

Munich Cancer Registry



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

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

Cancer statistics: Survival

C18.1: Appendix cancer

Year of diagnosis	1981-1997	1998-2011
Patients	63	412
Diseases	63	412
Creation date	04/01/2013	
Export date	01/03/2013	
Population	4.5 m	



http://www.tumorregister-muenchen.de/en/facts/surv/surv_C181_E.pdf

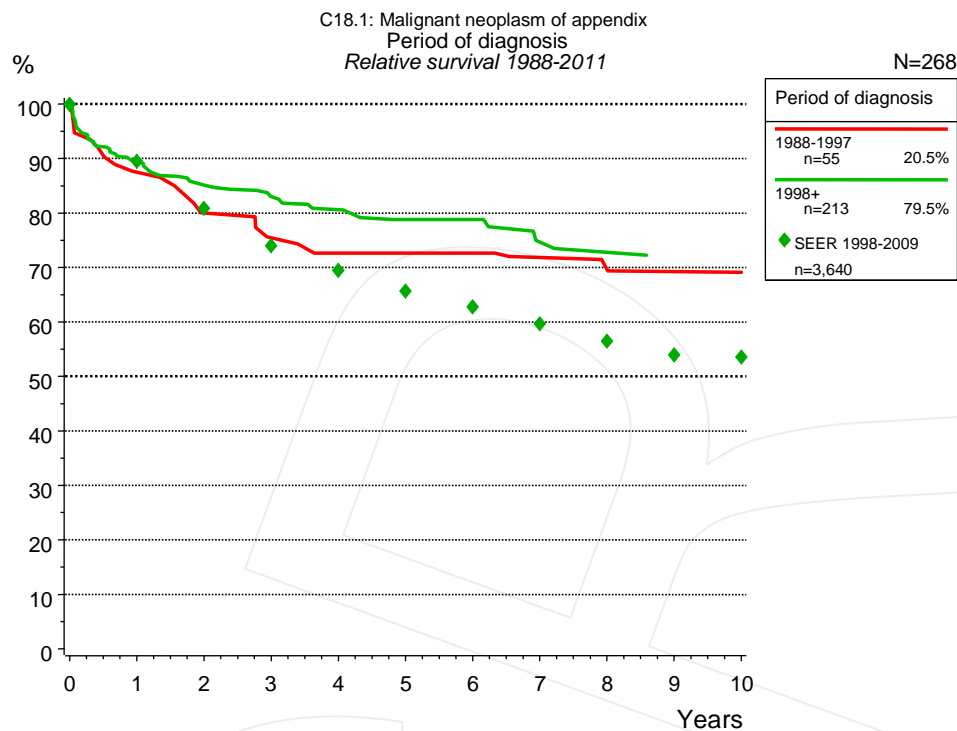


Figure 1a. Relative survival of patients with appendix cancer by period of diagnosis. Included in the evaluation are 268 cases diagnosed between 1988 and 2011.

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			
	1988-1997 n=55		1998+ n=213	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	85.5	87.5	87.6	89.4
2	76.4	80.0	82.9	85.1
3	70.9	75.4	78.6	83.0
4	67.3	72.6	75.8	80.6
5	67.3	72.6	72.4	78.8
6	67.3	72.6	72.4	78.8
7	63.5	71.8	66.6	74.6
8	61.7	69.5	65.1	72.8
9	59.8	69.2	62.7	71.7
10	59.8	69.1	62.7	70.3

Table 1b. Observed (obs.) and relative (rel.) survival of patients with appendix cancer by period of diagnosis for period 1988-2011 (N=268).

