



MEDIA RELEASE

A new clinical study highlights efficiency in spine surgery of NextAR Spine, augmented reality surgical application

CASTEL SAN PIETRO, 14 December 2023 - Medacta Group SA ("Medacta", SIX:MOVE), a Swiss company specializing in the design, production, and distribution of innovative, personalized, and sustainable solutions for joint replacement, sports medicine, and spine surgeries, announces the publication of a new study in the European Spine Journal which demonstrates that [NextAR Spine](#) seamlessly integrates into the OR workflow, enabling the surgeon to enhance efficiency, accuracy, and versatility in spine surgery.

"Precision and accuracy in spine surgery is critical. As stated in our recent study, NextAR, the new AR-assisted navigation system, greatly simplifies pedicle screw placement, ensuring effectiveness and accuracy. It's a reliable tool, straightforward to use, and it elevates our ability to provide safe and precise navigation for various spinal conditions," says Professor Dr. med. Bernhard Meyer, Director of the Neurosurgical Clinic and Policlinic at the University Hospital Rechts der Isar, Munich.

The study "[Evaluating a cutting-edge augmented reality-supported navigation system for spinal instrumentation](#)"¹ led by Prof. Dr. med. Bernhard Meyer, evaluates the efficiency, accuracy, and versatility of NextAR Spine, a navigation system that incorporates augmented reality to provide unique real-time surgical guidance, superimposed onto the operative field, enhancing precision and enabling data-driven decision-making in the placement of pedicle screws, and addressing different types of spine indications, such as trauma, degeneration, infection, and tumor.

The placement of pedicle screws has been achieved with precision using both open and percutaneous approaches in both long and short constructs, **indicating a lower intraoperative revision rate (1.7%)¹ compared to the rate documented in the scientific literature with other navigation systems (3.4% by Ille at al²; 4.7% by Ryang at al³).** This further highlights that NextAR Spine proves to be a reliable and safe tool for 3D imaging-based pedicle screw placement while requiring minimal setup during surgery, in line with Medacta's philosophy of healthcare sustainability. The setup is reduced to a minimum by integrating the cameras into the surgical instruments and establishing a flexible platform which includes the preoperative planning.

The [NextAR platform](#) is offered as a hardware system with limited capital investment and single-use instrumentation at a low cost per case and offers the ability to host software for multiple applications (NextAR Knee, NextAR Shoulder, NextAR Spine, and Hip applications). The platform represents an optimal solution worldwide, particularly for US Ambulatory Surgery Centers (ASCs).

The NextAR surgical platform is part of Medacta's [MySolutions Personalized Ecosystem](#), a network of advanced digital solutions designed to improve patient outcomes and healthcare efficiency. MySolutions embodies Medacta's holistic approach to personalized medicine, aiming at bringing value to every step of the patient's journey, from preoperative through postoperative care.

NextAR is also supported by the comprehensive, tailored educational offerings provided by the M.O.R.E. Institute. With an international network of expert surgeons, the [M.O.R.E. Institute](#) is at the forefront of education on spine procedures and products with personalized high-level educational pathways. With Medacta, the surgeon is never alone.



REFERENCES

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About Medacta

Medacta is an international company specializing in the design, production, and distribution of innovative orthopaedic products, as well as in the development of accompanying surgical techniques. Established in 1999 in Switzerland, Medacta is active in joint replacement, spine surgery, and sports medicine. Medacta is committed to improving the care and well-being of patients and maintains a strong focus on healthcare sustainability. Medacta's innovation, forged by close collaboration with surgeon experts globally, began with minimally invasive surgical techniques and has evolved into personalized solutions for every patient. Through the M.O.R.E. Institute, Medacta supports surgeons with a comprehensive and tailored program dedicated to the advancement of medical education. Medacta is headquartered in Castel San Pietro, Switzerland, and operates in over 50 countries. Follow us on [Medacta TV](#), [YouTube](#), [LinkedIn](#), and [X](#).