

Munich Cancer Registry



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ICD-10 D06: Ca. i.s. Cervix

Survival

Year of diagnosis	1988-1997	1998-2019
Patients	74	7,995
Diseases	74	7,997
Cases evaluated	64	7,690
Creation date	01/28/2021	
Database export	01/07/2021	
Population (females)	2.48 m	



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

https://www.tumorregister-muenchen.de/en/facts/surv/sD06__E-ICD-10-D06-Ca.-i.s.-Cervix-survival.pdf

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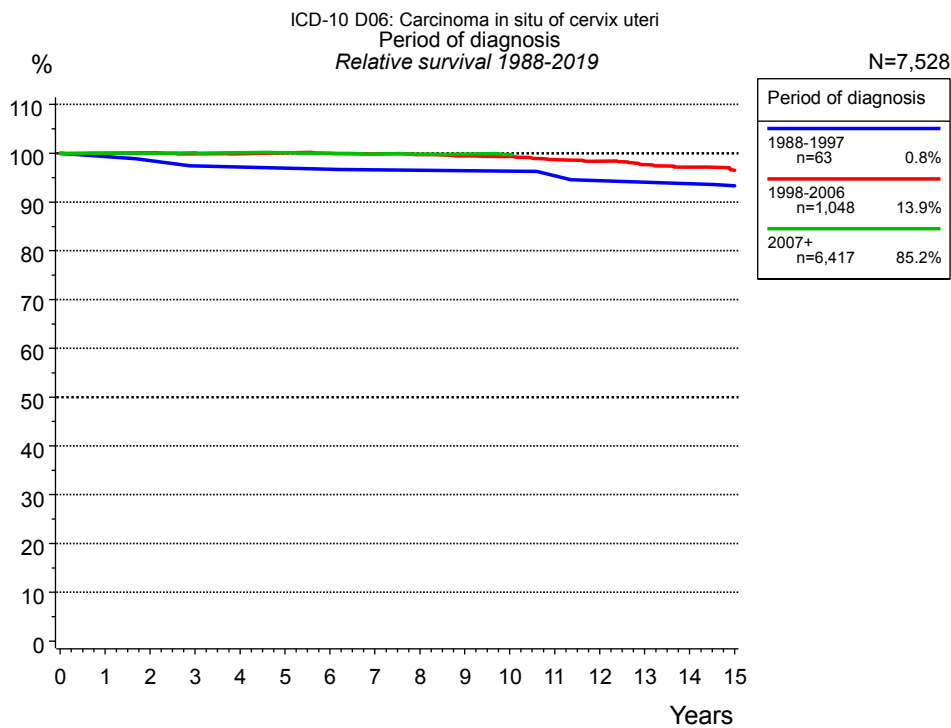


Figure 1a. Relative survival of patients with ca. i.s. Cervix by period of diagnosis. Included in the evaluation are 7,528 cases diagnosed between 1988 and 2019.

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 to , 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=63		1998-2006 n=1,048		2007+ n=6,417	
	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0	100.0	100.0
1	100.0	99.3	99.9	100.0	99.9	100.0
2	98.2	98.5	99.8	100.1	99.8	100.0
3	96.4	97.4	99.3	99.9	99.8	100.1
4	96.4	97.2	99.1	99.9	99.7	100.1
5	96.4	96.9	99.1	100.1	99.5	100.1
6	96.4	96.7	98.7	99.9	99.3	100.0
7	94.6	96.6	98.4	99.9	99.0	99.9
8	94.6	96.5	98.0	99.7	98.8	99.8
9	94.6	96.4	97.5	99.5	98.7	99.8
10	94.6	96.3	97.1	99.3	98.4	99.7
11	92.7	95.4	96.2	98.7		
12	90.7	94.4	95.5	98.4		
13	90.7	94.1	94.5	97.7		
14	90.7	93.8	93.8	97.2		
15	88.7	93.3	92.9	96.6		
Median						

Table 1b. Observed (obs.) and relative (rel.) survival of patients with ca. i.s. Cervix by period of diagnosis for period 1988-2019 (N=7,528).

