

# Munich Cancer Registry



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

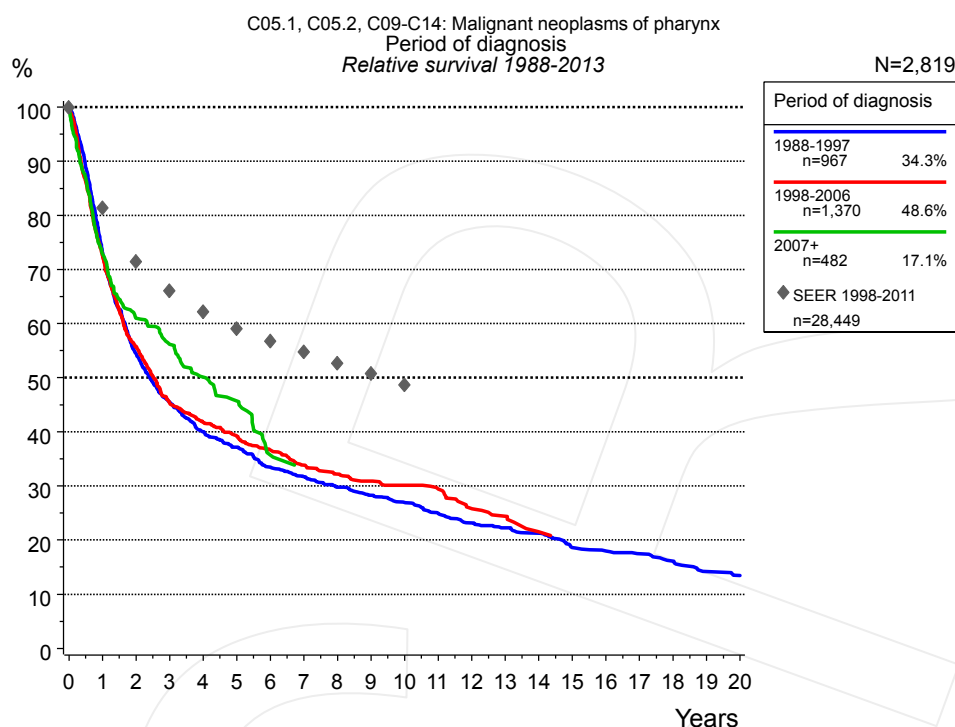
## Cancer statistics: Survival

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

Year of diagnosis	1988-2013
Patients	4,621
Diseases	4,702
Cases evaluated	2,819
Creation date	05/13/2015
Export date	12/30/2014
Population	4.64 m



