

### 3.5 Colon and rectum

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

	2011		2012		Prediction for 2016	
	Men	Women	Men	Women	Men	Women
Incident cases	34,460	29,330	33,740	28,490	33,400	27,600
Crude incidence rate <sup>1</sup>	88.0	71.4	85.8	69.3	83.5	66.6
Standardised incidence rate <sup>1,2</sup>	59.5	37.9	57.1	36.8	52.7	33.9
Median age at diagnosis	71	75	72	75		
Deaths	13,863	12,439	13,772	12,200		
Crude mortality rate <sup>1</sup>	35.4	30.3	35.0	29.7		
Standardised mortality rate <sup>1,2</sup>	23.2	13.7	22.4	13.3		
5-year prevalence	117,700	98,800	116,200	97,200		
	<i>after 5 years</i>		<i>after 10 years</i>			
Absolute survival rate (2011–2012) <sup>3</sup>	52 (50–55)	52 (49–56)	38 (35–42)	40 (37–44)		
Relative survival rate (2011–2012) <sup>3</sup>	63 (60–66)	63 (58–68)	58 (55–61)	61 (54–70)		

<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 eighth case of cancer of females and males in Germany affects colon or rectum. In 2012 about 33,740 men and 28,500 women were diagnosed with bowel cancer. In life one of fourteen men and one of eighteen women will eventually be diagnosed with bowel cancer but one of thirty-two men and one of thirty-nine women die of bowel cancer only.

Almost two thirds of tumours were located in the colon, some 30 % affected the shorter rectum, while the remainder were located at the junction between the colon and the rectum (rectosigmoid), respectively the anal canal. The rare cases of – for instance neuroendocrine – cancer in the longest part of the bowel the upper intestine (C17) are not included here, in line with international practice. Histologically, besides squamous-cell carcinomas of the anus and rare neuroendocrine tumours (approx. 1%), almost all tumours are adenocarcinomas (approx. 85 %).

The risk of developing the disease increases steadily with advancing age up to very old age. Correspondingly the median age at diagnosis is 72 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 are decreasing since 2002, even the number of cases is on the decrease. The age-standardised mortality rates for men and women have declined by more than 20 % in the past 10 years. The relative survival rates are approximately 63 % for men and for women.

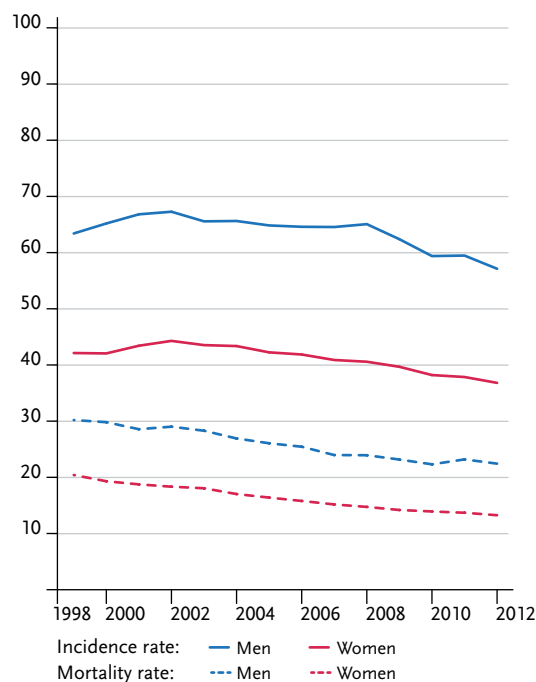
#### Risk factors and early detection

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).

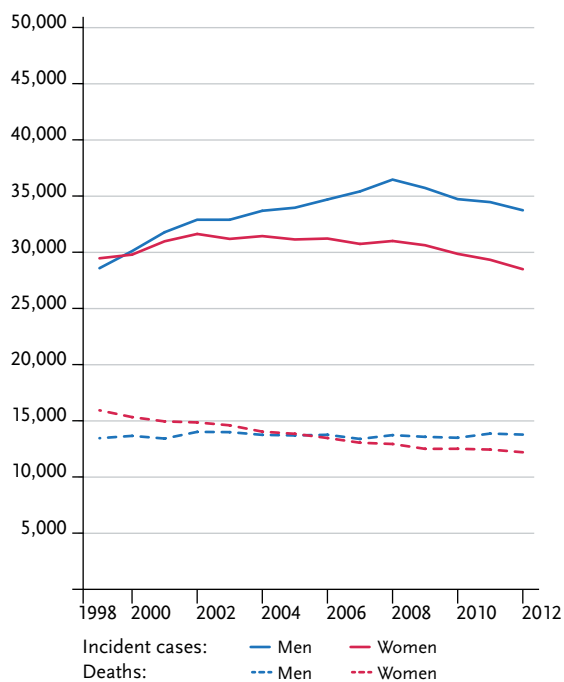
Chronic inflammatory bowel diseases also slightly increase the risk of developing this cancer.

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.

