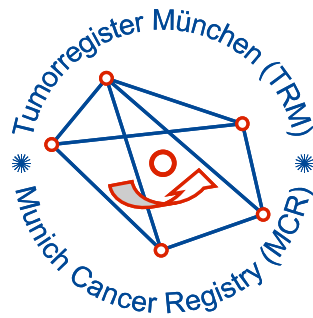


# Munich Cancer Registry



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

## MCC: Merkel cell carcinoma

### Survival

Year of diagnosis	1998-2020
Patients	419
Diseases	426
Cases evaluated	260
Creation date	04/27/2022
Database export	12/20/2021
Population	4.92 m



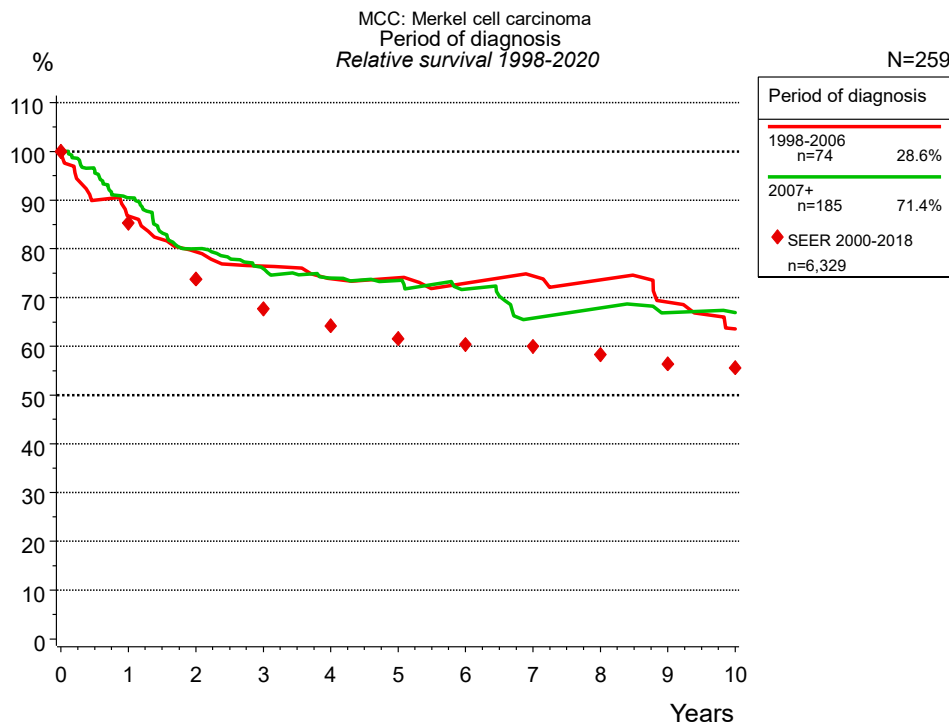
Munich Cancer Registry  
Cancer Registry Bavaria - Upper Bavaria Regional Center  
at Klinikum Grosshadern/IBE  
Marchioninstr. 15  
Munich, 81377  
Germany

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

[https://www.tumorregister-muenchen.de/en/facts/surv/sMCC\\_\\_E-MCC-Merkel-cell-carcinoma-survival.pdf](https://www.tumorregister-muenchen.de/en/facts/surv/sMCC__E-MCC-Merkel-cell-carcinoma-survival.pdf)

**Index of figures and tables**

Fig./Tbl.		Page
1a	Relative survival by period of diagnosis (chart)	3
1b	Survival by period of diagnosis (table)	3
2a	Survival by sex (chart)	4
2b	Survival by sex (table)	4
3a	Relative survival by age category (chart)	5
3b	Survival by age category (table)	5
5a	Time to first progression (chart)	6
5b	Time to first progression (table)	6
5c	Observed post-progression survival (chart)	7
5d	Observed post-progression survival (table)	7

