

Introduction Surgical Theater’s Surgical Rehearsal Platform (SRP), Surgical Theater LLC, has been previously used for cranial microsurgery planning in a 3D environment. For spine tumor surgery, the surgeon can use the SRP for preoperative modeling, pre-surgical planning of the tumor resection and reconstruction, and evaluation of the tumor relative to surrounding anatomy. Additionally it can be used for surgical rehearsal for resident training for key critical steps of the procedure.	Methods Evaluation of SRP modeling of spinal tumors is based on using preoperatively obtained images which include Computed Tomography (CT) scans of the spine. Case illustration: A 73 year-old man with previously metastatic myoepithelial carcinoma to T8 underwent radiation and transpedicular decompression with T6-T10 instrumented fusion, but presented a year later with tumor recurrence at the index and adjacent levels, kyphotic deformity and hardware failure. He was offered tumor resection and extension of hardware. He underwent standard preoperative imaging, including CT scan of the thoracic spine. The CT scan was registered preoperatively with the SRP to help in presurgical planning.	Results Preoperative planning of the spine tumor on the SRP allowed evaluation of bony anatomy for presurgical planning for resection and instrumentation. It can model drilling of bone for exposure of tumor, including transpedicular and costotransversectomy approaches, as well as 3D modeling of the bony anatomy for conceptualization and preoperative planning for instrumentation. Conclusions Simulation allows preoperative planning of tumor resection, and repetition of critical steps prior to surgery. It can allow for presurgical procedural planning by surgeons, as well as provide a platform for resident training. SRP is a useful tool for presurgical modeling of spinal tumors prior to surgical tumor resection and instrumented reconstruction.	Learning Objectives <ul style="list-style-type: none">- Surgical rehearsal platform as a tool for resident training for spine tumor operations- Surgical rehearsal platform as a tool for presurgical planning for spine tumor operations References Bambakidis, NC, Selman, WR, and Sloan, AE. Surgical Rehearsal Platform: Potential Uses in Microsurgery. <i>Neurosurgery</i> ,73(4), Oct 2013. S122-126
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