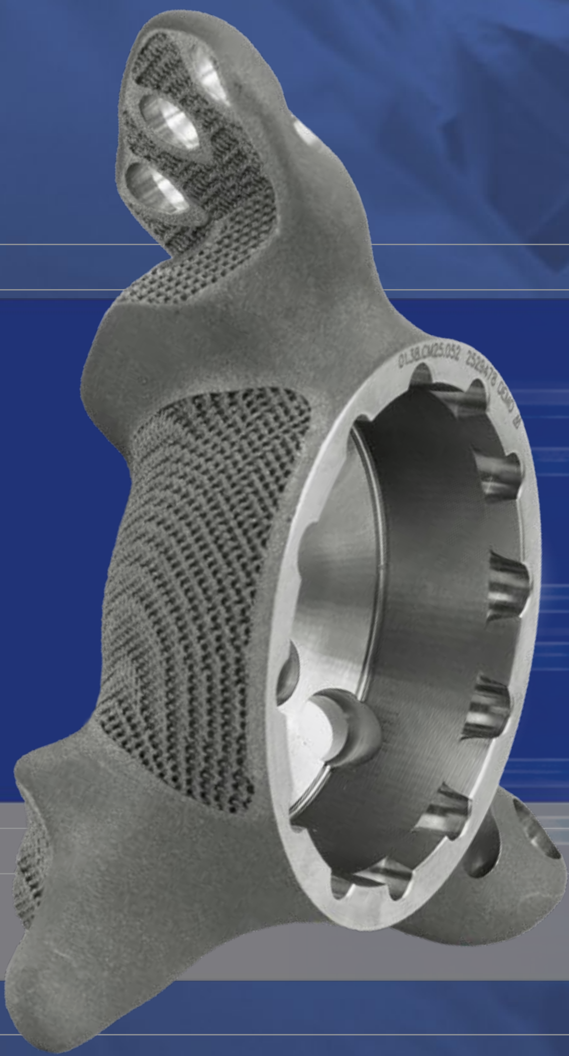
MyImplant

PATIENT ANATOMY RESOLVED

CUSTOM SOLUTIONS FOR UNCUSTOMARY NEEDS



Brochure

Joint | Spine | Sports Med

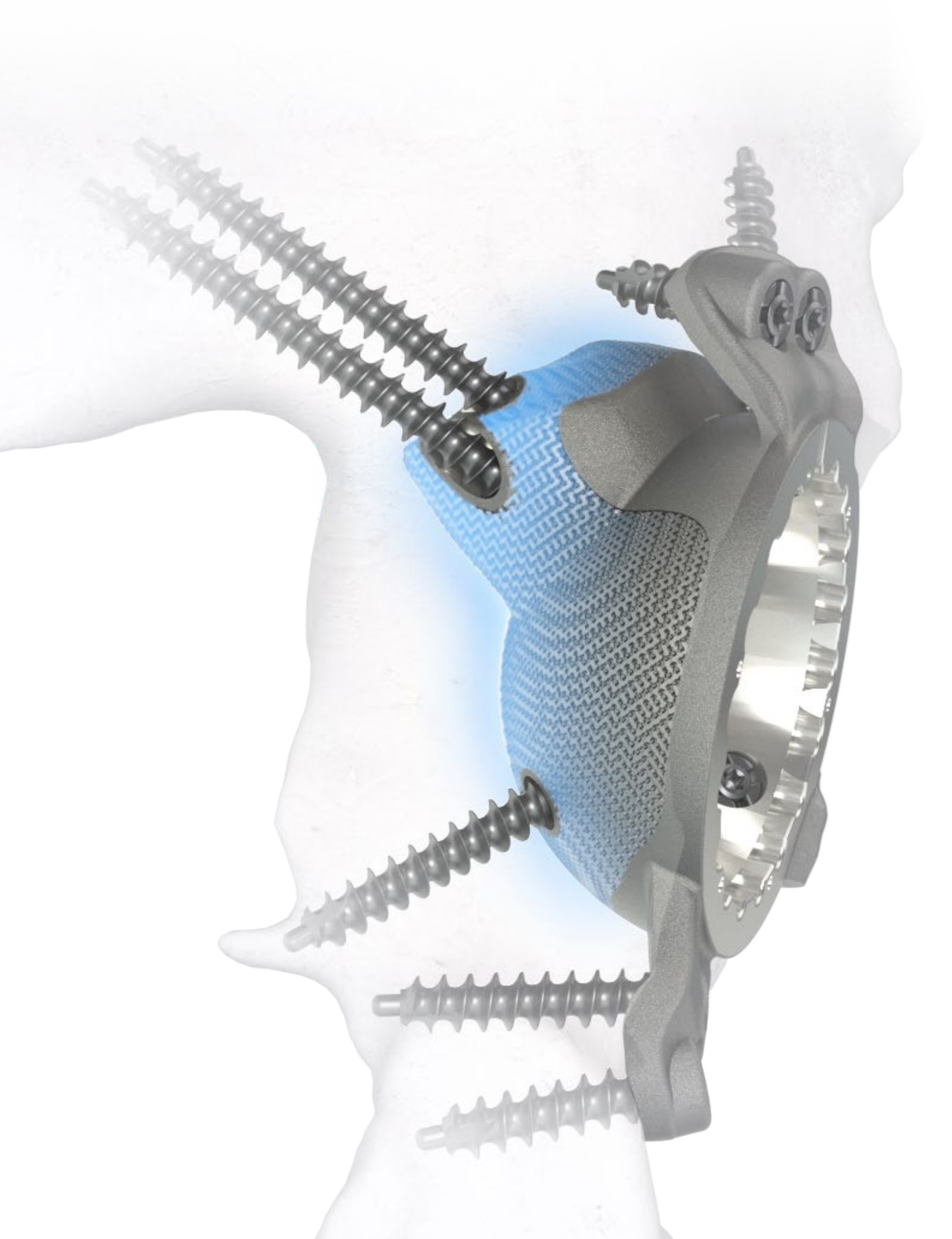
ACETABULAR RECONSTRUCTION CUP

Medacta International

Leveraging Medacta's extensive experience in **3D preoperative planning** and **advanced 3D Metal technology**, MyImplant offers **innovative custom-fit hip solutions** tailored to each patient's unique anatomical and clinical needs that potentially **enhance surgical outcomes** and **improve the quality of life** for patients with complex orthopedic conditions.

In cases of **complex acetabular bone loss or deformity**, **MyImplant acetabular reconstruction cup** supports surgeons in managing the most challenging cases by restoring anatomy and biomechanics.

MyImplant acetabular reconstruction cup is a **3D printed, monobloc customized solution** that integrates **cup, augment, and flanges** into a single titanium component, engineered from **CT-based planning** with **patient-specific* screw fixation** to ensure optimal stability.



MyImplant offers a **comprehensive platform** that guides the surgeons through every step of the custom implant journey. This holistic approach is possible thanks to a robust suite of services, advanced surgical techniques, and tailored education programs that ensure a smooth and informed process.

