3.15 Mesothelioma

Table 3.15.1
Overview of key epidemiological parameters for Germany, ICD-10 C45

Incidence		2017		2018	Prediction for 2022	
	Women	Men	Women	Men	Women	Men
Incident cases	290	1,310	340	1,290	340	1,400
Crude incidence rate [1]	0.7	3.2	0.8	3.1	0.8	3.4
Age-standardised incidence rate [1, 2]	0.4	1.8	0.4	1.8	0.4	1.8
Median age at diagnosis	75	76	76	76		
Mortality		**2017**		**2018**		**2019**
	Women	Men	Women	Men	Women	Men
Deaths	270	1,121	269	1,092	274	1,156
Crude mortality rate [1]	0.6	2.7	0.6	2.7	0.7	2.8
Age-standardised mortality rate [1, 2]	0.3	1.5	0.3	1.4	0.3	1.5
Median age at death	77	77	77	78	78	78
Prevalence and survival rates		**5 years**		**10 years**		**25 years**
	Women	Men	Women	Men	Women	Men
Prevalence	500	1,800	800	2,300	1,400	3,800
Absolute survival rate (2017–2018) [3]	10	9	5	4		
Relative survival rate (2017–2018) [3]	12	11	6	6		

[1] per 100,000 persons [2] age-standardised (old European Standard) [3] in percent

Epidemiology

Mesothelioma is a rare tumour of the soft tissue that occurs predominantly in men of advanced age. The most common location is the pleura; the disease is rarely diagnosed in the peritoneum. In 2018, about 340 women and 1,290 men were diagnosed in Germany. In the last 10 years, the incidence and mortality rates in Germany have been steadily decreasing, while the absolute numbers have remained almost constant. Comparatively high disease rates can be found today in north-western Germany at (former) shipbuilding sites, e.g. in the state of Bremen and neighbouring regions, and partly also at steel industry sites, such as in the Ruhr area. Occasionally, regions around former production sites of asbestos products are also affected. With relative 5-year survival rates of 12 % in women and 11 % in men, mesothelioma is one of the tumour diseases with a very unfavourable prognosis; accordingly, the number of annual deaths (1,430 in 2019) is only slightly below that of new cases.

Risk factors

Inhalation of asbestos fibres is primarily responsible for most of the newly diagnosed mesotheliomas today. Although the processing of asbestos was generally banned in Germany in 1993 and later throughout the EU, there is usually a latency period of 30 to 50 years between the onset of exposure and manifestation of the disease.

Primarily, people who have worked in the construction industry have an increased risk of asbestos exposure. In 2020, 824 asbestos-related mesotheliomas were recognised by the employers' liability insurance associations. Even if occupational exposure is not known, asbestos fibres can often be detected in X-rays or tissue samples: For example, in women who had only indirect contact with asbestos, e.g. when washing contaminated work clothes. There is also the possibility of asbestos exposure during privately carried out demolition and renovation work.

Weakly bound asbestos with a high fibre content is particularly dangerous. In contrast, asbestos cement (›Eternit‹), which can still be found in or on many buildings today, is considered largely harmless as long as it remains intact.

Exposure to other fibres such as erionite or even radiation therapy plays a subordinate role.

▶ *Additional information: www.krebsdaten.de/mesothelioma*

Figure 3.15.1a
Age-standardised incidence and mortality rates by sex, ICD-10 C45, Germany 1999–2018/2019, projection (incidence) through 2022
per 100,000 (old European Standard)

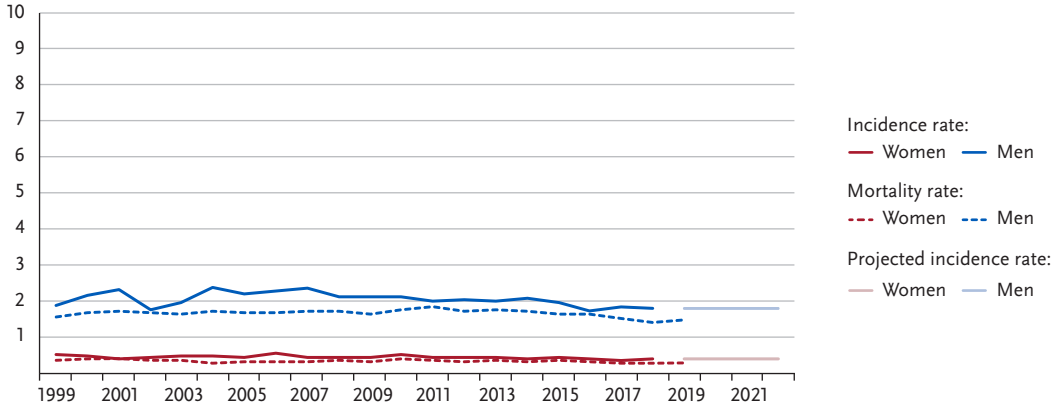


Figure 3.15.1b
Absolute numbers of incident cases and deaths by sex, ICD-10 C45, Germany 1999–2018/2019, projection (incidence) through 2022

