

**DATE PRESENTING CLINICAL SIGNS**

7/16/23

Presenting Complaint: Not Eating. Lethargic.

**PATIENT**

Ozzy Arbaugh

History: Date: 07-15-2023 Notes: PC: - Not eating- last ate wed night 7/12 - No energy - lying around, doesn't want to be picked up - Took to rDVM- discussed IVF - Concern for pancreatitis - Drinking and urinating - Diet- Purina One And Fresh Pet + Biscuit Wrapped With Jerky ATO in room: - Wednesday night wnl - Not himself, not eating - Vomited thursday am - Went to churchville- xrays and bw- couldn't tell whole lot- Unsure if some organs pushed to right side. Unsure if fluke vs mass - First time Possible pancreatitis June 22nd 2023 resolved - Not walking much belly bloated - Still drinking and urinating just not eating - Today got a little excited- but still not eating - No medical hx always healthy prior

**SPECIES**

Canine

**BREED**

Shih Tzu X

**SEX**

Neutered Male

**AGE**

2014

**WEIGHT**

7.9 Pounds

Date: 07-15-2023 Notes: rDVM records: 7/14/23 - Churchville for Not eating, not wanting to be picked up, weakness, vomited once yesterday - PE: Abdomen tense, dehydrated - +- Pancreatitis, FB, cancer - CBC: HCT 36%, Low mch, inc mchc, low retic, low neu, inc mono, low eos, PLT wnl - Xray: two view abd rads - no overt FB or obstruction, subjectively structures appear pushed to the L on VD - but cannot see discrete mass. discussed possible end on bowel just caudal to ventral liver on lateral vs cannot rule out mass, less likely FB (o notes p is not one to ingest things) brief us focal u/s scan - no overt mass, no FAF, subjectively the surrounding tissue in the cranial abd appeared very hyperechoic, suggesting inflammatory stimulus. relayed to o but advised this does not rule out mass or serious process, truly would need formal AUS reviewed by radiologist to evaluate these things and confirm/rule out pancreatitis more definitively - SQ fluids - B12 injection - Cerenia injection - Sent home- If any decline/ no improvement- recommend AEH IVF, Abdominal ultrasound - Rx @ home: Famotidine, Gastro LT can, Cerenia PO 6/22/23 - CBC/CHEM- ALKP 379, Inc chol, lipase - CPL- abnormal 6/3- 4dx Negative

Assessment: Ozzy 9 yr MN Shih Tzu Mix. Initial exam: Quiet/ little depressed, H/L wnl, Abdomen soft, No FF on FAST scan- dilated bowel loops. Problems: Anorexia. Lethargy. Anal sacs- extremely impacted. Nuclear sclerosis. Gums tacky; dental disease.

**INTERPRETED BY**Eric Lindquist, DMV  
DABVP, Cert. IVUSS

DDX: Pancreatitis, liver dz, kidney dz, other

Lab Results: Attached.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

**HOSPITAL NAME**Animal Emergency  
Hospital

Imaging Performed By: Rachel Brillhart, RDMS.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****REFERRING VET**

Dr.

**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.

**INVOICE**

43883

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex. Mineralization noted in both kidneys. The left kidney measured 3.14 cm. A left kidney pelvic calculus measured 0.32 cm. A right kidney pelvic calculus measured 0.85 cm. Pyelectasia noted in the right kidney at 0.90 cm with echogenic debris. The right kidney measured 3.17 cm.

### ***Adrenal Glands***

Both **adrenal glands** were 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 1.73 cm x 0.62 cm at the caudal pole and 0.63 cm at the cranial pole. The right adrenal gland measured 1.39 cm x 0.69 cm at the caudal pole and 0.63 cm at the cranial pole.

### ***Spleen***

The **spleen** in this patient was uniform, yet volume contracted. Hydration status should be assessed.

### ***Liver***

The **liver** was uniformly swollen with minor, excessive gallbladder debris and over distension with dependent and suspended bile without evidence of overt mucocele formation. However, excessive sludge was present. The liver presented coarse architecture with mildly increased portal markings and subtle, mixed echogenic changes. This is consistent with vacuolar hepatopathy and some level of remodeling and history of inflammatory component. There was no overt suspicion of neoplasia.

### ***Gastrointestinal***

The **stomach** was empty and wall was normal. The upper duodenum was thickened and spastic, enveloped by the pancreatic pathology.

