3.19 Testicle

Table 3.19.1
Overview of key epidemiological parameters for Germany, ICD-10 C62

	2009	2010	Prediction for 2014
	Men	Men	Men
Incident cases	3,900	3,820	4,000
Crude incidence rate[1]	9.7	9.5	9.9
Standardised incidence rate[1,2]	9.5	9.4	10.0
Median age at diagnosis	38	38	
Deaths	170	166	
Crude mortality rate[1]	0.4	0.4	
Standardised mortality rate[1,2]	0.4	0.4	
5-year prevalence	18,900	18,800	
Absolute 5-year survival rate (2009-2010)[3]		95 (93-96)	
Relative 5-year survival rate (2009-2010)[3]		97 (94-98)	

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

Epidemiology

In 2010 some 3,820 men in Germany were diagnosed with testicular cancer. It accounts for 1.5 % of all cases of cancer in men, making it a relatively rare tumour.

In contrast to almost all other types of cancer, most cases are diagnosed at a comparatively young age, namely between 25 and 45 years of age. In this age group, testicular cancer is the most common malignant tumour in men. Correspondingly, the median age at diagnosis is 38 years.

The age-standardised incidence rate has remained almost constant recently, levelling out after decades during which a steady increase was observed in Germany and other European countries. Over 90 % of testicular tumours are diagnosed in the early stages T1 or T2. Histologically, testicular cancers are predominantly germ cell tumours, of which approximately two thirds are seminomas. Approximately one case in six is a malignant teratoma or a combination of the latter types.

Since the introduction of cis-platinum in chemotherapy for testicular cancer over 30 years ago, this disease has become one of the malignant neoplasms with more favourable prognoses (5-year survival rate most recently 97 %) and a low mortality (166 deaths in 2010).

Risk factors and early detection

A proven risk factor for testicular cancer is cryptorchidism (undescended testis), even after this has been properly treated. Men who have already had cancer or a preliminary stage of cancer in one testicle have an increased risk of developing a tumour in the other testicle. Infertility and rare, genetic disturbances to sexual development, such as Klinefelter's syndrome, also increase the likelihood of developing testicular cancer.

In a small proportion of cases there may be a genetic predisposition. Sons and brothers (especially twin brothers) of patients with testicular cancer have a significantly higher risk of developing the disease.

A hypothesis is that the predisposition for the most frequently occurring germ cell tumours in the testes may have its origin in cells which are scattered during the embryonic stage, and which then undergo a malignant development in puberty. A birth weight below 2500g or above 4500g as well as tall stature are also being discussed as possible risk factors. The causes of the increase in incidence observed in former decades are not clearly understood. The current view is that lifestyle and environmental factors play no part in the development of testicular cancer. Since an early diagnosis is correlated with a better prognosis, men between 20 and 40 years of age are advised to carry out regular self-examination by palpation of the testes.

Figure 3.19.1a
Age-standardised incidence and mortality rates, ICD-10 C62, Germany 1999 – 2010
per 100,000 (European standard)

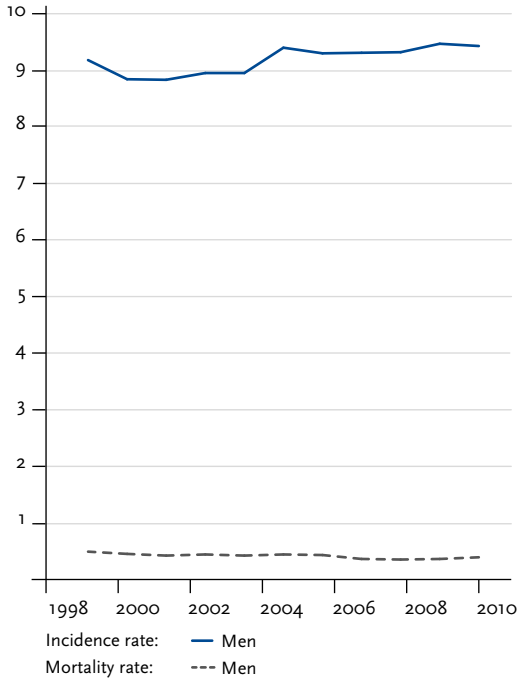

Figure 3.19.1b
Absolute numbers of incident cases and deaths, ICD-10 C62, Germany 1999 – 2010

