Obesity and Cancer

Can Cancer Really be Prevented by What You Eat?

C Heskey

Despite the multifactorial aetiology of cancer, lifestyle choices, including diet and physical activity, can have an impact on reducing the risk of certain cancers. Plant-based dietary patterns rich in fruits, vegetables, whole grains, legumes, and other whole food nutrient-dense choices are essential for primary and secondary prevention. Such dietary patterns are rich in nutrients and phytochemicals that can have a beneficial impact on immunity, inflammation, DNA repair, oxidative damage, hormone production and cell proliferation, thereby reducing cancer risk. Reductions of alcohol, refined carbohydrates, saturated fat, red meat, processed meat, sodium and excessive calorie intake may also be beneficial. Appropriately balancing calorie intake and expenditures may assist with weight management, thereby reducing the risk of various cancers, including those of the pancreas, gallbladder, breast, ovary, prostate, colon and stomach. Limiting alcohol intake may reduce the risk of various cancers along the gastrointestinal track, liver and breast. Limited evidence exists for the relationship between certain foods (or substances within foods) and the risk of cancer, including additives, coffee, genetically modified food and organic food. More research is needed to fully elucidate the effect of dietary patterns, foods, nutrients and non-nutritive substances in foods on the risk of cancer in humans.

Experience with an Advocate-led Community-based Breast Cancer Screening Fair in Antigua and Barbuda

G Jones, K Jones, E Bird, D Samuel, K Ashing, C Ragin

Background: Breast cancer may have a rising incidence in Antigua and Barbuda. Breast health fairs represent a community-based intervention for breast health and cancer control.
Objective: To examine the nature and outcomes of fairs led by Breast Friends, describe clients and findings and explore how to optimize the fairs.
Methods: On October 8, 2016, a single-page form was used by medical students and professional staff to capture data regarding presentation, risk-stratification for breast cancer, clinical breast examination (CBE) findings, and referrals for imaging. Risk-stratification was done online using the validated Harvard Disease Risk Index for breast cancer.
Results: The majority (99%) of the 157 participants were female. Median age was 46 years, and the majority were aged 45−74 years. By body mass index, 70% were overweight or obese. By risk index, 53% (83/157) were average to high-risk for breast cancer, but 30% (40/157) were above average to high-risk and 28 of these 40 were over 44 years old. Overall, one-third reported breast signs or symptoms prior to clinical examination, one-sixth was found to have findings on examination, and one-seventh was referred for imaging provided free by the public hospital. Further, 85% of clients were taught how to do breast self-examination, and 77% were counselled in breast cancer prevention. During follow-ups with Breast Friends over the course of several months, none of the 21 imaged cases had a diagnosis of breast cancer.
Conclusion: Breast cancer screening performed acceptably at this community-based activity in Antigua and Barbuda. Ways for optimization and ideas for future research include customizing risk levels, improving family histories and conducting genetic tests.

Hormone Receptor and HER-2 Status in Breast Cancer Patients Treated at the Oncology Centre of Princess Margaret Hospital, Nassau, The Bahamas

L Bartholomew, D Dames, D Curling

Objective: The objective of this study was to determine the hormone receptor and HER-2 receptor status of breast cancer patients treated at the Oncology Centre of Princess Margaret Hospital between 2005 and 2015. Prognostic, demographic and tumour character associations were examined.
Methods: A retrospective study was undertaken reviewing all charts of breast cancer patients diagnosed between 2005

and 2015. These files were obtained from the Oncology Department and the Cancer Registry of Princess Margaret Hospital. Information concerning patient demographics, tumour size, grade, lymph node metastases, hormone/molecular receptor subtype, genetic mutations and comorbid conditions were obtained.
Results: In this study, a total of 880 breast cancer cases were identified. Of these, 647 cases had receptor status testing done, with 56.8% being hormone receptor positive and 35.7% being triple negative. Triple negative status predominated in the young age group (47.7%). Hormone receptor positivity predominated in the older age groups (52% and 69.1%, respectively). It was also found that triple negative receptor status had the highest rates of mutation and tumour grade of the breast cancer susceptibility gene 1 (BRCA 1).
Conclusion: Breast cancer in The Bahamas occurs at younger ages compared to that seen in the population of the United States of America (USA). More interestingly, despite the fact that hormone receptor positivity remains the predominant receptor subtype, it has been found that triple negative disease predominates in the younger population but to higher percentages than what is seen in the USA population. Triple negative disease has again been demonstrated to be associated with poor prognostic factors.

