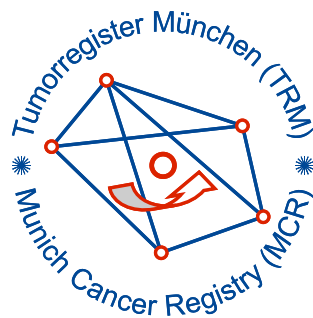


Munich Cancer Registry



- ▶ 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

C15: Oesophagus cancer

Year of diagnosis	1978-1987	1988-1997	1998-2011
Patients	223	592	3,177
Diseases	223	593	3,178
Creation date	04/01/2013		
Export date	01/03/2013		
Population	4.5 m		



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

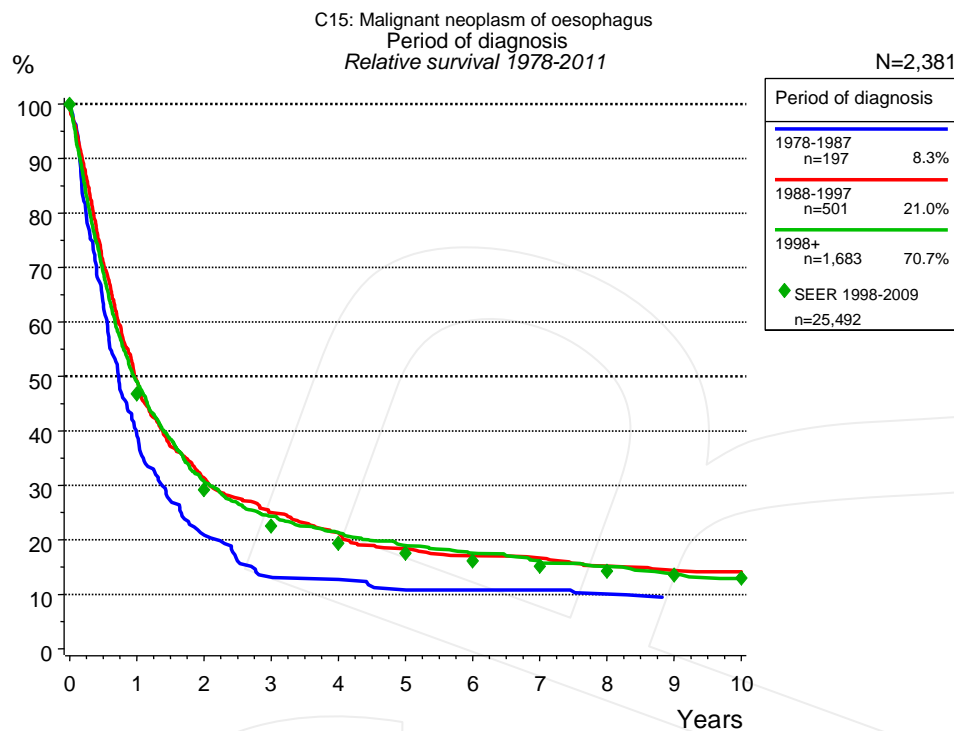


Figure 1a. Relative survival of patients with oesophagus cancer by period of diagnosis. Included in the evaluation are 2,381 cases diagnosed between 1978 and 2011.

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 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=197		1988-1997 n=501		1998+ n=1,683	
	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0	100.0	100.0
1	38.6	39.3	48.0	49.1	47.9	49.1
2	20.3	20.9	30.1	31.4	29.4	30.7
3	12.7	13.1	23.4	25.0	22.8	24.3
4	12.2	12.8	19.5	21.3	19.6	21.3
5	10.2	10.8	16.5	18.3	17.1	19.0
6	9.6	10.8	15.1	17.1	15.5	17.6
7	9.6	10.8	14.2	16.7	13.9	16.1
8	8.6	10.0	12.6	15.2	12.8	15.1
9	7.6	9.3	11.7	14.4	11.5	13.7
10			11.3	14.2	10.4	12.9

Table 1b. Observed (obs.) and relative (rel.) survival of patients with oesophagus cancer by period of diagnosis for period 1978-2011 (N=2,381).

