

What is cancer prevalence and why is it important?

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A. What is cancer prevalence?

Cancer prevalence states, at a specific point in time, the proportion of persons with a history of cancer (so called “cancer survivors”) in a certain population. It is a snapshot through the population at a defined date at which we determine who has or had cancer and who does not. For example, one might visit every household or medical care facility in a certain community on a certain day and determine how many people have received a diagnosis of lung cancer. This number becomes the numerator for prevalence. Some individuals may have developed the disease yesterday and some many years ago. If they are all included in the numerator, it measures the complete or total prevalence. If the time period of diagnosis is taken into account, for example all individuals who developed the disease during the last 5 years, it measures a limited-duration prevalence. The denominator is always the population in the community on that day.

Prevalence is often illustrated as the content in a bucket of water (Fig. 1). The inflow of water signifies the incidence rate, which is the number of new diagnoses within a defined population and period of time. The outflow signifies the mortality rate in the patient population plus the cure rate, the number of patients who died or were cured within the same population and period of time.

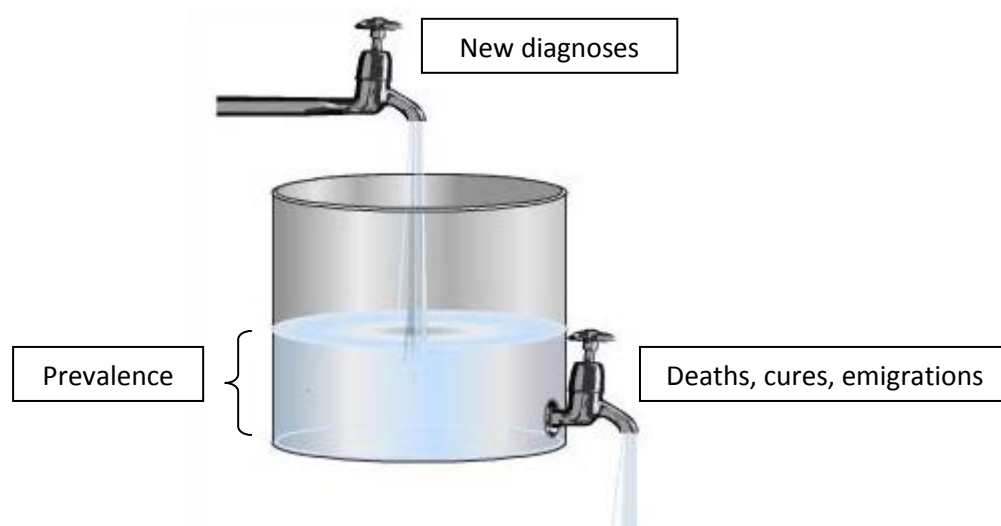


Fig. 1. Model of prevalence as dynamic equilibrium between incidence and mortality, cure or emigration.

B. Why is it important?

The prevalence measures a dimension of the cancer burden that is not immediately accessible from the more commonly available cancer incidence, mortality and survival trends. Such statistics should be useful to agencies charged with planning for the provision of health and oncology services such as continuing therapy, including the treatment of subsequent disabilities, continuing medical consultations, screening for recurrences and second primary cancers, and for long-term counselling and support.

Cancer survivors may have different care needs depending on the time elapsed since diagnosis. It is useful when planning service provision to consider sub-fractions of prevalence, as the cancer survivors prevalent within a one or two year period from diagnosis may still be undergoing primary treatment and active follow-up, whereas longer term survivors, with five or more years since diagnosis, will be on less intensive regimes. They may be utilizing services for late and long-term effects of their cancer diagnosis and treatment. Complete or total prevalence based on an estimation of survivors irrespective of diagnosis date is more difficult to interpret. This group includes long-term survivors who can be considered as cured of their cancer and may place little additional burden on the health services than others of their age.

E. References.

Leon Gordis (2009). *Epidemiology*, 4th edition. ISBN 978-1-4160-4002-6. Publisher: Saunders (Elsevier), Philadelphia, PA.

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