# **Munich Cancer Registry**



- ▶ Baseline statistics
- ▶ Selection Matrix
- ▶ Homepage

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

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

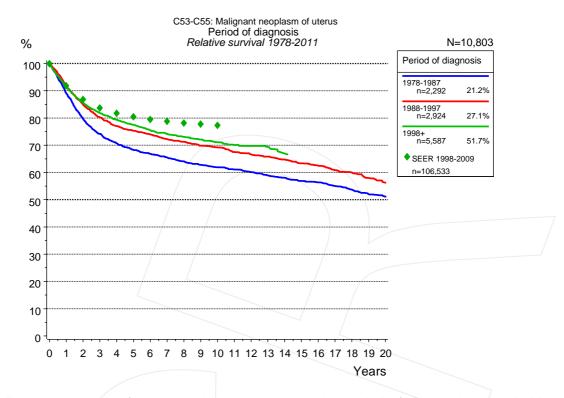
# **Cancer statistics: Survival**

C53-C55: Uterine cancer

Year of diagnosis	1978-1987	1988-1997	1998-2011
Patients	2,535	3,377	9,886
Diseases	2,538	3,385	9,924
Creation date	04/01/2013		
Export date	01/03/2013		
Population (females)	2.3 m		



http://www.tumorregister-muenchen.de/en/facts/surv/surv\_C5355E.pdf



**Figure 1a.** Relative survival of patients with uterine cancer by period of diagnosis. Included in the evaluation are 10,803 cases diagnosed between 1978 and 2011.

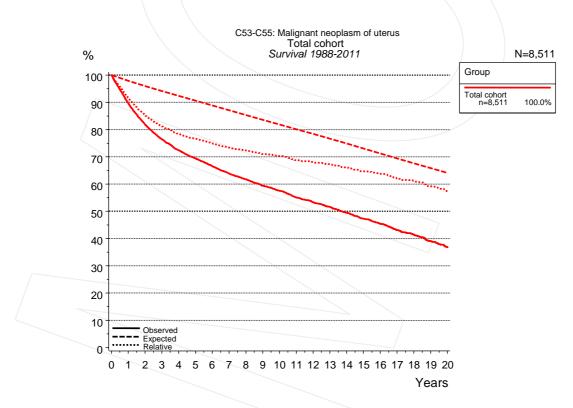
The survival results of the SEER program (Surveillance, Epidemiology, and End Results) of the American National Cancer Institute (NCI) are summarized as the period of diagnosis from 1998 to 2009, and are represented by green diamonds in order to facilitate comparisons between MCR and SEER.

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 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.



	F	eriod	of diag	_	i		
	1978-	1987	1988-	1997	1998+		
	n=2,	292	n=2,	924	n=5,587		
Years	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %	
0	100.0	100.0	100.0	100.0	100.0	100.0	
1	87.1	88.9	90.0	92.0	89.5	91.4	
2	76.5	79.6	81.2	84.9	82.3	85.6	
3	69.9	74.1	75.0	80.2	77.3	81.8	
4	65.4	70.7	70.5	77.0	73.7	79.3	
5	61.9	68.2	67.5	75.3	70.8	77.5	
6	59.6	66.8	64.8	74.0	67.7	75.5	
7	57.3	65.5	62.0	72.3	65.3	74.1	
8	54.9	64.1	59.8	71.3	63.3	73.1	
9	52.7	62.8	57.3	69.8	61.3	72.1	
10	50.8	61.9	55.6	69.2	59.3	71.1	
11	49.1	61.1	53.0	67.5	57.4	70.1	
12	47.2	60.1	51.2	66.6	56.4	69.8	
13	45.2	58.9	49.4	65.8	54.8	69.4	
14	43.5	58.0	47.5	64.7	52.6	66.9	
15	41.7	56.9	45.3	63.4			
16	40.3	56.3	43.6	62.5			
17	38.4	55.0	41.3	60.8			
18	36.6	53.7	39.8	60.0			
19	34.6	52.0	37.4	58.0			
20	33.1	51.1	35.2	56.2			

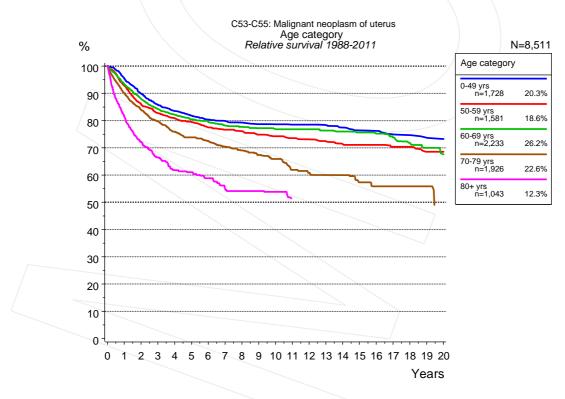
**Table 1b.** Observed (obs.) and relative (rel.) survival of patients with uterine cancer by period of diagnosis for period 1978-2011 (N=10,803).



