

Munich Cancer Registry



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Munich Cancer Registry at Munich Cancer Center
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<http://www.tumorregister-muenchen.de/en>

Cancer statistics: Survival

C81-C96: Systemic neoplasms

Year of diagnosis	1978-1987	1988-1997	1998-2011
Patients	1,782	3,800	18,653
Diseases	1,789	3,826	18,876
Creation date	04/01/2013		
Export date	01/03/2013		
Population	4.5 m		



http://www.tumorregister-muenchen.de/en/facts/surv/surv_C8196E.pdf

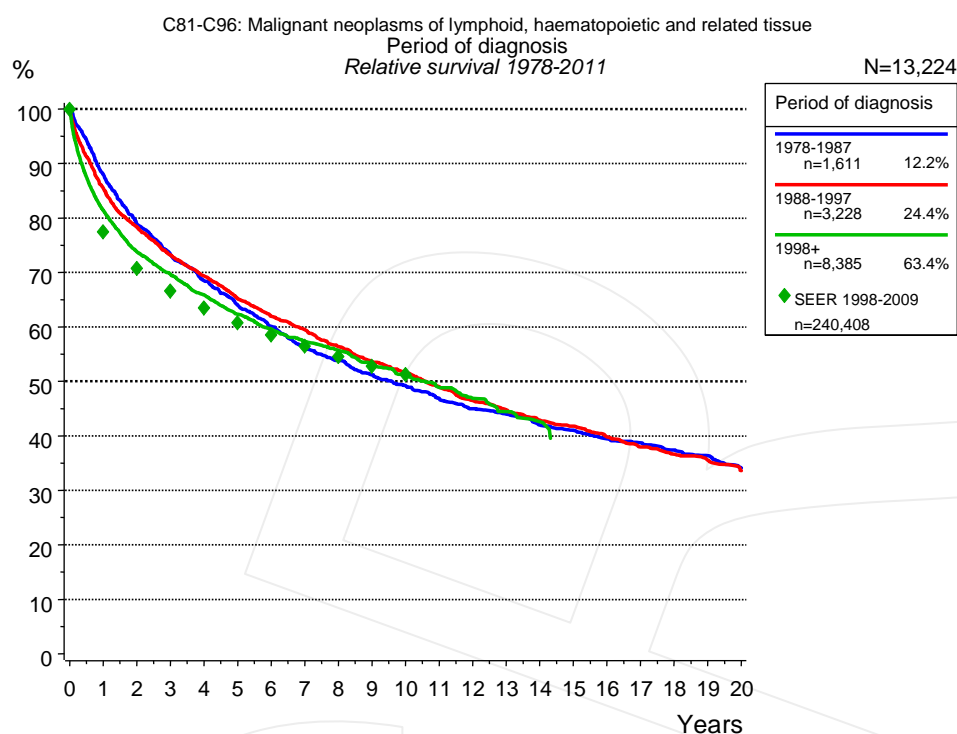


Figure 1a. Relative survival of patients with systemic neoplasms by period of diagnosis. Included in the evaluation are 13,224 cases diagnosed between 1978 and 2011.

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					
	1978-1987 n=1,611		1988-1997 n=3,228		1998+ n=8,385	
	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0	100.0	100.0
1	86.3	87.9	83.5	85.4	79.4	81.4
2	76.3	78.9	75.3	78.4	70.5	73.8
3	69.7	73.3	69.1	73.2	65.3	69.6
4	64.1	68.4	64.3	69.4	60.6	65.8
5	59.0	64.0	59.3	65.2	56.3	62.3
6	54.6	60.1	55.4	61.9	53.0	59.6
7	50.4	56.3	52.3	59.5	50.1	57.3
8	47.5	53.8	48.8	56.4	47.9	55.7
9	44.6	51.2	45.7	53.7	45.1	53.3
10	42.3	49.2	43.3	51.6	42.5	51.1
11	39.7	46.9	40.5	49.0	40.1	48.9
12	37.6	45.0	37.8	46.5	37.7	46.9
13	36.2	44.0	35.9	44.8	35.3	44.5
14	34.1	42.0	33.9	42.9	33.6	42.6
15	33.0	41.0	32.6	41.8		
16	31.3	39.5	30.6	39.8		
17	30.3	38.7	28.7	38.0		
18	28.9	37.4	27.4	36.7		
19	27.8	36.4	26.1	35.5		
20	25.8	34.1	24.4	33.7		

