

3.27 Multiple myeloma

Table 3.27.1
Overview of key epidemiological parameters for Germany, ICD-10 C90

	2011		2012		Prediction for 2016	
	Men	Women	Men	Women	Men	Women
Incident cases	3,560	2,940	3,490	2,850	3,800	3,000
Crude incidence rate ¹	9.1	7.2	8.9	6.9	9.4	7.4
Standardised incidence rate ^{1,2}	6.1	3.9	5.8	3.7	5.8	3.9
Median age at diagnosis	71	73	72	74		
Deaths	1,992	1,916	1,956	1,870		
Crude mortality rate ¹	5.1	4.7	5.0	4.6		
Standardised mortality rate ^{1,2}	3.3	2.2	3.1	2.1		
5-year prevalence	10,200	8,400	10,500	8,400		
	<i>after 5 years</i>		<i>after 10 years</i>			
Absolute survival rate (2011–2012) ³	41 (23–48)	40 (36–48)	22 (7–26)	22 (18–27)		
Relative survival rate (2011–2012) ³	48 (27–56)	45 (41–55)	31 (11–37)	30 (23–35)		

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

Epidemiology

Multiple myeloma (Plasmacytoma) is a malignant proliferation of anti-body-producing plasma cells. The disease mostly occurs initially in the bone marrow where it forms multiple myeloma with corresponding complications such as bone fractures and bone pain or blood count changes. In approximately 1% of cases involvement of other organs not associated with bone marrow leads to diagnosis (extramedullary plasmacytoma).

In Germany, in 2012 approximately 3,490 men and 2,850 women were newly diagnosed with the illness. The risk of developing the disease increases significantly in advanced years with cases being extremely rare before the age of 45 years (approximately 2% of all cases). Following age-standardisation the incidence rates for women and men were almost constant with the mortality rates in contrast for both genders declining slightly.

Given a relative 5-year survival rate of approximately 45% in women and 48% in men, the prognosis is relatively unfavourable. Even after maximum therapy, e.g. autologous stem cell transplant, a permanent cure is not to be expected. However, the course of the illness may in some cases be asymptomatic for a relatively long period, and during therapy temporary remissions may be possible.

Risk factors

The causes of the development of plasmacytomas (multiple myeloma) are largely still not yet understood. A monoclonal gammopathy of undetermined significance (MGUS) is considered to be the preliminary stage of the multiple myeloma. Recognised risk factors for multiple myeloma are advanced age and the male sex. Chronic infections such as HIV-infection or infection with the hepatitis C virus are associated with an increased risk of developing a multiple myeloma. There are currently conflicting opinions as to whether certain lifestyle habits or exposure to environmental toxins or radiation significantly increase the risk of developing a myeloma. According to more recent study data, being very overweight is linked with increased risk. Familial clustering has been observed though there is no definite evidence of heredity to date. However, variations in incidence within different population groups also point to genetic factors. People of black African origin are probably more frequently affected than white North Americans, Europeans or Asians.

Figure 3.27.1a
Age-standardised incidence and mortality rates,
by sex, ICD-10 C90, Germany 1999–2012
per 100,000 (European standard)

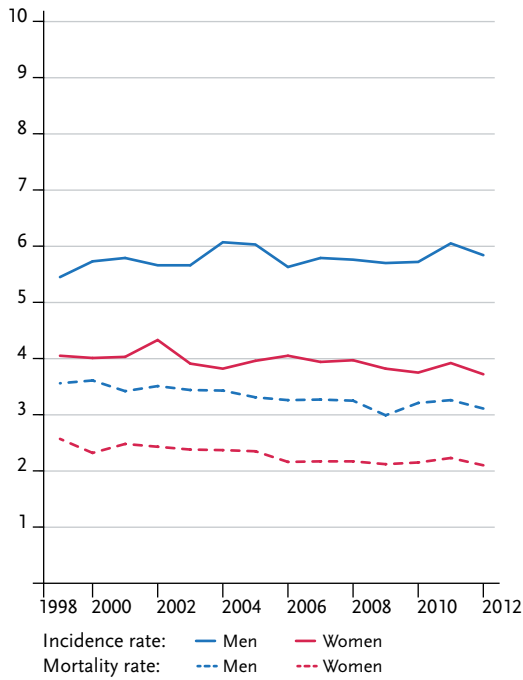


Figure 3.27.1b
Absolute numbers of incident cases and deaths,
by sex, ICD-10 C90, Germany 1999–2012

