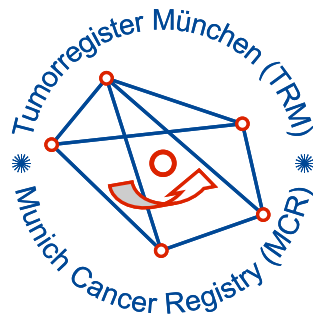


Munich Cancer Registry



- ▶ Baseline statistics
- ▶ Selection Matrix
- ▶ Homepage
- ▶ *Deutsch*

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

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

Cancer statistics: Survival

C15: Oesophagus cancer

Year of diagnosis	1988-2013
Patients	4,279
Diseases	4,281
Cases evaluated	2,276
Creation date	05/13/2015
Export date	12/30/2014
Population	4.64 m



http://www.tumorregister-muenchen.de/en/facts/surv/surv_C15__E.pdf

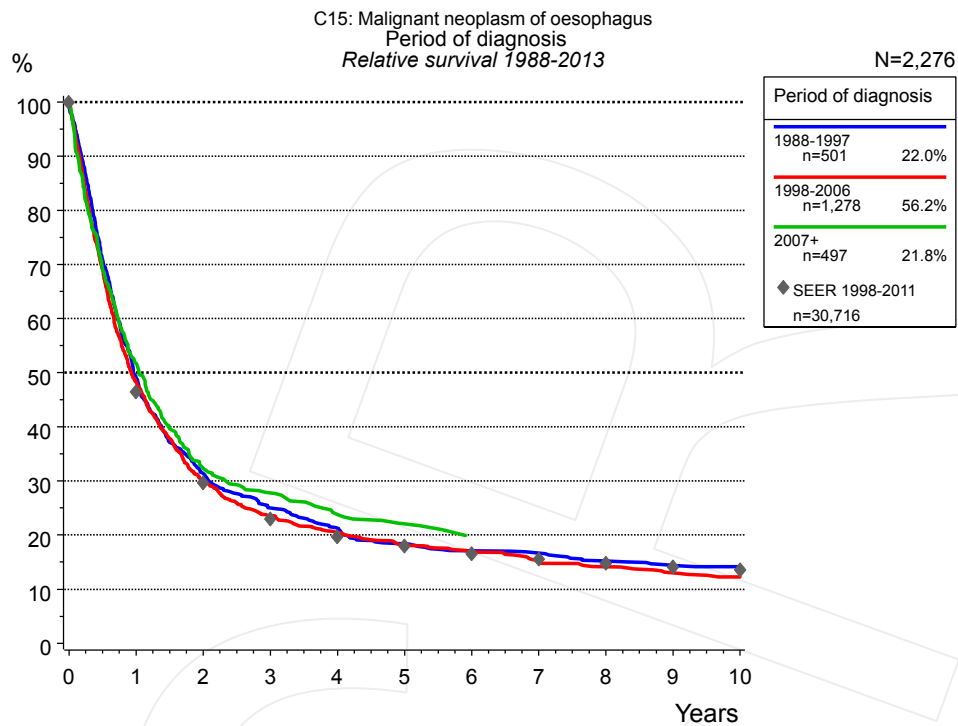


Figure 1a. Relative survival of patients with oesophagus cancer by period of diagnosis. Included in the evaluation are 2,276 cases diagnosed between 1988 and 2013.

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=501		1998-2006 n=1,278		2007+ n=497	
	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0	100.0	100.0
1	48.0	49.1	47.1	48.3	50.6	51.7
2	30.1	31.4	28.7	30.0	30.9	32.3
3	23.4	25.0	22.1	23.6	25.9	27.8
4	19.5	21.3	18.9	20.5	21.5	23.8
5	16.5	18.3	16.4	18.1	19.5	22.1
6	15.1	17.1	15.0	16.9	16.9	19.7
7	14.2	16.7	13.1	15.1		
8	12.6	15.2	12.1	14.2		
9	11.7	14.4	10.9	13.0		
10	11.3	14.2	10.0	12.3		

Table 1b. Observed (obs.) and relative (rel.) survival of patients with oesophagus cancer by period of diagnosis for period 1988-2013 (N=2,276).

