Munich Cancer Registry

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

Cancer statistics: Survival

C88,C90: Immunoprolif. disease

Year of diagnosis	1978-1987	1988-1997	1998-2011
Patients	165	456	3,042
Diseases	165	456	3,044

Creation date	04/01/2013
Export date	01/03/2013
Population	4.5 m

C88,C90: Malignant immunoproliferative and plasmacellular disease
Period of diagnosis
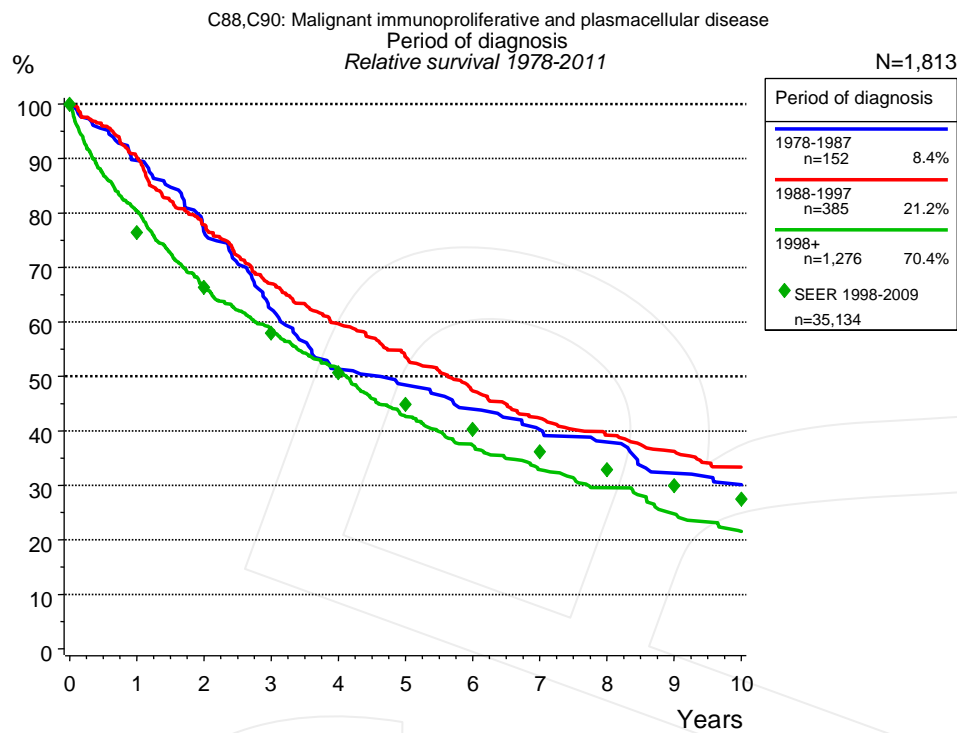*Relative survival 1978-2011*   N=1,813

Figure 1a. Relative survival of patients with immunoprolif. disease by period of diagnosis. Included in the evaluation are 1,813 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.

| | Period of diagnosis | | | | | |
| | 1978-1987 n=152 | | 1988-1997 n=385 | | 1998+ n=1,276 | |
Years	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0	100.0	100.0
1	88.2	89.6	88.0	90.2	78.2	80.4
2	73.7	76.4	74.2	77.8	63.1	66.4
3	59.1	62.3	62.4	67.0	54.3	58.5
4	47.7	51.3	54.2	59.6	46.3	51.2
5	44.4	48.4	47.7	53.6	37.8	42.6
6	39.6	44.0	41.1	47.3	32.4	37.3
7	35.6	40.2	36.1	42.3	27.9	32.9
8	32.9	38.0	32.7	39.2	24.6	29.6
9	27.6	32.2	29.8	36.2	20.4	24.8
10	25.5	30.1	26.6	33.3	17.2	21.6