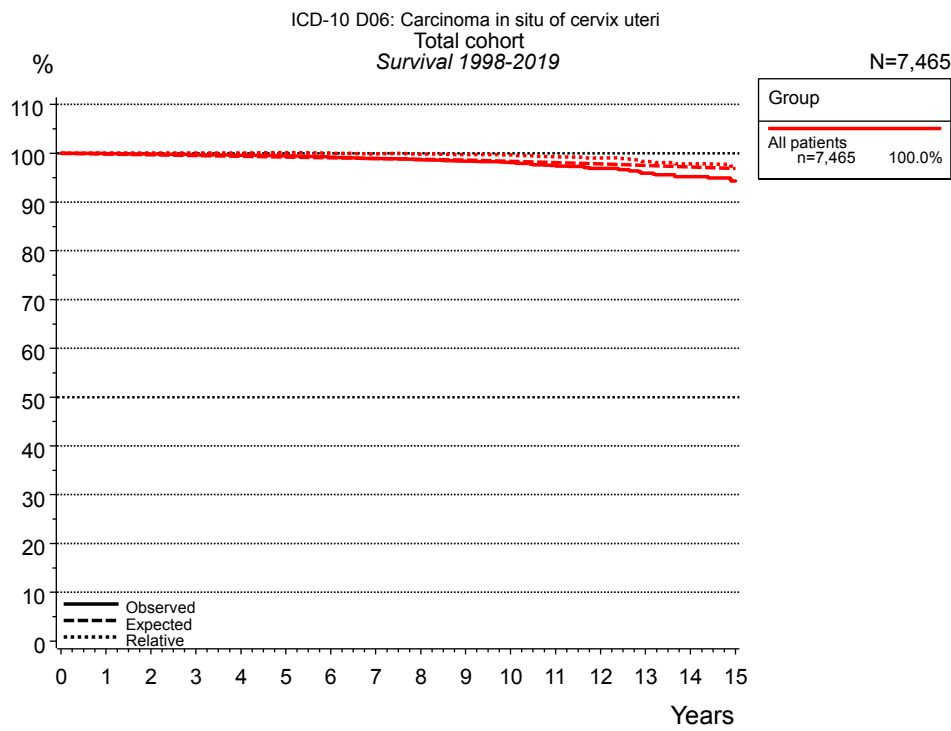


Figure 2a. Observed, expected and relative survival of the total cohort with ca. i.s. Cervix. Included in the evaluation are 7,465 cases diagnosed between 1998 and 2019.

Years	Group	
	obs. %	rel. %
	All patients n=7,465	
0	100.0	100.0
1	99.9	100.0
2	99.8	100.1
3	99.7	100.1
4	99.6	100.1
5	99.5	100.1
6	99.2	100.0
7	98.9	99.9
8	98.6	99.8
9	98.4	99.7
10	98.1	99.6
11	97.5	99.2
12	96.9	99.0
13	95.9	98.3
14	95.2	97.9
15	94.3	97.2
Median		

Table 2b. Observed (obs.) and relative (rel.) survival of the total cohort with ca. i.s. Cervix for period 1998-2019 (N=7,465).

