

# Spinal Tumor Surgery

A Case-Based Approach

Daniel M. Sciubba

*Editor*

 Springer

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## Foreword

Surgery for the treatment of primary and metastatic tumors requires considerable thought, planning, and a multidisciplinary approach. This book provides a case-based approach to surgery for spinal tumors—striking a balance between surgical atlas and informative text. The book delves into treatment indications, regional, and tumor-specific considerations for the surgical management of spinal neoplasms.

Although metastatic spine disease outweighs primary spinal neoplasms, it is important to recognize the operative approaches and goals of treatment for both. Many technical descriptions of spinal surgery have focused on the surgical exposure for a broad range of conditions, including degenerative, deformity, and tumor. Previous spinal oncology texts illustrate oncologic principles, predictive analytics, and management guidelines to inform multidisciplinary treatment. However, the present text is unique in that it describes the surgical planning and approach to spinal tumor surgery, specifically. As such, it is meant to serve as a stepwise technical guide for surgeons treating patients with neoplastic spine disease.

Optimal care relies upon surgeon familiarity with the various surgical approaches to the spinal column and an understanding of established treatment goals. The chapters are outlined by experts in the field, relative to spinal region of pathology, and compartment (i.e., extradural, intradural extramedullary, and intramedullary). Notably, the authors pay particular attention to patient evaluation, indications for surgery, preoperative planning, surgical technique, and complex spinal reconstruction. This text is an invaluable resource for surgeons, encompassing the biomechanic and anatomic complexity of spine tumor surgery, with detailed case descriptions and beautiful artist illustrations.

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## Preface

The operative techniques, treatment goals, biomechanical considerations, and indications for surgery are of particular importance to surgeons in the treatment of patients with spinal tumors. Unlike the operative management of traumatic injury, deformity or degenerative conditions, surgery for spinal tumors requires multifaceted consideration of prognosis, systemic burden, clinical presentation, tumor etiology, and options for neoadjuvant, adjuvant, or conservative treatment.

Surgical texts in this field have commonly grouped approaches applicable to the broad spectrum of spinal disorders, and spinal oncology texts focus on treatment guidelines. As such, there is limited informative material unifying the oncologic principles and technical aspects of spinal tumor surgery. The purpose of this book is to address this gap, serving as an educational resource for trainees, fellows, and attending spine surgeons.

*Spinal Tumor Surgery: A Case-Based Approach* contains 28 chapters, organized by location—spanning from pathologies of the craniocervical region to sacral and intradural pathologies. Chapters are structured to describe the anatomy and biomechanics of a specific region, patient evaluation, essential oncologic principles, decision-making process, and technical steps of surgery. A representative case illustration is provided at the end of each chapter, exemplifying pertinent concepts described. With emphasis on surgical technique and artist illustration, this book is meant to serve as a tool for spinal surgeons, focusing specifically on the operative management of spinal tumors.

Baltimore, MD, USA

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**Part I**

**Anterior Approaches**