

3.12 Lung

Table 3.12.1
Overview of key epidemiological parameters for Germany, ICD-10 C33–C34

Incidence	2015		2016		Prediction for 2020	
	Women	Men	Women	Men	Women	Men
Incident cases	21,470	36,860	21,500	35,960	25,920	36,460
Crude incidence rate ¹	51.7	91.8	51.5	88.6	62.4	90.1
Age-standardised incidence rate ^{1,2}	31.9	59.9	31.4	57.5	36.7	55.1
Median age at diagnosis	69	70	69	70		
Mortality	2015		2016		2017	
	Women	Men	Women	Men	Women	Men
Deaths	15,881	29,378	16,481	29,324	16,382	28,692
Crude mortality rate ¹	38.3	73.1	39.5	72.2	39.1	70.4
Age-standardised mortality rate ^{1,2}	22.1	46.5	22.6	45.7	22.1	43.9
Median age at death	71	72	71	72	71	72
Prevalence and survival rates	5 years		10 years			
	Women	Men	Women	Men		
Prevalence	38,200	58,300	52,700	80,500		
Absolute survival rate (2015–2016) ³	19 (15–24)	13 (9–17)	13 (10–17)	8 (5–11)		
Relative survival rate (2015–2016) ³	21 (17–26)	15 (10–19)	16 (12–21)	11 (7–16)		

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

► Additional information under www.krebsdaten.de/cancer-sites

Epidemiology

In 2016, approximately 21,500 women and 36,000 men developed malignant tumours of the lung; in the same year, 16,481 women and 29,324 men died from the condition.

Age-standardised incidence and mortality rates among men and women show contrasting trends. Whereas rates among women have risen continuously since the end of the 1990s, they decreased over the same period among men. These diverging trends can be attributed to changes in smoking habits that occurred in the past. As such, these trends will probably continue in the future. Lung cancer has one of the least favourable prognoses, with low 5-year survival rates of about 21% for women and 15% for men. There are three main types of lung cancer: adenocarcinomas, which account for 42% of cases; squamous cell carcinomas, which account for about a quarter of cases; and small-cell lung carcinomas, which account for around one fifth of all cases. The latter tend to metastasise early and thus have the worst prognosis.

A comparison of selected countries revealed the highest incidence rates for women in Denmark and for men in Belgium.

Risk factors and early detection

Tobacco use is the main risk factor associated with lung cancer. Up to nine out of ten cases of lung cancer cases among men and at least six out of ten cases among women are due to active smoking. However, passive smoking also increases the risk of lung cancer.

Other risk factors tend to play a minor role. Between 9 and 15 out of every 100 lung cancer cases can be attributed to carcinogenic substances such as asbestos, polycyclic aromatic hydrocarbons, and quartz or nickel dust. People living in areas with a high natural exposure to radon in buildings have a higher risk of developing lung cancer, with those living on the lower floors at particular risk. This also applies to occupational exposure to radon and to other sources of ionising radiation. Diesel exhaust fumes and particulate matter are the most important risk factors among air pollutants. Genetic factors are also assumed to play a role. Currently, no appropriate form of lung cancer screening exists for the entire population. Studies are being carried out to determine whether and for whom screening with low-dose computed tomography could be useful. However, an annual screening programme for lung cancer has yet to be established.

Figure 3.12.1a
 Age-standardised incidence and mortality rates by sex, ICD-10 C33–C34, Germany 1999–2016/2017, projection (incidence) through 2020 per 100,000 (old European Standard)

