

## Cancer Survivors at Higher Risk of Developing and Dying from Subsequent Cancers

– December 22<sup>nd</sup>, 2021 –

Individuals who survive adult-onset cancer are more likely to develop and die from subsequent primary cancers (SPCs) than the general population, according to a study published in the *Journal of the American Medical Association* today. The most frequent types of SPCs were smoking- and obesity-related cancers.

The team around researchers of the American Cancer Society retrospectively analysed data from 12 Surveillance, Epidemiology, and End Results registries in the United States. They included records of over 1.5 million adults with first primary cancers diagnosed between 1992 and 2011, who survived at least five years. The primary outcomes of interest were incidence and relative risk of developing SPCs. Mortality and relative risk of dying from SPCs were secondary outcomes.

Cancer survivors were more likely to develop a new malignant disease than the general population. The risk was 11% and 10% higher for men and women, respectively. Furthermore, survivors had a higher mortality than first-time patients with the same cancer types (men, 45%; women, 33%).

Most types of first primary cancers were associated with an increased likelihood of developing SPCs. Survivors of laryngeal cancer had the highest risk (incidence, 373 [men] and 336 [women] per 10,000 person-years). Laryngeal cancer was also the SPC with the highest mortality in women (mortality, 268 per 10,000 person-years). Among men, the risk of dying of an SPC was highest for survivors of gallbladder cancer (mortality, 341 per 10,000 person-years).

The most common SPCs were smoking- and obesity-related cancers. Lung cancer alone accounted for 31–33% of SPC-related patient deaths. Four obesity-associated carcinomas – colorectum, pancreas, corpus uteri, and liver cancer – comprised 22–24% of the total SPC mortality. These results suggest that lifestyle choices impact the risk of developing an SPC.

In an editorial accompanying the publication of the study, Drs Patricia Ganz, Director of the Center for Cancer Prevention & Control Research at the Jonsson Comprehensive Cancer Center, and Jacqueline N. Casillas, Medical Director of the Jonathan Jaques Children's Cancer Institute at Memorial Care Miller Children's & Women's Hospital Long Beach, note:

“The frequency with which SPCs occur after a wide variety of cancer diagnoses, and the higher relative risk of dying from an SPC, suggest that primary care clinicians should routinely consider the risk for SPCs in all the cancer survivors in their clinical practice.”

### Sources:

1. Sung H, *et al.* Association of First Primary Cancer With Risk of Subsequent Primary Cancer Among Survivors of Adult-Onset Cancers in the United States. *JAMA*. 2020 Dec 22;324(24):2521-2535. doi: 10.1001/jama.2020.23130
2. Ganz PA, Casillas JN. Incorporating the Risk for Subsequent Primary Cancers Into the Care of Adult Cancer Survivors: Moving Beyond 5-Year Survival. *JAMA*. 2020 Dec 22;324(24):2493-2495. doi: 10.1001/jama.2020.23410.