TRANSFORM MYELOMA

Achieving MRD Negativity May Mitigate Poor Prognosis in Myeloma Patients With High-Risk Cytogenetics[1,2]

In multiple myeloma, high-risk cytogenetics are associated with poor survival.[3]

While patients with standard-risk and high-risk cytogenetics see similar CR rates, high-risk patients have shorter PFS and OS.[1,3]

MRD has emerged as a more sensitive measure than standard response criteria. Among patients who have achieved CR, assessing MRD status can help identify patients who are at greater risk for earlier relapse.[4,5]

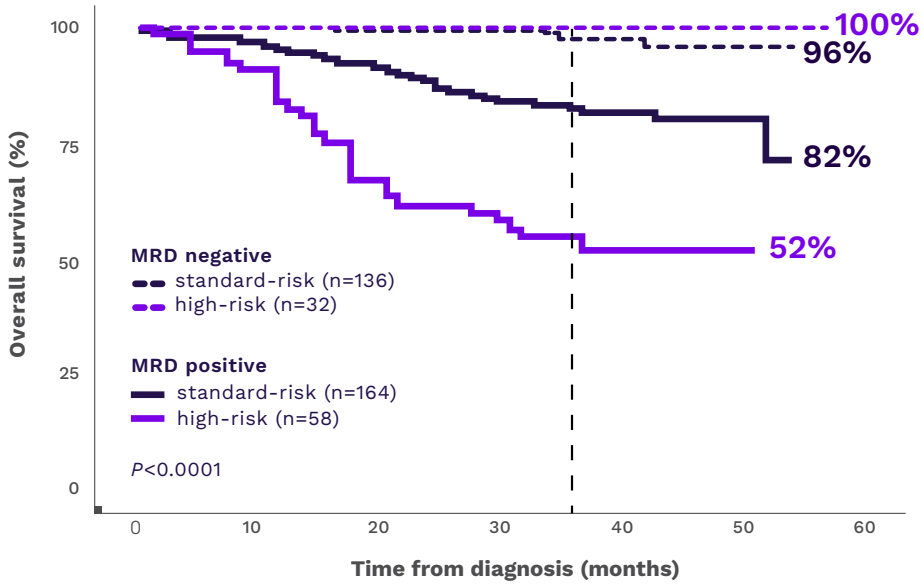
Aiming for MRD negativity in all patients may be a viable approach for improving long-term outcomes, including for patients with high-risk cytogenetics[1,5]

For patients with persistent MRD, or those who revert from MRD- to MRD+, **early therapeutic intervention may be critical**[6]

Patients with high-risk cytogenetics who achieve MRD- may have comparable outcomes to standard-risk patients[1]

A recent study of patients with transplant-eligible NDMM explored the long-term outcomes of patients according to their MRD and cytogenetic risk status.[1]*

3-YEAR OS RATES BY MRD AND CYTOGENETIC RISK STATUS[1]



- While fewer high-risk patients achieved MRD- compared with standard-risk patients (37% vs 49%, respectively), those who did had similar OS to standard-risk patients[1]
- Among patients who were MRD+, standard-risk patients had better outcomes compared with high-risk patients, despite a lack of difference in the number of residual cells between both groups. This suggests a different mechanism of resistance between standard- and high-risk patients[1]

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*High-risk defined by FISH as a patient having 1 of the following abnormalities: t(4;14), t(14;16), t(14;20), or loss of the p53 gene locus (del 17p or monosomy 17).[3]

CR=complete response; FISH=fluorescence in situ hybridisation; MRD=minimal residual disease; MRD-=minimal residual disease negative/negativity; MRD+=minimal residual disease positive/positivity; NDMM=newly diagnosed multiple myeloma; OS=overall survival; PFS=progression-free survival.

References: 1. Goicoechea I, Puig N, Cedena MT, et al. Deep MRD profiling defines outcome and unveils different modes of treatment resistance in standard- and high-risk myeloma. Blood. 2021;137(1):49-60. **2.** Corre J. Undetectable MRD can change the deal. Blood. 2021;137(1):5-6. **3.** Kumar S, Fonseca R, Ketterling RP, et al. Trisomies in multiple myeloma: impact on survival in patients with high-risk cytogenetics. Blood. 2012;119(9):2100-2105. **4.** Kostopoulos IV, Ntanasis-Stathopoulos I, Gavriatopoulou M, Tsitsilonis OE, Terpos E. Minimal residual disease in multiple myeloma: current landscape and future applications with immunotherapeutic approaches. Front Oncol. 2020;10:860. **5.** Lahuerta JJ, Paiva B, Vidriales MB, et al. Depth of response in multiple myeloma: a pooled analysis of three PETHEMA/GEM clinical trials. J Clin Oncol. 2017;35(25):2900-2910 **6.** Landgren O, Iskander K. Modern multiple myeloma therapy: deep, sustained treatment response and good clinical outcomes. J Intern Med. 2017;281(4):365-382

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