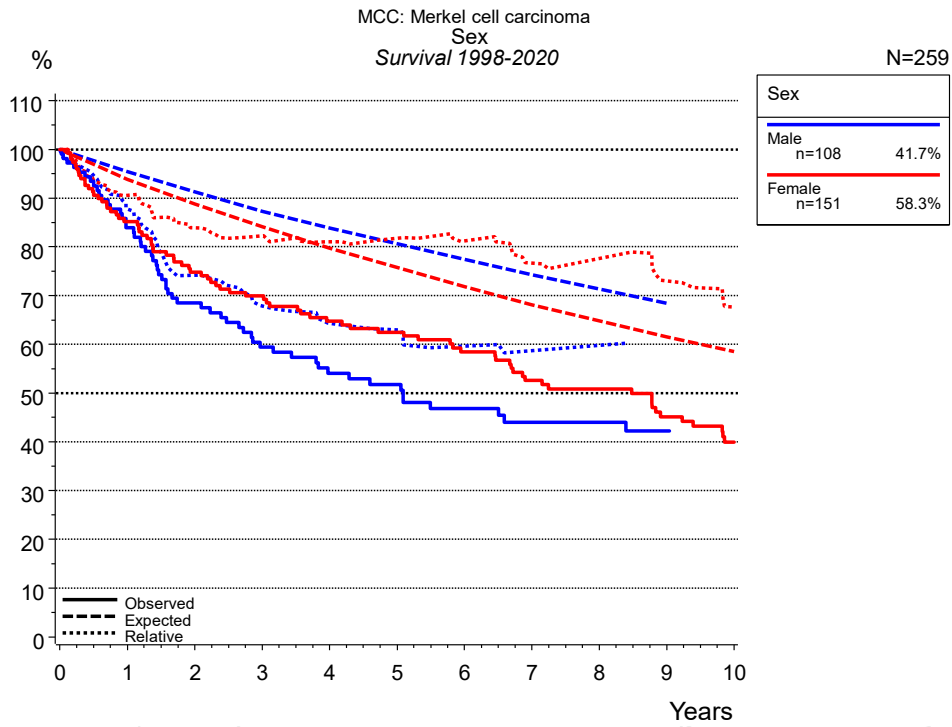


**Figure 1a.** Relative survival of patients with Merkel cell carcinoma by period of diagnosis. Included in the evaluation are 259 cases diagnosed between 1998 and 2020.

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			
	1998-2006 n=74		2007+ n=185	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	82.3	86.7	85.6	90.5
2	72.7	79.4	71.9	80.1
3	67.2	76.5	64.8	75.9
4	61.6	73.9	59.8	74.0
5	60.2	74.1	57.1	73.6
6	56.0	73.0	52.5	71.8
7	54.6	74.4	45.8	65.8
8	51.7	73.6	45.8	67.9
9	45.9	69.1	42.6	66.9
10	40.2	63.6	41.1	66.9
Median	8.8		6.6	

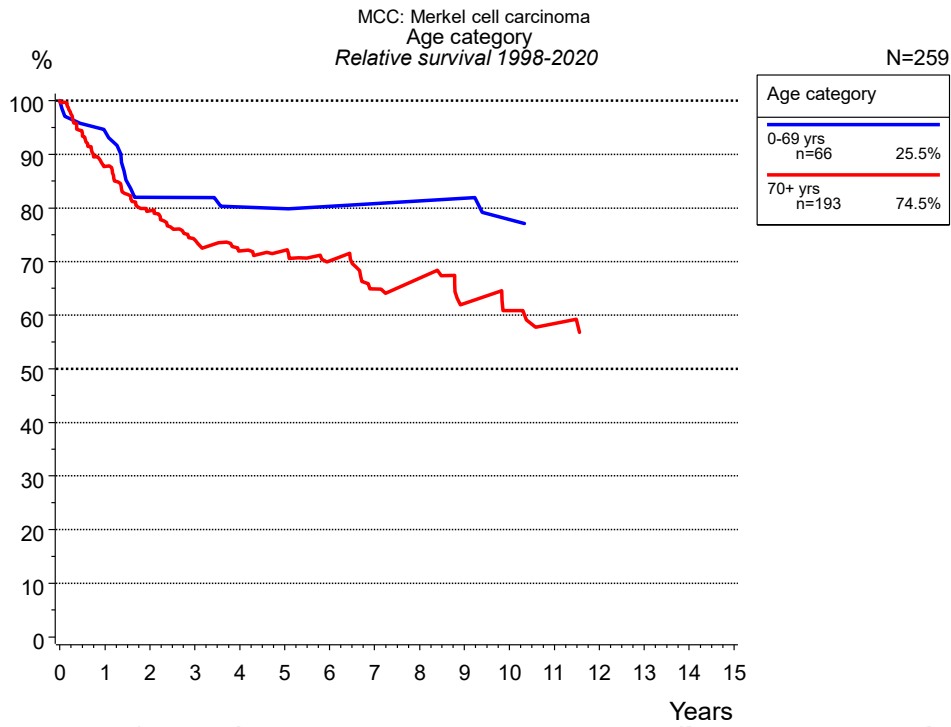
**Table 1b.** Observed (obs.) and relative (rel.) survival of patients with Merkel cell carcinoma by period of diagnosis for period 1998-2020 (N=259).