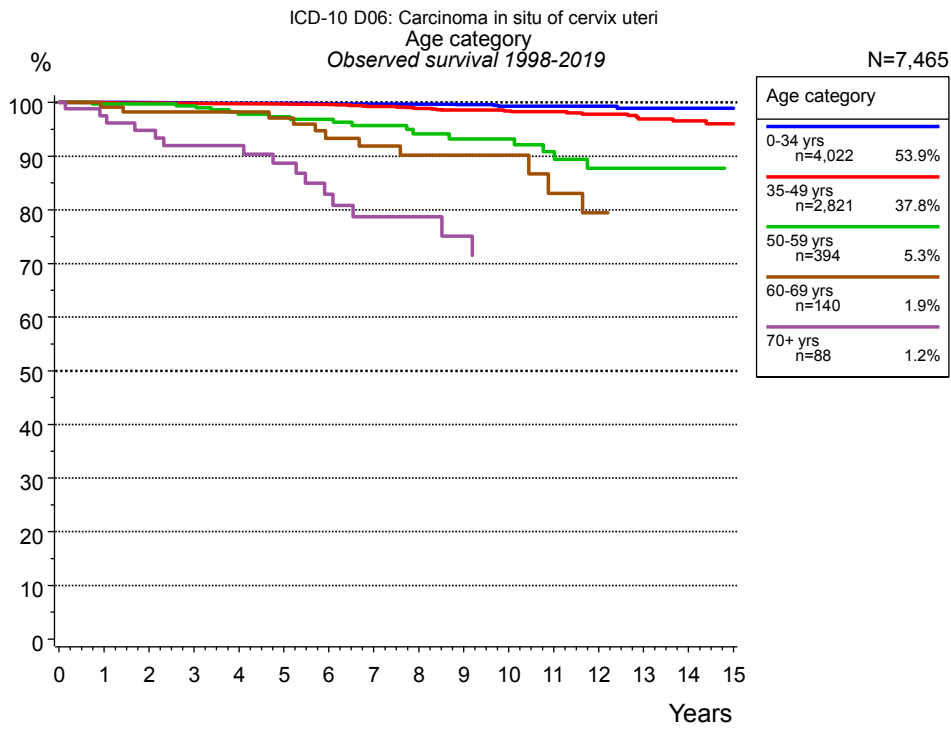


Figure 3a. Observed survival of patients with ca. i.s. Cervix by age category. Included in the evaluation are 7,465 cases diagnosed between 1998 and 2019.

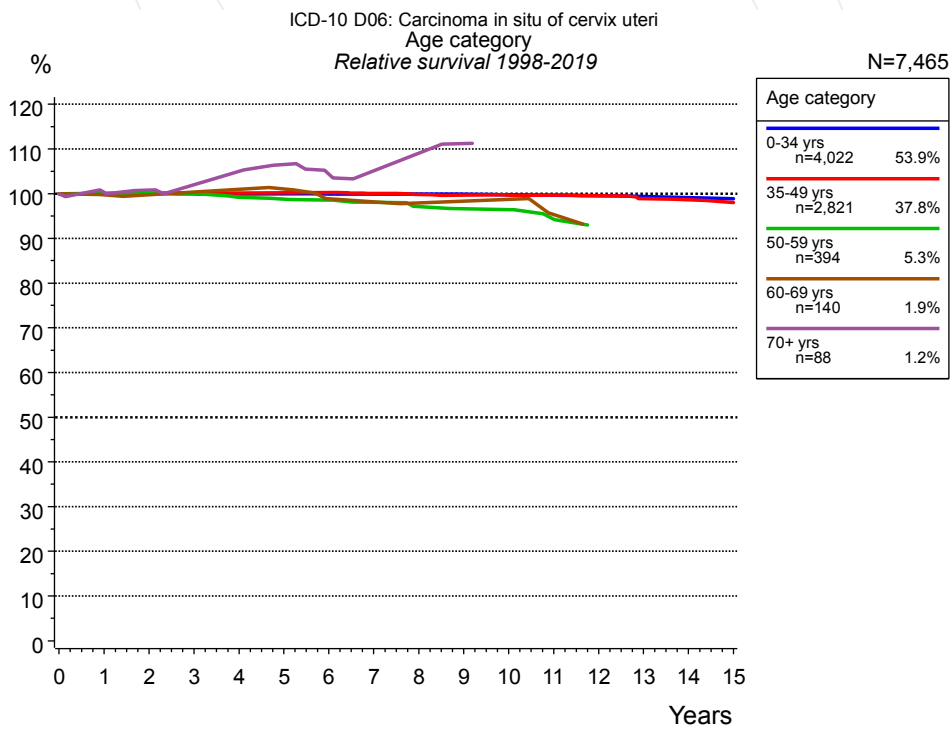


Figure 3b. Relative survival of patients with ca. i.s. Cervix by age category. Included in the evaluation are 7,465 cases diagnosed between 1998 and 2019.

Years	Age category									
	0-34 yrs n=4,022		35-49 yrs n=2,821		50-59 yrs n=394		60-69 yrs n=140		70+ yrs n=88	
	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	100.0	100.0	100.0	100.0	99.7	100.0	99.1	99.8	97.5	100.3
2	100.0	100.0	99.9	100.0	99.7	100.1	98.3	99.7	94.8	100.8
3	99.9	100.0	99.8	100.0	99.4	100.0	98.3	100.4	92.0	102.0
4	99.8	99.9	99.7	100.1	97.8	99.2	98.3	101.0	92.0	105.0
5	99.8	100.0	99.7	100.2	97.4	98.8	97.1	101.0	88.7	106.5
6	99.7	99.9	99.6	100.2	96.9	98.6	93.3	98.9	82.9	104.4
7	99.7	99.9	99.2	100.0	95.7	98.1	91.9	98.2	78.7	105.1
8	99.7	99.9	98.9	99.8	94.2	97.1	90.2	97.9	78.7	109.0
9	99.6	99.9	98.6	99.7	93.2	96.6	90.2	98.3	75.1	111.2
10	99.3	99.7	98.4	99.7	93.2	96.5	90.2	98.7		
11	99.3	99.6	98.3	99.7	90.8	94.3	83.1	95.3		
12	99.3	99.6	97.9	99.5	87.8	92.8	79.5	91.8		
13	99.0	99.4	97.0	98.9	87.8	92.0				
14	99.0	99.2	96.6	98.6	87.8	91.2				
15	99.0	98.9	96.1	98.1						
Median										