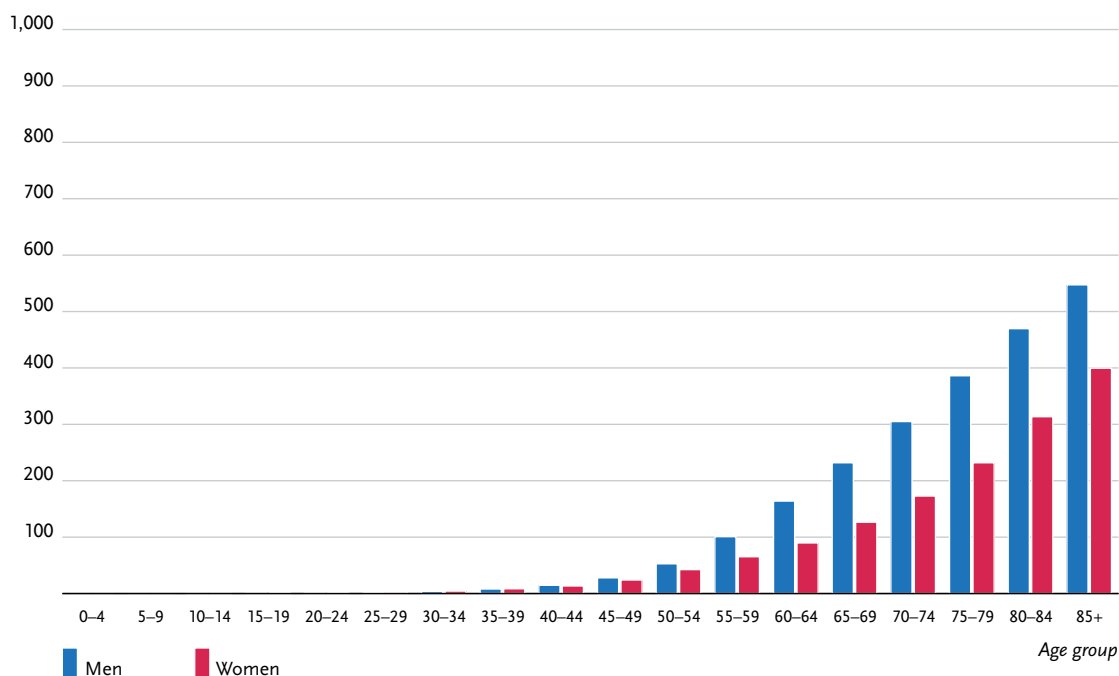
**Figure 3.5.1a**  
Age-standardised incidence and mortality rates,  
by sex, ICD-10 C18–C21, Germany 1999–2012  
per 100,000 (European standard)



**Figure 3.5.1b**  
Absolute numbers of incident cases and deaths,  
by sex, ICD-10 C18–C21, Germany 1999–2012



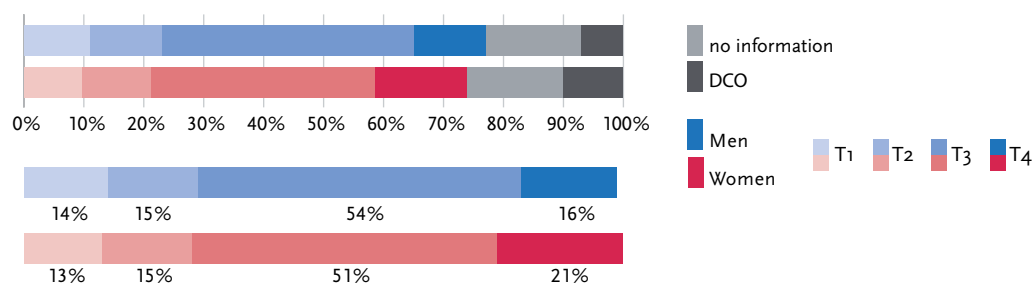
**Figure 3.5.2**  
Age-specific incidence rates by sex, ICD-10 C18–C21, Germany 2011–2012  
per 100,000



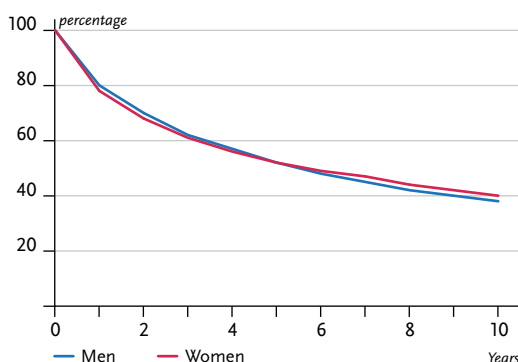
**Table 3.5.2**  
Cancer incidence and mortality risks in Germany by age and sex, ICD-10 C18–C21, database 2012

