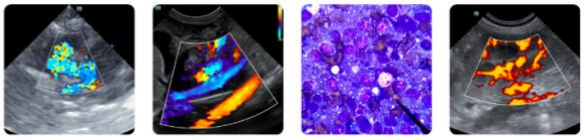


PATIENT

Vida Hagan

SPECIES

Canine

BREED

Retriever Mix

SEX

Spayed Female

AGE

12 Years 6 Months

WEIGHT

34.2 kg

INTERPRETED BY

Eric Lindquist, DMV, DABVP(CFM), Cert. IVUSS

IMAGING PERFORMED BY

Dr. Mariusz Chmielinski DVM

HOSPITAL NAME

Apex Veterinary Services LTD

REFERRING VET

Alpine 24/7 ER Doctor

INVOICE

13698

DATE

02/10/26

PRESENTING CLINICAL SIGNS

- Recheck following treatment for suspected pneumonia diagnosed ~1 month ago based on thoracic radiographs (alveolar pattern).
- Treated medically with clinical improvement.
- Currently: intermittent cough, often associated with excitement; no respiratory distress.
- Appetite, drinking, and activity level returned to normal.
- Previous abdominal radiographs raised concern for possible cranial abdominal mass.

Abnormal PE/Chem/CBC/UA Results: BAR, well hydrated T: 38.6°C | HR: 123 bpm | RR: 40 MM pink/moist, CRT <2 sec Cardiovascular: no murmur or arrhythmia ausculted Respiratory: normal bronchovesicular sounds, no crackles or wheezes Abdomen: soft, non-painful, no palpable masses Thoracic Radiographs: Subjective cardiomegaly Generalized mild increase in lung opacity Abdominal Radiographs : Mineralization over liver area (liver vs age-related rib change)

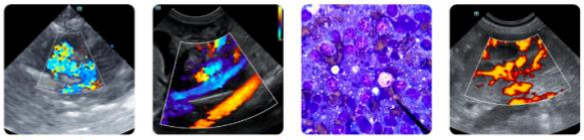
ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (M-Mode)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
PATIENT	--	--	1.3	1.4	29	56	0.26
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV MAX** (m/s)	**BODY WEIGHT** (kg)	**LAD** LA MAX 4 Chamber	**LVIDd** Avg; 2D and m-mode short axis (cm)	**LVIDs** Avg; 2D and m-mode short axis (cm)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6				
PATIENT	70	1.4	0.85	34.2	3.7	4.35	--

E-wave Velocity: 0.60

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 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 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



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thickness. **Pulmonary outflow** 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. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window.

Urinary System

The **bladder** in this patient was mildly thickened with slight echogenic mural changes. No calculi or masses were noted. Slight micropolypoid changes were noted. This is a frequent finding in older animals and may be linked to a history of chronic urinary tract infection or active urinary tract infection. Urinalysis would be recommended with culture if any evidence of inflammatory sediment is present. The region of the trigone and visible pelvic urethra were normal. Apical wall thickness measured 0.50 cm.

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 his age patient. Medullary structure differed distinctly from that of the cortex. Nonobstructive renal calculi were present. The left kidney measured 6.63 cm in length. The right kidney measured 6.7 cm in length.

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 0.56 cm width at the cranial pole and 0.61 cm width at the caudal pole. The right adrenal gland measured 0.62 cm width at the caudal pole and 0.74 cm width at the cranial pole.

Spleen

The **spleen** revealed a focal hypoechoic nodule located in the mid body measuring 1.12 cm.

Liver

The **liver** revealed multifocal biliary calculi. The calculi were nonobstructive at the time of the sonogram. The gallbladder was unremarkable with normal size and contour and a mildly echogenic wall. The biliary calculi appeared to be in the mid liver and occupying portions of the cystic duct and proximal common bile duct. Minor gallbladder sand was present.

Gastrointestinal

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. Some minor mucosal speckling was noted in the small intestine yet not clinically significant.

