3.24 Kidney

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

Incidence		2017		2018	Prediction for 2022	
	Women	Men	Women	Men	Women	Men
Incident cases	5,410	9,070	5,480	9,350	5,200	9,300
Crude incidence rate [1]	12.9	22.2	13.0	22.9	12.4	22.4
Age-standardised incidence rate [1, 2]	7.5	15.2	7.6	15.4	7.1	14.7
Median age at diagnosis	72	68	71	68		
Mortality		**2017**		**2018**		**2019**
	Women	Men	Women	Men	Women	Men
Deaths	1,985	3,155	1,931	3,108	1,920	3,230
Crude mortality rate [1]	4.7	7.7	4.6	7.6	4.6	7.9
Age-standardised mortality rate [1, 2]	2.0	4.6	1.9	4.5	1.8	4.5
Median age at death	80	76	80	76	81	77
Prevalence and survival rates		**5 years**		**10 years**		**25 years**
	Women	Men	Women	Men	Women	Men
Prevalence	21,200	35,900	37,400	62,200	63,100	101,900
Absolute survival rate (2017–2018) [3]	67 (62–72)	67 (66–70)	52 (47–62)	51 (50–53)		
Relative survival rate (2017–2018) [3]	76 (70–81)	78 (75–81)	70 (63–81)	71 (70–74)		

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

Epidemiology

Malignant neoplasms of the kidney can originate from various tissues. Among all kidney tumours in adults, renal cell carcinomas (hypernephromas) occur most frequently with a share of about 95%. In children, however, who are rarely affected, nephroblastomas (Wilms tumours) predominate. In total, about 14,800 new cases occurred in 2018, men were affected almost twice as often as women.

The age-standardised incidence rates show a slight decline in both sexes since around 2008. Age-standardised mortality rates have slightly decreased for women and men over the entire observation period. The median age at diagnosis is 71 to 72 years for women and 68 years for men. The prognosis of renal carcinoma is comparatively favourable, the relative 5-year survival of patients is 76% for women and 78% for men. A good half of all tumours are diagnosed at an early stage (UICC I). In a regional comparison, higher incidence and mortality rates are noticeable in the eastern federal states. Internationally, the disease and mortality rates in the Czech Republic are comparatively high.

Risk factors

Smoking and passive smoking as well as high blood pressure and obesity are considered the most important risk factors associated with cancer of the kidney. In addition, lack of physical activity seems to increase the risk. Chronic renal insufficiency favours tumours of this organ overall and regardless of their cause. It can be caused, for example, by drugs that damage the kidneys or repeated inflammations of the urinary tract. Even after a kidney transplant, the risk of developing renal cell carcinoma remains increased in immunosuppressed patients.

A familial predisposition probably only plays a role in a comparatively small number of cases. About 4% of renal cell carcinomas occur in patients with complex hereditary diseases, such as von Hippel-Lindau syndrome. These genetic renal cell carcinomas are often multifocal, bilateral and occur more often at a younger age than renal cancers in patients without a genetic disposition.

▶ *Additional information: www.krebsdaten.de/kidney*

Figure 3.24.1a
Age-standardised incidence and mortality rates by sex, ICD-10 C64, Germany 1999–2018/2019, projection (incidence) through 2022
per 100,000 (old European Standard)

