

3.24 Kidney

Table 3.24.1
Overview of key epidemiological parameters for Germany, ICD-10 C64

Incidence	2015		2016		Prediction for 2020	
	Women	Men	Women	Men	Women	Men
Incident cases	5,720	9,780	5,360	9,280	5,700	9,700
Crude incidence rate ¹	13.8	24.4	12.9	22.8	13.6	23.9
Age-standardised incidence rate ^{1,2}	8.0	16.8	7.5	15.7	7.4	15.7
Median age at diagnosis	72	68	72	68		
Mortality	2015		2016		2017	
	Women	Men	Women	Men	Women	Men
Deaths	2,106	3,306	2,074	3,280	1,985	3,155
Crude mortality rate ¹	5.1	8.2	5.0	8.1	4.7	7.7
Age-standardised mortality rate ^{1,2}	2.2	5.0	2.1	4.9	2.0	4.6
Median age at death	79	75	79	75	80	76
Prevalence and survival rates	5 years		10 years			
	Women	Men	Women	Men		
Prevalence	21,900	37,900	39,900	66,600		
Absolute survival rate (2015–2016) ³	69 (64–74)	66 (60–71)	53 (50–57)	50 (46–56)		
Relative survival rate (2015–2016) ³	77 (73–82)	76 (69–81)	70 (67–75)	69 (63–76)		

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

Malignant neoplasms of the kidney originate from various types of tissue. Renal cell carcinomas (hypernephromas) occur most frequently in adulthood and account for almost 96 % of all kidney tumours. In contrast, cancer of the kidney is rare among children, although nephroblastomas (Wilms' tumours) are predominantly diagnosed in children. In total, around 14,640 new cases of kidney cancer were diagnosed in 2016, and men were affected almost twice as often as women.

Age-standardised incidence rates have been falling among both sexes since about 2008. Age-standardised mortality rates have decreased slightly throughout the entire period. The median age at diagnosis is 72 years for women and 68 years for men. The prognosis for patients with kidney cancer is comparatively favourable, with a relative 5-year survival rate of 77 % for women and 76 % for men. About 56 % of all tumours are diagnosed at relatively early stages (UICC I/II). A regional comparison shows higher rates of incidence and mortality in eastern Germany. At the international level, incidence and mortality rates are relatively high in the Czech Republic.

Risk factors

Active and passive smoking as well as high blood pressure and obesity are the most important risk factors associated with cancer of the kidney. A lack of physical activity also appears to increase risk. An additional risk factor is chronic renal insufficiency, regardless of whether it is due to medicines that damage the kidneys, repeated inflammation of the urinary tract or another cause. Patients with a suppressed immune system after a kidney transplant have a high risk of developing renal cell carcinoma.

A familial predisposition probably only plays a role in a relatively small number of cases. Nevertheless, around 4 % of renal cell carcinomas occur in patients with complex hereditary diseases such as von Hippel-Lindau syndrome. Renal cell carcinomas that are caused by genetic factors are often multifocal, bilateral and occur more often at a younger age than kidney cancers in people without a genetic predisposition.

Figure 3.24.1a
 Age-standardised incidence and mortality rates by sex, ICD-10 C64, Germany 1999–2016/2017, projection (incidence) through 2020 per 100,000 (old European Standard)

