Munich Cancer Registry

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- *Deutsch*

ICD-10 C92: Myeloid leukaemia

Survival

Year of diagnosis	1988-1997	1998-2020
Patients	394	4,944
Diseases	394	4,964
Cases evaluated	334	2,633

Creation date	04/15/2022
Database export	12/20/2021
Population	4.92 m

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

https://www.tumorregister-muenchen.de/en/facts/surv/sC92__E-ICD-10-C92-Myeloid-leukaemia-survival.pdf

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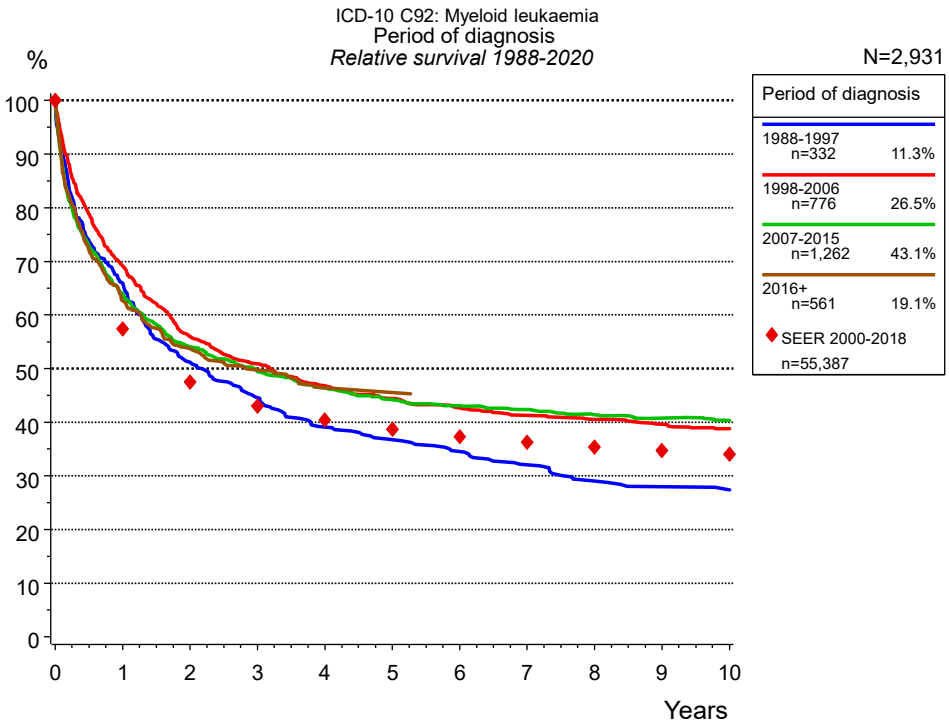

Figure 1a. Relative survival of patients with myeloid leukaemia by period of diagnosis. Included in the evaluation are 2,931 cases diagnosed between 1988 and 2020.

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 2000 to 2018, and are represented by colored 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							
	1988-1997 n=332		1998-2006 n=776		2007-2015 n=1,262		2016+ n=561	
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	64.7	65.9	67.9	69.2	62.4	64.0	61.3	62.7
2	50.0	51.2	54.0	56.0	52.0	54.1	51.8	53.7
3	43.1	44.6	48.6	50.9	46.9	49.5	47.4	49.7
4	37.4	39.1	44.2	46.8	43.3	46.3	43.6	46.5
5	34.8	36.8	41.5	44.5	40.7	44.2	43.6	45.6
6	32.6	34.5	39.4	42.7	39.2	43.0		
7	29.9	32.0	37.7	41.3	38.1	42.4		
8	26.9	29.1	36.6	40.5	36.7	41.4		
9	25.9	28.0	35.5	39.6	35.7	40.8		
10	25.2	27.4	34.4	38.8	34.8	40.3		
Median	1.9		2.6		2.3		2.2	

Table 1b. Observed (obs.) and relative (rel.) survival of patients with myeloid leukaemia by period of diagnosis for period 1988-2020 (N=2,931).

