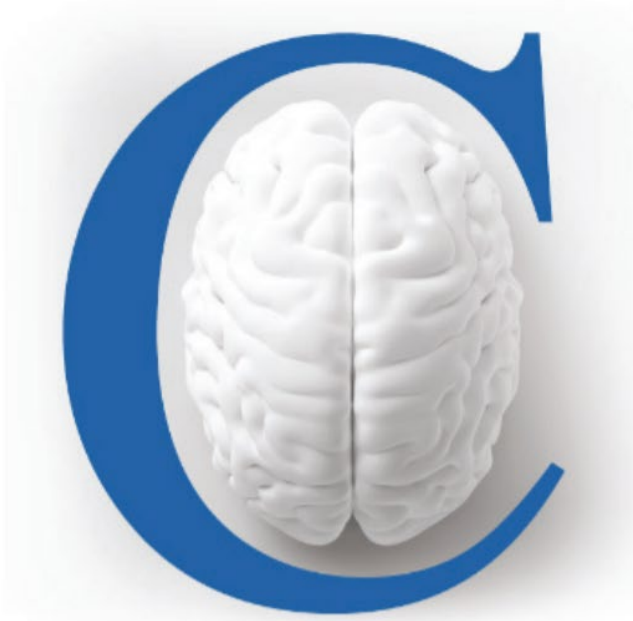


10th Annual Ottawa Neurosurgery Review Course
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Course Schedule

Saturday February 5th

07:50 – 08:00	Introductory Remarks	Dr. Charles Agbi Dr Safraz Mohammed
08:00 – 08:40	Minimally Invasive Approaches in Spine Surgery: General Principles <ul style="list-style-type: none"> • Describe the indications and contraindications for minimally invasive techniques in spinal surgery • Discuss the role of technology in minimally invasive spine surgery • Be able to describe the planning and placement of thoracolumbar pedicle screws using minimally invasive techniques 	Dr. Safraz Mohammed
08:50 – 09:30	Case Presentations	Dr. Safraz Mohammed
09:40 – 10:20	Epidemiology, Genetics, Molecular Biology of Intracranial Aneurysms. Management of Unruptured Intracranial Aneurysms. <ul style="list-style-type: none"> • List three genetic syndromes associated with the development of brain aneurysms • List three molecules involved in the pathogenesis of aneurysms • List three histological features of aneurysm formation • Name three aneurysm features that can influence risk of rupture 	Dr. Alim Mitha
10:30 – 11:10	Surgical Management of Ruptured Intracranial Aneurysms <ul style="list-style-type: none"> • To describe the rationale for the treatment of ruptured and unruptured aneurysms • Select the appropriate therapeutic strategy(ies) for the treatment of an aneurysm • To describe the risks associated with the treatment and therapeutic measures to minimize such risks • Describe the rationale for a multidisciplinary approach to the management of aneurysms 	Dr. Alim Mitha
11:10 – 11:40	BREAK	
11:40 – 12:40	Case Discussions/Interactive Session	Dr. Mazen Alotabi
12:40 – 13:30	LUNCH	
13:30 – 15:00	HOT SEAT Sessions	Dr. Alim Mitha/ Dr. Charles Agbi
15:00 – 15:20	BREAK	
15:20 – 16:00	Case Discussions/Interactive Sessions	Dr. Abdulhadi Algahtani
16:00 – 16:40	Endovascular Treatment Options for Ruptured Intracranial Aneurysms <ul style="list-style-type: none"> • Discuss the scientific basis for choosing treatment options for ruptured aneurysms • List three different endovascular techniques for ruptured aneurysms • Discuss commonly used adjuvant techniques for dealing with complex aneurysms 	Dr. Gwynedd Pickett

	<ul style="list-style-type: none"> Describe a grading system for measuring treatment outcomes and the implications 	
16:40 – 17:30	<p>Pathophysiology, Diagnosis and Management of Cerebral Vasospasm</p> <p>Following this lecture, learners will be able to:</p> <ul style="list-style-type: none"> Select and correctly interpret appropriate investigations in the management of delayed neurological deterioration post-SAH. List risk factors for cerebral vasospasm and describe epidemiology and outcomes. Describe current understanding of pathophysiology of vasospasm post-SAH. Choose appropriate therapy for management of cerebral vasospasm. 	Dr. Gwynedd Pickett
17:40 – 18:20	<p>Stroke Update: Acute Medical and Interventional Neuroradiology Management</p> <ul style="list-style-type: none"> Examine a case study of a stroke patient and determine treatment options. Relate the importance of neurological examination in hyperacute stroke management. 	Dr. Robert Fahed