Table 3c. Observed (obs.) and relative (rel.) survival of patients with ca. i.s. Cervix by age category for period 1998-2019 (N=7,465).

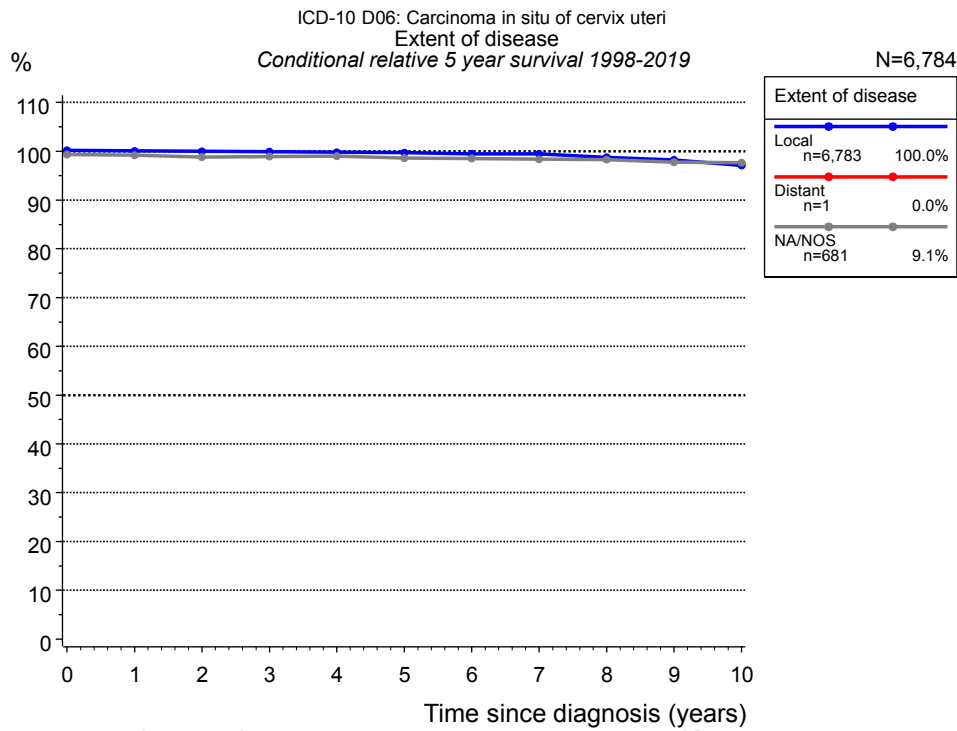


Figure 4c. Conditional relative 5-year survival of patients with ca. i.s. Cervix by extent of disease. For 6,785 of 7,465 cases diagnosed between 1998 and 2019 valid data could be obtained for this item. For a total of 6,784 cases an evaluable classification was established. The grey line represents the subgroup of 681 patients with missing values regarding extent of disease (9.1 % of 7,465 patients, the percent values of all other categories are related to n=6,784). Subgroups with sample size <20 are omitted from the chart.

Years	Extent of disease					
	Local		Distant		NA/NOS	
	n	Cond. surv. % 5 yrs	n	Cond. surv. % 5 yrs	n	Cond. surv. % 5 yrs
0	6,783	100.2	1		681	99.3
1	5,771	100.1			597	99.2
2	5,338	100.0			567	98.8
3	4,840	99.9			539	98.9
4	4,456	99.8			514	99.0
5	3,941	99.7			495	98.6
6	3,256	99.4			467	98.5
7	2,586	99.5			440	98.4
8	2,082	98.8			406	98.3
9	1,552	98.2			367	97.8
10	1,187	97.1			310	97.7

Table 4d. Conditional relative 5-year survival of patients with ca. i.s. Cervix by extent of disease for period 1998-2019 (N=6,784).

