

**PATIENT PRESENTING CLINICAL SIGNS**

**Bohdi Landsay** History: Hx of seizures. Infrequent. Not on medication Grade 4/6 heart murmur with PMI on left side 2cm round SQ hemangiosarcoma on right ventro-lateral thorax 5mm raised bleeding hemangiosarcoma in left inguinal region Present 7/22/22 weak, QAR, falling over

**SPECIES**

Canine

Abnormal PE/Chem/CBC/UA Results: June 2022 - unremarkable cbc and Chem 7/22/22 - pcv 35%, ts 6.0 Heart Rate and Respiratory Rates 140/30

**BREED**

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN**

Tibetan Spaniel

**SEX**

Neutered Male

**AGE**

15 Years

**WEIGHT**

14.4 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	<1.3	28-40	40-100	<0.6
PATIENT	5.92	2.5	1.0	1.37	53	86	0.18
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	194	--	.74	--	3.26	2.43	--

**INTERPRETED BY**

Eric Lindquist, DMV, DABVP, Cert. IVUSS

**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 vegetative thickening consistent with endocardiosis. Doppler indicated measurable 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. Minor **tricuspid** insufficiency was noted. 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.

**IMAGING PERFORMED BY**

Sara Hansen

**HOSPITAL NAME**

Banfield South Eugene

**REFERRING VET**

Dr. Garretson

**DATE**

7/29/22

**Invoice**

16600



**PATIENT** *Urinary System*

Bohdi Landsay

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.

**SPECIES**

Canine

The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. The left kidney measured 4.2 cm. The right kidney measured 4.28 cm.

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*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 2.38 cm x 1.16 cm at the cranial pole and 0.99 cm at the caudal pole. The left adrenal gland measured 2.05 cm x 0.55 cm at the caudal pole and 0.58 cm at the cranial pole.

**AGE**

15 Years

*Spleen*

**WEIGHT**

14.4 Pounds

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 minor 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*

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There was some residual chyme and gas was noted in the stomach, yet not pathological. This is consistent with end post prandial presentation. Transit of chyme into the small intestine was normal. Curvilinear patterns were maintained throughout the GI tract. No evidence of pathology. 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.

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*Pancreas*

**Invoice**

16600



**PATIENT**

Bohdi Landsay

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.

**SPECIES**

Canine

**ULTRASONOGRAPHIC FINDINGS**

- Structurally unremarkable abdomen- no evidence of pathology
- Stable, compensated stage B-1 valvular disease- no evidence of volume overload

**BREED**

Tibetan Spaniel

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Blood pressure measurements warranted. CT with contrast of the skull is recommended in this patient to assess for primary disease. If systolic blood pressure is >160, then treatment for hypertension is indicated. Given the history of hemangiosarcoma, CNS metastasis is a strong potential. Holter monitor would be ideal to assess for paroxysmal arrhythmia that may be playing a role in the syncopal episodes.

**SEX**

Neutered Male

The heart is stable without clinical disease. No overt contraindication for anesthesia of brief to moderate duration. I suggest Torbutrol premed, Propofol induction, Isoflor maintenance or similar protocol if anesthesia is desired. Blood pressure recommended if not already performed and target white coat negative systolic pressure of < 160 mmHg. If higher than this ACE-inhibitor is suggested to reach this level. Recheck echocardiogram is recommended in 6 months, earlier if murmur grade increases or clinical signs initiate.

**AGE**

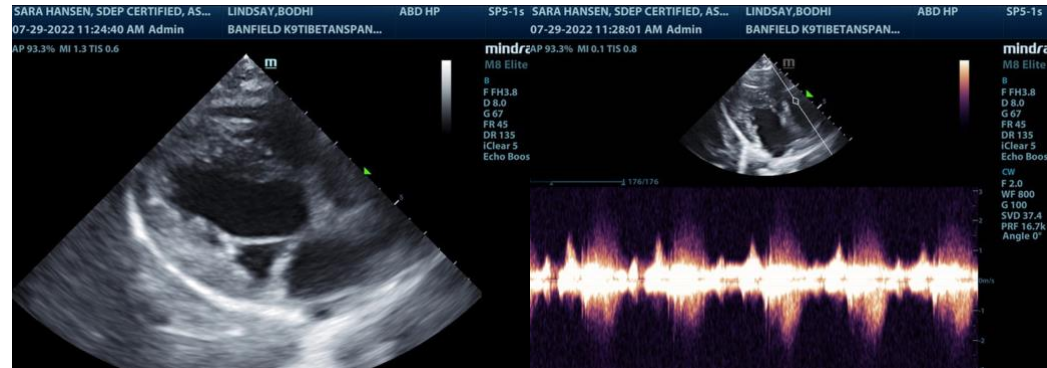
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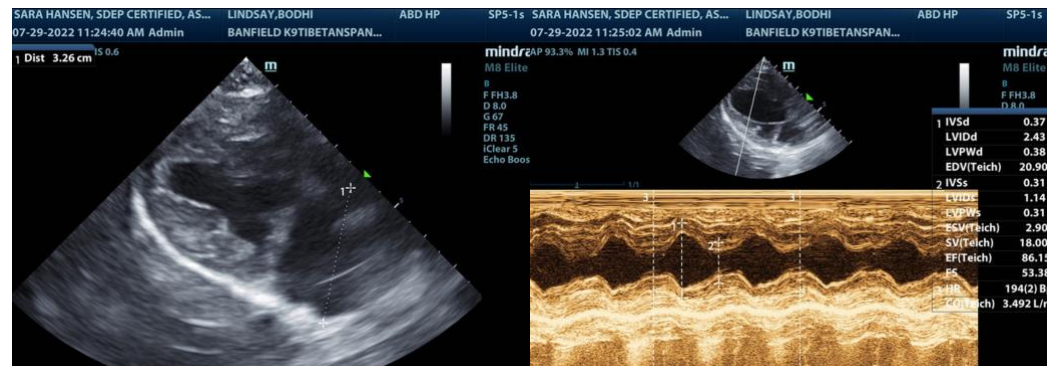


