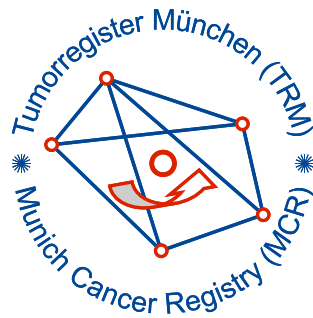


Munich Cancer Registry



- ▶ [Baseline statistics](#)
- ▶ [Selection Matrix](#)
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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

C64: Kidney cancer

Year of diagnosis	1978-1987	1988-1997	1998-2011
Patients	827	2,772	7,862
Diseases	830	2,803	8,010
Creation date	04/01/2013		
Export date	01/03/2013		
Population	4.5 m		



http://www.tumorregister-muenchen.de/en/facts/surv/surv_C64__E.pdf

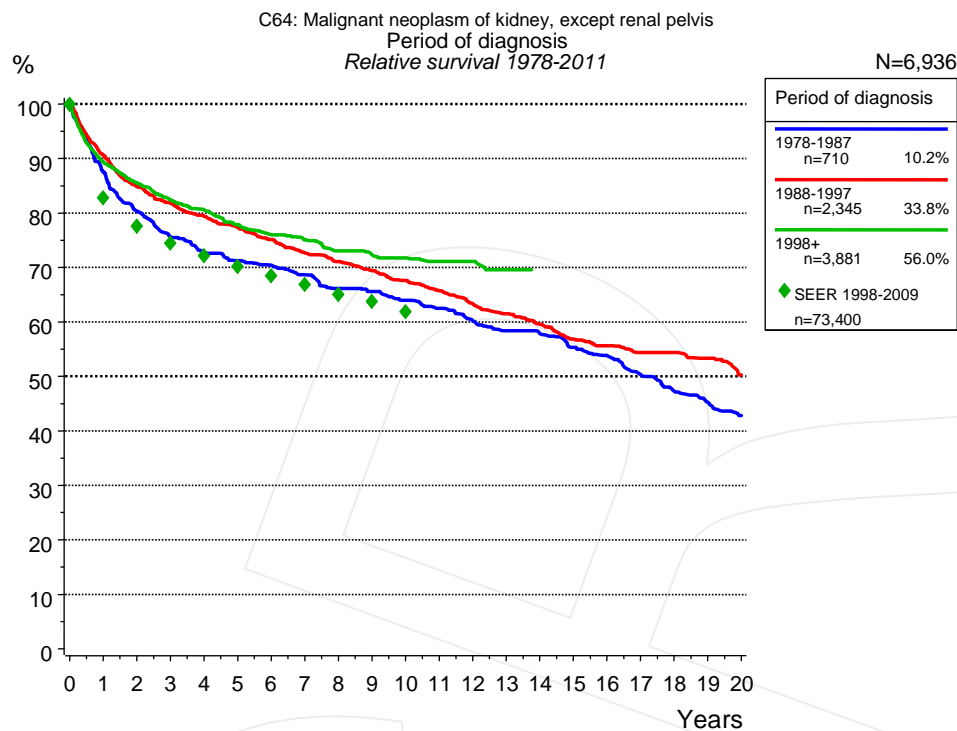


Figure 1a. Relative survival of patients with kidney cancer by period of diagnosis. Included in the evaluation are 6,936 cases diagnosed between 1978 and 2011.