### ***Pancreas***

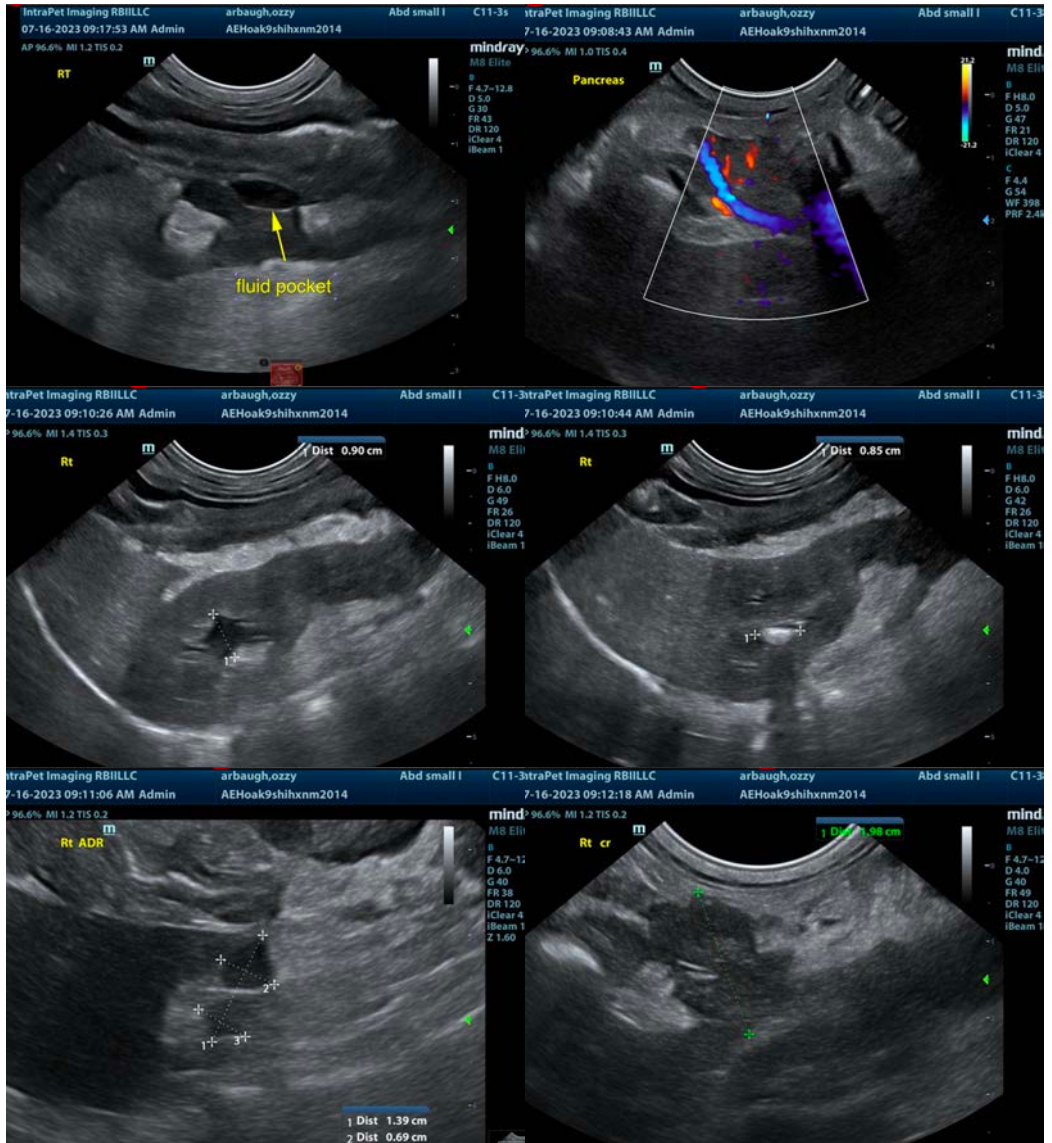
The right limb of the **pancreas** was hypoechoic and irregular with enhanced surrounding mesentery in a region of approximately 2.0 cm, strongly consistent with pancreatitis. Additional areas of the right pancreatic limb and based presented extensive mixed hypoechoic parenchymal changes, enveloping the upper duodenum. The left pancreatic limb measured 0.82 cm.