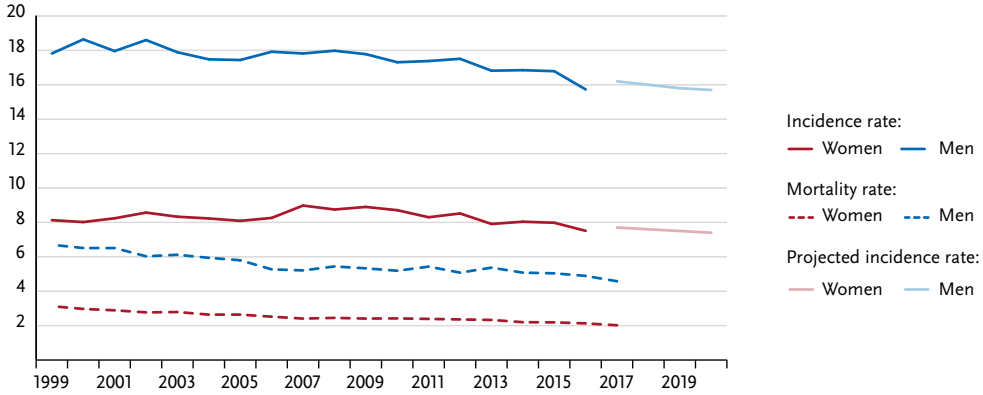


Figure 3.24.1b
 Absolute numbers of incident cases and deaths by sex, ICD-10 C64, Germany 1999–2016/2017, projection (incidence) through 2020

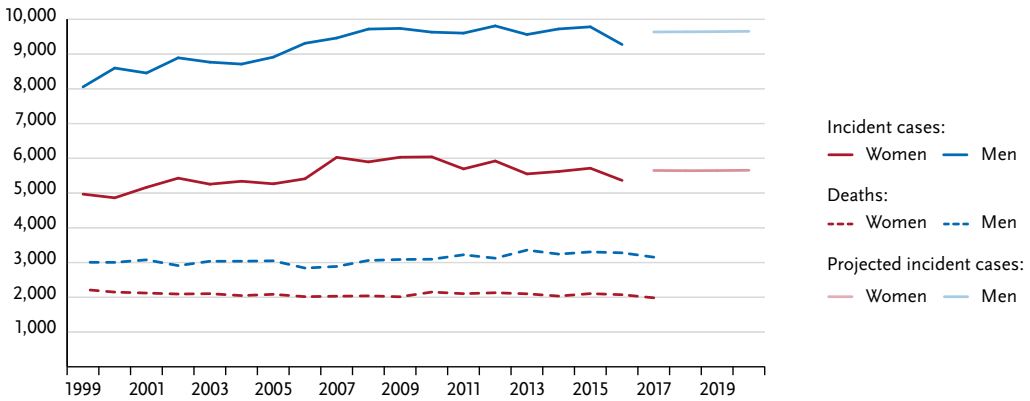


Figure 3.24.2
 Age-specific incidence rates by sex, ICD-10 C64, Germany 2015–2016 per 100,000



Table 3.24.2
Cancer incidence and mortality risks in Germany by age and sex, ICD-10 C64, 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 4,000)	1.0%	(1 in 100)	< 0.1%	(1 in 41,300)	0.4%	(1 in 230)
45 years	0.1%	(1 in 1,300)	1.0%	(1 in 110)	< 0.1%	(1 in 10,100)	0.4%	(1 in 230)
55 years	0.2%	(1 in 580)	0.9%	(1 in 110)	< 0.1%	(1 in 2,900)	0.4%	(1 in 240)
65 years	0.3%	(1 in 330)	0.8%	(1 in 130)	0.1%	(1 in 1,200)	0.4%	(1 in 240)
75 years	0.4%	(1 in 260)	0.5%	(1 in 190)	0.2%	(1 in 500)	0.4%	(1 in 270)
Lifetime risk			1.0%	(1 in 100)			0.4%	(1 in 240)
Men aged	in the next ten years		ever		in the next ten years		ever	
35 years	0.1%	(1 in 1,800)	1.7%	(1 in 60)	< 0.1%	(1 in 21,200)	0.7%	(1 in 150)
45 years	0.2%	(1 in 590)	1.6%	(1 in 61)	< 0.1%	(1 in 3,800)	0.7%	(1 in 140)
55 years	0.4%	(1 in 250)	1.5%	(1 in 66)	0.1%	(1 in 1,000)	0.7%	(1 in 150)
65 years	0.6%	(1 in 160)	1.3%	(1 in 79)	0.2%	(1 in 530)	0.7%	(1 in 150)
75 years	0.6%	(1 in 160)	0.8%	(1 in 130)	0.4%	(1 in 270)	0.6%	(1 in 170)
Lifetime risk			1.7%	(1 in 61)			0.7%	(1 in 150)

