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Nota di contenuto	The Early History of Intra-Operative Brain Mapping / Courtney Pendleton, Kaisorn L. Chaichana, and Alfredo Quinones-Hinojosa -- Anatomy of Eloquent Cortical Brain Regions / Antonio Cesar de Melo Mussi and Evandro Pinto da Luz de Oliveira -- Anatomy of Eloquent White Matter Tracts / Vicent Quilis-Quesada and Shao-Ching Chen -- Direct Functional Mapping Using Radiographic Methods (fMRI and DTI) / Erik H. Middlebrooks, Vivek Gupta, and Prasanna Vibhute -- Indirect Functional Mapping Using Radiographic Methods / Vivek Gupta, Erik H. Middlebrooks, and Prasanna Vibhute -- Neurophysiology of Identifying Eloquent Regions / Tasneem F. Hasan and William O. Tatum IV -- Extraoperative Mapping for Epilepsy Surgery : Epilepsy Monitoring, Wada, and Electroconvulsive Therapy / Emily L. Johnson and Eva K. Ritzl -- Neuropsychologist's Role in the Management of Brain Tumor Patients / David S. Sabsevitz, Kathleen H. Elverman, Kyle Nol, and Jeffrey Wefel -- Awake Craniotomy Operating Room Setup and Surgical Instruments / Karim ReFaey, Shashwat Tripathi, Sanjeet S. Grewal, Kaisorn L. Chaichana, and Alfredo Quinones-Hinojosa -- Anesthetic

Considerations for Intraoperative Cerebral Brain Mapping / Elird Bojaxhi and Perry Bechtle -- Speech Mapping / Shawn Hervey-Jumper and Mitchel Berger -- Motor Mapping (Rolandic, Pre-Rolandic, Insular Cortex) / N.U. Farrukh Hameed, Peng Wang, Geng Xu, Jie Zhang, and Jin-song Wu -- Awake Subcortical Mapping of the Ventral and Dorsal Streams for Language / Hugues Duffau -- Surgery Around the Command and Control Axis : The Default Mode, Control, and Frontal Aslant Systems / Michael E. Sughrue -- Mapping and Surgery of Insular Tumours / Matthew A. Kirkman and George Samandouras -- Mapping of the Visual Pathway / Lina Marengo-Hillebrand and Kaisorn L. Chaichana -- Seizure Mapping Surgery / TBD -- Asleep Motor Mapping / Deependra Mahato, Alison Ho, and Javed Siddiqi -- Brainstem and Spinal Cord Mapping Mohammad / Hassan A. Noureldine, Nir Shimony, Rechdi Ahdab, and George I. Jallo -- Importance of Rehabilitation After Eloquent Brain Surgery / Kenneth Ngo, Andrea Davis, Russell Addeo, Jodi Morgan, Jennifer Walworth, and Sarah Chamberlain -- Emergence of Deep Learning Methods for DBS-Evoked Functional Connectomics / Christine Edwards, Abbas Kouzani, Kendall Lee, and Erika Ross -- Neuroplasticity and Rewiring of the Brain / Juan A. Barcia, Maria Perez-Garoz, and Cristina Nombela -- Radiating in Eloquent Regions / Henry Ruiz-Garcia, Jennifer Peterson, and Daniel M. Trifiletti.

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### Sommario/riassunto

"Despite advances in imaging techniques to identify eloquent cortical brain regions and subcortical white matter, brain mapping is the only method for obtaining real-time information with high sensitivity and specificity. This groundbreaking technology greatly enhances the neurosurgeon's ability to safely resect challenging lesions located in eloquent areas of the brain. The book starts with discussion of preoperative aspects, including the history of brain mapping and anatomy of eloquent cortical and eloquent white matter tracts. Subsequent chapters cover perioperative aspects of brain mapping including indirect and direct functional mapping, the role of neurophysiology, awake craniotomy operating room set-up and surgical instruments, and anesthetic considerations. Diverse awake and asleep brain mapping techniques are described for various intracranial pathologies, as well as advances in postoperative recovery of neurological function including physical and speech therapy"--

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