

3.27 Leukaemias

Table 3.27.1
Overview of key epidemiological parameters for Germany, ICD-10 C91 – C95

	2009		2010		Prediction for 2014	
	Men	Women	Men	Women	Men	Women
Incident cases	6,550	5,180	6,640	4,920	6,800	5,300
Crude incidence rate ¹	16.3	12.7	16.6	11.8	17.2	12.9
Standardised incidence rate ^{1,2}	12.4	8.3	12.4	7.7	12.0	8.0
Median age at diagnosis	69	72	70	72		
Deaths	3,799	3,308	3,942	3,304		
Crude mortality rate ¹	9.5	7.9	9.8	7.9		
Standardised mortality rate ^{1,2}	6.5	4.1	6.5	4.0		
5-year prevalence	20,100	15,400	20,200	15,100		
Absolute 5-year survival rate (2009-2010) ³			47 (35-54)	47 (37-54)		
Relative 5-year survival rate (2009-2010) ³			55 (41-62)	53 (42-61)		

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

Epidemiology

In 2010, some 11,500 people in Germany were diagnosed with leukaemia, 6 % of whom were under 15 years of age. The incidence risk for leukaemia falls with increasing age among children and young adults independent of gender. Above the age of 30 the risk increases again continuously, with a higher incidence among men than women. More than a third of the diagnosed cases were chronic lymphatic leukaemia (CLL) and over a quarter of the cases were acute myeloid leukaemia (AML).

The age-standardised incidence rates are declining among both sexes. However, in view of the vague distinction between CLL and non-Hodgkin lymphomas (C82-C85), this trend should be interpreted carefully, especially since the incidence of the latter has increased to a similar extent. The age-standardised mortality rates for both sexes have declined continuously in recent years.

The prognosis for leukaemia depends on its form and the age of the subject at diagnosis. It is most favourable by far for the leukaemia forms in childhood, whereas in adults the acute forms still have a poorer prognosis.

Overall, about half of adult patients are still alive five years after diagnosis. However, a permanent cure is rarely achieved, e.g. after a risky stem cell transplantation.

Risk factors

The risk factors known to cause acute leukaemia include ionising radiation in radiotherapy, cytostatic drugs in chemotherapy for cancer, and probably also various chemicals (e.g. at the workplace). If, for example, occupational contact with benzene is a causal factor, then leukaemia can be recognised as an occupational disease.

However, none of these risk factors is found in the medical history of most patients. In particular the causes of chronic leukaemias are unclear.

The possible influence of dietary habits and lifestyle is under discussion, particularly for chronic lymphatic leukaemias. So far, however, there is no proof of such influences for this or for other chronic and acute forms of leukaemia.

A number of comparatively rare genetic mutations can increase the incidence risk for leukaemia, including trisomy of chromosome 21. Research is being carried out into other genetic changes.

The influence of viruses has not been conclusively proved and is also the subject of research. There is also a debate as to whether insufficient training of the immune system in childhood contributes towards increased risk, with no conclusion having yet been reached. No link to exposure to electromagnetic fields of any origin has been proved.

Figure 3.27.1a
Age-standardised incidence and mortality rates, by sex,
ICD-10 C91 – C95, Germany 1999 – 2010
per 100,000 (European standard)

