

# Psychological Distress, Health Behaviors, and Benefit Finding in Survivors of Multiple Primary Cancers: Results From the 2010 Livestrong Survey

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**Purpose/Objectives:** To evaluate whether survivorship of multiple primary cancers (MPCs) is associated with psychological distress, positive health behaviors, and benefit finding.

**Design:** Secondary analysis of the 2010 Livestrong cross-sectional survey.

**Setting:** Online survey.

**Sample:** 238 MPC survivors and 3,295 single cancer survivors.

**Methods:** Chi-square and t tests for group comparisons were used. Multivariate linear regression, adjusted for covariates, was used to determine associations between variables.

**Main Research Variables:** MPC versus single cancer; psychological distress, health behavior (healthy lifestyle and positive healthcare utilization), and benefit-finding scores.

**Findings:** Survivors of MPCs (compared to single cancer survivors) were significantly older, less likely to have a spouse or partner, further out from original cancer diagnosis, and less likely to be employed full-time, and they differed by cancer diagnoses and survivorship stage. Having MPCs was associated with significantly higher psychological distress and healthcare utilization but not healthy lifestyle or benefit finding.

**Conclusions:** Relative to those with single cancers, MPC survivors are at increased risk for psychological distress and are more likely to receive recommended cancer screenings. Additional research is needed to understand mechanisms surrounding psychological distress in MPC survivors.

**Implications for Nursing:** Targeted distress screening in MPC survivors may allow for early identification and interventions to ameliorate distress and reduce negative downstream health effects.

One in five cancers diagnosed in the United States will occur in someone who has a previous cancer diagnosis, and these multiple primary cancers (MPCs) are a major cause of morbidity and mortality in cancer survivors (Bluethmann, Mariotto, & Rowland, 2016; De Gonzalez et al., 2011; Morton, Onel, Curtis, Hungate, & Armstrong, 2014).

A second cancer, or MPC, is the occurrence of a new cancer that is histologically distinct from the original primary cancer and has been ruled out as metastatic disease of the primary tumor (Begg, 1999). An example of someone who is an MPC survivor is an individual who experiences breast cancer and later presents with a new diagnosis of ovarian cancer. Contrast this with a woman with breast cancer that metastasizes to the bone, which is diagnosed as metastatic spread of the original breast cancer; this would not be considered an MPC. Risk of developing subsequent MPCs varies by site of first primary cancer, age at first cancer diagnosis, environmental and behavioral exposures, genetic susceptibility, and cancer