Application number/Title: 8508 - Development of a risk prediction model for colorectal cancer

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Keywords provided by the Applicant PI to describe the research project:
Cancer, bowel, genetics, biomarkers, risk factors

Application Lay Summary:

1a: Knowledge of colorectal cancer (CRC) risk factors can be translated into improvements in prevention and early detection of CRC through risk stratification of the population and tailoring interventions according to risk. Paramount to this is the development of risk stratification models from prospective cohort studies, and the discovery of novel biomarkers of CRC risk.

Aims
a) To develop a risk prediction model for CRC that incorporates genetic, lifestyle and biomarker information
b) To discover CRC risk alleles and new biomarkers predictive of CRC risk
c) To evaluate the performance of new risk prediction models under development including environmental, biomarker and genetic information.

1b: The proposed research will result in development of a model for prediction
of CRC that can be implemented in risk-stratified strategies for the prevention and early detection of CRC.

1c: We would like to request an extract of raw data on CRC risk factors and outcomes (colorectal polyps or cancer, other major diseases, survival) for participants in the UK Biobank. These data will be processed to derive variables for our analyses.

1d: Members of any age participating in the full UK Biobank cohort, but subset acceptable where data are not available on all participants.