

# Munich Cancer Registry



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

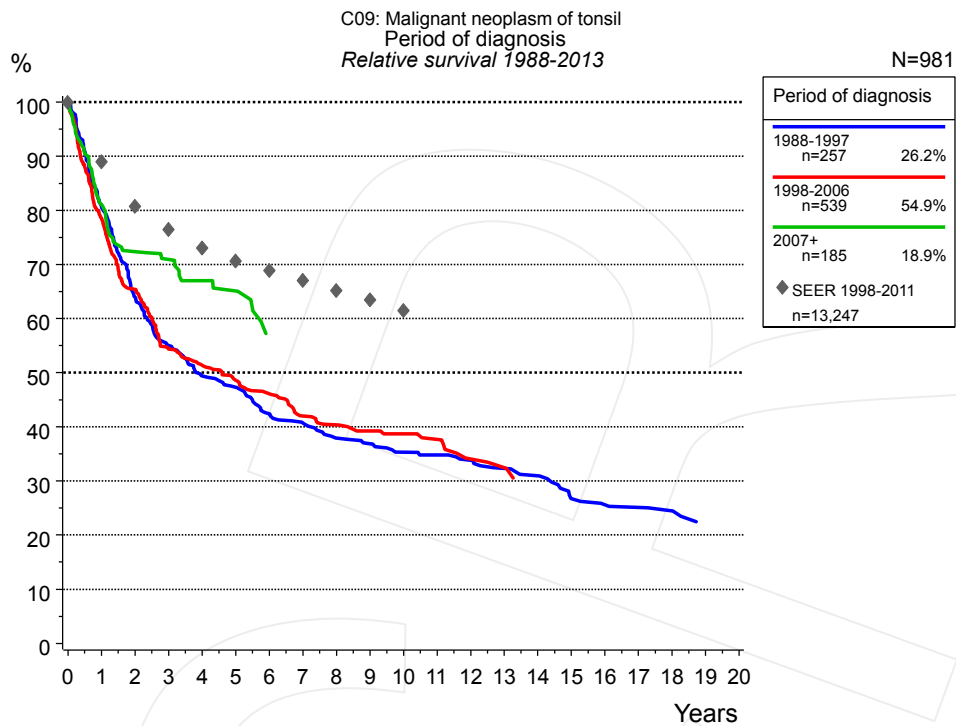
## Cancer statistics: Survival

### C09: Tonsil cancer

Year of diagnosis	1988-2013
Patients	1,654
Diseases	1,662
Cases evaluated	981
Creation date	05/13/2015
Export date	12/30/2014
Population	4.64 m



[http://www.tumorregister-muenchen.de/en/facts/surv/surv\\_C09\\_\\_E.pdf](http://www.tumorregister-muenchen.de/en/facts/surv/surv_C09__E.pdf)



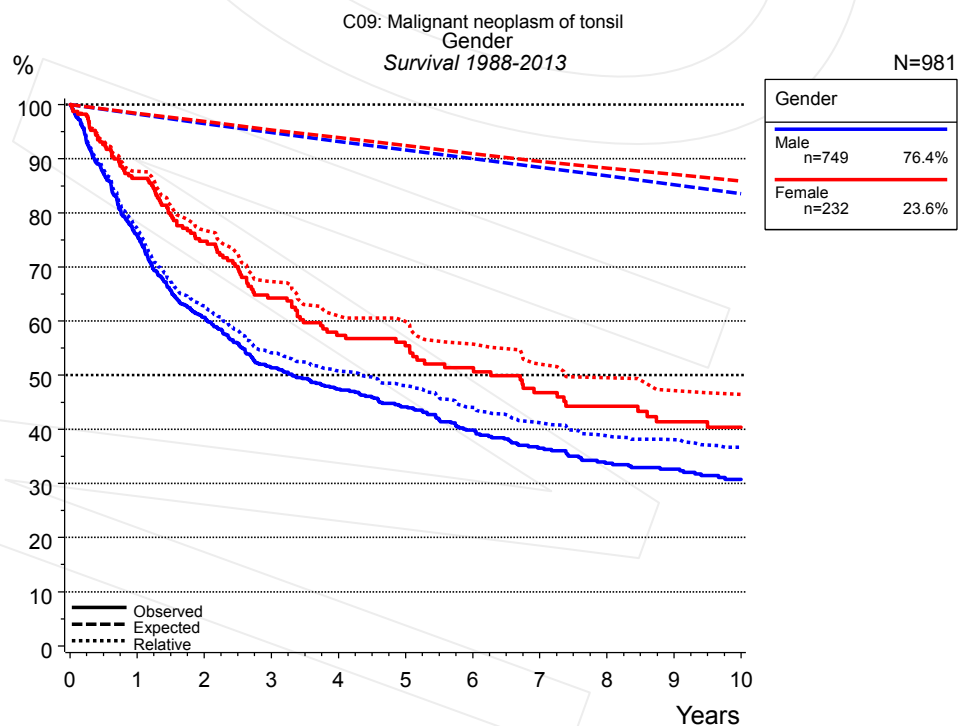
**Figure 1a.** Relative survival of patients with tonsil cancer by period of diagnosis. Included in the evaluation are 981 cases diagnosed between 1988 and 2013.

