

# Munich Cancer Registry



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

### Survival

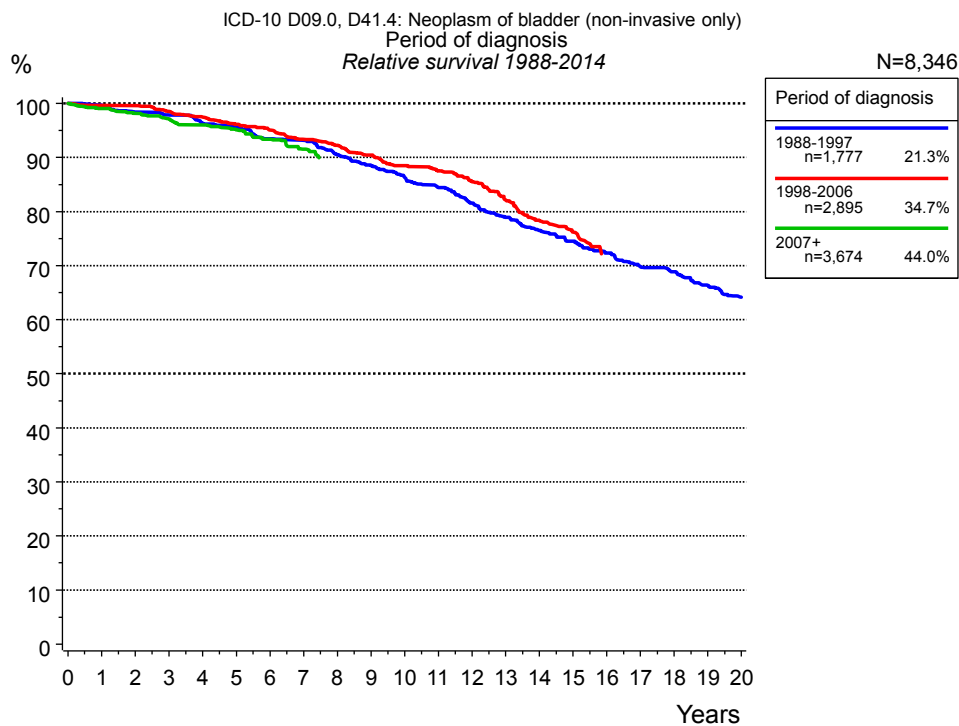
|                   |            |           |
|-------------------|------------|-----------|
| Year of diagnosis | 1988-1997  | 1998-2014 |
| Patients          | 1,998      | 8,633     |
| Diseases          | 1,998      | 8,638     |
| Cases evaluated   | 1,778      | 6,611     |
| Creation date     | 03/02/2016 |           |
| Export date       | 12/23/2015 |           |
| Population        | 4.64 m     |           |



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

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

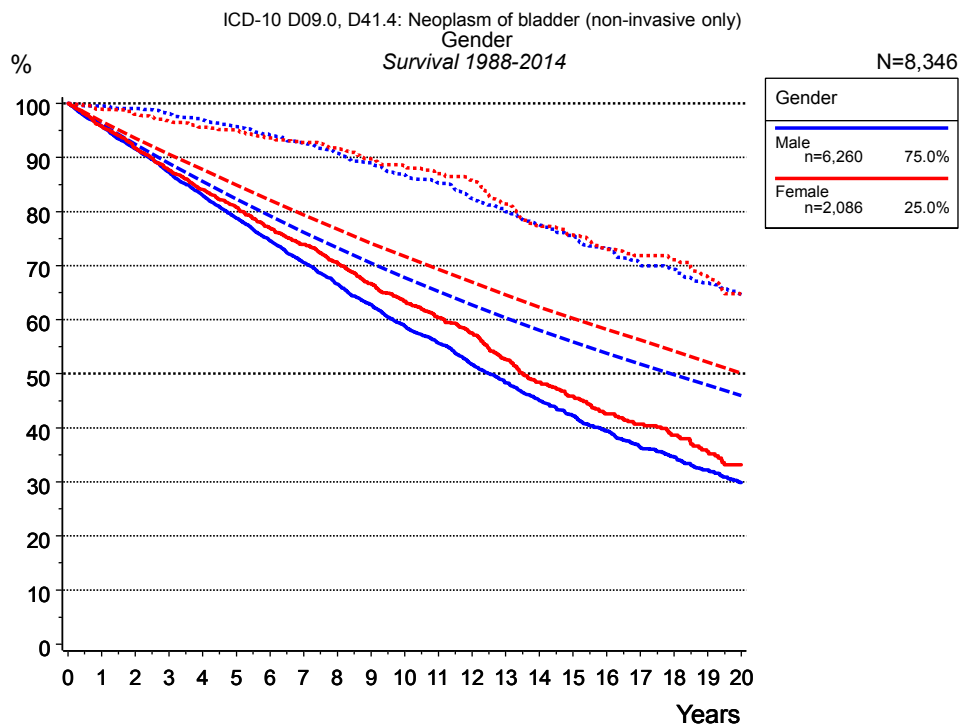


**Figure 1a.** Relative survival of patients with bladder tumor by period of diagnosis. Included in the evaluation are 8,346 cases diagnosed between 1988 and 2014.

