

### 3.4 Stomach

**Table 3.4.1**  
Overview of key epidemiological parameters for Germany, ICD-10 C16

	2011		2012		Prediction for 2016	
	Men	Women	Men	Women	Men	Women
Incident cases	9,800	6,640	9,180	6,460	9,200	6,400
Crude incidence rate <sup>1</sup>	25.0	16.2	23.4	15.7	23.1	15.4
Standardised incidence rate <sup>1,2</sup>	17.0	8.6	15.6	8.3	14.4	7.9
Median age at diagnosis	71	75	72	75		
Deaths	5,691	4,399	5,770	4,208		
Crude mortality rate <sup>1</sup>	14.5	10.7	14.7	10.2		
Standardised mortality rate <sup>1,2</sup>	9.7	5.2	9.5	4.9		
5-year prevalence	20,100	14,200	19,800	13,900		
	<i>after 5 years</i>		<i>after 10 years</i>			
Absolute survival rate (2011–2012) <sup>3</sup>	26 (24–29)	28 (24–32)	19 (16–23)	20 (17–26)		
Relative survival rate (2011–2012) <sup>3</sup>	32 (30–34)	33 (28–39)	29 (25–34)	31 (25–45)		

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

#### Epidemiology

Histologically, various forms of adenocarcinomas predominate in the stomach and some are only to be found there, such as signet ring cell carcinoma (15 %) and certain neuro-endocrine carcinoma. Particularly noteworthy are the (mucosa-associated) MALT lymphomas originating in the stomach mucosa that are increasingly counted among the low-grade non-Hodgkin lymphoma. In addition to carcinomas, mesenchymal and mixed tumours occur only rarely.

Men on average are diagnosed with stomach cancer at the age of 72, women not until the age of 75 – both later than for cancer in general. Seventy-five-year-old men and women are at greatest risk of falling ill with stomach cancer within the following ten years. Still more than 1 % of the population die from stomach cancer.

For decades in Germany – as in other industrialised nations – there has been a steady decline in the incidence and mortality rates for stomach cancer. This trend has continued even after the turn of the Millennium in all age groups.

The relative 5-year-survival rates are around 30 % for both men and women. Although the 5-year-survival prospects for stomach cancer have recently improved, they still tend to be unfavourable in comparison to other forms of cancer. Only in just over half of all cases is the tumour stage noted on diagnosis. These statistics reveal that about two-thirds of these cancers are discovered at a late stage (T3 or T4).

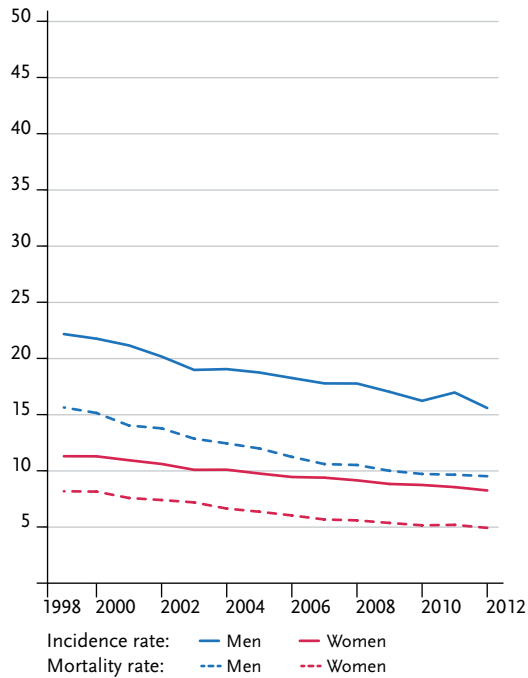
#### Risk factors

A bacterial infection of the stomach with *Helicobacter pylori* is the most important risk factor for stomach cancer, as this can probably strengthen the effects of other risks. Smoking and excessive alcohol consumption also increase the risk of stomach cancer. The relationships between dietary factors and the risk of stomach cancer are complex. In general, a diet with a low fruit and vegetable content and high animal product content is associated with a higher risk. There are indications that chronic heartburn or gastro-oesophageal reflux increases the risk for certain forms of tumour at the transition from the stomach to the oesophagus. Being overweight can also promote these carcinomas. Low socio-economic status and past stomach surgery continue to be associated with an increased frequency of stomach cancer.

