



PATIENT PRESENTING CLINICAL SIGNS

Dunkin Kam
 Distended abdomen, dyspnea, history of Cushing's disease at RDVM.
 Abnormal PE/Chem/CBC/UA Results: HCT 22.8, WBC 21.62, neut. 18.49, monos 1.22, creat. 2.6, BUN 63, cl. 108, ALP 704.

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

BREED

Schnauzer X

SEX

Neutered Male

AGE

11 Years

WEIGHT

28.6 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 | | | NM | 1.1 | 31 | 60 | NM |
| 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 | 100 | 1.09 | 1.75 | | 2.27 | 2.62 | |

INTERPRETED BY

Eric Lindquist, DMV
 DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

Westwood Regional

REFERRING VET

Dr. Murphy

INVOICE

26375

DATE

10/20/21

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. Trivial mitral insufficiency noted, not clinically significant. The **left ventricle** presented thicknesses with linear contour and was not dilated nor restricted. Subjectively the left ventricle and left atrium appeared volume contracted, possibly owing to shock. 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. No evidence of metastatic disease to the heart.

Urinary System

The **urinary bladder** and visible pelvic urethra were unremarkable for the level of repletion presented. The urine, however, did present some mildly echogenic debris consistent with mucous, exfoliated cells from renal or bladder origin, and/or blood clots as these echogenic changes can all present similarly. This is often related to urinary tract infection but may represent simple evidence of exfoliated debris or sterile inflammation. Cystocentesis, urinalysis, +/- culture would be recommended to rule out and define any UTI.



PATIENT

Dunkin Kam

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 5.69 cm. The left kidney measured 4.68 cm with slight mineralization.

SPECIES

Canine

Adrenal Glands

BREED

Schnauzer X

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 2.28 cm x 0.73 cm at the caudal pole and 0.57 cm at the cranial pole. The left adrenal gland measured 1.84 cm x 0.54 cm at the caudal pole and 0.53 cm at the cranial pole.

SEX

Neutered Male

Spleen

An 8.2 cm parenchyma **splenic** mass was noted in the caudal abdomen. The mass appeared to derive from the caudal pole with adjacent hematoma.

AGE

11 Years

Liver

The **liver** was slightly heterogeneous, yet no evidence of cavitated metastatic lesions. The gallbladder was unremarkable.

WEIGHT

28.6 Pounds

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.

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

Pancreas

Minor heterogeneous changes noted around the **pancreas**, yet not overtly pathological.

IMAGING PERFORMED BY

Kelly Vazquez

Free Abdomen

Reactive mesentery noted throughout the mid abdomen.

HOSPITAL NAME

Westwood Regional

ULTRASONOGRAPHIC FINDINGS

- Hemorrhagic splenic mass with hematoma and hemoabdomen – possibly histopathologically benign hematoma, hemangiosarcoma, round cell neoplasia less likely
- Volume contracted and shocky heart

REFERRING VET

Dr. Murphy

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The splenic mass appears fairly isolated and may be histopathologically benign. However, acute hematoma is present. Recommend immediate exploratory surgery in this patient if there is no evidence of metastatic disease. Plasma expansion warranted given the volume contracted heart.