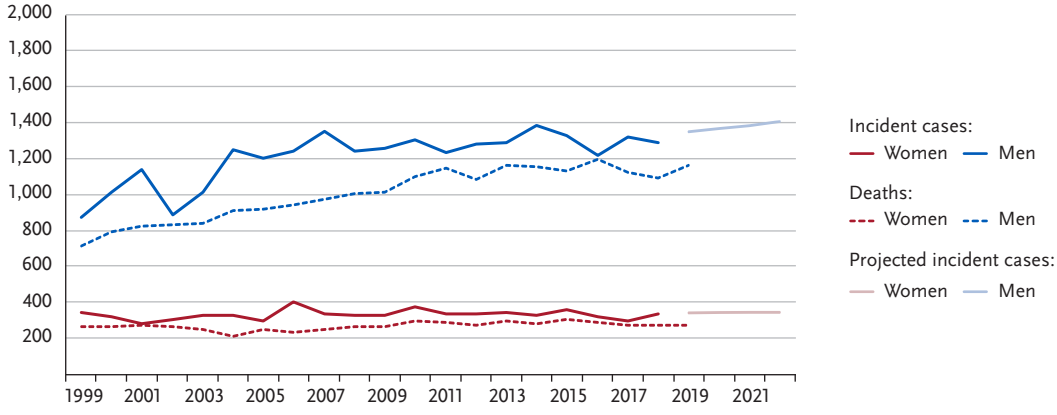


Figure 3.15.2
Age-specific incidence rates by sex, ICD-10 C45, Germany 2017–2018
per 100,000

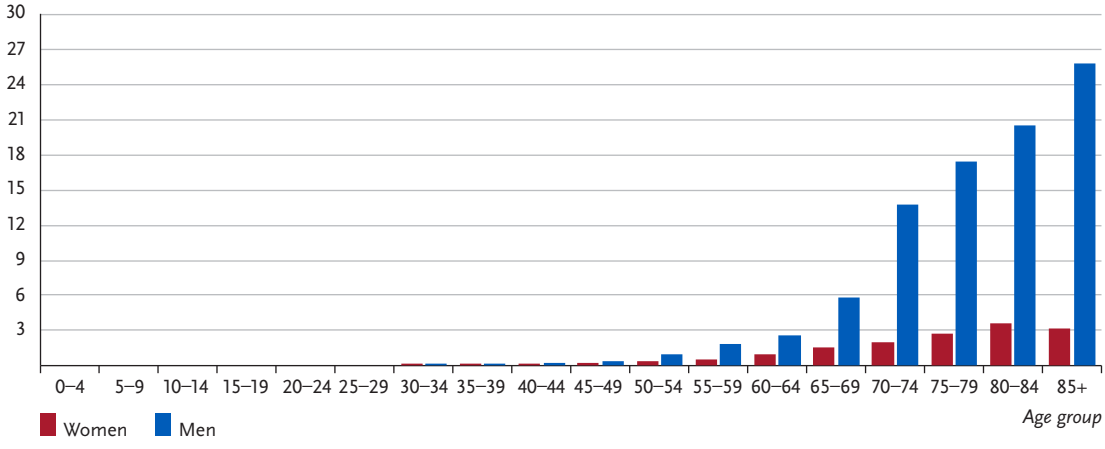


Table 3.15.2
Cancer incidence and mortality risks in Germany by age and sex, ICD-10 C45, database 2018

	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 71,600)	0.1 %	(1 in 1,600)	< 0.1 %	(1 in 443,000)	0.1 %	(1 in 1,900)
45 years	< 0.1 %	(1 in 38,800)	0.1 %	(1 in 1,600)	< 0.1 %	(1 in 83,200)	0.1 %	(1 in 1,900)
55 years	< 0.1 %	(1 in 13,900)	0.1 %	(1 in 1,700)	< 0.1 %	(1 in 21,400)	0.1 %	(1 in 1,900)
65 years	< 0.1 %	(1 in 5,700)	0.1 %	(1 in 1,800)	< 0.1 %	(1 in 7,100)	< 0.1 %	(1 in 2,000)
75 years	< 0.1 %	(1 in 3,500)	< 0.1 %	(1 in 2,300)	< 0.1 %	(1 in 4,300)	< 0.1 %	(1 in 2,500)
Lifetime risk			0.1 %	(1 in 1,600)			0.1 %	(1 in 2,000)
Men aged	**in the next 10 years**		**ever**		**in the next 10 years**		**ever**	
35 years	< 0.1 %	(1 in 65,500)	0.3 %	(1 in 380)	< 0.1 %	(1 in 126,700)	0.2 %	(1 in 450)
45 years	< 0.1 %	(1 in 14,600)	0.3 %	(1 in 380)	< 0.1 %	(1 in 32,800)	0.2 %	(1 in 450)
55 years	< 0.1 %	(1 in 4,500)	0.3 %	(1 in 380)	< 0.1 %	(1 in 7,100)	0.2 %	(1 in 440)
65 years	0.1 %	(1 in 1,200)	0.3 %	(1 in 370)	0.1 %	(1 in 1,700)	0.2 %	(1 in 420)
75 years	0.1 %	(1 in 700)	0.2 %	(1 in 430)	0.1 %	(1 in 690)	0.2 %	(1 in 450)
Lifetime risk			0.3 %	(1 in 390)			0.2 %	(1 in 460)

