

MySpine® CERVICAL

PATIENT MATCHED TECHNOLOGY
IN SPINE SURGERY

UNIQUE ANATOMIES, PATIENT-MATCHED SOLUTIONS



Brochure

Joint

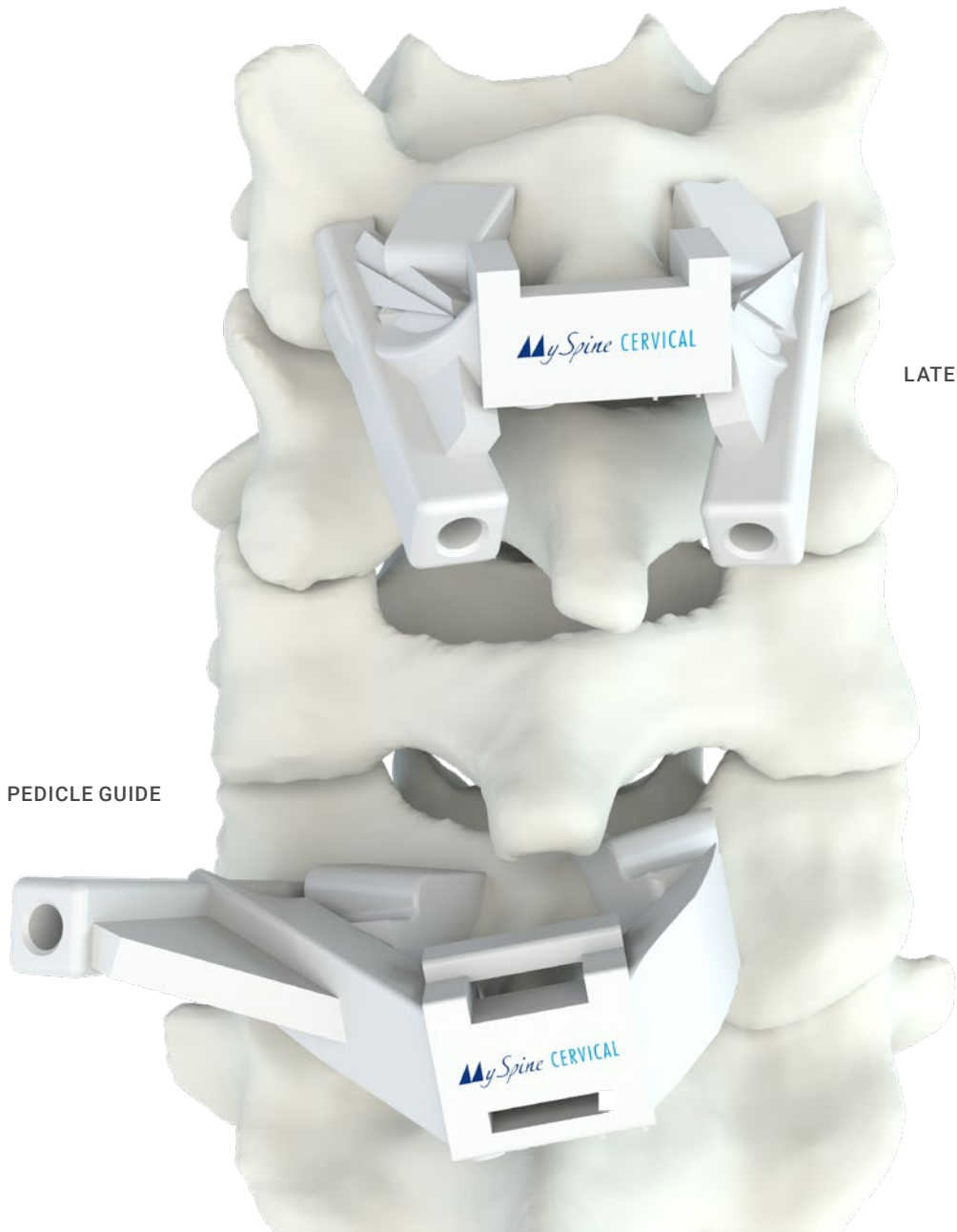
Spine

Sports Med

MySpine Cervical is a patient-matched technology that assists in the placement of **posterior cervical screws**. The MySpine platform uses the patient's spinal CT scan to create a 3D preoperative plan specific to that patient.

