

Munich Cancer Registry



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

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

Cancer statistics: Survival

ALL: Acute lymphobl. leukaemia

Year of diagnosis	1988-2013
Patients	888
Diseases	888
Cases evaluated	481
Creation date	05/13/2015
Export date	12/30/2014
Population	4.64 m



http://www.tumorregister-muenchen.de/en/facts/surv/surv_C910_E.pdf

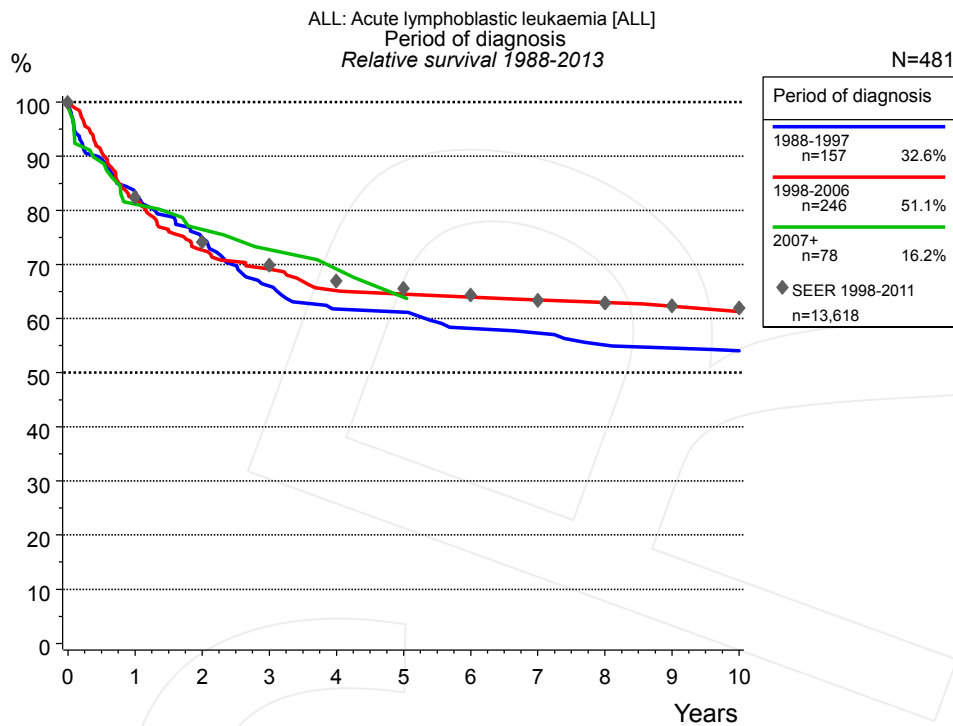


Figure 1a. Relative survival of patients with acute lymphobl. leukaemia by period of diagnosis. Included in the evaluation are 481 cases diagnosed between 1988 and 2013.

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 1988, 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						
Years	1988-1997 n=157		1998-2006 n=246		2007+ n=78	
	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0	100.0	100.0
1	83.4	83.3	81.9	82.2	81.1	81.1
2	75.0	74.9	72.5	72.6	76.4	76.4
3	65.9	66.0	68.8	69.2	72.5	72.7
4	61.2	61.7	65.2	65.2	70.0	69.1
5	61.2	61.1	64.5	64.6	66.7	63.9
6	57.8	58.2	63.8	64.0		
7	57.1	57.3	62.9	63.5		
8	55.0	55.1	62.9	63.0		
9	54.3	54.5	61.7	62.3		
10	53.6	54.0	61.7	61.3		

Table 1b. Observed (obs.) and relative (rel.) survival of patients with acute lymphobl. leukaemia by period of diagnosis for period 1988-2013 (N=481).

