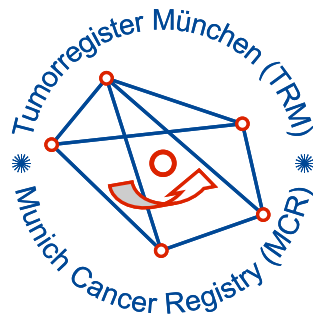


# Munich Cancer Registry



- ▶ Baseline statistics
- ▶ Selection Matrix
- ▶ Homepage
- ▶ *Deutsch*

Munich Cancer Registry at Munich Cancer Center  
Marchioninstr. 15  
Munich, 81377  
Germany

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

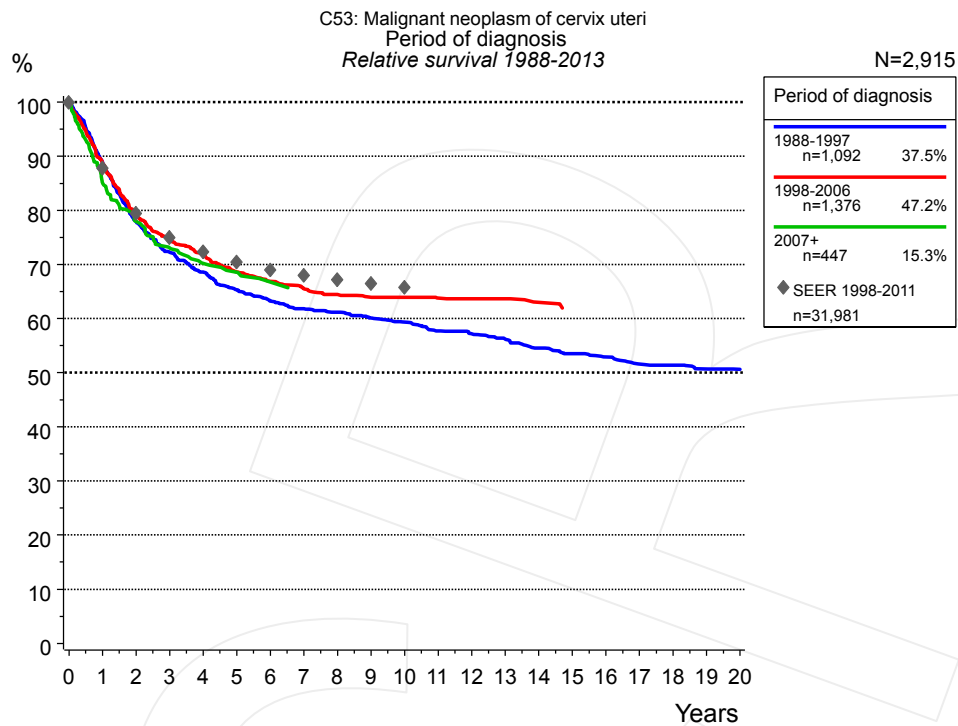
## Cancer statistics: Survival

### C53: Cervical cancer

Year of diagnosis	1988-2013
Patients	4,709
Diseases	4,713
Cases evaluated	2,915
Creation date	05/13/2015
Export date	12/30/2014
Population (females)	2.36 m



[http://www.tumorregister-muenchen.de/en/facts/surv/surv\\_C53\\_\\_E.pdf](http://www.tumorregister-muenchen.de/en/facts/surv/surv_C53__E.pdf)



