3.21 Kidney

Table 3.21.1
Overview of key epidemiological parameters for Germany, ICD-10 C64

	2011		2012		Prediction for 2016	
	Men	Women	Men	Women	Men	Women
Incident cases	9,320	5,600	9,500	5,530	10,400	6,100
Crude incidence rate[1]	23.8	13.6	24.2	13.5	26.1	14.8
Standardised incidence rate[1,2]	16.9	8.1	16.9	8.0	17.4	8.2
Median age at diagnosis	68	72	68	72		
Deaths	3,223	2,104	3,125	2,131		
Crude mortality rate[1]	8.2	5.1	8.0	5.2		
Standardised mortality rate[1,2]	5.4	2.4	5.1	2.4		
5-year prevalence	35,200	22,000	35,800	21,900		
	after 5 years		*after 10 years*			
Absolute survival rate (2011–2012)[3]	66 (61–69)	69 (58–75)	50 (43–54)	54 (46–59)		
Relative survival rate (2011–2012)[3]	76 (71–79)	78 (66–84)	68 (60–73)	71 (62–78)		

[1] per 100,000 persons [2] age-standardised (European standard) [3] in percentage (lowest and highest value of the included German federal states)

Epidemiology

Malignant neoplasms of the kidney can develop from various tissues. Among all types of kidney tumours in adults, renal cell carcinomas (hypernephromas) occur most frequently, account for 90 % of all cases. In contrast, nephroblastomas (Wilms' tumours), lymphomas or sarcomas of the kidney are more frequent in children.

The absolute number of incident cases has been rising continuously since the end of the 1990s for men, while a decrease can be observed for women since the year 2009. In contrast, the age-standardised incidence rates have remained at a fairly constant level for men and women over the whole period, although the incidence rate for men is twice as high as in women. As far as the age-standardised mortality rates are concerned, a slightly downward trend is observed for both sexes.

The median age at diagnosis is 68 years for men and 72 years for women.

The prognosis for kidney carcinoma is comparatively favourable, the relative 5-year survival rate for kidney tumours is approx. 76 % in men and 78 % in women. Around three-quarters of all tumours are diagnosed at a relatively early stage (T1 and T2). In regional and/or international comparison, relatively high incidence and mortality rates are apparent in the eastern federal states, as well as in the neighbouring Czech Republic.

Risk factors

Smoking and passive smoking, as well as hypertension and obesity are the most important risk factors. Furthermore, a lack of physical activity seems to increase the risk of developing kidney cancer.

On the whole, chronic renal insufficiency, regardless of cause, may promote carcinogenesis in the kidney. It can be caused for example by nephrotoxic medications or repeated inflammations of the urinary tract. Also following a kidney transplant, the immuno-suppressed patient has an increased risk of developing a renal cell carcinoma.

Familial predisposition probably only plays a role in relatively few cases. Approximately three per cent of renal cell carcinomas occur in patients with complex hereditary diseases such as those affected by Hippel-Lindau syndrome. These genetic renal cell carcinomas are often multifocal and occur more often at a younger age than kidney cancers in patients without a genetic disposition.

Figure 3.21.1a
Age-standardised incidence and mortality rates, by sex, ICD-10 C64, Germany 1999–2012
per 100,000 (European standard)

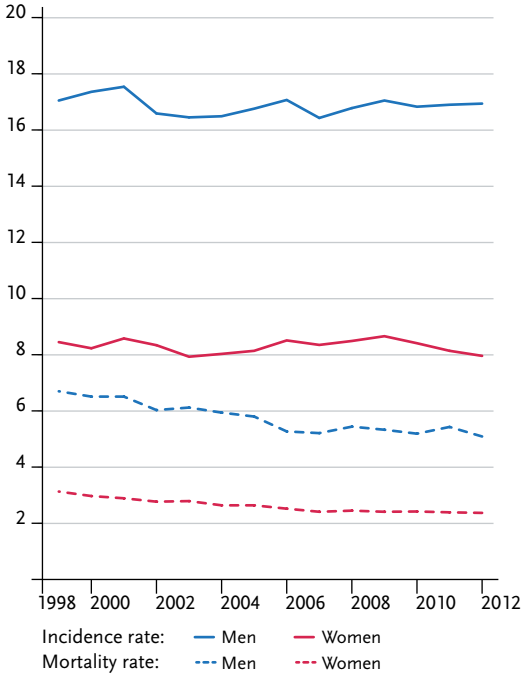


Abbildung 3.21.1b
Absolute numbers of incident cases and deaths, by sex, ICD-10 C64, Germany 1999–2012

