

3.30 Multiple myeloma

Table 3.30.1
Overview of key epidemiological parameters for Germany, ICD-10 C90

Incidence	2015		2016		Prediction for 2020	
	Women	Men	Women	Men	Women	Men
Incident cases	3,120	4,010	3,000	3,910	3,200	4,400
Crude incidence rate ¹	7.5	10.0	7.2	9.6	7.7	10.8
Age-standardised incidence rate ^{1,2}	4.0	6.4	3.8	6.1	3.9	6.4
Median age at diagnosis	74	72	74	72		
Mortality	2015		2016		2017	
	Women	Men	Women	Men	Women	Men
Deaths	1,950	2,149	1,987	2,243	1,851	2,287
Crude mortality rate ¹	4.7	5.3	4.8	5.5	4.4	5.6
Age-standardised mortality rate ^{1,2}	2.1	3.1	2.1	3.2	1.9	3.2
Median age at death	77	76	78	76	78	76
Prevalence and survival rates	5 years		10 years			
	Women	Men	Women	Men		
Prevalence	9,800	12,600	14,600	18,300		
Absolute survival rate (2015–2016) ³	43 (35–54)	41 (33–50)	23 (13–30)	23 (17–27)		
Relative survival rate (2015–2016) ³	49 (39–61)	49 (39–59)	31 (18–40)	33 (25–41)		

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

Multiple myeloma (also known as plasmacytoma) is a malignant proliferation of antibody-producing plasma cells. In most cases, the disease initially occurs in bone marrow. It often forms multiple foci with corresponding complications such as broken bones, painful bones and changes in blood cell counts. Only about 1% of diagnoses affect organs other than the bone marrow (extramedullary plasmacytoma).

In 2016, around 3,000 women and 3,900 men in Germany developed this condition. The risk of illness increases significantly in older age, with cases in before the age of 45 years being extremely rare (about 2%). Age-standardised incidence and mortality rates have remained almost constant among women and men in recent years.

Multiple myeloma has a generally unfavourable prognosis with relative 5-year survival rates of just 49%. In most cases, a lasting return to good health is unlikely. The disease sometimes causes only few symptoms for long periods, and temporary remissions are possible with therapy.

Risk factors

The causes of multiple myeloma are still largely unknown. Monoclonal gammopathy of undetermined significance (MGUS) is considered a precancerous stage of multiple myeloma. Other risk factors associated with multiple myeloma include advanced age, male gender and a family history of the disease.

Despite the fact that family clusters have been observed, there is no conclusive evidence to suggest that genetics plays a role. Nonetheless, variations in incidence within different population groups could still be related to genetic factors.

Chronic infections with HIV or hepatitis C are associated with an increased risk of multiple myeloma. Recent studies have shown that excess body weight also increases the risk of developing the condition.

There are currently conflicting results as to whether certain lifestyle habits, exposure to environmental toxins or radiation significantly increase the risk of developing myeloma.

Figure 3.30.1a
 Age-standardised incidence and mortality rates by sex, ICD-10 C90, Germany 1999–2016/2017, projection (incidence) through 2020 per 100,000 (old European Standard)

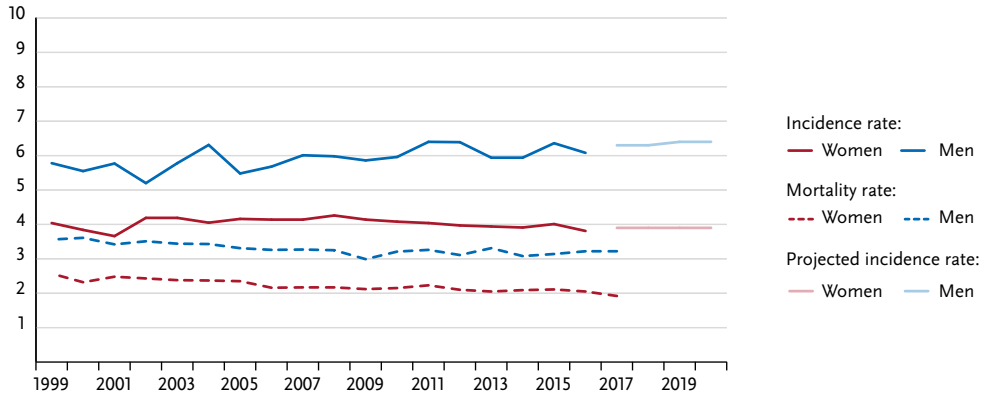


Figure 3.30.1b
 Absolute numbers of incident cases and deaths by sex, ICD-10 C90, Germany 1999–2016/2017, projection (incidence) through 2020