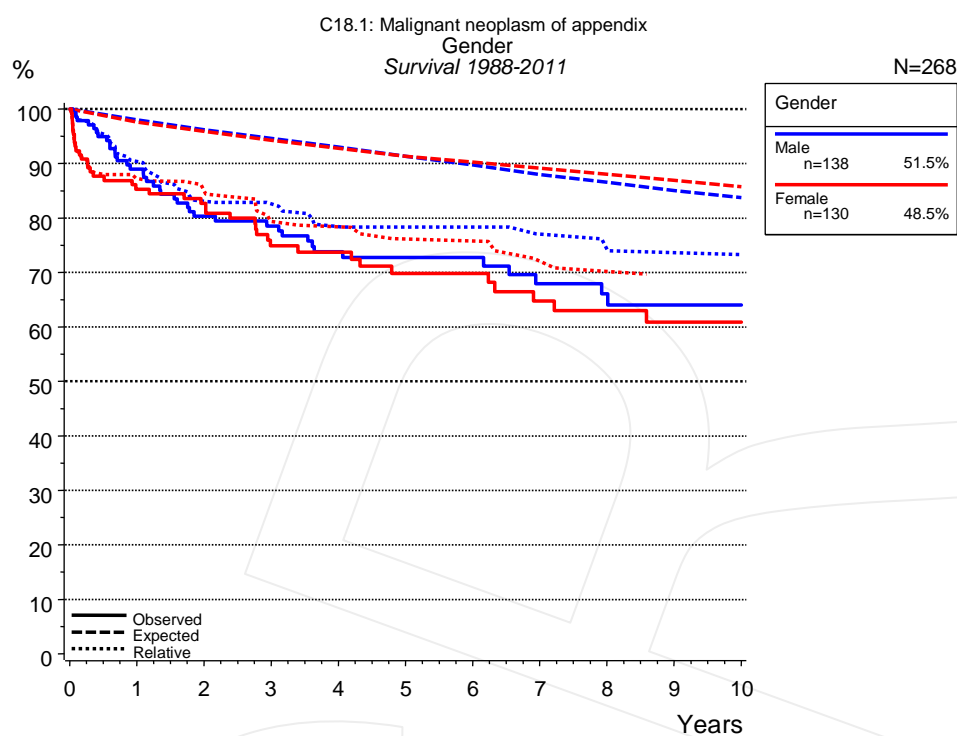


Figure 2a. Survival of patients with appendix cancer by gender. Included in the evaluation are 268 cases diagnosed between 1988 and 2011.

Years	Gender			
	Male n=138		Female n=130	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	89.0	90.4	85.3	87.3
2	80.3	83.1	82.7	85.0
3	78.5	82.6	74.8	79.4
4	73.8	78.4	73.7	78.4
5	72.7	78.3	69.8	76.1
6	72.7	78.3	69.8	75.8
7	67.9	77.1	64.8	72.0
8	66.0	74.1	63.0	70.2
9	64.0	73.6	60.9	69.5
10	64.0	73.3	60.9	69.1

Table 2b. Observed (obs.) and relative (rel.) survival of patients with appendix cancer by gender for period 1988-2011 (N=268).

