# Statistics on cancer incidence 2023

In 2023, a total of 80,502 malignant tumours affecting 73,794 individuals were reported to the Cancer Register. There are significantly more people who receive a cancer diagnosis than die from cancer each year. Lung and bladder cancer, which are related to tobacco smoking, continue to increase, but a decrease in incidence can be seen in younger age groups. In areas with better socioeconomic conditions, more people are diagnosed with breast and prostate cancer, while cancer mortality is generally higher in areas with poorer socioeconomic conditions. In areas with socioeconomic challenges, a greater proportion are diagnosed with cancer at a late stage.

Cancer incidence is increasing but cancer mortality is decreasing

The incidence of cancer has increased during the period 1970–2023, while the number of deaths from cancer has decreased (Figure 1). In 2020, a decrease in the number of cancer cases was observed, which was likely an effect of the Covid-19 pandemic. In the last three years, however, the increase seems to have returned to the pre-pandemic trend. It is more common for men than women to be both diagnosed with and die from cancer.

Figure 1. Cancer incidence and mortality, 1970–2023

Number of diagnosed individuals and number of deaths from cancer per 100,000, age-standardised according to the population in 2023.
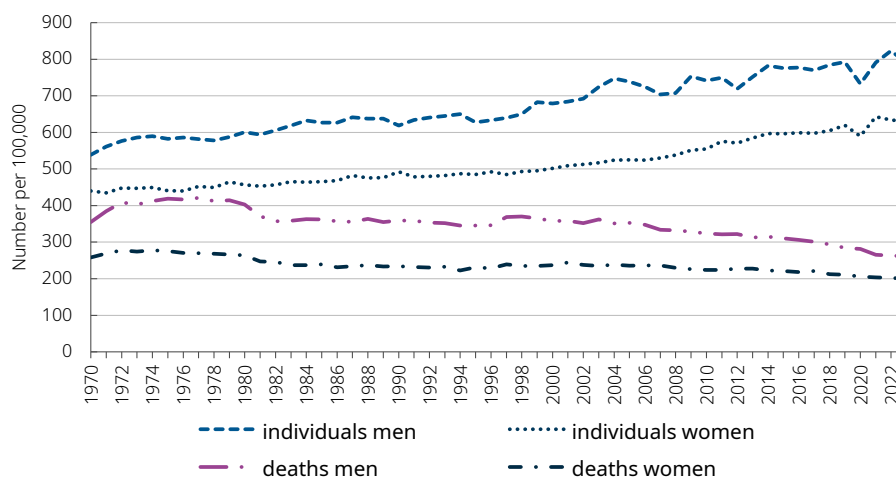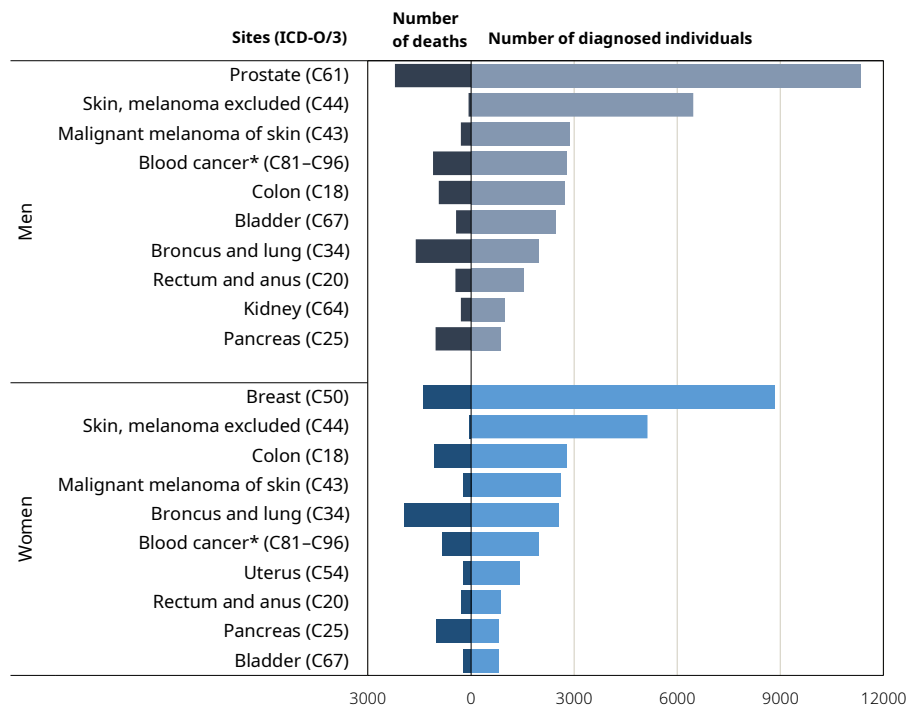

