

MINIMALLY INVASIVE PATIENT-MATCHED SOLUTIONS

MySpine MC is a **3D printed** patient matched solution in the **midline cortical** approach. Posterior lumbar fusion is driven in a **minimally invasive**, muscle sparing way, allowing for shorter operating times and a substantial reduction of both radiation exposure and costs.

- **MINIMALLY INVASIVE**
- **EXCELLENT CLINICAL OUTCOMES**
- **TIME SAVING**
- **LOW RADIATION DOSE**
- **HIGH BENEFIT/COST RATIO**

The goal of MySpine MC is to combine an **excellent fusion rate** with **greater predictability** of the clinical outcomes.

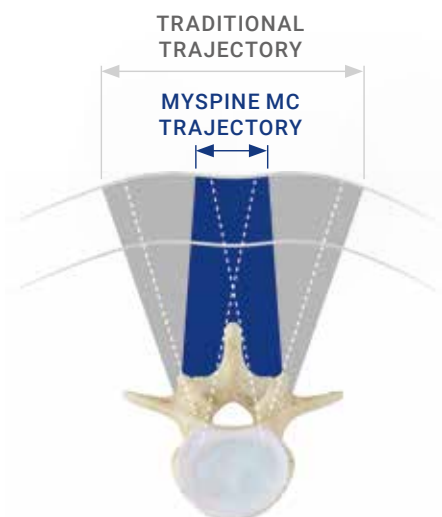
MySpine MC - Midline Cortical



MINIMALLY INVASIVE

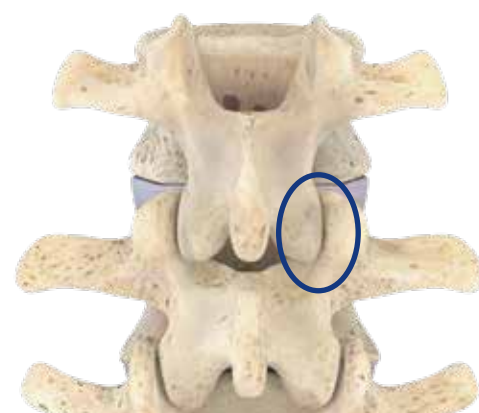
Minimally disruptive, medialized access with paramedial muscle retraction promotes^[1]:

- Enhanced **muscle preservation**^[2]
- **Reduced blood loss**^[3]
- **Faster patient recovery**^[3]
- Supradjacent **facet preservation**^[1]



POTENTIAL FOR A **LOWER ADJACENT SEGMENT DISEASE (ASD)** VS. CONVENTIONAL TECHNIQUE^[4]

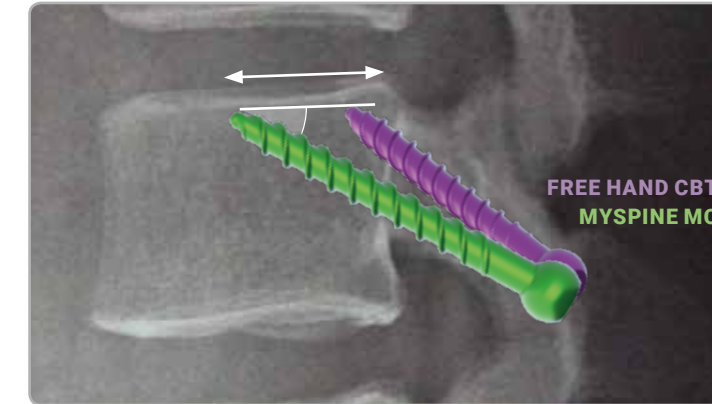
UP TO -71%



EXCELLENT CLINICAL OUTCOMES

Entry points are located at the pars interarticularis with favourable cortical bone^[4].