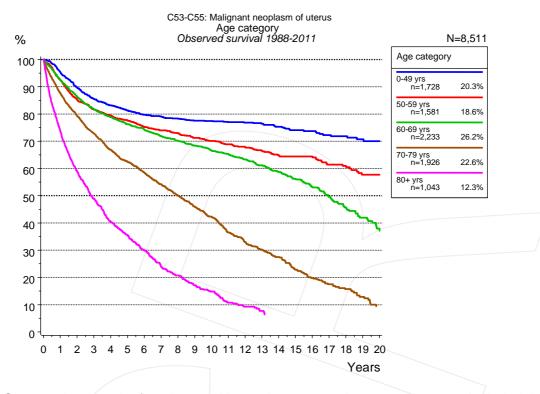
**Figure 2a.** Observed, expected and relative survival of the total cohort with uterine cancer. Included in the evaluation are 8,511 cases diagnosed between 1988 and 2011.

	Group				
Total cohort					
	n=8,511				
Years	obs. %	rel. %			
0	100.0	100.0			
1	89.7	91.6			
2	81.9	85.3			
3	76.4	81.2			
4	72.4	78.4			
5	69.4	76.6			
6	66.6	74.9			
7	63.9	73.3			
8	61.8	72.3			
9	59.4	71.0			
10	57.5	70.3			
11	55.1	68.7			
12	53.3	68.0			
13	51.6	67.3			
14	49.5	66.1			
15	47.3	64.6			
16	45.4	63.7			
17	43.1	62.1			
18	41.5	61.2			
19	39.0	59.2			
20	36.8	57.4			

**Table 2b.** Observed (obs.) and relative (rel.) survival of the total cohort with uterine cancer for period 1988-2011 (N=8,511).



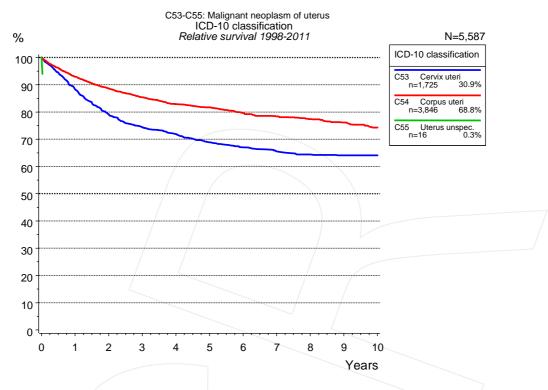
**Figure 3a.** Relative survival of patients with uterine cancer by age category. Included in the evaluation are 8,511 cases diagnosed between 1988 and 2011.



**Figure 3b.** Observed survival of patients with uterine cancer by age category. Included in the evaluation are 8,511 cases diagnosed between 1988 and 2011.