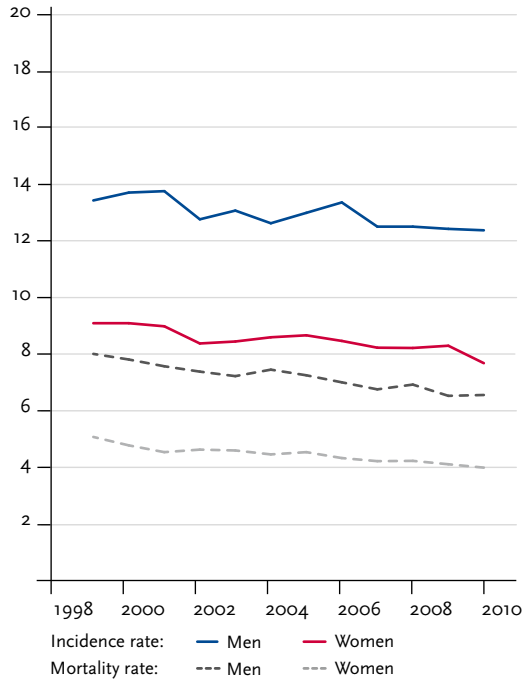


Figure 3.27.1b
Absolute numbers of incident cases and deaths, by sex,
ICD-10 C91 – C95, Germany 1999 – 2010

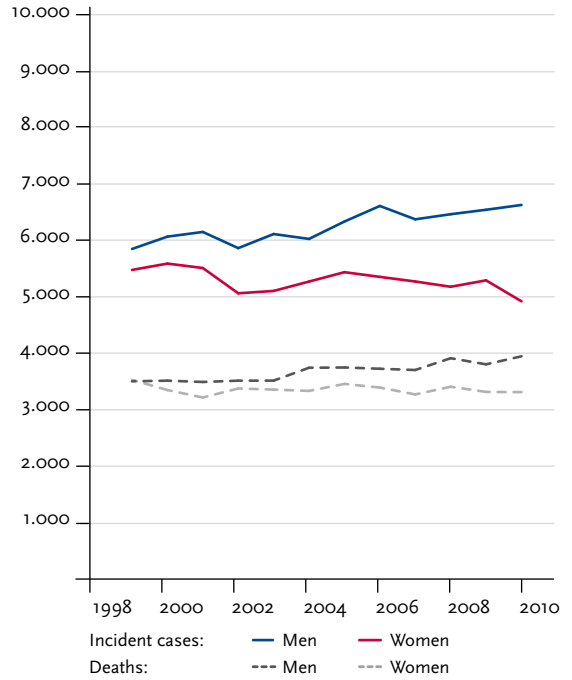


Figure 3.27.2
Age-specific incidence rates by sex, ICD-10 C91 – C95, Germany 2009 – 2010
per 100,000