Source: The National Cancer Register and the National Cause of Death Register, the National Board of Health and Welfare

Breast and prostate cancer are the most common cancers, but most deaths are caused by lung cancer

Among women, breast cancer was the most frequent cancer in 2023, with 8,837 diagnosed and 1,376 deceased (Figure 2). Among men that same year, prostate cancer was the most common cancer in terms of the number of diagnosed individuals, with 11,337 diagnosed and 2,213 deceased. Among women, most died from lung cancer, while among men, most died from prostate cancer.

Figure 2. The ten most common cancers, 2023

Number of diagnosed individuals and number of deaths.

* The group includes lymphomas, leukemias and related cancers.

Source: The National Cancer Register and the National Cause of Death Register, the National Board of Health and Welfare

Note that those who have died of cancer in a given year may have had their cancer diagnosed several years earlier. Nevertheless, comparing the incidence for a year with the mortality in the same year can still give an overall picture in relation to the incidence of the various cancers.

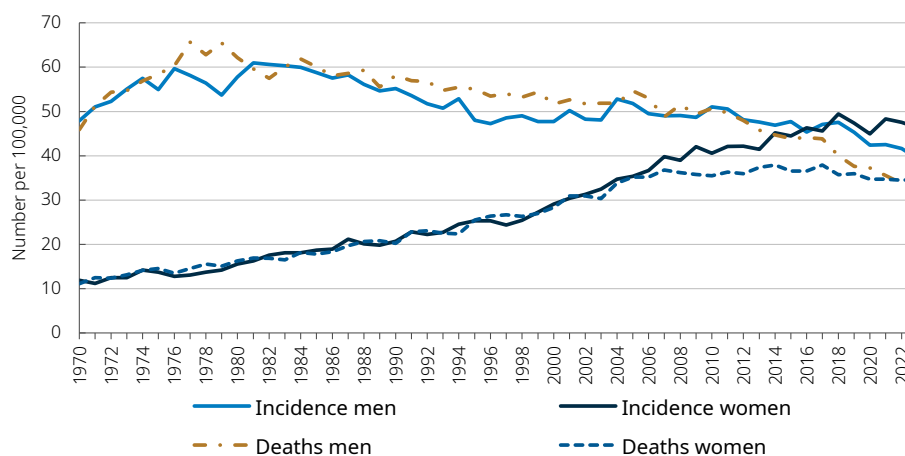# Tobacco smoking increases the risk of several forms of cancer and causes a large number of deaths annually

Tobacco smoking increases the risk of several forms of cancer, including lung, bladder, pancreatic, colon and rectal cancer. Smoking has declined in the population over several decades, from around 16% of the population reporting daily smoking in the beginning of the 2000s, to around 6% in 2022 (The Public Health Agency of Sweden, 2024), but the effects of smoking on cancer incidence and mortality are still seen, particularly in certain groups.

