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Clinical Sonography & Telecytology
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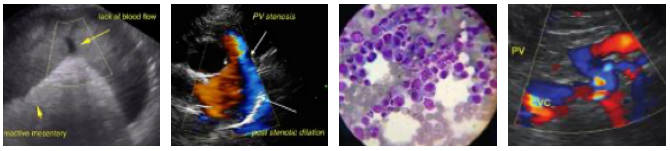

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1-800-838-4268 info@sonopath.com

PATIENT
Dakota Kline

SPECIES
Canine

BREED
West Highland White Terrier

SEX
Female, spayed

AGE
13 Yrs.

WEIGHT
11.6 kg.

INTERPRETED BY
Andrea Nicastro, DVM, Diplomate ACVIM (*Small Animal Internal Medicine*)

IMAGING PERFORMED BY
Tom McNeill

HOSPITAL NAME
SVS Imaging CT

REFERRING VET
Dr. Patton

INVOICE
13734

DATE
7/19/22

PRESENTING CLINICAL SIGNS

History: Owners noticed that Dakota was displaying some hind end weakness around the weekend of 5/28. They brought her in to an emergency vet clinic, and it was suspected that Dakota might have cancer, potentially liver cancer. Owners have an appointment scheduled with oncology in August, but Dakota started declining this week and owners did not think she could wait. Dakota has been vomiting all week, especially after eating and cannot keep anything down. Owners think she has been losing weight, she has been lethargic, and her appetite has decreased over the last week as well. She seems painful when walking and her abdomen seems bloated and uncomfortable. She does not want to walk much at all. Dakota had one instance of diarrhea this morning. She is still drinking water okay
Abnormal PE/Chem/CBC/UA Results: Scant to mild amount of free fluid and suspected multiple abdominal masses on AFAST scan. Same of the effusion obtained and confirmed a hemoabdomen. HCT - 18.8 (37.3-61.7) Retic- 364.5 (10.0-110.0) WBC - 21.27 (5.05-16.76) NEU- 14.02 (2.95-11.64) Mono- 2.09 (0.16-1.12) PLT - 42 (148-484) SDMA- 25 (0-14) ALKP- 264 (23-212) TBIL- 1.0 (0.0-0.9)

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder wall is mildly to moderately distended. The wall is slightly thickened (up to 0.22 cm) with a smooth mucosal surface. Scant echogenic debris is suspended within the lumen. No cystic calculi are observed. The region of the trigone and the visible portion of the proximal urethra are normal.

The left kidney is normal size (5.37 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. Severe pyelectasia/hydroureter is present (1.36 cm in the longitudinal plane). There is no evidence of nephroliths or infarcts. The proximal ureter is dilated (up to 0.55 cm in diameter). Within the proximal ureter, a 1.09 x 0.57 cm echogenic structure that is irregular in shape is observed approximately 1-2 cm from the renal pelvis.

The right kidney is normal size (5.77 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. Mild pyelectasia is present (0.23 cm in the transverse plane). There is no evidence of nephroliths, infarcts or hydroureter.

Adrenal Glands

The left adrenal gland is not definitively visualized. In the region of the left adrenal gland, an approximately 8 cm irregular heterogeneous cavitated mass is visualized. Surrounding mesentery is hyperechoic.

The right adrenal gland is enlarged (1.03 cm at cranial pole) (1.94 cm at caudal pole) (4.14 cm in length) with an irregular shape. A 2.19 x 1.94 cm irregular, hyperechoic nodule is observed at the caudal pole. Glandular echogenicity and detail at the cranial pole appear normal. Surrounding vasculature appears normal.

Spleen

The spleen is subjectively enlarged with irregular peripheral contours. Several varying sized cavitated to heterogeneous nodules/masses are observed throughout the organ. Splenic vasculature appears normal with no evidence of thrombosis.

Liver

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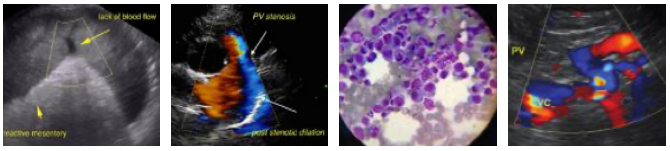

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The liver is normal to slightly prominent in size with normal curvilinear peripheral contours. The parenchyma is hypoechoic relative to the spleen and diffusely mottled in appearance with a few ill-defined hypoechoic and hyperechoic nodules. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion. The gall bladder lumen is moderately distended. The wall is thin and smooth. A moderate amount of aggregated echogenic partially dependent to suspended sludge in a partially stellate pattern is observed within the lumen. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive disease is noted.

