

PATIENT

Abby Arntz

SPECIES

Feline

BREED

Domestic Shorthair

SEX

Spayed female

AGE

10 years

WEIGHT

8.7 lbs

INTERPRETED BY

Eric Lindquist, DMV,
DABVP, Cert. IVUSS,
CFO of SonoPath.com

IMAGING PERFORMED BY

Kelly Vazquez, CVT

HOSPITAL NAME

Sova AH

REFERRING VET

Dr. Wentworth

INVOICE

18204

DATE

11/25/22

PRESENTING CLINICAL SIGNS

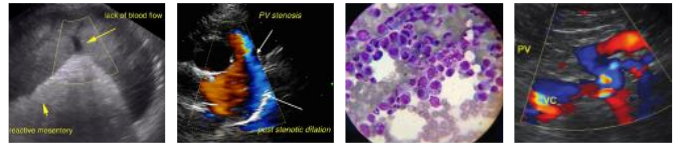
History: Patient with history of stomatitis - all teeth removed, configusconduliacsis (autoimmune), chronic URI was recently seen at ER facility on 10/31/2022 for lethargy, no interest in eating or drinking and coughing. Ultrasound performed at ER found "changes consistent with acute pancreatitis". Patient was treated with Convenia, and went home with SQ fluids 100 mls SID PRN, mirtazapine and Cerenia already at home. Patient presents today for similar symptoms as previous, ADR, no vomiting or diarrhea, not eating well, lethargy; noisy "wet" upper airways sounds heard upon presentation. Wheezing was heard on physical exam and concern for possible pleural effusion vs. other- echo added. Patient DID eat at 8:30am. Current meds: mirtazapine transdermal, clavacin 62.5 mgs 1 tab BID, NaCL 100 ccs. and Immunoquin.
Abnormal PE/Chem/CBC/UA Results: WBC 23.16 (previously 29.6), Neuts. 20.9 (was 28.4), monocytosis (was low), persistent lymphopenia.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm)	LVIDd (cm)	LVWd (cm)	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT	--	144	0.57	1.01	0.57	47	83
FELINE CARDIAC PARAMETERS	LA/AO (Boon)	LA/AO HEART BASE (Sisson)	LA 2D 4-chamber long axis AS to FW (Sisson) (cm)	LVOT VEL. (m/s)	RVOT VEL. (m/s)	IVRT (m/)	
NORMAL PARAMETER	<1.5	0.88-1.79	0.7-1.7	<1.6	<1.3	40-60	
PATIENT	1.1	1.1	--	--	.87	NM	
Adapted from June Boon, Veterinary Echocardiography, 1998 Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705							

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. The cranial and caudal **mitral** valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. The **left ventricle** presented thicknesses with linear contour and was not dilated nor restricted. The **myocardium** presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. **Contractility** of the ventricular walls was adequate and in normal range for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions of the myocardium. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinesis. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonary outflow** tract assessment revealed



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normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). No visible **pericardial** or free pleura fluid was noted. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window.

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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.

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The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some minor 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 this age patient. Medullary structure differed distinctly from that of the cortex. Some pyelectasia was noted in the right kidney. The right kidney measured 3.6 cm. The left kidney measured 3.41 cm.

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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 0.28 cm.

WEIGHT

8.7 lbs

The region of the **right adrenal gland** revealed no evident pathology.

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Spleen

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

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 presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.

Gastrointestinal

The **stomach** was overdistended with chyme. The upper duodenum was unremarkable. This change is most consistent with metabolic ileus. The small intestine and colon were unremarkable.

Pancreas

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Some mild 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

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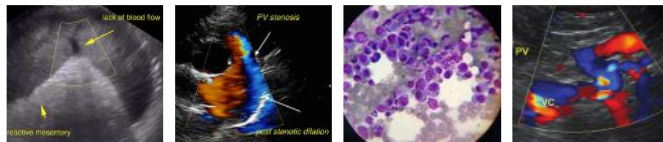
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subxyphoid palpation then low-grade smoldering chronic pancreatitis should be suspected. The left limb measured 0.8 cm.