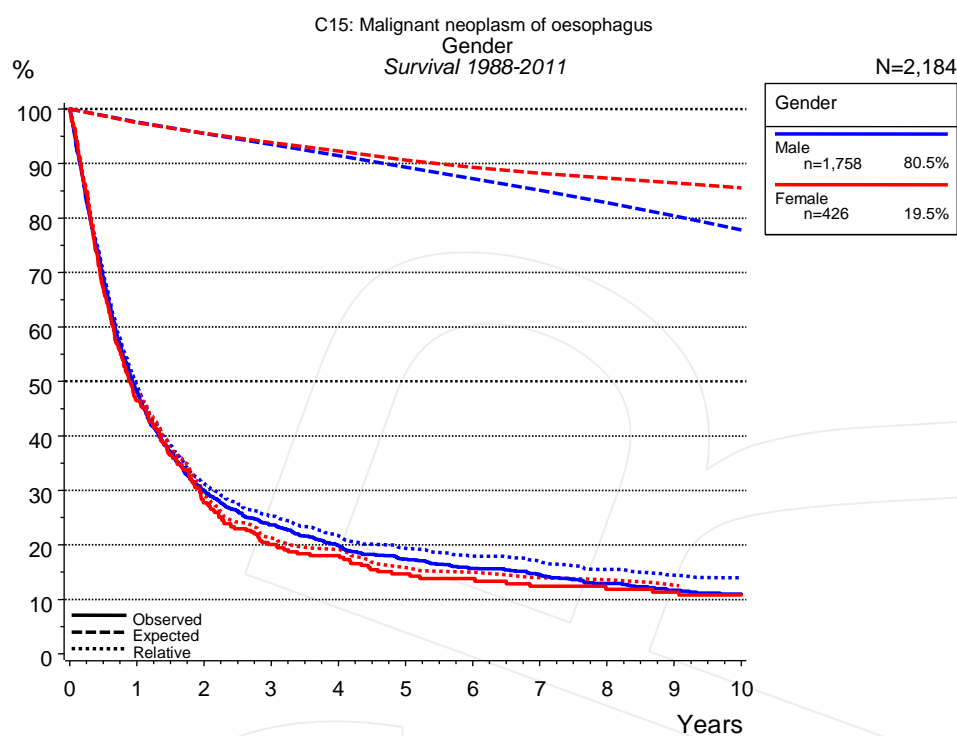


Figure 2a. Survival of patients with oesophagus cancer by gender. Included in the evaluation are 2,184 cases diagnosed between 1988 and 2011.

Years	Gender			
	Male n=1,758		Female n=426	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	48.2	49.4	46.4	47.6
2	30.0	31.4	27.7	28.9
3	23.6	25.3	20.1	21.3
4	19.9	21.7	18.0	19.2
5	17.4	19.4	14.7	15.8
6	15.7	17.9	13.8	15.0
7	14.5	17.0	12.4	14.0
8	12.9	15.5	11.9	13.6
9	11.7	14.4	11.3	12.6
10	11.0	14.0	10.8	12.2

Table 2b. Observed (obs.) and relative (rel.) survival of patients with oesophagus cancer by gender for period 1988-2011 (N=2,184).