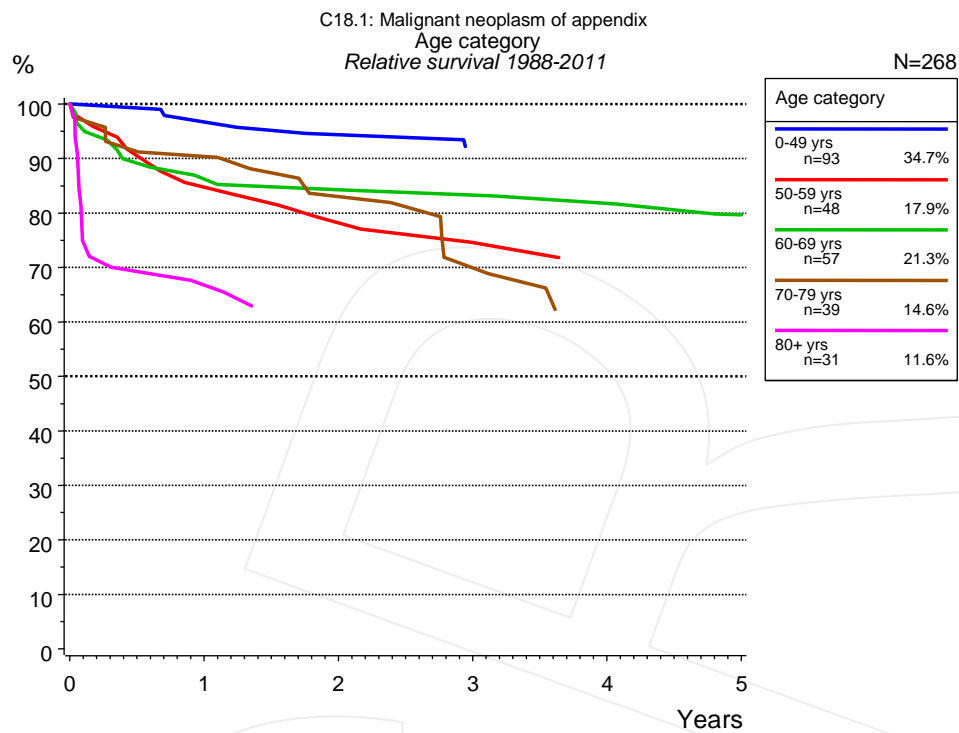


Figure 3a. Relative survival of patients with appendix cancer by age category. Included in the evaluation are 268 cases diagnosed between 1988 and 2011.

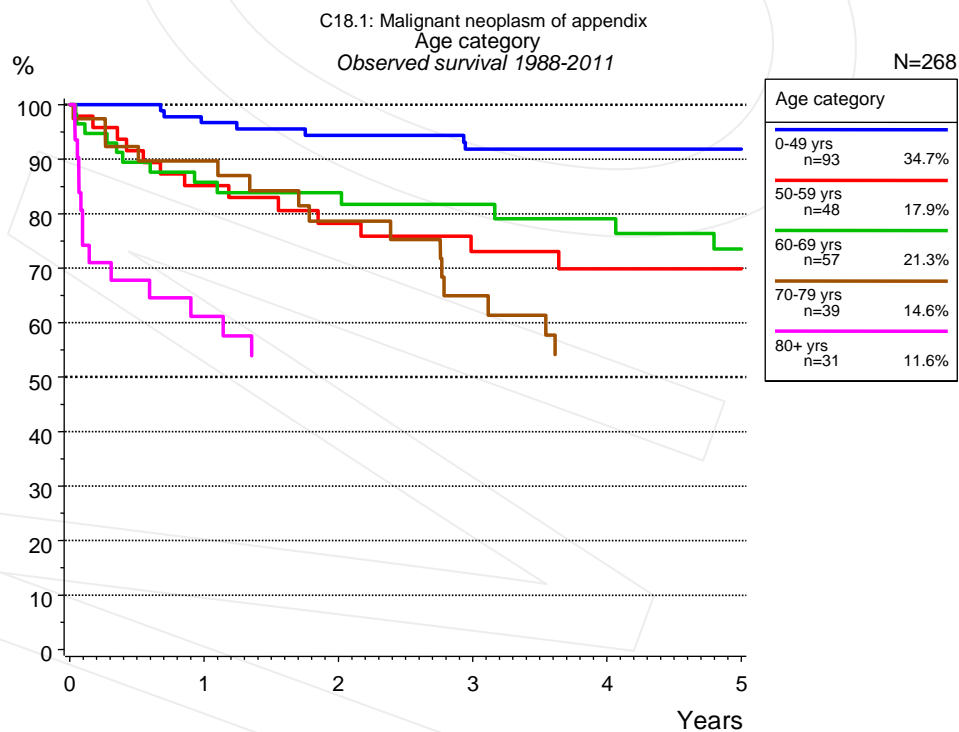


Figure 3b. Observed survival of patients with appendix cancer by age category. Included in the evaluation are 268 cases diagnosed between 1988 and 2011.

