

Table of Contents

Section 1: General Evaluation and Management of Musculoskeletal Tumors

Section Editor: Kurt R. Weiss, MD

Chapter 1 Evaluation of Bone Tumors Judd E. Cummings, MD, FACS.....	3
--	---

Chapter 2 Evaluation of Soft-Tissue Tumors Andrew C. Cordle, MD, PhD Carol L. Andrews, MD.....	15
--	----

Chapter 3 Biopsy Stella J. Lee, MD Kurt R. Weiss, MD Richard L. McGough III, MD.....	25
---	----

Chapter 4 The Molecular Biology of Musculoskeletal Neoplasia Kevin B. Jones, MD.....	33
---	----

Chapter 5 Pseudotumors and Tumorlike Lesions Raffi S. Avedian, MD.....	43
---	----

Chapter 6 Systemic Treatment of Bone Sarcoma Matteo M. Trucco, MD.....	57
---	----

Chapter 7 Systemic Treatments for Soft-Tissue Sarcomas Warren A. Chow, MD, FACP An Uche, MD.....	67
--	----

Chapter 8 Radiation Therapy Safa K. Ahmed, MD Dawn Owen, MD, PhD.....	83
---	----

Section 2: Benign Bone Tumors

Section Editor: Benjamin J. Miller, MD, MS

Chapter 9 Benign Radiolucent Lesions John A. Abraham, MD, FACS.....	99
--	----

Chapter 10 Benign Cartilage Lesions Krista A. Goulding, MD, MPH Nathaniel B. Hinckley, DO.....	111
--	-----

Chapter 11 Benign Bone-Forming Tumors Robert Mikael Henshaw, MD Emily E. Carmody, MD.....	125
---	-----

Chapter 12 Benign Fibrous Lesions and Langerhans Cell Histiocytosis William M. Parrish, MD.....	141
--	-----

Chapter 13 Giant Cell Tumor of Bone David D. Greenberg, MD, FAOA.....	151
--	-----

Section 3: Malignant Primary Bone Tumors

Section Editor: Carol D. Morris, MD, MS

Chapter 14
Conventional Osteoblastic Osteosarcoma
 Odion Binitie, MD
 Carol D. Morris, MD, MS 169

Chapter 15
Osteosarcoma Variants
 Lisa B. Ercolano, MD 181

Chapter 16
Ewing Sarcoma
 Matthew R. Steensma, MD 191

Chapter 17
Chondrosarcoma of Bone
 Richard L. McGough III, MD 201

Chapter 18
Miscellaneous Malignant Primary Bone Tumors
 Rosanna Wustrack, MD
 Melissa Zimel, MD 215

Chapter 19
Multiple Myeloma
 Adam S. Levin, MD 225

Chapter 20
Lymphoma
 Wakenda K. Tyler, MD, MPH 239

Section 4: Soft-Tissue Tumors

Section Editor: Patrick P. Lin, MD

Chapter 21
Benign Vascular Soft-Tissue Tumors
 Yee-Cheen Doung, MD 249

Chapter 22
Benign Cystic Soft-Tissue Lesions
 Jeffrey E. Krygier, MD 257

Chapter 23
Lipoma and Other Benign Lipomatous Tumors
 Sean V. McGarry, MD 271

Chapter 24
Benign Neural Tumors
 Shahram Bozorgnia, MD 279

Chapter 25
Benign Fibrous Tumors
 Robert L. Satcher Jr, MD, PhD 293

Chapter 26
Synovial Chondromatosis and Tenosynovial Giant Cell Tumor/Pigmented Villonodular Synovitis
 Bryan S. Moon, MD 301

Chapter 27
Miscellaneous Benign Soft-Tissue Tumors
 Spencer J. Frink, MD 305

Chapter 28
Soft-Tissue Sarcomas
 Robert J. Esther, MD, MSc 315

Chapter 29
Management of Soft-Tissue Sarcomas
 Justin E. Bird, MD 329

Section 5: Metastatic Disease to Bone

Section Editor: Rex Haydon, MD, PhD

Chapter 30
The Pathophysiology of Bone Metastasis
 Valerie A. Fitzhugh, MD 341

Chapter 31
Approach to the Patient With Bone Metastasis
 Frank Chiarappa, MD
 Tessa Balach, MD 353

Chapter 32
Surgical Management of Upper Extremity Bone Metastases: A Treatment Algorithm
 Kevin A. Raskin, MD 365

Chapter 33
Surgical Management of Lower Extremity Metastatic Disease
 Francis R. Patterson, MD
 Valdis M. Lelkes, MD 373

Chapter 34 Evaluation and Management of Spinal Metastases Michael J. Vives, MD Colin B. Harris, MD.	381	Chapter 40 Proximal Tibial Resection and Reconstruction Robert K. Heck Jr, MD Patrick C. Toy, MD.	451
Section 6: Management of Bone Tumors		Chapter 41 Upper Extremity Resection and Reconstruction Kelly C. Homlar, MD Jennifer L. Halpern, MD	461
Section Editor: Ginger E. Holt, MD		Chapter 42 Bone Grafting, Bone Graft Substitutes, and Growth Factors in Reconstruction for Bone Defects Samuel Z. Grinberg, BA Herbert S. Schwartz, MD Robert J. Wilson, MD.	473
Chapter 35 General Principles of Intralesional Treatment of Bone Tumors James P. Norris IV, MD	395	Chapter 43 Surgical Management of Sarcomas in Skeletally Immature Patients Joel L. Mayerson, MD, FAAOS, FAOA Ernest U. Conrad III, MD.	485
Chapter 36 General Principles of Wide Resection of Bone Tumors Joshua M. Lawrenz, MD Nathan W. Mesko, MD	407	Chapter 44 Amputations Mitchell S. Fourman, MD, MPhil Stella J. Lee, MD Richard L. McGough III, MD Mark A. Goodman, MD Kurt R. Weiss, MD	505
Chapter 37 Pelvic Sarcoma Resection and Reconstruction Peter C. Ferguson, MD, MSc, FRCSC, FAOA	423	Index	521
Chapter 38 Proximal Femur Resection and Reconstruction Christian M. Ogilvie, MD	435		
Chapter 39 Distal Femoral Resection and Reconstruction Iqbal Singh Multani, MD Theresa Pazonis, MD, MA Michelle Ghert, MD, FRCSC	441		

SECTION EDITOR:
KURT R. WEISS, MD