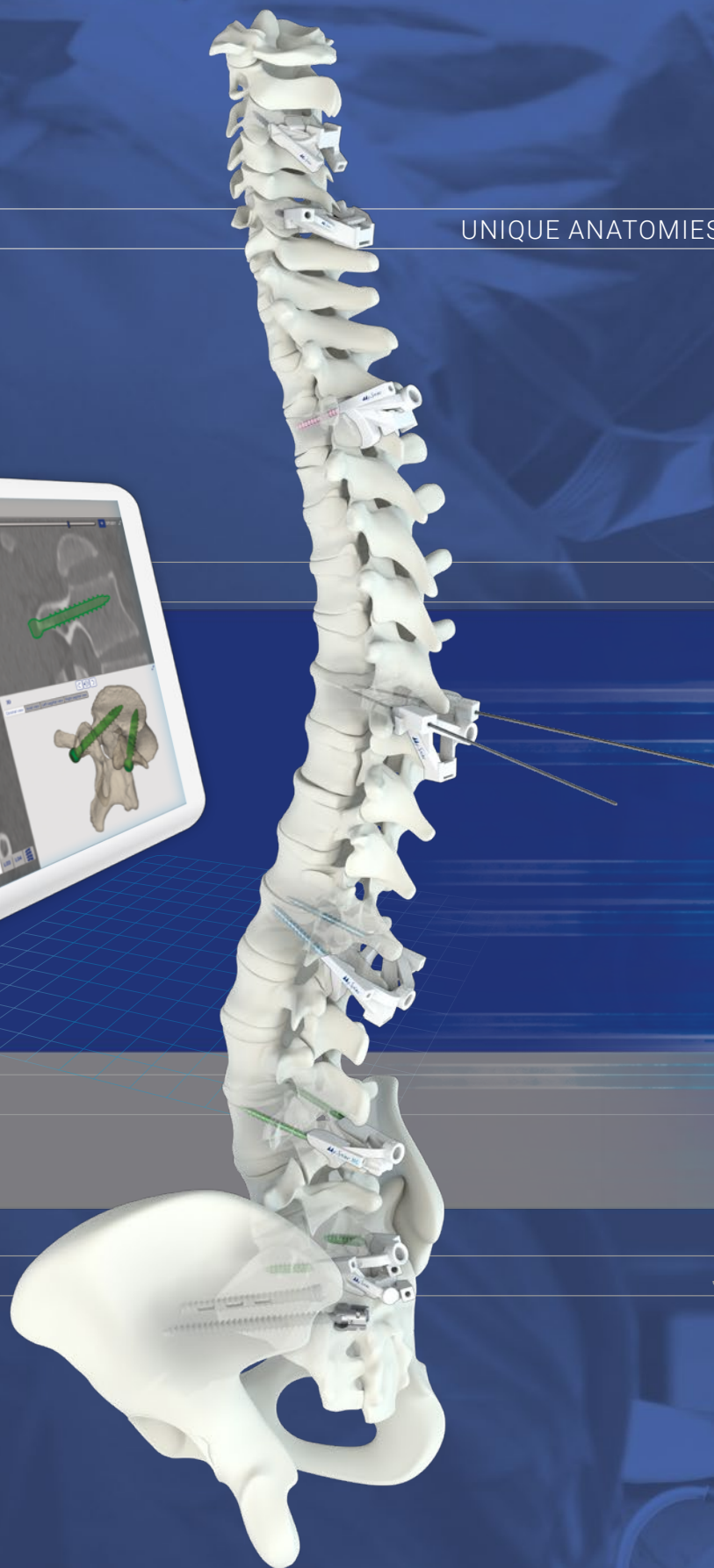
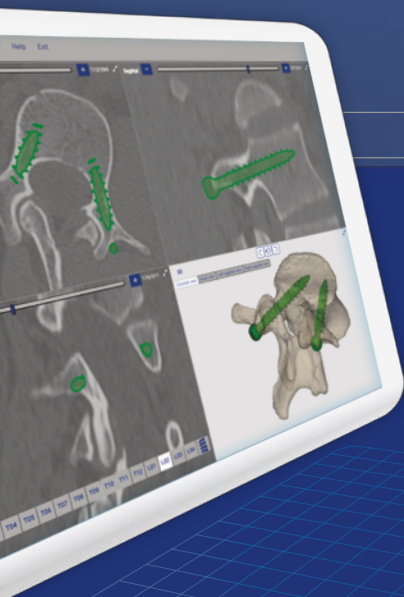




PATIENT MATCHED TECHNOLOGY
IN SPINE SURGERY

UNIQUE ANATOMIES, PATIENT-MATCHED SOLUTIONS



Brochure

Joint

Spine

Sports Med

 **edacta**
International 

MySpine guides assist in pilot hole preparation for **posterior fixation screws** from **C2 to the sacrum and ilium**. The MySpine technology uses the patient's spinal CT to create a **3D preoperative plan** and **patient-specific anatomical perforating guides**.

