HUMAN DEVELOPMENT INDEX TRANSITIONS

Understanding the transition from infection-related cancers to lifestyle-related cancers in many low- and middle-income countries is vital for planning tailored cancer control programs to reduce the future deaths and suffering from the disease.

Over the last century, reductions in mortality from infectious disease, childhood and maternal conditions, and changes in fertility have led to rapid population growth and aging, and consequently an increasing burden of noncommunicable diseases, including cancer. The unsurpassed scale of the cancer problem worldwide continues to evolve as countries undergo major transitions, as measured by human development index (HDI). **MAP & FIGURE 14.1**

Cancer is a major cause of premature death (at ages <70) linked to socioeconomic transitions. **MAP 14.2** It is the leading cause of premature death in 48 (predominantly very high-HDI) countries, where cancer has surpassed the first position from cardiovascular disease. In Japan, cancer now represents 45% of all premature deaths, compared with 21% due to cardiovascular disease. **FIGURE 14.2** In a further 43 countries, cancer is the second-leading cause of premature death following cardiovascular disease, while both diseases rank lower in most low- and medium-HDI countries.

In South Africa, for example, infectious and parasitic diseases account for 45% of premature deaths, while cancer and cardiovascular disease each account for only 10%.

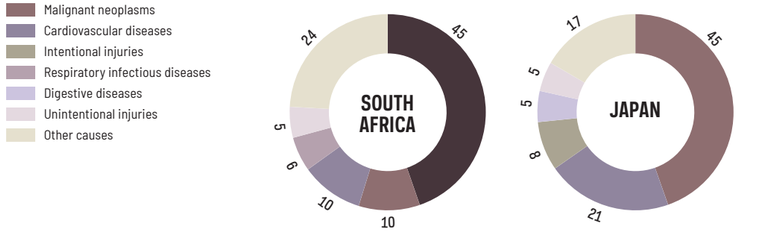
The profiles of cancer substantially vary by HDI, reflecting differences in lifestyle factors, entrenchment of tobacco marketing, the built environment, and the availability of detection and diagnostic services that are associated with social and economic development. Among the top 5 most commonly diagnosed cancers and 5 leading causes of cancer death by HDI, and separately for India and China, there are 16 different cancer types that rank within the top five even within these six broad "regions." **FIGURE 14.3**

The rising cancer burden will hit the lower HDI countries the hardest. Low- and medium-HDI countries, many of which are ill-equipped to deal with the present situation, are projected to have the greatest percentage increase in the burden of cancer in the coming decades. **FIGURE 14.4**

FIGURE 14.2

Leading causes of premature mortality (%) (ages <70 years) in South Africa and Japan

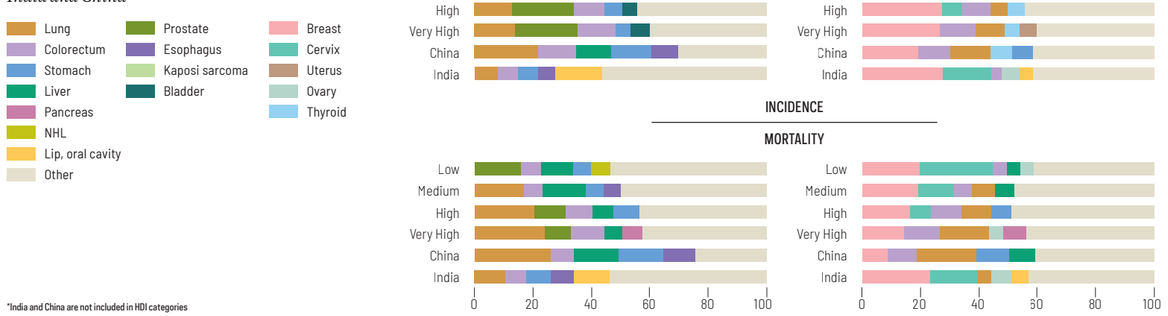
While infectious causes of death dominate in South Africa, cancer is the most common cause of death in Japan.



Numbers may not sum to 100 due to rounding.