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=710		1988-1997 n=2,345		1998+ n=3,881	
	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0	100.0	100.0
1	85.8	87.5	88.4	90.6	87.2	89.3
2	77.3	80.3	80.8	84.8	81.6	85.5
3	71.3	75.6	76.0	81.8	76.7	82.3
4	67.2	72.8	72.0	79.4	73.3	80.6
5	64.5	71.2	68.4	77.4	69.1	77.8
6	62.3	70.4	64.7	75.1	65.8	76.0
7	59.5	68.6	61.0	72.7	63.3	75.0
8	55.9	66.1	58.2	71.1	60.1	73.1
9	54.3	65.6	55.3	69.4	57.8	72.3
10	51.6	63.9	52.5	67.6	55.8	71.7
11	49.3	62.5	49.7	65.7	53.9	71.1
12	46.4	60.1	46.6	63.4	52.8	71.1
13	43.6	58.4	43.9	61.5	50.4	69.6
14	42.2	57.8	41.4	59.6		
15	39.3	55.3	38.4	56.8		
16	37.1	53.8	36.4	55.6		
17	33.8	50.3	34.6	54.4		
18	30.9	47.2	33.8	54.4		
19	28.9	45.2	32.0	53.3		
20	26.6	42.8	29.0	50.3		

Table 1b. Observed (obs.) and relative (rel.) survival of patients with kidney cancer by period of diagnosis for period 1978-2011 (N=6,936).

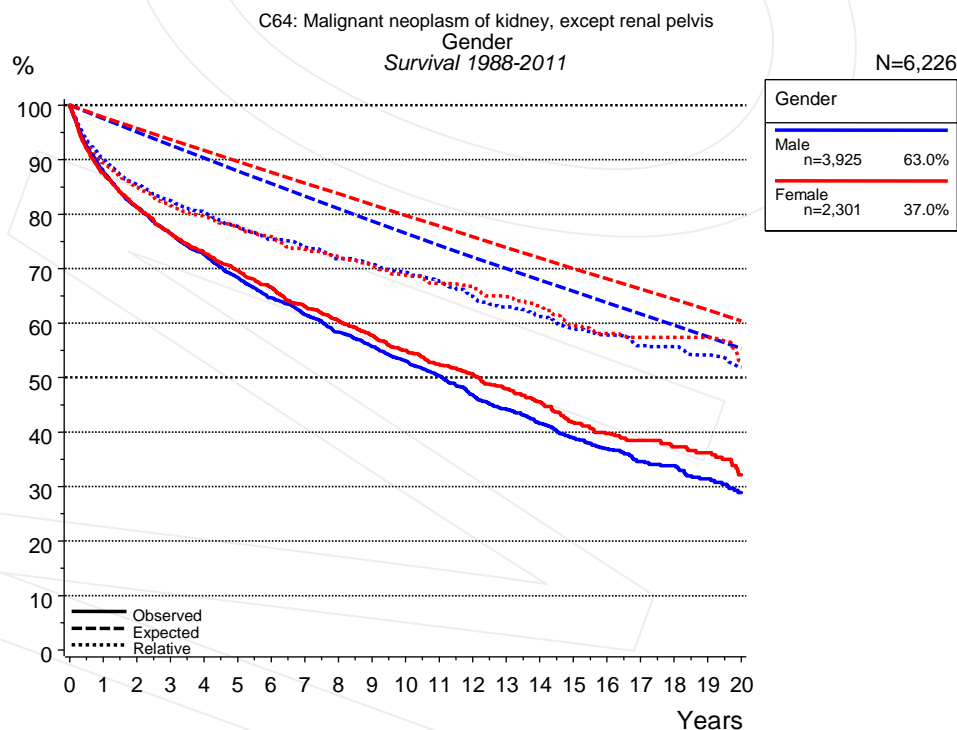


Figure 2a. Survival of patients with kidney cancer by gender. Included in the evaluation are 6,226 cases diagnosed between 1988 and 2011.

Years	Gender			
	Male n=3,925		Female n=2,301	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	87.7	90.0	87.5	89.4
2	81.2	85.4	81.3	84.9
3	76.4	82.4	76.4	81.5
4	72.6	80.4	72.9	79.4
5	68.4	77.7	69.6	77.6
6	64.6	75.4	66.5	75.8
7	61.5	73.9	63.1	73.6
8	58.3	71.8	60.5	72.1
9	55.7	70.7	57.7	70.6
10	53.0	69.3	55.0	68.8
11	50.3	67.6	52.5	67.3
12	46.9	64.9	50.6	66.7
13	44.2	63.0	47.9	64.8
14	41.6	61.2	45.6	63.2
15	38.9	59.0	41.8	59.5
16	36.9	57.8	39.8	58.0
17	34.6	55.9	38.5	57.4
18	33.8	55.7	37.3	57.4
19	31.4	54.1	36.2	57.4
20	28.9	51.9	32.2	53.0

Table 2b. Observed (obs.) and relative (rel.) survival of patients with kidney cancer by gender for period 1988-2011 (N=6,226).

