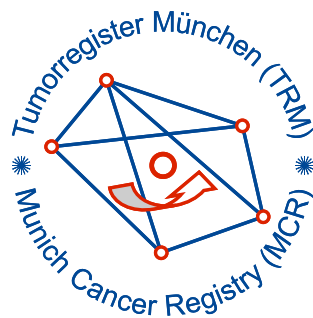


Munich Cancer Registry



- ▶ Baseline statistics
- ▶ Selection Matrix
- ▶ Homepage

Munich Cancer Registry at Munich Cancer Center
Marchioninstr. 15
Munich, 81377
Germany

<http://www.tumorregister-muenchen.de/en>

Cancer statistics: Survival

C62: Testicular cancer

Year of diagnosis	1979-1987	1988-1997	1998-2011
Patients	397	934	2,559
Diseases	402	949	2,604
Creation date	04/01/2013		
Export date	01/03/2013		
Population (males)	2.2 m		



http://www.tumorregister-muenchen.de/en/facts/surv/surv_C62__E.pdf

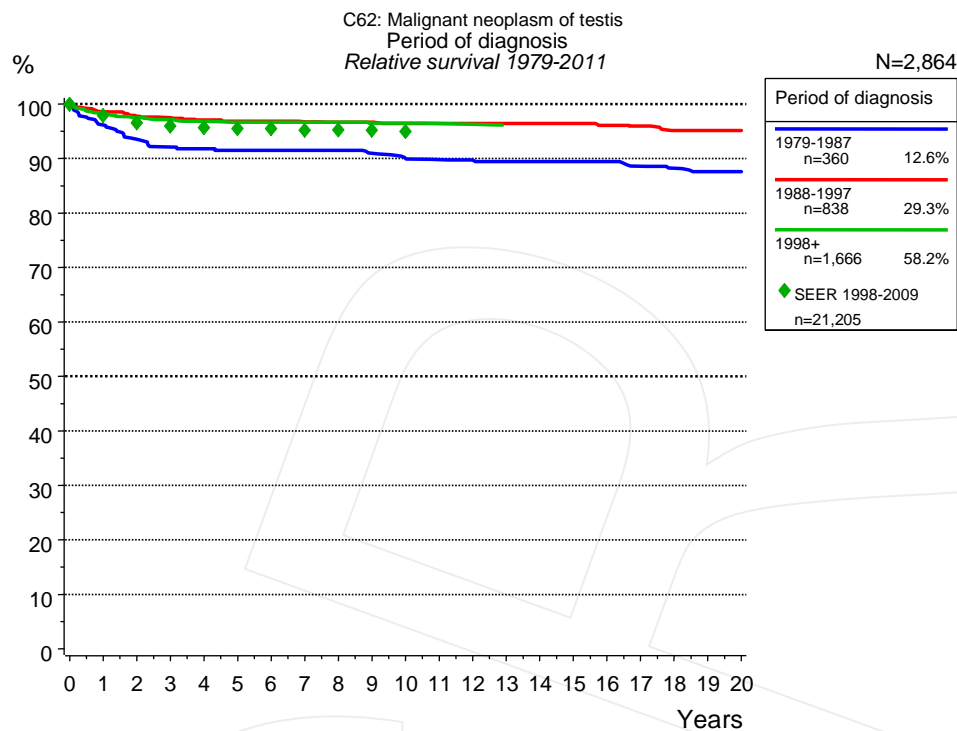


Figure 1a. Relative survival of patients with testicular cancer by period of diagnosis. Included in the evaluation are 2,864 cases diagnosed between 1979 and 2011.

The survival results of the SEER program (Surveillance, Epidemiology, and End Results) of the American National Cancer Institute (NCI) are summarized as the period of diagnosis from 1998 to 2009, and are represented by green diamonds in order to facilitate comparisons between MCR and SEER.

The presented survival curves are derived from clinical records with valid follow-up informations, which means that death certificate cases (DCO) cases are omitted from the analysis. With this one restriction, the MCR has provided population-based statistics since 1998, collecting data on all cancer cases in the region of southern Bavaria. Historical data of previous time periods can be heavily selected, therefore, univariate survival comparisons of the presented time periods must be carefully considered. Nonetheless, all calculable survival curves are depicted to facilitate the comparison of long time follow-up analyses of relative survival between particular cancers.