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<br>n=1,777 |        | 1998-2006<br>n=2,895 |        | 2007+<br>n=3,674 |        |
|       | 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                 | 99.6   | 95.6             | 99.0   |
| 2     | 90.4                 | 98.4   | 92.7                 | 99.6   | 91.4             | 98.2   |
| 3     | 86.3                 | 97.9   | 88.2                 | 98.5   | 87.3             | 97.1   |
| 4     | 81.6                 | 96.3   | 84.1                 | 97.5   | 83.7             | 96.0   |
| 5     | 77.9                 | 95.7   | 80.0                 | 96.1   | 79.6             | 95.1   |
| 6     | 73.4                 | 93.5   | 76.3                 | 95.0   | 75.4             | 93.4   |
| 7     | 70.2                 | 93.1   | 72.1                 | 93.3   | 71.4             | 91.5   |
| 8     | 65.7                 | 90.6   | 68.7                 | 92.2   |                  |        |
| 9     | 61.9                 | 88.6   | 64.9                 | 90.4   |                  |        |
| 10    | 58.1                 | 86.3   | 61.2                 | 88.5   |                  |        |
| 11    | 54.8                 | 84.5   | 58.2                 | 87.5   |                  |        |
| 12    | 51.1                 | 81.6   | 54.7                 | 85.5   |                  |        |
| 13    | 47.6                 | 78.9   | 50.6                 | 82.1   |                  |        |
| 14    | 44.5                 | 76.5   | 46.4                 | 78.4   |                  |        |
| 15    | 41.9                 | 74.5   | 43.4                 | 76.2   |                  |        |
| 16    | 39.1                 | 72.4   |                      |        |                  |        |
| 17    | 36.3                 | 69.8   |                      |        |                  |        |
| 18    | 34.5                 | 68.9   |                      |        |                  |        |
| 19    | 32.1                 | 66.3   |                      |        |                  |        |
| 20    | 29.7                 | 64.2   |                      |        |                  |        |

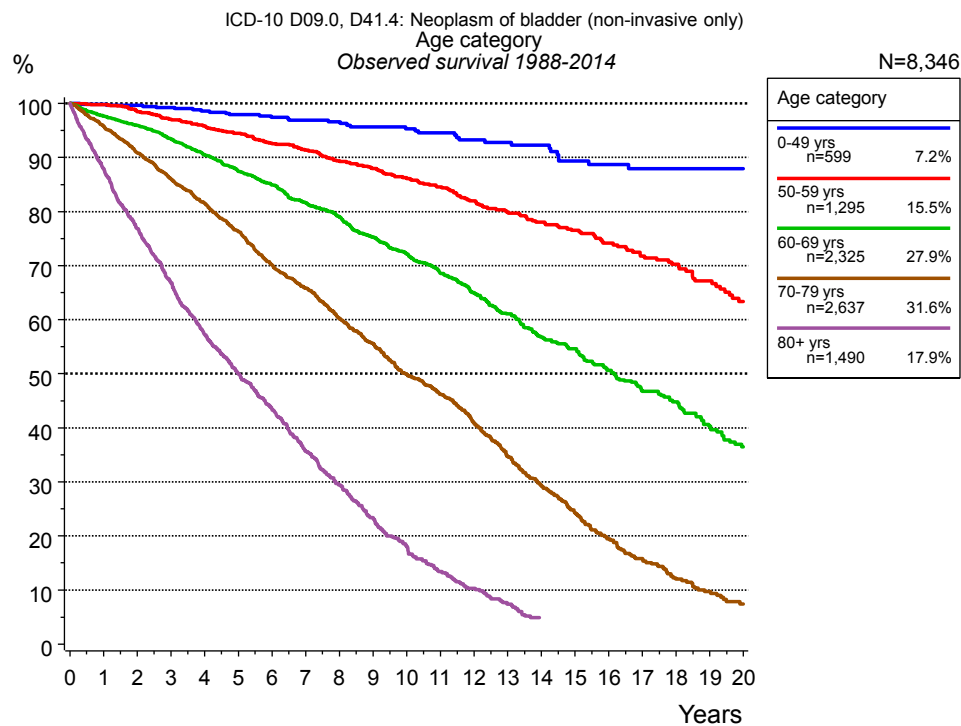
**Table 1b.** Observed (obs.) and relative (rel.) survival of patients with bladder tumor by period of diagnosis for period 1988-2014 (N=8,346).