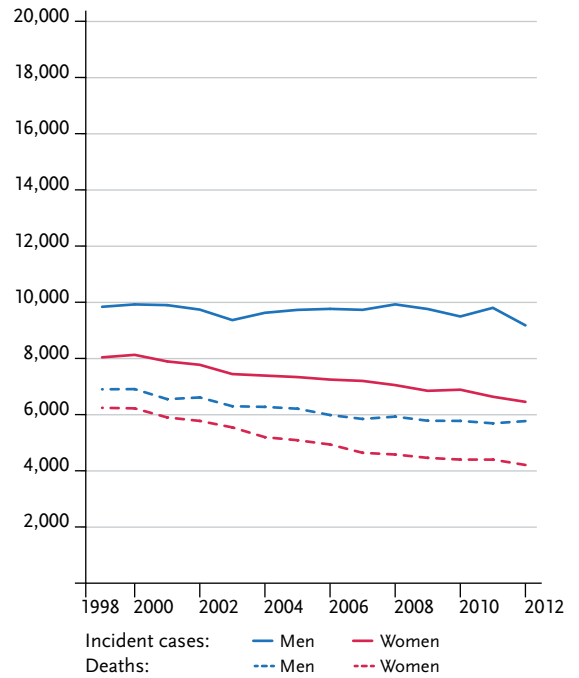
First-degree relatives of patients have a risk two to three times higher than the general population. It is not always clear whether this is due to a shared lifestyle, to the transmission of *Helicobacter pylori* within the family, or to hereditary gene mutations. In the case of young patients, it can be useful for relatives to receive genetic advice. The same applies for members of families with rare hereditary colorectal cancer (HNPCC, Lynch syndrome).

Pernicious anaemia and several other pre-existing diseases constitute risk factors that affect only comparatively few people. Among the mostly benign stomach polyps, only the rare adenoma is regarded as a precursor to cancer.

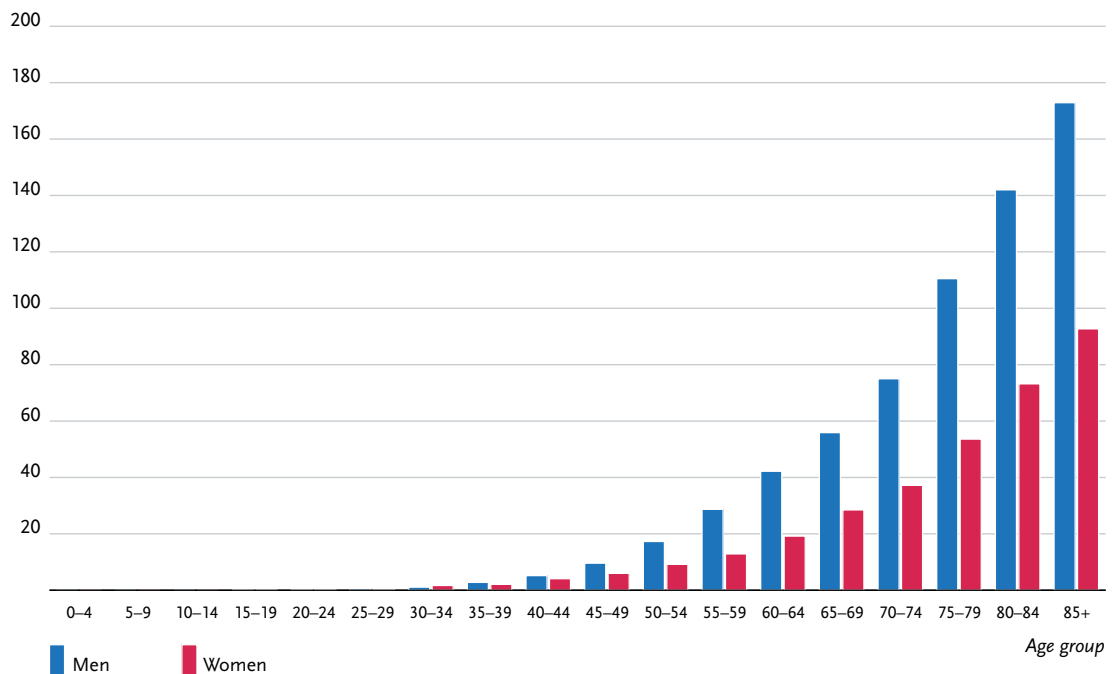
**Figure 3.4.1a**  
Age-standardised incidence and mortality rates, by sex,  
ICD-10 C16, Germany 1999–2012  
per 100,000 (European standard)



