

# Genourob®

INNOVATIVE LAXIMETRY

The LDA®,  
Automated Dynamic Laximetry,  
In Orthopaedics

■ Laxity measurement  
of ACL and PCL



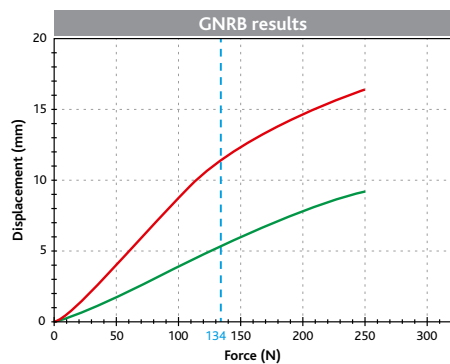
# The LDA<sup>®</sup>, Automated Dynamic Laximetry in Orthopaedics Support in diagnostic and in postoperative control



- Device for the LDA<sup>®</sup> in tibial translation
- Push forces from 1 to 300 N
- LDA<sup>®</sup> software
- Optional modules : Rotab, PCL, Radio

## Test results of the LDA<sup>®</sup>

- Dynamic measurements of tibial displacement
- Curves of ligament resistance
- Calcul of the slope of curves
- Chart with registered measures
- Patient data archiving
- Export to xls file
- Print in pdf format

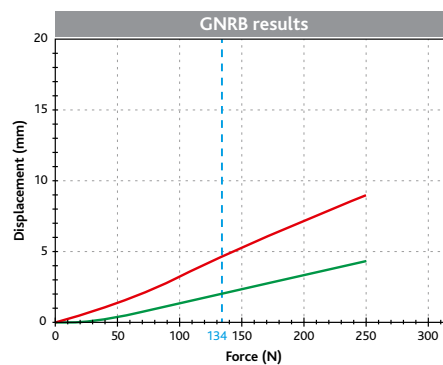


### Preoperative control\*

$\Delta 134 = 6 \text{ mm}$ ,  $\Delta P2 = 2 \mu\text{m/N}$

#### Complete rupture

Objectification of Lachman's test.

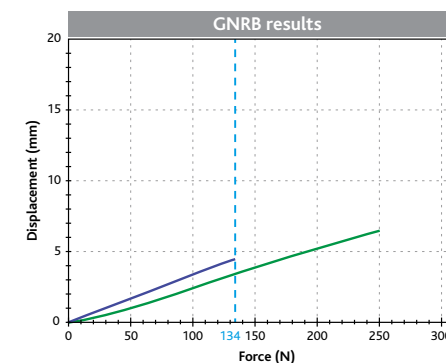


### Preoperative control\*

$\Delta 134 = 2,4 \text{ mm}$ ,  $\Delta P2 = 18 \mu\text{m/N}$

#### Almost complete lesion

High curves divergence showing severe functional instability.  
In Arthroscopy: fostering on the PCL, explaining the non-functionality of the ACL (attachment without resistance: soft tissue)  
In MRI: difficult exploration (Haemarthrosis, Hydarthrosis).



### Postoperative control\* after 3 months

$\Delta 134 = 1,2 \text{ mm}$ ,  $\Delta P2 = 0$

#### Good evolution of the plasty

The parallel curves show a good resistance of the ACL reconstruction against adapted, non-deleterious pushes. The graft is considered functional and the curves should ideally maintain parallel during the ligamentisation process. Any divergence of the curves will indicate a deterioration of the tissue reconstruction process (of tendon in neo-ligament).



### ■ An innovative support in diagnostics

As first intention, by objective confirmation of suspect clinical examinations, the Automated Dynamic Laximetry, LDA<sup>®</sup>, promotes an **objective detection of the lesions of the ACL and the PCL (GNRB LCP)**.

The GNRB performs an **automatized anterior tibial translation**, calculating new parameters for a highly accurate evaluation of the **ligament knee function**.

### ■ A patented method

The fixation parameters of the ankle and the femur saved, the sensor positioned on the ATT (Anterior Tibial Tuberosity) measures the **anterior translation of the tibia** generated by a motorized push under the calf.

The **specific LDA<sup>®</sup> software** synthesizes and immediately compares the measurements performed on both knees.

### ■ Networked devices

The GNRBs are the only **automated dynamic laximeters**, where test results can be integrated into the inhouse patient data-management system.

### ■ The LDA<sup>®</sup>: accurate, rigorous and reproducible measurements due to automatization

The GNRB is designed to get **measures easy and with high precision**. In addition to the technical innovations (see brochure LDA<sup>®</sup>), the device features an integrated **biofeedback** system to detect the **contractions of hamstrings muscles avoiding false-negatives**.

The optional module LCP allows an evaluation of the Posterior Cruciate Ligament (PCL).

### ■ A new tool for the follow-up of the reconstruction

The **control of laxity** at regular intervals is practicable with soft adapted pushes and therefore without risk for the ACL reconstruction.

The results provide information on the healing process and the state of the ligament resistance, thus accurately guiding on the **choice of rehabilitation techniques**.

### ■ Objective Quality Assurance

The measures of LDA<sup>®</sup> validate the **quality** of the surgical procedure and the follow-up monitoring.

The performed tests provide a precise individual documentation, relevant for the inhouse **Quality Management System and for the patient himself**.



## Quality Certificates

- NF IN ISO 13485 (2012)
- ISO 9001 (2008)
- ISO 13485 (2003)

## Patents

- French patents (INPI) : FR 0608725 and FR 0608726
- European patent : EP 078209.0-1526
- USA patent : Nr.13/502790



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