

# Contents

Foreword.....	vii
Preface.....	ix
 <b>I. General Information</b>	
1. Meningiomas: Historical Perspective .....	3
<i>David O. Okonkwo and Edward R. Laws, Jr.</i>	
2. Epidemiology .....	11
<i>Bong Jin Park, Han Kyu Kim, Burak Sade, and Joung H. Lee</i>	
3. Human Meninges: Anatomy and Its Role in Meningioma Pathogenesis .....	15
<i>Tetsumori Yamashima</i>	
4. Meninges: Embryology .....	25
<i>M. Beatriz S. Lopes</i>	
5. Pathology of Meningiomas .....	31
<i>Richard A. Prayson</i>	
6. Natural History, Growth Rates, and Recurrence .....	45
<i>Kyung Gi Cho</i>	
 <b>II. Diagnostic Considerations</b>	
7. Diagnostic Neuroradiology: CT, MRI, fMRI, MRS, PET, and Octreotide SPECT .....	55
<i>Albert S. Chang and Jeffrey S. Ross</i>	
8. Meningiomas: Imaging Mimics .....	67
<i>Manzoor Ahmed, Joung H. Lee, and Thomas J. Masaryk</i>	
9. Preoperative Embolization of Meningiomas .....	89
<i>David J. Fiorella, Vivek R. Deshmukh, Cameron G. McDougall, Robert F. Spetzler,</i> <i>and Felipe C. Albuquerque</i>	
10. Neuro-ophthalmic Evaluations in Patients with Meningiomas .....	101
<i>Steven A. Newman</i>	

### III. Basic Science

11. Meningioma Tumorigenesis: An Overview of Etiologic Factors . . . . . 137  
*Michael J. Link and Arie Perry*
12. Molecular Basis of Meningioma Tumorigenesis and Progression . . . . . 147  
*Lilyana Angelov and Mladen Golubic*
13. Meningiomas of the Central Neuraxis: Unique Tumors . . . . . 157  
*Joung H. Lee and Burak Sade*
14. Radiation-Induced Meningiomas: Historical Perspective, Presentation,  
Management, and Genetics . . . . . 163  
*Yigal Shoshan, Sergey Spektor, Guy Rosenthal, Shifra Fraifeld, and Felix Umansky*
15. Emerging Treatment Modalities I: Cyclooxygenase-2 as a Therapeutic  
Target for Meningioma Tumor Growth . . . . . 177  
*Brian T. Ragel and William T. Couldwell*
16. Emerging Treatment Modalities II: Gene Therapy for Meningiomas . . . . . 185  
*Nader Pouratian, Charles A. Sansur, John A. Jane, Jr., and Gregory A. Helm*

### IV. Management and Outcome

17. Management Options and Surgical Principles: An Overview . . . . . 203  
*Joung H. Lee and Burak Sade*
18. Operative Outcome Following Meningioma Surgery:  
A Personal Experience of 600 Cases . . . . . 209  
*Joung H. Lee and Burak Sade*
19. Factors Influencing Outcome in Meningioma Surgery . . . . . 213  
*Burak Sade and Joung H. Lee*
20. The Novel “CLASS” Algorithmic Scale for Patient Selection in Meningioma Surgery . . . . . 217  
*Joung H. Lee and Burak Sade*
21. Endoscopy in Meningioma Surgery: Basic Principles, Applications, and Indications . . . . . 223  
*Paolo Cappabianca, Luigi M. Cavallo, Felice Esposito, and Enrico de Divitiis*
22. Image-Guided Surgery for Meningiomas . . . . . 231  
*Tina Thomas and Gene H. Barnett*
23. Meningiomas and Epilepsy . . . . . 243  
*Jorge A. González-Martínez and Imad M. Najm*
24. Surgical Correction of Postoperative Strabismus . . . . . 247  
*Gregory Kosmorsky*

