alterations remains a challenge and should take into consideration other laboratory and clinical data.

https://doi.org/10.1016/j.htct.2021.10.755

EFFECTS OF DARATUMUMAB (DARA), CYCLOPHOSPHAMIDE (C), THALIDOMIDE (T) AND DEXAMETHASONE (D) COMBINATION ON LYMPHOCYTE POPULATIONS OF TRANSPLANT ELIGIBLE NEWLY DIAGNOSE MULTIPLE MYELOMA PATIENTS

A Santos [a], H Santos [a,b], J Santos [c], L Lucas [c], M Salvino [d], A Almeida [d], M Santos [a], A Torres [a], MG Arruda [c], EQ Crusoe [b]

[a] *Immunology and Cytometry Lab, Universidade Federal da Bahia (UFBA), Salvador, BA, Brazil*
[b] *Hematology, Hospital Universitário Professor Edgard Santos (HUPES), Universidade Federal da Bahia (UFBA), Salvador, BA, Brazil*
[c] *Hematology, Instituto D'or de Pesquisa e Ensino (IDOR) e Clinica CEHON, Salvador, BA, Brazil*
[d] *Hematology and Bone Marrow Transplantation, Hospital Universitário Professor Edgard Santos (HUPES), Universidade Federal da Bahia (UFBA), Salvador, BA, Brazil*

Background: The CTD combination have both an immunomodulatory and immunosuppressive activity on multiple-myeloma (MM) patients (pts) treatment. The advance of immunotherapy has been demonstrated by the development ofnew agents like anti CD38-antibody Dara, that are increasing the overall and progression-free survival of MM pts. Daraeffect on the immune system was already described, but few studies analyzed specifically lymphocytes population. Wehypothesized that Dara-CTD combination could impact on lymphocytes subsets during treatment.Aims: The primary endpoint was to quantify subpopulations of lymphocytes in pts with newly diagnosed multiplemyeloma (NDMM) transplant eligible (TE) pts, during Dara-CTD treatment phases (induction, consolidation andmaintenance). Secondary endpoint was to describe B cells subsets during the same phases **Methods:** Peripheral blood of 14 pts at four different time points was collected: at diagnose, after four cycles of Dara-CTD, after two consolidation cycles post-autologous stem cell transplantation (ASCT) and before maintenance therapy.Flow cytometry was used to detect lymphocyte surface molecules including CD3, CD4, CD5, CD8, CD16, CD19, CD20,CD38, CD45 and CD56 in the scatter plot. B cells were isolated and subpopulations (naïve B cells, non-class switchedmemory B cells, class switched memory B cells, IgD-CD27- memory B cells and plasmablasts) were detected by CD20,CD24, CD27, CD38, CD45 and IgD. Statistics was performed using the SPSS®v25.0 **Results:** The pts median age was 55 range (41-65) years old, and 57% were female. The median of T, B and NKlymphocytes subsets at diagnosis were 1153 x $10^3/\mu$L, 205x $10^3/\mu$L and 284 x $10^3/\mu$L cells, respectively. After four cyclesof Dara-CTD the median of T, B and NK cells dropped significantly to 889 x $10^3/\mu$L, 12 x $10^3/\mu$L and 11 x $10^3/\mu$L,respectively ($p<0.05$). The number of the cells after two consolidation cycles post-ASCT, showed T cells full recovery(1087 x $10^3/\mu$L) while B and NK cells had weakly reconstitution (15 x $10^3/\mu$L and 34 x $10^3/\mu$L, respectively). Beforemaintenance therapy, the median of T, B and NK cells were 1456 x $10^3/\mu$L, 24 x $10^3/\mu$L and 33 x $10^3/\mu$L, respectively.Regarding B cell population, the median of naïve B cell decreased after 4 induction cycles from 32 x $10^3/\mu$L to 1 x $10^3/\mu$L.Then, after two consolidation cycles post-ASCT the number of B cell increased to 14 x $10^3/\mu$L and to 18 x $10^3/\mu$L beforemaintenance **Summary/Conclusion:** Lymphopenia have been shown with different protocols using Dara as single agent or incombination. The present study confirmed that there is a decrease in the number of different lymphocytes populations (T,B and NK) after induction therapy with Dara-CTD. The T cells number recovery after two consolidation cycles post-ASCT,but B and NK cells remain low after the same period. There was a slowly but continuously recovering of B and NK cells,suggesting that Dara-CTD combination allows lymphocytes reconstitution. Analyzing the B cells subpopulations, thenaive B cell was the first to show a more significant recovery, although it was below the reference range (33 – 259). Inconclusion, this is the first study that report the lymphocyte profile during Dara-CTD treatment. This preliminary datasuggest that Dara-CTD induces general lymphopenia on (T, B and NK) populations after induction phase. It wasidentified that T cells recovery was complete after two consolidations cycles while the recovery of B and NK cells wasslowly but continuously.

https://doi.org/10.1016/j.htct.2021.10.756

ELEVATED CIRCULATING ENDOTHELIAL CELLS AND SUCCESS IN ENDOTHELIAL COLONY-FORMING CELLS ISOLATION

LQ Silva [a], AS Justo-Junior [b], SAL Montalvão [a], R Medina [c], JM Annichino-Bizzacchi [a]

[a] *Universidade Estadual de Campinas (UNICAMP), Campinas, SP, Brazil*
[b] *Centro Nacional de Pesquisa em Energia e Materiais (CNPEM), Campinas, SP, Brazil*
[c] *Queen's University Belfast (QUB), Belfast, Northern Ireland, United Kingdom*

Introduction: Circulating endothelial cells (CEC) have been associated with vascular injury and are described as potential biomarkers for cardiovascular disease (1). Besides, current optimized methodologies enable the isolation of a well-characterized subtype of endothelial progenitor known as Endothelial colony-forming cells (ECFCs) (2,3). Although ECFC isolation methodologies are well described; some discrepancies remain in relation to their isolation efficiency. **Aims:** To evaluate the isolation efficacy ECFCs and CEC frequency in human peripheral blood. **Methods:** The Ethics Research Committee of the University of Campinas approved the experimental procedures and all donors signed the informed consent form. CEC enumeration was assessed by flow