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Other

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A large amount of **thoracic fat** was noted in this patient.

Feline

ULTRASONOGRAPHIC FINDINGS

BREED

- Nonspecific abdominal changes, largely age-related with minor irregular pancreas and gastric stasis
- Volume contracted spleen
- Large amount of thoracic fat
- Normal echocardiogram

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Spayed female

Some level of resolving pancreatitis is likely in this patient. Systemic infectious disease such as bartonella should be considered.

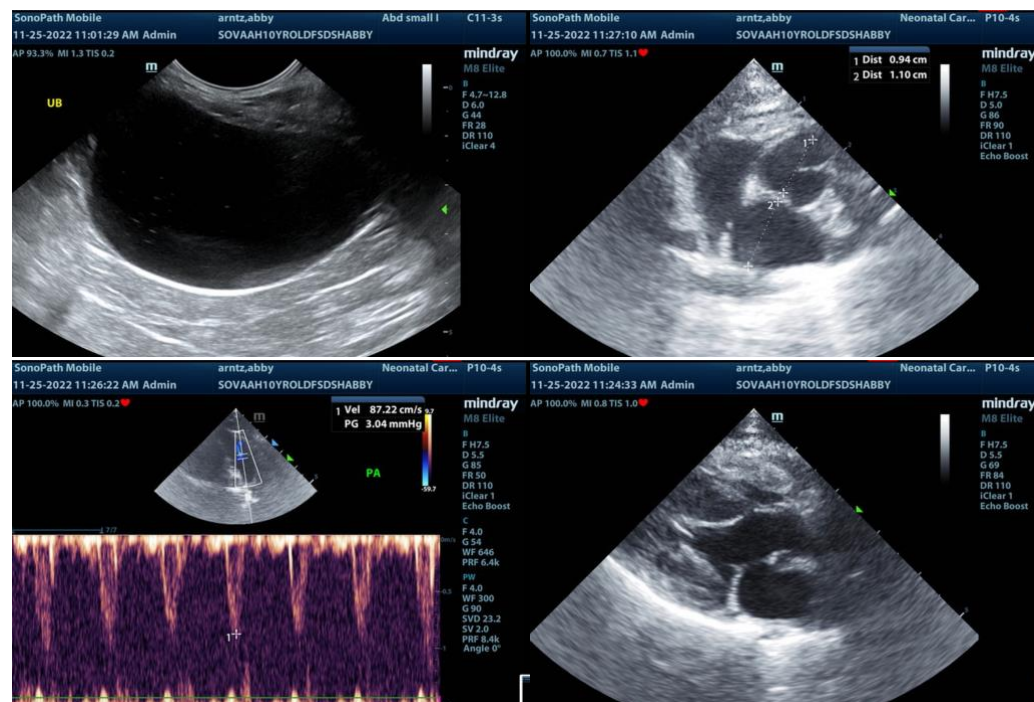
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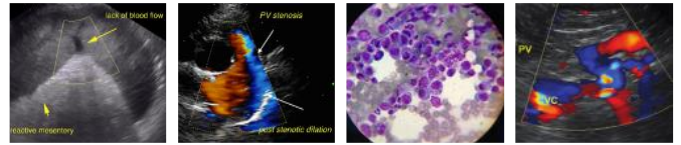
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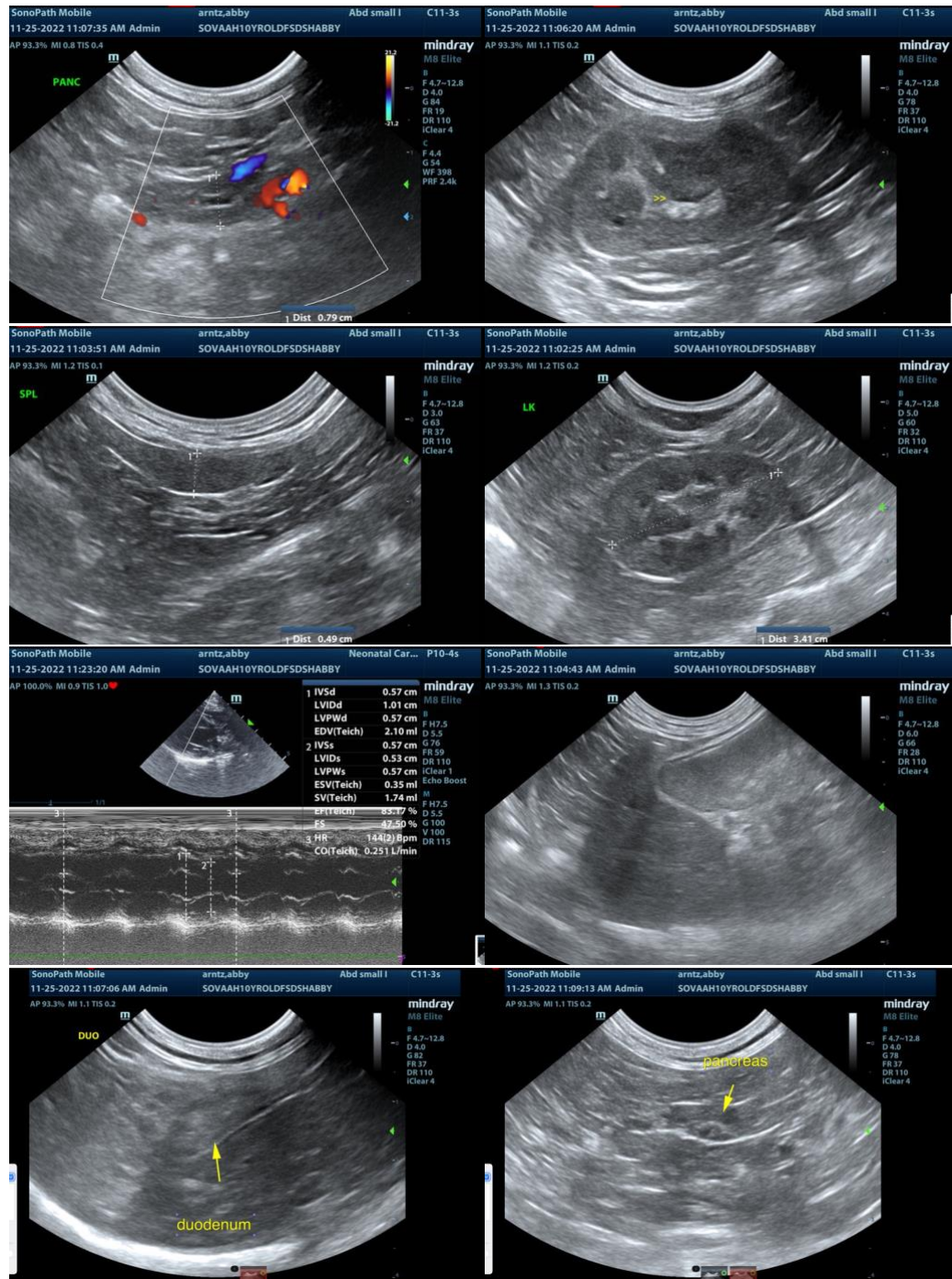
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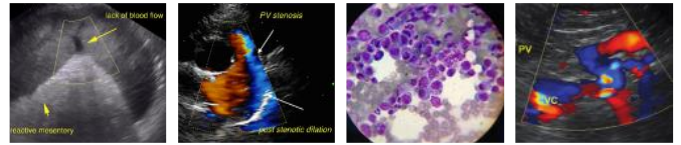
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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