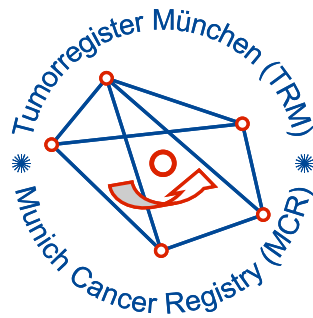


Munich Cancer Registry



- ▶ Incidence and Mortality
- ▶ Selection Matrix
- ▶ Homepage
- ▶ *Deutsch*

ICD-10 D09.0, D41.4: Bladder tumor

Survival

Year of diagnosis	1988-1997	1998-2016
Patients	2,002	9,664
Diseases	2,002	9,669
Cases evaluated	1,782	7,339
Creation date	08/22/2018	
Export date	08/09/2018	
Population	4.81 m	



Munich Cancer Registry
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Marchioninstr. 15
Munich, 81377
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<https://www.tumorregister-muenchen.de/en>

<https://www.tumorregister-muenchen.de/en/facts/surv/sD0941E-ICD-10-D09.0-D41.4-Bladder-tumor-survival.pdf>

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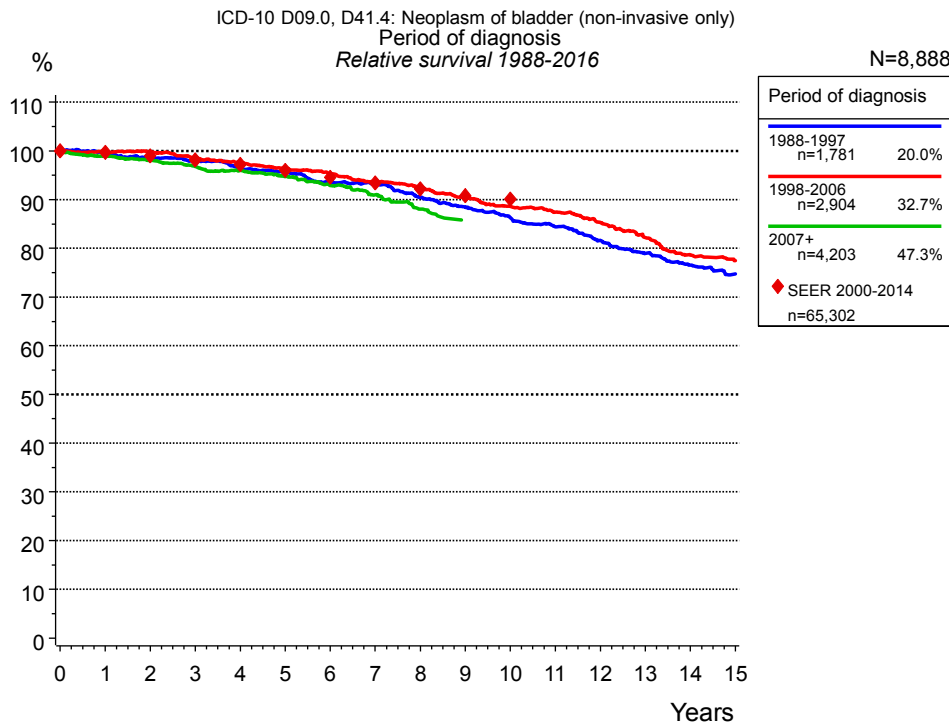


Figure 1a. Relative survival of patients with bladder tumor by period of diagnosis. Included in the evaluation are 8,888 cases diagnosed between 1988 and 2016.

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 2000 to 2014, and are represented by colored 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=1,781		1998-2006 n=2,904		2007+ n=4,203	
	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0	100.0	100.0
1	95.5	99.7	96.2	99.9	95.4	98.9
2	90.4	98.4	92.7	99.8	91.2	98.0
3	86.4	97.9	88.2	98.6	87.0	96.8
4	81.6	96.3	84.2	97.6	83.3	96.0
5	78.0	95.7	80.1	96.3	79.2	94.7
6	73.4	93.7	76.4	95.3	75.0	92.9
7	70.3	93.2	72.3	93.6	70.9	91.0
8	65.6	90.5	68.9	92.5	66.3	88.0
9	61.8	88.5	65.0	90.7		
10	58.1	86.2	61.2	88.6		
11	54.9	84.4	58.1	87.4		
12	51.2	81.7	54.6	85.2		
13	47.7	79.0	50.6	82.2		
14	44.6	76.6	46.6	78.7		
15	42.0	74.7	44.2	77.5		

Table 1b. Observed (obs.) and relative (rel.) survival of patients with bladder tumor by period of diagnosis for period 1988-2016 (N=8,888).