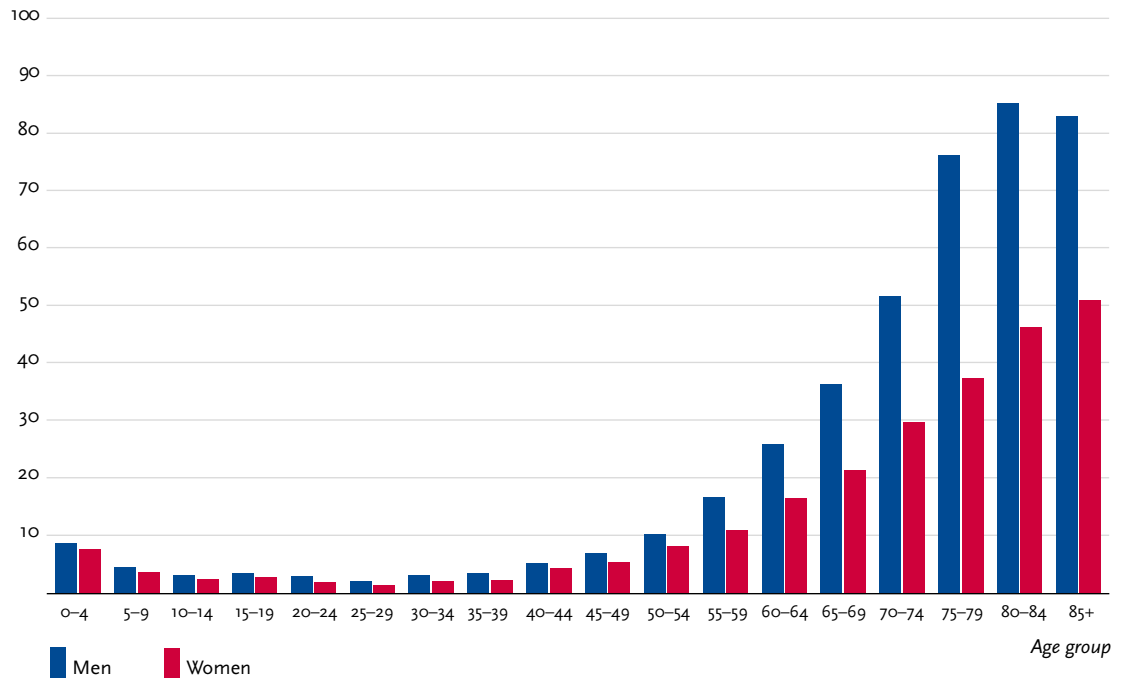


Table 3.27.2
Cancer incidence and mortality risks in Germany by age and sex, ICD-10 C91 – C95, database 2010

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 2,300)	1.3 %	(1 in 79)	<0.1%	(1 in 9,000)	0.9%	(1 in 110)
45 years	0.1%	(1 in 1,200)	1.2 %	(1 in 81)	<0.1%	(1 in 3,200)	0.9%	(1 in 110)
55 years	0.2%	(1 in 490)	1.2 %	(1 in 83)	0.1%	(1 in 1,200)	0.9%	(1 in 110)
65 years	0.4%	(1 in 250)	1.1 %	(1 in 90)	0.3%	(1 in 400)	0.9%	(1 in 110)
75 years	0.6%	(1 in 160)	0.9%	(1 in 110)	0.5%	(1 in 200)	0.8%	(1 in 120)
Lifetime risk			1.4%	(1 in 72)			0.9%	(1 in 110)
Women aged	in the next ten years		ever		in the next ten years		ever	
35 years	<0.1%	(1 in 3,300)	0.9%	(1 in 110)	<0.1%	(1 in 10,000)	0.7%	(1 in 150)
45 years	0.1%	(1 in 1,500)	0.9%	(1 in 120)	<0.1%	(1 in 5,000)	0.7%	(1 in 150)
55 years	0.1%	(1 in 770)	0.8%	(1 in 120)	0.1%	(1 in 1,700)	0.7%	(1 in 150)
65 years	0.2%	(1 in 430)	0.7%	(1 in 140)	0.1%	(1 in 690)	0.6%	(1 in 160)
75 years	0.3%	(1 in 290)	0.6%	(1 in 180)	0.3%	(1 in 330)	0.6%	(1 in 180)
Lifetime risk			1.0%	(1 in 100)			0.7%	(1 in 150)

Figure 3.27.3
Distribution of T-stages at first diagnosis by sex
T-stages are not defined for leukaemias.

Table 3.27.3
Proportion of the various leukaemia forms for all new diagnoses C91 – C95, by sex, Germany 2009 – 2010

	ALL ¹	CLL ²	AML ³	CML ⁴	others ⁵
Men	8 %	40 %	24 %	10 %	18 %
Women	8 %	34 %	30 %	10 %	18 %

¹ Acute lymphatic leukaemia (C91.0) ² Chronic lymphatic leukaemia (C91.1) ³ Acute myeloid leukaemia (C92.0)
⁴ Chronic myeloid leukaemia (C92.1) ⁵ incl. unspecified leukaemia forms

Figure 3.27.4a
Absolute survival rates up to 5 years after first diagnosis, by sex, ICD-10 C91 – C95, Germany 2009 – 2010