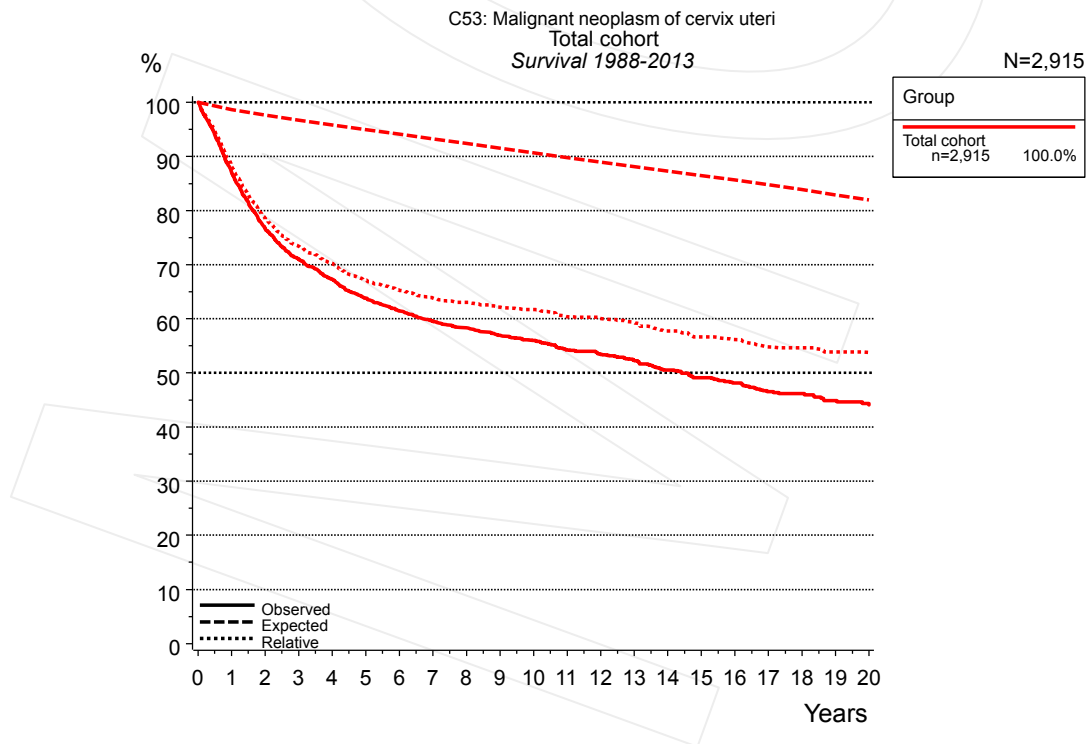
**Figure 1a.** Relative survival of patients with cervical cancer by period of diagnosis. Included in the evaluation are 2,915 cases diagnosed between 1988 and 2013.

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 2011, and are represented by gray 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 n=1,092		1998-2006 n=1,376		2007+ n=447	
	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0	100.0	100.0
1	87.4	88.7	87.5	88.6	84.3	85.0
2	75.7	77.9	77.7	79.3	76.8	78.0
3	69.3	72.3	72.5	74.6	71.5	73.1
4	65.1	68.6	69.4	71.9	68.2	70.2
5	61.2	65.3	65.8	68.7	66.5	68.6
6	58.5	63.3	63.7	66.9	64.6	66.7
7	56.6	61.8	62.0	65.5		
8	55.5	61.2	60.7	64.4		
9	53.8	60.1	59.8	64.0		
10	52.6	59.3	59.6	63.9		
11	50.6	57.7	58.6	63.8		
12	49.7	57.2	58.3	63.7		
13	48.4	56.2	57.9	63.7		
14	46.5	54.6	56.5	63.0		
15	45.2	53.5				
16	44.2	52.9				
17	42.7	51.6				
18	42.3	51.4				
19	41.2	50.7				
20	40.4	50.6				

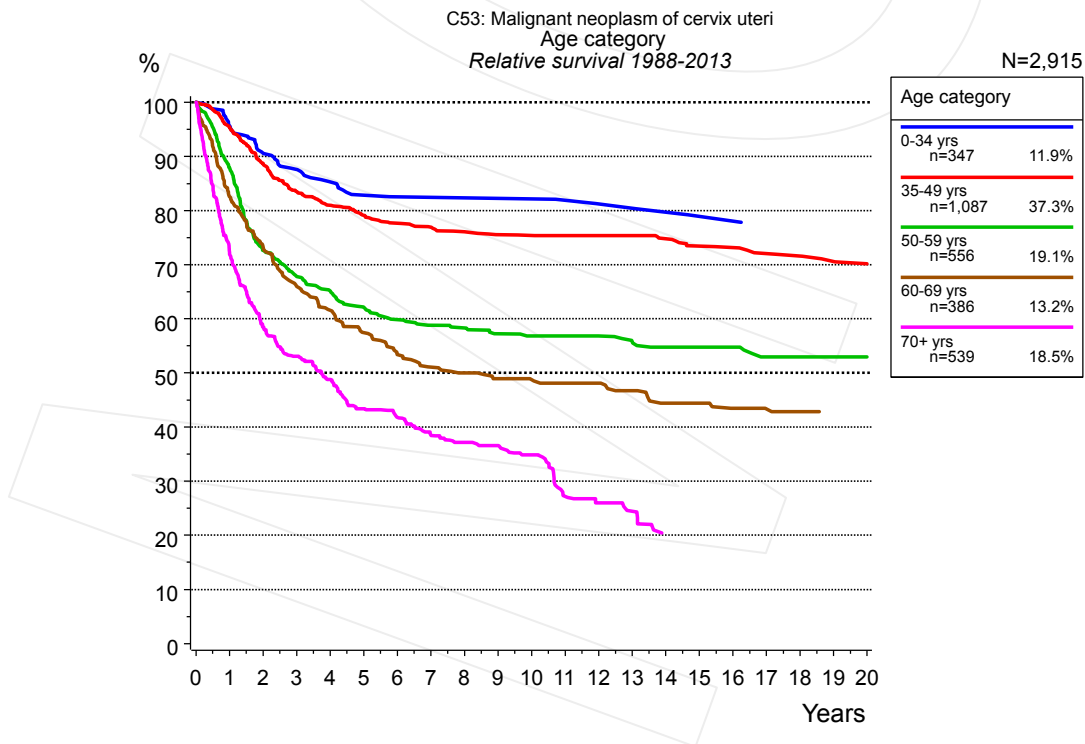
**Table 1b.** Observed (obs.) and relative (rel.) survival of patients with cervical cancer by period of diagnosis for period 1988-2013 (N=2,915).