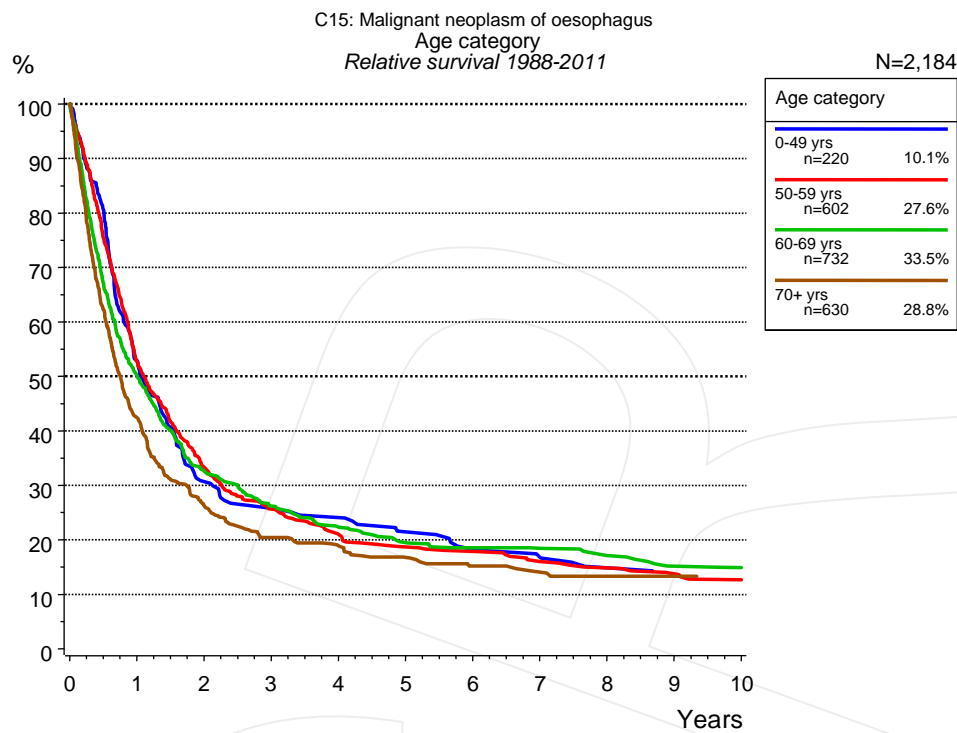


Figure 3a. Relative survival of patients with oesophagus cancer by age category. Included in the evaluation are 2,184 cases diagnosed between 1988 and 2011.

Years	Age category							
	0-49 yrs n=220		50-59 yrs n=602		60-69 yrs n=732		70+ yrs n=630	
	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	53.1	52.9	52.3	52.7	49.4	50.1	40.1	42.4
2	30.7	30.7	32.9	33.3	31.7	32.6	23.5	26.2
3	26.0	25.8	25.1	25.7	25.0	26.2	17.4	20.5
4	24.2	24.1	20.4	21.0	21.0	22.4	15.2	18.9
5	21.2	21.5	18.0	18.7	18.0	19.5	12.7	16.8
6	18.4	18.2	17.2	17.9	16.6	18.5	10.7	15.2
7	17.0	16.8	15.0	16.0	16.3	18.4	9.4	14.1
8	14.7	14.9	13.9	14.8	14.5	17.1	8.6	13.3
9	13.8	14.1	12.8	13.7	12.5	15.2	8.6	13.3
10	13.8	13.5	11.6	12.7	12.1	14.9	8.0	13.3

Table 3b. Observed (obs.) and relative (rel.) survival of patients with oesophagus cancer by age category for period 1988-2011 (N=2,184).

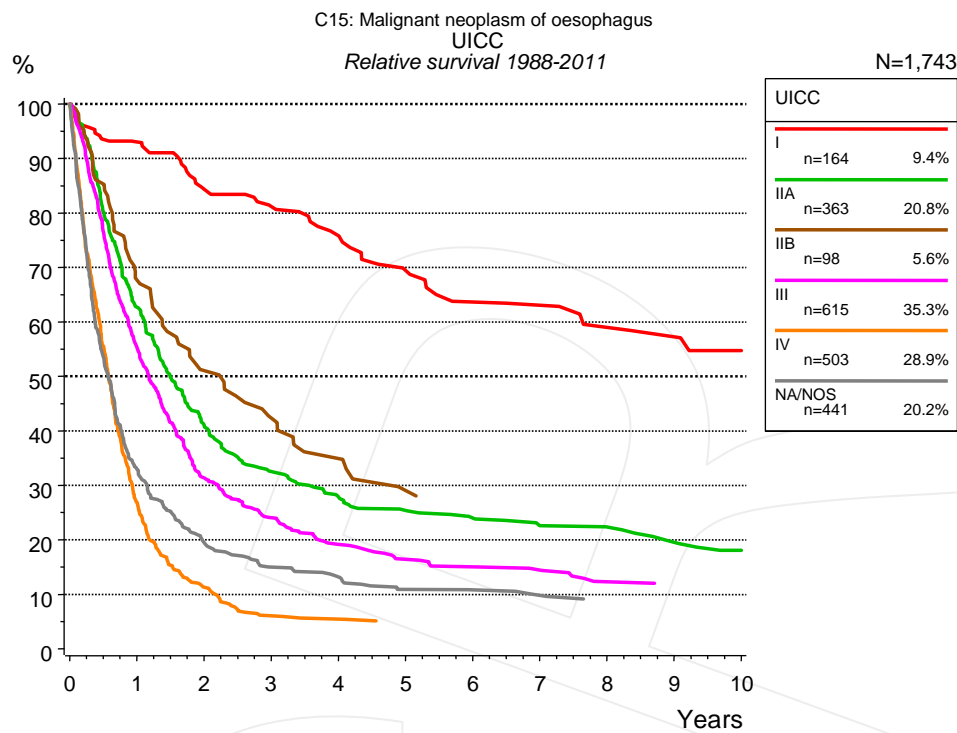


Figure 4a. Relative survival of patients with oesophagus cancer by UICC. For 1,796 of 2,184 cases diagnosed between 1988 and 2011 valid data could be obtained for this item. For a total of 1,743 cases an evaluable classification was established. The grey line represents the subgroup of 441 patients with missing values regarding UICC (20.2% of 2,184 patients, the percent values of all other categories are related to n=1,743).