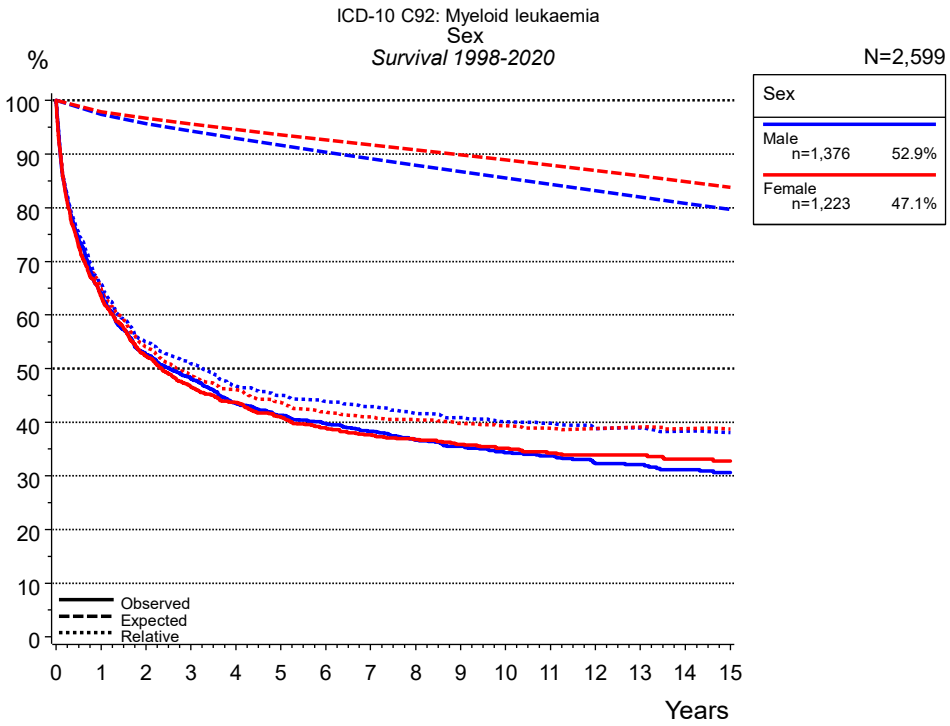

Figure 2a. Survival of patients with myeloid leukaemia by sex. Included in the evaluation are 2,599 cases diagnosed between 1998 and 2020.

	Sex			
	Male n=1,376		Female n=1,223	
Years	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0
1	64.1	65.7	63.6	65.0
2	52.7	55.0	52.3	54.1
3	48.1	51.0	46.7	48.8
4	43.5	46.8	43.6	46.1
5	41.3	45.0	41.0	43.7
6	39.7	43.9	39.0	42.0
7	38.3	43.0	37.7	41.0
8	36.7	41.7	36.8	40.5
9	35.5	40.9	35.8	39.8
10	34.3	40.1	35.1	39.3
11	33.7	39.8	34.3	38.9
12	32.3	38.8	33.9	38.8
13	32.1	38.9	33.9	39.1
14	31.2	38.4	33.1	38.8
15	30.6	38.1	32.8	38.7
Median	2.5		2.3	

Table 2b. Observed (obs.) and relative (rel.) survival of patients with myeloid leukaemia by sex for period 1998-2020 (N=2,599).

