# **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

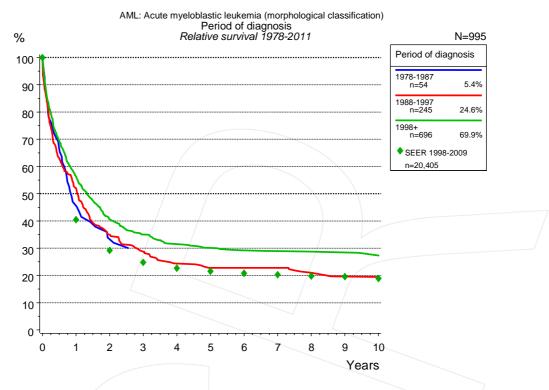
## **Cancer statistics: Survival**

# AML: Acute myelobl. leukemia (morph.)

Year of diagnosis	1978-1987	1988-1997	1998-2011
Patients	59	289	1,975
Diseases	59	289	1,977
Creation date	04/01/2013		
Export date	01/03/2013		
Population	4.5 m		



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



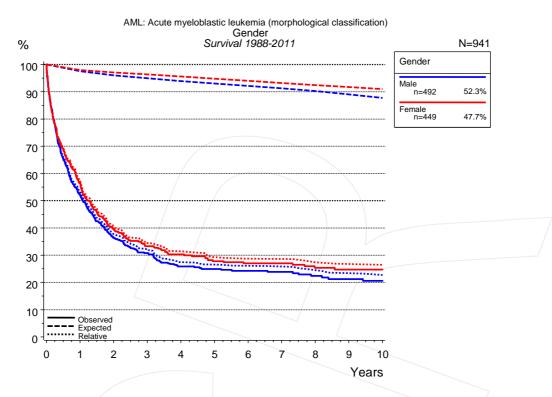
**Figure 1a.** Relative survival of patients with acute myelobl. leukemia (morph.) by period of diagnosis. Included in the evaluation are 995 cases diagnosed between 1978 and 2011.

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.

Period of diagnosis										
	1978-	1987	1988-1997		1998+					
	n=	54	n=2	245	n=696					
Years	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %				
0	100.0	100.0	100.0	100.0	100.0	100.0				
1	46.3	45.5	51.0	52.0	55.3	56.4				
2	33.1	33.2	34.2	34.9	39.2	40.6				
3			27.9	28.7	33.5	35.0				
4			23.2	24.4	29.9	31.5				
5			21.5	22.8	28.4	30.1				
6			21.5	22.8	27.2	29.2				
7			21.5	22.8	26.8	28.9				
8			19.3	21.0	26.2	28.7				
9			18.0	19.6	26.2	28.4				
10			18.0	19.4	25.3	27.3				

**Table 1b.** Observed (obs.) and relative (rel.) survival of patients with acute myelobl. leukemia (morph.) by period of diagnosis for period 1978-2011 (N=995).

surv\_hAML\_E.pdf

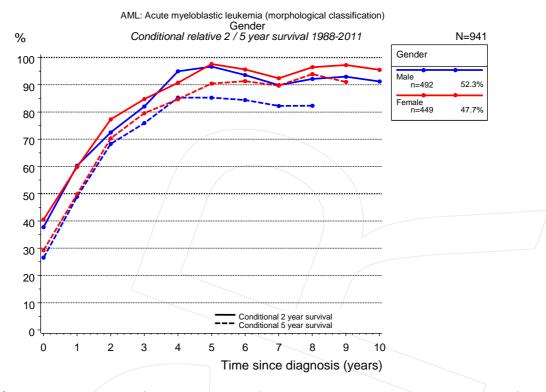


**Figure 2a.** Survival of patients with acute myelobl. leukemia (morph.) by gender. Included in the evaluation are 941 cases diagnosed between 1988 and 2011.

Gender								
	Ma	ale	Female					
	n=4	192	n=449					
Years	obs. %	rel. %	obs. %	rel. %				
0	100.0	100.0	100.0	100.0				
1	52.1	53.4	56.5	57.4				
2	36.4	37.7	39.5	40.5				
3	30.8	32.2	33.3	34.5				
4	25.8	27.5	30.3	31.4				
5	24.9	26.5	27.8	29.2				
6	24.2	26.1	27.0	28.7				
7	23.8	25.8	27.0	28.5				
8	22.4	24.5	25.4	27.4				
9	21.2	23.4	24.7	26.7				
10	20.6	22.7	24.7	26.4				

**Table 2b.** Observed (obs.) and relative (rel.) survival of patients with acute myelobl. leukemia (morph.) by gender for period 1988-2011 (N=941).