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

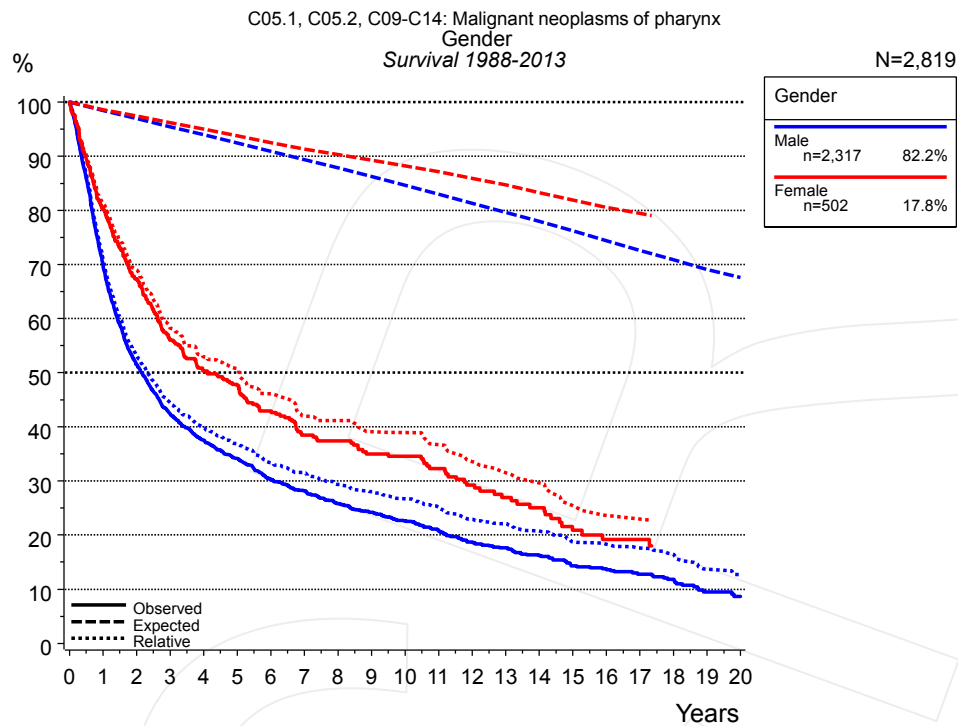


**Figure 1a.** Relative survival of patients with pharynx cancer by period of diagnosis. Included in the evaluation are 2,819 cases diagnosed between 1988 and 2013.

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.

Period of diagnosis						
Years	1988-1997 n=967		1998-2006 n=1,370		2007+ n=482	
	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0	100.0	100.0
1	71.8	73.0	71.4	72.4	71.8	72.9
2	52.9	54.5	54.3	55.7	58.8	61.0
3	43.6	45.5	43.5	45.3	53.1	56.2
4	37.7	40.0	39.6	41.8	46.8	50.1
5	34.5	37.2	36.5	39.2	42.0	45.7
6	30.6	33.5	33.7	36.6	32.3	35.7
7	28.5	31.7	30.7	33.8	29.7	32.3
8	26.4	29.8	28.7	32.2		
9	24.7	28.3	27.2	30.9		
10	23.1	26.9	26.2	30.1		
11	21.1	25.0	25.0	29.4		
12	19.3	23.2	21.6	25.8		
13	18.2	22.3	20.0	24.4		
14	17.1	21.3	16.9	21.5		
15	14.6	18.6	16.2	20.6		
16	14.0	18.0				
17	13.1	17.4				
18	12.0	16.1				
19	10.2	14.2				
20	9.6	13.5				

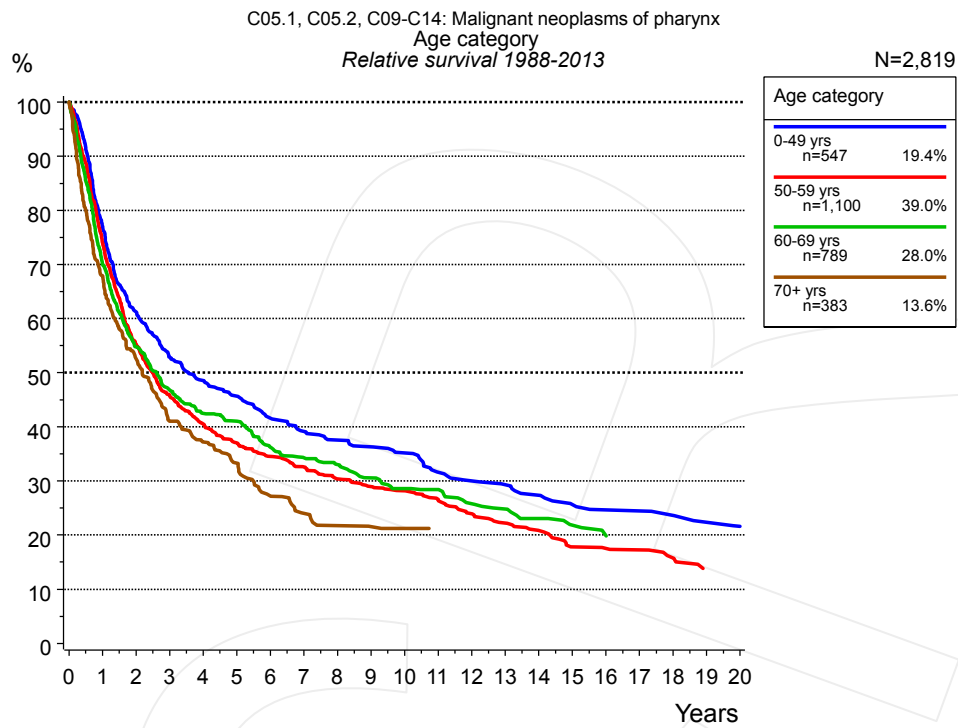
**Table 1b.** Observed (obs.) and relative (rel.) survival of patients with pharynx cancer by period of diagnosis for period 1988-2013 (N=2,819).



