

Venetoclax plus hypomethylating agents as a bridge to transplant or donor lymphocyte infusion in relapsed/refractory acute myeloid leukemia

Authors

Kathelijn Verdeyen,^{1,2*} Tom Reuvekamp,^{1-3*} Walter J.F.M. van der Velden,⁴ Bas J. Wouters,⁵ Peter A. von dem Borne,⁶ Anna van Rhenen,⁷ Birgit I. Lissenberg-Witte,⁸ Daniëlle van Lammeren,⁹ Geerte L. van Sluis,¹⁰ Eva de Jongh,¹¹ Roel B. Fiets,¹² Maarten F. Corsten,¹³ Arie C. van der Spek,¹⁴ Anke M. Gerrits,¹⁵ Esther R. van Bladel,¹⁶ Lidwine W. Tick,¹⁷ Okke de Weerd,¹⁸ Bregje van Zaane,¹⁹ Marjan J. Cruijssen,²⁰ Eduardus F.M. Posthuma,²¹ Catharina H.M.J. van Elssen,^{22,23} Saskia K. Klein,²⁴ Arjan A. van de Loosdrecht^{2,3} and David C. de Leeuw^{2,3}

¹Amsterdam UMC location Universiteit van Amsterdam, Department of Hematology, Amsterdam; ²Amsterdam UMC location Vrije Universiteit Amsterdam, Department of Hematology, Amsterdam; ³Cancer Center Amsterdam, Imaging and Biomarkers, Amsterdam; ⁴Radboud University Medical Center, Department of Hematology, Nijmegen; ⁵Erasmus Medical Center, Department of Hematology, Rotterdam; ⁶Leiden University Medical Center, Department of Hematology, Leiden; ⁷University Medical Center Utrecht, Department of Hematology, Utrecht; ⁸Amsterdam UMC location Vrije Universiteit Amsterdam, Department of Epidemiology and Data Science, Amsterdam; ⁹HagaZiekenhuis, Department of Hematology, The Hague; ¹⁰Isala Clinics, Department of Internal Medicine, Zwolle; ¹¹Albert Schweitzer Hospital, Department of Internal Medicine, Dordrecht; ¹²Amphia Hospital, Department of Internal Medicine, Breda; ¹³Meander Medical Center, Department of Hematology, Amersfoort; ¹⁴Northwest Clinics, Department of Internal Medicine,

Alkmaar; ¹⁵OLVG, Department of Internal Medicine, Amsterdam; ¹⁶Slingeland Hospital, Department of Internal Medicine, Doetinchem; ¹⁷Máxima Medical Center, Department of Internal Medicine, Veldhoven; ¹⁸Sint Antonius Hospital, Department of Hematology, Nieuwegein; ¹⁹Flevo Hospital, Department of Internal Medicine, Almere; ²⁰Catharina Hospital, Department of Internal Medicine, Eindhoven; ²¹Reinier de Graaf Group, Department of Internal Medicine, Delft; ²²Maastricht University Medical Center+, Department of Internal medicine, Maastricht; ²³Research Institute for Oncology and Reproduction (GROW), Maastricht University, Maastricht and ²⁴University Medical Center Groningen, Department of Hematology, Groningen, the Netherlands

**KV and TR contributed equally as first authors.*

Correspondence:

D.C. DLEEUW - d.deleeuw@amsterdamumc.nl

<https://doi.org/10.3324/haematol.2025.288178>

Received: May 8, 2025.

Accepted: September 8, 2025.

Early view: September 18, 2025.

©2026 Ferrata Storti Foundation

Published under a CC BY-NC license 

Supplementary information to Venetoclax-HMA as a bridge to transplant or DLI in relapsed or refractory acute myeloid leukemia

Verdeyen and Reuvekamp et al.

Supplemental Figures

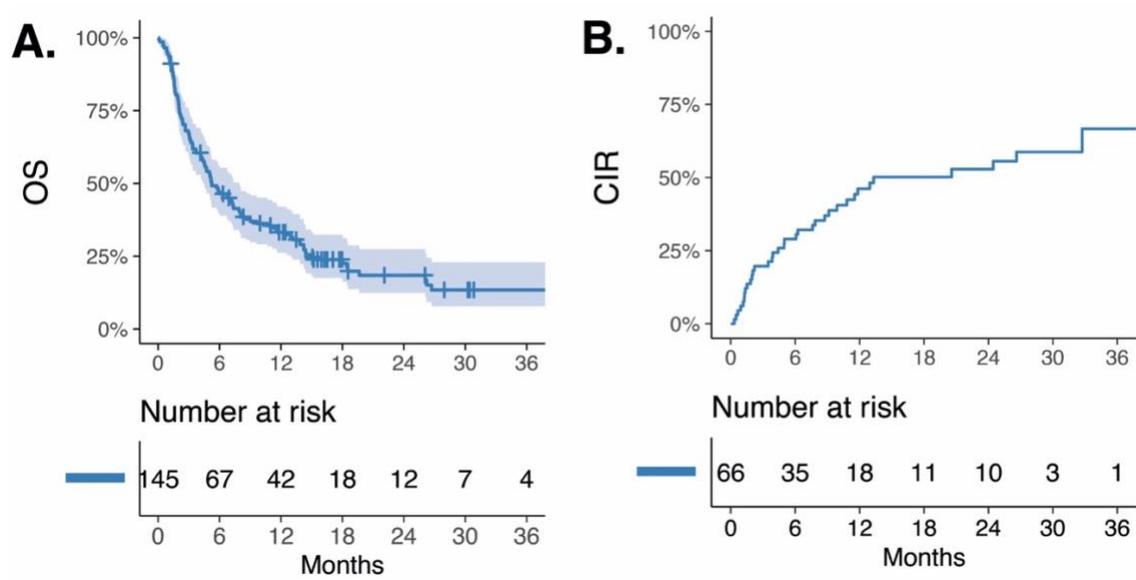


Figure S1. Overall survival and cumulative incidence of relapse in the whole cohort.

