

Advanced Techniques in Neurosurgery
August 20 – 21, 2021
The Viticus Center - Oquendo Campus | Las Vegas, NV

DAY 1 Friday, August 20, 2021		
Time	Topic	Presenter(s)
7:00-7:35 am	Registration	
7:35-7:45 am	Welcome & Introductions	<i>Dr. Sharon Kerwin</i>
7:45-8:15 am	Atlantoaxial Stabilization <ul style="list-style-type: none"> • Demonstrate appropriate patient positioning and surgical approach for access to the ventral aspect of the atlantoaxial joint. • Select and apply appropriate implants for screw and PMMA stabilization of the ventral aspect of the atlantoaxial joint. • Create an appropriate post-operative monitoring and treatment plan for veterinary patients undergoing ventral internal stabilization of the atlantoaxial joint. 	<i>Dr. Beth Boudreau</i>
8:15-8:45 am	Cervical Stabilization <ul style="list-style-type: none"> • Explain the approach to the ventral cervical spine for implant fixation. • Recognize the differences in implant application between the described techniques. • Discuss the use of intervertebral spacers. 	<i>Dr. Bianca Hettlich</i>
8:45-9:00am	Break	
9:00 am-12:00 pm	Lab: A-A Stabilization and Ventral Cervical Stabilization <ul style="list-style-type: none"> • Identify bony landmarks and use anatomical landmarks to guide implant placement. • Select and place screws for ventral atlanto-axial fixation with screws and PMMA. • Demonstrate ventral surgical approach to the cervical region. • Evaluate actual implant placement and suggest improvements toward ideal placement. 	<i>All</i>
12:00-12:45 pm	Lunch	

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DAY 1 (continued) Friday, August 20, 2021		
Time	Topic	Presenter(s)
12:45-1:05 pm	Thoracolumbar Dorsal Approach and Lateral Corpectomy <ul style="list-style-type: none"> Recognize when these approaches might be useful. Recognize anatomical landmarks and practical approaches. Avoid or manage intra- and post- operative complications. 	<i>Dr. Nick Jeffery</i>
1:05-1:50 pm	Thoracolumbar Stabilization and 3D Printing <ul style="list-style-type: none"> Recognize the indications for and challenges of thoracolumbar implant placement. Identify the appropriate corridors and implant types for stabilization. Gain a familiarity with the utility of 3D printing for thoracolumbar stabilization. 	<i>Dr. Fred Wininger</i>
1:50-2:15 pm	Lumbosacral Decompression, Including Minimally Invasive Techniques <ul style="list-style-type: none"> Explain patient positioning and dorsal surgical approach to the lumbosacral space. Identify landmarks and determine proper laminectomy dimensions. Discuss potential benefits of minimally invasive surgery specific for the LS space. 	<i>Dr. Bianca Hettlich</i>
2:15-2:30 pm	Lumbosacral Lateral Foraminotomy <ul style="list-style-type: none"> Recognize when this approach might be useful: what imaging and electrodiagnostic features may help. Recognize anatomical landmarks and practicalities. Compare alternative procedures at the lumbosacral junction. 	<i>Dr. Nick Jeffery</i>

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DAY 1 (continued) Friday, August 20, 2021		
Time	Topic	Presenter(s)
2:30-2:45 pm	Break	
2:45-5:45 pm	Lab: Dorsal Approach to TL; Dorsal Approach to LS; Lateral Foraminotomy; Lateral Corpectomy; (optional: Nerve and Muscle Biopsy) <ul style="list-style-type: none"> • Demonstrate and perform all approaches. • Identify important bony landmarks. • Practice obtaining appropriate biopsy samples. 	<i>All</i>
5:45-7:00 pm	Welcome Reception	

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DAY 2 Saturday, August 21, 2021		
Time	Topic	Presenter(s)
7:30-8:00 am	Bilateral Modified Transfrontal Craniotomy <ul style="list-style-type: none"> Assess the suitability of this approach for surgical access on a case-by-case basis. Demonstrate appropriate patient positioning and surgical approach for access to the precruciate cerebrum and subcortical structures. Select and apply appropriate materials for closure of the transfrontal craniectomy. Create an appropriate post-operative monitoring and treatment plan for veterinary patients undergoing transfrontal craniectomy. 	<i>Dr. Beth Boudreau</i>
8:00-8:30 am	Lateral Rostrotentorial Craniotomy <ul style="list-style-type: none"> Appropriately position a dog or cat to facilitate exposure for this approach. Describe anatomic landmarks guiding skin incision, muscle dissection and osteotomy. Decide, based on pre-operative imaging and surgical goals, when zygomatic osteotomy may be necessary 	<i>Dr. Sharon Kerwin</i>
8:30-8:45 am	Ventriculoperitoneal Shunts <ul style="list-style-type: none"> Be familiar with VP shunt systems and tips for surgical technique to avoid shunt failure. Recognize the indications for shunt placement and how to deal with common complications. 	<i>Dr. William Thomas</i>
8:45-9:00 am	Break	

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DAY 2 (continued) Saturday, August 21, 2021		
Time	Topic	Presenter(s)
9:00 am-12:00 pm	Lab: V-P Shunts; Lateral Rostrotentorial; Bilateral Modified Transfrontal <ul style="list-style-type: none"> • Demonstrate appropriate patient positioning and head stabilization. • Identify important bony and anatomical landmarks. • Practice using oscillating saw and air drill to create craniotomy. • Practice techniques for closure, zygomatic osteotomy, placement of ventricular shunt and placement of peritoneal shunt. 	<i>All</i>
12:00-12:45 pm	Lunch	
12:45-1:20 pm	Caudal Fossa Approaches - Indications and Methods <ul style="list-style-type: none"> • Be familiar with the regional anatomy involved in the surgical approach to the caudal fossa. • Recognize the indications for occipital craniotomy/craniectomy. 	<i>Dr. William Thomas</i>
1:20-1:45 pm	Dorsal and Lateral Cervical Approaches <ul style="list-style-type: none"> • Recognize when these approaches might be considered. • Recognize pathways to the vertebral bone. • Recognize common intra- and post- operative complications and how to minimize them. 	<i>Dr. Nick Jeffery</i>
1:45-2:00 pm	Break	
2:00-5:00 pm	Lab: Caudal Fossa; Dorsal and Lateral Cervical Approaches <ul style="list-style-type: none"> • Demonstrate appropriate patient positioning and head stabilization. • Practice surgical approaches. • Practice using air drill. • Practice identifying and using anatomical landmarks. 	<i>All</i>
5:00 pm	Course Concludes	

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