



PATIENT

Kali Keeler

SPECIES

Canine

BREED

German Shepherd

SEX

FS

AGE

9 years

WEIGHT

69.2 lbs.

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

IMAGING PERFORMED BY

Sara Hansen

PRESENTING CLINICAL SIGNS

III/VI Heart Murmur - Bloating abdomen, excessive panting, lethargic, diarrhea, cannot stand/sit for a long period of time - Chronic skin issues (multiple, small, non-healing lesions have been removed)
Abnormal PE/Chem/CBC/UA Results: - FAST Scan at EVH on 10/1 showed possible splenic mass
Blood Pressure Measurements 133/70 (97) Current Medications Levothyroxine 0.7 mg BID; Medrol 5 mg/day; Capromorelin Entyce Canine Solu - 3.0 ml once per day; Furosemide (Lasix) 3mg/kg; Pimobendan -15.7 mg SID; Cerenia 60mg 1 SID; Gabapentin 300mg every 8-12 hrs

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

| 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 | <1.3 | 28-40 | 40-100 | <0.6 |
| PATIENT | | | | 1.38 | 20 | 46 | 0.47 |
| CANINE | HR | AV | PV | BODY WEIGHT | LA | LVIDd | LVIDs |
| CARDIAC PARAMETERS | (BPM) | VMAX (m/s) | MAX (m/s) | (kg) | 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 | NM | 1.1 | 0.8 | | 4.9 | 5.0 | |

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 2 separate methods of LA evaluation. The cranial and caudal **mitral** valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. The **left ventricle** presented normal thicknesses with maintained linear contour. Mild subjective increased left ventricle volume was present. The **myocardium** presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. **Contractility** of the ventricular walls was mildly subnormal as evidenced by the fractional shortening measurement above. 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

HOSPITAL NAME
Balanced Veterinary
Care

REFERRING VET

Dr. Teri Sue Wright

INVOICE

15056

DATE

10/4/22



PATIENT

Kali Keeler

SPECIES

Canine

BREED

German Shepherd

SEX

FS

AGE

9 years

WEIGHT

69.2 lbs.

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

**IMAGING
PERFORMED BY**

Sara Hansen

HOSPITAL NAME

Balanced Veterinary
Care

REFERRING VET

Dr. Teri Sue Wright

INVOICE

15056

DATE

10/4/22

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.

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

The area of the aortic trifurcation was free of pathology.

Normal margination was present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Subjective right kidney nonobstructive medullary mineral was noted. The left kidney measured 8.6 cm in length. Potential for mild subnormal right kidney size compared to the left was noted. The right kidney measured 6.3 cm in length.

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 2.7 cm length x 0.48 cm width at the caudal pole. The right adrenal gland was not definitively visualized.

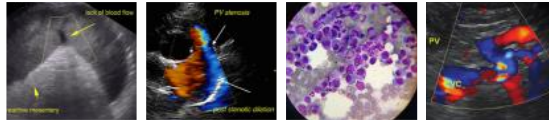
Spleen

Generalized mild splenic parenchyma heterogeneity was present with no masses or nodules. Multifocal, well-defined, symmetrical, nondisruptive, hyperechoic nodules were present primarily throughout the medial parenchyma adjacent to the hilus, consistent with benign myelolipomas. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory or neoplastic changes were not noted. The echogenic nodules tend to trend benign and are most consistent with benign hyperplasia or myelolipomas.

Liver/ Gallbladder

The liver exhibited marked generalized enlargement with the ventral liver extending caudally past the level of the gastric axis. Multiple, variably sized to expansive, mixed echogenic, hepatic masses were noted diffusely throughout the hepatic parenchyma. Some of the masses exhibited potential for mineralization, along with associated distortion of the hepatic capsule. An example of a hepatic mass measured 10.0-11.0 cm in diameter occupying the left liver.

The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.



PATIENT

Gastrointestinal

Kali Keeler

The stomach was overtly normal exhibiting intact and sonographically unremarkable wall layering. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material.

SPECIES

Canine

The small intestine was overtly normal exhibiting intact and sonographically unremarkable wall layering. The lumen of the small intestine was empty with no signs of ileus, obstruction, or foreign material.

BREED

German Shepherd

The colon was overtly normal exhibiting intact and sonographically unremarkable wall layering.

SEX

FS

Pancreas

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

AGE

9 years

Free Abdomen

Regional perihepatic hyperechoic mesentery was present with scant perihepatic free fluid. Focal to possible intermittent hypoechoic to swollen cranial mesenteric lymphadenopathy was present. An example of a lymph node measured 2.8 cm in diameter.

