

Munich Cancer Registry



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

Cancer statistics: Survival

C49: Soft tissue cancer

Year of diagnosis	1988-2013
Patients	2,413
Diseases	2,424
Cases evaluated	1,333
Creation date	05/13/2015
Export date	12/30/2014
Population	4.64 m



http://www.tumorregister-muenchen.de/en/facts/surv/surv_C49__E.pdf

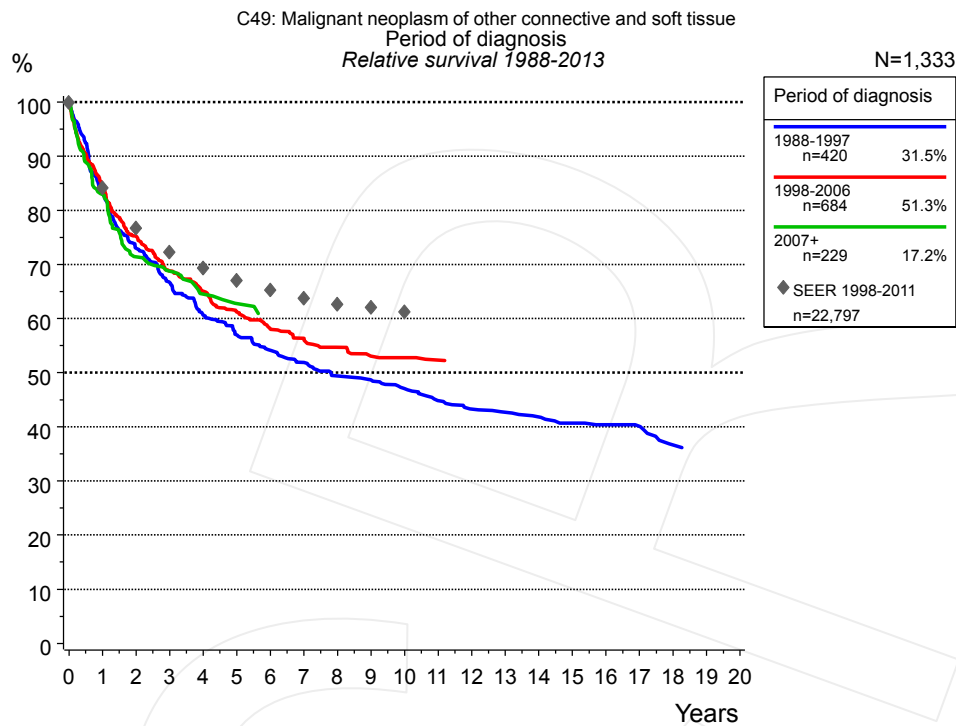


Figure 1a. Relative survival of patients with soft tissue cancer by period of diagnosis. Included in the evaluation are 1,333 cases diagnosed between 1988 and 2013.

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 2011, and are represented by gray 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 1988, 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					
	1988-1997 n=420		1998-2006 n=684		2007+ n=229	
	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0	100.0	100.0
1	81.2	83.1	82.3	84.3	81.0	82.9
2	70.2	73.0	72.0	75.2	68.3	71.4
3	63.0	66.7	64.6	68.8	64.7	68.8
4	56.2	60.6	60.2	65.0	59.6	64.5
5	52.0	57.0	55.5	61.2	56.9	62.8
6	48.5	54.2	51.9	58.0		
7	45.8	51.9	49.7	56.4		
8	42.8	49.4	47.2	54.7		
9	41.5	48.7	45.0	53.1		
10	39.3	47.1	44.6	52.8		
11	36.8	44.9	43.5	52.4		
12	35.0	43.3				
13	34.0	42.7				
14	32.9	41.8				
15	31.4	40.7				
16	30.6	40.4				
17	30.1	40.1				
18	26.8	36.7				
19	26.1	36.1				
20	26.1	36.0				

Table 1b. Observed (obs.) and relative (rel.) survival of patients with soft tissue cancer by period of diagnosis for period 1988-2013 (N=1,333).

