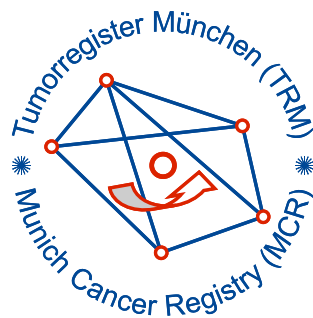


# Munich Cancer Registry



- ▶ Baseline statistics
- ▶ Selection Matrix
- ▶ Homepage

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

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

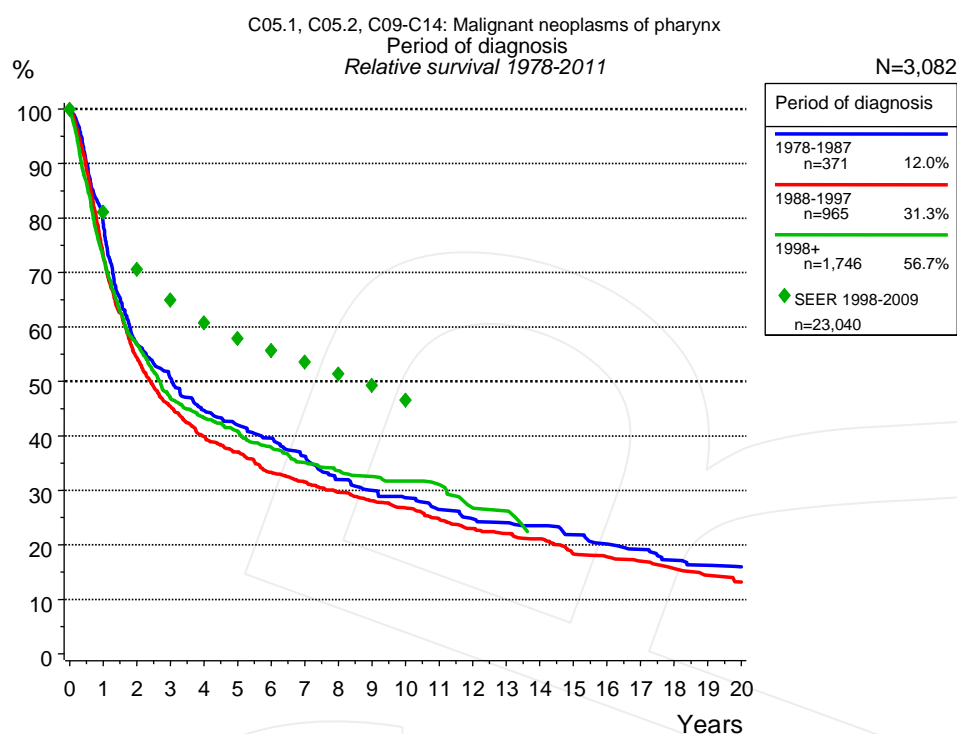
## Cancer statistics: Survival

### C05.1, C05.2, C09-C14: Pharynx cancer

Year of diagnosis	1978-1987	1988-1997	1998-2011
Patients	416	1,120	3,049
Diseases	416	1,137	3,089
Creation date	04/01/2013		
Export date	01/03/2013		
Population	4.5 m		



[http://www.tumorregister-muenchen.de/en/facts/surv/surv\\_C0914E.pdf](http://www.tumorregister-muenchen.de/en/facts/surv/surv_C0914E.pdf)