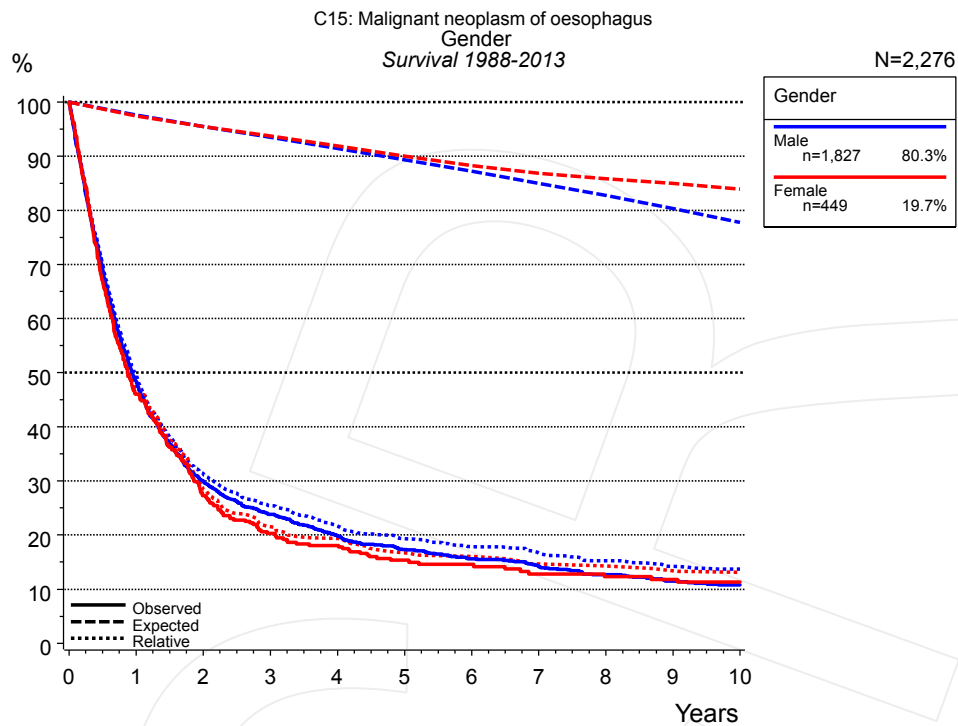


Figure 2a. Survival of patients with oesophagus cancer by gender. Included in the evaluation are 2,276 cases diagnosed between 1988 and 2013.

Years	Gender			
	Male n=1,827		Female n=449	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	48.5	49.6	46.0	47.2
2	30.0	31.3	27.3	28.5
3	23.8	25.4	20.3	21.6
4	19.9	21.7	18.1	19.4
5	17.3	19.3	15.4	16.7
6	15.6	17.9	14.6	16.1
7	14.2	16.7	12.8	14.7
8	12.7	15.3	12.3	14.3
9	11.5	14.2	11.8	13.4
10	10.8	13.7	11.3	13.1

Table 2b. Observed (obs.) and relative (rel.) survival of patients with oesophagus cancer by gender for period 1988-2013 (N=2,276).