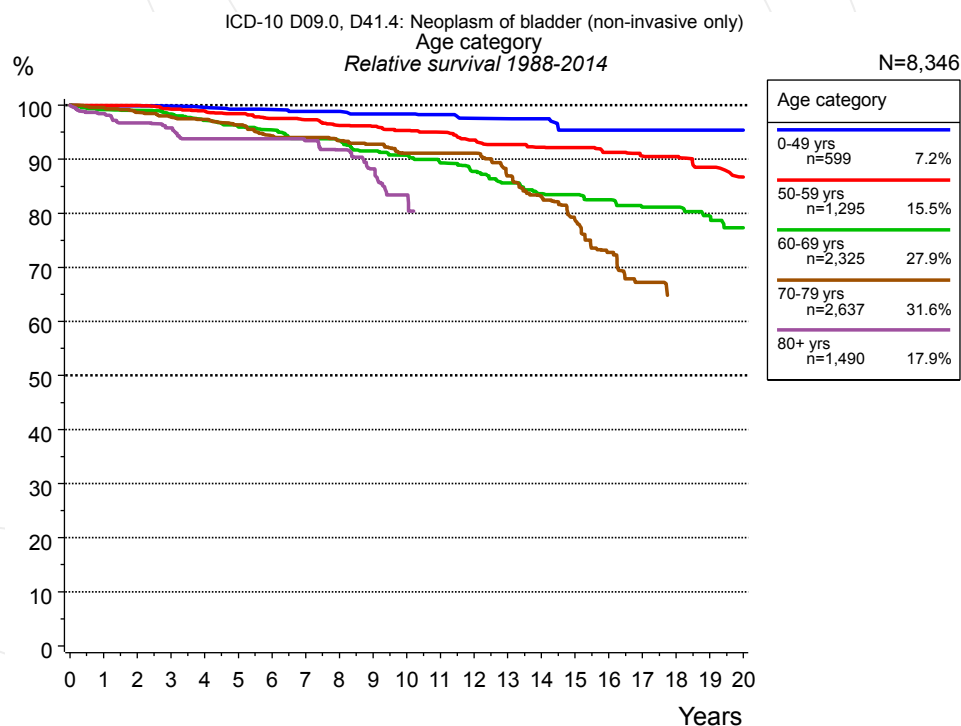
**Figure 2a.** Survival of patients with bladder tumor by gender. Included in the evaluation are 8,346 cases diagnosed between 1988 and 2014.

| Years | Gender          |        |                   |        |
|-------|-----------------|--------|-------------------|--------|
|       | Male<br>n=6,260 |        | Female<br>n=2,086 |        |
|       | obs. %          | rel. % | obs. %            | rel. % |
| 0     | 100.0           | 100.0  | 100.0             | 100.0  |
| 1     | 95.8            | 99.5   | 95.8              | 99.0   |
| 2     | 91.6            | 99.0   | 91.8              | 98.0   |
| 3     | 87.3            | 98.2   | 87.6              | 96.7   |
| 4     | 83.0            | 97.0   | 84.1              | 95.6   |
| 5     | 78.8            | 95.7   | 80.7              | 95.1   |
| 6     | 74.6            | 94.2   | 77.0              | 93.6   |
| 7     | 70.6            | 92.6   | 73.9              | 92.8   |
| 8     | 66.6            | 90.7   | 70.4              | 91.8   |
| 9     | 62.8            | 89.0   | 66.6              | 89.7   |
| 10    | 58.8            | 86.7   | 63.4              | 88.4   |
| 11    | 55.7            | 85.3   | 60.4              | 87.0   |
| 12    | 51.7            | 82.4   | 57.6              | 85.8   |
| 13    | 48.3            | 80.0   | 52.7              | 81.4   |
| 14    | 45.1            | 77.5   | 48.4              | 77.4   |
| 15    | 42.2            | 75.5   | 45.8              | 75.7   |
| 16    | 39.4            | 73.1   | 42.6              | 73.0   |
| 17    | 36.4            | 70.2   | 40.7              | 71.9   |
| 18    | 34.6            | 69.3   | 38.6              | 71.1   |
| 19    | 32.2            | 66.8   | 35.6              | 67.8   |
| 20    | 29.9            | 64.6   | 33.2              | 64.9   |

**Table 2b.** Observed (obs.) and relative (rel.) survival of patients with bladder tumor by gender for period 1988-2014 (N=8,346).



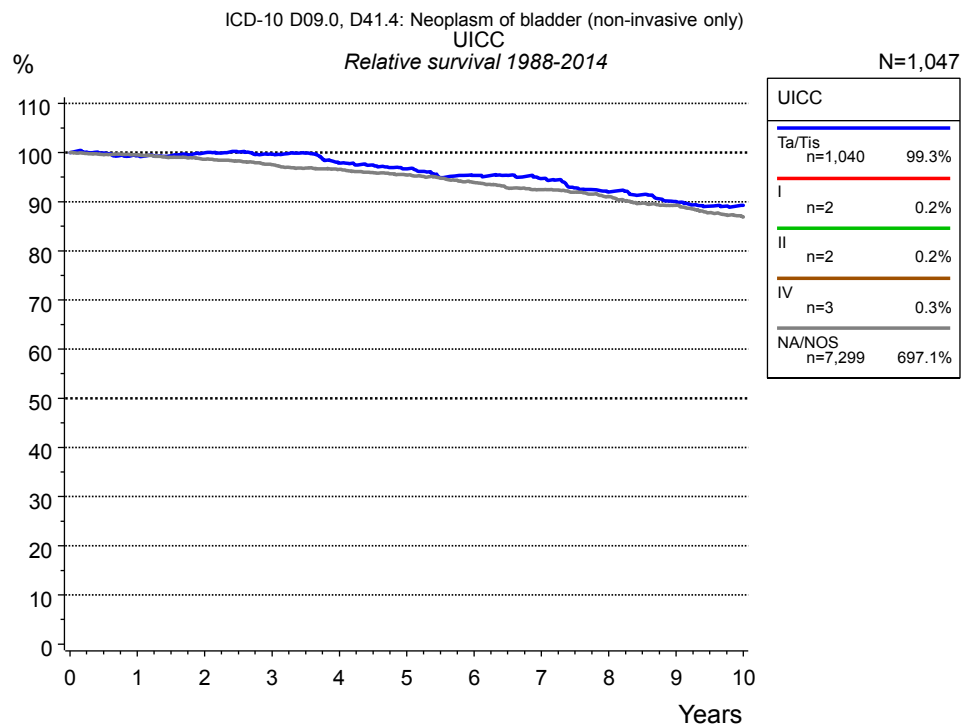
**Figure 3a.** Observed survival of patients with bladder tumor by age category. Included in the evaluation are 8,346 cases diagnosed between 1988 and 2014.



