

**An Integrated View of Hepatobiliary Diseases in Cats and Dogs**  
**Live Virtual Course**  
**September 27-29, 2021**

Thank you to our *Premier Sponsor*



| Monday, September 27, 2021 |  |  |
|----------------------------|--|--|
| Time<br>(Mountain Time)    | Topic  | Presenter(s)   |
| 8:00-8:15 am               | <b>Welcome and Introductions</b>   | <i>Dr. Jonathan Lidbury</i>                              |
| 8:15-9:15 am               | Copper-Associated Chronic Hepatitis – Genes vs. Environment <ul style="list-style-type: none"> <li>• Understand the role of mutations in ATP7A, ATP7B and COMMD1 in different dog breeds.</li> <li>• Understand the role of diet as an environmental factor in the pathogenesis of copper-associated hepatitis.</li> </ul>   | <i>Dr. Hille Fieten</i>                                  |
| 9:15-10:15 am              | Copper-Associated Chronic Hepatitis – Update on Treatment <ul style="list-style-type: none"> <li>• Understand chelation therapy in copper-associated hepatitis.</li> <li>• Review strategies for the prevention of re-accumulation of copper.</li> <li>• Implement breed-specific treatment and monitoring approaches toward copper-associated hepatitis.</li> </ul>   | <i>Dr. Hille Fieten</i>                                  |
| 10:15-10:30 am             | <b>Break</b>   |  |
| 10:30-11:30 am             | Sonographic Imaging of Hepatobiliary Diseases in Cats and Dogs <ul style="list-style-type: none"> <li>• Distinguish sonographic findings of hepatobiliary biliary tract inflammation, neoplasia, vascular/biliary cystic anomalies and mucoceles.</li> <li>• Identify sonographic diagnosis of portal vein thrombosis and acquired shunting, extrahepatic biliary obstruction and pancreatitis.</li> <li>• Have awareness of the function of contrast enhanced ultrasound and elastography.</li> </ul>   | <i>Dr. Angela Marolf</i>                                 |
| 11:30 am-12:30 pm          | <b>Lunch Break</b><br><b>11:50 am-12:30 pm: Lunch and Learn – Sponsored by Royal Canin</b><br><br>Copper's Role in the Body <ul style="list-style-type: none"> <li>• Understand the functional role of copper in the body.</li> <li>• Compare and contrast the ADME of copper in normal dogs and dogs affected with copper overload diseases</li> <li>• Describe the various diseases seen due to copper deficiency and copper overload.</li> <li>• Understand the methods used to quantitatively assess copper and their limitations</li> </ul> | <i>Dr. Adrienne Bautista</i><br><i>Dr. Danielle Dito</i> |

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| 12:30-1:30 pm              | CT and MRI Imaging of Hepatobiliary Diseases in Cats and Dogs <ul style="list-style-type: none"> <li>• Appreciate the use of CT multiplanar reconstructions and different MRI planes to assist in evaluation the hepatobiliary system and pancreas.</li> <li>• Recognize the value of intravenous contrast with CT/CT angiography and MR imaging in distinguishing different disease processes.</li> <li>• Understand CTA imaging in portal vein thrombosis, acquired shunting, extrahepatic biliary obstruction and pancreatitis.</li> </ul> | <i>Dr. Angela Marolf</i>   |
| 1:30-2:30 pm               | Getting the Most Out of Your Liver Biopsy <ul style="list-style-type: none"> <li>• Understand the impact of different types of liver biopsies on pathologic interpretation.</li> <li>• Be familiar with the impact of good communication between pathologist and clinician.</li> <li>• Understand the value of different special stains, when to request them, if needed, and how to interpret the results.</li> </ul>  | <i>Dr. John Cullen</i>   |
| 2:30-2:45 pm               | <b>Break</b>  |  |
| 2:45-3:45 pm               | An Introduction to Hepatic Histology for Internists <ul style="list-style-type: none"> <li>• Be familiar with the normal histology of the liver.</li> <li>• Understand descriptive terminology of injured liver and associated prognosis.</li> <li>• Assess the histologic description of various hepatic or biliary diseases of the liver.</li> </ul>  | <i>Dr. John Cullen</i>   |
| 3:45-4:45 pm               | Immune-Mediated Chronic Hepatitis in Dogs <ul style="list-style-type: none"> <li>• Understand the clinical, biochemical and histopathologic features of immune-mediated hepatitis.</li> <li>• Recognize the challenges in diagnosing immune-mediated hepatitis.</li> <li>• Explore the current and emerging treatment options for immune-mediated hepatitis.</li> </ul>   | <i>Dr. Tarini Ullal</i>  |
| 4:45-5:45 pm               | Group Panel Discussion/Q&A: Controversies in Canine Chronic Hepatitis <ul style="list-style-type: none"> <li>• Recognize the controversies regarding case selection for copper chelation therapy.</li> <li>• Recognize gaps in our knowledge regarding optimal immunomodulatory therapy for canine chronic hepatitis.</li> <li>• Appreciate challenges when imaging the canine hepatobiliary system.</li> <li>• Appreciate challenges when histologically grading and staging chronic hepatitis.</li> </ul>                                   | <i>Dr. John Cullen,<br/>Dr. Jonathan Lidbury,<br/>Dr. Angela Marolf,<br/>Dr. Tarini Ullal<br/>Dr. Valerie Parker</i> |