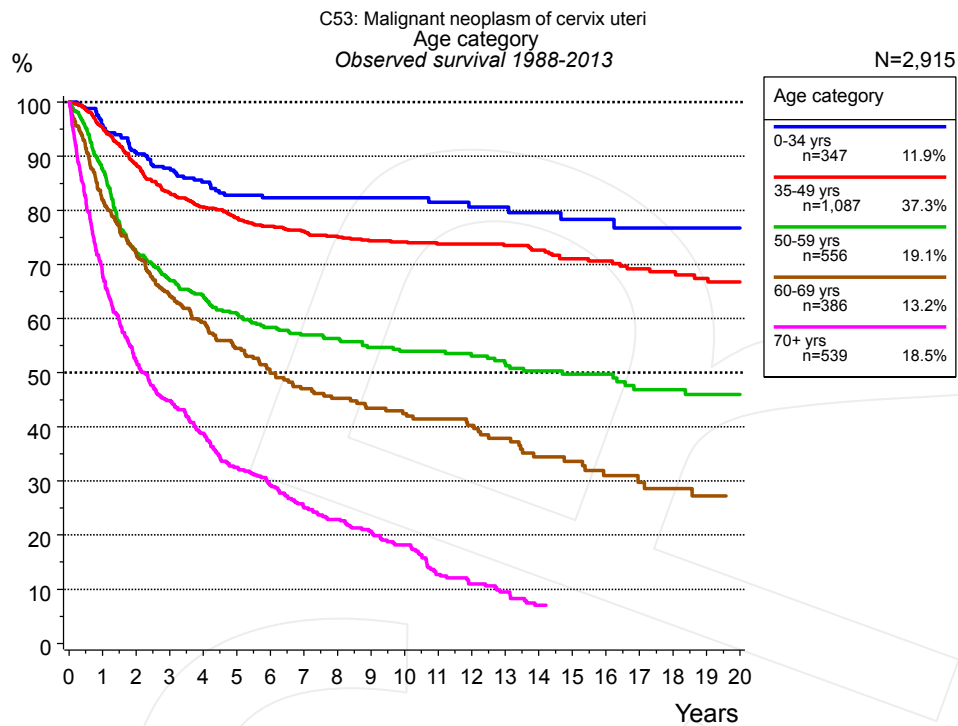
**Figure 2a.** Observed, expected and relative survival of the total cohort with cervical cancer. Included in the evaluation are 2,915 cases diagnosed between 1988 and 2013.

Years	Group	
	obs. %	rel. %
	Total cohort n=2,915	
0	100.0	100.0
1	87.0	88.2
2	76.7	78.6
3	71.0	73.4
4	67.4	70.3
5	63.8	67.2
6	61.4	65.2
7	59.6	63.8
8	58.4	63.0
9	57.0	62.2
10	56.0	61.7
11	54.3	60.4
12	53.4	60.0
13	52.3	59.3
14	50.5	57.8
15	49.1	56.7
16	48.2	56.2
17	46.5	54.8
18	46.2	54.6
19	44.9	53.9
20	44.1	53.8

**Table 2b.** Observed (obs.) and relative (rel.) survival of the total cohort with cervical cancer for period 1988-2013 (N=2,915).