Large increase in lung cancer among women

The majority of all lung cancers can be linked to tobacco smoking. During the years 2019–2023, an average of approximately 2,500 women and 2,000 men were diagnosed annually with lung cancer, and during the same time period approximately 1,900 women and 1,600 men died annually from lung cancer. Historically, men have had significantly higher incidence and mortality from lung cancer than women, but since the late 1970s, the incidence and mortality have decreased among men (Figure 3). An inverse pattern is seen for women, with a marked increase in incidence and mortality through most of the time period, in recent years exceeding the incidence of men. The mortality among women levelled off during the 2000s and has decreased every year since 2017.

Figure 3. Lung cancer—incidence and mortality 1970–2023

Number of diagnosed individuals and deaths per 100,000 inhabitants, age-standardised according to the population in 2023.
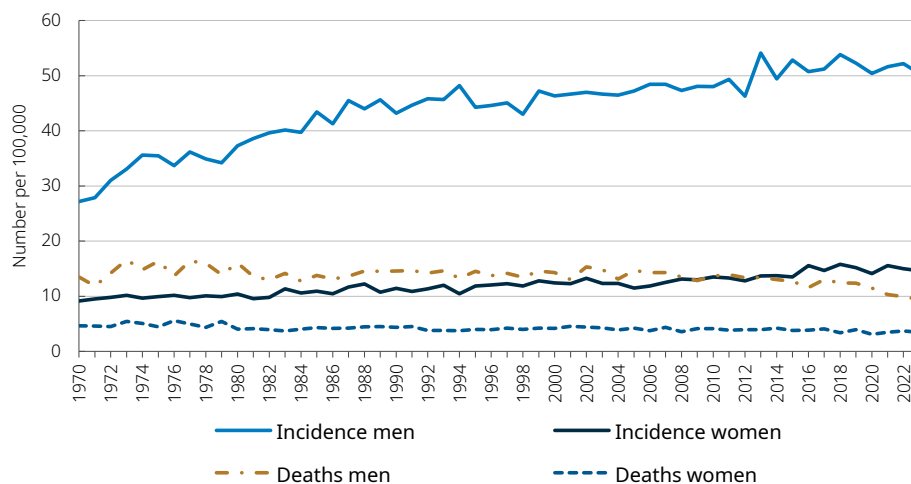

Source: The National Cancer Register and the National Cause of Death Register, the National Board of Health and Welfare

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Bladder cancer is more common among men than among women

Tobacco smoking is also a risk factor for bladder cancer and is estimated to cause approximately 30–50% of all cases (IHE, 2023; Freedman et al., 2012). During the period 2019–2023, approximately 800 women and 2,400 men were diagnosed with bladder cancer annually. About 200 women and 450 men died annually from bladder cancer during the same time period. Bladder cancer has increased among both women and men during the period 1970–2023, but the increase has been greater among men (Figure 4). In recent years, the increase has levelled off. Mortality has decreased among both women and men.