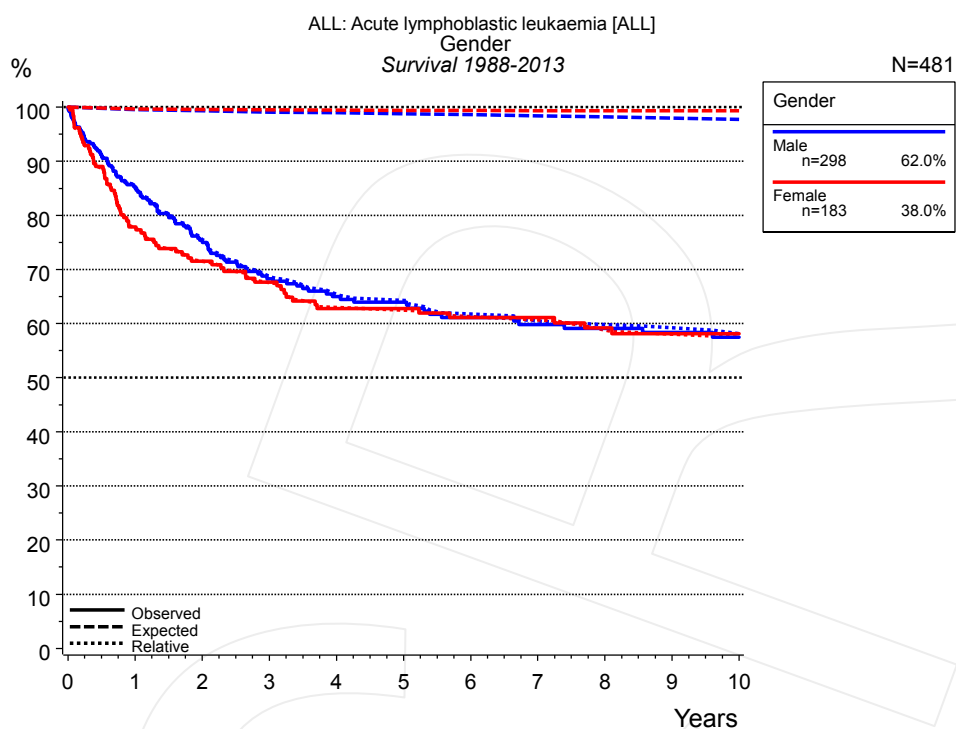


Figure 2a. Survival of patients with acute lymphobl. leukaemia by gender. Included in the evaluation are 481 cases diagnosed between 1988 and 2013.

	Gender			
	Male n=298		Female n=183	
Years	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	85.0	85.4	77.9	77.7
2	75.4	75.5	71.5	71.5
3	68.3	68.8	67.7	67.6
4	65.0	65.4	62.8	63.0
5	64.0	64.2	62.8	62.5
6	61.2	61.8	61.1	61.3
7	59.8	60.5	61.1	60.7
8	59.1	59.8	59.2	58.8
9	58.4	59.2	58.1	58.0
10	57.5	58.1	58.1	57.5

Table 2b. Observed (obs.) and relative (rel.) survival of patients with acute lymphobl. leukaemia by gender for period 1988-2013 (N=481).

