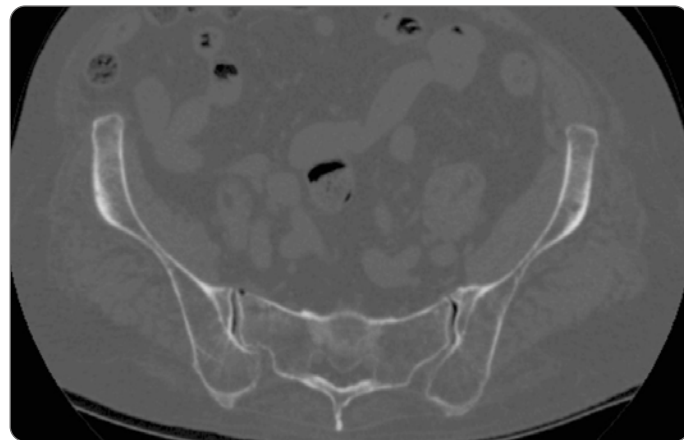
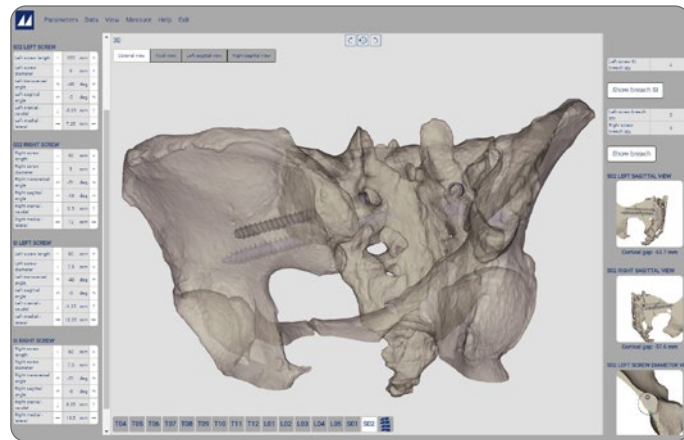