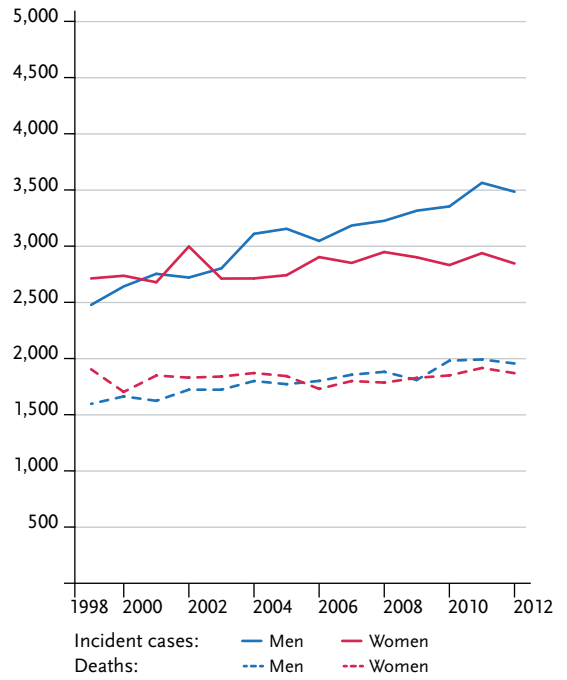


Figure 3.27.2
Age-specific incidence rates by sex, ICD-10 C90, Germany 2011–2012
per 100,000

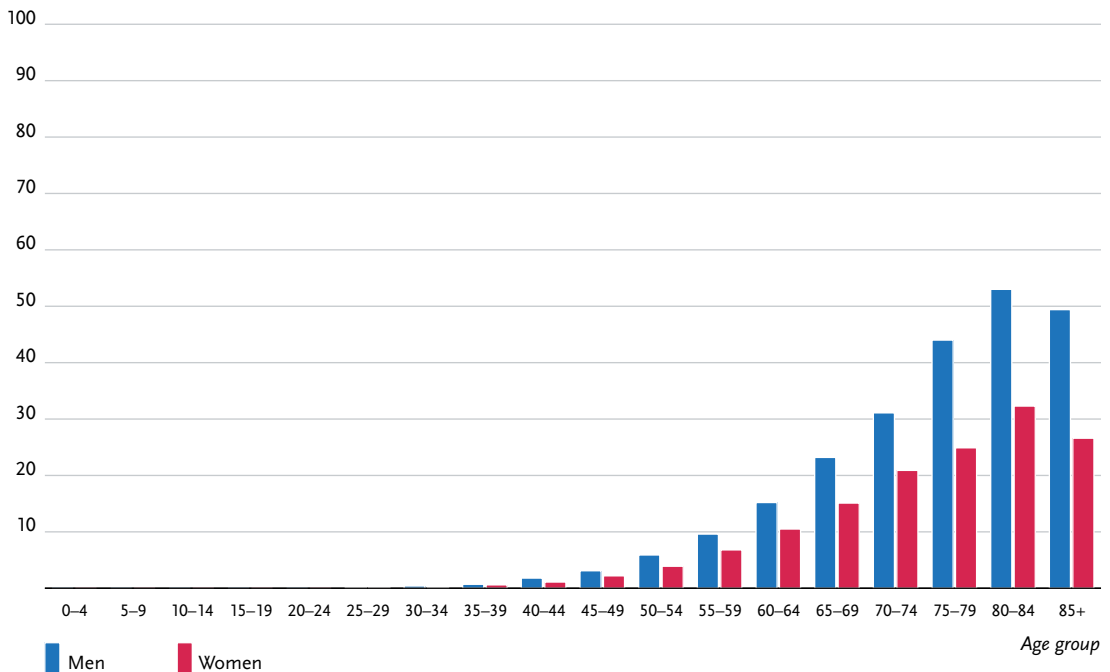


Table 3.27.2
Cancer incidence and mortality risks in Germany by age and sex, ICD-10 C90, database 2012