- MySpine MC provides **highly precise** implant positioning which may enable the use of **longer screws** and **larger diameters** vs. CBT free hand^[5]
- Uncompromised **fusion rate**^[6]
- May reduce the risk of nerve root injury by means of thorough pre-op trajectory management^[7]
- **Accurate** pedicle screw positioning; easier access to the **safe zone** for ALL screws^[8]

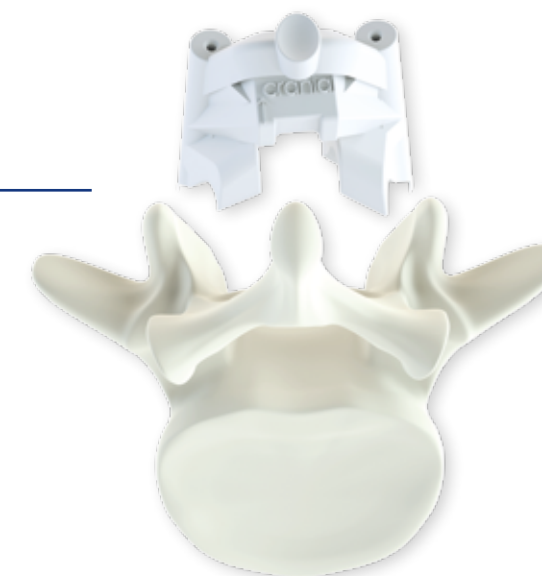


Improved bone purchase vs. conventional technique:

- Reduced screw loosening **-69%**^[9]
- Significantly increase in pull-out resistance **+30%**^[9]
- Strong anteroposterior spondylolisthesis correction, **-83% slip**^[10]

TIME SAVING

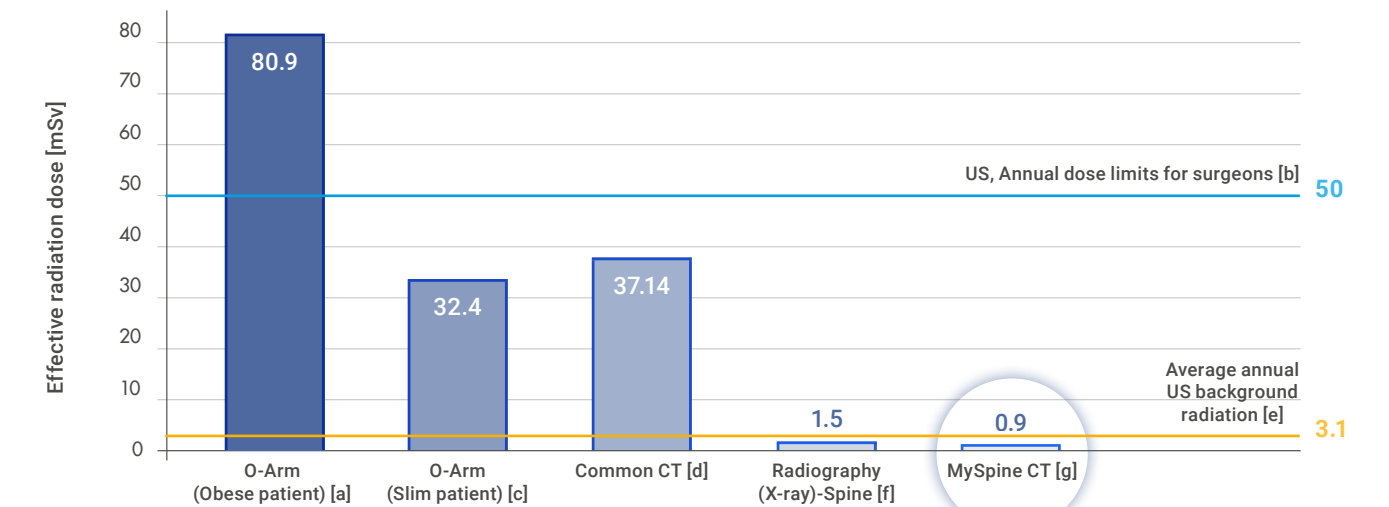
- **Ready to use 3D printed** technology in your hands
- **No peri-operative image acquisition**, thanks to accurate pre-op planning^[11]
- **Smart Technique:** position the MySpine jig on the corresponding vertebra and prepare the screw path for safe and fast implant positioning