THE MYSPINE JOURNEY



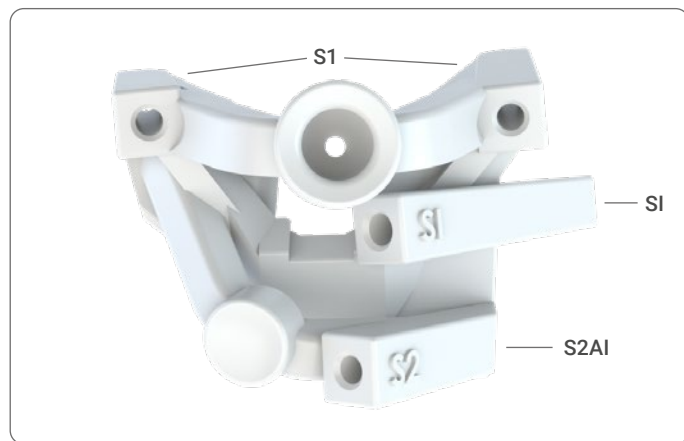
1. IMAGE ACQUISITION

Low dose CT scan to deliver 3D reconstructed vertebrae



2. 3D PRE-OP PLAN MANAGEMENT

The surgeon defines optimal implant parameters



3. 3D PRINTING

Patient-matched guides are sent to the hospital



4. PROCTORED SURGERY

An experienced surgeon will support your first cases

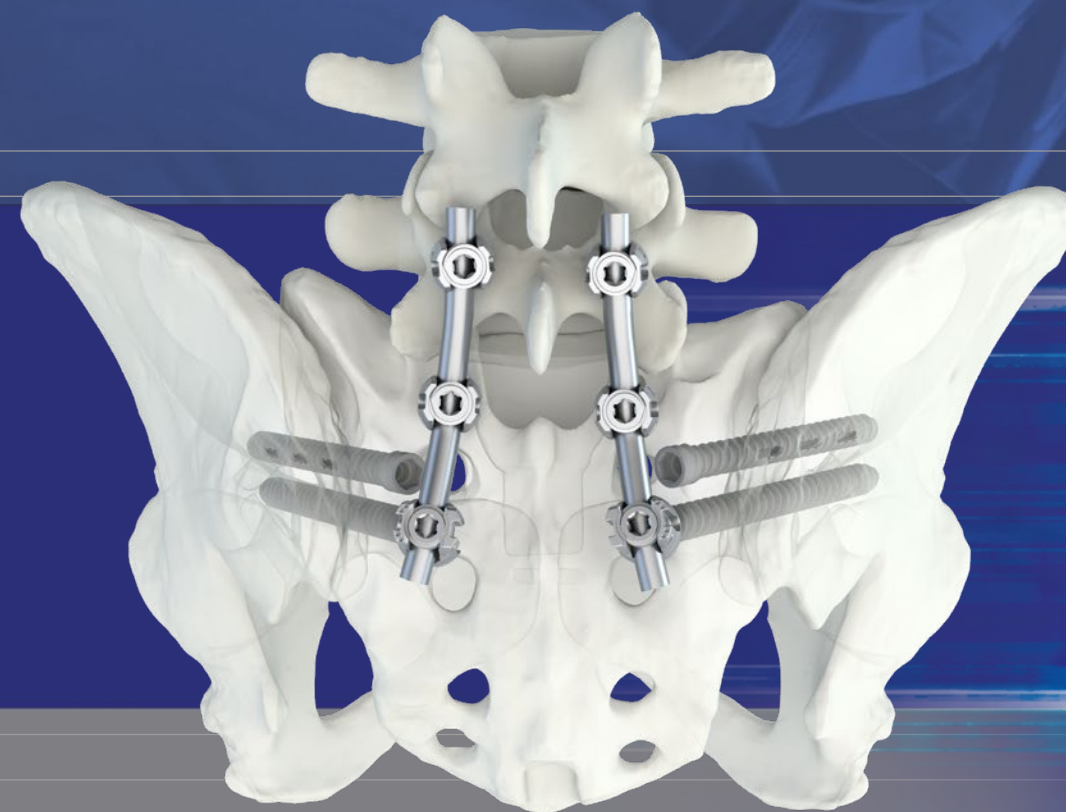
References: [1] Emami A. et al., "Outcome and Complications of Long Fusions to the Sacrum in Adult Spine Deformity: Luque-Galveston, Combined Iliac and Sacral Screws, and Sacral Fixation", *Spine*, April 1, 2002. [2] Kim YJ, Bridwell KH, Lenke LG, et al. Pseudarthrosis in long adult spinal deformity instrumentation and fusion to the sacrum: prevalence and risk factor analysis of 144 cases. *Spine (Phila Pa 1976)*. 2006; 31(20): 2329-2336. [3] Kebaish KM. Sacropelvic fixation: techniques and complications. *Spine (Phila Pa 1976)*. 2010; 35(25): 2245-2251. [4] Casaroli et al. "Evaluation of iliac screw, S2 alar-iliac screw and laterally placed triangular titanium implants for sacropelvic fixation in combination with posterior lumbar instrumentation: a finite element study". *European Spine Journal* (2019) 28:1724-1732. <https://doi.org/10.1007/s00586-019-06006-0>. [5] S. M. Krieg et al. "Revision by S2 alar-iliac instrumentation reduces caudal screw loosening while improving sacroiliac joint pain—a group comparison study". *Neurosurgical Review* (2021) 44:2145-2151. [6] Ai-Min Wu et al. "The technique of S2 alar-iliac screw fixation: a literature review". <http://amj.amegroups.com/article/view/4197/4924>. [7] Matsukawa K. et al., Cortical pedicle screw trajectory technique using 3D printed patient-specific guide, *M.O.R.E. Journal*, September 2018. [8] Strnad Z., Strnad J., HYPERLINK "https://www.researchgate.net/profile/Ctibor-Povysil/Povysil-C", Effect of Plasma-Sprayed Hydroxyapatite Coating on the Osteoconductivity of Commercially Pure Titanium Implants. HYPERLINK "https://www.researchgate.net/journal/The-International-journal-of-oral-maxillofacial-implants-1942-4434" *The International Journal of oral & maxillofacial implants*. July 2000; 15(4):483-90.

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UNIQUE ANATOMIES PATIENT-MATCHED SOLUTIONS



Brochure

Joint Spine Sports Med

CLINICAL CHALLENGE



Lumbosacral fixation in spine surgery can be challenging for spine surgeons.

Using isolated S1 pedicle screws as the sole distal fixation in long thoracolumbar posterior constructs has been shown to result in a high rate of failure, due to loosening, breakage, and pseudarthrosis.^[1]

Due to its unique clinical and biomechanical challenges, adult spinal deformity correction surgery is widely researched. The estimated incidence of pseudarthrosis is 24% in patients with long fusions ending at the sacrum.^[2] A solid foundation able to resist the robust movement and load present at the lumbosacral junction may help prevent mechanical failure at the base of the construct.^[3]

"Why would I use MySpine Anchor? The SI screw placement is really challenging and if I can do it in a safe, fast, and accurate way without more dissection as I am used to, I think I have to go for it. MySpine Anchor technology allows me to put my screws exactly in the way I planned before: they are well aligned, and rod placement is really simple."