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 extent of disease="Local", who are alive at least 3 years after cancer diagnosis, the conditional relative 5-year survival rate is 99.9% (n=4,840).

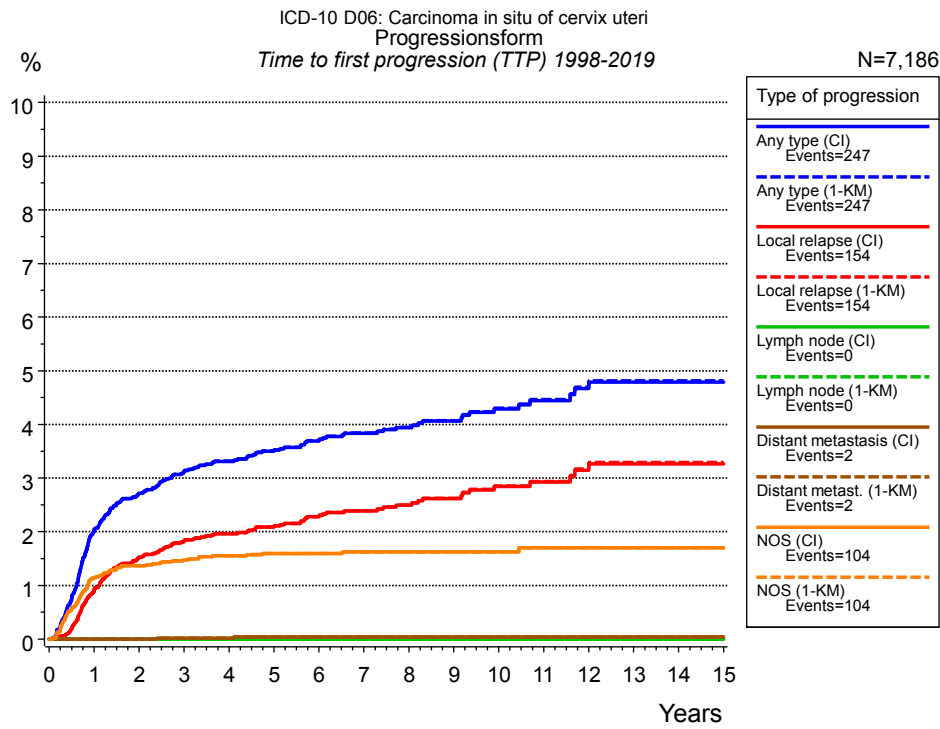


Figure 5a. Time to first progression of 7,186 patients with ca. i.s. Cervix diagnosed between 1998 and 2019 (in solid cancers M0 only) estimated by cumulative incidence function (CI, solid line) accounting for death as competing risk and by inverse Kaplan-Meier estimate (1-KM, dashed line). The frequency of events may be underestimated due to underreporting.

	Type of progression							Distant metastasis (CI)
	Any type (CI)	Any type (1-KM)	Local relapse (CI)	Local relapse (1-KM)	Lymph node (CI)	Lymph node (1-KM)		
N	7,185	7,185	7,186	7,186	7,186	7,186	7,185	
Events	247	247	154	154	0	0	2	
compet.	85		92		96		94	
Years	%	%	%	%	%	%	%	
0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1	2.0	2.0	0.9	0.9	0.0	0.0	0.0	0.0
2	2.7	2.7	1.5	1.5	0.0	0.0	0.0	0.0
3	3.1	3.1	1.8	1.8	0.0	0.0	0.0	0.0
4	3.3	3.3	2.0	2.0	0.0	0.0	0.0	0.0
5	3.5	3.5	2.1	2.1	0.0	0.0	0.0	0.0
6	3.7	3.7	2.3	2.3	0.0	0.0	0.0	0.0
7	3.8	3.8	2.4	2.4	0.0	0.0	0.0	0.0
8	3.9	3.9	2.5	2.5	0.0	0.0	0.0	0.0
9	4.1	4.1	2.6	2.6	0.0	0.0	0.0	0.0
10	4.3	4.3	2.8	2.9	0.0	0.0	0.0	0.0
11	4.4	4.5	2.9	2.9	0.0	0.0	0.0	0.0
12	4.7	4.7	3.1	3.2	0.0	0.0	0.0	0.0
13	4.8	4.8	3.3	3.3	0.0	0.0	0.0	0.0
14	4.8	4.8	3.3	3.3	0.0	0.0	0.0	0.0
15	4.8	4.8	3.3	3.3	0.0	0.0	0.0	0.0