Table 1b. Observed (obs.) and relative (rel.) survival of patients with systemic neoplasms by period of diagnosis for period 1978-2011 (N=13,224).

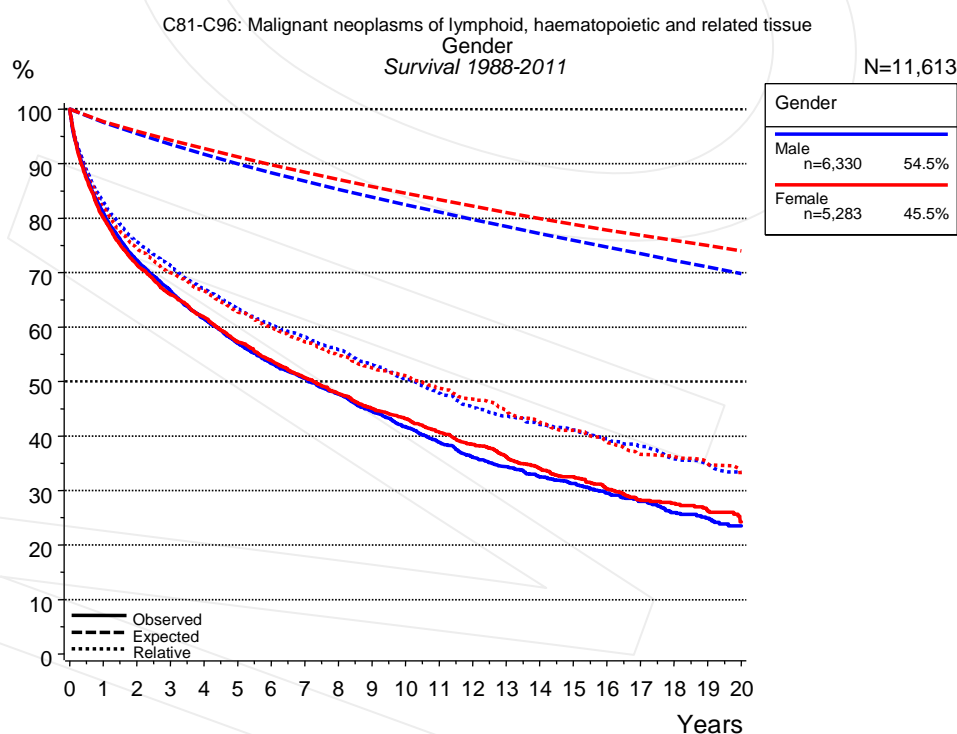


Figure 2a. Survival of patients with systemic neoplasms by gender. Included in the evaluation are 11,613 cases diagnosed between 1988 and 2011.

Years	Gender			
	Male n=6,330		Female n=5,283	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	80.9	82.9	80.1	82.0
2	72.2	75.7	71.4	74.4
3	66.7	71.3	66.0	69.9
4	61.5	67.0	61.8	66.6
5	57.0	63.3	57.2	62.7
6	53.3	60.3	53.8	59.9
7	50.6	58.2	50.7	57.3
8	47.7	55.8	47.8	54.8
9	44.5	53.1	45.1	52.5
10	41.6	50.5	43.2	51.0
11	38.8	47.9	40.7	48.8
12	36.1	45.2	38.5	46.8
13	34.3	43.7	36.2	44.6
14	32.6	42.1	34.1	42.5
15	31.3	41.1	32.5	41.0
16	29.5	39.5	30.3	38.8
17	28.0	38.1	28.2	36.6
18	26.0	35.8	27.6	36.2
19	24.9	34.8	26.3	34.9
20	23.5	33.4	24.2	32.7

Table 2b. Observed (obs.) and relative (rel.) survival of patients with systemic neoplasms by gender for period 1988-2011 (N=11,613).

