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Long-term estimates of cancer incidence and mortality for the EU and EFTA countries according to different demographic scenarios

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Background

Long-term projections of cancer burden are an important input to health-policy planning. Major cancer risk factors – such as genetics, lifestyle, environmental exposure to carcinogens, in combination with the associated population structures – impact on observed number of cancer incidence and mortality cases. The latest estimates on cancer burden in the EU and EFTA countries for the year 2020 predicted 2.8 million new cancer cases and 1.3 million cancer deaths. This study investigates how these numbers would change up to the year 2040 under different population structures, assuming the estimated 2020 cancer incidence and mortality crude rates remain the same.

Methods

Using the estimated 2020 cancer incidence and mortality crude rates and the projected populations for years 2025, 2030, 2035 and 2040, as released by Eurostat, cancer incidence and mortality was projected by age, sex, country, and cancer site. Alternative projections were computed using different population structures, also released by Eurostat, modelled on the following demographic scenarios: 20% lower fertility rate, lower mortality rate, 33% lower migration rate, no-migration and 33% higher migration rate as compared to the 2020 baseline.

Results

The number of new cancer cases in the EU and EFTA countries is estimated to increase to 3.4 million by 2040, with an increment of 21.4%. The increment is estimated to be highest in the scenario with lower mortality (23.3%), while it is lowest for the no-migration scenario (19.7%). Large variability is estimated among the different cancer sites, varying from a decrease of 5.2% for testicular cancer up to an increase of 35.2% for the mesothelioma in males. The variability is highest for the no-migration and lower mortality scenarios. The number of cancer deaths in the EU and EFTA countries is estimated to grow to 1.7 million by 2040, with an increment of 32.2%, increasing up to 35.4% for the lower mortality scenario.

Conclusions

The results obtained are of big value in planning health policies for cancer in the EU and EFTA region.

Legal entity responsible for the study

The authors.

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