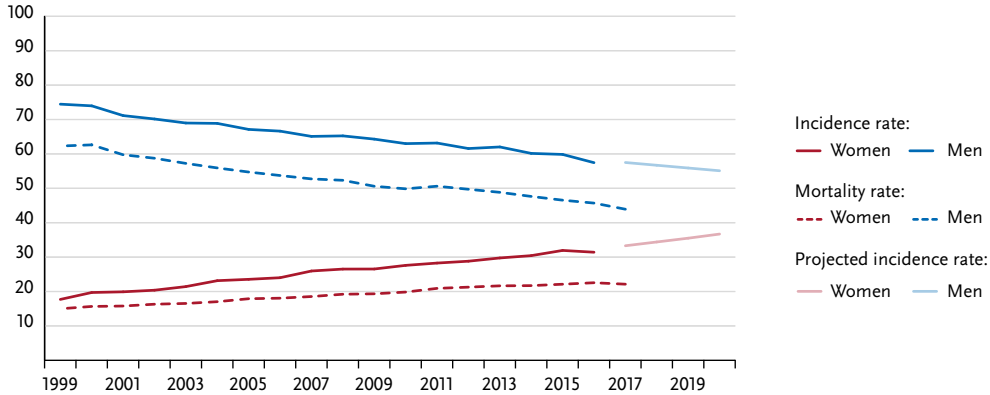


Figure 3.12.1b
 Absolute numbers of incident cases and deaths by sex, ICD-10 C33–C34, Germany 1999–2016/2017, projection (incidence) through 2020

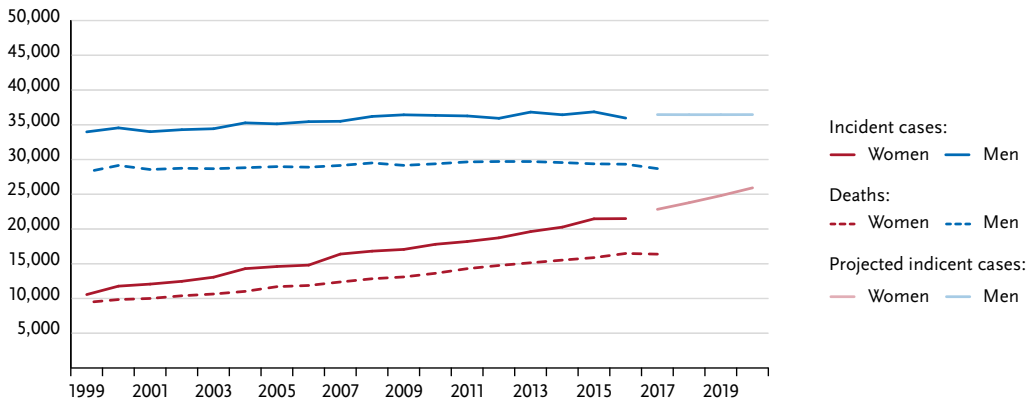


Figure 3.12.2
 Age-specific incidence rates by sex, ICD-10 C33–C34, Germany 2015–2016 per 100,000

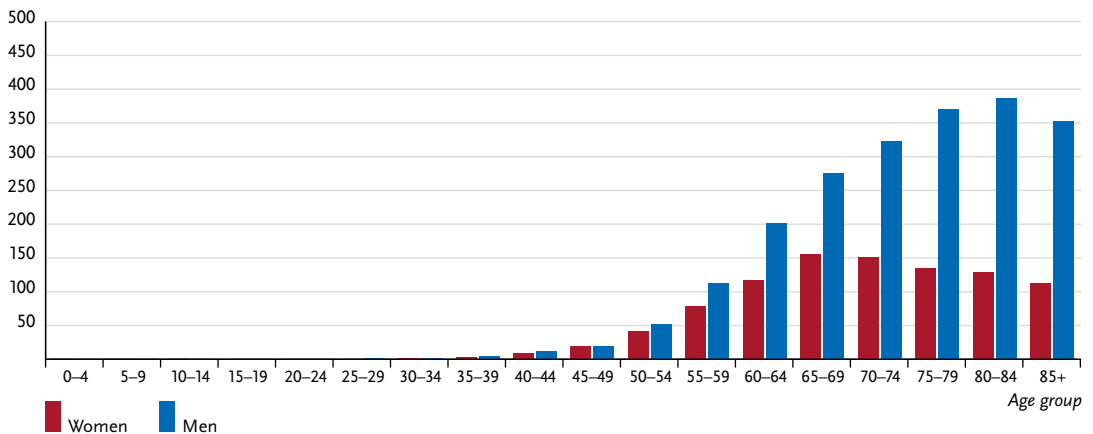


Table 3.12.2
Cancer incidence and mortality risks in Germany by age and sex, ICD-10 C33–C34, database 2016

