

Supplementary data 1: Methods - Statistical analysis

Joint swelling preceding joint damage or vice versa

The association between baseline joint swelling and joint damage during follow-up (binary) vs. the association between baseline joint damage and joint swelling during follow-up (binary) was analysed by comparing two different multilevel mixed-effects logistic regression models in which joints were clustered within patients. The first model was adjusted for baseline joint damage (binary) and follow-up duration. The second model was adjusted for baseline joint swelling and follow-up duration. For comparability of the models, the independent variables baseline joint swelling (first model) and baseline joint damage (second model) were standardised by dividing these variables by their standard deviations.

Joint swelling episodes

For the analysis of the association between intermittent joint swelling (the number of joint swelling episodes) and local joint damage progression, joint swelling episodes were defined as periods of subsequent study visits at which a joint was persistently swollen. If joint swelling assessments were missing, joints were not considered to be swollen. A generalized linear mixed model with joints clustered within patients was used. The model was adjusted for baseline joint damage and follow-up duration.