



FRENCH SURGEON PERFORMS WORLD'S FIRST SPINAL FUSION SURGERY USING CUSTOMIZED 3-D PRINTED SPINE CAGES

MEDICREA's UNiD anterior lumbar interbody fusion (ALIF) customization service exactly reproduces the anatomic details of a patient's vertebral plates and extends MEDICREA's UNiD customized spine implant platform

NEW YORK (June X, 2014) – [MEDICREA, Inc.](#), a company that specializes in the development of innovative surgical technologies for the treatment of complex spinal pathologies, today announced that a surgeon in Lyon, France has performed the world's first spinal fusion surgery using customized spine cages created with a 3-D printer.

MEDICREA has developed the UNiD service to bring customization to spinal fusion surgery for the first time. Spinal fusion surgery is performed to correct severe spinal deformities. Damaged discs are replaced with spinal cages to separate the vertebrae and align the spine properly, while a curved spinal rod is screwed into place to maintain that alignment. With the support of specific softwares and advanced imaging, the UNiD ALIF customized cages made of Poly Ether Ketone (PEKK) exactly reproduce the anatomic details of a patient's vertebral plates.

The first operation using MEDICREA'S "UNiD ALIF" device was performed on May 28, 2014 by Vincent Fiere, M.D. at the Hospital Jean Mermoz in Lyon, France, a center specialized in the diagnosis of severe spinal deformities and their surgical treatment. The UNiD ALIF extends MEDICREA's UNiD platform, following the launch of the UNiD pre-curved osteosynthesis rod service in Europe earlier this year.

"The intersomatic cage, specifically 'printed' by MEDICREA for my patient, positioned itself automatically in the natural space between the vertebrae and molded ideally with the spine by joining intimately with the end plates, despite their relative asymmetry and irregularity," said Dr. Fiere. "I could also very precisely perform the restoration of the disc height and simultaneously correct the degree of lumbar lordosis using plans I had made several days before the operation with the help of MEDICREA's Surgimap software tool."

The UNiD ALIF intersomatic anatomical inter-body device was developed by MEDICREA from a 3-D digital file created from the extraction and treatment of pre-operative scanner images of the patient, a process developed internally by MEDICREA's R&D teams. The company's design, recording and production methods open the door to the future development of implantable devices that can identically reproduce the elements of the spine that need to be reinforced or replaced by artificial components printed in 3D on implantable polymers or titanium.

This process and the multiple applications that directly result from it to create bone implants from 3D printing are patent-pending.

"Continuing our trajectory since the launch of our PASS LP UNiD rods which are made to measure for each patient, MEDICREA confirms its position as the pioneer of intelligent spinal implants, perfectly adapted to the morphology of each patient's spinal column and developed in a rational and planned manner to restore the fundamental mechanical equilibrium of the human body," said Denys Sournac, president and CEO of MEDICREA. "By



providing pre-planned customization, our goal is to improve patient outcomes and allow our surgeons customers to complete their plans in advance and solely focus on executing their strategy in the OR.”

ABOUT SPINAL DEFORMITIES

The term spinal deformity includes several conditions in which the spine is abnormally curved or aligned. Under normal conditions, the adult spine is straight when viewed from the front and has a series of curves when viewed from the side. This alignment helps keep the body erect and the head up with a minimum of effort. Spinal deformities, or curves in the spine, often develop during growth in adolescence or as a result of aging. In some cases, they can progress during the adult years as well. Spine deformities can happen when unnatural curvature occurs, as in scoliosis (side-to-side curvature) or kyphosis and Scheuermann's disease (front-to-back curvature). It also occurs due to defect (as in spondylolisthesis) or damage to the spine. Read more - <http://www.spine-health.com/>.

ABOUT MEDICREA (www.medicrea.com)

MEDICREA specializes in the design, development, manufacture and distribution of orthopedic implants dedicated to spinal surgery. In a \$10 billion market, MEDICREA is a very dynamic small to medium-sized business of 120 employees with unique innovation capabilities. The Company enjoys an excellent and ever-improving reputation and develops unique relationships with the most visionary and creative spine surgeons in France, the UK, and the USA. Products developed and patented by MEDICREA provide neurosurgeons and orthopedic surgeons specialized in the spine with new and less-invasive surgical solutions that are faster and easier to implement than traditional techniques. The Group's headquarters are based near Lyon, France, and it also has a manufacturing facility for surgical instruments and implants located in La Rochelle as well as three distribution subsidiaries in the USA, the UK and France.

ABOUT SURGIMAP SPINE (www.surgimapspine.com)

Surgimap Spine, a Namaris Inc. product, was developed by a group of surgeons, engineers, business leaders, software experts and programmers. The need for a clinical imaging tool driven by physician needs pulled them together in this effort. Our development started when we realized that most imaging tools were not user-friendly and not made for the spine specialist. So we started with measurement tools, added a superb DICOM image viewer, a handy database, and then made this all portable so it runs on a USB key, off a mobile device or directly on the web. The Surgimap software is free and serves more than 3,000 users.

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