Figure 3.24.3
Distribution of UICC-stages at first diagnosis by sex, ICD-10 C64, Germany 2015–2016
(top: all cases; bottom: only valid reports)

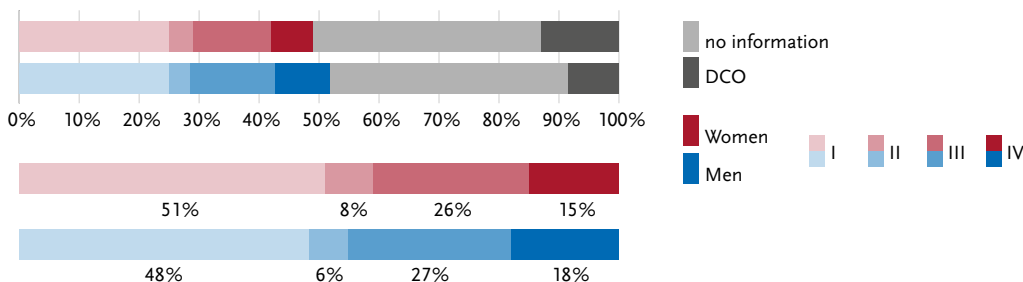


Figure 3.24.4
Absolute and relative survival rates up to 10 years after first diagnosis, by sex, ICD-10 C64, Germany 2015–2016

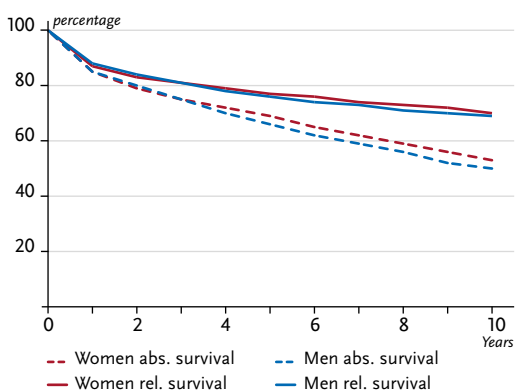


Figure 3.24.5
Relative 5-year survival by UICC-stage and sex, ICD-10 C64, Germany 2015–2016

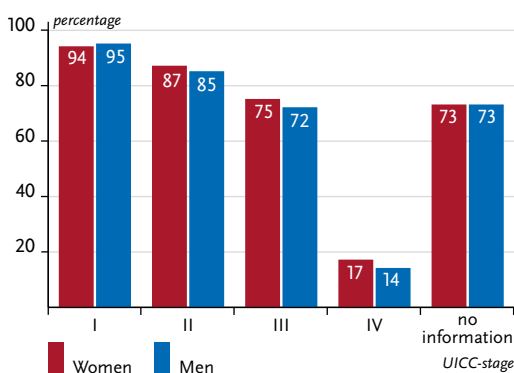


Figure 3.24.6
Age-standardised incidence and mortality rates in German federal states by sex, ICD-10 C64, 2015–2016
(Incidence in Bremen for 2014 and 2016, incidence in eastern Germany for 2014 to 2015)
per 100,000 (old European Standard)