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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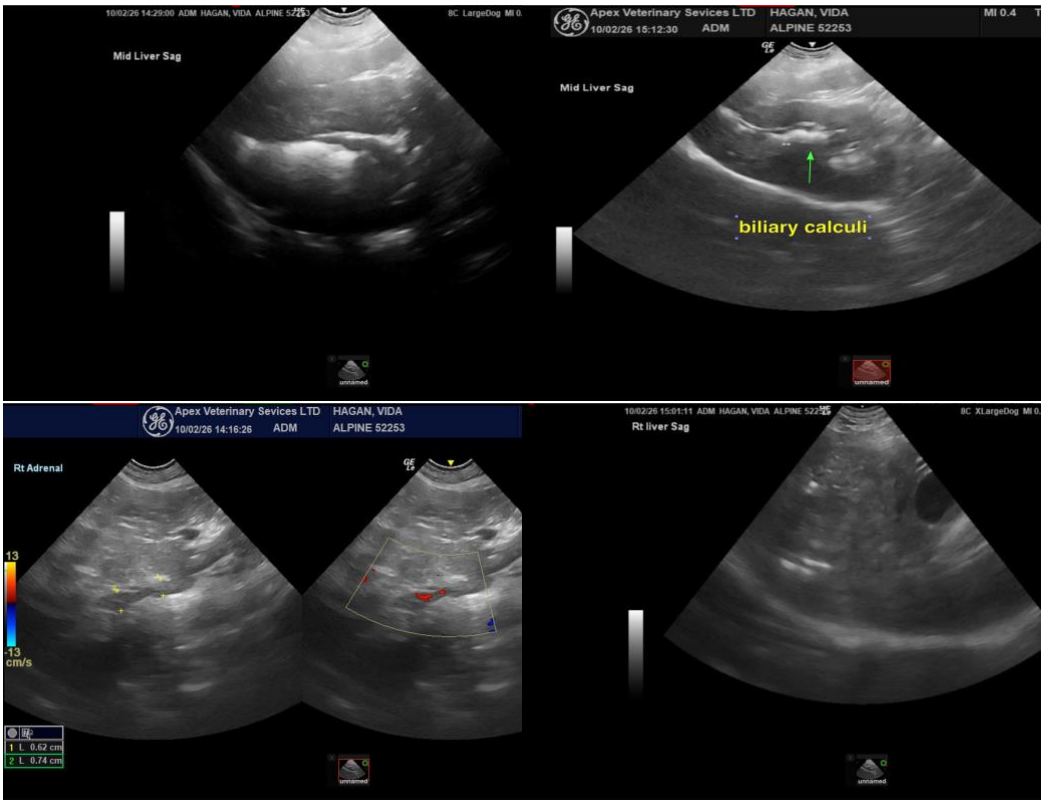
ULTRASONOGRAPHIC FINDINGS

- Normal echocardiogram with no evidence of pathology.
- Focal splenic nodule- likely hyperplasia over emerging round cell neoplasia or hemangiosarcoma. Should be monitored.
- Minor apical bladder wall thickening.
- Nonobstructive biliary calculi.
- Minor gallbladder sand.
- Intestinal mucosal speckling- not clinically significant.
- Age-related abdominal changes otherwise.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Full urinary work up is warranted if not already performed. 25-gauge FNA of the splenic nodule is indicated. Ursodiol therapy could be considered in this patient +/- bile acid profile, however, the Ursodiol is highly variable in effectiveness regarding dissolution of biliary calculi. Ursodiol over an 8 week period and recheck sonogram is indicated to assess the splenic nodule and the hepatic presentation.

The cough in this patient is noncardiogenic in origin.