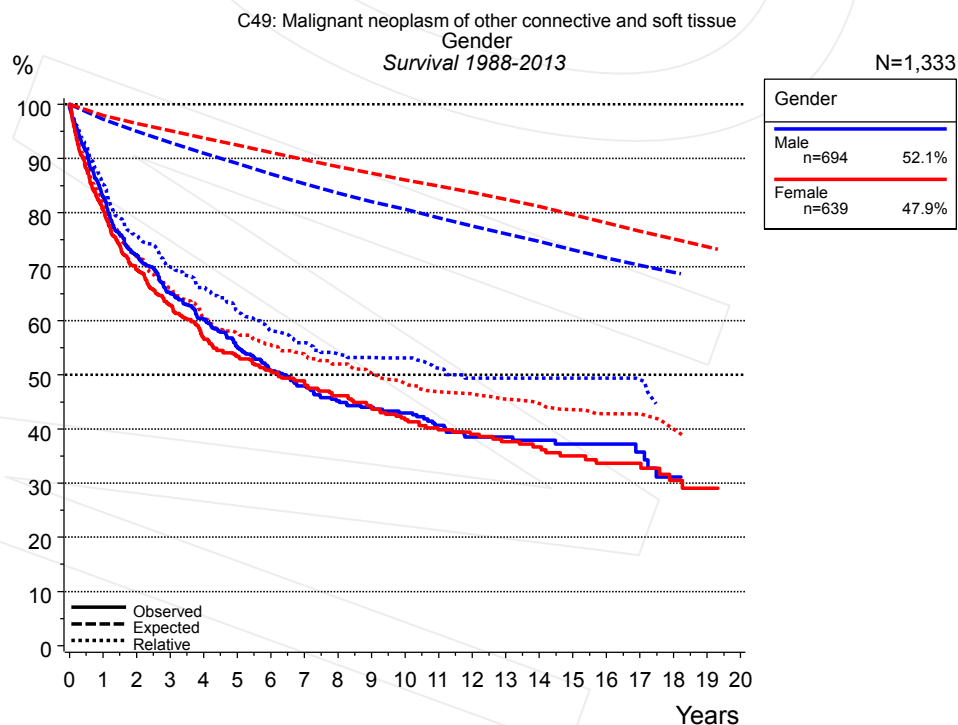


Figure 2a. Survival of patients with soft tissue cancer by gender. Included in the evaluation are 1,333 cases diagnosed between 1988 and 2013.

Years	Gender			
	Male n=694		Female n=639	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	83.0	85.2	80.4	82.1
2	72.1	75.8	69.5	71.9
3	65.1	70.0	62.9	66.0
4	60.3	66.2	56.8	60.4
5	55.1	61.7	53.4	57.7
6	50.8	58.2	50.9	55.6
7	48.0	55.9	48.9	53.9
8	45.2	53.9	46.2	52.0
9	44.0	53.3	44.0	50.2
10	43.0	53.1	41.7	48.4
11	40.7	51.3	39.9	46.9
12	38.5	49.5	39.0	46.5
13	38.5	49.5	37.7	45.6
14	37.9	49.5	36.7	44.7
15	37.2	49.5	35.0	43.6
16	37.2	49.5	33.7	42.9
17	35.8	49.2	33.7	42.8
18			30.5	40.0
19			29.1	38.4
20			29.1	37.8

Table 2b. Observed (obs.) and relative (rel.) survival of patients with soft tissue cancer by gender for period 1988-2013 (N=1,333).

