

Case example: MENISCUS

Patient: Soccer Player

Knee(s): Right Knee

Established diagnosis on file: Lateral Meniscectomy

Reason of consultation: Chronic lateral effusion and pain with re-injury

Athlete's Goals: Return to professional sport performance, manage reinjury risks and symptoms, minimize progression of cartilage degeneration

BIOMECHANICAL MARKERS: Results

Lateral compartment and patellofemoral compartment

Valgus thrust during loading

Negative (0.5°)

Valgus static functional lower limb alignment

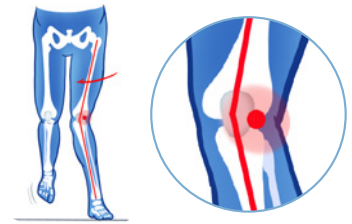
Positive + (Valgus -7.7°)

Valgus alignment at initial contact

Positive (Valgus -8.2°)

Valgus alignment during stance

Positive + (Valgus -8.7°)



IMPRESSION

A large amplitude of static valgus alignment, increased dynamically

- Loads the lateral compartment — can lead to cartilage degeneration and risk of long-term OA

THERAPEUTIC PROGRAM

Athlete was educated on his biomechanical dysfunctions and given **TARGETED** neuromuscular retraining exercises as a home program

1. Therapeutic corrective: Static Valgus

→ Valgus control-stability on 1 foot



2. Therapeutic corrective: Dynamic Valgus

→ Valgus control-at loading/stance



PATIENT SPECIFIC INFORMATION LEADS TO BETTER FUNCTIONAL OUTCOMES!

PATIENT OUTCOMES POST THERAPEUTIC PROGRAM

- ✓ **Dynamic biomechanics linked to improved functional outcomes**
 - Frontal plane alignment improved, thus reducing compressive loads on the lateral compartment
- ✓ **Improved patient reported outcomes (KOOS) from 75 to 94%**
- ✓ **Sports performance**
 - Athlete signed with a club in Europe and maintains play at the professional level 3.5 years later

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



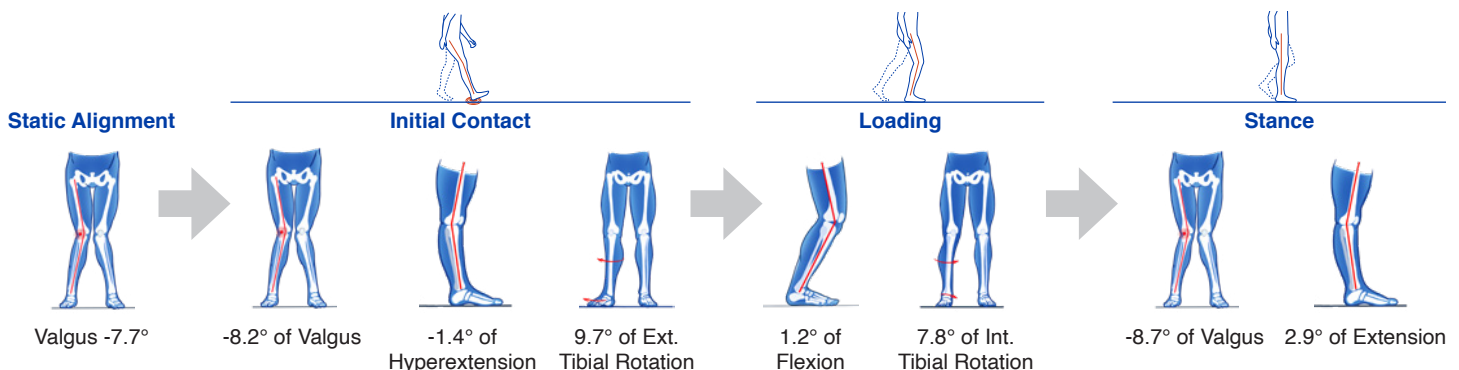
Patient name:
KneeKG Patient ID: 00123
Right knee - Comfortable walking (2.6 m/h)

KneeKG® Biomechanical Markers Report

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

Biomechanical markers	Results YYYY-MM-DD	Follow up date	Comparison
<u>Medial compartment and femopatellar compartment</u>			
Varus thrust during loading	Negative (0.9°)		
Varus static functional lower limb alignment	Negative (Valgus -7.7°)		
Varus alignment at initial contact	Negative (Valgus -8.2°)		
Varus alignment during stance	Negative (Valgus -8.7°)		
<u>Lateral compartment and femoropatellar compartment</u>			
Valgus thrust during loading	Negative (0.5°)		
Valgus functional lower limb alignment	Positive + (Valgus -7.7°)		
Valgus alignment at initial contact	Positive (Valgus -8.2°)		
Valgus alignment during stance	Positive + (Valgus -8.7°)		
<u>Femoropatellar compartment</u>			
Dynamic knee contracture in flexion at heel strike	Negative (-1.4° of extension)		
External tibial rotation at initial contact	Positive + (9.7°)		
<u>General</u>			
Knee in extension at initial contact	Positive (hyperextension -1.4°)		
Limited flexion excursion during loading	Positive + (1.2° of flexion)		
Limited extension movement during stance	Positive (2.9° of extension)		
Internal tibial rotation movement during loading	Positive + (7.8°)		
Tibia internally rotated in relation to the femur during loading	Negative		

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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