Years	Period of diagnosis					
	1979-1987 n=360		1988-1997 n=838		1998+ n=1,666	
	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0	100.0	100.0
1	96.1	96.1	98.3	98.6	98.0	98.2
2	93.3	93.5	97.2	97.8	97.0	97.5
3	91.6	92.1	96.6	97.5	96.5	97.1
4	91.1	91.8	96.0	97.1	95.8	96.8
5	90.5	91.5	95.4	96.8	95.4	96.7
6	90.5	91.5	95.3	96.8	95.2	96.7
7	90.2	91.5	94.7	96.8	95.2	96.7
8	90.0	91.5	94.3	96.7	94.6	96.7
9	88.8	90.9	94.1	96.7	93.9	96.5
10	87.7	90.0	93.3	96.4	93.9	96.5
11	87.1	89.8	93.2	96.4	93.3	96.4
12	86.5	89.7	93.0	96.4	93.3	96.3
13	86.2	89.4	92.5	96.4		
14	85.9	89.4	92.0	96.4		
15	85.3	89.4	91.8	96.4		
16	85.0	89.4	90.5	96.1		
17	83.4	88.6	89.9	95.9		
18	82.5	88.2	88.4	95.1		
19	81.6	87.6	87.9	95.1		
20	81.2	87.6	87.9	95.1		

Table 1b. Observed (obs.) and relative (rel.) survival of patients with testicular cancer by period of diagnosis for period 1979-2011 (N=2,864).

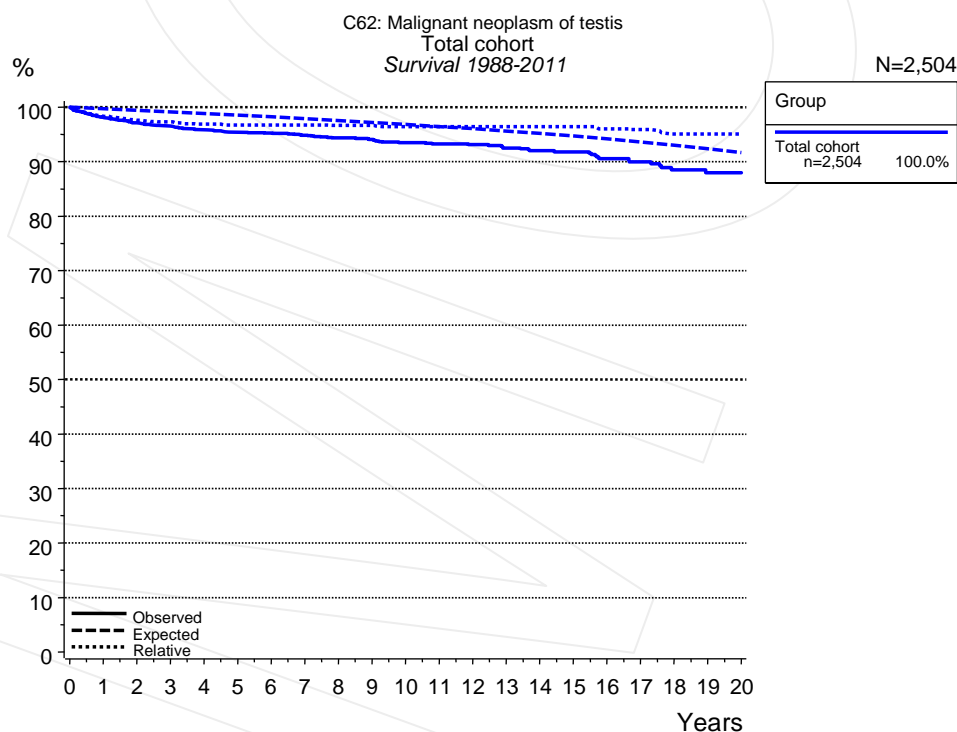


Figure 2a. Observed, expected and relative survival of the total cohort with testicular cancer. Included in the evaluation are 2,504 cases diagnosed between 1988 and 2011.

