orthokey | **orthokey** innovation in surgery

Orthokey is a young company founded in 2005, people working in it have 20 years of experience in Computer Assisted Orthopaedic Surgery.

Real progress comes when technology is used in clinical daily practice.

In the design phases of our solutions, at **Orthokey,** we follow three simple but fundamental goals: our systems has to be fast, simple and accurate. This ensures hi level solutions with short learning curves and surgeons' satisfaction.

Based on surgeons' experience and requirements **BLU-IGS** platform is the CAS system designed by Orthokey.

BLU-IGS integrates anatomical data, surgical workflows and biomechanical models in order to support the surgeon during surgery.

BLU-IGS features and ergonomic and effective user interface, designed to adapt to surgeon's needing.

The system is available in two versions: Compact and light.
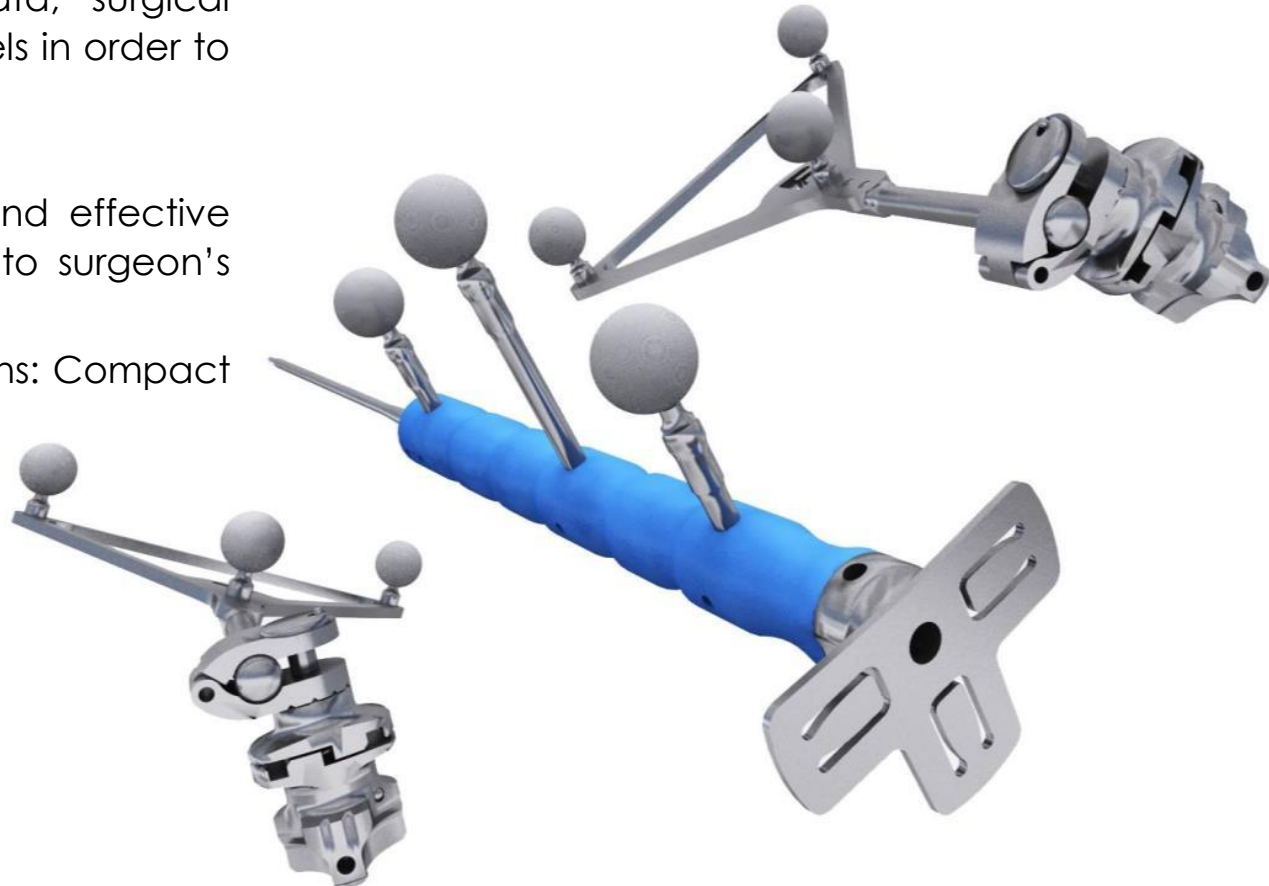
Solutions provided by **Orthokey** cover major intervention of the lower limb prosthetics.