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=257		1998-2006 n=539		2007+ n=185	
	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0	100.0	100.0
1	79.0	80.4	77.3	78.5	80.0	81.1
2	61.9	63.9	63.5	65.4	69.6	72.4
3	52.1	55.0	52.0	54.4	67.1	70.9
4	45.9	49.4	48.5	51.4	62.4	67.0
5	43.6	47.3	45.1	48.6	59.9	65.1
6	38.5	42.4	42.6	46.1	50.2	56.7
7	36.2	40.7	37.7	42.0	50.2	51.3
8	33.0	37.9	35.9	40.4		
9	31.9	36.9	34.2	39.2		
10	29.9	35.3	33.2	38.7		
11	29.1	34.8	31.8	37.7		
12	27.8	33.8	27.8	34.0		
13	26.1	32.3	26.8	32.4		
14	24.6	31.0	24.0	29.0		
15	20.5	26.8				
16	19.4	25.6				
17	18.9	25.1				
18	18.2	24.5				
19	15.8	22.1				

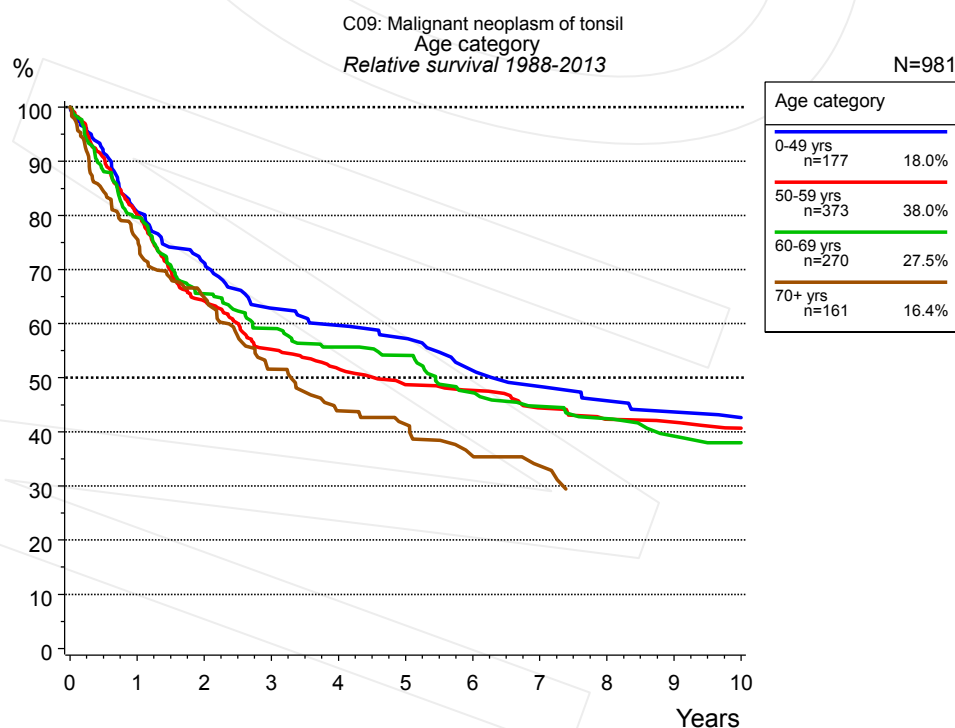
**Table 1b.** Observed (obs.) and relative (rel.) survival of patients with tonsil cancer by period of diagnosis for period 1988-2013 (N=981).



**Figure 2a.** Survival of patients with tonsil cancer by gender. Included in the evaluation are 981 cases diagnosed between 1988 and 2013.

