

P-13-D-01

SECOND PRIMARY CANCERS IN SWITZERLAND

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Background: Currently more people are living with a diagnosis of cancer than ever before and this increasing trend is likely to continue. One of the consequences of surviving cancer is the risk of being diagnosed with a second cancer.

Methods: Based on data from 9 Swiss cancer registries, the risk of a second primary cancer (SPC) was quantified for all and 23 common cancer sites using age period standardized incidence ratios (SIRs) for risk comparison with the general population. We applied multiple imputation methods to missing or incomplete follow-up. We included all patients with a first primary cancer diagnosed between 1981 and 2009 with at least 6 months of survival and a potential follow-up until the end of 2014. We considered all SPC occurring 6 months after diagnosis. Person-years at risk were calculated from 6 months after diagnosis.

Results: A total of 33,809 SPCs were observed in 344,164 cancer patients. Compared to the general population, both male (SIR 1.10, 95% confidence interval [CI] 1.08-1.11) and female (SIR 1.14, 95%CI 1.12-1.16) cancer survivors showed an elevated risk of developing a SPC. The highest SIRs were observed for cancers of the oral cavity & pharynx (males: SIR 3.09, 95%CI 2.94-3.25; females: SIR 2.65, 95%CI 2.40-2.89), Hodgkin lymphoma (males: SIR 2.45, 95%CI 2.08-2.82; females: SIR 2.54, 95%CI 2.06-3.02) and laryngeal cancers (males: SIR 2.29, 95%CI 2.13-3.46; females: SIR 2.96, 95%CI 2.29-3.64). In counterpart, a lower risk of a SPC was observed for pancreas (females: SIR 0.68, 95%CI 0.39-0.97), prostate (SIR 0.79, 95%CI 0.69-0.73) and female breast cancer (SIR 0.94, 95%CI 0.91-0.97).

Conclusion: Cancer survivors have an increased risk of developing a SPC probably linked to common risk factors or adverse effect of treatments. A careful monitoring of cancer survivors is warranted.

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