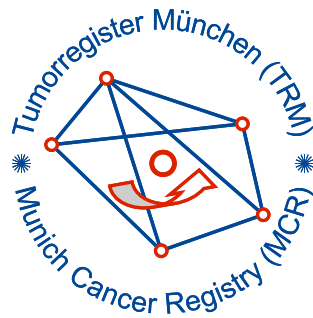


Munich Cancer Registry



- ▶ Baseline statistics
- ▶ Selection Matrix
- ▶ Homepage

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

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

Cancer statistics: Survival

C70-C72: Brain/nerves cancer

Year of diagnosis	1978-1987	1988-1997	1998-2011
Patients	244	746	4,579
Diseases	244	749	4,580
Creation date	04/01/2013		
Export date	01/03/2013		
Population	4.5 m		



http://www.tumorregister-muenchen.de/en/facts/surv/surv_C7072E.pdf

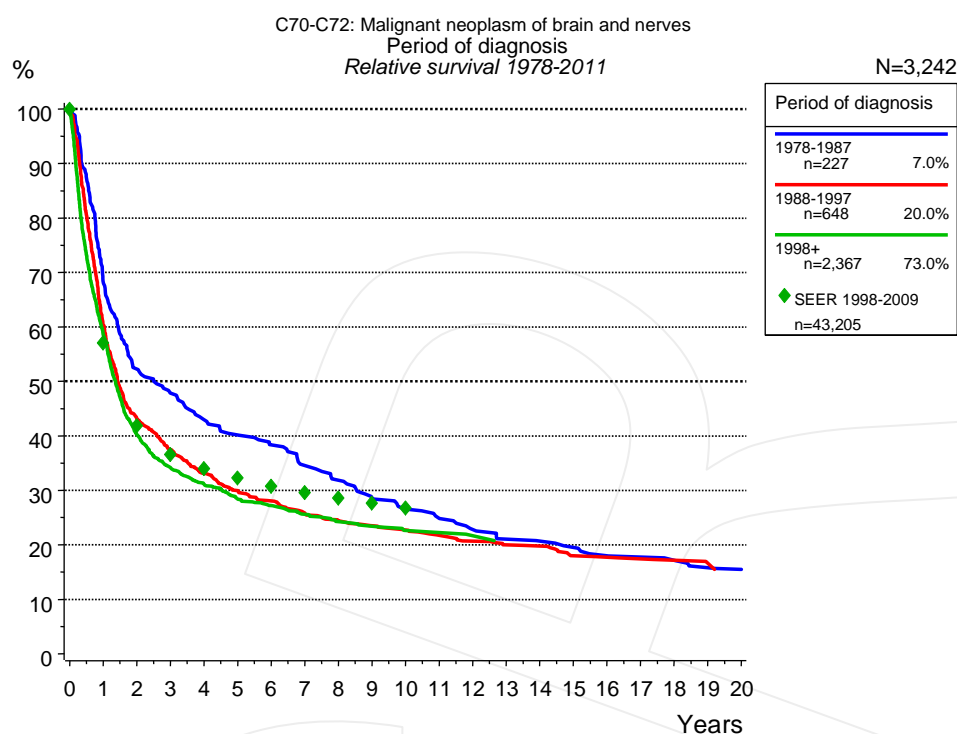


Figure 1a. Relative survival of patients with brain/nerves cancer by period of diagnosis. Included in the evaluation are 3,242 cases diagnosed between 1978 and 2011.

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					
	1978-1987 n=227		1988-1997 n=648		1998+ n=2,367	
	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0	100.0	100.0
1	67.4	67.9	59.7	60.3	57.7	58.6
2	51.8	52.3	42.4	43.1	39.3	40.2
3	46.9	47.8	36.6	37.5	33.1	34.2
4	41.9	43.0	32.2	33.1	30.0	31.1
5	39.2	40.1	29.0	29.9	27.2	28.4
6	37.0	38.3	27.0	28.1	25.9	27.2
7	33.3	34.5	24.7	25.8	24.2	25.6
8	30.5	31.9	23.1	24.4	22.8	24.3
9	27.3	28.6	22.1	23.5	21.8	23.4
10	25.0	26.6	21.3	22.7	20.9	22.7
11	23.6	24.9	20.2	21.8	20.5	22.3
12	21.3	22.8	19.0	20.7	19.9	21.7
13	19.4	21.0	18.2	20.0		
14	19.0	20.7	17.9	19.8		
15	18.0	19.5	16.0	18.0		
16	16.7	18.0	15.7	17.7		
17	16.2	17.7	15.4	17.4		
18	15.7	17.1	15.0	17.2		
19	14.3	15.8	14.4	16.6		
20	13.9	15.5				

Table 1b. Observed (obs.) and relative (rel.) survival of patients with brain/nerves cancer by period of diagnosis for period 1978-2011 (N=3,242).