Years	Gender			
	Male n=749		Female n=232	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	75.7	77.0	86.4	87.7
2	60.7	62.8	74.7	76.8
3	51.4	54.2	64.3	67.3
4	47.4	50.8	57.4	61.0
5	44.2	48.1	55.4	59.9
6	39.8	44.1	51.4	55.7
7	36.5	41.2	46.8	52.1
8	33.8	38.8	44.3	49.5
9	32.7	38.1	41.4	47.1
10	30.8	36.7	40.4	46.4

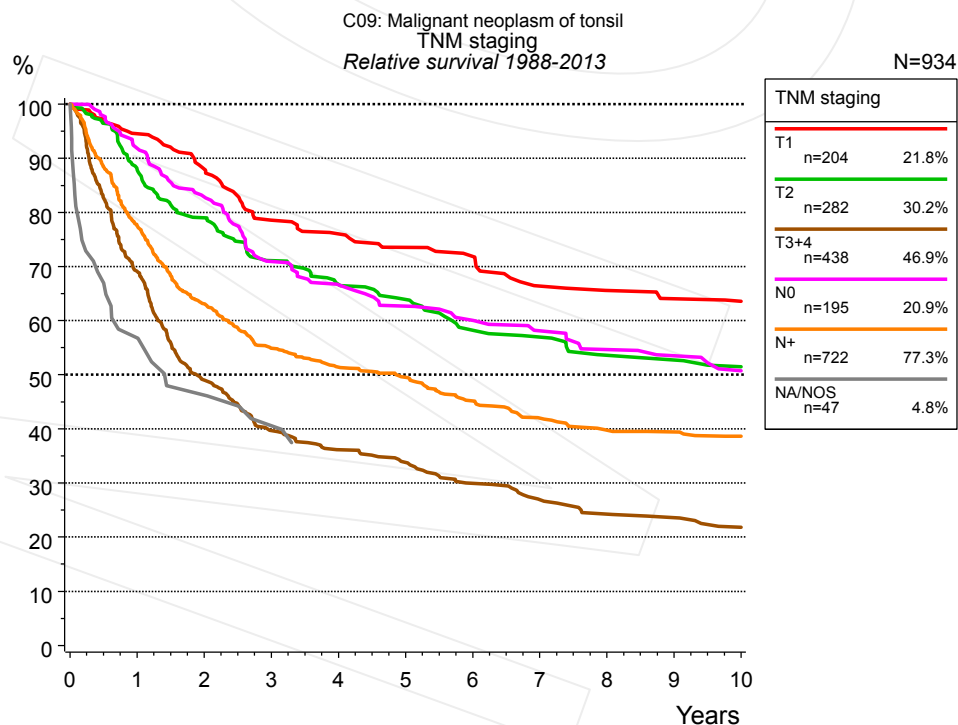
**Table 2b.** Observed (obs.) and relative (rel.) survival of patients with tonsil cancer by gender for period 1988-2013 (N=981).



**Figure 3a.** Relative survival of patients with tonsil cancer by age category. Included in the evaluation are 981 cases diagnosed between 1988 and 2013.

Years	Age category							
	0-49 yrs n=177		50-59 yrs n=373		60-69 yrs n=270		70+ yrs n=161	
	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	80.4	80.6	79.5	80.0	78.6	79.6	72.2	75.6
2	71.3	71.2	63.5	64.2	63.7	65.5	57.9	64.9
3	62.3	62.9	54.1	55.3	56.6	59.1	43.0	51.6
4	59.4	59.7	50.3	51.6	52.2	55.7	34.2	43.9
5	57.0	57.3	46.8	48.7	50.0	54.1	30.7	41.4
6	51.7	51.3	45.5	47.7	42.8	47.2	24.9	35.5
7	47.9	48.4	41.9	44.4	39.2	44.7	21.7	33.8
8	44.8	45.8	39.5	42.3	36.8	42.4	18.0	29.5
9	42.6	43.7	38.9	41.8	33.0	39.2	18.0	29.5
10	41.3	42.6	37.2	40.7	31.0	38.0		

