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Summary of research

Key words: Cancer, breast, hormones, reproductive factors, Breast Cancer Consortium

Previous research has shown that hormonal factors are important determinants of breast cancer risk, but understanding of these effects is far from complete. We propose a research programme on hormonal, reproductive and dietary factors and breast cancer risk; this will extend the work of two existing consortia co-ordinated in the Cancer Epidemiology Unit Oxford, the Collaborative Group on Hormonal Factors and Breast Cancer, and the Endogenous Hormones and Breast Cancer Collaborative Group.

In phase 1 we will describe the distributions of established and potential breast cancer risk factors in the UK Biobank, including reproductive factors, anthropometry, hormone use, alcohol intake and physical activity.

In phase 2 we will examine the associations of established and potential risk factors with the concentrations of serum biomarkers relevant to breast cancer, which are soon to be measured for all participants by UK Biobank, including sex hormones and growth factors.

In phase 3, when at least 2,000 incident breast cancer cases have accrued, we will examine the associations of breast cancer risk with reproductive and lifestyle factors, and serum hormones.

In phase 4, the data accrued will be combined with the data collected by

the Collaborative Group on Hormonal Factors and Breast Cancer, and the Endogenous Hormones and Breast Cancer Collaborative Group and new analyses of the worldwide evidence will be produced.

Project Extension - UK Biobank approval given to the researcher to expand the scope of MAF3248 to include SNPs associated with body mass index, in order to look at the relationships between these variants and Biobank's various anthropometric variables, physical activity level, and eventually breast cancer risk.

PROJECT EXTENSION APPROVED 13.11.2017:

"Include all the fields of raw accelerometer data to derive specific aspects of the patterns of physical activity including walking, sitting/ sedentary time, standing, etc."