**Figure 3.4.1b**  
Absolute numbers of incident cases and deaths, by sex,  
ICD-10 C16, Germany 1999–2012



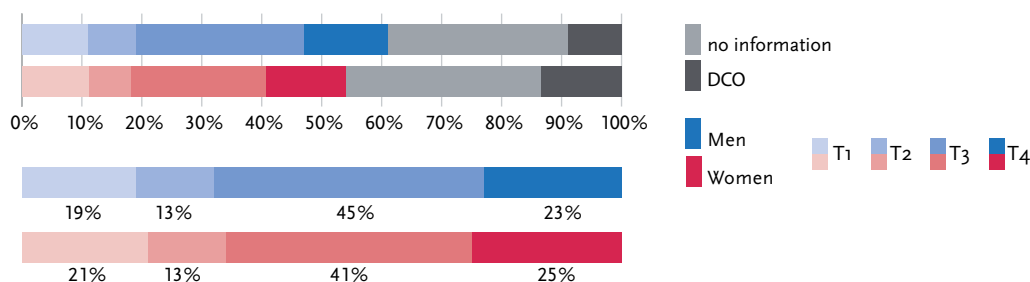
**Figure 3.4.2**  
Age-specific incidence rates by sex, ICD-10 C16, Germany 2011–2012  
per 100,000



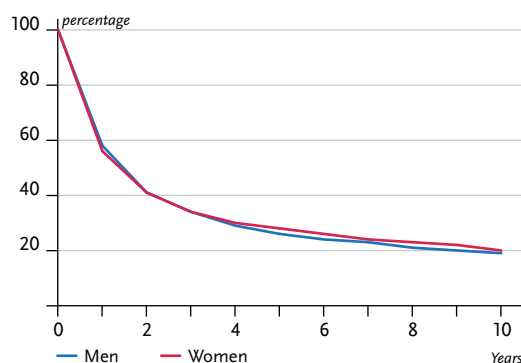
**Table 3.4.2**  
Cancer incidence and mortality risks in Germany by age and sex, ICD-10 C16, database 2012

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 2,600)	1.9%	(1 in 52)	<0.1%	(1 in 4,800)	1.3%	(1 in 78)
45 years	0.1%	(1 in 770)	1.9%	(1 in 52)	0.1%	(1 in 1,500)	1.3%	(1 in 78)
55 years	0.3%	(1 in 300)	1.9%	(1 in 54)	0.2%	(1 in 600)	1.3%	(1 in 79)
65 years	0.6%	(1 in 180)	1.7%	(1 in 59)	0.3%	(1 in 300)	1.2%	(1 in 82)
75 years	0.9%	(1 in 110)	1.4%	(1 in 70)	0.7%	(1 in 150)	1.1%	(1 in 90)
Lifetime risk			1.9%	(1 in 52)			1.3%	(1 in 79)
Women aged	in the next ten years		ever		in the next ten years		ever	
35 years	<0.1%	(1 in 3,200)	1.3%	(1 in 78)	<0.1%	(1 in 6,900)	0.9%	(1 in 120)
45 years	0.1%	(1 in 1,400)	1.3%	(1 in 79)	<0.1%	(1 in 2,700)	0.9%	(1 in 120)
55 years	0.2%	(1 in 640)	1.2%	(1 in 82)	0.1%	(1 in 1,200)	0.8%	(1 in 120)
65 years	0.3%	(1 in 320)	1.1%	(1 in 89)	0.2%	(1 in 580)	0.8%	(1 in 130)
75 years	0.5%	(1 in 190)	0.9%	(1 in 110)	0.4%	(1 in 280)	0.7%	(1 in 140)
Lifetime risk			1.3%	(1 in 77)			0.9%	(1 in 120)

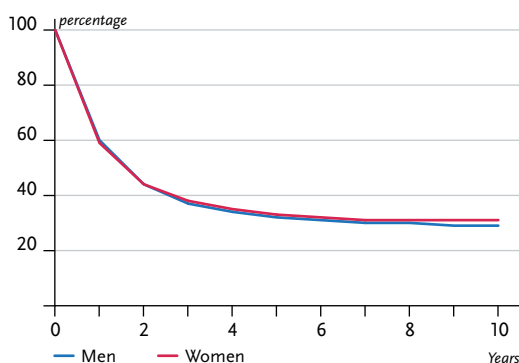
**Figure 3.4.3**  
Distribution of T-stages at first diagnosis by sex (top: all cases; bottom: only valid reports)  
ICD-10 C16, Germany 2011–2012