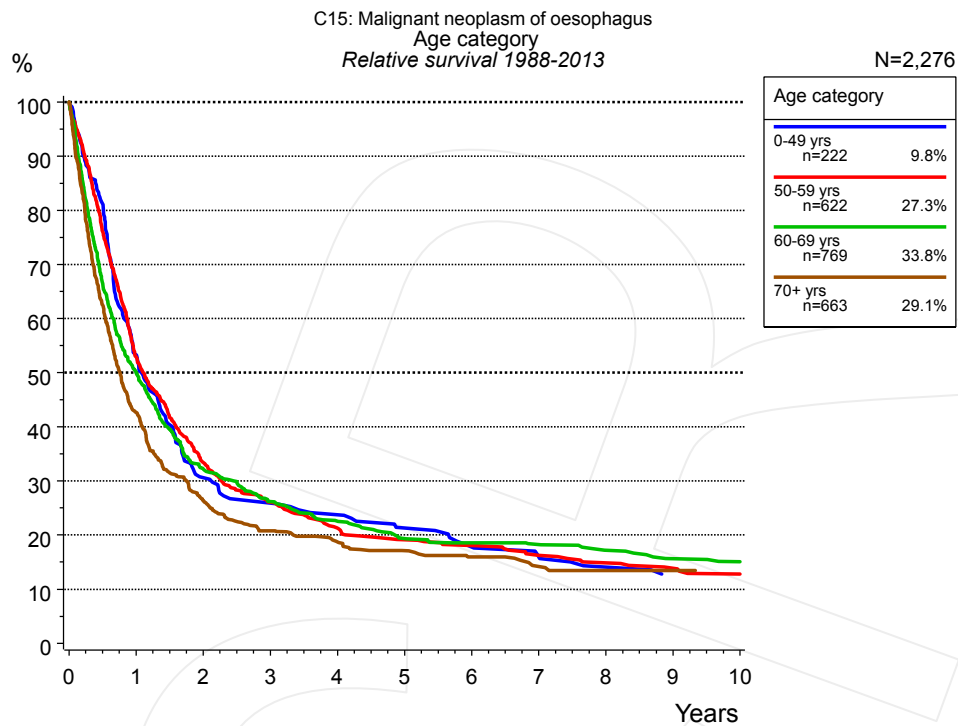


Figure 3a. Relative survival of patients with oesophagus cancer by age category. Included in the evaluation are 2,276 cases diagnosed between 1988 and 2013.

Years	Age category							
	0-49 yrs n=222		50-59 yrs n=622		60-69 yrs n=769		70+ yrs n=663	
	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	53.6	53.3	52.5	52.9	49.3	50.0	40.4	42.7
2	30.6	30.6	33.0	33.4	31.3	32.2	23.7	26.4
3	26.0	25.9	25.5	26.1	24.9	26.2	17.8	20.8
4	23.9	23.7	20.6	21.3	21.2	22.6	15.1	18.7
5	21.1	21.3	18.4	19.1	17.8	19.3	13.0	17.1
6	17.9	17.8	17.4	18.1	16.6	18.5	11.3	16.0
7	15.9	16.0	15.2	16.3	16.1	18.2	9.4	14.2
8	13.9	14.1	13.9	14.8	14.6	17.2	8.6	13.4
9	12.3	12.7	12.9	13.8	12.9	15.6	8.6	13.4
10	12.3	12.2	11.7	12.8	12.2	15.1	8.2	13.4

Table 3b. Observed (obs.) and relative (rel.) survival of patients with oesophagus cancer by age category for period 1988-2013 (N=2,276).

