3.10 Lung

Table 3.10.1
Overview of key epidemiological parameters for Germany, ICD-10 C33–C34

Incidence	2013		2014		Prediction for 2018	
	Men	Women	Men	Women	Men	Women
Incident cases	35,310	19,200	34,560	19,280	33,700	22,000
Crude incidence rate[1]	89.5	46.6	87.1	46.7	83.7	52.9
Standardised incidence rate[1,2]	59.6	29.1	57.3	29.0	53.1	31.8
Median age at diagnosis	70	69	70	69		

Mortality	2013		2014		2015	
	Men	Women	Men	Women	Men	Women
Deaths	29,708	15,140	29,560	15,524	29,378	15,881
Crude mortality rate[1]	75.3	36.8	74.5	37.6	73.1	38.3
Standardised mortality rate[1,2]	48.8	21.7	47.6	21.7	46.6	22.1
Median age at death	72	71	72	71	72	71

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

Prevalence and survival rates	after 5 years		after 10 years	
	Men	Women	Men	Women
Prevalence	49,400	32,100	67,800	43,600
Absolute survival rate (2013–2014)[3]	13 (12–15)	18 (17–21)	8 (7–10)	12 (11–14)
Relative survival rate (2013–2014)[3]	15 (14–18)	20 (18–23)	11 (9–14)	16 (14–19)

[3] in percentages (lowest and highest value of the included German federal states)

Epidemiology

In 2014, about 19,300 women and 34,500 men were diagnosed with malignant tumours of the lungs; 15,524 women and 29,560 men died of the disease.

Age-standardised incidence and mortality rates show opposing trends among men and women. Rates have risen continuously since the end of the 1990s among women, but they have decreased over the same period among men. These diverging trends can be attributed to changes in smoking habits that occurred in the past and which will probably continue to have an impact in the future. Lung cancer has one of the least favourable prognoses as it is associated with relatively low 5-year survival rates: 20 % for women and 15 % for men. In terms of histology, there are three main types of lung cancer: adenocarcinomas account for about half of all cases; squamous-cell carcinomas account for about one quarter and around one fifth are small-cell lung carcinomas. Small-cell carcinomas have the worst prognosis due to their tendency to metastasise early. In an international comparison of selected countries, the highest rates of lung cancer morbidity were found among women in Denmark and men in Belgium.

Risk factors and early detection

Tobacco smoke is the main risk factor associated with lung cancer. Among men, up to nine in ten, and at least six out of ten cases of lung cancer in women are due to active smoking. Passive smoking also increases a person's risk of developing lung cancer.

Other risk factors play a comparatively minor role. Between 9 and 15 of 100 cases of lung cancer are attributable to exposure to various carcinogenic substances, including asbestos, polycyclic aromatic hydrocarbons and quartz and nickel dust. People who live in areas with a high natural radon emission have a higher risk of lung cancer, especially those who live in a building's lower storeys. This also applies to occupational exposure to radon or other sources of ionising radiation. Diesel exhaust fumes are the most important risk factor in terms of air pollutants. Other forms of environmental pollution (particulate matter) and hereditary factors are also presumed to increase the risk of lung cancer.

No established screening procedure for the early detection of lung cancer has been put in place for the population as a whole. The role that examinations, such as regular computed tomography scans, could have for risk groups, is being explored as part of clinical trials.

Figure 3.10.1a
Age-standardised incidence and mortality rates, by sex, ICD-10 C33 – C34, Germany 1999 – 2014/2015
per 100,000 (old European Standard)

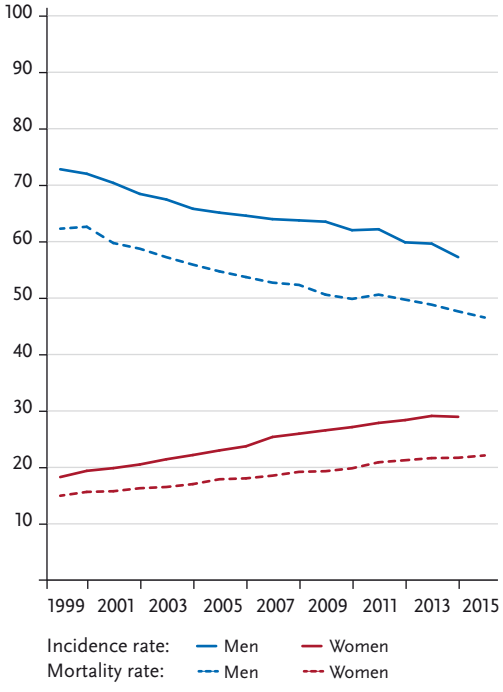


Figure 3.10.1b
Absolute numbers of incident cases and deaths, by sex, ICD-10 C33 – C34, Germany 1999 – 2014/2015