INVOICE

26375

DATE

10/20/21



PATIENT

Dunkin Kam

SPECIES

Canine

BREED

Schnauzer X

SEX

Neutered Male

AGE

11 Years

WEIGHT

28.6 Pounds

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUS

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

Westwood Regional

REFERRING VET

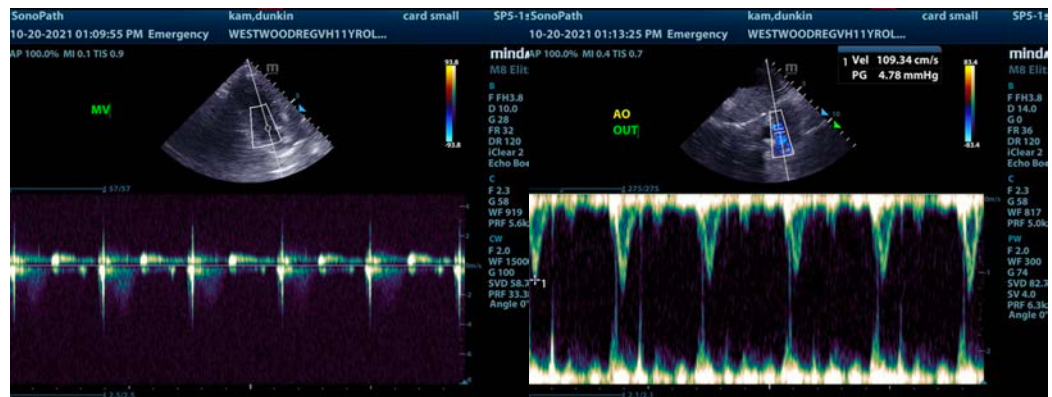
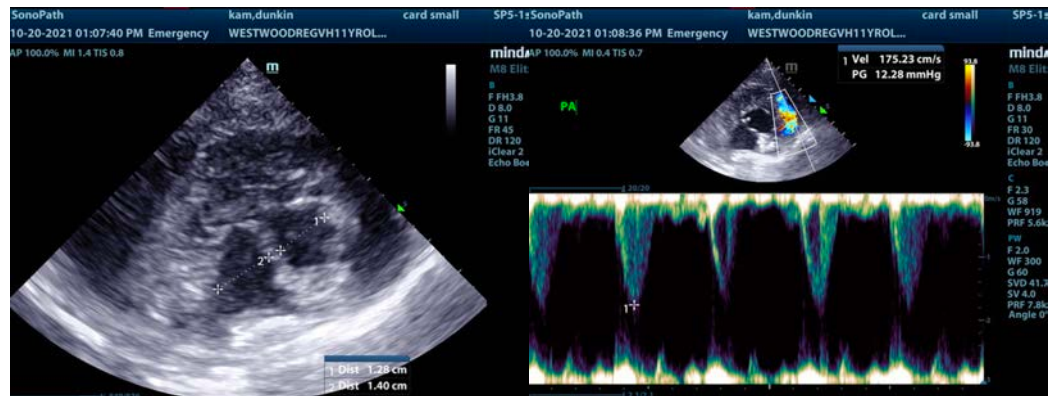
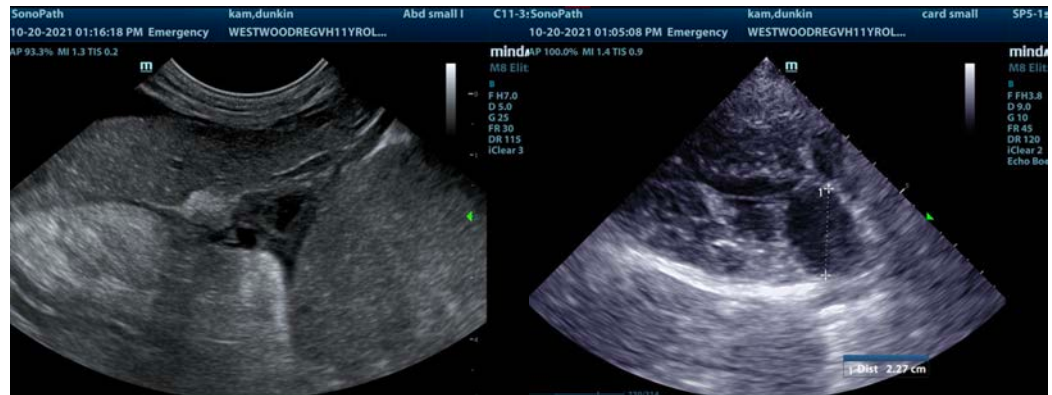
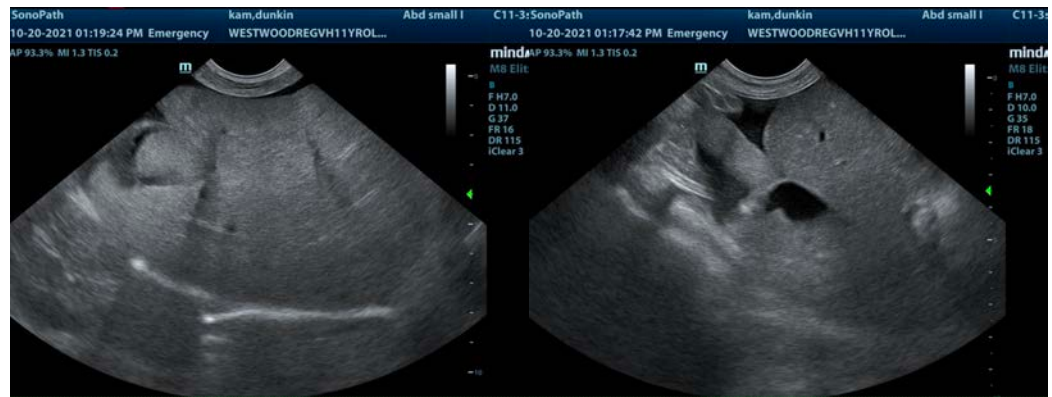
Dr. Murphy

