

## 3.25 Bladder

Table 3-25.1  
Overview of key epidemiological parameters for Germany, ICD-10 C67

Incidence	2017		2018		Prediction for 2022	
	Women	Men	Women	Men	Women	Men
Incident cases <sup>4</sup>	4,720 (7,450)	12,520 (23,170)	4,770 (7,630)	13,500 (23,410)	5,200 (7,700)	14,600 (23,000)
Crude incidence rate <sup>1, 4</sup>	11.3 (17.8)	30.7 (56.8)	11.4 (18.2)	33.0 (57.2)	12.3 (18.2)	35.3 (55.7)
Age-standardised incidence rate <sup>1, 2, 4</sup>	5.6 (9.2)	18.5 (34.7)	5.5 (9.3)	19.7 (34.5)	6.0 (9.2)	20.1 (32.3)
Median age at diagnosis <sup>4</sup>	76 (75)	75 (74)	76 (75)	75 (74)		
Mortality	2017		2018		2019	
	Women	Men	Women	Men	Women	Men
Deaths	1,858	3,848	1,840	3,862	1,814	3,824
Crude mortality rate <sup>1</sup>	4.4	9.4	4.4	9.4	4.3	9.3
Age-standardised mortality rate <sup>1, 2</sup>	1.8	5.2	1.7	5.1	1.6	5.0
Median age at death	81	80	82	80	82	80
Prevalence and survival rates	5 years		10 years		25 years	
	Women	Men	Women	Men	Women	Men
Prevalence	11,900	38,400	19,100	60,200	30,500	93,200
Absolute survival rate (2017–2018) <sup>3</sup>	40 (35–47)	47 (44–51)	27 (23–34)	31 (29–32)		
Relative survival rate (2017–2018) <sup>3</sup>	48 (43–58)	59 (56–64)	42 (36–55)	51 (50–54)		

<sup>1</sup> per 100,000 persons <sup>2</sup> age-standardised (old European Standard) <sup>3</sup> in percent (lowest and highest value of the included German federal states)

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

### Epidemiology

Approximately 18,270 people were diagnosed with invasive bladder cancer in 2018, including 4,770 women. In addition, around 12,770 people were diagnosed with non-invasive papillary carcinomas and in situ carcinomas of the bladder. Especially with the latter, there is an increased risk of tumour growth (progression) and recurrence of the disease. Therefore, they are of particular clinical relevance, although they are currently not classified as malignant tumours according to ICD-10. Most bladder cancers are urothelial carcinomas, which often occur simultaneously in different parts of the bladder and urinary tract.

In men, the age-standardised incidence and mortality rates have declined significantly since the end of the 1990s. This is probably a consequence of a reduction in tobacco consumption, possibly also a consequence of reduced occupational exposure to carcinogenic substances. For women, both rates have been largely constant over the years, but at a significantly lower level than for men.

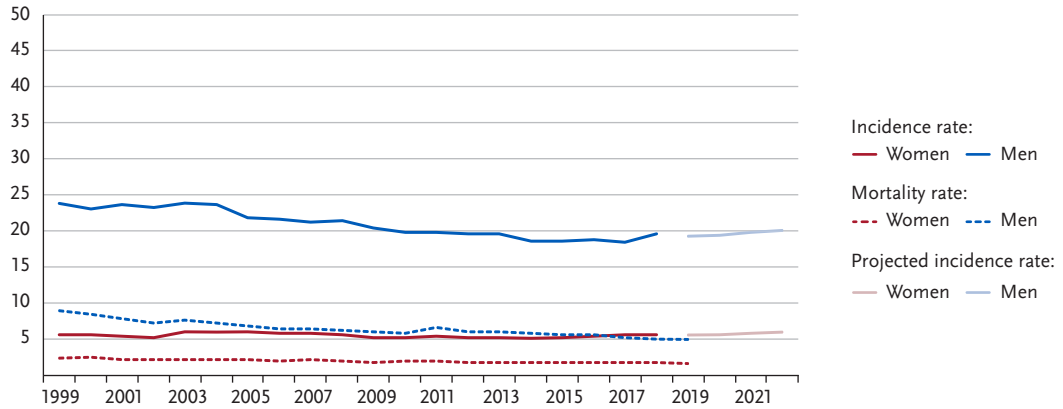
The higher relative 5-year survival rates of men compared to women correspond to a more favourable distribution of tumour stages.

