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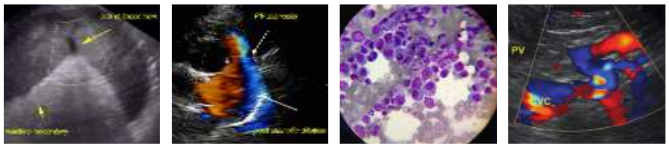

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1-800-838-4268 info@sonopath.com

**PATIENT**

Mittens Hannah

**SPECIES**

Feline

**BREED**

DSH

**SEX**

MN

**AGE**

9 years

**WEIGHT**

9.4 lbs.

**INTERPRETED BY**

R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

**IMAGING PERFORMED BY**

Dr. Jennifer Todd

**HOSPITAL NAME**

Lambs Gap AH

**REFERRING VET**

Dr. Laura Campbell

**INVOICE**

13139

**DATE**

1/25/22

## PRESENTING CLINICAL SIGNS

Mittens is a nine year old, MN, DSH cat. Mittens has a history of GI disease. He had chronic, intermittent vomiting episodes, but seemed to improve when his owner changed to Royal Canin Hypo PR diet mixed with a dental diet. However, his owner has recently noticed weight loss even though he has not been vomiting. His stools are normal. Mittens lost 4 pounds in 1 year. His BCS is 2/5. Wellness blood work revealed most notably low albumin (1.8, range 2.6-3.9). He has normal globulins (3.7, range 3-5.9), mildly elevated neutrophils (15479, range 2620-15170), elevated monocytes (1255, range 40-530), and a normal fPL (2.5, range 0-3.5). We are submitting a maldigestion profile (TLI, folate, cobalamin), administering a dose of Cobalamin and checking a UA with UPC today. Her owner will begin feeding Royal Canin Hypo PR exclusively at this time. TLI/B12/ Folate and UA/UPC is submitted to the lab today

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 cm exhibited normal thickness and tone. Primarily anechoic urine was present in the lumen. Mild to moderate, nondependent, particulate sediment was present without evidence of calculus formation. This may indicate cellular or crystalline debris or possible mid mucus. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic mural changes were noted.

The area of the aortic trifurcation was free of pathology.

Normal renal size with asymmetrical margination were present in both kidneys. The renal cortex presented uniformly increased in echogenicity with uniform echotexture. The renal cortex appeared to be hypertrophied resulting in an altered cortex: medulla ratio. Mild loss of corticomedullary distinction was also present. The renal medullary volume was subjectively reduced. The left kidney measured 4.3 cm in length. The right kidney measured 4.3 cm in length.

### *Adrenal Glands*

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.36 cm width. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.48 cm width.

### *Spleen*

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted. The spleen measured 0.78 cm width at the level of the hilus.

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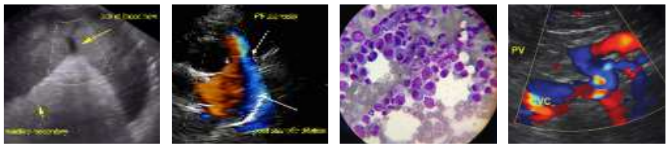

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### *Liver/ Gallbladder*

The liver was normal in overall size with primarily symmetrical contour. Normal hepatic parenchyma echogenicity exhibiting mild to moderate coarse echotexture was present. A solitary, mildly expansive, Isoechoic to nonhomogeneous nodule in the caudal aspect of the subjective right lateral to caudate liver lobe, measuring 1.4 cm diameter, was present. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

### *Gastrointestinal*

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material. The gastric body wall with measured 0.24 cm.

The small intestine exhibited generally intact wall layering and maintained a 1:3 muscularis / mucosa ratio. Subjective mild propensity for increased muscularis layer noted in the segmental mid abdominal small Intestine with segmental mural mass exhibiting moderate mural hypertrophy, decreased mural echogenicity, and loss of discernable wall layering, measuring approximately 3.5 cm x 2.0 cm, was present. Intact intestine wall adjacent to the mural mass measured up to 0.30 cm wall width. By comparison, normal-appearing small Intestine wall measured 0.22 cm width.

Normal visible colon wall layers were present with apparent formed feces in lumen.

### *Pancreas*

The parenchyma of the left limb, body, and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease were evident.

### *Free Abdomen*

Intermittent jejunocolic lymph nodes were present. The lymph nodes were mildly prominent with essentially isoechoic to adjacent omentum without evidence of peripheral inflammation and maintaining a normal width: length ratio (<0.5). An example of a lymph node measured 0.30 cm width. Subtle evidence of mild regional reactive mesentery around the intestinal mural mass was present. No evidence of free fluid was noted.

