



18<sup>th</sup> March 2025

## **dorsaVi launches first-in-class 3D motion analysis test to reduce ACL injuries in athletes**

### **Key Highlights:**

- **ACL injuries sideline thousands of athletes annually, with female athletes facing up to eight times the risk of their male counterparts<sup>1</sup>.**
- **dorsaVi (ASX: DVL) has launched a first-of-its-kind, commercially available knee assessment tool using its FDA-cleared wearable sensor technology.**
- **The test leverages over 10,000 proprietary knee assessments and the Company's advanced AI capabilities to identify unique movement patterns linked to ACL injury risk.**
- **dorsaVi's 3D motion analysis is a major advancement over traditional 1D force plates, which fail to capture critical rotational torque forces that contribute to ACL injuries.**
- **The new technology opens a significant market opportunity across elite sports, rehabilitation centres, and physiotherapy clinics.**

**Melbourne, Australia, 18<sup>th</sup> March 2025:** dorsaVi (ASX: DVL), a global leader in FDA cleared wearable sensor technology and human movement analysis, is pleased to announce the launch first-in-class 3D motion analysis test to reduce ACL injuries in athletes.

ACL injuries represent a major challenge for athletes, sports teams, and healthcare providers worldwide, often requiring lengthy rehabilitation and costly surgical intervention. Until now, accurately measuring knee rotation and torque—key risk factors for ACL tears—has only been possible in specialised biomechanics labs. dorsaVi's latest innovation brings real-time, laboratory-grade analysis into the hands of clinicians and coaches, enabling proactive injury prevention and rehabilitation strategies at scale.

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<sup>1</sup> <https://www.yalemedicine.org/news/sports-injuries-gender#:~:text=According%20to%20research%2C%20an%20ACL,yet%20has%20little%20elasticity%2C%20Dr.>

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## Superior to the Current Gold Standard

Historically, **1D force plates** have been the industry standard for assessing knee mechanics in the clinic, but they are fundamentally limited—they can measure force **vertically** but fail to capture the **critical rotational forces** that place athletes at risk.

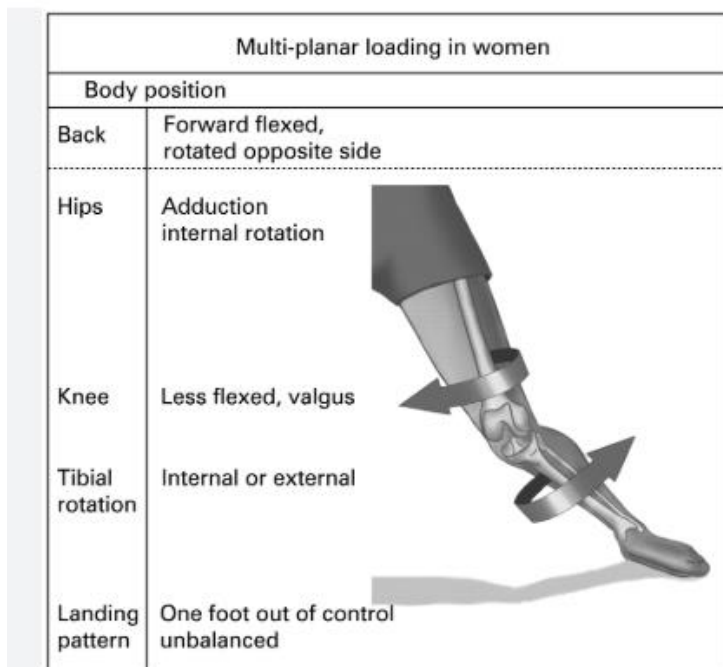
dorsaVi's new 3D motion analysis assessment fills this gap using the Company's proprietary, FDA-cleared wearable sensors and AI movement analysis, dorsaVi provides:

- **Full-spectrum 3D knee motion tracking**, including the rotational torque forces that contribute to ACL injuries.
- **Instant, real-time feedback**—eliminating the need for expensive, time-consuming lab assessments.
- **Actionable insights** from one of the industry's largest datasets of knee assessments, allowing practitioners to benchmark an athlete's movement against established norms and intervene before injury occurs.

British Journal of Sports Medicine



See image (left) from the British Journal of Sports Medicine<sup>2</sup> highlighting the multi-planar action leading to adverse stress in the knee.



The three-dimensional nature of this movement has been difficult to quantify in the past with tools and devices available in the average clinical environment.

<sup>2</sup> <https://pubmed.ncbi.nlm.nih.gov/19372087/>

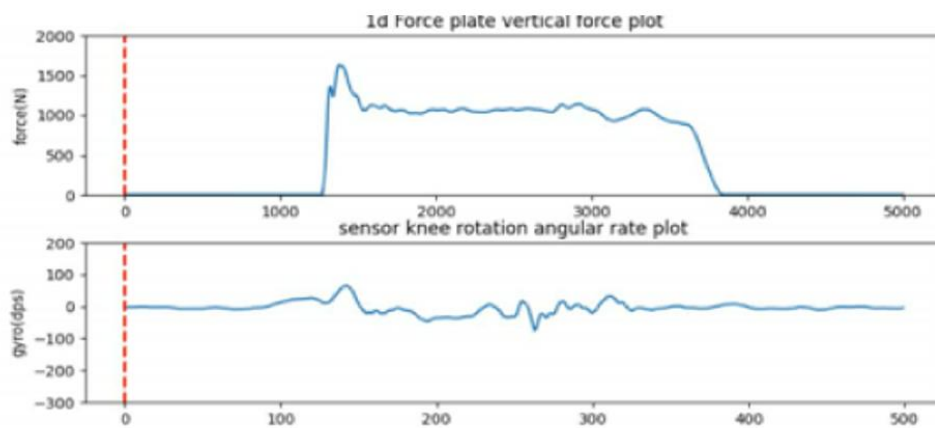
The graphs below describe the data that a 1D force plate is able to detect versus what a 3D sensor is able to detect.