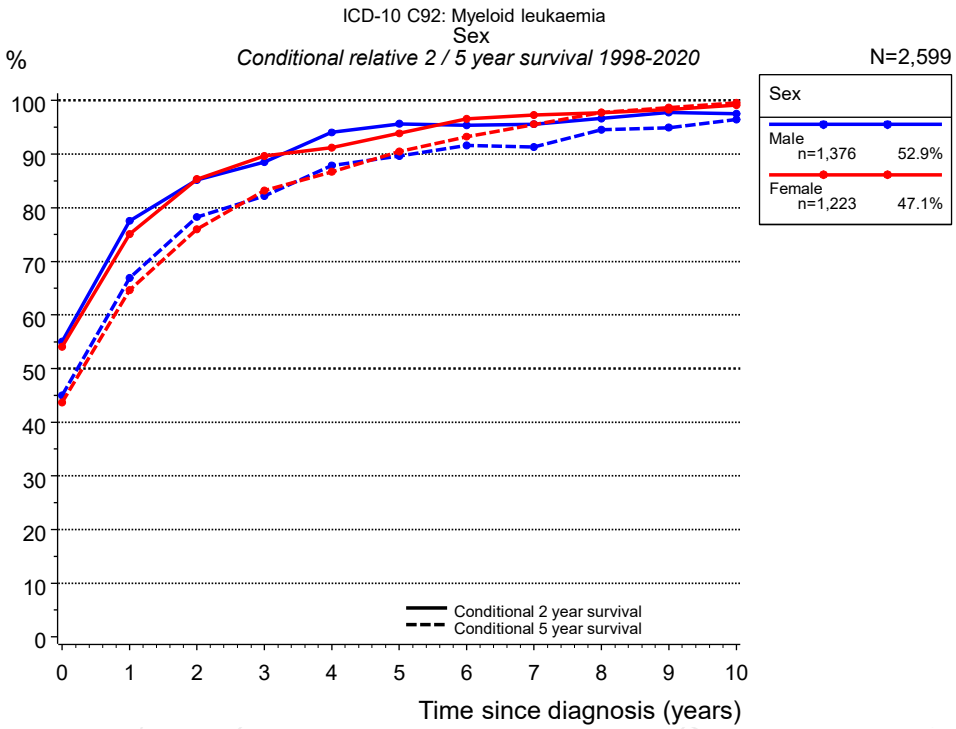

Figure 2c. Conditional relative 2 / 5-year survival of patients with myeloid leukaemia by sex. For 2,599 of 2,599 cases diagnosed between 1998 and 2020 valid data could be obtained for this item.

	Sex					
	Male			Female		
		Cond. surv. %			Cond. surv. %	
Years	n	2 yrs	5 yrs	n	2 yrs	5 yrs
0	1,376	55.0	45.0	1,223	54.1	43.7
1	849	77.6	66.9	741	75.1	64.7
2	672	85.1	78.3	578	85.3	75.9
3	594	88.5	82.2	494	89.7	83.2
4	515	94.0	87.9	441	91.2	86.7
5	450	95.6	89.6	384	93.9	90.5
6	396	95.4	91.6	340	96.6	93.3
7	360	95.5	91.3	307	97.3	95.5
8	310	96.6	94.6	279	97.7	97.8
9	275	97.8	94.9	252	98.3	98.7
10	237	97.5	96.5	224	99.1	99.5

Table 2d. Conditional relative 2 / 5-year survival of patients with myeloid leukaemia by sex for period 1998-2020 (N=2,599).

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 sex="Male", who are alive at least 3 years after cancer diagnosis, the conditional relative 2-year survival rate is 88.5% (n=594).

