

3.22 Bladder

Table 3.22.1
Overview of key epidemiological parameters for Germany, ICD-10 C67

| | 2011 | | 2012 | | Prediction for 2016 | |
|---|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------|-------|
| | Men | Women | Men | Women | Men | Women |
| Incident cases | 11,480 (22,430) ⁴ | 4,330 (7,380) ⁴ | 11,270 (21,810) ⁴ | 4,140 (7,100) ⁴ | 11,900 | 4,500 |
| Crude incidence rate ¹ | 29.3 (57.3) ⁴ | 10.5 (17.9) ⁴ | 28.7 (55.5) ⁴ | 10.1 (17.3) ⁴ | 29.8 | 10.7 |
| Standardised incidence rate ^{1,2} | 19.2 (37.8) ⁴ | 5.2 (9.6) ⁴ | 18.4 (36.0) ⁴ | 4.9 (9.1) ⁴ | 17.7 | 5.1 |
| Median age at diagnosis | 73 (73) ⁴ | 76 (74) ⁴ | 74 (73) ⁴ | 76 (75) ⁴ | | |
| Deaths | 4,046 | 1,891 | 3,791 | 1,826 | | |
| Crude mortality rate ¹ | 10.3 | 4.6 | 9.6 | 4.4 | | |
| Standardised mortality rate ^{1,2} | 6.6 | 1.9 | 6.0 | 1.9 | | |
| 5-year prevalence | 35,500 (79,900) ⁴ | 11,100 (24,400) ⁴ | 35,100 (80,500) ⁴ | 10,800 (24,400) ⁴ | | |
| | after 5 years | | after 10 years | | | |
| Absolute survival rate (2011–2012) ³ | 46 (44–53) | 39 (33–52) | 32 (27–36) | 28 (22–37) | | |
| Relative survival rate (2011–2012) ³ | 58 (54–66) | 48 (41–64) | 52 (48–58) | 44 (36–57) | | |

¹ per 100,000 persons ² age-standardised (European standard) ³ in percentages (lowest and highest value of the included German federal states)

⁴ in parentheses: including in situ tumours and neoplasms of uncertain or unknown behavior (D09.0, D41.4)

Epidemiology

Some 15,400 people, one quarter of them women, were newly diagnosed with an invasive bladder carcinoma in Germany in 2012. In addition, about 13,500 were diagnosed with non-invasive papillary carcinoma or in situ tumours of the bladder. The latter in particular, exhibit a high tendency of progression and recurrence and are thus of particular clinical relevance, despite the fact that they currently do not rank among malignant tumours according to ICD-10. The majority of bladder cancer cases are carcinomas of the urothelium, which frequently occur simultaneously at various places in the bladder and urinary tract.

Incidence rates increase steadily with age. For men, the age-standardised incidence and mortality rates show a clear downward trend since the 1990s, probably due to a decline in tobacco consumption, but possibly also because of a reduction in occupational exposure to carcinogens (see right). For women, both rates have remained relatively stable over the years, whereby they are much lower compared to men. The mortality rate for bladder cancer is higher in the eastern federal states than in the western parts of Germany, above all among men. The higher relative 5-year survival rates for men (58 %) compared with women (48 %) relate to the more favourable distribution of tumour stages at diagnosis (47 % vs. 37 % T1 tumours).

Risk factors

Tobacco consumption is a key risk factor for the development of cancer of the bladder. Passive smoking also contributes to an increase in risk. The risk is further increased by exposure to some chemical substances such as aromatic amines, which play a role especially for certain occupational groups. The known hazardous substances have largely been eliminated from industrial processes and workplaces in Europe. However, there is a long latency period between exposure and the development of cancer, so that bladder carcinomas caused by occupational exposure will continue to be registered. Cytostatic drugs used in chemotherapy and local radiation therapy can increase the risk. The risk potential for some other pharmaceuticals is currently being debated. In 2013 the International Agency for Research on Cancer (IARC) classified pioglitazone hydrochloride, an anti-diabetic agent, as probably carcinogenic to humans (Class 2A) with regard to cancer of the bladder. According to the IARC, air pollution is also associated with a higher risk of bladder cancer.

