



PATIENT PRESENTING CLINICAL SIGNS

Jewels Ozark NEUT 79, EOS 1, Platelets 970, ALT 556, AST 78, BUN 51, Chloride 100, CHOL 463, GGT 22, TP 8.0, B/C ratio 32, PSL LIPA 323

SPECIES Heart murmur, osteoarthritis, luxating patellas; otherwise, asymptomatic

Canine

BREED

Shih Tzu

SEX

Female, spayed

AGE

2/12/2011

WEIGHT

11.5 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

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

HOSPITAL NAME

Flowertown AH

REFERRING VET

Dr. Guffey

INVOICE

14440

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1/17/2023

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with mostly anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

The left kidney is normal size (3.68 cm in length) with a normal shape and smooth peripheral contours. The cortex is mildly thickened and hyperechoic with moderate loss of corticomedullary distinction. A small cortical cyst is seen at the lateral aspect. A few small non-obstructive nephroliths are visualized. Mild pyelectasia is present (0.33 cm in the transverse plane). There is no evidence of infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal size (4.39 cm in length); normal shape and architecture with smooth peripheral margins. The cortex is hyperechoic. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. A few non-obstructive nephroliths are visualized. Moderate pyelectasia is present (0.70 cm in the longitudinal plane). There is no evidence of infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is enlarged (1.46 cm at cranial pole) (1.41 cm at caudal pole) (2.20 cm in length) with a mass effect. The gland is oval in shape and heterogeneous in appearance with complete loss of glandular detail. There is no obvious evidence of vascular invasion.

The right adrenal gland is enlarged (2.20 cm at cranial pole) (0.45 cm at caudal pole) (3.80 cm in length) with a mineralized heterogeneous mass effect at the cranial aspect. The mass effect measures 3.14 x 2.25 cm at the caudal pole. The parenchyma is slightly heterogeneous with some loss of glandular detail. There is no obvious evidence of vascular invasion.

Spleen

The spleen is overall normal in size (1.08 cm in width at the level of the hilus). A 1.03 x 0.77 cm hypoechoic to slightly heterogeneous nodule/mass is observed at the cranial aspect. The lesion causes subtly capsular expansion. In the remainder of the spleen, the margins are curvilinear and the parenchyma is subtly mottled in appearance. Splenic vasculature is normal with no evidence of thrombosis.

Liver

The liver is enlarged with swollen, irregular peripheral contours. On the left side, an approximately 3 cm hypoechoic mass is visualized. The lesion causes slight capsular expansion. Adjacent to the diaphragm, a 2.57 cm hyperechoic to heterogeneous nodule/mass is seen. At the caudal aspect, a 4.54 cm heterogeneous mass is also present. This lesion also causes capsular expansion. The remaining



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parenchyma is heterogeneous in appearance. Vascular and biliary tracts are of normal volume with no evidence of congestion. The portal vein: caudal vena cava ratio is approximately 1:1. The gall bladder lumen is moderately distended. The wall is normal in thickness. A few polypoid like lesions are observed near the gallbladder neck. A small to moderate amount of mostly gravity-dependent echogenic debris 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 base and limbs of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is mildly hypoechoic 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

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

Other

A brief echocardiogram reveals no evidence of pericardial effusion or obvious right atrial/auricular mass.

ULTRASONOGRAPHIC FINDINGS

Primary Findings:

- Multiple hepatic masses. These lesions are concerning for neoplasia (i.e., adenocarcinoma, round cell tumor) with a lower possibility of multifocal inflammatory disease or benign regenerative nodules. The diffuse hepatic parenchymal changes are non-specific and could be secondary to an inflammatory hepatopathy, regenerative nodular hyperplasia, vacuolar hepatopathy, infiltrative neoplasia, other.
- The splenic nodule may represent a metastatic lesion, a primary splenic tumor, or a benign focus (i.e., lymphoid hyperplasia or similar).
- Bilateral adrenal masses. These lesions may represent adenomas, adenocarcinomas, pheochromocytomas, excessive nodular hyperplasia, other.

Secondary Findings:

- Bilateral nephropathy with non-obstructive nephrolithiasis and pyelectasia.
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.