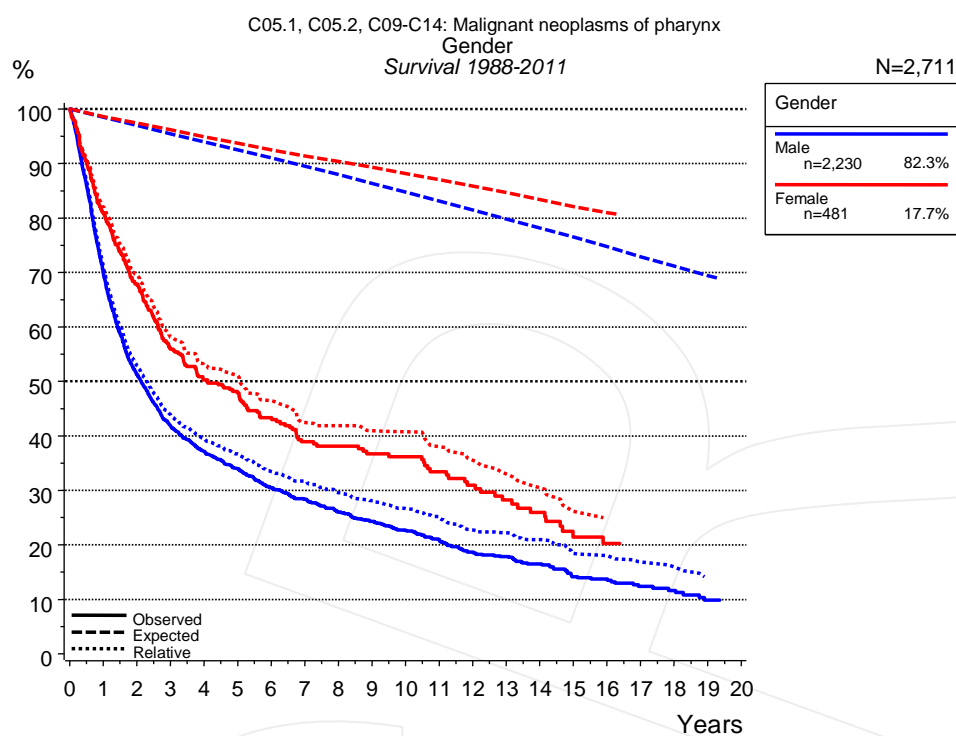


**Figure 1a.** Relative survival of patients with pharynx cancer by period of diagnosis. Included in the evaluation are 3,082 cases diagnosed between 1978 and 2011.

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=371		1988-1997 n=965		1998+ n=1,746	
	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0	100.0	100.0
1	76.8	78.3	71.8	72.9	71.6	72.7
2	55.0	56.9	52.8	54.4	55.2	56.8
3	48.0	50.6	43.5	45.4	44.9	46.9
4	41.7	44.7	37.6	39.9	40.8	43.3
5	38.4	42.0	34.4	37.0	37.8	40.8
6	35.6	39.6	30.5	33.3	34.6	37.8
7	32.1	36.2	28.4	31.5	31.7	35.1
8	27.6	32.0	26.2	29.6	29.8	33.6
9	25.4	30.0	24.5	28.1	28.5	32.5
10	23.7	28.6	23.0	26.8	27.3	31.7
11	21.5	26.4	21.0	24.8	26.4	31.1
12	19.8	24.8	19.1	23.0	22.5	26.8
13	19.0	24.1	18.0	22.0	21.8	26.2
14	18.1	23.5	16.9	21.1		
15	16.4	21.8	14.3	18.3		
16	15.0	20.2	13.8	17.8		
17	13.9	19.1	12.8	17.0		
18	12.2	17.2	11.7	15.6		
19	11.3	16.2	10.4	14.4		
20	10.8	16.0	9.4	13.1		