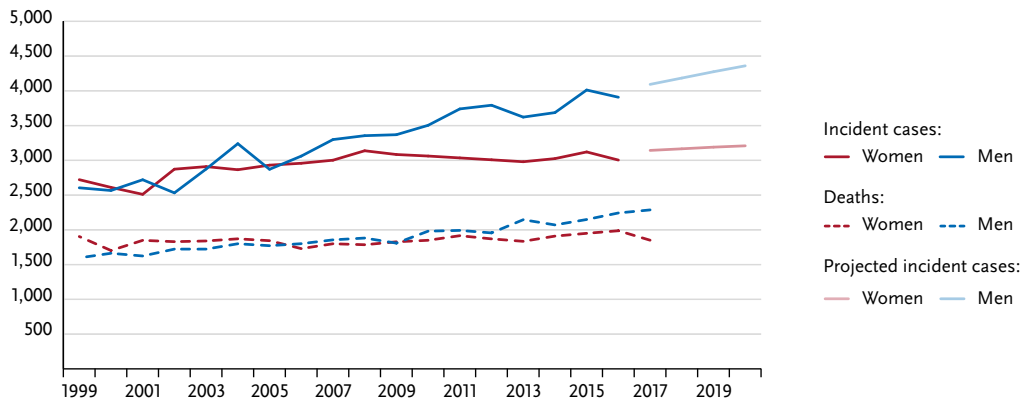


Figure 3.30.2
 Age-specific incidence rates by sex, ICD-10 C90, Germany 2015–2016 per 100,000

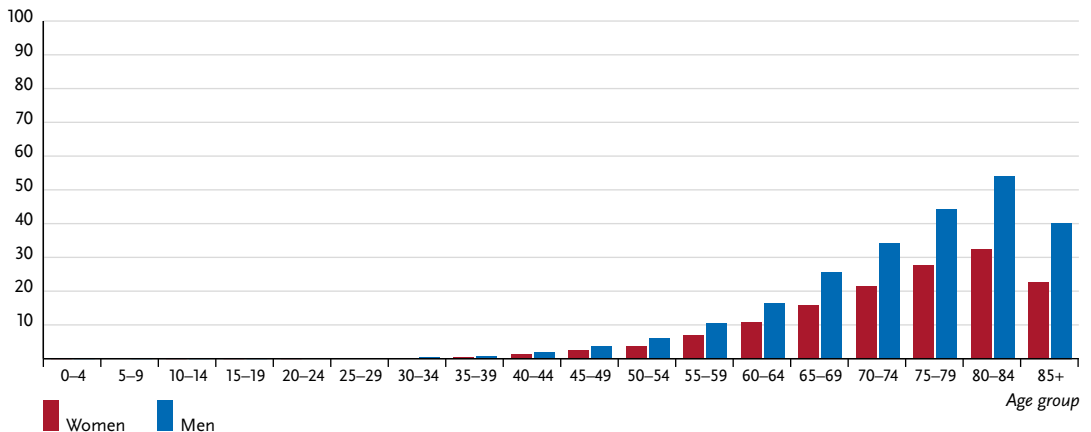


Table 3.30.2
Cancer incidence and mortality risks in Germany by age and sex, ICD-10 C90, database 2016