Table 1b. Observed (obs.) and relative (rel.) survival of patients with immunoprolif. disease by period of diagnosis for period 1978-2011 (N=1,813).
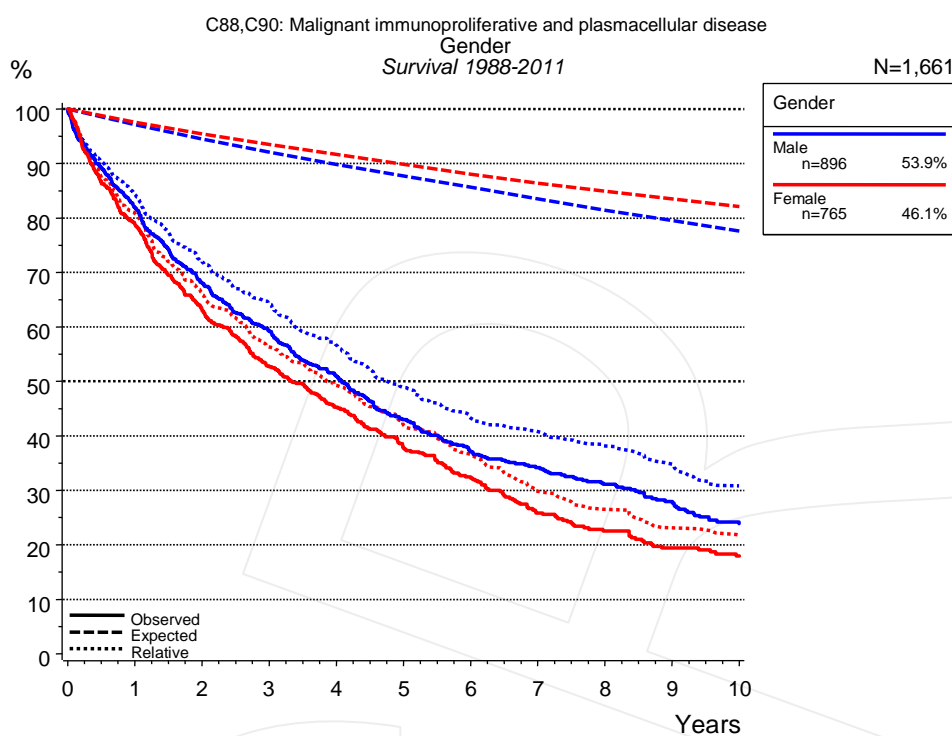
C88,C90: Malignant immunoproliferative and plasmacellular disease
Gender
Survival 1988-2011

Figure 2a. Survival of patients with immunoprolif. disease by gender. Included in the evaluation are 1,661 cases diagnosed between 1988 and 2011.

	Gender			
	Male n=896		Female n=765	
Years	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	81.9	84.3	79.0	80.8
2	68.1	72.0	63.1	66.0
3	59.3	64.3	52.7	56.3
4	50.9	56.6	45.3	49.2
5	43.0	48.9	37.7	41.9
6	37.0	43.2	32.2	36.6
7	34.2	40.8	25.9	29.8
8	31.1	38.2	22.5	26.5
9	28.0	34.8	19.4	23.1
10	23.9	30.8	18.0	21.8

Table 2b. Observed (obs.) and relative (rel.) survival of patients with immunoprolif. disease by gender for period 1988-2011 (N=1,661).

C88,C90: Malignant immunoproliferative and plasmacellular disease
Gender
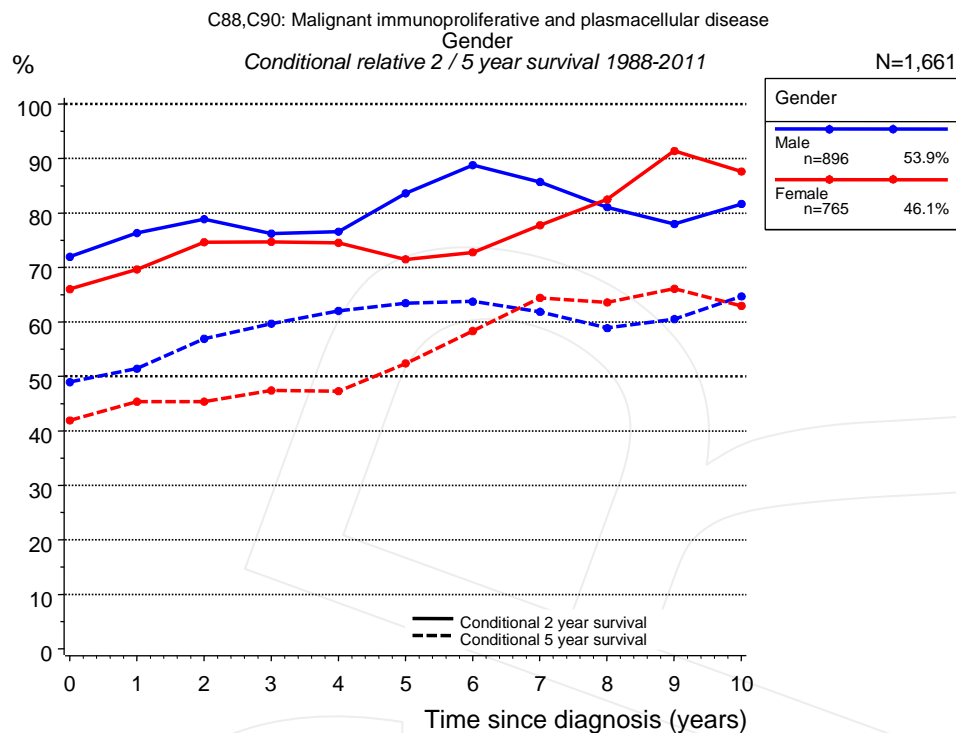*Conditional relative 2 / 5 year survival 1988-2011*   N=1,661

