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Study Title: Adherence to surveillance guidelines in survivors of Hodgkin lymphoma: a report from the Childhood Cancer Survivor Study (CCSS)

Background: Pediatric Hodgkin lymphoma (HL) is a highly curable disease. However, survivors are at high risk for long-term complications of therapy. The impact of sociodemographic and clinical factors on adherence to late effects surveillance guidelines is unknown.

Methods: The CCSS is a retrospective cohort with prospective follow-up of survivors diagnosed from 1970-1999. HL survivors enrolled in CCSS who responded to a 2017 questionnaire were included. We assessed adherence to the Children's Oncology Group surveillance guidelines for cardiomyopathy, breast cancer, colorectal cancer, and skin cancer. Logistic regression was used to estimate adjusted odds ratios and 95% confidence intervals (aOR [95% CI]) for sociodemographic and clinical risk factors associated with adherence. Estimates were adjusted for race, sex, age at and time from diagnosis, region of residence, area deprivation index (ADI), age at questionnaire, marital status, having children, education, employment, household income, insurance, chronic health conditions, recent (≤ 2 years) routine check-up, cancer center or survivorship clinic visit, recent cancer care and possession of a survivorship care plan (SCP).

Results: 1,380 HL survivors (45.6% male; median age 43.6 years, range 21.6-65.9 years) responded, of whom 55.5% were at elevated risk for cardiac dysfunction, 71.0% for breast cancer, 83.5% for skin cancer, and 39.4% for colorectal cancer. Of those at elevated risk, 42.7%, 19.9%, 31.3% and 48.9% were adherent to the guidelines for cardiac, breast, skin, and colorectal screening, respectively.

Predictors of adherence to cardiac dysfunction guidelines were male sex (aOR 1.7 [1.1-2.6]), having children (aOR 1.6 [1.1-2.4]), recent routine checkup (aOR 4.0 [1.3-13.1]), recent visit to a cancer center or survivorship clinic (aOR 6.2 [3.9-10.0]), and possession of a SCP (aOR 3.1 [1.9-5.0]). Adherence to breast cancer guidelines was higher in those who were unmarried (aOR 2.1 [1.0-4.1]), had a recent visit to a cancer center or survivorship clinic (aOR 3.7 [2.0-7.0]), and possessed a SCP (aOR 3.5 [1.5-8.3]). Adherence to skin cancer guidelines was higher in those

>14 years at diagnosis (aOR 1.8 [1.3-2.4]), living in a low deprivation area (ADI 1-24.9) compared to a high deprivation area (ADI 75-100) (aOR 3.4 [1.9-5.9]), employed (aOR 1.8 [1.1-2.9]), >30 years from diagnosis (aOR 2.4 [1.6-3.6]), with a recent routine check-up (aOR 3.6 [1.1-12.5]), and recent cancer care (aOR 2.4 [1.6-3.5]). Adherence to colorectal cancer guidelines was higher in those with grade 3-4 chronic health conditions (aOR 1.9 [1.1-3.3]).

Conclusion: Less than 50% of HL survivors are adherent to screening guidelines. Sociodemographic risk factors are significant predictors of non-adherence, particularly to skin cancer screening guidelines. This threatens to potentiate outcome disparities among HL survivors.