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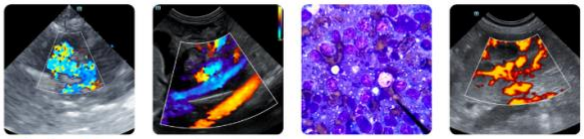

Clinical Sonography & Telecytology
Educational Teleconsultation Services™

SonoPath.com info@sonopath.com 1.800.838.4268

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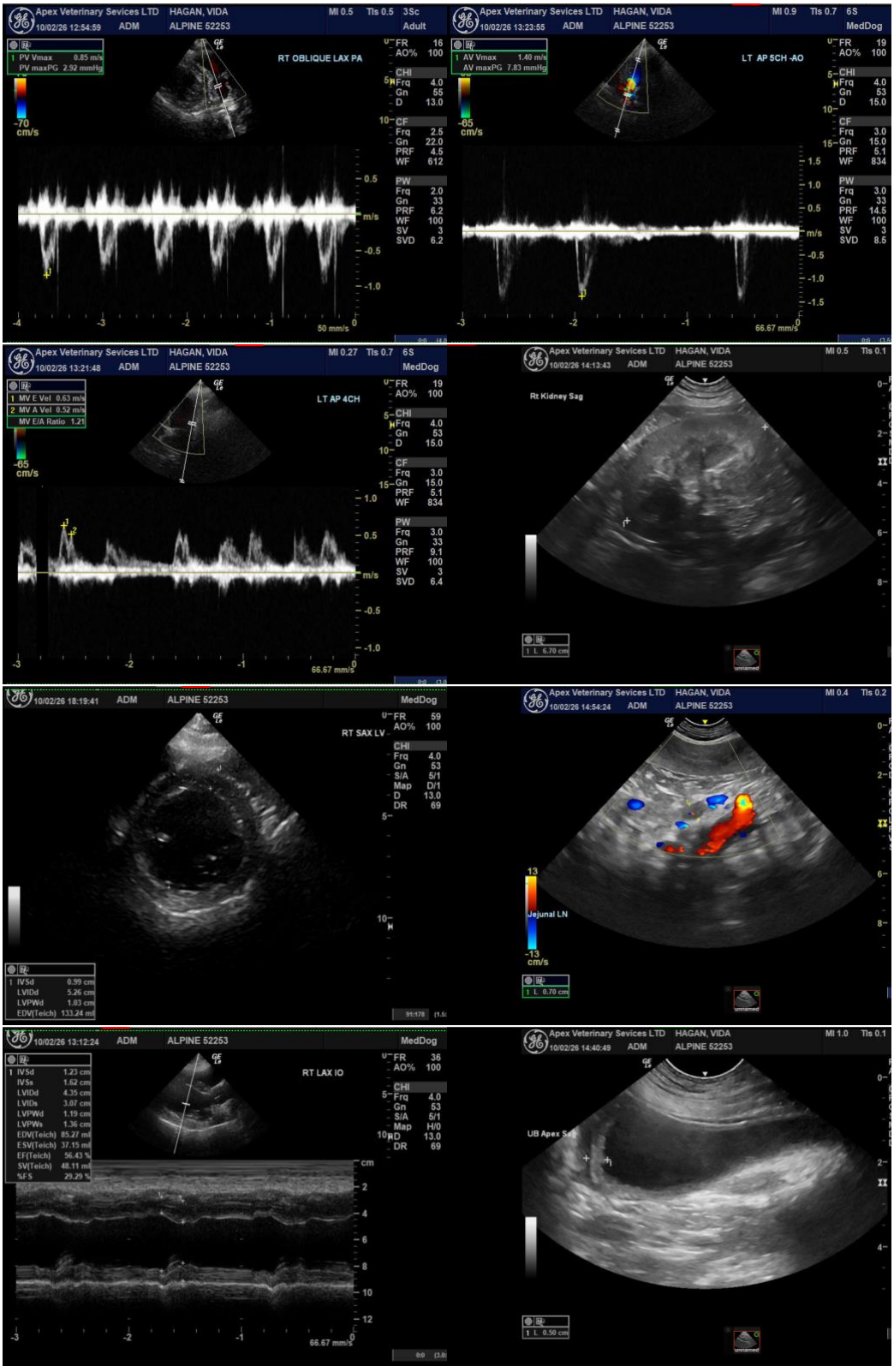