CERVICAL

MySpine Cervical guides are patient-specific devices intended for use as anatomical perforating guides to assist with the intraoperative positioning of screws during posterior cervical fixation surgery between the C2 to C7 levels. MySpine Cervical guides accommodate both lateral mass and pedicle planning trajectories.

MySpine guides are individually developed for each patient, with different configurations (K-wire- or drill-based) available for screw placement using a conventional trajectory, in both bilateral and unilateral configurations. They are intended as thoracic and lumbar guides for patients requiring spinal fusion between the levels of T1 to L5.

MC

MySpine MC is a minimally invasive, muscle sparing, midline cortical solution designed for patients requiring spinal fusion between the levels of L1 to S1.^[1,2]

S2AI

ANCHOR

MySpine S2AI and MySpine Anchor are solutions for posterior sacroiliac fusions. These guides can be used, for example, in long constructs to potentially overcome insufficient lower spine fixation.

MySpine offers a complete portfolio to support posterior cervical, thoracic, lumbar, and sacral procedures.

CERVICAL

UNILATERAL PEDICLE

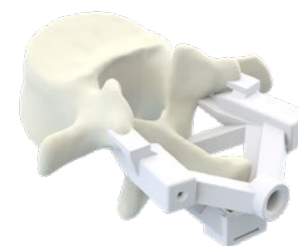


LATERAL MASS

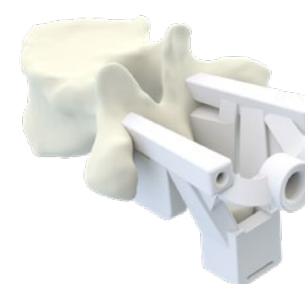


THORACOLUMBAR

LOW PROFILE K-WIRE



LOW PROFILE DRILL PILOT

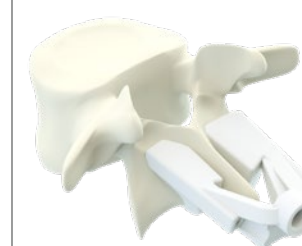


UNILATERAL



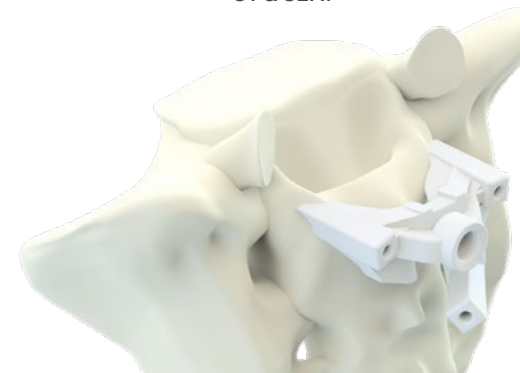
LUMBAR

MIDLINE CORTICAL (MC)



