



## PATIENT

Maggie Ling

## SPECIES

Canine

## BREED

Terrier Mix

## SEX

Spayed female

## AGE

8 years

## WEIGHT

13.3 lbs

## INTERPRETED BY

Dr. Alicia Angosto  
Guerrero

## IMAGING PERFORMED BY

Justin Eckenrode

## HOSPITAL NAME

Carlisle Small Animal  
VC

## REFERRING VET

Dr. Eckenrode

## INVOICE

71935

## DATE

2/25/26

## PRESENTING CLINICAL SIGNS

- Major Medical Conditions : liver and splenic tumor, suspect lymphoma, MCT
- Patient History : Mammary carcinoma mass excised with complete margins in 2025. Presented this week for a wellness exam and found abdominal tumor (s). Abd rads sent out and showed hepatosplenomegaly: probably a single etiology due to infiltrative neoplasia such as lymphoma or mast cell tumor. However, two disease processes cannot be excluded (benign vacuolar hepatopathy and splenic neoplasia). Benign splenic mass is less likely. - incidental finding of non-obstructive cholelithiasis. - fat stranding: peritoneal effusion +/- carcinomatosis, sarcomatosis, or lymphomatosis.
- Bloodwork showed regenerative anemia, elevated liver values.
- Primary concern or rule out: liver/spleen neoplasia
- CBC: RBC 5.53, hct 35.7, retics 143, wbc 14.9, neutrophilia with nrbc 6 (0-2), platelets 299  
Chem: Glucose 147 \* r/o stress, recommend u/a ALT 440 (18-121), AST 127 (16-55), alpk 2,610 (5-160) GGT 33 (0-13)

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### Urinary System

The urinary bladder lumen is not fully distended, and the wall appears thickened; however, due to underdistension, wall measurements may be overestimated. The urine is anechoic. The bladder neck and proximal urethra appear normal. No calculi are identified, and there is no evidence of inflammatory or neoplastic changes.

### Both Kidneys:

The cortex demonstrates normal echogenicity. The corticomedullary ratio is normal, and corticomedullary definition is preserved. Increased echogenicity of the outer medulla is noted. There is no evidence of pyelectasia, nephrolithiasis, or hydronephrosis. Color Doppler demonstrates a normal vascular pattern.

The left kidney is normal in shape and size: 4.57 x 2.29 cm, and the cortical thickness is 0.36 cm in the sagittal plane. The right kidney is normal in shape and size: 4.52 x 2.32 cm; cortical thickness measurement was not provided.

### Adrenal Glands

Both adrenal glands show normal shape and echogenicity. Dorsoventral diameters measured in the sagittal plane: The left adrenal gland measures 0.47 cm at the cranial pole and 0.46 cm at the caudal pole. The right adrenal gland measures 0.49 cm at the cranial pole and 0.48 cm at the caudal pole.

### Spleen

A large, solid, heterogeneous mass measuring approximately 10x5 cm occupies the dorsal extremity of the spleen and distorts the splenic capsule. The margins are poorly defined and irregular. At the ventral extremity, splenic thickness is 1.63 cm with rounded margins. The splenic parenchyma contains multiple hypoechoic nodules. The splenic capsule elsewhere appears smooth and regular.



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## Liver

Hepatomegaly is present with a diffuse multinodular pattern. Numerous nodules are identified throughout all hepatic lobes; some are hypoechoic, while others demonstrate a target-like appearance. The number of nodules is markedly increased and diffusely distributed.

The gallbladder lumen is normally distended. The wall is thin, and the contents are predominantly anechoic. No dilation of the cystic duct or common bile duct is observed.

## Gastrointestinal

The stomach is empty and folded, with mural thickness of 3.02 mm and preserved wall layering.

Pylorus: measurement not provided. Duodenum: 3.79 mm. Jejunum: 2.29–3.13 mm, with preserved wall layering. No evidence of ileus or foreign material is identified.

Colon: 1.79 mm, empty and folded.

## Pancreas

The evaluated pancreatic regions do not show evidence of overt inflammation.

## Peritoneal Cavity

Mild abdominal effusion is present, identified within the rectovesical recess and splenorenal recess. The peritoneum surrounding the splenic mass demonstrates markedly increased echogenicity.