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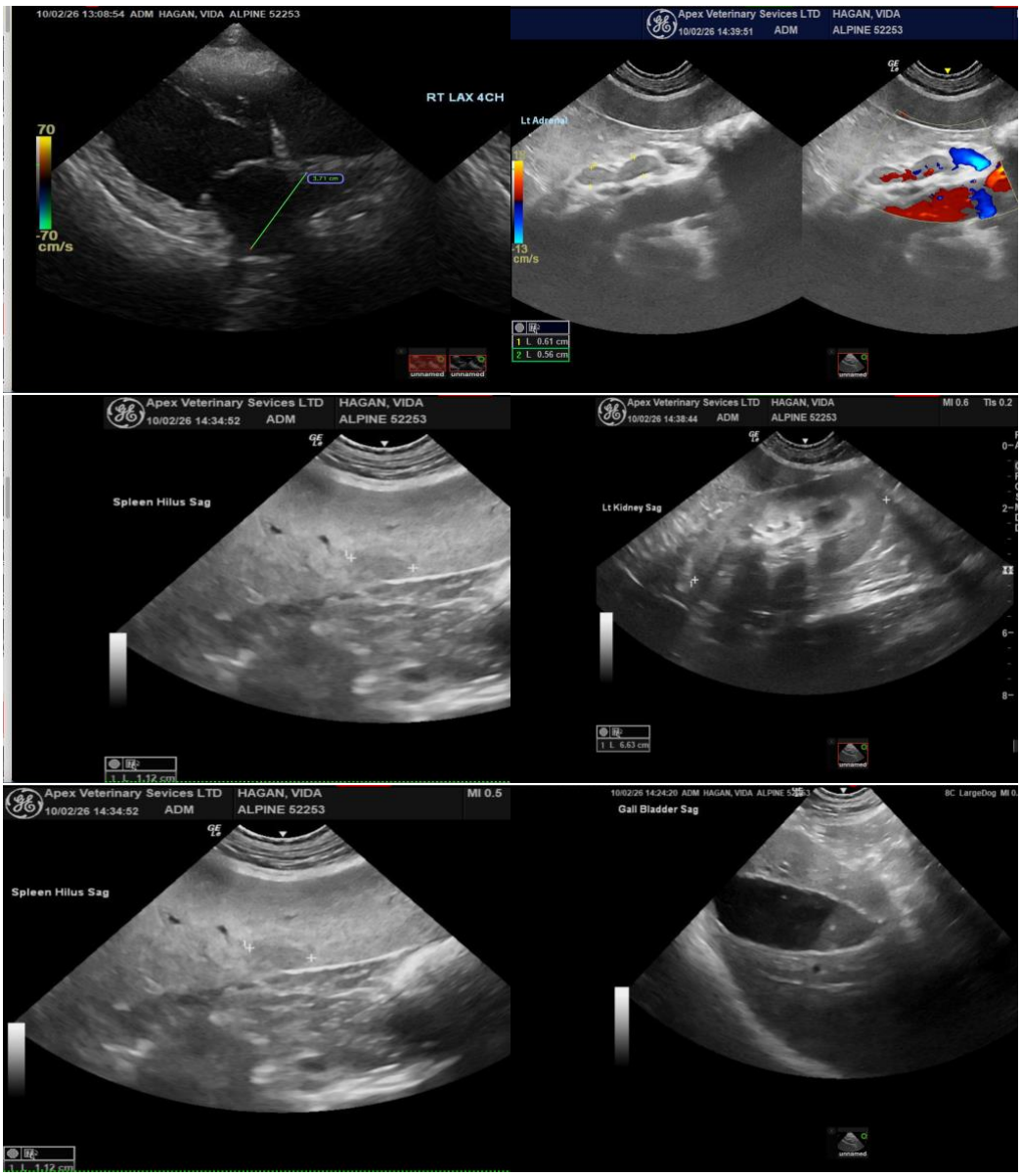

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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(CFM), Cert. IVUSS,

CEO, Owner, Founder -- SonoPath.com

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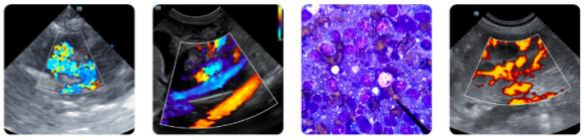

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