Furthermore, arsenic and chrome in drinking water increase the risk for developing a carcinoma of the bladder. Chronic inflammatory damage to the mucosa of the bladder also increases the risk of bladder cancer.

Family clusters have been observed. Furthermore, there are indications that genetic factors play a direct role in the occurrence of bladder cancer, by increasing the susceptibility to carcinogens.

Figure 3.22.1a
Age-standardised incidence and mortality rates,
by sex, ICD-10 C67, Germany 1999–2012
per 100,000 (European standard)

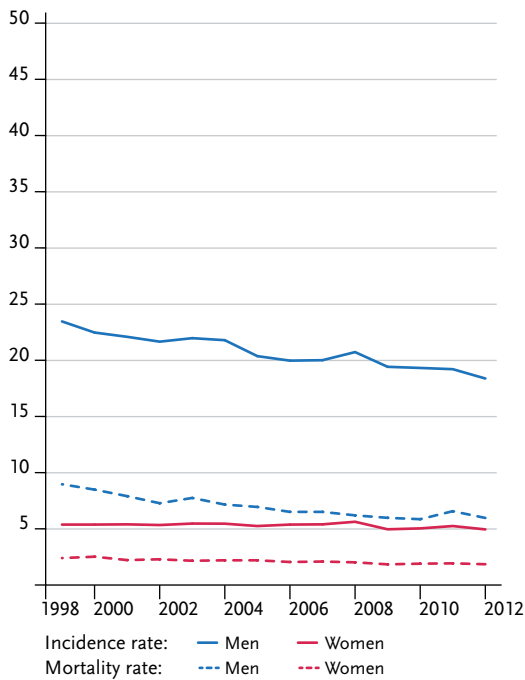


Figure 3.22.1b
Absolute numbers of incident cases and deaths,
by sex, ICD-10 C67, Germany 1999–2012

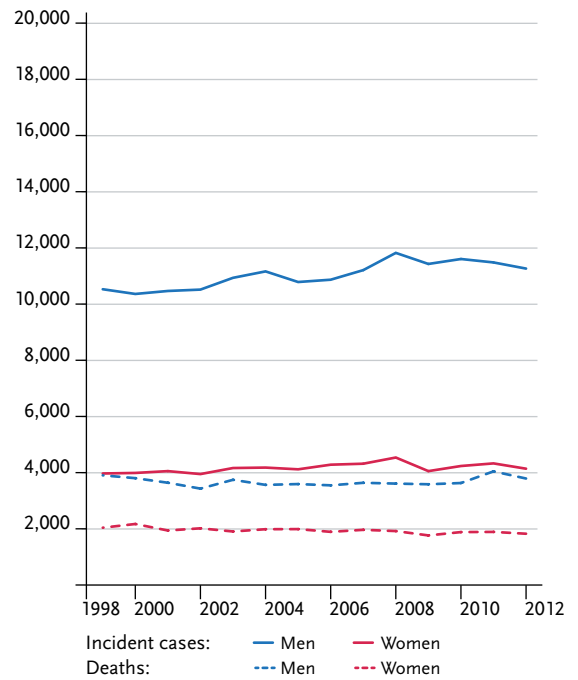


Figure 3.22.2
Age-specific incidence rates by sex, ICD-10 C67, Germany 2011–2012
per 100,000

