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Kai-Uwe Lewandrowski, Morgan P. Lorio, Benedikt W. Burkhardt and Alexander R. Vaccaro

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2397 Waterbury Circle, Suite 1,
Aurora, IL 60504, Phone: +1-630-375-1432

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High-Value Procedures in Endoscopic Spine Surgery: An Analysis of Clinical Outcomes Based on Surgeon Experience, Skill, and Training

KAI-UWE LEWANDROWSKI, MD[1,2,3,4]; MORGAN P. LORIO, MD, FACS[5,6]; BENEDIKT W. BURKHARDT, MD[7]; AND ALEXANDER R. VACCARO, MD, PHD, MBA[8]

[1]Division Personalized Pain Research and Education, Center for Advanced Spine Care of Southern Arizona, Tucson, AZ, USA; [2]Department of Orthopedic Surgery, University of Arizona, Banner Medical Center, Tucson, AZ, USA; [3]Department of Orthopedics, Fundación Universitaria Sanitas, Bogotá D.C., Colombia; [4]Department of Orthopedics, Hospital Universitário Gaffree Guinle Universidade Federal do Estado do Rio de Janeiro, Rio de Janeiro, Brazil; [5]Advanced Orthopedics, Altamonte Springs, FL, USA; [6]Orlando College of Osteopa-thic Medicine, Orlando, FL, USA; [7]Wirbelsäulenzentrum/Spine Center—WSC, Hirslanden Klinik Zurich, Witellikerstrasse, Zurich, Switzerland; [8]Chairman of the Department of Orthopedic Surgery Sidney Kimmel Medical College at Thomas Jefferson University, Philadelphia, PA, USA

K-UL, 0000-0001-7842-2914; MPL, 0000-0003-1623-2095; BWB, 0000-0002-9460-9807; ARV, 0000-0002-8073-0796

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Endoscopic spine surgery is rapidly advancing as a minimally invasive option for treating various spinal conditions, offering benefits such as reduced postoperative complications and quicker recovery times. However, the development of clinical guidelines for these procedures faces significant challenges due to the lack of high-grade clinical evidence from randomized controlled trials, which are often impractical in surgical settings. The Video presents an analysis of procedures in endoscopic spine surgery, based on data from nearly 800 surgeons participating in 4 International Society for the Advancement of Spine Surgery webinars. Using the Rasch model, a statistical tool that converts qualitative data into measurable insights, this study identifies endoscopic procedures that appear to provide favorable clinical outcomes when performed by experienced surgeons. The analysis identifies high-value procedures, such as percutaneous interlaminar endoscopic decompression and transforaminal full-endoscopic interbody fusion, and provides a framework for integrating surgeon experience into the creation of dynamic, evidence-based clinical guidelines. The Video addresses the limitations of traditional randomized controlled trials, offering an alternative and potentially more practical basis for guiding surgeon training and enhancing patient care. The findings have implications for health care policy, resource allocation, and the ongoing development of endoscopic spine surgery as a cornerstone of modern spine care.

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Author Note: Kai-Uwe Lewandrowski is a foreign corresponding member of the Colombian National Academy of Medicine, the Brazilian National Academy of Medicine, and the Brazilian Military Medical Academy. He is also president of the Interamerican Society For Minimally Invasive Spine Surgery (SICCMI).

Editor's Note: For readers interested in learning more about the Rasch anaylysis studies and the authors' findings, view the IJSS special issue "Perspectives on High-Value Endoscopic Spine Surgery" at https://www.ijssurgery.com/content/18/S2.

Corresponding Author: Kai-Uwe Lewandrowski, Division Personalized Pain Research and Education, Center for Advanced Spine Care of Southern Arizona, 4787 E Camp Lowell Dr, Tucson, AZ 85712, USA; business@tucsonspine.com