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| Tuesday, September 28, 2021 |  |                           |
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| Time<br>(Mountain Time)     | Topic  | Presenter(s)              |
| 8:00-9:00 am                | Nutritional Management of Hepatobiliary Disease - Part I <ul style="list-style-type: none"> <li>• Describe an optimal nutritional plan for a dog or cat with copper hepatopathy.</li> <li>• Review nutritional options for dogs and cats with portosystemic shunts, with and without hepatic encephalopathy.</li> <li>• Discuss how to optimize a home-cooked diet for various liver diseases.</li> <li>• Review how to make the best recommendations for supplements for liver disease.</li> </ul>  | <i>Dr. Valerie Parker</i> |
| 9:00-10:00 am               | Nutritional Management of Hepatobiliary Disease - Part II <ul style="list-style-type: none"> <li>• Review optimal nutritional plan for a cat with hepatic lipidosis.</li> <li>• Discuss how to optimize a home-cooked diet for various liver diseases.</li> <li>• Review how to make the best recommendations for supplements for liver disease.</li> </ul>  | <i>Dr. Valerie Parker</i> |
| 10:00-10:15 am              | <b>Break</b>   |                           |
| 10:15-11:15 am              | Feline Non-Suppurative & Lymphoproliferative Cholangitis <ul style="list-style-type: none"> <li>• Recognize clinical and clinicopathologic features of feline NS-CCHS, including those unique to symptomatic ductopenia.</li> <li>• Know the expected bile duct:artery and bile duct:portal tract metrics needed to confirm ductopenia to ensure ductopenia has not been overlooked.</li> <li>• Recognize need to collect intestinal biopsies from duodenum, jejunum, ileum and samples from any prominent lymph nodes; open laparotomy or laparoscopic assisted sampling preferred to needle biopsy sampling.</li> <li>• Be able to consider secondary sclerosing ductopenia that might be confused with ductopenic feline NS-CCHS</li> </ul> | <i>Dr. Sharon Center</i>  |
| 11:15 am-12:15 pm           | Feline Suppurative Cholangitis <ul style="list-style-type: none"> <li>• Recognize clinical signs, clinicopathologic metrics of feline S-CCHS.</li> <li>• Recognize causal disorders and common confusion with “idiopathic feline pancreatitis” caused by transiting choleliths that may be difficult to image with US.</li> <li>• Recognize best bacterial culture strategies.</li> <li>• Recognize commonality of infection and high likelihood of polymicrobial infection if only an anaerobic bacterial isolate is reported.</li> <li>• Be familiar with survival advantage for disorders correctable by cholecystectomy (esp., cholelithiasis) and alleviation of biliary stasis.</li> </ul>   | <i>Dr. Sharon Center</i>  |

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| Time<br>(Mountain Time)     | Topic  | Presenter(s)   |
| 12:15-1:15 pm               | <b>Lunch Break</b><br><b>12:45-1:15 pm: Lunch and Learn – Sponsored by Royal Canin</b><br><br>Open Forum Discussion with Pet Food Industry Partners  | <i>Dr. Adrienne Bautista</i><br><i>Dr. Vincent Biourge</i><br><i>Dr. Craig Datz,</i><br><i>Dr. Danielle Dito</i> |
| 1:15-2:15 pm                | Biliary Tract Disease in Dogs: Mucocoeles <ul style="list-style-type: none"> <li>• Be familiar with breed risk and antecedent conditions increasing risk for GBM.</li> <li>• Recognize clinical and clinicopathologic features that have survival-risk relevance.</li> <li>• Describe the evolution of GBM maturation which assists case triage for surgical intervention.</li> <li>• Recommend reasonable pre- and post-surgical interventions that assist recovery.</li> <li>• Be aware of unusual cases of intra-abdominal extruded GBM.</li> </ul>   | <i>Dr. Sharon Center</i>   |
| 2:15-3:15 pm                | Biliary Tract Disease in Dogs: Cholecystitis, Cholangitis, Cholelithiasis <ul style="list-style-type: none"> <li>• Explain differential diagnoses for Non-GBM GB conditions including disorders leading to EHBDO.</li> <li>• Describe the pathogenesis of canine cholelithiasis and associated comorbidities.</li> <li>• Recognize GB hemobilia as a cause of serious enteric bleeding, associated US findings, diagnostic utility of color flow doppler, and association with neuroendocrine neoplasms.</li> <li>• Recognize the importance of cholecystectomy in most GB disorders, unless biliary enteric anastomosis is a realistic consideration.</li> <li>• Understand what is meant by ductopenia and ischemic cholangiopathy.</li> </ul> | <i>Dr. Sharon Center</i>   |
| 3:15-3:30 pm                | <b>Break</b>   |  |