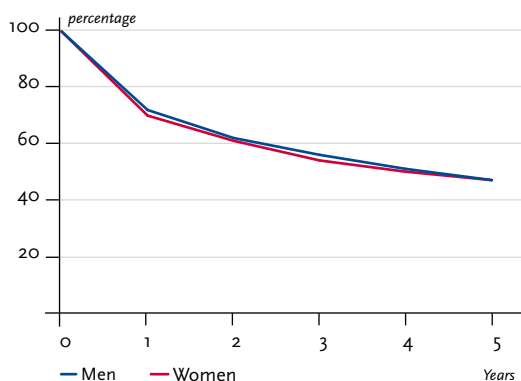


Figure 3.27.4b
Relative survival rates up to 5 years after first diagnosis, by sex, ICD-10 C91 – C95, Germany 2009 – 2010

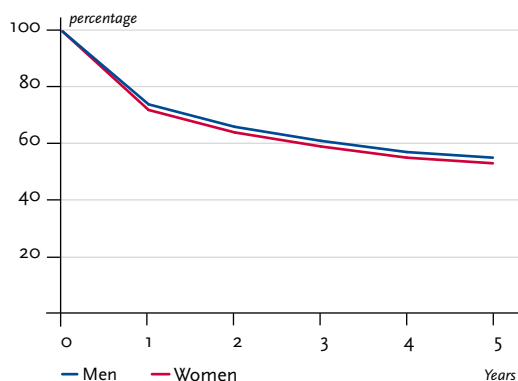


Figure 3.27.5
Registered age-standardised incidence and mortality rates in German federal states, by sex,
ICD-10 C91 – C95, 2009 – 2010
per 100,000 (European standard)

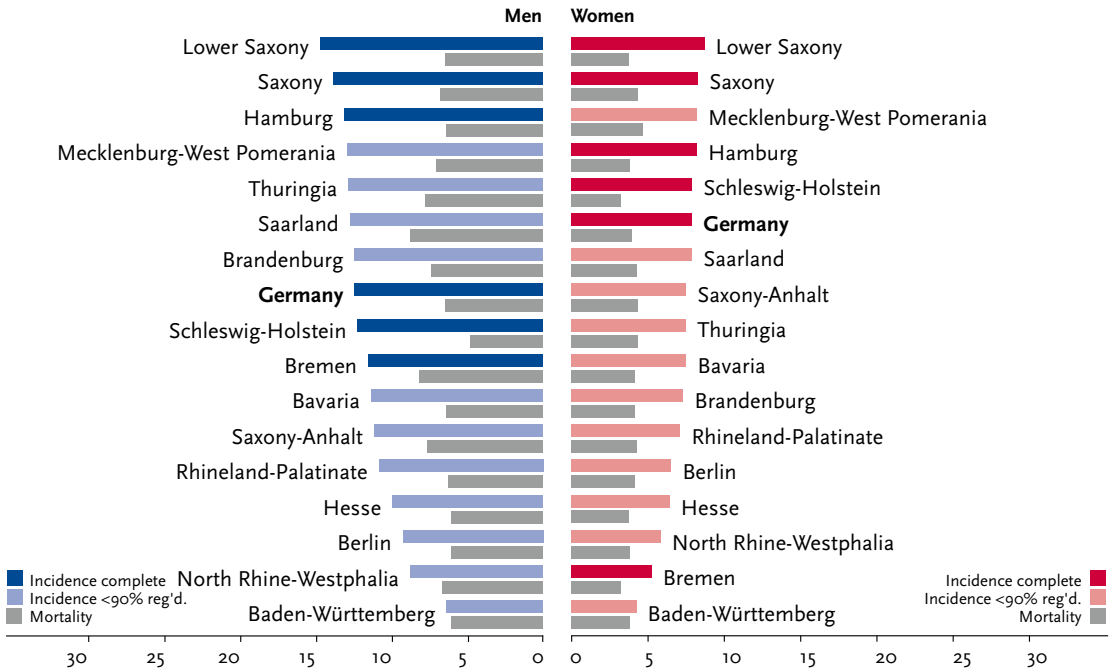


Figure 3.27.6
International comparison of age-standardised incidence and mortality rates, by sex,
ICD-10 C91 – C95, 2009 – 2010 or latest available year (details and sources, see appendix)
per 100,000 (European standard)