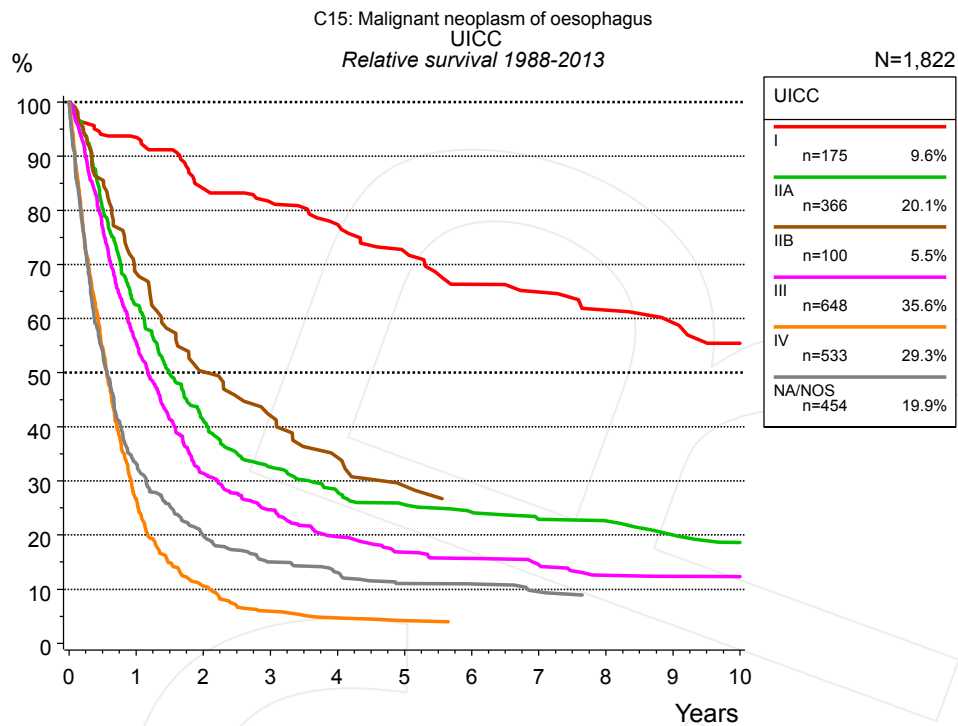


Figure 4a. Relative survival of patients with oesophagus cancer by UICC. For 1,876 of 2,276 cases diagnosed between 1988 and 2013 valid data could be obtained for this item. For a total of 1,822 cases an evaluable classification was established. The grey line represents the subgroup of 454 patients with missing values regarding UICC (19.9% of 2,276 patients, the percent values of all other categories are related to n=1,822).

Years	UICC											
	I n=175		IIA n=366		IIB n=100		III n=648		IV n=533		NA/NOS n=454	
	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	91.8	93.5	61.2	62.5	67.4	68.4	54.6	55.6	26.3	26.7	31.9	33.2
2	80.6	84.0	39.8	41.2	48.5	50.2	30.5	31.4	10.2	10.6	18.6	19.9
3	76.2	81.5	30.7	32.5	40.0	42.1	23.4	24.7	5.8	5.9	13.5	15.0
4	71.2	77.4	25.9	28.0	32.5	34.3	18.3	19.7	4.6	4.7	11.6	13.1
5	64.6	72.4	23.5	25.6	26.8	29.1	15.4	16.8	3.9	4.2	9.3	11.0
6	57.8	66.4	21.8	24.2	23.8	26.1	14.2	15.7			9.0	11.0
7	55.2	64.9	20.0	22.9			12.7	14.5			7.7	9.5
8	51.1	61.6	19.4	22.6			10.7	12.6			6.9	8.8
9	48.1	59.2	17.1	20.0			10.3	12.4				
10	43.4	55.4	15.3	18.6			10.3	12.3				

Table 4b. Observed (obs.) and relative (rel.) survival of patients with oesophagus cancer by UICC for period 1988-2013 (N=1,822).

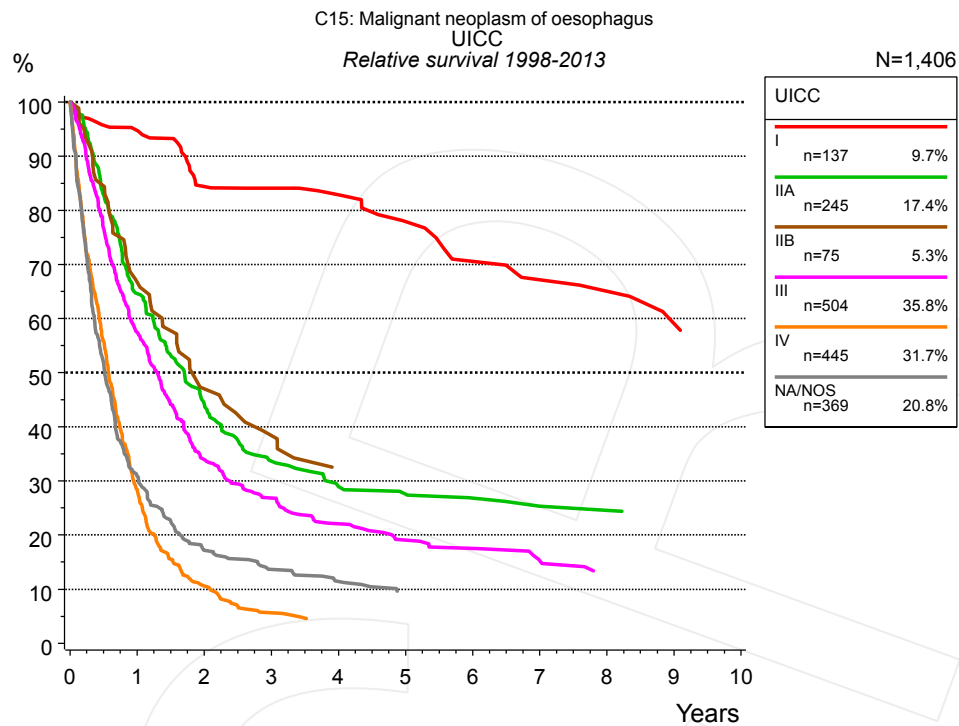


Figure 4c. Relative survival of patients with oesophagus cancer by UICC. For 1,448 of 1,775 cases diagnosed between 1998 and 2013 valid data could be obtained for this item. For a total of 1,406 cases an evaluable classification was established. The grey line represents the subgroup of 369 patients with missing values regarding UICC (20.8% of 1,775 patients, the percent values of all other categories are related to n=1,406).