MySpine Cervical guides are patient-specific devices intended to be used as **anatomical perforating guides**, specific to a single patient's anatomy, to assist intraoperatively in the positioning of screws during posterior cervical fixation surgery between the **C2 to C7 levels**.

MySpine Cervical guides accomodate both **LATERAL MASS** and **PEDICLE** planning trajectories.



LATERAL MASS GUIDE

PEDICLE GUIDE

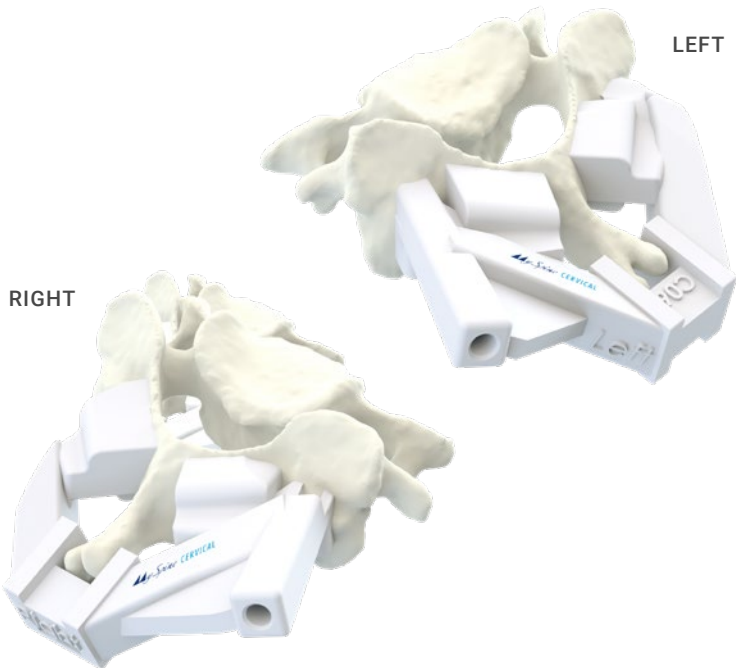
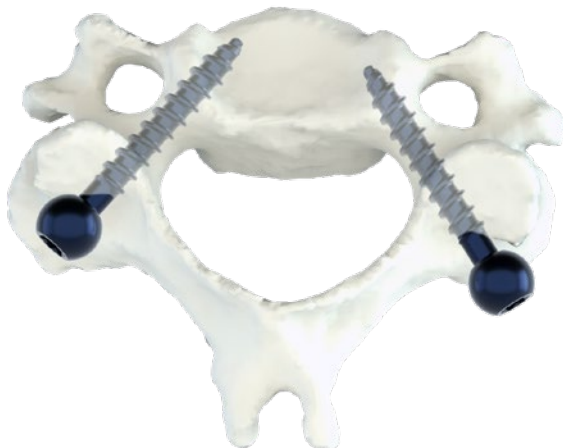
LATERAL MASS TRAJECTORY

