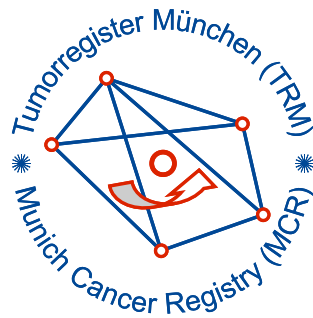


Munich Cancer Registry



- ▶ 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

C64-C66, C68: Urinary tract cancer

Year of diagnosis	1988-2012
Patients	13,115
Diseases	13,509
Cases evaluated	7,116
Creation date	03/25/2014
Export date	02/12/2014
Population	4.5 m



http://www.tumorregister-muenchen.de/en/facts/surv/surv_C6466E.pdf

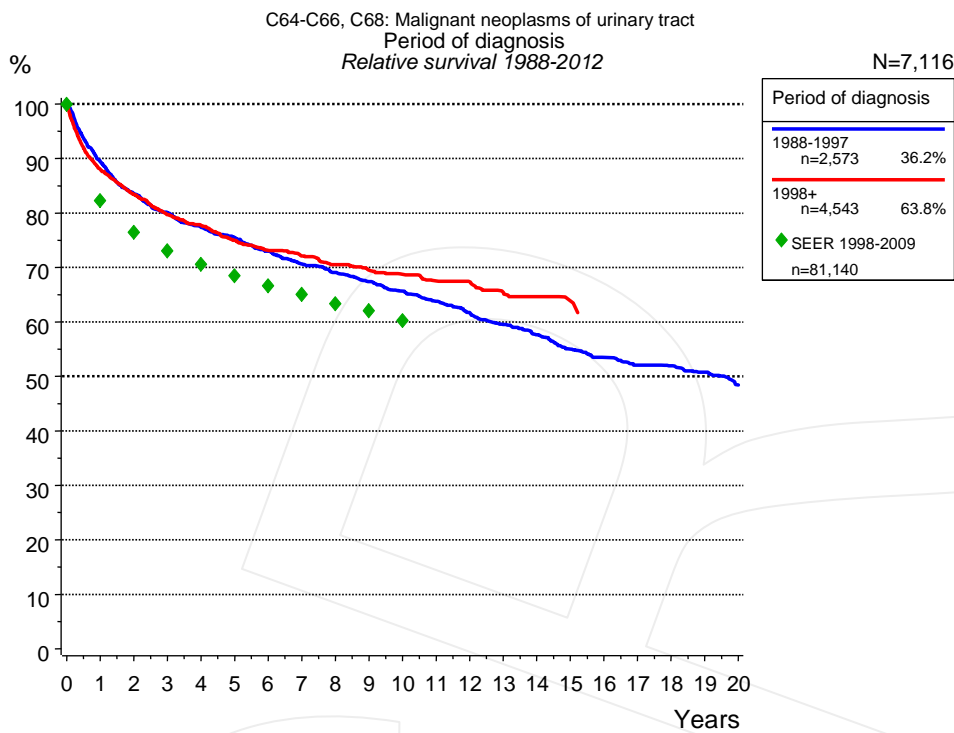


Figure 1a. Relative survival of patients with urinary tract cancer by period of diagnosis. Included in the evaluation are 7,116 cases diagnosed between 1988 and 2012.

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 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		1998+	
	n=2,573		n=4,543	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	87.1	89.4	85.7	87.9
2	79.3	83.5	79.3	83.4
3	74.2	80.0	73.9	79.7
4	70.0	77.4	70.4	77.7
5	66.5	75.5	66.2	75.0
6	62.7	73.0	62.9	73.2
7	59.1	70.6	60.4	72.1
8	56.3	69.0	57.6	70.5
9	53.5	67.4	55.1	69.5
10	50.8	65.7	53.0	68.8
11	48.0	63.8	50.6	67.5
12	45.1	61.7	49.0	67.3
13	42.3	59.5	46.3	65.5
14	39.9	57.7	44.3	64.7
15	36.9	55.0	43.1	63.9
16	34.8	53.4		
17	32.9	52.1		
18	31.9	52.0		
19	30.3	50.8		
20	27.8	48.4		

Table 1b. Observed (obs.) and relative (rel.) survival of patients with urinary tract cancer by period of diagnosis for period 1988-2012 (N=7,116).