### Risk factors

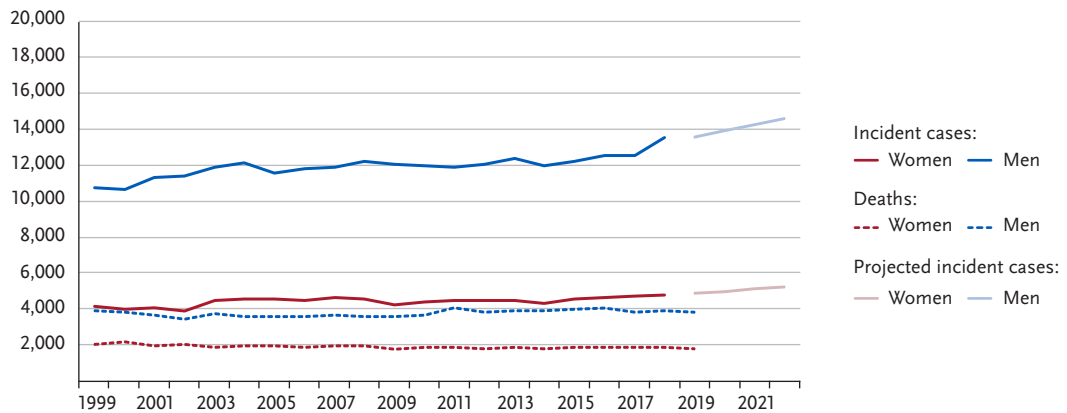
Active and passive smoking are the most important risk factors for bladder cancer. In addition, some chemical substances such as aromatic amines increase the risk. The known risk-increasing agents have now largely disappeared from the workplace in Europe. However, the latency period between exposure and cancer development is long, so that occupational bladder cancers continue to be registered. Cytostatics used in cancer therapy and radiotherapy of this body region can increase the risk. Other drugs such as the antidiabetic drug pioglitazone also seem to increase bladder cancer risk.

In addition, air pollution and arsenic or chlorine in drinking water increase the risk of developing bladder cancer. Aristolochic acid from Aristolochia plants such as Easter lily also increases the risk of bladder cancer. Chronic inflammatory damage to the bladder mucosa also increases the risk of disease. Familial clusters are observed: There is evidence that genetic factors play a role in the development of bladder cancer by influencing sensitivity to carcinogens.

**Figure 3.25.1a**  
Age-standardised incidence and mortality rates by sex, ICD-10 C67, Germany 1999–2018/2019, projection (incidence) through 2022  
per 100,000 (old European Standard)



**Figure 3.25.1b**  
Absolute numbers of incident cases and deaths by sex, ICD-10 C67, Germany 1999–2018/2019, projection (incidence) through 2022



