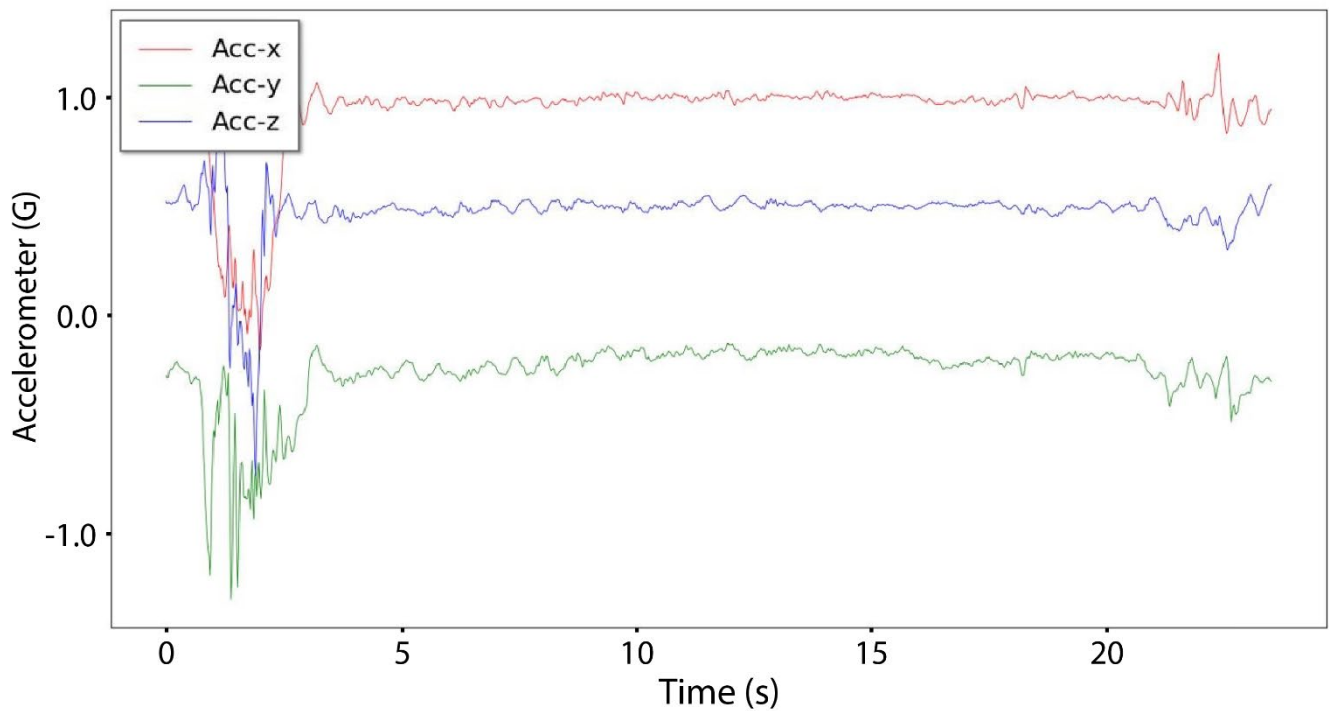# Bone & Joint Research

Supplementary Material

Fig a. Sample accelerometer inertial data in the labelled test set, collected in-clinic by Patient N3. While most of this patient's in-clinic records present clear repetitive motion, indicative of exercise (e.g. Fig. 4 in the main text), this resisted shoulder internal rotation exercise does not exhibit clear repetitions, which could reflect a recording error.
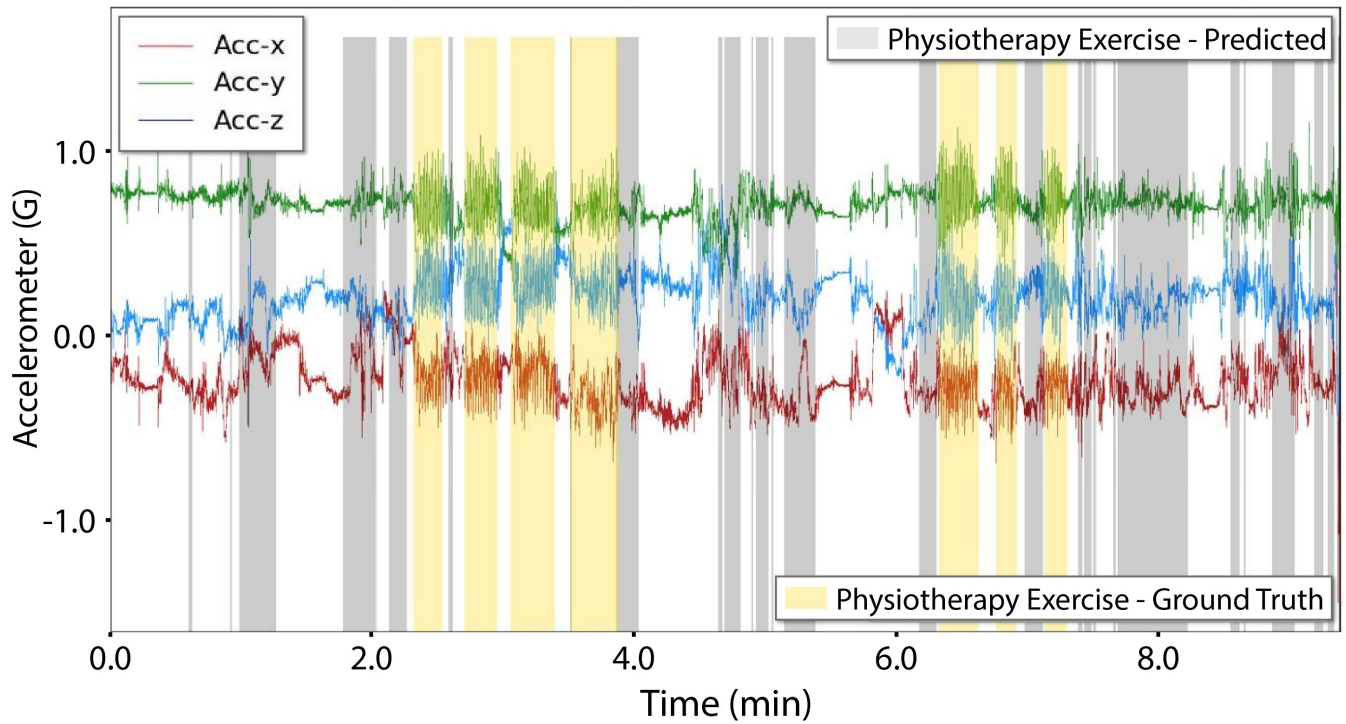
Fig b. Supervised fully convolutional network with proxy prediction on record R0 of patient P2 (area under the receiver operating characteristic (AUROC) of 0.366). There is a clear mismatch between the algorithm and the manual segmentation for this record, which could be due to a problem with the 'ground truth' manual segmentation. Records 1 through 4 from Patient 2 did not have the same issue, with AUROC values ranging from 0.763 to 0.950.