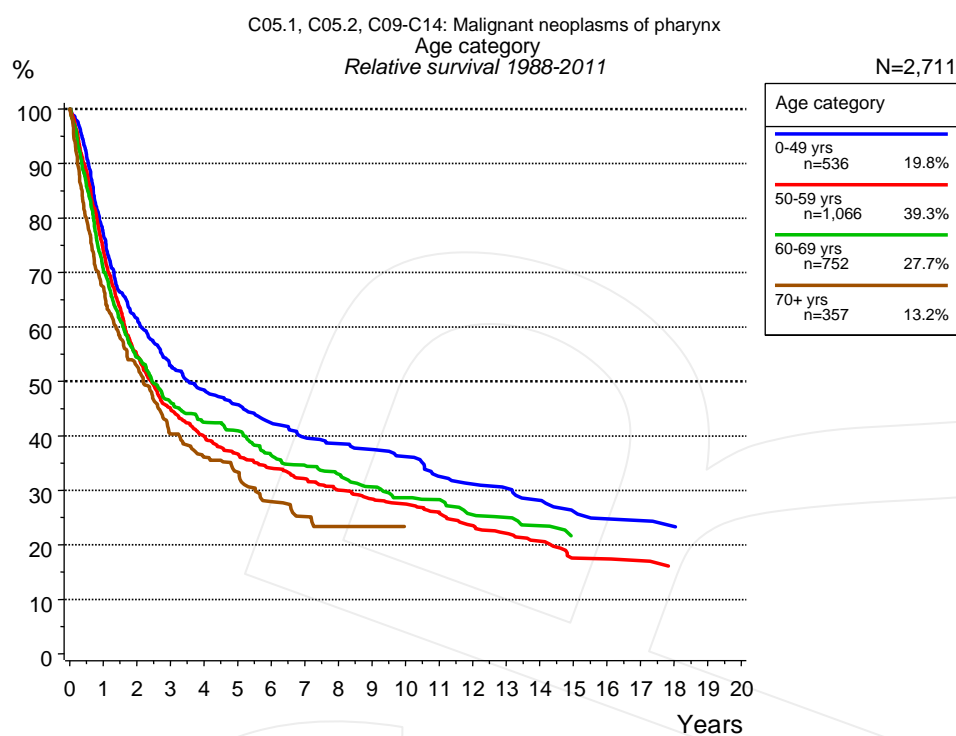
**Table 1b.** Observed (obs.) and relative (rel.) survival of patients with pharynx cancer by period of diagnosis for period 1978-2011 (N=3,082).



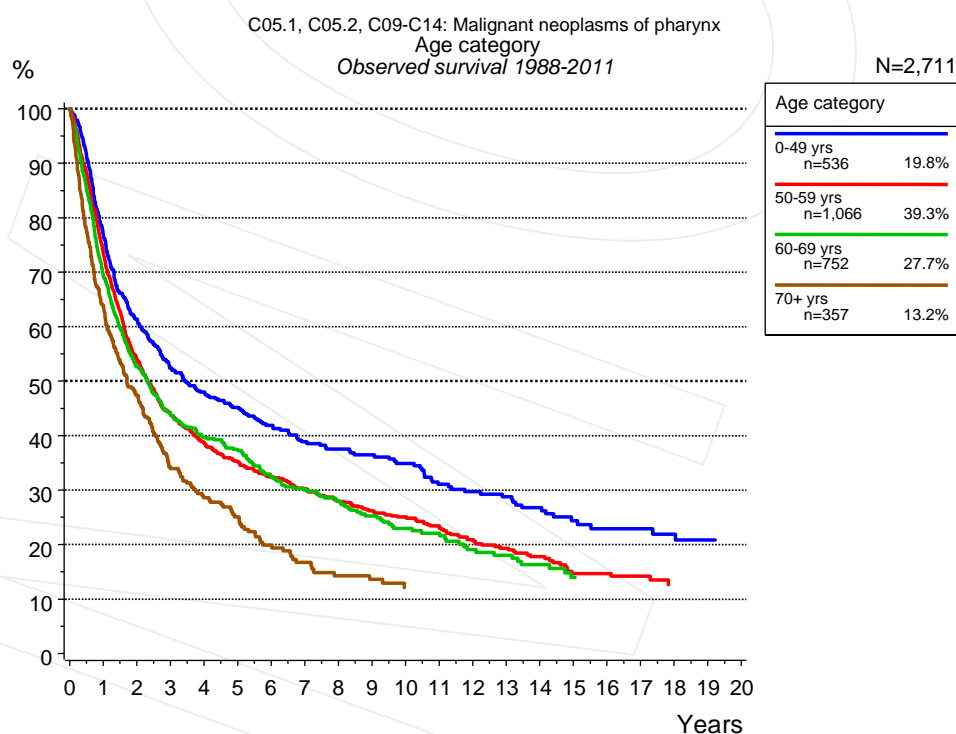
**Figure 2a.** Survival of patients with pharynx cancer by gender. Included in the evaluation are 2,711 cases diagnosed between 1988 and 2011.

