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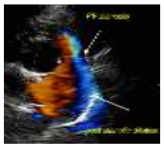
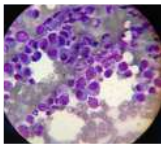
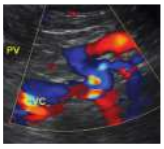
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Sasha Blain

SPECIES
Canine

BREED
German Shepherd

SEX
FS

AGE
11 years

WEIGHT
61 lbs.

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

IMAGING PERFORMED BY
Kim Liedberg

HOSPITAL NAME
SVS Imaging WI

REFERRING VET
Dr. Kreier, Badger Veterinary

INVOICE
12484

DATE
10/29/21

PRESENTING CLINICAL SIGNS

Patient presented with skin lesions. Chest radiographs were taken and identified metastasis in lungs. Abdominal radiographs revealed a cranial abdominal mass. Possible spleen. This dog currently has had seizures or syncope episodes.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

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			1.3	1.3	32.9	64.9	0.32
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	BELOW	BELOW	BELOW	BELOW
PATIENT	101	1.1	1.0		3.7	3.6	

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 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 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 borderline subnormal 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** revealed normal size and content. The area of the right auricle appeared to be thickened with strong suspicion for mildly nonhomogeneous mass lesion, measuring up to 4.0 cm in diameter. **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 subjective normal valve structure, laminar systolic flow, and diameter with pulmonic valve insufficiency noted on color doppler assessment. Moderate **pericardial** or free pleura was present without overt evidence of concurrent free pleural fluid.

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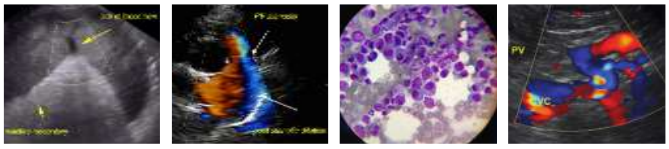

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Urinary System

The urinary bladder, trigone, and cystourethral junction 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 size and margination were 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. The left kidney measured 7.8 cm in length. The right kidney measured 7.6 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 0.63 cm width at the caudal pole and 0.71 cm width at the cranial pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.75 cm width at the caudal pole.

Spleen

The spleen exhibited generalized enlargement with asymmetrical capsule contour owing to areas of variable parenchymal swelling. Generalized nonhomogeneous to indistinctly nodular splenic parenchyma was present.

Liver/ Gallbladder

The liver exhibited generalized enlargement with asymmetrical capsule contour owing to variable lobar swelling. Generalized nonuniform to nodular hepatic parenchyma including areas of indistinct nonhomogeneous nodular mass lesions were preset. An example of a nodular mass lesion in the liver measured 5.5 cm in diameter.

The gallbladder was non-distended in size with mild to moderate, primarily dependent, echogenic gallbladder debris. The cystic and common bile ducts were normal.

Transdiaphragmatic view revealed a mild comet tail lung pattern, which is echogenic sound wave interface with microconsolidations within the caudal lung field. The lung field should not be visualized by sonogram unless pathology is present.

Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction, or foreign material.

Normal visible colon wall layers were present with apparent formed feces in lumen.

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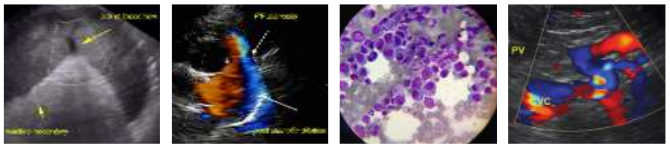

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Pancreas

The parenchyma of the left limb, body, and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease were evident.

Free Abdomen

Scant to minor effusion was noted around the liver. No overt lymphadenopathy was noted.