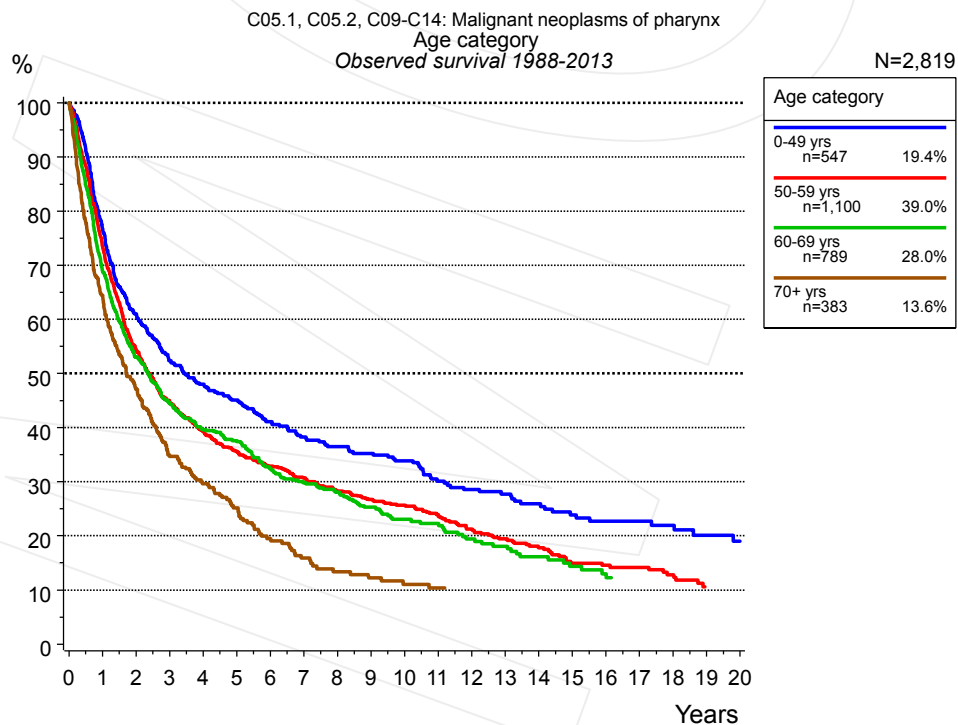
**Figure 2a.** Survival of patients with pharynx cancer by gender. Included in the evaluation are 2,819 cases diagnosed between 1988 and 2013.

Years	Gender			
	Male n=2,317		Female n=502	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	69.6	70.7	80.4	81.4
2	51.5	53.1	67.4	69.0
3	42.4	44.4	56.0	58.2
4	37.5	39.9	50.3	52.9
5	34.1	36.9	47.6	50.7
6	30.3	33.3	42.9	46.1
7	28.2	31.5	38.5	42.0
8	25.8	29.4	37.4	41.1
9	24.2	28.0	35.0	39.1
10	22.6	26.7	34.6	39.0
11	21.0	25.1	32.3	36.7
12	18.7	22.9	29.2	33.6
13	17.7	22.1	27.0	31.5
14	16.2	20.8	25.1	29.6
15	14.3	18.7	20.9	25.4
16	13.8	18.3	19.2	23.7
17	12.8	17.6	19.2	23.0
18	11.8	16.4		
19	9.5	13.7		
20	8.7	12.7		

**Table 2b.** Observed (obs.) and relative (rel.) survival of patients with pharynx cancer by gender for period 1988-2013 (N=2,819).



