

## PATIENT

Arnie Penner

## SPECIES

Canine

## BREED

Shepherd x

## SEX

Neutered Male

## AGE

8 Years

## WEIGHT

49 kg

## INTERPRETED BY

Greg Kuhlman, DVM,  
DACVIM (SAIM)

## IMAGING PERFORMED BY

Dr. Iacovides

## HOSPITAL NAME

Tuxedo Animal  
Hospital

## REFERRING VET

Dr. Anderson

## INVOICE

74793

## DATE

4/28/26

## PRESENTING CLINICAL SIGNS

3/28/26 acute onset of vomiting and lethargy. 3/31/26 March 31st - L hock - punctate bleeding area with bruising - soft ball sized firm irregular intra abdominal mass - irregular heterochoic on u/s - exploratory surgery was planned but postponed due to thrombocytopenia. April 9 recheck and dog is feeling better and CBC parameters improved. Abdominal ultrasound wished to confirm suspect diagnosis of splenic hemangiosarcoma and to assess if any evidence of metastasis and prognosis if surgery was to be pursued

Abnormal PE/Chem/CBC/UA Results: CBC 3/28/25 HCT .282 (0.373-0.62) Retic 2.4% WBC 29x10e9/l (5.1-16.8) Neutr 23.1 (2.95-11.6) Lymp 0.9 (1.05-5.1) Mono 4.8 (0.16-1.12) Plt 87 (148-484) CBC 4/9/26: HCT 0.35 (0.37-0.62) Retic 6.9% WBC 31.81 Neut 24.14 Mono 4.77 Plt 187 CHEM: ALP 337 u/l (23-212) Bili totl 49 umol/l (0-15)

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### Urinary System

The bladder is moderately distended with anechoic urine. No uroliths are seen. The bladder wall is normal in appearance and thickness. No masses are seen.

The right kidney presents normal size (8.0 cm) with normal shape and architecture. Normal corticomedullary distinction. No pyelectasia, ureteral dilation or nephrolithiasis.

The left kidney presents normal size (7.6 cm) with normal shape and architecture. Normal corticomedullary distinction. No pyelectasia, ureteral dilation or nephrolithiasis.

### Adrenal Glands

The caudal pole of the right adrenal gland presents normal shape and homogenous parenchyma. The phrenic vasculature is unremarkable. The caudal pole measures 7.5 mm.

The left adrenal gland presents normal shape and homogenous parenchyma. The phrenic vasculature is unremarkable. The cranial pole measures 5.0 mm and the caudal pole measures 7.8 mm.

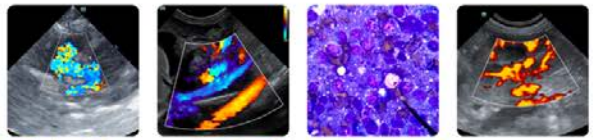
### Spleen

The spleen is diffusely enlarged and hypoechoic with markedly irregular shape. Mild decreased blood flow.

### Liver

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion. Several pockets of scant free fluid are present surrounding the liver. No evidence of metastatic disease seen within the liver.

The gallbladder contains a moderate amount of debris. The gallbladder wall is diffusely hyperechoic. A scant pocket of free fluid is noted in the ventral aspect of the gallbladder.



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## *Gastrointestinal*

The stomach and intestines have normal wall layering and thickness. The stomach is gas-filled. Colon contains a moderate amount of formed stool. Colon wall appears normal.

## *Pancreas*

The visible pancreas is normal in size with normal echogenic parenchyma and surrounded by normal peri-pancreatic mesentery.

## *Free Abdomen*

There are no enlarged abdominal lymph nodes seen on this exam. No free abdominal fluid is seen.

Included cardiac images show a moderate amount of pericardial effusion. There is what appears to be a right atrial mass present measuring 2.3 cm x 2.5 cm.

## ULTRASONOGRAPHIC FINDINGS

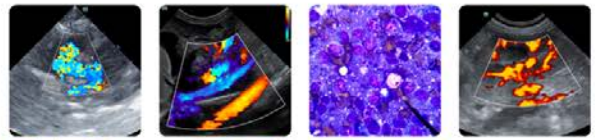
- Heterogeneous liver – most likely a normal variation.
- Enlarged, irregular, hypoechoic spleen – Consistent with a neoplastic process such as infiltrative neoplasia, round cell neoplasia, lymphoma, mast cell, histiocytic sarcoma, or possibly primary splenic neoplasia, hemangiosarcoma. The appearance of the spleen is unlikely to be infectious or benign.
- Suspect right atrial mass.
- Pericardial effusion.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the appearance of the gallbladder and the patient's elevated bilirubin, there is concern for possible bacterial cholangitis. Recommend bile aspirate with submission for aerobic and anaerobic culture and cytology to determine if bacterial cholangitis is present, or empirical treatment with Ursodiol and an antibiotic such as Amoxicillin.

