

PERCEPTIONS OF RISK FOR INFERTILITY AMONG MALE SURVIVORS OF CHILDHOOD CANCER: A REPORT FROM THE CHILDHOOD CANCER SURVIVOR STUDY (CCSS)

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Purpose: Adverse male reproductive late-effects of childhood cancer treatment have been well documented and guidelines for screening patients at risk for infertility established. The purpose of this investigation was to assess perceptions of risk for infertility among a large sample of adult male survivors of childhood cancers.

Methods: 1,352 adult male survivors from the CCSS, diagnosed between 1970-86 completed a questionnaire assessing health related quality of life (HRQoL), awareness of infertility risks and previous infertility-related education experiences. Multivariable logistic regression was used to identify predictors of awareness of infertility risk.

Results: The median age of participants was 37.8 years (range: 22.0-58.7), survivors were a median of 28.4 (range 21.4-39.2) years from diagnosis and 85.3% received gonadotoxic treatment. Among survivors with no history of gonadotoxic treatment, 28.6% mistakenly thought that they were at risk for infertility related to their cancer diagnosis or treatment. Conversely, 40.7% of survivors who received gonadotoxic treatments were unaware of their risk for infertility. Men who perceived themselves at risk for infertility were twice as likely to report poor physical HRQoL (Odds Ratio [OR]=2.2, 95% Confidence Interval [CI] 1.4, 3.6). Lack of awareness of infertility risk following gonadotoxic treatment was predicted by lower educational achievement ($p<0.001$) and reporting no previous history of the following: survivorship care (OR 2.1, 95% CI 1.3-3.4, $p=0.002$), testosterone replacement (OR 3.4 95% CI 1.8-6.6 $p<0.001$), or erectile dysfunction treatment (OR 2.3, 95% CI 1.2-4.7, $p=0.02$). Survivors who correctly identified their infertility risk were more likely to report receiving risk education from an oncologist compared to survivors who misclassified their infertility risk (45% vs 23%, $p=0.015$).

Conclusions: Many male survivors are unaware of how their childhood cancer treatment may or may not impact their reproductive health. Survivors should be educated about their risk for infertility at diagnosis and throughout survivorship.