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Summary of research

Key words: Ankylosing spondylitis, Demographics, Epidemiology, Mental Health

1a: Ankylosing Spondylitis (AS) is a chronic inflammatory disease of the axial skeleton (bones of the head and trunk) with variable involvement of other joints. AS is a complex poorly understood disease, epidemiological studies are limited by low numbers of cases, and lack of controls. We aim to utilise a case-control methodology to comprehensively investigate the epidemiology of AS.

Two specific objectives will be investigated:

- a) Investigating the determinants of AS;
- b) Investigating the impacts of the disease e.g. mental health and wellbeing, socioeconomic status etc.

1b: The UK Biobank provides us with a unique opportunity to improve our understanding of a complex chronic condition, which significantly impacts on quality of life. Our proposed research will provide the most comprehensive

overview of AS to date in a UK population. A greater understanding of this condition is important for improving diagnosis, treatment regimens and public health interventions.

1c: We will utilise standard case-control epidemiological techniques to investigate AS within the UK Biobank. We will compare the individuals reporting a diagnosis of AS (cases) to those not reporting AS (controls). Our research will compare the characteristic features of cases and controls. We will be able to determine if specific factors increase an individual's risk of reporting AS. Similar methodology will be utilised to look at the mental health impact of the condition.

1d: We would like to compare the AS cases to all controls within the UK Biobank baseline data. We will also carry out a sub-analysis looking at double the number of age and sex matched controls.