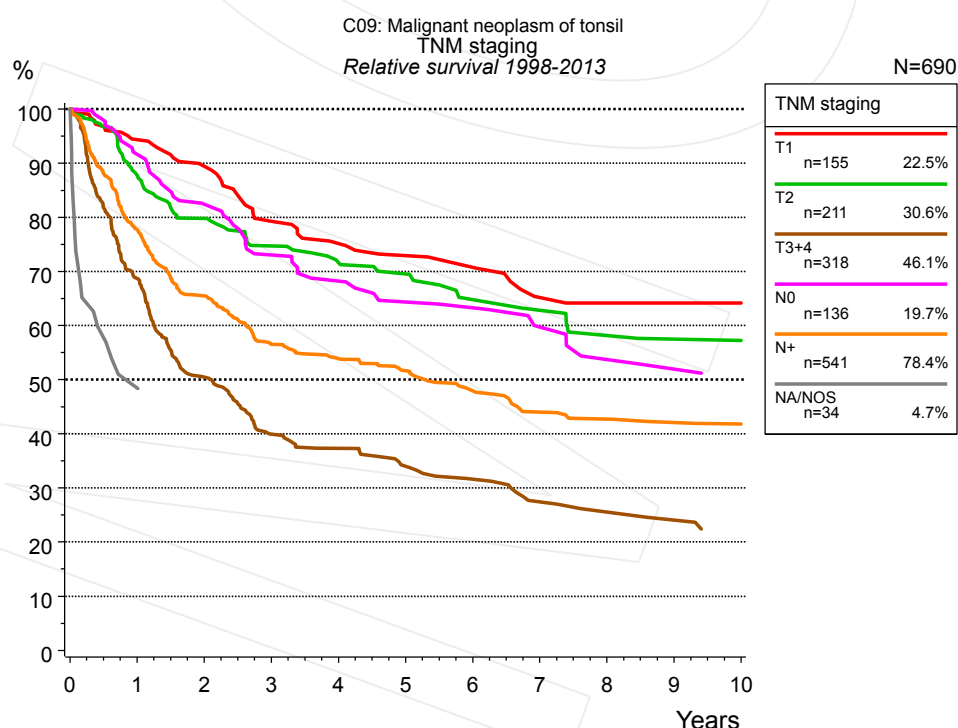
**Table 3b.** Observed (obs.) and relative (rel.) survival of patients with tonsil cancer by age category for period 1988-2013 (N=981).



**Figure 4a.** Relative survival of patients with tonsil cancer by TNM staging. For 937 of 981 cases diagnosed between 1988 and 2013 valid data could be obtained for this item. For a total of 934 cases an evaluable classification was established. The accumulated percentage exceeds the 100% value because patients are potentially considered in more than one subgroup. The grey line represents the subgroup of 47 patients with missing values regarding TNM staging (4.8% of 981 patients, the percent values of all other categories are related to n=934).

Years	TNM staging											
	T1 n=204		T2 n=282		T3+4 n=438		N0 n=195		N+ n=722		NA/NOS n=47	
	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
1	93.5	94.5	86.4	87.8	67.9	69.1	91.1	91.8	76.1	77.4	57.1	56.8
2	86.1	88.0	76.7	79.0	47.4	49.0	80.7	82.9	61.1	63.1	46.1	46.2
3	75.6	78.5	67.7	71.1	37.5	39.7	67.8	70.9	52.1	54.9	39.5	40.6
4	72.5	76.0	62.7	66.7	33.4	36.2	62.6	66.6	48.1	51.4		
5	69.1	73.5	59.4	63.9	30.8	33.8	58.4	62.7	45.6	49.5		
6	66.8	71.9	53.5	58.2	26.7	29.9	55.2	60.0	40.9	45.2		
7	60.1	66.4	51.3	57.0	23.7	26.9	51.8	58.1	37.3	41.9		
8	58.3	65.6	47.3	53.6	21.2	24.3	48.1	54.6	34.8	39.7		
9	56.1	64.1	46.4	52.7	20.3	23.6	46.3	53.5	34.1	39.4		
10	54.9	63.6	44.4	51.5	18.4	21.8	43.3	50.7	32.7	38.6		

