**Appendix**. Calculation of life expectancy gains and life-extension costs from cancer elimination in the general population.

Differences in life years () and life-time costs () between cancer elimination () and no cancer elimination () are obtained in a population with individuals at age as follows:

, (A1)

, (A2)

, (A3)

, (A4)

where denotes life expectancy, is expected costs, denotes population size at age , denotes probability of surviving from age to , and is costs incurred during time interval . As shown, age-specific remaining life expectancy and health spending is weighted by age-specific population size. In equations A1 and A3 the denominator is total population size.