Figure 2c. Conditional relative 2 / 5-year survival of patients with immunoprolif. disease by gender. For 1,661 of 1,661 cases diagnosed between 1988 and 2011 valid data could be obtained for this item.

	Gender					
	Male			Female		
		Cond. surv. %			Cond. surv. %	
Years	n	2 yrs	5 yrs	n	2 yrs	5 yrs
0	896	72.0	48.9	765	66.0	41.9
1	682	76.3	51.4	562	69.7	45.4
2	520	78.9	56.9	415	74.6	45.4
3	405	76.2	59.7	317	74.7	47.4
4	310	76.6	62.0	244	74.5	47.3
5	232	83.6	63.4	179	71.5	52.4
6	177	88.8	63.7	133	72.8	58.3
7	149	85.7	61.9	97	77.8	64.4
8	128	81.1	58.9	77	82.5	63.6
9	99	78.0	60.5	59	91.4	66.1
10	77	81.6	64.7	50	87.6	63.0

Table 2d. Conditional relative 2 / 5-year survival of patients with immunoprolif. disease by gender for period 1988-2011 (N=1,661).

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 76.2% (n=405).
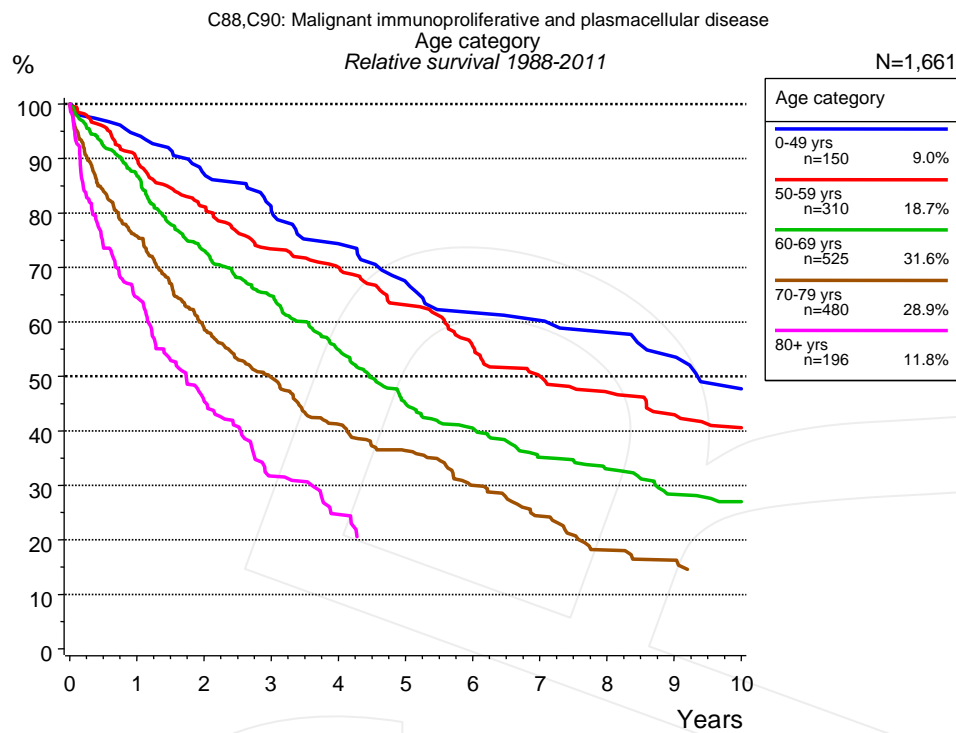
C88,C90: Malignant immunoproliferative and plasmacellular disease
Age category
Relative survival 1988-2011   N=1,661

Figure 3a. Relative survival of patients with immunoprolif. disease by age category. Included in the evaluation are 1,661 cases diagnosed between 1988 and 2011.

