# Maintenance Treatment Options in MM: Risk vs. Benefit

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The introduction of the immunomodulatory drugs (IMiDs) thalidomide and lenalidomide, and the proteasome inhibitor bortezomib, has considerably modified the management of multiple myeloma (MM).

The risk/benefit ratio associated with maintenance therapy including novel agents should be carefully considered. In a recent trial, thalidomide maintenance was associated with a significantly longer progression-free survival (PFS) compared to no maintenance (23 vs. 15 months; P<.001), while no significant difference in median overall survival (OS) was detected (P=.40). However, 52% of thalidomide patients discontinued treatment due to adverse events, particularly peripheral neuropathy. Thalidomide maintenance did not result in an increased rate of second primary malignancies (SPMs).[1]

Maintenance with lenalidomide proved to be a better alternative, due to the lack of peripheral neuropathy. In a trial including newly diagnosed elderly MM subjects, patients receiving lenalidomide after melphalan-prednisone-lenalidomide induction had improved PFS compared with patients assigned to placebo maintenance (31 vs. 14 months; P<.001). SPMs are a major concern, and were reported in 7% of lenalidomide maintenance patients.[2] Two other studies assessed the role of lenalidomide maintenance after transplantation.[3,4] Both studies found a PFS improvement with lenalidomide maintenance (medians: 41-46 vs. 23-27 months in the placebo arms; P<.001), although this benefit translated into an OS advantage in one study only.[4] Neutropenia is the major adverse event associated with lenalidomide and prompt action is needed. SPM incidence was similar in the two studies (8%).

Maintenance with bortezomib plus either thalidomide (VT) or prednisone (VP) improved outcome after induction with bortezomib-melphalan-prednisone or bortezomib-thalidomide-prednisone. After maintenance randomization, PFS was 32 months for VT and 24 months for VP patients (P=.1), and no OS difference was detected. Peripheral neuropathy was the major toxicity of both approaches (2% with VP vs. 7% with VT).[5] A recent study reported longer PFS and OS with bortezomib maintenance compared to thalidomide maintenance, however no randomization was planned.[6]

The data available support the value of a sequential approach including maintenance therapy with novel agents: maintenance therapy showed to prolong PFS, but longer follow-up is needed to assess the impact on OS.

***References***


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