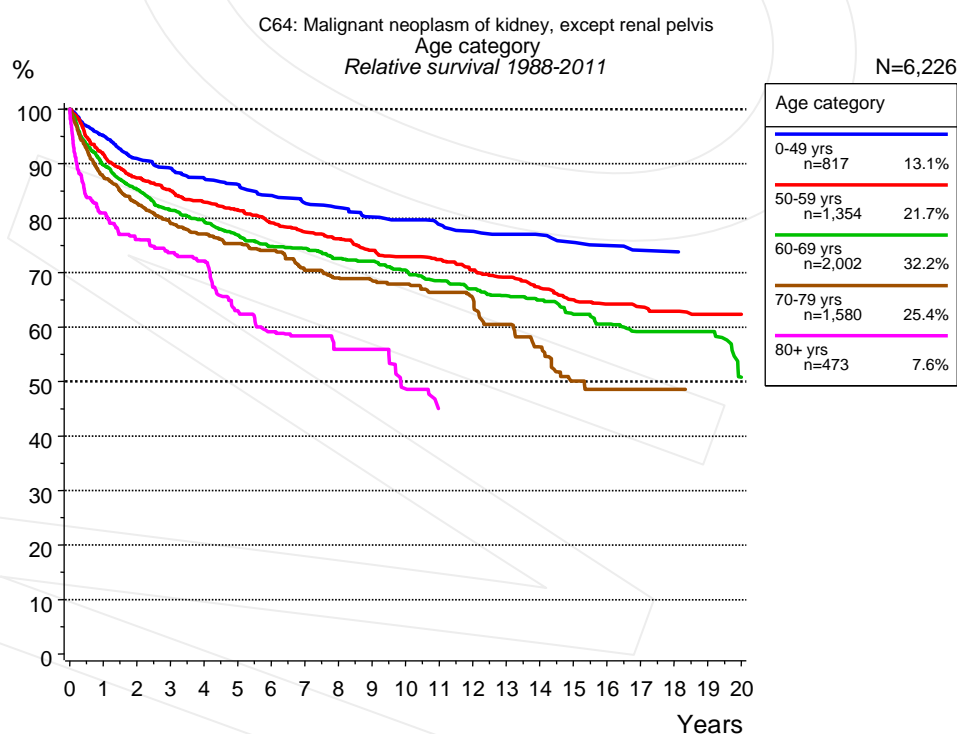


Figure 3a. Relative survival of patients with kidney cancer by age category. Included in the evaluation are 6,226 cases diagnosed between 1988 and 2011.

