

Munich Cancer Registry



- ▶ Baseline statistics
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- ▶ *Deutsch*

Munich Cancer Registry at Munich Cancer Center
Marchioninstr. 15
Munich, 81377
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<http://www.tumorregister-muenchen.de/en>

Cancer statistics: Survival

C00-C14,C30-C32: HN cancer

Year of diagnosis	1988-2013
Patients	14,178
Diseases	14,821
Cases evaluated	8,735
Creation date	05/13/2015
Export date	12/30/2014
Population	4.64 m



http://www.tumorregister-muenchen.de/en/facts/surv/surv_C0032E.pdf

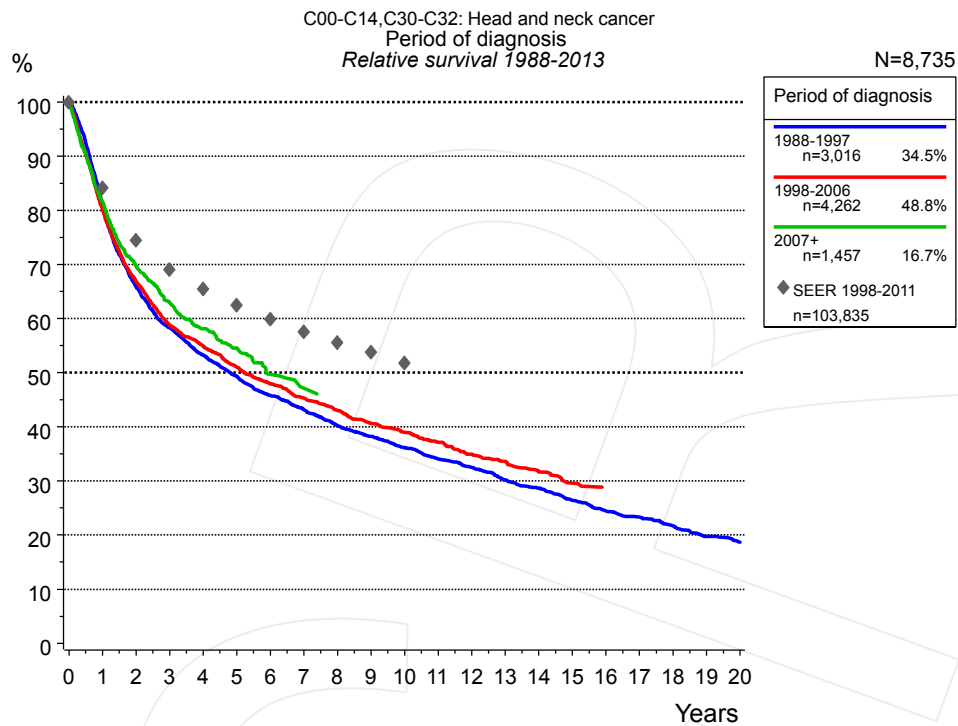


Figure 1a. Relative survival of patients with HN cancer by period of diagnosis. Included in the evaluation are 8,735 cases diagnosed between 1988 and 2013.

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=3,016		1998-2006 n=4,262		2007+ n=1,457	
	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0	100.0	100.0
1	79.4	81.0	78.7	80.1	80.0	81.5
2	63.4	65.9	64.4	66.8	67.1	69.6
3	55.0	58.3	55.7	58.8	59.5	62.9
4	49.2	53.2	51.0	54.8	54.0	58.1
5	44.8	49.4	46.5	51.0	49.8	54.5
6	40.6	45.8	42.9	47.9	44.5	49.7
7	37.6	43.2	39.8	45.3	41.5	47.1
8	34.3	40.2	36.9	43.0		
9	32.0	38.2	34.2	40.6		
10	29.7	36.2	32.1	39.0		
11	27.4	34.1	29.9	37.1		
12	25.5	32.5	27.4	34.9		
13	23.2	30.2	25.6	33.6		
14	21.6	28.7	23.5	31.6		
15	19.4	26.4	21.5	29.5		
16	17.6	24.5	20.3	28.5		
17	16.4	23.3				
18	14.9	21.7				
19	13.2	19.7				
20	12.3	18.7				

Table 1b. Observed (obs.) and relative (rel.) survival of patients with HN cancer by period of diagnosis for period 1988-2013 (N=8,735).

