This study integrates neuroimaging and behavioural assessments to improve detection and characterization of abnormalities for clinical management. Methods: We recruited 12 recently concussed athletes (21 ± 2.1 years, 7 ± 4.6 days post-injury; 9 completed behavioural testing) and 24 controls. All participants underwent DTI and NODDI to assess white matter integrity. Kinematic performance was evaluated using the Kinarm exoskeleton robot's Reverse Visually Guided Reaching (RVGR) task. Group differences in imaging and kinematic metrics were analyzed using permutation-based and parametric tests, controlling for age and sex. Results: Concussed athletes had elevated fractional anisotropy, reduced mean and radial diffusivity, and lower isotropic volume fraction in affected tracts. However, no group differences emerged in RVGR parameters, indicating intact sensorimotor function despite imaging abnormalities. Conclusions: Our findings reveal that acute concussion leads to measurable microstructural changes without corresponding functional deficits on a cognitive inhibition task. These findings highlight the clinical utility of neuroimaging for early and precise diagnosis, emphasizing its sensitivity over behavioural measures to detect subtle impairment for acute concussion management.

## Neurovascular and Neurointerventional

### P.027

**Sex differences in symptomatic intracranial hemorrhage and procedural complications after endovascular thrombectomy: Analysis of the OPTIMISE registry**

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Background: Studies have found similar rates of functional independence for men and women after endovascular thrombectomy (EVT). Less is known regarding EVT-related procedural complications and symptomatic intracerebral hemorrhage (sICH) between sexes. Methods: Using the OPTIMISE registry including data from 20 comprehensive stroke centers across Canada between 1/1/2018 and 12/31/2022, we performed a retrospective descriptive analysis of patients divided between men and women. Hemorrhagic transformation on follow-up imaging with associated clinical deterioration was required to define sICH. Results: 3631 patients were included (1778 men and 1853 women) for analysis. Female patients were older (71.8±14.6 vs 68.0±13.1 years, p<0.001). There were no differences in sICH rates (2.5% men vs. 2% women, p= 0.388}. Procedural complication rates were not different between men and women (5.8 vs 5.6% p=0.76): dissection {26 (1.5%) vs. 30 (1.6%), p=0.804}, perforation {11 (0.6%) vs. 7 (0.4%), p=0.426}, embolization {25 (1.4%) vs. 25 (1.3%), p=0.996} and arterial access complications {45 (2.5%) vs. 43 (2.3%), p=0.761}. Conclusions: In this large multicentre registry of stroke patients undergoing EVT, men and women had similarly low and reassuring rates of sICH and procedural complications. This complements previous data showing similar functional outcomes for men and women after EVT.

### P.028

**Tenecteplase for treatment of acute ischemic stroke in the extended time window, a review of current data**

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Background: The use of Tenecteplase (TNK) in Extended Time Window (ETW) for Acute Ischemic Stroke (AIS) remains an ongoing debate. Methods: Systematic review of 3 Randomized controlled trials (RCTs)- TIMELESS, TRACE 3, CHABLIS-T II was conducted. Results: 1198 patients were enrolled: 603 received TNK, while 595 were controls. All 3 trials included patients with Internal Carotid and/ or Proximal Middle Cerebral Artery Occlusions; however, in TRACE 3, patients did not have access to endovascular thrombectomy. TIMELESS and CHABLIS-T II showed better recanalization in the TNK group but the median Modified Rankin Score was 3 at 90 days in both groups, demonstrating no benefit in clinical outcomes. Symptomatic Intracranial hemorrhage (sICH) was similar in the two groups. In TRACE 3, there was an improvement in functional outcomes at 90 days in the TNK group (33.0% vs. 24.2%), but the incidence of sICH was also higher (3.0% and 0.8%, respectively). Conclusions: Better recanalization rates are seen with TNK in ETW, but may not be associated with improved functional outcomes at 90 days compared to medical management. Incidence of sICH also remains largely favorable, except in TRACE 3, which showed a higher incidence in the TNK group. There remains a need for more RCTs in this population.

## Other Adult Neurology

### P.029

**Personalized locomotor training with non-invasive spinal cord stimulation for functional recovery after spinal cord injury**

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Background: Spinal cord injury (SCI) is a central nervous system injury that often leads to motor, sensory and autonomic