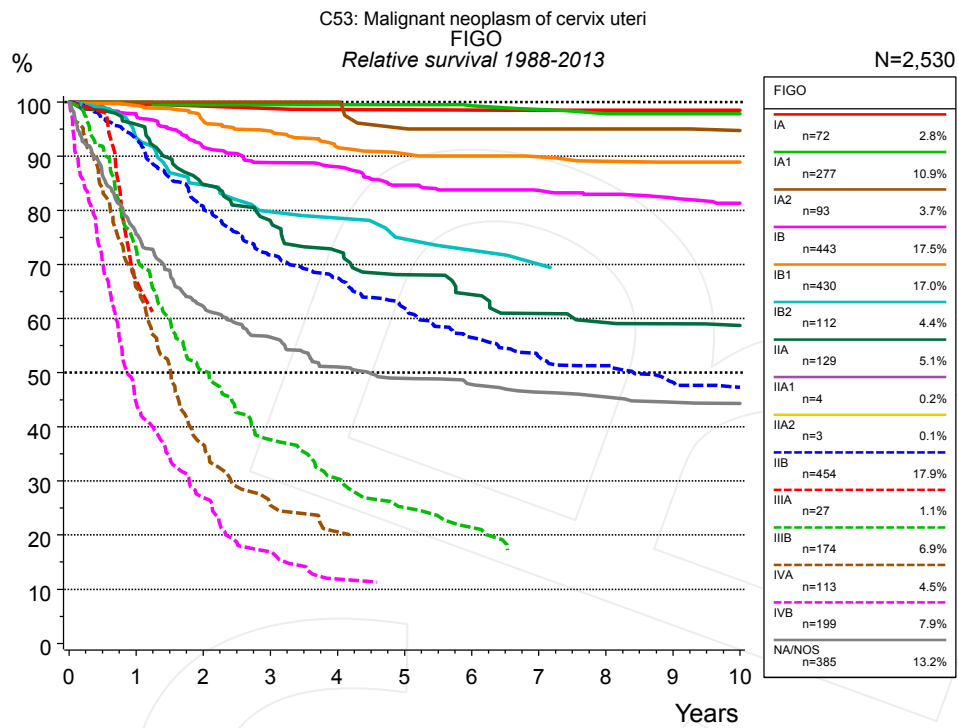
**Figure 3a.** Relative survival of patients with cervical cancer by age category. Included in the evaluation are 2,915 cases diagnosed between 1988 and 2013.



**Figure 3b.** Observed survival of patients with cervical cancer by age category. Included in the evaluation are 2,915 cases diagnosed between 1988 and 2013.

Years	Age category									
	0-34 yrs n=347		35-49 yrs n=1,087		50-59 yrs n=556		60-69 yrs n=386		70+ yrs n=539	
	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	95.8	95.6	95.3	95.3	87.5	87.8	81.9	82.6	67.9	72.1
2	90.8	90.6	88.5	88.7	72.1	72.7	72.2	73.2	52.1	58.5
3	87.8	87.6	83.3	83.5	67.0	67.8	64.1	66.0	44.9	53.1
4	85.2	85.3	80.6	81.0	64.3	65.2	59.3	61.6	38.8	48.8
5	82.8	82.8	78.6	79.1	60.8	62.1	54.5	57.5	32.5	43.4
6	82.3	82.5	77.0	77.7	58.4	59.9	49.9	53.4	29.2	41.8
7	82.3	82.4	76.2	76.9	56.9	58.8	47.0	51.1	25.3	38.5
8	82.3	82.3	75.2	76.1	56.3	58.3	45.3	50.0	22.9	37.1
9	82.3	82.2	74.4	75.6	54.7	57.2	43.4	49.0	20.7	36.6
10	82.3	82.1	74.2	75.4	53.9	56.9	42.5	48.8	18.2	34.9
11	81.5	81.9	73.8	75.4	53.9	56.9	41.5	48.2	12.7	27.2
12	80.6	81.2	73.8	75.4	53.1	56.9	40.3	48.2	11.0	26.0
13	80.6	80.4	73.5	75.4	51.8	55.8	37.9	46.7	9.5	24.5
14	79.6	79.7	72.6	74.8	50.3	54.8	34.5	44.5	7.0	20.3
15	78.3	78.9	71.0	73.4	49.7	54.8	33.7	44.5		
16	78.3	78.0	70.6	73.2	49.7	54.8	31.0	43.5		
17	76.7	77.2	69.2	72.1	46.9	53.0	29.8	43.4		
18	76.7	76.3	68.7	71.6	46.9	53.0	28.6	42.8		
19	76.7	75.5	67.4	70.6	46.0	53.0	27.2	42.8		
20	76.7	74.7	66.8	70.2	46.0	53.0				