Figure 4. Bladder cancer—incidence and mortality 1970–2023

Number of diagnosed individuals and deaths per 100,000 inhabitants, age-standardised according to the population in 2023.
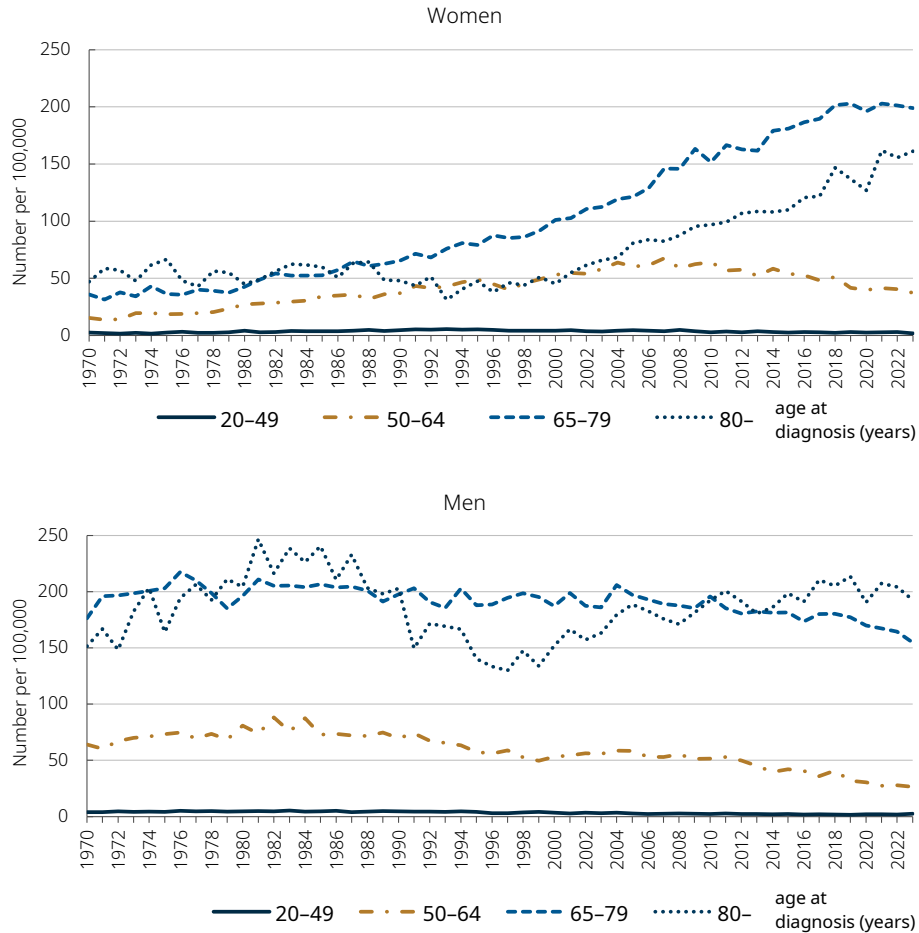

Source: The National Cancer Register and the National Cause of Death Register, the National Board of Health and Welfare

Lung cancer is still increasing among older women

Among women, lung cancer has been increasing in the age group 65–79 years and 80 years and over during the time period 1970–2023 (Figure 5). In the age group 50–64 years, the incidence increased until about 15 years ago, and was then followed by a decrease. The incidence has decreased also in the age group 20–49 years. Among men, lung cancer has decreased during the time period, except in the oldest age group, 80 years and older. In the age group 65–79 years old, the incidence has decreased since the beginning of the 2000s, while the incidence among 50–64-year-olds has decreased since the 1980s. The incidence in the youngest group, 20–49-year-olds, has also decreased.

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Figure 5. Lung cancer, incidence by age group and year.

Number of cases per 100,000 inhabitants.

