

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

C18-C20: Colorectal cancer

Year of diagnosis	1978-1987	1988-1997	1998-2011
Patients	2,717	10,055	36,626
Diseases	2,754	10,225	37,474
Creation date	04/01/2013		
Export date	01/03/2013		
Population	4.5 m		



http://www.tumorregister-muenchen.de/en/facts/surv/surv_C1820E.pdf

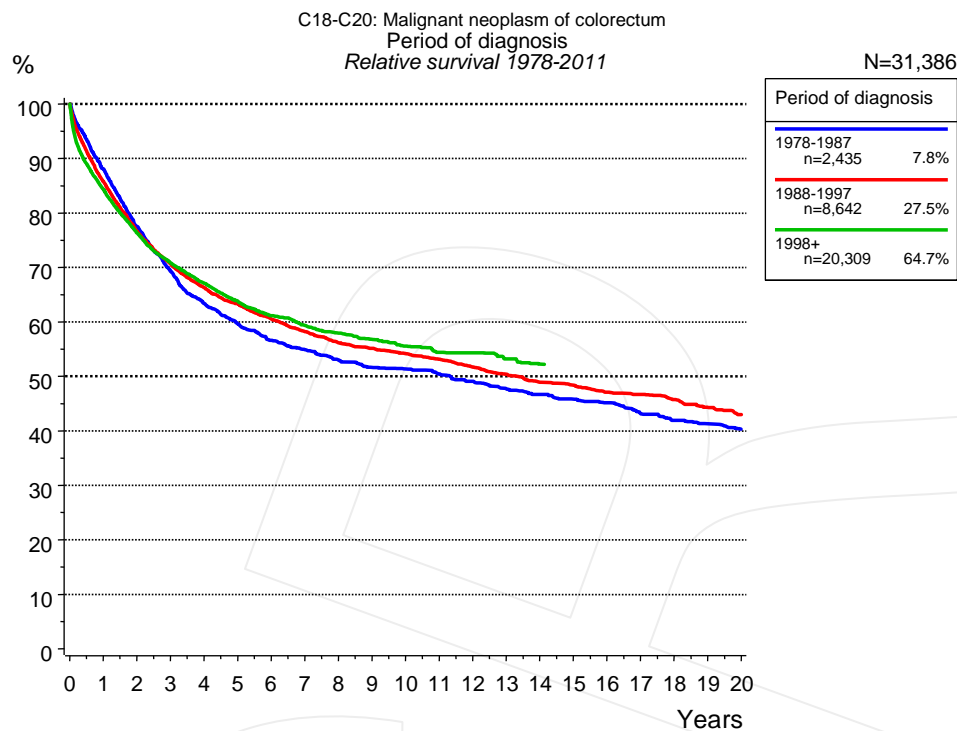


Figure 1a. Relative survival of patients with colorectal cancer by period of diagnosis. Included in the evaluation are 31,386 cases diagnosed between 1978 and 2011.

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=2,435		1988-1997 n=8,642		1998+ n=20,309	
	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0	100.0	100.0
1	85.2	88.1	82.6	85.7	81.1	84.3
2	72.7	77.5	71.3	76.6	71.0	76.3
3	62.9	69.3	63.5	70.6	63.7	70.8
4	55.8	63.4	57.5	66.3	58.3	67.1
5	50.8	59.6	53.1	63.3	53.6	63.8
6	46.6	56.6	49.0	60.5	49.6	61.1
7	43.7	54.9	45.4	58.2	46.5	59.4
8	40.8	53.0	42.3	56.2	43.9	58.0
9	38.4	51.6	40.1	55.1	41.5	56.8
10	36.9	51.3	38.0	54.2	39.1	55.6
11	34.9	50.4	35.9	53.1	36.9	54.4
12	32.8	49.1	33.7	51.7	35.5	54.3
13	30.6	47.7	31.7	50.4	33.3	53.2
14	29.0	46.7	29.6	48.9	31.3	52.2
15	27.4	45.8	28.3	48.4		
16	26.1	45.2	26.5	47.1		
17	23.9	43.1	25.4	46.7		
18	22.4	41.9	23.9	45.8		
19	21.3	41.3	22.2	44.3		
20	20.0	40.4	20.7	43.0		

Table 1b. Observed (obs.) and relative (rel.) survival of patients with colorectal cancer by period of diagnosis for period 1978-2011 (N=31,386).

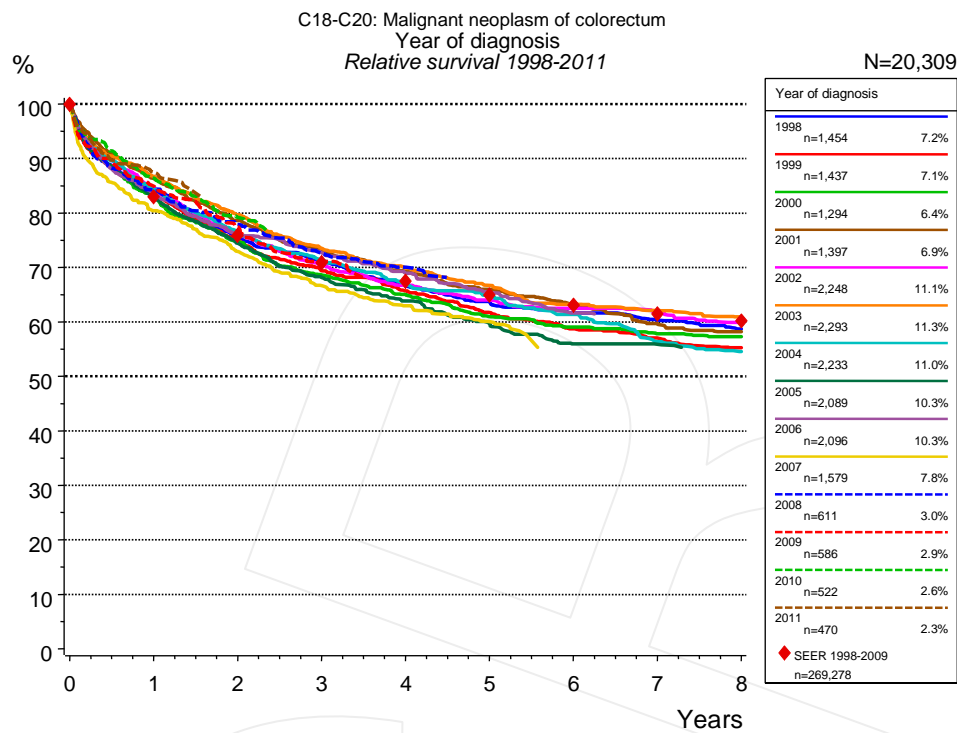


Figure 1c. Relative survival of patients with colorectal cancer by year of diagnosis. Included in the evaluation are 20,309 cases diagnosed between 1998 and 2011.

