# **Munich Cancer Registry**



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

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

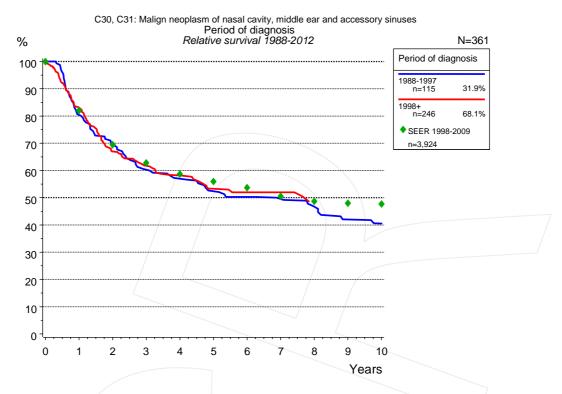
## **Cancer statistics: Survival**

# C30, C31: Nasal cavity, middle ear, sinuses cancer

Year of diagnosis	1988-2012
Patients	624
Diseases	627
Cases evaluated	361
Creation date	03/25/2014
Export date	02/12/2014
Population	4.5 m



http://www.tumorregister-muenchen.de/en/facts/surv/surv\_C3031E.pdf



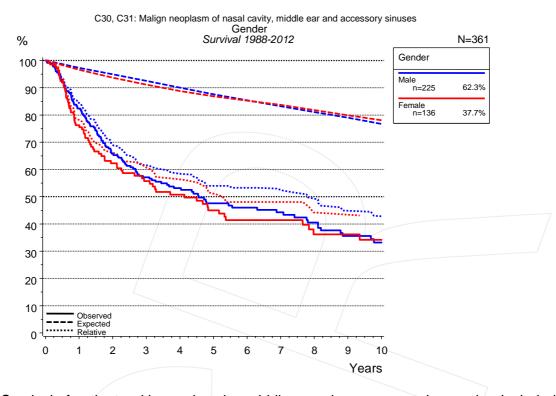
**Figure 1a.** Relative survival of patients with nasal cavity, middle ear, sinuses cancer by period of diagnosis. Included in the evaluation are 361 cases diagnosed between 1988 and 2012.

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 2009, and are represented by green 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.

	Period of diagnosis				
	1988-	1997	199	+8	
	n=1	15	n=2	246	
Years	obs. %	rel. %	obs. %	rel. %	
0	100.0	100.0	100.0	100.0	
1	78.3	80.4	81.0	83.0	
2	66.1	69.5	63.5	67.0	
3	55.6	60.3	57.1	61.7	
4	51.2	57.0	52.9	58.1	
5	45.8	52.4	47.0	53.3	
6	43.1	50.3	45.1	52.0	
7	41.4	49.5	45.1	52.0	
8	37.7	46.7	40.0	48.4	
9	33.1	42.0	40.0	47.4	
10	31.2	40.5			

**Table 1b.** Observed (obs.) and relative (rel.) survival of patients with nasal cavity, middle ear, sinuses cancer by period of diagnosis for period 1988-2012 (N=361).

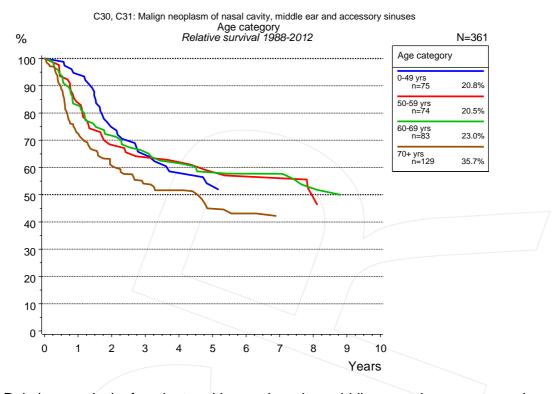


**Figure 2a.** Survival of patients with nasal cavity, middle ear, sinuses cancer by gender. Included in the evaluation are 361 cases diagnosed between 1988 and 2012.

Gender										
	Ma	ale	Fem	nale						
	n=2	225	n=1	36						
Years	obs. %	rel. %	obs. %	rel. %						
0	100.0	100.0	100.0	100.0						
1	82.4	84.4	76.2	78.2						
2	65.8	69.0	62.2	66.1						
3	57.1	61.5	55.7	60.7						
4	53.1	58.4	50.7	56.3						
5	47.5	54.0	45.0	51.1						
6	46.0	53.2	41.4	48.0						
7	44.2	52.5	41.4	48.0						
8	40.5	49.2	36.2	44.2						
9	35.6	44.8	36.2	43.4						
10	33.2	42.8	34.2	42.2						

**Table 2b.** Observed (obs.) and relative (rel.) survival of patients with nasal cavity, middle ear, sinuses cancer by gender for period 1988-2012 (N=361).



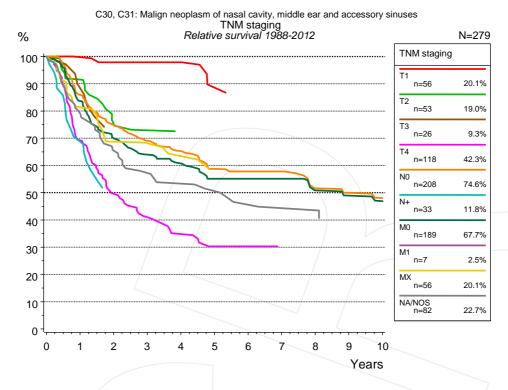


**Figure 3a.** Relative survival of patients with nasal cavity, middle ear, sinuses cancer by age category. Included in the evaluation are 361 cases diagnosed between 1988 and 2012.

