Supplement Digital Content 2: Scree plots for the PCA and both hierarchical clustering analyses and the silhouette plot for the k-means clustering technique.

Supplement Digital Content 3: Complete list of variables included in the supervised machine learning algorithms.

Demographic data	
Age	
Sex	
Weight (kg)	
Height (cm)	
BMI	
Work status (at work, retired, sick leave, early retirement benefit)	
Osteoarthritis or total knee replacement or total knee replacement revision	
Pain intensity	
Period with pain in the index knee (months)	
Average daily pain intensity in index knee, last 7 days (NRS 0-10)	
Max pain intensity at rest (NRS 0-10)	
Max nightly pain at rest (NRS 0-10)	
Pain during walking (NRS 0-10)	
Pain climbing stairs (NRS 0-10)	
Self-constructed questions	
Sharp pain (yes/no)	
Light touch pain (yes/no)	
Light pressure pain (yes/no)	
Questionnaires	
BPI pain other than everyday kind of pain (yes/no)	
BPI pain severity score	
BPI pain interference score	
PQAS paroxysmal pain	
PQAS surface pain	
PQAS deep pain	
KOOS symptoms	
KOOS pain	
KOOS activities of daily living	
KOOS sport and recreation	
KOOS knee-related quality of life	
PD-Q total score	
Bedside	
Mechanical punctate pain sensitivity (NRS) – Index knee	
Mechanical punctate pain sensitivity (NRS) – Extra-segmental	
Mechanical temporal summation (NRS) single stimulus – Index knee	
Mechanical temporal summation (NRS) single stimulus – Extra-segmental	
Mechanical temporal summation (NRS) series stimuli – Index knee	
Mechanical temporal summation (NRS) series stimuli – Extra-segmental	
Mechanical temporal summation (NRS): Difference (series-single stimulus) – Index knee	
Mechanical temporal summation (NRS): Ratio (series/single stimulus) with 0.5 shift – Index knee	
Mechanical temporal summation (NRS): Ratio (series/single stimulus) with 1.0 shift – Index knee	
Mechanical temporal summation (NRS): Difference (series-single stimulus) – Extra-segmental	

<mark>Mechanical temporal summation (NRS): Ratio (series/single stimulus) with 0.5 shift – Extra-segmental</mark>
<mark>Mechanical temporal summation (NRS): Ratio (series/single stimulus) with 1.0 shift – Extra-segmental</mark>
Dynamic mechanical allodynia (NRS) – Index knee
Pressure pain sensitivity: Painful when compressed to 4ml (yes/no) – Index knee
Pressure pain sensitivity: Pain intensity at 4ml pressure (NRS) – Index knee
Pressure pain sensitivity: Pain threshold (ml compressed) – Index knee
Pressure pain sensitivity: Painful when compressed to 4ml (yes/no) – Extra-segmental
Pressure pain sensitivity: Pain intensity at 4ml pressure (NRS) – Extra-segmental
Pressure pain sensitivity: Pain threshold (ml compressed) – Extra-segmental
Conditioned pain modulation: Test stimulus alone (VAS)
Conditioned pain modulation: Test stimulus with conditioning stimulus (VAS)
Conditioned pain modulation: Conditioning stimulus pain rating (VAS)
QST z-values*
MPT – Index knee
MPT – Extra-segmental
MPS – Index knee
MPS – Extra-segmental
PPT – Index knee
PPT – Extra-segmental
DMA – Index knee
DMA – Extra-segmental
*not included in the QSTGroup calculation (removed to prevent circular reasoning) BPI, Brief Pain Inventory; PQAS, Pain Quality Assessment Scale; KOOS, Knee injury and Osteoarthritis Outcome Score; PD-Q, PainDETECT Questionnaire MPT, mechanical pain threshold; MPS mechanical pain sensitivity; PPT, pressure pain threshold; DMA, dynamic mechanical allodynia