Figure 3.15.3
Distribution of UICC stages at diagnosis by sex, ICD-10 C45, Germany 2017–2018
top: according to 7th edition TNM; bottom: according to 8th edition TNM.
The DCO proportion was 14%. For 75% of the remaining cases, no UICC stage could be assigned.

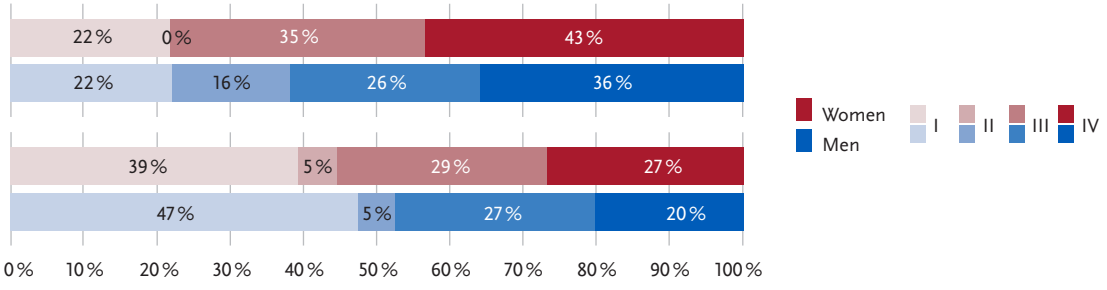


Figure 3.15.4
Absolute and relative survival rates up to 10 years after diagnosis by sex, ICD-10 C45, Germany 2017–2018

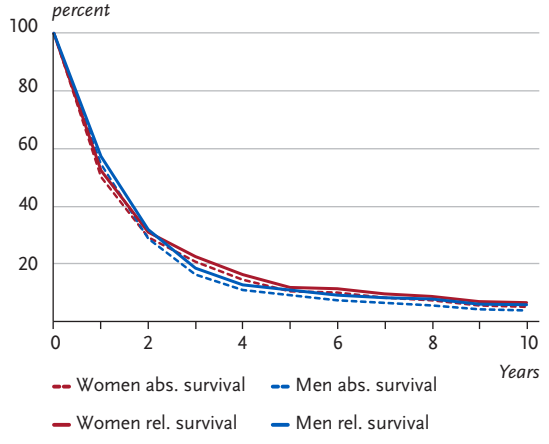


Figure 3.15.5
Relative 5-year survival by site and sex, ICD-10 C45, Germany 2017–2018

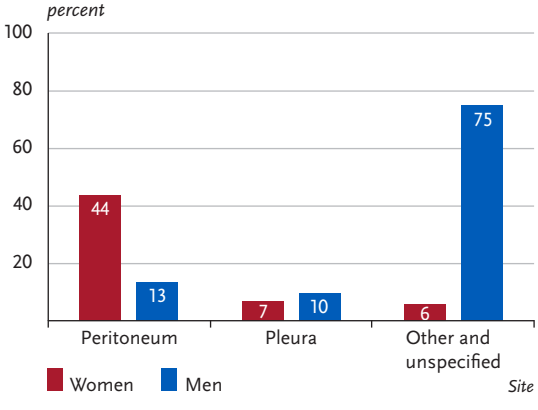


Figure 3.15.6
Age-standardised incidence and mortality rates in German federal states by sex, ICD-10 C45, 2017–2018
per 100,000 (old European Standard)

