



**PATIENT PRESENTING CLINICAL SIGNS**

**PATIENT** George Oakes Had surgery to remove firm irregular shaped cutaneous lump located mid ventral abdomen was diagnosed on histopath as extraskeletal osteosarcoma; screening for staging disease - both u/s and x-rays are submitted

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Neutered Male

Abnormal PE/Chem/CBC/UA Results: CBC/Chem - NSF x-rays - pending Histo: The dermal to subcutaneous mass is a sarcoma. Possible considerations include soft tissue sarcoma with non-neoplastic osteoblastic proliferation and extraskeletal osteosarcoma at site where bone-forming cells would not normally be expected. Cartilaginous and/or osseous metaplasia occurs in some malignant peripheral nerve sheath tumors and soft tissue sarcomas and could lead to a misdiagnosis of extraskeletal osteosarcoma. In this particular case, the osteogenic cell population shows malignant features. Therefore, extraskeletal osteosarcoma is favored.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**AGE**

9.5 Years

**WEIGHT**

5.39 kg

**Urinary System**

Urinary bladder is adequately distended. It has a normal uniform wall thickness. Contents include primarily anechoic fluid with occasional echogenic non-shadowing debris, most consistent with incidental suspended lipid in a cat, possibly combined with exfoliated cells, mucous and/or small blood clots. Both sterile inflammation as well as urinary tract infection can also present with echogenic debris. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

The right kidney is normal in size (3.87 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.

**IMAGING PERFORMED BY**

Dr. Trudeau

The left kidney is normal in size (3.79 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.

**Adrenal Glands**

**HOSPITAL NAME**

Petworks VH

The right adrenal gland is unable to be well visualized in these images.

The left adrenal gland is normal in size (0.27 cm at the cranial pole and 0.33 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**REFERRING VET**

Dr. Trudeau

**Spleen**

**INVOICE**

44152

The **spleen** was mildly enlarged with uniform, but subtly micronodular parenchyma, and undulating capsular contour. This is consistent with reactive spleen owing to immune stimulus or early infiltrative disease such as mast cell disease or lymphoma. 25-gauge FNA would be ideal if weight loss is an issue to differentiate early round cell neoplasia versus splenitis or reactive spleen all of which can present in this manner.

**DATE**

7/19/23

**Liver**

The 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



<b>PATIENT</b>	homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.
George Oakes	
<b>SPECIES</b>	The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. Tortuous but not pathologically distended cystic and common bile duct are noted, which is often a normal anatomic variant in a cat. This finding should be interpreted in combination with clinical signs and/or laboratory changes that suggest otherwise.
Feline	
<b>BREED</b>	<b><i>Gastrointestinal</i></b>
DSH	The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.
<b>SEX</b>	The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). 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.
Neutered Male	
<b>AGE</b>	The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.
9.5 Years	
<b>WEIGHT</b>	<b><i>Pancreas</i></b>
5.39 kg	The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.
<b>INTERPRETED BY</b>	<b><i>Free Abdomen</i></b>
Beth Johnson, DVM DACVIM	There is no evidence of free peritoneal effusion noted in these images.
<b>IMAGING PERFORMED BY</b>	The mesenteric lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.
Dr. Trudeau	
<b>HOSPITAL NAME</b>	<b>ULTRASONOGRAPHIC FINDINGS</b>
Petworks VH	<ul style="list-style-type: none"> <li>Scalloped spleen – can be associated with benign or malignant infiltrative disease. Common causes include a reactive spleen secondary to immune stimulus or early infiltrative round cell neoplasia such as lymphoma or mast cell tumor.</li> </ul>
<b>REFERRING VET</b>	<ul style="list-style-type: none"> <li>Reactive mesenteric lymph nodes – infiltrative neoplastic disease cannot be ruled out but is considered less likely.</li> </ul>
Dr. Trudeau	<ul style="list-style-type: none"> <li>Urinary bladder debris</li> </ul>
<b>INVOICE</b>	<b><u>INTERPRETATION OF THE FINDINGS &amp; FURTHER RECOMMENDATIONS</u></b>
44152	There is no definitive ultrasonographically visible evidence of intraabdominal metastatic disease in these images. However, given the slightly atypical appearance of the spleen as described above, a fine needle aspirate of the spleen could be considered if patient's coagulation status is appropriate.
<b>DATE</b>	Additionally, consultation with a veterinary oncologist is recommended.
7/19/23	