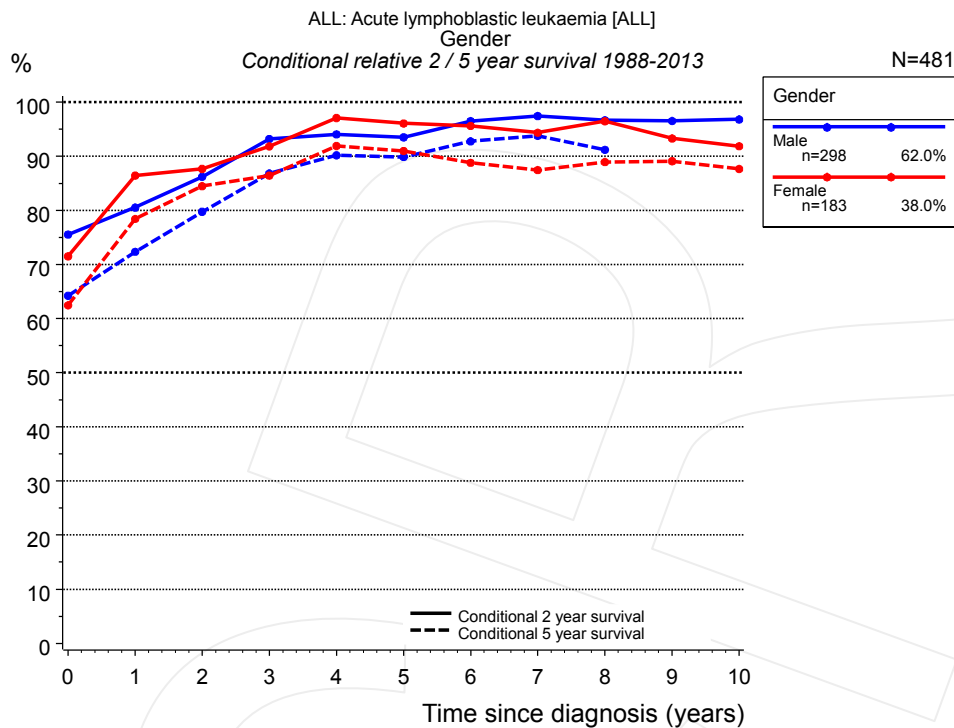


Figure 2c. Conditional relative 2 / 5-year survival of patients with acute lymphobl. leukaemia by gender. For 481 of 481 cases diagnosed between 1988 and 2013 valid data could be obtained for this item.

Years	Gender					
	Male			Female		
	n	Cond. surv. % 2 yrs	5 yrs	n	Cond. surv. % 2 yrs	5 yrs
0	298	75.5	64.2	183	71.5	62.5
1	241	80.5	72.4	138	86.5	78.4
2	189	86.2	79.7	117	87.7	84.5
3	150	93.2	86.8	99	91.8	86.4
4	128	94.0	90.2	87	97.1	91.9
5	116	93.5	89.9	78	96.1	91.0
6	102	96.5	92.8	68	95.6	88.8
7	89	97.4	93.8	64	94.3	87.5
8	81	96.6	91.2	59	96.5	88.9
9	73	96.5		52	93.3	89.1
10	62	96.8		48	91.9	87.7

Table 2d. Conditional relative 2 / 5-year survival of patients with acute lymphobl. leukaemia by gender for period 1988-2013 (N=481).

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 93.2% (n=150).

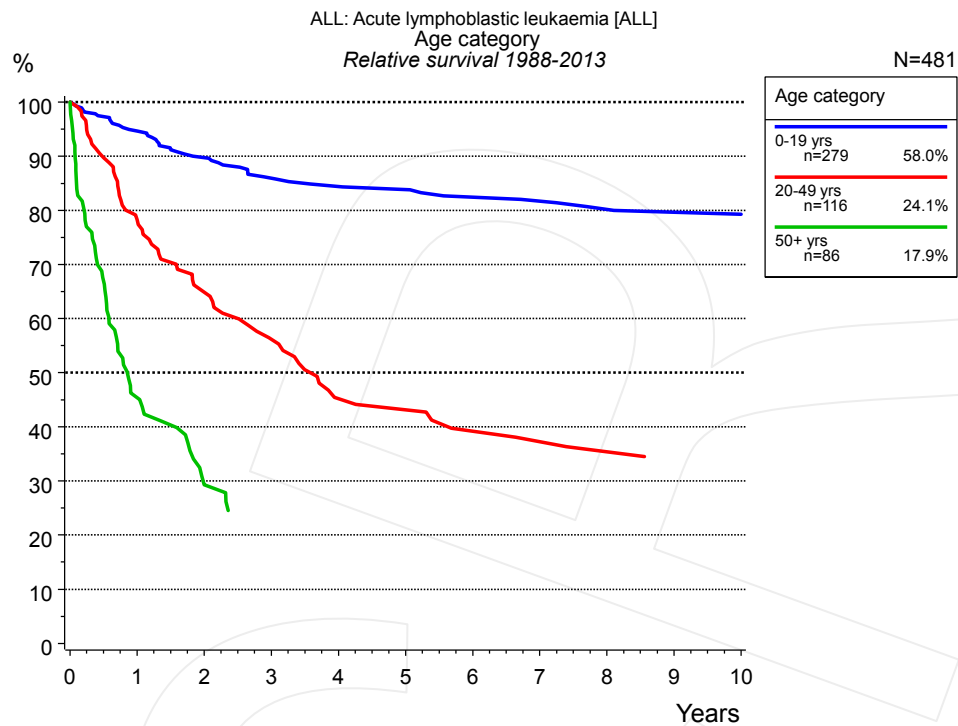


Figure 3a. Relative survival of patients with acute lymphobl. leukaemia by age category. Included in the evaluation are 481 cases diagnosed between 1988 and 2013.