**Figure 3b.** Relative survival of patients with bladder tumor by age category. Included in the evaluation are 8,346 cases diagnosed between 1988 and 2014.

| Years | Age category      |        |                      |        |                      |        |                      |        |                    |        |
|-------|-------------------|--------|----------------------|--------|----------------------|--------|----------------------|--------|--------------------|--------|
|       | 0-49 yrs<br>n=599 |        | 50-59 yrs<br>n=1,295 |        | 60-69 yrs<br>n=2,325 |        | 70-79 yrs<br>n=2,637 |        | 80+ yrs<br>n=1,490 |        |
|       | 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   | 99.8                 | 99.9   | 97.6                 | 99.2   | 95.8                 | 99.6   | 87.9               | 98.4   |
| 2     | 99.6              | 99.9   | 98.5                 | 99.9   | 95.9                 | 99.0   | 90.9                 | 98.6   | 76.9               | 96.7   |
| 3     | 99.2              | 99.9   | 97.1                 | 99.2   | 93.4                 | 98.3   | 86.0                 | 97.8   | 66.8               | 95.8   |
| 4     | 98.6              | 99.6   | 95.8                 | 98.9   | 90.5                 | 97.2   | 81.6                 | 97.4   | 57.3               | 93.8   |
| 5     | 97.9              | 99.2   | 94.5                 | 98.4   | 87.5                 | 96.0   | 76.3                 | 96.4   | 50.0               | 93.8   |
| 6     | 97.4              | 99.2   | 92.5                 | 97.5   | 84.9                 | 95.4   | 70.1                 | 94.3   | 43.5               | 93.8   |
| 7     | 96.9              | 98.8   | 91.3                 | 97.3   | 81.6                 | 93.8   | 65.8                 | 94.0   | 35.7               | 93.4   |
| 8     | 96.6              | 98.8   | 89.4                 | 96.3   | 79.0                 | 93.5   | 60.2                 | 93.4   | 29.4               | 91.7   |
| 9     | 95.6              | 98.4   | 88.0                 | 96.1   | 75.3                 | 91.5   | 55.5                 | 92.8   | 23.4               | 88.2   |
| 10    | 95.3              | 98.4   | 86.1                 | 95.3   | 72.1                 | 90.7   | 49.9                 | 91.1   | 18.0               | 83.4   |
| 11    | 94.5              | 98.2   | 84.6                 | 95.0   | 68.6                 | 89.3   | 46.2                 | 91.1   |                    |        |
| 12    | 93.3              | 97.6   | 82.0                 | 93.5   | 65.0                 | 87.8   | 40.9                 | 91.1   |                    |        |
| 13    | 92.8              | 97.5   | 79.9                 | 92.7   | 61.0                 | 85.6   | 34.7                 | 86.9   |                    |        |
| 14    | 92.2              | 97.5   | 78.0                 | 92.2   | 56.8                 | 83.6   | 29.3                 | 83.1   |                    |        |
| 15    | 89.3              | 95.4   | 76.5                 | 92.1   | 54.6                 | 83.4   | 24.3                 | 78.7   |                    |        |
| 16    | 88.7              | 95.4   | 74.1                 | 91.3   | 50.6                 | 82.5   | 19.5                 | 72.7   |                    |        |
| 17    | 87.9              | 95.4   | 71.8                 | 90.6   | 46.7                 | 81.1   | 15.8                 | 67.2   |                    |        |
| 18    | 87.9              | 95.4   | 70.2                 | 90.5   | 44.8                 | 81.1   |                      |        |                    |        |
| 19    | 87.9              | 95.4   | 67.2                 | 88.5   | 40.3                 | 79.5   |                      |        |                    |        |
| 20    | 87.9              | 95.4   | 63.3                 | 86.7   | 36.5                 | 77.3   |                      |        |                    |        |

