3. RELAPSED/REFRACTORY MULTIPLE MYELOMA

INPATIENT VS. OUTPATIENT TREATMENT MANAGEMENT WITH TECLISTAMAB IN RELAPSED AND REFRACTORY MULTIPLE MYELOMA: A COST AND HEALTHCARE RESOURCE UTILIZATION ANALYSIS

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Introduction. Teclistamab is a first-in-class CD3xBCMA-targeting bispecific antibody, indicated for the treatment of triple-class exposed relapsed and refractory multiple myeloma (RRMM). Clinical experience is rapidly increasing, with over 20,800 patients treated worldwide. While early teclistamab use focused on step-up dosing (SUD) in a hospital setting for close monitoring, emerging data support outpatient SUD administration as an option to reduce health care resource utilisation (HRU) and improve patient experience. Like in the inpatient setting, patients developing CRS in the outpatient setting would be treated with 8mg/kg tocilizumab, steroids, or supportive care. Recent nationwide Dutch registry data indicate that 51% of patients treated with teclistamab in the Netherlands (NL) experienced CRS, mostly grade 1-2; 41% of them received tocilizumab treatment. We evaluated the economic impact of moving teclistamab SUD administration from inpatient to outpatient setting in NL.

Methods. An expert panel discussion was held with 3 haematologists who have experience treating RRMM patients with teclistamab, from three NL MM centres. Participants completed a 16-question survey, engaged in individual follow-up calls, and attended an online consensus meeting (Jun-Jul 2025). The questionnaire assessed HRU for patients treated in inpatient versus outpatient settings, considering factors such as hospitalisation days, supportive and prophylactic medication, and additional diagnostic tests. Resource use was costed against NL tariffs available from the 2024 costing manual and the National Health Care Institute, indexed for June 2025.

Results. While inpatient administration of teclistamab SUD was associated with an average of 7 days of hospitalisation, outpatient treatment initiation required patients to come to the hospital for an outpatient visit on the day of each SUD administration (2 step-up doses and first full dose). The 2025 cost of hospitalisation in NL is €710.45 per day, versus €132.38 per outpatient visit. Therefore, moving teclistamab SUD to the outpatient setting would result in a total hospital cost saving of €4,576.01 per patient for the full SUD administration. While the use of supportive medications and laboratory tests was largely comparable between the two settings, outpatient SUD may be associated with a greater use of prophylactic medications (e.g.,tocilizumab or steroids) to mitigate the risk of developing cytokine release syndrome (CRS). While one KOL indicated 100% of patients would be treated with one dose of prophylactic tocilizumab in the outpatient setting to prevent CRS-related readmissions, others would only consider prophylactic tocilizumab or alternative prophylactic medication for patients with certain characteristics, such as high tumour burden. As maintenance doses are already administered in the outpatient setting, there is no impact on HRU and costs after the SUD phase.

Conclusions. While teclistamab SUD is currently predominantly administered in the inpatient setting in NL, there is consensus among clinical experts strongly indicating that teclistamab SUD can be administered feasibly, safely and conveniently in the outpatient setting. In addition, it leads to more efficient healthcare resource use and cost savings. While there is heterogeneity in prophylactic medication used to mitigate CRS, potential costs associated with this are largely offset by hospitalisation costs and potential re-admission costs saved.