Years	UICC											
	I n=164		IIA n=363		IIB n=98		III n=615		IV n=503		NA/NOS n=441	
	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	91.3	93.1	61.4	62.7	66.7	67.7	54.3	55.3	26.5	26.8	31.7	32.9
2	81.0	84.4	39.6	41.1	49.3	51.1	30.5	31.4	10.9	11.3	18.3	19.5
3	76.0	81.2	30.7	32.5	40.2	42.4	22.8	24.1	5.9	6.0	13.6	15.0
4	70.0	75.8	25.8	27.9	33.6	34.9	17.7	19.2	5.4	5.4	11.8	13.2
5	62.2	69.4	23.3	25.4	26.9	29.0	15.0	16.4	4.8	5.0	9.3	10.9
6	55.6	63.6	21.6	24.0			13.7	15.1			8.9	10.8
7	54.2	63.0	19.7	22.6			12.9	14.4			8.0	9.8
8	49.4	59.0	19.1	22.3			10.6	12.3			7.1	9.0
9	47.7	57.3	16.7	19.5			10.0	12.0				
10	43.6	54.7	14.9	18.1			10.0	11.8				

Table 4b. Observed (obs.) and relative (rel.) survival of patients with oesophagus cancer by UICC for period 1988-2011 (N=1,743).

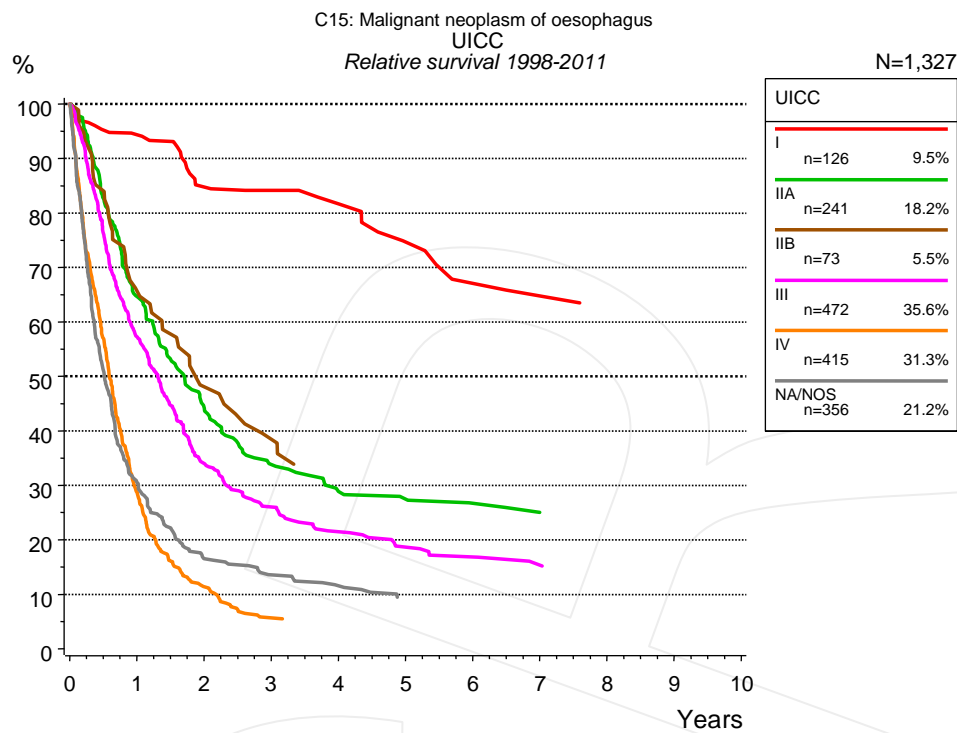


Figure 4c. Relative survival of patients with oesophagus cancer by UICC. For 1,368 of 1,683 cases diagnosed between 1998 and 2011 valid data could be obtained for this item. For a total of 1,327 cases an evaluable classification was established. The grey line represents the subgroup of 356 patients with missing values regarding UICC (21.2% of 1,683 patients, the percent values of all other categories are related to n=1,327).