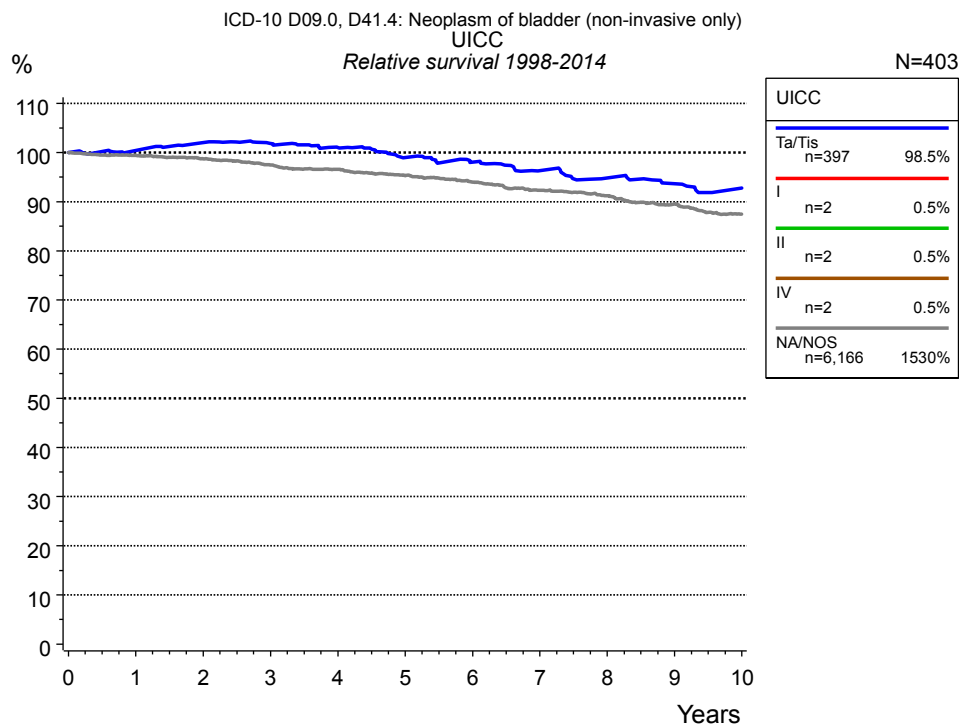
**Table 3c.** Observed (obs.) and relative (rel.) survival of patients with bladder tumor by age category for period 1988-2014 (N=8,346).



**Figure 4a.** Relative survival of patients with bladder tumor by UICC. For 8,210 of 8,346 cases diagnosed between 1988 and 2014 valid data could be obtained for this item. For a total of 1,047 cases an evaluable classification was established. The grey line represents the subgroup of 7,299 patients with missing values regarding UICC (87.5% of 8,346 patients, the percent values of all other categories are related to n=1,047). Subgroups with sample size <15 are dropped from the chart.

| Years | UICC              |        |          |        |           |        |           |        |                   |        |
|-------|-------------------|--------|----------|--------|-----------|--------|-----------|--------|-------------------|--------|
|       | Ta/Tis<br>n=1,040 |        | I<br>n=2 |        | II<br>n=2 |        | IV<br>n=3 |        | NA/NOS<br>n=7,299 |        |
|       | 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     | 95.6              | 99.4   |          |        |           |        |           |        | 95.8              | 99.5   |
| 2     | 92.6              | 100.0  |          |        |           |        |           |        | 91.5              | 98.6   |
| 3     | 88.8              | 99.7   |          |        |           |        |           |        | 87.2              | 97.5   |
| 4     | 84.0              | 97.9   |          |        |           |        |           |        | 83.2              | 96.6   |
| 5     | 80.0              | 96.7   |          |        |           |        |           |        | 79.2              | 95.4   |
| 6     | 75.9              | 95.3   |          |        |           |        |           |        | 75.1              | 93.9   |
| 7     | 72.6              | 94.7   |          |        |           |        |           |        | 71.2              | 92.4   |
| 8     | 67.9              | 92.0   |          |        |           |        |           |        | 67.6              | 91.0   |
| 9     | 64.2              | 90.0   |          |        |           |        |           |        | 63.8              | 89.3   |
| 10    | 61.4              | 89.2   |          |        |           |        |           |        | 59.8              | 86.8   |

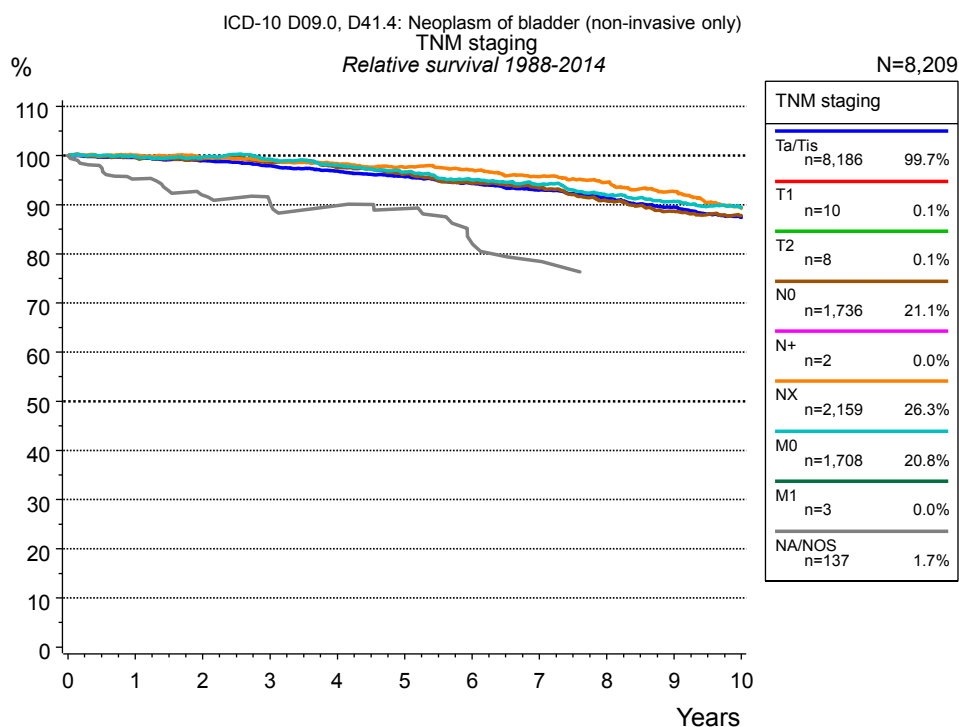
**Table 4b.** Observed (obs.) and relative (rel.) survival of patients with bladder tumor by UICC for period 1988-2014 (N=1,047).