**Table 3c.** Observed (obs.) and relative (rel.) survival of patients with cervical cancer by age category for period 1988-2013 (N=2,915).



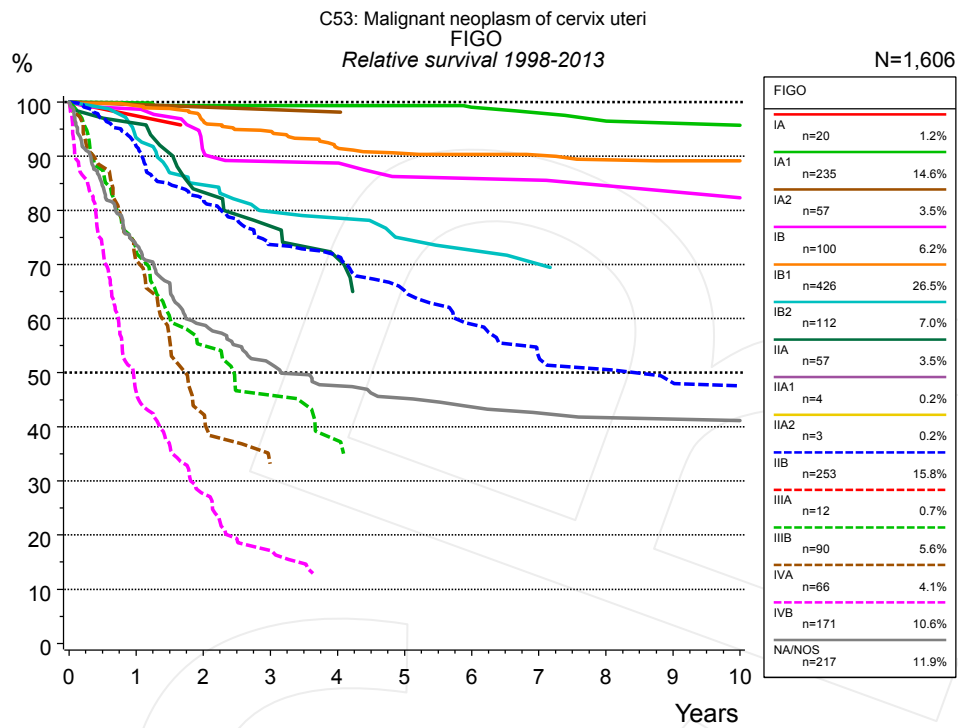
**Figure 4a.** Relative survival of patients with cervical cancer by FIGO. For 2,711 of 2,915 cases diagnosed between 1988 and 2013 valid data could be obtained for this item. For a total of 2,530 cases an evaluable classification was established. The grey line represents the subgroup of 385 patients with missing values regarding FIGO (13.2% of 2,915 patients, the percent values of all other categories are related to n=2,530). Subgroups with sample size <15 are dropped from the chart.

Years	FIGO													
	IA n=72		IA1 n=277		IA2 n=93		IB n=443		IB1 n=430		IB2 n=112		IIA n=129	
	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	100.0	99.6	100.0	99.9	100.0	100.0	97.1	97.8	99.3	99.4	92.5	93.5	94.5	95.9
2	98.6	99.2	99.2	99.5	100.0	100.0	90.3	91.7	95.8	96.5	83.6	84.7	82.2	84.8
3	98.6	98.8	99.2	99.5	100.0	100.0	86.8	88.8	93.8	94.6	77.9	79.7	74.5	78.1
4	97.1	98.6	99.2	99.5	100.0	100.0	85.5	88.0	90.4	91.7	76.6	78.6	68.4	72.5
5	97.1	98.5	98.7	99.5	94.2	95.1	81.5	84.7	89.0	90.4	71.8	74.7	62.9	68.1
6	97.1	98.5	97.4	99.3	92.7	95.0	80.0	83.8	88.1	90.0	70.1	72.6	58.9	64.4
7	95.4	98.5	96.7	98.6	92.7	95.0	79.5	83.7	87.5	89.9	67.9	70.1	54.7	61.0
8	95.4	98.5	96.0	97.9	92.7	95.0	78.1	83.0	86.2	89.1	65.5	68.7	52.5	59.2
9	95.4	98.5	95.1	97.8	92.7	95.0	76.8	82.3	85.3	88.9	65.5	67.8	51.4	59.0
10	95.4	98.5	95.1	97.8	90.3	94.7	75.4	81.3	85.3	88.9	65.5	66.9	50.2	58.7