Age category										
	0-49	yrs	50-59	9 yrs	60-69 yrs		70-79 yrs		80+ yrs	
	n=1,	728	n=1,	581	n=2,	n=2,233		926	n=1,043	
Years	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	95.4	95.4	92.5	92.8	92.5	93.3	87.7	90.0	73.6	81.4
2	89.7	89.9	85.2	85.9	86.4	88.0	79.3	83.9	59.0	72.1
3	85.5	85.8	81.6	82.7	81.7	84.2	72.8	79.7	49.0	66.4
4	83.2	83.5	79.5	80.9	78.8	82.1	66.8	75.9	40.4	61.8
5	81.3	81.8	77.6	79.4	76.2	80.5	62.4	73.8	35.4	61.1
6	79.7	80.4	75.3	77.5	74.3	79.5	58.5	72.5	30.0	58.9
7	79.1	79.9	74.0	76.6	71.9	78.2	54.2	70.4	24.0	55.0
8	78.4	79.3	72.9	76.1	70.2	77.7	50.0	69.0	20.7	54.1
9	77.5	78.7	71.2	74.8	68.3	77.2	45.9	67.4	17.1	54.1
10	77.4	78.7	70.1	74.2	66.5	76.8	42.3	65.9	14.8	53.9
11	77.0	78.5	68.9	73.5	65.4	76.8	36.5	61.9	10.8	51.5
12	76.8	78.5	67.8	73.1	63.3	76.8	33.0	60.8		
13	76.4	78.4	66.5	72.4	61.1	76.3	30.2	60.0		
14	75.3	77.4	64.9	71.3	58.7	76.0	27.5	60.0		
15	74.0	76.4	64.4	71.0	56.2	75.7	22.8	57.3		
16	73.7	76.2	64.4	71.0	53.0	75.2	19.8	55.8		
17	72.2	74.9	61.4	70.4	49.6	73.8	17.5	55.8		
18	71.8	74.7	60.9	70.4	45.7	71.7	15.7	55.8		
19	70.7	73.7	57.7	68.5	41.9	70.0	12.9	55.8		
20	70.0	73.2	57.7	68.5	37.2	67.5				

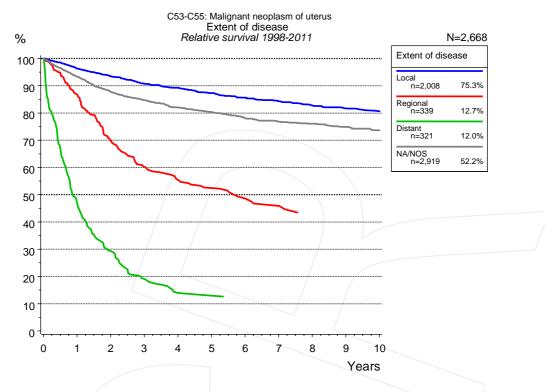
**Table 3c.** Observed (obs.) and relative (rel.) survival of patients with uterine cancer by age category for period 1988-2011 (N=8,511).



**Figure 4a.** Relative survival of patients with uterine cancer by ICD-10 classification. Included in the evaluation are 5,587 cases diagnosed between 1998 and 2011.

	ICD-10 classification									
		C53 Cer	vix uteri	i C54 Corpus uteri C55 Uterus uns						
		n=1,	725	n=3,	846	n=16				
	Years	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %			
	0	100.0	100.0	100.0	100.0	100.0	100.0			
	1	87.2	88.3	90.8	93.0					
	2	77.5	79.1	84.7	88.7					
	3	72.4	74.4	79.8	85.4					
	4	69.5	71.9	75.8	82.9					
	5	66.1	68.9	73.0	81.7					
	6	63.9	67.0	69.6	79.6					
	7	62.1	65.5	67.0	78.4					
	8	60.7	64.4	64.6	77.4					
	9	59.8	64.0	62.1	76.1					
	10	59.8	64.0	59.0	74.3					

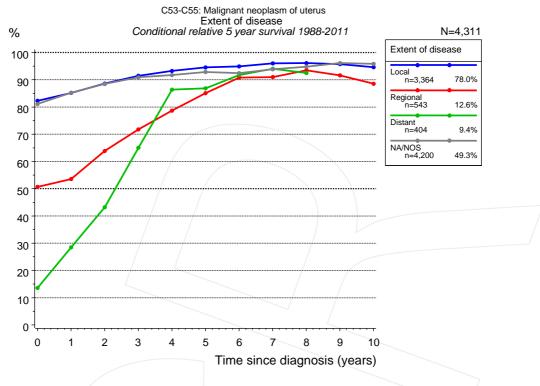
**Table 4b.** Observed (obs.) and relative (rel.) survival of patients with uterine cancer by ICD-10 classification for period 1998-2011 (N=5,587).



**Figure 4c.** Relative survival of patients with uterine cancer by extent of disease. For 5,300 of 5,587 cases diagnosed between 1998 and 2011 valid data could be obtained for this item. For a total of 2,668 cases an evaluable classification was established. The grey line represents the subgroup of 2,919 patients with missing values regarding extent of disease (52.2% of 5,587 patients, the percent values of all other categories are related to n=2,668).

