



**PATIENT**

Nala Hernandez

**SPECIES**

Canine

**BREED**

Shih Tzu

**SEX**

Female

**AGE**

11 Years

**WEIGHT**

19 Pounds

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING  
PERFORMED BY**

Dra. Yaniris Alvarado

**HOSPITAL NAME**

Ramey VH

**REFERRING VET**

Dra. Yaniris Alvarado

**INVOICE**

23818

**DATE**

8/7/23

**PRESENTING CLINICAL SIGNS**

Patient had a lot of vomiting since yesterday and abdominal pain. She tends to eat random stuff.

Abnormal PE/Chem/CBC/UA Results: CBC: WBC 37.7 K/ $\mu$ L, NEU 31.27K/ $\mu$ L, MON 3.14K/ $\mu$ L CHEM: GLU 640 mg/dL, PHOS 8.3 mg/dL, ALKP324U/L, LIPA 5350U/L UA: Glucose in the urine, ketones, and blood in the blood.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes were noted. Ureteral papillae were normal.

The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. The right kidney measured 4.55 cm. The left kidney measured 4.3 cm.

**Adrenal Glands**

The **left adrenal gland** was visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 5.0 mm.

The **right adrenal gland** was imaged and revealed no evident pathology.

**Spleen**

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes were noted.

**Liver**

The **liver** was mildly enlarged with attenuating sound beam and minor heterogenous parenchymal changes. Generalized hepatomegaly was noted with heterogenous nodular changes. The gallbladder and common bile duct were unremarkable.

**Gastrointestinal**

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

**Pancreas**



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The **pancreas** was hypoechoic and mildly irregular. This may be an age-related change or low grade inflammation. Subxiphoid palpation is recommended to assess for pain or discomfort associated with the pancreas.

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**Other**

The **left ovary** was cystic, measuring 2.0 cm. The remainder of the reproductive tract did not demonstrate any significant disease.

**BREED**

Shih Tzu

**ULTRASONOGRAPHIC FINDINGS**

- Subjectively benign hepatopathy with nodular hyperplasia pattern- FNA is indicated to ensure a more significant disease is not present.

**SEX**

Female

- Prominent pancreas- possible low-grade inflammation. The changes were mild.
- Cystic left ovary

**AGE**

11 Years

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The exact cause of the clinical signs is unclear. Either low grade pancreatitis is playing a role or possible referred back pain as the cause of abdominal tension. Bile acid profile and hepatic FNA are indicated. Supportive care for gastrointestinal upset and low-grade pancreatitis. The liver presentation is likely complicated by the diabetic state. Treatment for stabilization of the diabetic state is indicated and is likely the primary issue in this patient.

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**Potential Causes of Diabetic Dysregulation**

This is a suggestive checkoff list when faced with an unregulated diabetic patient:

UTI

Dietary indiscretion/intolerance

Pancreatitis

Hyperthyroidism/hypothyroidism

Exogenous steroids (including topical eye meds)