Years	UICC											
	I n=126		IIA n=241		IIB n=73		III n=472		IV n=415		NA/NOS n=356	
	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	92.6	94.3	63.5	64.6	64.8	65.7	56.3	57.3	28.4	28.7	29.3	30.5
2	81.5	84.8	42.9	44.2	46.4	48.1	33.2	34.0	11.0	11.4	15.4	16.5
3	79.2	84.2	32.2	33.8	37.1	38.5	24.8	26.1	5.6	5.7	12.3	13.6
4	76.1	81.7	26.9	28.9	31.5	31.5	20.1	21.5			10.2	11.6
5	66.7	74.6	25.7	27.5			17.2	18.7			8.0	9.4
6	59.3	67.1	24.1	26.7			15.5	16.8				
7	56.5	64.8	22.1	25.0			14.1	15.3				
8	53.2	61.3	22.1	24.1								

Table 4d. Observed (obs.) and relative (rel.) survival of patients with oesophagus cancer by UICC for period 1998-2011 (N=1,327).

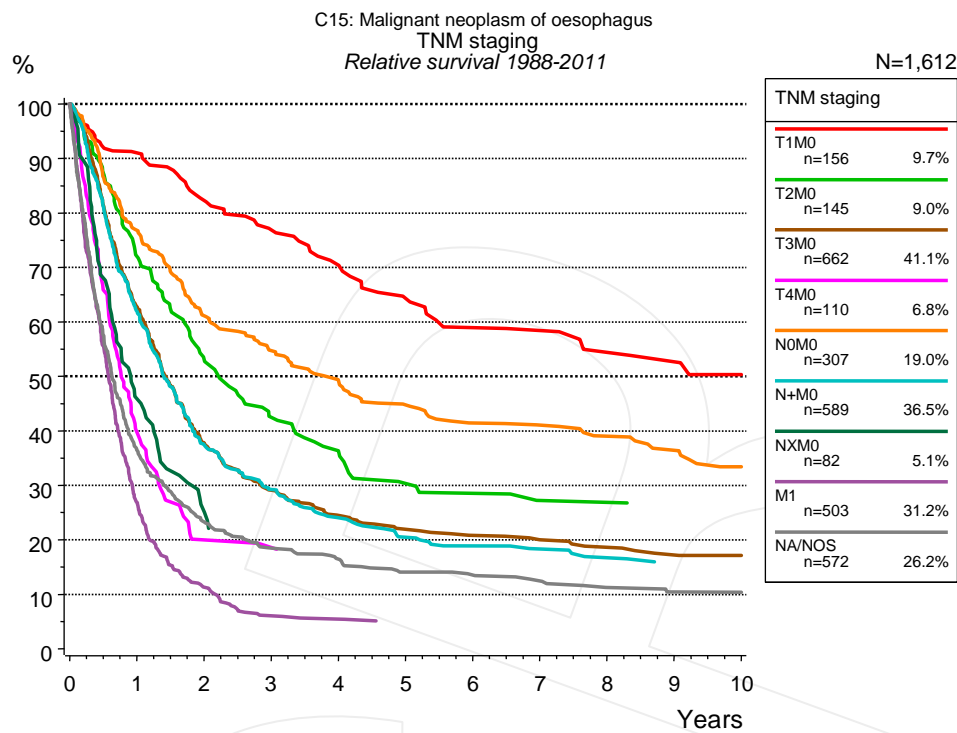


Figure 4e. Relative survival of patients with oesophagus cancer by TNM staging. For 1,796 of 2,184 cases diagnosed between 1988 and 2011 valid data could be obtained for this item. For a total of 1,612 cases an evaluable classification was established. The accumulated percentage exceeds the 100% value because patients are potentially considered in more than one subgroup. The grey line represents the subgroup of 572 patients with missing values regarding TNM staging (26.2% of 2,184 patients, the percent values of all other categories are related to n=1,612).