	Risk of developing cancer				Mortality risk			
	in the next ten years		ever		in the next ten years		ever	
Men aged								
35 years	<0.1%	(1 in 7,900)	0.7%	(1 in 140)	<0.1%	(1 in 36,100)	0.4%	(1 in 230)
45 years	<0.1%	(1 in 2,300)	0.7%	(1 in 140)	<0.1%	(1 in 6,900)	0.4%	(1 in 230)
55 years	0.1%	(1 in 840)	0.7%	(1 in 140)	0.1%	(1 in 2,000)	0.4%	(1 in 230)
65 years	0.2%	(1 in 410)	0.6%	(1 in 160)	0.1%	(1 in 750)	0.4%	(1 in 240)
75 years	0.3%	(1 in 290)	0.5%	(1 in 200)	0.2%	(1 in 410)	0.4%	(1 in 270)
Lifetime risk			0.7%	(1 in 140)			0.4%	(1 in 240)
Women aged								
35 years	<0.1%	(1 in 11,200)	0.6%	(1 in 180)	<0.1%	(1 in 64,100)	0.4%	(1 in 260)
45 years	<0.1%	(1 in 3,300)	0.6%	(1 in 180)	<0.1%	(1 in 11,000)	0.4%	(1 in 260)
55 years	0.1%	(1 in 1,200)	0.5%	(1 in 190)	<0.1%	(1 in 3,000)	0.4%	(1 in 260)
65 years	0.2%	(1 in 600)	0.5%	(1 in 210)	0.1%	(1 in 1,000)	0.4%	(1 in 270)
75 years	0.2%	(1 in 420)	0.4%	(1 in 290)	0.2%	(1 in 530)	0.3%	(1 in 330)
Lifetime risk			0.6%	(1 in 180)			0.4%	(1 in 260)

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

Figure 3.27.4a
Absolute survival rates up to 10 years after first diagnosis,
by sex, ICD-10 C90, Germany 2011–2012

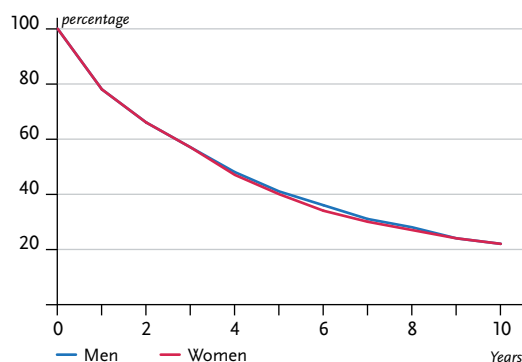


Figure 3.27.4b
Relative survival rates up to 10 years after first diagnosis,
by sex, ICD-10 C90, Germany 2011–2012

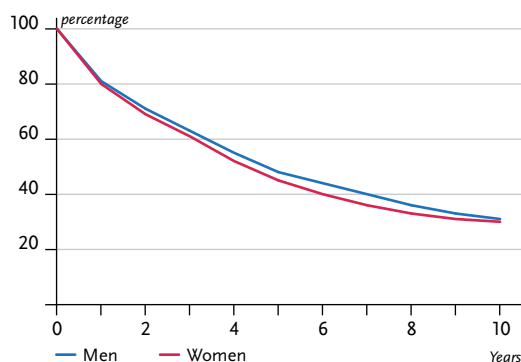


Figure 3.27.5
Registered age-standardised incidence and mortality rates in German federal states, by sex,
ICD-10 C90, 2011–2012
per 100,000 (European standard)

