

## PART I: GENERAL CONSIDERATIONS

1. Physiology and Metabolism of the Brain and Spinal Cord  
Yunfang Joan Hou and Ira S. Kass
2. Effects of Anesthesia on Cerebral and Spinal Cord Physiology  
Rosemary Hickey
3. Neurophysiologic Monitoring  
M. Sean Kincaid and Arthur M. Lam
4. Improving Neurologic Recovery from Cerebral Ischemia  
Yunfang Joan Hou, James E. Cottrell, and Ira S. Kass
5. The Management of Pain in the Neurosurgical Patient  
Timothy R. Deer and Jason E. Pope
6. Anesthesia and Neurosurgery: A Communication Paradigm  
Eugenia Ayrian, Chelsia Varner, Yvette Marquez, and Steven Giannotta

## PART II: ANESTHETIC MANAGEMENT

7. Anesthetic Management of Head Trauma  
Kishore Tolani, Audrée A. Bendo, and Takefumi Sakabe
8. Anesthesia for Supratentorial Tumors  
Nicolas J. Bruder and Patrick A. Ravussin
9. Anesthesia for Posterior Fossa Surgery  
Deborah S. Pederson and Robert Peterfreund
10. Anesthetic Management of Cerebral Aneurysms and Arteriovenous Malformations  
Rukaiya K. A. Hamid, Nadeem Hamid, Philippa Newfield, and Audrée A. Bendo
11. Ischemic Cerebrovascular Disease  
Ian A. Herrick and Adrian W. Gelb
12. Neuroendocrine Procedures  
David L. Schreiber and M. K. McHugh
13. Epilepsy, Epilepsy Surgery, Awake Craniotomy for Tumor Surgery, and Intra-operative Magnetic Resonance Imaging  
Pirjo Hellen Manninen and Jee Jian See
14. Spinal Cord: Injury and Procedures  
Gary R. Stier, Daniel J. Cole, Joseph P. Giffin, and Elie Fried
15. Pediatric Neuroanesthesia  
Nadeem A. Hamid, Rukaiya K. A. Hamid, and Philippa Newfield
16. Neurosurgery in the Pregnant Patient  
David J. Wlody, Ivan Velickovic, and Lela D. Weems
17. Anesthetic Management of Diagnostic and Therapeutic Interventional Neuroradiologic Procedures  
Shailendra Joshi, Sean D. Lavine, and William L. Young
18. Anesthetic Management of Diagnostic Neuroradiology  
Deborah M. Whelan, Melissa A. Laxton, and Patricia H. Petrozza
19. Parkinson's Disease and Deep Brain Stimulator Insertion  
Alana M. Flexman and Pekka O. Talke
20. Intra-operative Imaging Modalities: Magnetic Resonance, Positron Emission Tomography, Gamma Knife, and Stereotactic Surgery  
Saleh Khunein and Pirjo H. Manninen

## PART III: POSTANESTHESIA CARE UNIT AND INTENSIVE CARE

21. Complications in the Post-anesthesia Care Unit

Jean G. Charchaflich, Samrat H. Worah, and Georges I. Labaze

22. Respiratory Care of the Neurosurgical Patient

Irene Rozet and Karen B. Domino

23. Cardiovascular Therapy

Sheena M. Howson, John A. Barwise, and C. Lee Parmley

24. Fluid and Electrolyte Management

Concezione Tommasino, Valentina Picozzi, and Federico Bilotta

25. Nutritional Support in the Critically Ill Patient

John M. Taylor and Binbin Wang

26. Traumatic Brain Injury, Stroke, and Brain Death

Seth Manoach, Georges I. Labaze, and Jean G. Charchaflich

PART IV: APPENDICES

27. Information Technology: Accessing and Exchanging Information

Klaus Ulrich Klein and Kristin Engelhard

28. ASA Practice Guidelines: Prevention of Post-operative Visual Loss and Prevention of Post-operative Neuropathies

Christine Goepfert, Cindy Monsey, and René Tempelhoff