<i>cont'd</i>	FIGO													
	IIA1 n=4		IIA2 n=3		IIB n=454		IIIA n=27		IIIB n=174		IVA n=113		IVB n=199	
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					91.6	93.2	66.7	67.0	71.3	72.8	64.3	65.8	44.2	44.5
2					78.3	80.7			48.7	50.4	35.7	36.7	26.5	26.9
3					68.4	71.7			35.8	37.6	23.6	25.5	17.0	16.9
4					63.5	67.5			28.9	30.4	19.1	20.6	11.7	11.9
5					57.2	61.9			23.2	25.1				
6					51.3	56.5			19.7	21.4				
7					47.5	53.0			15.2	17.1				
8					45.4	51.3			15.2	16.9				
9					41.9	48.2			15.2	16.7				
10					40.3	47.3								

<i>cont'd</i>	FIGO NA/NOS n=385	
	Years	obs. % rel. %
0	100.0	100.0
1	73.7	75.7
2	59.5	62.3
3	53.4	56.6
4	47.6	51.1
5	44.9	49.0
6	43.3	47.8
7	41.4	46.4
8	40.3	45.5
9	38.7	44.6
10	38.3	44.3

**Table 4b.** Observed (obs.) and relative (rel.) survival of patients with cervical cancer by FIGO for period 1988-2013 (N=2,530).



**Figure 4c.** Relative survival of patients with cervical cancer by FIGO. For 1,695 of 1,823 cases diagnosed between 1998 and 2013 valid data could be obtained for this item. For a total of 1,606 cases an evaluable classification was established. The grey line represents the subgroup of 217 patients with missing values regarding FIGO (11.9% of 1,823 patients, the percent values of all other categories are related to n=1,606). Subgroups with sample size <15 are dropped from the chart.

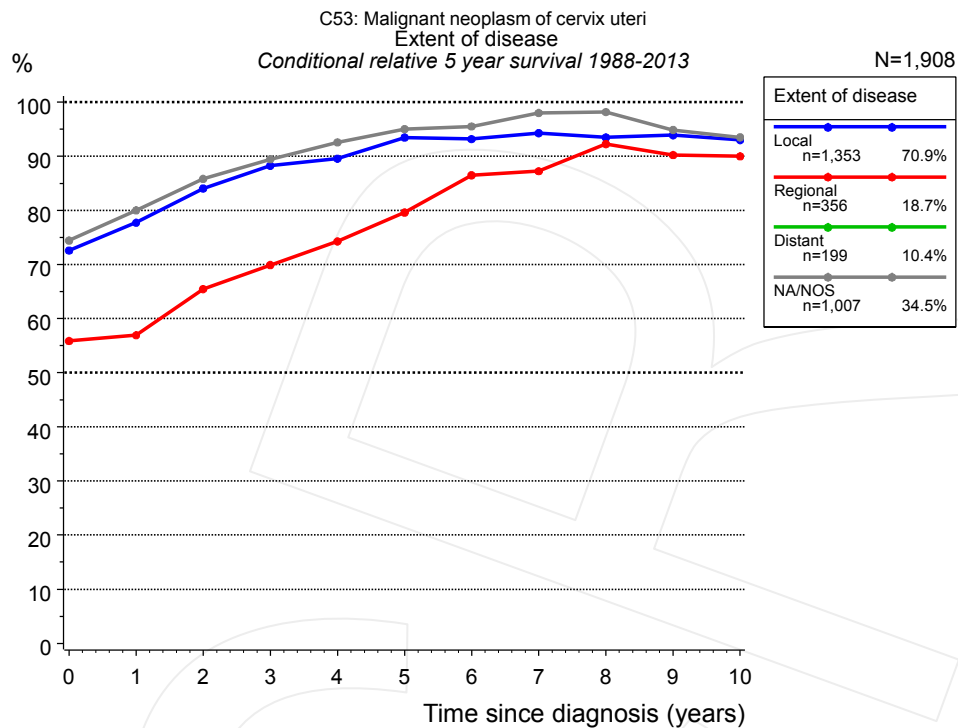
Years	FIGO															
	IA n=20		IA1 n=235		IA2 n=57		IB n=100		IB1 n=426		IB2 n=112		IIA n=57			
	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %		
0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
1	100.0	97.4	100.0	99.9	100.0	99.5	99.0	98.7	99.3	99.3	92.5	93.5	96.5	96.1		
2			99.1	99.4	100.0	99.1	90.2	90.9	95.8	96.5	83.6	84.7	82.4	83.3		
3			99.1	99.4	100.0	98.6	87.8	89.0	93.7	94.6	77.9	79.7	75.9	77.1		
4			99.1	99.4	100.0	98.2	87.8	88.7	90.3	91.6	76.6	78.6	69.2	71.1		
5			99.1	99.4			83.4	86.2	88.8	90.5	71.8	74.7	61.9	64.7		
6			97.4	99.1			83.4	85.9	88.4	90.3	70.1	72.6	61.9	64.3		
7			96.5	98.0			83.4	85.6	87.8	90.2	67.9	70.1	61.9	63.9		
8			95.4	96.5			81.4	84.6	86.4	89.3	65.5	68.7				
9			94.1	96.1			78.8	83.5	85.5	89.1	65.5	67.8				
10			94.1	95.7			78.8	82.3	85.5	89.1	65.5	66.9				