Cushing's

Acromegaly

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Owner compliance

Insulin quality issues

Antibodies to insulin

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Underlying Neoplasia

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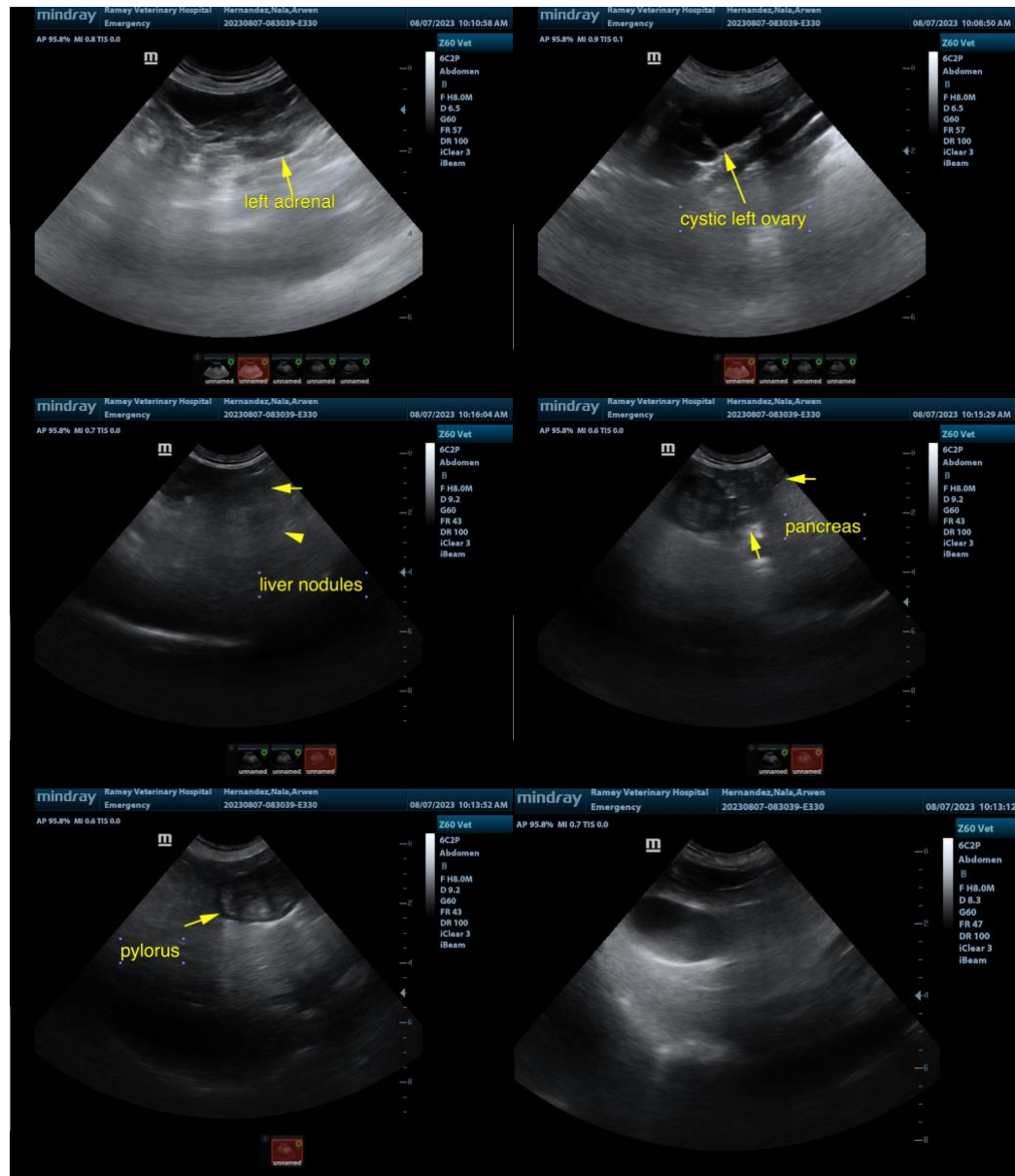
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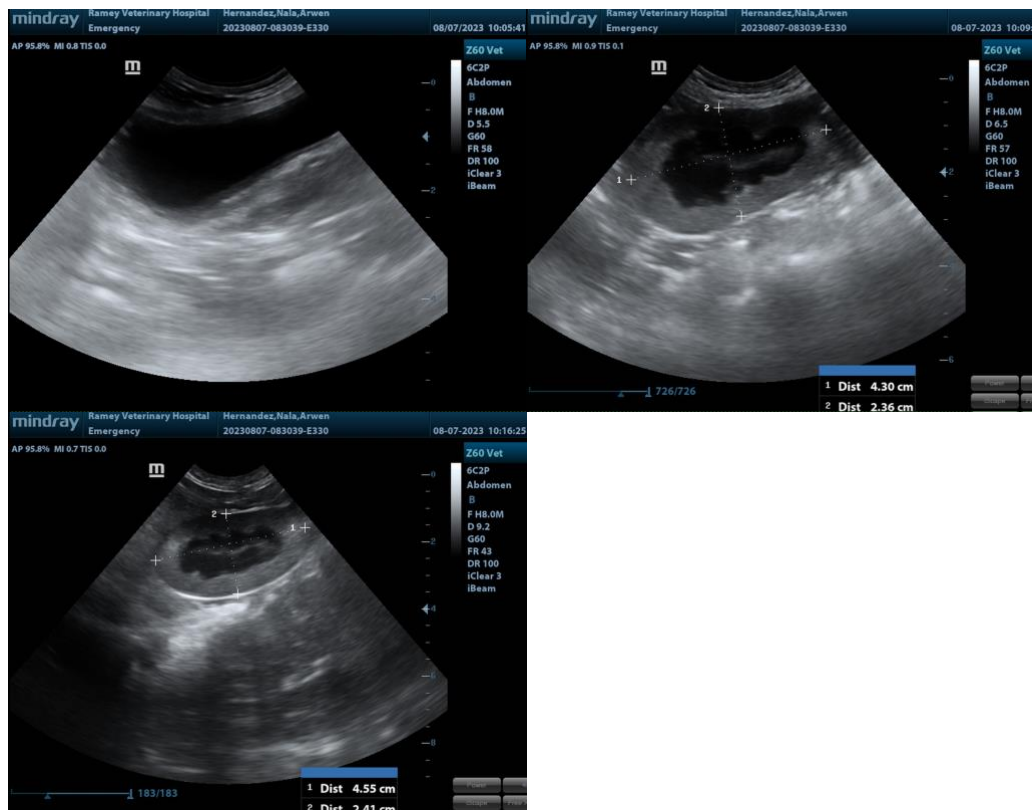
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Eric Lindquist**, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com  
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