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 10,600)	0.6%	(1 in 180)	< 0.1%	(1 in 65,000)	0.4%	(1 in 250)
45 years	< 0.1%	(1 in 3,200)	0.6%	(1 in 180)	< 0.1%	(1 in 12,700)	0.4%	(1 in 250)
55 years	0.1%	(1 in 1,200)	0.5%	(1 in 190)	< 0.1%	(1 in 3,200)	0.4%	(1 in 250)
65 years	0.2%	(1 in 590)	0.5%	(1 in 210)	0.1%	(1 in 1,100)	0.4%	(1 in 260)
75 years	0.2%	(1 in 410)	0.3%	(1 in 290)	0.2%	(1 in 470)	0.3%	(1 in 290)
Lifetime risk			0.6%	(1 in 180)			0.4%	(1 in 250)
Men aged	in the next ten years		ever		in the next ten years		ever	
35 years	< 0.1%	(1 in 7,300)	0.7%	(1 in 140)	< 0.1%	(1 in 38,800)	0.5%	(1 in 210)
45 years	< 0.1%	(1 in 2,100)	0.7%	(1 in 140)	< 0.1%	(1 in 6,900)	0.5%	(1 in 210)
55 years	0.1%	(1 in 770)	0.7%	(1 in 140)	0.1%	(1 in 1,800)	0.5%	(1 in 210)
65 years	0.3%	(1 in 390)	0.6%	(1 in 160)	0.1%	(1 in 750)	0.5%	(1 in 220)
75 years	0.4%	(1 in 280)	0.5%	(1 in 210)	0.3%	(1 in 360)	0.4%	(1 in 240)
Lifetime risk			0.7%	(1 in 140)			0.5%	(1 in 220)

Figure 3.30.3
Distribution of UICC-stages at first diagnosis by sex
Not included because UICC-stages are not defined for multiple myeloma.

Figure 3.30.4
Absolute and relative survival rates up to 10 years after first diagnosis, by sex, ICD-10 C90, Germany 2015–2016

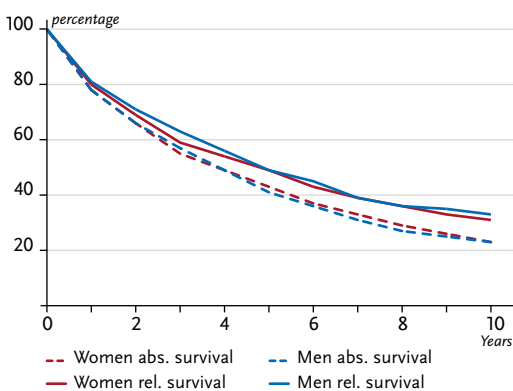


Figure 3.30.5
Relative 5-year survival by UICC-stage and sex
Not included because UICC-stages are not defined for multiple myeloma.

Figure 3.30.6
 Age-standardised incidence and mortality rates in German federal states by sex, ICD-10 C90, 2015–2016
 (Incidence in Bremen for 2014 and 2016, incidence in eastern Germany for 2014 to 2015)
 per 100,000 (old European Standard)

