



**PATIENT**

**PRESENTING CLINICAL SIGNS**

Max Scholz

Diabetic, elevated ALT/ALKP/Tbili, pre surgical. Hx of bladder stones. Current meds: Vetsulin- 15 units in AM + 14 units in PM

**SPECIES**

Platelet Count 700, ALT 205, ALKP 2085, T. Bili 0.4, BUN/Crea 28, Gluc 360, Na/K Ratio 26, Cholesterol 934, Triglyc 1852 UA: WBC 2-3, Glucose 3+, Protein 1+ SG: 1.025

Canine

**BREED**

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

Miniature Schnauzer

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The pelvic urethra was imaged 3.0 cm beyond the cystourethral junction. The ureters were not visible which is normal. Grouping of bladder calculi were noted. The largest of which measured 0.6 cm and a grouping of which measured 1.5 cm. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

**SEX**

Neutered male

**AGE**

9 years

The **kidneys** presented a relatively uniform cortical hyperechogenicity when compared to the renal medulla, spleen and liver. No overt masses were noted. Corticomedullary definition was nebulous and the ratio favored the cortex slightly. The ureters were not visible and assumed to be normal. These changes are most consistent with chronic interstitial nephritis yet infiltrative disease could not be entirely ruled out without biopsy though neoplasia is not suspected. Slight pyelectasia was noted. Slight mineralization was noted in both kidneys. The right kidney measured 7.1 cm. The left kidney measured 7.5 cm.

**WEIGHT**

32 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**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 2.21 x 0.68 cm at the caudal pole and 0.5 cm at the cranial pole. The right adrenal gland measured 1.78 x 1.03 cm at the cranial pole and 0.5 cm at the caudal pole.

**IMAGING PERFORMED BY**

Jessica Miller, RDMS

**HOSPITAL NAME**

Animal Care Center of  
Flanders

**Spleen**

The **spleen** was diffusely hyperechoic to the falciform fat, possible amyloid accumulation. Hyperechoic structure was noted just cranial to the spleen. This measured approximately 2.0 cm with a hyperechoic granulation bed. I suspect abscessation with the potential for distorted lymph node.

**REFERRING VET**

Dr. Hallihan

**Liver**

**INVOICE**

96496

The **liver** revealed coarse architecture and generalized enlargement. The gallbladder and common bile duct were unremarkable. There was no evidence of post hepatic obstruction.

**DATE**

3/1/22



**PATIENT**

**Gastrointestinal**

Max Scholz

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.

**SPECIES**

Canine

**BREED**

**Pancreas**

Miniature Schnauzer

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Some parenchymal remodeling, however, with mild deviation from curvilinear normalcy was observed. Pancreatic duct and capsular irregularities were present consistent with age related changes. If pain upon imaging (+ Murphy sign) was present or if the patient is focally painful in subxiphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

**SEX**

Neutered male

**AGE**

**Heart**

9 years

Rapid view of the heart revealed no evidence of pathology.

**WEIGHT**

**ULTRASONOGRAPHIC FINDINGS**

32 lbs

Bladder calculi. Non-obstructive at the time of the sonogram. However, the patient may be passing calculi periodically.

**INTERPRETED BY**

Swollen kidneys.

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

Hyperechoic liver and spleen, non-specific.

Cranial abdominal abscess or distorted lymph node.

**IMAGING PERFORMED BY**

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Jessica Miller, RDMS

The axillary mass in this patient is concerning. A well organized lipoma is possible; however, sarcoma is a concern. FNA is indicated. The second mass that needs to be removed is most consistent with lipoma in the subcutaneous space.

**HOSPITAL NAME**

Animal Care Center of  
Flanders

Given the bilirubin elevations I recommend FNA of the spleen, undefined structure cranial to the spleen and liver. Eventual cystotomy is warranted in this patient. Three view thoracic radiographs are recommended to assess for thoracic metastasis. The hyperechoic portion of the spleen is likely a secondary change from the diabetic state.

**REFERRING VET**

Dr. Hallihan

**Potential Causes of Diabetic Dysregulation**

**INVOICE**

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

96496

UTI

**DATE**

Dietary indiscretion/intolerance

3/1/22



**PATIENT**

Pancreatitis

Max Scholz

Hyperthyroidism/hypothyroidism

Exogenous steroids (including topical eye meds)