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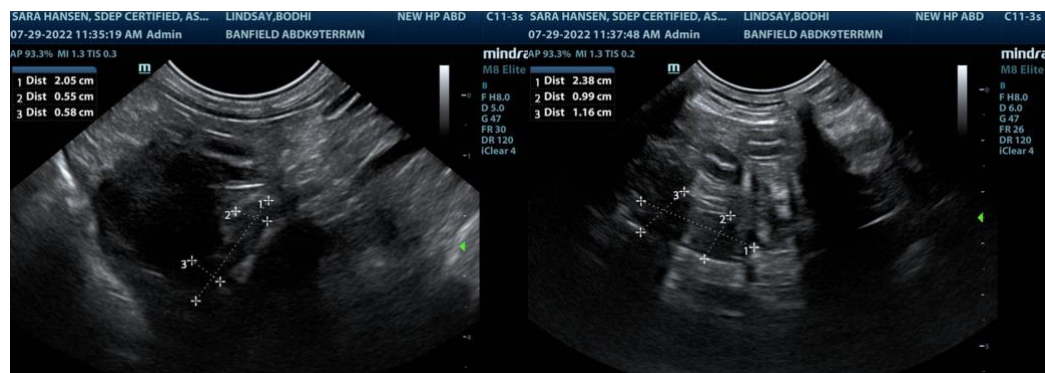
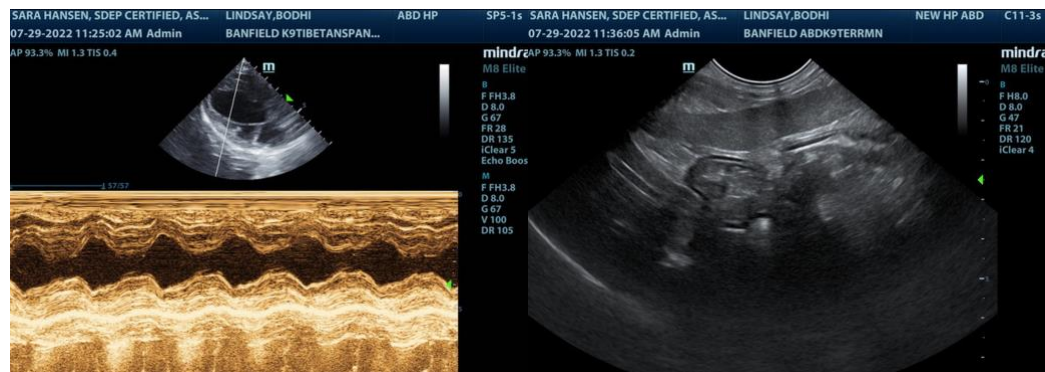
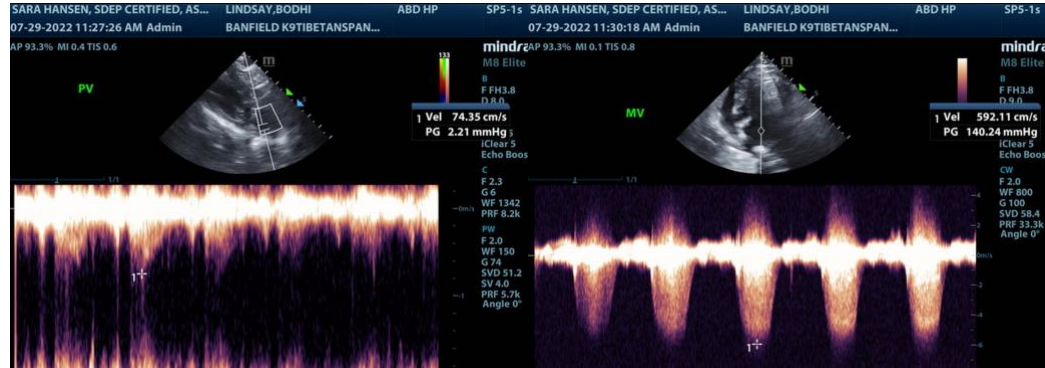
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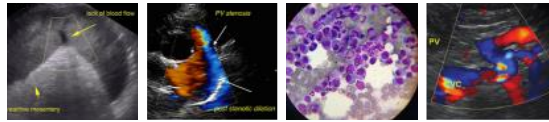
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The information and recommendations provided are based on the images presented by the



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**referring veterinarian. 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.

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