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**IMAGING PERFORMED BY**

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**HOSPITAL NAME**

Petworks VH

**REFERRING VET**

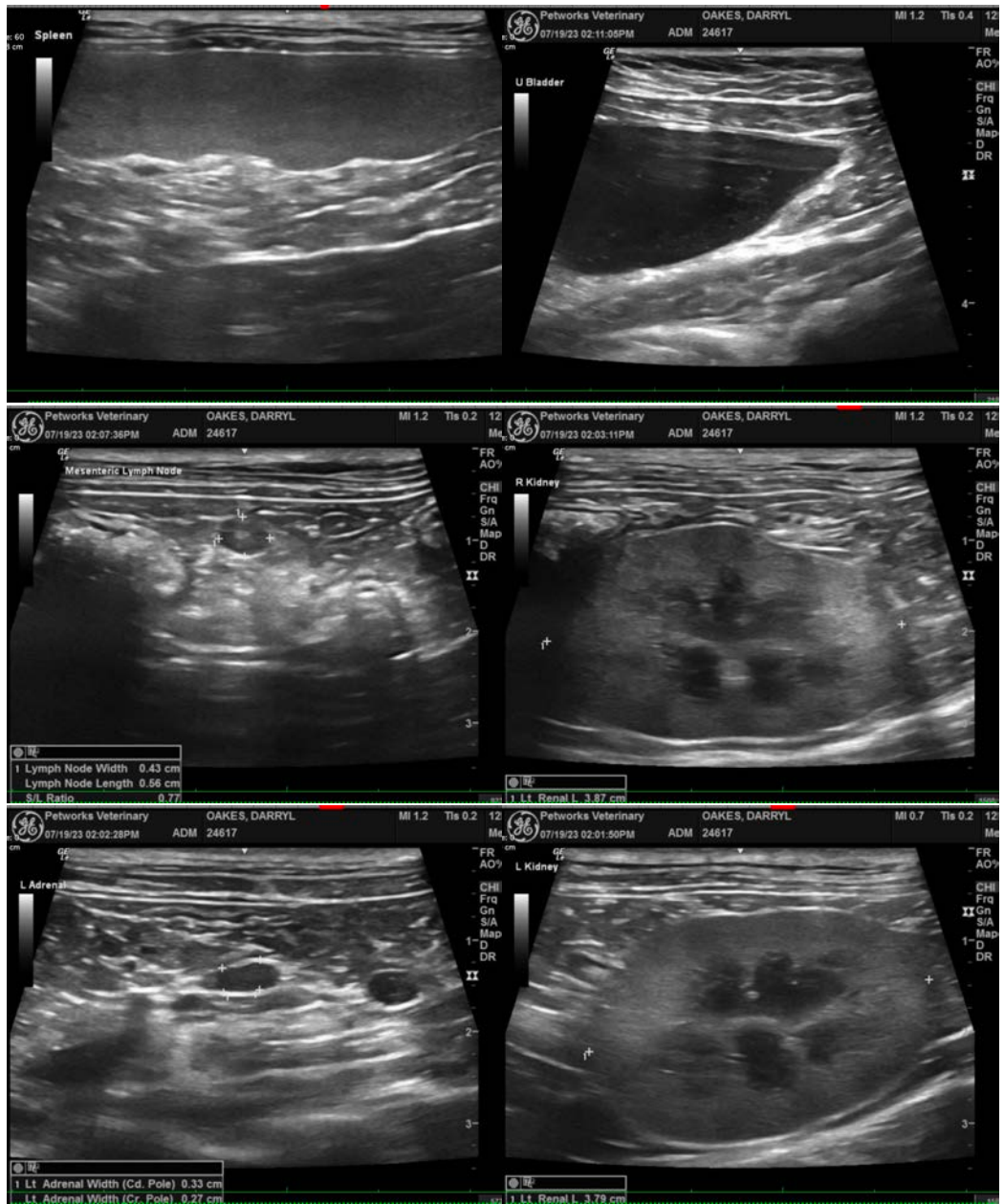
Dr. Trudeau

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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.

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