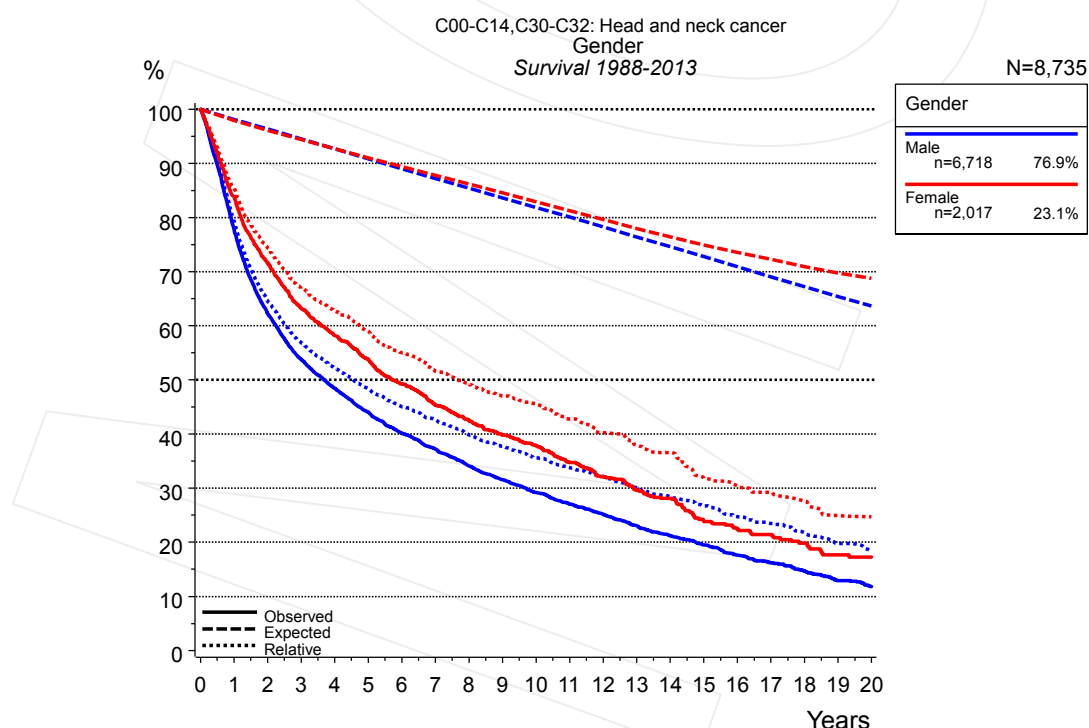


Figure 2a. Survival of patients with HN cancer by gender. Included in the evaluation are 8,735 cases diagnosed between 1988 and 2013.

Years	Gender			
	Male n=6,718		Female n=2,017	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	77.7	79.2	83.8	85.5
2	62.3	64.6	71.6	74.5
3	53.8	56.9	63.2	66.9
4	48.4	52.2	58.2	62.7
5	44.0	48.4	53.8	59.1
6	40.1	45.1	49.3	55.1
7	37.2	42.7	45.4	51.6
8	34.1	39.8	42.6	49.3
9	31.6	37.7	39.8	47.1
10	29.2	35.6	37.9	45.7
11	27.1	33.8	34.8	42.8
12	25.2	32.2	32.1	40.2
13	23.0	30.1	29.6	38.0
14	21.2	28.4	28.1	36.6
15	19.5	26.7	23.8	31.8
16	17.6	24.7	22.4	30.4
17	16.2	23.5	21.4	29.2
18	14.7	21.8	19.9	27.6
19	12.9	19.8	17.7	25.0
20	11.8	18.4	17.3	24.7

Table 2b. Observed (obs.) and relative (rel.) survival of patients with HN cancer by gender for period 1988-2013 (N=8,735).