Years	Group	
	Total cohort n=2,504	
	obs. %	rel. %
0	100.0	100.0
1	98.1	98.3
2	97.1	97.6
3	96.5	97.3
4	95.8	96.9
5	95.4	96.7
6	95.2	96.7
7	94.9	96.7
8	94.4	96.7
9	94.1	96.7
10	93.5	96.4
11	93.2	96.4
12	93.1	96.4
13	92.5	96.4
14	92.0	96.4
15	91.8	96.4
16	90.6	96.0
17	90.0	95.9
18	88.5	95.1
19	88.0	95.1
20	88.0	95.1

Table 2b. Observed (obs.) and relative (rel.) survival of the total cohort with testicular cancer for period 1988-2011 (N=2,504).

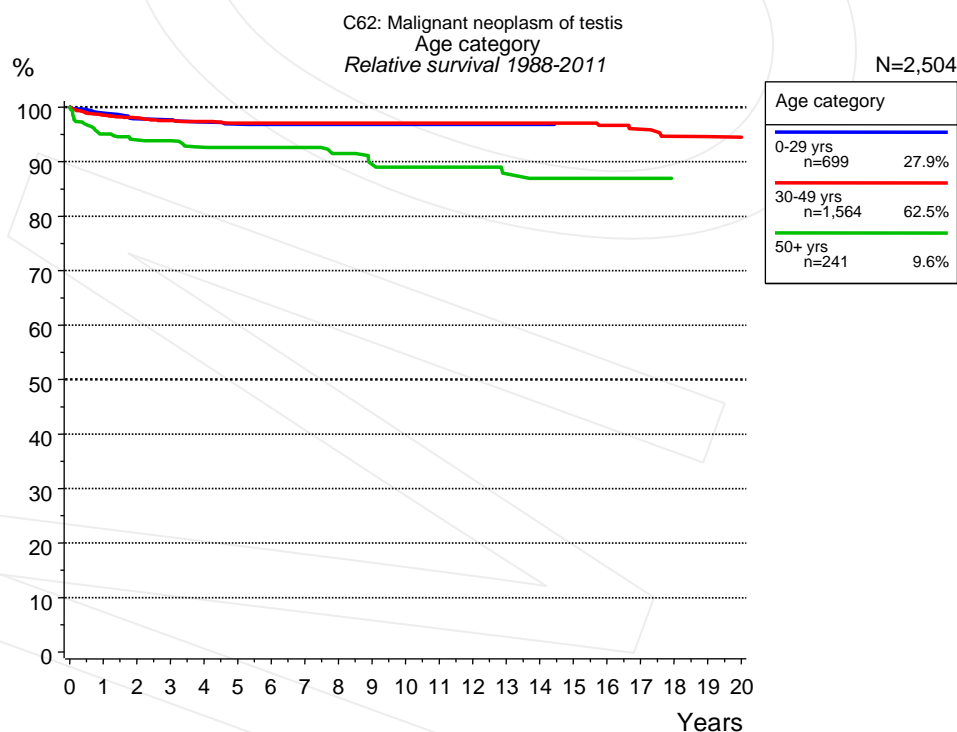


Figure 3a. Relative survival of patients with testicular cancer by age category. Included in the evaluation are 2,504 cases diagnosed between 1988 and 2011.

Years	Age category					
	0-29 yrs n=699		30-49 yrs n=1,564		50+ yrs n=241	
	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0	100.0	100.0
1	99.0	98.9	98.4	98.5	93.7	95.1
2	97.7	97.8	97.7	98.0	91.0	94.0
3	97.6	97.6	97.1	97.6	89.5	93.8
4	97.0	97.3	96.7	97.3	87.4	92.6
5	96.6	96.9	96.2	97.1	86.8	92.6
6	96.4	96.8	96.1	97.1	86.8	92.6
7	96.4	96.8	95.9	97.1	83.5	92.6
8	96.4	96.8	95.7	97.1	80.0	91.5
9	96.4	96.8	95.7	97.1	76.9	89.4
10	96.4	96.8	94.8	97.1	75.7	88.9
11	96.4	96.8	94.6	97.1	74.4	88.9
12	96.4	96.8	94.4	97.1	74.4	88.9
13	96.4	96.8	94.1	97.1	69.3	87.8
14	96.4	96.8	93.5	97.1	67.2	86.9
15	95.8	96.1	93.5	97.1	67.2	86.9
16	95.8	94.8	91.8	96.6	64.8	86.9
17	95.8	93.6	90.7	95.9	64.8	86.9
18	95.8	92.3	88.8	94.6	60.9	86.9
19	95.8	91.0	87.9	94.6	60.9	86.3
20	95.8	89.8	87.9	94.5	60.9	85.8

Table 3b. Observed (obs.) and relative (rel.) survival of patients with testicular cancer by age category for period 1988-2011 (N=2,504).

