



**Supplementary Figure 1. Study design of the TwinsUK. A. Timeline of follow-up data collection in TwinsUK and the cross-sectional and prospective analyses design in this study. A, timeline for diet and biomarker assessment; B, biomarker statistical analyses; C, microbiome statistical analyses. Dotted arrows indicate prospective analyses, whereas the solid arrows indicate cross-sectional analyses. D. Flow chart of participants in the TwinsUK cohort for analysis.**