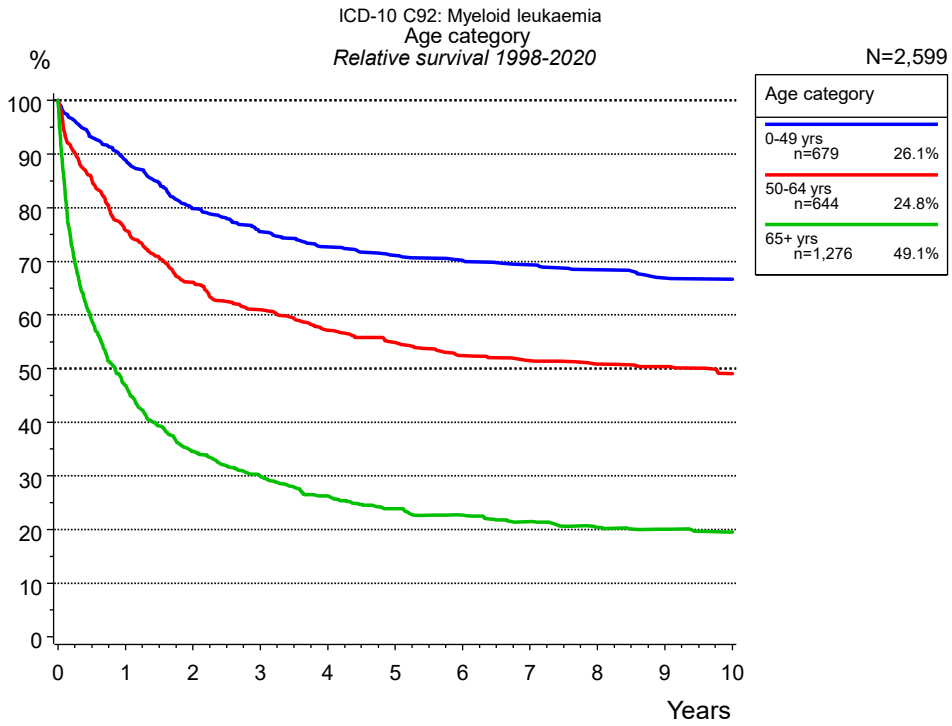

Figure 3a. Relative survival of patients with myeloid leukaemia by age category. Included in the evaluation are 2,599 cases diagnosed between 1998 and 2020.

	Age category					
	0-49 yrs n=679		50-64 yrs n=644		65+ yrs n=1,276	
Years	obs. %	rel. %	obs. %	rel. %	obs. %	rel. %
0	100.0	100.0	100.0	100.0	100.0	100.0
1	88.9	88.9	75.3	75.8	44.9	46.9
2	79.7	79.9	65.3	66.1	31.9	34.6
3	75.2	75.5	59.7	61.0	26.7	30.0
4	72.4	72.7	55.5	57.2	22.5	26.2
5	70.8	71.1	52.9	54.9	19.7	23.8
6	69.6	70.2	49.9	52.4	18.0	22.7
7	68.8	69.4	48.5	51.5	16.4	21.5
8	67.7	68.4	47.3	50.8	14.9	20.4
9	66.1	66.9	46.5	50.4	14.0	20.1
10	65.8	66.7	44.6	49.0	12.9	19.5
Median			5.9		0.7	

Table 3b. Observed (obs.) and relative (rel.) survival of patients with myeloid leukaemia by age category for period 1998-2020 (N=2,599).