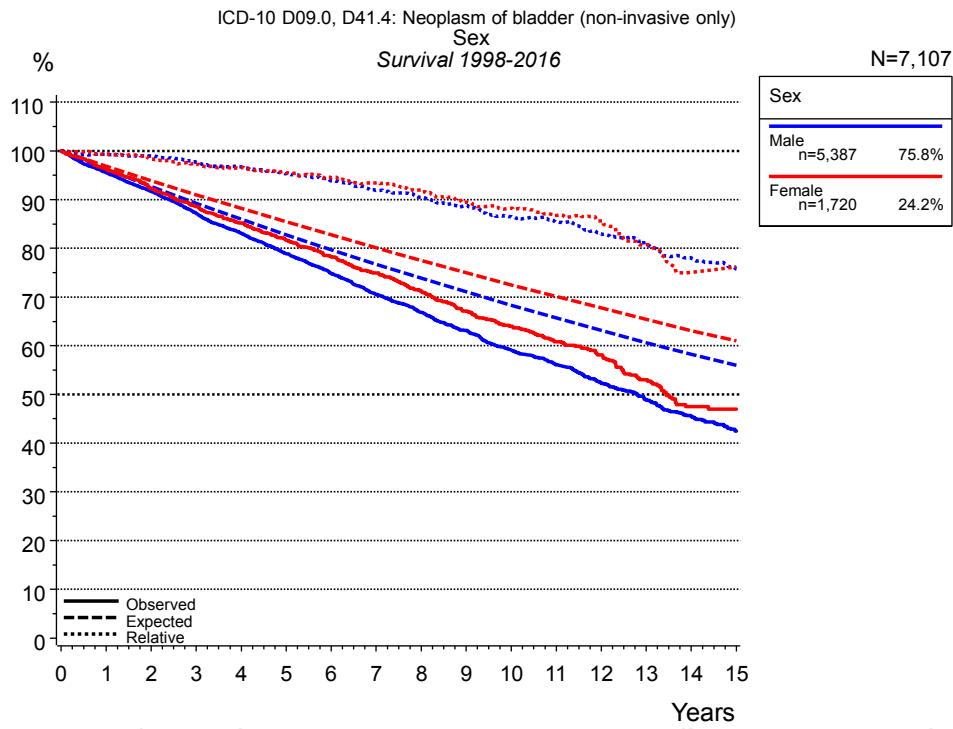


Figure 2a. Survival of patients with bladder tumor by sex. Included in the evaluation are 7,107 cases diagnosed between 1998 and 2016.

Years	Sex			
	Male n=5,387		Female n=1,720	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	95.5	99.2	96.3	99.4
2	91.7	98.9	92.4	98.3
3	87.2	97.7	88.5	97.2
4	83.1	96.7	85.2	96.5
5	78.9	95.3	81.6	95.5
6	74.8	93.9	78.3	94.5
7	70.5	91.9	75.0	93.4
8	66.9	90.5	71.1	91.8
9	63.1	88.8	67.1	89.4
10	59.1	86.5	64.0	88.2
11	56.1	85.4	60.8	86.7
12	52.4	82.8	58.1	85.6
13	48.9	80.6	53.1	80.7
14	45.5	78.0	47.5	75.1
15	42.5	75.8	47.0	76.2

Table 2b. Observed (obs.) and relative (rel.) survival of patients with bladder tumor by sex for period 1998-2016 (N=7,107).