		TNM staging													
		T1M0 n=156		T2M0 n=145		T3M0 n=662		T4M0 n=110		N0M0 n=307		N+M0 n=589		NXM0 n=82	
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		89.5	91.0	70.7	71.9	61.6	62.8	39.6	39.7	75.3	76.8	60.8	61.9	45.0	45.9
2		79.4	82.3	51.1	52.9	36.6	37.8	19.4	20.0	58.7	61.1	36.2	37.4	25.1	25.1
3		72.5	76.9	39.8	42.5	27.6	29.1	18.3	18.6	51.5	54.7	27.7	29.2		
4		65.7	70.4	33.1	36.2	22.8	24.5			45.4	49.3	22.2	24.0		
5		58.3	64.3	27.4	30.3	20.2	21.9			40.4	44.8	18.6	20.5		
6		52.4	58.9	25.5	28.5	18.6	20.8			36.4	41.4	16.9	18.9		
7		51.1	58.4	23.1	27.2	17.5	20.0			35.3	41.1	16.0	18.3		
8		46.5	54.4	23.1	26.9	16.2	18.6			32.9	39.0	14.4	16.7		
9		44.8	52.7			14.8	17.2			30.3	36.4	13.2	15.9		
10		41.0	50.3			14.3	17.1			26.8	33.4	13.2	15.9		

cont'd Years	TNM staging			
	M1 n=503		NA/NOS n=572	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	26.5	26.8	35.2	36.5
2	10.9	11.3	22.0	23.3
3	5.9	6.0	16.9	18.5
4	5.4	5.4	14.7	16.5
5	4.8	5.0	12.1	14.1
6			11.5	13.5
7			10.4	12.5
8			8.9	11.2
9			8.0	10.4
10			8.0	10.4

Table 4f. Observed (obs.) and relative (rel.) survival of patients with oesophagus cancer by TNM staging for period 1988-2011 (N=2,554).

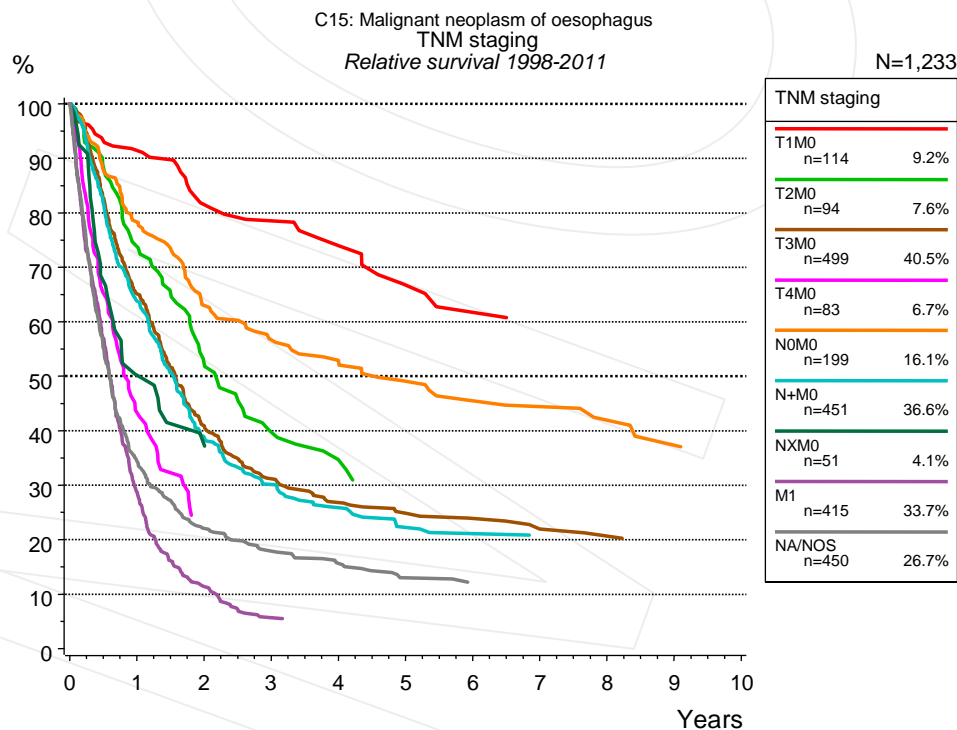


Figure 4g. Relative survival of patients with oesophagus cancer by TNM staging. For 1,368 of 1,683 cases diagnosed between 1998 and 2011 valid data could be obtained for this item. For a total of 1,233 cases an evaluable classification was established. The accumulated percentage exceeds the 100% value because patients are potentially considered in more than one subgroup. The grey line represents the subgroup of 450 patients with missing values regarding TNM staging (26.7% of 1,683 patients, the percent values of all other categories are related to n=1,233).