Women 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 1,500)	3.9%	(1 in 25)	< 0.1%	(1 in 3,700)	3.1%	(1 in 32)
45 years	0.3%	(1 in 340)	3.9%	(1 in 26)	0.2%	(1 in 520)	3.1%	(1 in 32)
55 years	0.9%	(1 in 110)	3.7%	(1 in 27)	0.7%	(1 in 150)	3.0%	(1 in 33)
65 years	1.4%	(1 in 70)	2.9%	(1 in 35)	1.0%	(1 in 97)	2.5%	(1 in 40)
75 years	1.2%	(1 in 87)	1.7%	(1 in 60)	1.1%	(1 in 94)	1.6%	(1 in 61)
Lifetime risk			3.9%	(1 in 26)			3.1%	(1 in 32)
Men aged	in the next ten years		ever		in the next ten years		ever	
35 years	0.1%	(1 in 1,300)	6.7%	(1 in 15)	< 0.1%	(1 in 3,100)	5.9%	(1 in 17)
45 years	0.4%	(1 in 270)	6.7%	(1 in 15)	0.3%	(1 in 380)	5.9%	(1 in 17)
55 years	1.5%	(1 in 69)	6.6%	(1 in 15)	1.1%	(1 in 88)	5.8%	(1 in 17)
65 years	2.7%	(1 in 37)	5.7%	(1 in 17)	2.1%	(1 in 48)	5.2%	(1 in 19)
75 years	2.9%	(1 in 35)	3.9%	(1 in 26)	2.7%	(1 in 37)	4.0%	(1 in 25)
Lifetime risk			6.6%	(1 in 15)			5.7%	(1 in 17)

Figure 3.12.3
Distribution of UICC-stages at first diagnosis by sex, ICD-10 C33–C34, Germany 2015–2016
(top: all cases; bottom: only valid reports)

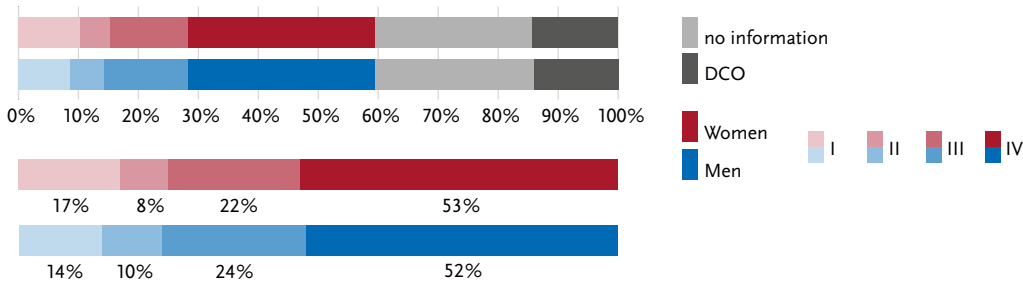


Figure 3.12.4
Absolute and relative survival rates up to 10 years after first diagnosis, by sex, ICD-10 C33–C34, Germany 2015–2016

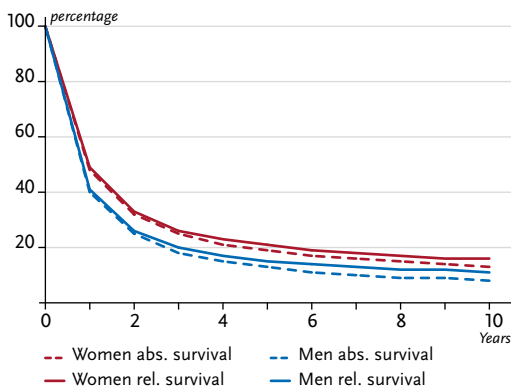


Figure 3.12.5
Relative 5-year survival by UICC-stage and sex, ICD-10 C33–C34, Germany 2015–2016

