

NYU Langone performs first US implant of patient-specific rod for spinal deformities

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Frank J. Schwab, MD. , a clinical professor in the Department of Orthopaedic Surgery and director of the Spinal Deformity Service at NYU Langone, performed the procedure. He has subsequently

performed two additional procedures since the first successful implantation.

The device, named UNiD and manufactured by Medicea of Lyon, France, offers a personalized medicine approach to spinal osteosynthesis. A surgeon uses a dedicated software platform to preoperatively analyze a patient's spine from radiographic images, and then can simulate surgical correction in order to determine the ideal bend of the two rods that will be implanted. Based on the physician's plan for the patient's specific anatomy, the rods are produced in titanium or cobalt chromium alloy with industrial precision and delivered, ready to be implanted.

Before this innovation, surgeons had to physically bend metal rods in the operating room with plier-like devices while eyeballing the patient's scans. The new approach enables the surgeon to more reliably obtain precise realignment of the spine, and save time in the [operating room](#). In addition, a more customized rod implant may reduce the need for costly revision surgeries that are sometimes required to correct the surgeries where the rods were initially bent incorrectly.

"Even the most experienced spine surgeons sometimes have to perform revision surgeries to correct an initial procedure," says Dr. Schwab.

"Surgically implanting rods that are already individualized to the patient could go a long way in improving outcomes." Dr. Schwab is also President, CEO and co-founder of Nemaris Inc., developer of Surgimap Spine, the dedicated surgical planning [software platform](#) that doctors use to plan the desired contour of the UNiD rods.

"This milestone in spinal surgery demonstrates NYU Langone's unwavering commitment to bringing patients the most cutting-edge, individualized treatments designed to advance the field of [orthopaedic surgery](#)," says Dr. Joseph Zuckerman, Walter A.L. Thompson Professor

of Orthopedic Surgery and Chair of the Department of Orthopaedic Surgery at NYU Langone Medical Center. "As a leader in the field of spinal surgery, we're pleased that Dr. Schwab is one of the first surgeons to use this advanced technology that may change the way we perform these types of procedures in the future."

Spine [surgery](#) is sometimes a recommended treatment to relieve pain, disability, weakness, numbness, and other symptoms caused by spinal deformities like scoliosis, kyphosis or age-related wear and tear of the disks and vertebra that deform the spine.

For these procedures, a surgeon creates a fusion between the affected vertebra and devices like metal rods to correct the curvature angles and stabilize and appropriately realign the spine, thereby reducing symptoms.

UNiD received 510(k) clearance from the U.S. Food and Drug Administration on November 10, 2014 prior to the first U.S. implantation. The device has been used in Europe since September 2013.

Provided by New York University School of Medicine

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