Extent of disease										
	Loc	cal	Regi	onal	Dist	ant	NA/NOS			
	n=2,	800	n=3	339	n=3	321	n=2,919			
Years	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	94.7	96.2	86.0	86.8	46.0	46.7	91.0	93.3		
2	90.8	93.5	68.2	69.7	28.4	29.2	83.9	87.9		
3	86.7	90.8	58.4	60.2	18.5	19.1	79.3	84.7		
4	84.1	89.3	53.4	55.4	13.1	13.9	75.2	82.0		
5	81.0	87.3	50.0	52.4	12.4	12.9	72.2	80.3		
6	78.2	85.6	46.5	48.6	11.7	12.2	68.9	78.1		
7	75.7	84.3	43.8	45.9			66.5	76.8		
8	73.3	82.8	40.2	42.6			64.6	76.0		
9	71.1	81.7	40.2	40.6			62.3	74.9		
10	69.0	80.6	40.2	38.6			60.1	73.6		

**Table 4d.** Observed (obs.) and relative (rel.) survival of patients with uterine cancer by extent of disease for period 1998-2011 (N=2,668).

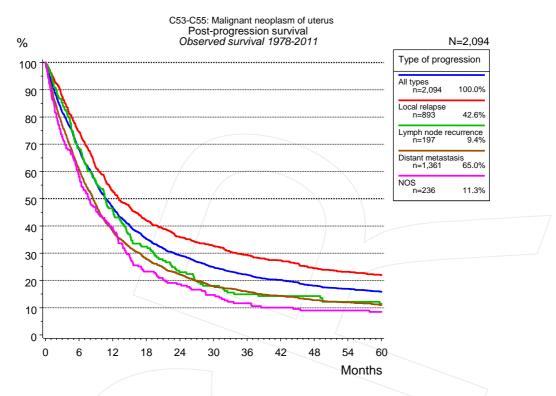


**Figure 4e.** Conditional relative 5-year survival of patients with uterine cancer by extent of disease. For 8,024 of 8,511 cases diagnosed between 1988 and 2011 valid data could be obtained for this item. For a total of 4,311 cases an evaluable classification was established. The grey line represents the subgroup of 4,200 patients with missing values regarding extent of disease (49.3% of 8,511 patients, the percent values of all other categories are related to n=4,311).

Extent of disease									
	Loc	al	Regional		Dist	ant	NA/NOS		
		Cond. surv. %		Cond. surv. %	Cond. surv. %			Cond. surv. %	
Years	n	5 yrs	n	5 yrs	n	5 yrs	n	5 yrs	
0	3,364	82.3	543	50.7	404	13.6	4,200	81.1	
1	2,970	85.2	447	53.6	161	28.5	3,680	85.2	
2	2,547	88.6	314	63.9	91	43.2	3,186	88.4	
3	2,219	91.5	242	71.8	54	65.0	2,766	90.9	
4	1,962	93.2	205	78.7	33	86.4	2,392	91.7	
5	1,689	94.5	171	85.1	29	86.8	2,080	92.9	
6	1,467	94.9	139	90.8	22	91.8	1,802	92.4	
7	1,334	96.0	120	91.0	19	94.0	1,552	93.8	
8	1,201	96.1	106	93.5	18	92.5	1,348	94.8	
9	1,072	95.7	94	91.6			1,160	96.1	
10	956	94.6	87	88.5			992	95.8	

**Table 4f.** Conditional relative 5-year survival of patients with uterine cancer by extent of disease for period 1988-2011 (N=4,311).

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 91.5% (n=2,219).



**Figure 5a.** Observed post-progression survival of 2,094 patients with uterine cancer diagnosed between 1978 and 2011 (incl. M1). These 2,094 patients with documented progression events during their course of disease represent 19.4% of the totally 10,803 evaluated cases. Patients with cancer relapse documented via death certificates only were excluded (n=550, 5.1%). Multiple progression types on different sites are included in the evaluation even when not occuring 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 potientially considered in more than one subgroup.

Type of progression								
	All types	Local relapse	Lymph node recurrence	Distant metastasis	NOS			
	n=2,094	n=893	n=197	n=1,361	n=236			
Months	%	%	%	%	%			
0	100.0	100.0	100.0	100.0	100.0			
12	46.9	52.9	45.9	38.2	39.5			
24	29.1	35.9	23.0	22.2	18.6			
36	22.0	29.4	14.9	15.9	11.6			
48	18.0	24.4	14.3	12.7	9.0			
60	15.8	21.9	11.4	11.0	8.4			

**Table 5b.** Observed post-progression survival of patients with uterine cancer for period 1978-2011 (N=2,094).

#### **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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