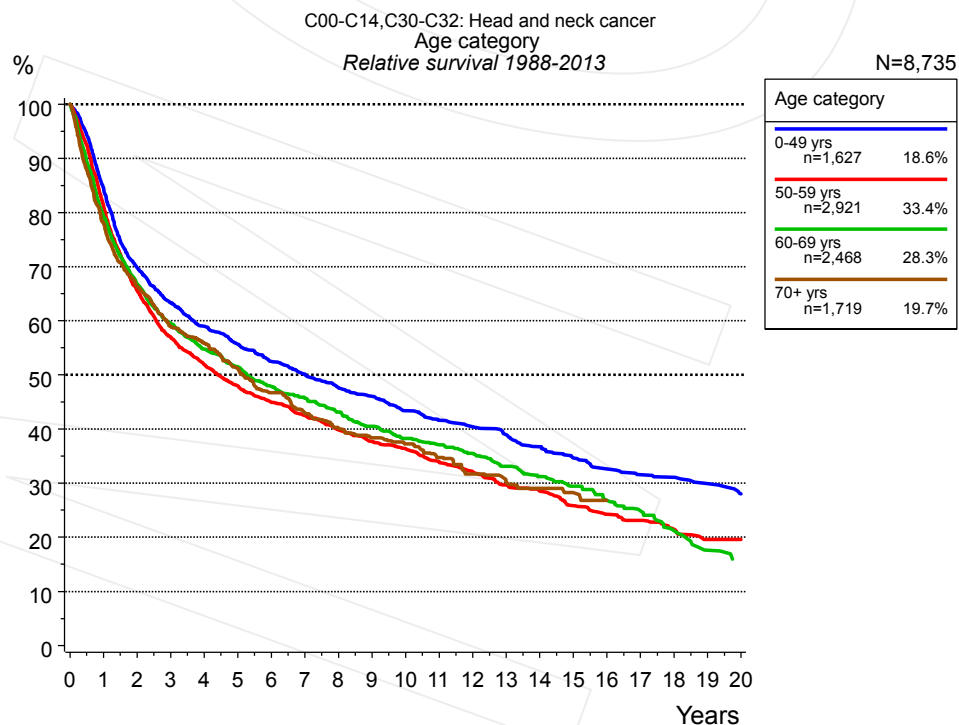


Figure 3a. Relative survival of patients with HN cancer by age category. Included in the evaluation are 8,735 cases diagnosed between 1988 and 2013.

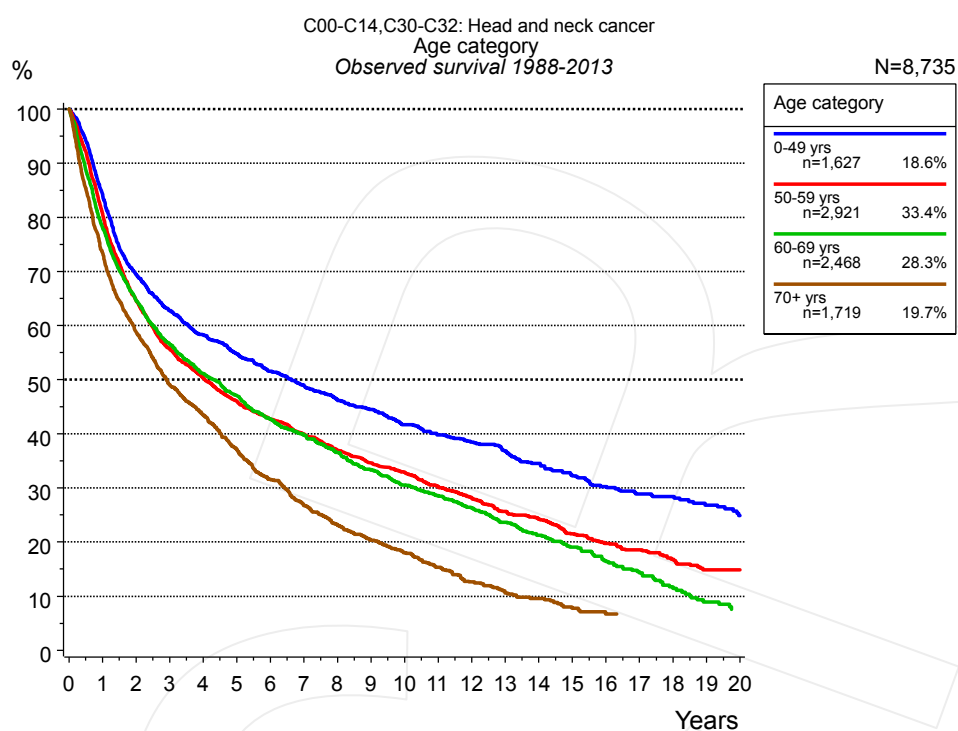


Figure 3b. Observed survival of patients with HN cancer by age category. Included in the evaluation are 8,735 cases diagnosed between 1988 and 2013.