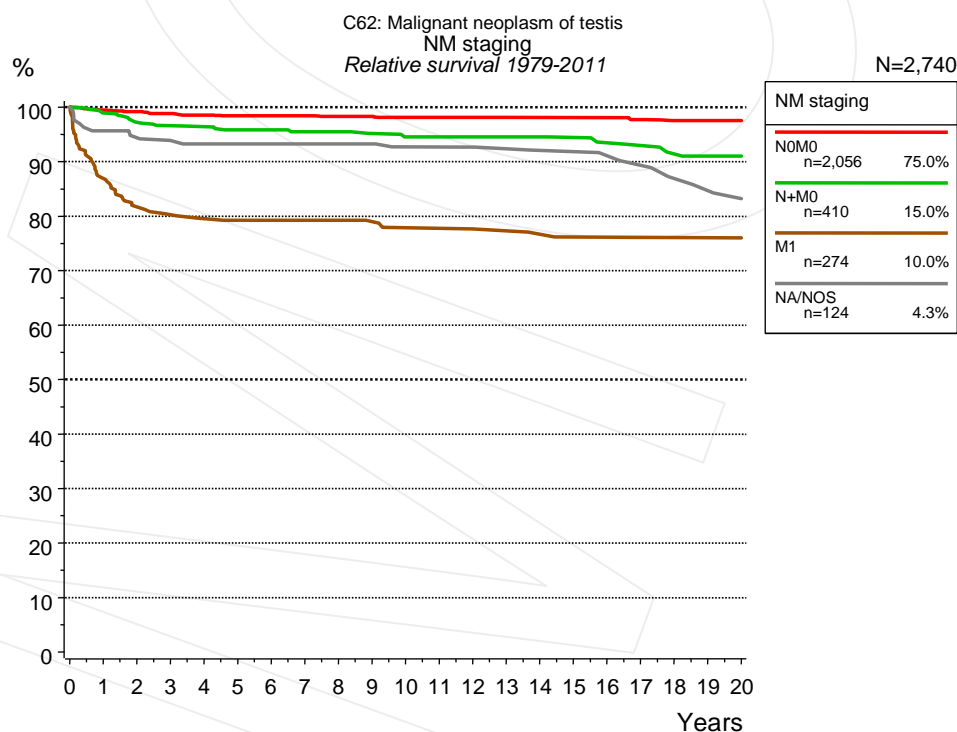


Figure 4a. Relative survival of patients with testicular cancer by NM staging. For 2,741 of 2,864 cases diagnosed between 1979 and 2011 valid data could be obtained for this item. For a total of 2,740 cases an evaluable classification was established. The grey line represents the subgroup of 124 patients with missing values regarding NM staging (4.3% of 2,864 patients, the percent values of all other categories are related to n=2,740).

Years	NM staging							
	N0M0 n=2,056		N+M0 n=410		M1 n=274		NA/NOS n=124	
	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	99.3	99.5	98.8	98.9	86.9	86.9	95.2	95.7
2	98.7	99.2	97.0	97.2	81.6	81.7	93.5	94.4
3	98.1	98.8	96.1	96.6	79.9	80.2	91.8	93.9
4	97.5	98.5	95.9	96.4	79.0	79.5	90.9	93.3
5	97.1	98.4	94.9	95.8	78.4	79.2	90.9	93.3
6	96.9	98.4	94.9	95.8	78.4	79.2	90.9	93.3
7	96.6	98.4	94.1	95.5	78.4	79.2	90.9	93.3
8	96.0	98.3	94.1	95.5	78.4	79.2	89.9	93.3
9	95.7	98.3	93.3	95.2	77.7	79.0	88.8	93.3
10	95.3	98.1	92.3	94.6	76.2	77.8	86.6	92.7
11	94.8	98.1	92.3	94.6	76.2	77.7	86.6	92.7
12	94.5	98.1	92.3	94.6	75.3	77.6	86.6	92.7
13	93.8	98.1	92.3	94.6	75.3	77.3	85.3	92.4
14	93.7	98.1	91.7	94.6	74.3	76.7	83.9	92.0
15	93.5	98.1	91.0	94.4	73.2	76.1	83.9	91.8
16	92.8	98.1	89.5	93.5	73.2	76.1	82.4	91.1
17	91.6	97.7	88.7	93.0	73.2	76.1	80.8	89.3
18	90.7	97.6	86.9	91.4	73.2	76.0	77.4	86.9
19	90.1	97.5	85.9	91.0	73.2	76.0	75.7	84.7
20	90.1	97.5	85.9	91.0	73.2	76.0	74.0	83.2