Years	Age category									
	0-49 yrs n=93		50-59 yrs n=48		60-69 yrs n=57		70-79 yrs n=39		80+ yrs n=31	
	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
1	96.7	96.7	85.1	84.7	85.7	86.2	89.7	90.4	61.1	66.8
2	94.4	94.3	78.2	78.2	83.8	84.2	78.6	83.0		
3			73.0	74.6	81.7	83.3	64.9	69.9		
4			69.9	71.4	79.1	81.7	54.1	62.3		
5			69.9	70.2	73.5	79.6	54.1	62.3		

Table 3c. Observed (obs.) and relative (rel.) survival of patients with appendix cancer by age category for period 1988-2011 (N=268).

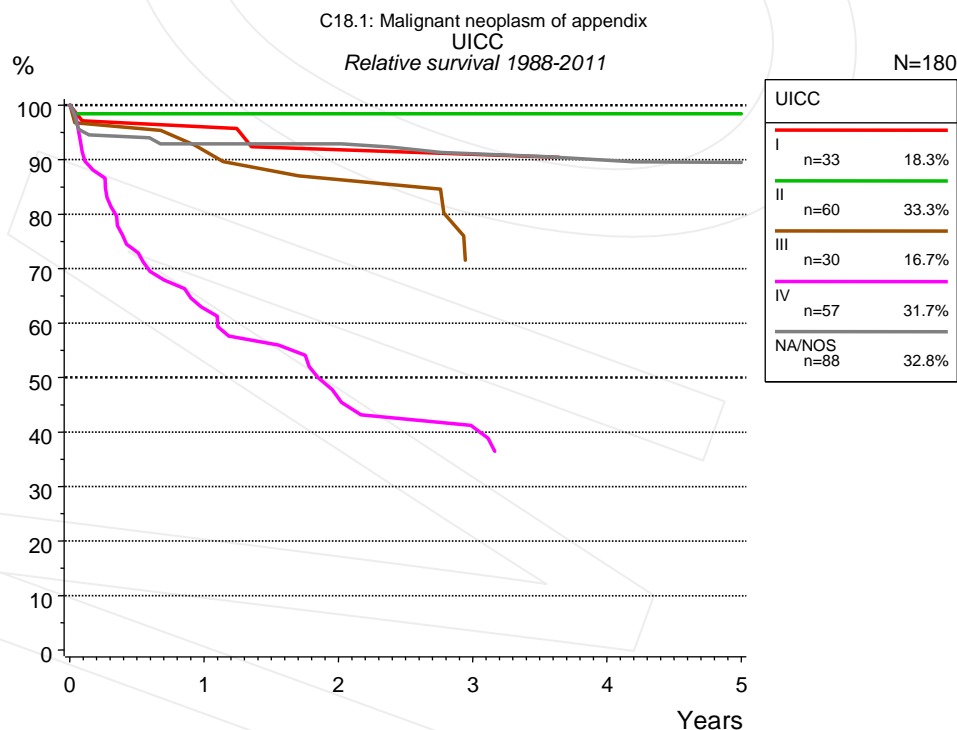


Figure 4a. Relative survival of patients with appendix cancer by UICC. For 198 of 268 cases diagnosed between 1988 and 2011 valid data could be obtained for this item. For a total of 180 cases an evaluable classification was established. The grey line represents the subgroup of 88 patients with missing values regarding UICC (32.8% of 268 patients, the percent values of all other categories are related to n=180).

Years	UICC									
	I		II		III		IV		NA/NOS	
	n=33		n=60		n=30		n=57		n=88	
	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
1	97.0	96.0	98.3	98.4	90.0	91.7	61.4	62.6	91.9	92.9
2	90.2	91.8	94.5	98.4	82.9	86.3	45.9	46.2	91.9	92.9
3	90.2	91.0	94.5	98.4	66.3	71.3	39.0	41.0	88.1	91.1
4	85.4	90.1	91.9	98.4	66.3	68.3			86.7	89.9
5	85.4	89.3	91.9	98.4					85.1	89.5

Table 4b. Observed (obs.) and relative (rel.) survival of patients with appendix cancer by UICC for period 1988-2011 (N=180).

