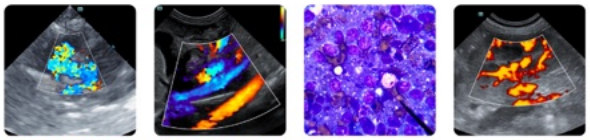


PATIENT

Zoey Barnett

SPECIES

Canine

BREED

Pug

SEX

Spayed female

AGE

14 years

WEIGHT

21.4 lbs

INTERPRETED BY

Alicia Angosto Guerrero, DMV, PgDip, MSc.

IMAGING PERFORMED BY

John Ammeraal

HOSPITAL NAME

Sova

REFERRING VET

Dr. Ammeraal

INVOICE

74852

DATE

4/27/26

PRESENTING CLINICAL SIGNS

History: Presenting for continued workup due to mast cell tumor on R shoulder , FNA said high grade. Hx of Hypercalcemia
Abnormal PE/Chem/CBC/UA Results: 4 cm raised inflamed dermal mass R shoulder, mu;tiple smaller dermal/intradermal masses R shoulder Ica- 1.66 ug/dL . Thoracic rads normal.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is normally distended, with a thin, smooth wall. The urine is predominantly anechoic with a small amount of mineral sediment (gravel/microliths). The bladder neck and proximal urethra appear normal. There is no ultrasonographic evidence of inflammatory or neoplastic changes.

The left kidney is normal in shape and size, measuring 4.60×2.44 cm, with a cortical thickness of 0.53 cm in the sagittal plane. The right kidney is normal in shape and size, measuring 4.94×2.56 cm, with a cortical thickness of 0.50 cm in the sagittal plane. In both kidneys, the cortex is isoechoic relative to the liver parenchyma. The corticomedullary ratio is within normal limits and corticomedullary distinction is preserved. Bilaterally, there are hyperechoic structures with distal acoustic shadowing within the renal calyces, compatible with nephroliths. There is no evidence of pyelectasia or hydronephrosis.

Adrenal Glands

Both adrenal glands show normal shape and echogenicity. Dorsoventral diameters measured in the sagittal plane: The left adrenal gland measures 0.73 cm at the cranial pole and 1.16 cm at the caudal pole. The right adrenal gland measures 0.74 cm at the cranial pole and 0.57 cm at the caudal pole.

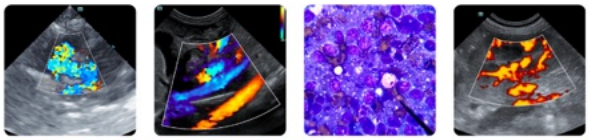
Spleen

The spleen measures 0.92 cm in thickness and contains a 1.63×1.66 cm heterogeneous nodule.

Liver

The liver is subjectively normal in size, with sharp edges and a regular contour. The liver parenchyma looks uniform and isoechoic compared to the falciform fat, with a normal echotexture. No hepatic lymphadenopathy is observed.

The gallbladder is moderately distended, with a thin wall. The lumen contains a moderate amount of organized biliary sludge. No dilation of the cystic duct or common bile duct is observed.



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Gastrointestinal

The stomach is empty and folded, with a mural thickness of 2.53 mm and preserved wall layering. The pylorus measures 3.89 mm. The duodenum measures 3.34 mm. The jejunum measures 3.93–4.14 mm, with normal wall layering. No ultrasonographic evidence of inflammation, ileus, or foreign material is identified. The colon measures 0.78 cm and contains a small amount of formed fecal material within the descending segment.

Pancreas

The evaluated pancreatic areas do not show evidence of overt inflammation or neoplastic disease.

Free Abdomen

No sonographic evidence of abdominal effusion, peritonitis, or lymphadenomegaly is identified. The iliac trifurcation is normal.

PRIMARY FINDINGS

- Bilateral nephrolithiasis (non-obstructive)
- Splenic heterogeneous nodule (1.63×1.66 cm).
- Left adrenal caudal pole enlargement.

SECONDARY FINDINGS

- Mild mineral sediment within the urinary bladder.
- Moderate organized biliary sludge

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The most clinically relevant finding in this patient, given the history of a high-grade mast cell tumor, is the presence of a solitary heterogeneous splenic nodule. Mast cell tumors can metastasize to the spleen, although the ultrasonographic appearance of metastatic lesions overlaps significantly with benign nodular processes. Based on imaging alone, this lesion cannot be definitively characterized.