**Figure 2a.** Survival of patients with Merkel cell carcinoma by sex. Included in the evaluation are 259 cases diagnosed between 1998 and 2020.

Years	Sex			
	Male n=108		Female n=151	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	83.9	87.8	85.2	90.6
2	68.5	74.2	74.8	83.9
3	59.4	67.8	69.9	82.3
4	54.1	64.3	64.8	81.0
5	51.8	62.9	62.5	81.8
6	46.9	59.6	58.4	81.2
7	44.0	58.7	52.6	76.7
8	44.0	59.8	50.8	77.6
9	42.3	60.7	45.2	73.0
10			40.0	67.6
Median	5.1		8.5	

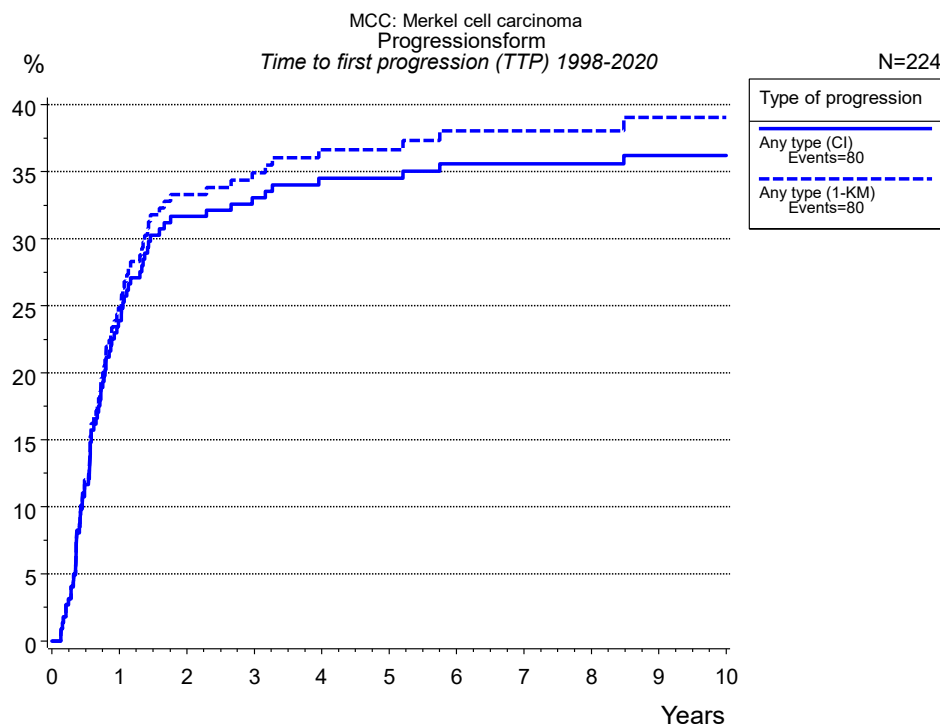
**Table 2b.** Observed (obs.) and relative (rel.) survival of patients with Merkel cell carcinoma by sex for period 1998-2020 (N=259).



**Figure 3a.** Relative survival of patients with Merkel cell carcinoma by age category. Included in the evaluation are 259 cases diagnosed between 1998 and 2020.

Years	Age category			
	0-69 yrs n=66		70+ yrs n=193	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	93.7	94.4	81.6	87.7
2	80.7	82.0	69.3	79.5
3	80.7	81.9	60.6	74.1
4	77.2	80.1	54.7	71.9
5	77.2	79.8	51.7	72.0
6	75.3	80.3	46.5	70.1
7	75.3	80.8	40.2	64.9
8	75.3	81.3	38.7	66.9
9	75.3	81.8	32.9	62.2
10	69.9	77.8	30.0	60.8
11			26.9	58.4
Median			5.1	

