

3.26 Non-Hodgkin lymphomas

Table 3.26.1
Overview of key epidemiological parameters for Germany, ICD-10 C82–C88

	2011		2012		Prediction for 2016	
	Men	Women	Men	Women	Men	Women
Incident cases	8,690	7,510	8,580	7,570	9,800	8,200
Crude incidence rate ¹	22.2	18.3	21.8	18.4	24.5	19.9
Standardised incidence rate ^{1,2}	15.9	10.9	15.4	11.0	16.7	11.2
Median age at diagnosis	69	72	70	72		
Deaths	3,232	3,027	3,407	2,955		
Crude mortality rate ¹	8.3	7.4	8.7	7.2		
Standardised mortality rate ^{1,2}	5.4	3.4	5.5	3.3		
5-year prevalence	29,200	25,600	29,500	25,900		
	<i>after 5 years</i>		<i>after 10 years</i>			
Absolute survival rate (2011–2012) ³	57 (52–61)	61 (53–66)	42 (38–44)	47 (41–52)		
Relative survival rate (2011–2012) ³	66 (61–69)	69 (62–74)	57 (51–61)	62 (57–66)		

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

Epidemiology

Non-Hodgkin lymphomas originate from cells of the lymphatic system, mostly from B-lymphocytes. A distinction is made between high-grade and low-grade malignancy forms. In 2012, some 16,000 people were diagnosed with non-Hodgkin lymphoma in Germany. The disease occurs as early as in childhood and the risk of developing it rises almost steadily with increasing age. The median age at diagnosis for men was 70 years and for women 72 years.

The significant increases in the age-standardised incidence rates should be seen within the context of falling rates for leukaemias, since chronic lymphatic leukaemias are now classified clinically under the low-grade malignancy non-Hodgkin lymphomas. The majority of cases are non-follicular lymphomas (49 % among men, 44 % among women). The age-standardised mortality rates are decreasing in both men and women since the turn of the millennium and reached a constant level by now, though they are lower among women compared to men. Approximately 6,000 people in Germany die of this disease annually.

With a relative 5-year survival rate of 66 % among men and 69 % among women, the prognosis for non-Hodgkin lymphomas is generally favourable, although in individual cases it depends on age, as well as on type and distribution of the disease. Some forms, even highly malignant ones, can now be treated with the prospect of a permanent cure.

Risk factors

Risk factors for non-Hodgkin lymphoma can only rarely be conclusively identified. Immunodeficiency (hereditary, because of HIV infection, or due to immunosuppressive treatment) is associated with an increased risk, as are a number of rare autoimmune diseases. Nuclear radiation or chemotherapy can also cause malign lymphomas. Viruses and other pathogens also contribute to the development of some lymphomas. For example, the link between infection with the Epstein-Barr virus (EBV, glandular fever) and Burkitt's lymphoma, which occurs predominantly in Africa, has been proven. Chronic infection of the stomach with the *Helicobacter pylori* bacterium can lead to a lymphoma of the gastric mucosa (MALT lymphoma). Certain T-cell lymphomas that are rare in Europe are found clustered in carriers of the human T-cell leukaemia virus (HTLV-1). Studies suggest that certain types of lymphoma are more likely to develop in people chronically infected with hepatitis viruses (type B or C). Environmental pollutants such as heavy metals, organic solvents as well as some herbicides, insecticides and fungicides are being discussed as causes of malign lymphomas. Smoking and being overweight appear to play a role, particularly for aggressive lymphomas. Regular exercise may reduce the risk. New studies suggest that hereditary genetic variations could affect the risk of developing the disease, without being a direct cause of the lymphomas.

Figure 3.26.1a
Age-standardised incidence and mortality rates,
by sex, ICD-10 C82–C88, Germany 1999–2012
per 100,000 (European standard)

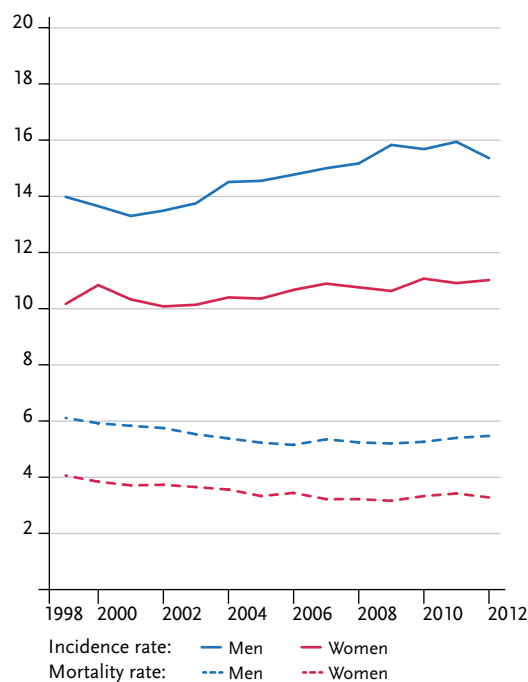


Figure 3.26.1b
Absolute numbers of incident cases and deaths,
by sex, ICD-10 C82–C88, Germany 1999–2012

