AMIS® Experience
ANTERIOR MINIMALLY INVASIVE SURGERY
IN HIP REPLACEMENT
The **AMIS Experience** is much more than a surgical technique. It is a **complete set of services** that delivers **healthcare efficiency** with **no additional costs**.
With the **patient** in mind, our **innovations** are designed to become part of their **life experience**
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMIS EXPERIENCE</td>
<td>6</td>
</tr>
<tr>
<td>SURGICAL TECHNIQUE</td>
<td>10</td>
</tr>
<tr>
<td>MEDICAL EDUCATION</td>
<td>12</td>
</tr>
<tr>
<td>DEDICATED IMPLANTS</td>
<td>16</td>
</tr>
<tr>
<td>ADVANCED INSTRUMENTATION</td>
<td>19</td>
</tr>
<tr>
<td>TOOLS &amp; SERVICES</td>
<td>23</td>
</tr>
<tr>
<td>ECONOMIC BENEFITS</td>
<td>28</td>
</tr>
<tr>
<td>SURGEON TESTIMONIES</td>
<td>29</td>
</tr>
<tr>
<td>AMIS BIKINI</td>
<td>30</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>35</td>
</tr>
</tbody>
</table>

- **Medacta International**
AMIS Experience

The anterior approach is the only approach that follows both an intermuscular and internervous path, potentially reducing the risk of damage to periarticular structures, including muscles, tendons, vessels and nerves. Its use in Total Hip Replacement goes back many years\(^1\) and advantages have been extensively reported in the literature\(^2\). However, we recognize that it can be challenging to adopt\(^3\).

Convinced of the value of the anterior approach for improving patient wellbeing, but at the same time acknowledging the potential challenges, an international group of expert surgeons (now the AMIS Education Board), in collaboration with Medacta, set out to optimize and standardize the anterior approach, to make it more straightforward and enhance its reproducibility.

The result of this collaboration was the AMIS (Anterior Minimally Invasive Surgery) technique, created in 2004, along with the development of dedicated instrumentation to facilitate the procedure.

AMIS.MEDACTA.COM
When it was clear that the AMIS procedure had the potential to deliver important clinical advantages, effective and comprehensive education of the technique became the goal.

The M.O.R.E. (Medacta Orthopaedic Research and Education) Institute was created and, together with the AMIS Education Board, became responsible for the development and continuous improvement of the AMIS Education Program, with a mission to:

- provide ongoing surgeon training and proctorship
- encourage the sharing of experiences between surgeons
- reduce, as much as possible, challenges in the early phase of the learning curve
More than an Anterior Approach

SURGICAL TECHNIQUE
AMIS is an evolution of the anterior approach: simpler, more reproducible and less invasive.

MEDICAL EDUCATION
The M.O.R.E. AMIS Education Program has proven to be of the highest standard of extensive medical education, demonstrating to effectively ease the learning curve.

DEDICATED IMPLANTS
Specifically designed to facilitate implantation through the anterior approach, with success evidenced by clinical outcomes and customer satisfaction.

ADVANCED INSTRUMENTATION
Developed specifically to make the AMIS technique easier and more reproducible.

TOOLS & SERVICES
Additional support elements provided by Medacta to further help the surgeon.

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Surgical Technique

The AMIS technique is a minimally invasive anterior approach, following an INTERMUSCULAR AND INTERNERVOUS pathway, protecting and preserving periarticular structures.

Consequently, the AMIS technique potentially delivers the following advantages for the patient:

- **Significantly shortened rehabilitation**
- **Faster return to daily activities**
- **Decreased post-operative pain**
- **Immediate post-operative muscle tone preservation**
- **Decreased blood loss**
- **Shorter hospitalization**
- **Reduced risk of dislocation**

These advantages are predominantly experienced by the patient in the short-term, however, the approach may deliver potential MEDIUM - TO LONG -TERM BENEFITS.