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Sunday February 6th

08:00 – 08:40	Pathology of Non-Glial Tumours of the CNS <ul style="list-style-type: none"> Recognize the key macroscopical and histological features of the most frequent extra-axial tumor, peripheral nervous system tumors and pituitary tumors. Identify the key morphological elements supporting the WHO classification and grading of the entities presented 	Dr. Gerald Jansen
08:50 – 09:30	Pathology of Intrinsic Primary Tumours of the CNS <ul style="list-style-type: none"> Gain knowledge of the new integrated diagnosis in use for Astrocytic and Oligodendroglial tumours. To be able to identify the role ATRX, and IDH mutation results play in classification of gliomas 	Dr. Gerald Jansen
09:40 – 10:20	Molecular Biology and Genetics of Brain Tumours: Current Concepts and Therapeutic Implications <ul style="list-style-type: none"> Identify the new WHO classification Realize the prognostic impact for the molecular classification of gliomas Discuss the rationale for the superiority of the molecular classification over the morphological classification in the current WHO schema Anticipate how this will eventually impact clinical practice 	Dr. David Fortin
10:30 – 11:10	Surgery for Malignant Primary Brain Tumours <ul style="list-style-type: none"> Describe dynamics of glial tumour growths and infiltration, and the role of surgery in negating these phenomenon's To better define the role of surgery in assisting adjuvant treatment and impacting clinical surrogates in relation to molecular subtyping To clarify the role and impact of technological advancements in assisting gross total resection, and their impact on clinical surrogates. 	Dr. David Fortin
11:10-11:40	BREAK	
11:40 – 12:40	Case Discussions/Interactive Sessions	Dr. Paul Kongkham
12:40 – 13:30	LUNCH	
13:30 – 15:00	HOT SEAT Sessions	Dr. David Fortin/Dr. Joe Megyesi
15:00 – 15:40	BREAK	
15:40 – 16:00	Case Presentations	Dr. Joe Megyesi
16:00 – 16:40	Management Options for Low Grade Gliomas: What's New? <ol style="list-style-type: none"> Be able to explain the pathology and basic molecular biology of low- grade gliomas and what distinguishes them from high grade gliomas. Be able to describe the typical presentation of patients with low grade glioma. Be able to interpret the neuro-imaging of patients with low grade glioma. Be able to discuss the controversies surrounding the management of patients with a low- grade glioma including the early surgery approach versus the watchful waiting approach. 	Dr. Joe Megyesi
16:40 – 17:30	Brain Metastases <ul style="list-style-type: none"> Enumerate the currently available treatment options for metastatic brain tumours 	Dr Paul Kongkham

	<ul style="list-style-type: none"> • Discuss the relative advantages and disadvantages of each treatment option/combination • Discuss the available evidence supporting currently employed the treatment option • Discuss the current guidelines for treatment of these lesions 	
17:40 – 18:20	<p>Stereotactic Radiosurgery Primer for Neurosurgeons</p> <ul style="list-style-type: none"> • Define the concept of stereotactic radiosurgery • Explain basic radiobiology principles related to radiosurgery • Identify the role of radiosurgery in the management of common neurosurgical conditions: <ol style="list-style-type: none"> 1. brain metastases 2. meningiomas 3. vestibular schwannomas 4. AVMs 5. trigeminal neuralgia 	Dr Paul Kongkham

