OMNIBotics®
Predictive Balance™ technique
with BalanceBot™
P**redictive Balance™ technique with BalanceBot™**

Alignment and balance are the primary objectives of total knee arthroplasty (TKA). Traditional TKA instrumentation routinely helps deliver radiographic alignment, but a significant percentage of patients with well-aligned knees are still dissatisfied with their results. It is generally recognized that soft-tissue imbalance is a primary contributor to dissatisfaction.

To ensure accurate, personalized alignment and balance, Omni has developed the Predictive Balance robotic technique. It combines the alignment precision of our OMNIBotics® robotic system with the world’s first ligament balancing robot...

...the BalanceBot

**What is the BalanceBot?**

BalanceBot acts like a robotic laminar spreader to measure soft-tissue tension throughout a range of motion before making any femoral resections. This information is used to intraoperatively plan implant placement to ensure alignment and balance, while frequently eliminating further soft-tissue releases. After femoral resections, the BalanceBot is used again to measure ligament balance and confirm joint stability.
OMNIBotics® Bone Morphing™ creates a virtual 3D model of the patient’s knee.

After the tibial resection, the BalanceBot™ tensions soft-tissues and measures gaps.

The gap data is measured throughout the full range of motion and plotted on the graph.

OMNIBot™ guides the surgeon for each femoral resection.

The software uses the Predictive Balance™ technology to recommend implant placement.

BalanceBot replicates the insert trials to allow surgeons to assess stability through feel and viewing the graphed forces.

The femoral trial is impacted and results in an aligned and balanced knee without additional or aggressive releases.
OMNIBotics® system

Orthopaedic robotics since 2007

Manufacturer
OMNILife science Inc.
480 Paramount Drive
Rayham, MA 02767

Patents

References
4. Actual Predictive Balance™ case performed by Jeff Lawrence, MD