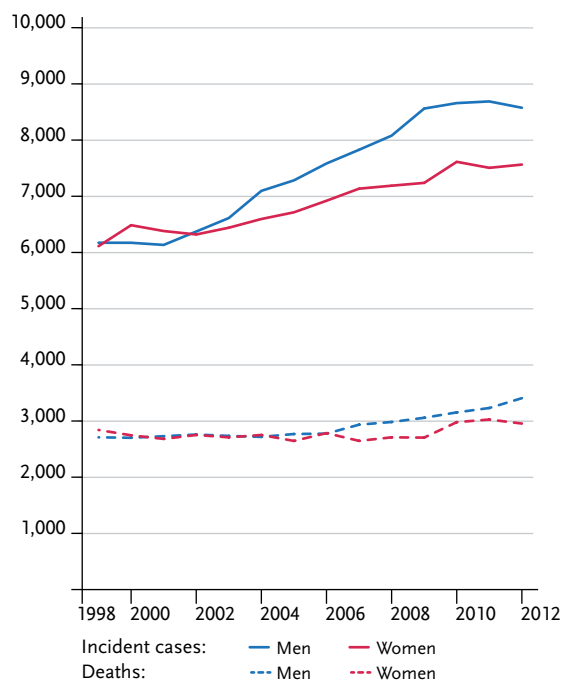


Figure 3.26.2
Age-specific incidence rates by sex, ICD-10 C82–C88, Germany 2011–2012
per 100,000

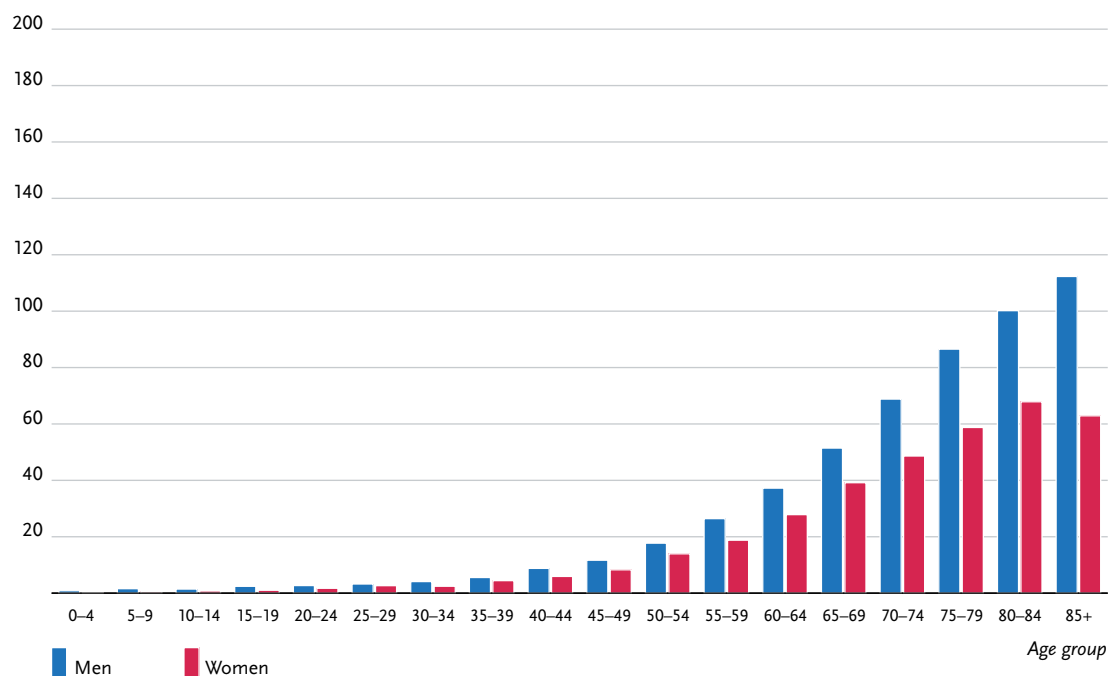


Table 3.26.2
Cancer incidence and mortality risks in Germany by age and sex, ICD-10 C82–C88, database 2012