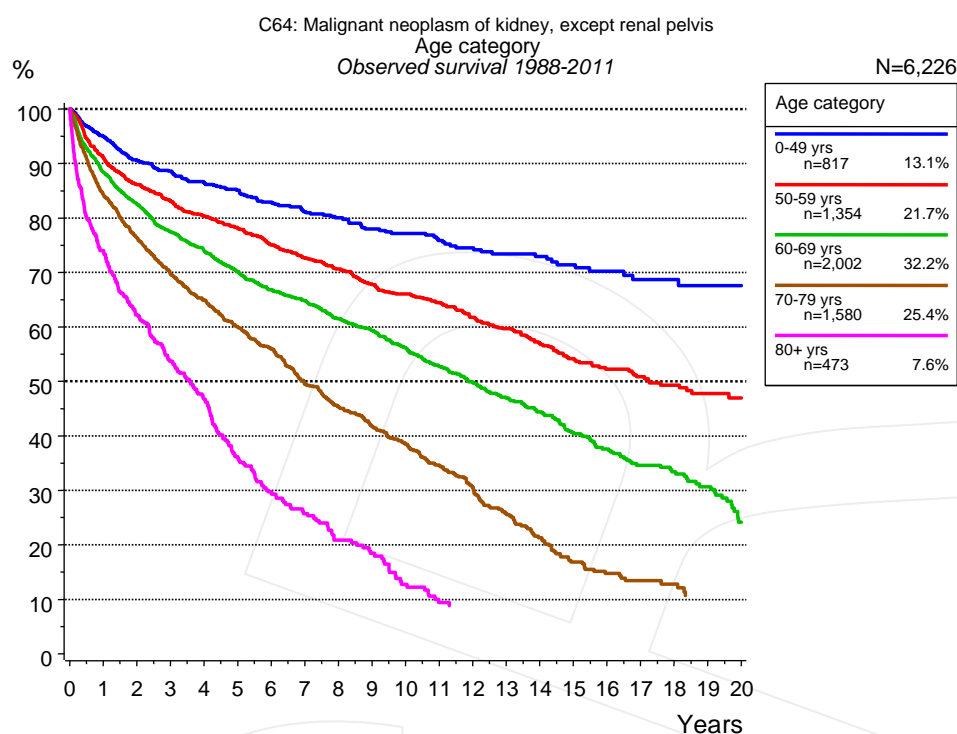


Figure 3b. Observed survival of patients with kidney cancer by age category. Included in the evaluation are 6,226 cases diagnosed between 1988 and 2011.

Years	Age category									
	0-49 yrs n=817		50-59 yrs n=1,354		60-69 yrs n=2,002		70-79 yrs n=1,580		80+ yrs n=473	
	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	94.9	95.1	91.0	91.6	88.3	89.7	84.3	87.6	73.8	80.9
2	90.5	91.0	86.1	87.4	82.4	85.2	76.3	82.7	62.2	76.0
3	88.6	89.2	83.1	85.1	77.5	81.5	69.7	79.0	53.7	73.6
4	86.5	87.4	80.3	82.9	74.0	79.4	64.9	77.1	46.7	72.1
5	85.1	86.2	78.1	81.5	70.2	76.9	60.0	75.4	36.1	63.0
6	82.9	84.2	75.0	79.1	66.8	74.8	55.9	74.0	29.7	59.1
7	81.2	82.8	72.7	77.4	64.8	74.5	49.5	70.4	25.7	58.4
8	80.0	82.0	70.7	76.2	61.5	72.6	45.4	69.0	20.8	55.9
9	78.0	80.2	67.7	74.1	59.3	72.1	41.8	68.6	18.4	55.9
10	77.2	79.7	66.0	72.9	56.1	70.4	38.4	67.9	12.8	48.7
11	75.9	78.8	64.5	72.4	52.8	68.5	34.6	66.3	9.4	45.1
12	74.5	77.6	61.8	70.5	49.9	67.0	30.5	65.3		
13	73.4	77.0	59.7	69.2	46.9	65.8	25.8	60.5		
14	72.9	76.9	57.0	67.2	44.4	65.0	21.3	56.3		
15	71.4	75.6	54.2	65.0	40.4	62.4	16.8	50.1		
16	70.2	75.0	52.3	64.2	37.6	60.5	14.7	48.6		
17	68.7	74.1	50.9	63.7	34.6	59.2	13.4	48.6		
18	68.7	73.8	49.3	62.9	33.4	59.2	12.8	48.6		
19	67.6	73.3	47.8	62.3	30.7	59.2				
20	67.6	72.8	47.0	62.3	24.1	50.8				

Table 3c. Observed (obs.) and relative (rel.) survival of patients with kidney cancer by age category for period 1988-2011 (N=6,226).

