ACVIM American College of Veterinary Internal Medicine | Advanced Continuing Education

North American Neuroscience Course (Brain Camp) Advanced Diagnostic Imaging
AGENDA
2022 On Demand

Advanced Diagnostic Imaging	
Topic	**Presenter(s)**
MRI Basic Physics, Sequences and Techniques: Part I • Develop a functional understanding of basic MRI physics and hardware • Describe the advantages of common MRI pulse sequences and the use of contrast media • Recognize artifacts and understand corrective actions	*Dr. John Griffin*
MRI Basic Physics, Sequences and Techniques: Part II • Develop a functional understanding of basic MRI physics and hardware • Understand the advantages of common MRI pulse sequences and the use of contrast media • Recognize artifacts and understand corrective actions	*Dr. John Griffin*
Approach to the MRI Examination of the Brain • Develop a functional understanding of how specific pulse sequences answer specific questions • Correctly classify intracranial lesions based on location • Recognize signs of increased intracranial pressure	*Dr. John Griffin*
MRI of Congenital Brain Diseases • Explain imaging features suggesting significant ventriculomegaly/hydrocephalus • Identify abnormal intracranial fluid accumulations, and understand their clinical significance • Recognize imaging findings seen with meningoencephalocele, holoprosencephaly/corpus callosum abnormalities, lissencephaly, Chiari-like malformation, and other congenital brain abnormalities	*Dr. Silke Hecht*
MRI of Brain Aging, Degenerative and Metabolic Encephalopathies • Recognize changes expected with normal canine and feline brain aging • Identify abnormalities seen with degenerative, metabolic, toxic and nutritional brain diseases in dogs and cats and rank appropriate differential diagnosis • Understand that not all bilaterally symmetric brain lesions are metabolic in etiology	*Dr. Silke Hecht*

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MRI of Vascular Brain Diseases and Brain Trauma • Recognize the appearance of ischemic brain lesions on MRI including diffusion-weighted imaging and ADC map • Identify the appearance of hemorrhage at different stages on MRI • Describe the respective merits of MRI versus CT and imaging of canine and feline head trauma	*Dr. Silke Hecht*
Clinical Cases – Brain • Develop an organized approach to the interpretation of a brain MRI study • Identify MRI sequences • Identify abnormalities on small animal brain MRI studies and derive appropriate differential diagnoses	*Dr. John Griffin,* *Dr. Silke Hecht*
MRI of Inflammatory Brain Diseases • Explain the wide variety of MRI findings with inflammatory brain diseases • Describe which imaging features are more likely to indicate inflammatory encephalopathies over neoplastic, vascular and metabolic diseases • Recognize certain inflammatory brain diseases (e.g., FIP, neospora, canine blastomycosis) based on fairly specific imaging findings	*Dr. Silke Hecht*
MRI of Brain Tumors • Develop an understanding of typical features of common brain tumors • Correctly classify intracranial lesions based on location • Derive appropriate differential diagnoses	*Dr. John Griffin*
MRI of the Vertebral Column and Spinal Cord: Part I • Develop a functional understanding of how specific pulse sequences answer specific questions • Correctly classify spinal lesions based on location • Recognize signs of spinal cord compression and aggressive bone disease	*Dr. John Griffin*
MRI of the Vertebral Column and Spinal Cord: Part II • Develop a functional understanding of how specific pulse sequences answer specific questions • Correctly classify spinal lesions based on location • Recognize signs of spinal cord compression and aggressive bone disease	*Dr. John Griffin*

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CT: Basic Principles and Brain Diseases • Understand CT windowing (window level and window width) as it pertains to small animal neuroimaging • Systematically evaluate the canine and feline brain on CT, recognize abnormalities, and rank appropriate differential diagnoses • Recognize the advantages and disadvantages of CT compared to MRI when imaging the brain	*Dr. Silke Hecht*
CT: Vertebral Column Diseases • Systematically evaluate the canine and feline spine on CT, recognize abnormalities, and rank appropriate differential diagnoses • Understand the advantages and disadvantages of CT compared to MRI when imaging the spine	*Dr. Silke Hecht*
Clinical Cases – Spinal Cord • Develop an organized approach to the interpretation of spine MRI and CT studies • Identify MRI sequences and CT windows • Identify abnormalities on small animal spine MRI and CT studies and derive appropriate differential diagnoses	*Dr. John Griffin,* *Dr. Silke Hecht*