

Noncancer comparators in cancer survivorship studies

In their article on new directions in cancer and aging, Kobayashi et al¹ discuss the important issue of control selection in cancer survivorship studies. As in all areas of epidemiology and health services research, the scientific question should drive the choice of comparison groups. We believe that it is helpful to consider the comparators needed to address 3 distinct types of survivorship questions.

When we are interested in etiologic questions about the joint effects of cancer and its treatment, a noncancer comparator is usually appropriate. Comparing survivors with cancer-free persons can improve our understanding of the effects of cancer and its treatment “over and above normal aging alone.”¹ An example of such a question would be “Do people with cancer who have received a specific treatment have impaired cognition compared to otherwise similar individuals without a history of cancer?”

When we are interested in the effects of specific cancer treatments on aging-relevant outcomes, we can limit our studies to cancer survivors. For clinical decision-making, it may not be useful to know what would have happened had a person not developed cancer. The comparison of interest is among cancer survivors, namely those who receive treatment and those who receive no treatment. An example of such a question would be “Does palliative chemotherapy exacerbate functional impairment compared with no chemotherapy?” Similar logic applies for exposures other than treatment, such as lifestyle factors and preventive care, if the goal is to determine care delivery for patients with cancer. In such studies, a noncancer comparator is likely unnecessary.

When we are interested in whether health promotion or clinical recommendations should differ on the

basis of cancer history, a stratified analysis is informative. Comparing the exposure-outcome association in people with and without a history of cancer can answer questions such as “Should cancer survivors take additional preventive measures to mitigate COVID-19 and its sequelae beyond what is recommended for those without a history of cancer?”

Recognizing when a noncancer comparator is unnecessary to address the scientific question of interest is as important as recognizing when it is necessary. When noncancer comparators are not needed, resources (eg, funds for chart abstraction, patient contact, and intervention delivery) can be used to increase the number and diversity of cancer survivors in the study or to improve the depth or breadth of the data collection.

FUNDING SUPPORT

No specific funding was disclosed.

CONFLICT OF INTEREST DISCLOSURES

Jennifer L. Lund reports that her spouse was formerly employed by GlaxoSmithKline and previously owned stock in the company (<36 months ago). The other author made no disclosures.

REFERENCE

1. Kobayashi LC, Westrick AC, Doshi A, et al. New directions in cancer and aging: state of the science and recommendations to improve the quality of evidence on the intersection of aging with cancer control. *Cancer*. 2022;128:1730-1737. doi:10.1002/cncr.34143

Jessica Chubak, PhD 

Kaiser Permanente Washington Health Research Institute, Seattle, Washington

Jennifer L. Lund, PhD, MSPH 

Department of Epidemiology, Gillings School of Global Public Health, University of North Carolina, Chapel Hill, North Carolina

DOI: 10.1002/cncr.34253, Published online May 3, 2022 in Wiley Online Library (wileyonlinelibrary.com)