

## ASCO Quality Symposium 2024 Abstract

Track:

***Health Care Access, Equity, and Disparities*** (Interventions and Policies to Optimize Health Equity)

***Survivorship*** (Late- and Long-Term Effects/Comorbidities)

Due: **May 21, 2024, at 11:59 PM (ET)**

Character Limit: 2,598 (2,600 limit including the abstract title, body, and table, not including spaces)

### **Authors:**

Xin Hu, PhD<sup>1</sup>

Sharon M. Castellino, MD, MSc<sup>2,3</sup>

Deo Kumar Srivastava, PhD<sup>4</sup>

Paul C. Nathan, MD, MSc<sup>5</sup>

Gregory T. Armstrong, MD, MSCE<sup>6</sup>

Ann C. Mertens, PhD<sup>2,3</sup>

Anne C. Kirchhoff, PhD<sup>7,8</sup>

Xu Ji, PhD<sup>2,3</sup>

### **Affiliations:**

<sup>1</sup> Department of Public Health Sciences, University of Virginia Comprehensive Cancer Center and School of Medicine, Charlottesville, VA, USA

<sup>2</sup> Department of Pediatrics, Emory University School of Medicine, Atlanta, GA, USA

<sup>3</sup> Aflac Cancer & Blood Disorders Center, Children's Healthcare of Atlanta, Atlanta, GA, USA

<sup>4</sup> Biostatistics Department, St. Jude Children's Research Hospital, Memphis, TN, USA

<sup>5</sup> The Hospital for Sick Children and University of Toronto, Toronto, ON, Canada

<sup>6</sup> Department of Epidemiology and Cancer Control, St. Jude Children's Research Hospital, Memphis, TN, USA

<sup>7</sup> Department of Pediatrics, University of Utah School of Medicine, Salt Lake City, UT, USA

<sup>8</sup> Cancer Control and Population Sciences, Huntsman Cancer Institute, Salt Lake City, UT, USA

**Title:** Adherence to Guideline-recommended Cardiac Screening in Medicaid-enrolled Survivors of Childhood Cancer: A Report from the Childhood Cancer Survivor Study (CCSS)

**Background:** Childhood cancer survivors face increased risks of heart failure and myocardial dysfunction associated with cancer treatment exposure. Children’s Oncology Group (COG) guidelines recommend periodic cardiac screening for survivors exposed to anthracycline or radiation. However, the extent of adherence to cardiac screening among Medicaid-enrolled survivors—a group typically characterized by socioeconomic disadvantages—remains unclear. Additionally, as Medicaid expansion under the Affordable Care Act has occurred in most, but not all states, cardiac screening adherence may vary based on survivors' state of residence.

**Methods:** Data from the CCSS were linked to administrative Medicaid insurance claims from 2015 to 2019. We included at-risk survivors (i.e., received radiation to chest or heart, total body irradiation, and/or anthracyclines), aged 18-64 years, continuously covered by Medicaid during 2015-2019, and without a history of grade 3-4 cardiovascular conditions by 2019 to ensure the identified cardiac tests were for screening purposes. Our primary outcome assessed adherence to COG guidelines (V4.0) based on age- and therapy dose-specific frequency of cardiac testing (i.e., echocardiogram, multigated acquisition scan, or magnetic resonance imaging) during the study period. Multivariable logistic models assessed sociodemographic, clinical, and policy-related factors associated with adherence, with adjusted probability differences (i.e., marginal effects [MEs]) reported.

**Results:** We identified 1,062 survivors at risk of cardiovascular conditions, with 57.0% female, 52.8% young adults (ages 18-39 years), and 72.8% non-Hispanic White. During 2015-2019, 285 (26.8%) survivors received any cardiac test, and 102 (9.6%) adhered to COG guideline-based frequency of cardiac testing. In multivariable models, survivors residing in states that expanded

Medicaid in 2014 and later has 4.3 percentage points (ppts, 95% CI=0.5–8.1,  $p=0.025$ ) and 6.1 ppts (95% CI=0.6–11.6,  $p=0.031$ ) increased likelihood of adhering to guideline-based frequency of cardiac testing respectively compared to states that did not. Compared to leukemia survivors, the likelihood of adhering to guideline-based frequency of cardiac testing was higher in survivors of central nervous system tumors (ME=7.6 ppt, 95% CI=2.7–12.6,  $p=0.002$ ), Hodgkin lymphoma (ME=10.7 ppt, 95% CI=1.3–20.1,  $p=0.026$ ), and non-Hodgkin lymphoma (ME=9.4, 95% CI=1.0–17.8,  $p=0.028$ ).

**Conclusions:** Adherence to risk-based cardiac testing is low among Medicaid-enrolled survivors of childhood cancer, and associated with residence in a Medicaid expansion state and cancer type. Policy reforms toward improving affordable, continuous health insurance coverage are important means to increase adherence to guideline-based cardiac tests among survivors.