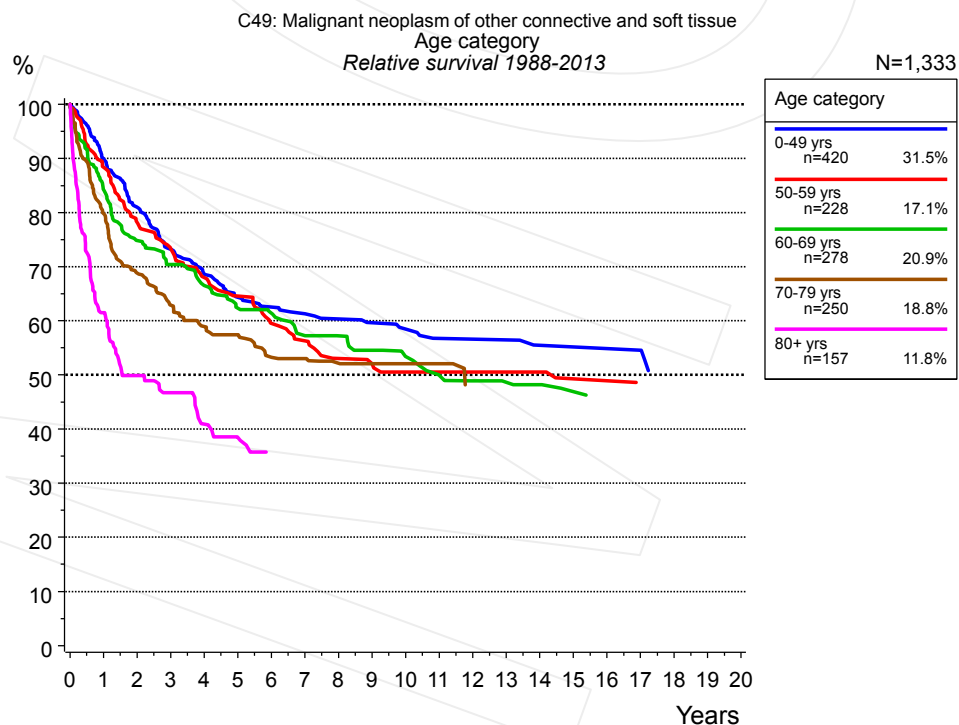


Figure 3a. Relative survival of patients with soft tissue cancer by age category. Included in the evaluation are 1,333 cases diagnosed between 1988 and 2013.

Years	Age category									
	0-49 yrs n=420		50-59 yrs n=228		60-69 yrs n=278		70-79 yrs n=250		80+ yrs n=157	
	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
1	89.9	90.0	88.1	88.4	83.2	84.2	77.2	79.8	55.2	61.6
2	80.8	81.0	77.5	78.2	72.8	74.8	64.0	68.8	40.8	49.9
3	73.1	73.2	72.2	73.3	67.5	70.4	56.0	62.9	33.4	46.8
4	68.5	68.6	66.5	68.0	62.5	66.5	50.3	58.9	25.1	41.0
5	64.0	64.3	62.5	64.6	57.7	62.3	46.9	57.4	20.4	38.4
6	62.2	62.5	57.1	59.5	55.9	61.4	41.2	53.3	16.4	35.8
7	61.0	61.3	53.9	56.3	51.3	57.3	39.0	53.0		
8	59.7	60.4	50.0	53.0	49.8	57.3	35.6	52.2		
9	58.8	59.7	49.2	52.1	46.5	54.5	34.7	52.1		
10	57.7	58.5	46.9	50.5	43.7	53.4	32.5	52.1		
11	55.6	56.8	46.9	50.5	39.7	49.9	29.7	52.1		
12	55.6	56.6	45.9	50.5	37.5	48.9	23.5	47.2		
13	55.6	56.5	45.9	50.5	36.4	48.6				
14	53.8	55.5	45.9	50.5	35.3	48.2				
15	53.8	55.2	43.0	49.3	32.6	46.9				
16	53.8	54.9	43.0	49.0	30.6	42.7				
17	53.8	54.6	40.6	48.1	30.6	37.0				
18					30.6	31.3				
19					30.6	25.5				
20					30.6	19.8				

Table 3b. Observed (obs.) and relative (rel.) survival of patients with soft tissue cancer by age category for period 1988-2013 (N=1,333).

