

Neurotrauma Fellowship Curriculum

The aim of CAST Neurotrauma Fellowship is to provide training in the management of the full spectrum of traumatic injuries to the brain, spine, and peripheral nervous system. Neurotrauma specialists, or neurotraumatologists, demonstrate expertise in the clinical care of neurotrauma patients, beginning with pre-hospital acute care and lasting through the post-acute setting. This includes patient triage, diagnostic testing, surgical and non-surgical management, clinical follow up and rehabilitation. Neurotraumatologists work as a part of multi-disciplinary teams that include other neurosurgeons, surgery traumatologists, intensivists, neurologists, and rehabilitation physicians, as well as advanced practice providers, nurses, therapists, pharmacists, and social workers. Neurotraumatologists must exhibit excellent communications skills that are essential for interacting with other medical professionals and patients and families to deliver the highest level of coordinated care. Finally, in order to provide compassionate, equitable and ethical care, Neurotraumatologists must demonstrate skills and expertise to guide patients and families through end-of-life decisions.

In addition to these core skills, neurotraumatologists may have also expertise in neurocritical care as it relates to neurotrauma because of the relationship of the injured nervous system to other organ systems in the critical care setting; outpatient care such as injury prevention, concussion, and neuro-rehabilitation; and laboratory and translational research.

Core Neurotrauma Curriculum

The training program must enable the trainee to acquire an advanced body of knowledge and level of skill in the management of neurotrauma patients with competency to assume primary responsibility for care of these patients in the hospital and outpatient setting. This advanced body of knowledge and level of skill must include the mastery of:

- o Critical Care of the neurotrauma patient
- o Treatment of polytrauma with neurological injury
- o Treatment of the TBI spectrum, from concussion to coma
- o Treatment of spinal cord injury
- o Treatment of osseous spinal column injuries
- o Injury prevention and rehabilitation strategies
- o Experience with palliative care as it relates to neurotrauma
- o Follow-up and management of post-acute neurotrauma care
- o Organizational and administrative aspects of a neurotrauma program

Case Requirements

- Critical care management of TBI – 25
- Critical care management of SCI – 10
- Surgical management of TBI – 25
- Surgical management of traumatic cervical injuries, with or without neurological deficits – 10
- Surgical management of traumatic thoracolumbar injuries, with or without neurological deficits – 10
- Clinical care of acute concussion/mild TBI (GCS 13-15) – 50
- Follow-up and management of post-acute neurotrauma care – 50