The first graph (Graph.1) shows data for **Good landing** on a single leg in which the tibia stays facing forward with minimal rotation, therefore not stressing the knee adversely.

**Graph 1:**

## Good Hop & Land

### 1D Vertical Force plate vs rotation of tibia on sensor

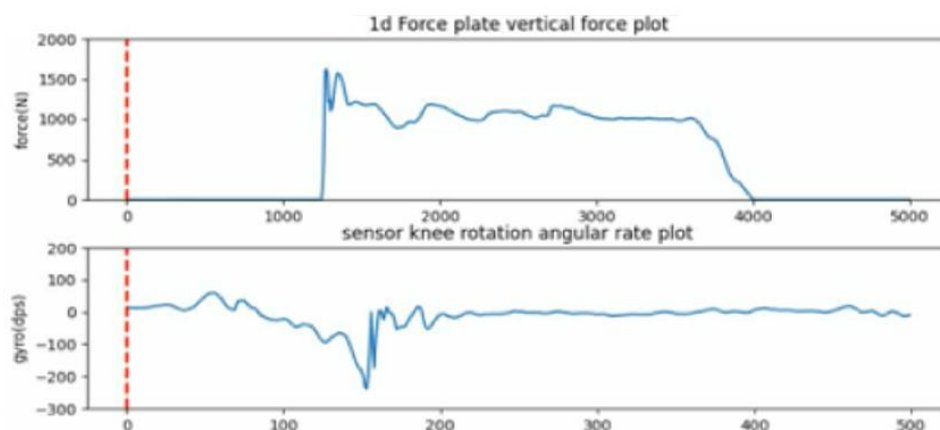


The second graph (Graph.2) shows data for **Poor landing** in which the tibia rotates at 230 °/sec (approx. 25°) which is detected by the 3D sensor yet not by the 1D force plate. This rotation is an element that potentially stresses the Anterior Cruciate Ligament (ACL) causing adverse tension and increasing the risk of injury.

**Graph 2:**

## Poor Hop & Land

### 1D Vertical Force plate vs rotation of tibia on sensor



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## Unlocking a Major Market Opportunity

dorsaVi's 3D knee assessment test directly addresses a **multi-billion-dollar market**<sup>3</sup> spanning elite sports, clinical rehabilitation, and orthopaedic injury prevention, with more than 200,000 ACL injuries in the US each year and an estimated annual cost of \$7 billion in the US alone.

- **Elite Sports & Performance** - ACL injuries cost professional sports leagues millions in lost player time. dorsaVi's solution enables real-time injury risk assessments to optimise training and recovery programs.
- **Rehabilitation & Physical Therapy** - Clinicians can now deliver data-driven, personalised rehab programs, leveraging dorsaVi's proprietary AI insights to track patient progress objectively.
- **Insurance & Workplace Health** - Preventative injury screening is increasingly recognised as a cost-saving measure for insurers and employers, expanding dorsaVi's reach beyond sports into broader musculoskeletal health applications.

## Smarter Injury Prevention: AI and 3D Motion Tracking for Athletes

dorsaVi CEO, Dr. Andrew Ronchi, states: *"This technology represents a paradigm shift in sports injury prevention. Our AI-driven 3D motion analysis offers unprecedented accuracy in assessing knee mechanics in the clinic—something the industry has never had access to outside of biomechanics labs. We believe this innovation will become the new standard in ACL injury prevention and rehabilitation, delivering tangible benefits for athletes, teams, and clinicians worldwide."*

With commercial rollouts already underway and partnerships forming with elite sporting organisations and leading physical therapy clinics, dorsaVi is redefining how ACL injuries are assessed and prevented.

This release has been authorised for lodgement by the Company's Board of Directors.

- ENDS -

## For further information about dorsaVi, please contact:

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<sup>3</sup> <https://www.sciencedirect.com/science/article/pii/S2059775421003102>

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## About dorsaVi

dorsaVi Ltd (ASX: DVL) is an ASX company focused on developing innovative motion analysis device technologies for use in clinical applications, elite sports, and occupational health and safety. dorsaVi believes its wearable sensor technology enables, for the first time, many aspects of detailed human movement and position to be accurately captured, quantified, and assessed outside a biomechanics lab, in both real-time and real situations for up to 24 hours. dorsaVi's focus is on two major markets:

- **Workplace:** dorsaVi enables employers to assess risk of injury for employees as well as test the effectiveness of proposed changes to OHS workplace design, equipment or methods based on objective evidence. dorsaVi works either directly with major corporations, or through an insurance company's customer base with the aim of reducing workplace compensation and claims. dorsaVi has been used by major corporations including London Underground, Vinci Construction, Crown Resorts, Caterpillar (US), Boeing, Monash Health, Coles, Woolworths, Toll, Toyota, Orora, Mineral Resources and BHP Billiton.
- **Clinical:** dorsaVi is transforming the management of patients with its clinical solutions (ViMove+) which provide objective assessment, monitoring outside the clinic and immediate biofeedback. The clinical market is broken down into physical therapy (physiotherapists), hospital in the home and elite sports. Hospital in the home refers to the remote management of patients by clinicians outside of physical therapy (i.e. for orthopaedic conditions). Elite sports refer to the management and optimisation of athletes through objective evidence for decisions on return to play, measurement of biomechanics and immediate biofeedback to enable peak performance.

Further information is available at [www.dorsaVi.com](http://www.dorsaVi.com)