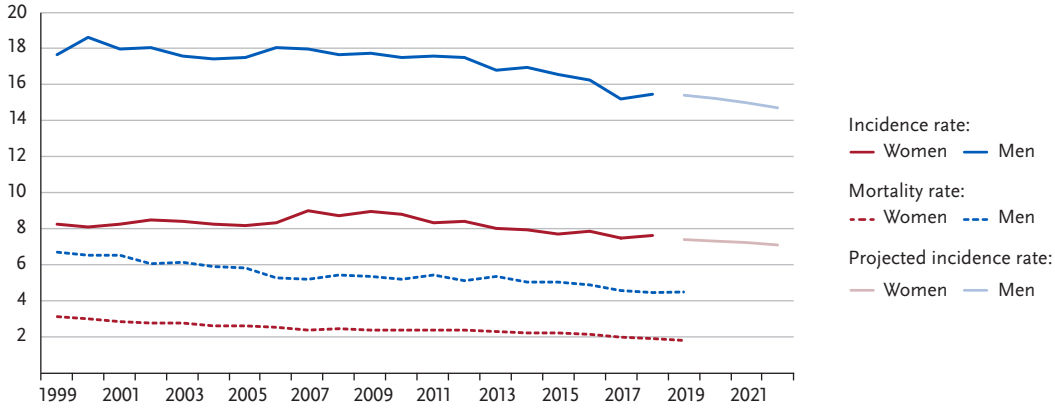

Figure 3.24.1b
Absolute numbers of incident cases and deaths by sex, ICD-10 C64, Germany 1999–2018/2019, projection (incidence) through 2022

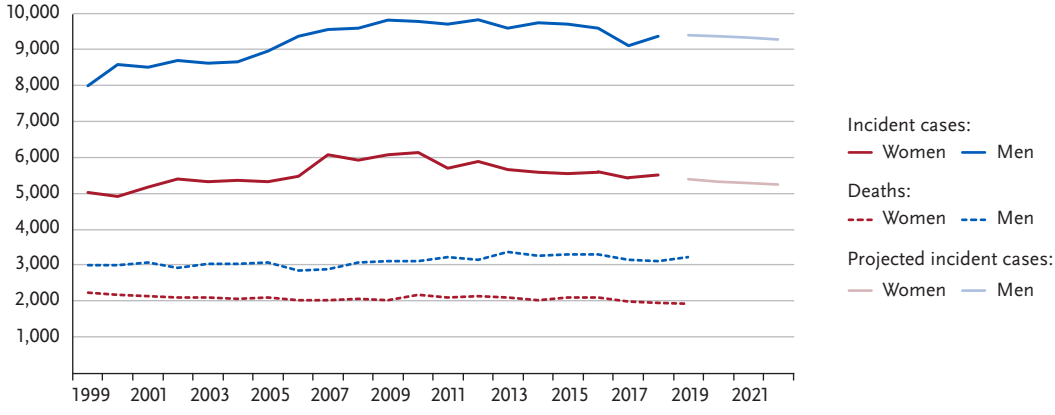

Figure 3.24.2
Age-specific incidence rates by sex, ICD-10 C64, Germany 2017–2018
per 100,000

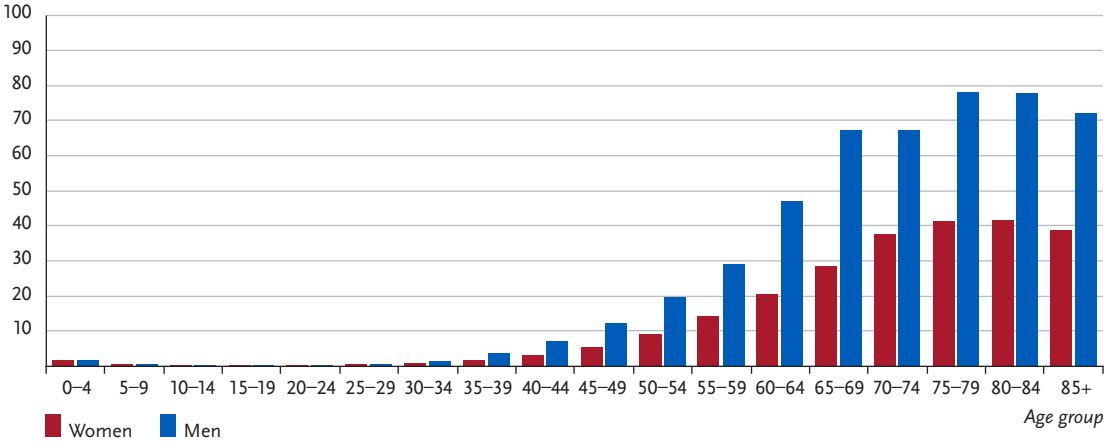

Table 3.24.2
Cancer incidence and mortality risks in Germany by age and sex, ICD-10 C64, database 2018

