


**PATIENT**

Charlie Sommer

**PRESENTING CLINICAL SIGNS**

febrile, vomiting, hyporexia, pleural effusion concern for underlying neoplasia vs FIP cytology of pleural effusion- predominant neutrophilia Current meds Dex SP Unasyn, IVF

**SPECIES**

Feline

Abnormal PE/Chem/CBC/UA Results: HCT 26% Retics 111K WBC 18 K ALT 154 ALP 115 Chol 245

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN**
**BREED**

DSH

**SEX**

Neutered Male

**AGE**

7 Years

**WEIGHT**

10.4 Pounds

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		210	0.5	1.2	0.5	40	
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	1.15	1.3	1.7		1.3	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							

**INTERPRETED BY**

Eric Lindquist, DMV

DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Jenn

**HOSPITAL NAME**

Rockaway AH

**REFERRING VET**

Dr. Maniar

**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** tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). Slight pleural effusion noted. This is not cardiogenic. Comet tail lung pattern also noted.

**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** 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



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changes are most consistent with chronic interstitial nephritis yet infiltrative disease could not be entirely ruled out without biopsy though neoplasia is not suspected. The right kidney measured 4.42 cm. The left kidney measured 4.54 cm.

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Feline

**Adrenal Glands**

The regions of the **adrenal glands** were unremarkable.

**Spleen**

**BREED**

DSH

The **spleen** was enlarged with scalloping contour, measuring 1.3 cm. Reactive spleen versus emerging round cell neoplasia.

**Liver**

**SEX**

Neutered Male

The **liver** was mildly enlarged and revealed coarse architecture and increased portal markings. The gallbladder and common bile duct were unremarkable.

**Gastrointestinal**

**AGE**

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The **gastrointestinal** presentation revealed mild uniform prominence of the gastric mucosa as well as areas of "ropey" 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.

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**Pancreas**

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

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**ULTRASONOGRAPHIC FINDINGS**

- Normal echocardiogram, no evidence of pathology
- Splenohepatomegaly
- Interstitial nephrosis
- IBD GI pattern
- Non-cardiogenic pleural effusion

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**REFERRING VET**

Dr. Maniar

Thoracic neoplasia, pleuritis less likely, FIP possible. Pleurocentesis and immediate cytospin recommended if not already performed in this fashion. Chest CT would be ideal. FNA of the spleen and liver also ideal. History of cholangitis and reactive spleen or emerging round cell neoplasia possible.

**INVOICE**

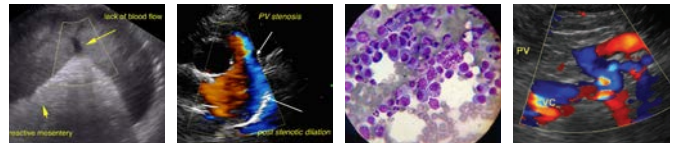
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**ABOUT SONOPATH CT SERVICES:**

**SonoPath CT Services** are offered at the SonoPath Imaging and Veterinary Education Center, 141 Main St (rt 206), Andover, New Jersey, a 20-minute drive west on route 80/206 North from the route 80/287 interchange/Parsippany, New Jersey. More information can be found at <https://sonopath.com/services/sonopath-ct-services>