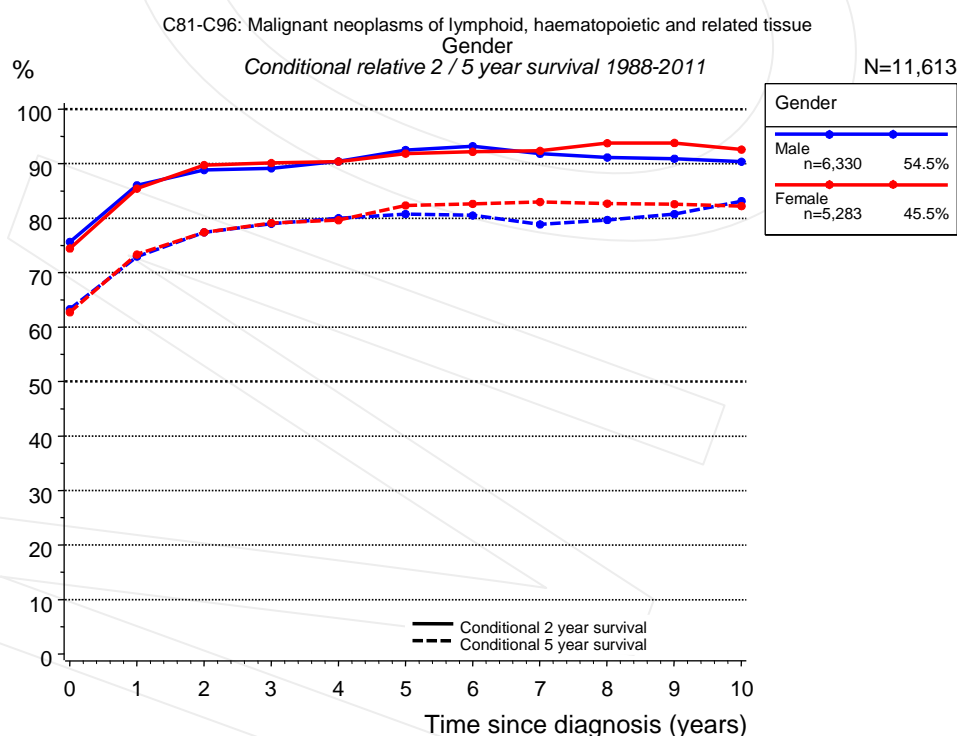


Figure 2c. Conditional relative 2 / 5-year survival of patients with systemic neoplasms by gender. For 11,613 of 11,613 cases diagnosed between 1988 and 2011 valid data could be obtained for this item.

Years	Gender					
	Male			Female		
	n	Cond. surv. % 2 yrs	5 yrs	n	Cond. surv. % 2 yrs	5 yrs
0	6,330	75.7	63.3	5,283	74.4	62.7
1	4,846	86.0	72.9	4,029	85.4	73.3
2	3,971	88.8	77.4	3,349	89.7	77.4
3	3,331	89.1	79.0	2,828	90.1	79.1
4	2,754	90.4	80.0	2,369	90.4	79.6
5	2,271	92.5	80.8	1,967	91.9	82.3
6	1,884	93.2	80.5	1,662	92.2	82.6
7	1,630	91.8	78.8	1,419	92.4	83.0
8	1,388	91.1	79.6	1,209	93.8	82.7
9	1,163	90.9	80.8	1,010	93.8	82.6
10	955	90.4	83.1	848	92.6	82.2

Table 2d. Conditional relative 2 / 5-year survival of patients with systemic neoplasms by gender for period 1988-2011 (N=11,613).