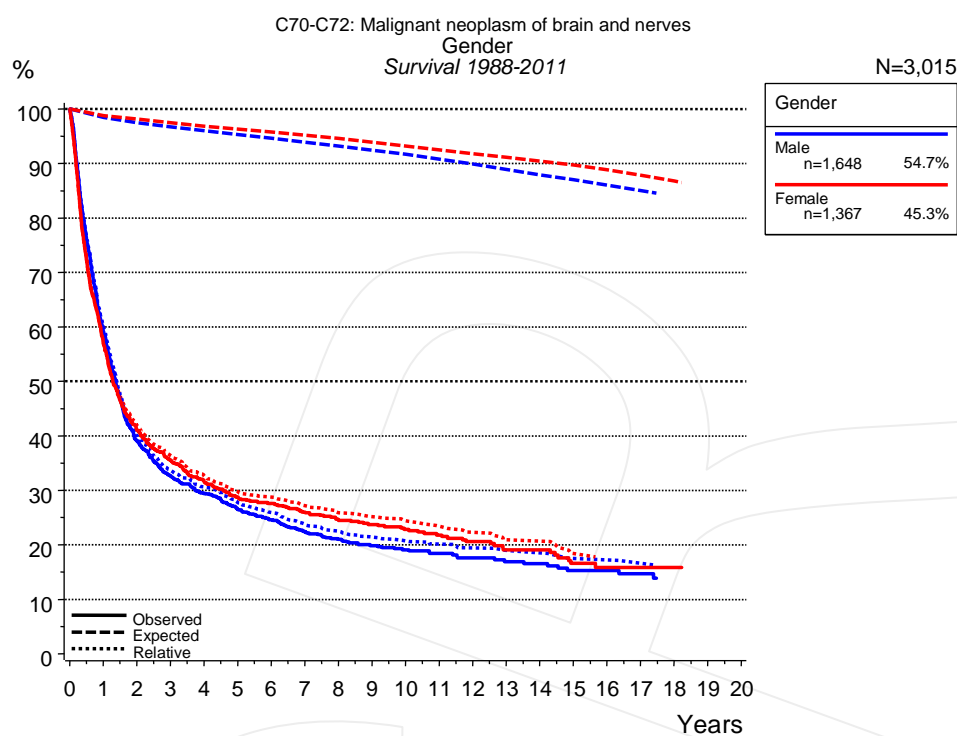


Figure 2a. Survival of patients with brain/nerves cancer by gender. Included in the evaluation are 3,015 cases diagnosed between 1988 and 2011.

Years	Gender			
	Male n=1,648		Female n=1,367	
	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	59.1	60.0	56.9	57.6
2	39.0	40.0	41.1	41.9
3	32.6	33.7	35.5	36.3
4	29.4	30.6	31.6	32.6
5	26.5	27.8	28.8	29.8
6	24.6	25.9	27.6	28.8
7	22.4	23.8	26.0	27.2
8	21.0	22.5	24.5	25.9
9	19.9	21.4	23.7	25.2
10	19.1	20.7	22.8	24.4
11	18.4	20.2	21.8	23.4
12	17.6	19.4	20.6	22.3
13	16.9	19.0	19.1	20.9
14	16.6	18.5	19.1	20.7
15	15.3	17.5	16.6	18.4
16	15.3	17.2	15.9	17.7
17	14.7	16.6	15.9	17.5
18	13.8	15.9	15.9	17.3
19	13.8	15.2		

Table 2b. Observed (obs.) and relative (rel.) survival of patients with brain/nerves cancer by gender for period 1988-2011 (N=3,015).