<i>cont'd</i>	FIGO													
	IIA1 n=4		IIA2 n=3		IIB n=253		IIIA n=12		IIIB n=90		IVA n=66		IVB n=171	
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					90.4	91.9			71.7	72.7	69.3	70.8	46.3	46.6
2					80.3	82.2			53.7	55.0	42.2	42.3	27.3	27.7
3					70.8	73.6			45.0	45.9	30.9	33.1	17.4	17.1
4					68.4	71.5			37.2	37.5				
5					61.2	65.1								
6					55.0	59.0								
7					49.1	52.9								
8					47.0	50.6								
9					44.4	48.1								
10					43.0	47.6								

<i>cont'd</i>	FIGO NA/NOS n=217	
	obs. %	rel. %
Years		
0	100.0	100.0
1	71.3	73.6
2	56.2	58.8
3	48.8	51.7
4	44.2	47.6
5	41.8	45.3
6	39.7	43.7
7	38.2	42.6
8	37.2	41.7
9	37.2	41.4
10	37.2	41.1

**Table 4d.** Observed (obs.) and relative (rel.) survival of patients with cervical cancer by FIGO for period 1998-2013 (N=1,606).

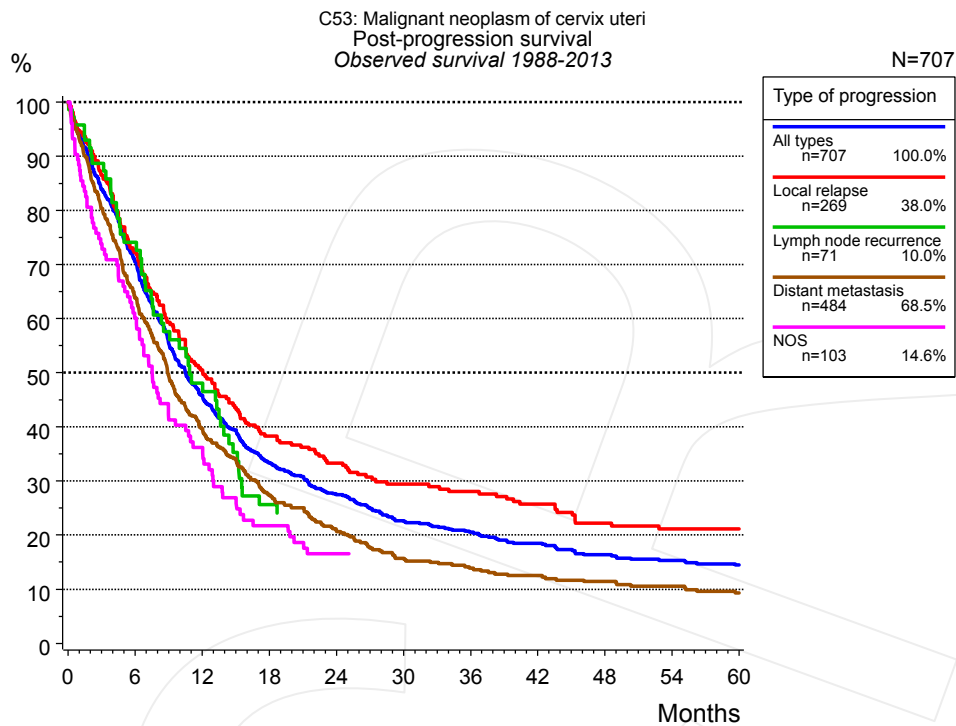


**Figure 4e.** Conditional relative 5-year survival of patients with cervical cancer by extent of disease. For 2,711 of 2,915 cases diagnosed between 1988 and 2013 valid data could be obtained for this item. For a total of 1,908 cases an evaluable classification was established. The grey line represents the subgroup of 1,007 patients with missing values regarding extent of disease (34.5% of 2,915 patients, the percent values of all other categories are related to n=1,908).

Years	Extent of disease							
	Local	Regional	Distant	NA/NOS				
	n	Cond. surv. % 5 yrs	n	Cond. surv. % 5 yrs				
0	1,353	72.6	356	55.9	199	74.4	1,007	74.4
1	1,172	77.7	305	56.9			862	80.0
2	992	84.0	232	65.5			726	85.8
3	868	88.3	182	69.9			643	89.5
4	775	89.6	153	74.3			572	92.6
5	678	93.5	133	79.6			507	95.0
6	616	93.2	112	86.5			449	95.5
7	555	94.3	95	87.2			394	98.0
8	520	93.5	83	92.3			340	98.2
9	484	93.9	75	90.2			300	94.9
10	450	93.0	69	90.0			252	93.5

**Table 4f.** Conditional relative 5-year survival of patients with cervical cancer by extent of disease for period 1988-2013 (N=1,908).

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 4c). 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 88.3% (n=868).