1. DEDICATED DESIGN SERVICE
2. ENHANCED BONE PRESERVATION
3. MAXIMIZED PRIMARY STABILITY
4. COMPLETE SYSTEM

DEDICATED SET OF PATIENT-SPECIFIC* INSTRUMENTS

The implant is complemented with a dedicated set of patient-specific* instruments designed to enhance surgical precision and confidence.

3D BONE MODEL

A 3D bone model including **removable osteophytes**, to clearly visualize the areas of bone that need to be resected during surgery.

PATIENT-SPECIFIC* TRIAL IMPLANT

A patient-specific* trial implant, to **verify proper bone preparation** before placing the final component.

CUSTOM DRILLING GUIDES

Custom drilling guides, to help ensure **accurate and safe screw placement**, fully aligned with the preoperative plan.

1 DEDICATED DESIGN SERVICE

The **MyImplant engineering team works** closely with surgeons to understand clinical needs, integrating feedback into each stage of the design process. The engineers design patient-specific* implants and instruments that aim to **restore the native condition** while **prioritizing bone preservation**.

Medacta's preoperative planning tools leverage **advanced software and CT scans of the patient** to construct highly detailed 3D bone models. These tools enable **precise pre-surgical planning and simulation**, helping to achieve a **satisfying implant fit** and **accurate positioning**.