LOW RADIATION DOSE

- Patients are exposed to a **low dose** pre-op **CT scan**, resulting in radiation exposure lower than a single full spine x-ray
- Pre-operative planning potentially **nullifies the need of intra-operative checks**, with dramatic reduction of irradiation^[11]
- **Cumulative dose is potentially reduced** vs. navigation assisted technique

MySpine is Safe for both OR Staff and Patients!



Comparison of conventional and competitors technique irradiation vs. MySpine

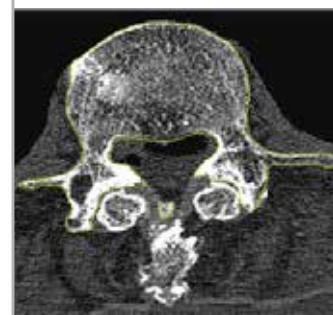
[a] Lange et al. Estimating the effective radiation dose imparted to patients by intraoperative cone-beam computed tomography in thoracolumbar spinal surgery, Spine 2013 [b] US Nuclear Regulatory Commission's (USNRC) [c] Lange et al. Estimating the effective radiation dose imparted to patients by intraoperative cone-beam computed tomography in thoracolumbar spinal surgery, Spine 2013 [d] Biswas et al. Radiation Exposure from Musculoskeletal Computerized Tomographic Scans, JBJS Am. 2009 [e] Health Physics Society Specialists in Radiation Safety, Lawrence Berkeley National Laboratory; Fact Sheet 2010 [f] Radiation Dose in X-Ray and CT Exams; 2013 Radiological Society of North America, Inc [g] MySpine, Charité University Hospital, Berlin, Germany

HIGH BENEFIT COST/RATIO

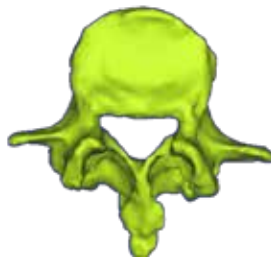
- **NO expensive** capital investment is required
- **No recurrent service cost** or disposable kit
- **Rapid Learning Curve** for effective accuracy
- **Outpatient Surgery:** hospital can potentially capitalize on resources and potentially increase volumes as patients return home immediately^[12]



MYSPIKE CASE MANAGEMENT



CT BASED SEGMENTATION



3D ANATOMY

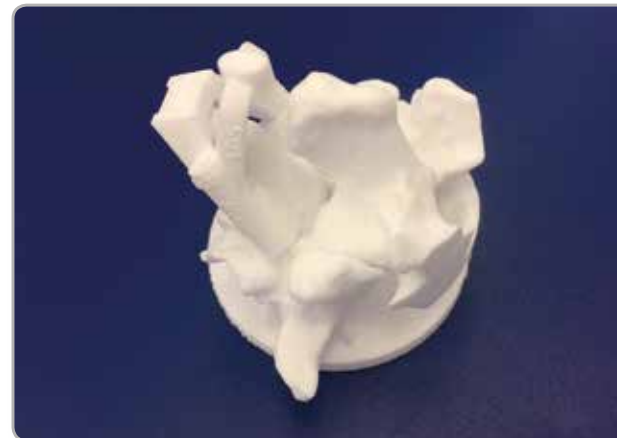
1. IMAGE ACQUISITION

Low Dose CT scan to deliver 3D reconstruction of individual vertebral anatomy



2. 3D PRE-OP PLAN MANAGEMENT

The surgeon defines optimal implant parameters: screw diameter, length and trajectory