Years	Age category							
	0-49 yrs n=1,627		50-59 yrs n=2,921		60-69 yrs n=2,468		70+ yrs n=1,719	
	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	84.0	84.2	80.6	81.2	78.0	79.3	73.4	78.0
2	69.4	69.8	64.7	65.6	64.6	66.7	58.8	66.4
3	62.8	63.3	55.7	57.0	56.5	59.4	49.0	59.0
4	58.3	59.0	50.2	51.9	51.1	54.8	43.5	55.9
5	54.8	55.7	46.1	48.0	47.0	51.5	37.2	51.2
6	51.5	52.5	42.7	44.9	42.7	47.9	31.6	46.7
7	49.0	50.1	39.9	42.5	39.8	45.7	26.7	42.9
8	46.3	47.5	36.9	39.8	36.6	43.2	23.1	40.1
9	44.5	46.0	34.6	37.7	33.4	40.5	20.3	38.4
10	41.7	43.4	32.9	36.4	30.5	38.3	18.0	37.3
11	39.8	41.6	30.3	34.0	28.6	37.1	15.3	34.8
12	38.5	40.4	28.2	32.2	26.3	35.5	12.6	31.7
13	36.8	38.9	25.6	29.7	23.7	33.1	10.6	30.2
14	34.5	36.7	24.2	28.6	21.2	31.3	9.6	29.0
15	32.2	34.7	21.5	25.9	19.1	29.4	7.7	28.2
16	30.3	32.6	19.7	24.3	16.6	26.8	6.7	26.8
17	28.9	31.5	18.5	23.1	14.3	24.9		
18	28.4	31.1	16.8	21.5	11.4	21.2		
19	26.9	29.9	14.8	19.6	8.9	17.6		
20	24.9	28.0	14.8	19.6				

Table 3c. Observed (obs.) and relative (rel.) survival of patients with HN cancer by age category for period 1988-2013 (N=8,735).

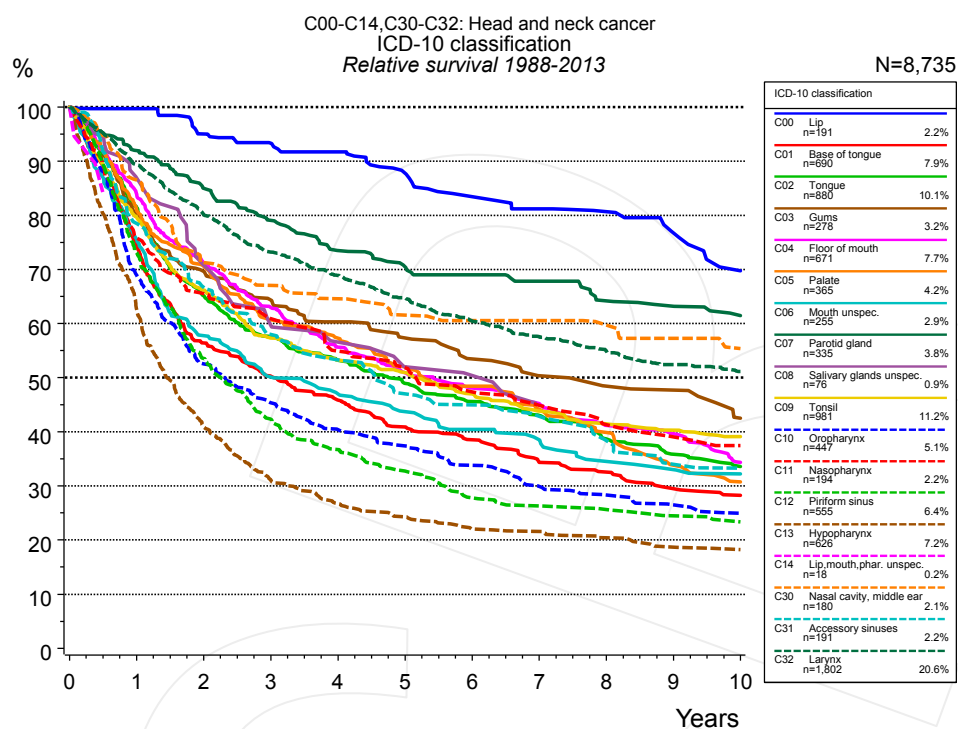


Figure 4a. Relative survival of patients with HN cancer by ICD-10 classification. Included in the evaluation are 8,735 cases diagnosed between 1988 and 2013.