HOW TO PLAN YOUR FIRST MYIMPLANT

- **MYHIP** CREDENTIALS SET-UP
- UPLOAD THE **CT IMAGES** OF YOUR PATIENT
- DISCUSS WITH **OUR ENGINEERS**
- REVIEW THE **DESIGN** OF YOUR IMPLANT
- VALIDATE THE **PLANNING**
- PERFORM YOUR **SURGERY**

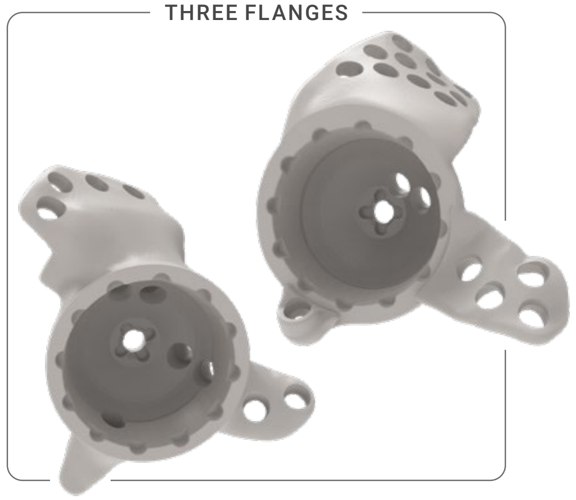
CUSTOMIZED DESIGN OF FLANGES

Different flange options can be designed to better adapt the construct to the patient's defect and support stable fixation.

ONE FLANGE

TWO FLANGES

THREE FLANGES



SPECIFIC SUGGESTION FOR BONE PREPARATION

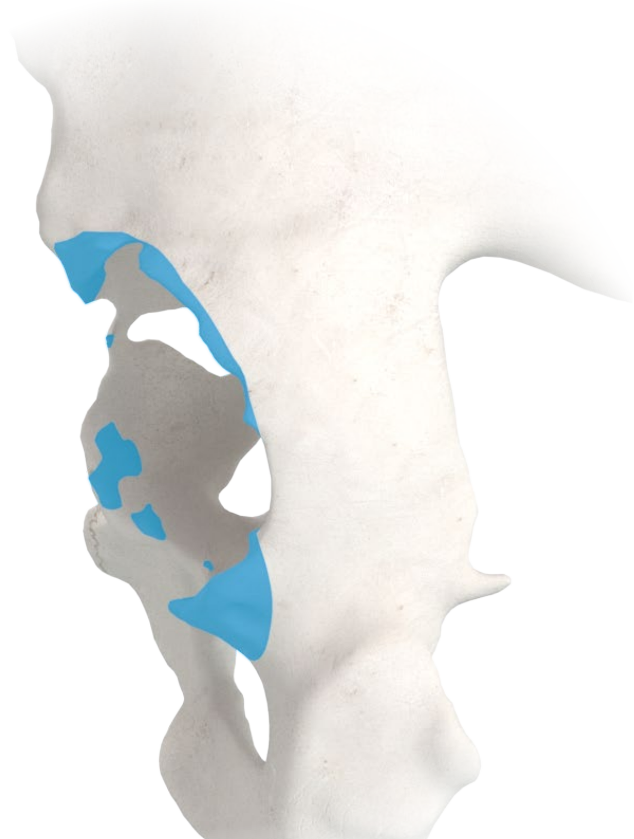
A **specific suggestion for the reaming process** is provided as part of the MyImplant design, helping the surgeon prepare the bone cavity to optimally match the implant geometry.

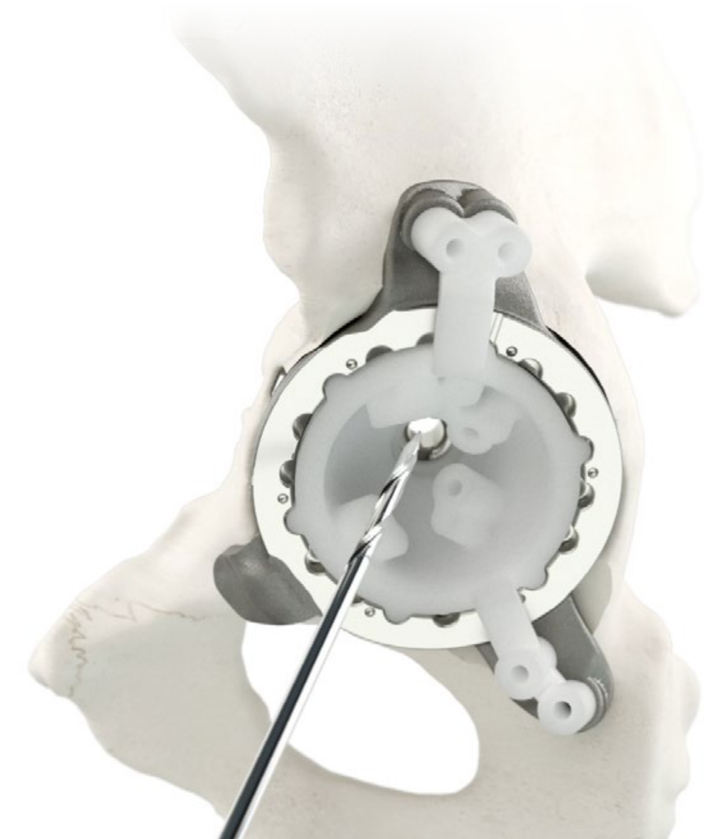
This tailored guidance ensures **proper implant seating** and promotes **bone preservation**, contributing to overall surgical precision and implant stability.

