Predictors of Colorectal Cancer Screening among High-Risk Survivors of Childhood Cancer

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Purpose: To identify predictors of colorectal cancer (CRC) screening guidelines (colonoscopy every 5 years beginning at age 35 or 10 years post-treatment) among high-risk survivors of childhood cancer in the Childhood Cancer Survivor Study (CCSS) cohort. High-risk is defined as childhood cancer survivors who received ≥30 Gy radiation therapy to the abdomen, pelvis, or spine and were 36 years or older at the time of the CCSS 2007 Follow-Up Questionnaire.

Methods: Among 711 5-year survivors of childhood cancer who completed the CCSS 2007 Follow-Up Questionnaire and met criteria for being at increased risk of CRC, we determined potentially significant variables associated with self-reported CRC screening participation. Univariate and Multivariable generalized linear models with a log link and Poisson distribution were used to directly calculate relative risks for adherence to CRC screening guidelines (via blood stool testing colonoscopy/sigmoidoscopy).

Results: The 711 survivors were at increased risk for CRC and eligible for the study were at a current mean age of 44 years (SD=5.2 years). Among them, 231 (32.5%) reported ever participating in home blood stool testing and 276 (38.8%) reported ever having colonoscopy/sigmoidoscopy. Of the 711 participants, 60 (8.4%) reported participating in home blood stool testing in the past year (meeting guidelines for the general population) and 207 (29.1%) reported having colonoscopy/sigmoidoscopy in the past 5 years (meeting screening recommendations for high-risk individuals). In the multivariable analyses: any physical impairment causing need for assistance of others in routine needs such as household chores, necessary business, shopping or getting around (RR=1.7, 95% CI=1.2-2.2), having discussed future cancer risk with a physician at most recent follow-up visit (RR=1.3, 95% CI=1.1-1.6), and age 50 or older at the time of survey completion (RR=2.4, 95% CI=1.9-2.9) were significantly associated with participating in CRC screening. Survivors who reported that their most recent routine cancer follow-up visit was within one year prior to questionnaire completion (RR=1.7, 95% CI=1.2-2.5) were more likely to have completed cancer screening than those who never had a checkup or had it more than 5 years prior.

Conclusions: Older age and increased contact with the health care system are associated with greater adherence to CRC screening guidelines likely due to increased awareness of long-term health risks. These findings underscore the importance of maintaining ongoing, life-long risk-based care with childhood cancer survivors to ensure they attend and receive appropriate follow-up care.