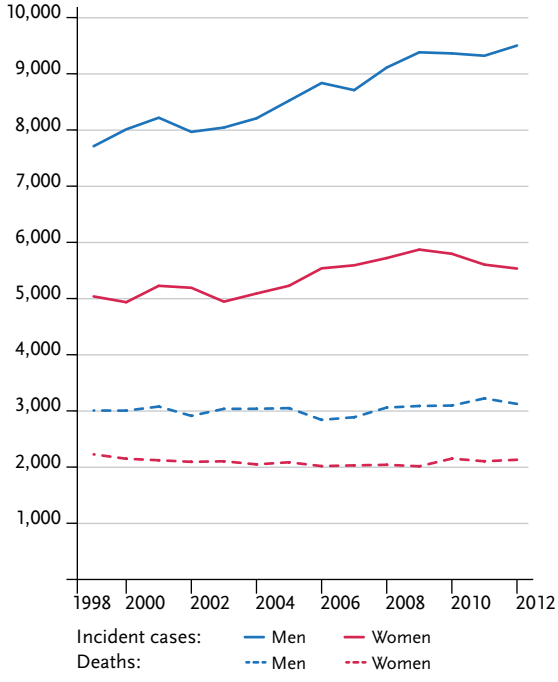


Figure 3.21.2
Age-specific incidence rates by sex, ICD-10 C64, Germany 2011–2012
per 100,000

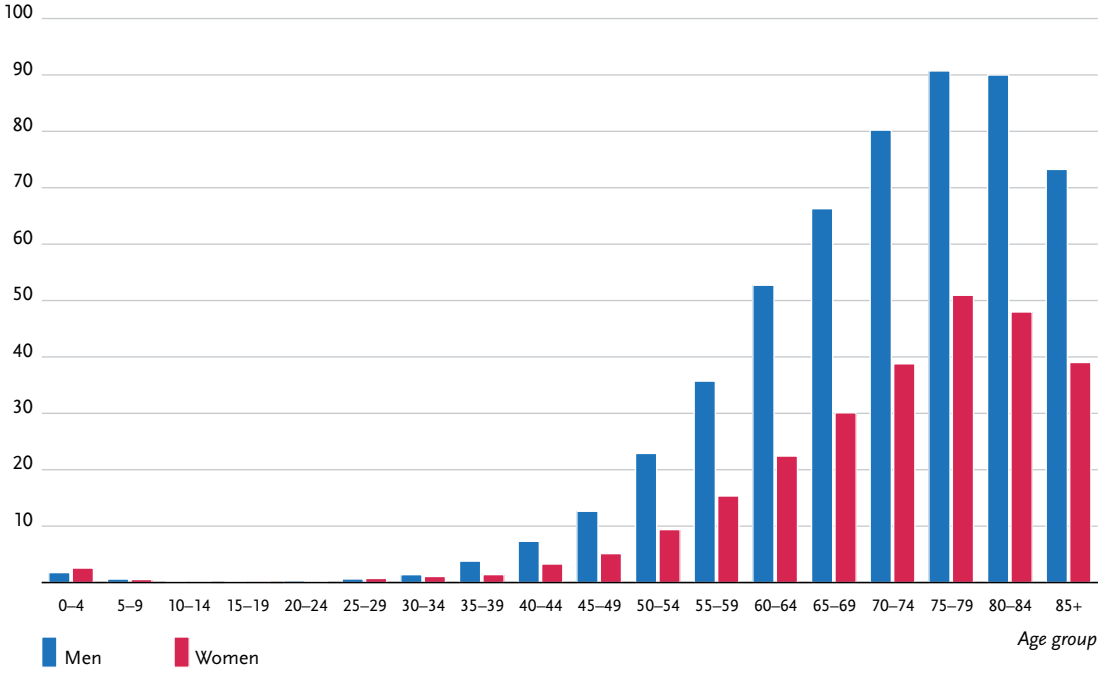


Table 3.21.2
Cancer incidence and mortality risks in Germany by age and sex, ICD-10 C64, database 2012