Mirò is the state of the art software for total knee surgery, **Hopper** introduces new concepts in total hip surgery with less morbidity and greater efficacy, **Monet** is an effective and fast software for Uni compartmental knee surgery, **Dalì** is a dedicated software for Osteotomy and **Rho** is a valuable help during complex cases like Revision of total knee implants.

For the centres involved in high level research, **Klee** is a flexible research tool, that can be integrated with the other applications.
Software of **BLU-IGS** platform includes the main procedures for lower-limb surgery.

All procedures can be adapted to implant model, in order to optimize the surgical procedure, but with the universal version it can be adapted to all implants.

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MIRÒ–TKA is the software dedicated to total knee arthroplasty. Correct limb alignment and ligament balancing are the key factor for a successful TKA.
MIRÒ–TKA enhanced surgeon confidence during all steps of the procedure, giving the fundamental tools to determine the best surgical approach. This is achieved with a reduced set of surgical instruments and a fast anatomical registration.
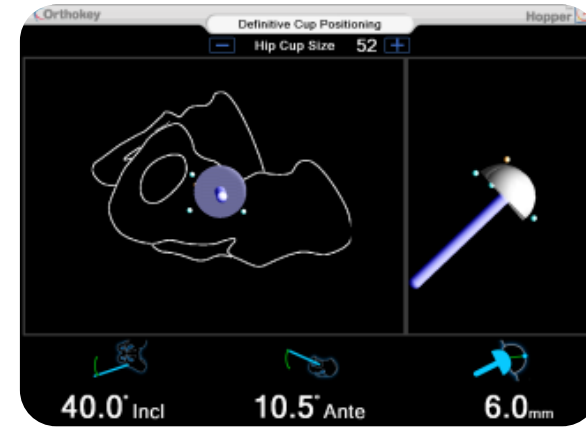
Main key features of MIRÒ

- Implant positioning based on limb alignment and ligament balancing
- Optimized software interface
- Personalized workflow
- Optimized surgical tool compatible with all conventional surgical instruments
- No pre operative images required
- Suitable for al implant designs
- Possibility to evaluate knee kinematics and stability with the **KLEE** module
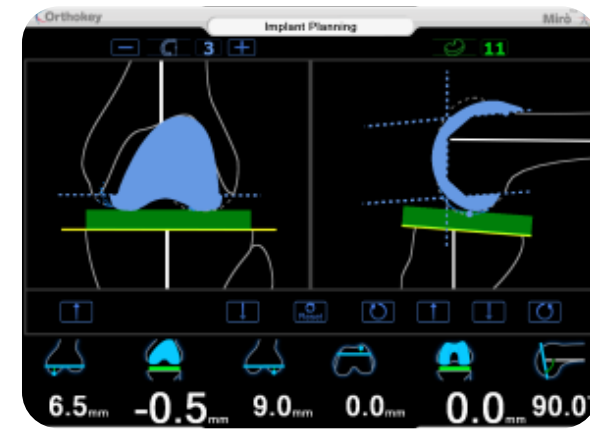
HOPPER-THA is the software dedicated to navigation of hip implants. An accurate positioning of acetabular cup and the preservation of leg length and offset are the keys to restore a good articular function and a long implant survivorship.

HOPPER-THA, with four independent modules, satisfies all surgical needing with no time waste and improved accuracy.

Main key features of HOPPER

- Accurate cup position and orientation
- Virtual planning of offset and length variation for each implant combination without the use of invasive navigated tools
- Pinless intraoperative evaluation of offset and length variation
- Pinless femoral component simulation

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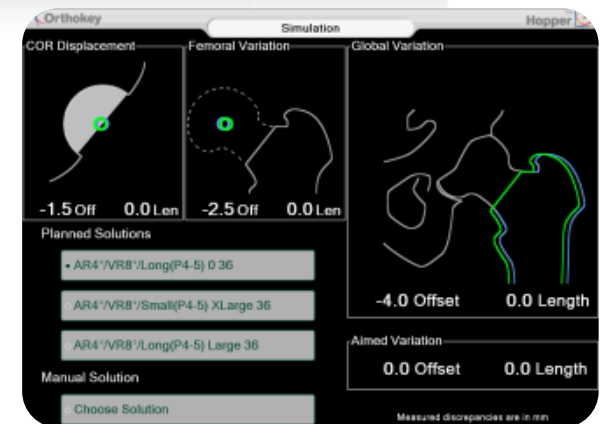
MONET-UKA is the software dedicated to uni compartmental knee implants.

