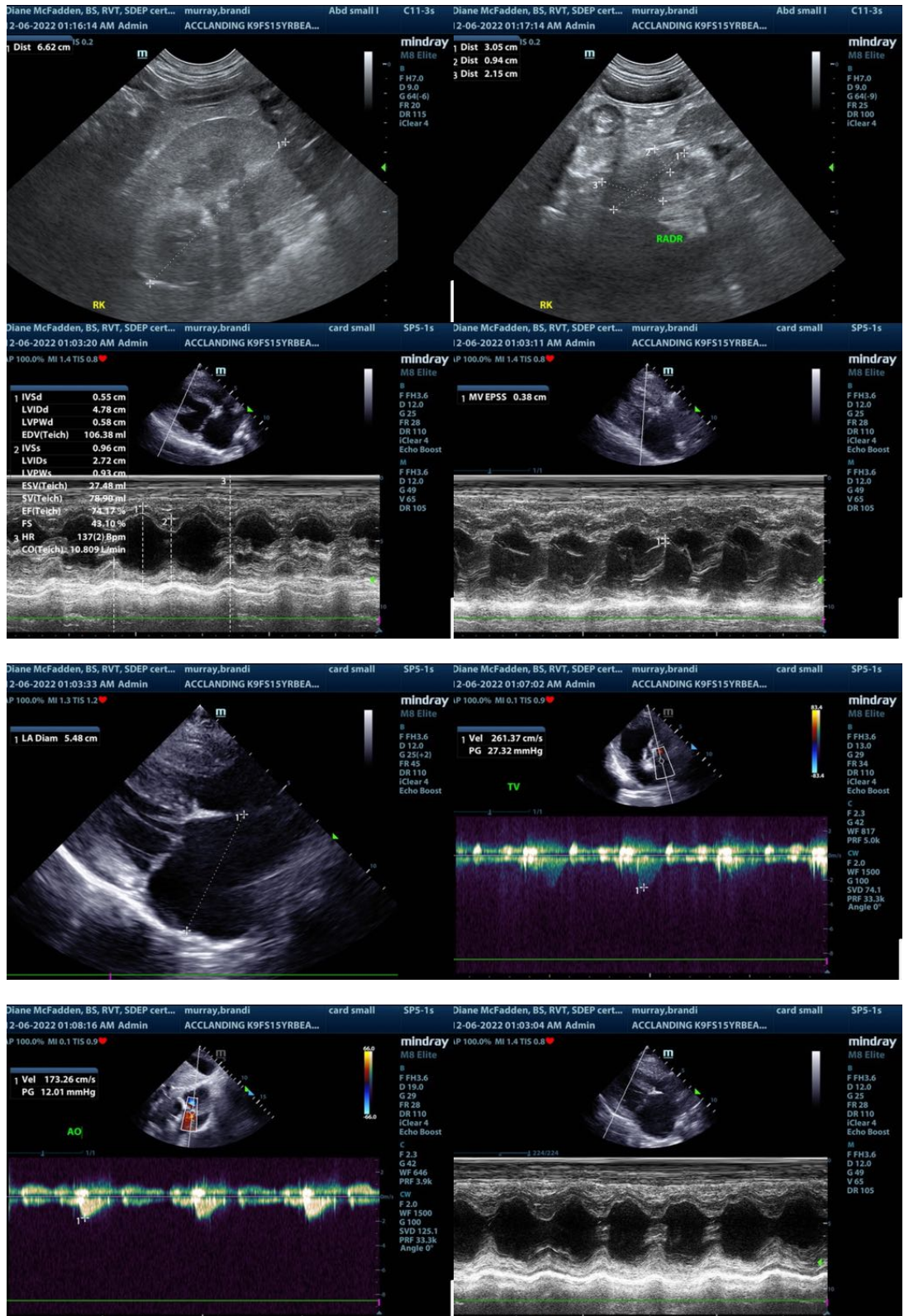
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**PATIENT**

Brandy Murray

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.

**SPECIES**

Canine

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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Beagle

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

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