ACVIM American College of Veterinary Internal Medicine | ADVANCED CONTINUING EDUCATION

Advanced Techniques in Neurosurgery
August 5 – 7, 2024
The Viticus Center - Oquendo Campus | Las Vegas, NV

DAY 1 Monday, August 5, 2024		
Time	**Topic**	**Presenter(s)**
7:00-7:30 am	**Registration** *Faculty to pre-meet from 7-7:30*	
7:30-7:40 am	**Welcome & Introductions**	*Dr. Amanda Taylor,* *Dr. Fred Wininger*
7:40-8:30 am	VP Shunting • Get familiar with VP shunt systems • Learn tips for surgical technique to avoid shunt failure • Recognize the indications for shunt placement • Managing common complications	*Dr. William Thomas*
8:30-8:45 am	**Break**	
8:45-10:15 am	Brain Surgeries: Transfrontal, Rostrotentorial, Alternative Methods • Assess the suitability of approaches for surgical access • Demonstrate appropriate patient positioning & surgical approach • Select/apply appropriate materials for closure • Describe anatomic landmarks for skin incision, muscle dissection and osteotomy • Determine whether zygomatic osteotomy may be necessary • Create an appropriate post-operative monitoring and treatment plan for veterinary patients undergoing these surgeries	*Dr. Amanda Taylor*
10:15 am – 12:45 pm	**Lab:** Laboratory Overview, Review Instrumentation, VP Shunt, Transfrontal, Rostrotentorial • Perform VP shunt placement • Perform rostrotentorial and transfrontal approaches • Practice approach for zygomatic osteotomy	*Dr. Nick Jeffery,* *Dr. Sharon Kerwin,* *Dr. Talisha Moore,* *Dr. Amanda Taylor,* *Dr. William Thomas,* *Dr. Fred Wininger*

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DAY 1 (continued) Monday, August 5, 2024		
Time	**Topic**	**Presenter(s)**
12:45-1:45 pm	**Lunch**	
1:45-2:35 pm	Foramen Magnum Decompression with Titanium Mesh • Review indications for foramen magnum decompression • Review anatomy of region • Learn technique for application of titanium mesh over craniectomy	*Dr. William Thomas*
2:35-2:50 pm	**Break**	
2:50-4:50 pm	**Lab:** Laboratory Overview, Review Instrumentation, Foramen Magnum Decompression, Minimally Invasive Techniques • Perform Foramen Magnum Decompression • Review minimally invasive spine approaches	*Dr. Nick Jeffery,* *Dr. Sharon Kerwin,* *Dr. Talisha Moore,* *Dr. Amanda Taylor,* *Dr. William Thomas,* *Dr. Fred Wininger*
5 pm	**Welcome Reception** *Faculty to debrief first 15 minutes*	

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DAY 2 Tuesday, August 6, 2024		
Time	**Topic**	**Presenter(s)**
7:00-7:30 am	*Faculty to pre-meet from 7-7:30*	
7:30-8:20 am	AO Principles of Fracture Management • Determination of presence of fracture • Principles of stabilization • Indications for different stabilization techniques in spine	*Dr. Sharon Kerwin*
8:20-8:35 am	**Break**	
8:35-9:25 am	Available Techniques for Fracture Stabilization • Review use of selection of implant size and drilling • Review screws and PMMA • Review SOP use • Review polyaxial screw use	*Dr. Sharon Kerwin*
9:35-10:25 am	Indications for Thoracolumbar Stabilization, Screws and PMMA, and How to Plan a Stabilization Case • Understand anatomical challenges of thoracolumbar stabilization • Learn appropriate corridors for thoracolumbar stabilization • **Review CT Planning software** • **Learn how to plan stabilization angles and implant size based on CT planning**	*Dr. Talisha Moore*
10:25-11:00 am	Lateral Corpectomy and Durotomy • Recognize when these approaches might be useful • Recognize anatomical landmarks and practical approaches	*Dr. Nick Jeffery*
11:00 am – 1:00 pm	**Lab:** Laboratory Overview, Review Instrumentation, Thoracolumbar Stabilization, Lateral Corpectomy, Durotomy • **Faculty Demonstration of Lateral Corpectomy on Cadaver** • Demonstrate and perform all approaches. • Identify important bony landmarks. • Perform stabilization with Pins and "PMMA"	*Dr. Nick Jeffery,* *Dr. Sharon Kerwin,* *Dr. Talisha Moore,* *Dr. Amanda Taylor,* *Dr. William Thomas,* *Dr. Fred Wininger*