Conditional relative survival rates refer to the relative survival probability, in this case for 2 and 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 2a). 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 gender="Male", who are alive at least 3 years after cancer diagnosis, the conditional relative 2-year survival rate is 89.1% (n=3,331).

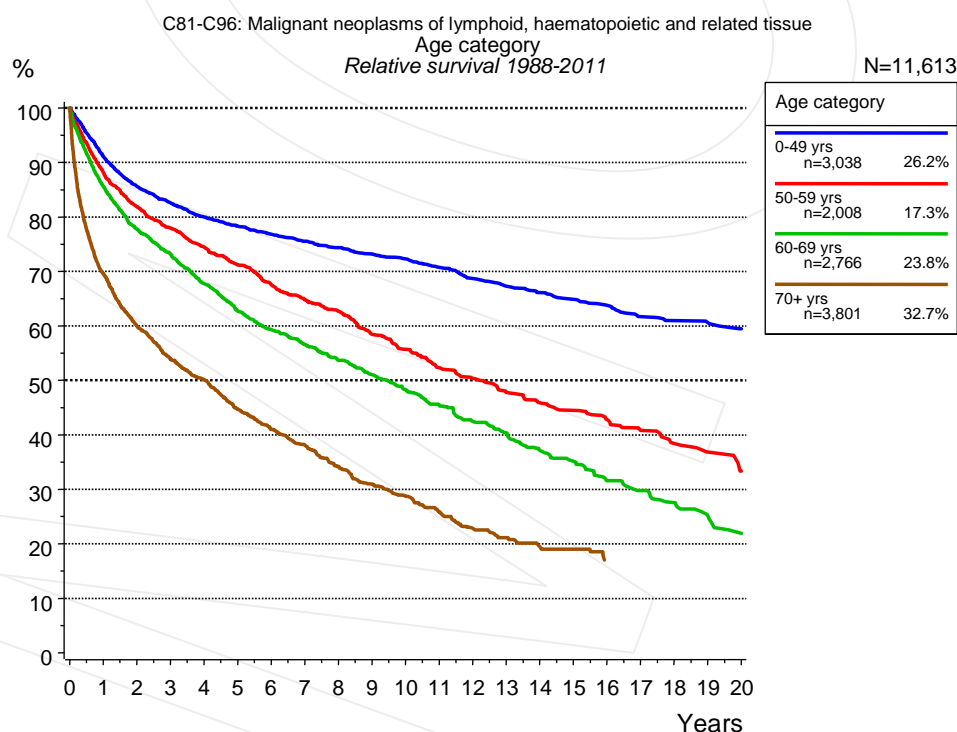


Figure 3a. Relative survival of patients with systemic neoplasms by age category. Included in the evaluation are 11,613 cases diagnosed between 1988 and 2011.

