



PATIENT PRESENTING CLINICAL SIGNS

Harley Sifford

History: Patient presented for fever (103) and panting.
 Abnormal PE/Chem/CBC/UA Results: Routine Lab work CBC/CHM was normal Radiographs:
 Ordering DVM suspected enlarged heart and on the abdomen suspect a mass affect in the cranial abdomen.

SPECIES

Canine

BREED

German Shepherd

SEX

Spayed Female

AGE

9 years

WEIGHT

87.8

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. Trivial **mitral** valve insufficiency was noted on color flow Doppler. 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. **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.

INTERPRETED BY

Eric Lindquist, DMV
 DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Gotfredson

HOSPITAL NAME

Red Hills VH

REFERRING VET

Dr. Meyers

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CANINE	MR	TR	LA/AO	LA/AO	FS	EF	EPSS
CARDIAC PARAMETERS	VMAX (m/s)	VMAX (m/s)	(Boon method)	(Heart Base; Swe)	(%)	(%)	(cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT	NM	NM	1.3	1.2	35		0.1
CANINE	HR	AV	PV	BODY WEIGHT	LA	LVIDd	LVIDs
CARDIAC PARAMETERS	(BPM)	VMAX (m/s)	MAX (m/s)		2D short axis Base view (cm)	Avg; 2D and m-mode short axis (cm)	Avg; 2D and m-mode short axis (cm)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6				
PATIENT	80		0.6	87.8 lbs	3.06	2.8	



PATIENT **ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

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Urinary System

SPECIES

Canine

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.

BREED

German Shepherd

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 7.0 cm.

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Adrenal Glands

The left **adrenal gland** was 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 left adrenal gland measured 0.4 cm. The right adrenal gland was not visualized.

WEIGHT

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Spleen

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The **spleen** was uniformly enlarged with relatively uniform parenchyma without evidence of masses. The capsule was mildly swollen. This is most consistent with hypersplenism and reactive hyperplasia deriving from splenic white or red pulp. However, early infiltrative disease, such as lymphoma or mast cell neoplasia can, at times, present in this manner. True hypersplenism from an internal medicine standpoint causes sequestering of thrombocytes resulting in thrombocytopenia and anemia. Clinical manifestation of this phenomenon should be considered. US-guided FNA would be best in order to ensure only reactive hyperplasia is present. If clinical signs fit with potential neoplasia or mast cell disease, then Benadryl injection (1 mg/pound IM) 15 minutes prior to FNA would be recommended.

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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. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.

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Gastrointestinal

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The midabdomen revealed an infiltrative, irregular intestinal mass with regional inflammation and peritonitis. The intestinal mass measured approximately 5.0 cm with loss of curvilinear detail. This may be non-neoplastic. Intestinal wall thickness measured up to 2.0 cm.



PATIENT

Pancreas

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Inflammation obscured portions of the pancreas. There was no overt evidence of metastatic disease.

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ULTRASONOGRAPHIC FINDINGS

Normal echocardiogram with trivial mitral insufficiency.

BREED

German Shepherd

Intestinal mass with secondary peritonitis. Does not appear surgically resectable as the mass extends into the regional omentum.

SEX

Spayed Female

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

I recommend ultrasound-guided FNA and immediate chemotherapeutic intervention. Three view chest radiographs are recommended to assess for metastatic disease. Intestinal lymphoma or similar is suspected. There is a minor potential for non-neoplastic granulomatous disease.

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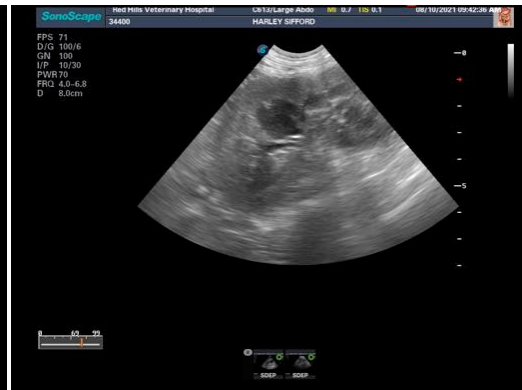
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PATIENT

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

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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.

BREED

Germand Shepherd

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