**Figure 3.25.2**  
Age-specific incidence rates by sex, ICD-10 C67, Germany 2017–2018  
per 100,000

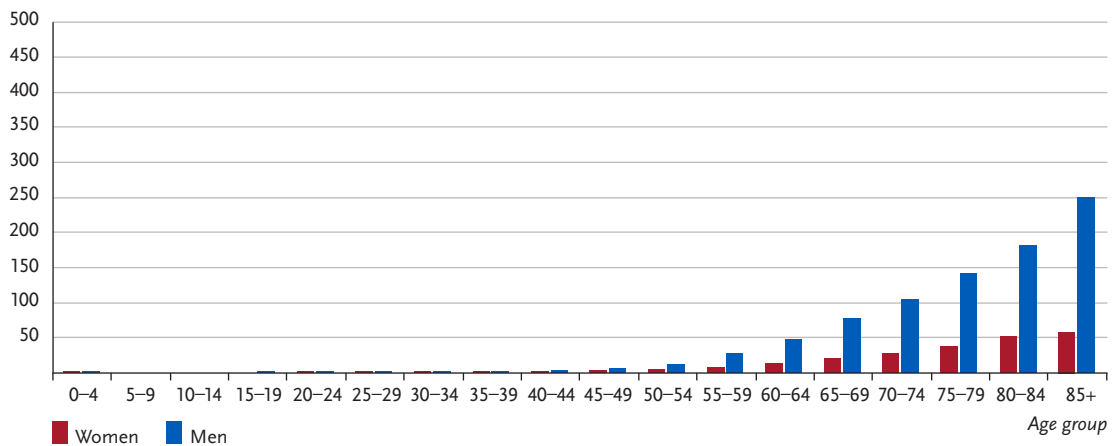


Table 3.25.2  
Cancer incidence and mortality risks in Germany by age and sex, ICD-10 C67, database 2018

Risk of developing cancer					Mortality risk			
Women aged	in the next 10 years			ever	in the next 10 years			ever
35 years	< 0.1 %	(1 in 10,300)	0.9 %	(1 in 110)	< 0.1 %	(1 in 39,700)	0.4 %	(1 in 270)
45 years	< 0.1 %	(1 in 2,500)	0.9 %	(1 in 110)	< 0.1 %	(1 in 10,300)	0.4 %	(1 in 270)
55 years	0.1 %	(1 in 860)	0.9 %	(1 in 120)	< 0.1 %	(1 in 4,300)	0.4 %	(1 in 270)
65 years	0.2 %	(1 in 430)	0.8 %	(1 in 130)	0.1 %	(1 in 1,800)	0.4 %	(1 in 280)
75 years	0.4 %	(1 in 270)	0.6 %	(1 in 160)	0.2 %	(1 in 660)	0.3 %	(1 in 290)
Lifetime risk			0.9 %	(1 in 110)			0.4 %	(1 in 270)
Men aged	in the next 10 years			ever	in the next 10 years			ever
35 years	< 0.1 %	(1 in 4,900)	2.7 %	(1 in 38)	< 0.1 %	(1 in 54,300)	0.9 %	(1 in 120)
45 years	0.1 %	(1 in 970)	2.7 %	(1 in 37)	< 0.1 %	(1 in 7,600)	0.9 %	(1 in 120)
55 years	0.4 %	(1 in 260)	2.7 %	(1 in 37)	0.1 %	(1 in 1,700)	0.9 %	(1 in 110)
65 years	0.8 %	(1 in 120)	2.5 %	(1 in 40)	0.2 %	(1 in 600)	0.9 %	(1 in 110)
75 years	1.3 %	(1 in 77)	2.1 %	(1 in 47)	0.4 %	(1 in 230)	0.9 %	(1 in 110)
Lifetime risk			2.6 %	(1 in 38)			0.8 %	(1 in 120)

Figure 3.25.3  
Distribution of UICC stages at diagnosis by sex, ICD-10 C67, Germany 2017–2018  
top: according to 7<sup>th</sup> edition TNM; bottom: according to 8<sup>th</sup> edition TNM.  
The DCO proportion was 5%. For 56% of the remaining cases, no UICC stage could be assigned.