	Risk of developing cancer				Mortality risk			
Women aged	**in the next 10 years**		**ever**		**in the next 10 years**		**ever**	
35 years	< 0.1 %	(1 in 3,600)	1.0 %	(1 in 100)	< 0.1 %	(1 in 57,000)	0.4 %	(1 in 270)
45 years	0.1 %	(1 in 1,300)	1.0 %	(1 in 100)	< 0.1 %	(1 in 12,500)	0.4 %	(1 in 270)
55 years	0.2 %	(1 in 560)	0.9 %	(1 in 110)	< 0.1 %	(1 in 3,400)	0.4 %	(1 in 270)
65 years	0.2 %	(1 in 320)	0.8 %	(1 in 130)	0.1 %	(1 in 1,300)	0.4 %	(1 in 270)
75 years	0.3 %	(1 in 290)	0.5 %	(1 in 190)	0.2 %	(1 in 580)	0.3 %	(1 in 300)
Lifetime risk			1.0 %	(1 in 100)			0.4 %	(1 in 270)
Men aged	**in the next 10 years**		**ever**		**in the next 10 years**		**ever**	
35 years	0.1 %	(1 in 1,700)	1.7 %	(1 in 59)	< 0.1 %	(1 in 20,900)	0.6 %	(1 in 160)
45 years	0.2 %	(1 in 610)	1.7 %	(1 in 60)	< 0.1 %	(1 in 4,000)	0.6 %	(1 in 160)
55 years	0.4 %	(1 in 270)	1.5 %	(1 in 65)	0.1 %	(1 in 1,200)	0.6 %	(1 in 160)
65 years	0.6 %	(1 in 160)	1.3 %	(1 in 77)	0.2 %	(1 in 580)	0.6 %	(1 in 170)
75 years	0.6 %	(1 in 160)	0.9 %	(1 in 120)	0.3 %	(1 in 330)	0.5 %	(1 in 190)
Lifetime risk			1.7 %	(1 in 59)			0.6 %	(1 in 160)

Figure 3.24.3
Distribution of UICC stages at diagnosis by sex, ICD-10 C64, Germany 2017–2018
top: according to 7th edition TNM; bottom: according to 8th edition TNM.
The DCO proportion was 7%. For 47% of the remaining cases, no UICC stage could be assigned.

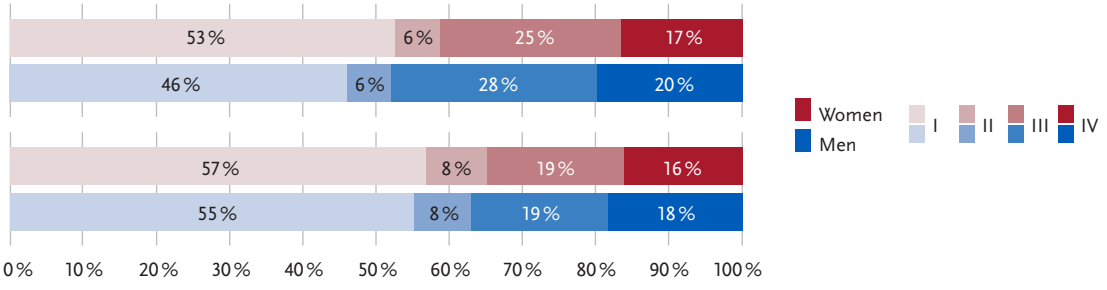

Figure 3.24.4
Absolute and relative survival rates up to 10 years after diagnosis by sex, ICD-10 C64, Germany 2017–2018

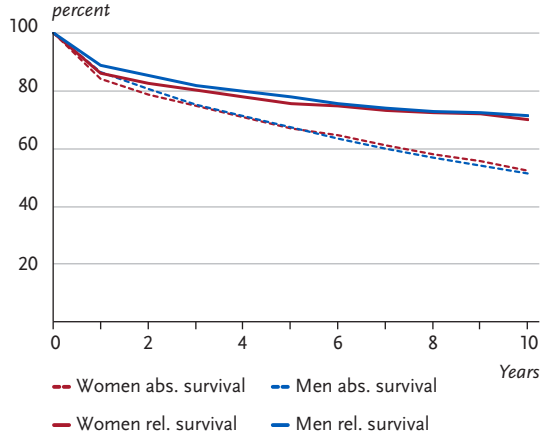

Figure 3.24.5
Relative 5-year survival by UICC stage (7th edition TNM) and sex, ICD-10 C64, Germany 2016–2018