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 red diamonds in order to facilitate comparisons between MCR and SEER.

		Year of diagnosis													
		1998 n=1,454		1999 n=1,437		2000 n=1,294		2001 n=1,397		2002 n=2,248		2003 n=2,293		2004 n=2,233	
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		81.2	84.5	80.3	83.6	79.6	82.9	83.1	86.3	81.2	84.5	83.6	86.7	81.2	84.3
2		69.9	75.5	69.4	74.8	69.4	74.8	73.2	78.6	70.5	76.0	74.3	79.6	71.0	76.3
3		63.6	71.0	62.2	69.4	61.6	68.6	65.7	73.0	63.1	70.4	66.4	73.5	64.2	71.3
4		57.6	66.6	56.8	65.7	56.4	65.0	60.5	69.3	57.8	66.7	61.1	69.9	58.3	67.0
5		53.2	63.7	51.4	61.7	51.2	61.0	55.8	66.0	53.5	64.0	56.3	66.7	54.5	64.9
6		49.7	61.7	47.3	58.7	48.0	59.1	51.7	63.1	50.7	62.5	51.6	63.2	49.9	61.4
7		47.0	60.4	44.4	57.0	45.4	57.9	47.4	59.7	48.1	61.6	49.0	62.1	43.9	56.4
8		44.2	58.7	41.7	55.3	43.8	57.3	44.9	58.2	45.1	59.9	46.2	60.9	40.8	54.6

		Year of diagnosis													
cont'd		2005 n=2,089		2006 n=2,096		2007 n=1,579		2008 n=611		2009 n=586		2010 n=522		2011 n=470	
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		80.0	83.1	80.8	83.7	77.4	80.4	80.9	84.3	81.9	84.9	83.3	86.4	84.2	87.5
2		69.4	74.4	71.1	75.8	67.8	72.9	72.2	77.9	72.4	77.5	73.6	79.2		
3		61.7	68.1	66.1	72.7	59.8	66.6	65.0	72.6	64.2	71.1				
4		55.8	63.8	60.6	69.0	54.6	62.9	60.6	70.0						
5		50.6	59.7	55.8	65.5	50.2	60.0								
6		45.5	55.9	50.7	61.7										
7		43.9	55.9												

Table 1d. Observed (obs.) and relative (rel.) survival of patients with colorectal cancer by year of diagnosis for period 1998-2011 (N=20,309).

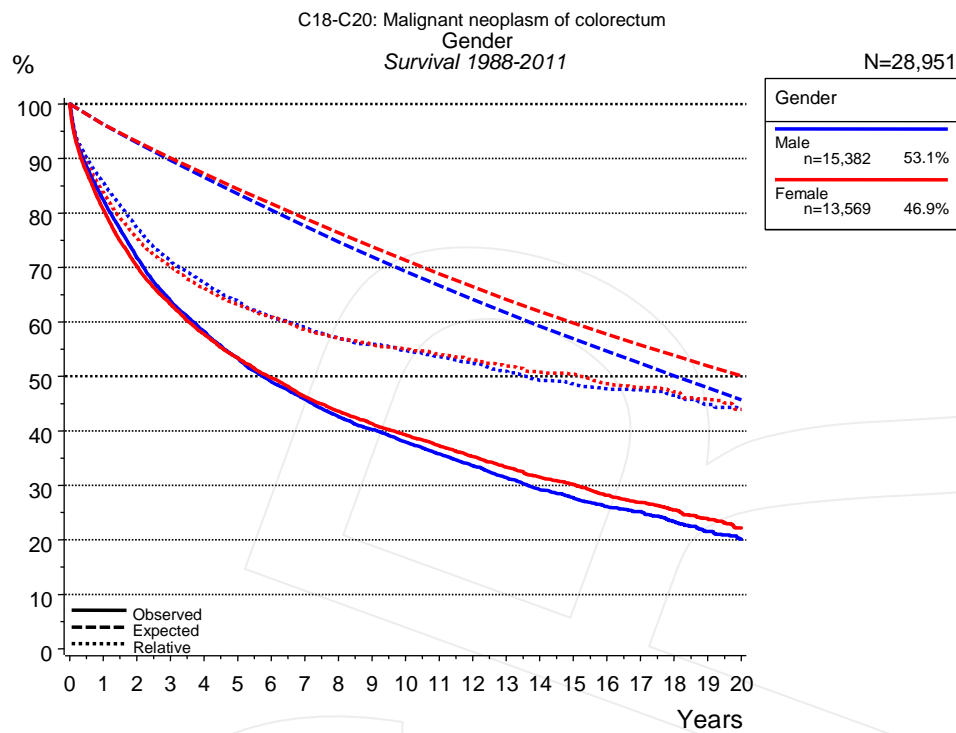


Figure 2a. Survival of patients with colorectal cancer by gender. Included in the evaluation are 28,951 cases diagnosed between 1988 and 2011.

Years	Gender			
	Male n=15,382		Female n=13,569	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	82.4	85.6	80.6	83.7
2	71.8	77.2	70.2	75.4
3	63.9	71.2	63.2	70.1
4	58.2	67.2	57.7	66.2
5	53.4	63.9	53.4	63.3
6	49.0	60.9	49.7	60.9
7	45.8	59.0	46.3	58.6
8	42.6	57.0	43.6	57.1
9	40.2	55.9	41.3	56.0
10	37.9	54.8	39.2	55.0
11	35.8	53.6	37.3	54.1
12	33.6	52.4	35.3	53.1
13	31.4	50.9	33.3	51.9
14	29.2	49.3	31.4	50.8
15	27.7	48.6	30.2	50.4
16	26.2	47.7	28.2	48.7
17	25.2	47.6	26.8	47.9
18	23.4	46.6	25.5	47.2
19	21.6	44.8	23.8	45.8
20	20.1	43.9	22.2	44.0

Table 2b. Observed (obs.) and relative (rel.) survival of patients with colorectal cancer by gender for period 1988-2011 (N=28,951).

