

Donor lymphocyte infusions after first allogeneic hematopoietic stem-cell transplantation in adults with acute myeloid leukemia: a single-center landmark analysis

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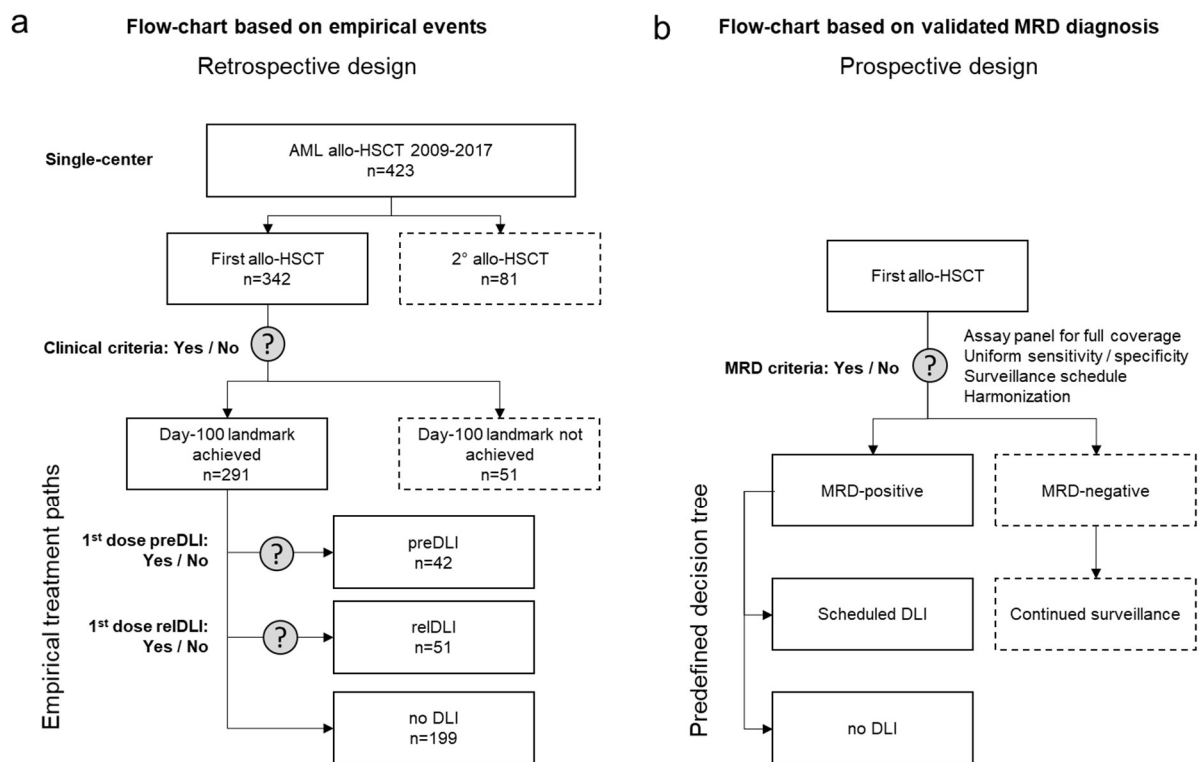
Andrés R. Rettig¹, Gabriele Ihorst², Hartmut Bertz¹, Michael Lübbert¹, Reinhard Marks¹, Miguel Waterhouse¹, Ralph Wäsch¹, Robert Zeiser¹, Justus Duyster¹, Jürgen Finke¹

¹Department of Hematology, Oncology and Stem Cell Transplantation, University Medical Center Freiburg, Freiburg, Germany

²Clinical Trials Unit, University Medical Center Freiburg, Freiburg, Germany

Corresponding author: Andrés R. Rettig; e-mail: andres.rettig@uniklinik-freiburg.de

Online Resource 1



Schematic representation of (a) cohort partitioning algorithm used in the present study, with achievement of day 100 landmark criteria (Yes / No) and documented date of first-dose DLI treatment, either before (preDLI, Yes / No) or after date of first detection of hematological relapse (relDLI, Yes / No) as mutually exclusive principal events. Part (b) depicts a hypothetical future scenario in AML with allo-HSCT, in which a standardized, sensitive and specific clinical entity of Measurable Residual Disease (MRD) becomes available as an approach to principal cohort stratification (cf. Ravandi et al., Blood Adv 2:1356–1366, 2018).