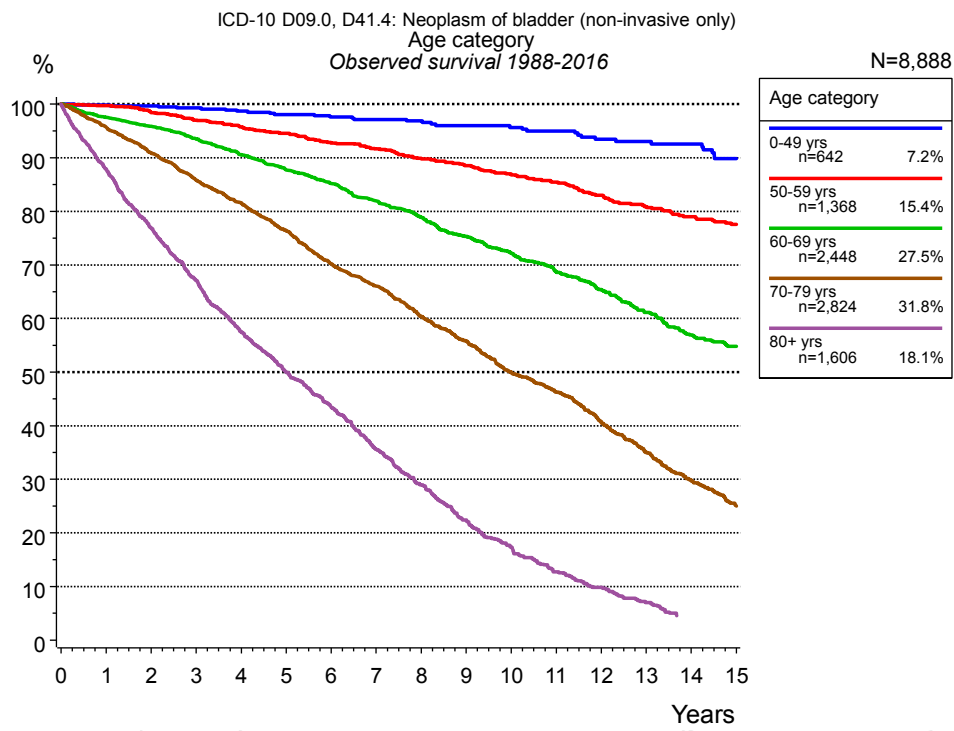


Figure 3a. Observed survival of patients with bladder tumor by age category. Included in the evaluation are 8,888 cases diagnosed between 1988 and 2016.

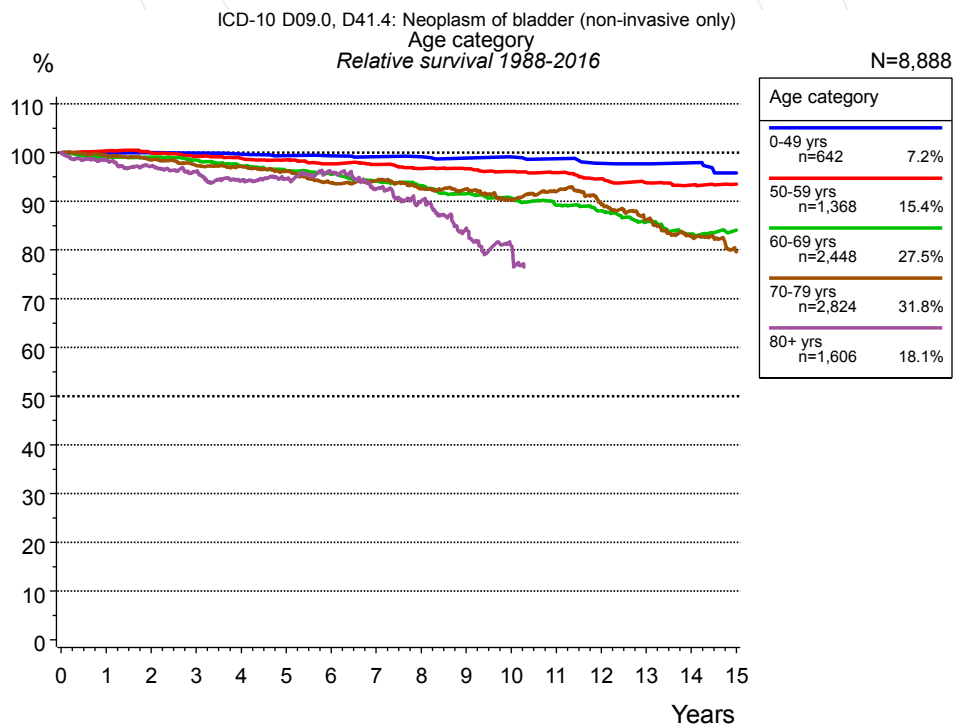


Figure 3b. Relative survival of patients with bladder tumor by age category. Included in the evaluation are 8,888 cases diagnosed between 1988 and 2016.