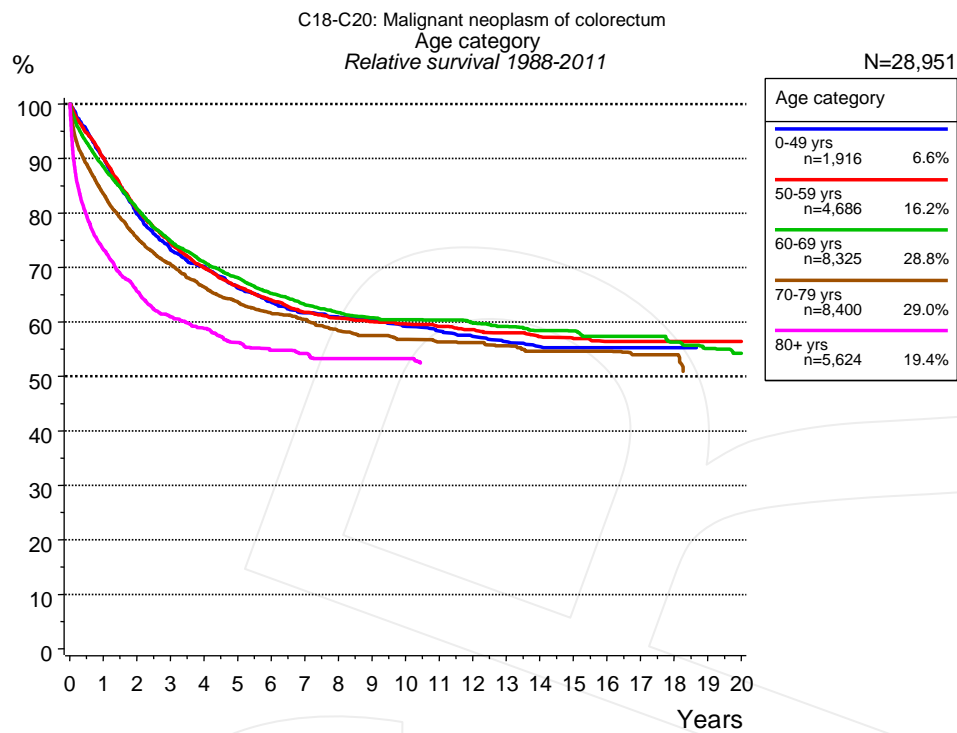


Figure 3a. Relative survival of patients with colorectal cancer by age category. Included in the evaluation are 28,951 cases diagnosed between 1988 and 2011.

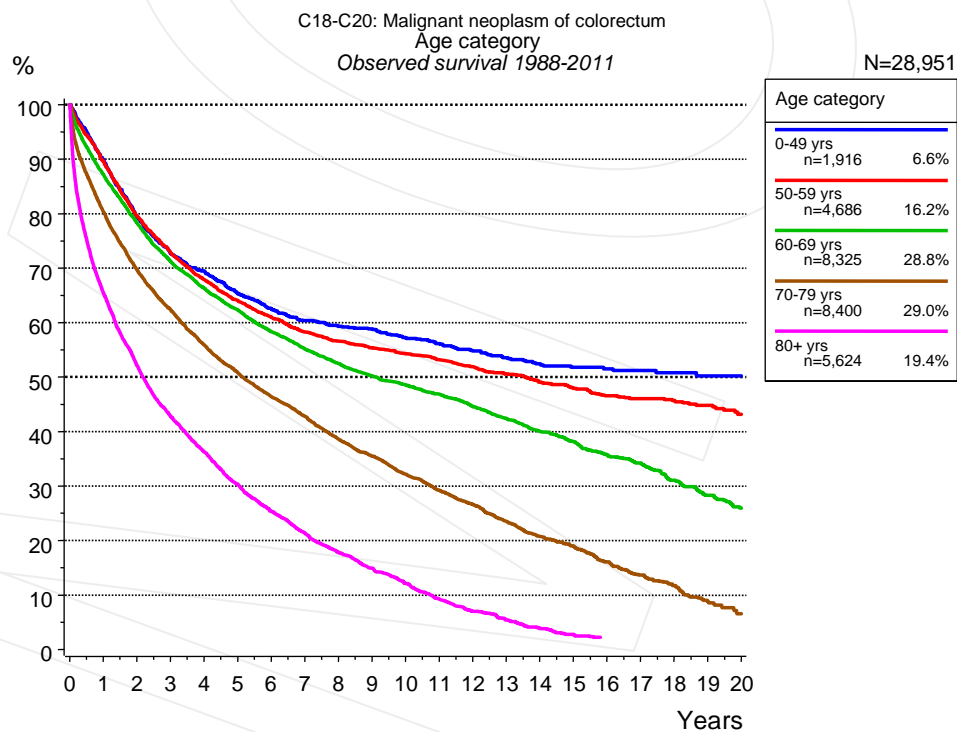


Figure 3b. Observed survival of patients with colorectal cancer by age category. Included in the evaluation are 28,951 cases diagnosed between 1988 and 2011.

Years	Age category									
	0-49 yrs n=1,916		50-59 yrs n=4,686		60-69 yrs n=8,325		70-79 yrs n=8,400		80+ yrs n=5,624	
	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	89.9	90.1	89.6	90.2	87.2	88.5	80.4	83.5	65.4	73.3
2	79.4	79.8	79.5	80.7	78.3	80.8	69.7	75.4	52.1	65.6
3	72.7	73.2	72.9	74.5	71.3	74.9	62.4	70.6	42.9	60.9
4	69.5	70.2	67.9	69.9	66.3	71.0	55.9	66.4	36.3	58.8
5	65.3	66.2	64.0	66.6	62.3	68.1	50.9	63.7	30.4	56.2
6	62.5	63.6	60.9	64.0	58.3	65.3	46.4	61.6	25.4	54.8
7	60.3	61.6	58.2	61.8	55.1	63.2	42.8	60.4	21.3	54.2
8	59.3	60.8	56.6	60.7	52.5	61.7	38.6	58.4	17.9	53.3
9	58.8	60.5	55.4	60.1	50.2	60.8	35.4	57.5	14.9	53.3
10	57.2	59.2	54.2	59.6	48.5	60.4	32.2	56.8	12.1	53.3
11	56.1	58.4	53.2	59.2	46.9	60.3	29.2	56.3		
12	54.8	57.4	51.9	58.6	44.7	59.9	26.6	56.2		
13	53.6	56.3	50.6	58.0	42.4	59.2	23.5	55.6		
14	52.4	55.5	49.1	57.3	40.0	58.4	20.7	54.6		
15	51.8	55.3	47.9	57.0	38.1	58.4	19.0	54.6		
16	51.5	55.2	46.6	56.5	35.8	57.4	16.1	54.6		
17	51.2	55.2	46.0	56.5	34.2	57.4	13.7	54.0		
18	50.8	55.2	45.7	56.5	31.0	56.3	11.7	54.0		
19			44.8	56.5	28.3	55.1				
20			43.2	56.5	25.9	54.2				