SACRAL

S1 & S2AI



ANCHOR



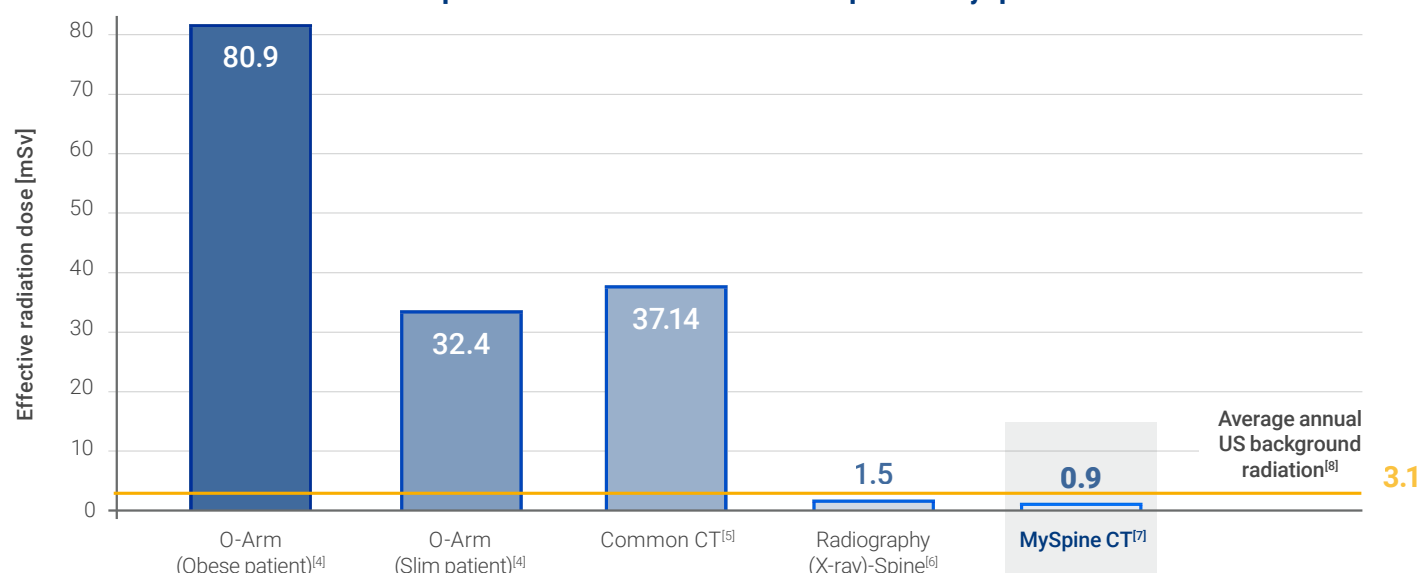
MYSPINE CASE MANAGEMENT

The MySpine process is managed entirely in-house, with **zero capital investment**. A 3D reconstruction of the patient's anatomy is obtained from **low dose CT scan**. Then, an **accurate 3D preoperative planning** is prepare to design patient-matched guides.

IMAGE ACQUISITION

A specific **low dose CT protocol** ensures a safe image acquisition, reducing the amount of irradiation absorbed by the patient. **Preoperative planning** potentially nullifies the need for intraoperative fluoro scans, with a **reduction of intraoperative radiation for both OR staff and patients**.^[3] The cumulative dose is potentially reduced compared to a navigation-assisted technique.

Comparison of other irradiation techniques vs. MySpine



MYSPINE WEBPLANNER

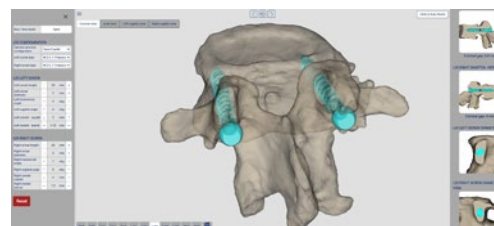
MySpine cases are managed **entirely online** with no need to install additional software. The case **database** is available to the surgeon **anytime and anywhere**, and the information on the website is always kept up-to-date.

3D PRINTING

The MySpine guide is designed to **match the vertebral anatomy of the patient and provide maximum stability** on the vertebra as well as correct pilot hole preparation for the screw placement. Guides and vertebral models are produced with **3D printing technology**. Prior to the surgery, surgeons will receive the MySpine instruments and the plastic 3D bone model, anatomically reproducing the patient's vertebra. This model is provided to simulate the proper positioning of the MySpine guide in the operating room.

PROCTORED SURGERY

Medacta's mission is to **support surgeons through the M.O.R.E. Education Program**. Upon request, the surgeon can receive the assistance of an experienced Medacta Proctoring Surgeon to assist with the first surgeries in the local hospital or surgery center. **With Medacta, the surgeon is never alone.**



VALUE PROPOSITION

97.9% screw accuracy

MySpine is a **highly accurate** guiding option for **precise screw placement**, compared to the free-hand technique.^[9] Additionally, a superimposed CT analysis showed a 100% accuracy of pedicle screw placement without any violation of the pedicle wall or other relevant structures.^[10]

100% safety

The MySpine 3D-printed guide technology is a **safe and accurate** tool for precise pedicle screw insertion.^[10] This suggests that average spine surgeons can provide **patient safety through the use of this technology**, which may be applicable to a wide range of spinal conditions.^[11]