FIGURE 14.3

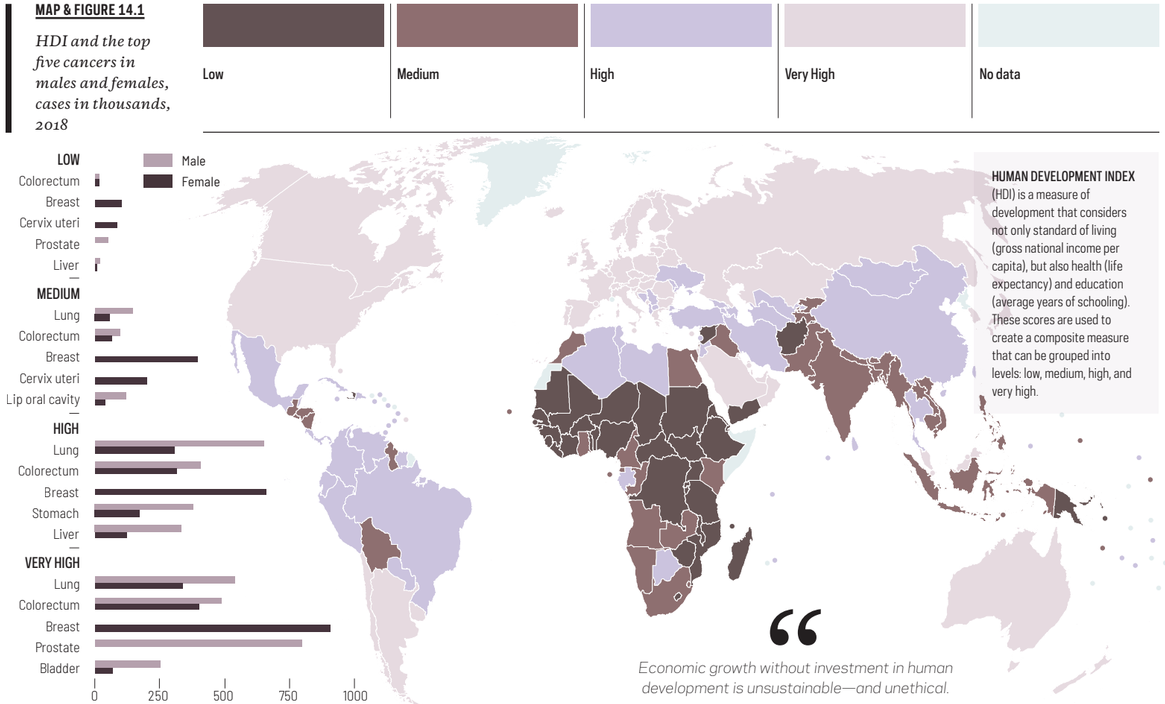
*Most commonly diagnosed cancers and leading causes of cancer death (%) by four-tier HDI plus India and China**



*India and China are not included in HDI categories

MAP & FIGURE 14.1

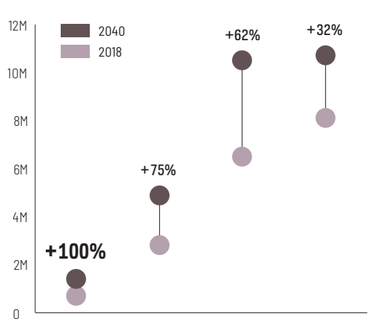
HDI and the top five cancers in males and females, cases in thousands, 2018



By 2040, the cancer burden will double in low-HDI countries, which are least equipped to deal with the pending cancer epidemic.

FIGURE 14.4

Estimated millions of new cancer cases in 2018 and the projected increase by 2040 by four-tier HDI level, assuming only a demographic effect

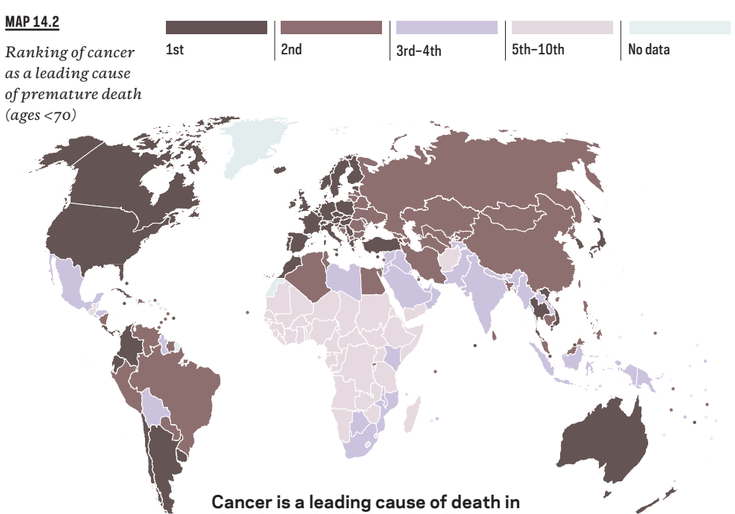


"Economic growth without investment in human development is unsustainable—and unethical."

— Amartya Sen, awarded the Nobel Prize in Economics.

MAP 14.2

Ranking of cancer as a leading cause of premature death (ages <70)



Cancer is a leading cause of death in North and South America, Europe, Australia, North Africa, and parts of Asia.