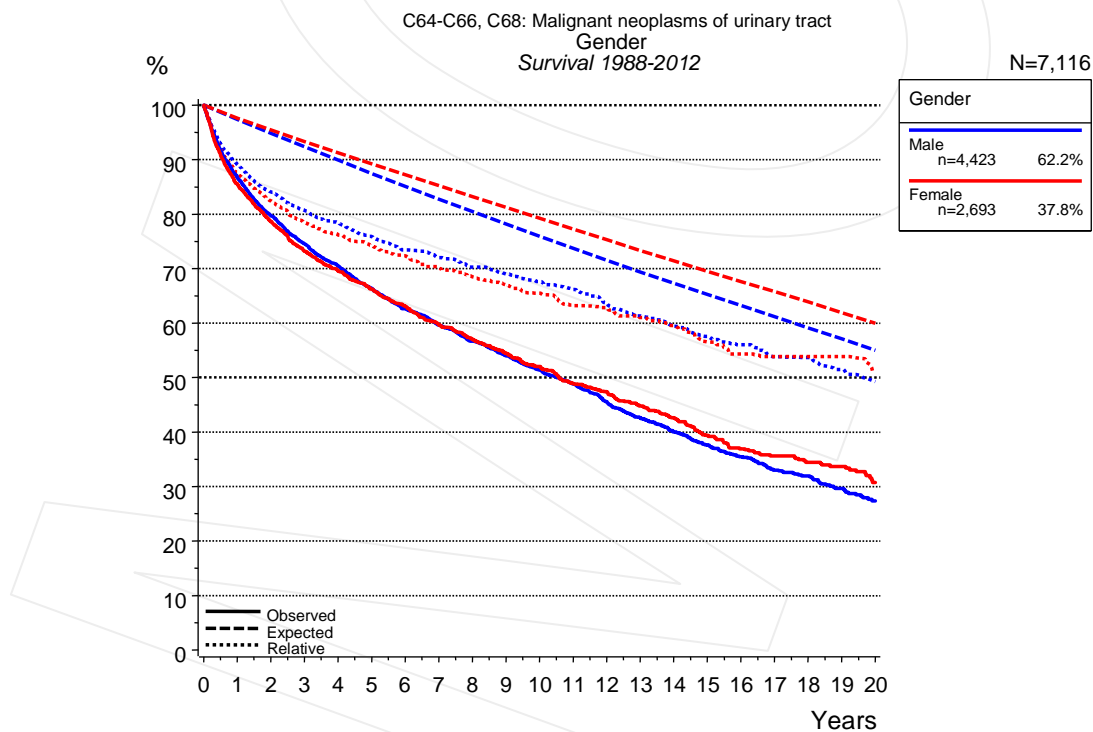


Figure 2a. Survival of patients with urinary tract cancer by gender. Included in the evaluation are 7,116 cases diagnosed between 1988 and 2012.

Years	Gender			
	Male n=4,423		Female n=2,693	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	86.7	89.0	85.5	87.6
2	79.7	84.0	78.6	82.4
3	74.5	80.7	73.2	78.4
4	70.5	78.4	69.6	76.2
5	66.4	75.9	66.2	74.2
6	62.6	73.4	63.1	72.3
7	59.6	72.0	59.7	70.1
8	56.7	70.3	57.1	68.5
9	53.9	69.0	54.4	67.0
10	51.3	67.6	52.0	65.5
11	48.8	66.2	49.0	63.3
12	45.6	63.7	47.3	62.8
13	42.6	61.3	44.8	61.0
14	40.0	59.4	42.6	59.5
15	37.6	57.5	39.4	56.5
16	35.5	56.0	36.9	54.3
17	33.0	53.9	35.6	53.9
18	32.0	53.7	34.5	53.9
19	29.6	51.5	33.7	53.8
20	27.4	49.3	30.8	51.1

Table 2b. Observed (obs.) and relative (rel.) survival of patients with urinary tract cancer by gender for period 1988-2012 (N=7,116).