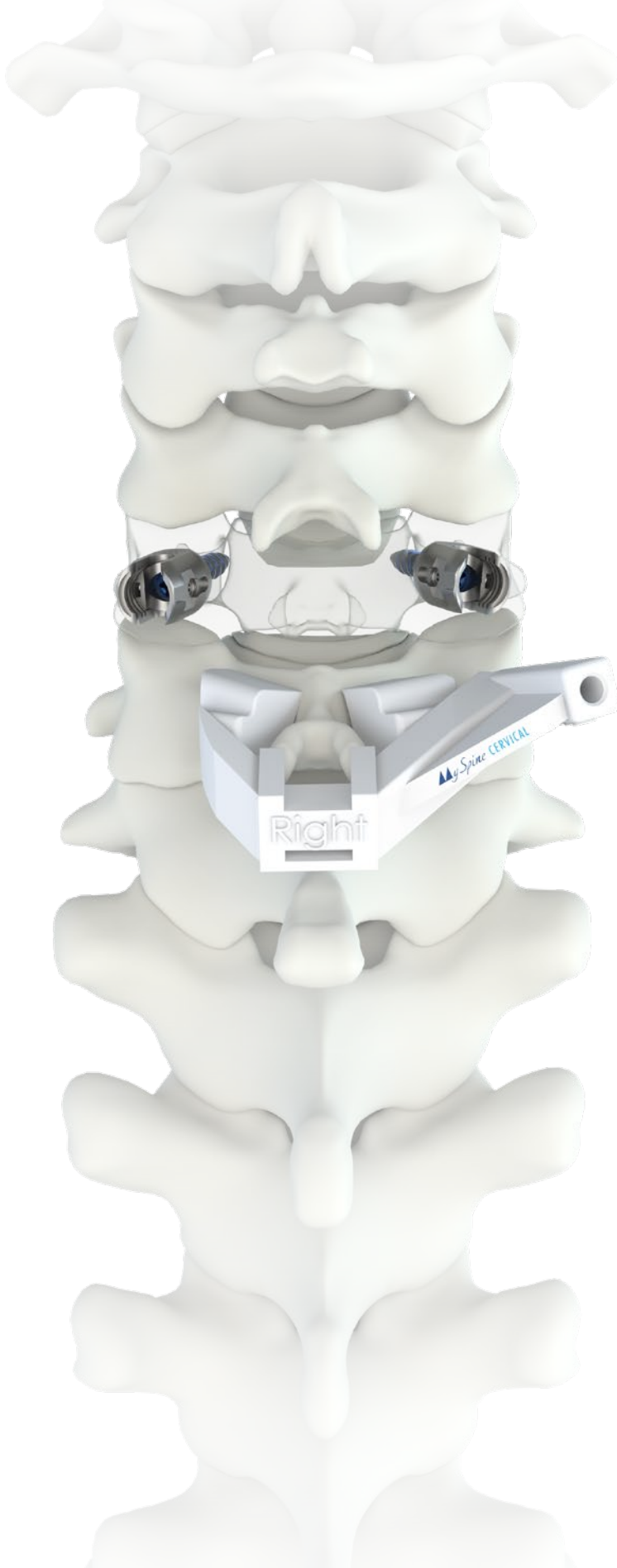
- Lateral Mass screws are safer than transpedicular screws^[1]
- Lateral mass trajectory is not dependent on the integrity of the lamina, pedicle, or spinous processes to achieve fixation^[1]



PEDICLE TRAJECTORY

- Pedicle screws have a superior biomechanical properties than lateral mass screws, with an higher pullout strengths, which are ideal for strong fixation in deformity, trauma, or tumor cases^[2]
- Significantly longer screws compared to lateral mass trajectory^[2]





VALUE PROPOSITION

98.7% screw accuracy

MySpine Cervical allows for precise screw insertion in the pedicle, while reducing the incidence of complications.^[3]

100% safety

The precision and safety of MySpine Cervical make it a valuable navigation tool for pedicle screw insertion in the cervical spine.^[4]

49.8% reduction in O.R. Time

The average operative time with MySpine Cervical was 168 minutes, compared to a range of 110 - 564 minutes with the free-hand technique.^[4]

41.4% reduction in blood loss

The median blood loss using MySpine Cervical was 300 mL, compared to a range of 150 - 1300 mL with the free-hand technique.^[4]

Low dose exposure

The median intraoperative fluoroscopic dose was reduced to 321.2 mGycm² vs. the standard range of 102.4 to 825.0 mGycm².^[4]

Treatment of tumor cases

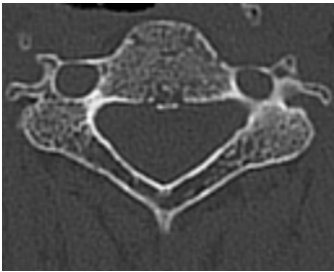
MySpine Cervical could increase the safety and the accuracy of this challenging screw placement, even in oncological patients.^[5]

CASE MANAGEMENT

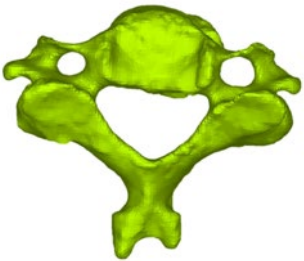
Accurate 3D preoperative planning based on a **low dose CT scan** delivers patient-matched guides, requiring zero capital investment.

