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Application Number / Title: 21082 - Frailty and inflammatory arthritis
Funding body: University of Manchester

Keywords provided by the Applicant PI to describe the research project: Frailty, inflammatory arthritis, ageing, rheumatic disease

Application Lay Summary:
1a: Frailty is an age-associated syndrome characterised by the accumulation of deficits across multiple organ systems resulting in reduced physiological reserve and consequently reduced ability to regain homeostasis after a stressor event. We hypothesise i) frailty is associated with the occurrence of inflammatory arthritis (IA), ii) because of the reduction in physiological reserve; frailty is linked with an increased susceptibility to IA.

We aim to i) Define a frailty index, and determine the occurrence of frailty in the general UK Biobank cohort and in people with IA, ii) Determine whether frailty is linked with a predisposition to developing IA.

1b: The proposed research will characterise the distribution of frailty in the UK Biobank cohort. It may help identify an important and novel predictor of the onset of inflammatory arthritis and also identify a pathophysiological link between frailty, inflammation and inflammatory arthritis.

1c: We will develop a frailty index in the UK Biobank cohort using a standardised methodology described in the next section. We will then examine the association between frailty status at baseline and the presence of inflammatory arthritis at baseline. We will also identify participants who have developed inflammatory arthritis during follow up, and determine the ability of frailty status at baseline to predict the development of inflammatory arthritis.

1d: We will include data from the whole cohort at baseline and follow up assessment.