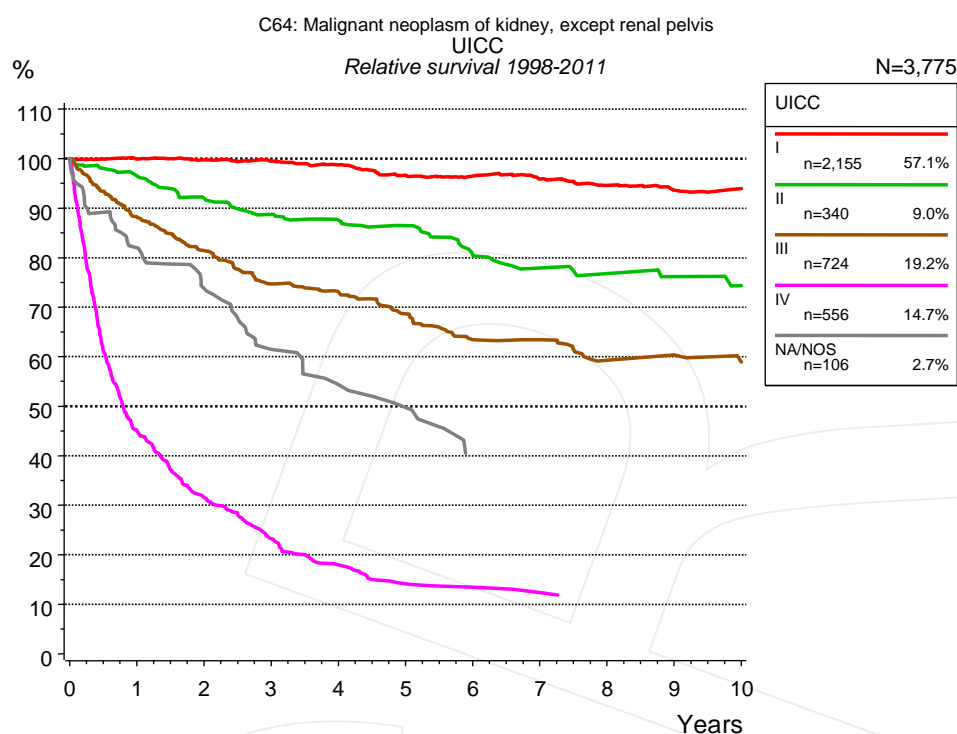


Figure 4a. Relative survival of patients with kidney cancer by UICC. For 3,788 of 3,881 cases diagnosed between 1998 and 2011 valid data could be obtained for this item. For a total of 3,775 cases an evaluable classification was established. The grey line represents the subgroup of 106 patients with missing values regarding UICC (2.7% of 3,881 patients, the percent values of all other categories are related to n=3,775).

		UICC									
		I n=2,155		II n=340		III n=724		IV n=556		NA/NOS n=106	
Years		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		97.9	99.9	94.3	96.5	85.9	88.2	43.9	45.0	79.0	81.9
2		95.8	99.7	87.7	92.0	77.0	81.4	30.0	31.5	68.3	73.7
3		93.4	99.4	82.7	88.7	68.7	74.7	21.7	23.2	54.5	61.5
4		90.6	98.7	79.5	87.6	65.5	73.0	16.4	17.9	46.7	54.3
5		86.6	96.6	76.6	86.4	59.9	68.7	12.7	14.2	42.2	49.7
6		84.4	96.5	69.8	80.5	53.7	63.5	12.1	13.5	32.7	40.1
7		81.8	95.9	65.7	77.9	52.6	63.4	10.7	12.4		
8		78.6	94.6	63.1	76.8	47.4	59.2				
9		75.7	93.6	60.8	76.2	46.7	60.3				
10		73.9	93.9	57.6	74.3	44.4	58.9				

Table 4b. Observed (obs.) and relative (rel.) survival of patients with kidney cancer by UICC for period 1998-2011 (N=3,775).