**Figure 5a.** Observed post-progression survival of 707 patients with cervical cancer diagnosed between 1988 and 2013 (incl. M1). These 707 patients with documented progression events during their course of disease represent 24.3% of the totally 2,915 evaluated cases. Patients with cancer relapse documented via death certificates only were excluded (n=165, 5.7%). 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.

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=707	Local relapse n=269	Lymph node recurrence n=71	Distant metastasis n=484	NOS n=103
	%	%	%	%	%
0	100.0	100.0	100.0	100.0	100.0
12	45.8	50.5	48.1	39.7	36.2
24	27.5	33.3		20.9	16.5
36	20.5	28.1		13.9	
48	16.4	22.2		11.4	
60	14.5	21.1		9.3	

**Table 5b.** Observed post-progression survival of patients with cervical cancer for period 1988-2013 (N=707).

**Shortcuts**

MCR	Munich Cancer Registry, Germany (Tumorregister München)
NCI	National Cancer Institute, USA
SEER	Surveillance, Epidemiology, and End Results, USA
UICC	Union for International Cancer Control, Geneva
DCO	Death certificate only. The death certificate provides the only notification to the registry.
NA	Not available
NOS	Not otherwise specified
OS	Observed/overall survival (Kaplan-Meier estimate)
RS	Relative survival, compared to the general population, ratio of observed to expected survival (Ederer II method), reflecting excess mortality among cancer patients
AS	Assembled survival chart (observed, expected, relative)
PPS	Post-progression survival, survival since first relapse (Kaplan-Meier estimate)
progression	Date of entry: Date of first locoregional recurrence, distant metastasis, unspecified
	Event: Death of all causes
CS	Conditional survival, survival probability under the condition of surviving a given period of time

**Recommended Citation**

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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 of total cohort (chart)	3
2b	Survival of total cohort (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 FIGO 1988+ (chart)	6
4b	Survival by FIGO 1988+ (table)	6
4c	Relative survival by FIGO 1998+ (chart)	8
4d	Survival by FIGO 1998+ (table)	8
4e	Conditional survival by extent of disease (chart)	10
4f	Conditional survival by extent of disease (table)	10
5a	Observed post-progression survival (chart)	11
5b	Observed post-progression survival (table)	11