Our approach allow to optimize tibial bone preservation and knee stability during range of motion.

MONET-UKA, with few and simple steps, guides the surgeon to find the best patient specific implant positioning.

Main key features of MONET

- Accurate planning based on pre-operative limb deformation and gap balance.
- Precise slope determination and bone preserving
- Optimized software interface
- Suitable for minimal invasive approach
- Optimized surgical tool compatible with all conventional surgical instruments
- Possibility to evaluate knee kinematics and stability with the **KLEE** module
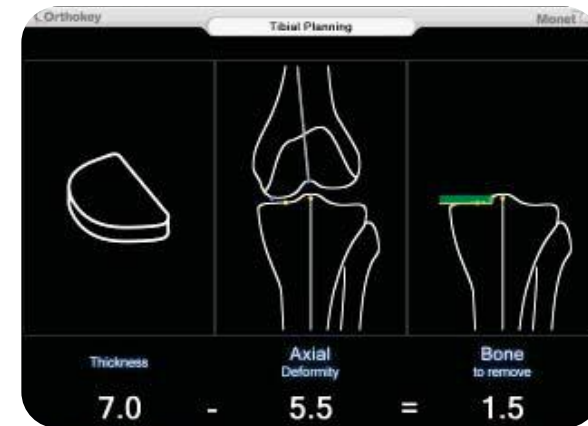
RHO-RTKA is the navigation software for revision total knee arthroplasty. The main features of the procedure are the accurate ligament balance and correct limb alignment and joint line restoration. Bone quality and soft tissue laxity may introduce several complications during surgery.

RHO-RTKA supports the surgeon in the identification of the most appropriate surgical strategy and provides a precise guide throughout the procedure.

Main key features of RHO

- Anatomical landmark acquisition after failed TKA removal
- Joint line restoration based on data redundancy and anatomical model database
- Optimal planning of component sizes and models
- Component positioning real time guidance
- Final evaluation of limb alignment and range of motion
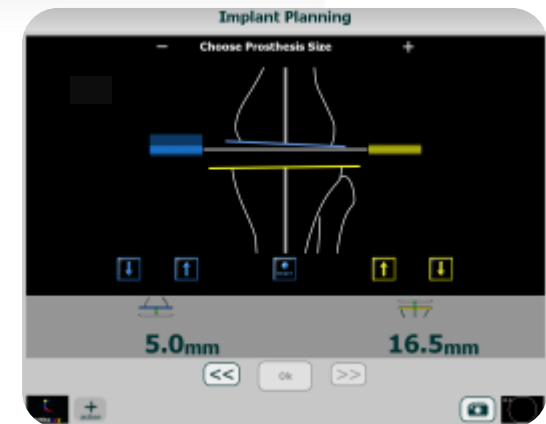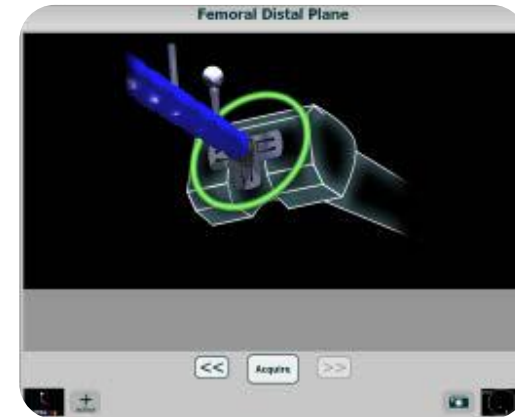
DALI'-HTO is the software dedicated to high tibial osteotomy. With a reduced registration time it is possible to monito limb alignment during surgery.
DALI'-HTO increase surgeons' confidence providing in real time limb alignment and flexion. This permits to reduce radiation exposure and ensures optimal results.