WEIGHT

69.2 lbs.

ULTRASONOGRAPHIC FINDINGS

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

- Normal echocardiogram with LV hypocontractility - systemic disease, metabolic disease i.e., hypothyroidism, patient / age-related variant, or less likely athletic state possible, DCM criteria was not met
- Marked hepatomegaly exhibiting multifocal variably sized to expansive mixed echogenic masses - consistent with multicentric to diffuse hepatic neoplastic criteria
- Perihepatic hyperechoic mesentery and scant free fluid
- Age-related spleen with probable myelolipomas
- Mild chronic renal changes with subjective right kidney medullary mineral

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

Balanced Veterinary
Care

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Assuming normal clotting status, screening FNA mass cytology for further assessment with potential for oncology consult could be considered. Hepatocutaneous syndrome, potentially severe, may be an alternative consideration in this patient, given history of chronic skin issues / lesions.

REFERRING VET

Dr. Teri Sue Wright

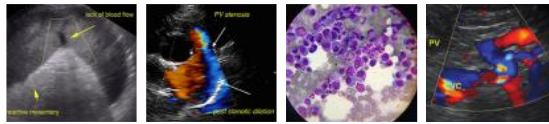
Unfortunately, the extent of hepatic pathology precludes surgical options. An unfavorable prognosis is unfortunately indicated.

INVOICE

15056

DATE

10/4/22



PATIENT

Kali Keeler

SPECIES

Canine

BREED

German Shepherd

SEX

FS

AGE

9 years

WEIGHT

69.2 lbs.