TNM staging															
	T1M0 n=114		T2M0 n=94		T3M0 n=499		T4M0 n=83		N0M0 n=199		N+M0 n=451		NXM0 n=51		
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	91.4	73.0	73.7	64.0	65.1	43.1	43.4	77.1	78.3	62.7	63.8	49.1	50.1	
2	78.5	81.5	50.8	52.1	39.7	40.9	23.7	24.3	60.5	62.9	37.5	38.7	37.9	37.3	
3	74.5	78.5	37.5	39.7	29.7	31.2	23.7	23.5	53.5	56.7	28.6	30.1			
4	69.8	74.0	31.7	34.6	25.2	26.8			48.8	52.7	24.2	25.8			
5	60.4	66.7	28.2	30.9	23.1	24.8			44.4	49.1	20.4	22.2			
6	56.1	61.7	28.2	30.9	21.5	23.9			40.3	45.5	19.1	21.1			
7	53.1	59.5	28.2	30.8	19.4	22.0			39.1	44.4	18.1	20.6			
8			28.2	30.8	18.5	20.6			36.1	41.9					
9			28.2	30.7					32.7	37.3					

TNM staging				
Years	M1 n=415		NA/NOS n=450	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	28.4	28.7	33.1	34.3
2	11.0	11.4	20.7	22.1
3	5.6	5.7	16.3	17.9
4			13.9	15.6
5			11.1	13.0
6			10.1	12.1

Table 4h. Observed (obs.) and relative (rel.) survival of patients with oesophagus cancer by TNM staging for period 1998-2011 (N=1,906).

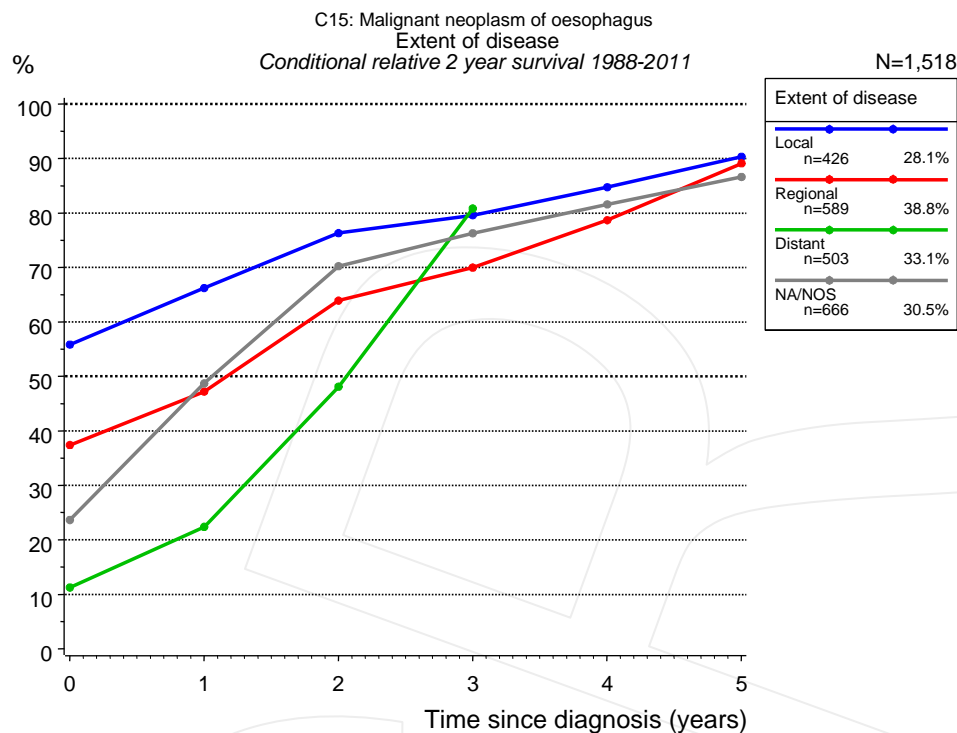


Figure 4i. Conditional relative 2-year survival of patients with oesophagus cancer by extent of disease. For 1,796 of 2,184 cases diagnosed between 1988 and 2011 valid data could be obtained for this item. For a total of 1,518 cases an evaluable classification was established. The grey line represents the subgroup of 666 patients with missing values regarding extent of disease (30.5% of 2,184 patients, the percent values of all other categories are related to n=1,518).

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	426	55.9	589	37.4	503	11.3	666	23.7
1	287	66.2	333	47.2	125	22.4	233	48.7
2	190	76.3	178	63.9	47	48.1	129	70.3
3	150	79.6	118	70.0	23	80.8	89	76.3
4	119	84.7	74	78.7			68	81.6
5	98	90.3	53	89.1			49	86.6

Table 4j. Conditional relative 2-year survival of patients with oesophagus cancer by extent of disease for period 1988-2011 (N=1,518).

