

3.30 Multiple myeloma

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

Incidence	2019		2020			
	Women	Men	Women	Men		
Incident cases	3,210	4,030	3,010	3,700		
Crude incidence rate ¹	7.6	9.8	7.1	9.0		
Age-standardised incidence rate ^{1,2}	3.9	6.1	3.7	5.5		
Median age at diagnosis	75	72	74	72		
Mortality	2019		2020		2021	
	Women	Men	Women	Men	Women	Men
Deaths	1,884	2,116	1,881	2,213	1,836	2,208
Crude mortality rate ¹	4.5	5.2	4.5	5.4	4.4	5.4
Age-standardised mortality rate ^{1,2}	1.8	2.8	1.8	2.9	1.8	2.9
Median age at death	79	77	80	77	80	78
Prevalence and survival rates	5 years		10 years		25 years	
	Women	Men	Women	Men	Women	Men
Prevalence	9,900	12,700	15,000	18,800	19,800	24,100
Absolute survival rate (2019–2020) ³	50 (45–60)	46 (36–55)	29 (19–42)	26 (11–33)		
Relative survival rate (2019–2020) ³	58 (52–68)	56 (42–66)	38 (25–56)	38 (16–50)		

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

Epidemiology

Multiple myeloma (synonym: plasmocytoma) is a malignant proliferation of antibody-producing plasma cells. In most cases, the disease initially occurs in the bone marrow, where it often forms several foci of disease (multiple myeloma) with corresponding complications, such as bone fractures and pain or blood count changes. Only about 1% of diagnoses affect organs outside the bone marrow (extramedullary plasmocytoma).

In 2020, the disease was newly diagnosed in about 3,010 women and 3,700 men in Germany. The risk of developing the disease increases significantly with age; cases before the age of 45 are extremely rare. After age standardisation, the incidence and mortality rates for women and men have remained almost constant since around 2005.

The prognosis is rather unfavourable with relative 5-year survival rates of 58% for women and 56% for men. Normally, a permanent cure is not to be expected. However, the disease can be asymptomatic for a relatively long time and temporary remissions under therapy are possible.

Risk factors

Multiple myeloma occurs more frequently in old age and more often in men than in women. The cause of the disease is unknown. Among other things, chronic infections, obesity, immunosuppression, environmental toxins and ionising radiation are discussed as risk factors. In cases of intensive occupational exposure to benzene, multiple myeloma is recognised as an occupational disease under certain conditions.

A certain genetic predisposition is indicated by a higher risk for first-degree relatives of myeloma patients and different disease rates in different population groups. In the USA, for example, people of African descent fall ill more frequently than people of Caucasian descent.

Monoclonal gammopathy of undetermined significance (MGUS) is considered a precursor to multiple myeloma. The risk of MGUS developing into multiple myeloma is estimated at around 1% per year.

Figure 3.30.1a
 Age-standardised incidence and mortality rates by sex, ICD-10 C90, Germany 1999 – 2020/2021
 per 100,000 (old European Standard)

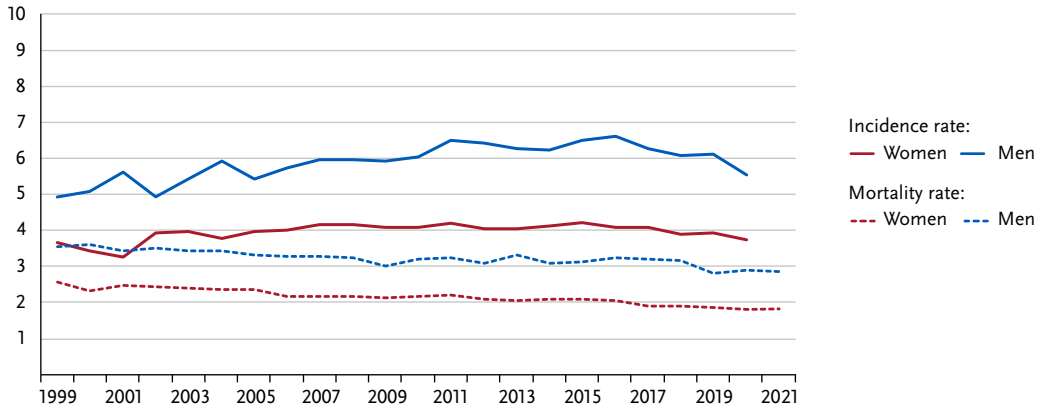


Figure 3.30.1b
 Absolute numbers of incident cases and deaths by sex, ICD-10 C90, Germany 1999 – 2020/2021