Main key features of DALI'

- Fast registration process
- Limb alignment monitoring during surgery
- Optimized software interface
- Suitable for minimal invasive approach
- Optimized surgical tool compatible with all conventional surgical instruments
- Possibility to evaluate knee kinematics and stability with the **KLEE** module

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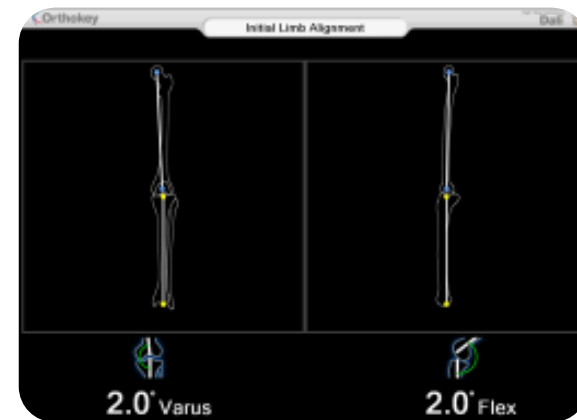
KLEE – kinematic evaluation is the only navigation software dedicated to the intraoperative evaluation of knee kinematics. Success of a surgical procedure is strictly related to the quality of life of the patient and his articular stability.

KLEE – kinematic evaluation provides a precise and efficient way to monitor and record kinematic values related to the final results of your surgery. Our software is fundamental also for research thanks to its flexibility.

Main key features of KLEE

- Possibility to configure data acquisition according to the defined protocol
- Real time display of the executed test
- Pre-op and post-op data comparison on real time
- Automatic log file storage in txt format, with all acquired data
- Simple and intuitive interface
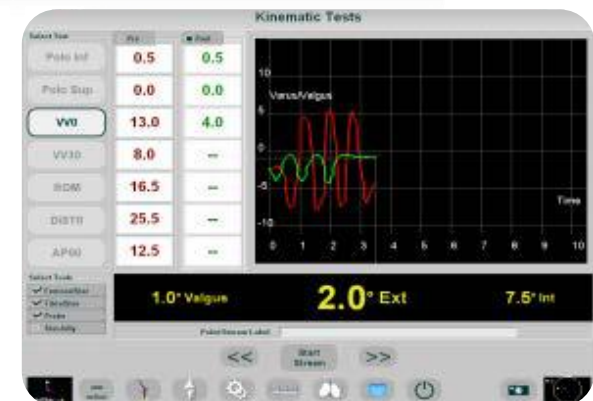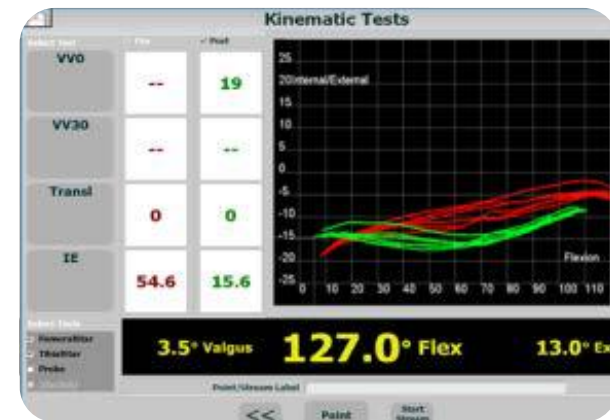
Our effort in designing effective solutions for computer aided surgery yields the best clinical results with less stress for the surgeon.

The evaluation of our navigation system has shown that improves not only the clinical result, with more accurate resections and more repeatable results, but is able provide comparable surgical time with respect to conventional surgery.