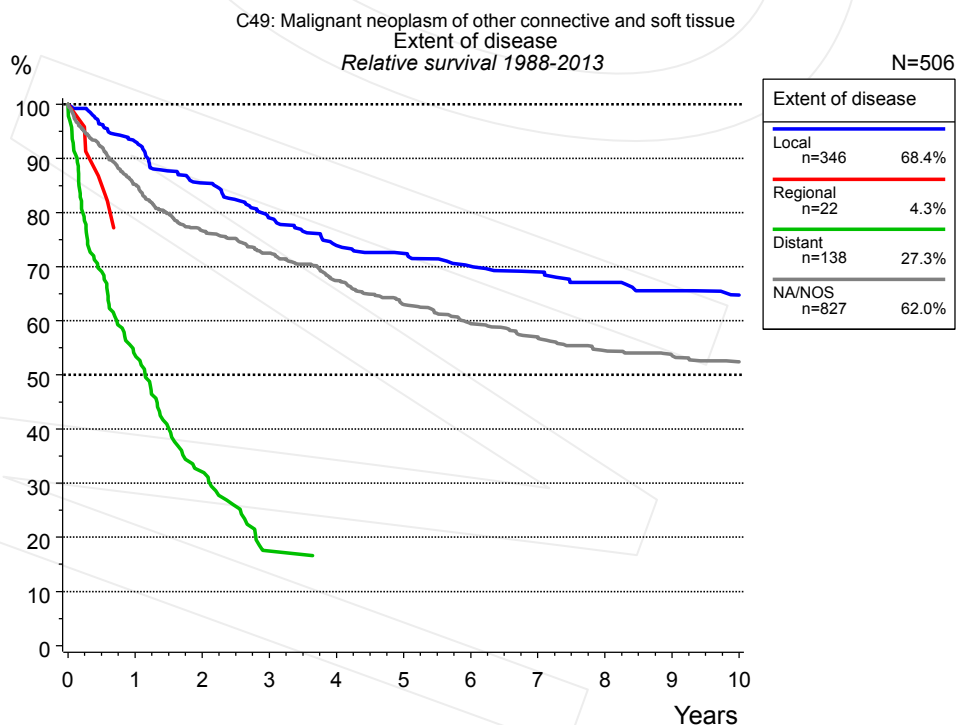


Figure 4a. Relative survival of patients with soft tissue cancer by extent of disease. For 760 of 1,333 cases diagnosed between 1988 and 2013 valid data could be obtained for this item. For a total of 506 cases an evaluable classification was established. The grey line represents the subgroup of 827 patients with missing values regarding extent of disease (62.0% of 1,333 patients, the percent values of all other categories are related to n=506).

Years	Extent of disease							
	Local n=346		Regional n=22		Distant n=138		NA/NOS n=827	
	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	91.5	93.1			53.0	53.6	82.8	85.2
2	82.7	85.5			31.8	32.1	73.0	76.7
3	75.4	79.0			16.9	17.5	67.7	72.5
4	69.6	73.9			15.9	15.5	61.6	67.5
5	67.6	72.5					56.5	63.0
6	64.4	70.1					52.3	59.5
7	62.6	69.1					49.4	57.0
8	60.0	67.1					46.1	54.5
9	57.8	65.6					44.6	53.6
10	55.9	64.8					42.7	52.4

Table 4b. Observed (obs.) and relative (rel.) survival of patients with soft tissue cancer by extent of disease for period 1988-2013 (N=506).