Dr. Geert Mahieu

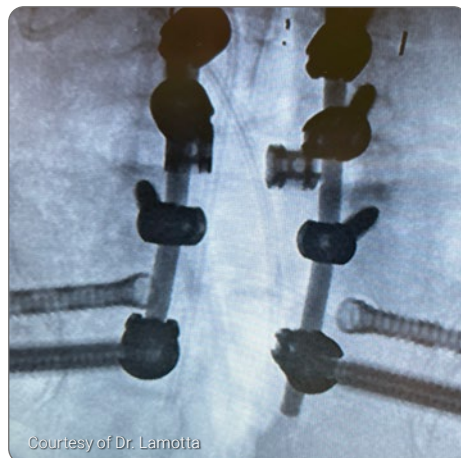
MYSPINE ANCHOR TECHNIQUE

The **MySpine Anchor** technique is designed to **enhance stability** at the end of long constructs and may help **decrease the risk of screw loosening and instrumentation failure**. This technique can provide additional stability and fusion in spinal deformities where there is a tendency of SI joint dysfunction.^[3]

The stabilizing effect of S2 alar-iliac screws in combination with posterior SI fusion devices **may reduce the risk of mechanical failure of S1 pedicle screws**.^[4] Divergent S2 alar-iliac trajectories may support a **smaller incision and less lateral retraction**.^[5] The medial entry points allow for quick rod connections.



Courtesy of Dr. Lamotta



Courtesy of Dr. Lamotta

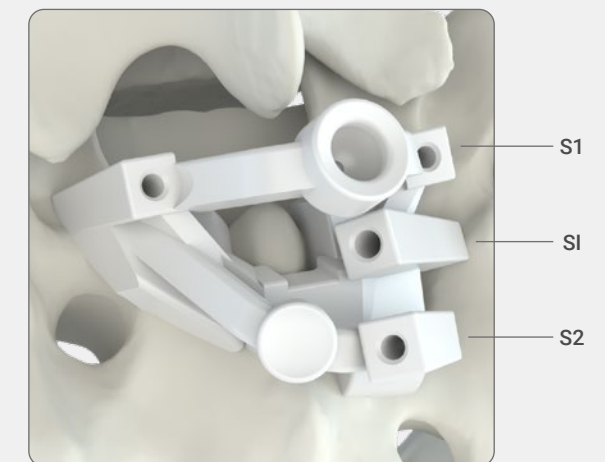
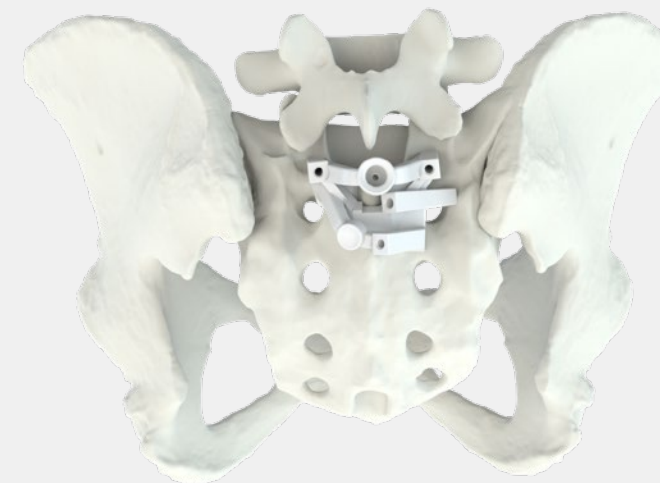


Courtesy of Dr. Lamotta

MYSPINE ANCHOR KEY FEATURES

MySpine Anchor is Medacta's **patient-matched solution** for posterior sacro-iliac fusion as an adjunct to thoracopelvic fixation. This minimally invasive solution is mainly designed for long constructs to overcome potential insufficient fixation in the lower spine.

This guided technique leads to **accurate screw positioning** and potential **reduction in radiation exposure** and **surgical time**.^[6,7] The MySpine Anchor guide is an all-in-one solution for S2AI and SI pilot hole preparation, designed to avoid increasing the operation time.



The MySpine Anchor patient-specific drill guide is paired with the **M.U.S.T. S2AI screw** system, which provides several advantages. These include a **titanium polyaxial tulip design** with a range of motion from 40° to 80° and a favored angle, longer screws, an **optional hydroxyapatite (HA) coating**, a larger neck diameter and the T25 torque interface. M.U.S.T. S2AI screws are available in sizes of **7.0, 8.0, 9.0, and 10.0mm** and are fully **compatible with 5.5mm and 6.0mm rods**. This technique also incorporates the **M.U.S.T. Sacro-Iliac Headless Screw** system, which features an anatomical headless design to reduce compressive force on the cortical bone and a **hydroxyapatite rough plasma spray coating** to enhance fusion.^[8]