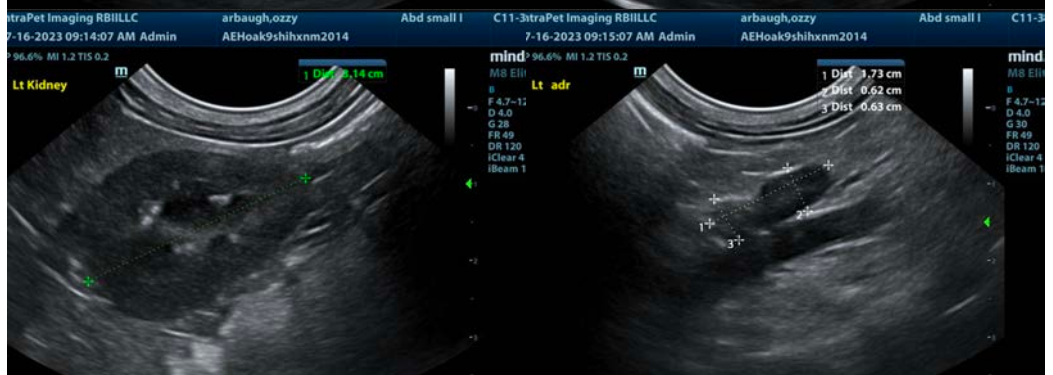
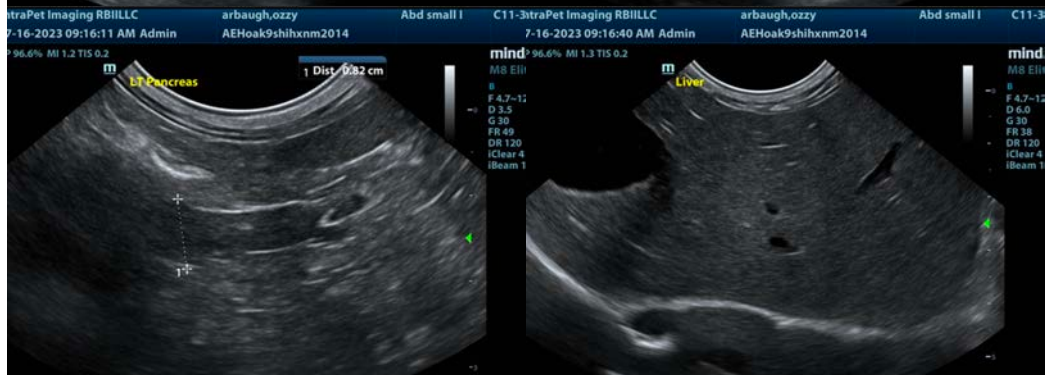
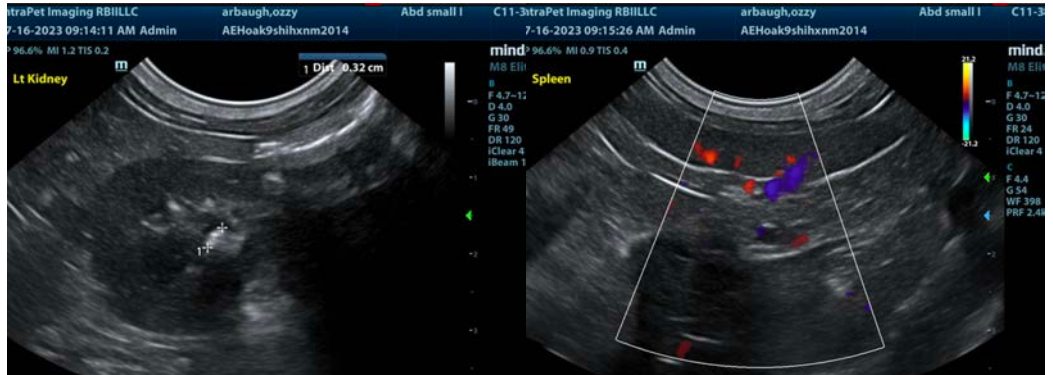
## **ULTRASONOGRAPHIC FINDINGS**

- Gastroenteritis
- Extensive pancreatitis, primarily in the right limb
- Moderate degenerative renal changes with pelvic calculi, and pyelectasia of the right kidney
- Volume contracted spleen
- Vacuolar hepatopathy liver pattern

## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Aggressive treatment for pancreatitis with plasma expanders, broad-spectrum antibiotics, GI protectants, and pain management, as well as IV fluid support. Recheck sonogram in 3-5 days. FNA of the hypoechoic portions of the pancreas would be ideal to rule out underlying carcinoma. Fluid pockets noted may represent abscessation. Urinary workup warranted if not already performed to assess for underlying UTI. Chronic pyelonephritis suspected in the right kidney.





**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.

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