

KNEE KINESIOGRAPHY

Case example: **OA**  
Patient: **60-years old**  
Knee(s): **Right Knee**

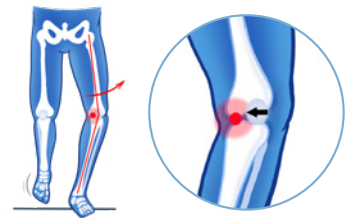
**Established diagnosis on file:** Moderate/Severe OA; pain over Medial Tibiofemoral and Patellofemoral joints

**Reason of consultation:** Scheduled for Uni-Compartmental knee replacement; reduce pain and prepare for surgery

**BIOMECHANICAL MARKERS: Results**

Medial compartment and patellofemoral compartment

Varus thrust during loading	<b>Positive (3.0°)</b>
Varus static functional lower limb alignment	<b>Negative</b> (Neutral -0.9°)
Varus alignment at initial contact	<b>Negative</b> (Varus 1.4°)
Varus alignment during stance	<b>Positive (Varus 2.2°)</b>



**IMPRESSION**

**Neutrally aligned knee with a Varus thrust during loading; returns toward neutral at stance**

- Loads the medial compartment leading to medial OA progression

**THERAPEUTIC PROGRAM**

**Patient was educated on her biomechanical dysfunctions**

1. Given **TARGETED** neuromuscular retraining as a home program
2. Knee brace

**1. Therapeutic corrective: Varus Thrust**

→ Varus thrust control-Loading



**2. Type of knee brace: Stabilizing brace**

→ Encourage neutral alignment during initial contact and loading (when the varus thrust occurs)

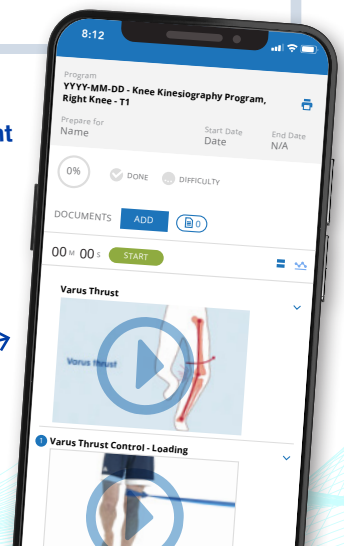


**PATIENT SPECIFIC INFORMATION LEADS  
TO BETTER FUNCTIONAL OUTCOMES!**

**PATIENT OUTCOMES POST THERAPEUTIC PROGRAM**

- ✓ **Dynamic biomechanics linked to improved functional outcomes**
  - Addressed the objective biomechanical marker and root cause of her Osteoarthritis
- ✓ **Postponed surgery**

**Personalized program  
available for your patient  
via an online platform**  
with detailed explanations  
and videos to educate the  
patient on how to restore  
their function



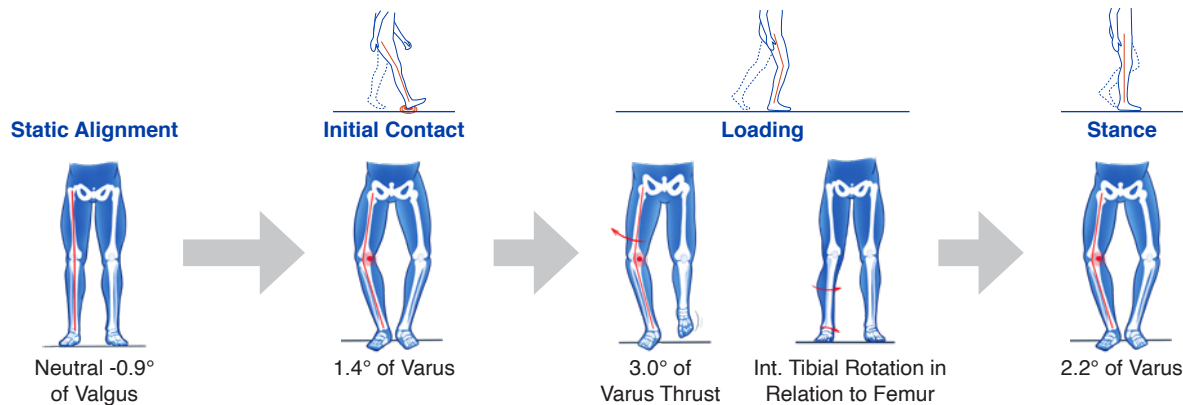
Patient name:  
KneeKG Patient ID: 00123  
Right knee - Comfortable walking (2.0 km/h)

## KneeKG® OA Report

Date: YYYY-MM-DD  
KneeKG evaluator  
Diagnostic information: **No osteoarthritis diagnostic on file**

Presence of mechanical risk factors linked to knee OA	Results YYYY-MM-DD	Follow up date	Comparison
<u>Medial compartment and femopatellar compartment</u>			
Varus thrust during loading <sup>1-4</sup>	<b>Positive</b> (3.0°)		
Varus static functional lower limb alignment <sup>100</sup>	<b>Negative</b> (Neutral -0.9°)		
Varus alignment at initial contact <sup>101</sup>	<b>Negative</b> (Varus 1.4°)		
Varus alignment during stance <sup>101</sup>	<b>Positive</b> (Varus 2.2°)		
<u>Lateral compartment and femoropatellar compartment</u>			
Valgus thrust during loading <sup>3</sup>	<b>Negative</b>		
Valgus functional lower limb alignment <sup>102, 104</sup>	<b>Negative</b> (Neutral -0.9°)		
Valgus alignment at initial contact <sup>103, 105</sup>	<b>Negative</b> (Varus 1.4°)		
Valgus alignment during stance <sup>103, 105</sup>	<b>Negative</b> (Varus 2.2°)		
<u>Femoropatellar compartment</u>			
Dynamic knee contracture in flexion at heel strike <sup>15</sup>	<b>Negative</b> (9.5° of flexion)		
External tibial rotation at initial contact <sup>16-18</sup>	<b>Negative</b> (0.7°)		
<u>General</u>			
Tibia internally rotated in relation to the femur during loading <sup>20,21</sup>	<b>Positive</b>		
Body Mass Index (BMI) > 25 <sup>9,22,23,34</sup>	<b>Positive</b> (BMI=29.3)		

## PATIENT SPECIFIC DYNAMIC ALIGNMENT



The KneeKG® system is FDA (510k) cleared, Health Canada licensed and CE Marked, to assess the 3D motion of the knee of patients who have impaired movement functions of an orthopaedic cause.

\* Because this information does not purport to constitute any diagnostic or therapeutic statement with regard to any individual medical case, each patient must be examined and advised individually, and this information does not replace the need for such examination and/or advice in whole or in part. Emovi does not practice medicine. Each physician should exercise his or her own independent judgment in the diagnosis and treatment of an individual patient, and this information does not purport to replace the comprehensive training physicians have received.

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