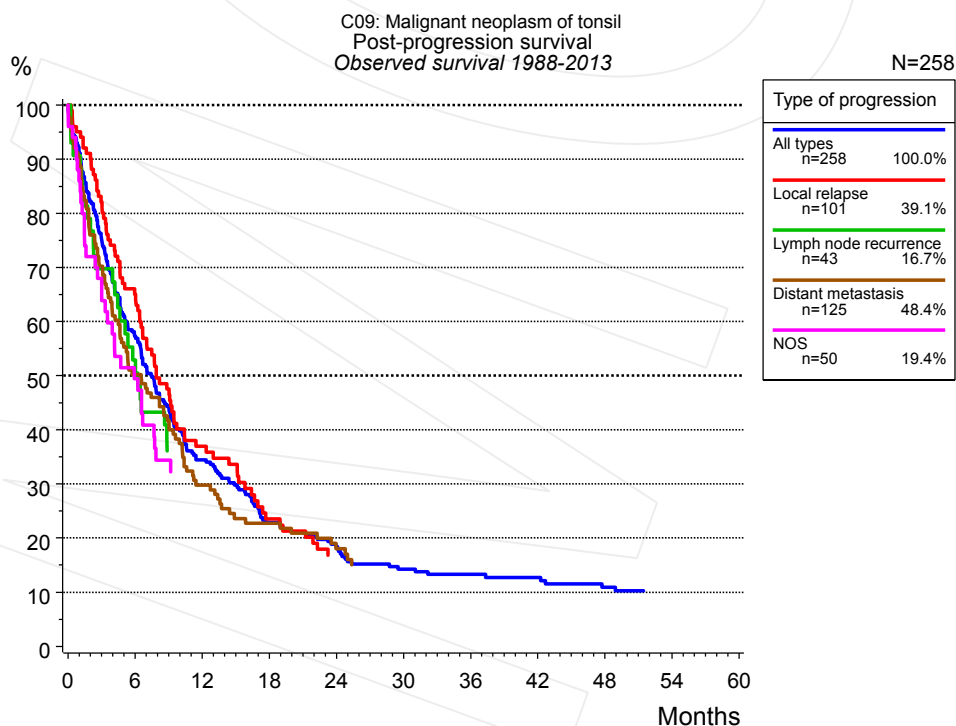
**Table 4b.** Observed (obs.) and relative (rel.) survival of patients with tonsil cancer by TNM staging for period 1988-2013 (N=1,841).



**Figure 4c.** Relative survival of patients with tonsil cancer by TNM staging. For 693 of 724 cases diagnosed between 1998 and 2013 valid data could be obtained for this item. For a total of 690 cases an evaluable classification was established. The accumulated percentage exceeds the 100% value because patients are potentially considered in more than one subgroup. The grey line represents the subgroup of 34 patients with missing values regarding TNM staging (4.7% of 724 patients, the percent values of all other categories are related to n=690).

Years	TNM staging											
	T1 n=155		T2 n=211		T3+4 n=318		N0 n=136		N+ n=541		NA/NOS n=34	
	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
1	93.4	94.4	86.5	87.7	67.7	68.7	90.9	91.6	76.5	77.7	49.5	48.5
2	87.8	89.4	78.0	79.8	48.8	50.5	80.4	82.4	63.5	65.5		
3	76.2	79.3	71.9	74.7	37.7	40.0	70.6	73.0	53.8	56.6		
4	71.8	75.2	68.1	71.6	34.7	37.3	65.5	68.2	50.5	53.9		
5	68.8	72.9	65.5	69.5	31.0	34.0	60.7	64.4	47.6	51.7		
6	67.6	70.8	59.8	64.8	28.1	31.6	59.2	63.3	43.7	48.0		
7	59.2	65.2	57.0	62.8	24.1	27.4	54.2	59.7	39.2	44.0		
8	57.6	64.2	52.4	58.2	22.5	25.6	48.6	53.7	37.6	42.7		
9	57.6	64.2	50.4	57.5	20.8	24.1	46.7	51.9	36.3	42.1		
10	57.6	64.2	50.4	57.3	18.7	21.4	44.6	49.7	35.5	41.8		

**Table 4d.** Observed (obs.) and relative (rel.) survival of patients with tonsil cancer by TNM staging for period 1998-2013 (N=1,361).



**Figure 5a.** Observed post-progression survival of 258 patients with tonsil cancer diagnosed between 1988 and 2013 (incl. M1). These 258 patients with documented progression events during their course of disease represent 26.3% of the totally 981 evaluated cases. Patients with cancer relapse documented via death certificates only were excluded (n=136, 13.9%). 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=50 %
	All types n=258 %	Local relapse n=101 %	Lymph node recurrence n=43 %	Distant metastasis n=125 %	
0	100.0	100.0	100.0	100.0	100.0
12	34.5	37.0		29.8	
24	18.4	16.8		18.0	
36	13.3				
48	10.9				

**Table 5b.** Observed post-progression survival of patients with tonsil cancer for period 1988-2013 (N=258).



## 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

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