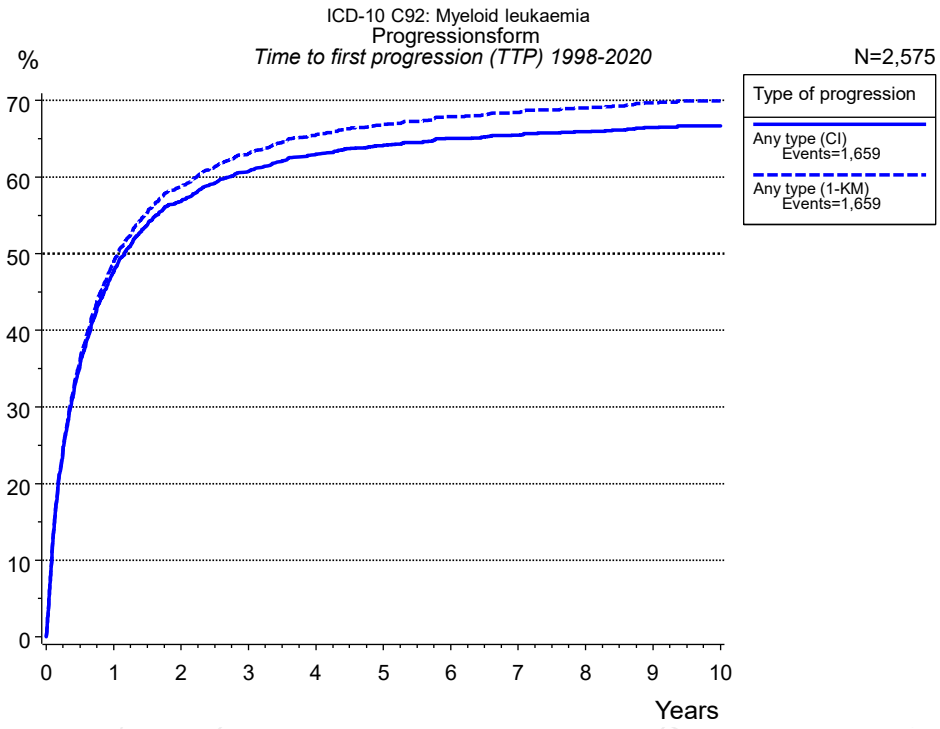

Figure 5a. Time to first progression of 2,575 patients with myeloid leukaemia diagnosed between 1998 and 2020 (in solid cancers M0 only) estimated by cumulative incidence function (CI, solid line) accounting for death as competing risk and by inverse Kaplan-Meier estimate (1-KM, dashed line). The frequency of events may be underestimated due to underreporting.

Type of progression		
	Any type (CI)	Any type (1-KM)
N	2,575	2,575
Events	1,647	1,647
compet.	222	
Years	%	%
0	0.0	0.0
1	47.7	48.9
2	56.8	58.7
3	60.8	63.0
4	62.9	65.4
5	64.1	66.8
6	65.0	67.9
7	65.5	68.4
8	65.9	69.0
9	66.5	69.7
10	66.7	69.9

Table 5b. Time to first progression of patients with myeloid leukaemia for period 1998-2020 (N=2,575), also showing the total of progression events (Events) and of deaths as competing risk (compet.).

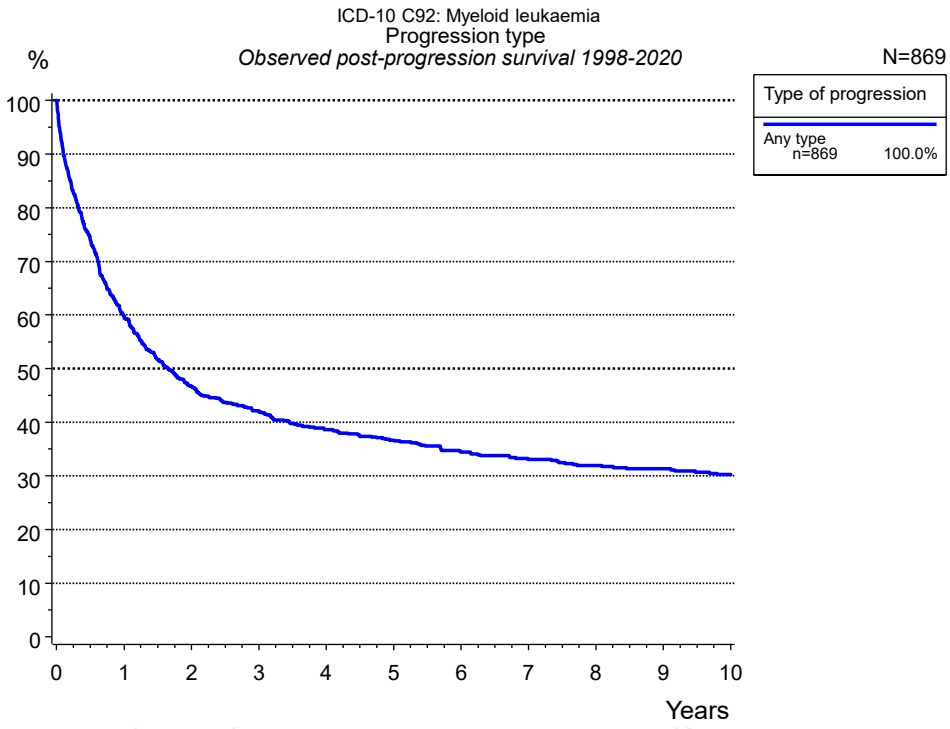

Figure 5c. Observed post-progression survival of 869 patients with myeloid leukaemia diagnosed between 1998 and 2020. These 869 patients with documented progression events during their course of disease represent 33.7 % of the totally 2,577 evaluated cases. Patients with cancer relapse documented via death certificates only were excluded (n=792, 30.7 %).

