



Abstract

## Can Planetary Health Mean Population Health? Higher Adherence to the EAT-Lancet Reference Diet Is Inversely Associated with Mortality in a UK Population of Cancer Survivors †

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**Abstract:** Background and Objectives: Advancements in treatment and care, as well as early detection, have contributed to an increase in cancer survival rates. However, limited evidence exists on the optimal diet that should be followed by people after receiving a cancer diagnosis and how it may affect their survival outcomes. Recently, the EAT-Lancet Commission on Food, Planet, Health proposed the "planetary health diet" as a diet within the planetary boundaries. We aimed to investigate, for the first time, the association between adherence to the EAT-Lancet reference diet and mortality in cancer survivors. Methods: Using data from the UK Biobank cohort, we created a sub-population of cancer survivors, based on cancer-registry diagnoses. Data from the UK Biobank's Touchscreen questionnaire were used to develop a score reflecting adherence to the EAT-Lancet reference diet. Cox proportional hazards regression models were fitted to assess the association of the EAT-Lancet reference diet score with all-cause, cancer, and cardiovascular mortality in cancer survivors. Results: Better adherence to the EAT-Lancet reference diet was inversely associated with all-cause and cancer mortality, while mostly null associations were seen for cardiovascular mortality. Stratified analyses using potential effect modifiers led to largely similar results. Discussion: Our findings support the notion that the adoption of the EAT-Lancet reference diet has the potential to be beneficial for cancer survivors. Additional studies are needed in this specific population to further assess their post-diagnostic needs as well as the perceived barriers to the adoption of healthy lifestyle habits.

Keywords: EAT-Lancet; cancer; survivors; mortality; UK Biobank cohort; prospective

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**Informed Consent Statement:** All participants provided informed consent.

**Data Availability Statement:** The UK Biobank is an open access resource and bona fide researchers can apply to use the UK Biobank dataset by registering and applying at http://ukbiobank.ac.uk/register-apply/.

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