The left adrenal gland demonstrates caudal pole enlargement (1.16 cm). In dogs of this size, adrenal thickness greater than approximately 0.75–0.80 cm is generally considered enlarged. This degree of asymmetry raises concern for adrenal pathology (hyperplasia, adenoma, or less likely metastasis). However, the gland retains normal shape and echogenicity, which slightly lowers suspicion for aggressive neoplasia. Correlation with clinical signs and biochemical findings is recommended, particularly if there are features suggestive of hyperadrenocorticism or elevations in alkaline phosphatase (ALP).

The presence of bilateral nephroliths without pyelectasia or hydronephrosis indicates non-obstructive mineralization. These findings are relevant in the context of hypercalcemia, as chronic calcium

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dysregulation can predispose to urolith formation.

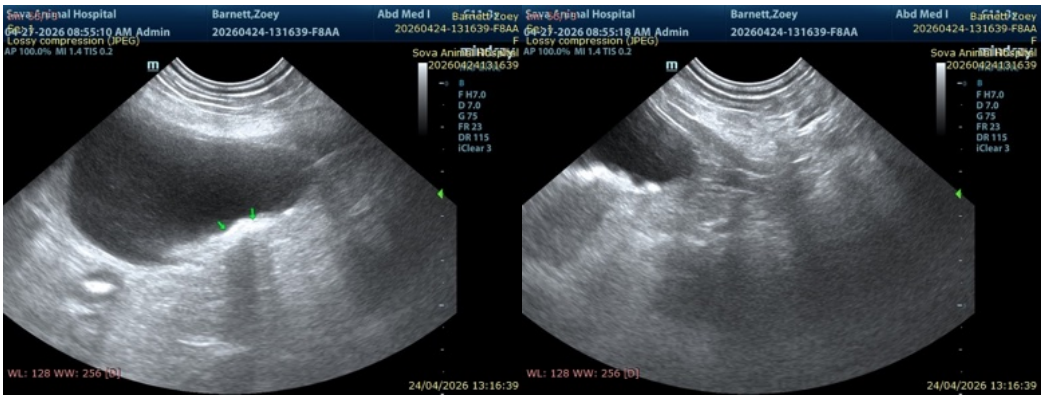
The biliary sludge is a common, often incidental finding in older dogs and is not associated with biliary obstruction in this case. The liver appears unremarkable, with no ultrasonographic evidence of metastatic disease; however, diffuse or early infiltrative disease cannot be excluded by ultrasound alone.

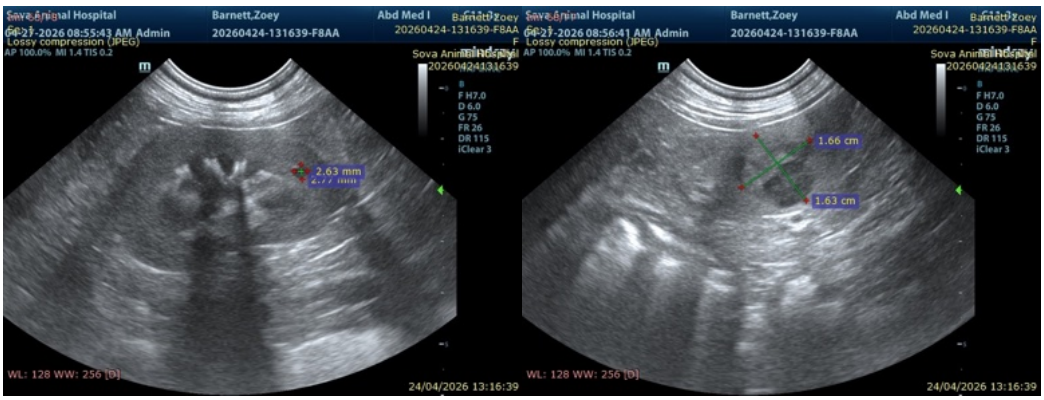
No abdominal lymphadenomegaly is identified, which is somewhat reassuring in the context of staging, although microscopic metastatic disease cannot be excluded.