Years	UICC											
	I n=137		IIA n=245		IIB n=75		III n=504		IV n=445		NA/NOS n=369	
	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	93.2	94.8	63.3	64.6	65.8	66.7	56.5	57.5	28.0	28.4	29.7	30.9
2	80.9	84.4	42.9	44.2	45.4	47.0	33.1	33.9	10.2	10.6	15.9	17.2
3	79.0	84.1	32.0	33.6	37.0	38.4	25.5	26.8	5.5	5.6	12.3	13.6
4	76.6	82.9	27.0	28.9	29.9	31.2	20.6	22.1			10.0	11.4
5	69.3	77.9	25.8	27.5			17.4	19.0			8.1	9.6
6	61.9	70.6	24.3	26.8			16.0	17.5				
7	57.4	67.2	22.4	25.3			13.4	15.2				
8	54.9	65.1	22.4	24.5			11.4	13.2				
9	49.3	59.1										

Table 4d. Observed (obs.) and relative (rel.) survival of patients with oesophagus cancer by UICC for period 1998-2013 (N=1,406).

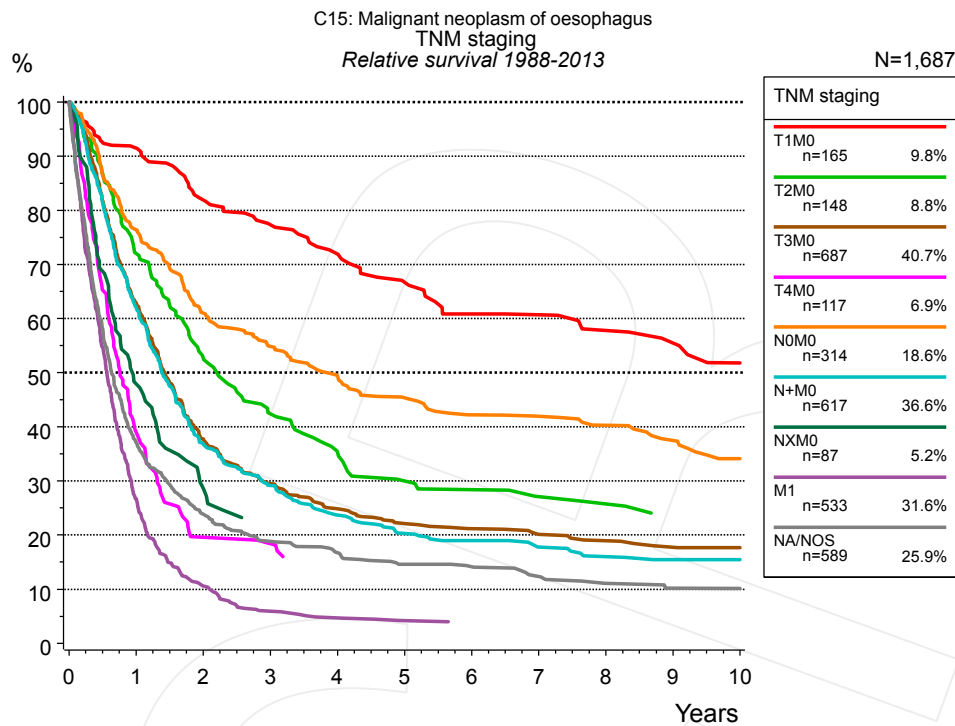


Figure 4e. Relative survival of patients with oesophagus cancer by TNM staging. For 1,876 of 2,276 cases diagnosed between 1988 and 2013 valid data could be obtained for this item. For a total of 1,687 cases an evaluable classification was established. The accumulated percentage exceeds the 100% value because patients are potentially considered in more than one subgroup. The grey line represents the subgroup of 589 patients with missing values regarding TNM staging (25.9% of 2,276 patients, the percent values of all other categories are related to n=1,687).

