

P.215**Tumor Heatmaps – Feedback Tool for Virtual Reality Neurosurgical Simulation**

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Background: Performance Heatmaps were designed to visualize the spatial distribution of performance metrics during resection of complex tumors. This novel methodology provides experts (neurosurgeons) and trainees (residents and medical students) with visual feedback on their neurosurgical performance during operative procedures. **Methods:** Neurosurgeons (NS), senior residents (SR), junior residents (JR) and medical students (MS) performed resection of a complex tumor on the NeuroVR simulation platform. Metrics including time spent, force applied, and tumor volume removed were used to create Performance Heatmaps for each group. **Results:** During complex operative procedures, greater expertise correlated increased time spent in critical areas (NS = 121.0 s, SR = 103.0 s, JR = 86.1 s, MS = 84.9 s), increased force application (NS = 387 N, SR = 317 N, JR = 340 N, MS = 304 N), and increased tumor removal (NS = .096 cc, SR = .081 cc, JR = .074 cc, MS = .069 cc). **Conclusions:** Performance Heatmaps further our understanding of neurosurgical expertise by identifying key differences between experts (neurosurgeons) and trainees (residents and medical students). With the adoption of competency-based curricula, intuitive feedback tools will prove essential for trainees seeking surgical mastery.

P.216**Improving access to neurosurgeons through an electronic consultation service**

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Background: Timely access to neurosurgeons for clinical advice is limited depending on region and other social factors. An eConsult service providing access to neurosurgeons in Ontario, Canada may influence primary care provider (PCP) course of action and referral behaviours. **Methods:** The Champlain BASE (Building Access to Specialist Care via eConsult) service allows PCPs to access specialist care in lieu of traditional face-to-face referrals. We conducted a cross-sectional study of eConsult cases submitted to neurosurgeons by PCPs between Jan 1, 2017 and Dec 31, 2018. Usage data and PCP responses to a mandatory closeout survey were analyzed. **Results:** A total of 432 eConsults were submitted. Specialist median response time was 2.29 days with 86.8% of responses occurring within 7 days. PCPs received a new or additional course of action in 53% of cases. An unnecessary face-to-face referral was avoided in 57% of all eConsults, and 50% of cases

where the PCP initially contemplated requesting a referral. Over 86% of cases were rated at least 4 out of 5 in value for PCPs and their patients. **Conclusions:** The use of eConsult improves access to neurosurgeons by providing timely, highly-rated practice-changing clinical advice while reducing the need for patients to attend face-to-face office visits.

SPINE AND PERIPHERAL NERVE SURGERY**P.217****Patient reported outcomes following surgery for lumbar spinal stenosis: Comparison of a universal and multitier health care system**

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Background: Canada has a universal health care system while the United States utilizes a combined public and private payer system. The purpose of this study is to investigate whether there are differences in clinical outcomes between those surgically treated for spinal stenosis in Canada as compared to the United States. **Methods:** Surgical lumbar spinal stenosis patients treated in Canada that were enrolled in the Canadian Spine Outcome Research Network (CSORN) prospective multicenter registry were compared with the surgical cohort enrolled in the Spine Patients Outcome Research Trial (SPORT) study. Spine-related patient reported outcomes (PROs) were compared at 3 months and 1 year post-operatively. **Results:** The CSORN cohort consisted of 432 patients and the SPORT cohort was made up of 278 patients. The CSORN cohort had a higher proportion of patients with a symptom duration greater than 6 months (92.3% vs. 58.3%, $p < 0.0001$). The CSORN cohort demonstrated significantly greater rates of satisfaction after surgery at 3 months ($p = 0.003$) and 1 year ($p < 0.001$). **Conclusions:** Patients undergoing surgical treatment for lumbar spinal stenosis in Canada (CSORN cohort) reported higher rates of satisfaction at 3 months and 1 year post-operatively compared to the United States cohort (SPORT) despite having longer durations of symptoms prior to surgery.

P.218**Patient reported outcomes following surgery for lumbar disk herniation: comparison of a universal and multitier health care system.**

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Background: Canada has a universal health care system that is funded by the government while the United States utilizes a combined public and private payer system. The purpose of this study is to investigate whether there are