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DAY 2 (continued) Tuesday, August 6, 2024		
Time	**Topic**	**Presenter(s)**
1:00-1:50 pm	**Lunch**	
1:50-2:20 pm	Lumbosacral Decompression and Stabilization with Polyaxial Implant Systems • Recognize indications for stabilization • Recognize anatomical landmarks and practicalities • Review operation of polyaxial systems • Compare alternative procedures at the lumbosacral junction	*Dr. Fred Wininger*
2:20-2:50 pm	L7 Foraminotomy • Recognize indications for this procedure • Learn challenges and advantages of procedure	*Dr. Nick Jeffery*
2:50-3:05 pm	**Break**	
3:05-5:20pm	**Lab:** Laboratory Overview, Review Instrumentation, LS Decompression and Stabilization; Foraminotomy; Demo • Perform approach for lumbosacral stabilization • Perform approach for lateral foraminotomy • **Practice implantation on 3D model using 3D Printed Jigs** • Learn how to operate a polyaxial system Perform polyaxial implantation	*Dr. Nick Jeffery,* *Dr. Sharon Kerwin,* *Dr. Talisha Moore,* *Dr. Amanda Taylor,* *Dr. William Thomas,* *Dr. Fred Wininger*
5:20-6:00 pm	Distribution of CT Study and Practice Planning Stabilization • **Review case provided to planning example** • **Transform CT study into 3-dimensional images for planning with aid of instructors**	*Dr. Amanda Taylor,* *Dr. Fred Wininger*

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DAY 3 Wednesday, August 7, 2024		
Time	**Topic**	**Presenter(s)**
7-7:30 am	Faculty meet to prepare for Day 3	
7:30-7:45 am	Questions So Far	*Dr. Amanda Taylor,* *Dr. Fred Wininger*
7:45-8:35 am	Craniocervical junction: Stabilization of atlantoaxial subluxation, review of concurrent abnormalities • Demonstrate patient positioning and surgical approach to ventral aspect of the atlantoaxial joint • Select and apply appropriate implants for screw and PMMA stabilization • Review use of 3D printed models for surgical planning	*Dr. Fred Wininger*
8:35-9:35 am	Cervical Stabilization, Utilization of SOP, Caudal Cervical Spondylomyelopathy (CCSM) • Review the approach to ventral cervical spine for implant fixation • Recognize advantages and disadvantages of SOP system • Discuss the use of distraction with intervertebral spacers • **Discuss indications for stabilization v. decompression for CCSM**	*Dr. Amanda Taylor,* *Dr. Sharon Kerwin*
9:35-9:45 am	**Break**	
9:45 am – 12:15 pm	**Lab:** Laboratory Overview, Review Instrumentation, Cervical Stabilization, Atlantoaxial Stabilization, CCSM • Practice implant placement on 3D AA models • Identify and utilize anatomical landmarks to guide implant placement • Select and place screws for ventral atlanto-axial fixation with screws and PMMA within cadaver • Demonstrate ventral surgical approach to the cervical region • Utilize SOP system to stabilize caudal cervical vertebrae	*Dr. Nick Jeffery,* *Dr. Sharon Kerwin,* *Dr. Talisha Moore,* *Dr. Amanda Taylor,* *Dr. William Thomas,* *Dr. Fred Wininger*

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DAY 3(continued) Wednesday, August 7, 2024		
Time	**Topic**	**Presenter(s)**
12:15-1:00 pm	**Lunch**	
1:00-1:50 pm	Dorsal Cervical Decompression and Cervical Hemilaminectomy • Review approaches for both surgeries, • Review tips for cervical hemilaminectomy previously unpublished • Visualize landmarks for cervical hemilaminectomy	*Dr. Amanda Taylor*
1:50-2:20 pm	Ventral Slot with Mag • Review advantages of magnification in ventral slots • Review available forms of magnification	*Dr. Fred Wininger*
2:20-2:30 pm	**Break**	
2:30-5:00 pm	**Lab:** Laboratory Overview, Review Instrumentation, Dorsal Cervical Stabilization and Decompression, Cervical Hemilaminectomy, Ventral Slot, Optional MM/NN Biopsy • Faculty Demonstration of Cervical Hemilaminectomy on Cadaver • Perform approach to lateral cervical region and hemilaminectomy • **Perform dorsal cervical approach and decompression (optional based on need for neurosurgery certificate)** • Perform ventral slot with aid of magnification • Optional – perform nerve and muscle biopsy	*Dr. Nick Jeffery,* *Dr. Sharon Kerwin,* *Dr. Talisha Moore,* *Dr. Amanda Taylor,* *Dr. William Thomas,* *Dr. Fred Wininger*
5 pm	**Closing Remarks and Course Wrap Up**	*Dr. Amanda Taylor,* *Dr. Fred Wininger*
5:10 pm	Faculty Debrief	

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