Shortened hospital stay

From the patient's perspective, a **potential reduction in postoperative morbidity** and a **shortened hospital stay** are advantages of MySpine technology.^[12]

35% reduction in screw placement time

MySpine pedicle screw placement is **faster than the free-hand technique** considering intraoperative instrumentation time.^[9]

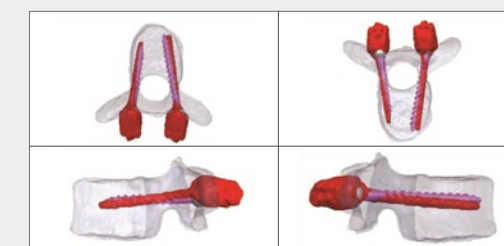
Suitable for revision surgeries

MySpine technology is **effective and safe** for pedicle screw placement **in spine revision surgery**. It can reduce the incidence of malpositioning compared to the standard freehand techniques, without requiring the cost, training, or radiation exposure associated with navigation and robotics.^[13]

Precise planning execution

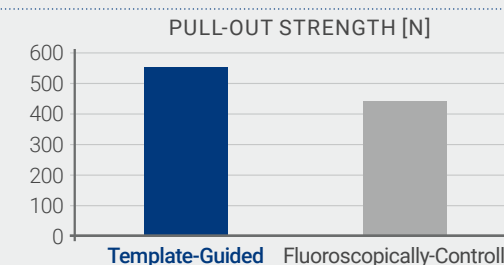
Superimposed CT analysis of the preoperative images with the planned pedicle screw trajectories provided as a part of the MySpine planning process demonstrates the following:^[10]

- Mean linear deviation = 0.92 mm
- Mean angular deviation = 2.92°



25% increase in pull-out strength

There is a significantly **higher pull-out strength** of thoracolumbar pedicle screws when inserted via MySpine patient-specific template-guided technique versus conventional free-hand fluoroscopically controlled technique.^[14]



SYNERGY

The **M.U.S.T. MINI** posterior cervical screw system, the **M.U.S.T.** pedicle screw system, and the **M.U.S.T. SI** implant system provide comprehensive solutions for the fixation of the cervical, thoracolumbar, and sacral spine regions. The wide range of screw types, rod shapes, connectors, and hooks offers surgeons the **flexibility needed to tailor the construct to the patient's anatomy** and pathology that is to be treated.

CERVICAL

M.U.S.T. MINI



SINGLE LEAD

Solid or Cannulated
Full or Partial thread

DUAL LEAD

Solid or Cannulated

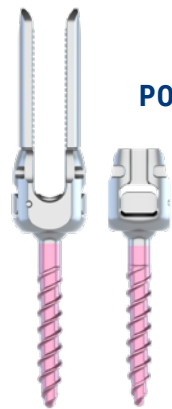
THORACOLUMBAR

M.U.S.T.

M.U.S.T. MC

M.U.S.T. UNIPLANAR

POLYAXIAL

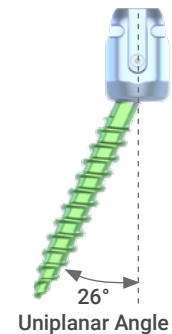
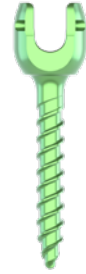


Used in combination with the locking tower

MONOAXIAL



New M.U.S.T. polyaxial screw that can accommodate a Ø5.5 or Ø6.0 rod



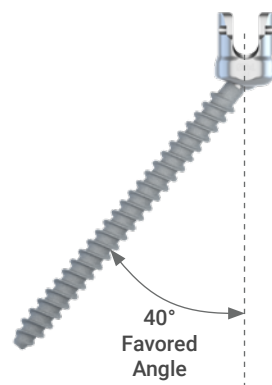
26°
Uniplanar Angle

SACRAL

M.U.S.T. SI



Headless



40°
Favored Angle

M.U.S.T. S2AI



MYSOLUTIONS PERSONALIZED ECOSYSTEM



A network of advanced digital solutions designed to improve patient outcomes and healthcare efficiency

Medacta's MySolutions Personalized Ecosystem is designed around the patient's needs and expectations, in collaboration with an international network of expert surgeons, with the aim of delivering value throughout the entire patient journey.

