# BENDAMUSTINE AUGMENTED CONDITIONING REGIMENT BEFORE AUTOLOGOUS HEMATOPOIETIC STEM CELL TRANSPLANTATION FOR ULTRA-HIGH-RISK MULTIPLE MYELOMA

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Background: Ultra-high-risk multiple myeloma (uHR-MM), defined by the occurrence of 2 or more high-risk cytogenetic abnormalities (HRCA) or clinical criteria. Exact and effective treatment of uHR-MM still debatable. Some empirical observations show partially increased activity of conventional chemotherapy for uHR-MM. Several reports and small studies revealed safety and potential benefit of adding bendamustine to standard dose of melphalan as augmented conditioning regimen for autologous stem cell transplantations (ASCT). Bendamustine and melphalan (BenMel) conditioning seems effective and feasible method to overcome resistance of uHR-MM in resource limited environment.

Purpose: Try out a potential active bendamustine and melphalan combination as conditioning regiment for uHR-MM patient, evaluate acute toxicity, effects to engraftment and efficacy.

Methods: Multiple myeloma patient, which are eligible to ASCT, stratified into utra-high risk categorys according mSMART v4.0 classification, received fortified conditioning regimen BenMel, over 4 days with standard autologous SCT.

Results: Findings support a hypothesis that BenMel conditioning might be an effective for ultra-high risk, heavily pretreated patients with multiple myeloma. No additional acute toxicity was observed and no impact to expected engraftment was founded because of addition of bendamustine. Efficacy of BenMel regiment remains debatable, but all treated patient remains alive with different disease status and treatment requirement.

Conclusions: Bendamustine and melphalan conditioning and safe, feasible and moderate effective even for patient with uHR-MM. Efficacy is comparable with historical data of conventional conditioning (HDMel). Safety profile also comparable with HDMel, although probably because of administration over 4 days, patients report less unspecific (infusion related) symptoms (nausea, vomiting, diarrhoea, weakness). Despite safety, efficacy of BenMel remains doubtful, but in resource limited environmental it might give several months of deep response with acceptable toxicity rate. BenMel with ASCT might work as a bridge to more effective therapy and as a potent debulking regiment for improvement of further therapy.