



Kinematic Rapid Assessment

THE ULTIMATE ACL SUPERVISOR



KiRA
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ORTHOKEY

Orthokey is a young and dynamic company founded in 2005, with ten years of experience in the design of smart solutions for healthcare, based on the integration of clinicians' experiences and new technologies.

Real progress comes when an innovative solution is used in everyday clinical practice. In collaboration with the most prestigious international centers of orthopedic surgery, Orthokey provides high-level solutions for clinicians and companies. Our work is dedicated to those who seek excellence in orthopedics.

Our portfolio includes computer assisted surgical platforms for orthopedics, as well as digital instruments for diagnosis and outpatient rehabilitation assessment.

The efficacy of our solutions is demonstrated by the growing interest shown by our trading partners. Our mission is to improve the performance of our customers providing them customizable tools and taking care of them with an efficient aftersale service.

KiRA is part of the family of new generation of smart instruments provided by ORTHOKEY.



KiRA is a fundamental support to the clinical investigation of the anterior cruciate ligament. KiRA provides accurate quantitative information for the assessment of the grade of suspected ACL lesion.

Pivot shift test is the most specific test for the evaluation of ACL injury and it is the most correlated to the subjective feelings reported by the patient. It is able to provide crucial information about the knee joint laxity both during diagnostic phase and following ACL reconstruction [1,2,3]. Moreover, Pivot-shift signs after surgery are correlated to the development of chondropathy and later osteoarthritis[4].

The increasing number of publications about pivot-shift test in the last years demonstrates the central role that quantitative analysis of pivot-shift has gained during in vivo quantification of knee laxity.

The Lachman test is the most commonly known and the most sensitive test used to evaluate the anterior laxity of the joint in the sagittal plane.

KiRA is the first medical device CE certified that improves the analysis of knee joint laxity. KiRA quantifies the dynamic laxity of knee joints during Pivot shift test and Lachman test comparing pathological and controlateral knee behavior. KiRA provides both real-time graphics and quantitative information about the examinations.

KiRA is composed by a free App available on Apple Store and by a sensing device containing the state of the art of miniaturized sensors that communicates via Bluetooth® with iPad 3 or superior, iPad mini and iPhone 5 or superior.

Kira has been clinically tested in the most prestigious sports medicine centres of the world [5 6 7 8].

Since 2013 KiRA is certified as medical device (Certification CE directive 93/42/CE and s.m.i. (2007/47/CE) class 1m).



KiRA ensures:

- Quantitative analysis of knee joint kinematics and dynamic laxities
- Detection and grade assessment of the suspected ACL lesion
- Comparison of the results between pathological and contralateral knee
- Monitoring of the functional recovery of the patient during the follow-up and rehabilitation phase
- Patient's history with retrieval and comparison of previous examinations
- Export and print of the results

INDICATIONS

KiRA is designed to provide dynamic laxity assessment in:

- KNEE trauma
- KNEE distortion
- SUSPECTED ACL lesion
- KNEE rehabilitation

Advantages for the professional



Fast, Effective, Immediate

- Provides an accurate quantitative assessment and immediate visualization of the knee stability
- Crucial to define the best clinical approach in case of ACL partial lesion
- Stores patient's examinations results for an effective follow up evaluation
- Easy to use, non-invasive, small sized and portable

Advantages for the patient



Captures your knee health condition

- Clear and objective evidence of the diagnosis and rehabilitation improvements

Advantages for both



Greater security in diagnosis!

- KiRA standardizes the diagnostic process, reducing risks of false positives
- Improves the level of confidence of doctor and patients

KiRA features

- iPad based medical device
- Free download of App from Apple Store
- Free and automatic App update
- Small and light sensor
- Automatic connection to iPad via bluetooth®
- Integration with EHR
- PDF report generation

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[5] "Tibial acceleration parameters during the pivot shift test most closely correlated with the clinical grading performed by 12 expert surgeons"

[6] "Based on our experience, the use of the accelerometer KiRA for quantitative measurement of the PS is both promising and reliable. It has the value of being easy to set up and easy to use in both the clinic and the operating room."

[7] "KiRA represents a valid non-invasive instrument able to quantify knee dynamic instability, also for ambulatory assessment"

[8] "A further application is the use of KiRA as a teaching tool to instruct young surgeons to perform the PS test in a more standardized way, ultimately enabling comparison of clinical outcome following ACL reconstruction surgery"



INFO

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