	Risk of developing cancer				Mortality risk			
Men aged	**in the next ten years**		**ever**		**in the next ten years**		**ever**	
35 years	0.1%	(1 in 1,700)	1.8%	(1 in 55)	<0.1%	(1 in 18,000)	0.7%	(1 in 150)
45 years	0.2%	(1 in 570)	1.8%	(1 in 56)	<0.1%	(1 in 3,200)	0.7%	(1 in 150)
55 years	0.4%	(1 in 240)	1.7%	(1 in 59)	0.1%	(1 in 1,000)	0.7%	(1 in 150)
65 years	0.7%	(1 in 150)	1.4%	(1 in 71)	0.2%	(1 in 510)	0.7%	(1 in 150)
75 years	0.7%	(1 in 140)	0.9%	(1 in 110)	0.4%	(1 in 270)	0.6%	(1 in 170)
Lifetime risk			1.8%	(1 in 55)			0.7%	(1 in 150)
Women aged	**in the next ten years**		**ever**		**in the next ten years**		**ever**	
35 years	<0.1%	(1 in 3,900)	1.0%	(1 in 96)	<0.1%	(1 in 28,200)	0.4%	(1 in 230)
45 years	0.1%	(1 in 1,400)	1.0%	(1 in 97)	<0.1%	(1 in 8,800)	0.4%	(1 in 230)
55 years	0.2%	(1 in 560)	1.0%	(1 in 100)	<0.1%	(1 in 2,900)	0.4%	(1 in 230)
65 years	0.3%	(1 in 300)	0.8%	(1 in 120)	0.1%	(1 in 1,000)	0.4%	(1 in 240)
75 years	0.4%	(1 in 250)	0.6%	(1 in 170)	0.2%	(1 in 480)	0.4%	(1 in 270)
Lifetime risk			1.1%	(1 in 94)			0.4%	(1 in 230)

Figure 3.21.3
Distribution of T-stages at first diagnosis by sex (top: all cases; bottom: only valid reports)
ICD-10 C64, Germany 2011–2012

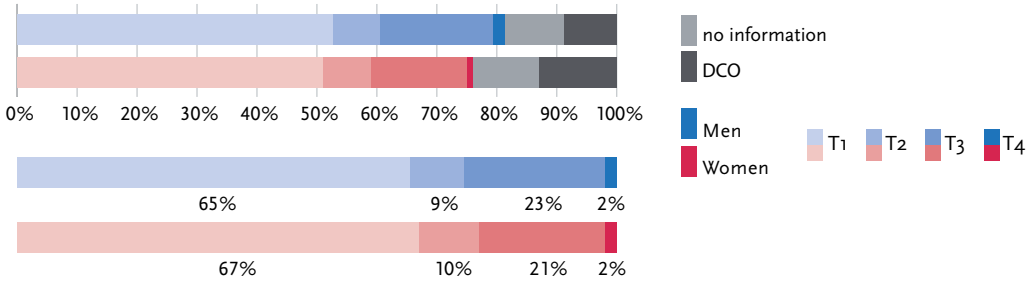


Figure 3.21.4a
Absolute survival rates up to 10 years after first diagnosis, by sex, ICD-10 C64, Germany 2011–2012

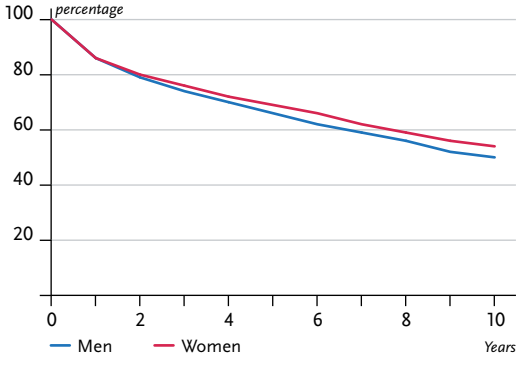


Figure 3.21.4b
Relative survival rates up to 10 years after first diagnosis, by sex, ICD-10 C64, Germany 2011–2012

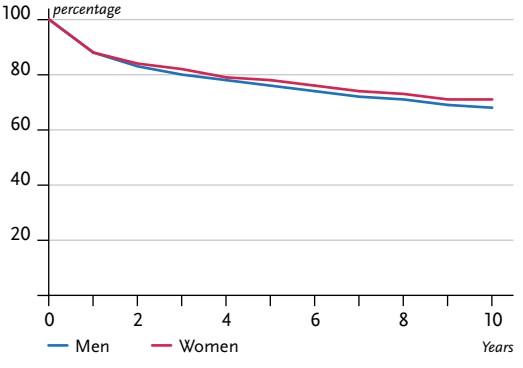


Figure 3.21.5
Registered age-standardised incidence and mortality rates in German federal states, by sex, ICD-10 C64, 2011–2012
per 100,000 (European standard)