Literature shows that with the AMIS approach:

- **Patients feel no residual trochanteric pain or limping**
- **There is a reduced risk of muscle degeneration**
- **There are potential advantages for revision surgery**
The **AMIS technique** is seen as an **evolution** of the **anterior approach**

It is quite **different than other MIS anterior approaches**. This **unique procedure** is differentiated by specific surgical steps:

- **Avoids excessive use of retractors**
  Reduced risk of damaging soft tissues and less need for extra instruments
- **Easier osteotomy of the femoral head**
  No need to dislocate the hip or perform a double osteotomy
- **Possible capsule preservation**
  Patients may feel their hip is more stable
- **Easier femoral exposure, with fewer releases**
  Simplified surgical technique, with improved joint stability

The **AMIS Experience** allows the surgeon to truly **maximize** the benefits of using the **anterior approach**
Medical Education

The M.O.R.E. Institute offers effective and continuous education to surgeons, with an aim to improve patient outcomes and surgical proficiency.

Close collaboration between Experts and the M.O.R.E. Institute, has resulted in the on-going development and evolution of the Educational program.

The M.O.R.E. Institute was founded on, and encourages the concept of, sharing experiences across the international medical community. It has become a unique and global education platform, tailored to the individual’s needs.
M.O.R.E. Opportunities

INSTRUCTIONAL LEVEL
Reference Center Visits, Standard Learning Center, Proctoring, Fellowship, Young Surgeon Meetings, Nurse Courses, Intensive Week

INTERNATIONAL MEDICAL NETWORK

MASTER LEVEL
Revision Learning Center, Reference Center Visits, Proctoring

SCIENTIFIC LEVEL
M.O.R.E. Symposia, Congress, Side Events, User Meetings, General Practitioner Meetings, Road Shows, Hospital Open Days, Webcast

ADVANCED LEVEL
Reference Center Visits, Advanced Learning Center, Proctoring, Product Club
1. **EVALUATE**
   Surgical Technique

2. **EXPLORE**
   Medacta Products/Services

3. **EXPERIENCE**
   a network of Experts, with mentoring of initial cases

   **EVOLVE**
   with the M.O.R.E. continuous education program

**By attending a Learning Center**

**DEEPEN**
the scientific knowledge of the Anterior Approach

**PRACTICE**
the technique during assisted cadaver workshops

**By visiting a Reference Center**

**By taking advantage of Proctoring**
By meeting with Experts

**SHARE**

your experience, improve your technique and widen patient selection

**MASTER**

the AMIS Surgical Technique and Medacta Products

By focusing on **Revision Cases**

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**ADVANCED LEVEL**

**MASTER LEVEL**

**EXPECT MORE**

with an Education Path tailored to your needs
Dedicated **Implants**

Medacta implants are designed to be **AMIS friendly** and reduce potential challenges during implantation. They are well established and **their reliability is supported by clinical evidence and customer success.**
Medacta’s P-Family Hip System, which includes Quadra-P, AMIStem-P and SMS, is a family of tapered rectangular stems. P-stems feature **proximal coating** and **progressive neck lengths**, with a range of stem lengths and canal filling dimensions which give clinicians the ability to match an implant to the patient’s bone morphology.
**AMIS Stem System**

First stem specifically designed for AMIS

- **98.4%**
  - Survival rate at minimum 8 years*
  - All cases done with AMIS stem-H through AMIS approach

**Quadra System**

- **99.6%**
  - Survival rate at minimum 10 years*
  - All cases done with QUADRA-H through AMIS approach

More than 15 years of clinical success

**SAAS**

Bone-preserving, short, metaphyseal-fitting cementless stem

- A valuable solution especially for young and active patients with Dorr A and B+ femurs

**MasterLoc®**

- Progressive triple offset with reduced distal geometry
  - Follows the flat tapered wedge philosophy with a long history of clinical success

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**Apact System**

- **98.8%**
  - Survival rate at minimum 2 years*
  - All cases done with Apact No-hole & Two-hole through AMIS approach

- **100%**
  - Survival rate at minimum 2 years

**MectaGrip**

- Hemispherical cup with a highly porous coating - Mectagrip

**TWO-HOLE**

- **100%**
  - Survival rate at minimum 2 years

**MULTI-HOLE & MULTI-HOLE THIN**

A complete hemispherical cup system that allows for efficient treatment of demanding patients, both in primary and revision surgeries

**3D Metal**

- 3D printed engineered biomaterial structure

*Aseptic loosening as endpoint*
Advanced **Instrumentation**

The AMIS specific instrumentation streamlines, simplifies and facilitates reproducibility of the anterior approach.

