



# Hepatology

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# Chief Complaint

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Tessa is a 6 year old chocolate Labrador retriever with a history of anorexia, weight loss, distended abdomen and polyuria and polydipsia. .

# Tessa

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# History

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Lethargy

Anorexia and weight loss

Polyuria /Polydipsea

Distended abdomen

# Physical Examination

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- Temperature normal
- Up to Date on all vaccinations
- Lethargic
- Poor hair coat and body condition
- Jaundice
- Ascites

# Problem List

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- Weight Loss
- Lethargic
- PU/PD
- Icterus
- Ascites

# Rule Outs

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- List all the Possible Diagnoses
- *This list is your Rule Out list*

# Rule Outs

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- Hepatic Neoplasia
- Canine Hepatitis
- Chronic Active Hepatitis (Immune Mediated)
- Cholelithiasis - blocked Bile Duct
- Drugs and Toxins: Trimethoprim sulfate, Carprofen (Rimadyl) Acetamenophen
- IMHA – Immune Mediated Hemolytic Anemia



# The Plan

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- What is your PLAN ?

# Plan

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- CBC
- Blood Serum Chemistry
- Abdominal Radiograph
- Abdominocentesis
- U/A

# Laboratory Findings

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- RBC –  $4.0 \times 10^3$  (5.5-11.0)
- PCV – 30 ( 37-55 )
- ALKP – 300 u/l (14-111)
- ALT – 500 u/L ( 10-100)
- BUN – 4.5 mg/dl (7.0-27)
- Glucose – 60 mg/dl (70-143)
- Albumin – 1.8 g/dl (2.3-4.0)

# Rule Outs

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- What diseases are likely or unlikely from the laboratory findings, clinical signs and history?

# Rule Outs

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- Canine Hepatitis – unlikely -young unvaccinated dog
- Hepatic Neoplasia – unlikely usually older dogs
- Blocked Bile Duct – usually very high SAP
- Chronic Hepatitis (Immune Mediated) – likely
- Drugs and Toxins: Trimethoprim sulfate, Carprofen (Rimadyl )unlikely no history of ingestion

# Abdominal Effusion Results

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- Protein 2.0 g/ dl ( >3.0 g/dl)
- Nucleated cell count – 400 nucleated cell/ul
- ( >500 nucleated cell/ul

# Abdominal effusion ?

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- Is this a:
  - Transudate
  - Modified Transudate
  - Exudate

# Transudate

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- *Transudate*
- Clear and colorless
- Protein < 2.5 g/dL
- Specific gravity < 1.018
- Cells < 1000/mm<sup>3</sup>-neutrophils and mesothelial cells



# Modified Transudate

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- *Modified Transudate*
- Red or pink; may be slightly cloudy
- Protein 2.5-5.0 g/dL
- Specific gravity  $> 1.018$
- Cells  $< 5000 / \text{mm}^3$ -neutrophils, mesothelial cells, erythrocytes, and lymphocytes

# Exudate

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- *Exudate (Septic)*
- Red, white, or yellow; cloudy
- Protein  $> 4.0$  g/dL
- Specific gravity  $> 1.018$
- Cells 5000-100,000/mm<sup>3</sup>-neutrophils, mesothelial cells, macrophages, erythrocytes, lymphocytes, and bacteria

# Laboratory Findings

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- List the abnormal laboratory findings
- Discuss the abnormal laboratory findings

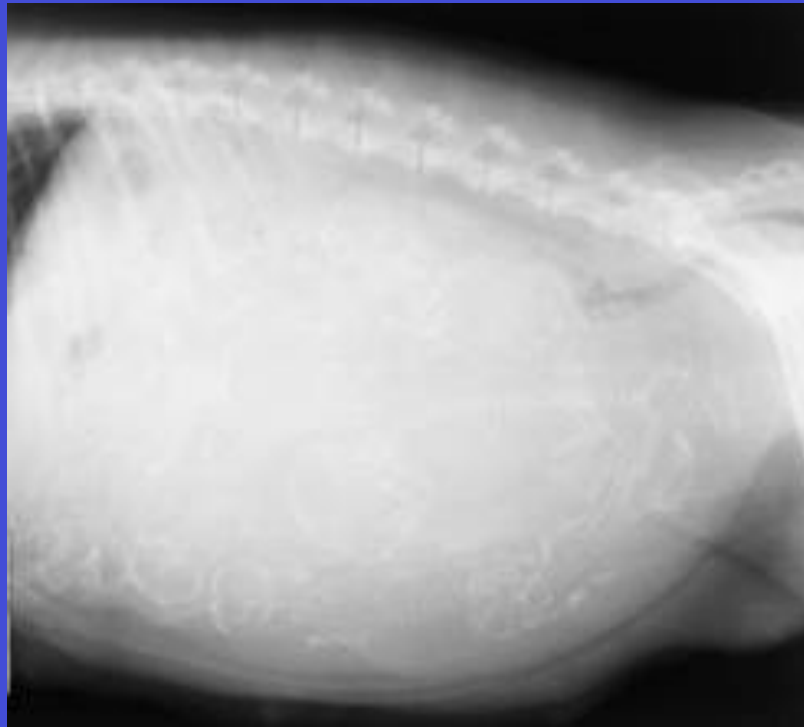
# Assesment of Laboratory Findings

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- RBC –  $4.0 \times 10^3$  (5.5-11.0) - anemic
- PCV – 30 ( 37-55 ) - anemia
- ALKP – 300 u/l (14-111) – liver function
- ALT – 500 u/L ( 10-100) – liver function
- BUN – 4.5 mg/dl (7.0-27) – low in liver Dz
- Glu – 60 mg/dl (70-143) – low in liver dz
- Albumin – 1.8 g/dl (2.3-4.0 – low in liver dz
- Abdominocentesis - Transudate

# Abdominal Radiograph

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# Abdominal Radiograph

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- What do you see?

# Abdominal Radiograph

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- Ascites

# What is your Diagnosis?

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- Assessing the clinical signs, laboratory findings and the radiograph what is your diagnosis?



# Diagnosis

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- Chronic Active Hepatitis

# Confirm the Diagnosis

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- What further test would you order to confirm your diagnosis?

# Confirm Your Diagnosis

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- Liver Biopsy

# Treatment Plan

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- B- Soluble Vitamins
- Ascites: Na restricted diet, diuretics
- Diet – Balanced diet not protein restricted
- Vitamin E
- S-Adenosylmethionine
- Ursodeoxycholic Acid
- Prednisone

# Prognosis

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- What is the Prognosis?

# Prognosis

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- Guarded to Poor.



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The End





































