INVOICE

26375

DATE

10/20/21





PATIENT

Dunkin Kam

SPECIES

Canine

BREED

Schnauzer X

SEX

Neutered Male

AGE

11 Years

WEIGHT

28.6 Pounds

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

Westwood Regional

REFERRING VET

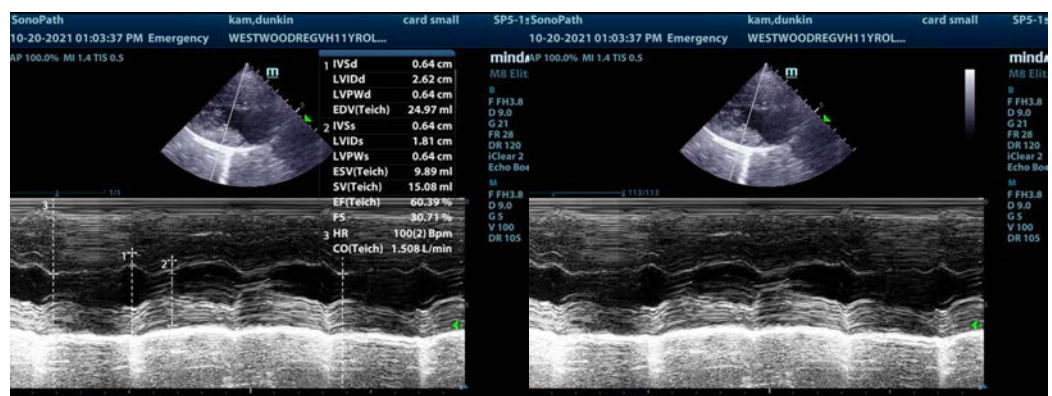
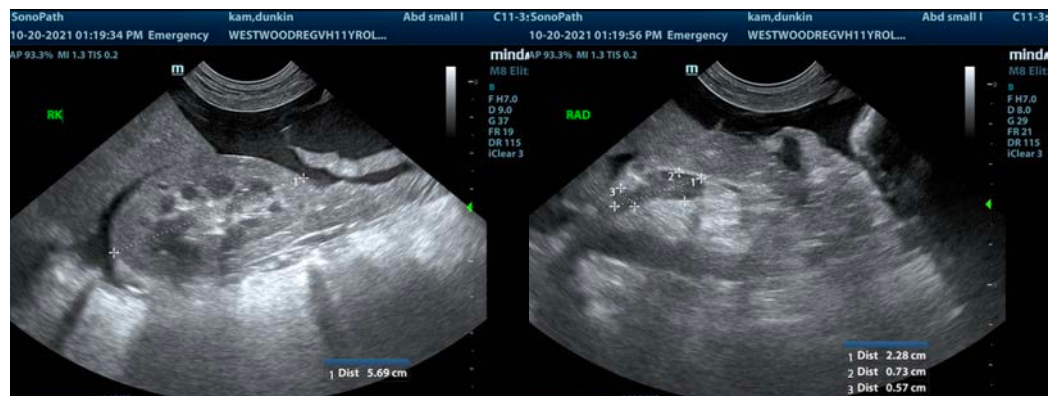
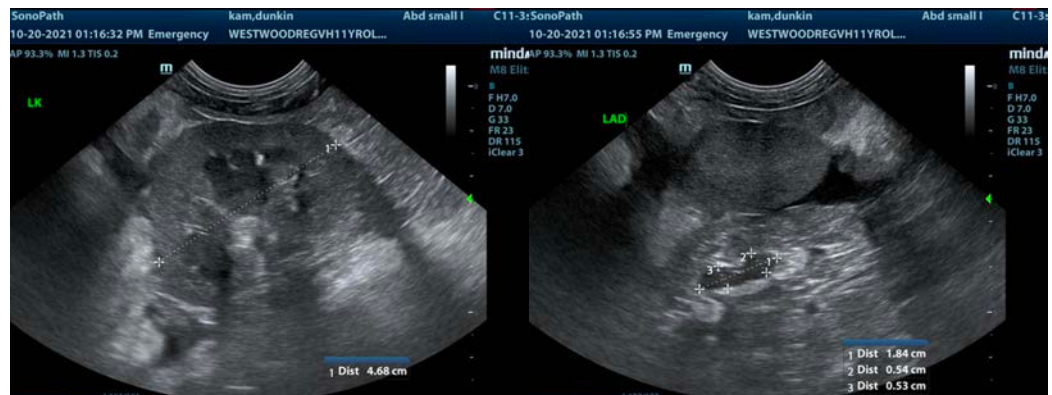
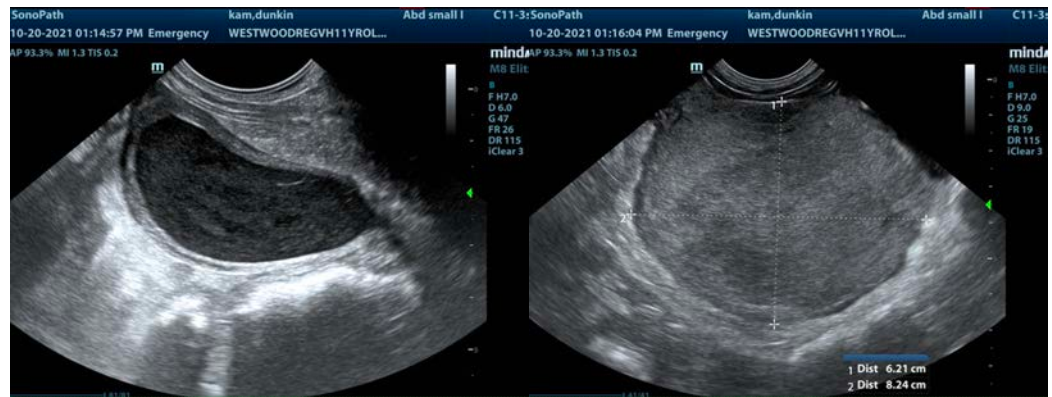
Dr. Murphy

INVOICE

26375

DATE

10/20/21



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



PATIENT

Dunkin Kam

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.

SPECIES

Canine

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

BREED

Schnauzer X

SEX

Neutered Male

AGE

11 Years

WEIGHT

28.6 Pounds

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

**IMAGING
PERFORMED BY**

Kelly Vazquez

HOSPITAL NAME

Westwood Regional

REFERRING VET

Dr. Murphy

INVOICE

26375

DATE

10/20/21