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 1,500)	1.7%	(1 in 60)	<0.1%	(1 in 13,000)	0.8%	(1 in 130)
45 years	0.1%	(1 in 700)	1.6%	(1 in 62)	<0.1%	(1 in 3,600)	0.8%	(1 in 130)
55 years	0.3%	(1 in 350)	1.5%	(1 in 65)	0.1%	(1 in 1,300)	0.8%	(1 in 130)
65 years	0.6%	(1 in 180)	1.4%	(1 in 72)	0.2%	(1 in 490)	0.8%	(1 in 130)
75 years	0.7%	(1 in 140)	1.1%	(1 in 94)	0.4%	(1 in 230)	0.7%	(1 in 140)
Lifetime risk			1.7%	(1 in 58)			0.8%	(1 in 130)
Women aged	in the next ten years		ever		in the next ten years		ever	
35 years	0.1%	(1 in 1,900)	1.4%	(1 in 70)	<0.1%	(1 in 20,300)	0.6%	(1 in 170)
45 years	0.1%	(1 in 900)	1.4%	(1 in 72)	<0.1%	(1 in 7,500)	0.6%	(1 in 170)
55 years	0.2%	(1 in 420)	1.3%	(1 in 77)	<0.1%	(1 in 2,200)	0.6%	(1 in 170)
65 years	0.4%	(1 in 240)	1.1%	(1 in 89)	0.1%	(1 in 710)	0.6%	(1 in 170)
75 years	0.5%	(1 in 190)	0.8%	(1 in 120)	0.3%	(1 in 350)	0.5%	(1 in 200)
Lifetime risk			1.5%	(1 in 68)			0.6%	(1 in 170)

Figure 3.26.3
Distribution of T-stages at first diagnosis by sex
T-stages are not defined for non-Hodgkin lymphomas.

Table 3.26.3
Proportion of the various non-Hodgkin lymphomas for all new diagnoses C82–C88, by sex, Germany 2011–2012

	C82 ¹	C83 ²	C84 ³	C85 ⁴	C86 ⁵	C88 ⁶
Men	15%	49%	8%	19%	2%	6%
Women	20%	44%	5%	22%	2%	7%

- ¹ Follicular lymphoma
- ² Non-follicular lymphoma
- ³ Mature T/NK-cell lymphomas
- ⁴ Other and unspecified types of non-Hodgkin lymphoma
- ⁵ Other specified types of T/NK-cell lymphoma
- ⁶ Malignant immunoproliferative diseases

Figure 3.26.4a
Absolute survival rates up to 10 years after first diagnosis, by sex, ICD-10 C82–C88, Germany 2011–2012

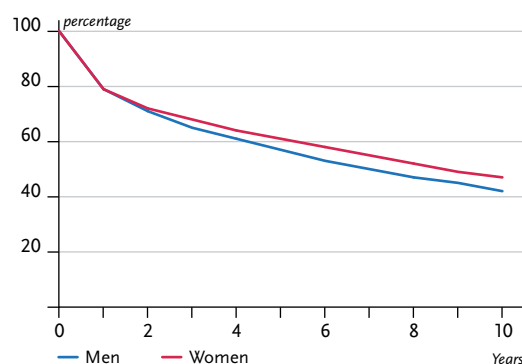


Figure 3.26.4b
Relative survival rates up to 10 years after first diagnosis, by sex, ICD-10 C82–C88, Germany 2011–2012

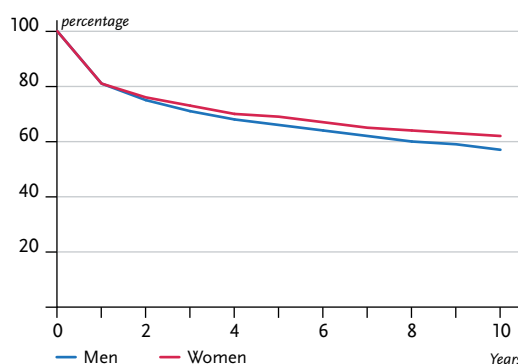


Figure 3.26.5

Registered age-standardised incidence and mortality rates in German federal states, by sex,
ICD-10 C82–C88, 2011–2012
per 100,000 (European standard)