Table 4b. Observed (obs.) and relative (rel.) survival of patients with testicular cancer by NM staging for period 1979-2011 (N=2,740).

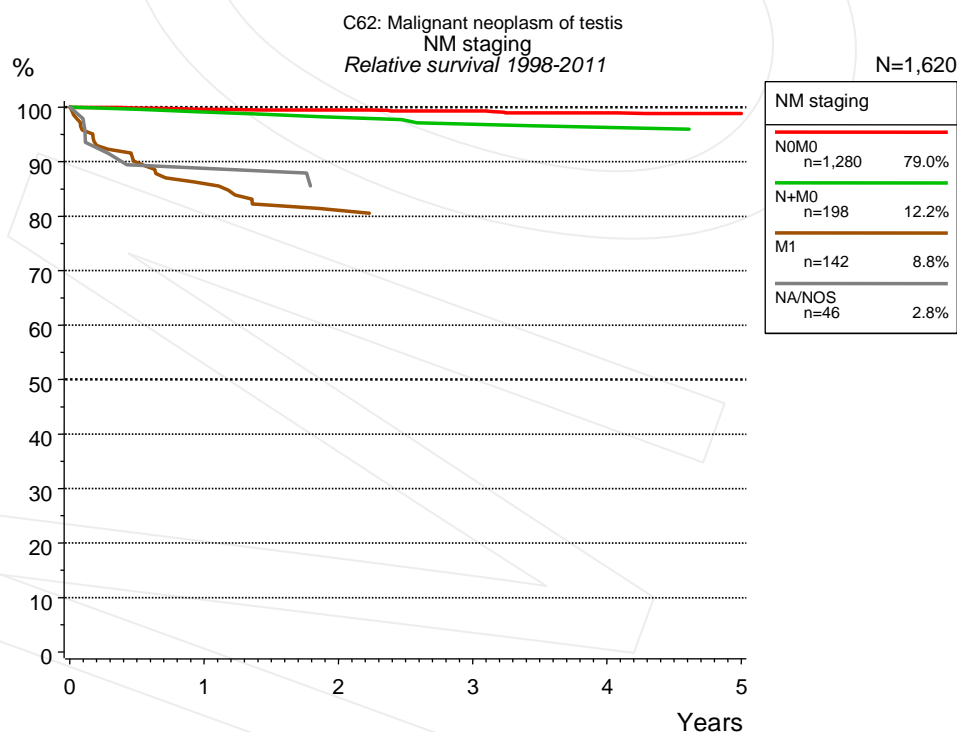


Figure 4c. Relative survival of patients with testicular cancer by NM staging. For 1,620 of 1,666 cases diagnosed between 1998 and 2011 valid data could be obtained for this item. The grey line represents the subgroup of 46 patients with missing values regarding NM staging (2.8% of 1,666 patients, the percent values of all other categories are related to n=1,620).

Years	NM staging							
	N0M0 n=1,280		N+M0 n=198		M1 n=142		NA/NOS n=46	
	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	99.4	99.6	98.9	99.1	86.1	86.0	89.1	88.8
2	99.1	99.5	97.8	98.1	81.0	81.1		
3	98.7	99.3	96.6	96.9				
4	98.0	98.9	95.9	96.3				
5	97.5	98.8						

Table 4d. Observed (obs.) and relative (rel.) survival of patients with testicular cancer by NM staging for period 1998-2011 (N=1,620).