Recommend fine needle aspirate of the spleen with submission for cytology to rule out round cell neoplasia. Consider splenectomy. However, the patient does have images of their heart included, and a mild amount of pericardial effusion is present as well as what appears to be a right atrial mass.

Given the presence of the right atrial mass and pericardial effusion, prognosis is poor to guarded. Prior to performing splenectomy, recommend 4dx testing to rule out any kind of vector borne disease, although unlikely. Also recommend pericardiocentesis for fluid analysis and cytology. I suspect the mass in the right atrium is a hemangiosarcoma, making prognosis poor to guarded as previously mentioned. Given the cardiac finding, splenectomy may not be warranted, as it may not benefit the patient long-term.



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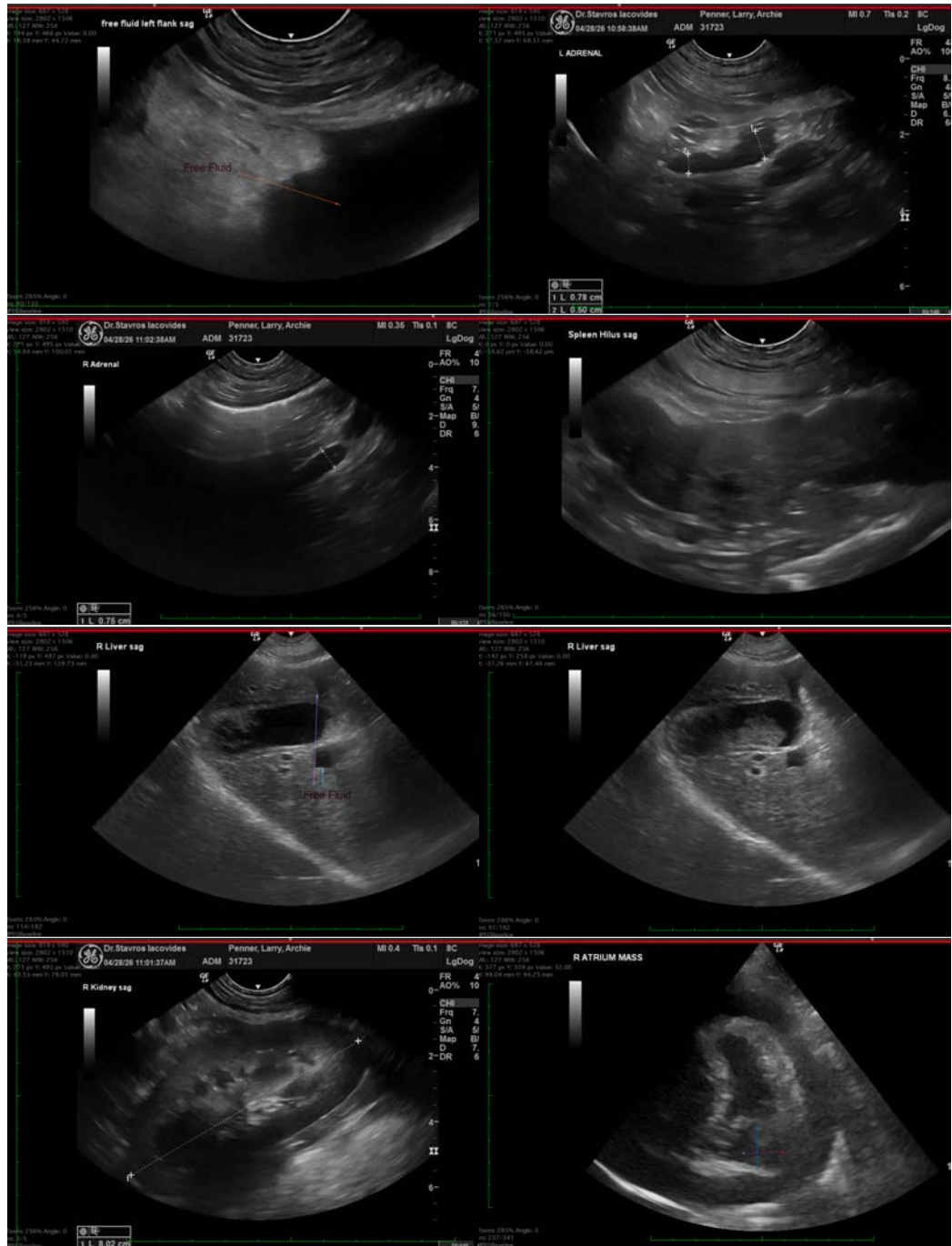
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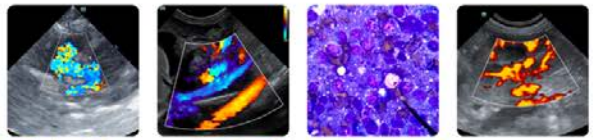
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Greg Kuhlman, DVM, DACVIM (SAIM)

Veterinary Internal Medicine Specialist  
[info@SonoPath.com](mailto:info@SonoPath.com)