

### 3.5 Colon and rectum

**Table 3.5.1**  
Overview of key epidemiological parameters for Germany, ICD-10 C18 – C21

	2009		2010		Prediction for 2014	
	Men	Women	Men	Women	Men	Women
Incident cases	34,770	29,540	33,800	28,620	35,500	28,400
Crude incidence rate <sup>1</sup>	86.6	70.8	84.3	68.7	89.5	68.9
Standardised incidence rate <sup>1,2</sup>	60.7	38.3	57.8	36.8	56.2	34.9
Median age at diagnosis	71	74	71	75		
Deaths	13,572	12,504	13,489	12,510		
Crude mortality rate <sup>1</sup>	33.8	30.0	33.6	30.0		
Standardised mortality rate <sup>1,2</sup>	23.2	14.2	22.3	13.9		
5-year prevalence	116,800	99,700	116,200	98,100		
Absolute 5-year survival rate (2009-2010) <sup>3</sup>			53 (47-58)	53 (48-58)		
Relative 5-year survival rate (2009-2010) <sup>3</sup>			64 (57-68)	65 (58-68)		

<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

About every seventh case of cancer in Germany affects the colon or rectum. In 2010 almost 34,000 men and 29,000 women were diagnosed. In addition, there were nearly 5,000 in situ tumours. Almost two thirds of tumours were located in the large intestine, some 30 % affected the rectum, while the remainder were located at the junction between the colon and the rectum (rectosigmoid), i.e. the anal canal. The rare cases of cancer of the upper intestine (C17) are not included here, in line with international practice. Histologically, besides squamous-cell carcinomas of the anus and rare neuroendocrinal tumours (approx. 1%), almost all tumours are adenocarcinomas (approx. 85 %).

The risk of developing the disease increases steadily with advancing age. Correspondingly the median age at diagnosis is 71 years for men and 75 years for women. More than half of those affected were diagnosed after the age of 70 years, with only about 10 % before 55 years of age, i.e. before qualifying for the colonoscopy offered in the early detection programme. The age-standardised incidence rates for women and men have recently shown a slight downward trend. Despite a demographic change, the absolute number of cases of colorectal cancer has recently not further increased. The age-standardised mortality rates for men and women have declined by more than 20 % in the past 10 years. Colorectal cancer has a moderately good prognosis, and five years after diagnosis about half of the patients are still alive. The relative survival rates are approximately 65 % for men and for women.

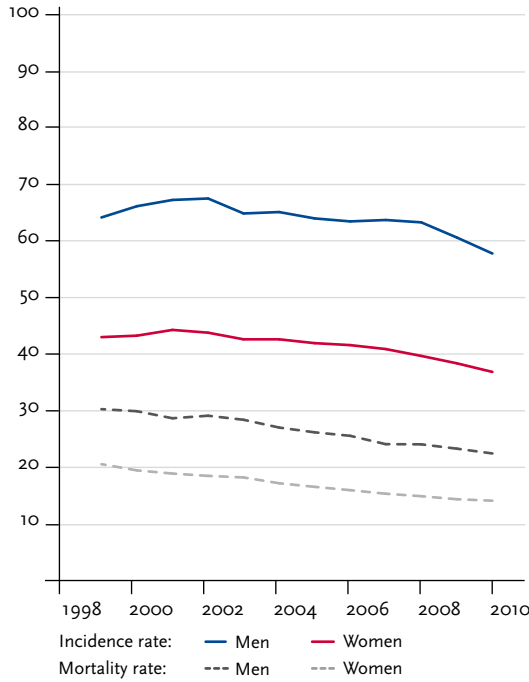
#### Risk factors and early detection

A number of factors increase the risk of colorectal cancer. Smoking and being overweight are the principal risk factors, followed by insufficient exercise and a diet low in fibre. People who regularly consume alcohol or eat a lot of red meat or processed meats made from red meat are more prone to develop colorectal cancer. First-degree relatives of colorectal cancer patients are themselves affected with an above-average frequency. There is a very high risk of developing colorectal cancer early in life in the case of rare inherited diseases such as familial adenomatous polyposis (FAP) or Lynch syndrome (hereditary non-polyposis colorectal cancer, HNPCC).