IMAGE ACQUISITION

A specific **low dose CT protocol** ensures safe image acquisition, reducing the amount of irradiation absorbed by the patient. Preoperative planning potentially nullifies the need for intraoperative checks, with a dramatic reduction of irradiation. The cumulative dose is potentially reduced compared to the navigation-assisted technique.



CT BASED SEGMENTATION



3D ANATOMY

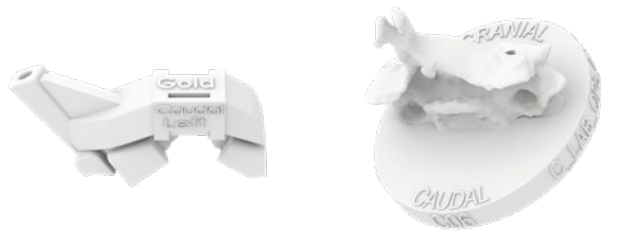
MYSPINE WEBPLANNER

MySpine Cervical cases are managed entirely online with no need to install additional software. The case database is available to the surgeon anytime and anywhere. 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 placement of the screws. A plastic 3D model, which accurately replicates the patient's vertebra, is provided to simulate the precise placement of the MySpine guide in the operating room.



PROCTORED SURGERY

Prior to the surgery, surgeons will receive the MySpine Cervical instruments and the plastic replica of the patient vertebrae. Medacta's mission is to provide surgeons support 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 first surgeries in the local hospital or surgery center. With Medacta, the surgeon is never alone.



SYNERGY

The M.U.S.T. MINI posterior cervical screw system is a **comprehensive solution** for fixation of the occipito-cervico-thoracic spine. The variety of screws, hooks, rods and connectors allows the surgeon to tailor the construct to the specific patient anatomy and pathology to be treated.

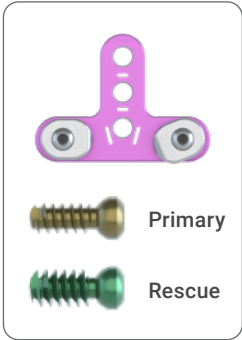
High **SAFETY** and **ACCURACY** in cervical screw placement^[3,4] with

M.U.S.T.® MINI POSTERIOR CERVICAL SCREW SYSTEM

SCREWS



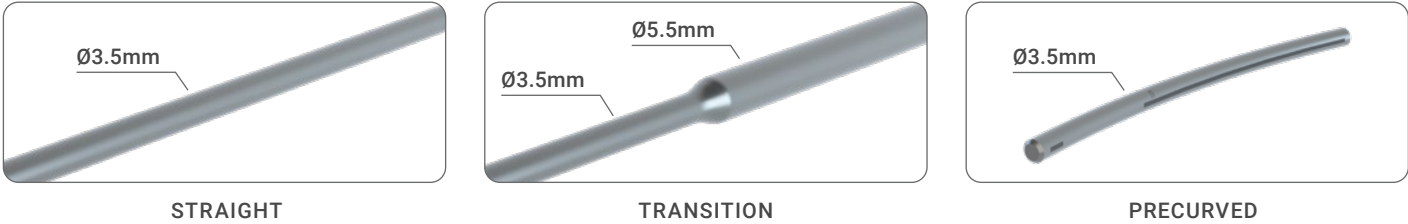
OCCIPITAL PLATE



CONNECTORS & HOOKS



RODS



MY SOLUTIONS 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, potentially **saving O.R. space, setup time, and increasing operating efficiency**.

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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MySpine® Cervical
Brochure

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References: [1] Mohamed E. et al., Lateral Mass Fixation in Subaxial Cervical Spine: Anatomic Review. *Global Spine Journal* 2021. [2] Ito Z. et al. Pedicle Screws Can be 4 Times Stronger Than Lateral Mass Screws for Insertion in the Midcervical Spine. *Journal of Spinal Disorders and Techniques*. 2014. [3] Oda I, Kawaguchi Y, et al. Accuracy of pedicle screw placement using patient-specific template guide system. *J Orthopaedic Science*. 2021 Jan. [4] Farshad M, et al. Template guided cervical pedicle screw instrumentation. *North American Spine Society Journal*. 2022. [5] Marengo N. et al., 3D-printed guides for cervical pedicle screw placement in primary spine tumor: Case report and technical description. *Frontiers in Surgery*. 2022.