Orthokey is an effective system!
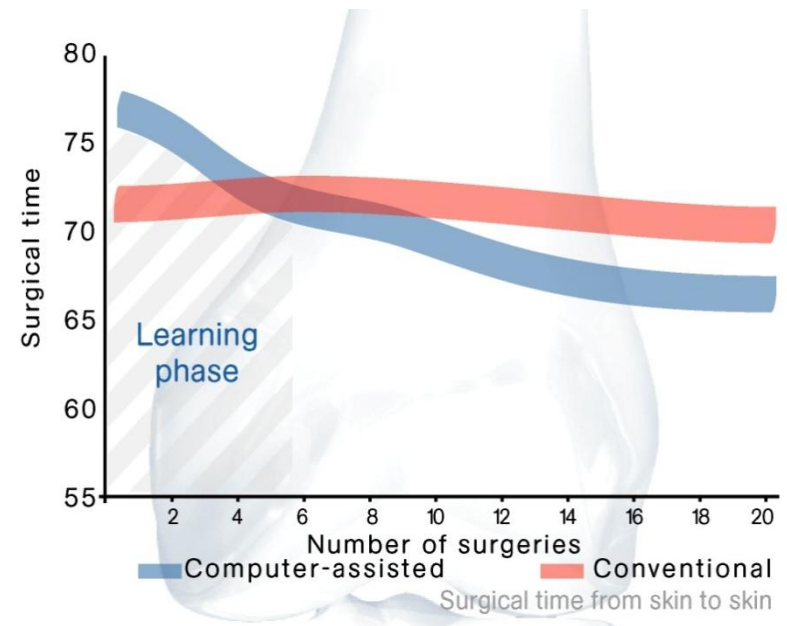
PERSEUS - New generation of smart surgical instruments

Perseus is the disruptive user friendly smart cutting guide operating within the conventional workflow

Perseus is composed by a minimal invasive cutting guide integrated with a disposable sensor that allows to perform femoral distal cut and tibial cut with an orientation error lower than 1°
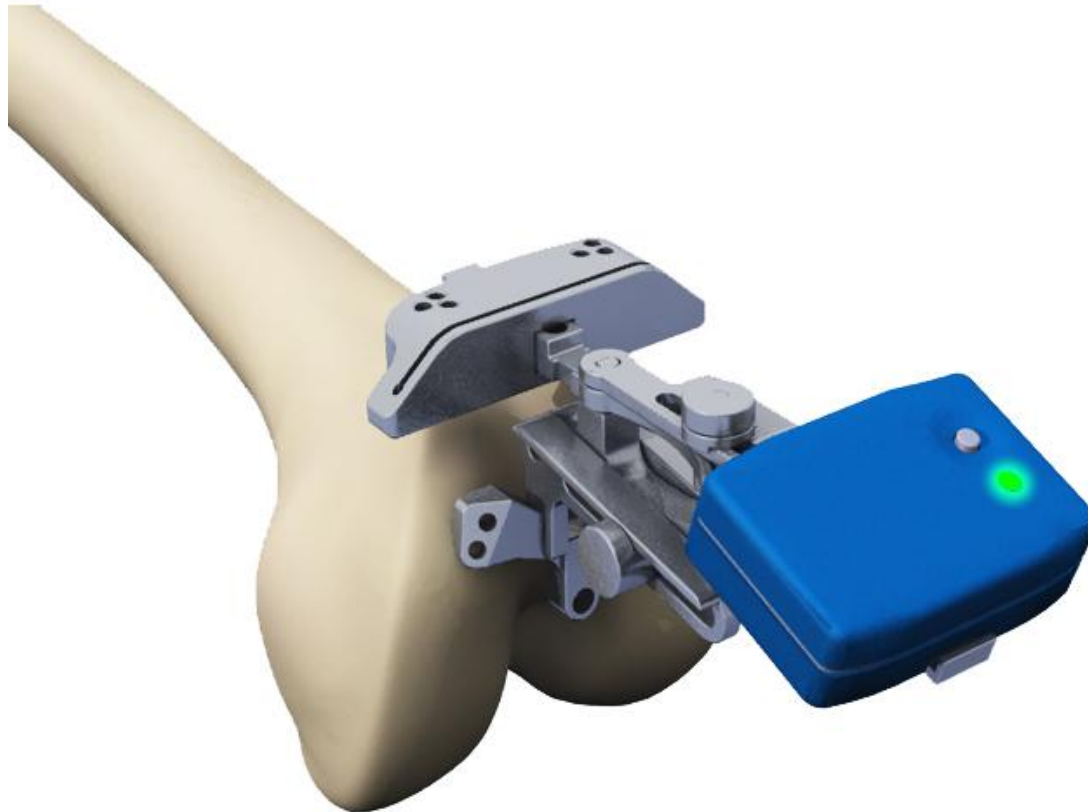
Features

- iPad app
- Disposable sensors
- No intramedullary rod
- 1 step registration
- Precise cut orientation