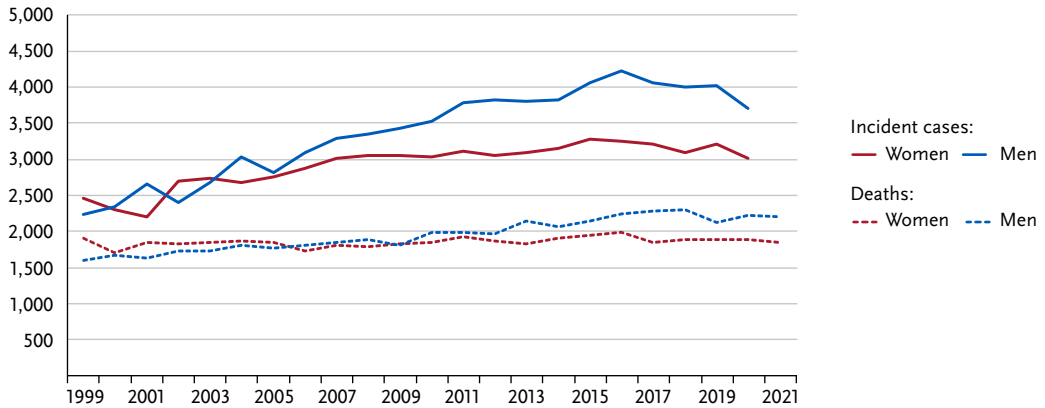


Figure 3.30.2
 Age-specific incidence rates by sex, ICD-10 C90, Germany 2019 – 2020
 per 100,000

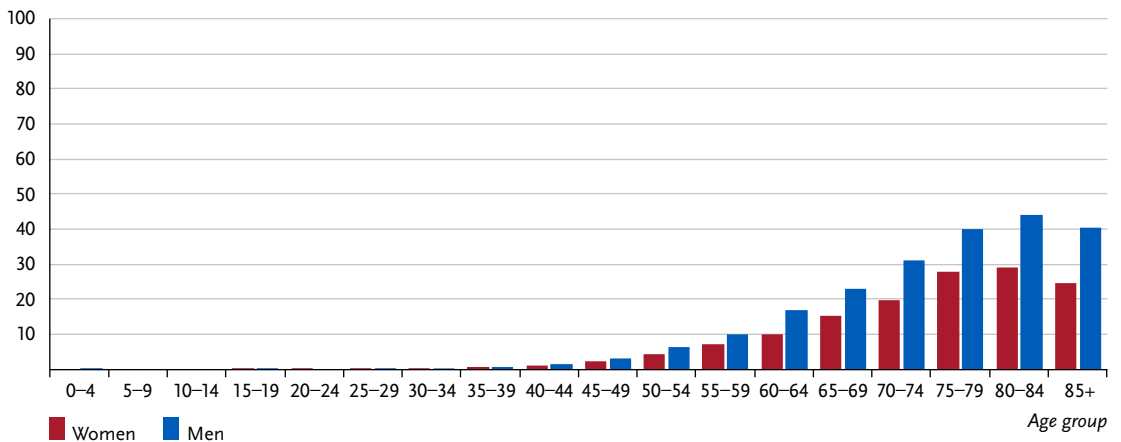


Table 3.30.2
Cancer incidence and mortality risks in Germany by age and sex, ICD-10 C90, database 2019