**AMIS MOBILE LEG POSITIONER** THE NEVER SLEEPING ASSISTANT

This orthopaedic table extension is the main facilitator of the AMIS technique: it provides for an easy and stable leg positioning, which allows a simple and reproducible procedure.

Benefits:
- No additional cost
- Patented automatic traction release
- Easy connection to all operating tables
- Radio transparency
- Ease of use
- Improved kinematics
  - Deep hyperextension
  - Optimal rotation center
  - Excellent rotational stability
- AMIS shoe, easy to assemble
Patented automatic traction release

Radio transparency

Easy connection to all operating tables

Improved kinematics

Patented automatic traction release
In addition to the AMIS Mobile Leg Positioner, the set of AMIS instruments are included at **no additional cost**:

**SELF-RETAINING RETRACTORS**
Avoids the excessive use of Hohmann or Cobra retractors, reducing the risk of soft tissues damage

**RADIO-TRANSPARENT SOLUTIONS**
To make fluoroscopy easier
As we continue to develop and improve the AMIS technique, there is a consequent evolution of the AMIS instrumentation. It is Medacta’s commitment to keep developing solutions that will further improve the learning curve, reduce possible technical complications and optimize reproducibility of the procedure.
Tools & Services

Medacta is committed to finding innovative solutions that can contribute to improving and enhancing patient care and experience, in addition to delivering economic value to the healthcare system. Medacta has developed several additional solutions/services to support the AMIS surgeons and add value to their patients’ experience.

**MYPRACTICE DEVELOPMENT PLAN**
A unique package of services to aid surgeons organize educational meetings with patients, general practitioners and caregivers. It assists surgeons in the promotion of the AMIS technique and patient education, with a series of patient-oriented documents and marketing tools.
MYHIP PLANNER - 3D PREOPERATIVE PLANNING SOFTWARE FOR THR*

An intuitive and reliable platform with advanced analytical features empowering the surgical decision-making process.

The software is designed to define the optimal surgical strategy according to each patient’s anatomy, hip joint biomechanics and functional needs, potentially improving surgical outcomes and patient satisfaction.22

MYHIP-PLANNER.MEDACTA.COM

*Availability depending on country-specific registrations
MYHIP VERIFIER - INTRAOPERATIVE VERIFICATION SOFTWARE FOR THR*
An easy-to-use, non-invasive platform providing an intraoperative assessment of implant positioning.

The software is designed to increase confidence and reproducibility, potentially reducing surgical outliers and improving patient outcomes and well-being.

MYHIP-VERIFIER.MEDACTA.COM

*Availability depending on country-specific registrations
POP - PATIENT OPTIMIZED PATHWAY
POP is an easy-to-use interactive tool designed to support healthcare professionals in the delivery of patient education, information, preparation, rehabilitation, follow-up and monitoring, before, during and after surgery.

Furthermore, it can enable better management of patient expectations, increase patient compliance and improve the overall patient care experience.

POP.MEDACTA.COM
Medacta has created the Propel program to aid its stakeholders in achieving the best outcomes at the lowest cost in the outpatient setting. Medacta has a wide breadth of products that are perfectly positioned for an outpatient surgical setting.

**AMIS IS A NO COST SOLUTION**

It facilitates performing anterior THA in an outpatient setting:

- **The AMIS dedicated instruments, and Mobile Leg Positioner are provided free of charge**
- **AMIS has potential clinical advantages that can ultimately reduce the cost of care**
  - Reduced instances of dislocation
  - Less post-operative pain and precautions
  - Reduced blood loss during surgery
Get MORE from your **AMIS Experience** and discover **AMIS BIKINI**

As part of the AMIS EXPERIENCE offer, AMIS Bikini represents an **ADVANCED level** of our anterior minimally invasive surgical offer that surgeons can experience within the **comprehensive AMIS educational program**.