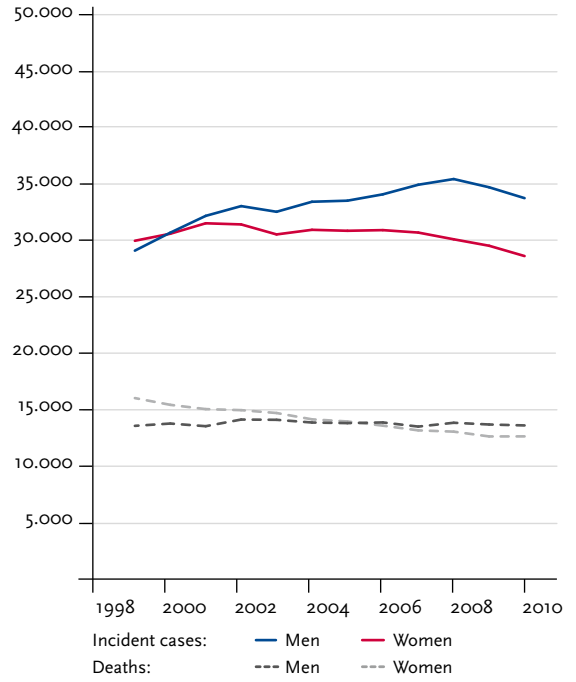
Chronic inflammatory bowel diseases also slightly increase the risk of developing this cancer.

As part of the early detection directive, people between 50 and 54 years of age with statutory health insurance can have an annual test for blood in the stool. From the age of 55 years they are entitled to a colonoscopy examination, in the course of which colon polyps, which may develop into malignant tumours, can also be removed. If there are no pathological findings, they are entitled to a further colonoscopy ten years later. As an alternative to colonoscopy, insured persons can have the above-mentioned stool test every two years, with entitlement to a follow-up colonoscopy where clarification is required. Special provisions are made for people with an increased risk.

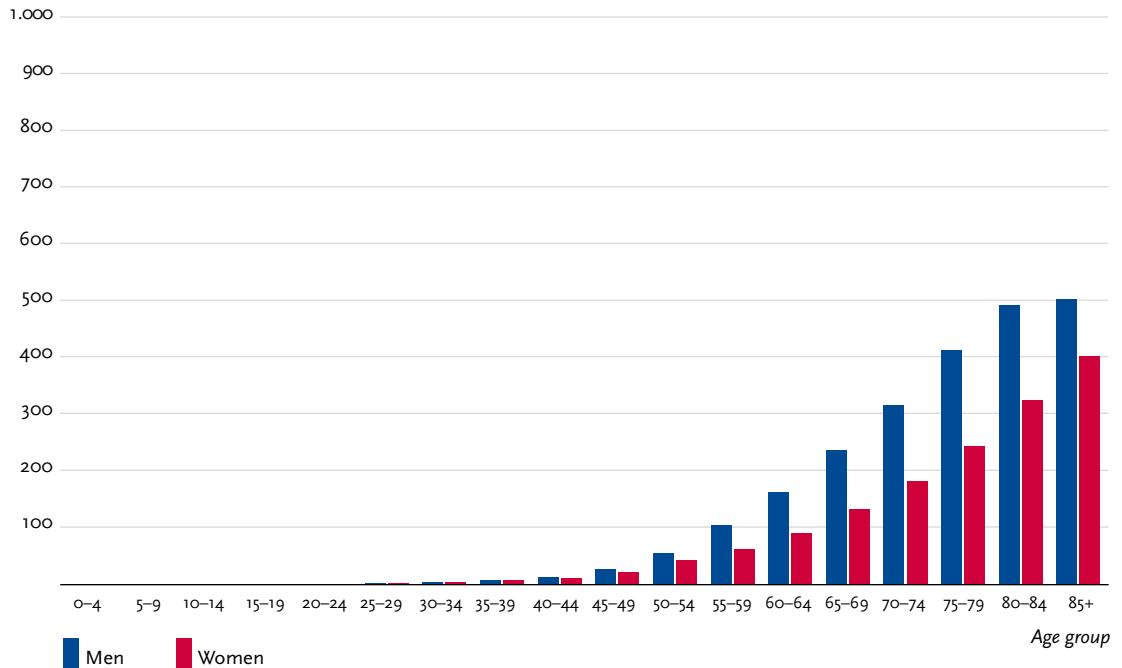
**Figure 3.5.1a**  
Age-standardised incidence and mortality rates, by sex,  
ICD-10 C18 – C21, Germany 1999 – 2010  
per 100,000 (European standard)