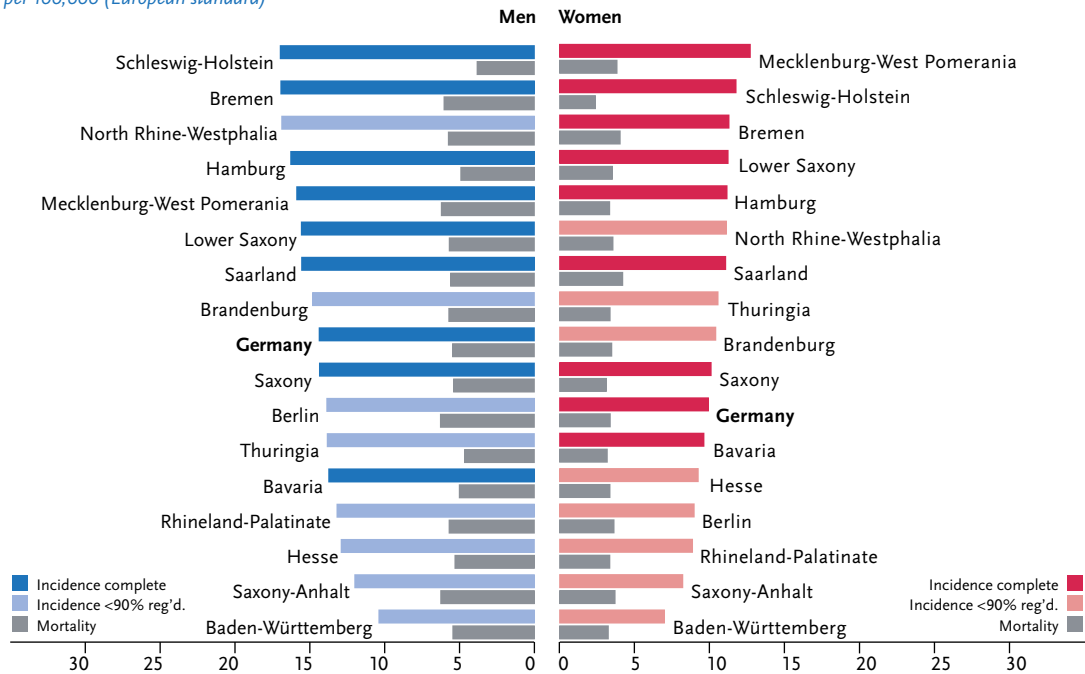
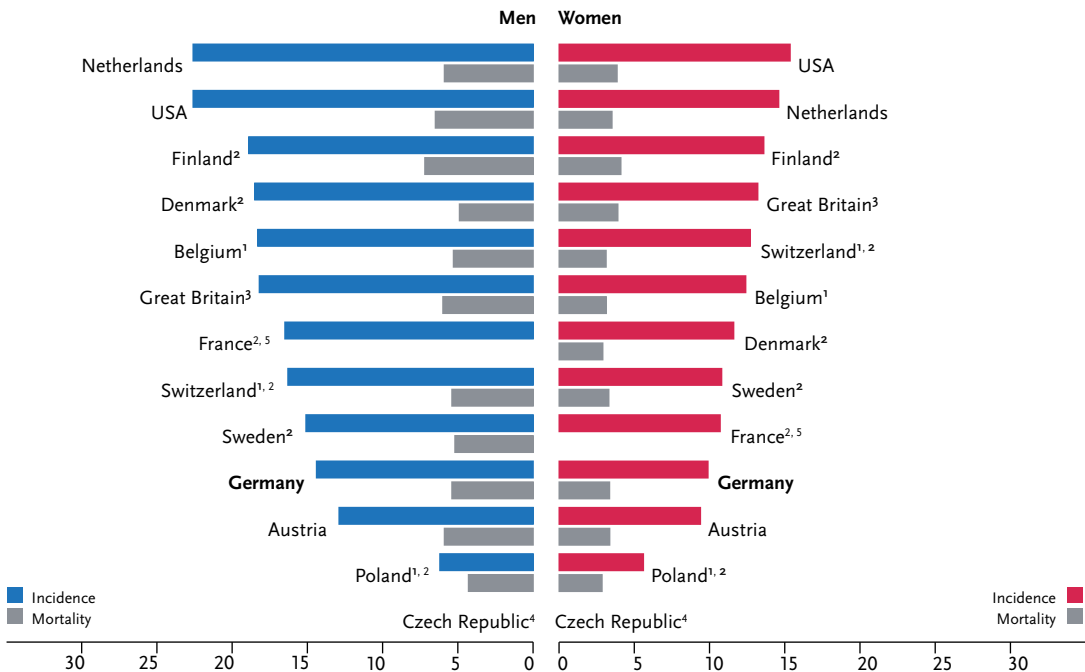


Figure 3.26.6

International comparison of age-standardised incidence and mortality rates, by sex,
ICD-10 C82–C88, 2011–2012 or latest available year (details and sources, see appendix)
per 100,000 (European standard)

¹ data for mortality for C81–C85² data for incidence for C82–C85 and C96³ data for C82–C85⁴ no comparable data⁵ no comparable data for mortality