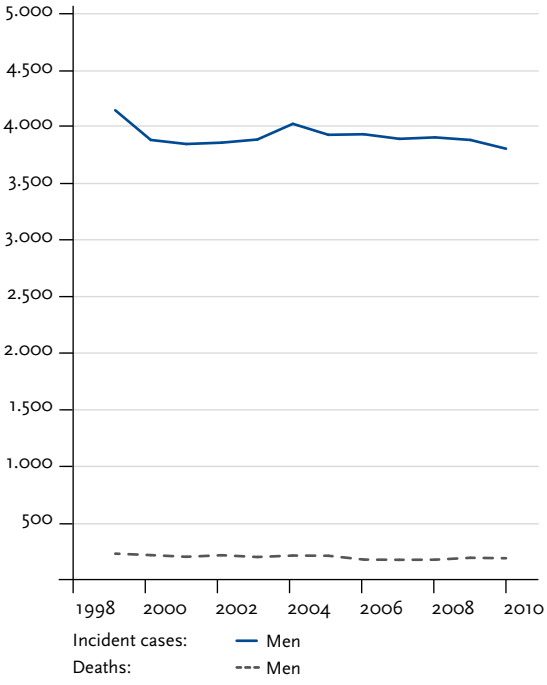

Figure 3.19.2
Age-specific incidence rates, ICD-10 C62, Germany 2009 – 2010
per 100,000

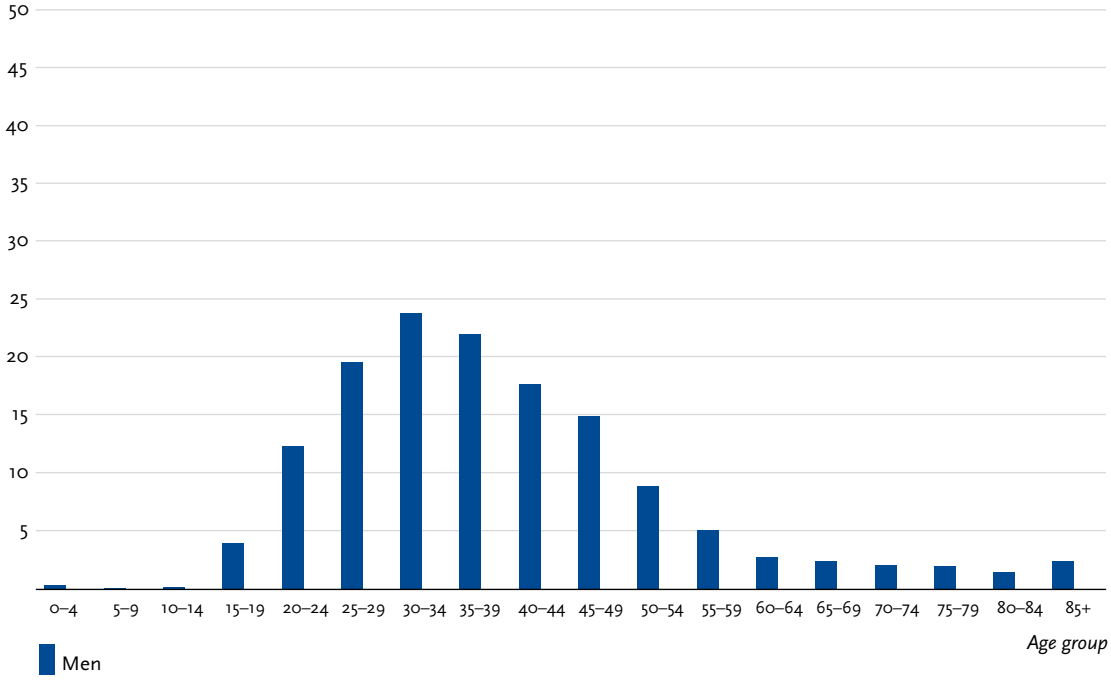

Table 3.19.2
Cancer incidence and mortality risks in Germany by age, ICD-10 C62, database 2010

	Risk of developing cancer				Mortality risk			
Men aged	**in the next ten years**		**ever**		**in the next ten years**		**ever**	
15 years	0.1%	(1 in 1,300)	0.7%	(1 in 150)	<0.1%	(1 in 67,000)	<0.1%	(1 in 3,300)
25 years	0.2%	(1 in 470)	0.6%	(1 in 170)	<0.1%	(1 in 16,000)	<0.1%	(1 in 3,500)
35 years	0.2%	(1 in 490)	0.4%	(1 in 260)	<0.1%	(1 in 16,000)	<0.1%	(1 in 4,400)
45 years	0.1%	(1 in 860)	0.2%	(1 in 550)	<0.1%	(1 in 19,000)	<0.1%	(1 in 6,000)
55 years	<0.1%	(1 in 2,500)	0.1%	(1 in 1,400)	<0.1%	(1 in 32,000)	<0.1%	(1 in 8,400)
65 years	<0.1%	(1 in 5,000)	<0.1%	(1 in 3,000)	<0.1%	(1 in 23,000)	<0.1%	(1 in 10,000)
75 years	<0.1%	(1 in 9,300)	<0.1%	(1 in 5,800)	<0.1%	(1 in 21,000)	<0.1%	(1 in 15,000)
Lifetime risk			0.7%	(1 in 150)			<0.1%	(1 in 3,300)