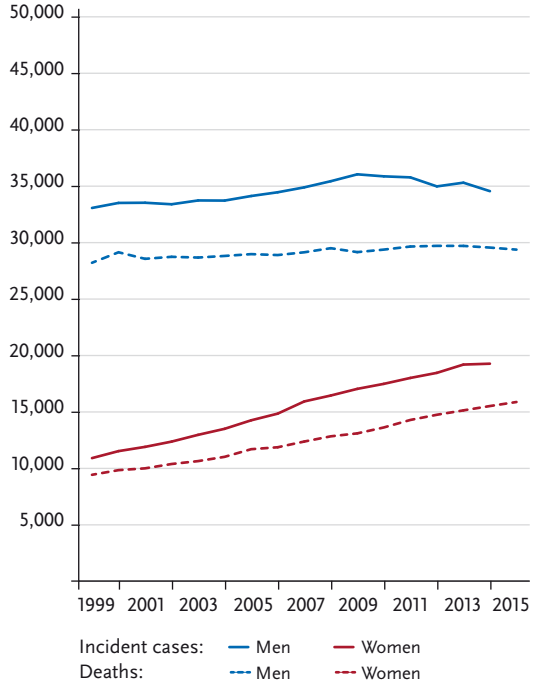


Figure 3.10.2
Age-specific incidence rates by sex, ICD-10 C33 – C34, Germany 2013 – 2014
per 100,000

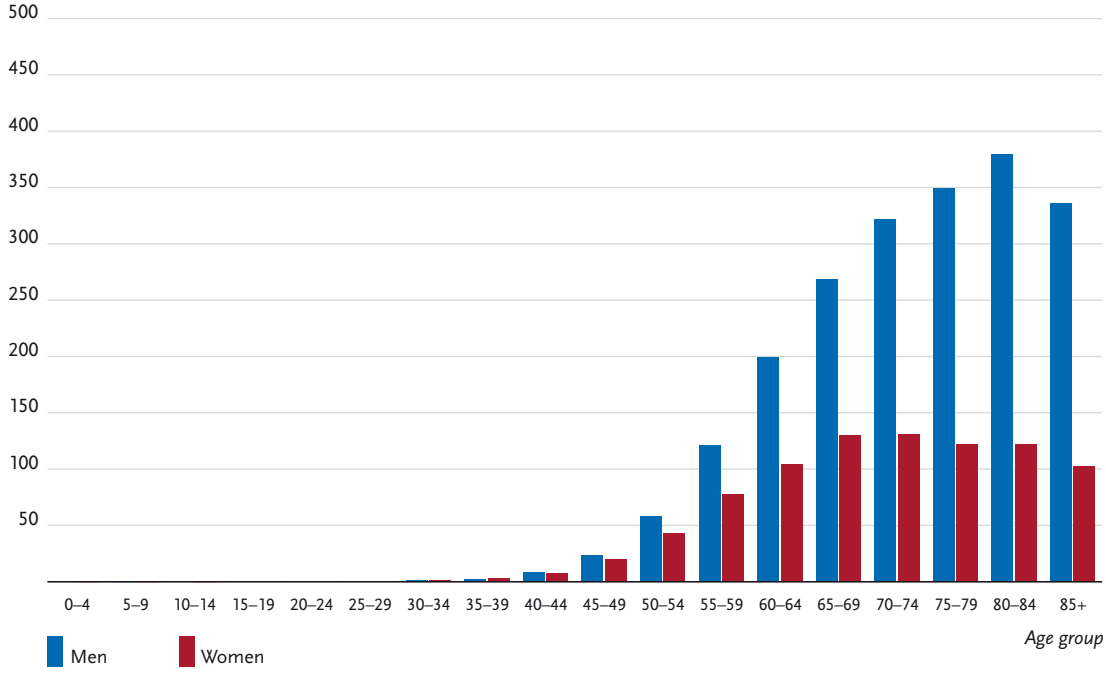


Table 3.10.2
Cancer incidence and mortality risks in Germany by age and sex, ICD-10 C33–C34, database 2014