<i>cont'd</i>	Type of progression		
	Distant metast. (1- KM)	NOS (CI)	NOS (1-KM)
N	7,185	7,186	7,186
Events	2	104	104
compet.		91	
Years	%	%	%
0	0.0	0.0	0.0
1	0.0	1.1	1.1
2	0.0	1.4	1.4
3	0.0	1.5	1.5
4	0.0	1.5	1.6
5	0.0	1.6	1.6
6	0.0	1.6	1.6
7	0.0	1.6	1.6
8	0.0	1.6	1.6
9	0.0	1.6	1.6
10	0.0	1.6	1.6
11	0.0	1.7	1.7
12	0.0	1.7	1.7
13	0.0	1.7	1.7
14	0.0	1.7	1.7
15	0.0	1.7	1.7

Table 5b. Time to first progression of patients with ca. i.s. Cervix for period 1998-2019 (N=7,186), also showing the total of progression events (Events) and of deaths as competing risk (compet.).

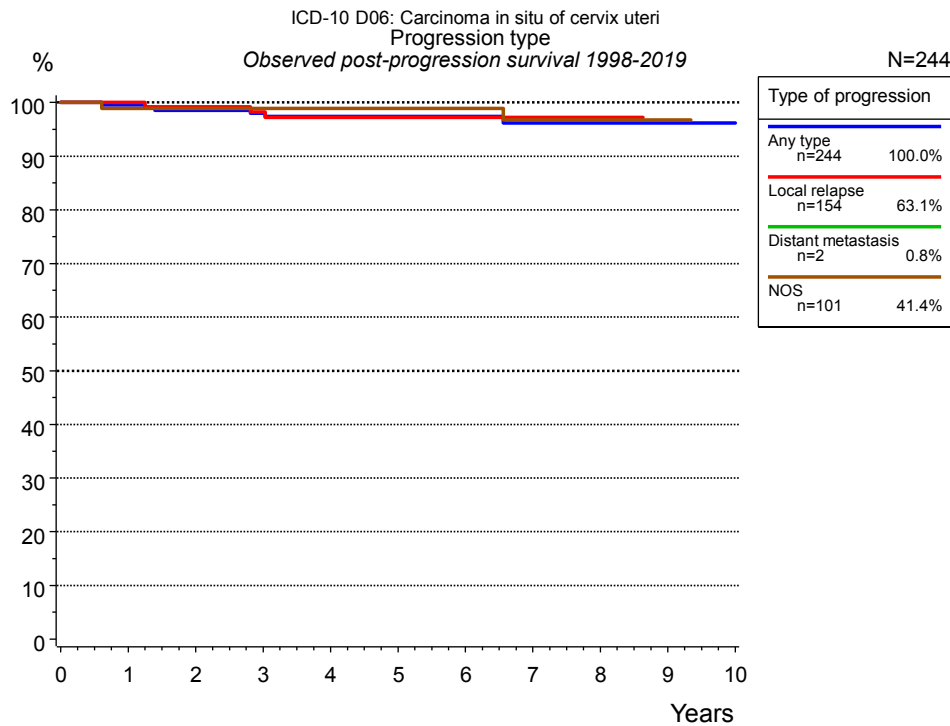


Figure 5c. Observed post-progression survival of 244 patients with ca. i.s. Cervix diagnosed between 1998 and 2019. These 244 patients with documented progression events during their course of disease represent 3.4 % of the totally 7,186 evaluated cases. Patients with cancer relapse documented via death certificates only were excluded (n=4, 0.1 %). 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. Subgroups with sample size <20 are omitted from the chart.

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 “Any type” 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.

Years	Type of progression		
	Any type n=244 %	Local relapse n=154 %	NOS n=101 %
0	100.0	100.0	100.0
1	99.5	100.0	98.9
2	98.5	99.2	98.9
3	98.0	98.3	98.9
4	97.4	97.3	98.9
5	97.4	97.3	98.9
6	97.4	97.3	98.9
7	96.2	97.3	96.8
8	96.2	97.3	96.8
9	96.2	97.3	96.8
10	96.2	97.3	96.8

Table 5d. Observed post-progression survival of patients with ca. i.s. Cervix for period 1998-2019 (N=244).

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

Recommended Citation

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