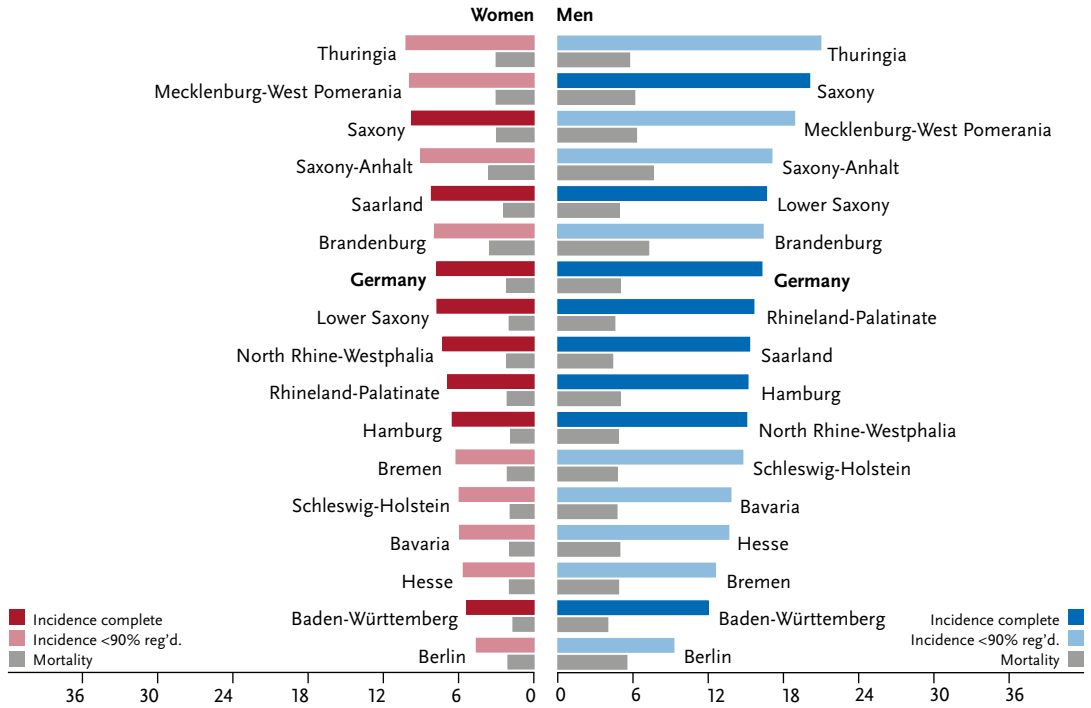
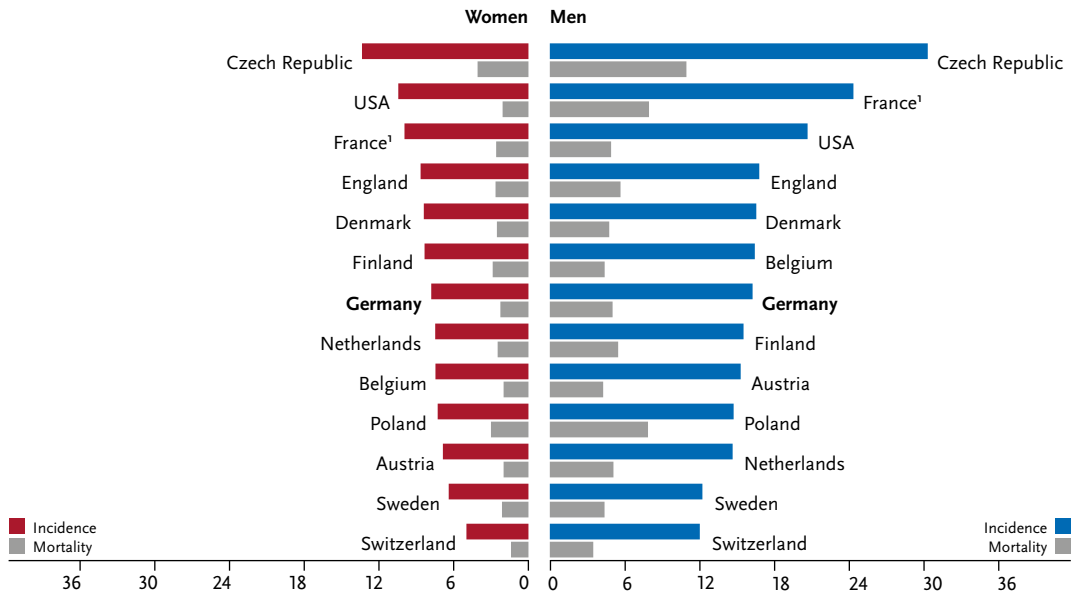


Figure 3.24.7
International comparison of age-standardised incidence and mortality rates by sex, ICD-10 C64, 2015–2016 or latest available year (details and sources, see appendix)
per 100,000 (old European Standard)



¹ Data including C65, C66 and C68