	Risk of developing cancer				Mortality risk			
Men aged	**in the next ten years**		**ever**		**in the next ten years**		**ever**	
35 years	0.1%	(1 in 1,500)	6.9%	(1 in 14)	<0.1%	(1 in 2,500)	6.0%	(1 in 17)
45 years	0.4%	(1 in 230)	7.0%	(1 in 14)	0.3%	(1 in 330)	6.0%	(1 in 17)
55 years	1.6%	(1 in 64)	6.8%	(1 in 15)	1.2%	(1 in 87)	6.0%	(1 in 17)
65 years	2.7%	(1 in 37)	5.8%	(1 in 17)	2.2%	(1 in 46)	5.3%	(1 in 19)
75 years	2.9%	(1 in 35)	4.0%	(1 in 25)	2.8%	(1 in 36)	4.0%	(1 in 25)
Lifetime risk			6.8%	(1 in 15)			5.9%	(1 in 17)
Women aged	**in the next ten years**		**ever**		**in the next ten years**		**ever**	
35 years	0.1%	(1 in 1,700)	3.6%	(1 in 28)	<0.1%	(1 in 3,600)	2.9%	(1 in 35)
45 years	0.3%	(1 in 300)	3.5%	(1 in 28)	0.2%	(1 in 470)	2.9%	(1 in 35)
55 years	0.9%	(1 in 110)	3.3%	(1 in 30)	0.6%	(1 in 160)	2.7%	(1 in 37)
65 years	1.2%	(1 in 84)	2.5%	(1 in 40)	0.9%	(1 in 110)	2.2%	(1 in 45)
75 years	1.1%	(1 in 95)	1.5%	(1 in 66)	0.9%	(1 in 110)	1.5%	(1 in 69)
Lifetime risk			3.6%	(1 in 28)			2.9%	(1 in 35)

Figure 3.10.3
Distribution of T-stages at first diagnosis by sex (top: all cases; bottom: only valid reports)
ICD-10 C33–C34, Germany 2013–2014

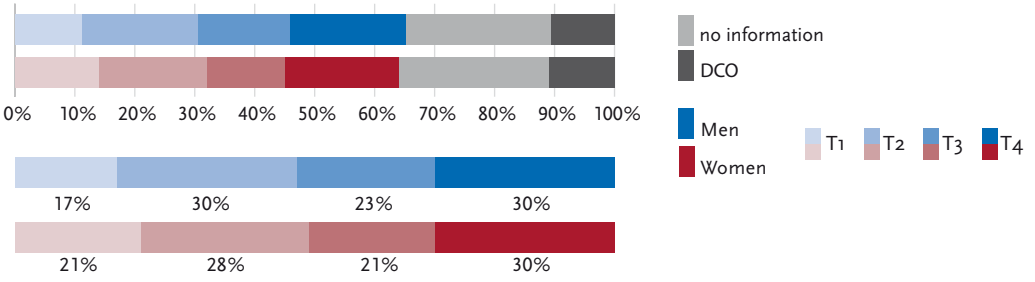


Figure 3.10.4a
Absolute survival rates up to 10 years after first diagnosis, by sex, ICD-10 C33–C34, Germany 2013–2014

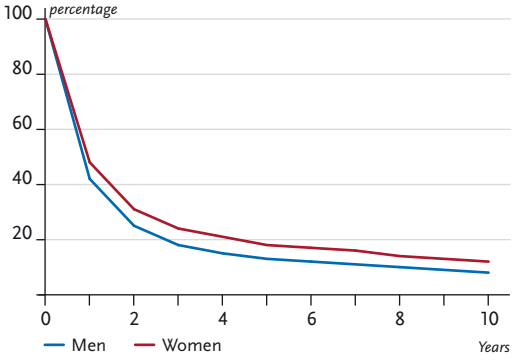


Figure 3.10.4b
Relative survival rates up to 10 years after first diagnosis, by sex, ICD-10 C33 – C34, Germany 2013–2014

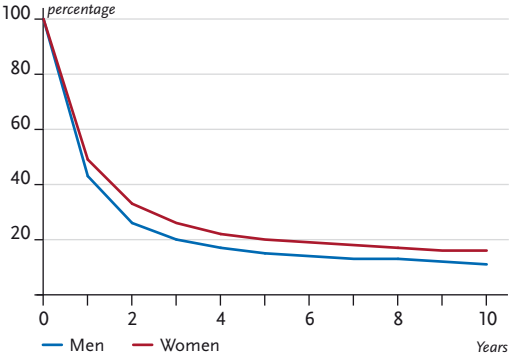


Figure 3.10.5
Registered age-standardised incidence and mortality rates in German federal states, by sex, ICD-10 C33 – C34, 2013 – 2014
per 100,000 (old European Standard)