Table 3c. Observed (obs.) and relative (rel.) survival of patients with colorectal cancer by age category for period 1988-2011 (N=28,951).

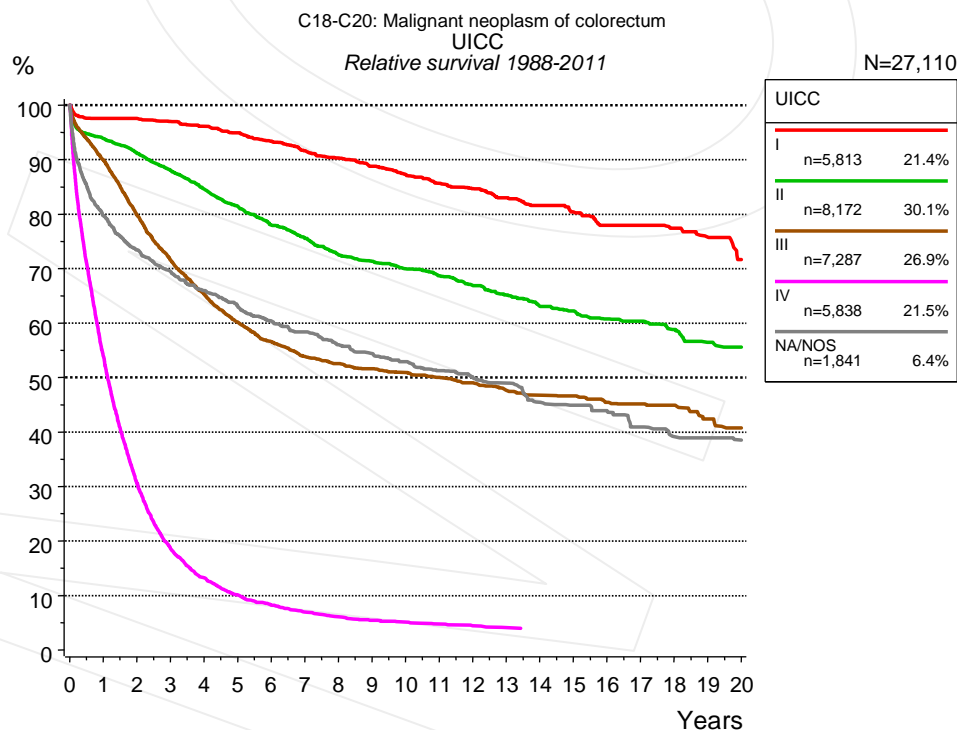


Figure 4a. Relative survival of patients with colorectal cancer by UICC. For 27,354 of 28,951 cases diagnosed between 1988 and 2011 valid data could be obtained for this item. For a total of 27,110 cases an evaluable classification was established. The grey line represents the subgroup of 1,841 patients with missing values regarding UICC (6.4% of 28,951 patients, the percent values of all other categories are related to n=27,110).

Years	UICC									
	I n=5,813		II n=8,172		III n=7,287		IV n=5,838		NA/NOS n=1,841	
	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	94.5	97.5	90.0	93.9	86.6	89.9	52.0	53.8	75.9	79.7
2	91.3	97.5	84.1	91.2	74.3	79.8	28.8	30.6	67.2	73.4
3	87.8	97.0	78.2	88.1	64.5	71.5	17.1	18.6	61.5	69.4
4	84.0	96.1	72.4	84.6	57.0	65.3	11.9	13.2	56.5	65.9
5	80.3	94.9	67.1	81.5	50.9	60.2	8.9	10.1	52.4	63.1
6	76.2	93.4	61.9	78.0	46.3	56.6	7.0	8.2	48.6	60.4
7	72.1	91.6	57.7	75.5	42.7	53.9	5.8	6.9	45.8	58.4
8	68.7	90.3	53.4	72.5	40.3	52.6	5.0	6.1	42.3	56.0
9	65.1	88.8	50.5	71.4	38.3	51.6	4.3	5.5	39.7	54.4
10	61.7	87.3	47.6	70.0	36.5	50.9	4.0	5.1	37.3	52.9
11	58.6	85.6	45.0	68.7	34.7	50.0	3.6	4.8	34.7	51.2
12	55.6	84.7	42.2	66.9	32.9	49.0	3.2	4.5	32.6	50.0
13	52.5	83.0	39.6	65.2	30.8	47.6	2.9	4.1	30.8	49.0
14	49.8	81.6	36.8	63.1	29.3	46.7	2.8	4.0	27.5	45.5
15	47.2	80.4	35.1	62.3	28.2	46.6	2.8	3.9	26.1	44.9
16	44.2	77.9	32.9	60.8	26.5	45.4			24.6	43.9
17	42.9	77.9	31.5	60.4	25.5	45.2			22.1	40.9
18	40.8	77.4	29.4	58.8	24.5	44.9			20.1	39.1
19	38.4	75.7	27.0	56.5	22.2	42.4			19.4	38.9
20	35.0	71.6	25.6	55.6	20.7	40.7			18.2	38.5

Table 4b. Observed (obs.) and relative (rel.) survival of patients with colorectal cancer by UICC for period 1988-2011 (N=27,110).

