

# 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. Previous studies showed that cancer survivors have an increased risk for being diagnosed with another primary cancer [1-3]. Therefore, this study aims to investigate the risk of second primary cancers (SPCs) in cancer survivors in Switzerland.

## METHODS

Based on data from 8 Swiss population-based cancer registries, the risk of metachronous SPCs was quantified for all and 23 common cancer sites using standardized incidence ratios (SIRs) for risk comparison with the general population. The study cohort included all patients first diagnosed between 1981 and 2006 with a minimum survival of 6 months, and a potential follow-up until the end of 2011. Person-year at risk (PYAR) were calculated from 6 months after diagnosis.

## RESULTS

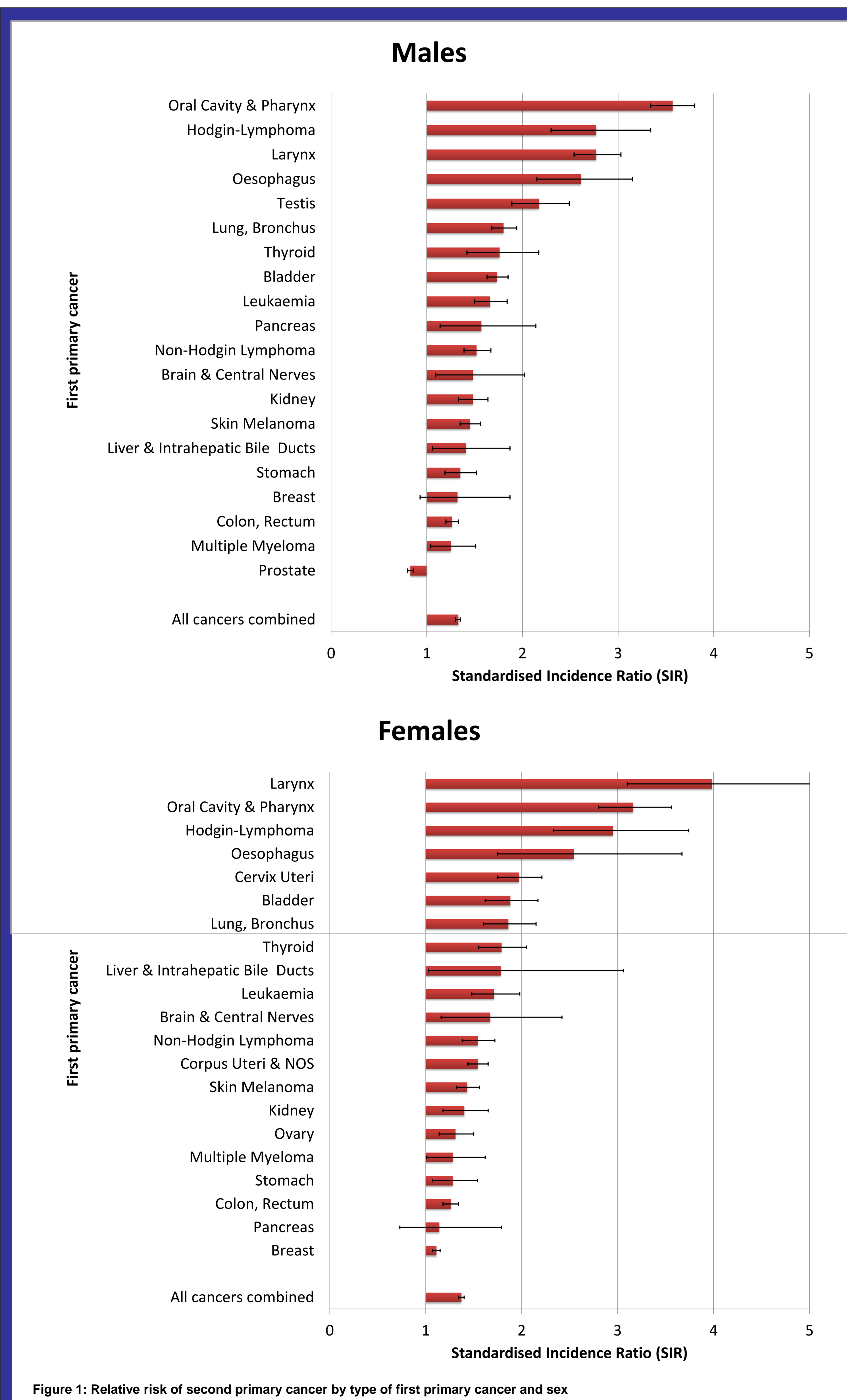


Figure 1: Relative risk of second primary cancer by type of first primary cancer and sex