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Monday February 7th

08:00 – 08:40	Pituitary tumours: The Endocrinologist’s Perspective on Diagnosis and Management <ul style="list-style-type: none"> To identify the clinical and laboratory findings important in the initial work-up and follow-up of patients with pituitary adenomas Interactive Case-based Seminar 	Dr Mary-Ann Doyle
08:50 – 09:30	Surgical Management of Pituitary Tumours/ Sellar/Suprasellar Lesions <ul style="list-style-type: none"> Identify the indications for surgery in pituitary tumours Enumerate the surgical options and their rationales Describe the transnasal endoscopic removal of pituitary lesions Discuss the outcomes including challenges and complications 	Dr Charles Agbi
09:40 – 10:20	Convexity and Posterior Fossa Meningiomas <ul style="list-style-type: none"> Be able to identify the key anatomical structures in the posterior cranial fossa Be able to decide which surgical approach is optimal for the presenting lesion Be able to express the safety measure to undertake for surgical procedures in the posterior cranial fossa 	Dr. Kesh Reddy
10:30 – 11:10	Skull Base Meningiomas <ul style="list-style-type: none"> Identify the common sites for meningioma formation along the anterior and middle skull base Describe the most common symptoms associated with these tumors. Discuss the natural history and treatment of meningiomas of the anterior and middle skull base 	Dr. Fahad AlKherayf
11:10 – 11:40	BREAK	
11:40 – 12:40	Case Discussions/Interactive Sessions	Dr. Saad Alqahatani
12:40 – 13:30	LUNCH AND LEARN– Presentation by Sponsor	
13:30 – 15:00	HOT SEAT Sessions	Dr. Kesh Reddy/ Dr. Fahad Alkherayf
15:00 – 15:40	BREAK	
15:40 – 16:00	Case Presentations	Dr. Vimoj Nair
16:00 – 16:40	Radiotherapy for CNS Tumours – Current Concepts <ul style="list-style-type: none"> discuss when radiation therapy is indicated for various benign and malignant tumors describe radiation therapy approaches for malignant gliomas define the current radiation therapy techniques list the indications of stereotactic radiation/radiosurgery 	Dr. Vimoj Nair
16:40 – 17:30	Chemotherapy for CNS Tumours – Current Concepts <ul style="list-style-type: none"> Attendees will be able to apply existing literature to decisions about systemic therapy for patients with primary brain tumours. 	Dr. Garth Nicholas
17:40 – 18:20	Vestibular and other schwannomas Glomus tumours. What you should know <ul style="list-style-type: none"> Describe the epidemiology and molecular biology of vestibular schwannomas and glomus tumours (including latest thinking) Enumerate the preop investigations and treatment options for these lesions 	Dr. Ryojo Akagami

	<ul style="list-style-type: none">• Describe the surgical approaches to the treatment of these lesions and their outcomes.	
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Tuesday February 8th

08:00 – 08:40	Classification and Management of lumbar Spondylolisthesis <ul style="list-style-type: none"> • Classification of lumbar spondylolisthesis in relation to treatment options and outcomes • Decision making in the management of thoracolumbar injuries • Enumerate treatment options • Describe the elements of surgical treatment 	Dr Carlo Santaguida
08:50 – 09:30	O-C1-C2 <ul style="list-style-type: none"> • To be able to identify the various types of C1/C2 injuries and describe the management options for each type • Identify common pitfalls in the written and oral exams and how to avoid them, using clinical examples 	Dr. Eugene Wai
09:40 – 10:20	Spinal Cord Injury: Clinical considerations <ul style="list-style-type: none"> • Be familiar with the cornerstones for the treatment of acute spinal cord injury • Explain the evidence behind therapeutic strategies for spinal cord injury <p>Outline priorities of spinal cord injury in the emergency setting</p>	Dr. John Hurlbert
10:30 – 11:10	Diagnosis, Classification and Management of Subaxial Cervical Spine Injuries <ul style="list-style-type: none"> • Be able to accurately diagnose subaxial cervical spine injuries. • Recognize importance and use of different classification systems for subaxial cervical spine injuries • Select appropriate management options for subaxial cervical spine injuries 	Dr. Richard Fox
11:10 – 11:40	BREAK	
11:40 – 12:40	Case Discussions/Interactive Sessions	Dr. Richard Fox
12:40 – 13:30	LUNCH	
13:30 – 15:00	HOT SEAT Sessions	Dr. Scott Paquette/Dr. Allan Levi
15:00 – 15:40	BREAK	
15:40 – 16:00	Case Presentations	Dr. Scott Paquette
16:00 – 16:40	Classification and Management of Thoracolumbar Injuries <ul style="list-style-type: none"> • Practical classification of thoracolumbar injuries in relation to treatment options and outcomes • Decision making in the management of thoracolumbar injuries • Enumerate treatment options • Describe the elements of surgical treatment 	Dr. Scott Paquette
16:40 – 17:30	Cervical Spondylosis: Diagnosis and Management <ul style="list-style-type: none"> • Define cervical spondylotic myelopathy, including anatomical changes and pathophysiology • Describe the indications for surgery • Describe surgical options and provide relative indications for each 	Dr Sean Christie
17:40 – 18:20	Spinal Cord and Peripheral Nerve Tumours <ul style="list-style-type: none"> • Demonstrate competency in the classification, imaging characteristics, surgical extirpation and differential diagnosis of intramedullary spinal cord tumors • Demonstrate competency in the classification, imaging characteristics, surgical removal of peripheral nerve sheath tumors • Develop a standardized protocol for answering neurosurgical oral board questions 	Dr. Dr. Allan Levi