	Risk of developing cancer				Mortality risk			
	in the next ten years		ever		in the next ten years		ever	
<b>Men aged</b>								
35 years	0.1%	(1 in 840)	7.0%	(1 in 14)	<0.1%	(1 in 4,100)	3.1%	(1 in 32)
45 years	0.4%	(1 in 250)	7.0%	(1 in 14)	0.1%	(1 in 890)	3.1%	(1 in 32)
55 years	1.2%	(1 in 80)	6.9%	(1 in 15)	0.4%	(1 in 260)	3.1%	(1 in 32)
65 years	2.4%	(1 in 41)	6.3%	(1 in 16)	0.9%	(1 in 110)	3.1%	(1 in 33)
75 years	3.3%	(1 in 31)	4.9%	(1 in 20)	1.6%	(1 in 62)	2.8%	(1 in 36)
Lifetime risk			6.9%	(1 in 14)			3.1%	(1 in 32)
<b>Women aged</b>								
35 years	0.1%	(1 in 800)	5.7%	(1 in 18)	<0.1%	(1 in 5,000)	2.6%	(1 in 39)
45 years	0.3%	(1 in 300)	5.6%	(1 in 18)	0.1%	(1 in 1,200)	2.6%	(1 in 39)
55 years	0.8%	(1 in 130)	5.4%	(1 in 19)	0.2%	(1 in 500)	2.5%	(1 in 39)
65 years	1.4%	(1 in 71)	4.9%	(1 in 20)	0.5%	(1 in 210)	2.5%	(1 in 40)
75 years	2.3%	(1 in 44)	4.0%	(1 in 25)	1.1%	(1 in 93)	2.3%	(1 in 44)
Lifetime risk			5.7%	(1 in 18)			2.6%	(1 in 39)

**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 2011–2012



**Figure 3.5.4a**  
Absolute survival rates up to 10 years after first diagnosis,  
by sex, ICD-10 C18–C21, Germany 2011–2012



**Figure 3.5.4b**  
Relative survival rates up to 10 years after first diagnosis,  
by sex, ICD-10 C18–C21, Germany 2011–2012

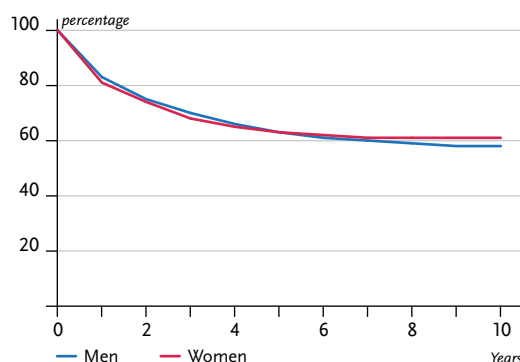


Figure 3-5-5

Registered age-standardised incidence and mortality rates in German federal states, by sex,  
ICD-10 C18–C21, 2011–2012  
per 100,000 (European standard)

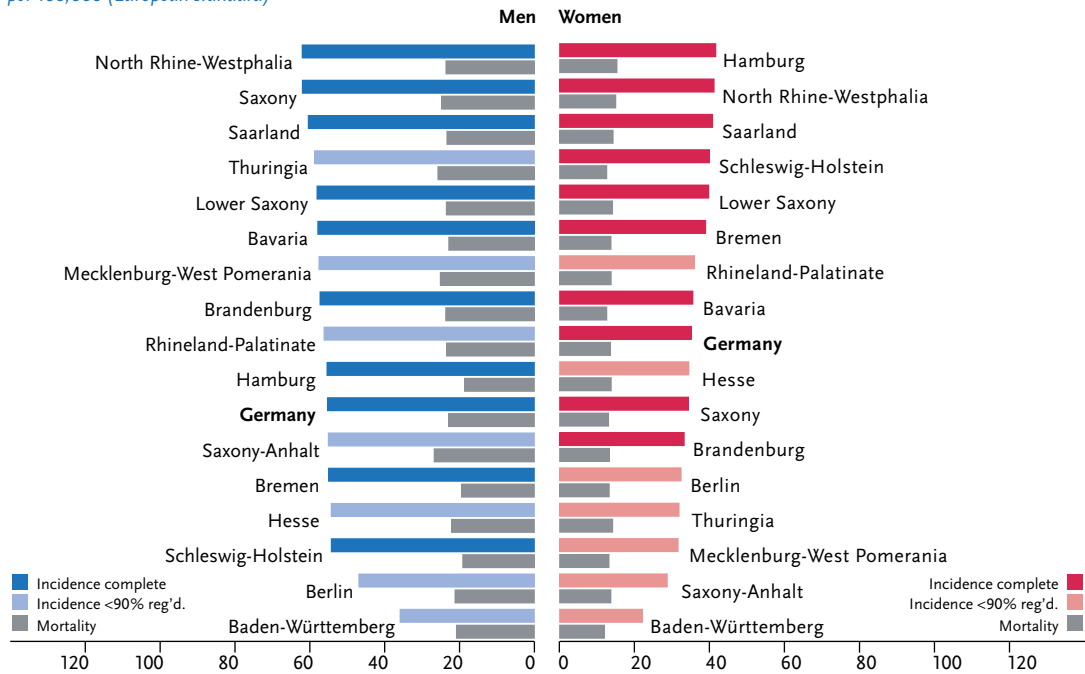


Figure 3-5-6

International comparison of age-standardised incidence and mortality rates, by sex,  
ICD-10 C18–C21, 2011–2012 or latest available year (details and sources, see appendix)  
per 100,000 (European standard)

