

## Adapting a food frequency questionnaire to assess dietary intake of people living with and beyond cancer

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People living with and beyond cancer (LWBC) are currently advised to follow World Cancer Research Fund (WCRF) dietary guidelines for cancer prevention<sup>(1)</sup>. There is increasing interest in capturing the aspects of diet that relate to these guidelines. Food Frequency Questionnaires (FFQs) can be used to capture habitual diet in large populations. FFQs are often limited by food list content, therefore the aim of this research was to adapt previously validated FFQs to include contemporary foods and food items relevant to cancer risk in order to assess dietary intake in people LWBC in the UK as part of a 'Health and Lifestyle Questionnaire' (HALQ).

The FFQ was adapted using previously validated questionnaires which were updated as required<sup>(2–5)</sup>. Diet variables of interest were: fibre, free sugar, red meat, processed meat, fruit and vegetables. Participants were asked how often they consumed certain food items with response options including: less than once a week or never/1–2 per week/3–5 per week/6 or more per week. 10 participating sites in London and Essex mailed a HALQ to patients diagnosed with breast, prostate and colorectal cancer in 2012/2013 (n = 13,645). The HALQ included this self-report FFQ to capture dietary intake.

A 42 item FFQ was adapted to evaluate 6 cancer specific diet variables as part of a larger questionnaire for people LWBC. Items from the Dietary Instrument for Nutrition Education (DINE)<sup>(2)</sup> were adapted to include contemporary foods such as couscous, meat alternatives and 1% milk in order to assess fibre and total fat intakes. Fruit and vegetable consumption was measured using a two-item questionnaire which has previously been validated against biomarkers<sup>(3)</sup>. Free sugar intake was estimated by three further questions, including two to assess the consumption of fruit juice and sugar sweetened beverages<sup>(4)</sup> and one adapted from the National Health and Nutrition Examination Survey Dietary Screener Questionnaire<sup>(5)</sup>, which was an open question where participants were asked to write the number of teaspoons of sugar, honey or syrup consumed in a day. Red and processed meat items from the DINE were structured to give separate scores in line with cancer-specific WCRF recommendations<sup>(1)</sup>. 5,835 participants returned the HALQ (43% response rate) which included the FFQ.

A FFQ was adapted and used to collect dietary data from a large sample of people LWBC. Further work will be undertaken to validate the FFQ against 24 h diet recalls.

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