The Department of Neurosurgery at Barrow Neurological Institute epitomizes its creed of accepting challenges, rejecting norms, and pushing boundaries. With Michael T. Lawton, MD, at the helm, Barrow focuses on providing every patient with the most advanced neurosurgical care. Our highly skilled and experienced neurosurgeons represent all subspecialties within the field of neurosurgery and perform more brain surgeries than any other hospital in the United States.

Barrow neurosurgery patients have access to invaluable research and hundreds of clinical trials—enabling better treatment options, sooner. Our surgeons have pioneered neurosurgical procedures and techniques in vascular (cardiac standstill, AVM grading, and complex bypass surgery), spine (fusion and instrumentation techniques, thoracoscopic spine surgery, and robotics), and tumor (Phase 0 clinical trials, transfacial and skull base resection techniques). They’ve made game-changing discoveries in neuroscience, including isolating the gene that causes the inherited form of cerebral cavernous malformations.

Barrow neurosurgeons are committed to sharing the knowledge they’ve built over the years through a steadfast pursuit of academic excellence and resident education.

What We Treat:

- Acoustic Neuroma
- Aneurysms
- Arteriovenous Malformations
- Brachial Plexus Injuries
- Brain Tumors
- Carotid Artery Disease
- Cavernous Malformations
- Degenerative Spine Disease
- Epilepsy
- Hydrocephalus
- Intracranial Stenosis and Moyamoya Disease
- Meningioma
- Parkinson’s Disease and Movement Disorders
- Peripheral Nerve Disorders
- Pituitary Tumors and Disorders
- Scoliosis and Spinal Deformities
- Spine Disorders
- Spinal Trauma
- Spinal Tumors
- Stroke
- Trigeminal Neuralgia

Brain and Cerebrovascular Procedures:

- Aneurysm Clipping
- Aneurysm Embolization
- Asleep Deep Brain Stimulation (DBS)
- AVM Resection
- Bypass Surgery
- Carotid Angioplasty and Stenting
- Carotid Endarterectomy
- Craniovascular Junction Surgery
- CyberKnife Radiosurgery
- Embolization of AVM and AV Fistula
- Endoscopic Cranial Surgery
- Endoscopic Transsphenoidal Pituitary Surgery
- Endovascular Neurosurgery
- Epilepsy Surgery
- Gamma Knife Radiosurgery
- Skull Base Surgery
- Stereotactic Laser Ablation

Spine Procedures:

- Adult and Pediatric Scoliosis Surgery
- Minimally Invasive and Hybrid Scoliosis Correction
- Custom 3-D Printed Implants for Fusion Surgery
- Less-Invasive Spine Tumor Surgery
- Mini-Open Thoracic Herniated Disc Surgery
- Minimally Invasive Lateral Surgery
- Minimally Invasive Spine Surgery
- Navigation-Guided Spinal Procedures
- Robotic-Assisted Spine Surgery

Continued on back
Stroke / Transient Ischemic Attack
Dural Arteriovenous Fistula
Arteriovenous Malformation
Aneurysms and Blood Vessel Disorders
Endovascular Neurosurgery
Andrew Ducruet, MD
Department of Neurosurgery

Disc Herniation
Lumbar Spine Surgery
Thoracic Spine Surgery
Cervical Spine Surgery
Scoliosis: Pediatric and Adult
U. Kumar Kakarla, MD

Skull Base Surgery
Acoustic Neuroma
Cavernous Malformation
Arteriovenous Malformation
Aneurysms and Blood Vessel Disorders
Endovascular Neurosurgery
Michael T. Lawton, MD

Spine Tumors
Spinal Cord Tumors
Spinal Cord Disorders
Parkinson’s Disease and Deep Brain Stimulation
Francisco Ponce, MD

Normal Pressure Hydrocephalus
Minimally Invasive Spine Surgery
Hydrocephalus
Brain Tumors
Brain and Spinal Tumors
Cranial and Spinal Trauma
Complex Spinal Deformity
Minimally Invasive Spine Surgery
Bryan Lee, MD

Brain Tumors
Gamma Knife
Cervical Spine Surgery
Glioblastoma Multiforme
Meningioma
Kris Smith, MD

Meningioma
Brain Tumors
Gamma Knife
Glioblastoma Multiforme
Meningioma
Laura Snyder, MD

Scoliosis and Spinal Deformities
Degenerative Spinal Disorders
Degenerative Spinal Disorders
Cervical Spine Surgery
Scoliosis and Spinal Deformities
Thoracic Spine Surgery
John Wanebo, MD

Artificial Disc Surgery
Spinal Cord Injury/Peripheral Nerve Surgery
Artificial Disc: Lumbar and Cervical Surgeries
Robotic-Assisted Spinal and Cervical Surgeries
Minimally Invasive Cranial and Cervical Surgeries
Anterior Cervical Fusions
Minimally Invasive Management of Spinal Cord Tumors
Luis Tumialan, MD

Spine Tumors
Spinal Cord Tumors
Spine Tumors
Degenerative Spinal Disorders
Deep Brain Stimulation and Cervical Surgeries
Cervical Myelopathy
Cervical Spine Surgery
Spinal Tumors
Brain Tumors
Rory Murphy, MD

Scoliosis: Pediatric and Adult
Cervical Spine surgery
Thoracic Spine surgery
Lumbar Spine surgery
Disc Hemiation
Francisco Ponce, MD

Meningioma
Brain Tumors
Gamma Knife
Glioblastoma Multiforme
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