

Forecasting non-impact football injuries

Improving injury prediction



Goal

The fitness coaching team of a premiership football club wanted to evaluate whether certain strength and flexibility tests, plus saliva samples, could assess the propensity of players to get injured.

Insight and Action

QuantumBlack built a surrogate model of injury onset based on prior injuries. Using objective medical markers and information from prior injuries, we recognised features that correlate to injury onset in the hamstring, upper leg, and lower leg.

In blind historical testing across two years of data and four squads, the model correctly forecast 170 out of 184 non-impact muscle injuries—a 90% improvement.

Results

90%

Improvement in accuracy of forecasting non-impact injuries

64%

Correct categorisation of (actual) injured players (type II error)

73%

Correct categorisation of (actual) healthy players (type I error)