Application number/Title: 30247 - Association between serum sex steroid hormones and ductal carcinoma in situ among UK women

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Keywords provided by the Applicant PI to describe the research project:
Ductal carcinoma in situ, sex hormones

Application Lay Summary:

1a: Endogenous sex steroid hormone levels, particularly oestrogen, are strongly associated with increased risk of invasive ductal carcinoma, but their role in the development of ductal carcinoma in situ DCIS, which is the earliest form of breast cancer, is unclear. This study, therefore, aims to i) investigate the association of oestrogen, testosterone and SHBG with risk of DCIS among women; ii) assess how these associations are modified by age, menopausal status, and weight.

1b: This study aims to improve our understanding of aetiology of early stage ductal carcinoma (DCIS). Such information can be useful in developing approaches for the prevention of breast cancer, and is in keeping with the UK Biobank’s aim to improve prevention of cancer.

1c: This study will be conducted by researchers at Albert Einstein College of Medicine, Department of Epidemiology and Population Health. We will use the data on serum oestrogen, testosterone and SHBG measurements for all women within the UK Biobank prospective cohort who developed DCIS and those without any previous history of cancer. We will also extract information on potential confounders such as age, BMI, parity and menopausal status, from the data base. We will analyse the data to investigate the association of sex steroid hormones with DCIS.

1d: This study will include all women with oestradiol, testosterone and SHBG measurements but will exclude those with a past history of DCIS or invasive
cancer, and also those who report use of hormone replacement therapy at the time of the sex steroid hormone measurements.