Years	Age category					
	0-19 yrs n=279		20-49 yrs n=116		50+ yrs n=86	
	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0	100.0	100.0
1	94.9	94.6	78.2	78.2	45.4	45.4
2	90.0	89.7	66.0	64.9	29.7	29.3
3	86.2	85.9	56.3	56.2		
4	84.8	84.4	45.2	45.2		
5	84.3	83.8	43.9	43.1		
6	82.6	82.4	39.4	39.2		
7	81.9	81.7	37.7	37.3		
8	80.6	80.2	35.9	35.4		
9	79.9	79.7	34.0	34.2		
10	79.9	79.3	34.0	33.4		

Table 3b. Observed (obs.) and relative (rel.) survival of patients with acute lymphobl. leukaemia by age category for period 1988-2013 (N=481).

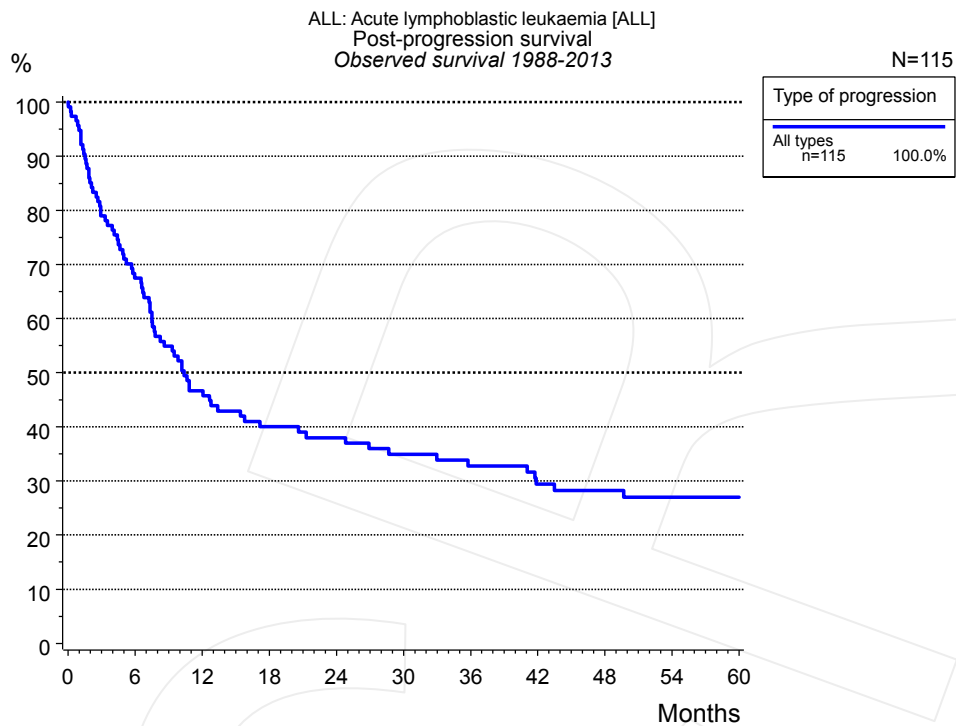


Figure 5a. Observed post-progression survival of 115 patients with acute lymphobl. leukaemia diagnosed between 1988 and 2013 (incl. M1). These 115 patients with documented progression events during their course of disease represent 23.9% of the totally 481 evaluated cases. Patients with cancer relapse documented via death certificates only were excluded (n=59, 12.3%).

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 potentially considered in more than one subgroup.

Type of progression	
All types n=115	
Months	%
0	100.0
12	46.7
24	38.0
36	32.8
48	28.3
60	27.0

Table 5b. Observed post-progression survival of patients with acute lymphobl. leukaemia for period 1988-2013 (N=115).

Shortcuts

MCR	Munich Cancer Registry, Germany (Tumorregister München)
NCI	National Cancer Institute, USA
SEER	Surveillance, Epidemiology, and End Results, USA
UICC	Union for International Cancer Control, Geneva
DCO	Death certificate only. The death certificate provides the only notification to the registry.
NA	Not available
NOS	Not otherwise specified
OS	Observed/overall survival (Kaplan-Meier estimate)
RS	Relative survival, compared to the general population, ratio of observed to expected survival (Ederer II method), reflecting excess mortality among cancer patients
AS	Assembled survival chart (observed, expected, relative)
PPS	Post-progression survival, survival since first relapse (Kaplan-Meier estimate)
progression	Date of entry: Date of first locoregional recurrence, distant metastasis, unspecified
	Event: Death of all causes
CS	Conditional survival, survival probability under the condition of surviving a given period of time

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