Years	Gender			
	Male n=2,230		Female n=481	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	69.6	70.7	81.0	82.0
2	51.3	52.8	67.9	69.5
3	41.8	43.8	55.9	58.1
4	37.1	39.5	50.3	52.9
5	33.9	36.7	47.8	51.0
6	30.5	33.5	43.3	46.5
7	28.3	31.6	38.9	42.5
8	26.0	29.6	38.1	41.9
9	24.3	28.1	36.7	40.9
10	22.6	26.6	36.2	40.7
11	21.0	25.1	33.4	38.0
12	18.6	22.7	30.9	35.5
13	17.8	22.2	28.2	33.0
14	16.5	20.9	25.9	30.5
15	14.2	18.4	21.5	26.1
16	13.7	18.1	20.3	24.9
17	12.4	16.9	20.3	23.8
18	11.6	15.9		
19	9.8	14.0		

**Table 2b.** Observed (obs.) and relative (rel.) survival of patients with pharynx cancer by gender for period 1988-2011 (N=2,711).



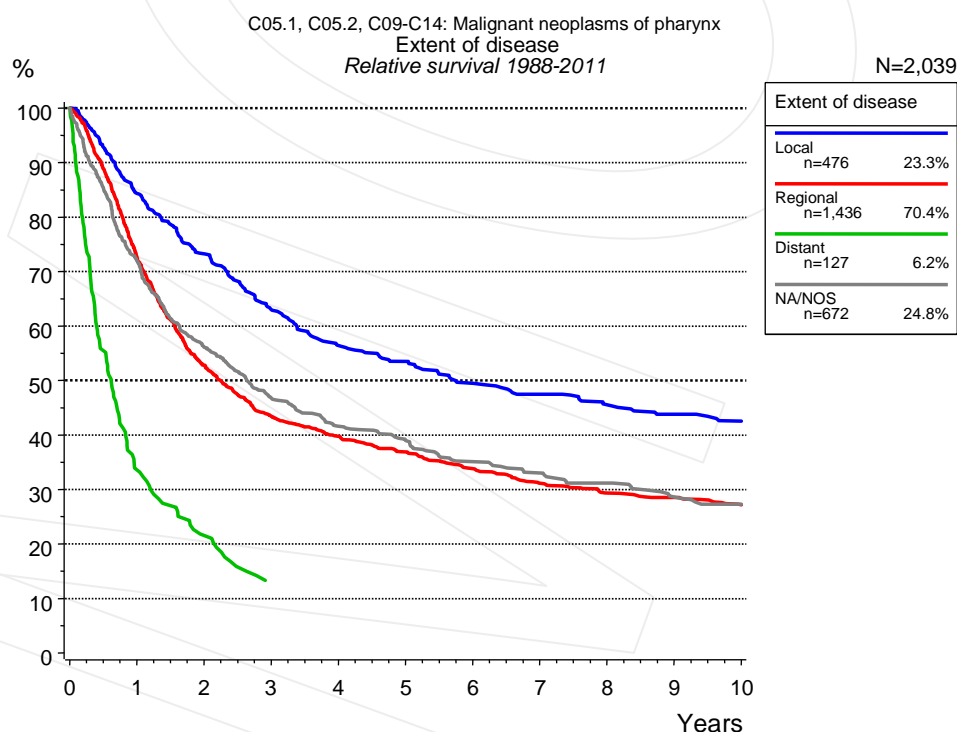
**Figure 3a.** Relative survival of patients with pharynx cancer by age category. Included in the evaluation are 2,711 cases diagnosed between 1988 and 2011.



**Figure 3b.** Observed survival of patients with pharynx cancer by age category. Included in the evaluation are 2,711 cases diagnosed between 1988 and 2011.

Years	Age category							
	0-49 yrs n=536		50-59 yrs n=1,066		60-69 yrs n=752		70+ yrs n=357	
	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	76.9	77.1	73.3	73.8	69.1	70.3	63.9	67.3
2	61.3	61.6	54.1	54.8	52.6	54.4	47.3	52.7
3	52.4	52.8	44.0	45.0	44.0	46.2	33.9	40.3
4	48.0	48.4	38.7	39.9	39.6	42.5	28.6	36.1
5	45.2	45.7	35.2	36.7	37.2	40.9	25.1	33.3
6	41.9	42.4	32.4	34.1	32.4	36.4	19.9	27.9
7	38.8	39.7	30.2	32.1	30.0	34.6	16.7	25.2
8	37.5	38.6	27.9	30.0	27.9	33.0	14.2	23.4
9	36.5	37.5	26.2	28.4	25.2	30.6	13.6	23.4
10	34.9	36.2	25.0	27.5	23.0	28.7	12.1	23.4
11	31.0	32.6	23.4	26.0	22.1	28.3		
12	29.7	31.2	20.9	23.5	19.1	25.5		
13	28.8	30.4	19.3	22.1	18.0	25.0		
14	26.8	28.2	17.8	20.7	16.3	23.5		
15	24.4	26.1	14.7	17.6	14.0	21.6		
16	22.9	24.8	14.7	17.4				
17	22.9	24.4	14.2	17.1				
18	21.9	23.4	12.6	15.9				
19	20.9	22.5						