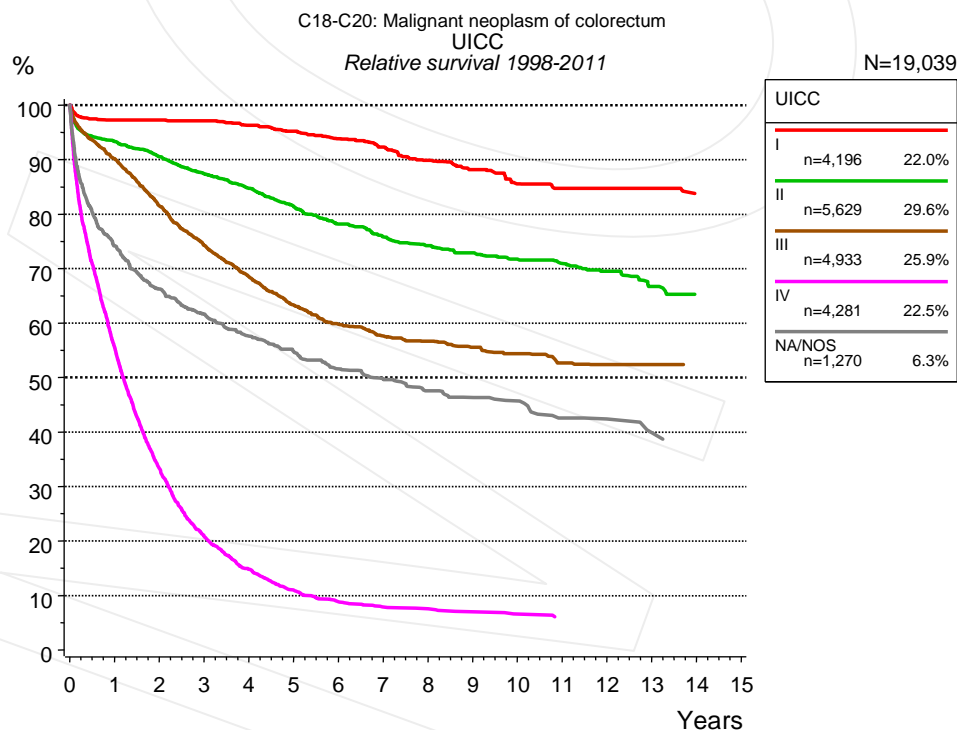


Figure 4c. Relative survival of patients with colorectal cancer by UICC. For 19,231 of 20,309 cases diagnosed between 1998 and 2011 valid data could be obtained for this item. For a total of 19,039 cases an evaluable classification was established. The grey line represents the subgroup of 1,270 patients with missing values regarding UICC (6.3% of 20,309 patients, the percent values of all other categories are related to n=19,039).

Years	UICC									
	I		II		III		IV		NA/NOS	
	n=4,196		n=5,629		n=4,933		n=4,281		n=1,270	
	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	94.3	97.3	89.4	93.3	86.9	90.1	53.6	55.5	70.4	74.2
2	91.2	97.3	83.4	90.5	75.9	81.5	31.4	33.3	60.4	66.2
3	88.0	97.1	77.6	87.4	67.0	74.3	19.2	20.8	54.5	61.6
4	84.3	96.3	72.4	84.8	59.8	68.5	13.4	14.8	49.4	57.6
5	80.7	95.2	67.1	81.5	53.5	63.3	9.7	11.0	45.7	54.8
6	76.6	93.9	62.0	78.1	48.9	59.8	7.6	8.8	42.0	51.6
7	72.7	92.3	57.9	75.8	45.7	57.6	6.6	7.9	39.6	49.8
8	68.1	89.8	54.7	74.2	43.6	56.7	6.3	7.6	36.7	47.6
9	64.4	88.2	51.6	72.9	41.2	55.6	5.8	7.0	35.0	46.3
10	60.2	85.6	48.8	71.7	39.2	54.4	5.2	6.6	33.6	45.7
11	57.7	84.8	46.4	70.9	36.5	52.7	4.7	6.0	30.2	42.5
12	56.3	84.8	43.9	69.5	35.3	52.3	4.7	5.6	29.0	42.4
13	53.5	84.8	40.2	66.7	33.9	52.3	4.7	5.1	27.0	39.9
14					32.3	50.9				

Table 4d. Observed (obs.) and relative (rel.) survival of patients with colorectal cancer by UICC for period 1998-2011 (N=19,039).

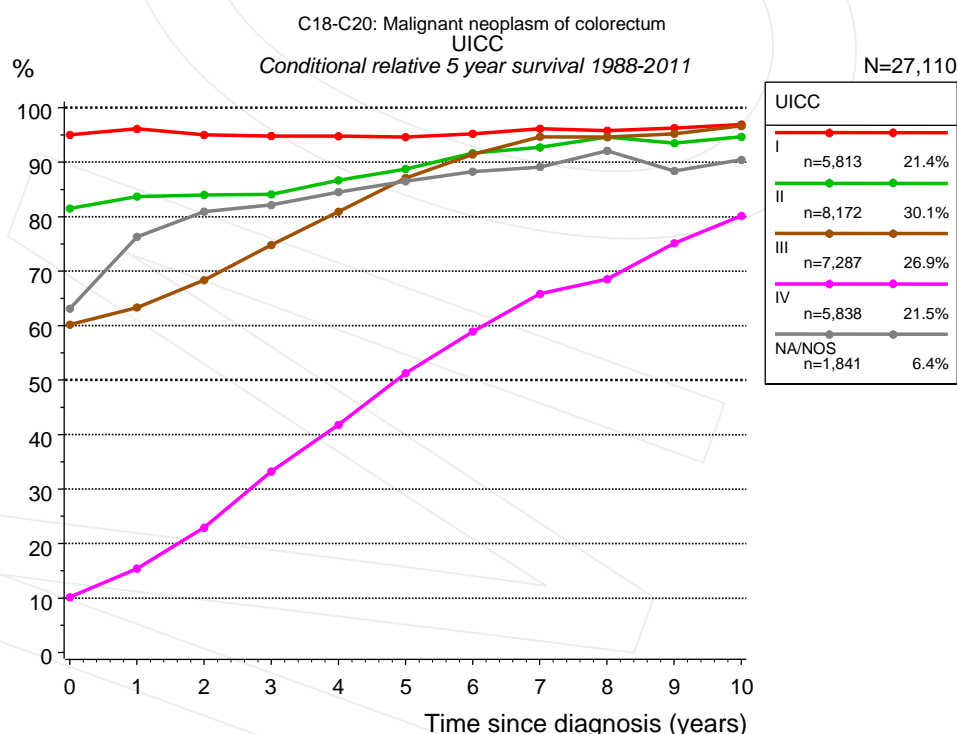


Figure 4e. Conditional relative 5-year survival of patients with colorectal cancer by UICC. For 27,354 of 28,951 cases diagnosed between 1988 and 2011 valid data could be obtained for this item. For a total of 27,110 cases an evaluable classification was established. The grey line represents the subgroup of 1,841 patients with missing values regarding UICC (6.4% of 28,951 patients, the percent values of all other categories are related to n=27,110).