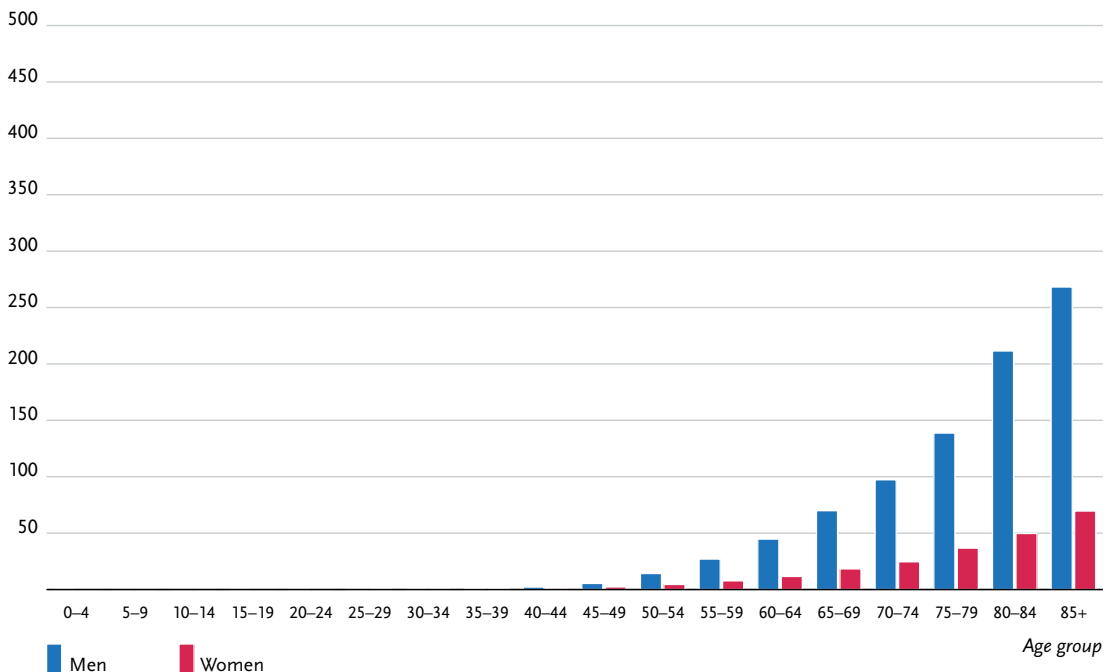


Table 3.22.2
Cancer incidence and mortality risks in Germany by age and sex, ICD-10 C67, database 2012

| Men aged | Risk of developing cancer | | | | Mortality risk | | | |
|---------------|---------------------------|---------------|------|------------|-----------------------|---------------|------|------------|
| | in the next ten years | | ever | | in the next ten years | | ever | |
| 35 years | <0.1% | (1 in 6,700) | 2.5% | (1 in 40) | <0.1% | (1 in 41,100) | 1.0% | (1 in 100) |
| 45 years | 0.1% | (1 in 1,000) | 2.5% | (1 in 40) | <0.1% | (1 in 6,000) | 1.0% | (1 in 100) |
| 55 years | 0.3% | (1 in 300) | 2.5% | (1 in 40) | 0.1% | (1 in 1,500) | 1.0% | (1 in 100) |
| 65 years | 0.8% | (1 in 130) | 2.4% | (1 in 41) | 0.2% | (1 in 550) | 1.0% | (1 in 97) |
| 75 years | 1.3% | (1 in 78) | 2.1% | (1 in 48) | 0.5% | (1 in 190) | 1.0% | (1 in 93) |
| Lifetime risk | | | 2.5% | (1 in 41) | | | 1.0% | (1 in 110) |
| Women aged | in the next ten years | | ever | | in the next ten years | | ever | |
| | | | | | | | | |
| 35 years | <0.1% | (1 in 11,500) | 0.8% | (1 in 120) | <0.1% | (1 in 34,700) | 0.4% | (1 in 250) |
| 45 years | <0.1% | (1 in 2,900) | 0.8% | (1 in 120) | <0.1% | (1 in 13,700) | 0.4% | (1 in 250) |
| 55 years | 0.1% | (1 in 1,100) | 0.8% | (1 in 120) | <0.1% | (1 in 4,100) | 0.4% | (1 in 250) |
| 65 years | 0.2% | (1 in 500) | 0.8% | (1 in 130) | 0.1% | (1 in 1,600) | 0.4% | (1 in 260) |
| 75 years | 0.4% | (1 in 280) | 0.6% | (1 in 160) | 0.2% | (1 in 600) | 0.4% | (1 in 270) |
| Lifetime risk | | | 0.8% | (1 in 120) | | | 0.4% | (1 in 260) |