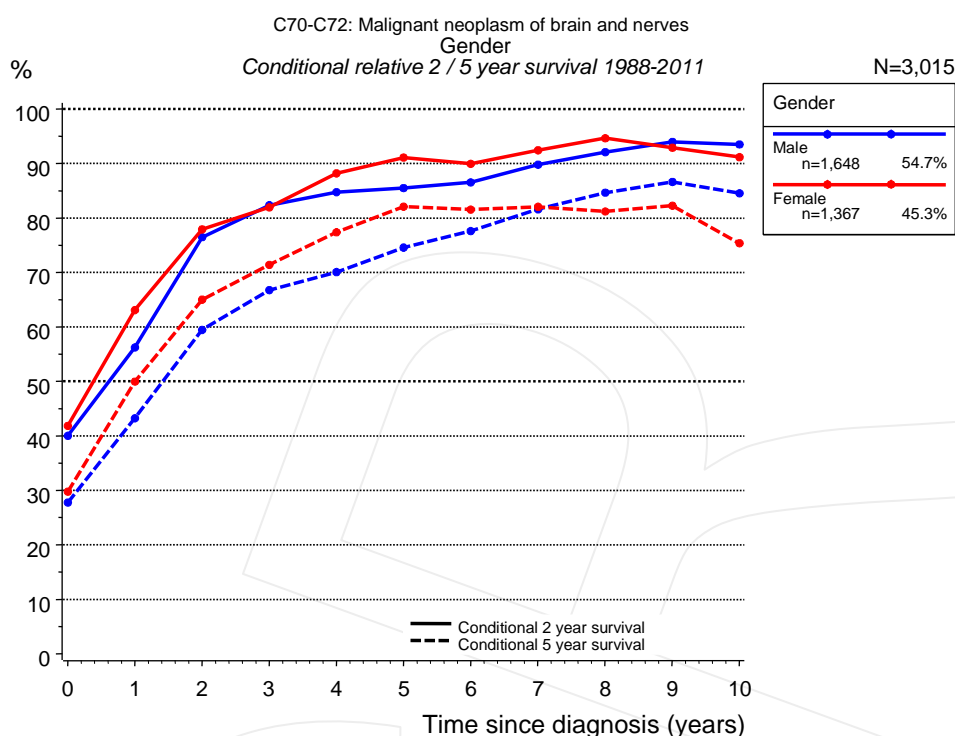


Figure 2c. Conditional relative 2 / 5-year survival of patients with brain/nerves cancer by gender. For 3,015 of 3,015 cases diagnosed between 1988 and 2011 valid data could be obtained for this item.

Years	Gender					
	Male			Female		
	n	Cond. surv. % 2 yrs	5 yrs	n	Cond. surv. % 2 yrs	5 yrs
0	1,648	40.0	27.8	1,367	41.9	29.8
1	911	56.2	43.3	726	63.1	50.0
2	548	76.5	59.5	482	77.9	65.0
3	411	82.4	66.8	373	82.0	71.4
4	325	84.7	70.1	298	88.2	77.4
5	250	85.5	74.6	232	91.1	82.1
6	202	86.5	77.6	197	90.0	81.5
7	164	89.8	81.6	169	92.4	82.1
8	135	92.1	84.6	134	94.6	81.2
9	113	94.0	86.6	118	92.9	82.3
10	89	93.5	84.5	96	91.2	75.4

Table 2d. Conditional relative 2 / 5-year survival of patients with brain/nerves cancer by gender for period 1988-2011 (N=3,015).

Conditional relative survival rates refer to the relative survival probability, in this case for 2 and 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 2a). 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 gender="Male", who are alive at least 3 years after cancer diagnosis, the conditional relative 2-year survival rate is 82.4% (n=411).

