



**PATIENT**

Heidi Montano

**SPECIES**

Canine

**BREED**

Miniature Schnauzer

**SEX**

Intact Female

**AGE**

17 years

**WEIGHT**

13.8 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING  
PERFORMED BY**

Dr. Bray

**HOSPITAL NAME**

Taylorsville VC

**REFERRING VET**

Dr. Bray

**INVOICE**

42392

**DATE**

12/28/22

**PRESENTING CLINICAL SIGNS**

Mammary mass that has been present for over a year, getting larger in L mammary gland (previous FNA not diagnostic but DVM was concerned for malignancy as a high possibility per notes). Multiple other smaller firm mammary nodules in L 4th gland, R 2nd, 3rd and 4th glands. P has lost 6lbs since 8/20/21. Presented on 12/17/22 because owner was concerned that mass in mammary gland is bothering p, p is licking it. P also stopped eating dry food and has been mostly on wet food. Owner gave a dose of Advil a couple days prior to visit on 17th.

Abnormal PE/Chem/CBC/UA Results: On PE, skin over mass is normal in appearance and there is no swelling or discharge present. Mass is very firm and freely moveable, others are as well. Largest mass is ~4cm in size, others are 1cm or less. On PE, p appeared slightly pale pink on MM and very tense on abdominal palpation, possibly painful. CBC: -Mild, non-regenerative, normochromic, normocytic anemia: likely anemia of chronic disease Chem: -Mild SDMA elevation -Moderate elevations of ALT/ALP/GGT

**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 was noted. Ureteral papillae were normal.

The ovaries were not visualized. The uterine base was visualized and is quiescent and empty measuring approximately 0.6 cm in width.

The **kidneys** revealed largely normal size and structure 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. Cortical collapse at the dorsal cortex of the left kidney. The right kidney revealed mild pyelectasia with loss of corticomedullary definition. A slight anechoic cyst was noted in the dorsal cortex of the right kidney.

**Adrenal Glands**

The **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 0.6 cm. The right adrenal gland measured 0.6 cm at the cranial pole and 0.4 cm at the caudal pole.

**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 was noted.



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**Liver**

The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. Vascular and biliary tracts were of normal volume with no evidence of congestion. The gallbladder was mildly over distended with suspended and dependent debris, yet not to the level of emerging mucocele, yet sludge appears to be mildly excessive. A minor amount of dependent sand was noted measuring 3.0 x 2.0 cm. No adjunctive inflammation was noted.

**Gastrointestinal**

The **gastrointestinal** presentation revealed mild uniform prominence of the gastric mucosa as well as areas of "ropy" small intestinal wall with slight disruption of the normal 1:3 muscularis/mucosal ratio. The intestinal submucosa was slightly irregular, thickened and hyperechoic suggestive of low grade, chronic disease. No concerning lymphadenopathy was visible. No evidence of obstruction was present. Chronic inflammatory bowel disease is likely with a low possibility of an early neoplastic event such as lymphoma. Full thickness tissue biopsies via open laparotomy, ideally guided by intraoperative ultrasound in order to obtain the most representative mural sample, would be necessary to rule out this possibility.

**Pancreas**

The right **pancreatic** limb was heterogenous with some areas of remodeling.

**ULTRASONOGRAPHIC FINDINGS**

Diffuse intestinal thickening, stable.

Moderate degenerative renal changes with infarcts and pyelectasia.

Excessive gallbladder debris.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

I recommend urinary work-up in this patient. Ursodiol therapy can be justified. There was no evidence of significant abdominal disease other than moderate chronic renal changes.