Clinical Validation

Cohort	Hg PRE (g/dl)	Hg reduction	Length of stay	Alignment front(°)	sagittal(°)
Perseus	11.00±1.17	1.71±0.96*	8.0±3.9*	0.60 ± 1.18	0.82 ± 2.12
Conventional	11.89±1.30	2.86±1.22	11,9±4.4	0.74 ± 2.18	0.68 ± 3.27

We compared blood loss, length of stay and implant positioning in a multicentric study
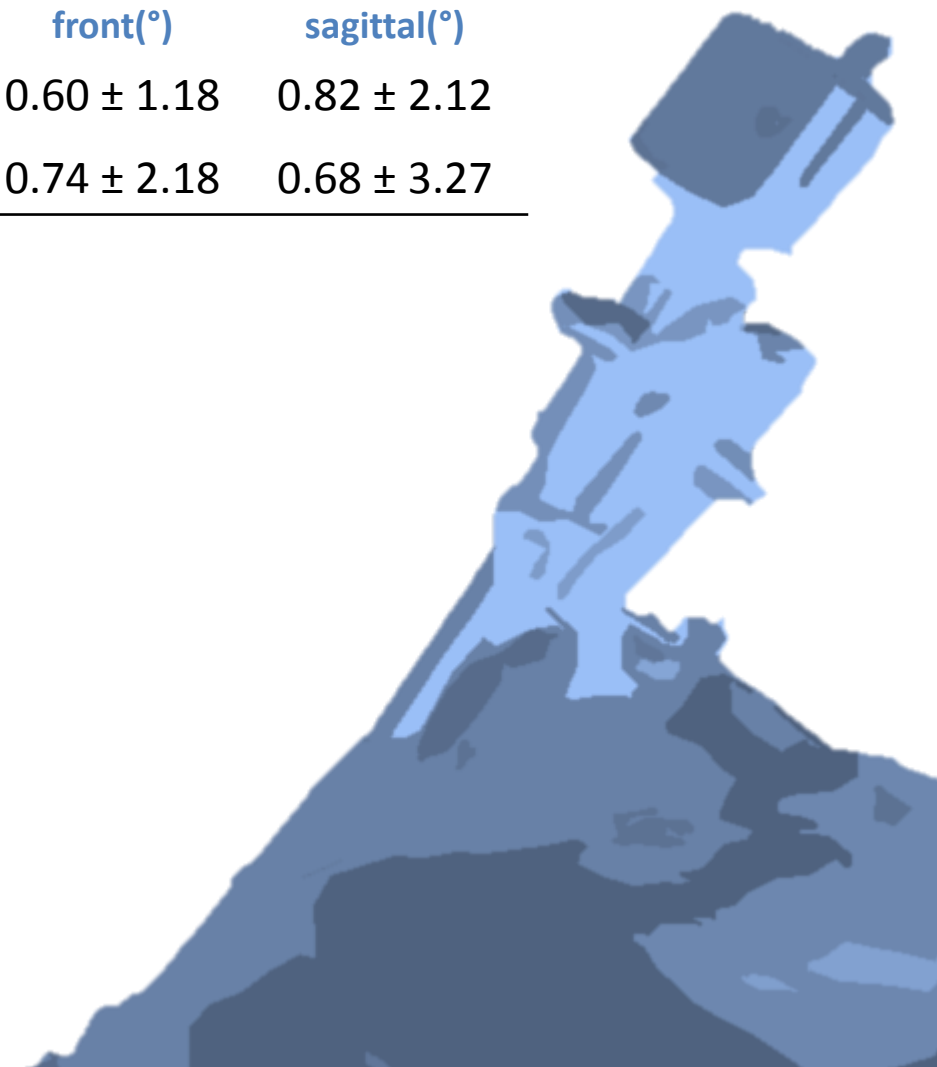
Perseus at glance

		Perseus	Navigation	Custom Blocks	Robotics
ECONOMICS	Affordability	●			
	OR Efficiency	●		●	
EFFICIENCY	Ease of Use	●		●	
	Accuracy	●	●		●
EFFICACY	Intra Op adjustability	●	●		
	Soft Tissue Management		●		

www.smartperseus.com

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KiRA is the unique digital medical device able to quantify ACL lesion measuring knee laxity and to support monitoring of rehabilitation care pathway

KiRA is an ambulatory device that allows the medical professionals to quantify, monitor and register knee laxity in patients with ACL lesion.