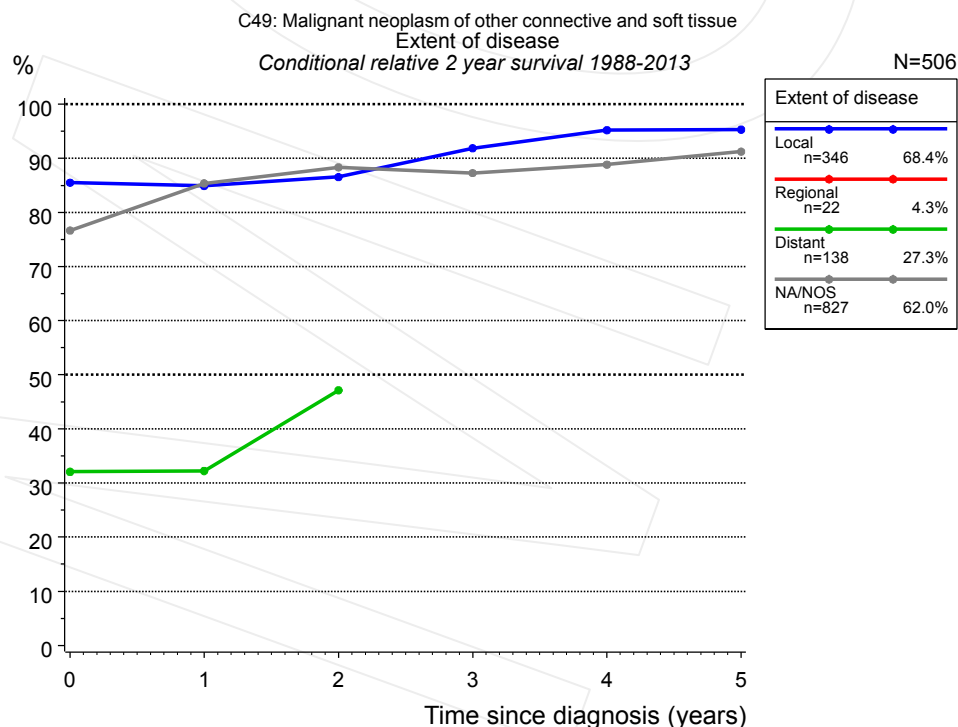


Figure 4c. Conditional relative 2-year survival of patients with soft tissue cancer by extent of disease. For 760 of 1,333 cases diagnosed between 1988 and 2013 valid data could be obtained for this item. For a total of 506 cases an evaluable classification was established. The grey line represents the subgroup of 827 patients with missing values regarding extent of disease (62.0% of 1,333 patients, the percent values of all other categories are related to n=506).

Years	Extent of disease							
	Local		Regional		Distant		NA/NOS	
	n	Cond. surv. % 2 yrs	n	Cond. surv. % 2 yrs	n	Cond. surv. % 2 yrs	n	Cond. surv. % 2 yrs
0	346	85.5	22		138	32.1	827	76.7
1	307	84.9			69	32.2	662	85.4
2	262	86.5			39	47.1	547	88.3
3	216	91.9					467	87.3
4	180	95.2					390	88.8
5	157	95.3					327	91.2

Table 4d. Conditional relative 2-year survival of patients with soft tissue cancer by extent of disease for period 1988-2013 (N=506).

Conditional relative survival rates refer to the relative survival probability, in this case for 2 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 4a). 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 2-year survival rate is 91.9% (n=216).

