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★ Abstract title:

EFFECT OF RISK-STRATIFIED THERAPY ON HEALTH STATUS AND SOCIODEMOGRAPHIC OUTCOMES IN SURVIVORS OF ACUTE LYMPHOBLASTIC LEUKEMIA (ALL) IN THE CHILDHOOD CANCER SURVIVOR STUDY

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Background/Objectives:

Although survivors of childhood ALL treated in the 1990s have decreased risk for late-mortality, they reported long-term health status outcomes that were similar or inferior to survivors treated in earlier eras. However, the impact of risk-stratified therapy on health status and sociodemographic outcomes has not been evaluated.

Design/Methods:

We estimated prevalence of poor general or mental health, functional impairment, activity limitations, cancer-related pain or anxiety as well as sociodemographic outcomes among 5368 survivors of childhood ALL diagnosed from 1970-1999. Therapy combinations defined treatment groups representative of 1970s therapy (70s), standard- and high-risk 1980s and 1990s therapy (80sSR, 80sHR, 90sSR, 90sHR), and relapse/transplant (R/BMT). Outcomes were compared among treatment groups and to a sibling cohort using log-binomial models adjusted for age, sex and race to estimate relative risk (RR) with 95% confidence intervals (CI).

Results:

Compared to 70s, 90sSR were less likely to report poor general health (RR [95% CI] 0.75 [0.57-0.997]), functional impairment (0.55 [0.40-0.74]), activity limitations (0.65 [0.47-0.89]) and cancer-related pain (0.62 [0.43-0.90]). Compared to 70s, 90sHR were less likely to report functional impairment (0.68 [0.47-0.99]) and activity limitations (0.65 [0.43-0.97]). Compared to 70s, a higher proportion of survivors from R/BMT reported adverse health status outcomes, albeit RR was not significantly different. Compared to siblings, 90sSR (0.80 [0.61-1.04]) and 90sHR (0.77 [0.51-1.15]) reported no difference in risk for being uninsured, attainment of <college degree (90sSR: 0.98 [0.88-1.09]; 90sHR: 0.85 [0.72-1.00]), or being employed less than full-time (90sSR: 1.29 [0.85-1.97]; 90sHR 1.38 [0.84-2.26]).

Conclusions:

Survivors treated with therapy consistent with more recent ALL protocols had reduced risk for adverse health status compared to 70s and have sociodemographic outcomes similar to their siblings. Thus, poor health status in patients treated in more recent eras appears to be driven by those patients that relapse or require a BMT.