ICD-10 classification														
Years	C00 Lip n=191		C01 Base of tongue n=690		C02 Tongue n=880		C03 Gums n=278		C04 Floor of mouth n=671		C05 Palate n=365		C06 Mouth unsp. n=255	
	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	97.4	99.7	73.3	74.4	80.1	81.4	78.3	80.1	82.6	83.8	80.3	81.0	73.8	75.5
2	87.6	95.0	54.9	56.4	63.1	65.1	66.7	69.6	69.3	71.1	68.8	70.6	55.6	57.8
3	83.0	93.3	48.2	50.3	54.8	57.5	60.3	64.3	60.5	62.9	58.3	60.7	47.3	50.1
4	79.4	91.7	43.1	45.8	49.8	53.2	55.1	60.3	52.8	55.6	54.4	57.3	43.5	47.0
5	72.6	87.8	38.0	40.9	45.2	49.0	51.2	57.3	47.9	50.9	48.8	52.1	39.5	43.7
6	66.4	83.4	35.0	38.5	41.4	45.6	46.5	53.5	44.5	48.1	44.6	48.4	35.9	40.5
7	63.0	81.2	30.5	34.3	38.4	43.0	42.7	50.4	41.5	45.2	40.1	44.2	33.7	38.5
8	60.2	80.7	28.6	32.5	33.9	38.6	40.3	48.4	37.1	41.2	35.8	39.9	29.7	34.6
9	55.3	76.8	25.3	29.5	30.9	35.9	39.4	47.7	35.3	39.7	29.7	33.8	27.9	33.0
10	49.5	69.7	23.9	28.3	28.4	33.6	33.8	42.5	30.1	34.4	26.6	30.8	26.6	32.2

ICD-10 classification														
cont'd Years	C07 Parotid gland n=335		C08 Salivary glands unspec. n=76		C09 Tonsil n=981		C10 Oropharynx n=447		C11 Nasopharynx n=194		C12 Piriform sinus n=555		C13 Hypopharynx n=626	
	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	89.3	92.0	85.1	86.9	78.2	79.6	68.3	69.0	75.2	75.8	72.3	73.1	61.5	62.5
2	80.3	85.0	67.8	70.8	64.0	66.2	51.5	52.6	64.1	65.5	52.3	53.6	39.8	40.9
3	73.0	79.1	57.1	59.6	54.4	57.3	43.7	45.4	58.8	60.9	40.7	42.3	30.0	31.2
4	66.1	73.5	52.2	56.6	49.8	53.2	38.4	40.4	52.4	54.9	35.0	36.7	25.3	26.7
5	62.3	70.5	46.7	52.0	46.8	51.0	35.2	37.4	49.1	51.8	30.6	32.8	22.7	24.3
6	60.0	69.0	44.8	50.4	42.6	47.0	31.3	33.8	44.3	47.4	25.7	27.8	20.1	22.0
7	57.4	67.8	38.9	45.3	39.0	43.8	27.2	29.9	41.3	44.9	24.1	26.3	19.6	21.6
8	53.0	64.2	38.9	45.3	36.2	41.5	25.4	28.3	37.3	41.3	23.1	25.6	18.1	20.5
9	51.2	63.2	38.9	45.3	34.7	40.3	23.5	26.5	34.8	39.0	21.7	24.5	16.5	18.7
10	48.5	61.5	38.9	45.3	33.1	39.1	21.8	25.0	32.9	37.5	20.4	23.4	15.9	18.3

cont'd Years	ICD-10 classification							
	C14 Lip,mouth,pha r. unspec. n=18		C30 Nasal cavity, middle ear n=180		C31 Accessory sinuses n=191		C32 Larynx n=1,802	
	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	86.5	76.6	78.5	87.5	89.4
2			67.5	71.3	63.4	66.7	76.7	80.1
3			62.1	67.0	53.8	58.0	68.5	73.2
4			58.4	64.6	48.6	53.2	63.0	68.9
5			54.0	61.5	41.8	47.0	57.8	64.7
6			52.0	60.5	39.4	45.0	52.7	60.5
7			52.0	60.5	36.7	42.8	49.0	57.5
8			49.2	59.7	31.8	38.4	45.6	54.9
9			46.2	57.3	27.7	34.0	42.6	52.4
10			42.8	55.4	26.6	33.3	40.4	51.1

Table 4b. Observed (obs.) and relative (rel.) survival of patients with HN cancer by ICD-10 classification for period 1988-2013 (N=8,735).

