Cancer results in economic burden for patients, healthcare systems, and countries due to healthcare spending, and productivity losses from morbidity and premature mortality. Economic analyses can inform resource allocation decisions and investments in cancer control programs, including prevention, early detection, treatment, survivorship, and end-of-life care.

The global economic burden of cancer is unknown, although data are available in some countries. In the US in 2017, estimated cancer healthcare spending was USD 874 billion, productivity loss from morbidity, USD 5 trillion, and premature mortality, USD 430 billion.

The economic burden of cancer in the US is approximately 5% of gross domestic product (GDP). In the European Union, healthcare spending was EUR 675 billion, and productivity losses due to morbidity and premature death were EUR 4.8 billion and EUR 299 billion, respectively. With informal care costs of EUR 212 billion, total burden rose to EUR 462 billion, 2.0% of GDP. (Figure 35.1)

Productivity losses due to premature deaths vary in transitioning countries. (Figure 35.2) Cancer treatment costs are increasing worldwide, making prevention and screening efforts more cost-effective and sometimes cost-saving. For example, when more expensive chemotherapies were considered in comparisons of colorectal cancer screening to no screening, treatment savings from preventing advanced cancer and death more than doubled in the US. Vaccination against human papillomavirus infection, which is responsible for most cervical cancers, in 73 countries supported by Gavi, the Vaccine Alliance, could avert nearly USD 6 billion in treatment costs and productivity losses between 2001–2020. Smoking is a strong risk factor for lung and other cancers. The cost of smoking globally is nearly USD 2.05 trillion annually, almost 2% of the world’s economic output. (Figure 35.3)

Most of this cost is productivity losses from premature death.

The economic burden of cancer is substantial in all countries and reflects health care spending as well as lost productivity due to morbidity and premature death from cancer. As cancer treatment costs increase, prevention and early detection efforts become more cost-effective, and potentially cost-saving.

The economic burden of lost productivity due to morbidity and premature death from cancer is nearly 60% of the total economic burden associated with cancer in European Union countries.