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 potientially considered in more than one subgroup.

Type of progression	
	Any type n=869
Years	%
0	100.0
1	59.8
2	46.7
3	42.1
4	38.6
5	36.6
6	34.4
7	33.0
8	31.9
9	31.3
10	30.2

Table 5d. Observed post-progression survival of patients with myeloid leukaemia for period 1998-2020 (N=869).

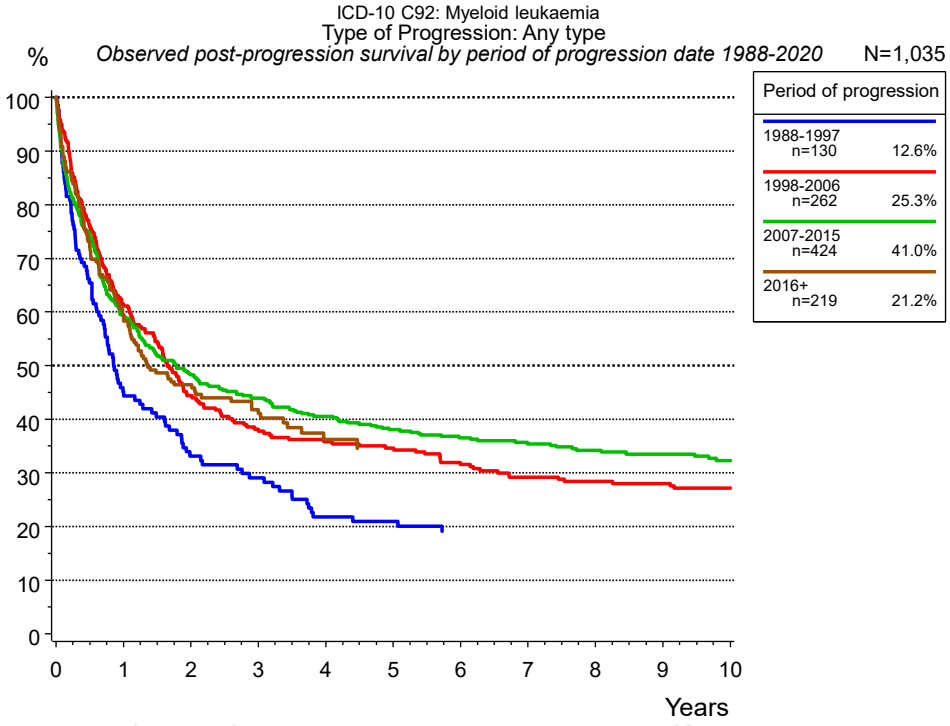

Figure 5e. Observed post-progression (any type) survival of 1,035 patients with myeloid leukaemia diagnosed between 1988 and 2020 by period of progression.

	Period of progression			
	1988-1997 n=130	1998-2006 n=262	2007-2015 n=424	2016+ n=219
Years	%	%	%	%
0	100.0	100.0	100.0	100.0
1	45.1	61.2	59.5	59.3
2	33.1	44.4	48.3	46.4
3	29.1	38.2	44.0	41.8
4	21.8	35.8	40.5	36.2
5	21.0	34.7	38.1	
6	19.1	31.5	36.6	
7		29.2	35.4	
8		28.4	34.2	
9		28.0	33.5	
10		27.2	32.3	

Table 5f. Observed post-progression (any type) survival of patients with myeloid leukaemia for period 1988-2020 by period of progression (N=1,035).

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

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