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

Balanced Veterinary
Care

REFERRING VET

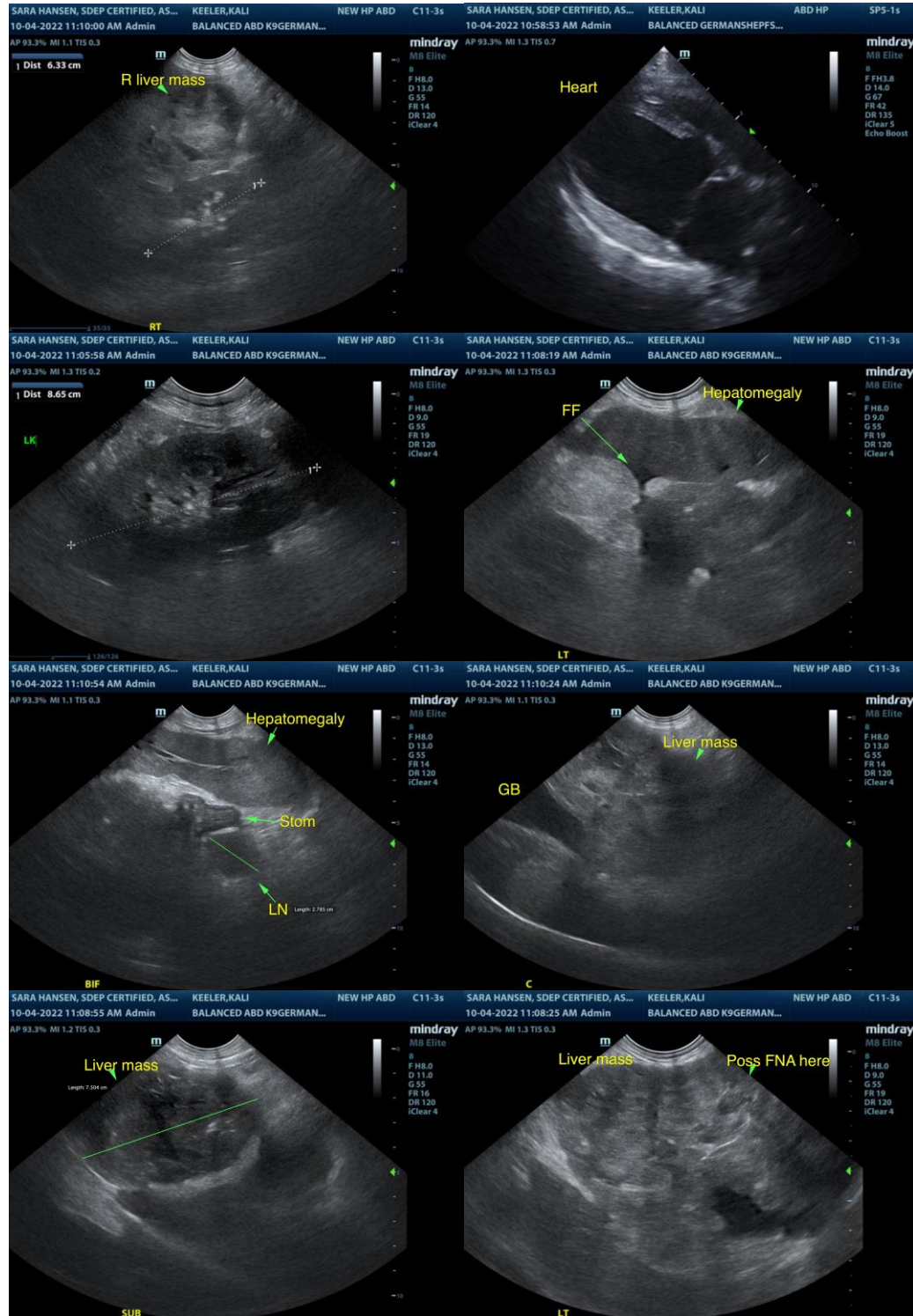
Dr. Teri Sue Wright

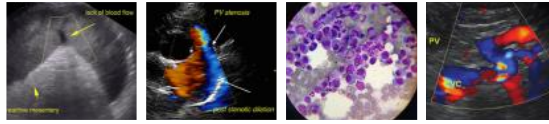
INVOICE

15056

DATE

10/4/22





PATIENT

Kali Keeler

SPECIES

Canine

BREED

German Shepherd

SEX

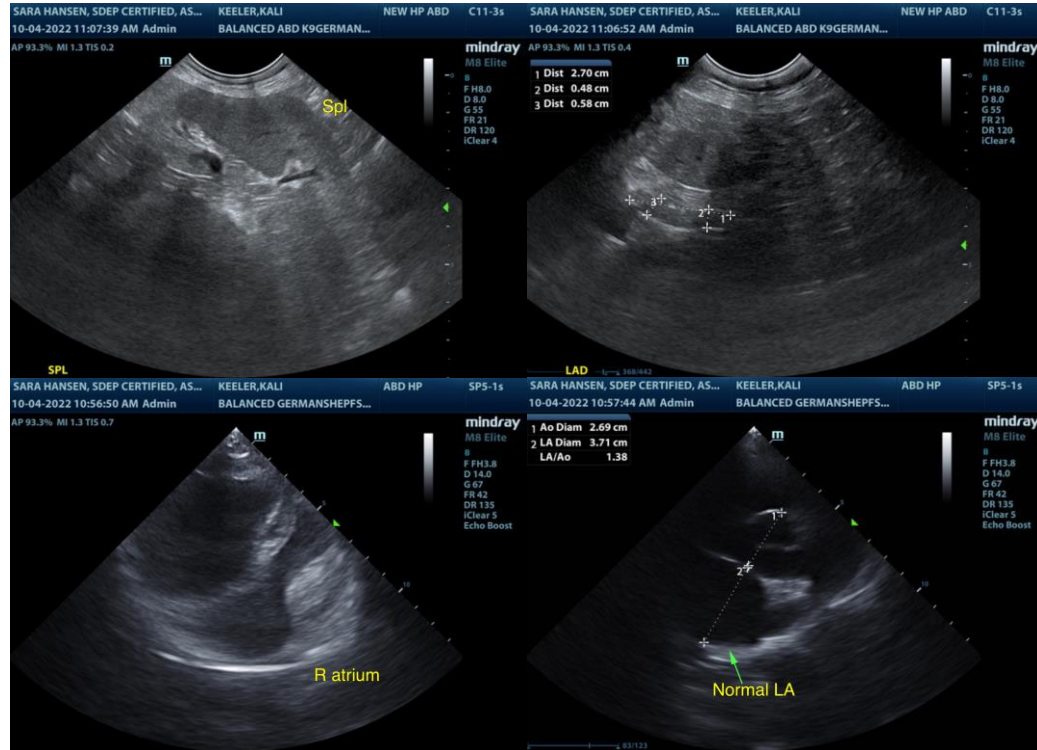
FS

AGE

9 years

WEIGHT

69.2 lbs.



INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

IMAGING PERFORMED BY

Sara Hansen

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.

HOSPITAL NAME
Balanced Veterinary
Care

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com

REFERRING VET

Dr. Teri Sue Wright

INVOICE

15056

DATE

10/4/22