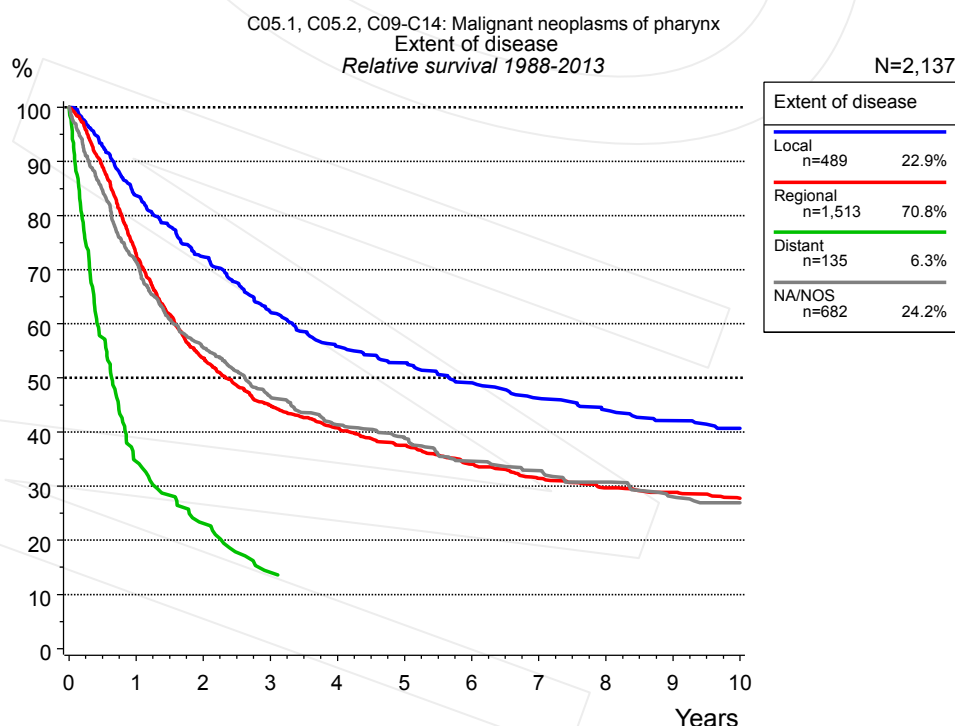
**Figure 3a.** Relative survival of patients with pharynx cancer by age category. Included in the evaluation are 2,819 cases diagnosed between 1988 and 2013.



**Figure 3b.** Observed survival of patients with pharynx cancer by age category. Included in the evaluation are 2,819 cases diagnosed between 1988 and 2013.

Years	Age category							
	0-49 yrs n=547		50-59 yrs n=1,100		60-69 yrs n=789		70+ yrs n=383	
	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	76.8	76.9	73.3	73.8	68.9	70.0	64.5	67.9
2	61.0	61.2	54.5	55.3	53.0	54.8	47.1	52.6
3	52.4	52.8	44.8	45.8	44.6	46.8	34.7	41.1
4	48.1	48.5	39.3	40.5	39.6	42.5	29.7	37.2
5	45.1	45.7	35.5	37.0	37.4	41.0	25.2	33.3
6	41.1	41.6	32.9	34.5	32.3	36.3	19.5	27.2
7	38.3	39.1	30.7	32.6	29.8	34.3	15.9	24.0
8	36.5	37.5	28.3	30.4	28.1	33.0	13.4	21.8
9	35.3	36.3	26.7	29.0	25.3	30.6	12.3	21.6
10	33.9	35.2	25.7	28.2	23.1	28.6	11.1	21.3
11	30.1	31.6	23.9	26.6	22.3	28.4	10.4	21.2
12	28.6	30.0	21.3	23.9	19.4	25.8		
13	27.7	29.3	19.4	22.2	18.1	24.8		
14	25.9	27.3	17.8	20.9	16.1	23.1		
15	23.9	25.6	14.9	17.8	14.4	21.8		
16	22.7	24.6	14.5	17.5	13.0	19.9		
17	22.7	24.4	14.2	17.3				
18	22.0	23.6	12.8	15.8				
19	20.2	22.4	10.6	13.8				
20	19.0	21.6	10.6	13.2				