PATIENT-SPECIFIC* SCREW CONFIGURATION

A **patient-specific* screw configuration** is planned with optimized selection of screw type (cancellous, cortical, compression polyaxial locking or iliac screws), positioning, trajectory, length, and orientation.

This supports **fixation into higher-quality bone for enhanced stability** while **simplifying intraoperative decision-making**.

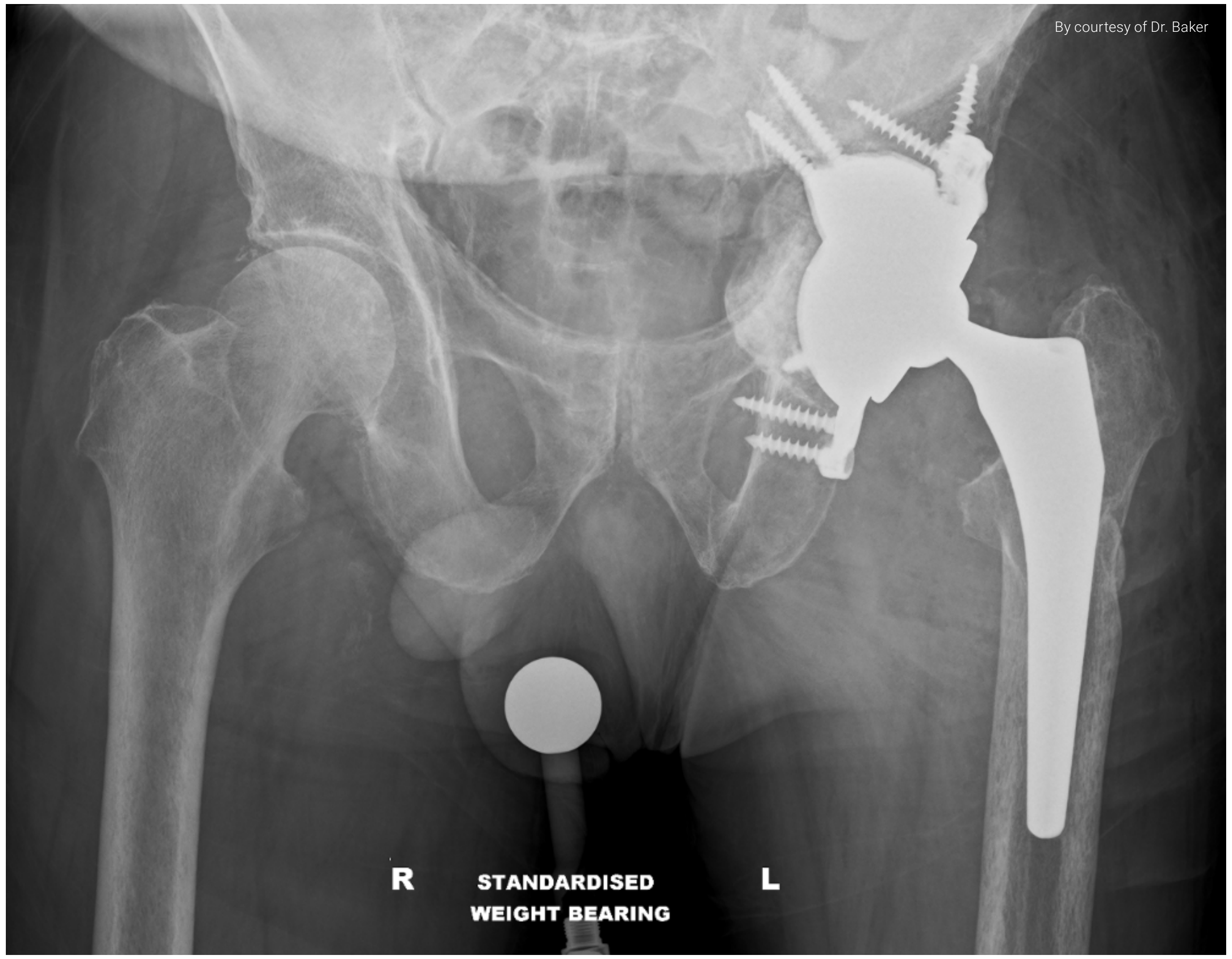




2 ENHANCED BONE PRESERVATION

The patient-specific* solution is meticulously engineered to **maximize the contact surface** between the implant and the existing bone, to find a good compromise between **load distribution** and the **preservation of the native bone structure**.