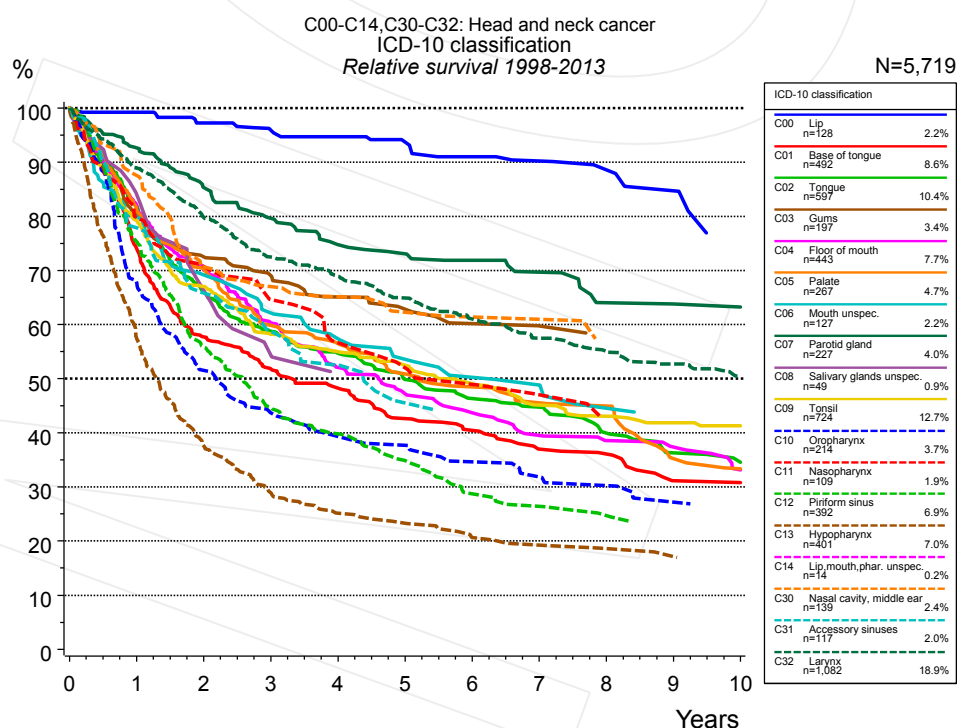


Figure 4c. Relative survival of patients with HN cancer by ICD-10 classification. Included in the evaluation are 5,719 cases diagnosed between 1998 and 2013. Subgroups with sample size <15 are dropped from the chart.

ICD-10 classification														
	C00 Lip n=128		C01 Base of tongue n=492		C02 Tongue n=597		C03 Gums n=197		C04 Floor of mouth n=443		C05 Palate n=267		C06 Mouth unspec. n=127	
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	97.6	99.3	72.9	74.0	80.7	82.0	78.5	80.3	80.7	81.9	80.6	81.1	77.6	79.9
2	89.4	97.2	56.2	57.8	64.2	66.1	69.5	72.5	68.4	70.1	68.5	70.3	66.2	69.2
3	84.9	95.9	49.6	51.8	56.2	58.8	64.9	69.0	57.9	60.3	57.5	59.9	58.4	62.2
4	83.0	94.7	45.4	48.3	51.5	54.7	59.7	65.1	49.5	52.1	53.7	56.5	52.8	57.4
5	77.1	93.7	39.5	42.7	46.3	49.9	56.7	62.9	44.8	47.2	47.9	50.9	47.9	53.6
6	72.8	91.0	36.8	40.5	42.4	46.3	53.1	60.1	40.5	43.7	44.8	48.5	43.8	50.3
7	69.4	90.2	32.7	37.0	40.6	44.8	51.3	59.7	36.5	39.5	41.6	45.5	42.3	48.8
8	65.5	88.6	31.6	36.1	35.7	40.0	49.4	58.0	34.7	38.6	40.7	45.0	37.1	44.6
9	61.5	84.7	26.3	31.1	31.7	36.3	49.4	56.7	33.2	37.4	31.0	35.3	35.2	43.9
10			26.3	30.8	29.5	34.6			29.1	33.1	28.9	33.4	35.2	43.9