**Figure 3.5.1b**  
Absolute numbers of incident cases and deaths, by sex,  
ICD-10 C18 – C21, Germany 1999 – 2010



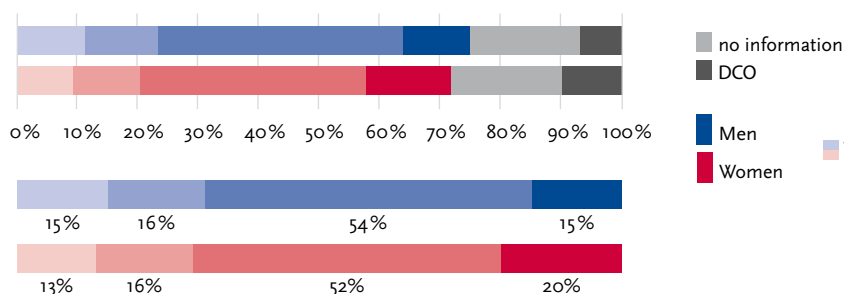
**Figure 3.5.2**  
Age-specific incidence rates by sex, ICD-10 C18 – C21, Germany 2009 – 2010  
per 100,000



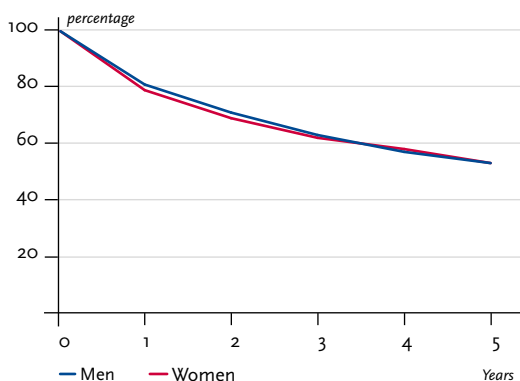
**Table 3.5.2**  
Cancer incidence and mortality risks in Germany by age and sex, ICD-10 C18 – C21, database 2010

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 920)	7.1%	(1 in 14)	<0.1%	(1 in 4,200)	3.1%	(1 in 32)
45 years	0.4%	(1 in 240)	7.1%	(1 in 14)	0.1%	(1 in 860)	3.1%	(1 in 32)
55 years	1.3%	(1 in 79)	7.0%	(1 in 14)	0.4%	(1 in 260)	3.1%	(1 in 32)
65 years	2.4%	(1 in 41)	6.4%	(1 in 16)	0.9%	(1 in 110)	3.0%	(1 in 33)
75 years	3.4%	(1 in 29)	5.1%	(1 in 20)	1.6%	(1 in 63)	2.7%	(1 in 37)
Lifetime risk			7.0%	(1 in 14)			3.0%	(1 in 33)
Women aged	in the next ten years		ever		in the next ten years		ever	
35 years	0.1%	(1 in 1,000)	5.7%	(1 in 17)	<0.1%	(1 in 4,000)	2.6%	(1 in 38)
45 years	0.3%	(1 in 300)	5.7%	(1 in 18)	0.1%	(1 in 1,200)	2.6%	(1 in 38)
55 years	0.7%	(1 in 140)	5.5%	(1 in 18)	0.2%	(1 in 460)	2.6%	(1 in 38)
65 years	1.4%	(1 in 69)	5.0%	(1 in 20)	0.5%	(1 in 190)	2.5%	(1 in 40)
75 years	2.4%	(1 in 42)	4.1%	(1 in 24)	1.1%	(1 in 91)	2.3%	(1 in 44)
Lifetime risk			5.7%	(1 in 17)			2.6%	(1 in 38)

