

Further analysis is underway to explore which particular traits and characteristics of those who self-harm are most associated with risk of suicide using cox regression in order to inform intervention targeting.

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Cancer 2

OP31 MEAT INTAKE AND CANCER RISK: PROSPECTIVE ANALYSES IN UK BIOBANK

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Background The latest meta-analysis from the World Cancer Research Fund/American Institute for Cancer Research concluded that red meat was a probable cause and processed meat a convincing cause of colorectal cancer. However, evidence for associations between red and processed meat intake and other cancer sites is limited. Furthermore, few studies have examined the association between poultry intake and cancer risk. Therefore, the aim of this study was to examine the associations between red, processed meat and poultry intake and incidence for 20 common cancer sites.

Methods We analysed data from 475,488 participants (54% women) in UK Biobank. Participants were aged 37–73 years and cancer free at baseline. Cancer diagnosis and death due to cancer during follow-up were determined using data-linkage with cancer and death registries (with follow-up until 30 November 2014 for England and Wales and until 31 December 2014 for Scotland, respectively). Information on meat consumption was based on a touchscreen questionnaire completed at baseline covering type and frequency of meat intake. We used multivariable-adjusted Cox proportional hazards models to determine the association between baseline meat intake and cancer incidence. Analyses of lung cancer risk were restricted to never smokers. All analyses were adjusted for socio-demographic, lifestyle and women-specific factors.

Results Over a mean 5.7 (SD 1.1) years of follow-up 23,117 participants were diagnosed with any type of malignant cancer. Red meat intake was positively associated with colorectal cancer (Hazard ratio (HR) per 50 g/day increment in intake 1.20, 95% Confidence Interval (CI) 1.02–1.41), breast cancer (1.13, 1.01–1.27) and prostate cancer (1.14, 1.00–1.29). Processed meat intake was positively associated with risk for colorectal cancer (HR per 20 g/day increment in intake 1.16, 95% CI 1.04–1.30). Poultry intake was positively associated with risk for malignant melanoma (HR per 30 g/day increment in intake 1.20, 95% CI 1.00–1.44), prostate cancer (1.11, 1.02–1.22) and non-Hodgkin lymphoma (1.26, 1.03–1.55).

Discussion Higher intakes of red and processed meat were associated with a higher risk of colorectal cancer. Red meat consumption was also positively associated with risk of breast and prostate cancer, but these associations are not supported by most previous prospective studies and may be affected by residual confounding. The positive associations of poultry intake with prostate cancer and non-Hodgkin lymphoma require further investigation.

OP32 SOCIOECONOMIC STATUS AND BREAST CANCER MORTALITY IN SCOTLAND BY OESTROGEN RECEPTOR STATUS

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Background Although breast cancer is a disease associated with high socioeconomic status (SES), previous studies report higher mortality amongst women with lower SES. Breast cancer prognosis is highly related to tumour characteristics, such as oestrogen receptor (ER) status. ER+ tumours have better prognosis than ER- tumours as they are responsive to hormone treatments. This study aims to examine if socioeconomic inequalities in breast cancer mortality in Scotland differ by ER status.

Methods All women diagnosed with breast cancer in Scotland (recorded in the cancer registry) from 1997 to 2016 were followed up to the end of 2016. Median follow up time was 5.5 years, and 5, 10 and 15 years Kaplan Meier estimates for all-cause mortality were calculated by Scottish Index of Multiple Deprivation (SIMD) –an area-based measure of deprivation, stratified by ER status (82% ER+). Cox models were used to estimate hazard ratios (HR) between women in the most deprived quintile (Q1) of areas and women in the least deprived quintile (Q5) of areas stratified by ER status. Models were adjusted for age, Scottish region, tumour characteristics (grade, tumour size and whether screen-detected or not), treatment regimens and Charlson index of comorbidity. The potential for SIMD and ER status interaction was tested using likelihood ratio test.

Results Among the total of 72,217 women with breast cancer 12,923 (18%) were in Q1 and 14,980 (21%) were in Q5. There were 5,688 (44%) deaths in Q1 and 4,526 (30%) deaths in Q5. Women in Q1 had more advanced tumours than women in Q5: 43% vs 37% with poorly differentiated tumours, 45% vs 40% with tumours bigger than 2cm, 24% vs 30% screen detected tumours. Difference in proportions who were dead at 5, 10 and 15 years between Q1 and Q5 were 11%, 14% and 17% respectively. Five and 10 years mortality rates were higher for ER- tumours than for ER+ but there were no differences in mortality at 15 years. Fully adjusted Cox regression models for mortality for Q1 compared to Q5 gave HR of 1.40 [95% CI: 1.30–1.50] for women with ER+ tumours and 1.35 [95% CI: 1.19–1.53] for women with ER- tumours. There was no evidence of interaction between SIMD and ER status (p value=0.375).

Conclusion Socio-economic status is inversely associated with breast cancer mortality in Scotland regardless of ER status. Future studies are needed to determine cause of death and the role of comorbidities in this population.

OP33 BODY SIZE AND COMPOSITION IN RELATION TO RISK OF ENDOMETRIAL CANCER IN UK BIOBANK

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Background Obesity, as reflected by a high body mass index (BMI), is a well-known risk factor for endometrial cancer. Whether more precise measures of body fat, such as body fat

percentage and fat mass as assessed by bioelectrical impedance analysis, are more strongly related to risk is unknown and has not been explored in any prospective study. In addition, the independent role of body fat distribution in the development of endometrial cancer remains unclear.

