Cancer Survivor's Adherence to Healthy Lifestyle Behaviours; Meeting the World Cancer Research Fund/American Institute of Cancer Research Recommendations, a Systematic Review and Meta-Analysis

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Abstract: Introduction: Lifestyle behaviours such as healthy diet, regular physical activity and maintaining a healthy weight are essential for cancer survivors to improve the quality of life and longevity. However, there is no study that synthesis cancer survivor's adherence to healthy lifestyle recommendations. The purpose of this review was to collate existing data on the prevalence of adherence to healthy behaviours and produce the pooled estimate among adult cancer survivors. Method: Multiple databases (Embase, Medline, Scopus, Web of Science and Google Scholar) were searched for relevant articles published since 2007, reporting cancer survivors adherence to more than two lifestyle behaviours based on the WCRF/AICR recommendations. The pooled prevalence of adherence to single and multiple behaviours (operationalized as adherence to more than 75% (3/4) of health behaviours included in a particular study) was calculated using a random effects model. Subgroup analysis adherence to multiple behaviours was undertaken corresponding to the mean survival years and year of publication. Results: A total of 3322 articles were generated through our search strategies. Of these, 51 studies matched our inclusion criteria, which presenting data from 2,620,586 adult cancer survivors. The highest prevalence of adherence was observed for smoking (pooled estimate: 87%, 95% CI: 85%, 88%) and alcohol intake (pooled estimate 83%, 95% CI: 81%, 86%), and the lowest was for fiber intake (pooled estimate: 31%, 95% CI: 21%, 40%). Thirteen studies were reported the proportion of cancer survivors (all used a simple summative index method) to multiple healthy behaviours, whereby the prevalence of adherence was ranged from 7% to 40% (pooled estimate 23%, 95% CI: 17% to 30%). Subgroup analysis suggest that short-term survivors (< 5 years survival time) had relatively a better adherence to multiple behaviours (pooled estimate: 31%, 95% CI: 27%, 35%) than long-term (> 5 years survival time) cancer survivors (pooled estimate: 25%, 95% CI: 14%, 36%). Pooling of estimates according to the year of publication (since 2007) also suggests an increasing trend of adherence to multiple behaviours over time. Conclusion: Overall, the adherence to multiple lifestyle behaviors was poor (not satisfactory), and relatively, it is a major concern for long-term than the short-term cancer survivor. Cancer survivors need to obey with healthy lifestyle recommendations related to physical activity, fruit and vegetable, fiber, red/processed meat and sodium intake.

Keywords: adherence, lifestyle behaviours, cancer survivors, WCRF/AICR **Conference Title:** ICPH 2018: International Conference on Public Health

Conference Location: London, United Kingdom

Conference Dates: May 14-15, 2018