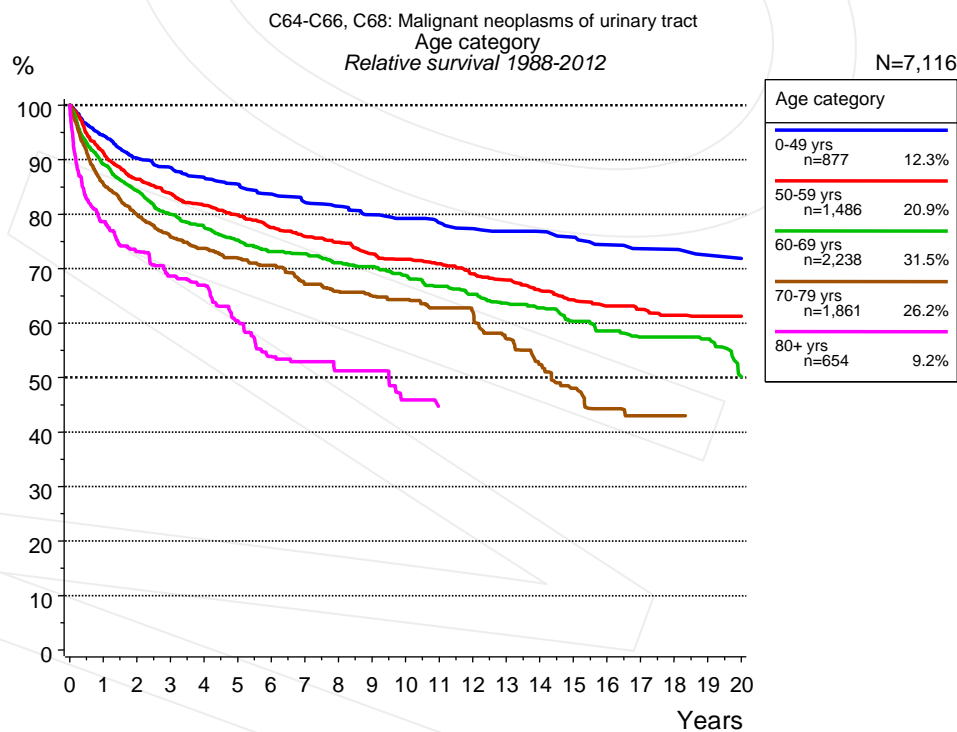


Figure 3a. Relative survival of patients with urinary tract cancer by age category. Included in the evaluation are 7,116 cases diagnosed between 1988 and 2012.