Pancreas

The right limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is largely isoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

Free Abdomen

A small amount of free fluid is present. The mesentery throughout the abdomen, particularly in the cranial region, is hyperechoic. The abdominal lymph nodes are normal/not visible.

Other

1-2 hypoechoic nodules are observed within the mesentery in the right cranial quadrant, the largest measuring 1.33 cm in diameter.

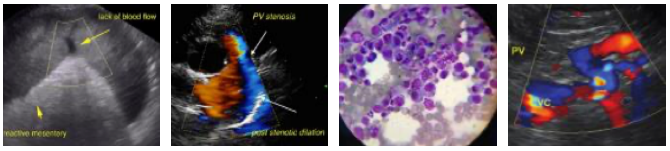
The caudal vena cava is subjectively small in diameter.

ULTRASONOGRAPHIC FINDINGS

Primary Findings:

- The origin of the mass effect in the left mid abdomen is unclear but may be arising from left adrenal gland, mesentery, spleen, liver, other. Neoplasia (i.e., hemangiosarcoma) is suspected.
- The splenic nodule/masses are also concerning for metastatic disease.
- Confirmed hemoabdomen.
- Bilateral, chronic age-related renal changes with left pyelectasia/hydronephrosis/hydroureter. The echogenic structure within the left proximal ureter is thought to represent extension of the mid-abdominal mass.

Secondary Findings:



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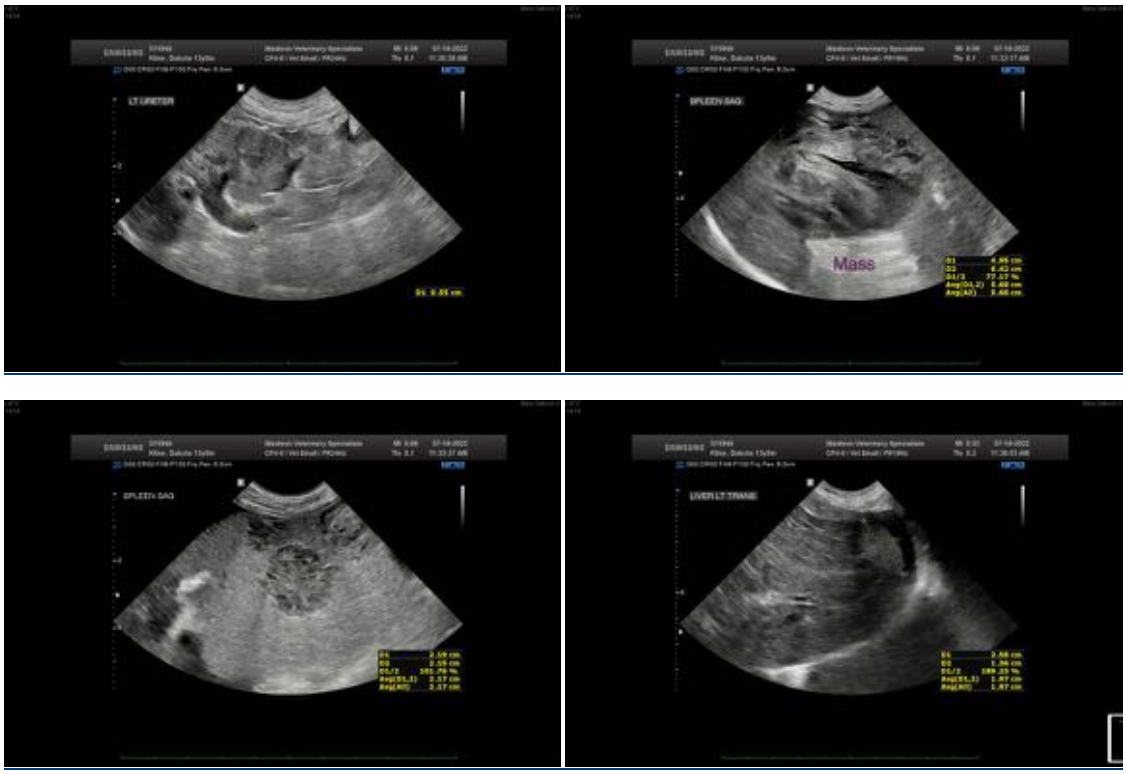
- The right adrenal nodule could be consistent with benign nodular hyperplasia. Alternatively, an emerging tumor cannot be excluded.
- The hepatic parenchymal changes are non-specific and could be consistent with a benign process (i.e., regenerative nodular hyperplasia). Alternatively, metastatic disease or other hepatopathies are possible.
- The gallbladder changes are consistent with a developing mucocele.
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.
- The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Three-view thoracic radiographs are recommended to assess for pulmonary metastases.
- Given the high likelihood of multi-organ neoplasia, palliative/symptomatic care is recommended in lieu of invasive diagnostics/therapeutics, as the prognosis is guarded.