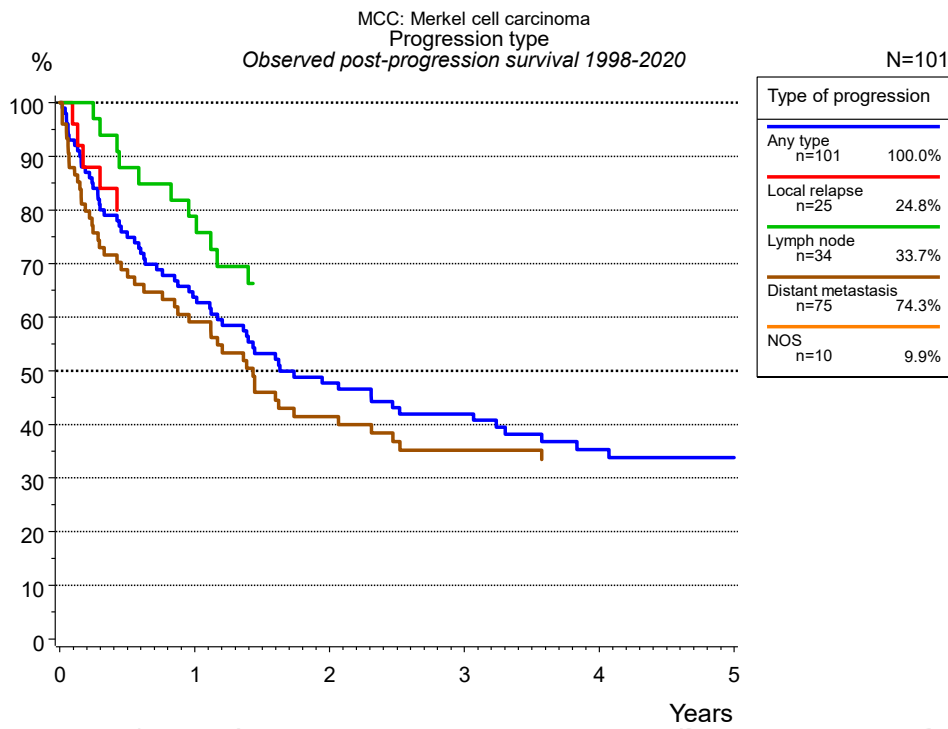
**Table 3b.** Observed (obs.) and relative (rel.) survival of patients with Merkel cell carcinoma by age category for period 1998-2020 (N=259).



**Figure 5a.** Time to first progression of 224 patients with Merkel cell carcinoma diagnosed between 1998 and 2020 (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	
	Any type (CI)	Any type (1-KM)
N	224	224
Events	79	79
compet.	56	
Years	%	%
0	0.0	0.0
1	23.9	24.9
2	31.7	33.3
3	33.1	34.9
4	34.5	36.6
5	34.5	36.6
6	35.6	38.0
7	35.6	38.0
8	35.6	38.0
9	36.2	39.0
10	36.2	39.0

**Table 5b.** Time to first progression of patients with Merkel cell carcinoma for period 1998-2020 (N=224), also showing the total of progression events (Events) and of deaths as competing risk (compet.).



**Figure 5c.** Observed post-progression survival of 101 patients with Merkel cell carcinoma diagnosed between 1998 and 2020. These 101 patients with documented progression events during their course of disease represent 39.0 % of the totally 259 evaluated cases (incl. M1, n=33, 12.7 %). Patients with cancer relapse documented via death certificates only were excluded (n=12, 4.6 %). 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=101 %	Local relapse n=25 %	Lymph node n=34 %	Distant metastasis n=75 %
0	100.0	100.0	100.0	100.0
1	63.7		78.8	59.1
2	47.7			41.5
3	41.9			35.2
4	35.3			
5	33.8			

**Table 5d.** Observed post-progression survival of patients with Merkel cell carcinoma for period 1998-2020 (N=101).

## 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

Munich Cancer Registry. Survival MCC: Merkel cell carcinoma [Internet]. 2022 [updated 2022 Apr 27; cited 2022 Jun 1]. Available from: [https://www.tumorregister-muenchen.de/en/facts/surv/sMCC\\_\\_E-MCC-Merkel-cell-carcinoma-survival.pdf](https://www.tumorregister-muenchen.de/en/facts/surv/sMCC__E-MCC-Merkel-cell-carcinoma-survival.pdf)

## Copyright

The content of the public web site provided by the Munich Cancer Registry is available worldwide and free of charge. All documents are free to download, utilize, copy, print-out and distribute, providing that the MCR is referenced.

## Disclaimer

The Munich Cancer Registry reserves the right to not be responsible for the topicality, correctness, completeness or quality of the information provided. Liability claims regarding damage caused by the use of any information provided, including any kind of information which is incomplete or incorrect, will therefore be rejected.