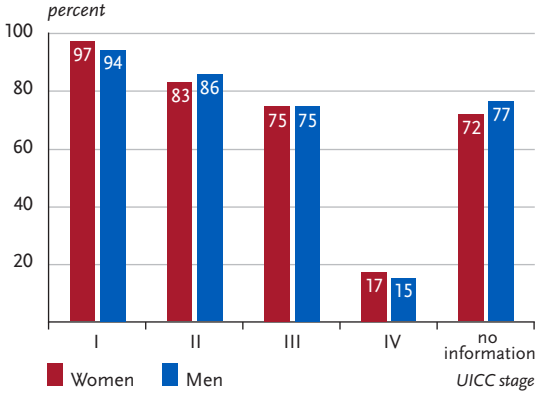

Figure 3.24.6
Age-standardised incidence and mortality rates in German federal states by sex, ICD-10 C64, 2017–2018
per 100,000 (old European Standard)

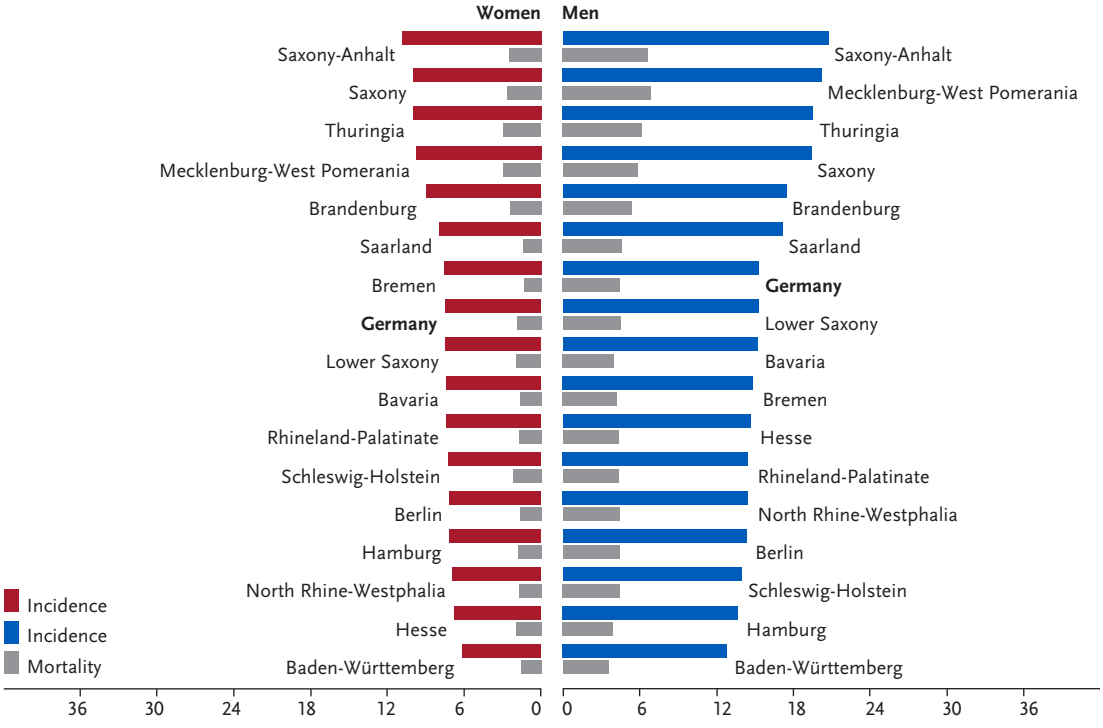

Figure 3.24.7
International comparison of age-standardised incidence and mortality rates by sex, ICD-10 C64, 2017–2018 or latest available year (details and sources, see appendix)
per 100,000 (old European Standard)