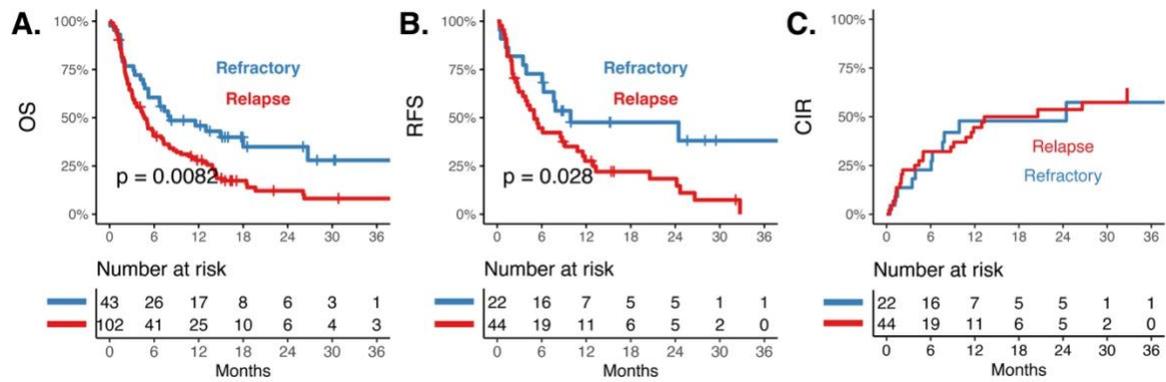


Figure S2. Survival of relapsed and refractory patients from start of venetoclax-HMA. A) overall survival. B) relapse-free survival. C) cumulative incidence of relapse

Supplemental Tables

Table S1. Mutations stratified by refractory and relapsed patients.

| Characteristic | Refractory, N = 44 ¹ | Relapse, N = 102 ¹ | p-value ² |
|--------------------|---------------------------------|-------------------------------|----------------------|
| Age | 63 (51-70) | 64 (52-69) | >0.9 |
| Sex: male | 27 (61%) | 53 (52%) | 0.3 |
| NPM1 | | | 0.10 |
| Negative | 38 (93%) | 80 (82%) | |
| Positive | 3 (7.3%) | 18 (18%) | |
| DNMT3A | | | 0.8 |
| Negative | 11 (73%) | 28 (65%) | |
| Positive | 4 (27%) | 15 (35%) | |
| TET2 | | | 0.7 |
| Negative | 13 (81%) | 37 (86%) | |
| Positive | 3 (19%) | 6 (14%) | |
| FLT3-TID | | | 0.2 |
| Negative | 37 (90%) | 79 (81%) | |
| Positive | 4 (9.8%) | 19 (19%) | |
| TP53 | | | 0.5 |
| Negative | 32 (82%) | 76 (86%) | |
| Positive | 7 (18%) | 12 (14%) | |
| IDH1 | | | 0.8 |
| Negative | 36 (92%) | 80 (89%) | |
| Positive | 3 (7.7%) | 10 (11%) | |
| IDH2 | | | 0.088 |
| Negative | 32 (80%) | 82 (91%) | |
| Positive | 8 (20%) | 8 (8.9%) | |
| RUNX1 | | | 0.11 |
| Negative | 30 (73%) | 74 (85%) | |
| Positive | 11 (27%) | 13 (15%) | |
| ASXL1 | | | 0.11 |
| Negative | 29 (74%) | 80 (86%) | |
| Positive | 10 (26%) | 13 (14%) | |
| Monosomy 17 | | | 0.4 |
| Negative | 37 (86%) | 92 (92%) | |
| Positive | 6 (14%) | 8 (8.0%) | |
| Inversion 3 | | | >0.9 |
| Negative | 41 (98%) | 97 (97%) | |
| Positive | 1 (2.4%) | 3 (3.0%) | |
| KRAS/NRAS | | | 0.6 |
| Negative | 16 (100%) | 40 (91%) | |
| Positive | 0 (0%) | 4 (9.1%) | |

| Characteristic | Refractory, N = 44 ¹ | Relapse, N = 102 ¹ | p-value ² |
|----------------|---------------------------------|-------------------------------|----------------------|
| CEBPA | | | 0.7 |
| Negative | 39 (98%) | 92 (94%) | |
| Positive | 1 (2.5%) | 6 (6.1%) | |

¹Median (IQR); n (%)

²Wilcoxon rank sum test; Pearson's Chi-squared test; Fisher's exact test