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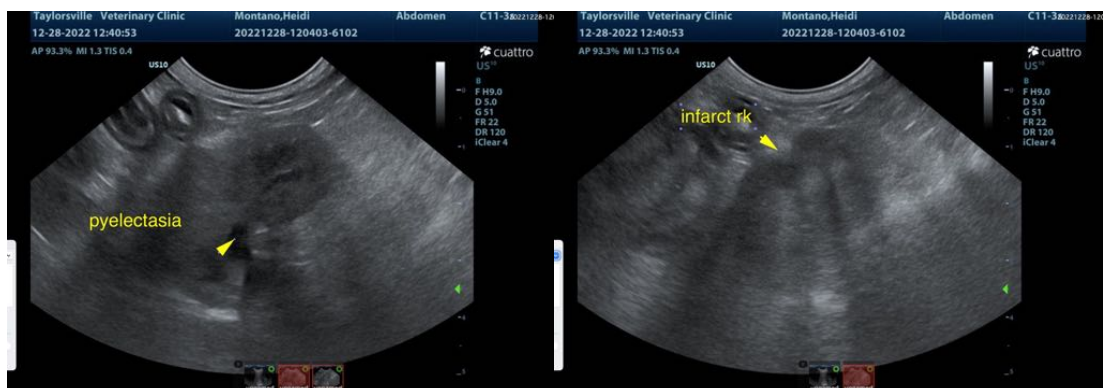
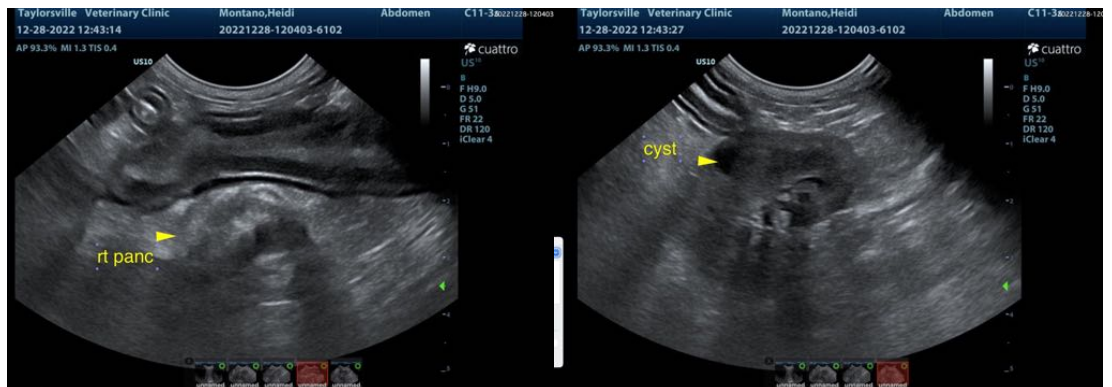
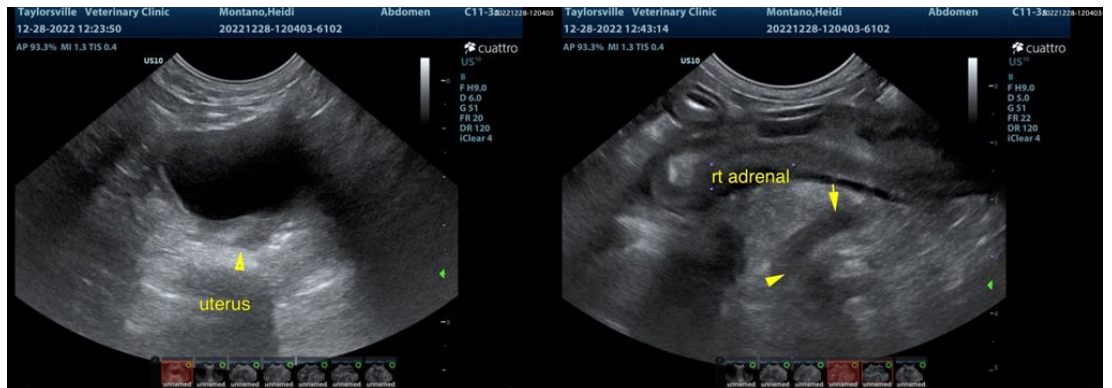
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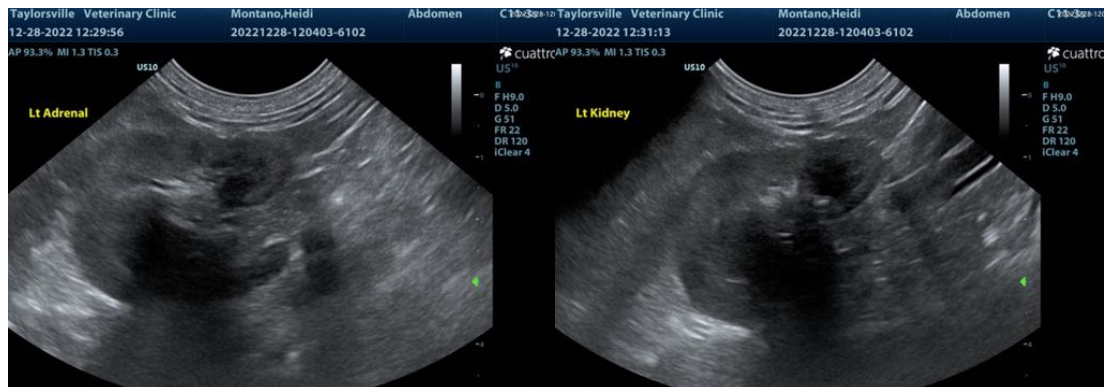
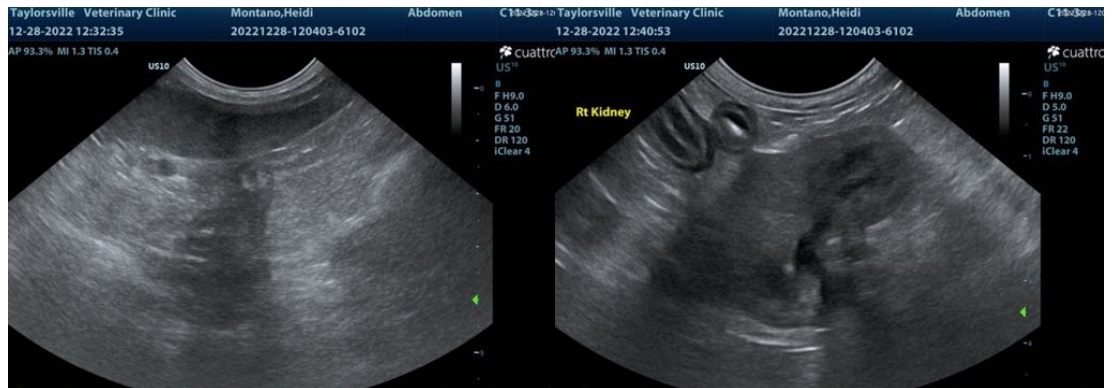
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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