Figure 3.22.3
Distribution of T-stages at first diagnosis by sex (top: all cases; bottom: only valid reports)
ICD-10 C67, Germany 2011–2012

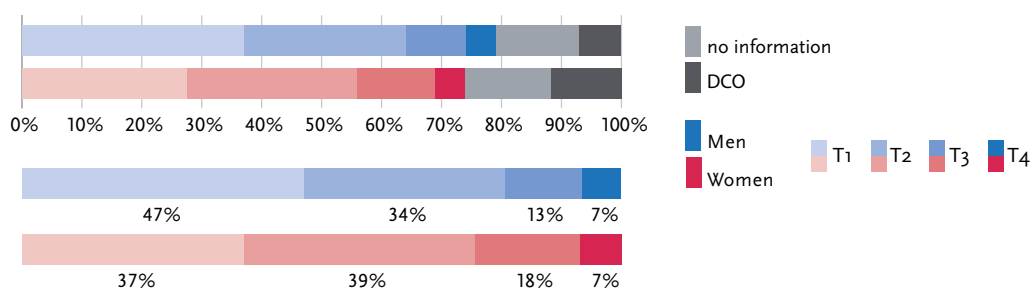


Figure 3.22.4a
Absolute survival rates up to 10 years after first diagnosis, by sex, ICD-10 C67, Germany 2011–2012

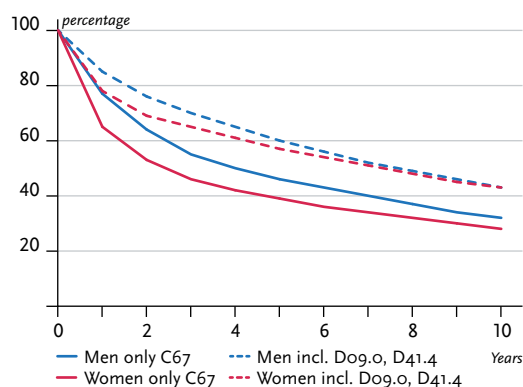


Figure 3.22.4b
Relative survival rates up to 10 years after first diagnosis, by sex, ICD-10 C67, Germany 2011–2012

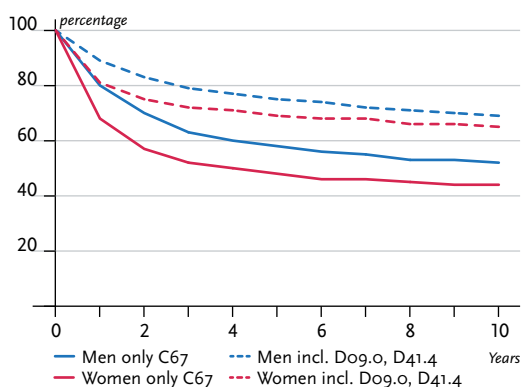


Figure 3.22.5
Registered age-standardised incidence and mortality rates in German federal states, by sex,
ICD-10 C67, 2011–2012
per 100,000 (European standard)