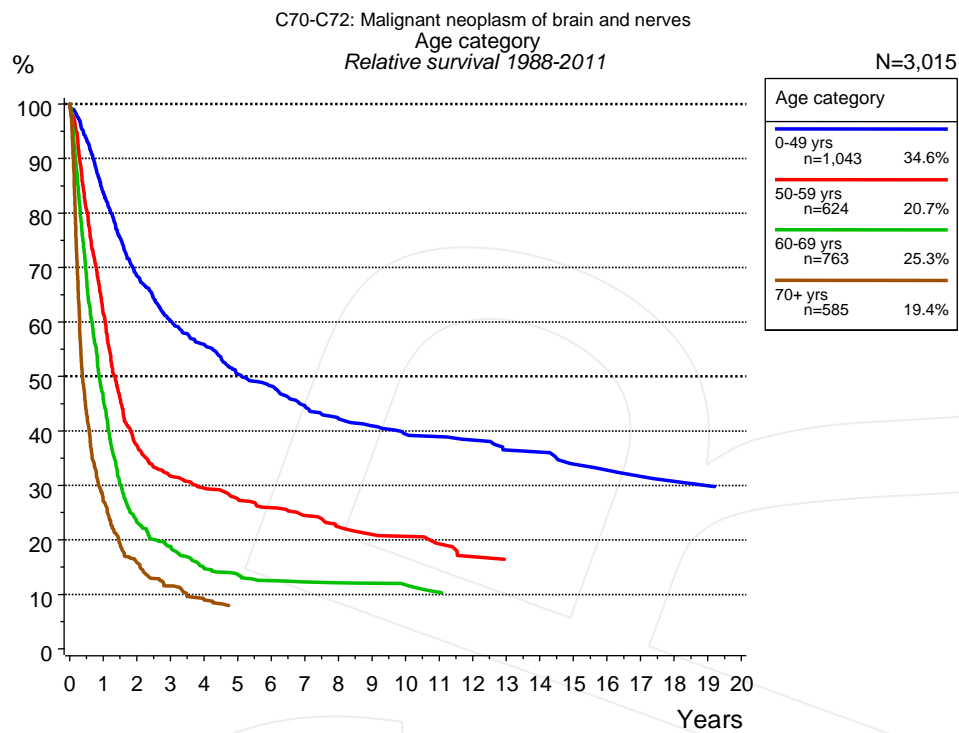


Figure 3a. Relative survival of patients with brain/nerves cancer by age category. Included in the evaluation are 3,015 cases diagnosed between 1988 and 2011.

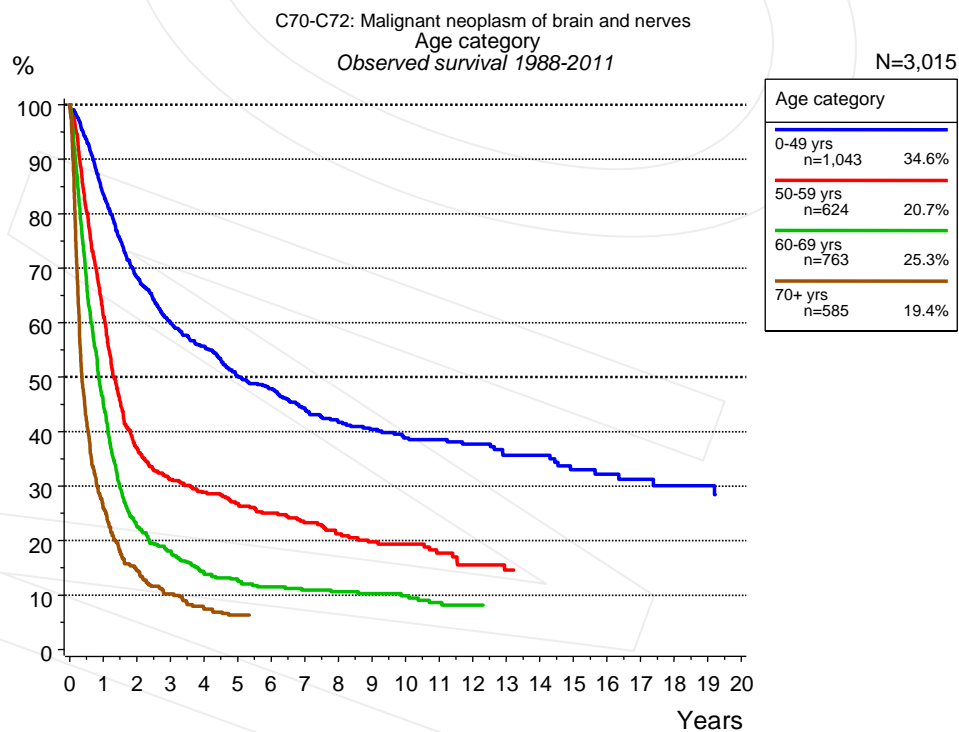


Figure 3b. Observed survival of patients with brain/nerves cancer by age category. Included in the evaluation are 3,015 cases diagnosed between 1988 and 2011.

