



UNIVERSITY OF LEEDS

This is a repository copy of *Healthy dietary patterns from food diaries and FFQ are not associated with colorectal cancer risk: results from the UKWCS*.

White Rose Research Online URL for this paper:

<https://eprints.whiterose.ac.uk/164439/>

Version: Accepted Version

Conference or Workshop Item:

Jones, P, Cade, J, Evans, C orcid.org/0000-0002-4065-4397 et al. (2 more authors) (2020) Healthy dietary patterns from food diaries and FFQ are not associated with colorectal cancer risk: results from the UKWCS. In: 13th European Nutrition Conference, 15-18 Oct 2019, Dublin, Ireland.

<https://doi.org/10.1017/s0029665120000348>

This article has been published in a revised form in Proceedings of the Nutrition Society [<http://doi.org/10.1017/s0029665120000348>]. This version is free to view and download for private research and study only. Not for re-distribution, re-sale or use in derivative works. © The Authors 2020

Reuse

Items deposited in White Rose Research Online are protected by copyright, with all rights reserved unless indicated otherwise. They may be downloaded and/or printed for private study, or other acts as permitted by national copyright laws. The publisher or other rights holders may allow further reproduction and re-use of the full text version. This is indicated by the licence information on the White Rose Research Online record for the item.

Takedown

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.



eprints@whiterose.ac.uk
<https://eprints.whiterose.ac.uk/>

Healthy dietary patterns from food diaries and FFQ are not associated with colorectal cancer risk: results from the UKWCS

Petra Jones (a1) (a2), Janet Cade (a2), Charlotte Evans (a2), Neil Hancock (a2) and Darren Greenwood (a2)

(a1) University of Malta, Msida, Malta

(a2) University of Leeds, Leeds, United Kingdom

Dietary pattern analyses have most commonly used food frequency questionnaire (FFQ) data for large population studies, whilst food diaries (FD) tend to be used with smaller datasets and followed up for shorter terms, restricting the possibility of a direct comparison. Studies comparing dietary patterns derived from two different assessment methods, in relation to diet and disease are limited. The aims of this study are to assess the agreement between dietary patterns derived from FFQ and FDs and to compare the associations between the Mediterranean dietary pattern and the World Cancer Research Fund/American Institute of Cancer Research (WCRF/AICR) dietary pattern in relation to colorectal cancer incidence.

The study population included 2276 healthy middle-aged women – participants of the UK Women's Cohort Study. Energy and nutrient intakes, derived from 4-day FDs and from a 217-item FFQ were compared. A 10 and an 8-component score indicating adherence to the Mediterranean diet and to the 2007 WCRF/AICR cancer prevention recommendations respectively were generated. Agreement was assessed by weighted Kappa statistics and the Bland-Altman method. Cox regression was used to estimate hazard ratios (HRs) for colorectal cancer risk for both the FD and the FFQ patterns, for each score separately.

The Bland-Altman method showed that the FFQ gave a higher energy intake compared to the FD with a bias of -525 kcal (95% CI -556, -493) between the two methods. Agreement was slight for the Mediterranean diet score ($K = 0.15$; 95% CI: 0.14, 0.16) and fair for the WCRF/AICR score ($K = 0.38$; 95% CI: 0.37, 0.39). A total of 173 incident cases of colorectal cancer were documented. In the multi-variable adjusted models, the estimates for an association with colorectal cancer were weak: HR = 0.94 (95% CI: 0.83 to 1.06) for a 1-unit increment in the Mediterranean diet score using FD and HR = 1.01 (95% CI: 0.83 to 1.24) for a 1-unit increment in the WCRF/AICR score using FD. For scores derived from the FFQ, estimates were inverse, but weak (HR = 0.80 (95% CI: 0.90 to 1.00) for a 1-unit increment in the Mediterranean diet score using FFQ and HR = 0.84 (95% CI: 0.67 to 1.05) for a 1-unit increment in the WCRF/AICR score using FFQ.

There is insufficient evidence of an association of colorectal cancer risk with the Mediterranean dietary pattern or with the WCRF/AICR cancer prevention recommendations, irrespective of the dietary assessment method in this sample. Further studies with larger sample sizes, using FD for diet assessment are warranted.