



Predictive Balance™ Technique
with BalanceBot™

Alignment.

Balance.

Minimal Releases.



Introducing

Predictive Balance™ Technique with BalanceBot™

Alignment and balance are the primary objectives of total knee arthroplasty (TKA)¹. Traditional TKA instrumentation routinely helps deliver radiographic alignment, but a significant percentage of patients with well-aligned knees are still dissatisfied with their results². It is generally recognized that soft-tissue imbalance is a primary contributor to dissatisfaction.³

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.



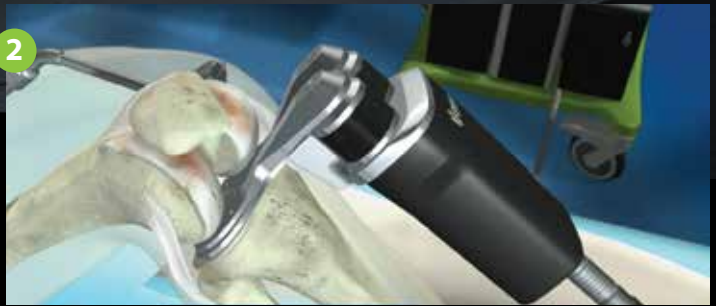
Surgical Technique⁴

1



Arrays are placed and Bone Morphing™ creates a virtual 3D model of the patient's knee.

2



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

3



The Predictive Balance™ graph shows the gap data from the BalanceBot™

- Less gap on distal medial side
- Larger gaps in flexion

4



The surgeon can now adjust femoral resections to ensure balance throughout motion.

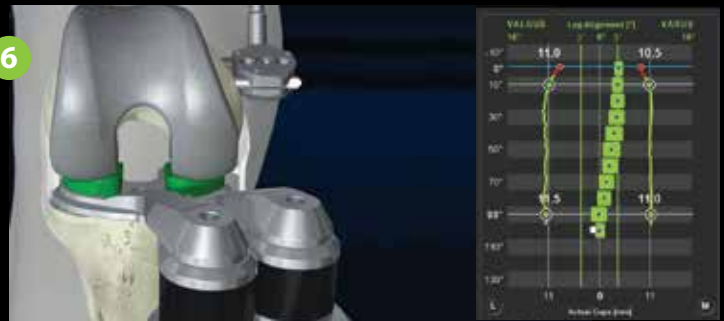
- Predicts consistent gaps throughout ROM

5



OMNIBot™ guides the surgeon for each resection.

6



The Femoral trial is impacted and results in an aligned and balanced knee without additional or aggressive releases.

7



BalanceBot™ replicates the insert trials to allow surgeons to assess stability through feel and viewing the graphed forces. This helps determine final insert size.

References

1. Winemaker. Perfect Balance in TKA. JOA, 2002
2. Schiraldi, et al. Mechanical and kinematic alignment in total knee arthroplasty. Ann Trans Med, 2016
3. Matsuda, et al. Varus-valgus balance and range of movement after total knee arthroplasty. J Bone Joint Surg Br. 2005
4. Actual Predictive Balance™ case performed by Jeff Lawrence, MD

OMNIBotics® System

Powerful, Practical, Perfectly Sized

Orthopedic Robotics Since 2007



BalanceBot™
First And Only Ligament
Balancing Robot

OMNIBot™
Femoral Preparation Robot

OMNIBotics® Workstation



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Patents
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FR 2 856 268, FR 2 852 223, CA 2,954,125. Other patents pending.

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