Years	Age category							
	0-49 yrs n=1,043		50-59 yrs n=624		60-69 yrs n=763		70+ yrs n=585	
	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	83.6	83.7	60.9	61.3	45.1	45.6	25.9	27.1
2	68.2	68.4	37.0	37.3	22.6	23.2	14.5	15.8
3	59.9	60.1	31.2	31.7	18.1	18.8	10.2	11.5
4	55.7	55.9	28.8	29.5	14.0	14.7	7.4	9.0
5	50.2	50.4	26.8	27.5	12.7	13.6	6.3	7.9
6	47.9	48.2	25.0	25.9	11.5	12.5		
7	44.3	44.6	23.2	24.4	10.9	12.3		
8	41.7	42.2	21.2	22.4	10.6	12.1		
9	40.4	40.9	19.7	21.0	10.3	12.0		
10	38.8	39.4	19.3	20.6	9.9	11.7		
11	38.5	38.9	17.7	19.3	8.6	10.4		
12	37.7	38.3	15.5	16.9	8.2	10.2		
13	35.6	36.5	14.6	16.3				
14	35.6	36.1						
15	33.0	33.9						
16	32.2	32.8						
17	31.2	31.7						
18	30.1	30.7						
19	30.1	29.9						

Table 3c. Observed (obs.) and relative (rel.) survival of patients with brain/nerves cancer by age category for period 1988-2011 (N=3,015).

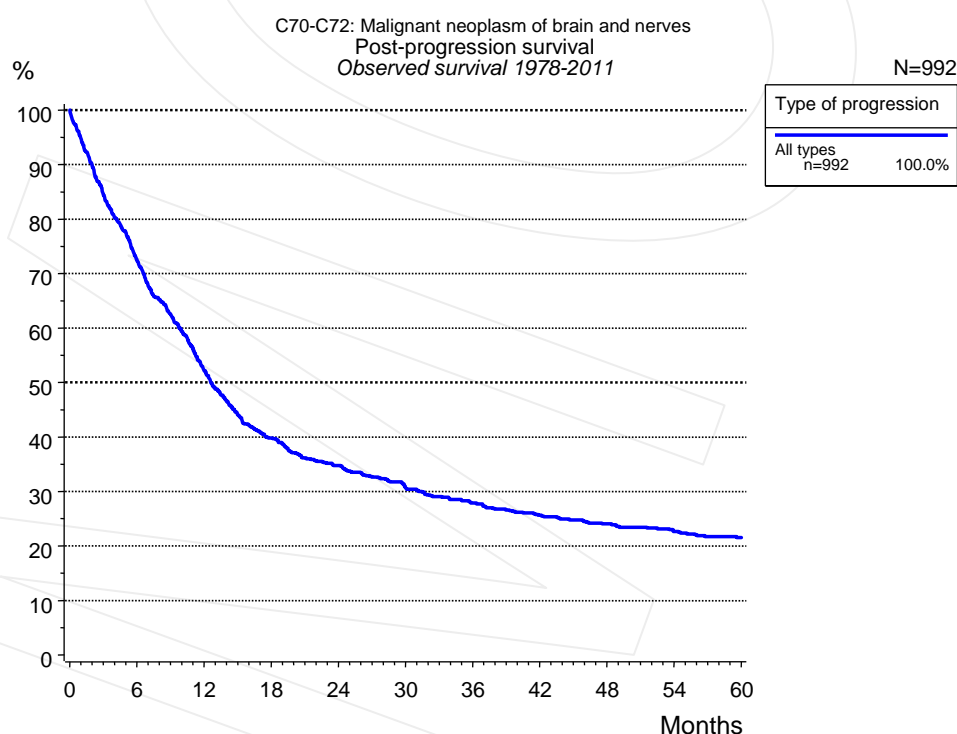


Figure 5a. Observed post-progression survival of 992 patients with brain/nerves cancer diagnosed between 1978 and 2011 (incl. M1). These 992 patients with documented progression events during their course of disease represent 30.6% of the totally 3,242 evaluated cases. Patients with cancer relapse documented via death certificates only were excluded (n=999, 30.8%).

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.

Type of progression	
All types n=992	
Months	%
0	100.0
12	52.2
24	34.8
36	27.9
48	24.1
60	21.6

Table 5b. Observed post-progression survival of patients with brain/nerves cancer for period 1978-2011 (N=992).

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

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