

Appendix Table A1. All factors collected at baseline and the 24 selected independent factors (bolded and numbered 1-24) with finally 19 included (KOOS and SEBT were removed) in the Classification and Regression Tree (CART) analysis.

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| <b>1. Time between primary injury and surgery (months)</b>   |
| <b>2. Playing level categories; Elite (2 top divisions), 3-6th division, lowest division or youth play</b> |
| <b>3. IKDC score (0-100)</b>   |
| <b>4. ACL-RSI (0-10)</b>   |
| <b>5. ACL – Quality of Life (0-10)</b>   |
| <b>(6.) KOOS – Symptom (0-100)</b>   |
| <b>(7.) KOOS – Pain (0-100)</b>  |
| <b>(8.) KOOS – Sport/Recreation (0-100)</b>  |
| <b>(9.) KOOS – Quality of Life (0-100)</b>   |
| <b>10. SMPS – Personal Standards (0-5)</b>   |
| <b>11. SSP – Somatic anxiety (T-score 0-100, The normal range is T-score 40–60)</b>                        |
| <b>12. SSP – Psychic anxiety (T-score 0-100, The normal range is T-score 40–60)</b>                        |
| <b>13. SSP – Stress susceptibility (T-score 0-100, The normal range is T-score 40–60)</b>                  |
| <b>14. SSP – Impulsiveness (T-score 0-100, The normal range is T-score 40–60)</b>                          |
| <b>15. SSP – Adventure seeking (T-score 0-100, The normal range is T-score 40–60)</b>                      |
| <b>16. Ankle dorsiflexion ROM, side difference (°)</b>   |
| <b>17. Knee extension ACLR leg (°)</b>   |
| <b>18. LSI – single hop for distance (%)</b>   |
| <b>19. LSI - side hop (%)</b>  |
| <b>20. 5-jump test (cm)</b>  |
| <b>21. Tuck Jumps total points (0-10)</b>  |
| <b>22. Knee collapse ACLR leg (cm) measured with Drop vertical jump</b>                                    |
| <b>23. Knee collapse non ACLR leg (cm) measured with Drop Vertical jump</b>                                |
| <b>(24.) Normalized SEBT composite score max LSI (ACLR (non ACLR leg)</b>                                  |
| <i>Other factors collected at inclusion and not included in CART analyses</i>                              |
| <i>Anthropometrics</i>   |
| Height   |
| Weight   |
| BMI (at testing occasion)  |
| Profession- Work/student   |
| Smoking- yes/no  |
| Heredity for ACL injury, yes or no   |
| Age at testing (inclusion)   |
| Age at primary injury  |
| Age at primary surgery   |
| Beighton   |
| Alignment, varus, valgus or neutral  |
| Lachman - yes/no (soft/hard)   |
| Pivot shift- negative or positive  |
| Dorsiflexion foot (°) (ACLR leg)   |
| Dorsiflexion foot (°) (non ACLR leg)   |
| Extension knee (°) (ACLR leg)  |

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| Extension knee (°) (non ACLR leg)  |
| Flexion knee (°) (ACLR leg)  |
| Flexion knee (°) (non ACLR leg)  |
| Oedema, yes/no   |
| MCL- 0-2, 3-5, >5mm  |
| LCL- 0-2, 3-5, >5mm  |
| Palpation- pain or not   |
| McMurrey's- pain or not  |
| Tibia length   |
| Leg length   |
| KT1000_20lb  |
| KT1000 Manuel max  |
| <i>Surgical and injury factors</i>   |
| Graft (primary)  |
| ACL diameter (0-15 mm)   |
| Fixation in tibia  |
| Fixation in tibia (type) cortical suspension devices/ intratunnel fixation   |
| Fixation in femur  |
| Fixation in femur (type) cortical suspension devices   |
| Meniscus injury at primary ACLR  |
| Meniscus surgically treated  |
| Repair/suture medial   |
| Repair/suture lateral  |
| Cartilage injury at ACLR   |
| Meniscus- and/or cartilage injury  |
| Cartilage surgically treated   |
| Graft - categories   |
| Primary ACLR in dominant leg   |
| Reconstructed knee (primary)   |
| Injury mechanism, contact/no contact (primary)   |
| Physiotherapy before primary ACLR, yes or no   |
| Physiotherapy treatment preoperative time 4 categories (< 3 months, 3-6 months, 6-9 months, >9 months)                                 |
| Physiotherapy after primary ACLR, yes or no  |
| Physiotherapy treatment post time 3 categories (0-6 months, 6-9 months, >9 months)   |
| <i>Soccer and activity factors</i>   |
| Playing position   |
| Dominant leg (kicking leg)   |
| Risk appraisal before injury, 1-avoided risks at any price, 4- often took deliberate risks   |
| Risk appraisal current, ranking on a scale 1-4; 1-avoided risks at any price 4- often took deliberate risks                            |
| Reason to play football before injury (To win, Have fun, Practice/prepare for competition, Help the team/health reasons/other reasons) |
| Current reason to play football (To win, Have fun, Practice/prepare for competition, Help the team/health reasons/other reasons)       |
| Satisfaction with performance (football) on a scale ranging from 1 (not satisfied at all) to 10 (very satisfied)                       |

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| Training sessions per week (football)   |
| Match sessions per week (football)  |
| Other sports, yes or no   |
| Other sports - what sport?  |
| Training/week (other sports)  |
| Satisfaction with current activity level on a scale ranging from 1 (not satisfied at all) to 10 (very satisfied)              |
| Months to return to full training after ACLR  |
| Months to return to match after ACLR  |
| Time from return to full training with the team at baseline, months   |
| Orthosis during soccer play?  |
| Playing level compared to before ACL injury   |
| Do you feel limited when playing football after the ACLR, yes/no  |
| Can you perform at the same level as before the ACL injury, yes/no  |
| Other injury that causes any inconvenience  |
| Other injury that causes any inconvenience comments   |
| Previous ankle injury, yes/no   |
| Problems/pain after previous ankle injury, yes/no   |
| Previous ankle injury categories yes/no   |
| <i>Questionnaires</i>   |
| Motivation 1. How important was it for you to return to your previous activity level? 1-10                                    |
| 2. Did you think that it was possible for you to return to your previous activity level? 1-10                                 |
| 3. How much were you willing to invest to return to your previous activity level? 1-10  |
| KOOS - ADL  |
| Knee function satisfaction – graded as delighted, pleased, mostly satisfied, mixed, mostly dissatisfied, unhappy and terrible |
| SMPS - Concern Over Mistakes (COM)  |
| SMPS - Perceived Parental Pressure (PPP)  |
| SMPS - Perceived Coach Pressure (PCP)   |
| SSP - Lack of assertiveness   |
| SSP - Detachment  |
| SSP - Social desirability   |
| SSP - Embitterment  |
| SSP - Trait irritability  |
| SSP - Mistrust  |
| SSP - Verbal trait aggression   |
| SSP - Physical trait aggression   |
| <i>Functional performance tests</i>   |
| Normalized SEBT Anterior – Side difference (cm) between ACLR-non ACLR leg   |
| The single hop for distance (ACLR and non ACLR leg)   |
| Side hop (ACLR and non ACLR leg )   |
| Probability of High Knee Abduction Moment (ACLR leg)  |
| Probability of High Knee Abduction Moment (non ACLR leg)  |