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Wednesday February 9th

08:00 – 08:40	<p>Intraoperative Neurophysiological Monitoring I</p> <ul style="list-style-type: none"> • Describe intraoperative neurophysiological monitoring ((IONM) techniques and their usefulness • Describe neurophysiological mapping techniques and their usefulness • Describe the limitations of IONM and neurophysiological mapping 	Dr. Susan Morris
08:50 – 09:30	<p>Intraoperative Neurophysiological Monitoring II</p> <ul style="list-style-type: none"> • Compare and contrast the strengths, weaknesses and overall usefulness of the two primary modalities used in intraoperative neurophysiological monitoring (IONM): 1. Somatosensory Evoked Potentials (SSEPs) and 2. Transcranial Motor Evoked Potentials (TcMEPs). • Compare and contrast TcMEPs and D-wave potentials with specific reference to spinal cord tumour resection surgery. • Choose the intraoperative neurophysiological <i>monitoring</i> and/or <i>mapping</i> modalities you would employ during the below listed procedures and clearly state the rationale for your choice(s): <ul style="list-style-type: none"> o Spine deformity correction o Intradural spinal cord tumour resection o Eloquent cortex tumour resection o Vestibular Schwannoma resection o Peripheral nerve/brachial plexus repair • List three non-surgical things that can cause a significant deterioration of TcMEP/SSEP signal amplitude. • Explain why total intravenous anesthesia (TIVA) is generally preferred over halogenated agents when employing TcMEP monitoring. 	Dr. Susan Morris
09:40 – 10:20	<p>Critical Care Management of TBI: What Should We Measure, When and Why</p> <ul style="list-style-type: none"> • Describe the patient population that may benefit from monitoring • Demonstrate the physiologic processes we can measure • Review the role and key measures of monitoring in ICU management of TBI <ul style="list-style-type: none"> ➢ ICP monitoring ➢ CPP • Cerebrovascular Autoregulation 	Dr. Shane English
10:30 – 11:10	BREAK	
11:40 – 12:40	Case Discussions/Interactive Sessions	Dr. Lissa Peeling
12:40 – 13:30	LUNCH AND LEARN – Presentation by Integra	
1330	Greetings from Dr. Sudhir Sundaesan Wilbert J. Keon Professor Chair, Department of Surgery, University of Ottawa	

13:45 – 15:00	HOT SEAT Sessions	Dr. Safraz Mohammed / Dr Carlo Santaguida
15:00 – 15:40	BREAK	
15:40 – 16:40	Case Presentations – Cranial and Spinal Angiogram anatomy (normal and pathological) with Cases	Dr Lissa Peeling
16:40 – 17:30	Neuro-ophthalmology Case discussion	Dr. Danah Albreiki
17:40 – 18:20	Neuroanesthesia <ul style="list-style-type: none"> • Be able to decide the technique of anesthesia for brain mapping procedures and those requiring intraoperative neurophysiological monitoring. • Be able to discuss the options available for postoperative pain management. • List the common anaesthetic agents utilized in neurosurgery and their indications and relative merits. 	Dr. Adele Budiansky

