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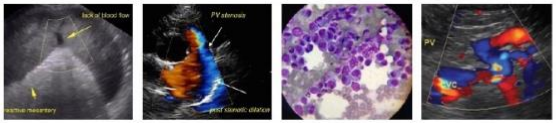


THE FOCAL ZONE
IMAGING PERFORMED BY
289-808-2608 info@thefocalzone.com

**PATIENT**

Clara Feldman

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Spayed Female

**AGE**

11 Years

**WEIGHT**

5.3 kg

**INTERPRETED BY**

Eric Lindquist, DMV DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Crystal Hill

**HOSPITAL NAME**

Hamilton Regional Emergency Clinic

**REFERRING VET**

Dr. Hill

**INVOICE**

23075

**DATE**

6/26/23

## PRESENTING CLINICAL SIGNS

History: In March 2022, Clara was presented to VEC South for similar clinical signs. Reportedly seen by IM; scope performed which found gastroduodenal polyps; surgically removed; unknown biopsy results. Since late May/early June 2023, the owners noticed decreased appetite. Presented to MOVEH on June 8th for work-up and hospitalization. Stable at home after discharge until yesterday AM, when the owners noticed inappetence again. Clara has not eaten since then. She is hiding and lethargic. No vomiting or diarrhea observed by the owners. June 8-12th hospitalization at MOVEH - Cardiology work-up reportedly unremarkable (report unavailable) - Abdominal ultrasound: "free fluid, concerning for overall nodular mesentery but not overt nodules, cystic structures in region of pancreas (periprostatic cysts versus carcinomatosis (or other neoplasm))"DIGISTAT abdominal fluid cytology = modified transudate (TP 4.4g/dL) Today: - mild dehydration - grade II/VI parasternal heart murmur - moderate amount of peritoneal effusion - uncomfortable abdomen Current Medications Gabapentin (100mg PO PRN), methadone (0.2mg/kg IM once)

Abnormal PE/Chem/CBC/UA Results: Bloodwork pending.

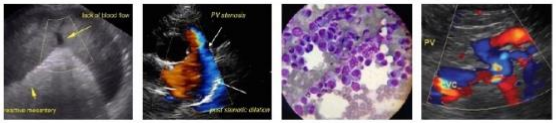
## ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

| **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** | -- | 231 | 0.58 | 1.21 | 0.58 | 59 | 92 |
| **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** | 1.19 | 1.3 | 1.2 | | 1.20 | 1.00 | 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 LA measurements. The cranial and caudal **mitral** valve leaflets presented normal linear structure and kinetics. The **left ventricle** presented normal 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 and angles 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 or chamber overload. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinetics. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonic**





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

### *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 largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some mild 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 and no evidence of pelvic dilation was present. The left kidney measured 3.5 cm. The right kidney measured 3.73 cm.

### *Adrenal Glands*

The regions of the **adrenal glands** revealed no evident pathology.

### *Spleen*

The **spleen** revealed slight scalloping contour. The spleen was relatively normal in size.

### *Liver*

The **liver** was slightly heterogenous. The gallbladder and common bile duct were unremarkable. No hepatic vein dilation was present.

### *Gastrointestinal*

The **stomach** itself was unremarkable. Intestinal thickening was noted in the jejunum with loss of structural detail, enveloped by surrounding omentum. Hypoechoic areas of undifferentiated tissue were noted in the region of the pancreas and small intestine.

### *Pancreas*

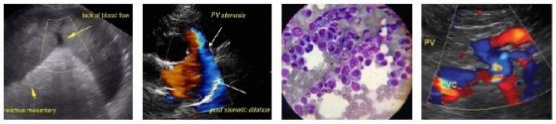
Variable areas of hypoechoic irregular **pancreatic** tissue were noted, much of which was obscured owing to enhanced omentum.

### *Free Abdomen*

**Free fluid** was noted in the abdomen with heterogenous omental changes and hypoechoic structures consistent with lymph nodes, nodules or metastatic spread.