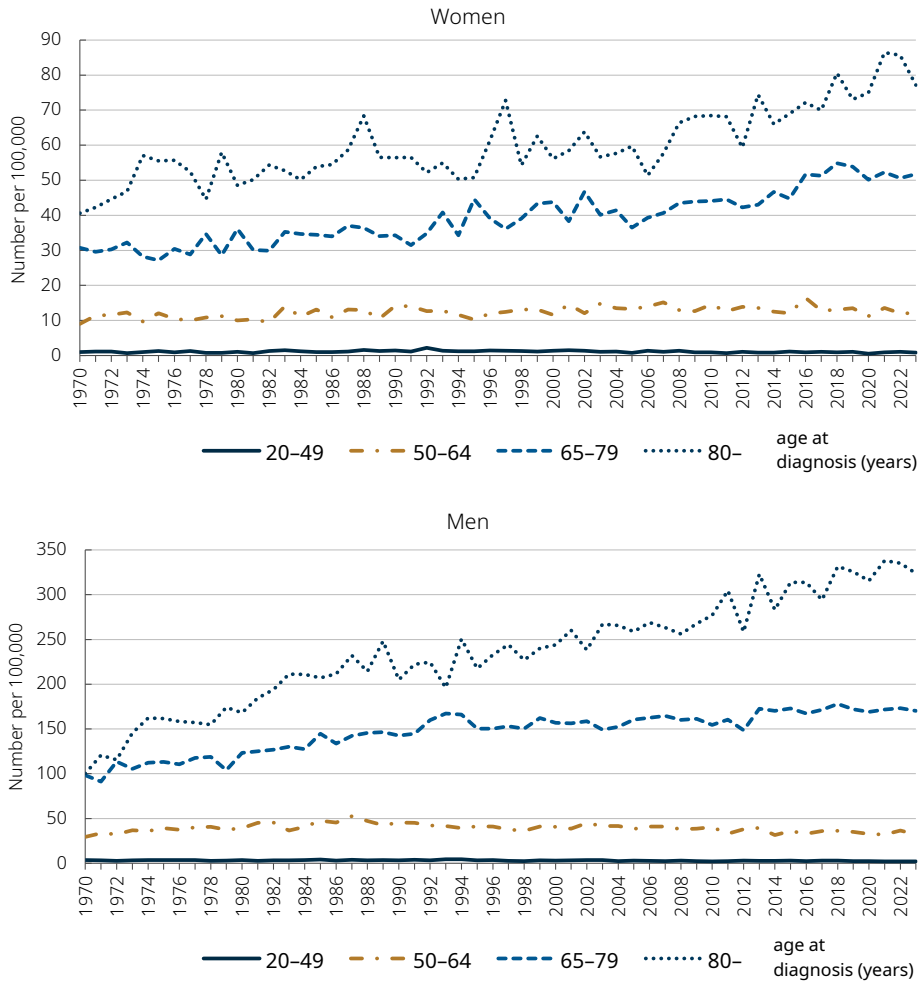Source: The National Cancer Register, the National Board of Health and Welfare

Bladder cancer increases most among older men

Bladder cancer is more common among men than women (Figure 6). Among women, an increase in incidence is seen in the age groups 50–64, 65–79 and 80 years and older during the time period 1970–2023. A slight decrease is seen in the youngest age group 20–49 years. Among men, a sharp increase is seen in the oldest age group, 80 years and older. Among 65–79-year-olds, a smaller increase is seen. In the age group 50–64 years, the incidence has decreased since the 1990s. A decrease is also seen in the youngest age group, 20–49 years.

Figure 6. Bladder cancer, incidence by age group and year.
Number of cases per 100,000 inhabitants. Note that the two graphs have different scales on the y-axes.

Women

Men

Source: The National Cancer Register, the National Board of Health and Welfare

Higher cancer mortality in areas with poorer socioeconomic conditions

Figure 7 shows the age-standardised incidence and mortality for the years 2017–2023 for breast, prostate, lung, bladder and colorectal cancer, by sex and residential area socioeconomic conditions (area type 1–5).

For most of the cancers presented here, clear differences in incidence and mortality are seen between the area types. For breast and prostate cancer, an inverse relationship is seen for incidence and mortality in relation to area type: the better the socioeconomic conditions, the more individuals are diagnosed, while fewer people die. For lung and bladder cancer, however, both higher incidence and mortality are seen in areas with socioeconomic challenges.

Regional statistical areas and area type
In this brief summary, statistics are presented by area type, a socioeconomic categorisation, which is based on regional statistical areas (acronym in Swedish: RegSO). RegSO divides Sweden into 3,363 areas that adhere to county and municipal boundaries.

RegSO are generated on the 31st of December each year for all living individuals registered in Sweden. Area type is based on a socioeconomical index (SEI) which is calculated for each RegSO. The SEI is constructed as the mean value for three statistical indicators: the proportion (of the population in each area) with high school education (20–64 years), the proportion with low economical prerequisites (irrespective of age), and the proportion receiving financial subsidies and/or that are long-term unemployed (20–64 years).

A high SEI-value is indicative of greater socioeconomical vulnerability. Based on standard deviations from the mean, a grouped variable is derived, namely area type. The variable spans from major socioeconomic challenges (area type 1) to very good socioeconomic conditions (area type 5). RegSO and area types are available up until 2023 and 2022, respectively.