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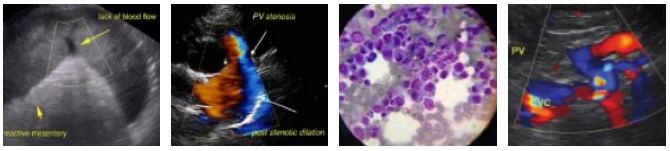

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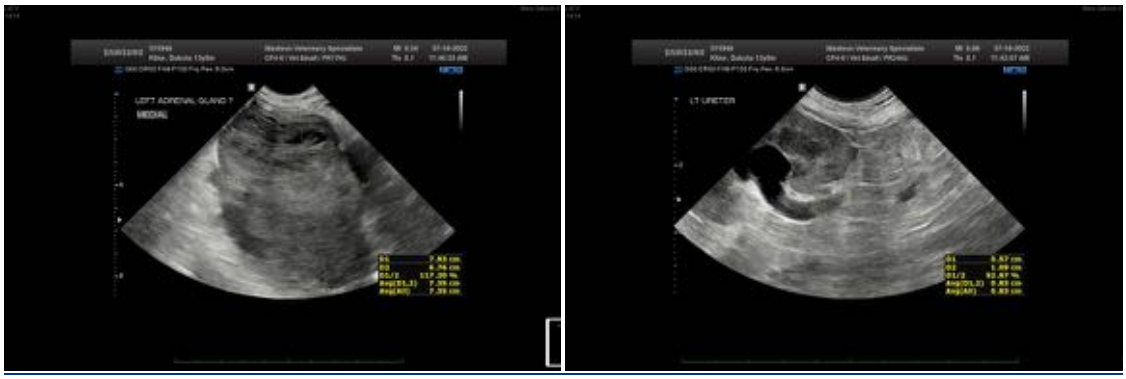

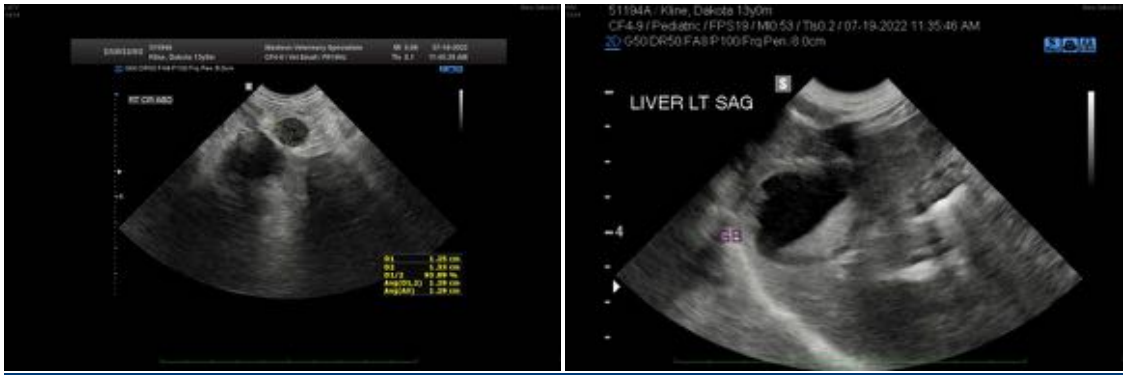

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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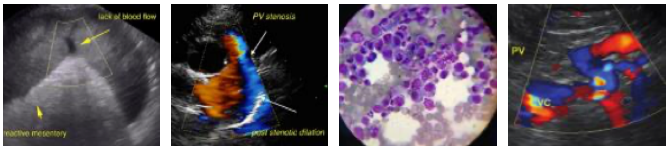

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Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

Andrea Nicastro, DVM, Diplomate ACVIM (*Small Animal Internal Medicine*)

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