Recommendations

- Ultrasound-guided FNA of the splenic nodule.
- Consider FNA of liver and spleen as part of staging, even if the liver appears normal, given the high-grade nature of the primary tumor.
- Further evaluation of the left adrenal gland:
  - Correlate with clinical signs and laboratory data.
  - Consider endocrine testing if clinically indicated.
- Monitor and manage hypercalcemia,
- Urinalysis and monitoring for progression of urolithiasis.

Final diagnostic and therapeutic decisions should be made by the attending veterinarian, who can best integrate these findings with the patient's clinical status.





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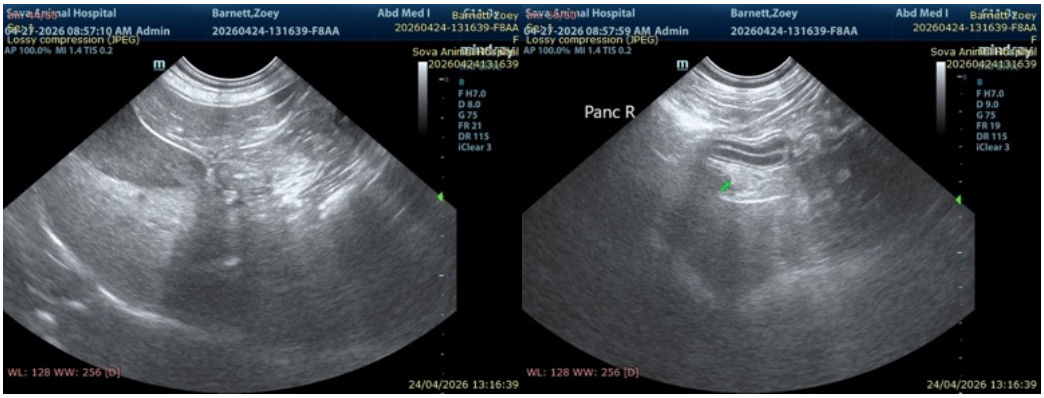

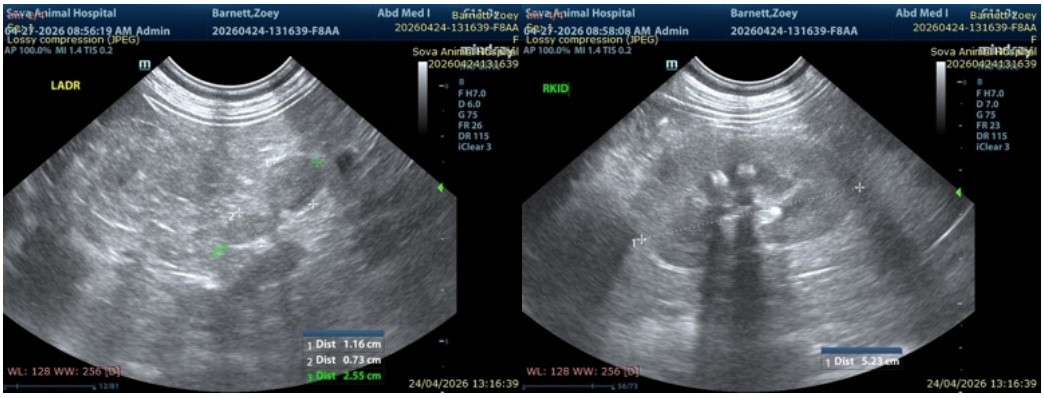

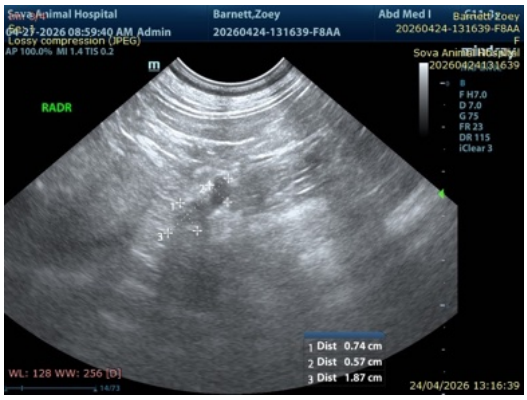

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Alicia Angosto Guerrero, DMV, PgDip, MSc.

info@SonoPath.com