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| Time<br>(Mountain Time)     | Topic   | Presenter(s)   |
| 3:30-4:30 pm                | Ductal Plate Malformations <ul style="list-style-type: none"> <li>• Understand the pathogenesis of ductal plate malformations.</li> <li>• Recognize the various histologic appearances of ductal plate malformations.</li> <li>• Understand the clinical implications of ductal plate malformations.</li> </ul>   | <i>Dr. John Cullen</i>   |
| 4:30-5:30 pm                | Group Panel Discussion/Q&A: Controversies in Feline Liver Disease <ul style="list-style-type: none"> <li>• Recognize the controversies regarding the clinical significance of combination of mild inflammation of the liver, small intestines and pancreas.</li> <li>• Recognize the benefits and limitations of different imaging modalities for the evaluation of the feline hepatobiliary system.</li> <li>• Recognize the benefits and limitations of cytological evaluation of the feline hepatobiliary system.</li> <li>• Recognize possible indications for surgery of the feline hepatobiliary system.</li> </ul> | <i>Dr. Sharon Center,<br/>Dr. John Cullen,<br/>Dr. Jonathan Lidbury,<br/>Dr. Angela Marolf,<br/>Dr. Valerie Parker</i> |

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| Wednesday, September 29, 2021 |   |  |
|-------------------------------|---|--|
| Time<br>(Mountain Time)       | Topic   | Presenter(s)   |
| 8:00-10:00 am                 | Hepatic Interventional Radiology: Lessons Learned Over Two Decades <ul style="list-style-type: none"> <li>• Recognize how IR techniques often provide an opportunity to better understand the disease process rather than simply providing a minimally invasive alternative treatment option.</li> <li>• Explain how IR techniques often offer superior treatment options and outcomes compared to more conventional surgical treatments.</li> <li>• Be familiar with the considerable (and growing) level of evidence that these techniques can improve the quality of life of our patients.</li> <li>• Recognize when medical management of EHBDO should be considered based on recent research.</li> </ul> | <i>Dr. Chick Weisse</i>  |
| 10:00-10:15 am                | <b>Break</b>  |  |
| 10:15-11:15 am                | Portal Hypertension: Case Series <ul style="list-style-type: none"> <li>• Understand the pathophysiology of portal hypertension.</li> <li>• Learn to differentiate the causes of portal hypertension: pre-hepatic, hepatic (pre-sinusoidal, sinusoidal, and post sinusoidal) and post-hepatic.</li> <li>• Discuss treatment options for portal hypertension in humans and animals.</li> </ul>   | <i>Dr. Tarini Ullal</i>  |
| 11:15 am-12:15 pm             | Group Panel Discussion/Q&A: EHBO – When and How to Intervene <ul style="list-style-type: none"> <li>• Recognize challenges when imaging the biliary outflow tract of dogs and cats.</li> <li>• Recognize potential indications for medical management of biliary tract disease.</li> <li>• Recognize potential indications for surgical management of biliary tract disease.</li> </ul><br>Group Panel Discussion: overall course discussion and questions, course wrap up  | <i>Dr. Tarini Ullal,<br/>Dr. Chick Weisse,<br/>Dr. Jonathan Lidbury</i><br><br><i>Dr. Sharon Center,<br/>Dr. John Cullen,<br/>Dr. Hille Fieten,<br/>Dr. Jonathan Lidbury,<br/>Dr. Valerie Parker,<br/>Dr. Tarini Ullal,<br/>Dr. Chick Weisse</i> |
| 12:15 pm                      | <b>Course Concludes</b>   |  |