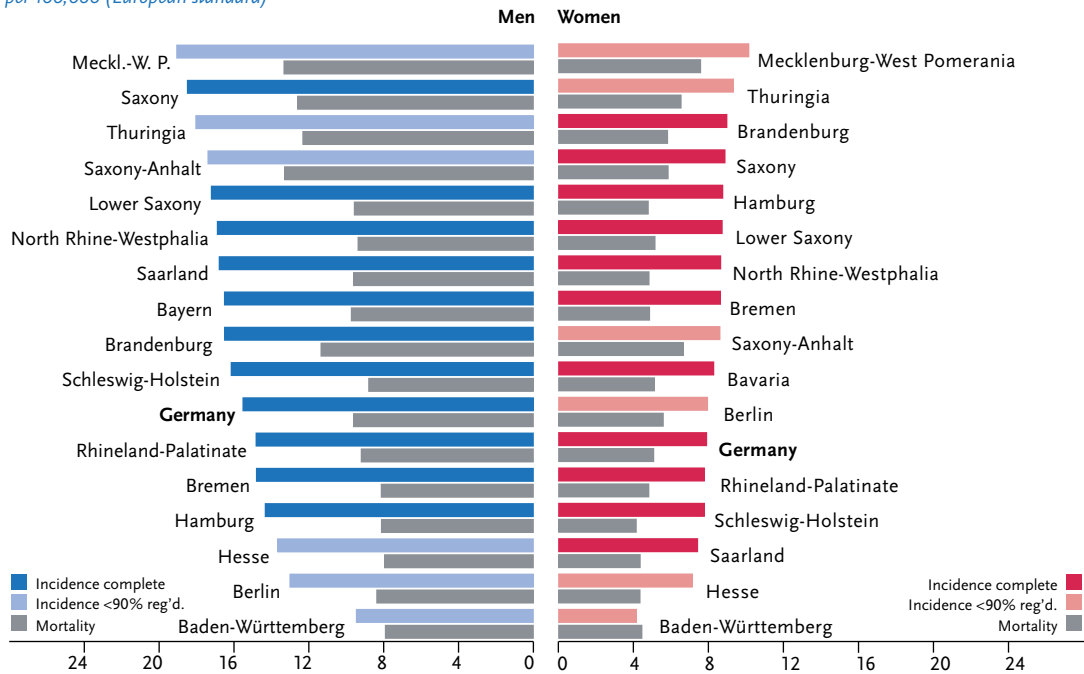
**Figure 3.4.4a**  
Absolute survival rates up to 10 years after first diagnosis,  
by sex, ICD-10 C16, Germany 2011–2012



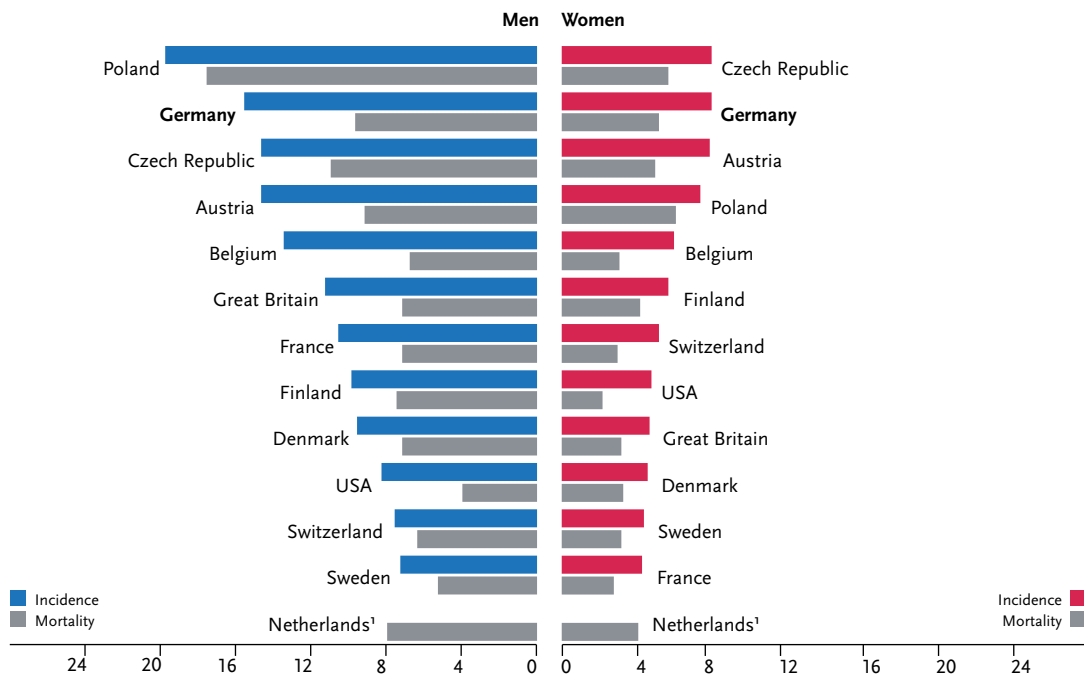
**Figure 3.4.4b**  
Relative survival rates up to 10 years after first diagnosis,  
by sex, ICD-10 C16, Germany 2011–2012



**Figure 3.4.5**  
Registered age-standardised incidence and mortality rates in German federal states, by sex,  
ICD-10 C16, 2011–2012  
per 100,000 (European standard)



**Figure 3.4.6**  
International comparison of age-standardised incidence and mortality rates, by sex,  
ICD-10 C16, 2011–2012 or latest available year (details and sources, see appendix)  
per 100,000 (European standard)



<sup>1</sup> no comparable data for incidence