## ULTRASONOGRAPHIC FINDINGS

### PRIMARY FINDINGS

- Large heterogeneous splenic mass with irregular margins.
- Additional splenic hypoechoic nodules.
- Diffuse hepatomegaly with multiple hypoechoic and target-like nodules.
- Mild abdominal effusion (rectovesical and splenorenal recesses).

### SECONDARY FINDINGS

- Increased peritoneal echogenicity surrounding the splenic mass.
- Outer medullary hyperechogenicity in both kidneys (incidental).



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## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

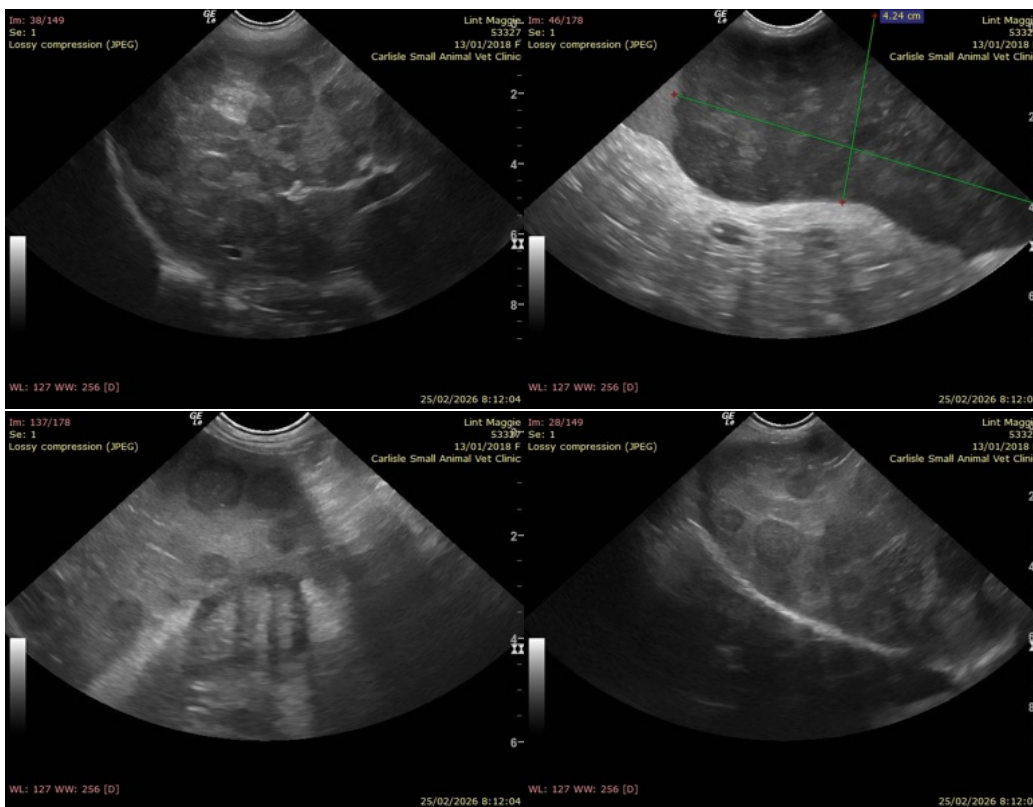
The combination of a large splenic mass, diffuse hepatic nodular infiltration, mild effusion, peritoneal reaction, and compatible hematologic abnormalities strongly supports a diagnosis of advanced systemic infiltrative neoplasia.

The pattern of diffuse hepatic multinodular infiltration affecting all lobes is more characteristic of systemic hematopoietic neoplasia (especially lymphoma). Visceral mast cell tumor represents an important and closely overlapping differential diagnosis, as it may produce a nearly identical splenic and hepatic appearance.

Metastatic carcinoma, including recurrence or spread of prior mammary carcinoma, remains a relevant consideration; however, the uniform and widespread hepatic infiltration favors a hematopoietic round cell process over typical metastatic epithelial disease. Primary splenic hemangiosarcoma with hepatic metastasis is possible but considered less characteristic based on the diffuse hepatic involvement pattern observed.

### Recommendations

- Ultrasound-guided fine-needle aspiration of the splenic mass and representative hepatic nodules is strongly recommended to obtain cytologic diagnosis.
- Thoracic staging is advised.





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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.

MV Esp Ultrasound in Domestic and Wild Animals

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