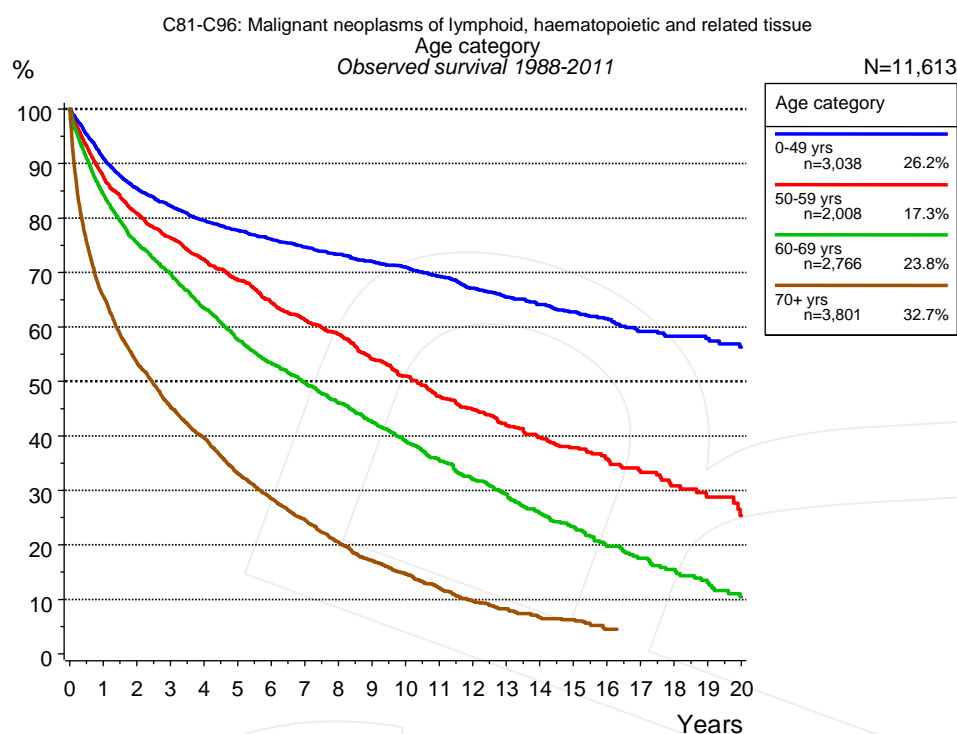


Figure 3b. Observed survival of patients with systemic neoplasms by age category. Included in the evaluation are 11,613 cases diagnosed between 1988 and 2011.

Years	Age category							
	0-49 yrs n=3,038		50-59 yrs n=2,008		60-69 yrs n=2,766		70+ yrs n=3,801	
	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	91.0	91.1	87.6	88.1	84.3	85.5	65.6	69.6
2	85.4	85.6	80.8	81.8	75.5	77.8	53.4	60.0
3	82.2	82.6	76.3	77.9	69.8	73.1	45.4	54.0
4	79.5	80.0	72.4	74.4	63.5	67.7	39.6	50.1
5	77.7	78.3	68.6	71.2	57.6	62.7	33.1	44.6
6	76.1	76.8	64.4	67.5	53.4	59.3	28.4	41.0
7	74.7	75.5	61.2	64.8	49.7	56.6	24.6	38.1
8	73.3	74.3	58.7	62.7	46.0	53.7	20.4	34.1
9	72.1	73.2	54.1	58.5	42.6	51.1	17.1	31.0
10	71.0	72.3	50.9	55.7	39.0	48.2	14.6	28.7
11	69.3	70.7	47.2	52.3	35.6	45.5	12.1	25.9
12	67.1	68.7	44.8	50.4	32.0	42.4	9.7	22.8
13	65.5	67.3	41.9	47.8	29.3	40.3	8.3	21.2
14	64.1	66.1	39.7	45.8	25.8	37.1	6.8	19.4
15	62.8	64.9	37.8	44.5	23.4	35.1	6.2	19.0
16	61.5	63.8	35.7	42.8	19.7	31.6	4.5	17.0
17	59.2	61.7	33.3	40.8	17.6	29.7		
18	58.3	61.0	30.8	38.4	15.5	27.6		
19	57.9	60.6	28.8	36.9	13.0	25.1		
20	56.3	59.5	25.4	33.4	10.4	21.9		

Table 3c. Observed (obs.) and relative (rel.) survival of patients with systemic neoplasms by age category for period 1988-2011 (N=11,613).

