Results: available from baseline questionnaires. hsCRP and IL-6; anthropometric and lifestyle information was also baseline were available for measurement of a high-sensitivity CRP points in both the left and right knee. Stored blood samples taken at mean of 10.3 years later. Tibiofemoral joint Kellgren and Lawrence progression of OA. We investigated whether baseline inflammatory chondrocytes appear to play pivotal roles in cartilage destruction. Baseline inflammatory markers were not shown to be concentration and OA progression. Conclusion: in this cohort; there were no clear relationships between baseline IL-6/C21/C20 hsCRP concentrations were normally distributed and fell in the normal Darshan Jagannath2, Cyrus Cooper1 and Elaine M. Dennison1 Georgia Ntani1, Karen Walker-Bone1, Gareth T. Jones2, Blair Smith3, CHRONIC WHOLE BODY PAIN: FINDINGS FROM UK BIOBANK 44. A HISTORY OF FRACTURE IS ASSOCIATED WITH CHRONIC WHOLE BODY PAIN: FINDINGS FROM UK BIOBANK

Georgia Ntani1, Karen Walker-Bone1, Gareth T. Jones1, Blair Smith3, Gary J. Macfarlane6, Cyrus Cooper1 and Nicholas C. Harvey1 1MRC Lifecourse Epidemiology Unit, University of Southampton, Southampton, 2Institute of Applied Health Sciences, School of Medicine and Dentistry, University of Aberdeen, Aberdeen, 3Ninewells Hospital and Medical School, University of Dundee, Dundee, UK

Background: Pain all over the body is a key component of chronic widespread pain (CWP), a common condition which often results in high levels of disability. Underlying mechanisms are complex and may involve neural systems, the hypothalamic-pituitary-adrenal (HPA) axis, and psychological indices. Although there is some evidence that CWP may follow a traumatic event, there are scant data relating to the occurrence of CWP following a history of a bone fracture. Whilst the case definition of CWP requires use of pain mannequins, which may not be feasible in a large population cohort, the presence of chronic pain all over the body, readily obtainable by self-report, affords a practical surrogate marker. The aim of this study was therefore to explore the association between presence of pain all over the body and previous fracture in a large population-based cohort, UK Biobank.

Methods: UK Biobank is a large prospective cohort comprising 500,000 men and women aged 40–69 years. Baseline assessment included detailed information covering health, medications, lifestyle, diet, physical activity and body build. Specifically data relating to past fracture over the last 5 years, and the presence of pain all over the body >3-months duration (PATB) were obtained. Poisson regression models with robust CIs were used to explore associations between presence of PATB and any fracture in the past 5 years, with adjustment for confounding factors, initially in the whole cohort and then separately for males and females. Results are presented as risk ratio (RR). Results: The mean (s.d.) age of participants was 57 (8.1) years and just over half were female (54%). The overall prevalence of PATB was 1.4%, as it was in those without previous fracture, while it was somewhat higher among those with a previous fracture (2.1%). A previous fracture was associated with a 51% increased the risk of PATB (RR: 1.51; 95% CI: 1.41, 1.62). The association was somewhat attenuated after adjustment for demographic characteristics (sex, age, BMI), lifestyle (alcohol consumption, smoking, physical activity) and socio-economic factors (deprivation index, household income) (RR: 1.37; 95% CI: 1.28, 1.47) and after further adjustments for psychological risk factors (RR: 1.20; 95% CI: 1.05, 1.37), but in each case the association remained statistically significant. After stratification by sex, relationships between previous fracture and PATB appeared somewhat stronger in men than in women (fully adjusted RR men: 1.32; 95% CI: 1.05, 1.66; and RR women: 1.15; 95% CI: 0.98, 1.35). Conclusion: In this large population-based cohort, previous fracture was associated with an increased risk of chronic pain all over the body, particularly in men, even after adjustment for a wide range of confounding factors. These results require replication in other settings, but raise the possibility that fracture may predispose to chronic widespread pain, perhaps through perturbation of the HPA axis, or psychological stressors. Disclosure statement: The authors have declared no conflicts of interest.