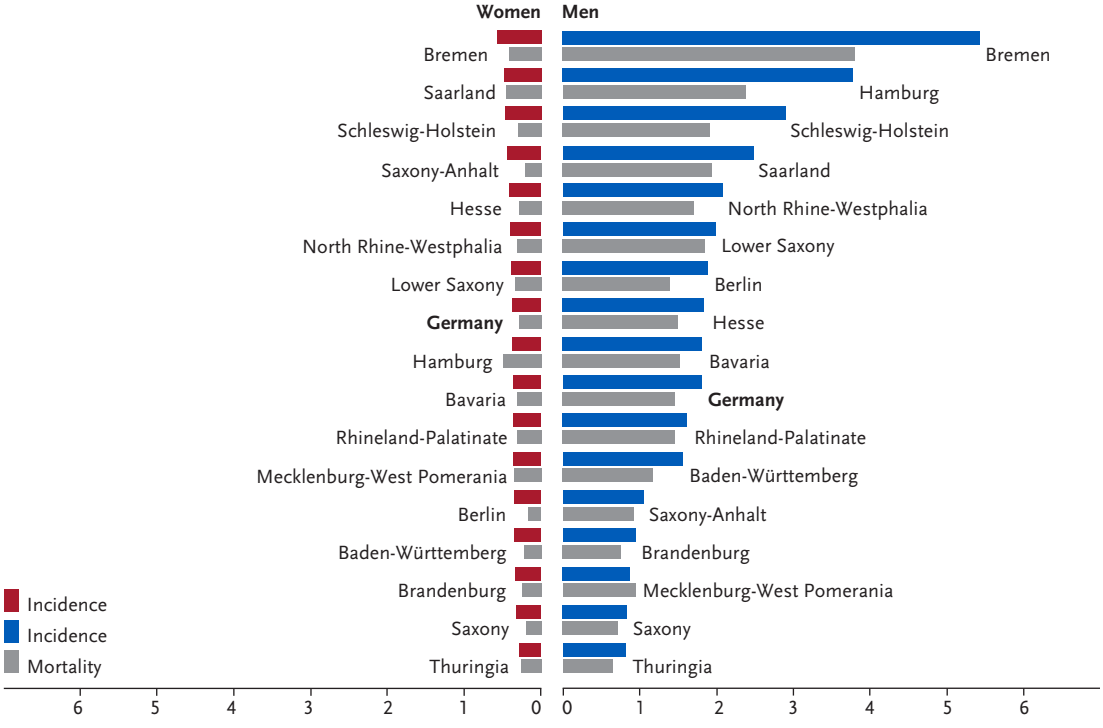
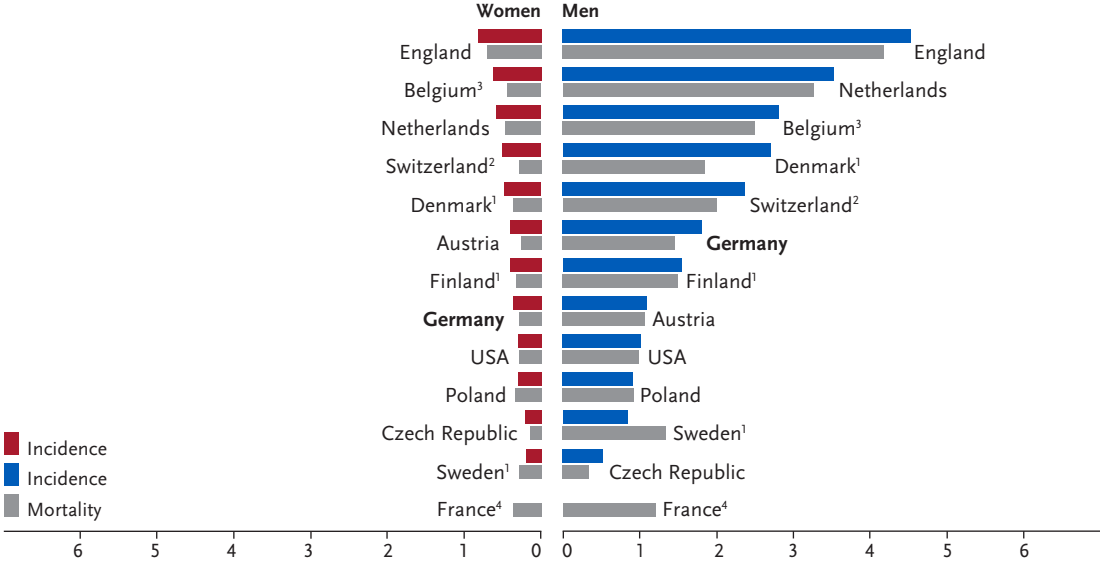


Figure 3.15.7
International comparison of age-standardised incidence and mortality rates by sex, ICD-10 C45, 2017–2018 or latest available year (details and sources, see appendix)
per 100,000 (old European Standard)



1 Data for C38.4, C45.0 and C45.9
2 Data for C38.4 and C45.0; mortality for 2013 to 2017
3 Mortality for 2016
4 No incidence data available