

**GENERAL.** The approach to revision procedures. How to dissect the plane between the scar of a laminectomy defect in the posterior cervical spine. How to dissect the plane between the scar of a laminectomy defect in the posterior thoracic and lumbar spine. Local muscle flaps in the setting of revision spine surgery: Indications, operative planning, principles, and postoperative management. Revision and reimplantation of a spinal cord stimulator device.

**ANTERIOR CERVICAL.** Revision ACDF at the same level. Revision ACDF: Adjacent level. Converting a total disc replacement to an ACDF. Treatment of adjacent segment disease after total disc replacement (TDR).

**POSTERIOR CERVICAL.** Revision suboccipital decompression for complex Chiari malformation. How to revise a failed occipital cervical fusion. How to revise a failed C1–C2. fusion. Treatment of postlaminectomy kyphosis. Revision of failed posterior cervical fusions. Complications necessitating surgical intervention following cervical laminoplasty.

**THORACIC/THORACOLUMBAR SPINE.** Revision surgery for proximal junctional kyphosis following thoracolumbar fusion. Pedicle subtraction osteotomy (PSO) nonunion revision. Treatment of a nonunion of a thoracolumbar deformity, not at the site of a three-column osteotomy. How to safely remove a pedicle screw abutting the aorta.

**LUMBAR SPINE.** Revision of an anterior lumbar interbody fusion (ALIF) nonunion. How to revise nonunion of a lateral lumbar interbody fusion (LLIF) through a lateral approach. How to surgically manage a recurrent lumbar herniated nucleus pulposus (HNP). How to perform revision lumbar decompression. How to perform revision lumbar decompression at the index level through a minimally invasive (MIS) approach. How to revise a transforaminal lumbar interbody fusion (TLIF) nonunion with recurrent stenosis at the index level (open). How to revise a minimally invasive transforaminal lumbar interbody fusion (MIS TLIF) nonunion with recurrent stenosis at the index level through an MIS approach. How to revise a posterior lateral decompression and fusion at the index level. How to revise a posterior lumbar fusion that has developed adjacent-level stenosis with or without instability. Flat back deformity revision surgery. Revision high-grade spondylolisthesis surgery. Management of a ventrally displaced graft following ALIF, TLIF or DLIF.

**SPECIAL CASES.** Treatment of symptomatic cervical and lumbar pseudomeningoceles. Treatment of a persistent cervical dural tear. Treatment of a ventral thoracic dural defect. Treatment of a persistent lumbar dural tear. Treatment of a chronic postoperative cervical and lumbar spine infection.