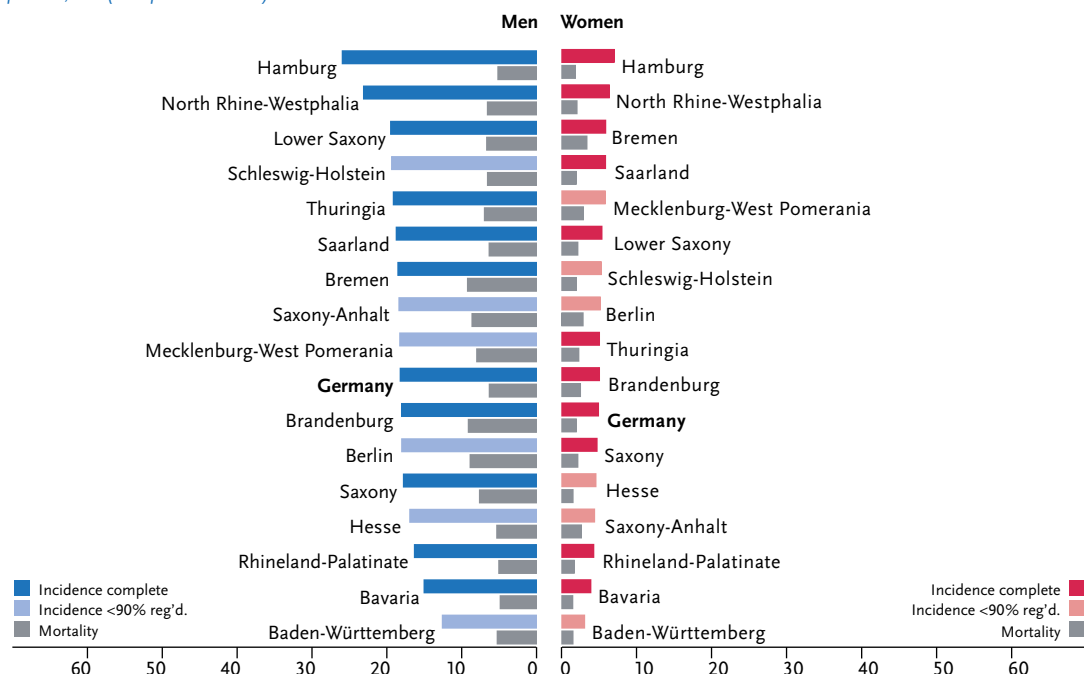
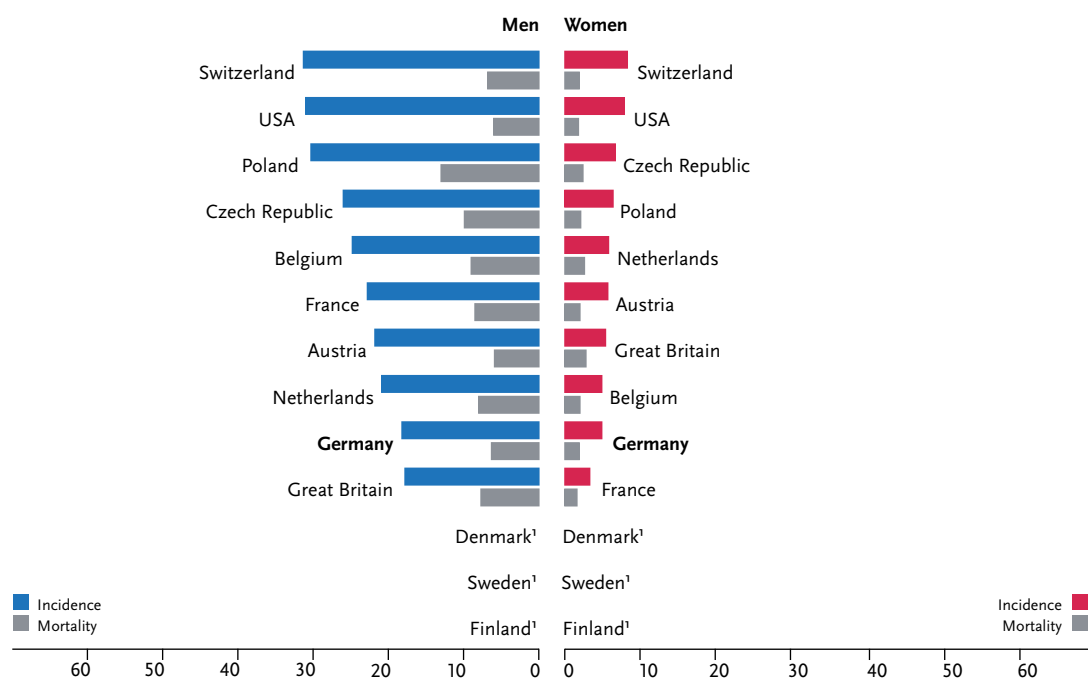


Figure 3.22.6
International comparison of age-standardised incidence and mortality rates, by sex,
ICD-10 C67, 2011–2012 or latest available year (details and sources, see appendix)
per 100,000 (European standard)



¹ no comparable data