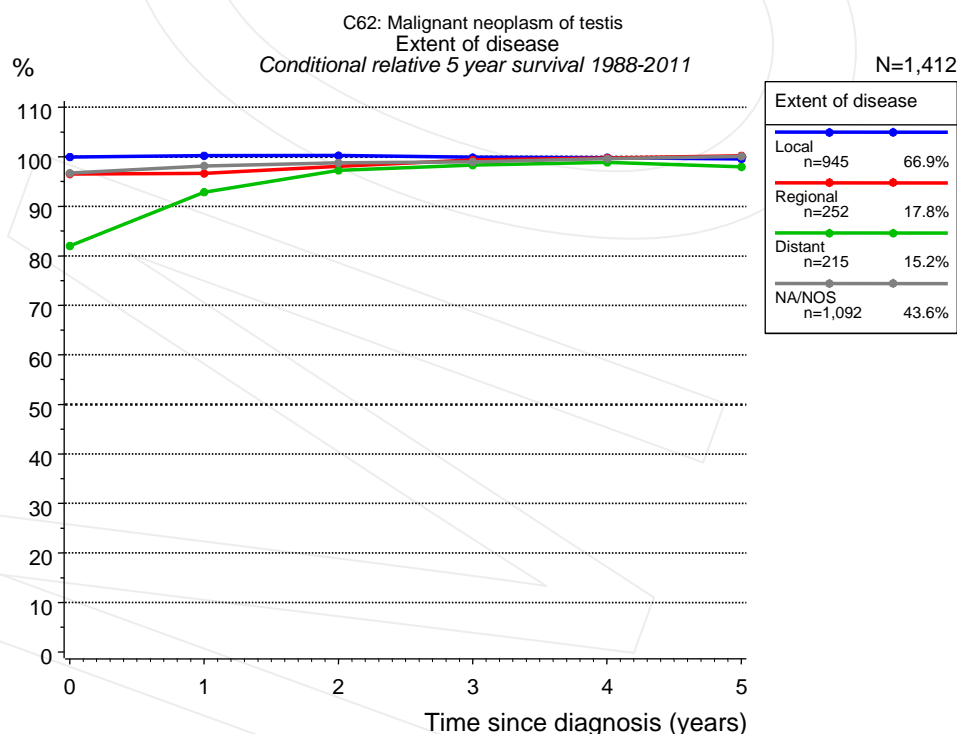


Figure 4e. Conditional relative 5-year survival of patients with testicular cancer by extent of disease. For 2,420 of 2,504 cases diagnosed between 1988 and 2011 valid data could be obtained for this item. For a total of 1,412 cases an evaluable classification was established. The grey line represents the subgroup of 1,092 patients with missing values regarding extent of disease (43.6% of 2,504 patients, the percent values of all other categories are related to n=1,412).

Years	Extent of disease							
	Local		Regional		Distant		NA/NOS	
	n	Cond. surv. % 5 yrs	n	Cond. surv. % 5 yrs	n	Cond. surv. % 5 yrs	n	Cond. surv. % 5 yrs
0	945	99.9	252	96.5	215	82.0	1,092	96.7
1	885	100.2	244	96.6	172	92.9	1,007	98.1
2	828	100.2	231	98.1	152	97.2	890	98.8
3	765	99.8	211	99.3	132	98.3	782	99.0
4	710	99.8	191	99.7	117	98.8	671	99.6
5	638	99.6	167	100.2	100	97.9	596	100.1

Table 4f. Conditional relative 5-year survival of patients with testicular cancer by extent of disease for period 1988-2011 (N=1,412).

Conditional relative survival rates refer to the relative survival probability, in this case for 5 years after cancer diagnosis, compared to the age- and sex-matched population (=100%) under the condition of being alive for a certain time period (x-axis in Figure 4c). The results illustrate to what extent the cancer induced mortality of particular subgroups declines in the subsequent years after detection of the malignancy. For instance, according to the presented survival statistics, patients in the subgroup extent of disease="Local", who are alive at least 3 years after cancer diagnosis, the conditional relative 5-year survival rate is 99.8% (n=765).