Risk of developing cancer				Mortality risk					
Women aged		in the next 10 years		ever		in the next 10 years		ever	
35 years	< 0.1 %	(1 in 1,100)	0.5 %	(1 in 200)	< 0.1 %	(1 in 205,600)	0.4 %	(1 in 270)	
45 years	< 0.1 %	(1 in 3,200)	0.5 %	(1 in 200)	< 0.1 %	(1 in 16,300)	0.4 %	(1 in 270)	
55 years	0.1 %	(1 in 1,300)	0.5 %	(1 in 210)	< 0.1 %	(1 in 3,900)	0.4 %	(1 in 270)	
65 years	0.2 %	(1 in 640)	0.4 %	(1 in 230)	0.1 %	(1 in 1,200)	0.4 %	(1 in 280)	
75 years	0.2 %	(1 in 460)	0.3 %	(1 in 310)	0.2 %	(1 in 540)	0.3 %	(1 in 320)	
Lifetime risk			0.5 %	(1 in 200)			0.4 %	(1 in 280)	
Men aged		in the next 10 years		ever		in the next 10 years		ever	
35 years	< 0.1 %	(1 in 9,200)	0.6 %	(1 in 170)	< 0.1 %	(1 in 50,500)	0.4 %	(1 in 230)	
45 years	< 0.1 %	(1 in 2,900)	0.6 %	(1 in 170)	< 0.1 %	(1 in 10,300)	0.4 %	(1 in 230)	
55 years	0.1 %	(1 in 1,200)	0.6 %	(1 in 180)	< 0.1 %	(1 in 2,400)	0.4 %	(1 in 230)	
65 years	0.2 %	(1 in 580)	0.5 %	(1 in 200)	0.1 %	(1 in 860)	0.4 %	(1 in 230)	
75 years	0.3 %	(1 in 390)	0.4 %	(1 in 270)	0.2 %	(1 in 410)	0.4 %	(1 in 250)	
Lifetime risk			0.6 %	(1 in 170)			0.4 %	(1 in 240)	

Figure 3.30.3
Distribution of UICC stages at 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 diagnosis, by sex, ICD-10 C90, Germany 2019 – 2020

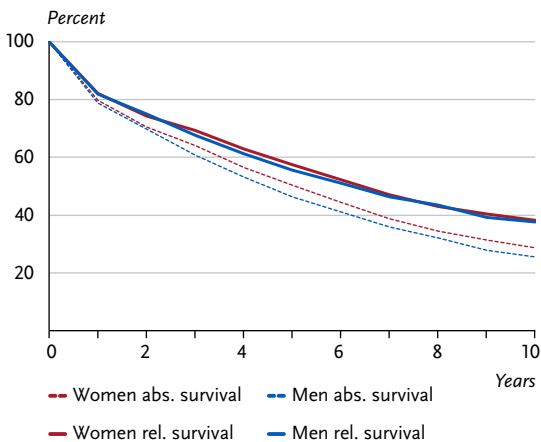


Figure 3.30.5
Relative 5-year survival by age at diagnosis and sex, ICD-10 C90, Germany 2019 – 2020

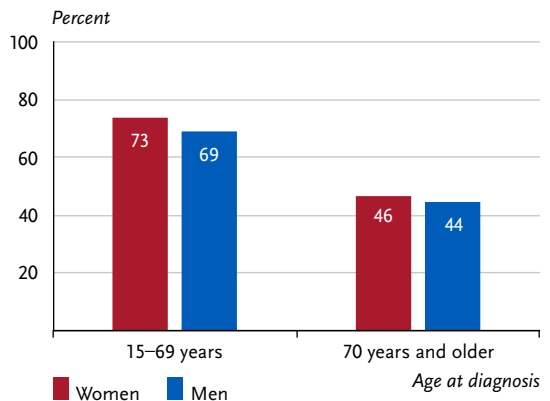


Figure 3.30.6
 Age-standardised incidence and mortality rates in German federal states by sex, ICD-10 C90, 2019 – 2020
 per 100,000 (old European Standard)

