


**PATIENT PRESENTING CLINICAL SIGNS**

**Zeus Scheffer** Pertinent Clinical History: Zeus, a 10-year-old neutered male German Shepherd, was referred to OSU VTH Emergency Service on 6/19/23 for a surgical consult and possible splenectomy. He was presented for the evaluation of lethargy, reduced appetite/thirst, trouble breathing, difficulty moving around and weight loss.

**SPECIES** Blood work showed anemia, thrombocytopenia, mild azotemia, and mild liver value elevation. Presence of abdominal mass and hemoabdomen were identified on point of care ultrasound and x-rays. No metastatic changes were appreciated on the chest rads taken by the rDVM. He not currently on any medications. He is up to date on all vaccines. and is on preventatives. He is currently on Royal Canin German Shepherd food.

**Canine**

**BREED** Leading differential/diagnosis: Hemangiosarcoma vs hemangioma vs hematoma vs metastasis

German Shepherd

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**
**SEX Urinary System**

**Neutered Male** Urinary bladder is adequately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

**AGE**

**10 years** Left kidney is normal in size (8.34 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

**WEIGHT**

**44.8 kg** Right kidney is normal in size (9.18 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

The area of the prostate is examined without evident prostatic pathology.

**INTERPRETED BY**
**Adrenal Glands**

Beth Johnson, DVM  
DACVIM

Left adrenal gland is normal in size (0.55 cm at cranial pole / 0.52 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

Right adrenal gland is normal in size (0.65 cm at cranial pole / 0.55 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

**IMAGING PERFORMED BY**
**Spleen**

Kacie Edwards

Spleen is diffusely heterogenous and irregularly shaped, with a large 9.00+ cm, expansive cavitated mass obscuring most of the normal architecture.

**HOSPITAL NAME**
**Liver**

Boren Vet Med  
Teaching Hospital  
OK State University

Liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

**REFERRING VET**

Dr. Pillai

Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

**INVOICE**
**Gastrointestinal**

13424

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

**DATE**

6.20.23



**PATIENT**

Zeus Scheffer

The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

**SPECIES**

Canine

The visible colon is normal in wall thickness and layering. Contents are consistent with normal formed feces and gas.

**Pancreas**

**BREED**

German Shepherd

The observed pancreas appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

**Free Abdomen**

**SEX**

Neutered Male

A small amount of free fluid is noted adjacent to the splenic mass. There is no apparent lymphadenopathy.

**Other**

There is no evidence of heart base or pericardial pathology noted in these images at this time. If cardiac function evaluation is desired a full echocardiogram is recommended.

**AGE**

10 years

**ULTRASONOGRAPHIC FINDINGS**

**Primary Findings**

**WEIGHT**

44.8 kg

- An expansive heterogenous, cavitated splenic mass is most-concerning for infiltrative neoplasia, such as sarcoma, especially given the concurrent free fluid. Having said that, benign hematoma, extramedullary hematopoiesis, etc. can mimic neoplasia and cannot be differentiated without tissue sampling.

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**Secondary Findings**

- Mild gallbladder debris – Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

**IMAGING PERFORMED BY**

Kacie Edwards

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**HOSPITAL NAME**

Boren Vet Med  
Teaching Hospital  
OK State University

If not recently evaluated, three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.

**REFERRING VET**

Dr. Pillai

Given this patient's reportedly already diagnosed hemoabdomen, an exploratory laparotomy is recommended for planned splenectomy/excisional biopsy of the mass.

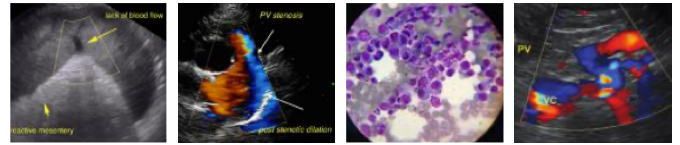
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**PATIENT**

Zeus Scheffer

**SPECIES**

Canine

**BREED**

German Shepherd



**SEX**

Neutered Male

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.

**AGE**

10 years

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.

**Beth Johnson, DVM DACVIM**  
info@SonoPath.com

**WEIGHT**

44.8 kg

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING  
PERFORMED BY**

Kacie Edwards

**HOSPITAL NAME**

Boren Vet Med  
Teaching Hospital  
OK State University

**REFERRING VET**

Dr. Pillai

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