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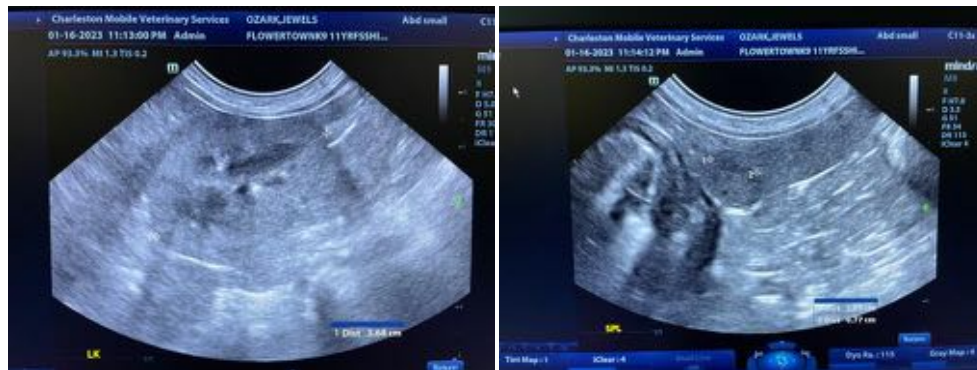
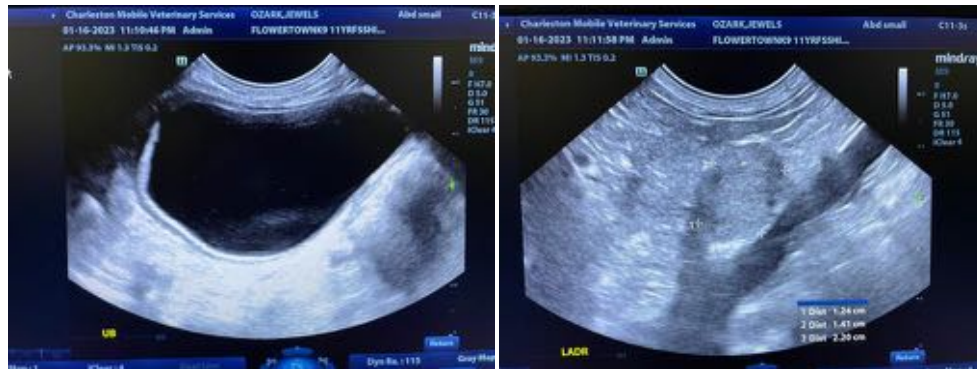
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Three-view thoracic radiographs are recommended to assess for pulmonary metastases.
- Fine needle aspirates of the splenic and hepatic masses can be considered (if clotting status is appropriate). 25-gauge needles should be used if pursued.
- Given the bilateral adrenal changes, consider the following:
 1. Baseline blood pressure measurement.
 2. Further testing for functional adrenal tumors (i.e., low-dose dexamethasone suppression test, urine/blood catecholamine levels).

*Given the concern for multi-organ neoplasia, palliative care should be considered in lieu of invasive diagnostics.