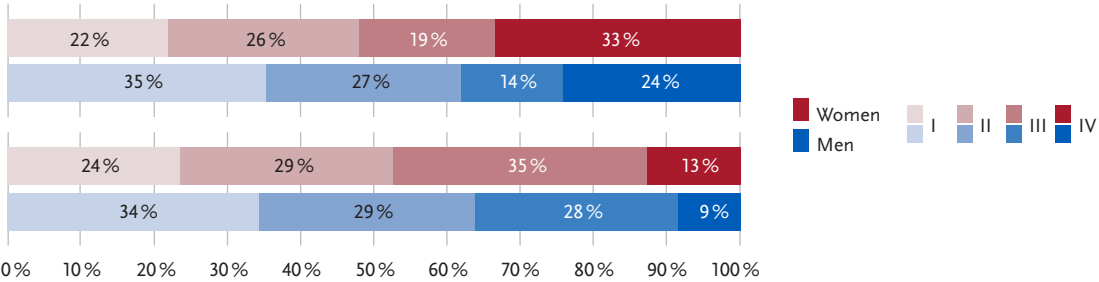


Figure 3.25.4  
Absolute and relative survival rates up to 10 years after diagnosis by sex, ICD-10 C67, Germany 2017–2018

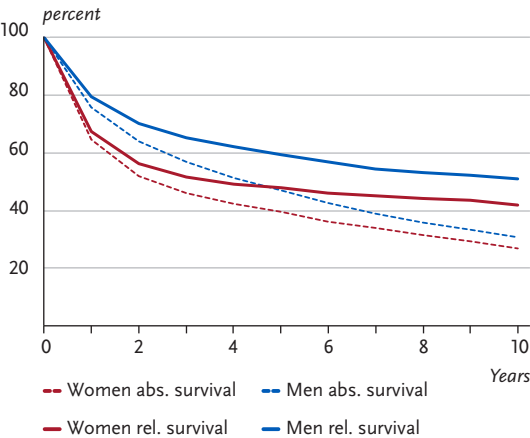


Figure 3.25.5  
Relative 5-year survival by UICC stage (7<sup>th</sup> edition TNM) and sex, ICD-10 C67, Germany 2016–2018

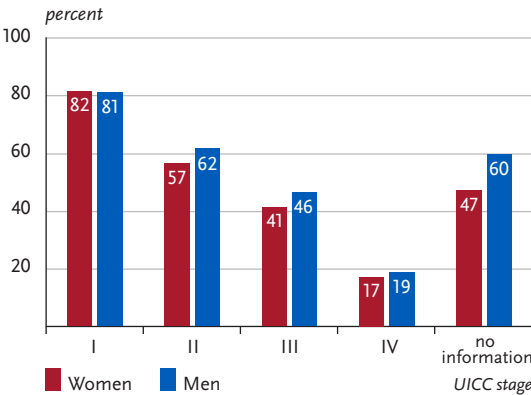


Figure 3.25.6

Age-standardised incidence and mortality rates in German federal states by sex, ICD-10 C67, 2017–2018  
per 100,000 (old European Standard)