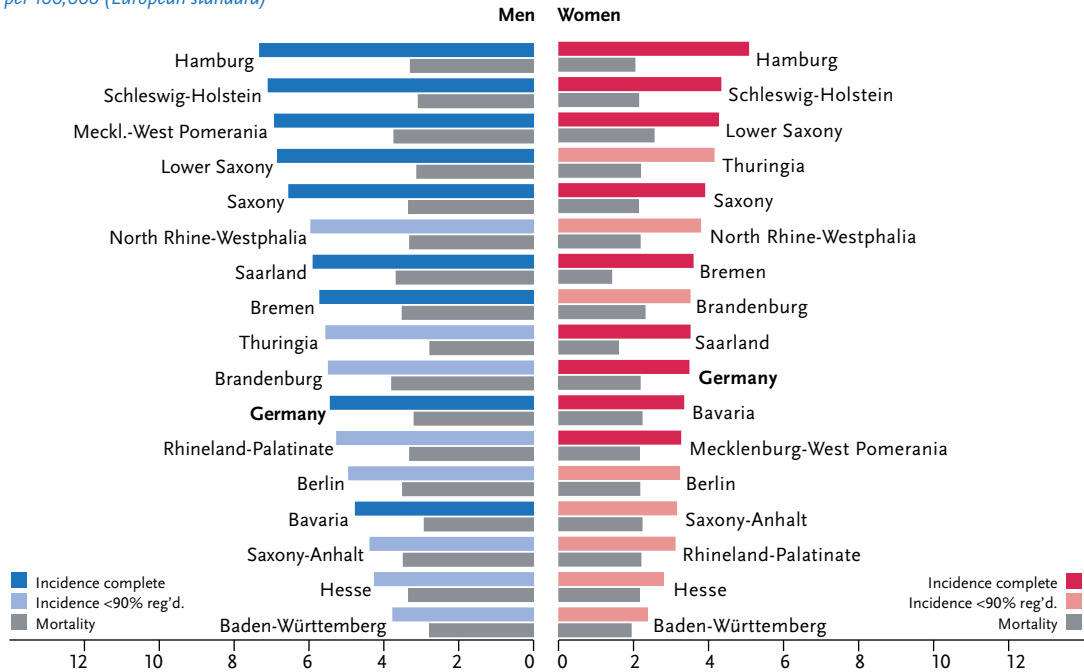
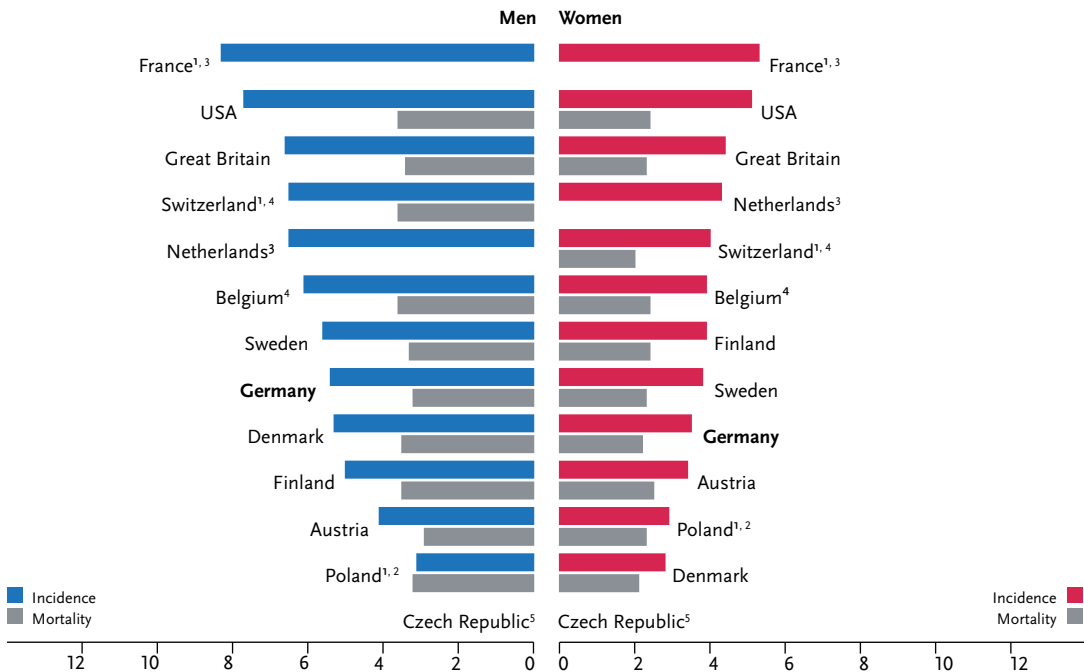


Figure 3.27.6
International comparison of age-standardised incidence and mortality rates, by sex,
ICD-10 C90, 2011–2012 or latest available year (details and sources, see appendix)
per 100,000 (European standard)



¹ incl. C88

² data for mortality incl. C96

³ no comparable data for mortality

⁴ data for mortality incl. C88, C96

⁵ no comparable data