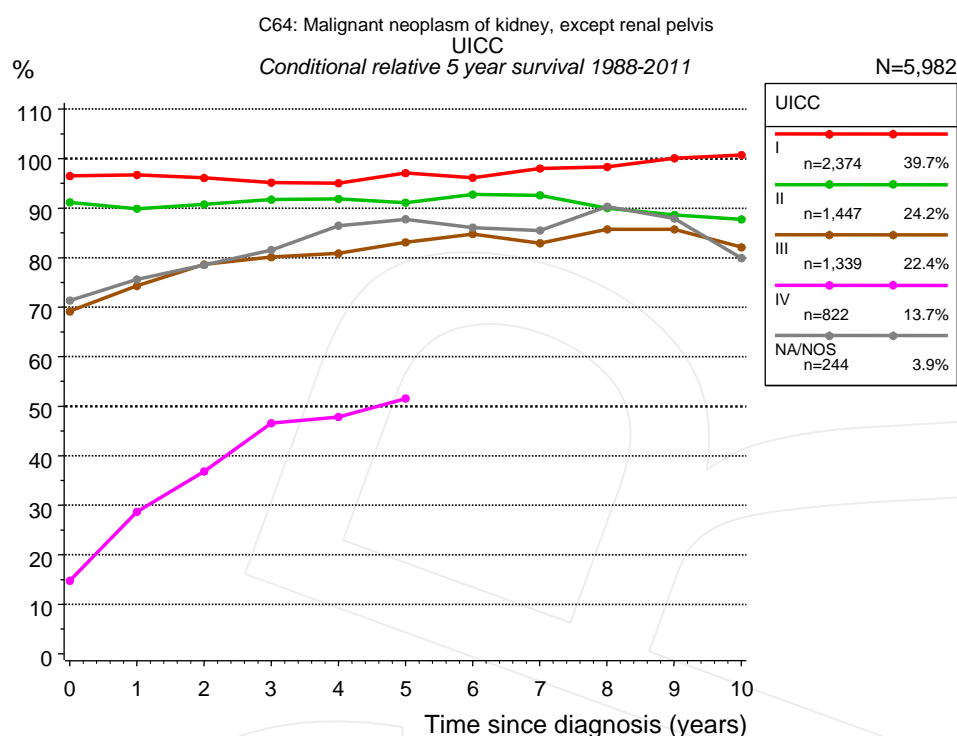


Figure 4c. Conditional relative 5-year survival of patients with kidney cancer by UICC. For 6,006 of 6,226 cases diagnosed between 1988 and 2011 valid data could be obtained for this item. For a total of 5,982 cases an evaluable classification was established. The grey line represents the subgroup of 244 patients with missing values regarding UICC (3.9% of 6,226 patients, the percent values of all other categories are related to n=5,982).

UICC										
Years	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	2,374	96.5	1,447	91.2	1,339	69.1	822	14.8	244	71.3
1	2,173	96.7	1,370	89.8	1,107	74.3	349	28.7	204	75.6
2	1,908	96.1	1,266	90.7	915	78.6	211	36.8	179	78.5
3	1,633	95.1	1,179	91.7	773	80.1	136	46.6	157	81.5
4	1,370	95.0	1,105	91.8	683	80.8	100	47.8	142	86.5
5	1,137	97.1	1,023	91.1	574	83.1	74	51.6	129	87.7
6	942	96.1	950	92.7	497	84.8			112	86.1
7	791	98.0	884	92.6	438	82.9			104	85.5
8	645	98.3	841	90.0	379	85.7			94	90.3
9	493	100.1	787	88.6	332	85.7			92	87.9
10	368	100.7	725	87.7	298	82.1			85	79.9

Table 4d. Conditional relative 5-year survival of patients with kidney cancer by UICC for period 1988-2011 (N=5,982).

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 4a). 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 95.1% (n=1,633).