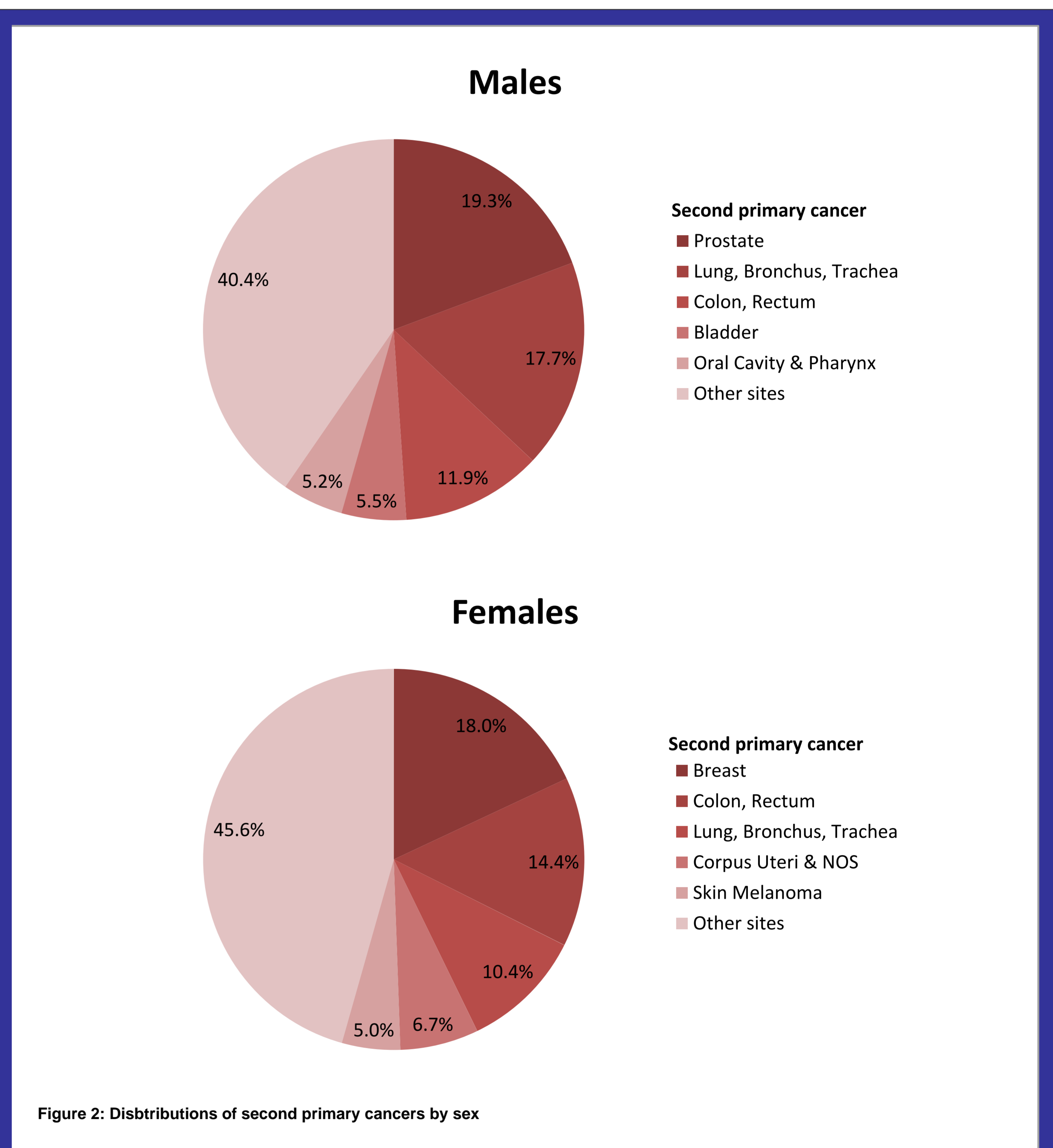


Figure 2: Distributions of second primary cancers by sex

A total of 19,396 SPCs were observed in 192,605 cancer patients over 1,227,382 person years at risk. Compared to the general population both male (SIR 1.33, 95%-CI 1.33-1.35) and female (SIR 1.37, 95%-CI 1.34-1.40) cancer survivors showed a substantial elevated risk of developing a SPC. Patients aged <65 years at first diagnosis showed higher SIRs in comparison with older ones for most cancer sites under investigation.

Out of the 23 cancer sites studied, 22 showed an increased risk varying between 1.25 (95% CI 1.04-1.51) (multiple myeloma) and 3.57 (95% CI 3.34-3.80) (cancer of the oral cavity & pharynx) in males and from 1.11 (95% CI 1.07-1.15) (breast cancer) to 3.98 (95% CI 3.10-5.10) (cancer of the larynx) in females. The risk for developing specific SPCs varied substantially according to type of first primary cancer. Overall, the most common SPCs were cancer of the prostate, lung and colon and rectum for males and cancer of the breast, colon and rectum and lung for females.

## CONCLUSIONS

Cancer survivors have an increased risk of developing SPCs. An ongoing monitoring of cancer survivors is warranted.

## SELECTED REFERENCES

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