In areas with socioeconomic challenges, lung cancer mortality is almost twice as high compared to areas with good socioeconomic conditions (1.8 times higher for both women and men). Among women in areas with major socioeconomic challenges (area type 1), a slightly different pattern is seen; bladder cancer incidence is slightly lower, and lung cancer incidence and mortality are slightly lower, compared to areas with socioeconomic challenges (area type 2).

For colorectal cancer, an arc-shaped pattern is seen with the highest incidence in the areas with socioeconomic challenges (area type 2), socioeconomically mixed areas (area type 3), and areas with good socioeconomic conditions (area type 4), among both women and men. The mortality is higher the poorer the socioeconomic conditions are, except for areas with major socioeconomic challenges (area type 1), where mortality is slightly lower compared to areas with socioeconomic challenges.

Figure 7. Incidence and mortality 2017–2023, by area type

Age-standardised incidence and mortality rates per 100,000. Standardised based on the population in 2023. Note that the two graphs have different scales on the x-axes.
Prostate and breast cancer.

Area type:
1 – major socioeconomic challenges
2 – socioeconomic challenges
3 – socioeconomically mixed areas
4 – good socioeconomic conditions
5 – very good socioeconomic conditions

Bladder, lung and colorectal cancer.

Area type:
1 – major socioeconomic challenges
2 – socioeconomic challenges
3 – socioeconomically mixed areas
4 – good socioeconomic conditions
5 – very good socioeconomic conditions
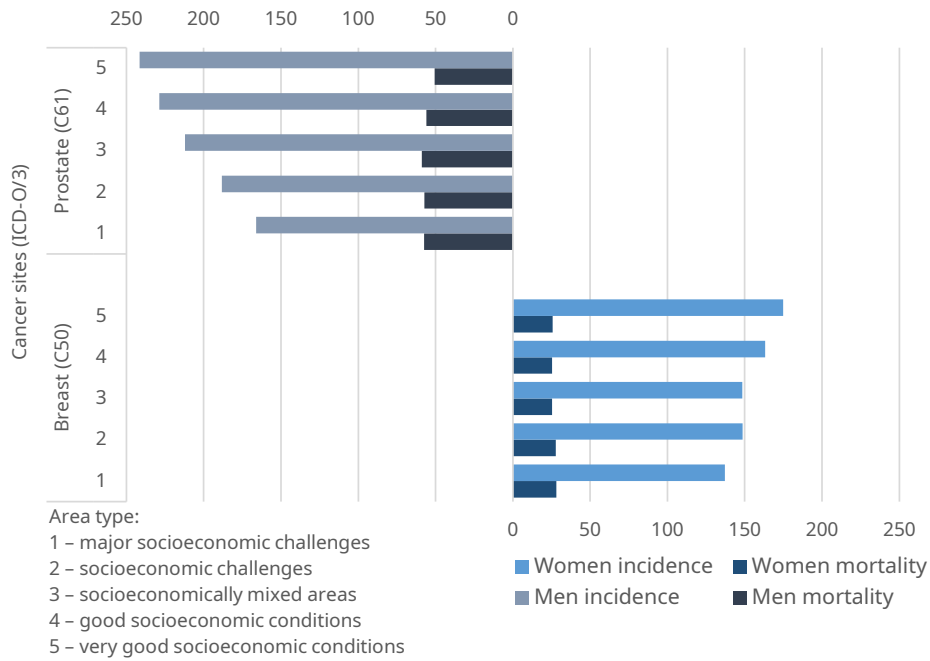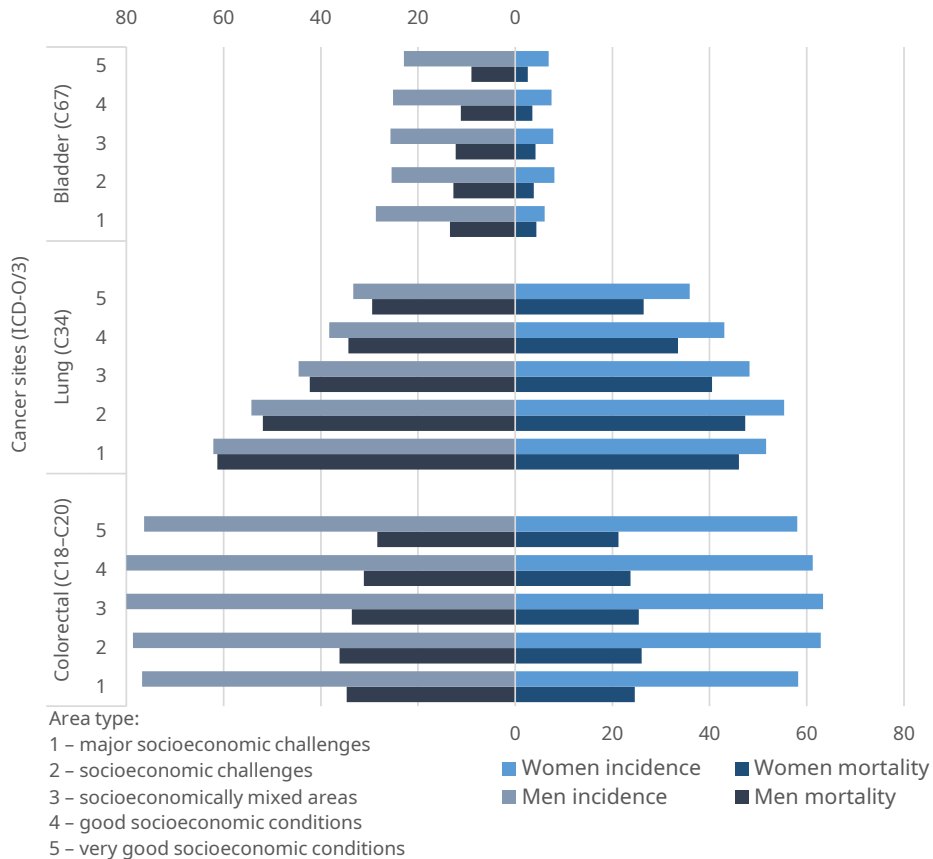
Source: Statistics Sweden, the National Cancer Register and the National Cause of Death Register, the National Board of Health and Welfare