ICD-10 classification															
<i>cont'd</i>	C07 Parotid gland		C08 Salivary glands unspec.		C09 Tonsil		C10 Oropharynx		C11 Nasopharynx		C12 Piriform sinus		C13 Hypopharynx		
	n=227		n=49		n=724		n=214		n=109		n=392		n=401		
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	90.0	92.6	83.2	84.1	78.0	79.3	67.4	67.8	79.0	79.8	74.5	75.3	56.4	57.3	
2	80.7	85.4	64.8	66.3	65.0	67.1	50.6	51.6	69.5	70.8	54.5	55.9	36.6	37.6	
3	73.7	79.6	54.6	54.2	55.4	58.2	42.2	43.7	62.5	64.7	42.9	44.6	28.0	28.9	
4	67.3	74.7	48.8	51.1	51.6	55.0	37.6	39.4	54.6	56.6	37.9	39.8	23.7	25.1	
5	65.0	73.1	48.8	49.6	48.3	52.5	36.1	37.7	50.2	52.0	32.4	34.9	22.0	23.3	
6	62.4	71.9			44.7	49.0	32.4	34.7	47.2	49.0	26.6	28.7	18.9	20.7	
7	59.2	69.7			40.1	45.1	29.9	31.9	43.5	47.0	24.3	26.4	17.8	19.3	
8	52.7	64.0			37.9	43.1	28.1	30.3	39.1	42.9	22.4	24.7	16.6	18.6	
9	52.7	63.8			36.1	41.9	25.1	27.2	39.1	41.1	20.8	23.5	15.7	17.1	
10	50.9	63.2			35.1	41.3	23.8	26.3			20.8	23.3	14.7	15.8	

ICD-10 classification								
Years	C14 Lip, mouth, pharynx unspec. n=14		C30 Nasal cavity, middle ear n=139		C31 Accessory sinuses n=117		C32 Larynx n=1,082	
	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			85.7	87.6	76.4	77.9	87.2	88.9
2			67.1	70.6	62.6	65.8	76.6	79.8
3			62.6	67.1	54.9	58.7	68.2	72.5
4			59.3	65.2	48.8	52.5	63.4	68.9
5			55.3	62.3	40.8	45.5	58.4	64.9
6			53.6	61.4	38.6	43.2	53.6	61.0
7			53.6	61.0			49.5	57.5
8			47.9	55.6			45.9	54.9
9							43.2	52.7
10							40.2	50.5

Table 4d. Observed (obs.) and relative (rel.) survival of patients with HN cancer by ICD-10 classification for period 1998-2013 (N=5,719).

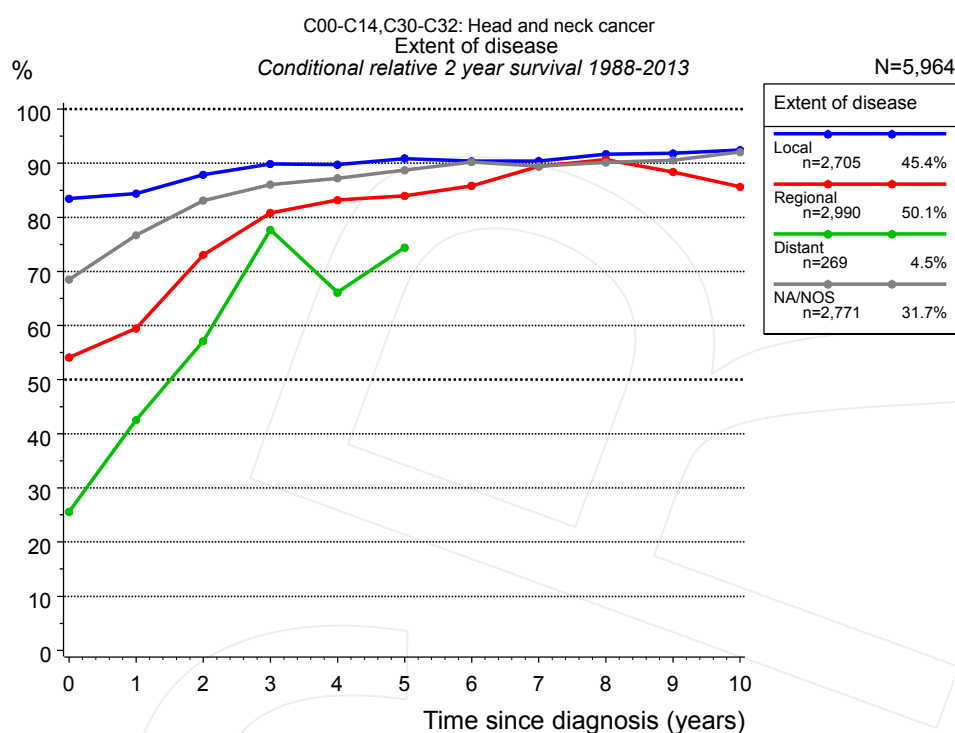


Figure 4e. Conditional relative 2-year survival of patients with HN cancer by extent of disease. For 7,974 of 8,735 cases diagnosed between 1988 and 2013 valid data could be obtained for this item. For a total of 5,964 cases an evaluable classification was established. The grey line represents the subgroup of 2,771 patients with missing values regarding extent of disease (31.7% of 8,735 patients, the percent values of all other categories are related to n=5,964).