Years	Age category									
	0-49 yrs n=642		50-59 yrs n=1,368		60-69 yrs n=2,448		70-79 yrs n=2,824		80+ yrs n=1,606	
	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	99.8	99.9	99.7	100.4	97.5	99.1	95.7	99.5	87.9	98.5
2	99.7	100.0	98.4	99.9	95.9	99.1	90.9	98.5	76.9	97.2
3	99.3	99.9	97.0	99.2	93.5	98.4	85.8	97.3	67.1	96.1
4	98.7	99.7	95.8	98.8	90.6	97.2	81.5	97.2	57.5	94.1
5	98.1	99.4	94.6	98.5	87.7	96.2	76.3	96.1	50.0	94.5
6	97.6	99.3	92.7	97.7	85.1	95.5	70.2	93.8	43.5	95.9
7	97.1	99.1	91.6	97.6	81.9	94.2	66.0	94.2	35.6	92.6
8	96.9	99.1	89.9	96.7	78.9	93.2	60.3	92.5	29.0	90.0
9	96.0	98.8	88.6	96.7	75.3	91.6	55.7	92.5	22.4	84.4
10	95.7	99.1	86.8	96.1	72.2	90.6	50.0	90.4	17.3	80.9
11	95.0	98.7	85.4	95.9	68.7	89.1	46.3	92.1	12.7	74.3
12	93.4	97.8	83.0	94.6	65.4	88.0	40.7	89.3	9.8	72.9
13	93.0	97.7	80.9	93.8	61.2	85.7	35.0	86.2	7.0	69.4
14	92.6	97.9	79.0	93.3	56.9	83.3	29.7	82.9		
15	89.8	95.8	77.6	93.5	54.8	84.1	25.0	79.6		

Table 3c. Observed (obs.) and relative (rel.) survival of patients with bladder tumor by age category for period 1988-2016 (N=8,888).

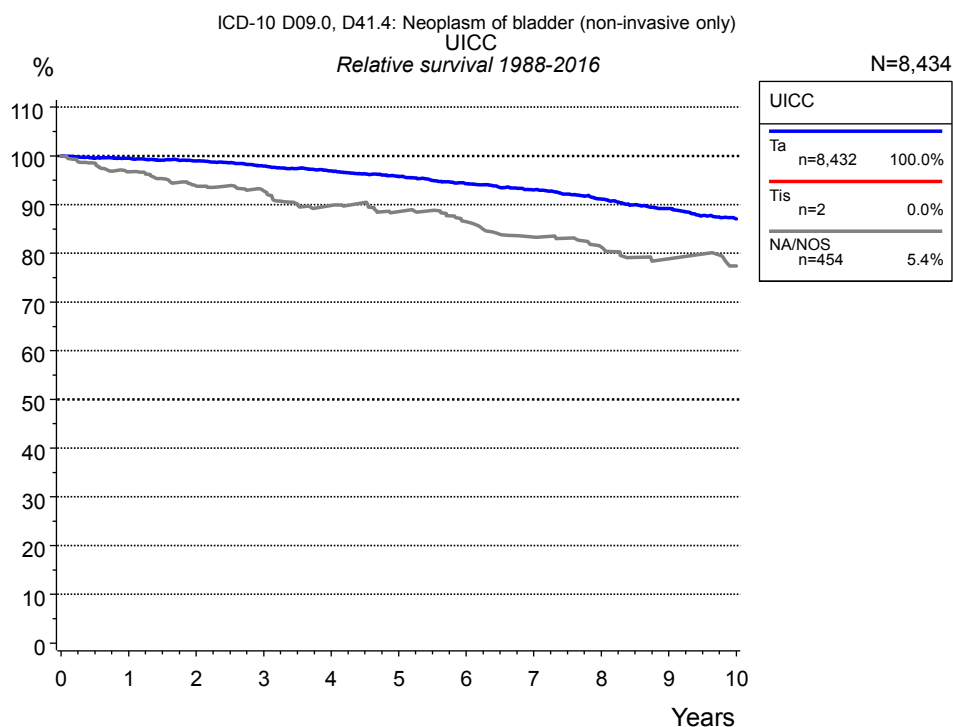


Figure 4a. Relative survival of patients with bladder tumor by UICC. For 8,737 of 8,888 cases diagnosed between 1988 and 2016 valid data could be obtained for this item. For a total of 8,434 cases an evaluable classification was established. The grey line represents the subgroup of 454 patients with missing values regarding UICC (5.1 % of 8,888 patients, the percent values of all other categories are related to n=8,434). Subgroups with sample size <20 are omitted from the chart.