Body Mass Index of Breast Cancer Patients in the Princess Margaret Hospital Oncology Unit
K Parker-Curling, SE Moxey, L Bartholemew, D Curling

Objective: To determine the body mass index (BMI) distribution of women presenting with breast cancer to the Princess Margaret Hospital Oncology Unit (PMHOU) between 2005 and 2015.
Methods: Body mass index was calculated for patients presenting to PMHOU between 2005 and 2015. Complete data were available for 720 of the 894 patients presenting during the study period. The BMI of each of these patients was calculated. Using the criteria of the World Health Organization (WHO), patients were classified as underweight, normal weight, overweight or obese based on their calculated BMI. The percentage of patients in each category was calculated.
Results: The mean BMI of all patients presenting for breast cancer management during the study period was 30.86 kg/m^2. The range of BMIs among the patients was 15.58–56.70 kg/m^2. The percentage of patients with a BMI in the WHO obese category was 50.56% (n = 365). The percentage of patients in the WHO overweight category was 31.67% (n = 228). The percentage of patients in the WHO normal BMI category was 15.56% (n = 112). The percentage of patients in the WHO underweight category was 2.22% (n = 16).
Conclusion: The majority of patients (82.22%) presenting for management of breast cancer during the study period satisfied WHO criteria for either overweight or obese status.

Inflammation Polymorphisms and Prostate Cancer Risk in Jamaican Men: The Role of Obesity/Body Size
B Dubey, M Jackson, C Zeigler-Johnson, K Devarajan, R Flores-Obando, N McFarlane-Anderson, M Tulloch-Reid, W Aiken, K Kimbro, D Jones, L Kidd, C Ragin

NO ABSTRACT.

Screening for Cervical Cancer in Females under the Age of 21 Years in The Bahamas: Should This Practice be Abolished?
N Ijeroma, D Halliday, R Butler, J Andrews, C Glinton, Y Mortimer, M Frankson

Background: Cervical cancer screening guidelines vary according to local epidemiology. In North America, recent guidelines recommend screening commence at the age of 21 years, while in Europe the age of commencement is 25 years. In The Bahamas, we currently adhere to guidelines which suggest screening below the age of 21 years.
Objective: To determine the value of screening for cervical cancer in patients under the age of 21 years within the government health services in The Bahamas.
Methods: We retrospectively reviewed all Pap smears between January 2011 and December 2015. Laboratory records, cancer registry data and medical records were cross-checked when needed. The cervical smears were classified according to the 2001 Bethesda System. Biopsy reports were classified as benign, mild dysplasia, severe dysplasia and invasive disease. Patients' Pap smears were serially observed for resolution or progression of the disease post-management.
Results: Of the 30 236 Pap smears done, 4540 were in patients under 21 years of age (10−20). Of these, 1270 (25%) were abnormal. The most common abnormalities were ASC-H (atypical squamous cells, cannot exclude high-grade squamous intraepithelial lesion (HSIL)) (44%) and ASC-US (atypical squamous cells of undetermined significance) (27%). The least common pathology was HSIL (9.7%). For those with abnormal smears, 23 (1.81%) had persistent HSIL at two years. Eleven (0.87%) resolved with five years, and 12 (0.94%) had persistent dysplasia without evidence of invasion. There were no cases of cervical cancer in the under-21 age group. For the study period, there were 85 cases of cervical cancer reported at our hospital cancer registry. The youngest patient was 30 years.
Conclusion: Screening for cervical cancer was of limited value in the under-21 age group in The Bahamas as this population was at a low risk for cervical cancer.

A Prostate Cancer Screening Clinic in The Bahamas: A Model for Lower Income Countries

R Roberts, C Mitchell, AL Tancawan, M Pedican, GW Jones

Objective: A local chapter of Us TOO International, a prostate cancer support group, has led an annual community-based prostate cancer screening clinic in Grand Bahama each September since 2009. Features of this initiative, characteristics of attendees and a description of cancers found were summarized to determine the clinic's value and to guide improvements.

Methods: We analysed the established clinic from 2012 to 2015, wherein Us TOO attracted corporate funding, volunteers managed clinics and health professionals provided healthcare services. An explicit algorithm was used to sort clients by age, co-morbidities, findings from digital rectal examination, and prostate-specific antigen (PSA) values to determine which clients would undergo escalation to secondary assessment and prostate biopsy.

Results: Overall, 1844 men were registered (mean age: 57.6 years), and only 149 men attended on more than one occasion for a total of 1993 clinic visits. The urologist reviewed 315 men in secondary follow-ups for elevated PSA and/or an abnormal digital rectal examination. Of these, 58 men fulfilled criteria for trans-rectal ultrasound biopsy, and there were 51 found cases of prostate cancer, with a positive-predictive value of 89%. By D'Amico risk stratification, these 51 cases were: low- (10%), intermediate- (31%) and high-risk (59%). The urologist counselled all 51 cases and facilitated access to standard care.

Conclusion: We detected 51 cases of cancer. Our algorithmic design for secondary assessment and biopsy lent to a high predictive value for clinically significant cancers. This could be a cost-effective approach for developing countries in cancer screening.