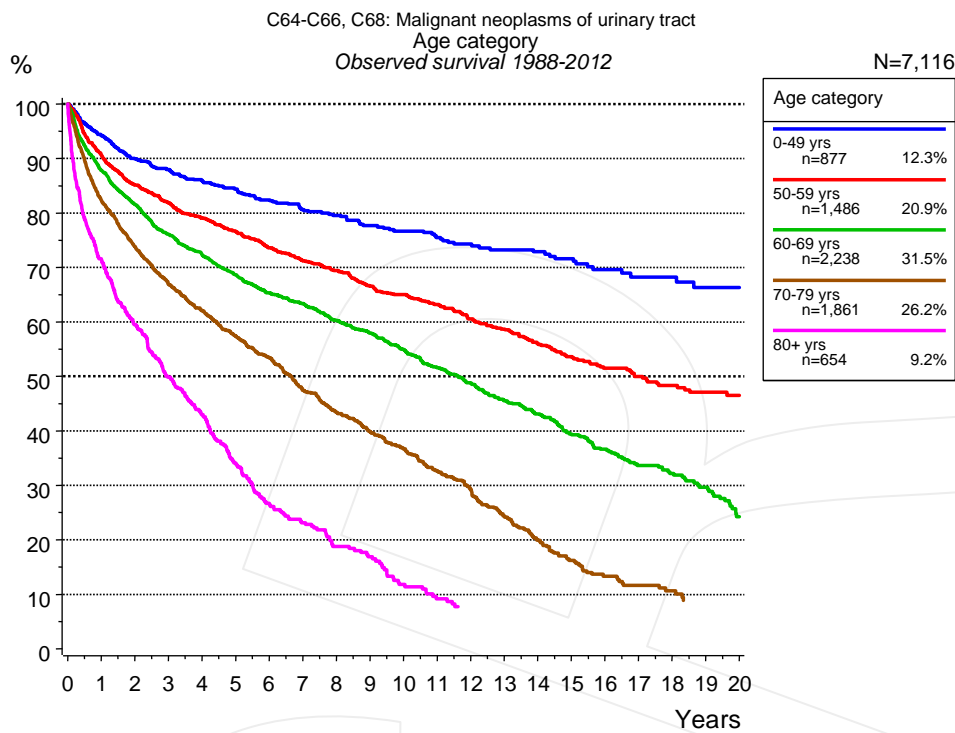


Figure 3b. Observed survival of patients with urinary tract cancer by age category. Included in the evaluation are 7,116 cases diagnosed between 1988 and 2012.

Years	Age category									
	0-49 yrs n=877		50-59 yrs n=1,486		60-69 yrs n=2,238		70-79 yrs n=1,861		80+ yrs n=654	
	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	94.2	94.4	90.6	91.2	87.7	89.1	82.3	85.5	71.4	78.6
2	89.9	90.3	85.1	86.4	81.5	84.2	73.8	79.9	59.5	73.1
3	88.0	88.6	81.9	83.8	76.0	80.0	66.9	75.7	49.8	68.7
4	85.9	86.7	79.0	81.6	72.4	77.6	62.0	73.7	43.0	66.9
5	84.4	85.5	76.5	79.8	68.7	75.2	57.4	72.0	34.1	60.4
6	82.4	83.7	73.6	77.5	65.3	73.1	53.4	70.6	26.7	53.9
7	80.6	82.2	71.2	75.9	63.4	72.7	47.4	67.1	23.1	52.9
8	79.5	81.5	69.4	74.8	60.3	71.1	43.5	65.8	18.8	51.3
9	77.7	79.9	66.5	72.7	57.9	70.4	39.8	65.0	16.9	51.3
10	76.7	79.2	65.0	71.7	54.9	68.8	36.7	64.3	11.8	45.9
11	75.5	78.4	63.2	70.9	51.6	66.8	32.7	62.8	9.2	44.7
12	74.3	77.3	60.6	69.0	48.8	65.3	29.2	62.1		
13	73.3	76.9	58.7	67.9	45.5	63.6	24.3	57.1		
14	72.8	76.8	56.0	66.0	43.1	62.8	19.9	52.4		
15	71.6	75.8	53.6	64.3	39.3	60.3	16.2	48.0		
16	69.6	74.4	51.5	63.1	36.6	58.5	13.3	44.3		
17	68.3	73.7	50.0	62.5	33.7	57.4	11.6	43.0		
18	68.3	73.5	48.3	61.4	32.2	57.4	10.6	43.0		
19	66.3	72.5	47.1	61.3	29.7	57.1				
20	66.3	71.9	46.5	61.3	24.2	50.1				

Table 3c. Observed (obs.) and relative (rel.) survival of patients with urinary tract cancer by age category for period 1988-2012 (N=7,116).