**Figure 4c.** Relative survival of patients with bladder tumor by UICC. For 6,438 of 6,569 cases diagnosed between 1998 and 2014 valid data could be obtained for this item. For a total of 403 cases an evaluable classification was established. The grey line represents the subgroup of 6,166 patients with missing values regarding UICC (93.9% of 6,569 patients, the percent values of all other categories are related to n=403). Subgroups with sample size <15 are dropped from the chart.

| Years | UICC            |        |          |        |           |        |           |        |                   |        |
|-------|-----------------|--------|----------|--------|-----------|--------|-----------|--------|-------------------|--------|
|       | Ta/Tis<br>n=397 |        | I<br>n=2 |        | II<br>n=2 |        | IV<br>n=2 |        | NA/NOS<br>n=6,166 |        |
|       | 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     | 97.2            | 100.4  |          |        |           |        |           |        | 95.8              | 99.4   |
| 2     | 95.7            | 102.0  |          |        |           |        |           |        | 91.8              | 98.7   |
| 3     | 92.3            | 101.9  |          |        |           |        |           |        | 87.4              | 97.5   |
| 4     | 88.5            | 101.0  |          |        |           |        |           |        | 83.5              | 96.6   |
| 5     | 83.6            | 99.0   |          |        |           |        |           |        | 79.4              | 95.3   |
| 6     | 80.0            | 98.1   |          |        |           |        |           |        | 75.6              | 94.0   |
| 7     | 75.8            | 96.3   |          |        |           |        |           |        | 71.5              | 92.3   |
| 8     | 72.1            | 94.8   |          |        |           |        |           |        | 68.1              | 91.2   |
| 9     | 68.7            | 93.7   |          |        |           |        |           |        | 64.4              | 89.5   |
| 10    | 66.0            | 92.8   |          |        |           |        |           |        | 60.5              | 87.5   |

**Table 4d.** Observed (obs.) and relative (rel.) survival of patients with bladder tumor by UICC for period 1998-2014 (N=403).



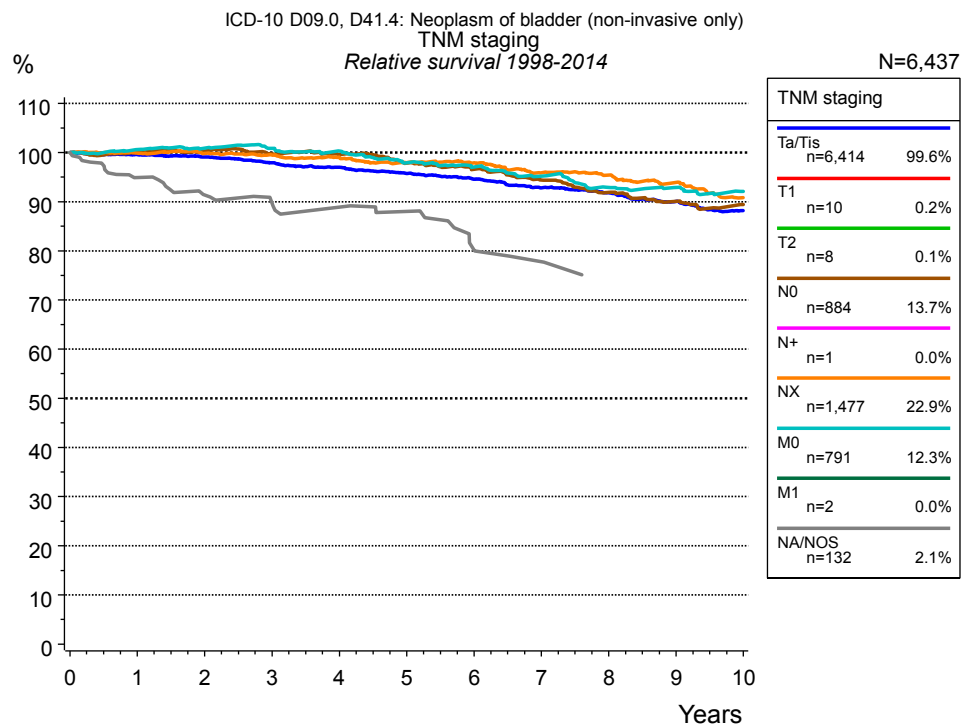
**Figure 4e.** Relative survival of patients with bladder tumor by TNM staging. For 8,210 of 8,346 cases diagnosed between 1988 and 2014 valid data could be obtained for this item. For a total of 8,209 cases an evaluable classification was established. The accumulated percentage exceeds the 100% value because patients are potentially considered in more than one subgroup. The grey line represents the subgroup of 137 patients with missing values regarding TNM staging (1.6 % of 8,346 patients, the percent values of all other categories are related to n=8,209). Subgroups with sample size <15 are dropped from the chart.