## ULTRASONOGRAPHIC FINDINGS

- Normal echocardiogram- no evidence of pathology.
- Variable intestinal thickening
- Pancreatic and omental nodular changes
- Free fluid
- Slightly heterogenous liver





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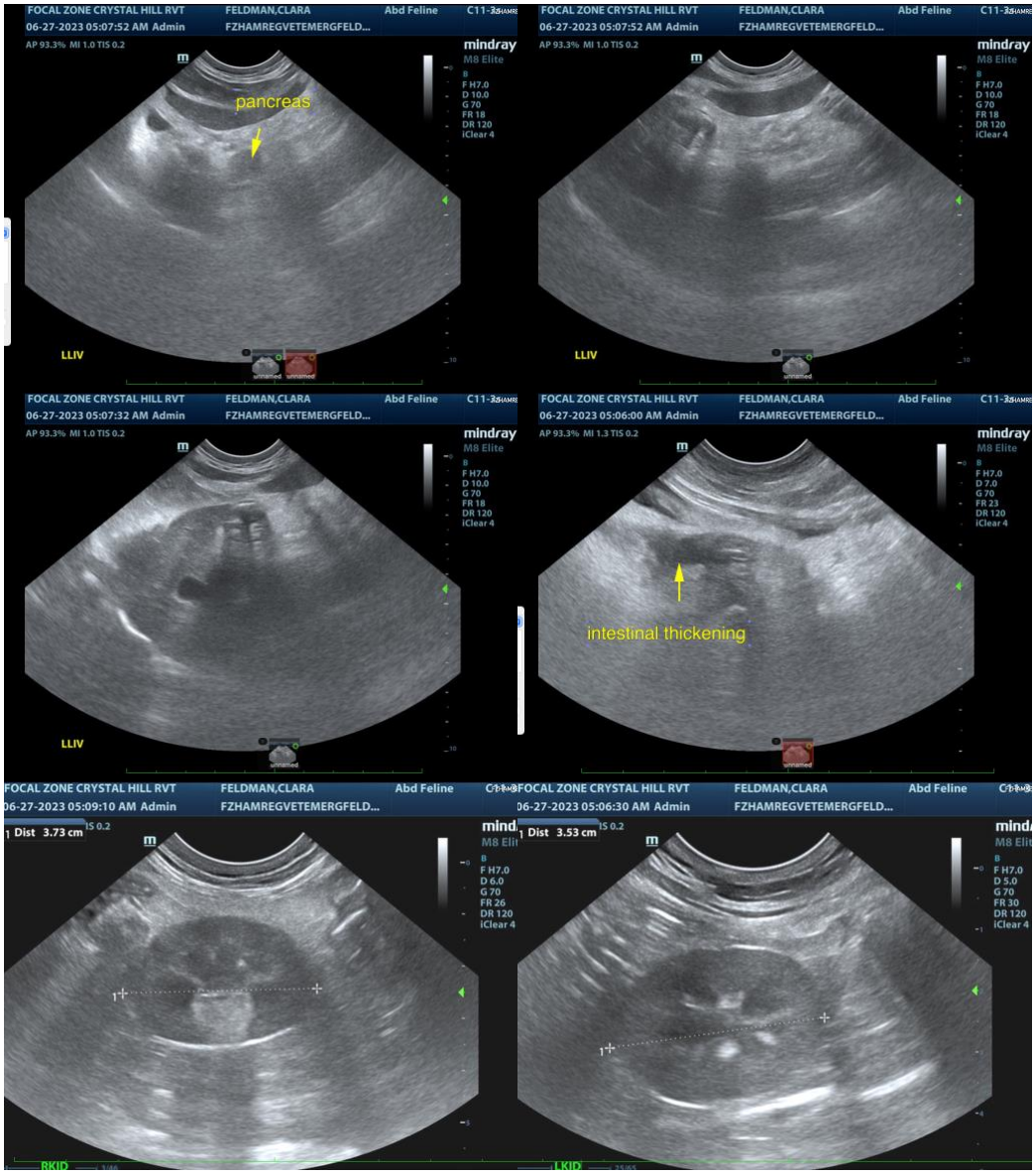
- Scalloping contour to the spleen
- Age-related renal changes

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The changes in the abdomen are strongly consistent with carcinomatosis, lymphomatosis, or similar Cytospin of the free fluid and FNA of the hypoechoic structures could be considered for further definition. Prognosis is guarded to poor. Otherwise, exploratory surgery would be necessary to assess for potential intestinal perforation. If septic abdomen is noted on abdominocentesis with cytospin, then exploratory surgery is indicated, however, the abdominocentesis with cytospin may allow for a definitive diagnosis of carcinomatosis, lymphomatosis or similar.