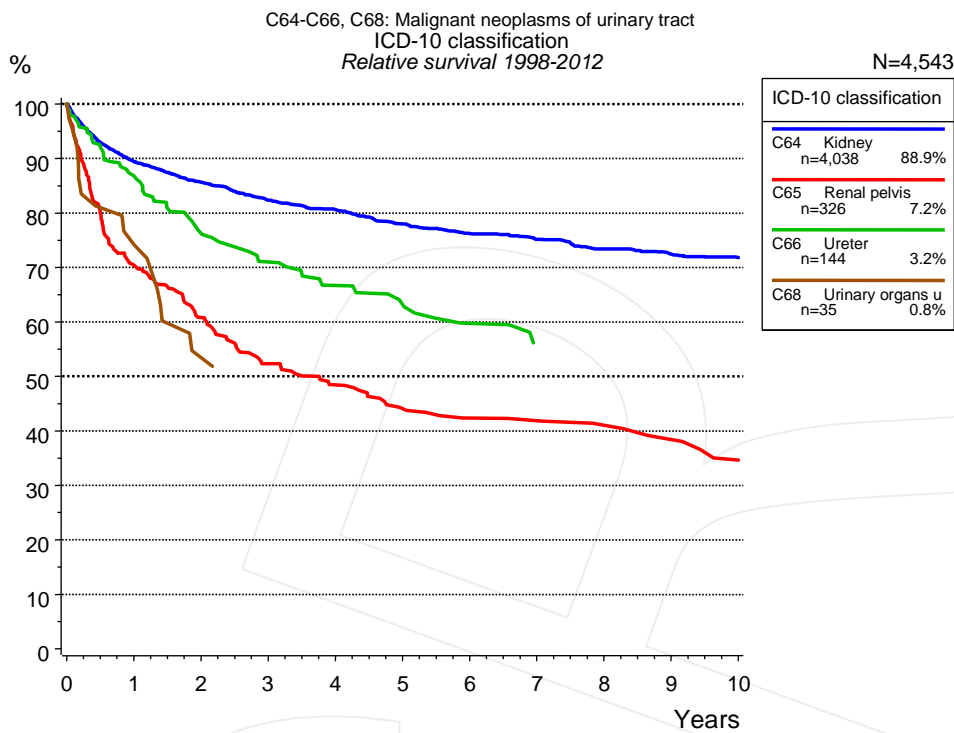


Figure 4a. Relative survival of patients with urinary tract cancer by ICD-10 classification. Included in the evaluation are 4,543 cases diagnosed between 1998 and 2012.

Years	ICD-10 classification							
	C64 Kidney n=4,038		C65 Renal pelvis n=326		C66 Ureter n=144		C68 Urinary organs unspec. n=35	
	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	87.3	89.4	67.8	70.4	83.3	86.8	74.3	74.2
2	81.7	85.6	56.2	60.8	70.8	76.2	51.1	53.4
3	76.8	82.3	46.4	52.3	63.2	71.0		
4	73.4	80.6	41.5	48.4	57.2	66.7		
5	69.3	78.0	36.4	44.1	52.5	63.1		
6	66.0	76.2	33.7	42.4	47.4	59.7		
7	63.5	75.2	32.9	41.9	42.7	56.1		
8	60.4	73.4	31.1	41.0	42.7	56.1		
9	58.0	72.5	28.7	38.4	42.7	56.1		
10	55.9	71.8	25.0	34.6	42.7	56.1		

Table 4b. Observed (obs.) and relative (rel.) survival of patients with urinary tract cancer by ICD-10 classification for period 1998-2012 (N=4,543).

