



Impact of Lenalidomide Maintenance Dosage on Survival Outcomes in Multiple Myeloma

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INTRODUCTION

The primary goal of maintenance therapy in multiple myeloma (MM) is to minimize adverse effects through the administration of low, consistent drug doses while preventing disease relapse by maintaining continuous suppression of plasma cell clones. However in clinical practice, a range of protocols are utilized, influenced by both physician preferences and the reimbursement policies of social security institutions. This study aimed to evaluate the impact of lenalidomide maintenance dosing on clinical outcomes and lenalidomide refractoriness. This retrospective study included 82 patients on lenalidomide maintenance post-ASCT. Low-dose maintenance was defined as a dose below the maximum allowable level based on GFR and blood counts, while the maximum tolerated dose (MTD) was the highest dose patients could tolerate.

RESULTS

The median progression-free survival (PFS) was 56.0 months (95% CI: 40.15–71.85), and overall survival (OS) was not reached, with 88.3% and 68.2% of patients alive at 60 and 120 months, respectively. A response of \geq VGPR was observed in 91% of patients on low-dose maintenance versus 73.3% at MTD (p:0.005). Median PFS was 56.0 months (95% CI: 47.06–64.93) in the low-dose group and 33 months (95% CI: 23.36–42.63) in the MTD group (p:0.166). Dose reductions due to adverse effects occurred in 17 patients (20.7%), more frequently in the MTD group (40% vs. 16.9%, p:0.42). Second-line therapy was administered in 48.7% of patients. PFS2 was similar between lenalidomide-based and lenalidomide-free regimens (p:0.978). Also in relapsed patients on low-dose maintenance, PFS2 did not differ between lenalidomide-based and lenalidomide-free regimens (p: 0.637).

CONCLUSION

This study introduces the concept of low-dose vs. MTD maintenance. MTD does not improve survival and increases toxicity. Our findings support low-dose maintenance as a preferable approach, though lenalidomide refractoriness may also develop in these patients.

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