## ULTRASONOGRAPHIC FINDINGS

### *Primary Findings*

- Urinary bladder sediment
- Bilateral chronic interstitial nephrosis renal pattern
- Segmental to potential generalized enteropathy with segmental mural mass
- Minor intermittent jejunocolic lymphadenopathy
- Nonspecific hepatic nodule

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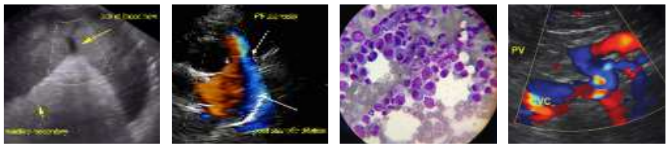

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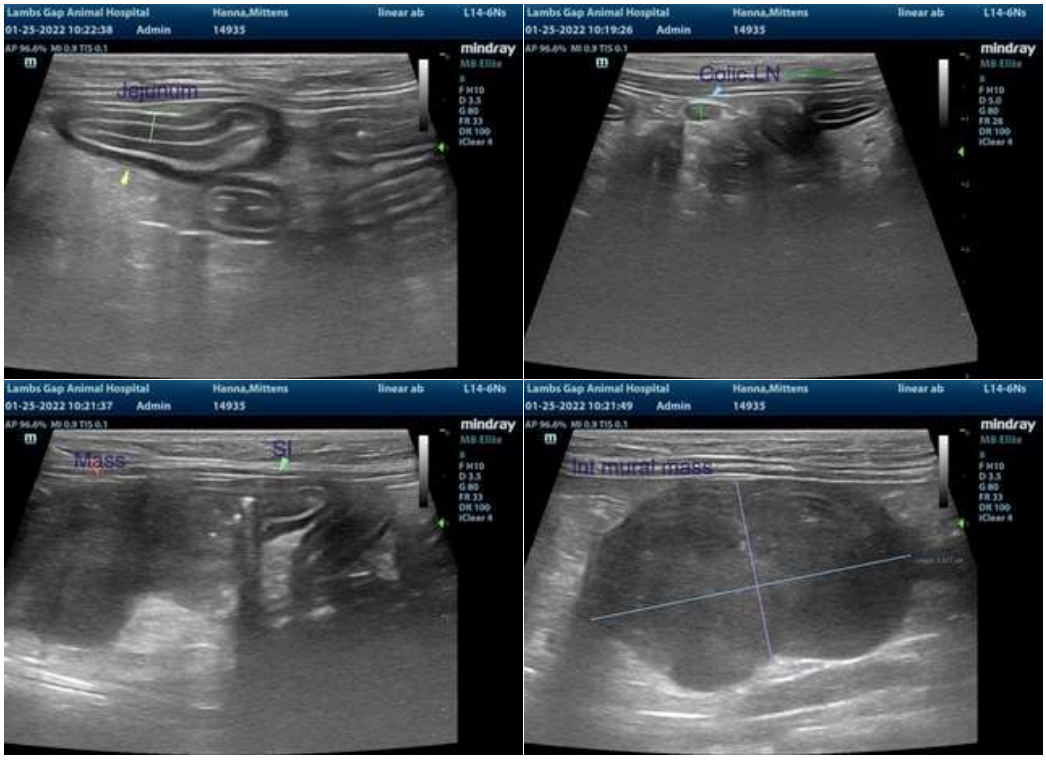
## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Considerations for the intestinal mural mass may include inflammatory, granulomatous (dry form FIP), or neoplastic etiologies.

The solitary hepatic nodule was nonspecific and may indicate benign processes such as focal nodular hyperplasia or small granuloma. The potential for emerging primary vs. metastatic hepatic neoplasia cannot be excluded.

Assuming normal clotting status, ultrasound-guided FNA of the intestinal mural mass +/- hepatic nodule if accessible for screening cytology could be considered. Subjectively, the intestinal mural mass appears to be amendable to surgical resection. Three view chest radiographs are recommended to assess for or rule out thoracic pathology / metastasis. Intestinal biopsies in intestinal segments not involved with the intestinal mural mass, as well as gross inspection of the hepatic nodule with potential for biopsy or resection is recommended if surgery is elected. Correlation with pending GI panel and further renal staging Is recommended.



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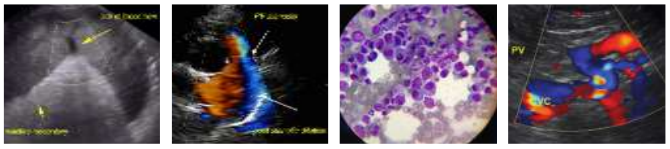

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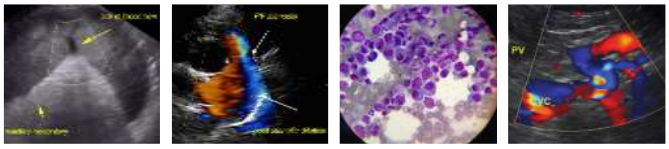

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**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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.

**R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)**
**info@SonoPath.com**