Years	UICC									
	I		II		III		IV		NA/NOS	
	n	Cond. surv. % 5 yrs	n	Cond. surv. % 5 yrs	n	Cond. surv. % 5 yrs	n	Cond. surv. % 5 yrs	n	Cond. surv. % 5 yrs
0	5,813	95.0	8,172	81.5	7,287	60.2	5,838	10.1	1,841	63.1
1	5,238	96.1	7,011	83.7	6,005	63.3	2,817	15.4	1,341	76.3
2	4,687	95.0	6,114	84.0	4,752	68.3	1,415	22.9	1,134	80.9
3	4,114	94.8	5,222	84.1	3,770	74.8	735	33.2	987	82.1
4	3,537	94.8	4,394	86.7	2,967	80.9	436	41.8	856	84.5
5	2,993	94.6	3,662	88.8	2,310	87.1	275	51.2	744	86.5
6	2,522	95.2	3,008	91.7	1,864	91.4	189	58.9	647	88.3
7	2,178	96.1	2,563	92.7	1,571	94.7	132	65.8	559	89.1
8	1,919	95.8	2,175	94.6	1,348	94.6	95	68.5	474	92.1
9	1,624	96.2	1,882	93.5	1,157	95.2	74	75.1	399	88.4
10	1,358	96.9	1,570	94.6	974	96.6	59	80.1	339	90.4

Table 4f. Conditional relative 5-year survival of patients with colorectal cancer by UICC for period 1988-2011 (N=27,110).

Conditional relative survival rates refer to the relative survival probability, in this case for 5 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 UICC="I", who are alive at least 3 years after cancer diagnosis, the conditional relative 5-year survival rate is 94.8% (n=4,114).

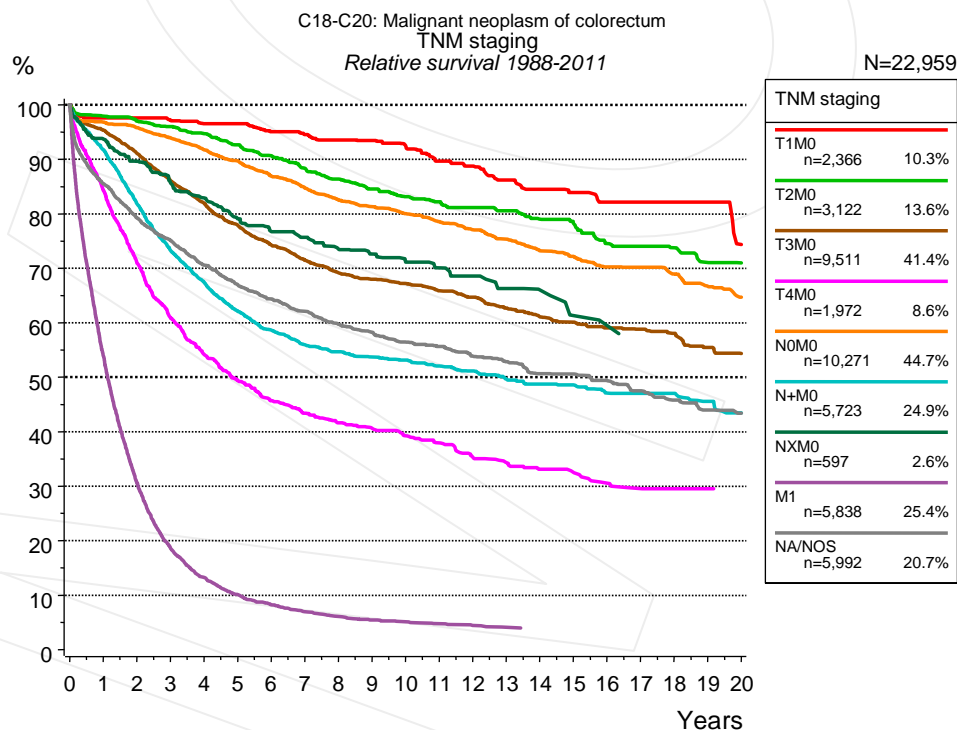


Figure 4g. Relative survival of patients with colorectal cancer by TNM staging. For 27,354 of 28,951 cases diagnosed between 1988 and 2011 valid data could be obtained for this item. For a total of 22,959 cases an evaluable classification was established. The accumulated percentage exceeds the 100% value because patients are potentially considered in more than one subgroup. The grey line represents the subgroup of 5,992 patients with missing values regarding TNM

staging (20.7% of 28,951 patients, the percent values of all other categories are related to n=22,959).