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 79.6% (n=150).

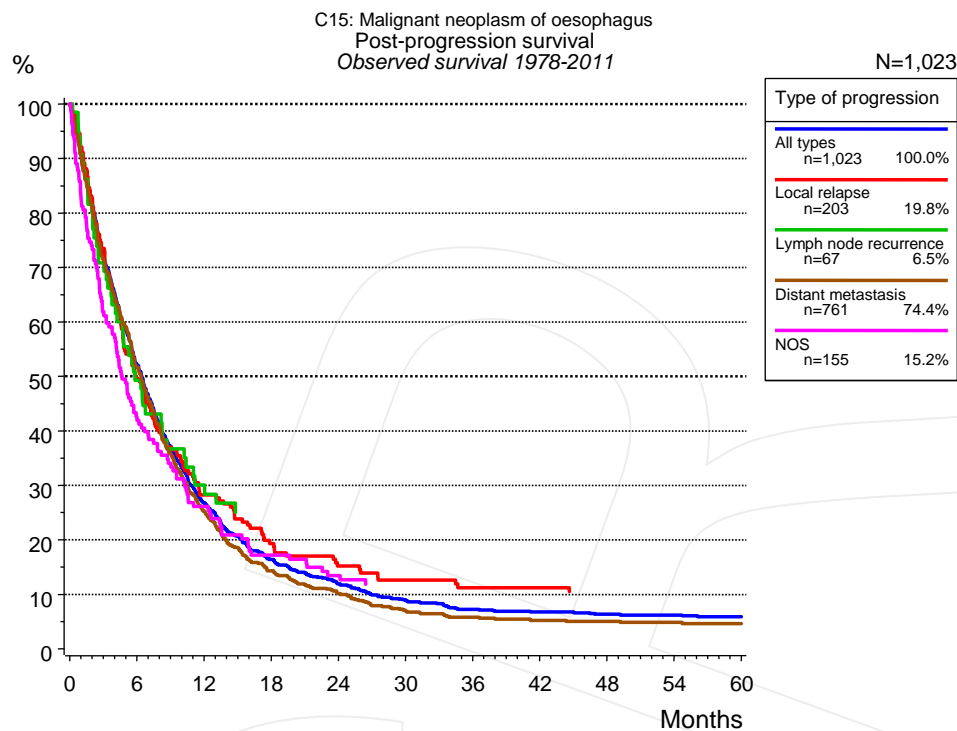


Figure 5a. Observed post-progression survival of 1,023 patients with oesophagus cancer diagnosed between 1978 and 2011 (incl. M1). These 1,023 patients with documented progression events during their course of disease represent 43.0% of the totally 2,381 evaluated cases. Patients with cancer relapse documented via death certificates only were excluded (n=576, 24.2%). 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=1,023 %	Local relapse n=203 %	Lymph node recurrence n=67 %	Distant metastasis n=761 %	NOS n=155 %
0	100.0	100.0	100.0	100.0	100.0
12	26.8	28.2	30.0	25.2	26.1
24	11.9	15.2		10.2	13.4
36	7.2	11.2		5.8	
48	6.3			5.1	
60	5.9			4.6	

Table 5b. Observed post-progression survival of patients with oesophagus cancer for period 1978-2011 (N=1,023).

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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Index of figures and tables

Fig./Tbl.	Page
1a Relative survival by period of diagnosis (chart)	2
1b Survival by period of diagnosis (table)	2
2a Survival by gender (chart)	3
2b Survival by gender (table)	3
3a Relative survival by age category (chart)	4
3b Survival by age category (table)	4
4a Relative survival by UICC 1988+ (chart)	5
4b Survival by UICC 1988+ (table)	5
4c Relative survival by UICC 1998+ (chart)	6
4d Survival by UICC 1998+ (table)	6
4e Relative survival by TNM staging 1988+ (chart)	7
4f Survival by TNM staging 1988+ (table)	7
4g Relative survival by TNM staging 1998+ (chart)	8
4h Survival by TNM staging 1998+ (table)	9
4i Conditional survival by extent of disease (chart)	10
4j Conditional survival by extent of disease (table)	10
5a Observed post-progression survival (chart)	11
5b Observed post-progression survival (table)	11