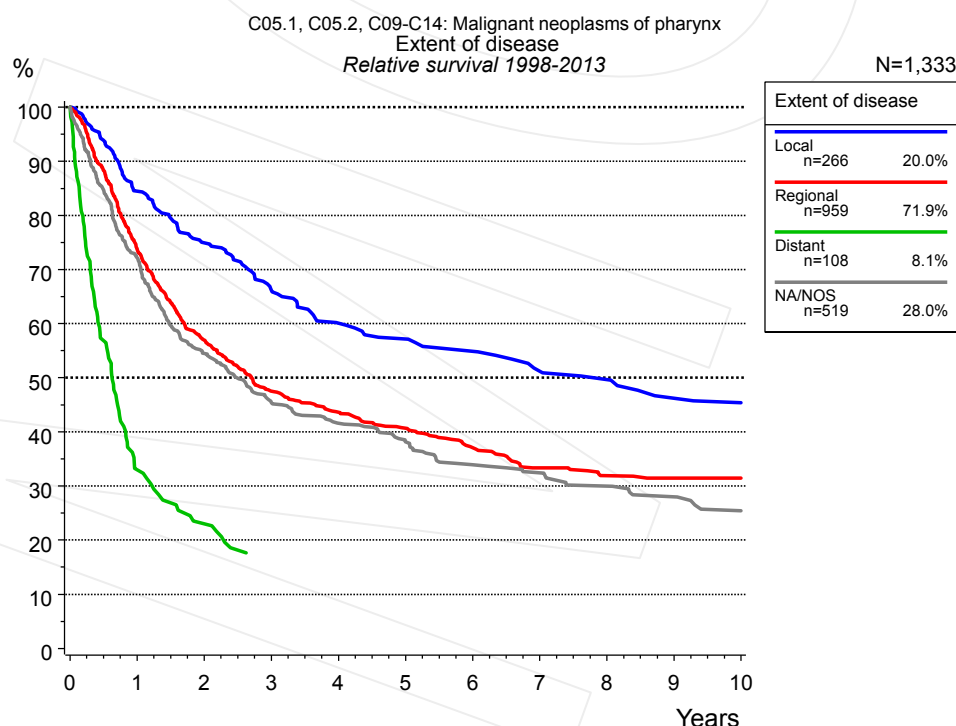
**Table 3c.** Observed (obs.) and relative (rel.) survival of patients with pharynx cancer by age category for period 1988-2013 (N=2,819).



**Figure 4a.** Relative survival of patients with pharynx cancer by extent of disease. For 2,651 of 2,819 cases diagnosed between 1988 and 2013 valid data could be obtained for this item. For a total of 2,137 cases an evaluable classification was established. The grey line represents the subgroup of 682 patients with missing values regarding extent of disease (24.2% of 2,819 patients, the percent values of all other categories are related to n=2,137).

Years	Extent of disease							
	Local n=489		Regional n=1,513		Distant n=135		NA/NOS n=682	
	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	82.5	83.7	71.9	73.0	34.5	34.6	70.2	71.5
2	70.4	72.4	52.2	53.7	22.7	23.1	53.9	55.6
3	59.5	62.2	43.1	44.9	13.9	14.1	44.5	46.6
4	52.6	55.8	38.5	40.8			38.8	41.4
5	49.2	52.8	35.0	37.6			35.8	38.9
6	45.1	49.1	31.2	34.1			31.4	34.6
7	41.7	46.2	28.4	31.5			29.5	32.9
8	39.2	44.1	26.4	29.7			27.2	30.8
9	36.9	42.1	25.3	28.9			24.3	28.0
10	35.1	40.7	23.9	27.8			23.0	26.9