Years	Age category								
	0-49 yrs n=150		50-59 yrs n=310		60-69 yrs n=525		70-79 yrs n=480		80+ yrs n=196	
	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	94.6	94.3	89.5	89.9	85.7	86.9	73.1	75.7	59.1	64.5
2	87.1	87.1	80.3	81.1	70.9	73.1	54.5	58.7	38.0	45.4
3	80.6	80.5	71.8	73.4	61.9	64.8	44.4	49.8	23.6	31.7
4	73.5	74.4	68.2	70.0	51.5	54.9	34.9	41.2	16.6	24.7
5	66.5	67.4	60.7	63.1	41.4	45.0	29.2	36.4		
6	61.2	61.7	52.9	55.5	36.4	40.5	22.7	30.0		
7	60.0	60.3	47.4	50.0	30.9	35.2	17.4	24.3		
8	57.5	58.1	44.0	47.1	28.2	33.0	12.2	18.1		
9	53.3	53.6	40.3	43.0	23.6	28.3	10.5	16.3		
10	47.4	47.7	37.4	40.6	21.9	27.0				

Table 3b. Observed (obs.) and relative (rel.) survival of patients with immunoprolif. disease by age category for period 1988-2011 (N=1,661).

C88,C90: Malignant immunoproliferative and plasmacellular disease
Post-progression survival
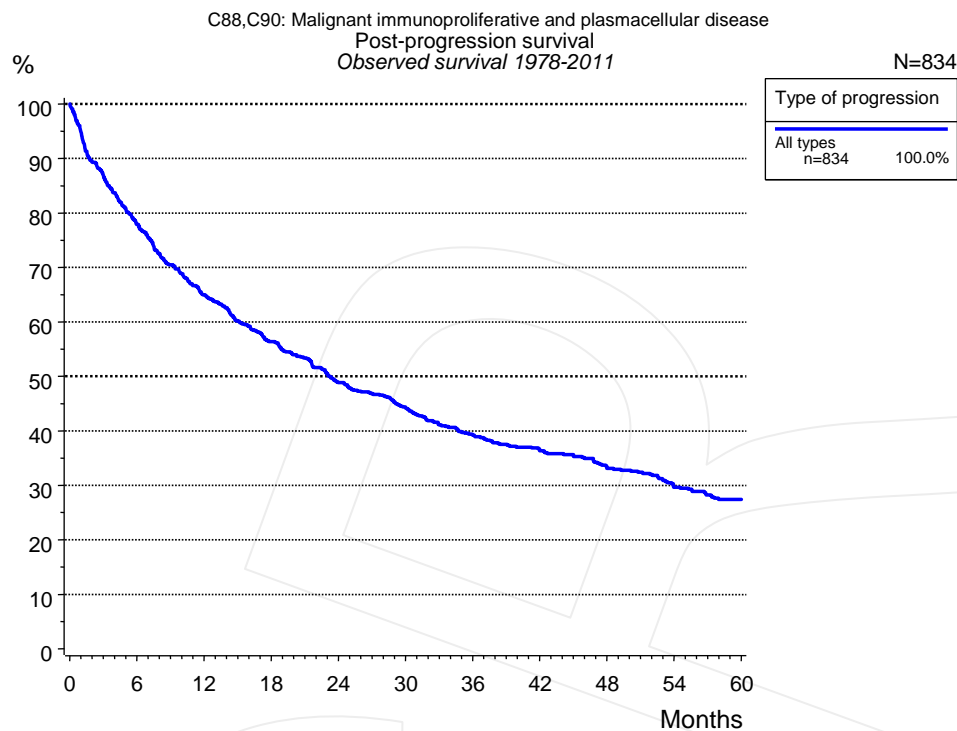*Observed survival 1978-2011*   N=834

Figure 5a. Observed post-progression survival of 834 patients with immunoprolif. disease diagnosed between 1978 and 2011 (incl. M1). These 834 patients with documented progression events during their course of disease represent 46.0% of the totally 1,813 evaluated cases. Patients with cancer relapse documented via death certificates only were excluded (n=314, 17.3%).

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 potiently considered in more than one subgroup.

	Type of progression
	All types n=834
Months	%
0	100.0
12	64.9
24	48.8
36	39.2
48	33.1
60	27.4

Table 5b. Observed post-progression survival of patients with immunoprolif. disease for period 1978-2011 (N=834).

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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