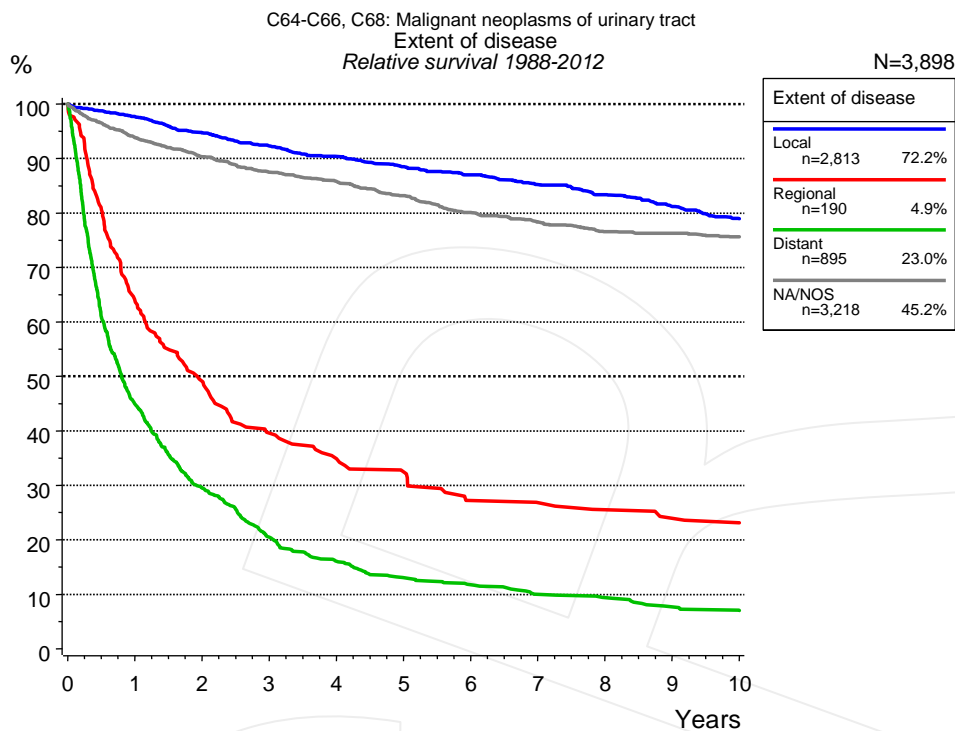


Figure 4c. Relative survival of patients with urinary tract cancer by extent of disease. For 6,844 of 7,116 cases diagnosed between 1988 and 2012 valid data could be obtained for this item. For a total of 3,898 cases an evaluable classification was established. The grey line represents the subgroup of 3,218 patients with missing values regarding extent of disease (45.2% of 7,116 patients, the percent values of all other categories are related to n=3,898).

Years	Extent of disease							
	Local n=2,813		Regional n=190		Distant n=895		NA/NOS n=3,218	
	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	95.4	97.7	62.4	63.9	43.7	44.9	91.3	93.8
2	90.3	94.7	47.1	49.1	28.2	29.5	85.7	90.3
3	85.9	92.3	36.8	39.6	19.2	20.5	80.8	87.5
4	82.1	90.3	32.1	34.9	14.7	16.1	77.2	85.7
5	78.5	88.5	29.1	32.5	11.6	13.0	72.8	83.1
6	75.3	87.0	23.6	27.2	10.3	11.8	68.4	80.1
7	71.8	85.2	22.9	26.8	8.6	10.0	65.0	78.3
8	68.5	83.3	21.4	25.5	8.0	9.4	61.9	76.6
9	64.9	81.2	19.9	23.9	6.5	7.7	60.0	76.3
10	61.5	78.9	19.2	23.1	5.7	7.1	57.8	75.7

Table 4d. Observed (obs.) and relative (rel.) survival of patients with urinary tract cancer by extent of disease for period 1988-2012 (N=3,898).

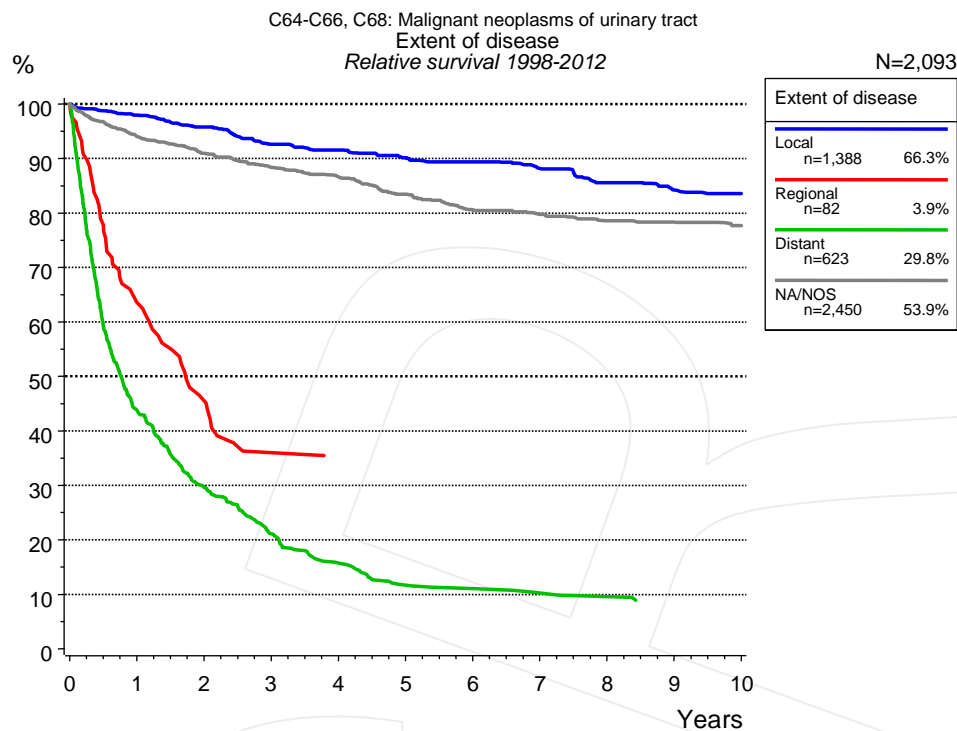


Figure 4e. Relative survival of patients with urinary tract cancer by extent of disease. For 4,412 of 4,543 cases diagnosed between 1998 and 2012 valid data could be obtained for this item. For a total of 2,093 cases an evaluable classification was established. The grey line represents the subgroup of 2,450 patients with missing values regarding extent of disease (53.9% of 4,543 patients, the percent values of all other categories are related to n=2,093).