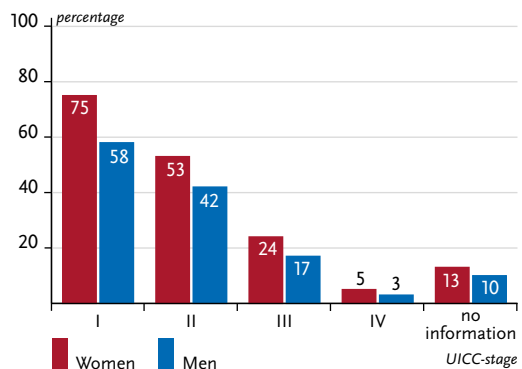


Figure 3.12.6
 Age-standardised incidence and mortality rates in German federal states by sex, ICD-10 C33–C34, 2015–2016
 (Incidence in Bremen for 2014 and 2016, incidence in eastern Germany for 2014 to 2015)
 per 100,000 (old European Standard)

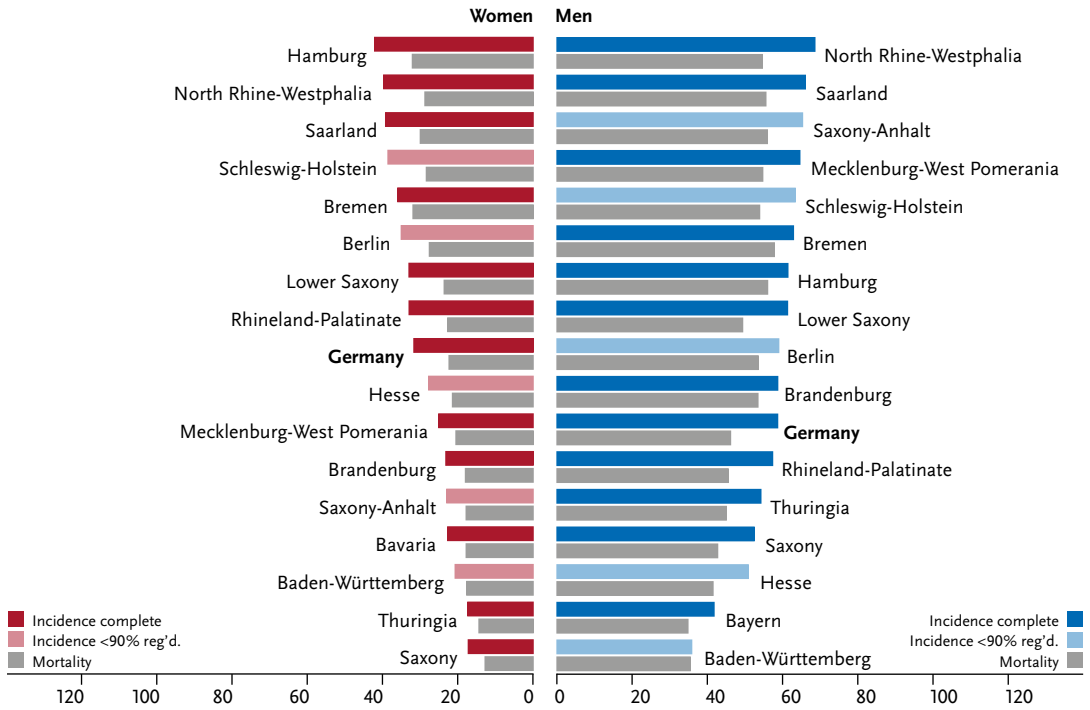


Figure 3.12.7
 International comparison of age-standardised incidence and mortality rates by sex,
 ICD-10 C33–C34, 2015–2016 or latest available year (details and sources, see appendix)
 per 100,000 (old European Standard)