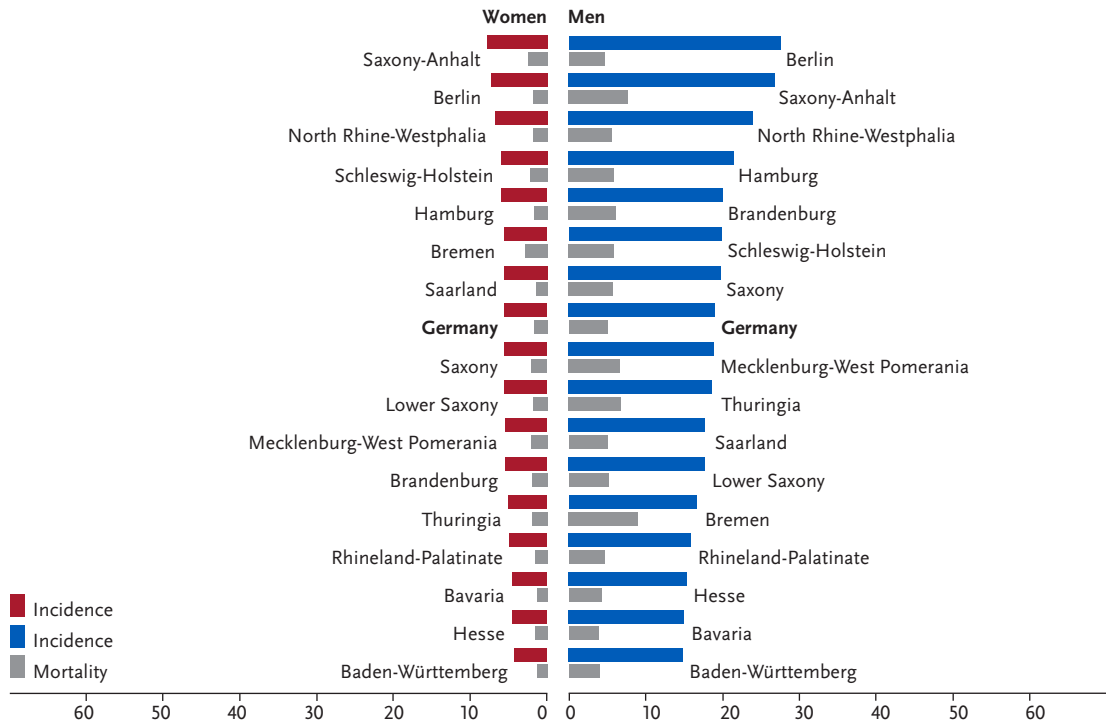
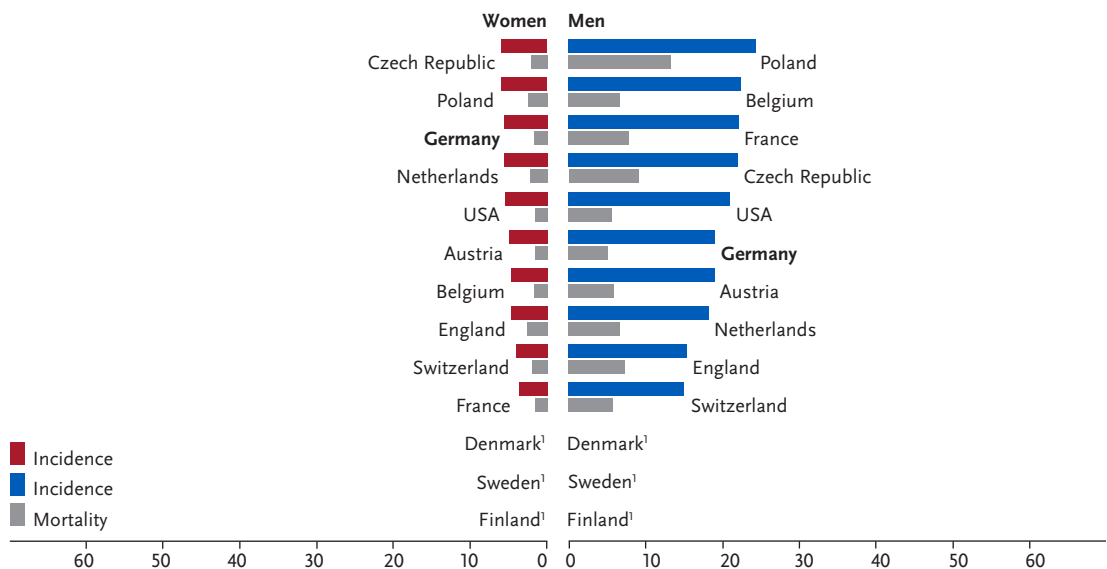


Figure 3.25.7

International comparison of age-standardised incidence and mortality rates by sex,  
ICD-10 C67, 2017–2018 or latest available year (details and sources, see appendix)  
per 100,000 (old European Standard)



<sup>1</sup> No comparable data available