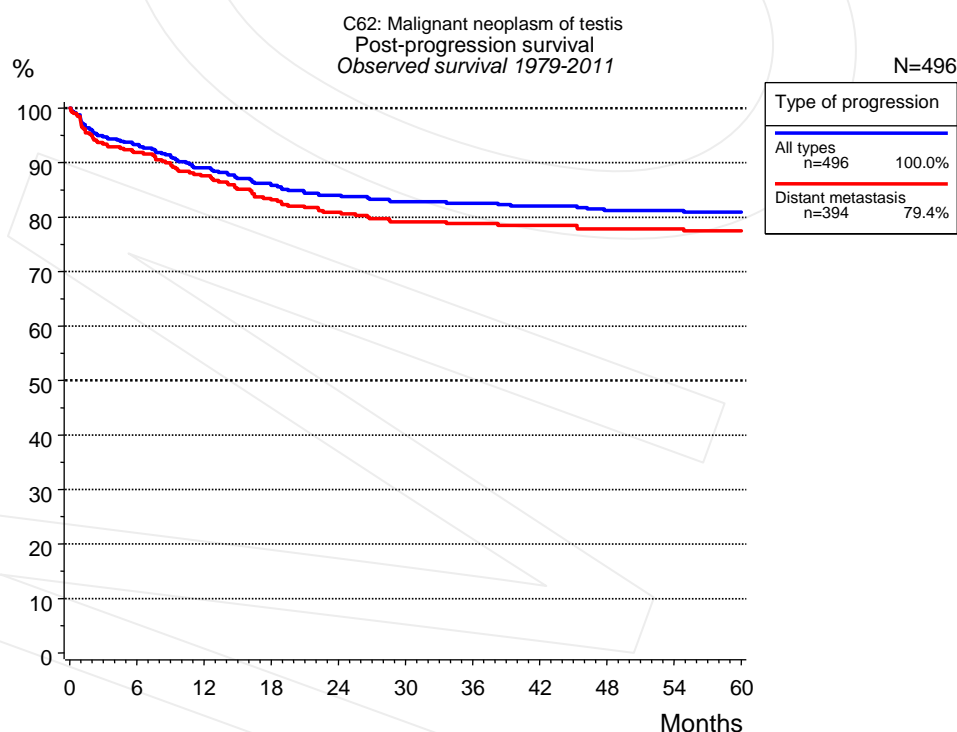


Figure 5a. Observed post-progression survival of 496 patients with testicular cancer diagnosed between 1979 and 2011 (incl. M1). These 496 patients with documented progression events during their course of disease represent 17.3% of the totally 2,864 evaluated cases. Patients with cancer relapse documented via death certificates only were excluded (n=12, 0.4%). Multiple progression types on different sites are included in the evaluation even when not occurring synchronously.

Medical record documentation often lacks the linguistic severity to distinguish between local relapse, regional lymph node metastasis and distant spread in solid cancers. Frequently, the statement "not specified" is the only information in registries regarding relapse of the disease. The category "All types" denotes all cases who suffered from at least one relapse during the course of disease (incl. primary M1-status). Although, the real number of relapsed patients is likely to be much higher. The accumulated percentage of patients with local relapse or distant metastasis exceeds the 100% value because patients are potentially considered in more than one subgroup.

Months	Type of progression	
	All types	Distant metastasis
	n=496	n=394
	%	%
0	100.0	100.0
12	89.0	87.5
24	84.0	80.9
36	82.5	78.8
48	81.2	77.8
60	80.9	77.4

Table 5b. Observed post-progression survival of patients with testicular cancer for period 1979-2011 (N=496).

Shortcuts

AS	Assembled survival chart (observed, expected, relative)
CS	Conditional survival
DCO	Death certificate only. The death certificate provides the only notification to the registry.
MCR	Munich Cancer Registry, Germany (Tumorregister München)
NA	Not available
NCI	National Cancer Institute, USA
NOS	Not otherwise specified
OS	Observed/overall survival (Kaplan-Meier estimate)
PPS	Post-progression survival
RS	Relative Survival. Ratio of observed and expected survival (derived from the normal population)
SEER	Surveillance, Epidemiology, and End Results, USA
TTP	Time to progression Date of entry: Date of diagnosis Event (Progression): First local recurrence, lymph node relapse or distant metastasis, unspecified recurrence First all-cause recurrence is illustrated by survival curves (Kaplan-Meier estimate). First local recurrence, lymph node relapse or distant metastasis are depicted cumulatively, where applicable ("reverse" Kaplan-Meier estimate).
UICC	Union for International Cancer Control, Geneva

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