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	2,705	83.4	2,990	54.1	269	25.6	2,771	68.5
1	2,348	84.4	2,104	59.5	95	42.6	2,077	76.7
2	2,007	87.8	1,413	73.0	59	57.1	1,627	83.1
3	1,710	89.9	1,050	80.8	32	77.7	1,342	86.1
4	1,465	89.7	848	83.2	27	66.1	1,107	87.2
5	1,231	90.9	690	84.0	21	74.4	917	88.7
6	1,050	90.4	562	85.8			748	90.2
7	937	90.4	472	89.4			625	89.4
8	818	91.7	408	90.7			527	90.1
9	730	91.8	343	88.4			425	90.5
10	637	92.4	289	85.6			342	92.1

Table 4f. Conditional relative 2-year survival of patients with HN cancer by extent of disease for period 1988-2013 (N=5,964).

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 89.9% (n=1,710).

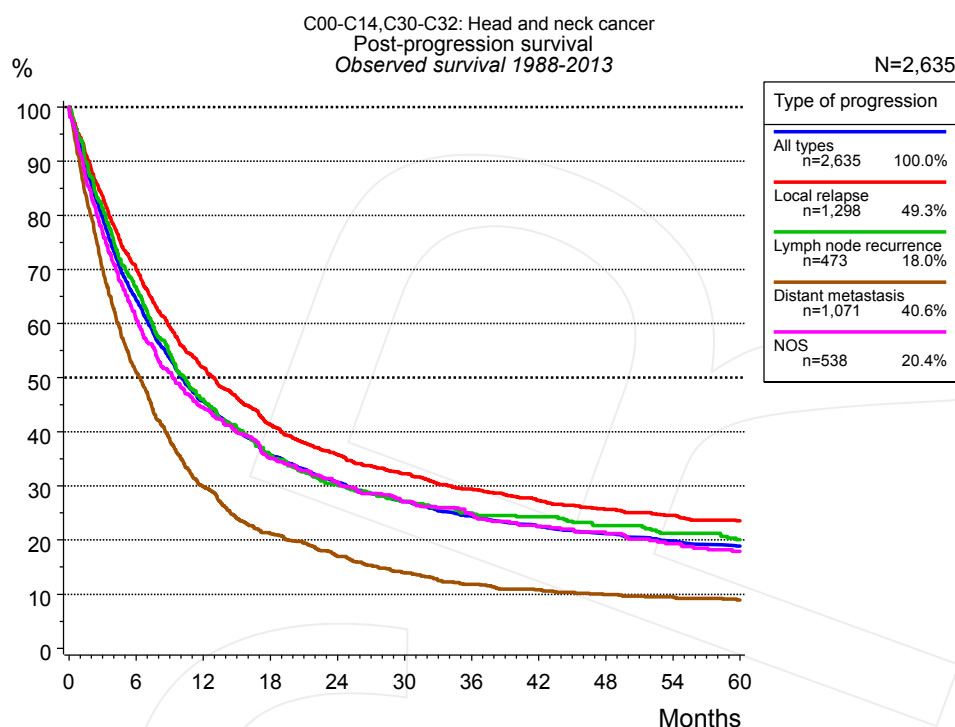


Figure 5a. Observed post-progression survival of 2,635 patients with HN cancer diagnosed between 1988 and 2013 (incl. M1). These 2,635 patients with documented progression events during their course of disease represent 30.2% of the totally 8,735 evaluated cases. Patients with cancer relapse documented via death certificates only were excluded (n=1,070, 12.2%). 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				
	All types n=2,635	Local relapse n=1,298	Lymph node recurrence n=473	Distant metastasis n=1,071	NOS n=538
	%	%	%	%	%
0	100.0	100.0	100.0	100.0	100.0
12	45.6	51.9	46.0	29.9	44.3
24	30.7	35.8	30.3	17.0	30.7
36	24.4	29.4	25.0	11.8	24.8
48	21.1	25.7	22.7	9.9	21.2
60	18.9	23.6	20.1	8.9	17.9

Table 5b. Observed post-progression survival of patients with HN cancer for period 1988-2013 (N=2,635).

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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