Years	T1M0 n=165		T2M0 n=148		T3M0 n=687		T4M0 n=117		N0M0 n=314		N+M0 n=617		NXM0 n=87	
	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	90.1	91.5	70.6	72.0	61.7	62.9	38.9	39.0	75.0	76.4	60.9	62.1	47.0	48.0
2	78.9	81.9	50.8	52.6	36.5	37.8	19.0	19.6	58.6	61.0	35.6	36.8	28.3	28.6
3	72.8	77.3	39.8	42.4	28.0	29.5	18.0	18.4	51.5	54.8	27.6	29.1	21.8	22.4
4	66.9	72.0	32.4	35.4	23.1	24.8			45.5	49.5	21.9	23.7		
5	60.2	66.7	27.2	30.0	20.3	22.1			40.9	45.4	18.4	20.3		
6	53.9	60.8	25.3	28.4	18.9	21.2			37.0	42.2	16.9	19.0		
7	52.7	60.7	23.1	27.1	17.5	20.1			36.0	42.0	15.3	17.8		
8	48.9	57.8	22.0	25.8	16.4	18.9			33.8	40.3	13.7	16.0		
9	46.0	55.5	19.5	23.5	15.1	17.7			30.9	37.5	12.7	15.4		
10	41.5	51.8			14.7	17.7			27.2	34.1	12.7	15.4		

cont'd Years	TNM staging			
	M1 n=533		NA/NOS n=589	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	26.3	26.7	35.8	37.1
2	10.2	10.6	22.5	23.9
3	5.8	5.9	17.2	18.8
4	4.6	4.7	14.9	16.8
5	3.9	4.2	12.6	14.6
6			12.0	14.2
7			10.2	12.3
8			8.7	11.1
9			7.9	10.2
10			7.9	10.2

Table 4f. Observed (obs.) and relative (rel.) survival of patients with oesophagus cancer by TNM staging for period 1988-2013 (N=2,668).

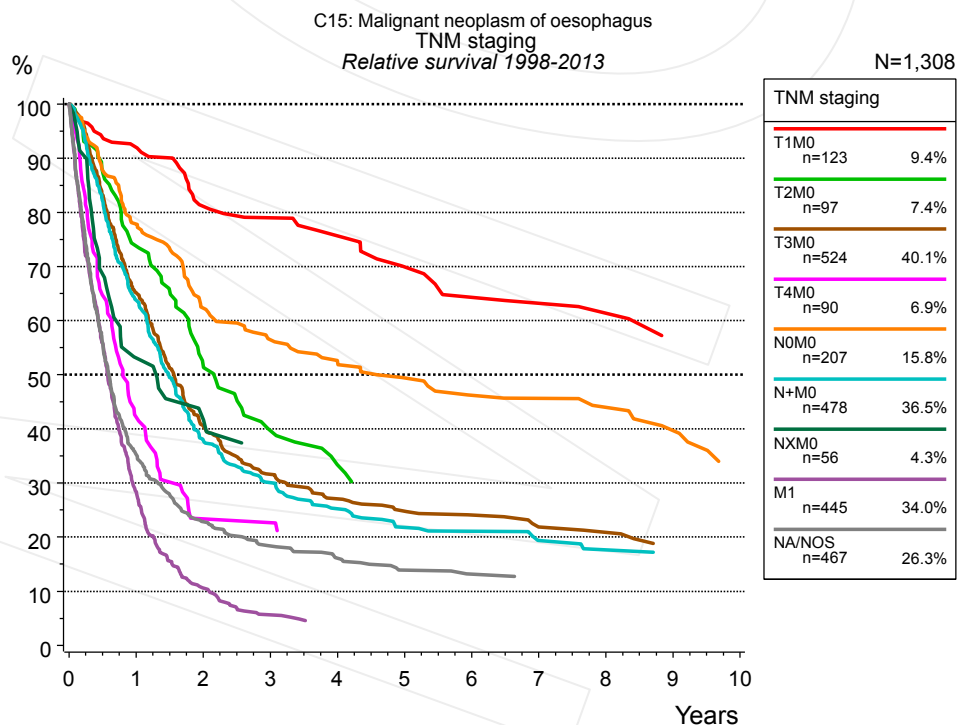


Figure 4g. Relative survival of patients with oesophagus cancer by TNM staging. For 1,448 of 1,775 cases diagnosed between 1998 and 2013 valid data could be obtained for this item. For a total of 1,308 cases an evaluable classification was established. The accumulated percentage exceeds the 100% value because patients are potentially considered in more than one subgroup. The grey line represents the subgroup of 467 patients with missing values regarding TNM staging (26.3% of 1,775 patients, the percent values of all other categories are related to n=1,308).