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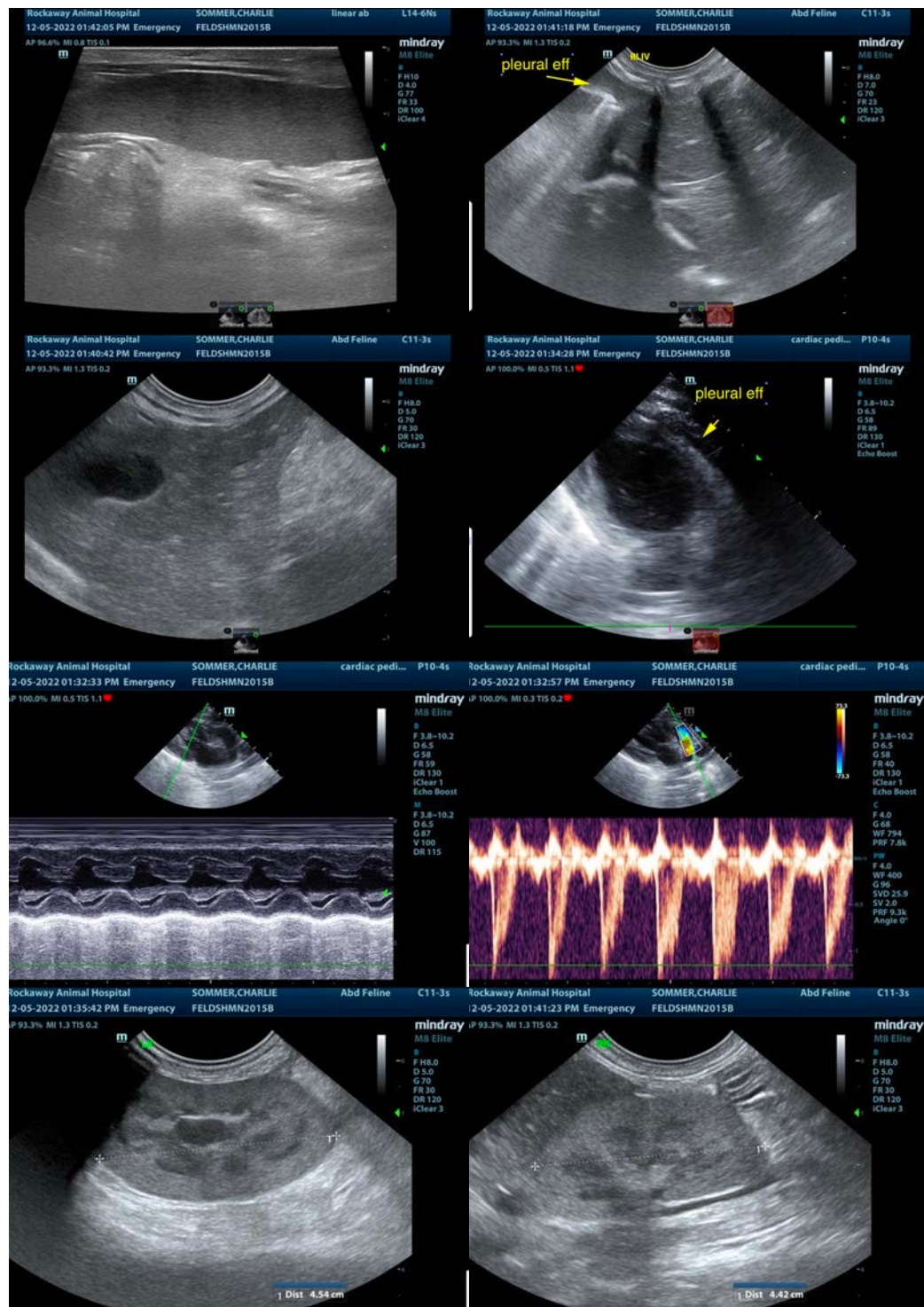
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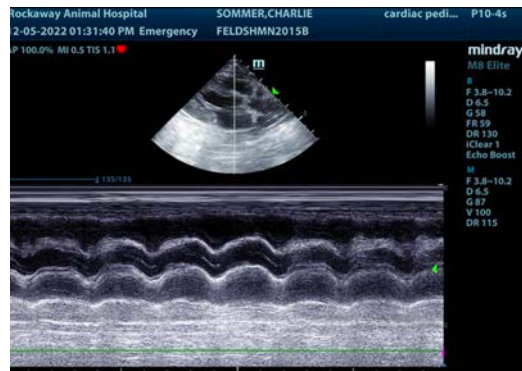
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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