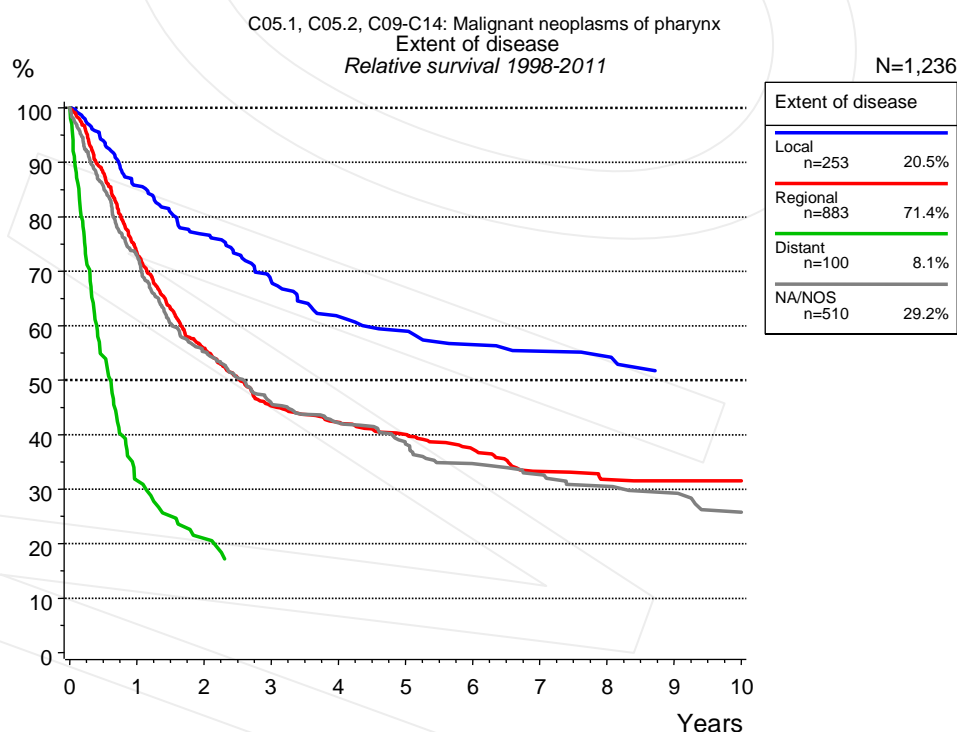
**Table 3c.** Observed (obs.) and relative (rel.) survival of patients with pharynx cancer by age category for period 1988-2011 (N=2,711).



**Figure 4a.** Relative survival of patients with pharynx cancer by extent of disease. For 2,549 of 2,711 cases diagnosed between 1988 and 2011 valid data could be obtained for this item. For a total of 2,039 cases an evaluable classification was established. The grey line represents the subgroup of 672 patients with missing values regarding extent of disease (24.8% of 2,711 patients, the percent values of all other categories are related to n=2,039).