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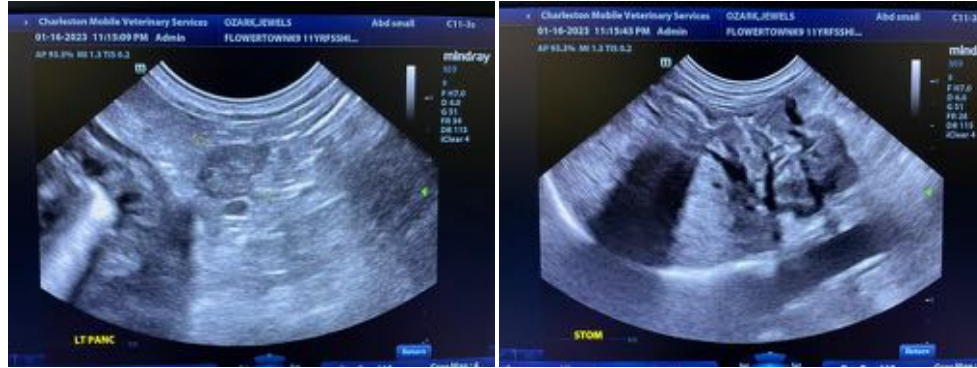
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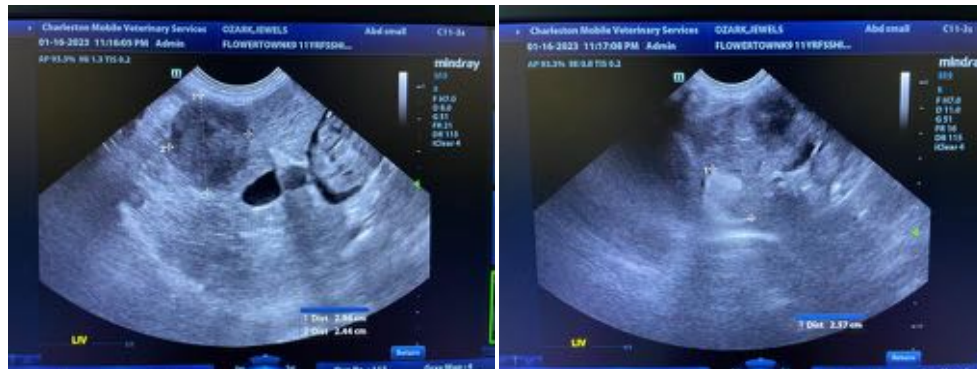
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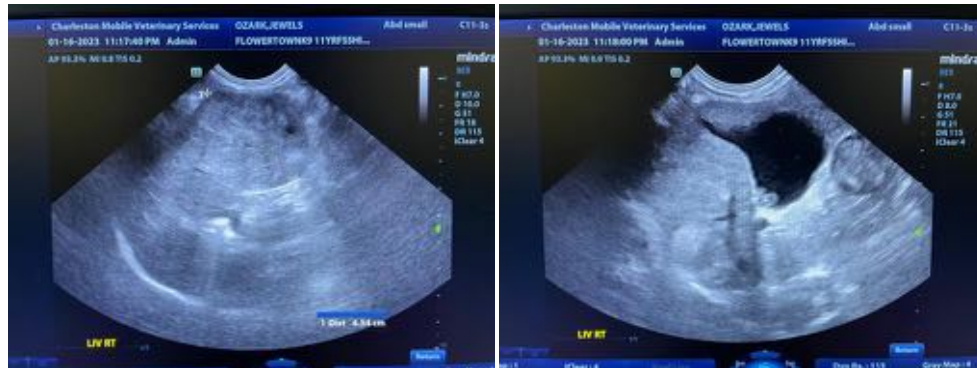


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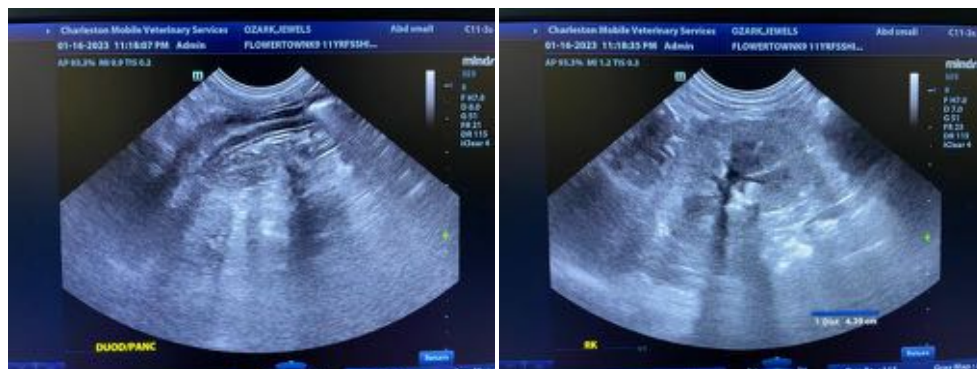
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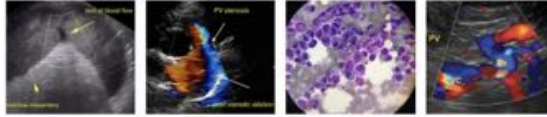
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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.

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info@SonoPath.com

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