Functional neurosurgery focuses on improving the lives of patients with epilepsy, movement disorders, pain, and psychiatric illnesses. In recent years, approaches ranging from open surgery to minimally invasive techniques have been leveraged to improve daily functioning and quality of life in people struggling with painful, highly disruptive, and/or treatment-resistant symptoms. These approaches focus on reducing or eliminating seizures, alleviating pain, decreasing abnormal movements or lessening debilitating symptoms associated with specific psychiatric disorders.

Neurosurgical Operative Atlas: Functional Neurosurgery, Third Edition, by renowned functional neurosurgeons Robert Gross, Nicholas Boulis, and esteemed contributors reflects the latest advances in functional and stereotactic neurosurgical approaches. The entire atlas has been streamlined and updated with new content, including the use of stereotactic surgery to treat obsessive compulsive disorder, Tourette syndrome, and major depression.

**Key Highlights**

- A full spectrum of epilepsy treatment techniques, including intracranial monitoring with stereo-electroencephalography, selective amygdalohippocampectomy, MRI-guided stereotactic laser ablation, vagus nerve stimulation, and more.
- Deep brain stimulation (DBS) for Parkinson’s disease, tremor, dystonia, epilepsy and medically intractable pain syndromes, with in-depth implantation guidance.
- The use of neurosurgical and interventional techniques to treat pain including percutaneous ablation, peripheral nerve stimulation, spinal cord and motor cortex stimulators, and pumps.
- More than 300 high quality color illustrations detail anatomy and surgical procedures.

This is the ultimate guide on functional neurosurgery for managing a wide range of incapacitating neurological conditions. Neurosurgical residents, fellows, and veteran neurosurgeons specializing in this rapidly evolving subspecialty will find this state-of-the-art book invaluable — reading it cover to cover will ultimately benefit patients.
Neurosurgical Operative Atlas: Functional Neurosurgery

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