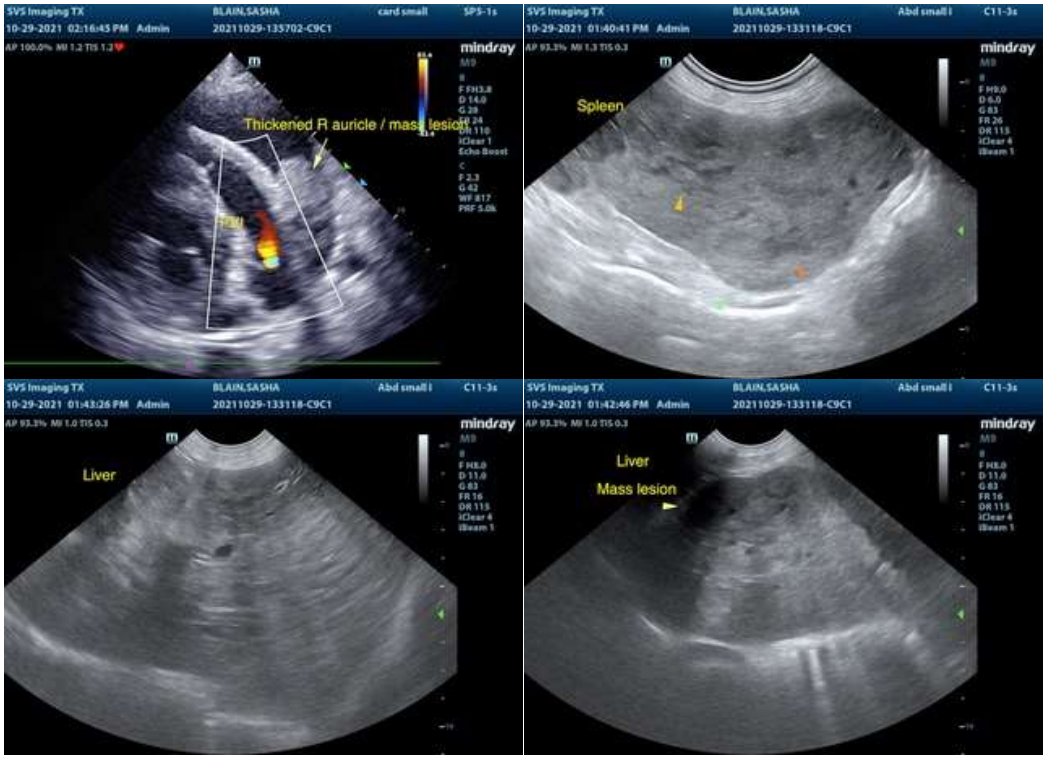
ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Pericardial effusion with thickened right auricle, probable right auricle mass
- Infiltrative neoplastic hepatosplenic pattern
- Mild transdiaphragmatic comet tail artifact - consistent with probable pulmonary metastasis

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Unfortunately, the sonographic abnormalities in this case are consistent with multicentric hepatosplenic neoplasia with evidence of cardiac metastasis, secondary noncardiogenic pericardial effusion, and likely pulmonary metastasis given the presence of the transdiaphragmatic comet tail artifact and in conjunction with the radiographic findings. An unfavorable prognosis is indicated.



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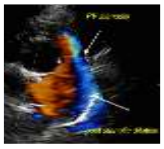
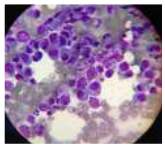
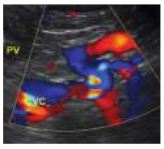

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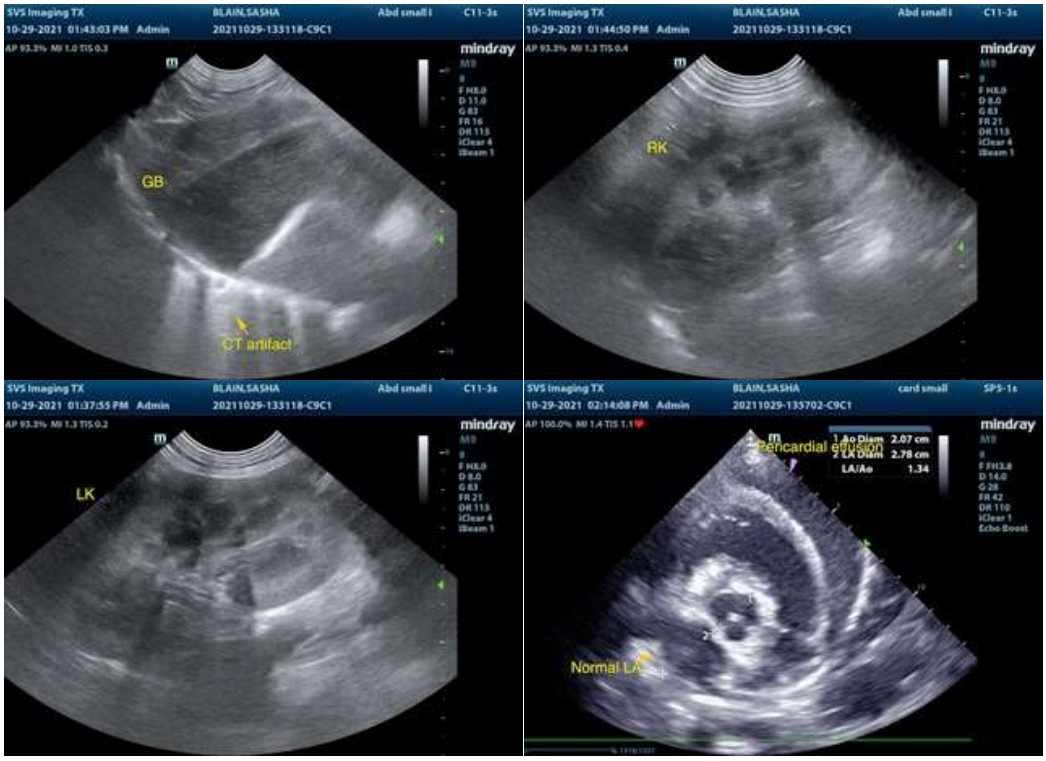

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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