| TNM staging |                   |        |            |        |           |        |               |        |           |        |               |        |               |        |
|-------------|-------------------|--------|------------|--------|-----------|--------|---------------|--------|-----------|--------|---------------|--------|---------------|--------|
|             | Ta/Tis<br>n=8,186 |        | T1<br>n=10 |        | T2<br>n=8 |        | N0<br>n=1,736 |        | N+<br>n=2 |        | NX<br>n=2,159 |        | M0<br>n=1,708 |        |
| 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           | 95.9              | 99.6   |            |        |           |        | 96.0          | 99.6   | 100.0     | 89.9   | 96.3          | 100.1  | 96.1          | 99.8   |
| 2           | 91.8              | 98.9   |            |        |           |        | 92.2          | 99.3   | 100.0     | 79.7   | 92.3          | 99.6   | 92.5          | 99.7   |
| 3           | 87.5              | 97.9   |            |        |           |        | 88.2          | 98.6   | 100.0     | 69.6   | 88.5          | 99.1   | 88.7          | 99.2   |
| 4           | 83.4              | 96.8   |            |        |           |        | 84.1          | 97.6   | 100.0     | 59.5   | 84.6          | 98.3   | 84.5          | 98.0   |
| 5           | 79.4              | 95.7   |            |        |           |        | 80.0          | 96.2   |           |        | 80.8          | 97.6   | 80.3          | 96.7   |
| 6           | 75.4              | 94.3   |            |        |           |        | 75.6          | 94.4   |           |        | 77.5          | 97.1   | 76.1          | 95.1   |
| 7           | 71.6              | 93.0   |            |        |           |        | 72.1          | 93.4   |           |        | 73.6          | 95.7   | 72.6          | 94.1   |
| 8           | 67.7              | 91.3   |            |        |           |        | 67.5          | 90.8   |           |        | 70.0          | 94.6   | 68.4          | 92.0   |
| 9           | 63.9              | 89.5   |            |        |           |        | 63.6          | 88.7   |           |        | 66.0          | 92.7   | 65.0          | 90.7   |
| 10          | 60.1              | 87.4   |            |        |           |        | 60.7          | 87.8   |           |        | 61.2          | 89.2   | 61.9          | 89.5   |



| <i>cont'd</i> | TNM staging |        |                 |        |
|---------------|-------------|--------|-----------------|--------|
|               | M1<br>n=3   |        | NA/NOS<br>n=137 |        |
|               | obs. %      | rel. % | obs. %          | rel. % |
| Years         |             |        |                 |        |
| 0             | 100.0       | 100.0  | 100.0           | 100.0  |
| 1             |             |        | 91.9            | 95.2   |
| 2             |             |        | 85.8            | 91.9   |
| 3             |             |        | 81.8            | 90.4   |
| 4             |             |        | 79.3            | 89.8   |
| 5             |             |        | 76.3            | 89.2   |
| 6             |             |        | 68.6            | 82.1   |
| 7             |             |        | 64.1            | 78.5   |
| 8             |             |        | 59.9            | 76.1   |
| 9             |             |        | 59.9            | 75.6   |
| 10            |             |        | 59.9            | 75.0   |

**Table 4f.** Observed (obs.) and relative (rel.) survival of patients with bladder tumor by TNM staging for period 1988-2014 (N=13,812).

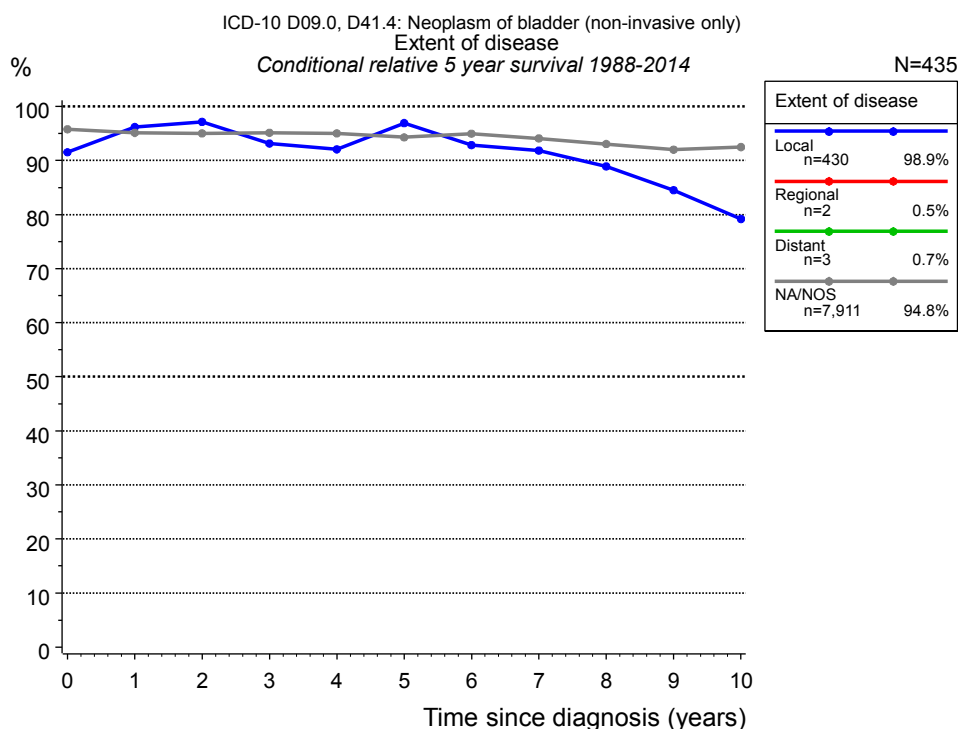


**Figure 4g.** Relative survival of patients with bladder tumor by TNM staging. For 6,438 of 6,569 cases diagnosed between 1998 and 2014 valid data could be obtained for this item. For a total of 6,437 cases an evaluable classification was established. The accumulated percentage exceeds the 100% value because patients are potentially considered in more than one subgroup. The grey line represents the subgroup of 132 patients with missing values regarding TNM staging (2.0 % of 6,569 patients, the percent values of all other categories are related to n=6,437). Subgroups with sample size <15 are dropped from the chart.