**ADVANCED EDUCATIONAL PROGRAM**

With the support of a network of world-renowned experts, we offer several **tailored educational options** to learn with confidence the AMIS Bikini and its advantages, thereby reducing any possible difficulties and challenges related to this technique.
AMIS BIKINI:
the evolution of the AMIS approach

The AMIS Bikini represents the natural evolution of the AMIS approach. This procedure follows the same intermuscular pathway, but utilizes an inguinal skin incision performed within the skin fold of the “bikini line”, or frontal groin crease.

The result is an aesthetically pleasing cosmetic scar along the natural “Langer’s lines” of the skin which can be hidden when wearing underwear or swimwear (e.g., a bikini).

The AMIS Bikini combines all the benefits of the AMIS technique with the additional advantages of the groin crease incision:
• Better cosmetic/aesthetic appearance.\textsuperscript{18,19,20,21}
• Enhanced wound healing environment and lower rate of wound complications (also indicated for patients with high BMI).\textsuperscript{18,19,20,21}
Innovative Instrumentation

The dedicated AMIS Bikini instruments have been designed to enable the surgeon to perform an optimized and reproducible implantation via a bikini incision, further minimizing the risk of soft tissue damage with respect to the traditional AMIS instruments.

**AMIS BIKINI BROACH HANDLE**

This tool features a unique curvature and offset which allow for fewer instances of impingement or skin irritation when broaching the femur.

The innovative geometrical shape of these handles provide different features that contribute to potentially decreasing the risk of femoral fractures:

- Less impingement
- Better rotational stability (control of anteversion while broaching)
- Less capsular release
- Less hyperextension
AMIS BIKINI CHARNLEY BLADE
The dedicated AMIS Bikini Charnley Blades help to avoid soft tissue injury, especially at the epidermis and dermis level.

AMIS BIKINI BECKMANN
The dedicated AMIS Bikini Beckmann offers stability and the sparing of soft tissues, especially at the epidermis and dermis level.
Economic benefits

The AMIS technique is a procedure that delivers economic benefits, with potential for the hospital to gain return on investment.

**NO ADDITIONAL COSTS**
Pursuing the AMIS Experience comes at NO additional cost to either the surgeon or the hospital!

**ECONOMIC SAVINGS**
The clinical benefits of the AMIS technique together with a well streamlined and carefully defined surgical approach, guided by the dedicated instrumentation and the special leg positioner, can optimize the overall cost associated with the arthroplasty procedure.

**IMPROVED O.R. EFFICIENCY**
The AMIS technique only requires 1 assistant; the overall cost of the procedure can be reduced by reducing the size of the O.R. team.

**EXCELENT MARKETING TOOL**
The frequently reported benefits of the AMIS approach make it a procedure often requested by patients. It is possible for surgeons to double their practice in an average of two years.
Surgeon Testimonies

“I had thought anterior approaches were all kind of the same but when I did the Medacta lab, I realized it was a very different procedure. AMIS was a much more controlled – a much better procedure.”

(Surgeon from USA)

“The intensity of training with Medacta was much greater and much better. (…) The engagement (with AMIS expert surgeons) was incredibly helpful in speeding up the learning curve.”

(Surgeon from USA)

“With AMIS I operate without stress. This technique brings financial advantages for the patient, for the surgeon, for the clinic/hospital and for the insurance.”

(Surgeon from Germany)

“I only need one assistant, the post-operative care is considerably less and the stationary treatment and the rehab requirement (outpatient/inpatient) are shorter. (…) In the last 3 years I operated on about 99% of patients with AMIS.”

(Surgeon from Germany)

“(since starting with AMIS) My practice has grown immensely.”

(Surgeon from USA)
REFERENCES

11. "Retrospective and prospective study to evaluate the AMISTEM H performance", study approved by Swiss Ethic (Zurich canton) on 24 of March 2016 (BASEC-Nr 2015-00132).