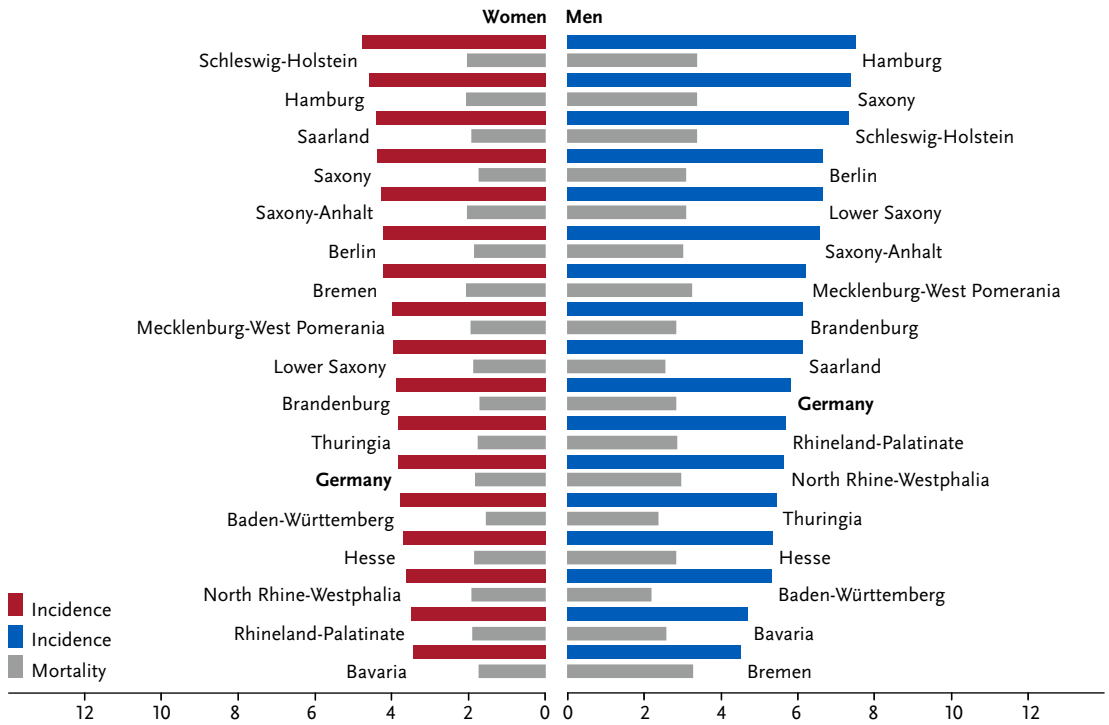
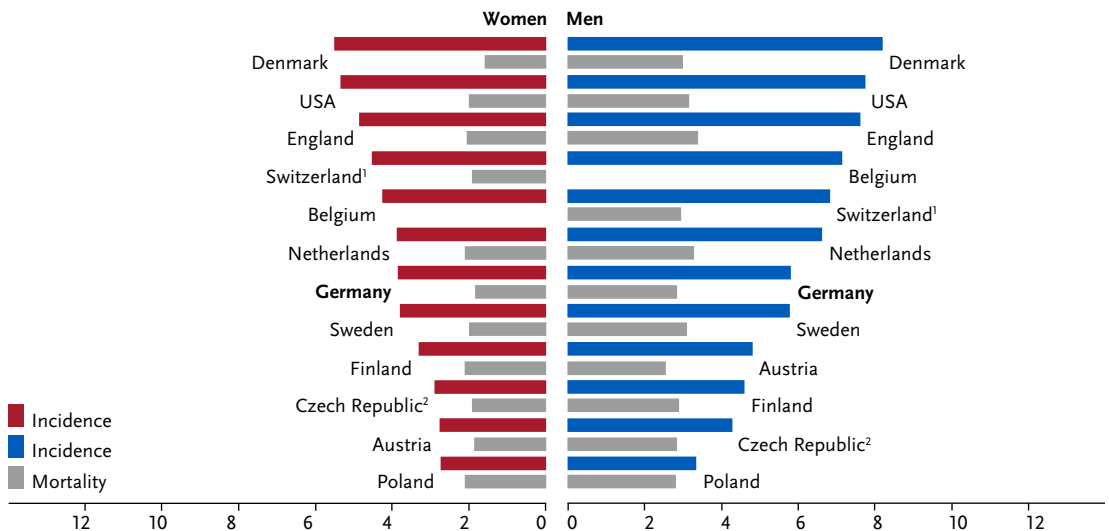


Figure 3.30.7
 International comparison of age-standardised incidence and mortality rates by sex,
 ICD-10 C90, 2019 – 2020 or latest available year (details and sources, see appendix)
 per 100,000 (old European Standard)



¹ Switzerland: incidence data for 2015 – 2019
² Czech Republic: incidence estimates by ENCR