

## PATIENT

Bella Netti **PRESENTING CLINICAL SIGNS**

## SPECIES

doing well- elevated ALT (lab value not available)- Urogenital drinking normal amounts. accidents while sleeping.

Canine

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### BREED *Urinary System*

Mini Australian Shepherd

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

### SEX

Spayed Female

The left kidney has a normal shape and size (5.6 cm). Overall echogenicity is slightly hyperechoic with mildly reduced corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

### AGE

12 Years

The right kidney has a normal shape and size (5.56 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

### WEIGHT

40 Pounds

### *Adrenal Glands*

The left adrenal gland is normal in size measuring 0.51 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

### INTERPRETED BY

Kathleen Sennello DVM,  
MS, Diplomate ACVIM  
(Small Animal Internal  
Medicine)

The right adrenal gland is large in size measuring 1.98 cm at the cranial pole, 0.57 cm at the caudal pole, and 3.06 cm in length. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is abnormal in appearance in that there is a nodule in the cranial pole that is hyperechoic, measuring 2.28 cm x 2.05 cm. There is a focal hyperechoic nodule within this nodule. No evidence of vascular invasion visualized.

### IMAGING BY

Loetitia Saint-Jacques,  
LVT

### *Spleen*

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

### HOSPITAL NAME

North Hills VC

### *Liver*

The liver is large in size, and hyperechoic with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There is a somewhat ill-defined hyperechoic lesion on the left side of the liver measuring 2.09 cm x 2.22 cm.

### REFERRING VET

Dr. David Baggett

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. The cystic and common bile ducts are normal/not visible.

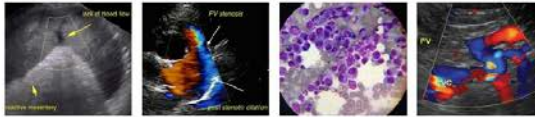
### INVOICE

42746

### *Gastrointestinal*

### DATE

11/15/22



**PATIENT**

**Bella Netti** The stomach is moderately dilated with fluid and irregular shadowing material most consistent with normal ingesta and gas. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layering is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

**SPECIES**

**Canine** The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Jejunum wall measures 0.24 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

**BREED**

**Mini Australian Shepherd** The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

**SEX**

**Spayed Female** **Pancreas**  
The pancreas is prominent and mottled compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

**AGE**

**12 Years** **Free Abdomen**  
Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

**WEIGHT**

**40 Pounds** **PRIMARY FINDINGS**

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- Prominent, mottled pancreas – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.
- Large, heterogeneous liver with hyperechoic nodule – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. The hyperechoic lesion in the liver trends towards the appearance of a benign lesion, although underlying neoplasia cannot be ruled out.
- Large hyperechoic nodule in the cranial pole of the right adrenal gland – most consistent with an adrenal mass. Right adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.

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**SECONDARY FINDINGS**

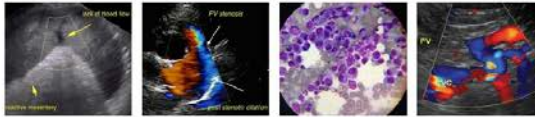
- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.
- Moderate gastric ingesta – Correlate with feeding history.

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**PATIENT**

Bella Netti

**SPECIES**

Canine

**BREED**

Mini Australian Shepherd

**SEX**

Spayed Female

**AGE**

12 Years

**WEIGHT**

40 Pounds

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

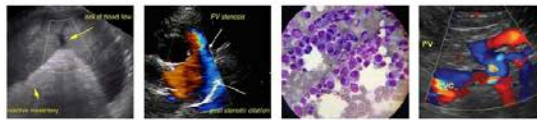
There is a hyperechoic mass effect in the cranial pole of the right adrenal gland. This could represent a benign or neoplastic lesion and could be secretory or non-active. These would be my recommendations:

- If signs of cushings are present, consider adrenal function testing. I prefer an ACTH stimulation test combined with an adrenal panel to the University of Tennessee's endocrine lab to look for atypical adrenal hormones as well as cortisol. (other testing can suffice)
- If adrenal dependent cushings is suspected and supported by adrenal function testing consider medical therapy with lysodren or trilostane and/or consider surgical removal (recommend referral to a board certified veterinary surgeon and possible pre op CT)-This can be a challenging surgery with significant risk for complication
- Recommend blood pressure evaluation-if hypertensive consider testing catecholamine levels for a possible pheochromocytoma
- Due to the invasive nature of these masses a CT scan is recommended to evaluate for metastasis and vascular invasion.
- If no symptoms of cushings are present, consider either referral for surgery or if surgery is not an option consultation with a veterinary oncologist regarding chemotherapeutic options and continued monitoring with ultrasound (in 4-6 weeks) can be considered.
- Some aggressive adrenal tumors can grow quickly and there is risk for acute hemorrhage from vascular invasion.

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.