Age category											
	0-49	yrs (	50-59	9 yrs	60-69	9 yrs	70+	yrs			
	n=	75	n=	74	n=	83	n=1	129			
Years	obs. %	rel. %									
0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0			
1	94.5	94.1	83.6	83.7	82.4	82.7	68.2	72.4			
2	74.7	74.7	67.5	68.3	70.2	71.6	53.1	60.6			
3	65.3	64.6	62.8	63.7	63.2	65.6	43.7	54.0			
4	58.1	57.9	61.0	61.9	58.8	61.6	39.4	51.6			
5	53.6	53.0	56.9	58.3	53.9	58.1	31.2	44.8			
6	51.4	51.0	54.7	56.7	52.1	57.7	28.3	43.1			
7	51.4	49.8	54.7	56.1	52.1	57.7	25.3	42.2			
8	51.4	48.6	46.1	48.9	45.8	52.3					
9					41.4	49.5					

**Table 3b.** Observed (obs.) and relative (rel.) survival of patients with nasal cavity, middle ear, sinuses cancer by age category for period 1988-2012 (N=361).



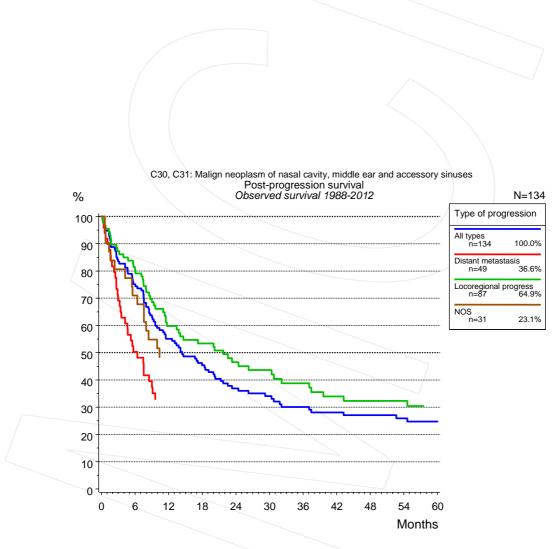


**Figure 4a.** Relative survival of patients with nasal cavity, middle ear, sinuses cancer by TNM staging. For 280 of 361 cases diagnosed between 1988 and 2012 valid data could be obtained for this item. For a total of 279 cases an evaluable classification was established. The accumulated percentage exceeds the 100% value because patients are potientially considered in more than one subgroup. The grey line represents the subgroup of 82 patients with missing values regarding TNM staging (22.7% of 361 patients, the percent values of all other categories are related to n=279). Subgroups with sample size <15 are dropped from the chart.

	TNM staging													
	T1		T2		Т	3	T	4	N	0	N	+	M	10
	n=	56	n=	53	n=	26	n=1	18	n=2	208	n=	33	n=1	189
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	98.1	99.8	90.4	91.5	88.5	88.4	68.0	69.2	83.8	85.9	69.4	68.7	81.5	83.7
2	94.0	97.8	72.2	75.2	72.0	72.1	47.7	49.6	71.2	74.8			66.5	70.0
3	91.6	97.8	67.8	72.9			38.9	41.0	63.8	69.1			58.9	64.0
4	91.6	97.8	65.1	72.6			32.2	34.8	58.8	65.2			54.6	60.7
5	78.7	88.5	65.1	72.6			26.8	30.3	51.3	58.7			47.9	55.1
6	75.1	85.7	65.1	72.6			26.8	30.3	49.6	57.8			47.9	55.1
7	75.1	84.1	65.1	72.6			25.2	30.2	48.6	57.8			46.8	55.1
8									41.4	51.6			40.4	50.9
9									39.2	49.9			38.0	49.0
10									36.7	48.0			35.4	46.9

TNM staging										
cont'd	M	1	M	X	NA/N	NOS				
	n=	<b>-</b> 7	n=	56	n=82					
Years	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %				
0	100.0	100.0	100.0	100.0	100.0	100.0				
1			79.8	81.4	77.3	79.0				
2			65.7	68.7	61.5	65.4				
3			63.6	68.1	53.4	57.2				
4			59.0	63.4	49.1	53.3				
5			52.5	57.7	45.8	50.6				
6					40.9	45.6				
7					38.9	44.3				
8					38.9	43.5				

**Table 4b.** Observed (obs.) and relative (rel.) survival of patients with nasal cavity, middle ear, sinuses cancer by TNM staging for period 1988-2012 (N=746).



**Figure 5a.** Observed post-progression survival of 134 patients with nasal cavity, middle ear, sinuses cancer diagnosed between 1988 and 2012 (incl. M1). These 134 patients with documented progression events during their course of disease represent 37.1% of the totally 361 evaluated cases. Patients with cancer relapse documented via death certificates only were excluded (n=30, 8.3%). Multiple progression types on different sites are included in the evaluation

even when not occuring 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 potientially considered in more than one subgroup.

	Type of progression									
	All types	Distant metastasis	Locoregional progress	NOS						
	n=134	n=49	n=87	n=31						
Months	%	%	%	%						
0	100.0	100.0	100.0	100.0						
12	55.1	32.9	59.7	48.4						
24	36.9		46.5							
36	30.1		38.8							
48	27.1		32.3							
60	24.7		30.4							

**Table 5b.** Observed post-progression survival of patients with nasal cavity, middle ear, sinuses cancer for period 1988-2012 (N=134).



#### **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**

Munich Cancer Registry. Survival C30, C31: Nasal cavity, middle ear, sinuses cancer [Internet]. 2014 [updated 2014 Mar 25; cited 2014 May 1]. Available from: http://www.tumorregister-muenchen.de/en/facts/surv/surv\_C3031E.pdf

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