Years	Extent of disease							
	Local n=476		Regional n=1,436		Distant n=127		NA/NOS n=672	
	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	83.1	84.3	71.6	72.7	33.5	33.6	70.7	72.0
2	71.3	73.3	51.4	52.8	21.3	21.5	54.4	56.1
3	60.3	63.0	41.7	43.4	12.8	12.9	44.7	46.8
4	53.3	56.5	37.6	39.8			39.0	41.6
5	49.9	53.5	34.4	36.9			35.9	39.0
6	45.6	49.5	31.0	33.8			31.8	35.1
7	43.0	47.5	28.1	31.1			29.7	33.0
8	40.6	45.6	26.1	29.4			27.6	31.2
9	38.4	43.8	25.1	28.5			24.8	28.6
10	36.8	42.6	23.5	27.2			23.2	27.3

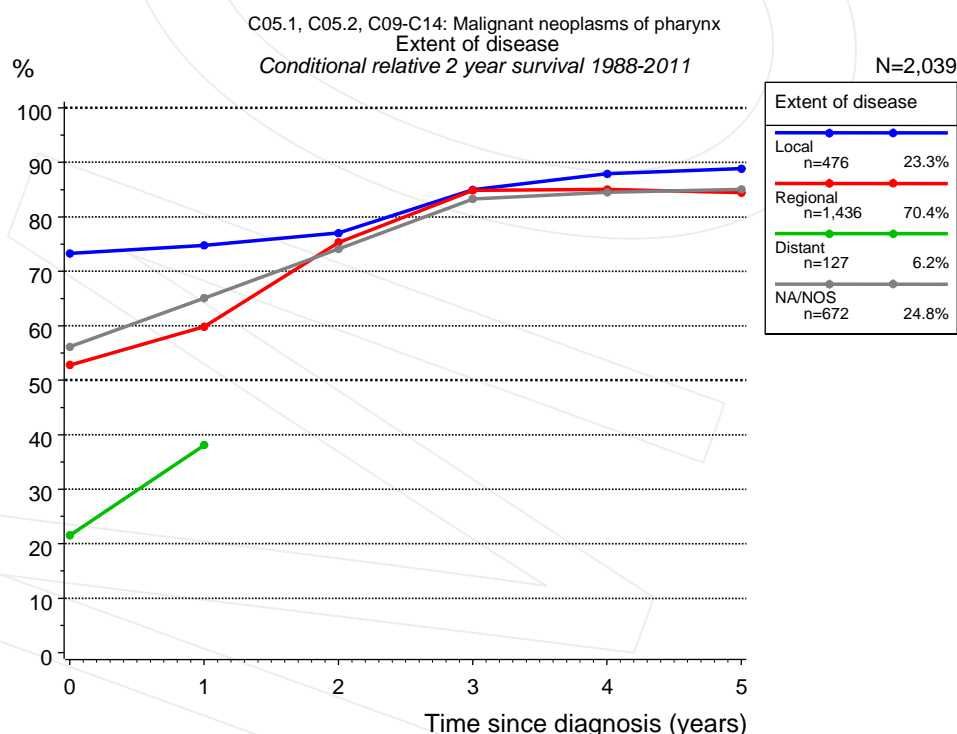
**Table 4b.** Observed (obs.) and relative (rel.) survival of patients with pharynx cancer by extent of disease for period 1988-2011 (N=2,039).



**Figure 4c.** Relative survival of patients with pharynx cancer by extent of disease. For 1,636 of 1,746 cases diagnosed between 1998 and 2011 valid data could be obtained for this item. For a total of 1,236 cases an evaluable classification was established. The grey line represents the subgroup of 510 patients with missing values regarding extent of disease (29.2% of 1,746 patients, the percent values of all other categories are related to n=1,236).

Years	Extent of disease							
	Local n=253		Regional n=883		Distant n=100		NA/NOS n=510	
	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	84.5	85.7	72.4	73.4	31.5	31.6	71.6	72.9
2	74.6	76.7	54.4	55.9	21.0	20.9	53.6	55.2
3	65.2	68.1	43.4	45.3			43.9	45.8
4	58.1	61.7	40.0	42.3			39.6	42.2
5	55.3	59.0	37.4	40.0			35.4	38.3
6	51.9	56.5	34.5	37.3			31.6	34.7
7	49.9	55.3	30.1	33.2			29.7	32.6
8	48.8	54.3	28.3	31.8			27.5	30.5
9	44.9	51.6	27.8	31.5			26.1	29.3
10	44.9	50.9	27.8	31.5			22.6	25.8

**Table 4d.** Observed (obs.) and relative (rel.) survival of patients with pharynx cancer by extent of disease for period 1998-2011 (N=1,236).

