

General AML

## ASH 2018 | Survival differences among patients with acute myeloid leukemia treated with or without allogeneic HCT

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At the [60<sup>th</sup> American Society of Hematology Annual Meeting & Exposition](#), [Mohamed L. Sorror](#) from the [Fred Hutchinson Cancer Research Center](#), Seattle, US, presented data from the first prospective multi-center longitudinal study, dating from first presentation of adult patients with acute myeloid leukemia (AML) who were treated at one of 13 different referral centers that provide both AML treatment and hematopoietic cell transplantation (HCT). The survival of patients who received and did not receive HCT was compared.

In this study, 695 patients with AML (90.5%) or myelodysplastic syndrome/myeloproliferative neoplasm (9.5%) were enrolled in this study. According to the European LeukemiaNet (ELN) 2010 cytogenetic risk classification, 15.5%, 49.6% and 34.8% of patients were classified as low-, intermediate- and high-risk, respectively.

The researchers identified risk factors associated with mortality in the overall population. These risk factors were used to develop multivariate models examining the association between HCT and mortality.

### Key findings:

- Risk factors associated with increased risk of mortality include: HCT-comorbidity index scores  $\geq 5$  ( $P < 0.0001$ ), age  $\geq 70$  years ( $P < 0.0001$ ), intermediate ( $P = 0.03$ ) and high ELN risk ( $P < 0.0001$ ), relapsed/refractory AML at enrollment ( $P = 0.0005$ ), relapse or refractory response to initial treatment after enrollment ( $P < 0.0001$ ), frailty per walk test ( $P = 0.004$ ), impaired quality of life per FACT-G scores ( $P = 0.02$ ), increased depression per Patient Health Questionnaire 9-item Depression Scale ( $P = 0.03$ ), and dependent status per activities of daily living scores  $< 14$  ( $P = 0.05$ )
- Median follow-up = 16.8 months (range, 0.1–52.4)
- 2-years survival rate after HCT: 58%
- In the unadjusted model, a survival advantage was associated with receiving allogeneic HCT compared with no transplantation,  $P = 0.0003$ 
  - The survival advantage for allogeneic HCT was observed in patients with intermediate ( $P = 0.0005$ ) or unfavorable ( $P < 0.0001$ ) ELN risk and in vulnerable patients ( $P < 0.0001$ )
- In the adjusted model for AML- and patient-specific variables, there was no survival benefit observed for allogeneic HCT,  $P = 0.21$

In summary, after adjusting for key AML-specific and patient-specific variables the observed benefit of HCT over non-HCT therapies in reducing mortality rates among patients with AML was negated.

The speaker suggested that the findings of their study “might reflect an improvement in supportive care and non-HCT therapies, a relatively high non-relapse mortality early after HCT and the need for longer follow-up to demonstrate an adjusted benefit of HCT, and the high selectivity of the transplant eligibility process, as we accounted here for variables that are often ignored in genetic assignment randomized studies.”

## References

1. Sorror M. L. *et al.* Survival differences among patients (pts) with acute myeloid leukemia (AML) treated with allogeneic hematopoietic cell transplantation (HCT) versus non-HCT therapies: a large real-time multi-center prospective longitudinal observational study. 2018 Dec 1; Oral Abstract #207: 60<sup>th</sup> ASH Annual Meeting and Exposition, San Diego, CA.

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