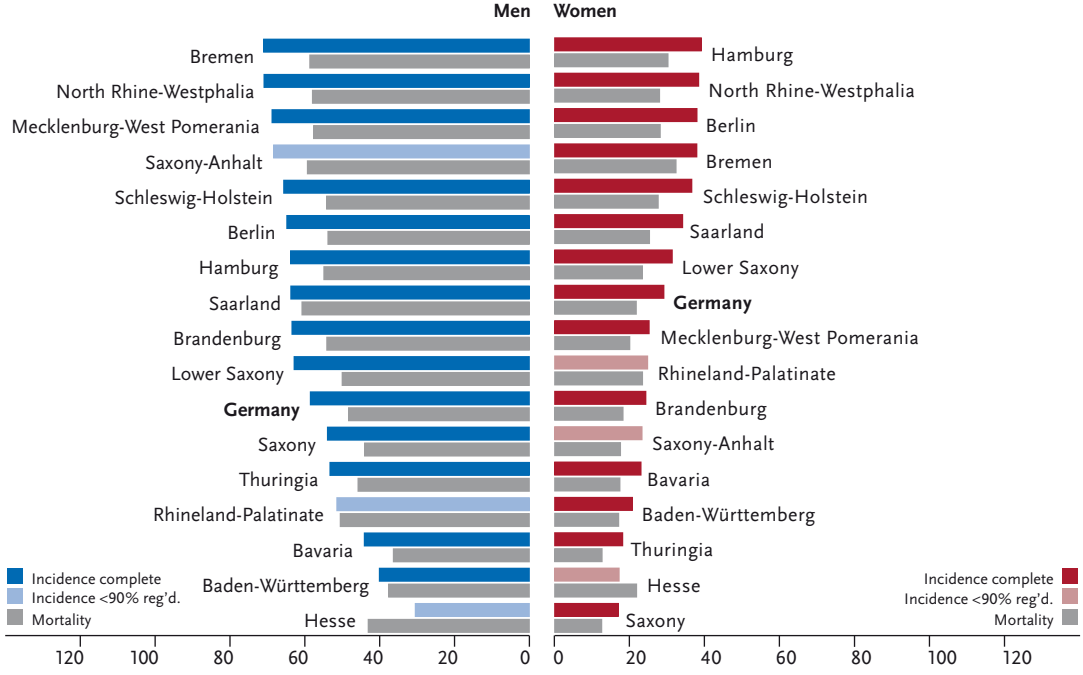
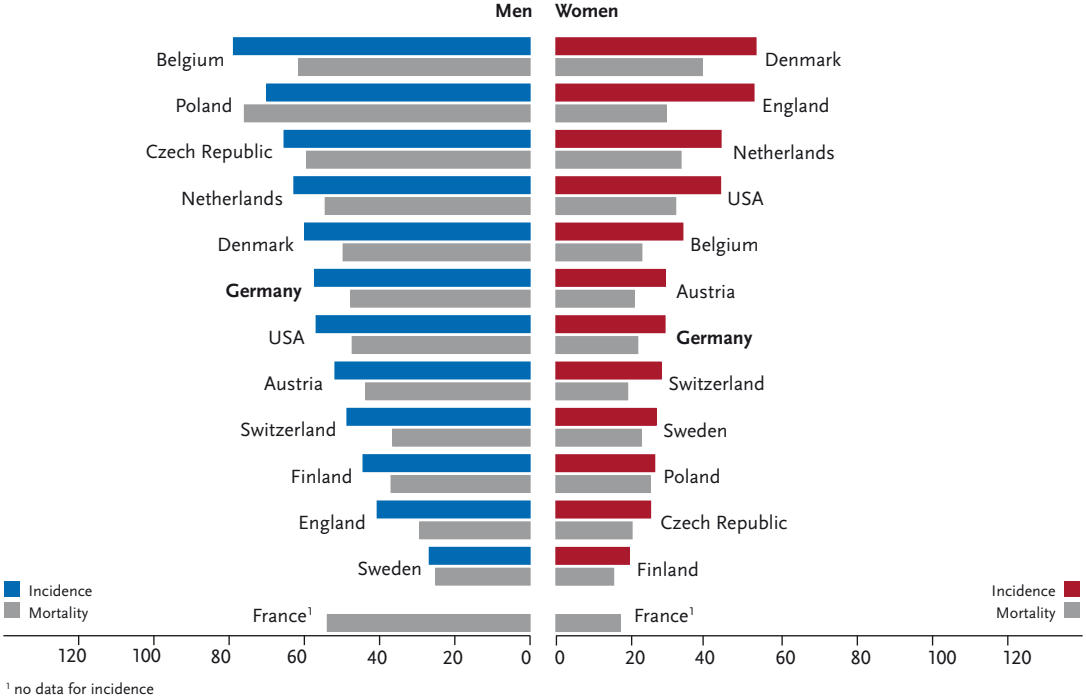


Figure 3.10.6
International comparison of age-standardised incidence and mortality rates, by sex, ICD-10 C33 – C34, 2013 – 2014 or latest available year (details and sources, see appendix)
per 100,000 (old European Standard)



[1] no data for incidence