3. 3D PRINTING MYSPIKE MC

3D patient matched Jigs are sent to the hospital



4. MYSPIKE MC MIS SURGERY

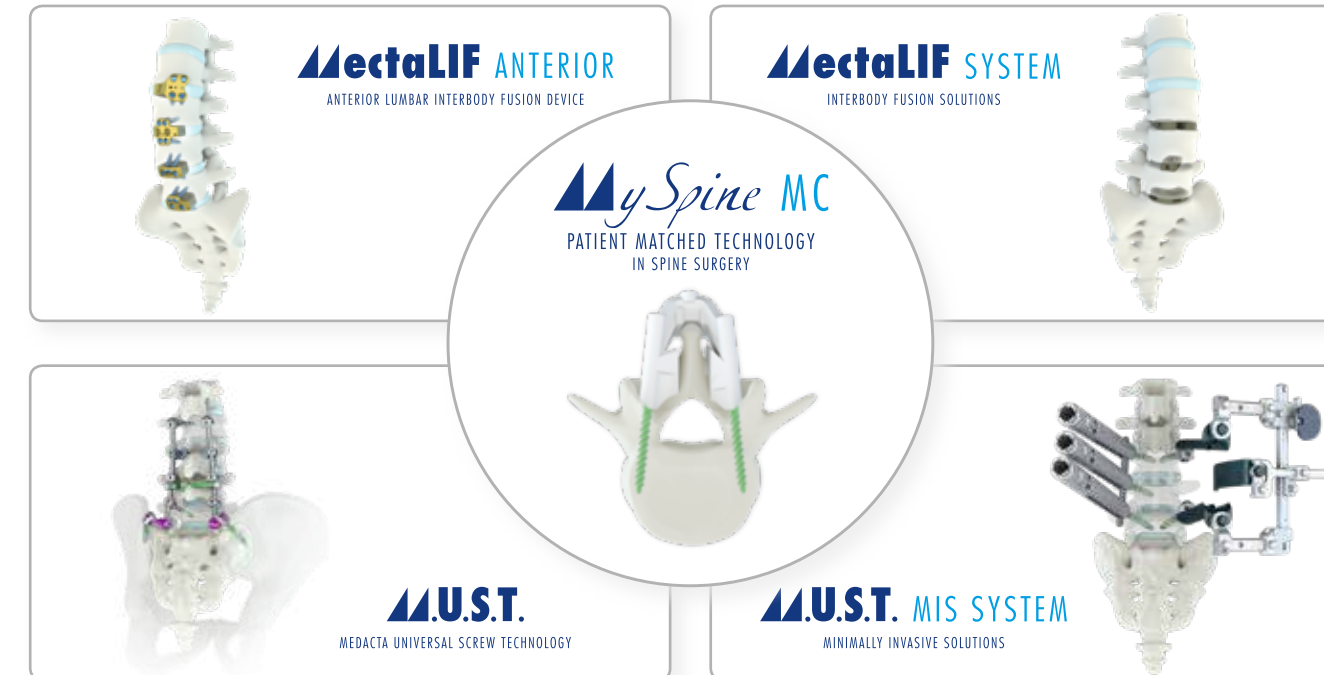
Surgery with dedicated MySpine MC system

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- [4] Gautschi O. et al., Maximal access surgery for posterior lumbar interbody fusion (PLIF) with divergent, cortical bone trajectory (CBT) pedicle screws: a good option for minimize spine access and maximize the field for nerve decompression, Journal of neurosurgical sciences, 2015
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- [6] Matsukawa - Biomechanics of CBT (Internal file)
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- [10] Mori K. et al., Short-Term Clinical Result of Cortical Bone Trajectory Technique for the Treatment of Degenerative Lumbar Spondylolisthesis with More than 1-Year Follow-Up, Asian Spine Journal, 2016
- [11] Farshad M. et al., Accuracy of patient-specific template-guided vs. free-hand fluoroscopically controlled pedicle screw placement in the thoracic and lumbar spine: a randomized cadaveric study, European Spine Journal, 2017
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COMPLETE SOLUTION

MySpine MC, together with the MUST Screw System, the MectaLIF Family of Interbody Fusion Devices and our Suite of Specialized Surgical Instruments, create a harmonized and complete system.