Surgeons' advanced 3D planning is at the core of our platform, followed by highly accurate execution tools such as patient-matched surgical guides, as well as an augmented-reality-based surgical platform and verification software. Medacta has created a pathway to improve patients' surgical experience and support them during the continuum of care.

Why choose Medacta personalized enabling technologies?

PERSONALIZED 3D PLANNING

Leverage Medacta's surgeon experience with our personalized **3D planning tool**. The preoperative planning software offers solutions to accurately plan even the most challenging case.

PRECISE EXECUTION

Provide **complete and precise pre- and intraoperative guidance** for screw placement, allowing surgeons a personalized approach based on each **patient's unique anatomy**.

STREAMLINED WORKFLOW

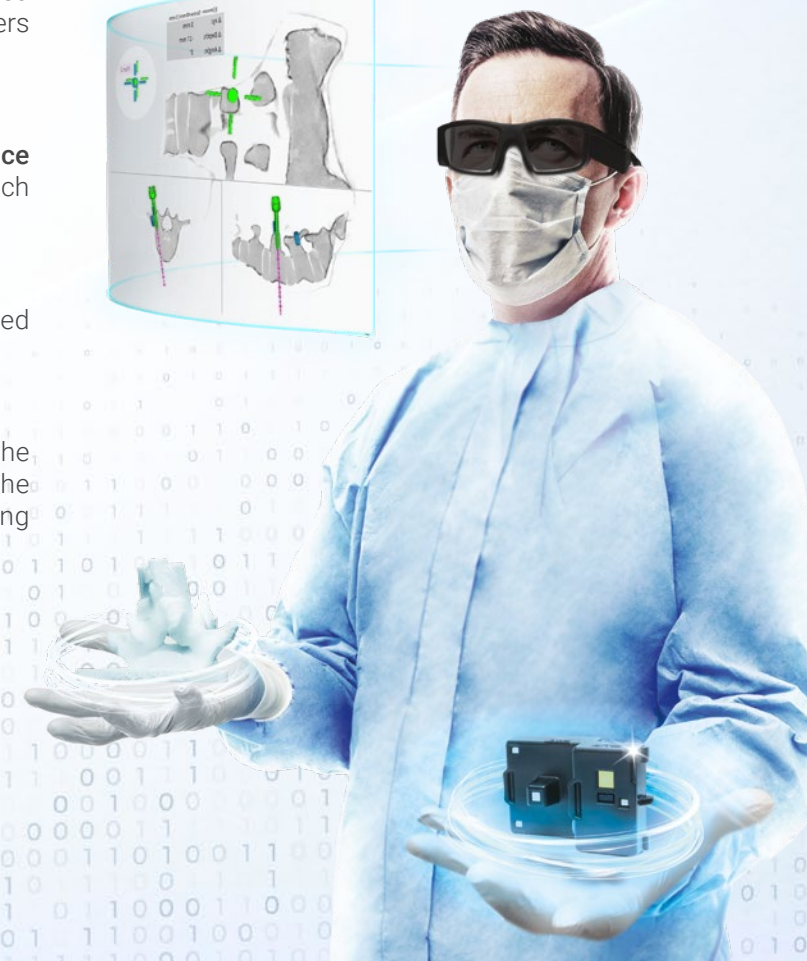
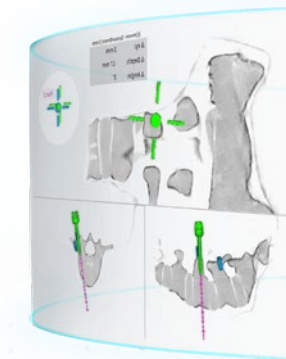
Surgeon's procedural workflow can be seamlessly integrated with Medacta's personalized enabling technology.

FULLY SUPPORTED ADOPTION

The **learning curve** can be limited to a few cases with the support of tailored **high-level educational pathways**. With the **M.O.R.E. Institute**, the surgeon is never alone when discovering new technologies.

SUSTAINABLE SOLUTION

Limited capital investment required.





REDEFINING BETTER IN ORTHOPAEDICS AND SPINE SURGERY

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For all indications, contraindications, warnings, precautions, and potential adverse effects of the product presented, see the instructions for use or contact your local representative. For additional product information, visit www.medacta.com.

MySpine®
Brochure

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rev. 04

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