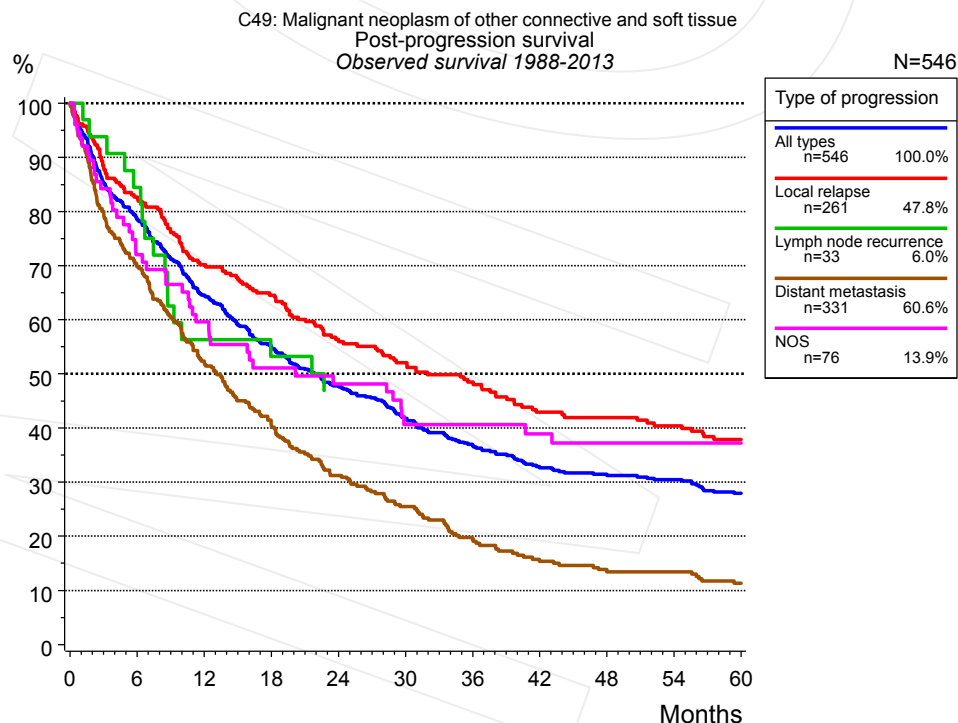


Figure 5a. Observed post-progression survival of 546 patients with soft tissue cancer diagnosed between 1988 and 2013 (incl. M1). These 546 patients with documented progression events during their course of disease represent 41.0% of the totally 1,333 evaluated cases. Patients with cancer relapse documented via death certificates only were excluded (n=115, 8.6%). Multiple progression types on different sites are included in the evaluation even when not occurring synchronously. The

NOS (not otherwise specified) class is included under the condition, that it is the one and only progression type during the course of disease.

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				NOS n=76 %
	All types n=546 %	Local relapse n=261 %	Lymph node recurrence n=33 %	Distant metastasis n=331 %	
0	100.0	100.0	100.0	100.0	100.0
12	64.4	70.2	56.3	52.1	59.6
24	47.8	56.4		31.2	48.2
36	36.8	48.5		19.4	40.6
48	31.5	41.9		13.8	37.2
60	27.9	37.9		11.3	37.2

Table 5b. Observed post-progression survival of patients with soft tissue cancer for period 1988-2013 (N=546).

Shortcuts

MCR	Munich Cancer Registry, Germany (Tumorregister München)
NCI	National Cancer Institute, USA
SEER	Surveillance, Epidemiology, and End Results, USA
UICC	Union for International Cancer Control, Geneva
DCO	Death certificate only. The death certificate provides the only notification to the registry.
NA	Not available
NOS	Not otherwise specified
OS	Observed/overall survival (Kaplan-Meier estimate)
RS	Relative survival, compared to the general population, ratio of observed to expected survival (Ederer II method), reflecting excess mortality among cancer patients
AS	Assembled survival chart (observed, expected, relative)
PPS	Post-progression survival, survival since first relapse (Kaplan-Meier estimate)
progression	Date of entry: Date of first locoregional recurrence, distant metastasis, unspecified
	Event: Death of all causes
CS	Conditional survival, survival probability under the condition of surviving a given period of time

Recommended Citation

Munich Cancer Registry. Survival C49: Soft tissue cancer [Internet]. 2015 [updated 2015 May 13; cited 2015 Jul 1]. Available from: http://www.tumorregister-muenchen.de/en/facts/surv/surv_C49__E.pdf

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