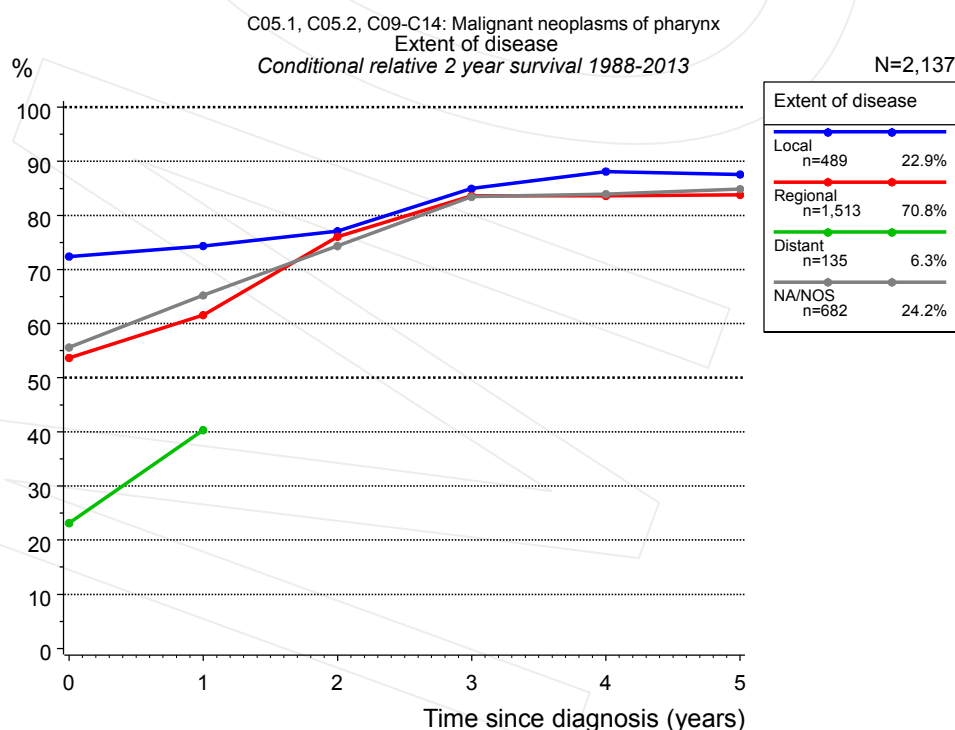
**Table 4b.** Observed (obs.) and relative (rel.) survival of patients with pharynx cancer by extent of disease for period 1988-2013 (N=2,137).



**Figure 4c.** Relative survival of patients with pharynx cancer by extent of disease. For 1,737 of 1,852 cases diagnosed between 1998 and 2013 valid data could be obtained for this item. For a total of 1,333 cases an evaluable classification was established. The grey line represents the subgroup of 519 patients with missing values regarding extent of disease (28.0% of 1,852 patients, the percent values of all other categories are related to n=1,333).

Years	Extent of disease							
	Local n=266		Regional n=959		Distant n=108		NA/NOS n=519	
	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	83.3	84.5	72.8	73.8	32.9	33.0	70.9	72.2
2	72.7	74.9	55.4	57.0	22.9	23.0	52.9	54.5
3	63.3	66.2	45.5	47.5			43.6	45.5
4	56.5	60.1	41.3	43.6			39.2	41.6
5	53.4	57.2	38.0	40.7			35.3	38.2
6	50.5	54.9	34.1	37.1			30.9	33.9
7	46.3	51.2	30.1	33.3			29.4	32.4
8	44.5	49.7	28.3	31.9			26.9	30.0
9	40.5	46.2	27.6	31.5			24.8	28.0
10	39.4	45.4	27.6	31.5			22.1	25.4

**Table 4d.** Observed (obs.) and relative (rel.) survival of patients with pharynx cancer by extent of disease for period 1998-2013 (N=1,333).