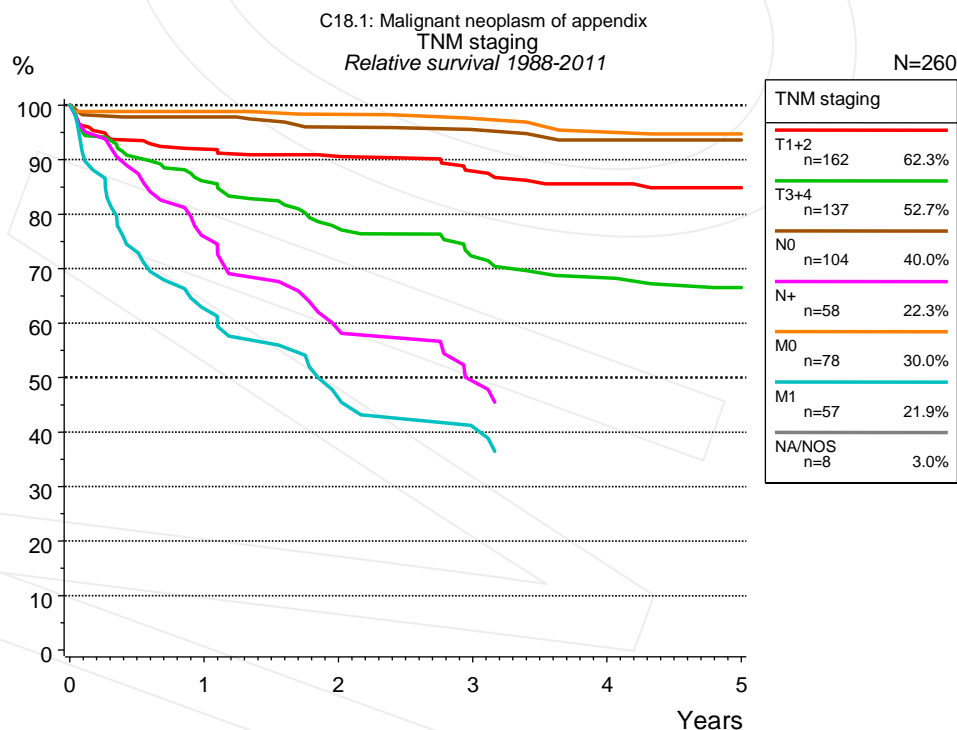


Figure 4c. Relative survival of patients with appendix cancer by TNM staging. For 268 of 268 cases diagnosed between 1988 and 2011 valid data could be obtained for this item. For a total of 260 cases an evaluable classification was established. The accumulated percentage exceeds the 100% value because patients are potentially considered in more than one subgroup. The grey line represents the subgroup of 8 patients with missing values regarding TNM staging (3.0% of 268

patients, the percent values of all other categories are related to n=260). Subgroups with sample size <15 are dropped from the chart.

Years	TNM staging													
	T1+2 n=162		T3+4 n=137		N0 n=104		N+ n=58		M0 n=78		M1 n=57		NA/NOS n=8	
	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	90.6	92.0	83.8	86.0	97.1	97.8	74.1	75.9	97.4	98.8	61.4	62.6	100.0	87.5
2	88.0	90.6	74.1	77.4	92.9	96.0	57.2	58.8	94.5	98.3	45.9	46.2		
3	83.6	87.9	67.2	72.3	90.3	95.5	46.7	49.3	91.2	97.6	39.0	41.0		
4	80.5	85.6	62.9	68.3	87.3	93.6	42.3	44.0	87.5	95.1				
5	78.8	84.8	59.1	66.6	87.3	93.6			85.4	94.7				

Table 4d. Observed (obs.) and relative (rel.) survival of patients with appendix cancer by TNM staging for period 1988-2011 (N=596).