Years	Extent of disease							
	Local n=1,388		Regional n=82		Distant n=623		NA/NOS n=2,450	
	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	95.8	98.0	61.7	63.6	42.6	43.7	91.6	94.1
2	91.5	95.8	44.1	45.5	28.2	29.6	86.4	91.0
3	86.3	92.6	33.8	36.0	19.7	21.1	81.8	88.3
4	83.5	91.5	32.1	35.2	14.4	15.7	78.2	86.7
5	80.2	90.1	32.1	34.0	10.5	11.7	73.3	83.4
6	77.6	89.4			10.0	11.1	68.9	80.6
7	74.5	88.1			8.9	10.2	66.4	79.8
8	70.7	85.5			8.5	9.6	63.6	78.6
9	67.5	84.2					61.7	78.3
10	65.0	83.5					59.5	77.7

Table 4f. Observed (obs.) and relative (rel.) survival of patients with urinary tract cancer by extent of disease for period 1998-2012 (N=2,093).

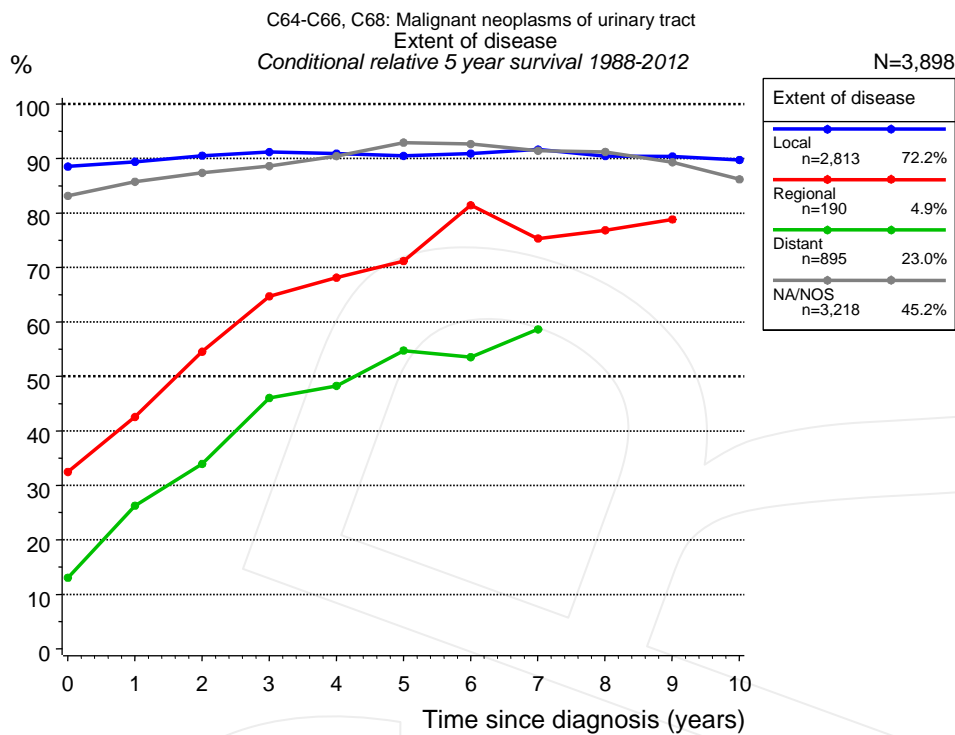


Figure 4g. Conditional relative 5-year survival of patients with urinary tract cancer by extent of disease. For 6,844 of 7,116 cases diagnosed between 1988 and 2012 valid data could be obtained for this item. For a total of 3,898 cases an evaluable classification was established. The grey line represents the subgroup of 3,218 patients with missing values regarding extent of disease (45.2% of 7,116 patients, the percent values of all other categories are related to n=3,898).