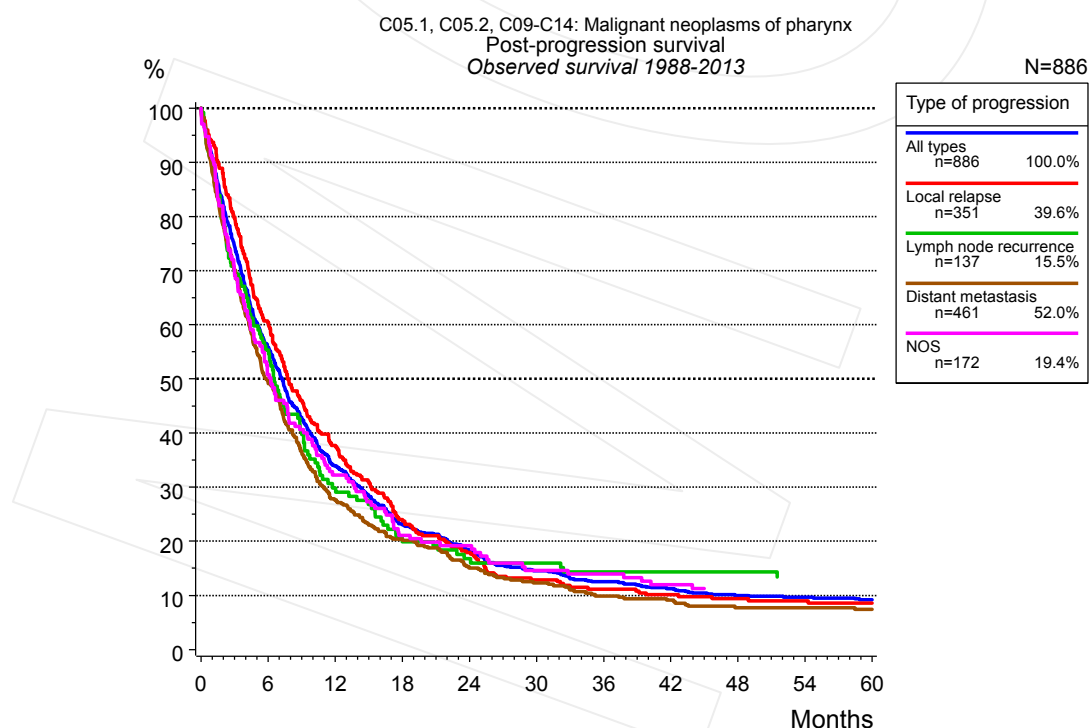


**Figure 4e.** Conditional relative 2-year survival of patients with pharynx cancer by extent of disease. For 2,651 of 2,819 cases diagnosed between 1988 and 2013 valid data could be obtained for this item. For a total of 2,137 cases an evaluable classification was established. The grey line represents the subgroup of 682 patients with missing values regarding extent of disease (24.2% of 2,819 patients, the percent values of all other categories are related to n=2,137).

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	489	72.4	1,513	53.7	135	23.1	682	55.6
1	385	74.4	1,036	61.6	44	40.3	457	65.2
2	315	77.1	702	76.0			332	74.3
3	251	84.9	530	83.6			256	83.4
4	205	88.1	440	83.6			201	83.9
5	174	87.6	364	83.8			175	84.9

**Table 4f.** Conditional relative 2-year survival of patients with pharynx cancer by extent of disease for period 1988-2013 (N=2,137).

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 84.9% (n=251).



**Figure 5a.** Observed post-progression survival of 886 patients with pharynx cancer diagnosed between 1988 and 2013 (incl. M1). These 886 patients with documented progression events during their course of disease represent 31.4% of the totally 2,819 evaluated cases. Patients with cancer relapse documented via death certificates only were excluded (n=445, 15.8%). 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=172 %
	All types n=886 %	Local relapse n=351 %	Lymph node recurrence n=137 %	Distant metastasis n=461 %	
0	100.0	100.0	100.0	100.0	100.0
12	33.9	37.7	29.9	27.6	32.3
24	18.4	17.9	16.8	15.1	19.2
36	12.5	11.2	14.3	9.9	13.9
48	10.0	9.4	14.3	7.7	
60	9.2	8.6		7.4	

**Table 5b.** Observed post-progression survival of patients with pharynx cancer for period 1988-2013 (N=886).

**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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