Years	UICC			
	Ta n=8,432		NA/NOS n=454	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	95.8	99.5	93.2	96.7
2	91.8	98.9	87.3	93.8
3	87.5	97.9	83.2	92.8
4	83.5	96.9	77.8	89.8
5	79.5	95.8	73.9	88.6
6	75.4	94.3	69.8	86.5
7	71.7	93.0	64.7	83.4
8	67.7	91.1	60.8	81.3
9	63.9	89.3	56.7	78.9
10	60.0	87.1	53.5	77.5

Table 4b. Observed (obs.) and relative (rel.) survival of patients with bladder tumor by UICC for period 1988-2016 (N=8,434).

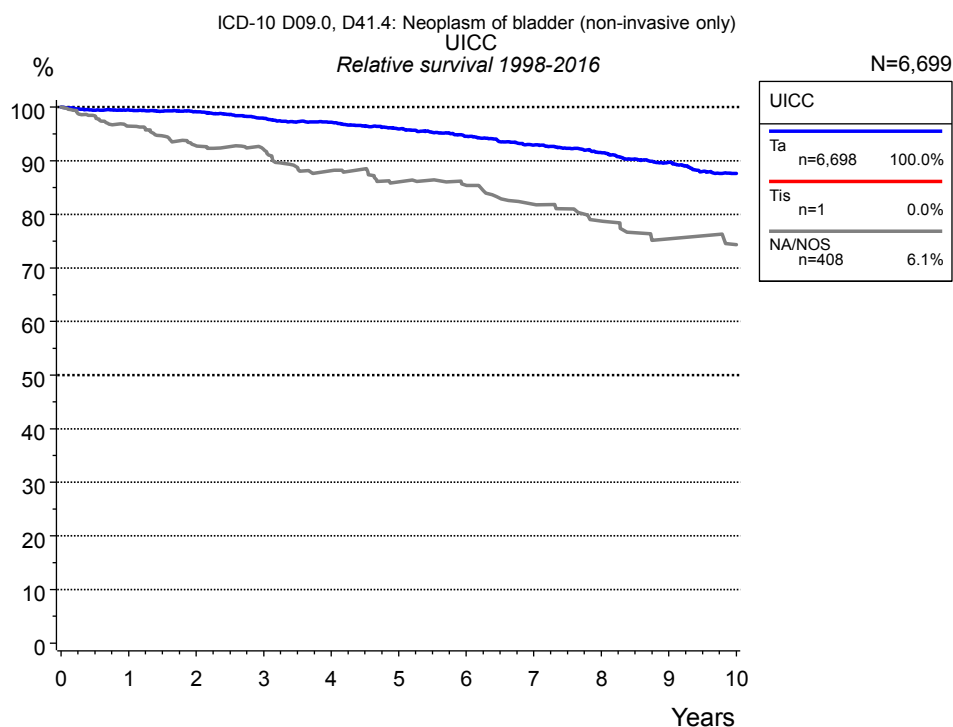


Figure 4c. Relative survival of patients with bladder tumor by UICC. For 6,962 of 7,107 cases diagnosed between 1998 and 2016 valid data could be obtained for this item. For a total of 6,699 cases an evaluable classification was established. The grey line represents the subgroup of 408 patients with missing values regarding UICC (5.7 % of 7,107 patients, the percent values of all other categories are related to n=6,699). Subgroups with sample size <20 are omitted from the chart.

Years	UICC			
	Ta n=6,698		NA/NOS n=408	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	95.9	99.5	93.0	96.4
2	92.2	99.1	86.4	92.8
3	87.8	97.9	82.6	92.1
4	84.1	97.2	76.5	88.2
5	80.0	95.9	72.0	86.1
6	76.1	94.5	69.1	85.4
7	72.1	92.9	63.9	81.9
8	68.4	91.5	59.5	78.7
9	64.7	89.7	54.6	75.4
10	60.8	87.6	51.9	74.4

Table 4d. Observed (obs.) and relative (rel.) survival of patients with bladder tumor by UICC for period 1998-2016 (N=6,699).

