Table of Contents:

I. Regional Spinal Anatomy

Chapter 1: Clinically Relevant Anatomy of the Cervical Region

Chapter 2: Clinically Relevant Anatomy of the Thoracic Region

Chapter 3: Clinically Relevant Anatomy of the Lumbar and Sacral Region

II. Clinical Evaluation of the Spine Patient

Chapter 4: Evaluation of Cervical Spine Disorders

Chapter 5: Evaluation of Thoracic and Lumbar Spine Disorders

Chapter 6: Evaluation of the Spine Trauma Patient

Chapter 7: Evaluation of Spinal Deformities

Chapter 8: Disability Evaluation

III. Spinal Imaging

Chapter 9: Strategies for Imaging in Spinal Disorders

Chapter 10: Radiographic Assessment of the Spine

Chapter 11: Magnetic Resonance Imaging of the Spine

Chapter 12: Computed Tomography and CT-Myelography

Chapter 13: Nuclear Imaging and Spinal Disorders

IV. Assessment and Non-surgical Management of Spinal Disorders

Chapter 14: Rehabilitation Medicine Approaches to Spinal Disorders

Chapter 15: Pharmacologic Management of Chronic Spinal Pain

Chapter 16: Diagnostic and Therapeutic Spinal
Injections

Chapter 17: Electrodiagnosis in Spinal Disorders

Chapter 18: Spinal Orthoses

Chapter 19: Complementary and Alternative Medicine Treatment for Back Pain

V Surgical Management of the Spine: General Considerations

Chapter 20: Indications for Surgical Intervention in Spinal Disorders

Chapter 21: When Not to Operate for Spinal Disorders

Chapter 22: Preoperative Assessment and Planning for Patients Undergoing Spine Surgery

Chapter 23: Procedures for Decompression of the Spinal Cord and Nerve Roots

Chapter 24: Spinal Arthrodesis and Bone-Grafting Techniques

Chapter 25: Surgical Approaches to the Cervical Spine

Chapter 26: Approaches to the Anterior Thoracic and Lumbar Spine

Chapter 27: Posterior Surgical Approaches to the Thoracic and Lumbar Spine

Chapter 28: Cervical Spinal Instrumentation

Chapter 29: Thoracic and Lumbar Spine Instrumentation

Chapter 30: Instrumentation and Fusion of the Spine to the Sacrum and Pelvis

Chapter 31: Intraoperative Neurophysiologic Monitoring during Spinal Procedures

Chapter 32: Anesthesia and Related Intraoperative Considerations in Spine Surgery

Chapter 33: Postoperative Management and
Complications after Spine Surgery

Chapter 34: Revision Spine Surgery

Chapter 35: Spinal Cord Stimulation and Implantable Drug Delivery Systems

VI Pediatric Spinal Deformities and Related Disorders

Chapter 36: Pediatric Back Pain

Chapter 37: Pediatric Cervical Disorders

Chapter 38: Spondylolysis and Spondylolisthesis in Pediatric Patients

Chapter 39: Idiopathic Scoliosis

Chapter 40: Sagittal Plane Deformities in Pediatric Patients

Chapter 41: Neuromuscular Spinal Deformities

Chapter 42: Congenital Spinal Deformities

Chapter 43: Special Surgical Techniques for the Growing Spine

Chapter 44: Pediatric Spine Trauma

VII Degenerative Disorders of the Adult Spine

Chapter 45: Pathophysiology of Degenerative Disorders of the Spine

Chapter 46: Cervical Degenerative Disorders

Chapter 47: Thoracic Disc Herniation and Stenosis

Chapter 48: Low Back Pain: Assessment and Initial Management

Chapter 49: Lumbar Disc Herniation

Chapter 50: Discogenic Low Back Pain

Chapter 51: Lumbar Spinal Stenosis
VIII Adult Spinal Deformities and Related Problems

Chapter 52: Adult Idiopathic and Degenerative Scoliosis

Chapter 53: Sagittal Plane Deformities in Adults

Chapter 54: Spondylolysis and Spondylolisthesis in Adults

IX Spinal Trauma

Chapter 55: Upper Cervical Spine Trauma

Chapter 56: Lower Cervical Spine Injuries

Chapter 57: Thoracic and Lumbar Spine Fractures

Chapter 58: Sacral Fractures

Chapter 59: Spinal Cord Injury

Chapter 60: Cervical Spine Injuries in Athletes

Chapter 61: Lumbar Spine Injuries in Athletes

X Systemic Problems Affecting the Spinal Column

Chapter 62: Disorders of the Spinal Cord and Related Structures

Chapter 63: Primary Spine Tumors

Chapter 64: Metastatic Spine Tumors

Chapter 65: Metabolic Bone Diseases and the Spine

Chapter 66: Treatment Options for Osteoporotic Vertebral Compression Fractures

Chapter 67: Spinal Infections

Chapter 68: Rheumatoid Arthritis

Chapter 69: Ankylosing Spondylitis
XI Emerging Spinal Technologies

Chapter 70: Minimally Invasive Spine Surgery

Chapter 71: Artificial Disc Replacement

Chapter 72: Bone Grafts, Bone Graft Substitutes, and Biologics