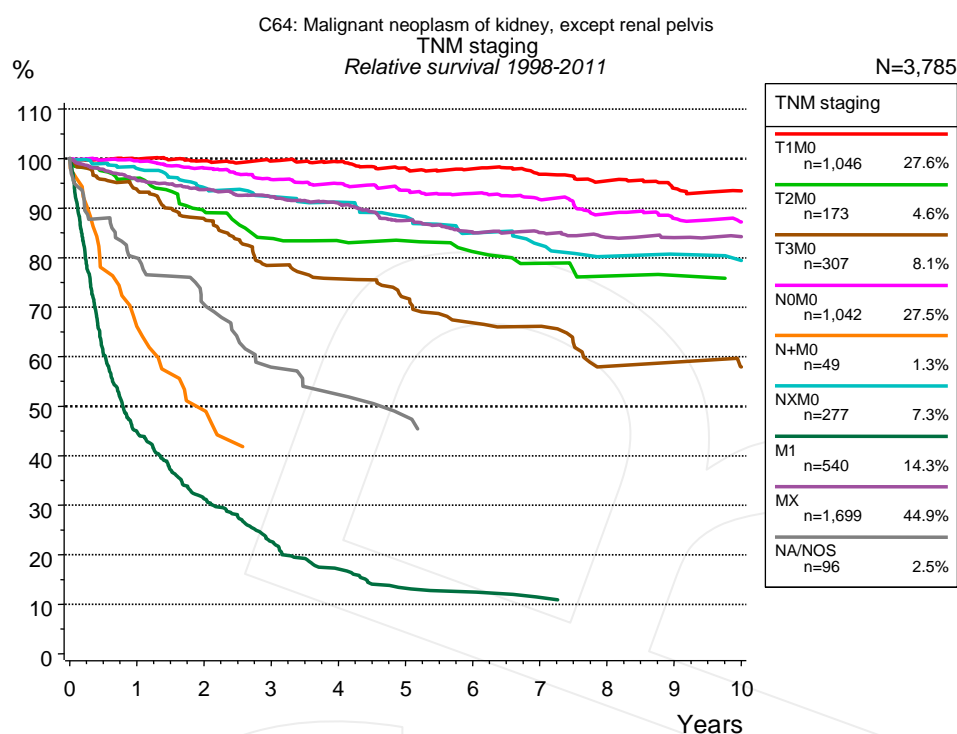


Figure 4e. Relative survival of patients with kidney cancer by TNM staging. For 3,788 of 3,881 cases diagnosed between 1998 and 2011 valid data could be obtained for this item. For a total of 3,785 cases an evaluable classification was established. The accumulated percentage exceeds the 100% value because patients are potentially considered in more than one subgroup. The grey line represents the subgroup of 96 patients with missing values regarding TNM staging (2.5% of 3,881 patients, the percent values of all other categories are related to n=3,785).

		TNM staging													
		T1M0 n=1,046		T2M0 n=173		T3M0 n=307		N0M0 n=1,042		N+M0 n=49		NXM0 n=277		M1 n=540	
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		97.9	99.9	94.1	96.0	91.3	93.8	97.5	99.5	64.5	66.1	96.0	98.0	43.7	44.8
2		95.6	99.6	85.2	89.4	83.2	87.8	94.0	98.1	49.0	49.2	90.2	94.1	29.8	31.3
3		93.6	99.5	78.4	83.9	72.4	78.4	89.8	95.8	39.4	41.2	86.6	92.3	21.2	22.7
4		91.4	99.4	75.6	83.4	68.6	75.7	87.0	95.0			83.7	91.2	15.7	17.1
5		88.2	98.1	74.0	83.4	63.4	71.9	83.9	93.6			79.2	88.2	12.0	13.3
6		86.1	97.9	69.9	81.2	57.4	66.9	81.2	93.0			74.8	85.0	11.3	12.5
7		82.9	96.8	66.5	78.9	55.9	66.2	78.1	91.7			71.4	82.6	9.9	11.4
8		79.9	95.5	62.7	76.3	47.1	58.1	73.8	88.9			67.6	80.2	9.4	10.3
9		76.6	94.0	61.1	76.4	47.1	58.9	71.1	87.9			66.3	80.7		
10		74.3	93.5	58.6	75.8	44.4	58.0	68.5	87.2			64.8	79.4		