Years	TNM staging													
	T1M0 n=123		T2M0 n=97		T3M0 n=524		T4M0 n=90		N0M0 n=207		N+M0 n=478		NXM0 n=56	
	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	90.8	92.0	72.8	73.8	64.0	65.1	41.9	42.2	76.6	77.8	62.7	63.8	52.0	53.2
2	78.0	81.1	50.4	51.6	39.4	40.7	22.7	23.4	60.0	62.3	36.7	37.9	41.9	41.8
3	74.7	79.0	37.6	39.7	30.1	31.6	22.7	22.7	53.3	56.5	28.5	30.1	35.5	35.9
4	70.8	75.7	30.6	33.4	25.4	27.1			48.4	52.4	23.5	25.2		
5	63.0	69.9	27.5	30.2	23.0	24.8			44.6	49.4	19.9	21.8		
6	57.5	64.3	27.5	30.2	21.6	24.1			40.9	46.2	18.9	21.1		
7	55.4	63.2	27.5	30.2	19.2	21.9			39.9	45.6	16.6	19.3		
8	53.0	61.4			18.4	20.9			37.5	43.9	15.1	17.6		
9	47.1	55.0			16.0	18.8			33.5	39.7	14.2	17.2		
10					16.0	18.6			27.4	33.7	14.2	17.0		

Years	TNM staging			
	M1 n=445		NA/NOS n=467	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	28.0	28.4	34.0	35.2
2	10.2	10.6	21.4	22.8
3	5.5	5.6	16.7	18.4
4			14.2	16.1
5			11.8	13.9
6			10.8	13.2

Table 4h. Observed (obs.) and relative (rel.) survival of patients with oesophagus cancer by TNM staging for period 1998-2013 (N=2,020).

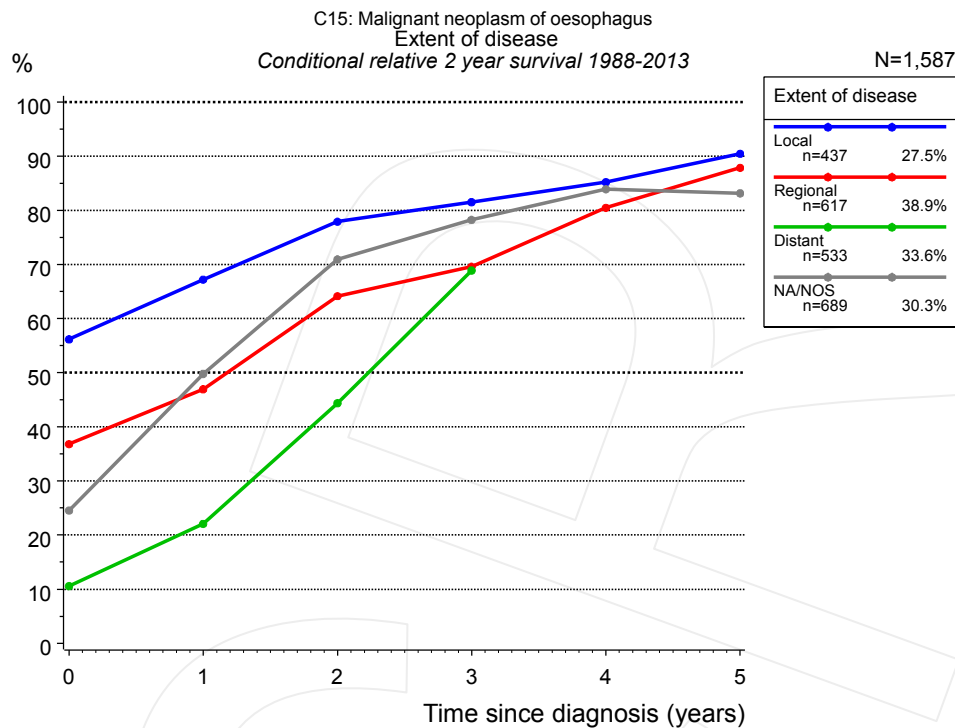


Figure 4i. Conditional relative 2-year survival of patients with oesophagus cancer by extent of disease. For 1,876 of 2,276 cases diagnosed between 1988 and 2013 valid data could be obtained for this item. For a total of 1,587 cases an evaluable classification was established. The grey line represents the subgroup of 689 patients with missing values regarding extent of disease (30.3% of 2,276 patients, the percent values of all other categories are related to n=1,587).