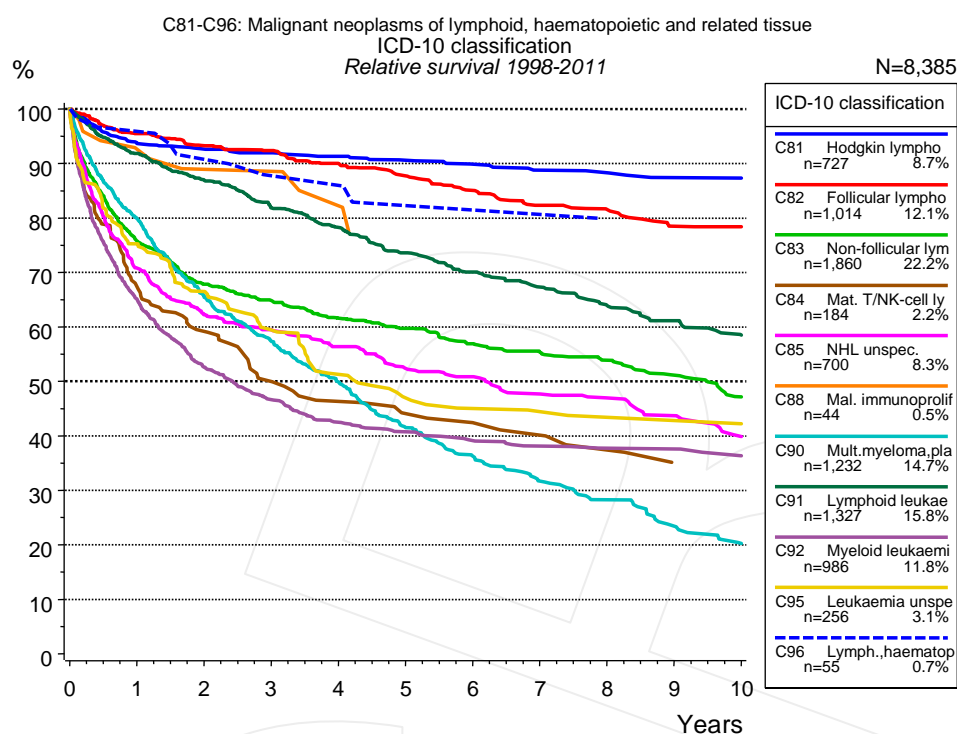


Figure 4a. Relative survival of patients with systemic neoplasms by ICD-10 classification. Included in the evaluation are 8,385 cases diagnosed between 1998 and 2011.

		ICD-10 classification													
		C81 Hodgkin lymphoma		C82 Follicular lymphoma		C83 Non-follicular lymphoma		C84 Mat. T/NK-cell lymphoma		C85 NHL unspec.		C88 Mal. immunoprolif. dis.		C90 Mult.myeloma, plasma cell	
		n=727		n=1,014		n=1,860		n=184		n=700		n=44		n=1,232	
Years		obs. %	rel. %	obs. %	rel. %	obs. %	rel. %	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	100.0	100.0	100.0	100.0	100.0	100.0
1		93.1	93.8	93.6	95.5	73.5	75.8	65.7	67.3	68.4	70.8	90.9	92.6	77.8	79.9
2		91.6	92.6	89.8	93.3	64.3	67.8	56.9	59.2	58.5	62.2	85.7	88.9	62.2	65.5
3		90.6	92.0	87.4	92.4	60.0	64.8	47.5	49.9	54.7	59.5	85.7	88.5	53.2	57.3
4		89.4	91.3	83.4	90.0	55.7	61.6	43.0	46.3	50.6	56.4	78.5	82.2	45.2	49.9
5		88.2	90.6	79.7	87.7	52.8	59.7	39.8	44.1	45.9	52.4			36.8	41.5
6		86.9	89.8	76.0	85.1	49.3	56.9	37.2	42.4	43.8	50.8			31.4	36.3
7		85.5	88.8	72.1	82.3	46.9	55.4	35.8	40.1	40.2	47.7			26.9	31.7
8		85.0	88.3	70.2	81.5	44.8	53.9	32.8	37.4	38.5	46.9			23.6	28.3
9		83.4	87.4	66.3	78.5	41.7	51.1			35.5	43.7			19.3	23.4
10		83.4	87.3	65.6	78.4	37.8	47.1			31.7	39.9			16.2	20.3