### V. Adjunct Treatment Modalities

25. Recent Advances in Therapeutic Radiation: An Overview . . . . . 253  
*Simon S. Lo, Eric L. Chang, and John H. Suh*

26. Conventional Radiation for Meningiomas . . . . .	259
<i>Simon S. Lo, Brent A. Tinnel, and John H. Suh</i>	
27. Gamma Knife Surgery for Meningiomas . . . . .	267
<i>Jason Sheehan, Nader Pouratian, Charles A. Sansur, and Ladislau Steiner</i>	
28. Linear Accelerator Radiosurgery for Meningiomas . . . . .	277
<i>William A. Friedman</i>	
29. Brachytherapy for Meningiomas . . . . .	283
<i>P. Pradeep Kumar and Burak Sade</i>	
30. Medical Therapy for Meningiomas . . . . .	293
<i>Glen H.J. Stevens and David M. Peereboom</i>	
 <b>VI. Meningiomas by Location: Special Considerations, Surgical Technique, Outcome, Complication Avoidance</b>	
31. Convexity Meningiomas . . . . .	301
<i>Noojan J. Kazemi and Andrew H. Kaye</i>	
32. Parasagittal Meningiomas . . . . .	309
<i>Jorge E. Alvernia and Marc P. Sindou</i>	
33. Falcine Meningiomas . . . . .	319
<i>Chae-Yong Kim and Hee Won Jung</i>	
34. Olfactory Groove/Planum Sphenoidale Meningiomas . . . . .	327
<i>Douglas Fox, Vini G. Khurana, and Robert F. Spetzler</i>	
35. Tuberculum Sellae Meningiomas . . . . .	333
<i>Chang Jin Kim and Seok Ho Hong</i>	
36. Anterior Clinoidal Meningiomas . . . . .	347
<i>Joung H. Lee and Burak Sade</i>	
37. Optic Nerve Sheath Meningiomas I: Aggressive Surgical Management. . . . .	355
<i>Werner Hassler and Uta Schick</i>	
38. Optic Nerve Sheath Meningiomas II: Conservative Management with Fractionated Stereotactic Radiotherapy . . . . .	363
<i>David W. Andrews and James J. Evans</i>	
39. Lateral and Middle Sphenoid Wing Meningiomas . . . . .	371
<i>Benoit J.M. Pirotte and Jacques Brotchi</i>	
40. Orbitosphenoid Meningiomas . . . . .	379
<i>Eric H. Sincoff and Johnny B. Delashaw, Jr.</i>	
41. Cavernous Sinus Meningiomas: Conservative Surgical Management. . . . .	389
<i>Burak Sade and Joung H. Lee</i>	
42. Temporal Bone Meningiomas . . . . .	393
<i>Mario Sanna, Maurizio Falcioni, Abdelkader Taibah, and Sean Flanagan</i>	

43. Posterior Clinoidal Meningiomas . . . . .	399
<i>Takeo Goto and Kenji Ohata</i>	
44. Petroclival and Upper Clival Meningiomas I: An Overview of Surgical Approaches . . . . .	403
<i>Marcus L. Ware, Svetlana Pravdenkova, Kadir Erkmén, and Ossama Al-Mefty</i>	
45. Petroclival and Upper Clival Meningiomas II: Anterior Transpetrosal Approach . . . . .	415
<i>Takeshi Kawase, Kazunari Yoshida, and Koichi Uchida</i>	
46. Petroclival and Upper Clival Meningiomas III: Combined Anterior and Posterior Approach . . . . .	425
<i>Samuel L. Barnett, Anthony L. D'Ambrosio, Síviero Agazzi, and Harry R. van Loveren</i>	
47. Petrous Meningiomas I: An Overview . . . . .	433
<i>H. Maximilian Mehdorn and Ralf M. Buhl</i>	
48. Petrous Meningiomas II: Ventral, Posterior and Superior Subtypes . . . . .	443
<i>Burak Sade and Joung H. Lee</i>	
49. Foramen Magnum Meningiomas . . . . .	449
<i>Luis A.B. Borba and Benedicto O. Colli</i>	
50. Cerebellar Convexity Meningiomas . . . . .	457
<i>Roberto Delfini, Antonio Santoro, and Angelo Pichierri</i>	
51. Tentorial Meningiomas . . . . .	465
<i>Khaled A. Aziz, Sebastien C. Froelich, Philip Theodosopoulos, and John M. Tew, Jr.</i>	
52. Torcular, Transverse, and Sigmoid Sinus Meningiomas . . . . .	473
<i>Jorge E. Alvernia and Marc P. Sindou</i>	
53. Falcotentorial and Pineal Region Meningiomas . . . . .	485
<i>Ivan Radovanovic and Nicolas de Tribolet</i>	
54. Intraventricular Meningiomas . . . . .	495
<i>Peter A. Winkler, Ralf M. Buhl, and Jörg-Christian Tonn</i>	
55. Jugular Foramen Meningiomas I . . . . .	515
<i>Tomio Sasaki and Nobutaka Kawahara</i>	
56. Jugular Foramen Meningiomas II: An Otologist's Approach, Perspective, and Experience . . . . .	521
<i>Mario Sanna, Sean Flanagan, G. DeDonato, A. Bacciu, and Maurizio Falcioni</i>	
57. Spinal Meningiomas . . . . .	529
<i>Eve C. Tsai, John Butler, and Edward C. Benzel</i>	
<b>VII. Miscellaneous</b>	
58. Pediatric Meningiomas . . . . .	543
<i>Amro Al-Habib and James T. Rutka</i>	
59. NF2/Multiple Meningiomas . . . . .	555
<i>Ralf M. Buhl, H. Maximilian Mehdorn, and Peter A. Winkler</i>	

60. Peritumoral Edema . . . . .	565
<i>Han Soo Chang</i>	
61. Primary Ectopic Meningiomas . . . . .	573
<i>Sarah E. Gibson and Richard A. Prayson</i>	
62. Management of Arterial Encasement by Intracranial Meningiomas . . . . .	585
<i>Laligam N. Sekhar and Sabareesh Kumar Natarajan</i>	
63. Venous Reconstruction in the Management of Intracranial Meningiomas . . . . .	603
<i>Sabareesh Kumar Natarajan and Laligam N. Sekhar</i>	
64. Dural Reconstruction in Meningioma Surgery. . . . .	619
<i>Joung H. Lee and Burak Sade</i>	
Index . . . . .	625

Meningiomas

Diagnosis, Treatment, and Outcome

Lee, J.H. (Ed.)

2009, XXIII, 639 p., Hardcover

ISBN: 978-1-84628-526-4