Thalidomide for previously untreated elderly patients with multiple myeloma: meta-analysis of 1685 individual patient data from 6 randomized clinical trials

Peter M. Fayers, Antonio Palumbo, Cyrille Hulin, Anders Waage, Pierre Wijermans, Meral Beksaç, Sara Bringhen, Jean-Yves Mary, Peter Gimsing, Fabian Termorshuizen, Rauf Haznedar, Tommaso Caravita, Philippe Moreau, Ingemar Turesson, Pellegrino Musto, Lotfi Benboubker, Martijn Schaafisma, Pieter Sonneveld, Thierry Facon and on behalf of the Nordic Myeloma Study Group, Italian Multiple Myeloma Network, Turkish Myeloma Study Group, Hemato-Oncologie voor Volwassenen Nederland, Intergroupe Francophone du Myélome, and European Myeloma Network
The role of thalidomide for previously untreated elderly patients with multiple myeloma remains unclear. Six randomized controlled trials, launched in or after 2000, compared melphalan and prednisone alone (MP) and with thalidomide (MPT). The effect on overall survival (OS) varied across trials. We carried out a meta-analysis of the 1685 individual patients in these trials. The primary endpoint was OS, and progression-free survival (PFS) and 1-year response rates were secondary endpoints. There was a highly significant benefit to OS from adding thalidomide to MP (hazard ratio $= 0.83; 95\%$ confidence interval $0.73-0.94, P = .004$), representing increased median OS time of 6.6 months, from 32.7 months (MP) to 39.3 months (MPT). The thalidomide regimen was also associated with superior PFS (hazard ratio $= 0.68, 95\%$ confidence interval $0.61-0.76, P < .0001$) and better 1-year response rates (partial response or better was $59\%$ on MPT and $37\%$ on MP). Although the trials differed in terms of patient baseline characteristics and thalidomide regimens, there was no evidence that treatment affected OS differently according to levels of the prognostic factors. We conclude that thalidomide added to MP improves OS and PFS in previously untreated elderly patients with multiple myeloma, extending the median survival time by on average $20\%$. (Blood. 2011;118(5):1239-1247)