**SPECIES**

Cushing's

Canine

Acromegaly

**BREED**

Owner compliance

Miniature Schnauzer

Insulin quality issues

Antibodies to insulin

**SEX**

Underlying Neoplasia

Neutered male

Diffuse liver disease

**AGE**

9 years

**WEIGHT**

32 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Jessica Miller, RDMS

**HOSPITAL NAME**

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**REFERRING VET**

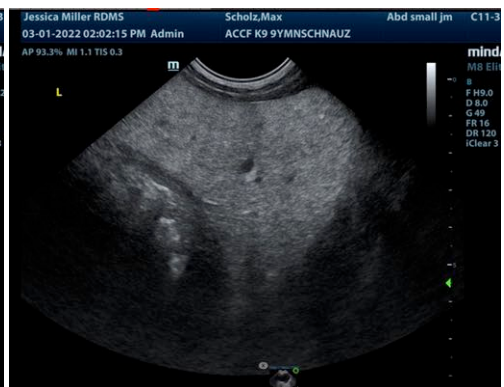
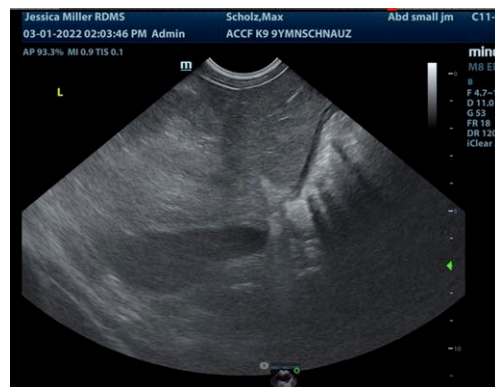
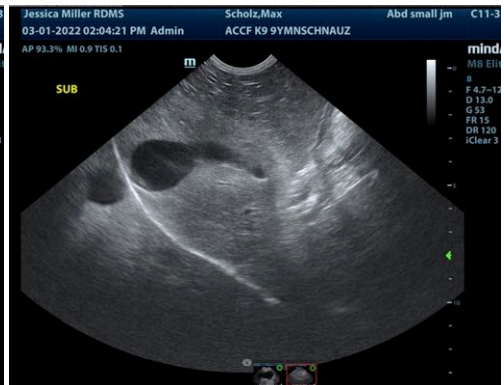
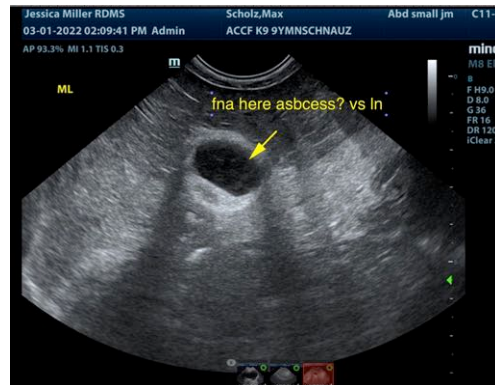
Dr. Hallihan

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Max Scholz

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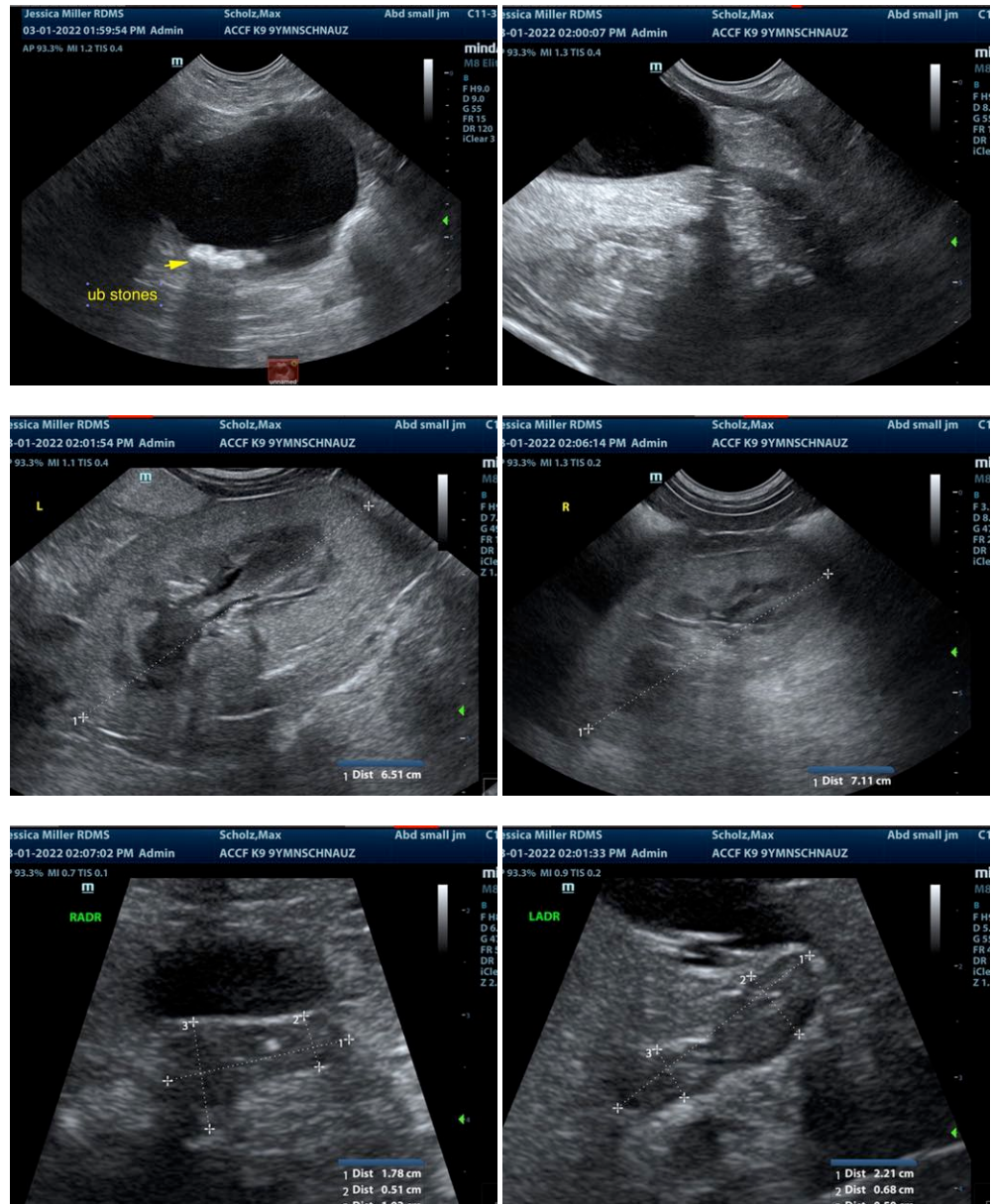
Dr. Hallihan

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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  
info@SonoPath.com