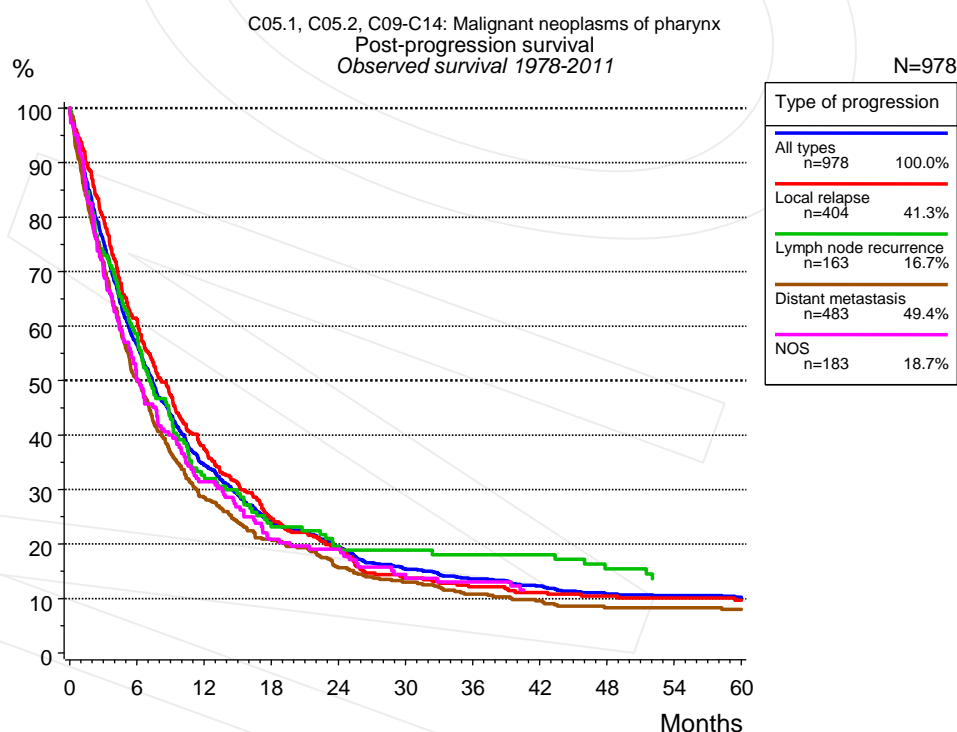


**Figure 4e.** Conditional relative 2-year survival of patients with pharynx cancer by extent of disease. For 2,549 of 2,711 cases diagnosed between 1988 and 2011 valid data could be obtained for this item. For a total of 2,039 cases an evaluable classification was established. The grey line represents the subgroup of 672 patients with missing values regarding extent of disease (24.8% of 2,711 patients, the percent values of all other categories are related to n=2,039).

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	476	73.3	1,436	52.8	127	21.5	672	56.1
1	378	74.8	975	59.8	41	38.1	452	65.1
2	304	77.0	649	75.3			324	74.1
3	239	85.0	485	84.9			248	83.3
4	193	87.9	406	85.0			187	84.5
5	166	88.8	337	84.4			154	85.1

**Table 4f.** Conditional relative 2-year survival of patients with pharynx cancer by extent of disease for period 1988-2011 (N=2,039).

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 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 2-year survival rate is 85.0% (n=239).



**Figure 5a.** Observed post-progression survival of 978 patients with pharynx cancer diagnosed between 1978 and 2011 (incl. M1). These 978 patients with documented progression events during their course of disease represent 31.7% of the totally 3,082 evaluated cases. Patients with cancer relapse documented via death certificates only were excluded (n=466, 15.1%). 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=183 %
	All types n=978 %	Local relapse n=404 %	Lymph node recurrence n=163 %	Distant metastasis n=483 %	
0	100.0	100.0	100.0	100.0	100.0
12	34.5	37.5	32.6	28.5	31.4
24	19.4	19.3	19.6	15.6	19.0
36	13.6	12.1	18.0	10.8	13.0
48	10.8	10.4	15.4	8.3	
60	10.2	9.7		8.0	

**Table 5b.** Observed post-progression survival of patients with pharynx cancer for period 1978-2011 (N=978).

**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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