

## **General**

- 1 The aging lumbar spine: Normal, Pathologic, and the Pain Generators
- 2 Anatomy of the cervical, thoracic, and lumbar Spine
- 3 Clinical Biomechanics of the Spine
- 4 Biomechanics of Internal Fixation
- 5 Physical and Neurological Examination of the Spine
- 6 Electro Diagnostic Studies of the Spine
- 7 Interventional Spinal Diagnostics and Therapeutics (Discography, MBB, Rhizotomy, etc)
- 8 Surgical Considerations in the Obese Patient
- 9 Surgical Considerations in the Geriatric Patient
- 10 Surgery of the Sympathetic Nervous System
- 11 Stereotactic Radiosurgery of the Spine
- 12 Spinal Cord and Nerve Root Monitoring (neurophysiologic monitoring)
- 13 Anesthesia in Spinal Surgery
- 14 Spinal Orthoses
- 15 Outcomes Assessment in Spine Surgery
- 16 Outpatient Rehabilitation of the Spine Patient

## **Developmental**

- 17 Embryologic Development of the spine
- 18 Anatomy and Physiology of Congenital Spinal Lesions
- 19 Congenital Anomalies of the Cervical Spine
- 20 Congenital Anomalies of the Spinal Cord
- 21 Occult Spinal Dysraphism and Tethered Spinal Cord
- 22 Surgical and Non-Surgical Treatment of Myelomeningocele and Associated Anomalies
- 23 Chiari Malformation and Syringomyelia
- 24 The Spine in Osteogenesis Imperfecta
- 25 Scheuermann's Kyphosis
- 26 Spinal Deformity in Familial Dysautonomia

## **Metabolic Disorders**

- 27 Nonoperative and Operative Management of Paget's Disease
- 28 Spinal Disorders Associated with Skeletal Dysplasias and Metabolic Diseases
- 29 Operative and Non Operative Management of Rheumatoid Arthritis
- 30 Operative and Non Operative Management of Ankylosing Spondylitis

## **Bone Grafting**

- 31 Techniques and Complications of Bone Graft Harvesting
- 32 Bone Graft Substitutes
- 33 Vascularized Bone Grafts in Spine Surgery
- 34 BMP's and their role in spinal fusion

## **Cervical**

- 35 Transoral and Jaw-Splitting Approaches to the Upper Cervical Spine
- 36 Anterior Cervical Approaches
- 37 Anterior Approaches to the Cervicothoracic Junction
- 38 Evaluation and treatment of Axial Neck Pain
- 39 Cervical Spondylotic Radiculopathy: Clinical Evaluation and Nonoperative Treatment
- 40 Surgical Treatment of Cervical Spondylotic Radiculopathy including Anteriorly and Posteriorly Based Procedures
- 41 Cervical Spondylotic Myelopathy: Clinical Evaluation and Nonoperative Treatment
- 42 Anteriorly Based Surgical Treatment of Cervical Spondylotic Myelopathy Excluding OPLL
- 43 Posteriorly Based Surgical Treatment of Cervical Spondylotic Myelopathy including Laminoplasty, Laminectomy, Laminectomy/Fusion
- 44 Natural History and Surgical Treatment for Ossification of the Posterior Longitudinal Ligament

- 45 Occipitocervical and Atlantoaxial Fusion
- 46 Instrumentation of the Subaxial Spine
- 47 Lesions of the Foramen Magnum (Transoral and Foramen Magnum Decompression)
- 48 Kyphotic Cervical Deformity Correction including Post Traumatic and Post Laminectomy Kyphosis
- 49 Osteotomies in the Cervical Spine
- 50 Management of Soft Tissue Injuries of the Cervical Spine: Whiplash
- 51 Closed Treatment of Cervical Spine Injuries
- 52 Cervical Spine Injuries in the Athlete: Return-to-Play Criteria
- 53 Nonoperative and operative Treatment of Upper Cervical Spine Trauma
- 54 Nonoperative and operative Treatment of subaxial Cervical Spine Trauma including dislocations
- 55 Revision anterior and posterior Cervical Spine Surgery
- 56 Acute Management of Spinal Cord Injury

### **Spinal Cord Injury**

- 57 Pharmacology and Timing of Surgical Intervention for Spinal Cord Injury
- 58 Pediatric Spine Trauma and Spinal Cord Injury
- 59 Penetrating Spinal Cord Injuries
- 60 Novel Approaches to Neural Repair and Regeneration After Spinal Cord Injury
- 61 Nutritional Care of the Spinal Cord Injured Patient
- 62 Rehabilitation of the Spinal Cord Injury Patient