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Late-stage diagnosis more common in areas with poorer socioeconomic conditions

Figure 8 presents age-standardised incidence for the years 2017–2023 by area type and stage at diagnosis for breast, prostate, lung, bladder and colorectal cancer. For most of these forms of cancer, differences are seen in the proportions diagnosed in the early and late stages.

In areas with poorer socioeconomic conditions, cancer is more commonly diagnosed at an advanced stage. Taking bladder cancer as an example, among women in areas with very good socioeconomic conditions (area type 5), 13 percent are diagnosed at a late stage, compared to 25 percent in areas with major socioeconomic challenges (area type 1). The corresponding figures among men are 11 and 17 percent, respectively.

Stage at diagnosis

Stage at diagnosis is here classified according to the TNM system (UICC, 2009; UICC, 2016) and based on information on tumour spread, spread to regional lymph nodes and presence of distant metastases. Tumour extent (T) describes the size of the tumour and whether it is growing into surrounding tissue. Lymph node status (N) indicates whether the tumour has spread to regional lymph nodes and the extent of such spread. Distant metastasis (M) indicates the presence of metastases in organs other than regional lymph nodes.

Using the information about T, N and M, a so-called TNM stage can be calculated. TNM stage is categorised into stages I–IV, possibly with subcategories, e.g. stage IA, IB, IIA, IIB, IIC, etc. For several cancers, a pre-cancer stage (cancer in situ), stage 0, can also be classified. In the fact sheet, statistics are reported as divided into early (stage I–II) and late stage (stage III–IV). Stage at diagnosis is strongly associated with survival and is used for both clinical decision-making and statistical purposes. In a smaller percentage of cases, information on T, N and M is missing, and stage classification has then not been possible. These are reported as "missing" in Figure 8.