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	437	56.2	617	36.8	533	10.6	689	24.6
1	297	67.2	352	46.9	131	22.1	244	49.8
2	205	77.9	188	64.1	49	44.4	138	70.9
3	162	81.5	131	69.6	25	68.9	99	78.3
4	131	85.2	87	80.4			77	83.9
5	106	90.5	63	87.8			55	83.1

Table 4j. Conditional relative 2-year survival of patients with oesophagus cancer by extent of disease for period 1988-2013 (N=1,587).

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 4g). 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 81.5% (n=162).

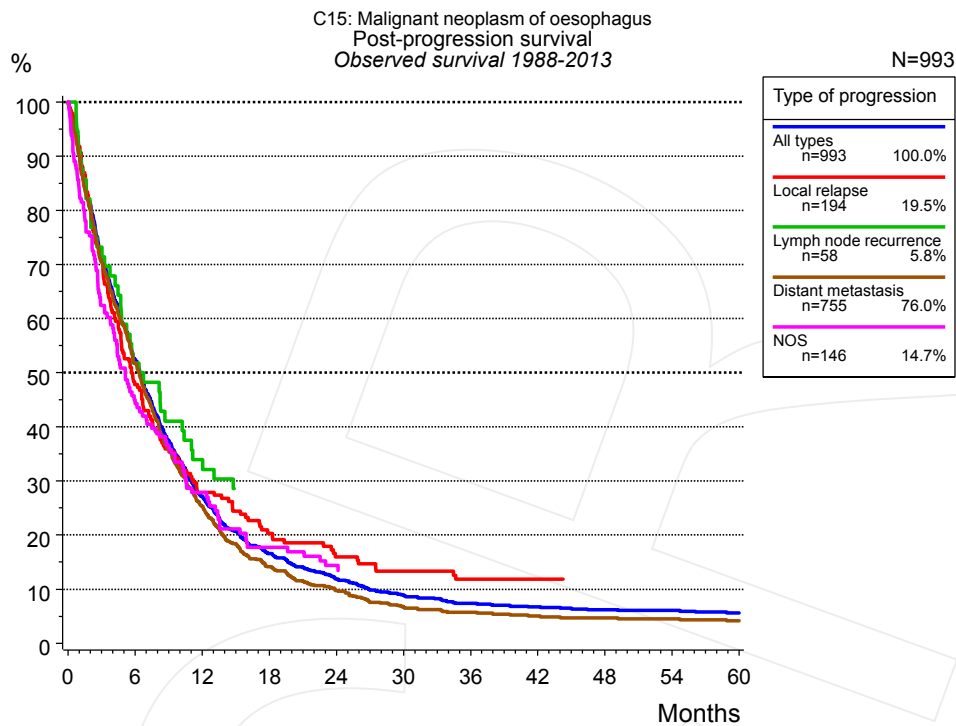


Figure 5a. Observed post-progression survival of 993 patients with oesophagus cancer diagnosed between 1988 and 2013 (incl. M1). These 993 patients with documented progression events during their course of disease represent 43.6% of the totally 2,276 evaluated cases. Patients with cancer relapse documented via death certificates only were excluded (n=566, 24.9%). 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				
	All types n=993	Local relapse n=194	Lymph node recurrence n=58	Distant metastasis n=755	NOS n=146
	%	%	%	%	%
0	100.0	100.0	100.0	100.0	100.0
12	27.1	27.9	33.9	25.3	27.8
24	11.9	16.0		9.8	14.4
36	7.4	11.8		5.7	
48	6.2			4.7	
60	5.6			4.1	

Table 5b. Observed post-progression survival of patients with oesophagus cancer for period 1988-2013 (N=993).

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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