cidence rates. Feuer et al recently suggested a method for correcting these prevalent cases when calculating the life table cancer risk.\(^6\) They calculated the number of expected cancer cases in the cohort as being the product of the age specific incidence rates and the number of persons in the cohort alive and free from cancer. The correction for prevalent cancer cases was performed by multiplication by the ratio \(R\) of the number alive at age \(x\) and the number alive and free from cancer at age \(x\). A reanalysis of our data using this correction for prevalent cases did not, however, change our results significantly. This can be explained by an inherent correction for prevalent cases with the life table method. The number of expected cancer cases is calculated as the product of the (underestimated) incidence rates and the number of person years. In these person years, the prevalent cancer cases are also included.

It is possible to calculate the lifetime risk of developing cancer using the life table method because the number of person years and the cancer incidence rates in the very elderly are known. The lifetime risk represents the average risk at birth that a member of the cohort will develop cancer during his or her lifetime.

It seems remarkable that the risk of developing cancer during an individual’s remaining lifetime rises until a certain age (see figs 3 and 4). This can be explained by the fact that the number of cancer cases (the numerator) decreases only slowly with increasing age even in life (most of the cancer cases occur at advanced ages), while the number of people alive and free from cancer (the denominator) decreases rapidly with increasing age. This phenomenon is especially notable for prostatic cancer, where the risk of developing cancer during the remaining lifetime rises until the age of 60 years.

Although the life table method has clear advantages over the cumulative risk method, it cannot replace the other two epidemiological measures.\(^1\) Firstly, life expectancy tables are not available for all populations. Secondly, age adjusted incidence rates, the cumulative risk and the cumulative rate, are better suited for comparing the cancer incidence rates of different populations in different time intervals and at different locations. The fact that these measures are not adjusted for life expectancy means that they are more suitable for making direct comparisons of cancer occurrence between different populations. For example, an increasing life expectancy (fewer deaths from competing causes) with stable age specific incidence rates will result in a higher estimate of the lifetime risk calculated with the life table, but will not influence the other risk estimates.\(^3\)

In conclusion, the life table method is a convenient method for estimating the probability that a person will develop cancer during a defined period or during his or her lifetime. The life table method is based on the assumption that the current death and cancer incidence rates will be maintained in the future, thus it shares this basic assumption with the other risk estimates. Because the life table methods include life expectancy, it is a good method of estimating the ‘cancer burden’ in a population. Other risk estimates overestimate the risk of developing any given disease, especially at advanced ages. The life table method cannot replace age standardised incidence rates.

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**Addendum**

List of notations:

\(C_x\) = number of incident cancer cases in age group \(x\), obtained from the cancer registry.

\(C_n\) = number of persons who develop cancer in the hypothetical cohort in a defined life period.

\(l_x\) = life table population at age \(x\) alive and free from cancer.

\(n_x\) = number of inhabitants in the area of cancer registry in age group \(x\), obtained from the Bureau of Statistics.

\(P_x\) = cumulative rate.

\(P_x\) = cumulative risk.

\(P_x\) = life table risk of developing cancer in a defined period.

\(y_x\) = total person years in the hypothetical cohort in age group \(x\).

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