Years	TNM staging													
	T1M0 n=2,366		T2M0 n=3,122		T3M0 n=9,511		T4M0 n=1,972		N0M0 n=10,271		N+M0 n=5,723		NXM0 n=597	
	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	95.1	97.6	94.8	97.9	91.9	95.4	80.6	84.3	93.4	96.8	88.6	91.8	90.5	93.7
2	92.2	97.6	90.9	97.0	84.7	91.1	65.3	70.9	89.2	95.8	76.5	81.9	83.9	89.6
3	89.1	97.2	87.1	96.0	77.4	86.1	54.0	60.8	84.5	94.0	66.3	73.3	77.9	85.7
4	85.8	96.6	83.1	94.7	71.1	81.9	46.3	54.1	79.7	91.8	59.2	67.4	73.3	82.9
5	83.4	96.5	78.6	92.6	65.3	78.0	40.9	49.4	75.2	89.8	52.9	62.2	67.8	79.1
6	79.3	95.1	74.3	90.7	60.0	74.3	36.5	45.7	70.3	86.9	48.4	58.6	63.9	76.7
7	76.2	94.6	70.0	88.4	55.7	71.5	33.5	43.4	66.1	84.7	44.8	56.0	61.5	75.7
8	73.5	93.5	66.1	86.4	52.1	69.2	31.0	41.6	62.1	82.5	42.3	54.6	57.8	73.5
9	70.6	93.4	62.6	84.6	49.4	68.0	29.2	40.6	59.0	81.3	40.3	53.7	55.1	72.6
10	67.3	92.5	59.4	83.2	47.0	67.2	27.3	39.3	55.9	80.0	38.7	53.2	51.9	71.1
11	63.1	89.6	56.9	82.2	44.4	65.9	25.6	37.9	52.9	78.6	36.6	52.1	49.5	70.1
12	60.3	88.7	54.2	81.1	42.1	64.7	23.1	35.2	50.0	77.0	34.9	51.2	47.5	68.6
13	56.7	86.2	51.7	80.6	39.3	62.7	21.7	34.3	47.2	75.4	32.6	49.6	43.6	66.3
14	53.9	84.5	48.7	79.0	36.9	61.1	20.2	33.1	44.1	73.2	31.1	48.8	41.5	66.0
15	51.3	83.9	46.5	78.2	35.0	60.1	19.4	32.5	41.9	72.2	29.7	48.6	37.2	61.3
16	48.6	82.2	42.7	74.6	33.2	59.1	17.7	30.6	39.4	70.3	28.0	47.1	35.4	59.5
17	48.2	82.2	41.3	74.1	31.9	58.9	16.7	29.6	38.1	70.2	27.1	47.0		
18	45.9	82.2	39.3	73.8	30.2	58.1	16.3	29.5	35.8	68.9	26.1	47.0		
19	43.4	82.2	36.6	71.1	27.7	55.5	16.3	29.5	33.3	66.7	24.2	45.6		
20	37.8	74.4	35.1	71.0	26.2	54.4			31.1	64.7	22.5	43.4		

Years	TNM staging			
	M1 n=5,838		NA/NOS n=5,992	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	52.0	53.8	81.6	85.5
2	28.8	30.6	72.6	79.2
3	17.1	18.6	66.2	75.1
4	11.9	13.2	59.9	70.6
5	8.9	10.1	54.8	67.0
6	7.0	8.2	50.7	64.4
7	5.8	6.9	47.1	62.1
8	5.0	6.1	43.6	59.7
9	4.3	5.5	40.8	58.3
10	4.0	5.1	38.0	56.5
11	3.6	4.8	36.1	55.7
12	3.2	4.5	33.5	53.9
13	2.9	4.1	31.6	52.8
14	2.8	4.0	29.1	50.7
15	2.8	3.9	27.9	50.6
16			26.2	49.4
17			24.1	47.5
18			22.2	45.8
19			20.5	44.0
20			19.2	43.4

Table 4h. Observed (obs.) and relative (rel.) survival of patients with colorectal cancer by TNM staging for period 1988-2011 (N=39,400).

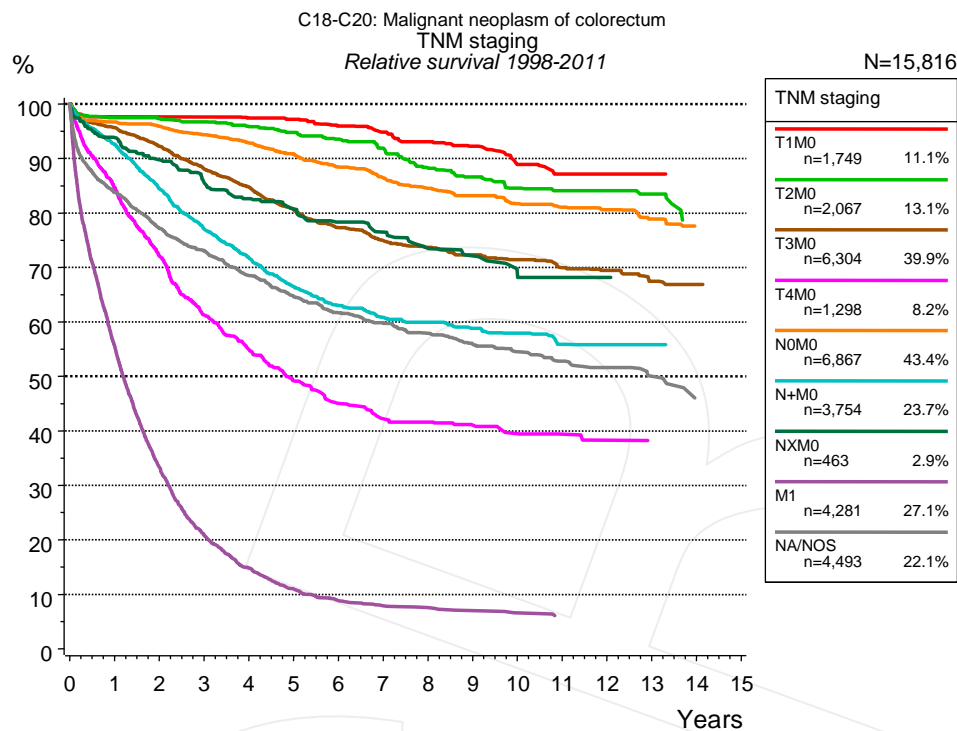


Figure 4i. Relative survival of patients with colorectal cancer by TNM staging. For 19,231 of 20,309 cases diagnosed between 1998 and 2011 valid data could be obtained for this item. For a total of 15,816 cases an evaluable classification was established. The accumulated percentage exceeds the 100% value because patients are potentially considered in more than one subgroup. The grey line represents the subgroup of 4,493 patients with missing values regarding TNM staging (22.1% of 20,309 patients, the percent values of all other categories are related to n=15,816).