Figure 3.19.3
Distribution of T-stages at first diagnosis (top: all cases; bottom: only valid reports)
ICD-10 C62, Germany 2009 – 2010

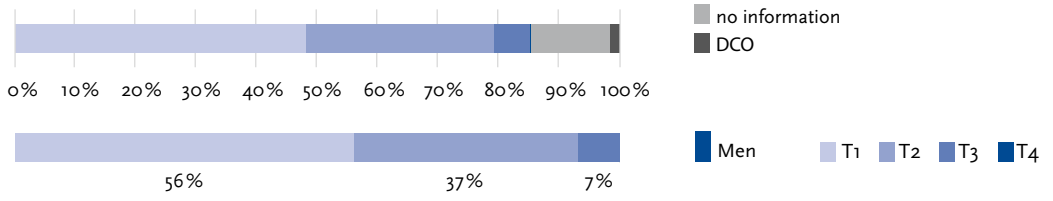

Figure 3.19.4a
Absolute survival rates up to 5 years after first diagnosis,
ICD-10 C62, Germany 2009 – 2010

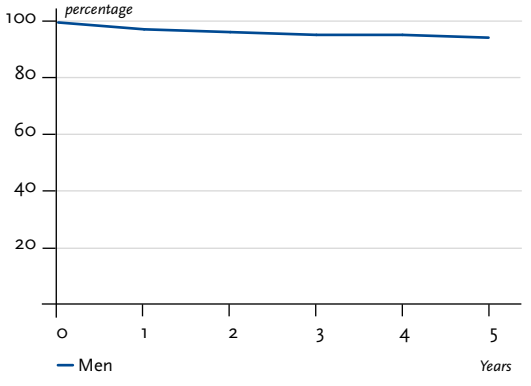

Figure 3.19.4b
Relative survival rates up to 5 years after first diagnosis,
ICD-10 C62, Germany 2009 – 2010

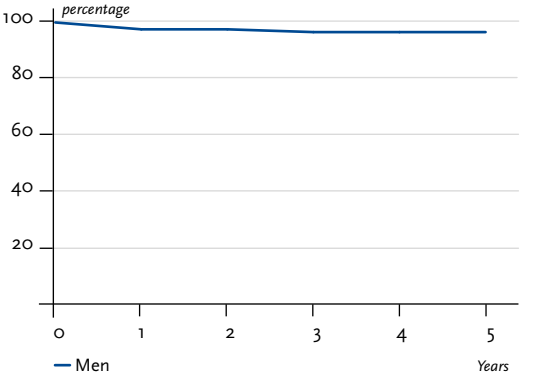

Figure 3.19.5
Registered age-standardised incidence and mortality rates in German federal states, ICD-10 C62, 2009 – 2010
per 100,000 (European standard)

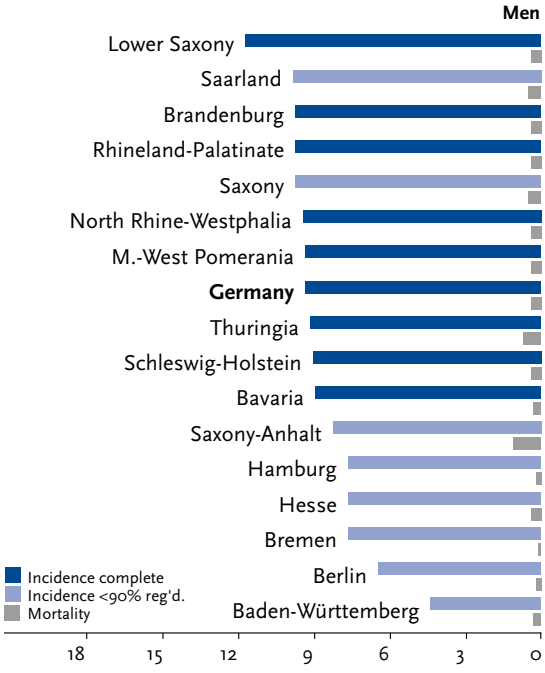

Figure 3.19.6
International comparison of age-standardised incidence and mortality rates, ICD-10 C62, 2009 – 2010 or latest available year (details and sources, see appendix)
per 100,000 (European standard)