Online Resource 2 Comparison of outcome results for adult AML patients with first allo-HSCT based on survival-with-transplant vs conventional overall survival including re-transplantation

a Survival after first allo-HSCT: endpoint comparison

Endpoint	Adult AML 1° allo-HSCT	Day-100 landmark cohort	Day-100 landmark cohort and DLI		
			no DLI	preDLI	reDLI
Survival-with-transplant^a					
Median (months)	29.5	55.7	Not reached	40.9	10.4
2-year (95% CI)	53.1% (47.7-58.2)	61.9% (56.1-67.2)	70.8 % (63.9-76.6)	64.3% (47.9-76.7)	25.5% (14.6-37.9)
5-year (95% CI)	42.5% (36.9-47.9)	49.4% (43.2-55.3)	62.4 % (54.9-69.0)	43.3% (27.7-57.9)	9.8% (3.6-19.7)
Overall survival^b					
Median (months)	36.9	65.8	Not reached	56.0	16.2
2-year (95% CI)	57.5% (52.1-62.6)	65.7 % (59.9-70.8)	72.5 % (65.5-78.0)	71.3 % (55.0-82.6)	35.3 % (22.6-48.2)
5-year (95% CI)	44.7% (39.0-50.2)	51 % (57.3-46.1)	63.5 % (56.0-70.1)	46.6 % (30.6-61.6)	11.8 % (4.5-22.8)

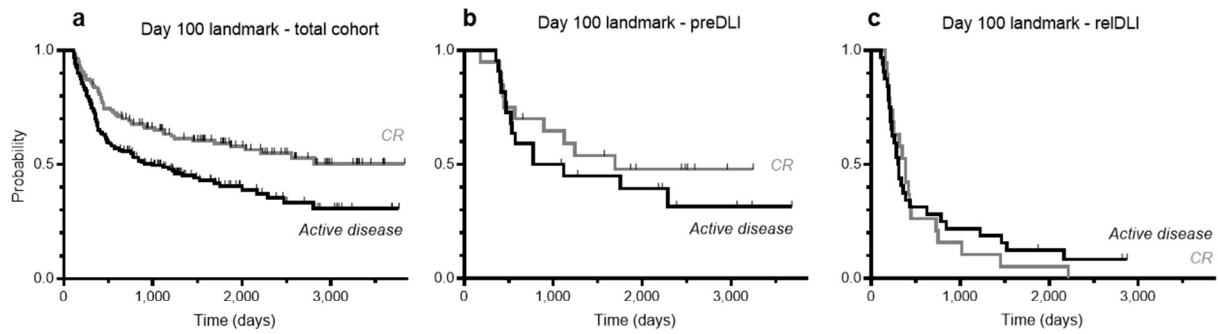
^a Survival with transplant defined by date of first transplantation to the earlier of death, from any cause, or re-transplantation, censored for status alive at last follow-up. ^b Overall survival defined by date of first transplantation to death, from any cause, censored for status alive at last follow-up.

b Day-100 landmark cohort
Survival after first allo-HSCT by disease status at transplantation: endpoint comparison

Status at first allo-HSCT	Median (months)	2-year (95% CI)	5-year (95% CI)	P-value	HR Active disease vs CR	95% CI of ratio
Survival-with-transplant^a						
CR ^c	Not reached	69.2% (60.6-76.2)	59.3% (50.1-67.4)	0.0017	1.68	(1.22-2.31)
Active disease	32.7	55.7% (47.6-63.0)	40.5% (32.1-48.8)			
Overall survival^b						
CR	Not reached	74.5% (66.2-81.1)	62.2% (53-70.1)	0.0002	1.89	(1.36-2.62)
Active disease	36.8	58.8% (50.7-66.0)	41% (32.4-49.4)			

^a Survival with transplant defined by date of first transplantation to the earlier of death, from any cause, or re-transplantation, censored for status alive at last follow-up. ^b Overall survival defined by date of first transplantation to death, from any cause, censored for status alive at last follow-up. ^c Disease status at transplantation: CR, complete remission vs. active disease

Online Resource 3 Covariate analysis for adult AML patients with first allo-HSCT based on disease status at transplantation



Cohort	Status at HSCT	Median survival (months)	HR	95% CI of ratio	P-value
Day-100 landmark - total	Active disease vs CR	32.7 vs not reached	1.68	1.22-2.31	0.0017
Landmark with preDLI	Active disease vs CR	31.2 vs 55.7	1.41	0.63-3.14	0.40
Landmark with reDLI	Active disease vs CR	12.6 vs 9.9	0.89	0.49-1.59	0.68

Comparison of survival with first transplant in patients who were either in CR or had active disease at the time of transplantation. The top panels show Kaplan-Meier plots for all patients meeting the day 100 landmark (a) and subgroups meeting the day 100 landmark and receiving either preDLI (b) or reDLI (c). Survival times are shown from day of transplantation. Vertical tick marks along the survival curves indicate individual patients alive without re-transplantation at the respective time of last follow-up. The bottom panel summarizes the results of univariate comparisons for survival and pre-transplantation clinical status.