		TNM staging													
		T1M0 n=1,749		T2M0 n=2,067		T3M0 n=6,304		T4M0 n=1,298		N0M0 n=6,867		N+M0 n=3,754		NXM0 n=463	
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		95.2	97.6	94.4	97.5	92.1	95.7	81.1	84.7	93.2	96.7	89.4	92.6	90.8	93.8
2		92.5	97.6	91.2	97.3	85.8	92.3	66.6	72.1	89.3	95.9	79.0	84.5	84.2	89.7
3		89.7	97.6	87.8	96.7	79.1	88.1	54.6	61.3	84.9	94.3	69.8	77.0	78.2	85.6
4		86.6	97.4	84.1	95.8	73.4	84.7	47.3	54.9	80.6	92.8	63.0	71.8	73.6	82.6
5		83.9	97.2	80.5	94.8	67.5	80.7	41.1	49.2	76.2	90.8	56.6	66.5	70.0	80.8
6		79.9	96.0	76.8	93.6	62.4	77.3	36.5	45.1	71.5	88.4	52.0	63.0	66.1	78.3
7		76.4	94.8	72.8	91.9	58.3	74.9	33.3	42.2	67.4	86.4	48.7	60.8	63.1	76.5
8		72.7	93.1	67.4	88.3	55.4	73.7	32.0	41.7	63.5	84.5	46.7	60.0	59.0	73.5
9		69.3	92.3	64.2	86.6	52.3	72.3	30.4	41.0	60.4	83.1	44.2	58.8	56.1	72.1
10		64.2	88.9	60.4	84.5	49.8	71.4	28.7	39.5	56.9	81.7	42.4	57.9	50.7	68.2
11		60.9	87.1	57.9	84.1	46.9	69.9	27.6	39.4	54.3	81.1	39.3	55.9	50.7	68.2
12		59.8	87.1	56.3	84.1	44.9	69.5	26.3	38.3	52.1	80.6	38.4	55.9	50.7	68.2
13		56.9	87.1	53.2	83.4	41.6	67.5			48.8	78.8	36.6	55.9		
14						40.0	66.9					35.8	54.5		

cont'd	TNM staging			
	M1		NA/NOS	
	n=4,281		n=4,493	
Years	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	53.6	55.5	79.9	83.8
2	31.4	33.3	70.6	77.1
3	19.2	20.8	64.3	73.0
4	13.4	14.8	58.1	68.5
5	9.7	11.0	52.9	64.7
6	7.6	8.8	48.6	61.7
7	6.6	7.9	45.5	59.8
8	6.3	7.6	42.5	57.9
9	5.8	7.0	39.5	55.9
10	5.2	6.6	37.2	54.5
11	4.7	6.0	34.8	52.8
12	4.7	5.6	32.7	51.6
13	4.7	5.1	30.5	50.0

Table 4j. Observed (obs.) and relative (rel.) survival of patients with colorectal cancer by TNM staging for period 1998-2011 (N=26,783).

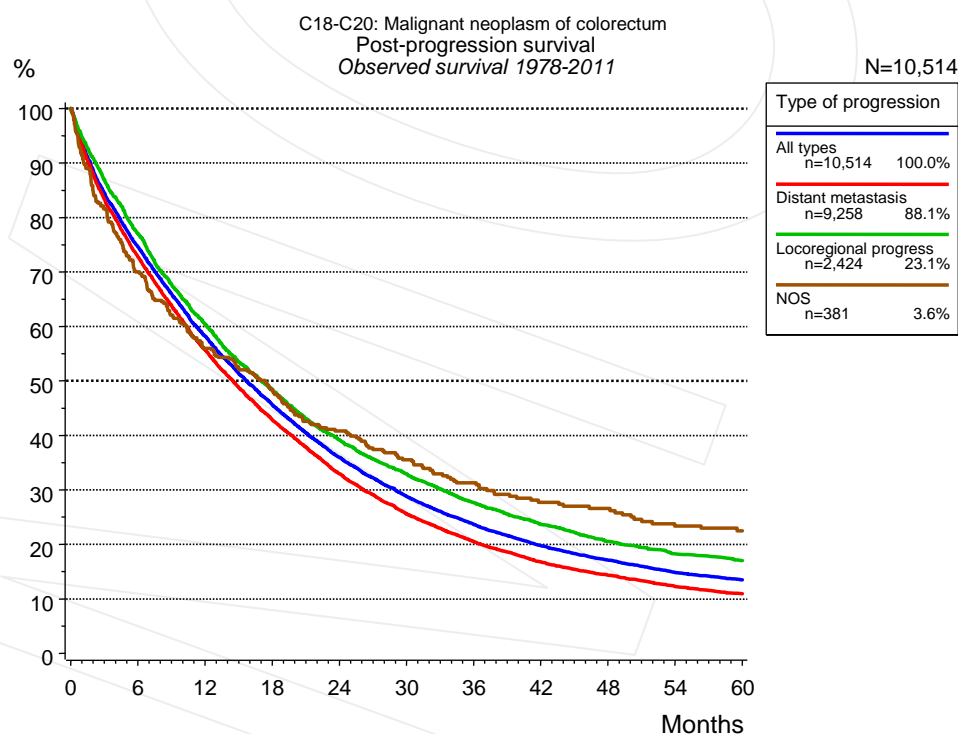


Figure 5a. Observed post-progression survival of 10,514 patients with colorectal cancer diagnosed between 1978 and 2011 (incl. M1). These 10,514 patients with documented progression events during their course of disease represent 33.5% of the totally 31,386 evaluated cases. Patients with cancer relapse documented via death certificates only were excluded (n=2,305, 7.3%). 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=10,514 %	Distant metastasis n=9,258 %	Locoregional progress n=2,424 %	NOS n=381 %
0	100.0	100.0	100.0	100.0
12	58.2	55.7	60.3	56.0
24	36.0	33.0	39.2	40.8
36	23.7	20.5	27.7	31.3
48	17.1	14.3	20.5	26.6
60	13.5	10.9	17.0	22.5

Table 5b. Observed post-progression survival of patients with colorectal cancer for period 1978-2011 (N=10,514).

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
1c Relative survival by year of diagnosis (chart)	3
1d Survival by year of diagnosis (table)	3
2a Survival by gender (chart)	4
2b Survival by gender (table)	4
3a Relative survival by age category (chart)	5
3b Observed survival by age category (chart)	5
3c Survival by age category (table)	6
4a Relative survival by UICC 1988+ (chart)	6
4b Survival by UICC 1988+ (table)	7
4c Relative survival by UICC 1998+ (chart)	7
4d Survival by UICC 1998+ (table)	8
4e Conditional survival by UICC (chart)	8
4f Conditional survival by UICC (table)	9
4g Relative survival by TNM staging 1988+ (chart)	9
4h Survival by TNM staging 1988+ (table)	10
4i Relative survival by TNM staging 1998+ (chart)	11
4j Survival by TNM staging 1998+ (table)	11
5a Observed post-progression survival (chart)	12
5b Observed post-progression survival (table)	13