Years	Extent of disease							
	Local		Regional		Distant		NA/NOS	
	n	Cond. surv. % 5 yrs	n	Cond. surv. % 5 yrs	n	Cond. surv. % 5 yrs	n	Cond. surv. % 5 yrs
0	2,813	88.5	190	32.5	895	13.0	3,218	83.1
1	2,578	89.4	117	42.5	367	26.3	2,770	85.7
2	2,325	90.5	83	54.5	216	33.9	2,334	87.4
3	2,083	91.2	63	64.7	138	46.1	2,011	88.6
4	1,894	90.9	54	68.1	101	48.3	1,694	90.4
5	1,711	90.5	44	71.2	74	54.7	1,409	92.9
6	1,555	90.9	33	81.4	60	53.6	1,171	92.7
7	1,424	91.6	31	75.3	45	58.7	995	91.4
8	1,300	90.5	29	76.8			840	91.2
9	1,153	90.4	26	78.8			720	89.3
10	1,013	89.7					596	86.2

Table 4h. Conditional relative 5-year survival of patients with urinary tract cancer by extent of disease for period 1988-2012 (N=3,898).

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 4e). 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 5-year survival rate is 91.2% (n=2,083).

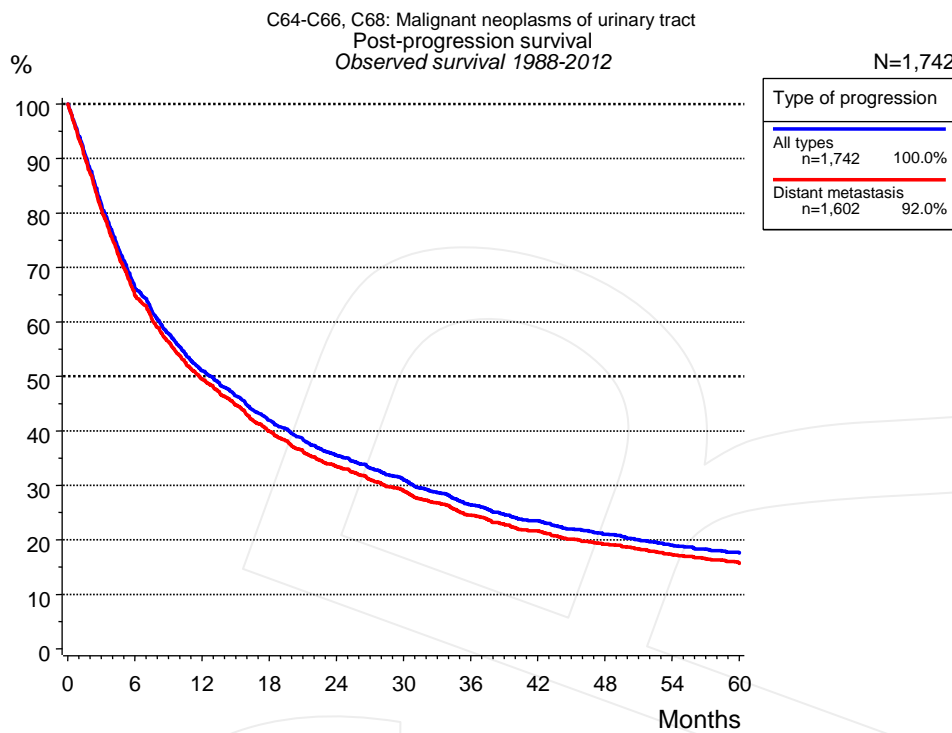


Figure 5a. Observed post-progression survival of 1,742 patients with urinary tract cancer diagnosed between 1988 and 2012 (incl. M1). These 1,742 patients with documented progression events during their course of disease represent 24.5% of the totally 7,116 evaluated cases. Patients with cancer relapse documented via death certificates only were excluded (n=301, 4.2%). 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=1,742 %	Distant metastasis n=1,602 %
0	100.0	100.0
12	51.0	49.5
24	35.5	33.5
36	26.4	24.6
48	21.0	19.2
60	17.6	15.7

Table 5b. Observed post-progression survival of patients with urinary tract cancer for period 1988-2012 (N=1,742).

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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