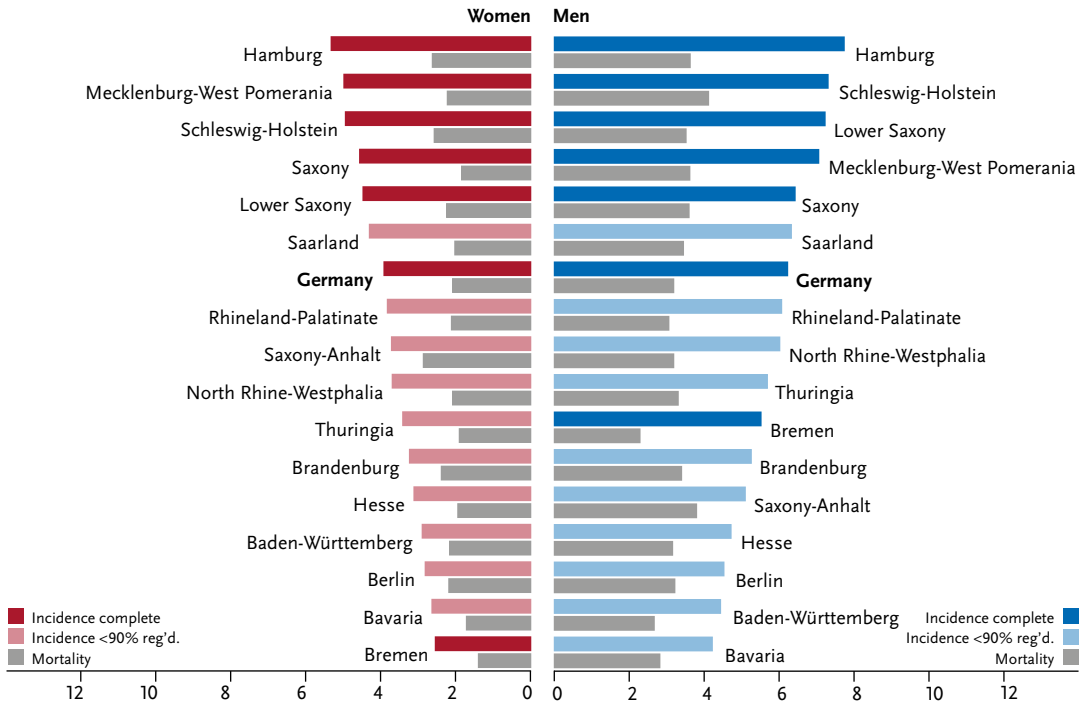
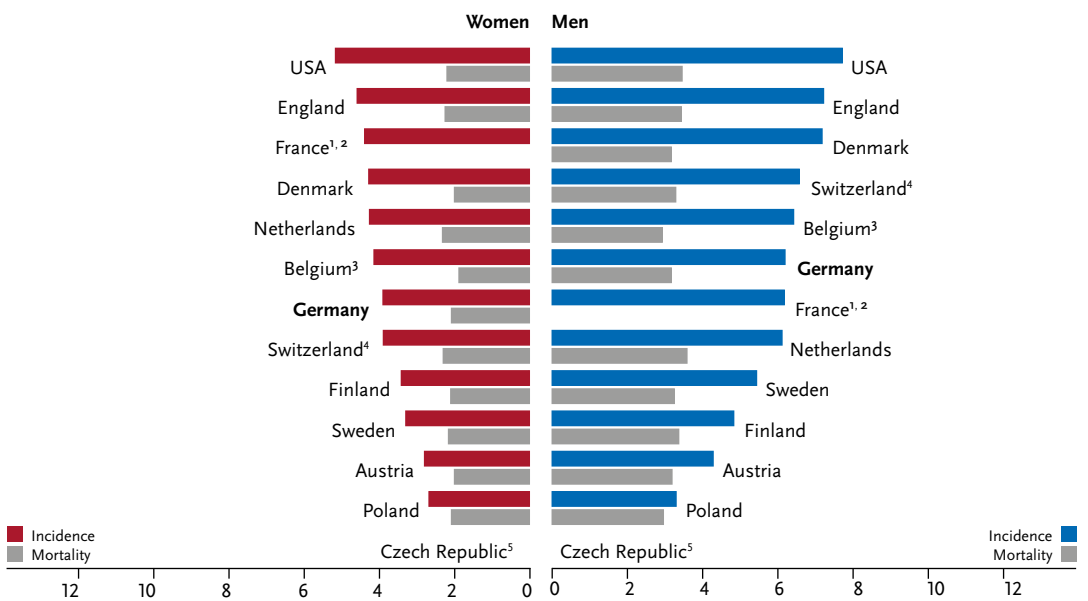


Figure 3.30.7
 International comparison of age-standardised incidence and mortality rates by sex, ICD-10 C90,
 2015–2016 or latest available year (details and sources, see appendix)
 per 100,000 (old European Standard)



¹ Multiple myeloma (plasmacytoma) defined by ICD-O-3 morphologies 9731/3, 9732/3, 9733/3, 9734/3

² No data for mortality available

³ Mortality only for 2015 from WHO mortality database

⁴ Mortality only for 2015

⁵ No data available