| TNM staging |                   |        |            |        |           |        |             |        |           |        |               |        |             |        |
|-------------|-------------------|--------|------------|--------|-----------|--------|-------------|--------|-----------|--------|---------------|--------|-------------|--------|
| Years       | Ta/Tis<br>n=6,414 |        | T1<br>n=10 |        | T2<br>n=8 |        | N0<br>n=884 |        | N+<br>n=1 |        | NX<br>n=1,477 |        | M0<br>n=791 |        |
|             | 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           | 96.0              | 99.6   |            |        |           |        | 96.8        | 99.9   | 100.0     | 75.3   | 96.3          | 99.9   | 97.4        | 100.6  |
| 2           | 92.2              | 99.1   |            |        |           |        | 94.0        | 100.3  | 100.0     | 50.5   | 93.0          | 99.9   | 94.6        | 100.9  |
| 3           | 87.8              | 97.9   |            |        |           |        | 90.5        | 99.7   | 100.0     | 25.8   | 89.4          | 99.5   | 91.6        | 100.8  |
| 4           | 83.9              | 97.0   |            |        |           |        | 87.4        | 99.6   | 100.0     | 1.0    | 85.7          | 99.0   | 88.1        | 100.3  |
| 5           | 79.8              | 95.7   |            |        |           |        | 82.9        | 97.8   |           |        | 81.7          | 97.9   | 83.2        | 97.9   |
| 6           | 76.1              | 94.6   |            |        |           |        | 79.1        | 96.6   |           |        | 78.8          | 97.9   | 79.7        | 97.1   |
| 7           | 72.0              | 92.9   |            |        |           |        | 74.7        | 94.4   |           |        | 74.4          | 95.9   | 75.6        | 95.2   |
| 8           | 68.6              | 91.8   |            |        |           |        | 70.2        | 91.9   |           |        | 71.4          | 95.4   | 71.4        | 92.9   |
| 9           | 64.8              | 90.1   |            |        |           |        | 66.4        | 90.1   |           |        | 67.7          | 93.9   | 68.9        | 92.9   |
| 10          | 61.0              | 88.2   |            |        |           |        | 63.6        | 89.4   |           |        | 62.9          | 90.8   | 66.0        | 92.1   |

| <i>cont'd</i> | TNM staging |        |                 |        |
|---------------|-------------|--------|-----------------|--------|
|               | M1<br>n=2   |        | NA/NOS<br>n=132 |        |
|               | obs. %      | rel. % | obs. %          | rel. % |
| Years         |             |        |                 |        |
| 0             | 100.0       | 100.0  | 100.0           | 100.0  |
| 1             |             |        | 91.6            | 94.9   |
| 2             |             |        | 85.2            | 91.4   |
| 3             |             |        | 81.0            | 89.6   |
| 4             |             |        | 78.4            | 88.9   |
| 5             |             |        | 75.3            | 88.0   |
| 6             |             |        | 67.0            | 80.1   |
| 7             |             |        | 63.7            | 77.8   |

**Table 4h.** Observed (obs.) and relative (rel.) survival of patients with bladder tumor by TNM staging for period 1998-2014 (N=9,587).



**Figure 4i.** Conditional relative 5-year survival of patients with bladder tumor by extent of disease. For 8,210 of 8,346 cases diagnosed between 1988 and 2014 valid data could be obtained for this item. For a total of 435 cases an evaluable classification was established. The grey line represents the subgroup of 7,911 patients with missing values regarding extent of disease (94.8% of 8,346 patients, the percent values of all other categories are related to n=435). Subgroups with sample size <15 are dropped 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     | 430               | 91.5                | 2        |                     | 3       |                     | 7,911  | 95.8                |
| 1     | 371               | 96.2                |          |                     |         |                     | 7,165  | 95.1                |
| 2     | 325               | 97.1                |          |                     |         |                     | 6,446  | 95.0                |
| 3     | 298               | 93.1                |          |                     |         |                     | 5,749  | 95.1                |
| 4     | 263               | 92.1                |          |                     |         |                     | 5,070  | 95.0                |
| 5     | 233               | 96.9                |          |                     |         |                     | 4,461  | 94.3                |
| 6     | 203               | 92.8                |          |                     |         |                     | 3,860  | 95.0                |
| 7     | 178               | 91.9                |          |                     |         |                     | 3,354  | 94.1                |
| 8     | 143               | 88.9                |          |                     |         |                     | 2,816  | 93.0                |
| 9     | 123               | 84.5                |          |                     |         |                     | 2,433  | 92.0                |
| 10    | 110               | 79.2                |          |                     |         |                     | 2,063  | 92.5                |

**Table 4j.** Conditional relative 5-year survival of patients with bladder tumor by extent of disease for period 1988-2014 (N=435).

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 93.1% (n=298).

## 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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