MYSPIKE MC EDUCATION PROGRAM

The M.O.R.E. Institute has created a comprehensive Education Program which supports the surgeon in the application of the MySpine MC system through:

- **Reference Center**
You will have the opportunity to visit a Reference Center and attend live MySpine surgeries
- **Learning Center**
Attend a MySpine WetLab, meet experienced surgeons and discuss the clinical and economic benefits of the MySpine technology.
- **Support in your hospital**
An experienced Reference Surgeon can support you during your first cases at your own hospital.
- **Continuous Education**
Through MySpine user meetings, M.O.R.E. International events, Reference Center visits and other educational tools.

Simply contact Medacta and we will create an Education Program for you!

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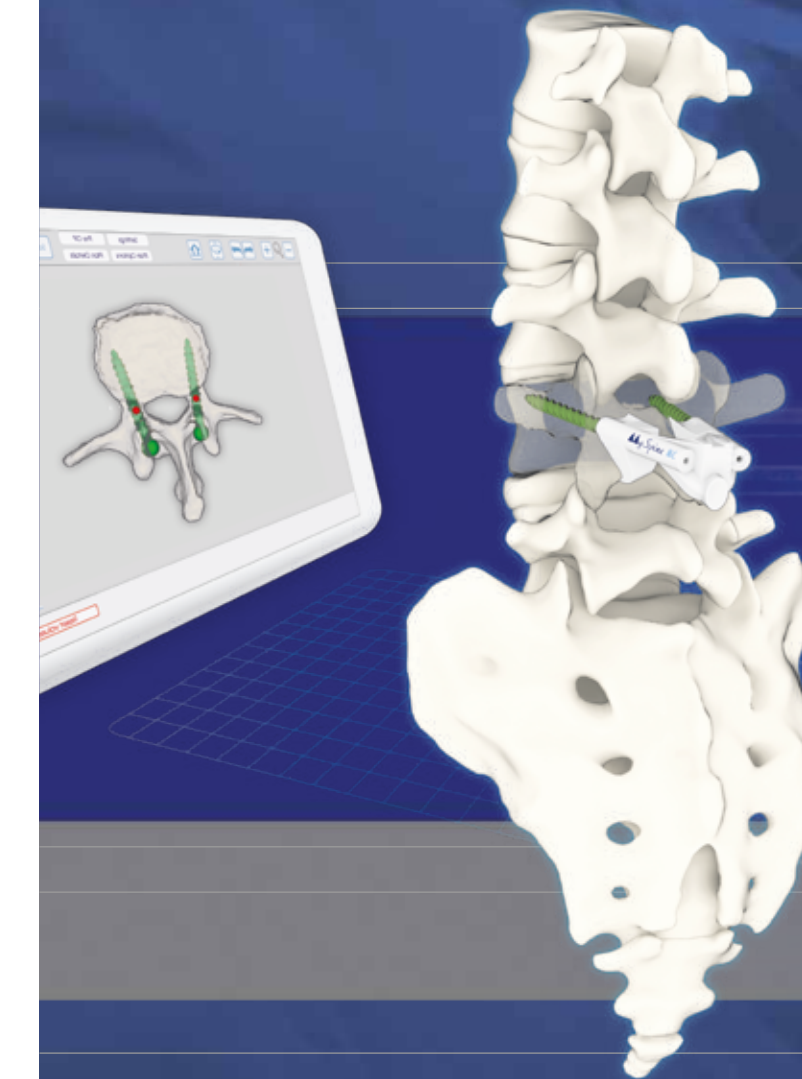


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Brochure

Joint

Spine

Sports Med