ICD-10 classification								
<i>cont'd</i>	C91 Lymphoid leukaemia n=1,327		C92 Myeloid leukaemia n=986		C95 Leukaemia unspec. n=256		C96 Lymph., haem atop. unspec. n=55	
Years	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	89.7	91.9	63.8	65.1	73.1	75.2	96.4	95.9
2	83.0	86.9	50.7	52.6	63.1	66.5	90.5	90.8
3	76.5	81.8	44.4	46.6	54.8	59.4	86.1	87.7
4	71.8	78.3	40.0	42.5	46.5	51.3	86.1	86.0
5	66.2	73.6	38.0	40.8	41.6	47.0	80.5	82.3
6	61.8	70.1	36.1	39.1	39.2	45.0	80.5	81.5
7	58.3	67.3	34.8	38.1	38.1	44.4	80.5	80.7
8	54.4	63.9	34.0	37.7	36.9	43.4		
9	51.4	61.1	34.0	37.6	35.5	42.8		
10	48.0	58.5	32.7	36.3	35.5	42.2		

Table 4b. Observed (obs.) and relative (rel.) survival of patients with systemic neoplasms by ICD-10 classification for period 1998-2011 (N=8,385).

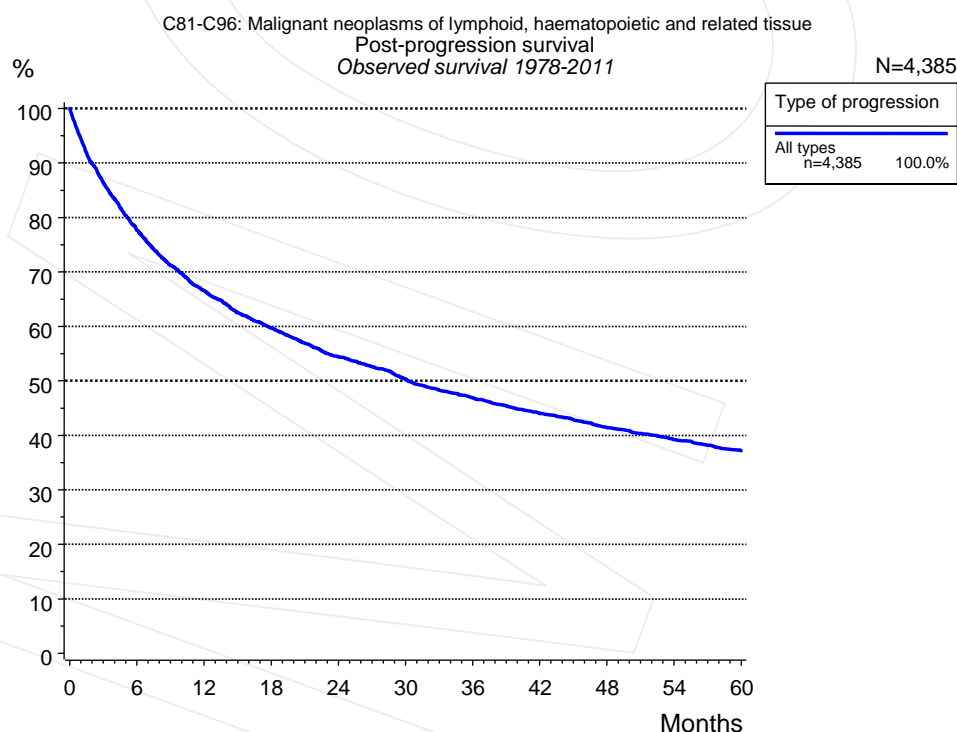


Figure 5a. Observed post-progression survival of 4,385 patients with systemic neoplasms diagnosed between 1978 and 2011 (incl. M1). These 4,385 patients with documented progression events during their course of disease represent 33.2% of the totally 13,224 evaluated cases. Patients with cancer relapse documented via death certificates only were excluded (n=1,878, 14.2%).

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.

Type of progression	
All types n=4,385	
Months	%
0	100.0
12	66.5
24	54.4
36	46.9
48	41.4
60	37.1

Table 5b. Observed post-progression survival of patients with systemic neoplasms for period 1978-2011 (N=4,385).

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

Recommended Citation

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