### **Lumbar Spine Part 1**

- 63 Anterior and Lateral Exposures to the Lumbosacral Spine
- 64 Posterior Approaches to the Lumbosacral Spine
- 65 Surgical Approaches and Reconstruction of the Sacrum
- 66 Fixation techniques of the Sacropelvic Junction
- 67 Lumbar pedicle Screw fixation
- 68 Transfacet, Translaminar, Cortical Screw fixation of the Lumbar spine
- 69 Anterior Lumbar Interbody Fusion (including stand along anterior interbody devices)
- 70 Posterior Lumbar Interbody Fusion
- 71 Transforaminal Lumbar Interbody Fusion
- 72 Lateral Lumbar Interbody Fusion Techniques (Degenerative and Scoliotic)
- 73 Non Operative Treatment of Lumbar Disk Herniation
- 74 Open Operative Treatment of Lumbar Disk Herniations
- 75 Cauda Equina and Conus Medullaris Syndrome
- 76 Lumbar Nucleus pulposus Replacement
- 77 Anular Repair
- 78 Surgical Treatment of Lumbar Degenerative Disk Disease: Axial Low Back Pain

### **Lumbar Spine Part 2**

- 79 Non Operative treatment of lumbar stenosis
- 80 Lumbar Spinal Stenosis: Open Operative Treatment
- 81 Interspinous Process Decompressive Devices
- 82 Operative Treatment of Low Grade Lumbar Degenerative Spondylolisthesis
- 83 Operative Treatment of High-Grade Lumbar Spondylolisthesis
- 84 Nonoperative Treatment of Fractures of the Thoracolumbar Spine
- 85 Surgical indications and management of Thoracolumbar fractures
- 86 Thoracolumbar Trauma: Lower Lumbar Fractures
- 87 Surgical and Non Surgical Treatment of Sacral Fractures
- 88 Non Operative and Operative Treatment of SI Joint Dysfunction
- 89 Tarlov Cysts
- 90 Failed Back Surgery Syndrome

### **Motion Preservation**

- 91 Biomechanics of Motion Preservation Strategies

- 92 Posterior Dynamic Stabilization
- 93 Total Facet Replacement
- 94 Lumbar Disk Replacement
- 95 Cervical Disk Replacement

#### **Thoracic**

- 96 Thoracic Spine: Surgical Approaches for decompression
- 97 Thoracoscopic Approach for Spinal Conditions
- 98 Thoracic Discectomy and Corpectomy
- 99 Thoracic pedicle Screw fixation
- 100 Direct Lateral Thoracic Interbody Fusion

#### **Pediatrics (Including Pediatric Deformity)**

- 101 Back Pain in Children and Adolescents
- 102 Congenital Scoliosis (including hemivertebrae resection)
- 103 Neuromuscular Scoliosis
- 104 Role of Halo /Halo- Femoral Traction in Paralytic Neuromuscular Scoliosis
- 105 Spinal Deformity in Skeletal Dysplasia Conditions
- 106 Non Operative Treatment of Adolescent Idiopathic Scoliosis
- 107 Operative Treatment of Adolescent Idiopathic Scoliosis
- 108 Anterior Lumbar and Thoracolumbar Correction and Fusion for AIS
- 109 Short Segment "Bone-on-Bone" Fusion for Adolescent Idiopathic Scoliosis
- 110 Pediatric Spondylolysis and Spondylolisthesis (including pars repair)
- 111 The Immature Spine and Athletic Injuries
- 112 Sacro-Pelvic Morphology and Spino-Pelvic Alignment

#### **Adult Deformity**

- 113 Non Operative Treatment of Adult Deformity
- 114 Preoperative considerations for the Adult Deformity Patient
- 115 Surgical Treatment of Adult Thoracolumbar Idiopathic Scoliosis
- 116 Surgical Management of Adult lumbar Degenerative Scoliosis
- 117 Osteotomy Techniques for Coronal and Sagittal Plane Thoracolumbar Deformities
- 118 Surgical Treatment of Spinal Deformities in the Setting of Osteoporosis

#### **Tumor, Vascular Malformations and Infections**

- 119 Primary Bony Spinal Lesions (benign and malignant)
- 120 Tumors of the Sacrum
- 121 Metastatic Tumors of the Spine
- 122 Intradural Intramedullary and Extramedullary Tumors
- 123 Spinal Intradural Vascular Malformations
- 124 Spinal Infections, Pyogenic Osteomyelitis, and Epidural Abscess
- 125 Tuberculosis Infections of the Spine

#### **Complications**

- 126 Medical Complications in the Adult Spinal Patient
- 127 Management of Cerebral Spinal Fluid Leaks
- 128 Complications of Lumbosacral Spine Surgery
- 129 Management of Iatrogenic Neurologic Loss Due to Spinal Instrumentation
- 130 Complications of Anterior and Posterior Cervical Spine Surgery
- 131 Complications of Anterior and Posterior Thoracic Spine Surgery

#### **Minimally Invasive Surgery and Navigation**

- 132 Minimally Invasive Techniques of the Cervical Spine
- 133 Minimally Invasive Techniques of the Thoracic Spine
- 134 Minimal Invasive Lumbar Surgery including Tubular Retractors for Disk Herniations and Stenosis
- 135 Minimally Invasive Instrumentation of the Lumbar Spine (TLIF, Pedicle Screws, Transfacet screws etc)

136 Minimally Invasive Deformity Surgery: Future Directions  
137 Use of Navigation in Spinal Surgery