KiRA is composed by :

- A small wearable wireless device
- An app for ipad

www.smartkira.com

The efficacy of our solutions is demonstrated by the growing interest shown by our trading partners.

Our philosophy is to integrate the products of our partners with effective solutions and minimally invasive surgical techniques, adapting to everyone and helping customers with an efficient after sale service.

Orthokey is your quality partner!
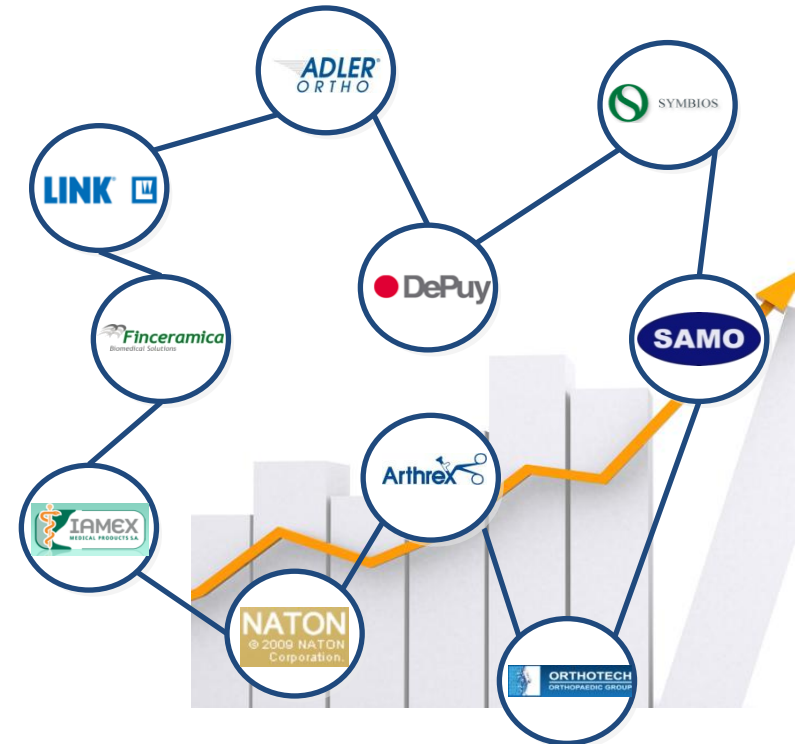
The most effective ideas can only come with practice. That's why **Orthokey** collaborates with the most prestigious centers of orthopedic surgery in the development of its products.

Only through our international network of research partners we can provide innovative products designed for everyday use.

Innovation within everyone's reach!
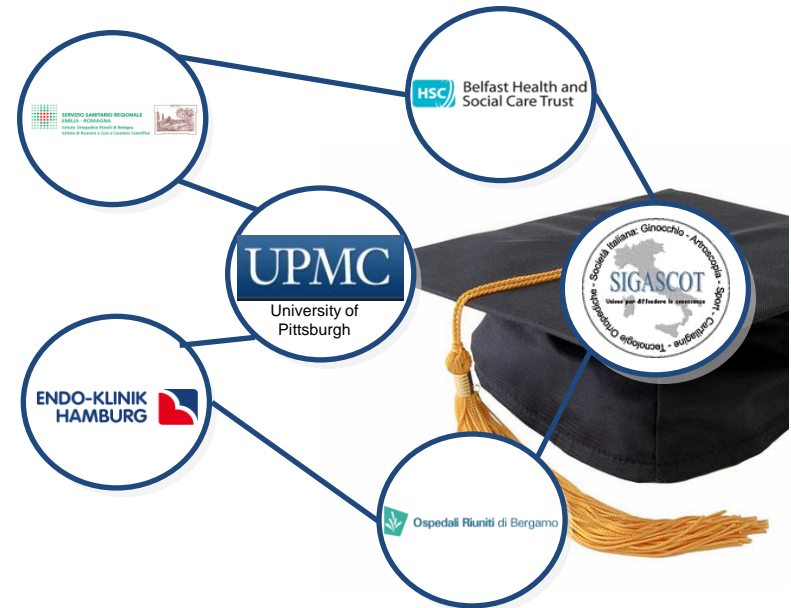
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