Methods We analysed data from 202,796 women in UK Biobank, aged 40–69 years at study entry. Trained personnel collected data on body size and composition. Cox proportional hazard models, with time in study as the underlying time metric, were used to estimate hazard ratios (HR) and corresponding 95% confidence intervals (CIs) for the association of body size and body composition with risk of endometrial cancer. Analyses were stratified by year of birth and year of recruitment and adjusted for age, socio-economic deprivation score, age at menarche, menopausal status and age at menopause, use of oral contraceptive and hormone replacement therapy, diabetes status, physical activity and smoking status. Models that assessed the association of fat distribution measures and fat-free mass on cancer risk were additionally adjusted for BMI in order to examine their independent effects.

Results During a mean follow up of 5.5 years, 651 incident cases of endometrial cancer were identified, with a mean age of diagnosis of 63.1 years. The HR per standard deviation increase in BMI was 1.64 (1.53–1.75) and was comparable to that of body fat percentage (HR=1.73, 95%CI: 1.56–1.90) and fat mass (HR=1.64, 95%CI:1.53–1.76); however, in terms of model fit assessed by likelihood ratio chi square statistics, BMI appeared to be the most informative measure. All measures of fat distribution (waist and hip circumference, waist to hip ratio, waist to height ratio and trunk fat percentage) also showed strong positive associations with endometrial cancer risk (Ptrend <0.001); however, these associations were substantially attenuated after adjusting for BMI (Ptrend >0.10). Fat-free mass, a marker of muscle and bone mass, was also strongly associated with endometrial cancer risk (HR=1.58, 95%CI:1.47–1.69), and the association persisted after adjusting for BMI (HR=1.15, 95%CI: 1.03–1.29).

Conclusion The results of this study support the continued use of BMI in assessing the risk of endometrial cancer associated with obesity.

OP34 ENDURING PSYCHOLOGICAL IMPACT OF CHILDHOOD CANCER ON SURVIVORS AND THEIR FAMILIES IN IRELAND: A NATIONAL QUALITATIVE STUDY

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Background Five-year survival after childhood cancer has improved in Ireland in recent decades and is currently 81%. There are thousands of adult survivors of childhood cancer (ASCC) living in Ireland, but little is known about their psychological and social needs. Ireland's National Cancer Strategy 2017–2026 highlighted the need to establish the psycho-social needs of ASCC. This study aims to establish the major expressed psycho-social needs of this group for the first time.

Methods Seven focus groups were conducted with ASCC and parents in Dublin, Cork and Galway in 2018. Focus groups were promoted through social media, print media, radio, voluntary organisations, and clinical networks. Survivors were invited to participate if they were diagnosed with cancer

before age 18. Braun & Clarke's Framework for Thematic Analysis was used to identify semantic and latent themes. Member-check was undertaken to confirm that participants' views and experiences were accurately recorded.

Results The 33 participants (15 ASCC, 18 parents) had experienced a range of haematological and solid tumours in childhood. Five overarching themes were generated: (1) Enduring psychological impact on survivors; Many ASCC experience high levels of psychological distress as adults, including delayed trauma which can precipitate mental health crises in adulthood. (2) Enduring psychological impact on family members; Parents and siblings have unmet psychological needs relating to their experience of childhood cancer. (3) Enduring impact on family dynamics; ASCC and parents expressed high levels of fear and guilt relating to their cancer experience, which impacted on their family interactions. (4) Challenges accessing support; Psychological support services are inadequate to meet the needs of ASCC and their families, and are often only available through private providers. ASCC are not routinely offered psychological support during follow-up. (5) Desired model of care; No single service model appeals to all ASCC, and flexibility is required in the delivery of psychological support (individual vs. group, formal vs. informal).

Conclusion ASCC and their family members experience enduring psychological effects relating to their diagnosis and treatment. Psychological support services are inadequate to meet the needs of this growing population in Ireland. The study was limited by its participants who were self-selected, majority female, and may have experienced psychological distress regardless of their previous experience of cancer. The findings are being used to guide development of enhanced psycho-oncology services in the Irish public healthcare system, in line with the National Cancer Strategy.

OP35 A SYSTEMATIC REVIEW OF POPULATION-BASED QUALITY INDICATORS FOR END OF LIFE CANCER CARE

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Background Improving the quality of cancer care throughout the disease trajectory is an international priority. Population-based quality indicators (QIs) are key to this process yet remain predominantly used for evaluating care during the early, often curative, stages of disease.

Aim To identify all existing QIs for cancer patients with advanced disease and/or at the end-of-life, and to evaluate each indicator's measurement properties and appropriateness for use.

Methods We searched five electronic databases from inception to February 2019 for studies describing the development, review and/or testing of QIs for adults with advanced cancer and/or at the end-of-life. For each QI identified we extracted descriptive information (numerator; denominator; benchmarking data; care domain) and assessed six measurement properties (acceptability; evidence-base; definition; feasibility; reliability; validity). Assessments were based on previously established criteria with four possible ratings: positive; intermediate; negative; unknown. Ratings were collated, and each QI classified as either: appropriate for use; inappropriate for use; or, of limited