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Thursday February 10th

08:00 – 08:40	<p>Movement Disorders: Pathophysiology and Surgical Management with DBS</p> <ul style="list-style-type: none"> List the pathological and molecular differences between neurodegenerative diseases including movement disorders, motor neuron disorders and cognitive disorders Explain the importance of non-motor features of Parkinson's Disease and provide examples of each Review the targets for neuromodulation (eg. DBS) in the basal ganglia for the treatment of movement disorders Describe the technical steps and surgical nuances of DBS 	Dr. Suneil Kalia
08:50 – 09:30	<p>Carotid Endarterectomy: What You Should Know</p> <ul style="list-style-type: none"> To be able to list the clinical indications for extracranial carotid artery reconstruction. Be able to discuss the importance of timing of carotid artery reconstruction Be able to describe the current Canadian Guidelines regarding carotid artery reconstruction 	Dr. Howard J Lesiuk
09:40 – 10:20	<p>Surgery for Epilepsy: What You Should Know</p> <ul style="list-style-type: none"> Explain indications for the surgical treatment of epilepsy Review surgical anatomy relevant to temporal lobe epilepsy Know the definition of medically refractory epilepsy Review basic work-up of epilepsy patients, including neuropsychology evaluations 	Dr. David Clarke
10:30 – 11:10	<p>Neuromodulation for Pain</p> <p>At the end of this session, participants should be able to</p> <ul style="list-style-type: none"> Describe and draw the pain pathways , Discuss the role of surgery in pain modulation List the currently available techniques for pain modulation including their indications and limitation Discuss the physiological basis for the common pain modulation techniques utilized by neurosurgeons 	Dr. Keith MacDougall
11:10 – 11:40	BREAK	
11:40 – 12:40	Case Discussions/Interactive Sessions	Dr Keith MacDougall
12:40 – 13:30	LUNCH AND LEARN – Presentation by Sponsor	
13:30 – 15:00	HOT SEAT Sessions	Dr Andrew Jack
15:00 – 15:20	BREAK	
15:20 – 16:00	Cranial – Functional Neurosurgery Anatomy and physiology of the thalamus and basal ganglia	Dr Zelma Kiss
16:00 – 16:40	<p>Spontaneous Intracerebral Haemorrhage: What's New</p> <ul style="list-style-type: none"> Describe the pathophysiology of hematoma expansion, hemodynamics & hemostasis List and discuss the indications for ICH surgery List the steps utilized in preventing complications of ICH 	Dr. Dar Dowlatshahi
16:40 – 17:30	<p>Management of Peripheral Nerve Injuries</p> <ul style="list-style-type: none"> Describe the pathophysiology of peripheral nerve injuries Classify these injuries Describe the causes, clinical features and epidemiology Discuss a logical approach to their management 	Dr. Line Jacques
17:40 – 18:20	<p>Management of Peripheral Nerve Entrapment Peripheral Nerve Entrapment Syndrome</p> <ul style="list-style-type: none"> Have a basic understanding of and be able to describe the clinical features and pathophysiology of non-surgical peripheral nerve and muscle diseases involved in the differential diagnosis of neurosurgical conditions or requiring nerve and/or muscle biopsy. 	Dr. Line Jacques

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Friday February 11th

08:00 – 08:40	Spinal Dysraphism and Tethered Cord Syndrome 1. To recognize and identify the following pediatric spine malformations <ul style="list-style-type: none"> • Spinal Dysraphism • Tethered Cord Syndrome • Split Cord Syndrome <ul style="list-style-type: none"> • To explain the surgical management for the above. 	Dr. Albert Tu
08:50 – 09:30	Paediatric Brain Tumours I <ul style="list-style-type: none"> • Discuss the presenting signs of a brain tumor- different childhood age groups; diagnostic workup • Identify/ classify more common brain tumors found in children; develop an appropriate Dx for a newly presenting pediatric brain tumor-WHO Classification has been updated in 2016 • Describe differences between adults and children in terms of types of tumors and planning surgery • Feel Confident at the Royal College Exam, if you get a question 	Dr. Adrianna Ranger
09:40 – 10:20	Paediatric Brain Tumours II	Dr. Adrianna Ranger
10:30 – 11:10	Childhood Hydrocephalus: Contemporary Management Objectives: <ul style="list-style-type: none"> • At the end of the presentation, participants will be able to • Apply pathophysiological principles to determine the appropriate options for the management of hydrocephalus in the pediatric age group • Utilize the results of clinical trials and registries to guide decision making • Recognize the various clinical presentation of treatment failure 	Dr. Femi Ajani
11:10 – 11:40	BREAK	
11:40 – 12:40	Case Discussions/Interactive Session	Dr. Femi Ajani/Dr. Albert Tu
12:40 – 13:30	LUNCH	
13:30 – 15:00	HOT SEAT Sessions	Dr. Adrianna Ranger/Dr. David McAuley/Dr. Albert Tu
15:00 – 15:40	BREAK	
15:40 – 16:40	Case Presentations – Dr. David McAuley	
16:00 – 16:40	Craniosynostosis and Craniofacial Anomalies <ul style="list-style-type: none"> • Be able to list the main categories of craniosynostosis • Be able to list the common syndromic types of congenital craniofacial anomalies and their distinguishing features • Be able to discuss timing and surgical decision making in the management of craniofacial anomalies and craniosynostosis • Be able to describe an operation for craniosynostosis 	Dr. David McAuley
16:40 – 17:30	Chiari malformation and syringomyelia <ul style="list-style-type: none"> • Describe the definition and classification of “Chiari Malformations” • Describe Syringomyelia • Explain the association of Chiari I malformation and Syringomyelia and the pathophysiological theories explaining this • Choose appropriate therapy of Chiari I malformation with or without syringomyelia 	Dr George Ibrahim
17:40 – 18:20	Pediatric Functional Neurosurgery	Dr George Ibrahim

	<ul style="list-style-type: none">• Epilepsy• Spasticity• Pain	
18:20	Closing remarks and wrap up	Dr Safraz Mohammed

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