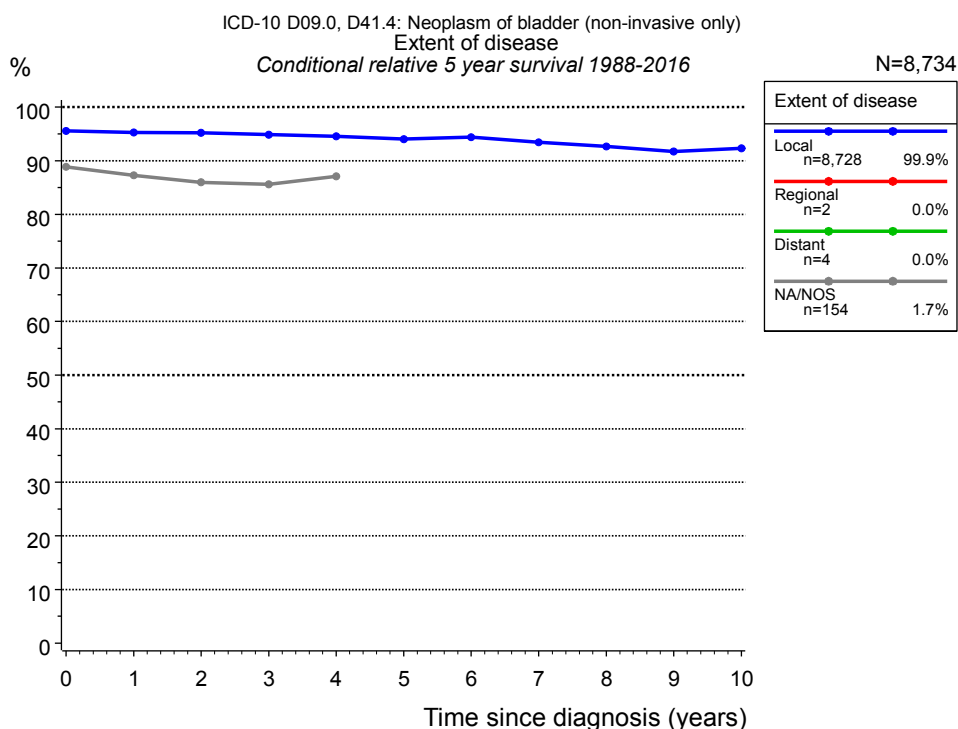


Figure 4i. Conditional relative 5-year survival of patients with bladder tumor by extent of disease. For 8,737 of 8,888 cases diagnosed between 1988 and 2016 valid data could be obtained for this item. For a total of 8,734 cases an evaluable classification was established. The grey line represents the subgroup of 154 patients with missing values regarding extent of disease (1.7 % of 8,888 patients, the percent values of all other categories are related to n=8,734). Subgroups with sample size <20 are omitted from the chart.

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	8,728	95.6	2		4		154	88.9
1	7,934	95.3					137	87.3
2	7,164	95.2					120	86.0
3	6,416	94.9					107	85.6
4	5,719	94.5					98	87.1
5	5,040	94.0						
6	4,423	94.4						
7	3,843	93.5						
8	3,315	92.7						
9	2,774	91.7						
10	2,389	92.3						

Table 4j. Conditional relative 5-year survival of patients with bladder tumor by extent of disease for period 1988-2016 (N=8,734).

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 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 5-year survival rate is 94.9% (n=6,416).

Shortcuts

MCR	Munich Cancer Registry, Germany	
NCI	National Cancer Institute, USA	
SEER	Surveillance, Epidemiology, and End Results, USA	
UICC	Union for International Cancer Control, Geneva	
DCO	Death certificate only	Death certificate provides the only notification to the registry.
NA	Not available	
NOS	Not otherwise specified	
OS	Overall/Observed survival	Overall/Observed survival (Kaplan-Meier estimate) Date of entry: diagnosis Event: death from any cause
RS	Relative survival	Survival compared to “general population”, ratio of observed to expected survival (Ederer II method), reflecting cancer specific survival
AS	Assembled survival	Assembled chart of observed, expected, relative survival
CS	Conditional survival	Survival probability under the condition of surviving a given period of time
TTP	Time to progression	Time to first progression / relapse Date of entry: diagnosis Event: (progression / relapse): first local-, lymph node recurrence, distant metastasis or unspecified progression
1-KM	1 minus Kaplan-Meier estimator ("inverse" Kaplan-Meier estimator)	
CI	Cumulative incidence Death as competing risk (according to Kalbfleisch und Prentice)	
PPS	Post-progression survival	Survival since first progression / relapse (Kaplan-Meier estimate) Date of entry (progression / relapse): first local-, lymph node recurrence, distant metastasis or unspecified progression Event: death from any cause

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