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POSTER ABSTRACTS

652.MULTIPLE MYELOMA: CLINICAL AND EPIDEMIOLOGICAL

Outcomes of Salvage VDT-PACE-like Regimens in Relapsed-Refractory Multiple Myeloma: 10-Year Experience of a Large Academic Institution

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Introduction: Rapidly evolving therapies for multiple myeloma (MM) have drastically changed the treatment landscape over the last decade. Despite the introduction of novel agents into clinical practice, MM remains challenging to treat in the setting of aggressive relapse and/or multi-refractory disease, accompanied by high tumor burden and extramedullary sites. Intensive chemotherapy with VDT-PACE (bortezomib, dexamethasone, thalidomide, cisplatin, doxorubicin, cyclophosphamide, etoposide)-like regimens may be used for a limited number of cycles as a bridging regimen to quickly achieve cytoreduction. This study aimed to evaluate outcomes of patients treated with VDT-PACE-like regimens (VPRs) for relapsed-refractory MM (RRMM) at our center.

Methods: We retrospectively analyzed medical records of patients with RRMM who were treated with VPRs at our institution between 1/1/2013 and 6/1/2023. Responses including complete response (CR), very good partial response (VGPR), partial response (PR) and minimal response (MR) were measured according to the International Myeloma Working Group (IMWG) criteria. Baseline characteristics were outlined by descriptive analysis. Kaplan-Meier method was used for progression free survival (PFS), and overall survival (OS) calculations. Patients were censored in PFS analysis if they started another therapy before progression.

Results: A total of 93 patients with RRMM were included in this analysis. Median age was 59 (range 42-84) years, 41% were female and 82% were White. The median number of prior lines of therapy was 6 (range 1-17) and median percentage of bone marrow plasma cells prior to VPRs initiation was 70%. Of the entire cohort, 60% of patients had high risk cytogenetics and 27% had plasma cell leukemia; other baseline patient and disease characteristics are summarized in Table 1. Patients received a median of 1 cycle (range 1-4) of VPRs; 37% received >2 cycles of treatment. After completion of cycle 1, VGPR or better, PR, and MR were achieved in 25 (27%), 30 (32%) and 11 (12%) patients, respectively. The estimated median PFS was 4 months (95% CI, 2.8 - not reached [NR]) and the estimated median OS was 7 months (95% CI, 5-8) from VPRs initiation (Figure 1). Among the 72 patients who received further treatment post VPRs completion, 19% underwent autologous hematopoietic cell transplant (AHCT), 70% were switched to another plasma cell-directed therapy, and 11% received chimeric antigen receptor T (CAR T)-cell therapy as the next line of therapy. The remaining 21 patients were transitioned to hospice immediately following VPRs, or died prior to receiving next line of therapy due to disease progression. Thirty-eight patients (41%) were readmitted after cycle 1 due to complications; median number of readmissions was 1 (range 1-4), and median cumulative duration of inpatient hospital stay was 7.5 (range 1-42) days. Severe neutropenia (defined as neutrophilic count $<500 \times 10^9$/L) and severe thrombocytopenia (defined as platelet count $<25 \times 10^9$/L) were seen in 57 (61%) and 43 (46%) patients, respectively after cycle 1, and 28 (30%) patients developed neutropenic fever.

Conclusion: VPRs are feasible salvage treatment options in RRMM patients with aggressive and multi agent-refractory disease. Most patients responded to VPRs bridge therapy and were able to transition to autologous hematopoietic cell transplant, CAR T-cell therapy or other less toxic plasma-cell directed regimens. Despite that, the median overall survival of the entire cohort was short indicating that VPRs might not be able to reverse the poor prognosis of highly aggressive RRMM disease.

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Table 1: Baseline Patient Characteristics

Baseline characteristics	Total N=93
Median age – median (range)	59 (42-84)
Female – n (%)	38 (41)
White – n (%)	76 (82)
IgG Isotype – n (%)	65 (70)
Kappa involved light chain (iFLC) – n (%)	58 (62)
High risk – n (%)	56 (60)
Bone Marrow Plasma cells % – n (%)	70 (1-93)
Plasma cell leukemia – n (%)	25 (27)
Extramedullary disease – n (%)	33 (35)
Prior ASCT – n (%)	58 (62)
Prior lines of therapy – median (range)	5 (1-17)
Baseline platelet count – median (range)	65 (7-265)
Baseline WBC – median (range)	3.56 (0.24-31.72)
Baseline Hgb – median (range)	8.3 (5.8-14.9)
Baseline iFLC – median (range)	1010 (0.8-33725)
Double refractory – n (%)	85 (91)
Triple refractory – n (%)	78 (84)
Penta refractory – n (%)	44 (47)

Figure 1: Kaplan Meier curve of Overall Survival.

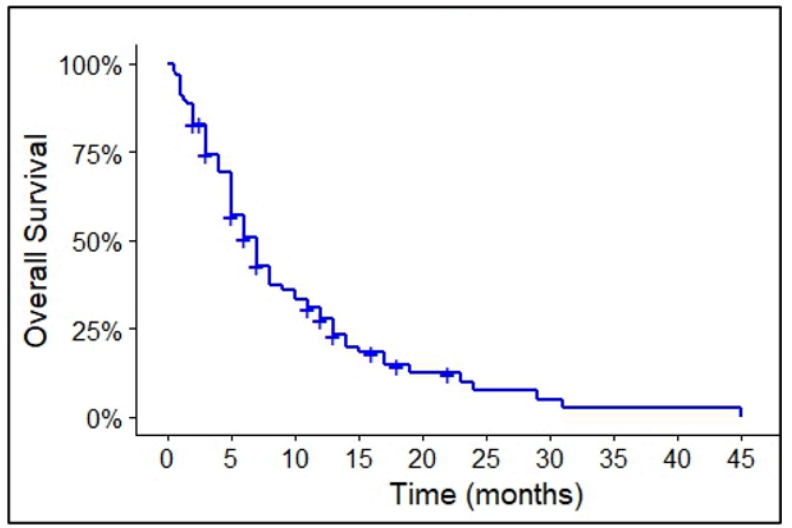

Figure 1