cont'd Years	TNM staging			
	MX n=1,699		NA/NOS n=96	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	93.5	95.6	76.9	79.9
2	89.6	93.8	65.0	70.5
3	86.0	92.3	50.9	57.8
4	82.8	91.0	45.2	52.3
5	77.7	87.5	40.3	47.9
6	73.6	85.1		
7	71.5	85.0		
8	68.7	84.1		
9	66.5	84.0		
10	65.0	84.3		

Table 4f. Observed (obs.) and relative (rel.) survival of patients with kidney cancer by TNM staging for period 1998-2011 (N=5,133).

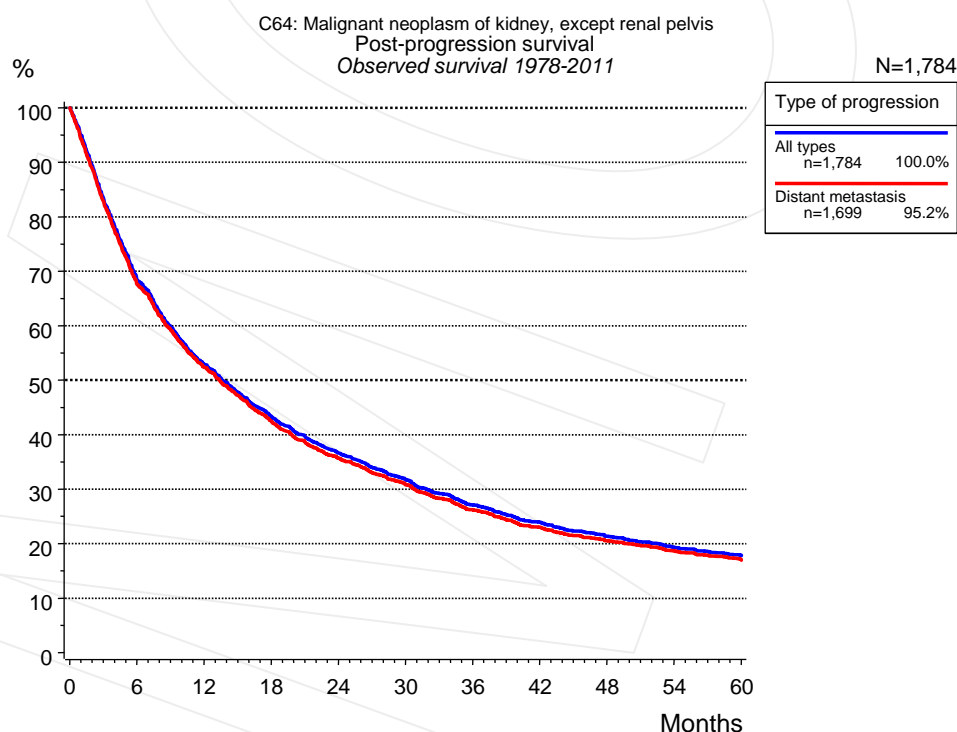


Figure 5a. Observed post-progression survival of 1,784 patients with kidney cancer diagnosed between 1978 and 2011 (incl. M1). These 1,784 patients with documented progression events during their course of disease represent 25.7% of the totally 6,936 evaluated cases. Patients with cancer relapse documented via death certificates only were excluded (n=254, 3.7%). Multiple progression types on different sites are included in the evaluation even when not occurring synchronously.

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=1,784	Distant metastasis n=1,699
	%	%
0	100.0	100.0
12	52.9	52.4
24	36.7	35.7
36	27.1	26.2
48	21.4	20.6
60	17.8	17.0

Table 5b. Observed post-progression survival of patients with kidney cancer for period 1978-2011 (N=1,784).

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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Index of figures and tables

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