This approach **minimizes the need for bone resection**, thus prioritizing preservation of the native bone. This preservation is crucial for maintaining the **biomechanical integrity** and for facilitating a **more stable initial fixation**, which is essential for long-term implant success.



3 MAXIMIZED PRIMARY STABILITY

Primary stability is ensured by two key factors: the **advanced 3D Metal surface** and the **strategic positioning of screws**.

3D METAL TECHNOLOGY

The implants are produced using the 3D Metal technology, Medacta's in-house **additive manufacturing process**. 3D Metal implants are engineered with an advanced outer surface designed to achieve **intrinsic high friction** and a precise **scratch-fit**[1] with the surrounding bone, contributing to maximized primary stability.

PATIENT-SPECIFIC* PLACEMENT OF SCREWS

Patient-specific* placement of screws further enhances primary stability. The **customized screw trajectories and positions** support fixation and may reduce the need of intraoperative adjustments.

3D METAL TECHNOLOGY: ADVANCED BIOMATERIAL STRUCTURE

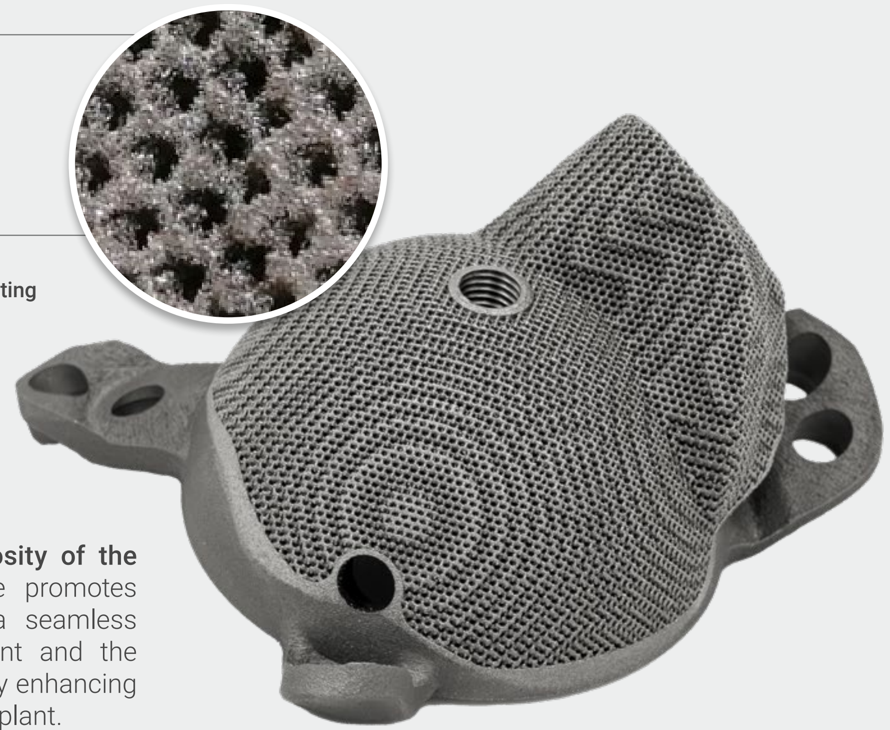
3D Metal®

Pore size 620 μm

Porosity 65%

HONEYCOMB STRUCTURE

Optimized pore interconnection, supporting structural connection with the bone



By replicating the **natural porosity of the bone**, the 3D Metal structure promotes bone ingrowth, allowing for a seamless integration between the implant and the native bone over time, potentially enhancing the **long-term stability** of the implant.

4 COMPLETE SYSTEM

MyImplant acetabular reconstruction cup is **seamlessly compatible** with all the components of the **Medacta Hip implant portfolio**, establishing a **versatile synergy** between customized and standard implant options. This provides a wide range of complete constructs to address each surgeon's and patient's needs in complex cases of acetabular bone loss or deformity.

Reference: *[1] www.medacta.com/EN/3d-metal.*

** Patient-specific is used for descriptive purposes only. Regulatory terminology may vary by country; the applicable wording must be confirmed locally.*

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