The liver is heterogeneous. This is a non-specific finding. This could be consistent with a vacuolar or steroid hepatopathy, but typically that would be associated with an elevation in ALP. A small focal lesion was visualized within the parenchyma, which subjectively appears somewhat benign but continued monitoring is warranted. Consider the following for further evaluation:

- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc...
- Consider PCR on urine/serum for leptospirosis (if not on antibiotics)/serology if recent antibiotic history
- If not already done, consider pre and post prandial bile acids to evaluate liver function
- Consider Fine needle aspirate if round cell neoplasia is on your differentia list (25 g needle, normal coags)
- If no response to supportive care (Denamarin, fluids, antibiotics, +/- ursodiol etc.) Consider liver biopsy with samples obtained for histopathology, culture, and copper levels.



Portable Animal Wellness Sonography, Inc.

IMAGING PERFORMED BY  
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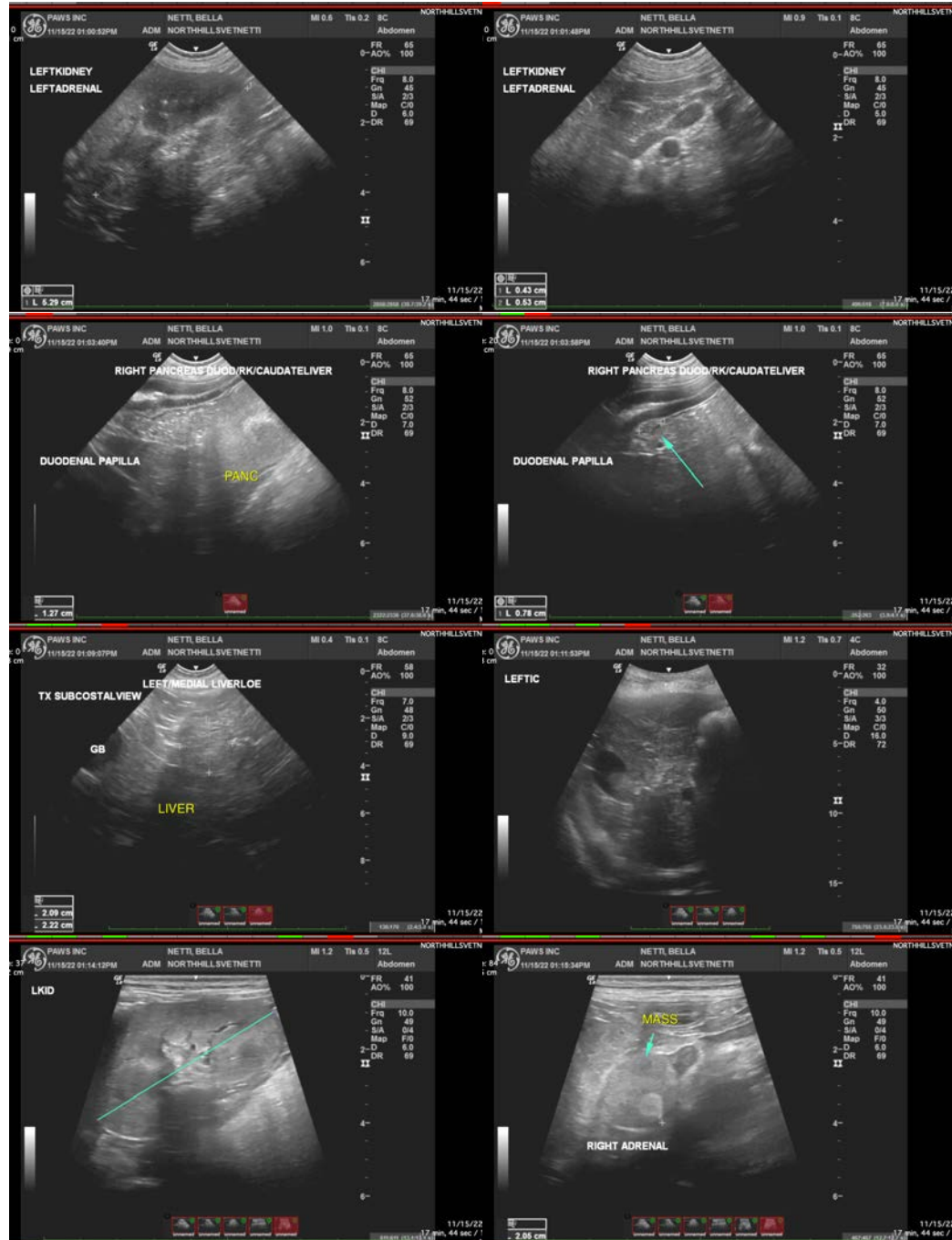
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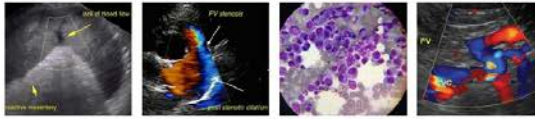
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Additionally, if a contrast CT scan is performed to further evaluate the adrenal lesion for possible surgical removal, then further evaluation of the liver lesion can be performed at that time.





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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.

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