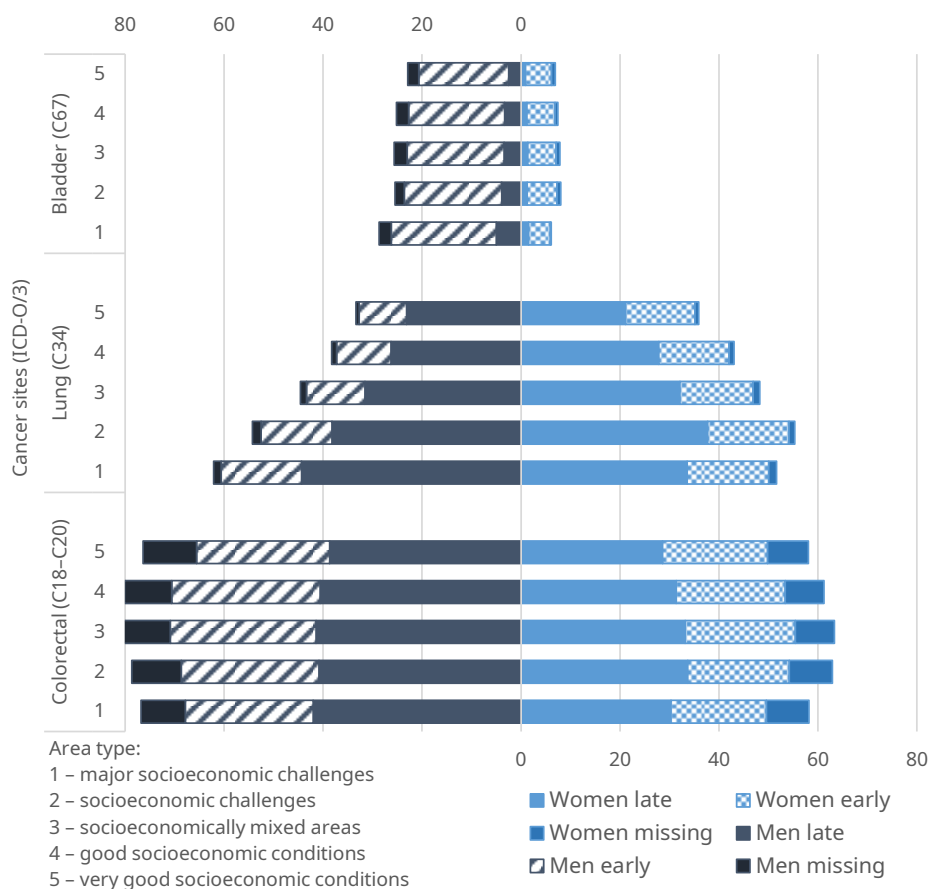## Figure 8. Incidence 2017–2023, by area type and stage at diagnosis

Age-standardised incidence rates per 100,000. Standardised based on the population in 2023.
Note that the two graphs have different scales on the x-axes.
Prostate and breast cancer.

Area type:
1 – major socioeconomic challenges
2 – socioeconomic challenges
3 – socioeconomically mixed areas
4 – good socioeconomic conditions
5 – very good socioeconomic conditions

Legend:
- ■ Women late
- ⊞ Women early
- ■ Women missing
- ■ Men late
- ▨ Men early
- ■ Men missing

Bladder, lung and colorectal cancer.

Area type:
1 – major socioeconomic challenges
2 – socioeconomic challenges
3 – socioeconomically mixed areas
4 – good socioeconomic conditions
5 – very good socioeconomic conditions

Legend:
- ■ Women late
- ⊞ Women early
- ■ Women missing
- ■ Men late
- ▨ Men early
- ■ Men missing

Source: Statistics Sweden and the National Cancer Register, the National Board of Health and Welfare

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References

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UICC. (2016). *TNM Classification of Malignant Tumours, 8th edition.* Union for International Cancer Control (UICC).

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