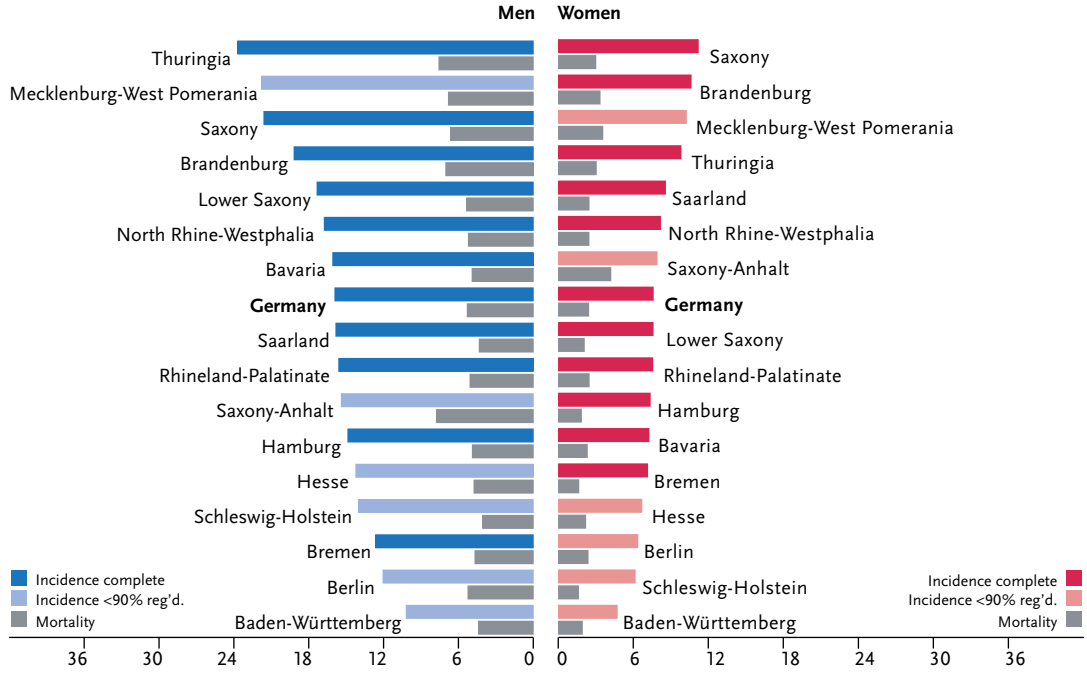
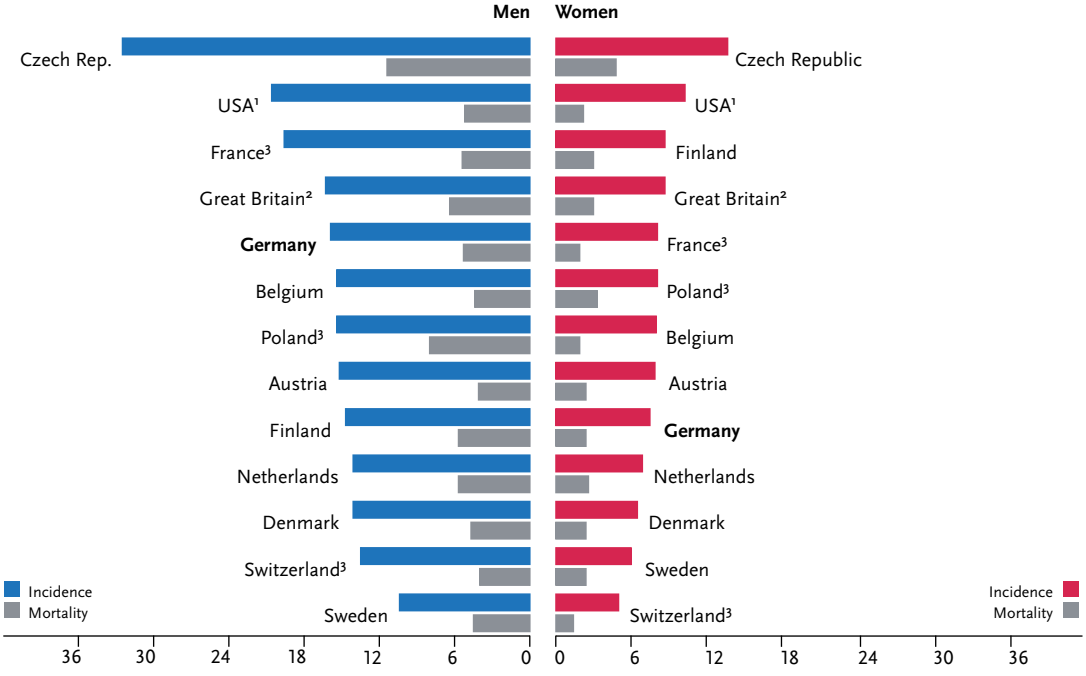


Figure 3.21.6
International comparison of age-standardised incidence and mortality rates, by sex, ICD-10 C64, 2011–2012 or latest available year (details and sources, see appendix)
per 100,000 (European standard)



[1] incl. C65
[2] incl. C65, C66, C68
[3] data for incidence incl. C65, C66