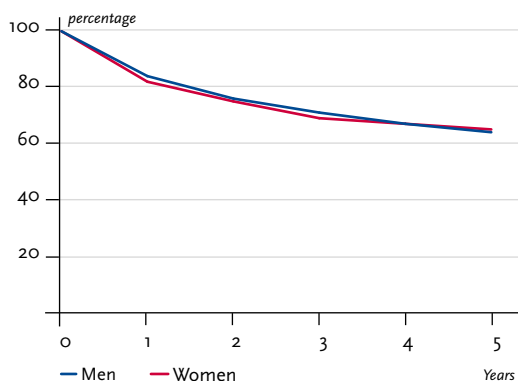
**Figure 3.5.3**  
Distribution of T-stages at first diagnosis by sex (top: all cases; bottom: only valid reports)  
ICD-10 C18 – C21, Germany 2010



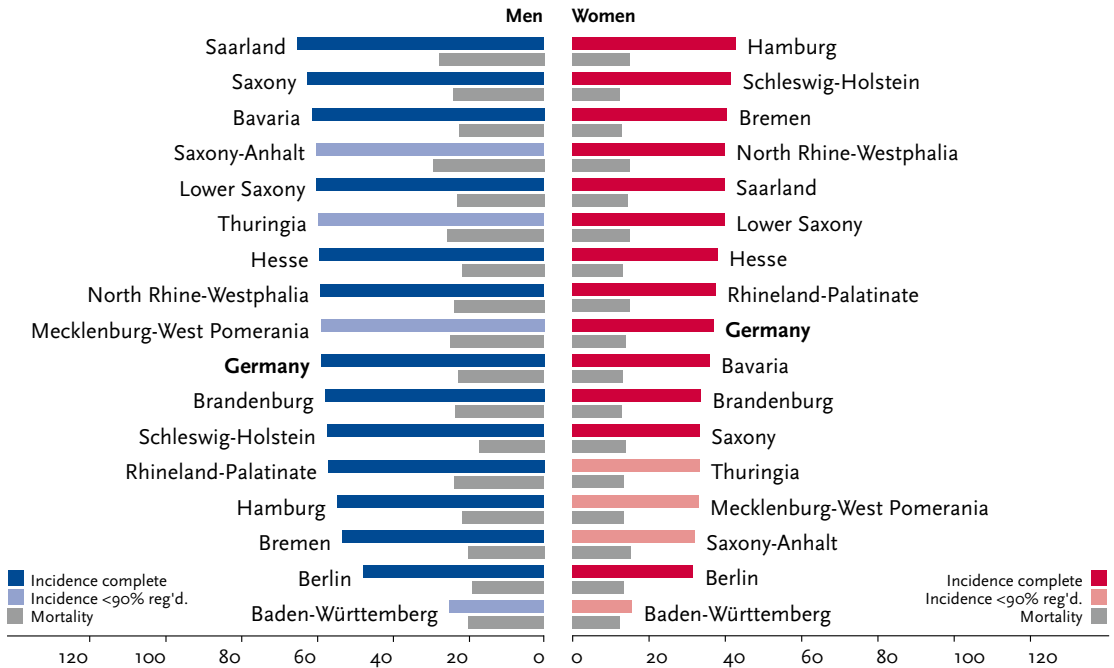
**Figure 3.5.4a**  
Absolute survival rates up to 5 years after first diagnosis,  
by sex, ICD-10 C18 – C21, Germany 2009 – 2010



**Figure 3.5.4b**  
Relative survival rates up to 5 years after first diagnosis,  
by sex, ICD-10 C18 – C21, Germany 2009 – 2010



**Figure 3.5.5**  
Registered age-standardised incidence and mortality rates in German federal states, by sex,  
ICD-10 C18 – C21, 2009 – 2010  
per 100,000 (European standard)



**Figure 3.5.6**  
International comparison of age-standardised incidence and mortality rates, by sex,  
ICD-10 C18 – C21, 2009 – 2010 or latest available year (details and sources, see appendix)  
per 100,000 (European standard)