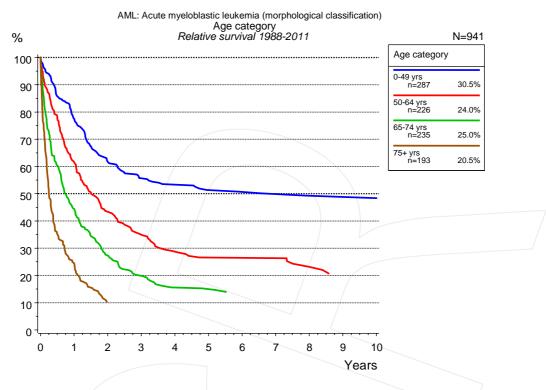


**Figure 2c.** Conditional relative 2 / 5-year survival of patients with acute myelobl. leukemia (morph.) by gender. For 941 of 941 cases diagnosed between 1988 and 2011 valid data could be obtained for this item.

Gender								
	Male			F	emale			
		Cond. s	surv. %	Cond. surv.				
Years	n	2 yrs	5 yrs	n	2 yrs	5 yrs		
0	492	37.7	26.5	449	40.5	29.2		
1	242	60.3	48.9	239	59.8	49.8		
2	154	72.5	68.3	155	77.3	70.3		
3	117	82.0	75.9	118	84.7	79.6		
4	90	94.9	85.3	95	90.7	84.7		
5	76	96.7	85.3	75	97.6	90.4		
6	64	93.6	84.4	69	95.6	91.3		
7	56	89.9	82.2	56	92.4	89.7		
8	41	92.1	82.3	43	96.5	93.9		
9	34	93.0		38	97.2	91.0		
10	26	91.2		33	95.5			

**Table 2d.** Conditional relative 2 / 5-year survival of patients with acute myelobl. leukemia (morph.) by gender for period 1988-2011 (N=941).

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 82.0% (n=117).

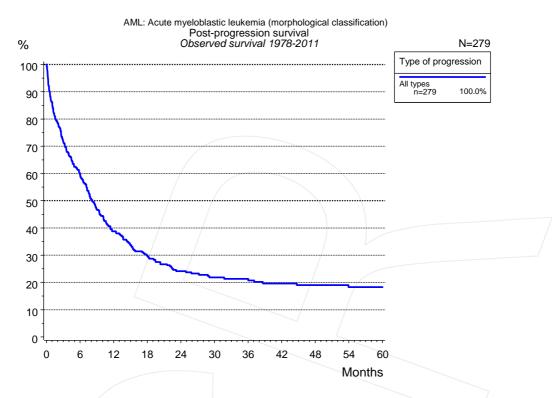


**Figure 3a.** Relative survival of patients with acute myelobl. leukemia (morph.) by age category. Included in the evaluation are 941 cases diagnosed between 1988 and 2011.

Age category									
	0-49	yrs	50-64 yrs n=226		65-74 yrs n=235		75+ yrs n=193		
	n=2	287							
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	77.7	77.5	61.1	61.6	43.7	44.4	23.2	24.4	
2	61.7	61.7	43.1	43.3	26.5	27.3	9.0	10.3	
3	55.6	55.7	34.5	35.0	19.0	19.9			
4	53.3	53.3	28.0	28.7	14.3	15.6			
5	51.0	51.3	25.5	26.6	13.6	15.0			
6	50.3	50.7	25.5	26.4	12.3	14.0			
7	49.6	49.9	25.5	26.3	12.3	13.9			
8	48.7	49.2	21.5	23.2					
9	48.7	48.8	19.1	20.4					
10	48.7	48.4	19.1	19.8					
5 6 7 8 9	51.0 50.3 49.6 48.7 48.7	51.3 50.7 49.9 49.2 48.8	25.5 25.5 25.5 21.5 19.1	26.6 26.4 26.3 23.2 20.4	13.6 12.3	15.0 14.0			

**Table 3b.** Observed (obs.) and relative (rel.) survival of patients with acute myelobl. leukemia (morph.) by age category for period 1988-2011 (N=941).





**Figure 5a.** Observed post-progression survival of 279 patients with acute myelobl. leukemia (morph.) diagnosed between 1978 and 2011 (incl. M1). These 279 patients with documented progression events during their course of disease represent 28.0% of the totally 995 evaluated cases. Patients with cancer relapse documented via death certificates only were excluded (n=370, 37.2%).

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				
	n=279			
Months	%			
0	100.0			
12	38.7			
24	24.2			
36	21.3			
48	19.0			
60	18.3			

**Table 5b.** Observed post-progression survival of patients with acute myelobl. leukemia (morph.) for period 1978-2011 (N=279).

#### **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**

Munich Cancer Registry. Survival AML: Acute myelobl. leukemia (morph.) [Internet]. 2013 [updated 2013 Apr 1; cited 2013 May 1]. Available from: http://www.tumorregister-muenchen.de/en/facts/surv/surv\_hAML\_E.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.

surv\_hAML\_E.pdf

### Index of figures and tables

F	ig./Tb	l.	Page
	1a	Relative survival by period of diagnosis (chart)	2
	1b	Survival by period of diagnosis (table)	2
	2a	Survival by gender (chart)	3
	2b	Survival by gender (table)	3
	2c	Conditional survival by gender (chart)	4
	2d	Conditional survival by gender (table)	4
	3a	Relative survival by age category (chart)	5
	3b	Survival by age category (table)	5
	5a	Observed post-progression survival (chart)	6
	5b	Observed post-progression survival (table)	6