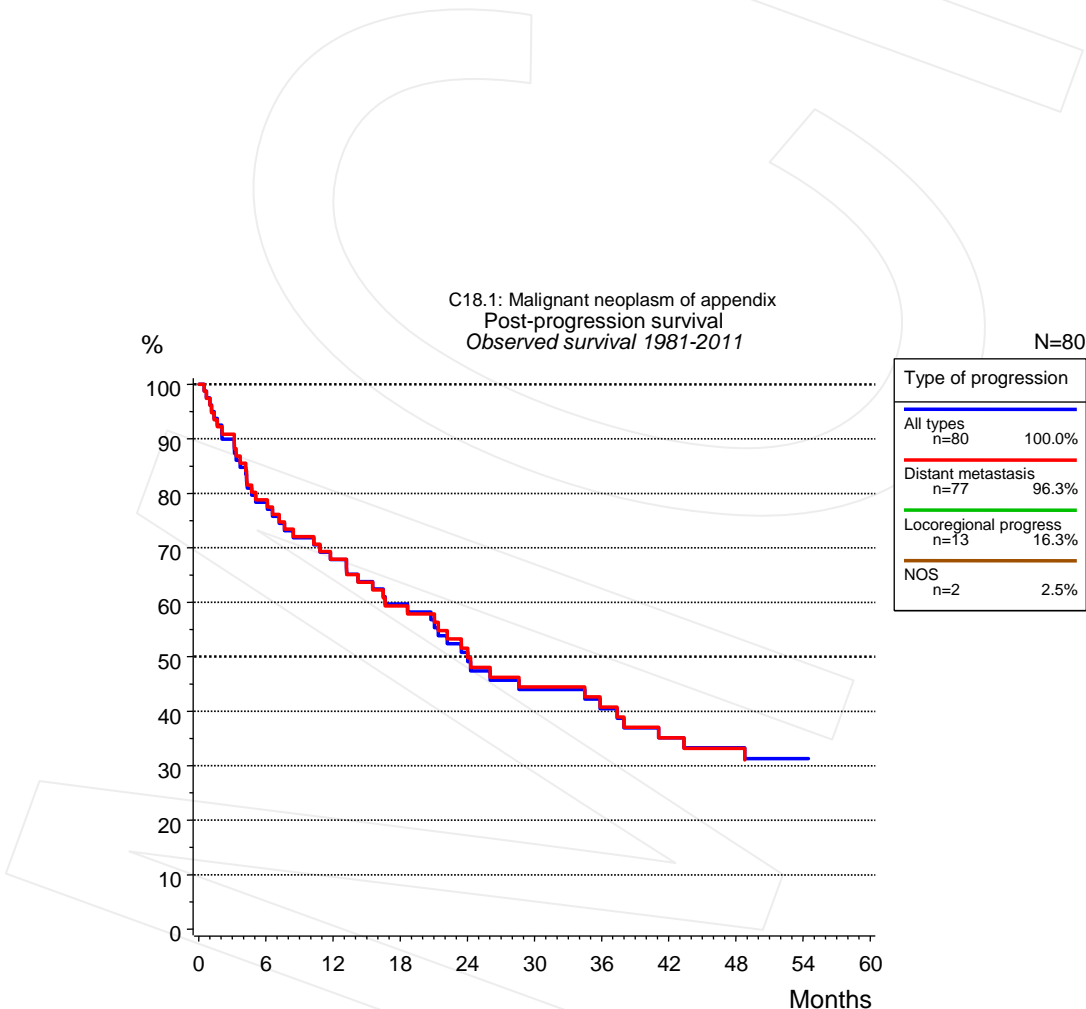


Figure 5a. Observed post-progression survival of 80 patients with appendix cancer diagnosed between 1981 and 2011 (incl. M1). These 80 patients with documented progression events during their course of disease represent 29.4% of the totally 272 evaluated cases. Patients with cancer relapse documented via death certificates only were excluded (n=12, 4.4%). 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. Subgroups with sample size <15 are dropped from the chart.

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=80 %	Distant metastasis n=77 %	Locoregional progress n=13 %	NOS n=2 %
0	100.0	100.0	100.0	100.0
12	67.8	67.9		
24	50.8	51.6		
36	40.5	40.8		
48	33.3	33.2		

Table 5b. Observed post-progression survival of patients with appendix cancer for period 1981-2011 (N=80).

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

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