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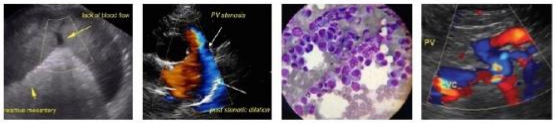

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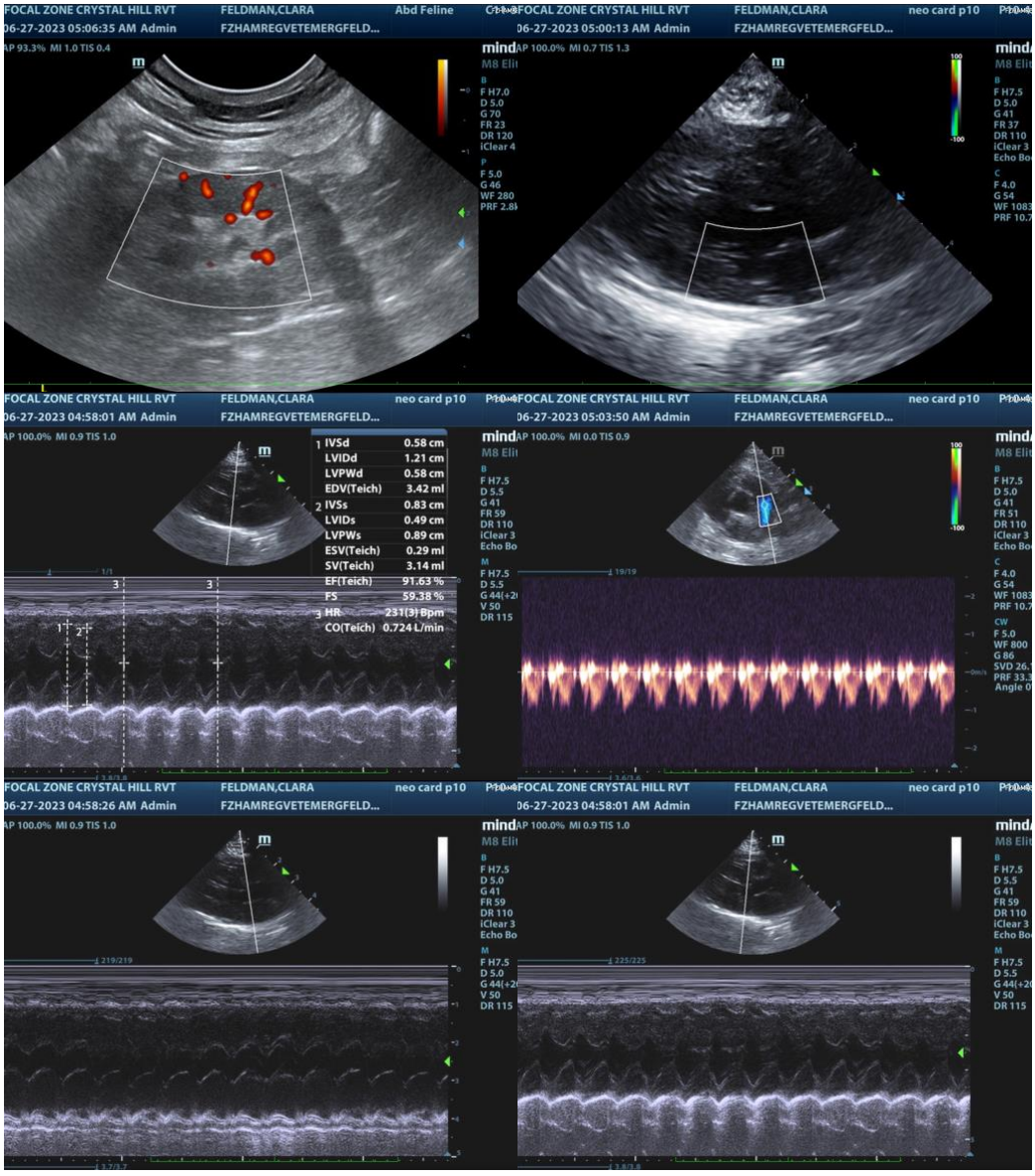


**The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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
info@SonoPath.com